Rossdale Power Plant Advanced Assessment and Priority Rehabilitation

Scope Definition and Class 5 Cost Estimate

MBAC | Saucier + Perrotte Architectes | DFS
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Scope Definition
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DATE: APRIL 21, 2022

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Traditional Land Acknowledgement

We respectfully acknowledge that Edmonton is known by the nêhiyawak (the Cree people) as ᐊᒥᐢᑲᐧᒋᐋᐧᐢᑲᐦᐃᑲᐣ (amiskwacîwâskahikan). It is a traditional gathering place for a diverse group of Indigenous peoples, including the nêhiyaw (Cree), Tsuut'ina, Niitsitapi (Blackfoot), Métis, Nakota Sioux, Haudenosaunee (Iroquois), Dene, Suliné, Anishinaabe/ Ojibway/ Saulteaux, Inuit, and many others who continue to make this place their home and whose histories, languages, and cultures continue to influence our vibrant community today. The Rossdale Power Plant lies on lands governed by Treaty 6, which encompasses 17 First Nations. In addition, it is acknowledged that the Rossdale site has been a gathering place of Indigenous peoples for thousands of years, and that it has special association with the Traditional Burial Ground and Fort Edmonton Cemetery nearby.
The city of Edmonton owes its strength and vibrancy to these lands and the diverse Indigenous peoples whose ancestors' footsteps have marked this territory.

Settlers from around the world who continue to be welcomed here and call Edmonton home, further contribute to the City's resilience and diversity. Together we call upon all our collective honoured traditions and spirits to work in building a great city for today and future generations. We would like to thank the Indigenous communities who participated in The Rivers Crossing Business Plan & Heritage Interpretation Plan engagement sessions. The contributions provided were greatly appreciated and it is hoped that the knowledges and stories shared are reflected here.

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Acknowldgements

The consultant team wishes to thank the City of Edmonton, EPCOR, and the Government of Alberta team members for their stewardship of the project and for their generous contributions and insights concerning the history of the site and the Rossdale Power Plant.

RPP AAPR
Scope Definition
Executive Summary

Overview

This document builds on and synthesizes information from the other components of the Rossdale Power Plant Advanced Assessment and Priority Rehabilitation project, including the Historic Building Record, the Historic Building Condition Assessment, the Building and Fire Code Assessment, and the Conservation Plan. This document is not meant to replicate the level of detail found in the aforementioned reports, but rather to offer a concise synopsis of relevant data and provide a high level framework to help guide decision making for future rehabilitation and reuse projects.

The intent of this document is to provide a broad strategy for the further development and implementation of scopes of work necessary to rehabilitate the extant heritage fabric of the Rossdale Power Plant, as well as to prepare the site for future adaptive reuse as a cultural resource and amenity for the community of Rossdale and for Edmonton more broadly.

The document is divided into five primary areas of focus: Identification of Character-Defining Elements and Intervention Strategies; Precedent Analysis; Program Compatibility Assessment; Phased Programming and Intervention Definition; and a Class 5 Cost Estimate.

Connecting with the Conservation Plan, in the first instance, the document identifies at a high level those aspects of each of the Plant's primary spaces that constitute character-defining elements. From these elements, the report identifies broad strategies for intervention that respect these character-defining elements while also facilitating future reuse potential.

The next section of the document examines a number of precedent projects from around the world and extracts 'lessons learned' that can be applied to future adaptive reuse projects for the Rossdale Power Plant.

Following the precedent analysis, the document identifies programming opportunities based on the spatial and functional needs of different cultural and commercial program types and corresponding and compatible spaces within the Plant.

The document presents a summary of programming and intervention scopes associated with three broad time horizons: Phase 01 (1-2 years), Phase 02 (2-10 years), and Phase 03 (10+ years). Phase 01 includes primarily stabilization and rehabilitation scopes intended to address the most urgent rehabilitation needs while supporting some temporary programming. Phase 02 includes comprehensive 'base building' scopes that provide more systemtic infrastructure required for long term adaptive reuse. Phase 03 includes scopes that facilitate a range of potential permanent program types.

Finally, the Class 5 Cost Estimate provides a basis for the development of future project budgets through the description of probable construction costs for the scopes identified in each of the three phases described above.

While this report identifies a range of potential adaptive reuse scenarios, it is not intended to be limiting or binding. Instead, it is meant to identify opportunities for reuse that capitalize on the inherent spatial and material qualities of each of the distinct spaces that comprise the Plant, and to serve as a road map to reuse. There are opportunities to 'mix and match' the uses proposed in the three 'Phase 03' scenarios described in this report, as well as other use opportunities identified on pp. 47-49 of this document.

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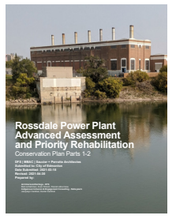
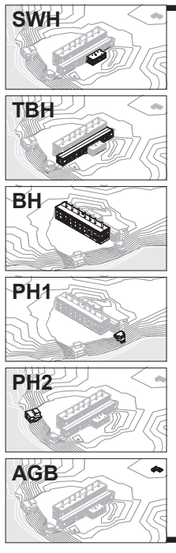
Scope Definition
Process Road Map

01

Map Character
Defining Elements from
Conservation Plan/
Statement of Significance.



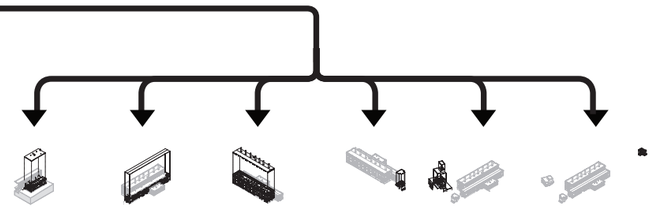


02

Assess and define spatial, functional, and performance requirements for various cultural uses.

03a

Identify strategies for intervention that respect intentions of Conservation Plan and requirements of Provincial Designation.

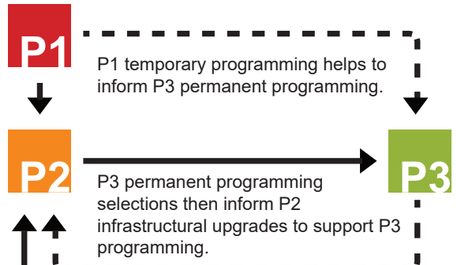


03b

Match program types to appropriate spaces in the Switch House, Turbine Hall, Boiler Hall, Pump House #1, Pump House #2, and ATCO Gas Building.

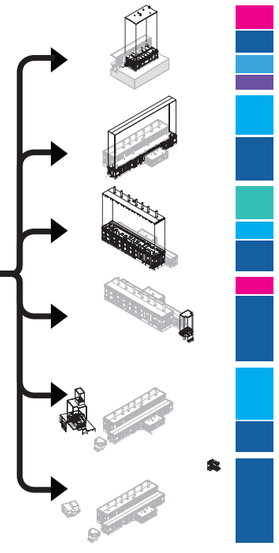
03c

Translate rehabilitation/repair scopes from Condition Assessments into time based implementation based on urgency and strategic overlap with programming potential.



04

Develop potential use vignettes to illustrate potential future scenarios based on the full implementation of reuse-supporting scopes.



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Scope Definition
Spatial Characteristics and Character Defining Elements

Switch House

RPP AAPR
Scope Definition
Spatial Characteristics and
Character Defining Elements

Switch House
Spatial Characteristics

In contrast to the other two buildings that comprise the Low Pressure Plant, the scale and character of the spaces that comprise the Switch House are reflective of its ‘command and control’ functions for the broader Power Plant.

With its specialized technical rooms, general operating floors, and spaces for administrative functions, the arrangement of the Switch House provide a spatial diagram for understanding plant operations.

Character Defining Elements

01 Overall form and massing of the building, including its relationship with the Turbine Hall and Boiler Hall;

02 Reinforced concrete foundations, masonry walls;

03 Horizontal white precast masonry cornice banding containing the dates of each phase, coping and belt course, pediments, capitals and other brick masonry materials and design details such as pilasters, rectangular decorative motifs, string courses, and Switch House capitals;

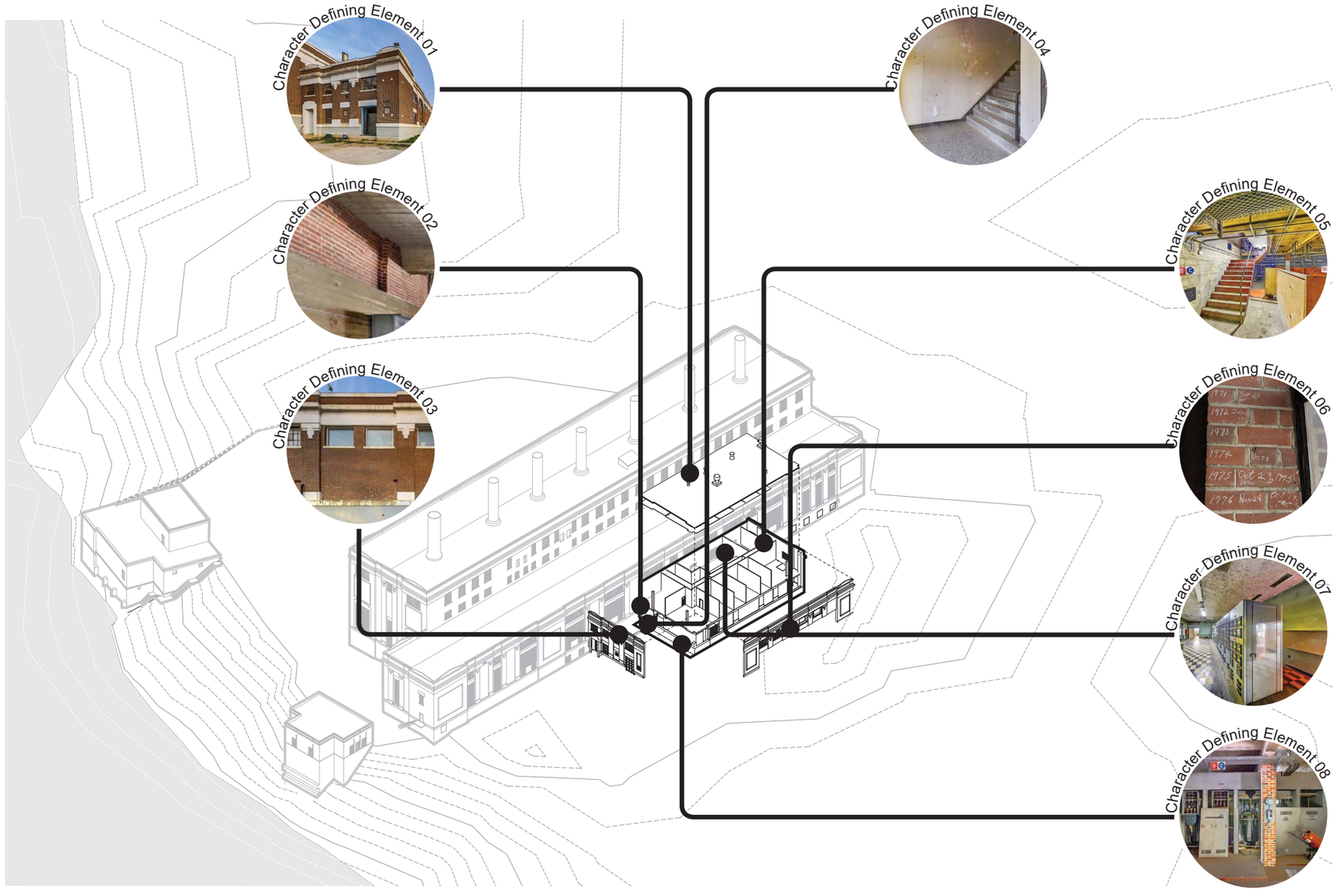
04 Interior terrazzo finishes;

05 The use of industrial detailing, such as pipe rails, concrete and steel stairs;

06 Text on walls, ceilings, and floors that relate to industrial functioning, including historical graffiti;

07 Extant electrical & mechanical equipment, such as breakers, switches, and control panels;

08 Salvaged and reused brick in the basement;



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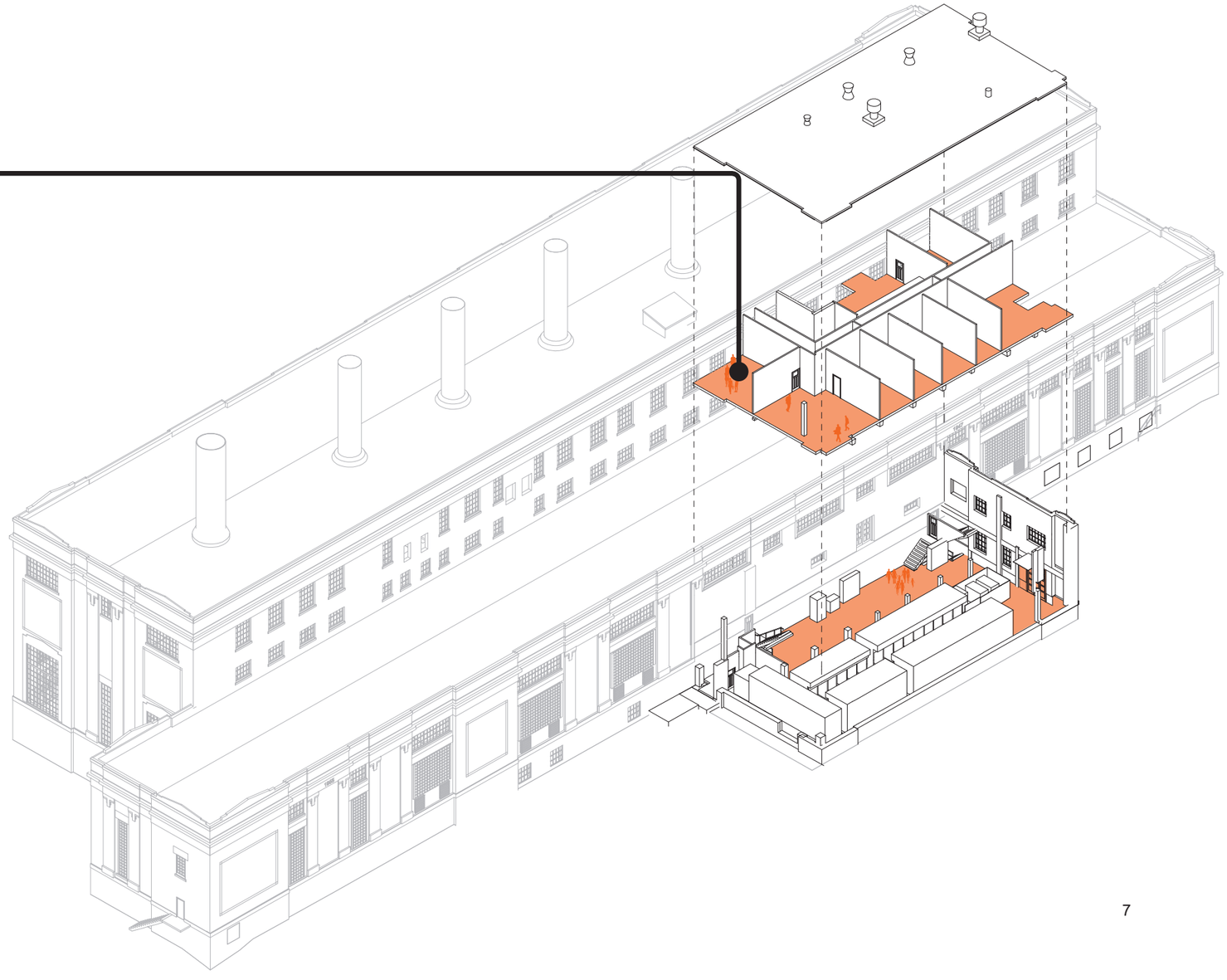
Scope Definition
Rehabilitation/Reuse
Intervention Strategies

Switch House
Programming and Occupation

Reoccupation Infill

Because of the Switch House's original function as the 'nerve center' of the broader Power Plant, its spaces are already tuned and scaled to human occupation. Respecting and building on the inherent logic of the Switch House's spaces, this approach to reoccupation stresses subtle adjustments and interventions to expand programming opportunities through the enhancement of finishes, building systems, and other amenities without compromising the extant character of the building's spatial logic.



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Scope Definition
Rehabilitation/Reuse
Intervention Strategies

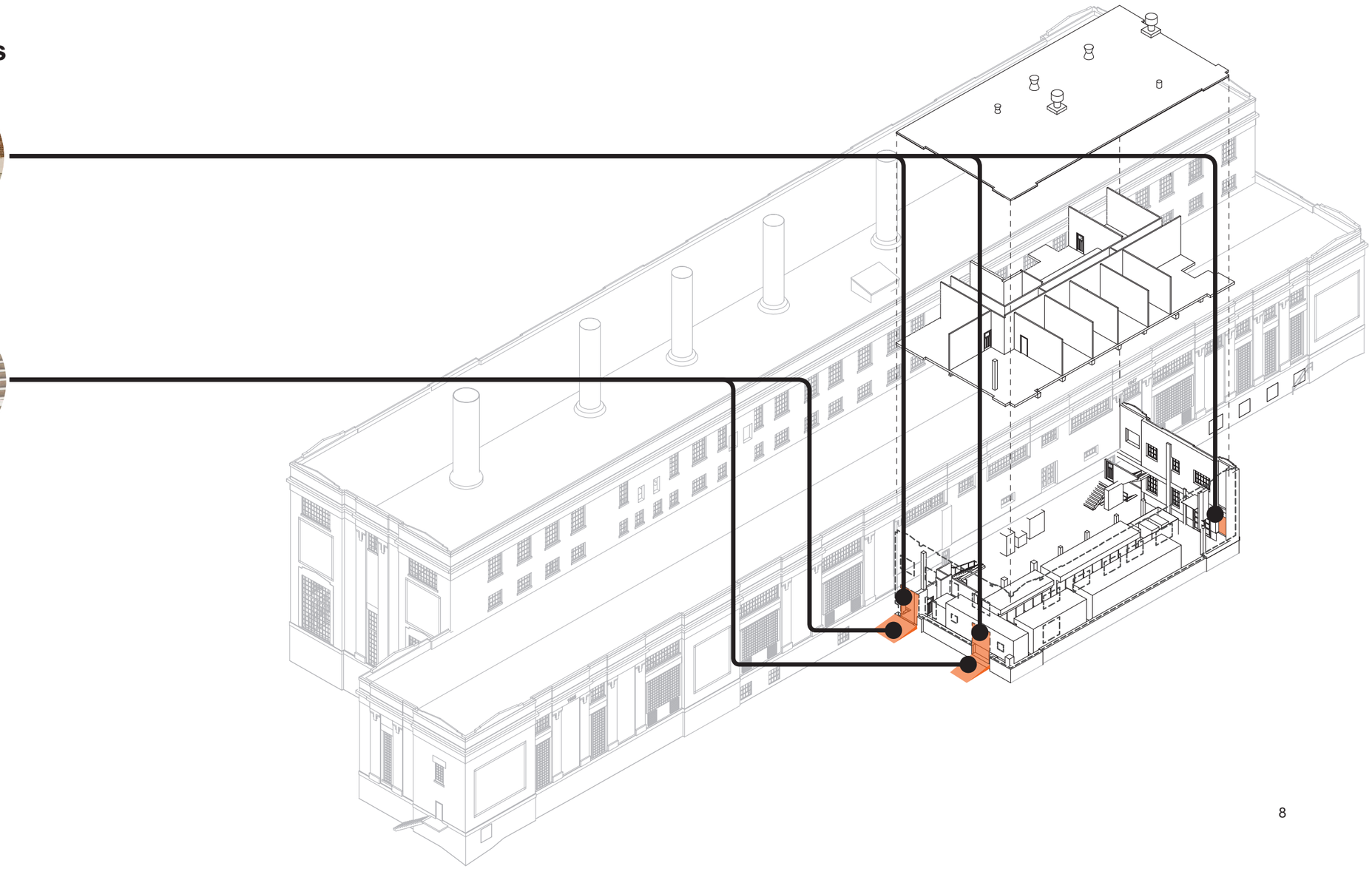
Switch House
Horizontal Connections

Enhanced Exterior Connections

Restoring the existing doors and retrofitting them with contemporary exit hardware will enable the reuse of the existing entry and egress points as exits while retaining their character.

Enhanced Accessibility

Addressing the lack of accessible entry points to the Switch House (and the Low Pressure Plant more broadly) through the gentle recalibration of grading and the entry sequence to the building will facilitate both retention of heritage fabric and universal access to the East side of the LPP.

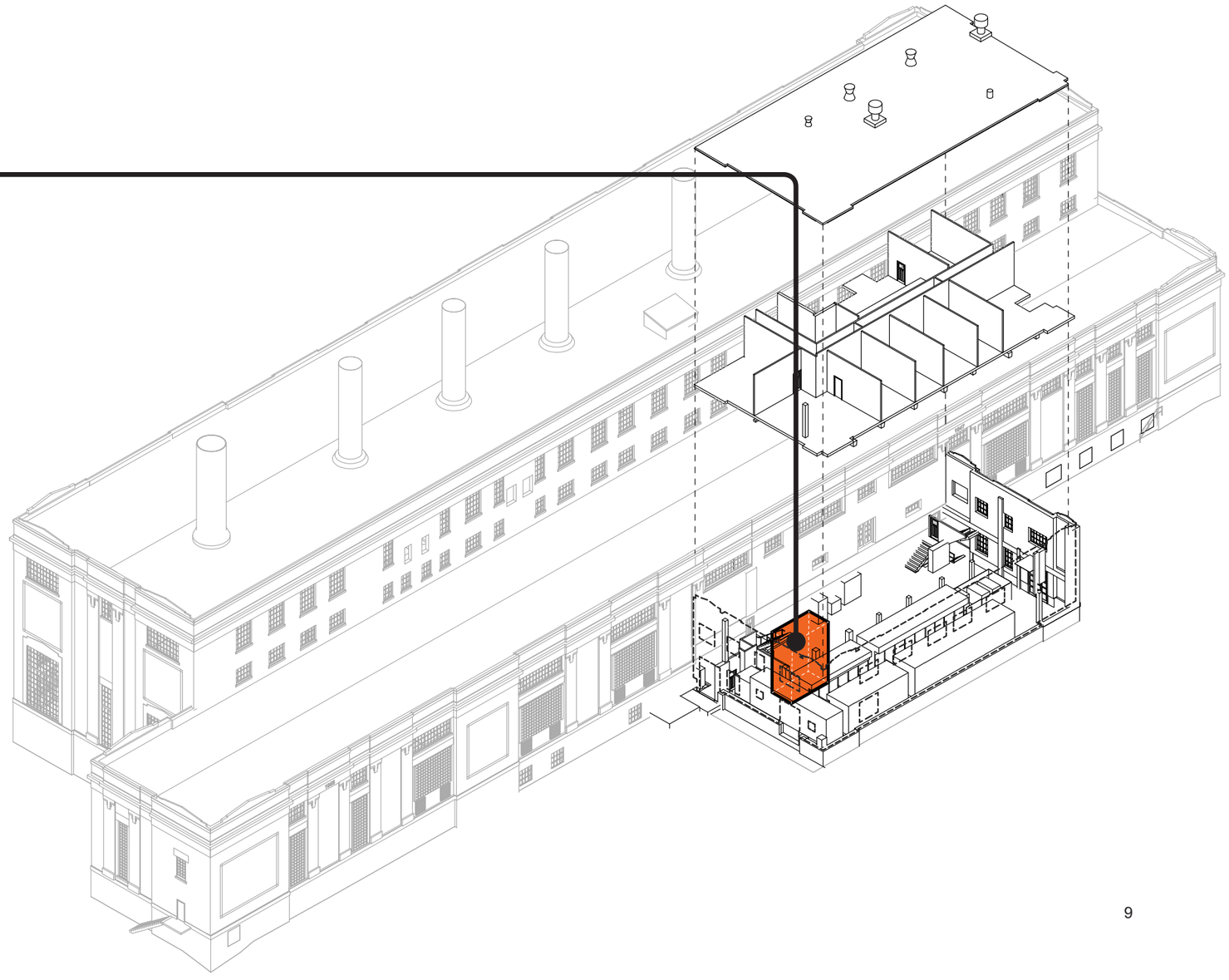


RPP AAPR
Scope Definition
Rehabilitation/Reuse
Intervention Strategies

Switch House
Vertical Connections

Elevator

The integration of elevating devices should capitalize on existing openings and void spaces to minimize negative impacts to existing heritage fabric. In the Switch House, there are several opportunities to introduce a new elevator to provide access to the second floor, and potentially to the basement. To limit the need for an overrun, this elevator could be a machine room-less (MRL) traction elevator, which requires minimal overhead space for equipment.



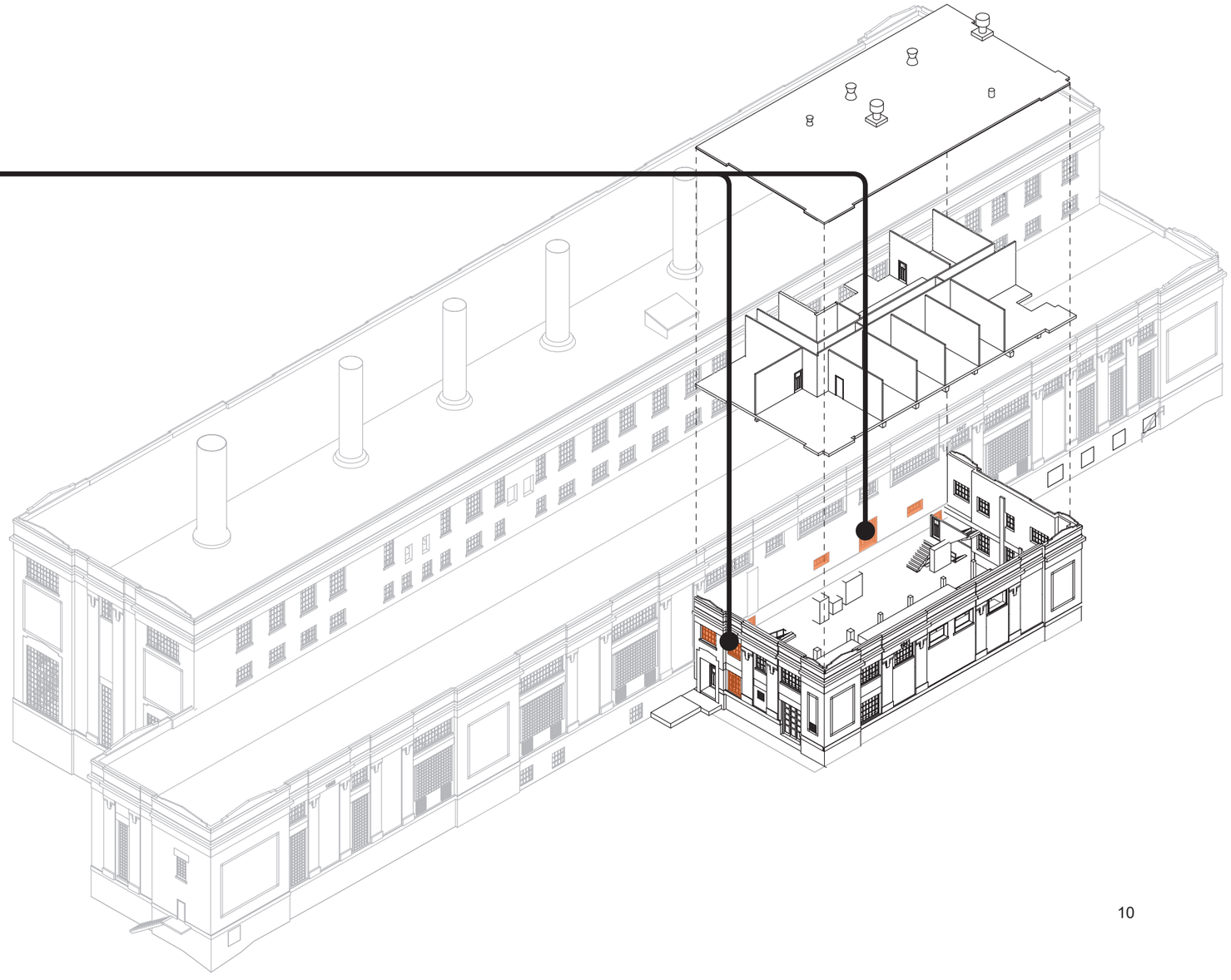
RPP AAPR
Scope Definition
Rehabilitation/Reuse
Intervention Strategies

Switch House
Vertical Closures

Fire Separations

There are currently a number of instances where the Switch House's shared wall with the Turbine Hall creates a condition where either exits are exposed to unprotected openings, as is the case at the existing entrance to the Switch House, or adjoining suites are not protected by a fire separation (as is the case with the openings between the Turbine Hall and Switch House.

To meet these challenges while retaining the character and protected heritage fabric that defines the Turbine Hall interface in particular, fire rated glass closures could be employed to address Building Code concerns while remaining visually permeable.



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Scope Definition
Spatial Characteristics and Character Defining Elements

Turbine Hall

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Scope Definition
Spatial Characteristics and Character Defining Elements

Turbine Hall
Spatial Characteristics

The Turbine Hall is defined primarily by the scale and high degree of refinement of its monumental industrial spaces. The uninterrupted voluminous grandeur of its main operating floor and the attention to detail in its finishing make it one of the most aesthetically significant spaces in the Low Pressure Plant and the Power Plant more broadly.

The monumental character of the main floor is reinforced at the basement level by the cavernous concrete pedestals that once supported the Plant's turbines and condenser tanks.

Character Defining Elements

01 Overall form and massing of the building, including its relationship with the Switch House and Boiler Hall;

02 Reinforced concrete foundations, structural riveted steel framing, non load-bearing masonry walls;

03 Horizontal white precast masonry cornice banding containing the dates of each phase, coping and belt course, pediments, capitals and other brick masonry materials and design details such as pilasters, rectangular decorative motifs, string courses, and Turbine Hall capitals;

04 Large and frequent openings of multi-light rolled steel windows and original ventilation openings for industrial components;

05 Large simple interior spaces reflecting the scale of the industrial processes being accommodated;

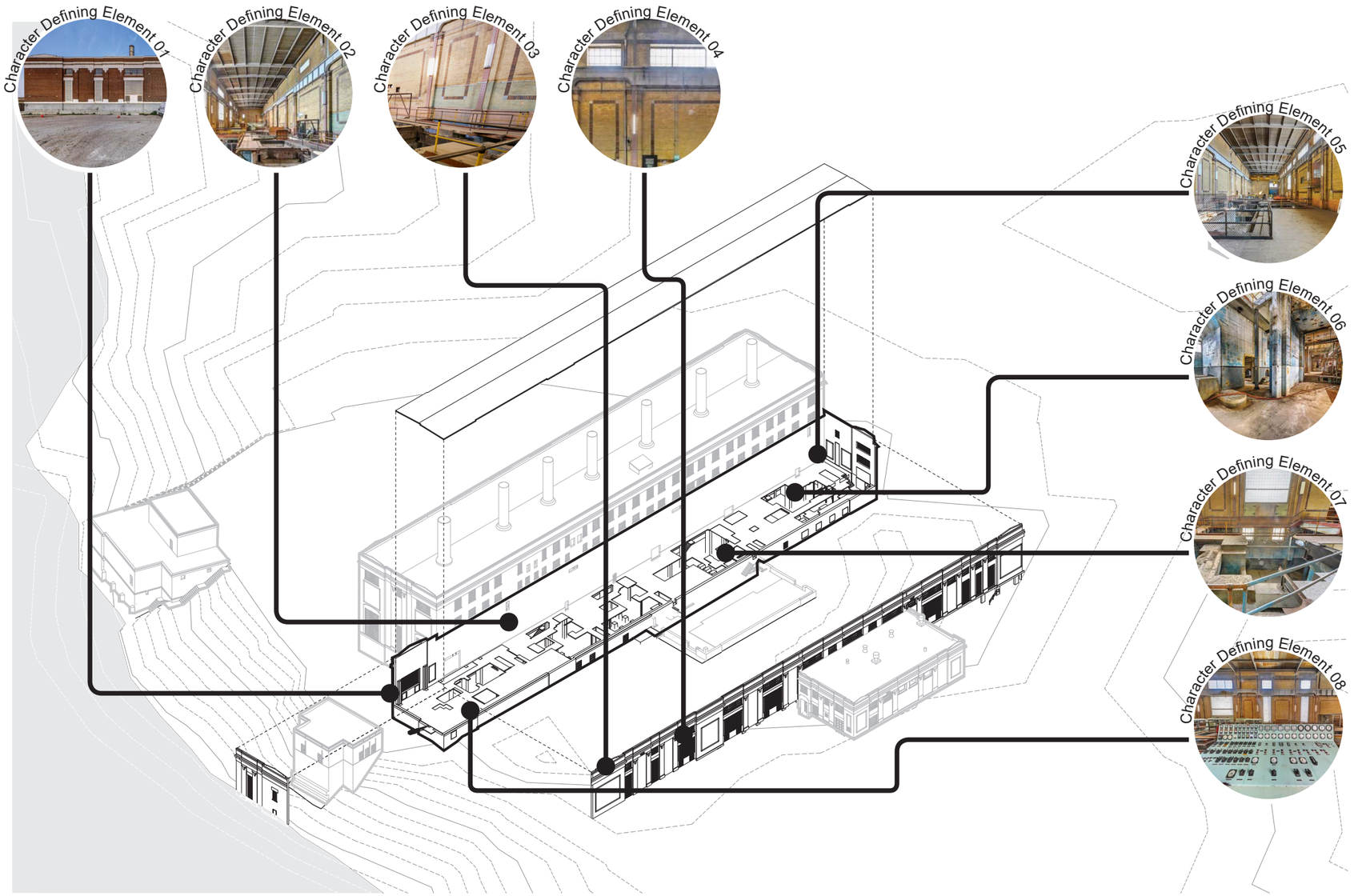
06 Remaining industrial support structures such as the turbine podiums, condenser tank pedestals, and gantry track.

07 Built voids in the operating floor to accommodate equipment and movement of materials;

08 Extant electrical & mechanical equipment, such as the interior crane track and structure, pipes, breakers, switches, and control panels

09 Darker clinker brick on the exterior and lighter, buff coloured brick on the interior;

10 Vertical fluorescent pilaster tube lighting;



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

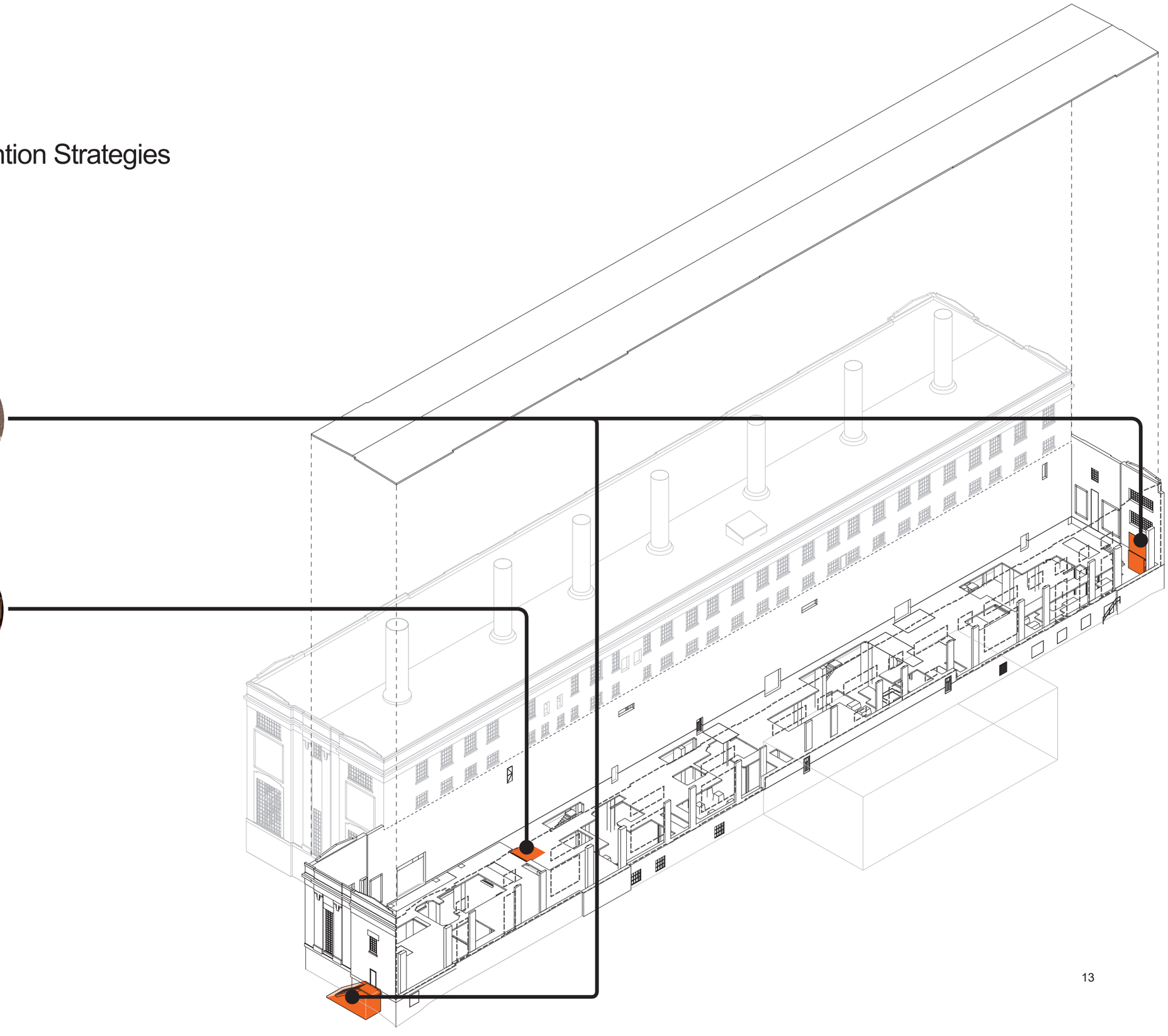
Turbine Hall
Horizontal Connections

Augmented Exterior Access

Rehabilitating and augmenting the existing exterior doors at the North and South ends of the Turbine Hall will help to address the exiting challenges in the Low Pressure Plant while simultaneously restoring the existing heritage fabric of the doors.

Internal Accessibility

Introducing new ramps to augment existing stairs will help to address the Turbine Hall main floor's current accessibility challenges.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

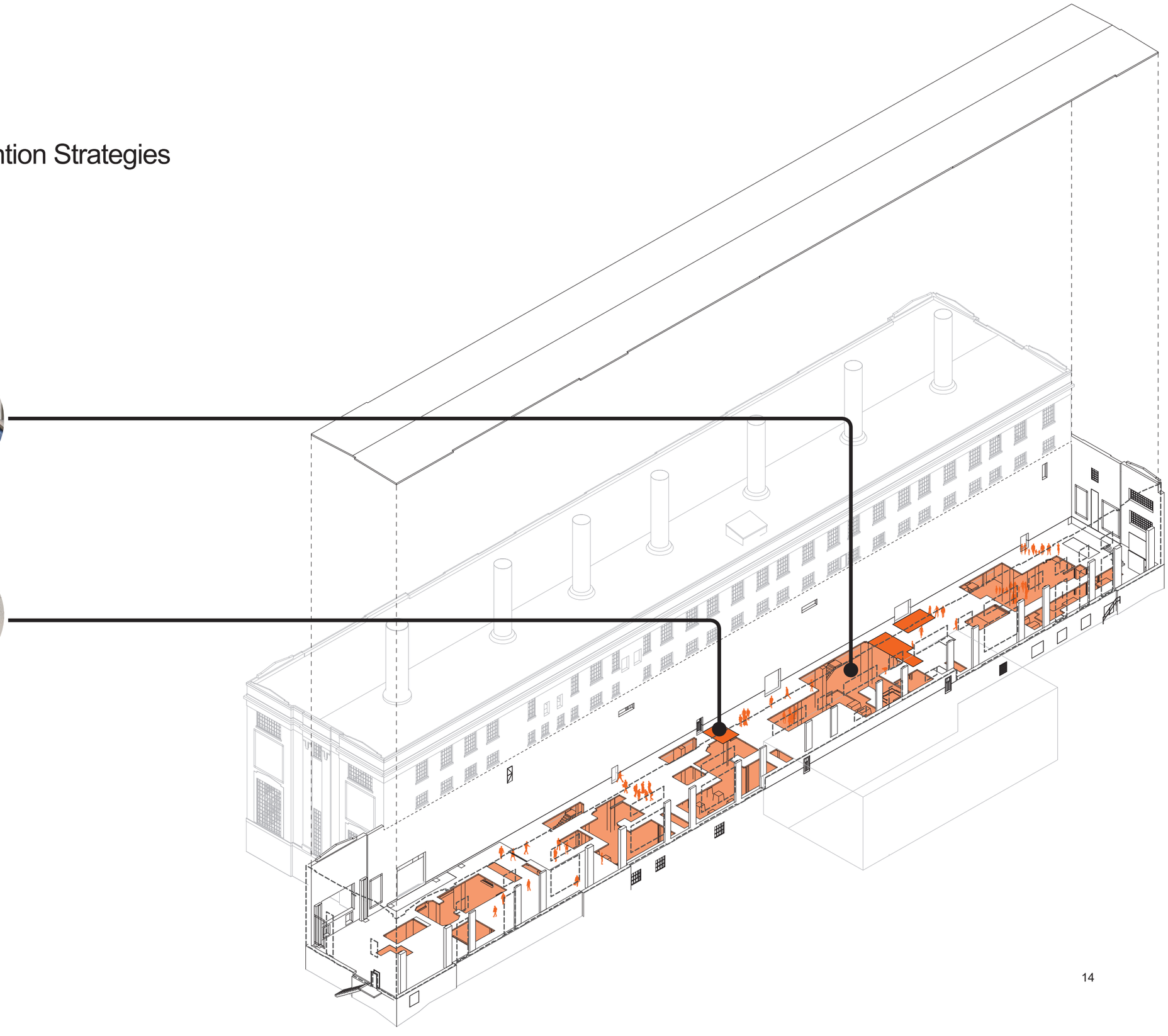
Turbine Hall
Horizontal Infill

Visually Permeable Infill

The built voids in the Turbine Hall (and elsewhere) are central to the interpretive narrative of industrial function of the Power Plant. In instances where these voids need to be covered for programmatic or Code reasons, maintaining their visual presence through a translucent or transparent infill maintains their presence in the space.

Visually Impermeable Infill

In instances where a visually permeable floor infill is impractical or undesirable, the approach to solid infill should maintain the visual presence of the original void space to the greatest extent possible.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

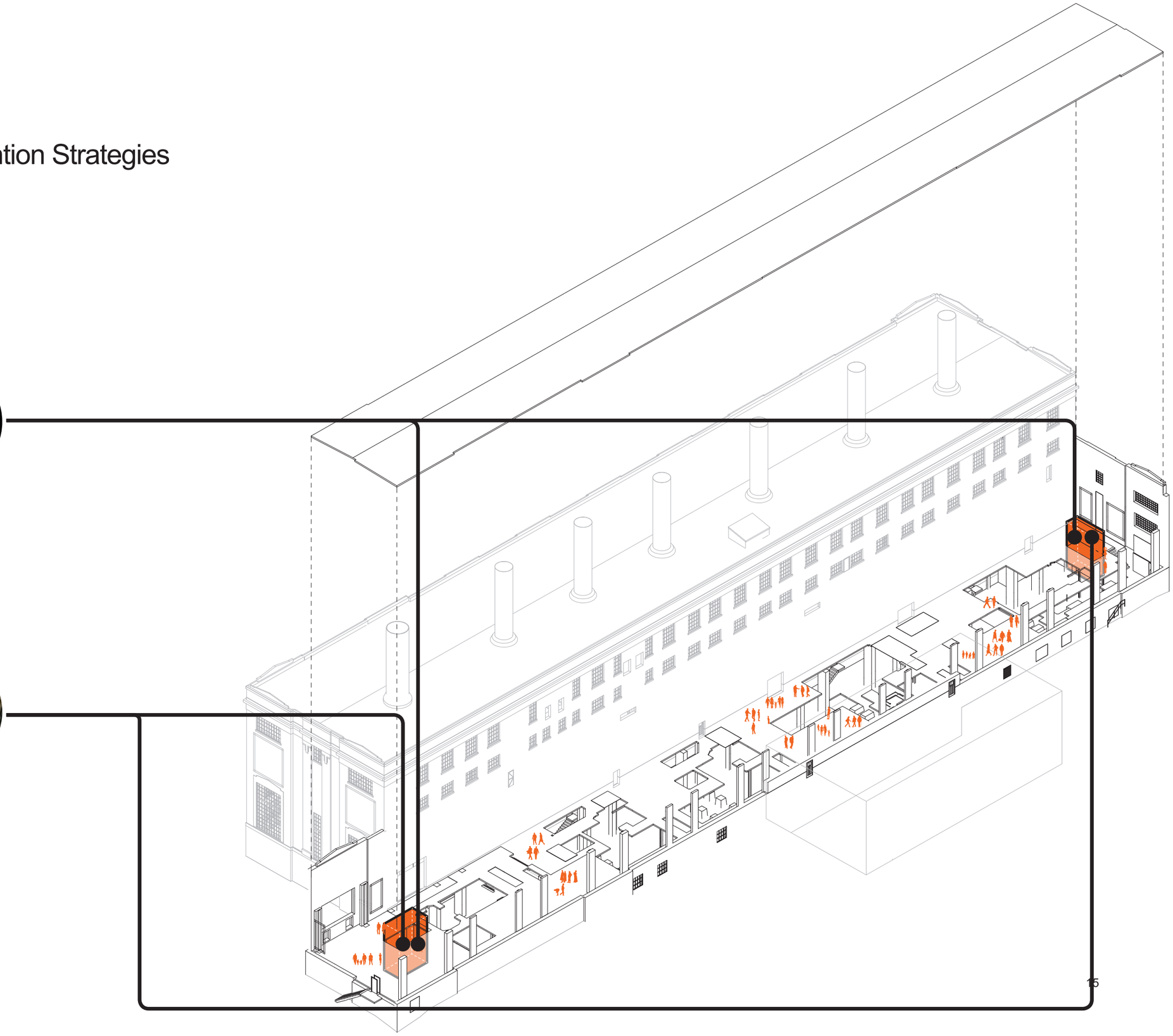
Turbine Hall
Vertical Connections

Elevators

The integration of elevating devices should capitalize on existing openings and void spaces to minimize negative impacts to existing heritage fabric. In the Turbine Hall, this strategy could take advantage of one or more voids of the voids created for the turbines to accommodate vertical circulation. To maintain the character of the monumental clear span space of the Turbine Hall, locating vertical circulation at the North and South end of the Turbine Hall may be strategic.

Stairs

Like the elevators, stairs intended for convenience circulation could be integrated into existing multi-storey void spaces. To provide access to exit from the basement, exit stairs could be introduced at appropriate locations in the Turbine Hall.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

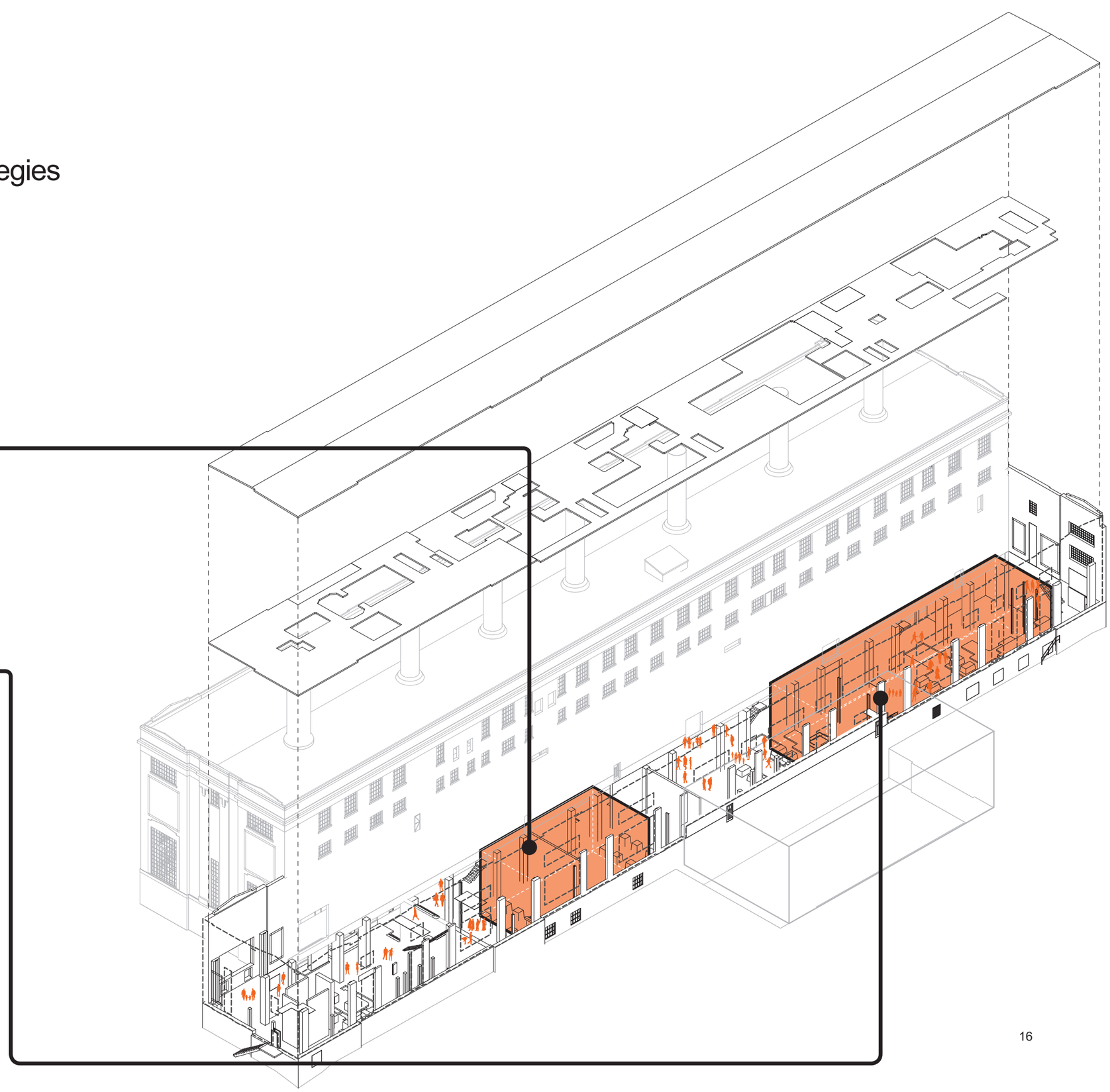
Turbine Hall
Programming and Occupation

Reoccupation Infill

This strategy for re-inhabiting the monumental industrial spaces in the LPP uses the existing architectural and structural order to establish a logic of reuse. In the Turbine Hall, this approach could manifest in the adaptation of the massive concrete pedestals that once supported the turbines and condensing tanks into objects that support program.

Adjunct Infill

As a complementary alternative to the re-occupation of existing ‘implied spaces’, this approach to programming introduces discrete, autonomous program elements that fit within the broader shell of the existing building.



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Scope Definition
Spatial Characteristics and Character Defining Elements

Boiler Hall

RPP AAPR
Scope Definition
Spatial Characteristics and Character Defining Elements

Boiler Hall
Spatial Characteristics

Like the Turbine Hall, the Boiler Hall is one of the Plant's monumental industrial spaces. In contrast to the Turbine Hall, the Boiler Hall is characterized by a greater intensity of structure and infrastructure. While the boilers have been removed, the residual structural framing that supported them, the voids in the floor through which the multi-storey boilers were suspended, and the air circulation mezzanine and catwalks that provided access remain as strong markers of the space's former industrial functions.

Character Defining Elements

01 Overall form and massing of the building, including its relationship with the Turbine Hall and Switch House;

02 Reinforced concrete foundations, structural riveted steel framing, non load-bearing masonry walls;

03 Horizontal white precast masonry cornice banding containing the dates of each phase, coping and belt course, pediments, capitals and other brick masonry materials and design details such as pilasters, rectangular decorative motifs, string courses, and Boiler Hall capitals;

04 Large and frequent openings of multi-light rolled steel windows and original ventilation openings for industrial components;

05 Large simple interior spaces reflecting the scale of the industrial processes being accommodated;

06 Built voids in the operating floor to accommodate equipment and movement of materials;

07 Remaining industrial support structures such as boiler supports;

08 Extant electrical & mechanical equipment, such as pipes, breakers, switches, control panels, ash chute frames, ash-car rails in basement, and valve heads;

09 Elevator;

10 The use of industrial detailing, such as pipe rails, concrete and steel stairs;

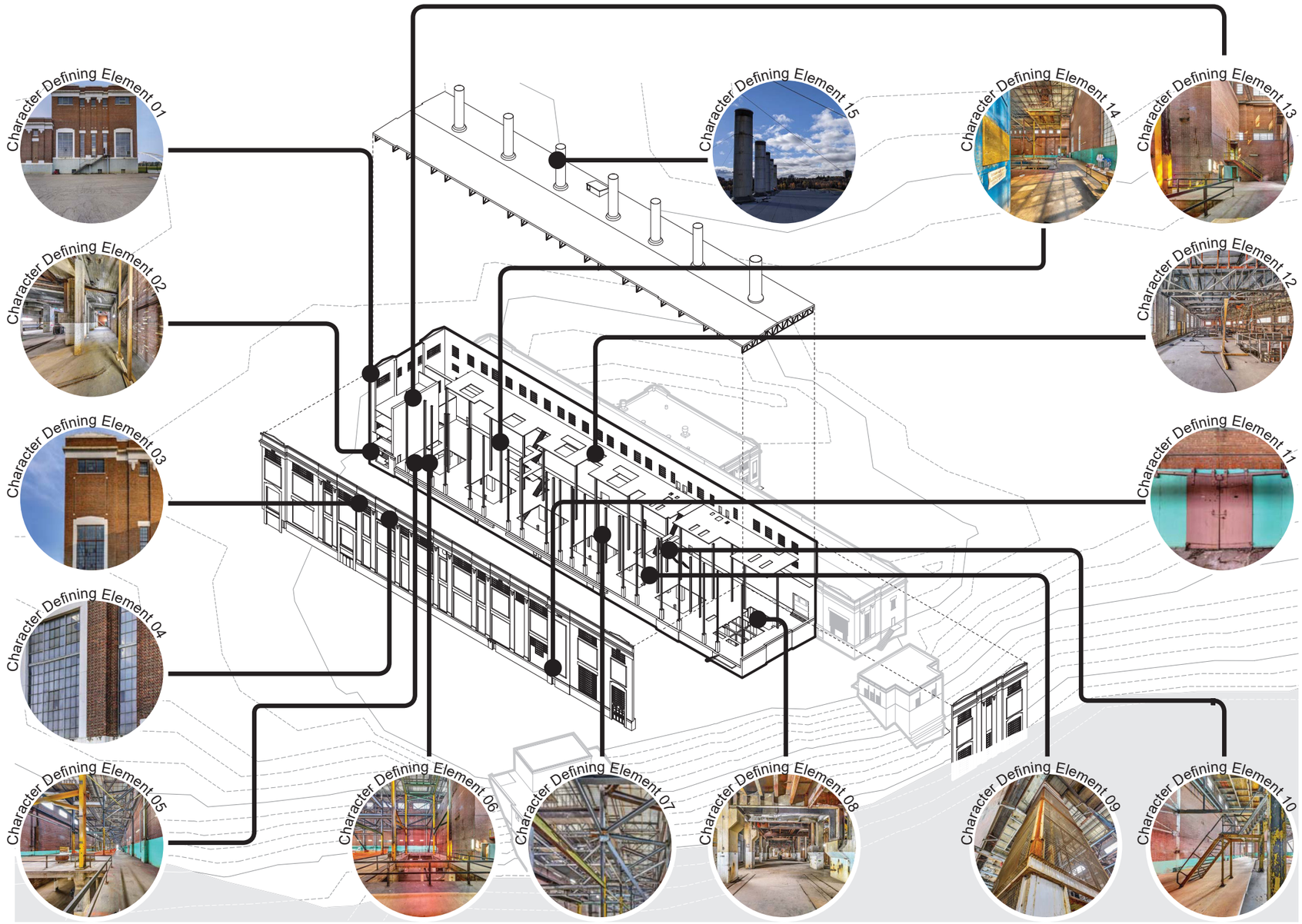
11 Douglas fir craftsman style single/double doors, and metal clad safety / fire-proof doors;

12 Air circulation mezzanine and catwalks below;

13 Brick infilled coal/ash handler location;

14 Layers of colours, including decorative and industrial paint schemes used throughout the site, including layer of colour of doors over time that are representative of different periods of colours used by Edmonton Power;

15 Seven roof stacks.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

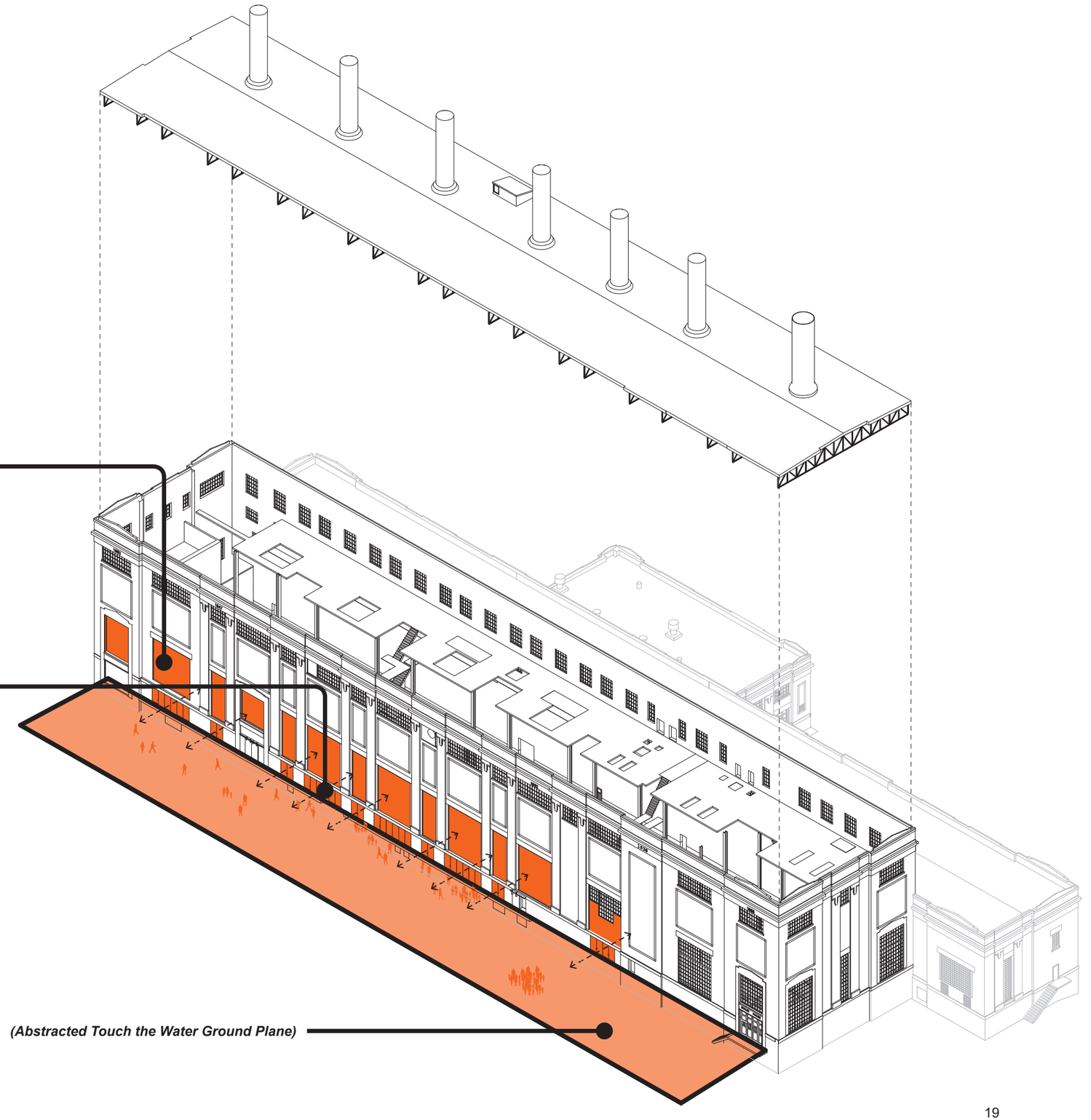
Boiler Hall
Horizontal Connections

Window Reinstatement

To maximize internal daylighting potential and connect the Boiler Hall visually with Touch the Water and the landscape beyond, the windows that were infilled when the High Pressure Plant was constructed could be reinstated.

Ground Floor Connections

To address exiting challenges from the LPP in a systematic manner, and to facilitate robust programmatic connection between the main floor of the Boiler Hall and Touch the Water's built topography, strategic subtractions from the concrete base of the Boiler Hall could accommodate both exit infrastructure and generous circulation openings.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

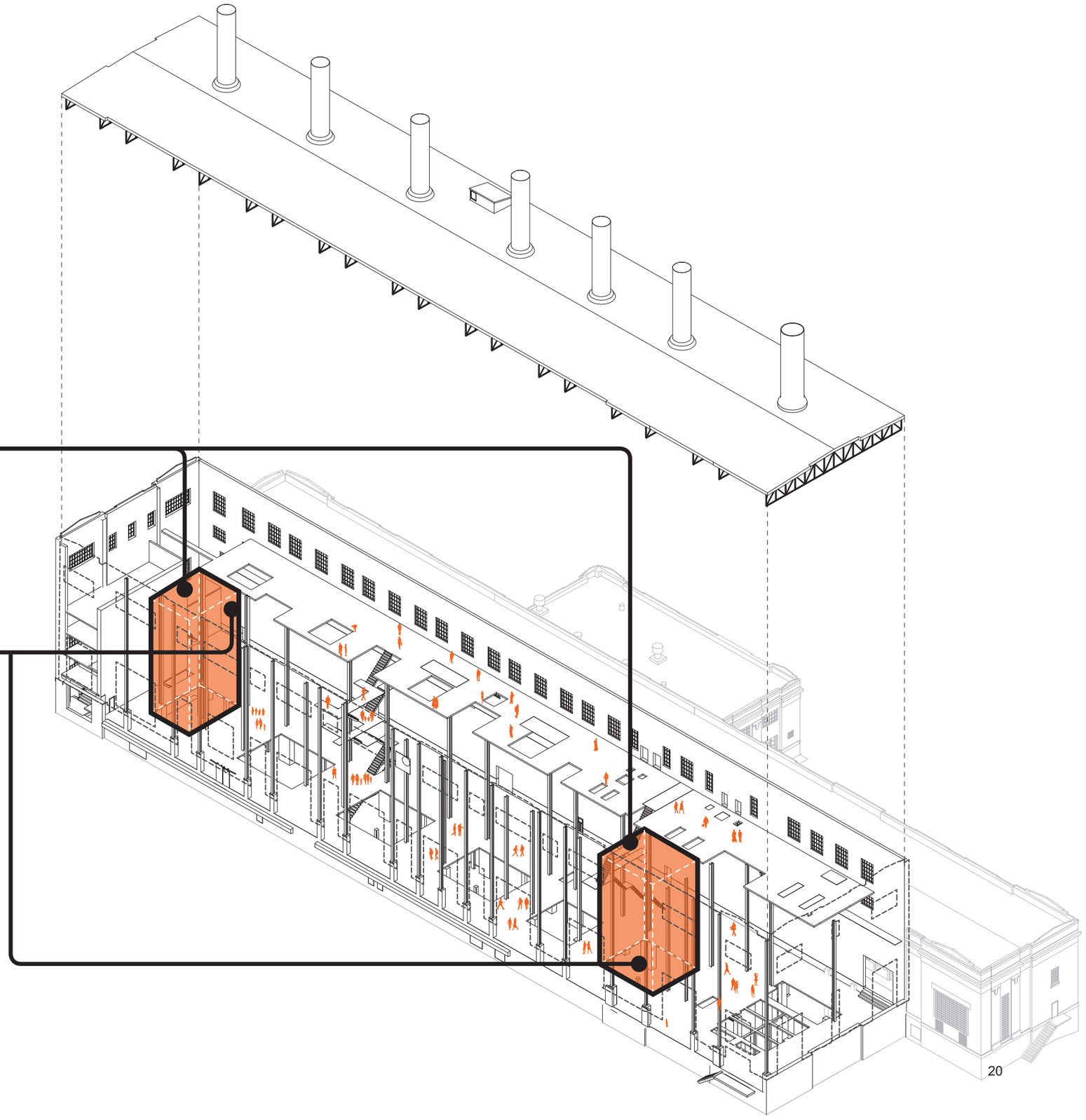
Boiler Hall
Vertical Connections

Elevators

The integration of elevating devices should capitalize on existing openings and void spaces to minimize negative impacts to existing heritage fabric. In the Boiler Hall, this strategy could take advantage of one or more ‘boiler voids’ to accommodate vertical circulation.

Stairs

Like the elevators, stairs intended for convenience circulation could be integrated into existing multi-storey void spaces.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

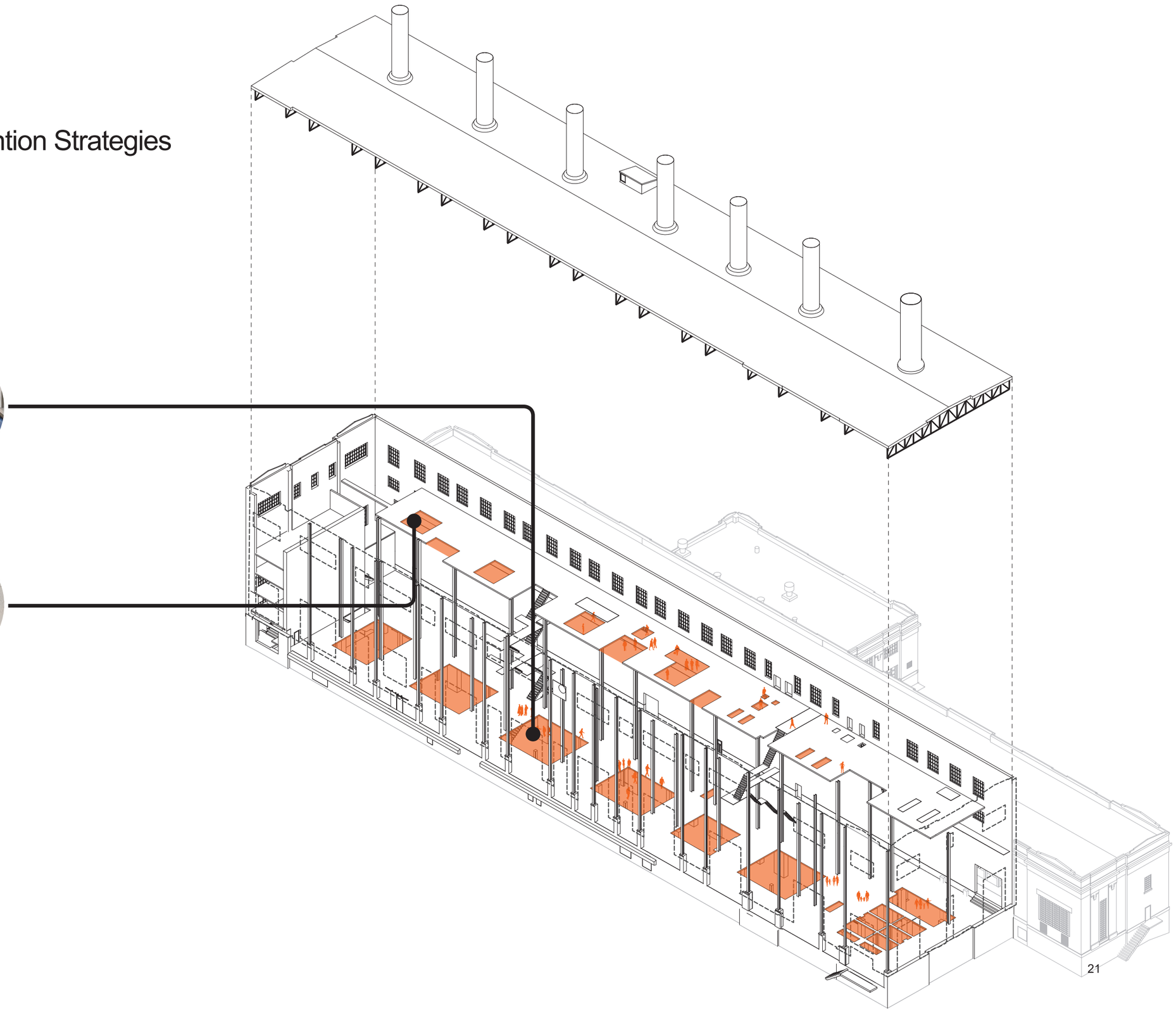
Boiler Hall
Horizontal Infill

Visually Permeable Infill

The built voids in the Boiler Hall (and elsewhere) are central to the interpretive narrative of industrial function of the Power Plant. In instances where these voids need to be covered for programmatic or Code reasons, a translucent or transparent infill maintains their presence in the space.

Visually Impermeable Infill

In instances where a visually permeable floor infill is impractical or undesirable, the approach to solid infill should maintain the visual presence of the original void space to the greatest extent possible.



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Scope Definition
Rehabilitation/Reuse Intervention Strategies

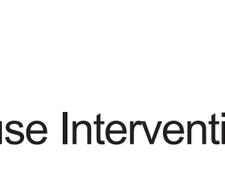
Boiler Hall
Programming and Occupation

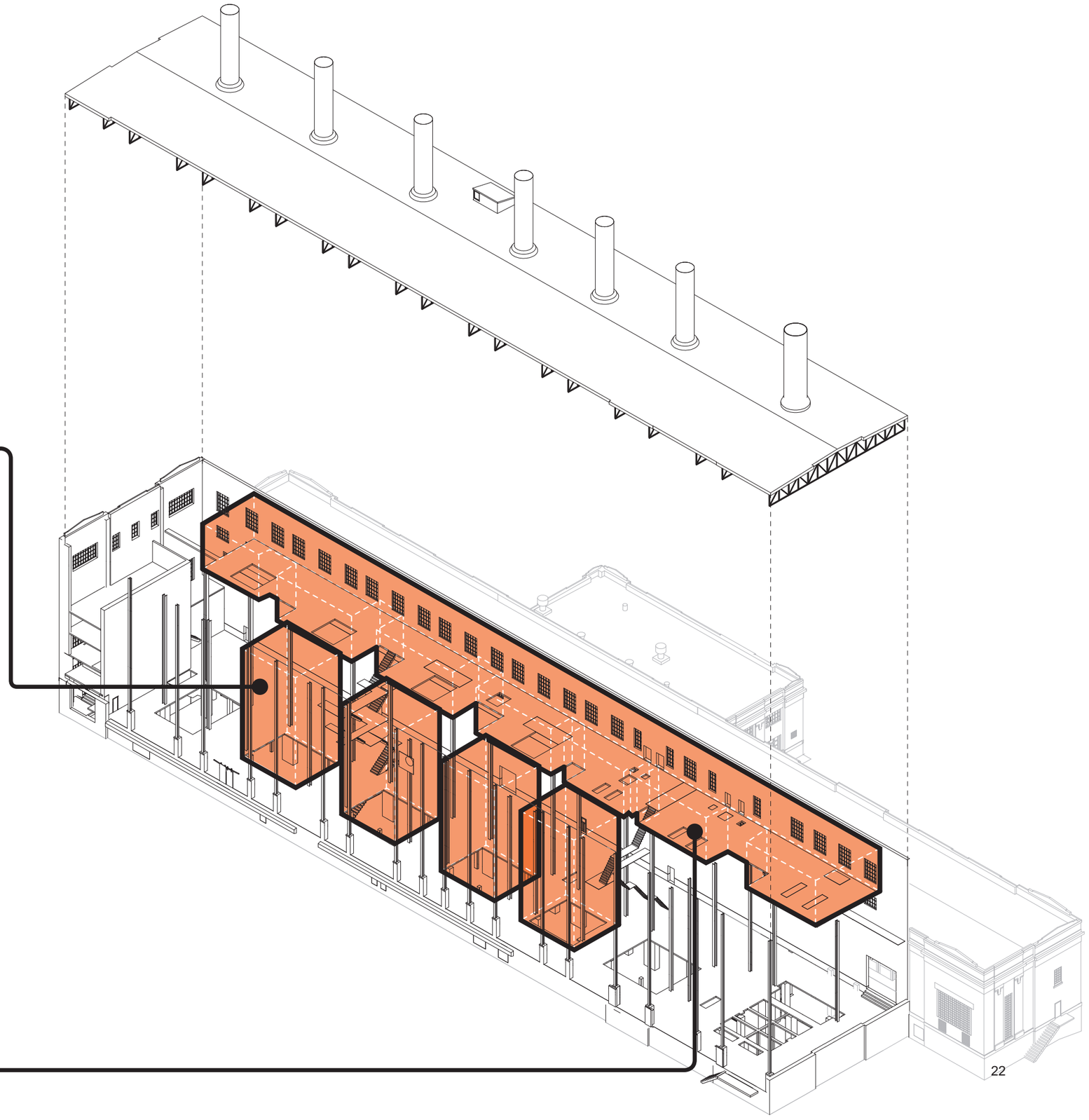
Reoccupation Infill

This strategy for re-inhabiting the monumental industrial spaces of the LPP uses the existing architectural and structural order to establish a logic of reuse. In this example the structural frames that supported the boilers are re-imagined as the foundation for new programmatic and service ‘blocks’.

Adjunct Infill

As a complementary alternative to the re-occupation of existing ‘implied spaces’, this approach to programming introduces discrete, autonomous program elements that fit within the broader shell of the existing building.





RPP AAPR
Scope Definition
Spatial Characteristics and Character Defining Elements

Pump House #1

RPP AAPR
Scope Definition
Spatial Characteristics and Character Defining Elements

Pump House #1
Spatial Characteristics

The interior volume of Pump House #1 is defined by the large amount of relict equipment contained within its main operating floor and four lower level floors. The open and interconnected nature of its floor levels and the amount of intact equipment they house gives it particular significance as an interpretive experience, particularly when compared with other spaces within the Plant where original equipment has largely been removed.

Character Defining Elements

01 Form, scale and massing of the one-storey reinforced concrete 'T' shaped structure with cast-in-place concrete construction; - lower chambers, catwalks and levels to a depth of over fifty (50) feet below grade;

02 Material choices and detailing such as fiber board insulation (some ashlar in form) and edge laid 2x4 Douglas-fir roof decking, multi-light rolled steel windows, Douglas fir door, and the use of symmetrically cut and planned plywood formed concrete above grade rather than board formed;

03 Extant mechanical systems such as: Pump engines, centrifugal pumps & pump shafts, traveling water screen, water intake valves and pipes, and gantry;

04 Text on walls, ceilings, and floors that relate to industrial functioning, including historical graffiti;

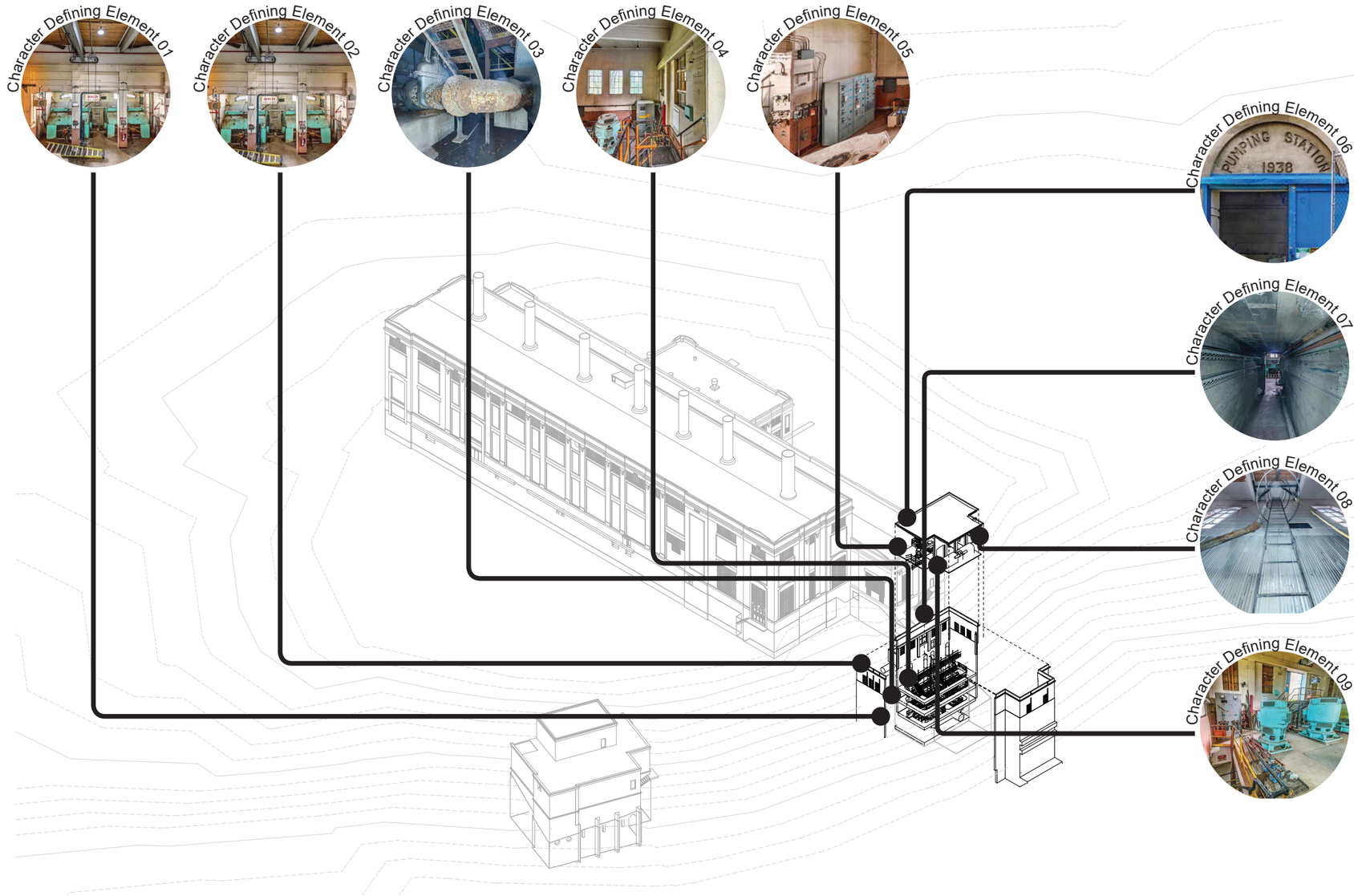
05 Extant electrical control equipment;

06 Exterior elements such as formed lettering and extant pipes;

07 Connecting tunnel to the Low Pressure Plant; - interpretation of classical forms, including cornice and pediment;

08 Access hatches & ladders;

09 Layers of colours and decorative and industrial schemes used throughout the site, including layer of colour of doors over time that are representative of different periods of colours used by Edmonton Power.



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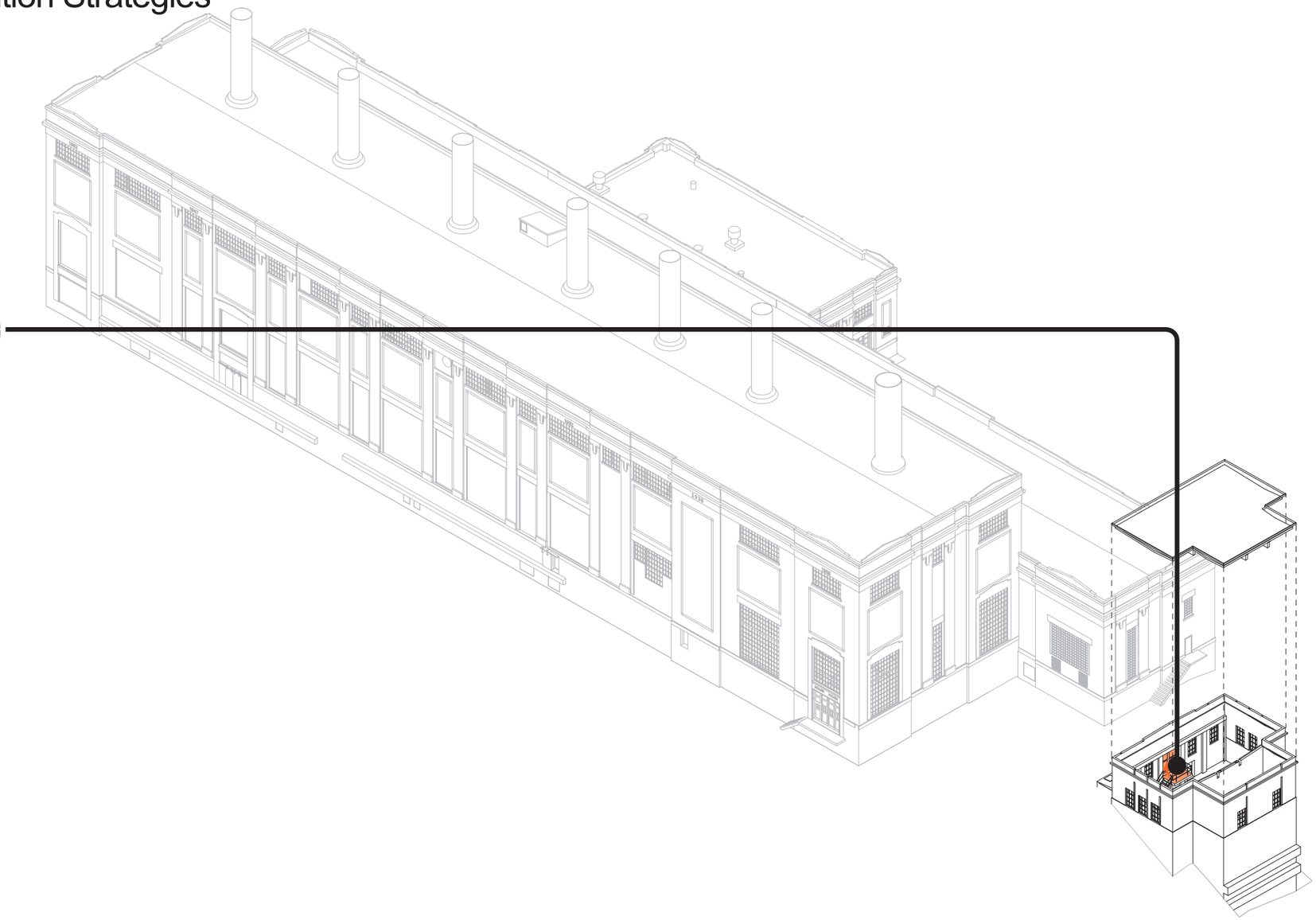
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #1
Horizontal Connections

Enhanced Accessibility

Introducing ramp access to Pump House #1's main operating floor would make the space universally accessible for any interpretive program included on the main level.

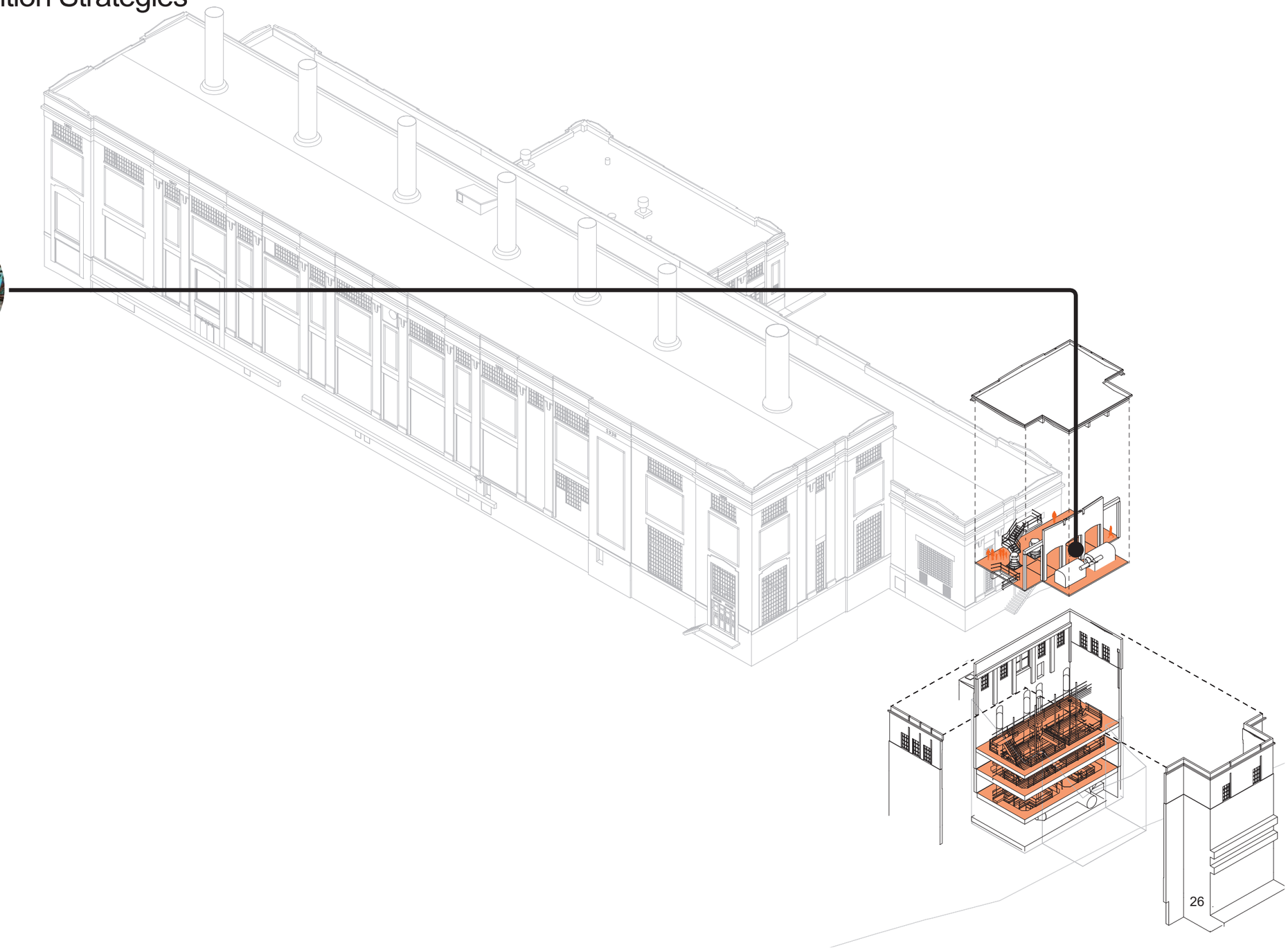


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #1
Programming and Occupation

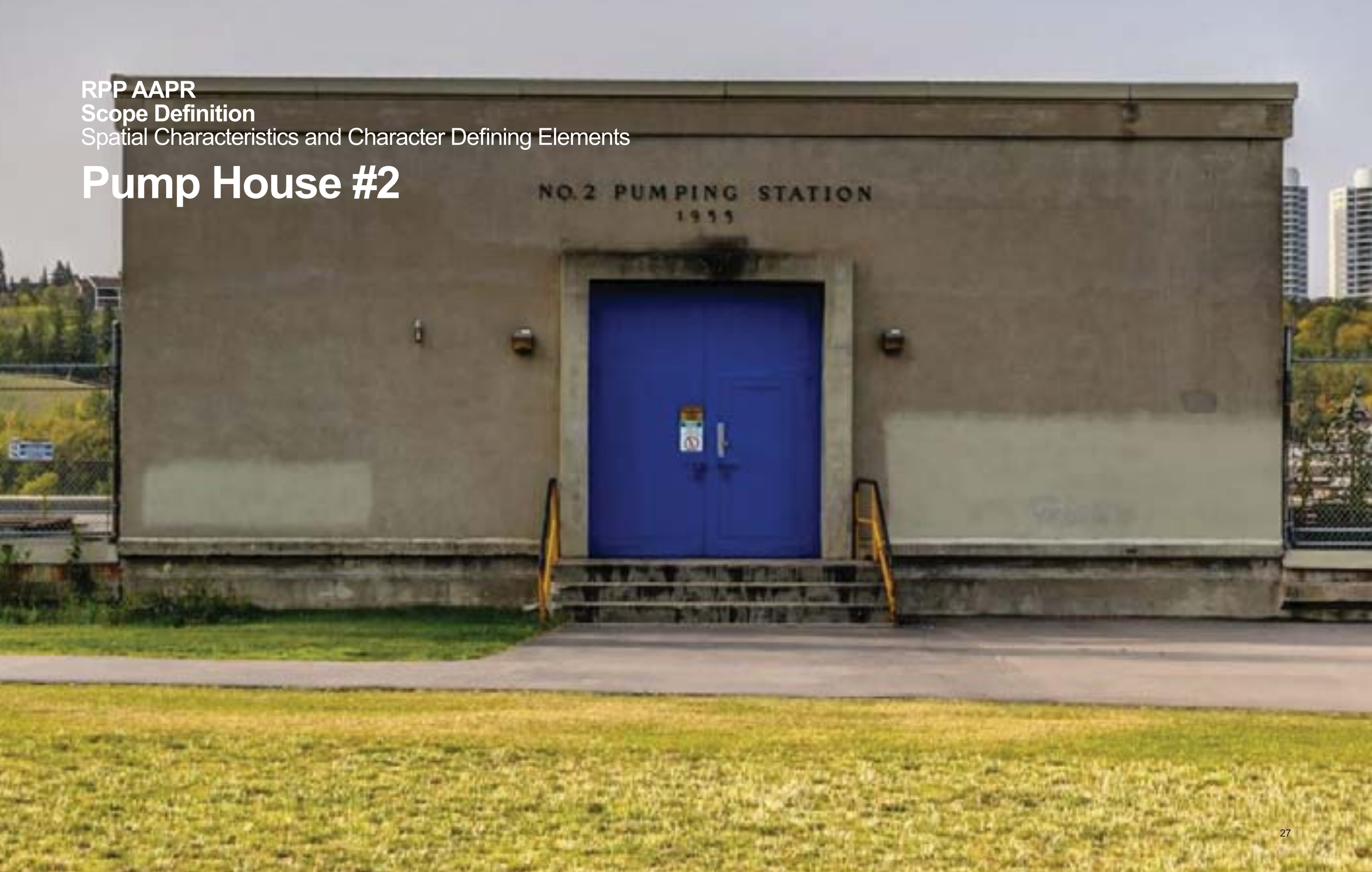
Reoccupation Infill

The large amount of extant relict equipment and machinery still present in Pump House #1 makes the building an invaluable interpretive resource for the broader site, particularly as it relates to the Power Plant's industrial past. The open and interconnected nature of the Pump House's lower levels - which were central to its industrial function - make reoccupation of those levels challenging without fundamentally altering the character of the space. Instead, a use focused more on inhabiting the existing building 'as-is' (such as an interpretive centre or museum), and one limited to the main operating floor, would best protect the existing heritage fabric.



RPP AAPR
Scope Definition
Spatial Characteristics and Character Defining Elements

Pump House #2



RPP AAPR
Scope Definition
Spatial Characteristics and Character Defining Elements

Pump House #2
Spatial Characteristics

Pump House #2's direct connection to the water makes it a unique feature within the campus of buildings that together constitute the Rossdale Power Plant and helps to articulate the ways in which the different elements of the Plant worked together and with the broader site to generate the electricity that powered Edmonton for decades.

While much of Pump House #2's original equipment has been removed, its lower level catwalks, piping, pump pedestals, access hatches, and operating equipment recall and reinforce its industrial past.

Character Defining Elements

01 Form, scale and massing of the one-storey reinforced concrete 'T' shaped structure, penthouse control room, and all cast-in-place concrete construction;

02 Lower chambers, catwalks and levels to a depth of over fifty (50) feet below grade;

03 Exterior elements such as aluminum lettering and extant pipes, staircase and rails, water intakes, and sluice gates;

04 Text on walls, ceilings, and floors that relate to industrial functioning, including historical graffiti;

05 Extant electrical control equipment;

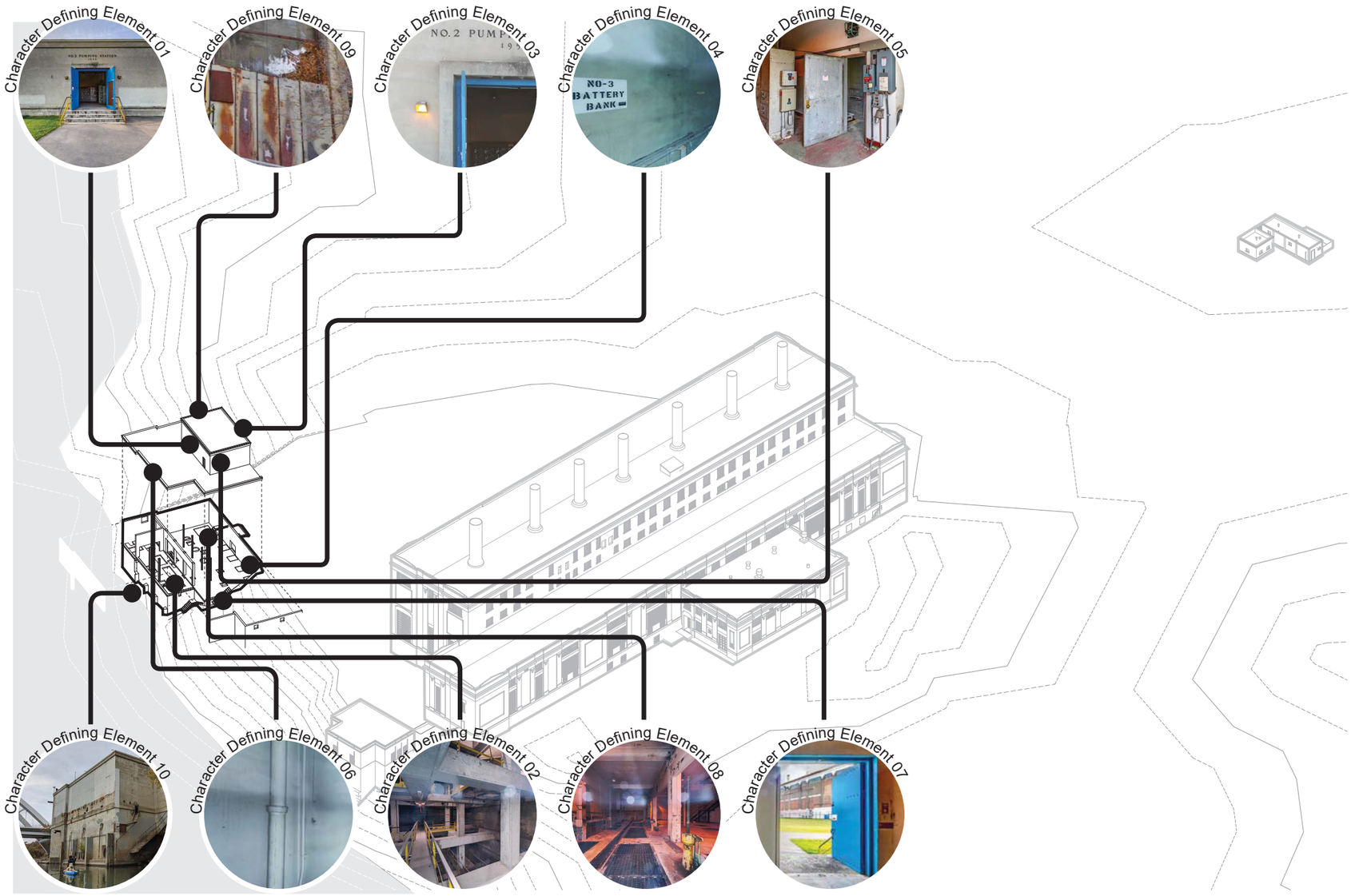
06 Internal cast-iron rain leaders;

07 Layers of colours and decorative and industrial schemes used throughout the site, including layer of colour of doors over time that are representative of different periods of colours used by Edmonton Power;

08 Extant mechanical systems such as: gantry, machinery access hatches, water intake valves, pipes, pump engine location, operating floor canal drainage, and pump pedestals;

09 Access hatches;

10 Physical connection to the water.

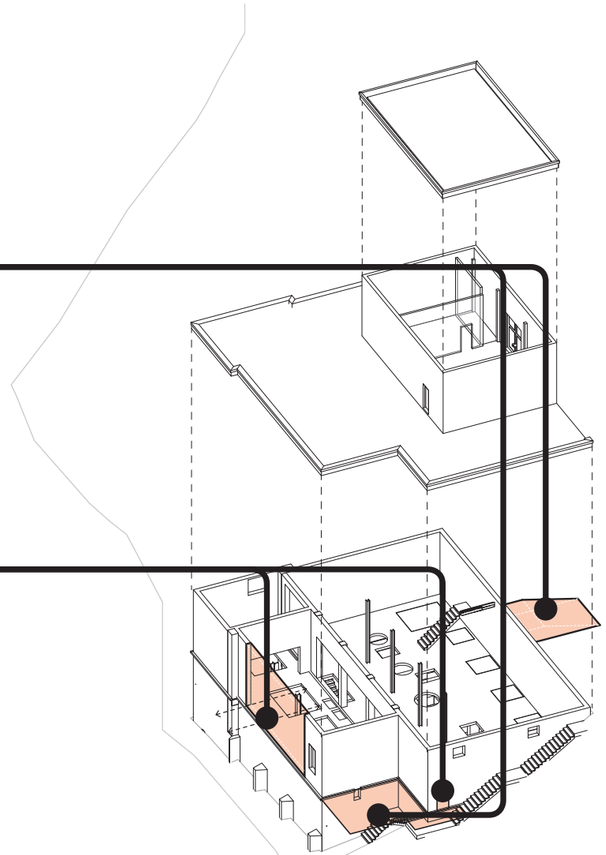


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #2
Horizontal Connections

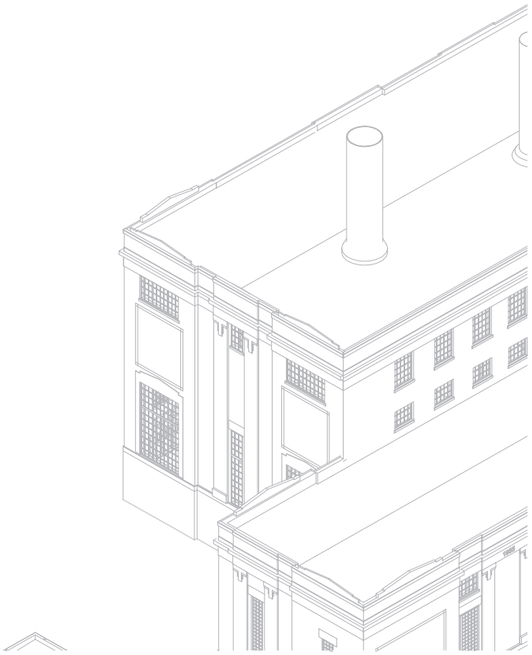
Enhanced Accessibility

Introducing ramp access to Pump House #2's penthouse level floor and the roof of the main operating floor would make both spaces universally accessible - a critical requirement of the reuse of both spaces.



Exterior Connections

Strategic erosions to the existing envelope would help connect the Pump House visually to the North Saskatchewan River, bring natural light into the main operating floor, and allow the main operating floor to connect with 'Touch the Water' as a distinct 'address' on its promenade without the need for elevator connections through the penthouse.

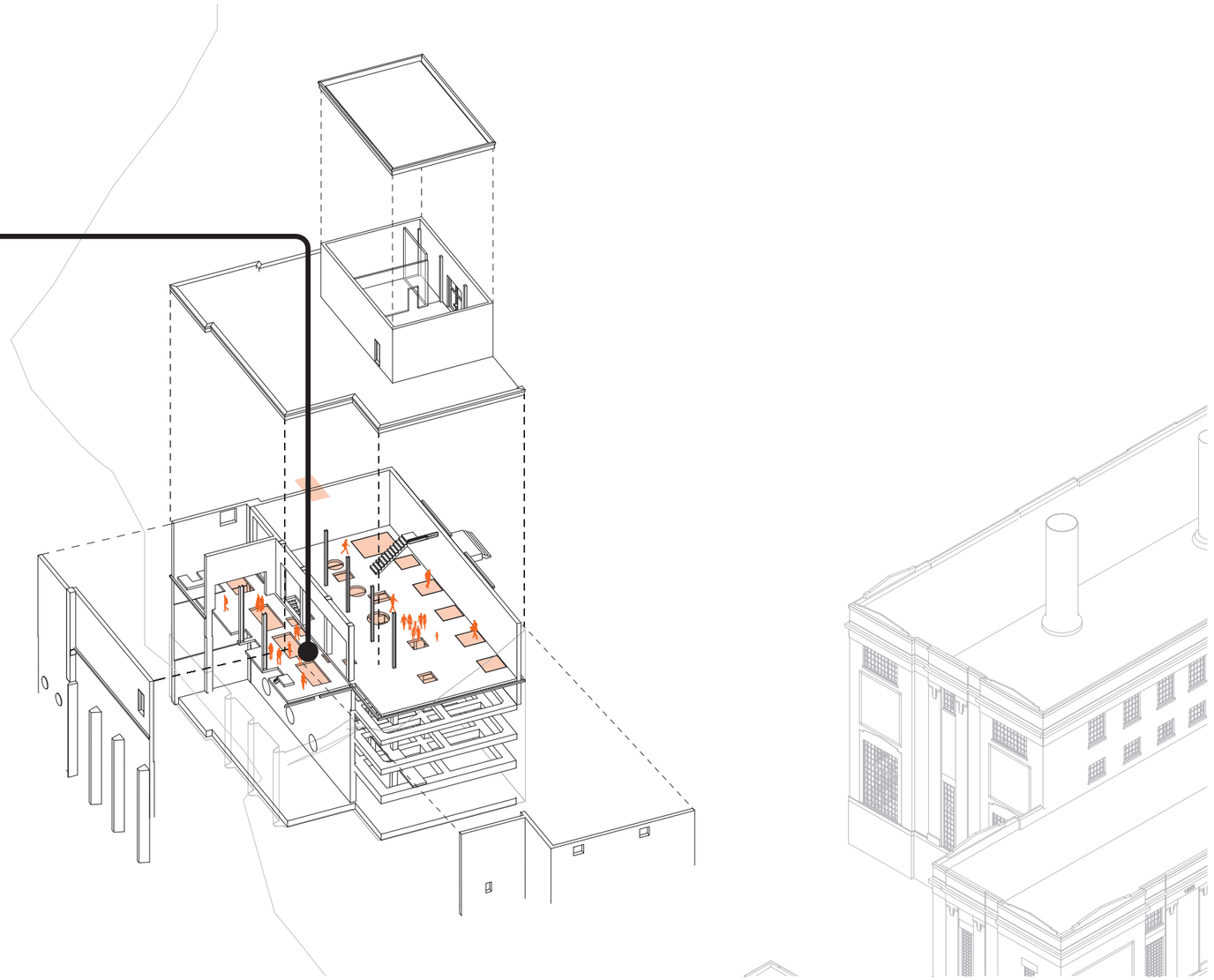


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #2
Horizontal Infill

Visually Permeable Infill

The built voids in the floor of Pump House #2 (and elsewhere) are central to the interpretive narrative of industrial function of the Power Plant. In instances where these voids need to be covered for programmatic or Code reasons, maintaining their visual presence through a translucent or transparent infill maintains their interpretive value in the space while offering new programming and occupation possibilities.

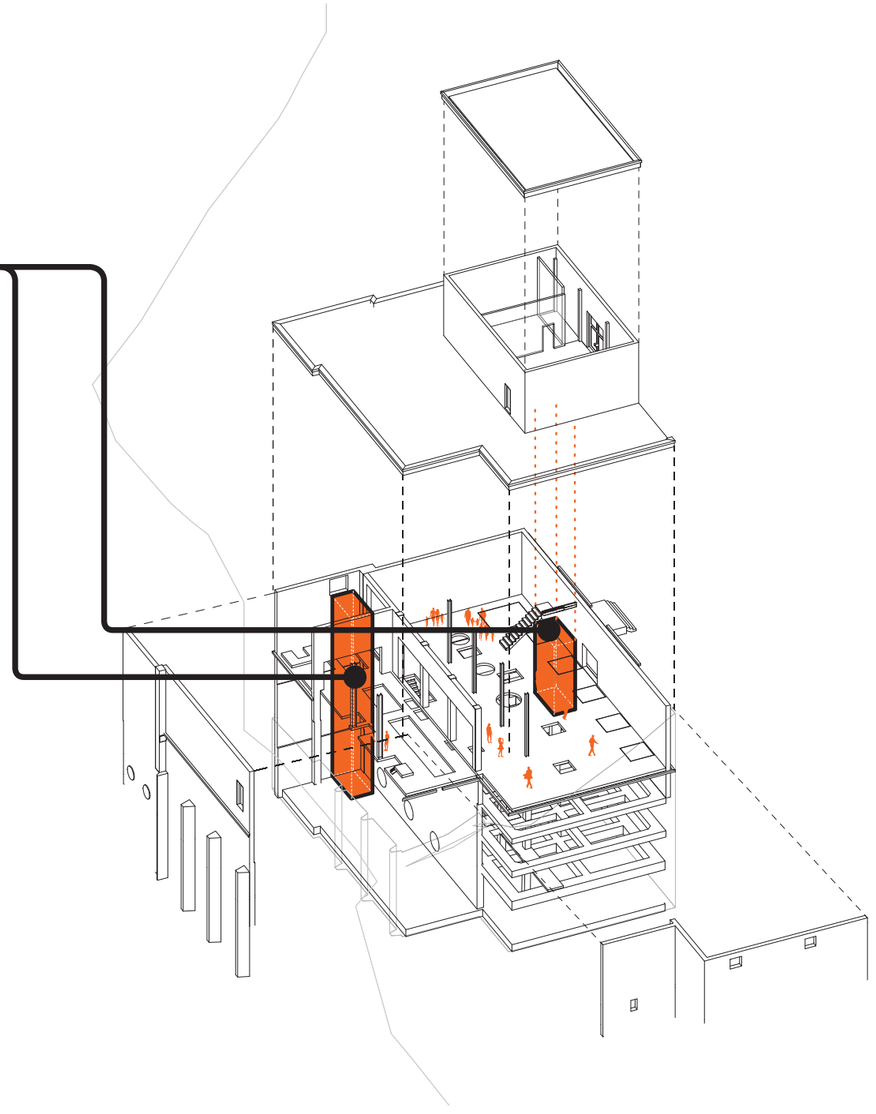


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #2
Vertical Connections

Elevators

The integration of elevating devices should capitalize on existing openings and void spaces to minimize negative impacts to existing heritage fabric. In Pump House #2, this strategy could take advantage of one or more of the voids created by the removal of relict equipment to accommodate vertical circulation.

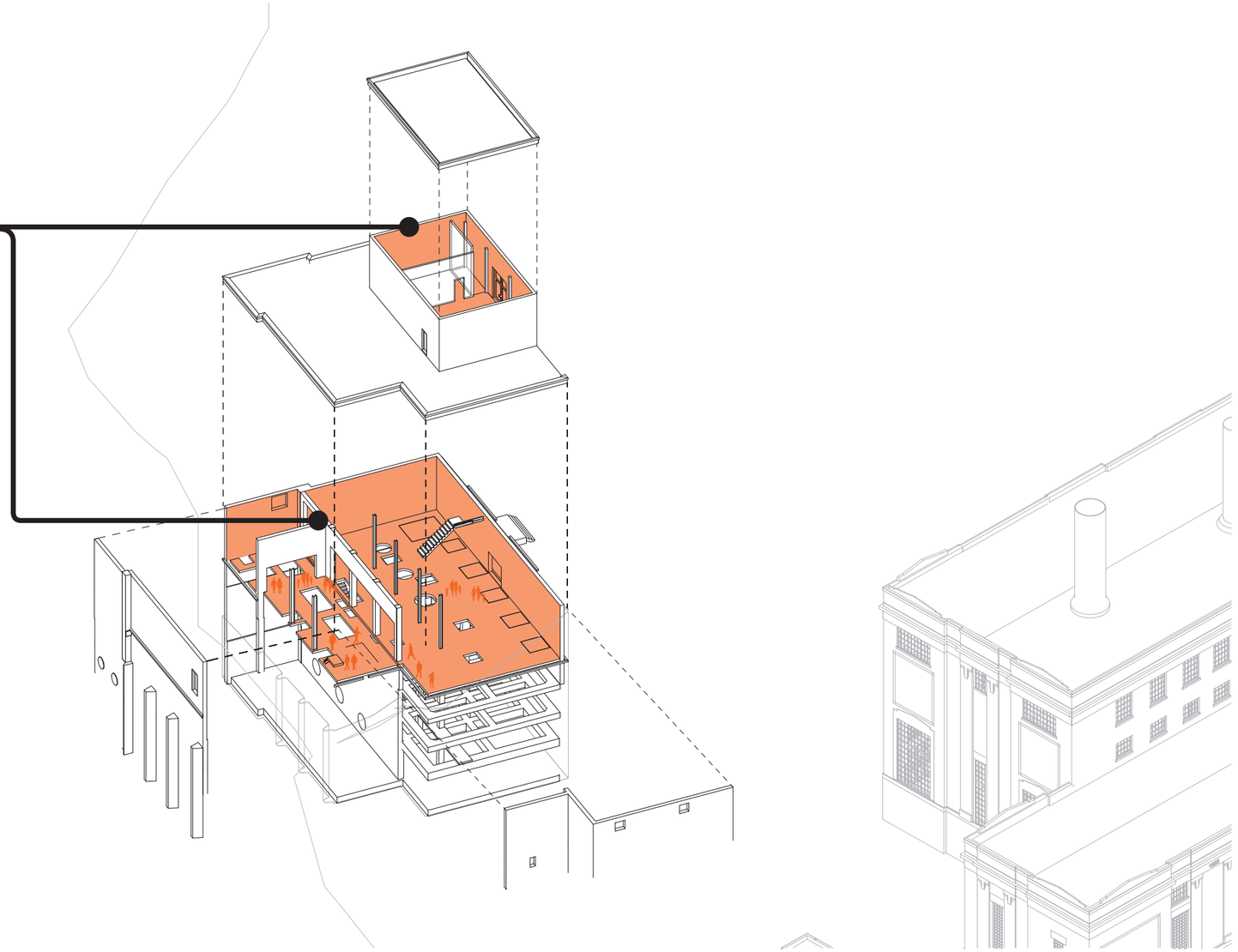


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

Pump House #2
Programming and Reoccupation

Reoccupation Infill

Unlike the larger, monumental spaces of the Low Pressure Plant, the scale and character of both the penthouse and main operating floor of Pump House #2 lend themselves to direct reoccupation, rather than reoccupation through the insertion of new, discrete program ‘objects’.



RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

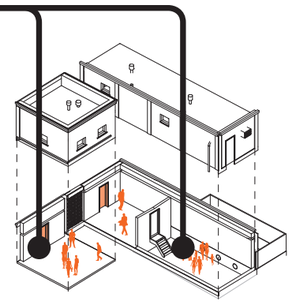
ATCO Gas Building

RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

ATCO Gas Building
Horizontal Connections

Enhanced Accessibility

Introducing ramp access to the ATCO Gas Building's main existing varied floor elevations would make the space universally accessible for a range of potential uses.

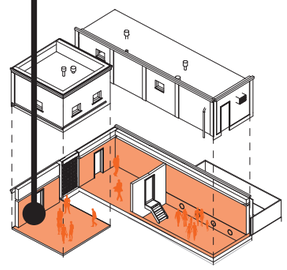


RPP AAPR
Scope Definition
Rehabilitation/Reuse Intervention Strategies

ATCO Gas Building
Programming and Reoccupation

Reoccupation Infill

The straightforward and robust construction of the ATCO Gas Building, coupled with with its modest scale make it a good candidate for a reoccupation strategy that works with its existing layout and materiality, but introduces new amenities and finishes where needed.



RPP AAPR
Scope Definition

Precedent & Programming Studies

Precedent Analysis
Performance Space

Berghain Night Club
Berlin, GER

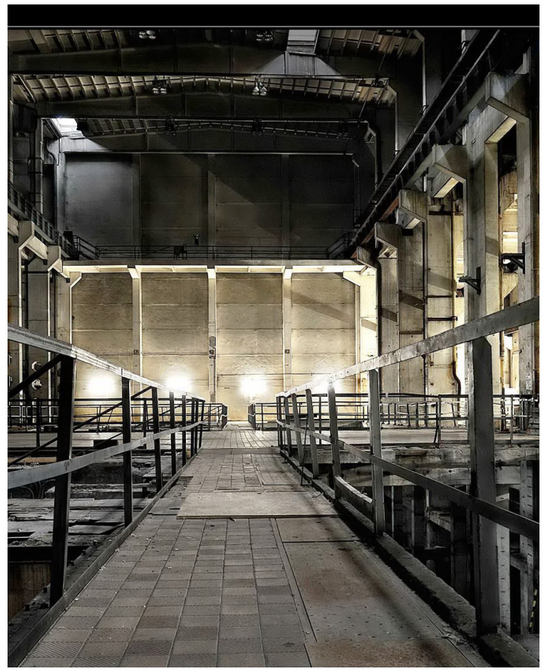
Summary
- club / performance space located in Berlin
- housed in a former power plant built in 1953 and abandoned in the 1980s

Adaptive Re-use Program
- dance club
- performance spaces
- art installations
- record label

Activation & Duration
- Permanent use
- Event-based, short-term use
- Temporary functions
- Primarily weekends

Relevance
- industrial heritage
- caters to younger crowds
- offers alternative programming and uses

Lessons Applied to Rossdale
- demonstrates ability of alternative programming to bring in people who might otherwise not feel connection to building
- good use of spatial dimensions to reinforce program and intended uses



Precedent Analysis
Art Gallery

Tate Modern
London, England

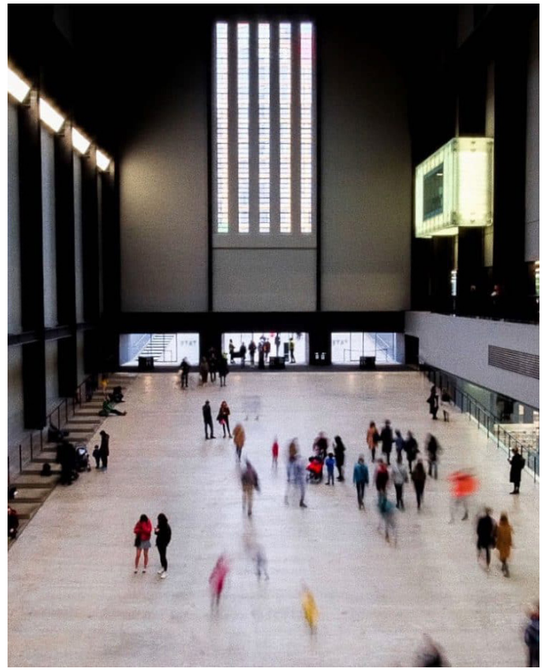
Summary
- located in former Bankside Power Station
- modern/contemporary art gallery, opened in 2000
- public-private funding: £195M ($332.3M CAD) funding from the national lottery, local development agencies and the Arts Council
- initial conversion project was such a success that a new extension and additional development of previously non-converted spaces in the existing building were completed between 2004-2016

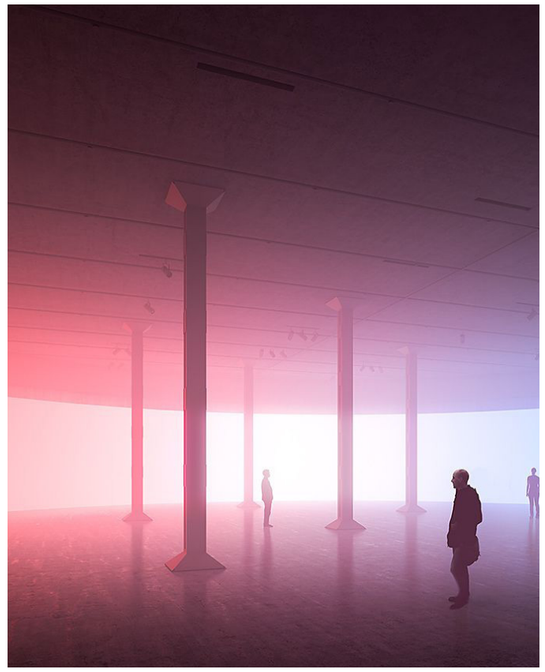
Relevance
- industrial heritage, part of national industrial landscape
- connection to waterfront
- similar structure and configuration:
    - turbine hall
    - boiler hall
    - switch house

Adaptive Re-use Program
- art galleries
- gift shop
- food services
- event space rentals

Activation & Duration
- Permanent use
- Event-based, short-term use
- International events

Lessons Applied to Rossdale
- phased development and rehabilitation of spaces
- protection, celebration and education of industrial heritage
- industrial location could become icon of 21st century city instead of ossuary to the past
- combination of public outreach and fundraising with government funding and substantial private investment





Precedent Analysis
Event Spaces

Hearn Power Station
Toronto, ON

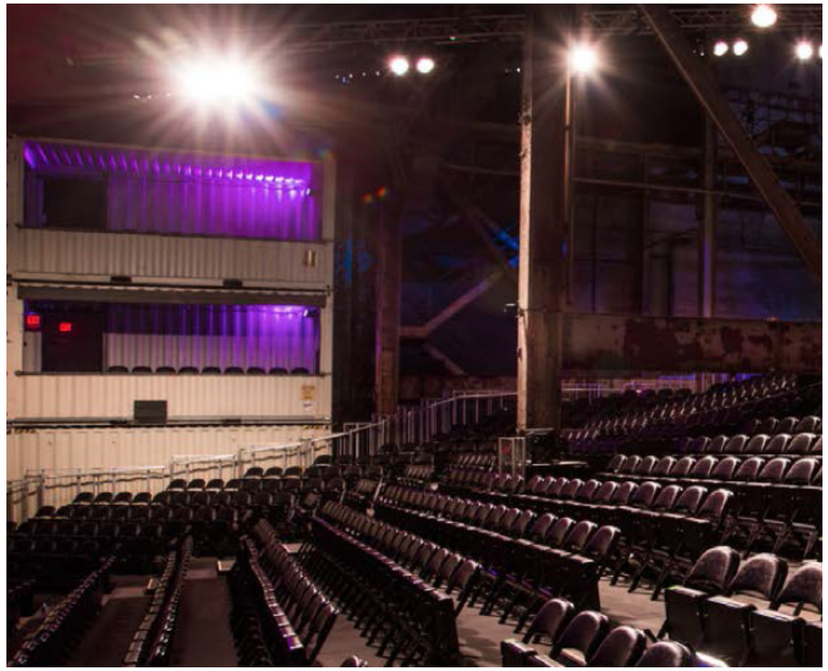
Summary
- decommissioned electrical generating station (coal/nat.gas)
- 40,000 sq.ft

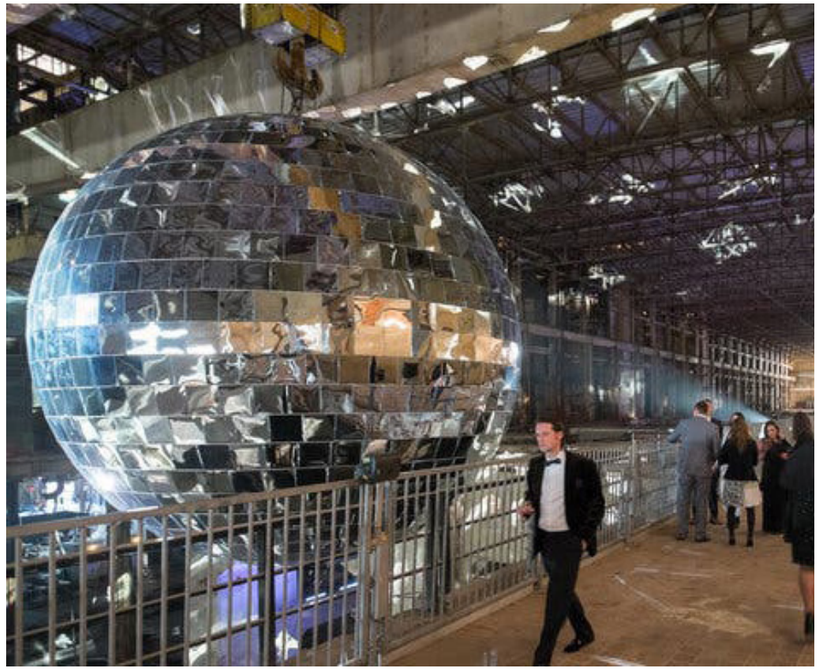
Relevance
- iconic infrastructure and well-known to city and residents
- similar industrial heritage
- connection to waterfront
- interest in site offered opportunity for open and inclusive programming that brings art and audiences together that might otherwise not engage with one another
- publicly accessible all year round and connects a new development to the waterfront while anchoring the city in its industrial heritage

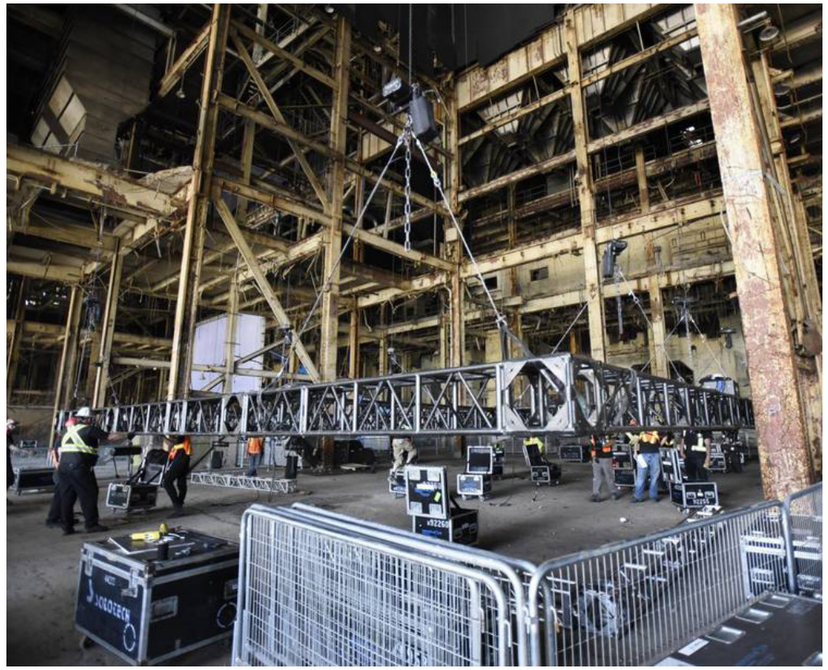
Adaptive Re-use Program
- Luminato Festival (2015)
- 2.5 week duration
- $2.5M public-private investment to create:
  - 3 performance spaces including a 1,200 seat theatre
  - beer garden
  - pop-up restaurant

Activation & Duration
- Event-based, short-term use

Lessons Applied to Rossdale
- Province's desire to generate profit from asset with minimal investment resulted in sale of site to US-based movie production company
- public investment is key so that the site does not remain under the influence of profit-driven and/or private development
- Hearn is too big for art gallery and too small for amusement park
  - Luminato became interested because size offered opportunity for open and inclusive programming that brings art and audiences together that might otherwise not engage with one another
- Event was a success - key question is how to make this initial excitement a permanent feature of the City's cultural landscape







Precedent Analysis
Museum / Heritage

Museum of Making
Derby, England

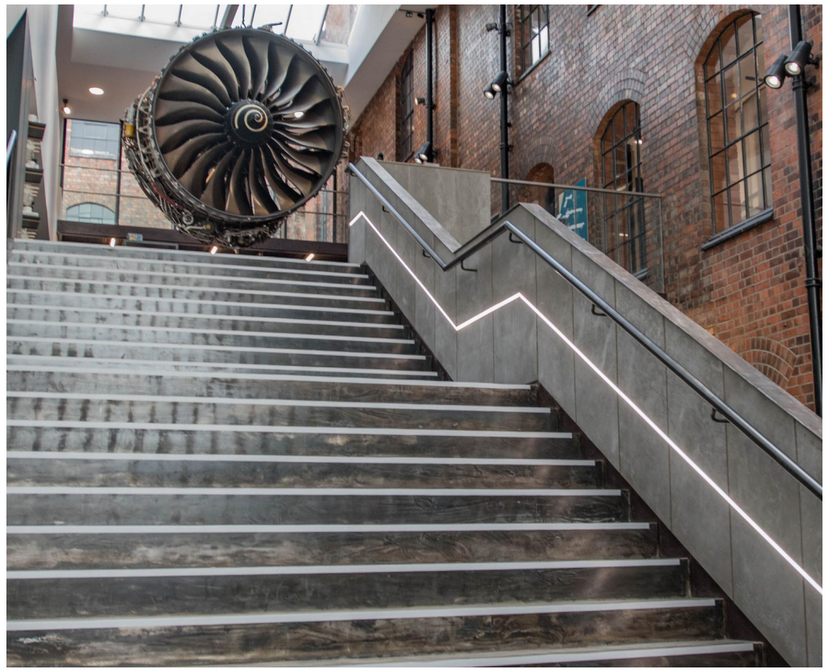
Summary
- opened in 1721, first fully mechanized factory in the world
- Began as silk mill, has been home to many different types of manufactured goods
- hub of education, production and innovation

Relevance
- iconic infrastructure and well-known to city and residents
- industrial heritage
- connection to waterfront
- public-private funding: £18M ($30.8M CAD) funding from the national lottery, local development agencies and the Arts Council

Adaptive Re-use Program
- interactive museum
- fully-equipped workshop
- restaurant, café
- co-working space
- floor for designers and craftspeople to sell their wares, providing a showcase of new Derbyshire talent

Activation & Duration
- Permanent use
- Event-based, short-term use
- Ongoing community use

Lessons Applied to Rossdale
- rethink museum as place for making rather than static display
- public investment is key so that the site does not remain under the influence of profit-driven and/or private development
- designed to be “making” history - celebrate heritage but also make the space interactive so that visitors become users
- community engagement is critical to success: program was developed through workshops and drop-in days to test curatorial methods and trial exhibition displays, creating a DIY museum with the help of more than 1,000 volunteers
- shift in tone: exhibitions discuss subjects such as the relationship of the industrial revolution to colonial exploitation, slavery, child labour and environmental destruction



Precedent Analysis
Museum / Heritage

Medalta Potteries
Medicine Hat, AB

Summary
- Canadian ceramics manufacturing company
- operated from 1916 to 1954
- first manufacturer in Western Canada to ship east of Ontario

Relevance
- industrial heritage, part of national industrial landscape connected by CPR and natural gas industry
- connection to natural resources
- National Historic Site

Adaptive Re-use Program
- museum
- galleries (7)
- artist facilities, residencies and lodge
- gift shop
- event space rentals

Activation & Duration
- Permanent use
- Event-based, short-term use
- Ongoing community use

Lessons Applied to Rossdale
- integration of preservation and active use programs
- protection, celebration and education of industrial heritage
- cultural and economic importance to surrounding communities
- Medalta is run as a heritage organization
  - “Heritage is the context for all that happens at Medalta. By leveraging our past we are able to create our shared future.”
- combination of public outreach and fundraising with government funding
- designed to be “making” history - celebrate heritage but also turn the site into a thriving artist community

Precedent Analysis
Exterior / Site Events

Summary
- Distillery District (Toronto, ON)
  - commercial / residential, original rehabilitation occupied the site and buildings of the Gooderham & Worts Distillery
  - 40+ heritage buildings and 10 streets; largest collection of Victorian-era industrial architecture in NA
- Studio East Dining (London, England)
  - 800 m² temporary pavilion of interlocking timber-lined rooms covered with translucent fabric roofs
  - 3-week event
  - lightweight structure was designed + built in 10 weeks
  - all materials 100% recyclable

Relevance
- outdoor experiences
- community-oriented
- capacity to hold events that cater to many different interests
- diversity of programs, users
- possibility for low-cost events for operators and patrons

Adaptive Re-use Program
- temporary gathering spaces
- temporary dining / food service
- event space rentals

Activation & Duration
- Short-term use
- Ongoing community use

Lessons Applied to Rossdale
- ability to attract many different types of people with many different types of interests
- promotes outdoor activities, something that is very much at the top of people's minds following the Covid-19 Pandemic
- engage whole site
- showcases connections to surrounding landscape, public amenities and other such features

Large-gathering Multipurpose Events
Distillery District Toronto, ON


Outdoor Dining
Studio East Dining London, England

Pedestrian Streets & Outdoor Dining
Distillery District Toronto, ON


Outdoor Movie Nights

Precedent Analysis
Tech Spaces

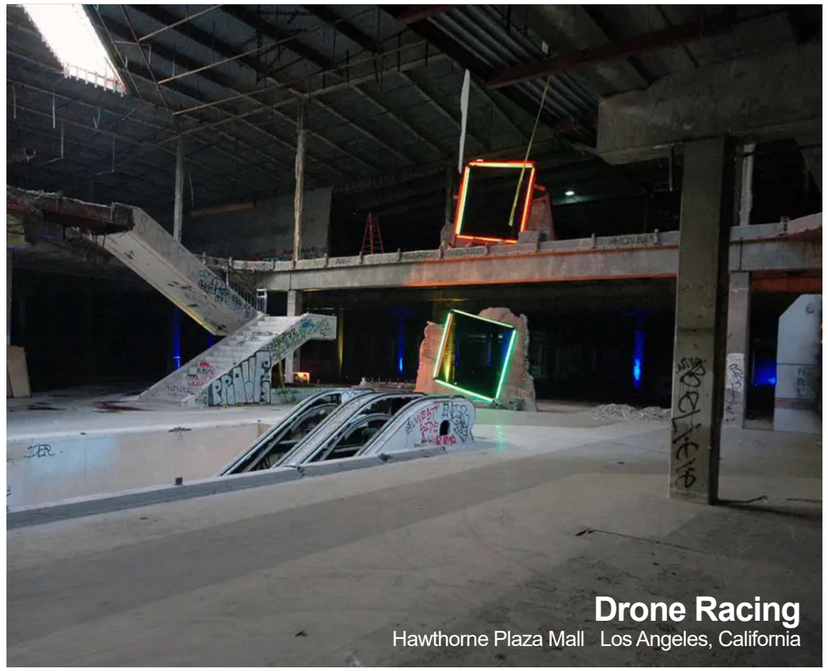
Summary
- Hawthorne Plaza Mall (LA, California)
  - abandoned mall in LA
  - hosts temporary infrastructure for drone racing
- RDM Rotterdam (Rotterdam, NL)
  - innovation showcase in the Rotterdam port area
  - collaboration between Rotterdam University of Applied Sciences and the Rotterdam Port Authority
- New Lab (Brooklyn, NY)
  - launched in 2016, flagship location in the Brooklyn Navy Yard dates
  - original building dates from 1902 and served as the primary machine shop for every major ship launched during
    World Wars I and II
  - return building to relevance by championing entrepreneurship, innovation, and frontier technologies that transform infrastructure and build a more resilient, sustainable world

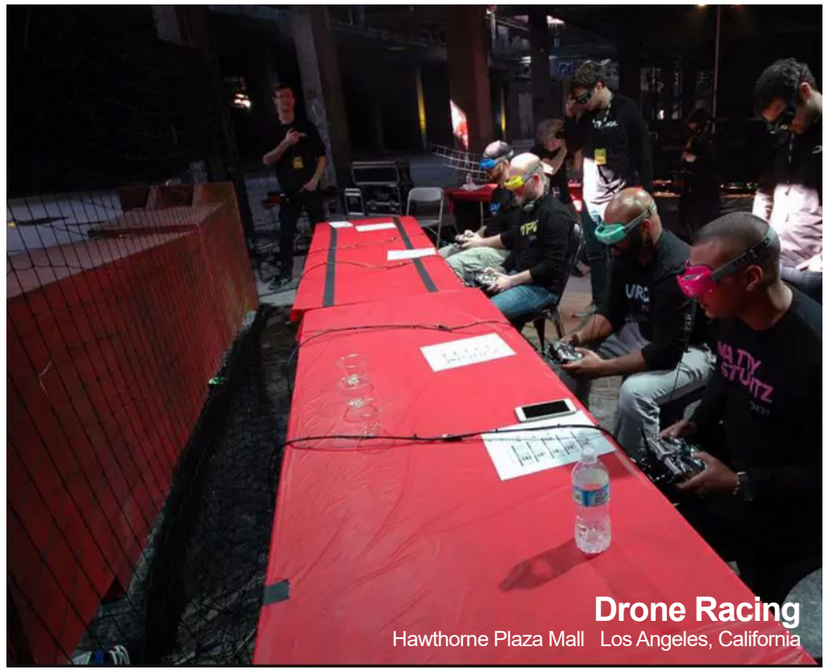
Relevance
- industrial heritage
- connection to energy industry
- connections to waterfront
- diversity of programs, users

Adaptive Re-use Program
- offices
- various studio spaces
- fabrication facilities
- food service
- event space rentals

Activation & Duration
- Permanent use
- Short-term use
- Ongoing community use

Lessons Applied to Rossdale
- integration of preservation and active use programs
- promotes industrial heritage as innovation precedent
- industrial spaces of similar scale suitable to rehabilitated fabrication spaces and studio environments
- flexible interior design to accommodate changing needs to meet user requirements





Precedent Analysis
Children-Focused Spaces

Summary
- Manitoba Children's Museum
  - occupies the oldest surviving train repair facility in Western Canada (est. 1889)
  - features twelve permanent educational galleries that entertain and educate
- Saskatchewan Science Centre
  - interactive science museum complete with IMAX theatre
  - owned + operated as non-profit charitable organization
  - located in former power plant in Wascana Centre

Adaptive Re-use Program
- science centre
- museum spaces
- interactive exhibits
- outdoor spaces
- food service
- event space rentals

Relevance
- industrial heritage
- connection to energy industry
- connections to waterfront
- public-private funding for initial capital and ongoing operations

Activation & Duration
- Permanent use
- Short-term use
- Ongoing community use

Lessons Applied to Rossdale
- demonstrates that children-centred programs should be important components of RPP due to its central importance to the City of Edmonton
- use of adjacent outdoor spaces to access larger site is key

Children's Museum
Manitoba Children's Museum Winnipeg, MB

Science Centre and Park
Saskatchewan Science Centre Regina, SK

Precedent Analysis
Market Spaces

Granville Island Public Market
Vancouver, BC

Summary
- peninsula originally used by First Nations as a fishing area
- 1915-23: land reclamation project created Granville Island that would become a major industrial manufacturing area
- 1975: begins transformation into public spaces and rehabilitation of industrial buildings into artistic and cultural hub
- Operationally self-sustaining, home to more than 300 businesses and over 3,000 employees

Relevance
- industrial heritage, part of national industrial landscape
- site of First Nations
- connection to waterfront
- conversion into multi-use programs and functions

Adaptive Re-use Program
- galleries
- shops
- public markets
- business spaces
- outdoor public spaces
- cultural venue for year-round performing arts / cultural festivals

Activation & Duration
- Permanent use
- Seasonal
- Tourist-oriented destination-based programs
- Ongoing community use

Lessons Applied to Rossdale
- protection, celebration and education of industrial heritage
- cultural and economic importance to surrounding communities
- self-sustaining operation without ongoing government funding
- designed to be “making” history - celebrate heritage but also turn the site into a thriving artist community
- required federal funding and oversight through the CMHC for initial development; provided development framework for ensuing private investment to protect character and ethos
- strong emphasis on First Nations history and ongoing presence / guiding authority in life of Granville Island

Precedent Analysis
Café / Restaurant Spaces

Distillery District
Toronto, ON

Summary
- 5.3 ha commercial / residential district home to many cafés, restaurants and shops
- original rehabilitation occupied the site and buildings of the Gooderham & Worts Distillery
- 40+ heritage buildings and 10 streets; largest collection of Victorian-era industrial architecture in NA

Relevance
- industrial heritage, part of national industrial landscape connected by CPR
- connection to waterfront
- conversion into multi-use programs and functions for cultural events, public spaces, etc. alongside residential and commercial developments to create self-sustaining community

Adaptive Re-use Program
- galleries
- shops
- public markets
- business spaces
- outdoor public spaces
- cultural venue for year-round performing arts / cultural festivals
- breweries
- performance theaters

Activation & Duration
- Permanent use
- Seasonal
- Tourist-oriented destination-based programs
- Ongoing community use

Lessons Applied to Rossdale
- protection, celebration and education of industrial heritage
- cultural and economic importance to surrounding communities
- self-sustaining operation without ongoing government funding
- thriving artistic community
- good mix of permanent uses alongside temporary operations to create steady stream of visitors and patrons punctuated by signature events and gatherings
- pedestrian-oriented development
- located outside city core but maintains wide variety of access through pedestrian routes, public transportation and private vehicules

RPP AAPR
Scope Definition
Program Capacities and Opportunities

Program Types	Possible Program / Occupancy Category		Space Requirements / Considerations	Area Per Person (m^2)	Area Required for General Occupant Loads					
					20	50	100	200	500	1000
Performance Spaces	Theatre	A1	Stage Seating Lighting rigging Concealed backstage area Ability to control sound/light pollution Storage Loading access	0.75	15m^2	38m^2	75m^2	150m^2	375m^2	750m^2
	Performing Arts Space	A1	Stage Seating Lighting rigging Concealed backstage area Ability to control sound/light pollution Storage Loading access	0.75	15m^2	38m^2	75m^2	150m^2	375m^2	750m^2
	Lecture Space / Auditorium	A2	Seating Stage Lighting/screen rigging	1.00	20m^2	50m^2	100m^2	200m^2	500m^2	100m^2
Display Spaces	Art Gallery / Museum	A2	Lighting Suspension structures Humidity control Display surfaces Daylight control Loading access	3.00	60m^2	150m^2	300m^2	600m^2	1500m^2	3000m^2
Food Service	Restaurant / Cafe	A2	Seating Kitchen Food storage Preparation area Loading access	3.00	60m^2	150m^2	300m^2	- -	- -	- -
	Bar / Pub	A2	Seating Kitchen Food storage Preparation area Loading access	3.00m^2	60m^2	150m^2	300m^2	- -	- -	- -
	Micro-Brewery / Micro Distillery	F2/F3	Fermentation tanks Bottling Fork lift access/loading access	4.60m^2	95m^2	230m^2	460m^2	- -	- -	- -

RPP AAPR
Scope Definition
Program Capacities and Opportunities

Program Types	Possible Program / Occupancy Category		Space Requirements / Considerations	Area Per Person (m^2)	Area Required for General Occupant Loads					
					50	50	100	200	500	1000
Work Spaces	School (Post Secondary)	A2	Lecture space Offices Classrooms Workspace	1.85	37m^2	93m^2	185m^2	370m^2	925m^2	1850m^2
	Offices	D	Acoustic/lighting considerations	9.30	186m^2	465m^2	930m^2	- -	- -	- -
	Radio Stations / Broadcast Studios	D	Acoustic considerations	4.60	92m^2	230m^2	460m^2	- -	- -	- -
	Workshop / Maker Space	F2/F3	Equipment size Ventilation Work surfaces Loading access	9.30	186m^2	465m^2	930m^2	- -	- -	- -
Event / Gathering Spaces	Market	E	Loading access/space Lighting	1.20	24m^2	60m^2	120m^2	240m^2	600m^2	1200m^2
	Shops / Stores	E	Loading access	3.70	74m^2	185m^2	370m^2	740m^2	1850m^2	3700m^2
	Exhibition Hall	E	Exiting width requirements Large, clear span, flexible spaces Acoustic considerations Loading access	0.75	15m^2	38m^2	75m^2	150m^2	375m^2	750m^2
	Event Hall	A2	Exiting width requirements Loading access Open, flexible spaces	0.40	8m^2	20m^2	40m^2	80m^2	200m^2	400m^2
Misc	Library	A2	Acoustic qualities Concealed storage and processing Stacks Seating/work space Front desk Office spaces	2.7	54m^2	135m^2	270m^2	540m^2	1350m^2	2700m^2

RPP AAPR
Scope Definition
Program/Space Compatibility

Power Plant Space	Occupancy Categories/Program Types: Theatre	Performing Arts Space	Art Gallery/Museum	Lecture Space/Auditorium	Library	Event Hall	Restaurant/Cafe	Bar/Pub	School (Post Secondary)	Studios	Market	Shops/Stores	Exhibition Hall	Radio Station/Broadcast Studio	Offices	Maker Space	Micro Brewery/Micro Distillery	District Energy Center
Switch House Basement			🟠🟢	🟠🟢			🟢	🟢	🟢					🟢	🟢	🟢	🟢	
Switch House Main Floor			🟠🟢	🟠🟢	🟢		🟢	🟢	🟢	🟢		🟢		🟢	🟢	🟢	🟢	
Switch House Second Floor			🟠🟢		🟢		🟢	🟢	🟢	🟢		🟢		🟢	🟢	🟢		
Turbine Hall Basement	🟢	🟠🟢	🟠🟢	🟠🟢		🟠🟢	🟢	🟢	🟢	🟢	🔴🟠🟢	🟢	🟠🟢			🟠🟢	🟢	🟢
Turbine Hall Main Floor			🟠🟢			🟠🟢					🟠🟢		🟠🟢					🟢
Boiler Hall Basement	🟢	🟠🟢	🟠🟢	🟠🟢		🟠🟢	🟢	🟢	🟢		🟠🟢	🟢	🟠🟢					🟢
Boiler Hall Main Floor	🟢	🔴🟠🟢	🔴🟠🟢	🔴🟠🟢		🔴🟠🟢	🟢	🟢	🟢	🟢	🟠🟢	🟢	🟠🟢		🟢			🟢
Boiler Hall Mezzanine/Second Floor	🟢	🟠🟢	🟠🟢	🟠🟢	🟢	🟠🟢	🟢	🟢	🟢	🟢		🟢	🟠🟢	🟢	🟢	🟢	🟢	🟢
Boiler Hall Ash Collection Tower			🟠🟢		🟢				🟢	🟢		🟢		🟢	🟢	🟢		
Pump House #1 Lower Levels			🟠🟢															
Pump House #1 Main Operating Floor			🟠🟢															
Pump House #2 Lower Levels																	🟢	
Pump House #2 Main Operating Floor							🔴🟠🟢	🟠🟢			🟠🟢	🔴🟠🟢					🟢	
Pump House #2 Penthouse							🔴🟠🟢	🔴🟠🟢				🔴🟠🟢						
ATCO Gas Building			🟠🟢				🟢	🟢				🟢		🟢	🟢	🟢	🟢	

Legend

- 🔴 Short Term [1-5 Years]
- 🟠 Medium Term [5-10 Years]
- 🟢 Long Term [10-15+ Years]

A1	FRR of FS to Adj. Maj. Occupancy
A1	-
A2	1hr
D	1hr
E	2hr
F2	2hr
F3	1hr

A2	FRR of FS to Adj. Maj. Occupancy
A1	1hr
A2	-
D	1hr (2hr if 3.2.2.58 applies)
E	2hr
F2	2hr
F3	1hr

D	FRR of FS to Adj. Maj. Occupancy
A1	1hr
A2	1hr (2hr if 3.2.2.58 applies)
D	-
E	-
F2	-
F3	-

E	FRR of FS to Adj. Maj. Occupancy
A1	2hr
A2	2hr
D	-
E	-
F2	-
F3	-

F2	FRR of FS to Adj. Maj. Occupancy
A1	2hr
A2	2hr
D	-
E	-
F2	-
F3	-

F3	FRR of FS to Adj. Maj. Occupancy
A1	1hr
A2	1hr
D	-
E	-
F2	-
F3	-

Development Phases

RPP AAPR
Scope Definition
Phase 01 Summary

Phase 01
Immediate Term [1-2 Years]

Immediate Term Area Summary

The Priority 01 proposed scope and area engage the majority of the Rossdale Power Plant to maximize its outreach potential.

The scale, complexity and future flexibility of the LPP calls for strategic, non-invasive “light touch” rehabilitation to facilitate larger, temporary, cultural gatherings. This approach makes extensive use of the southern half of the Low Pressure Plant including the main and second floors of the Switch House, the main floor of the Turbine Hall and the main floor of the Boiler Hall.

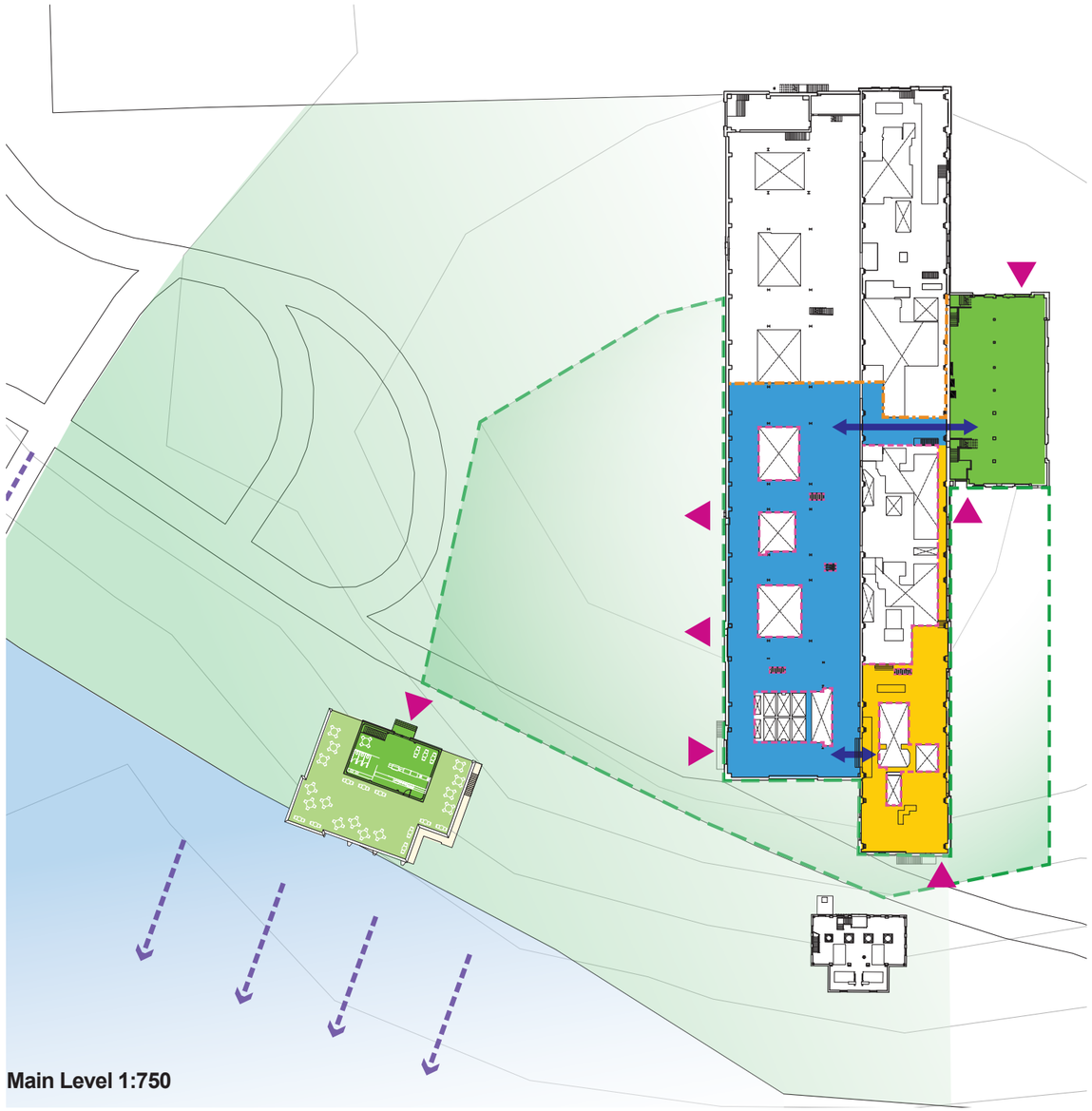
The attributes of Pump House #2 allow for a more comprehensive approach to create permanent site activation. Specifically, this includes the top level and the associated roof. Initial studies have focused on a cafe or food service establishment in Pump House #2 that could provide year-round service to the Rossdale Power Plant site and also to the parks and institutions across the river.

Connections to the surrounding landscape will be critical to the development of the LPP throughout phases P1 to P4. Interior and exterior compatibility is necessary to the long-term success of the rehabilitation and reprogramming efforts.

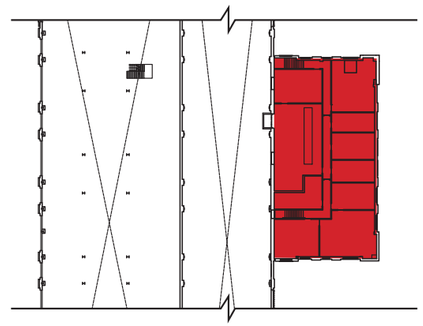
The Switch House lends itself to programming on the Main and Second Floors to house support and operational needs.

Considerations

- Provides some washroom facilities on site through the permanent programming in Pump House #2
- Assumes synergy with future ‘Touch the Water’ site development in a way that provides an open, flexible use area for user ‘spill-out’ from large events hosted in the LPP.
- Assumes user engagement with the interior spaces of the Pump House #1 and ATCO gas building will be provided as part of a future phase of development
- Assumes ‘light touch’ improvements in the LPP to facilitate use within a cost range of $100-$150/sqft
- Assumes comprehensive improvements in Pump House #2 in the cost range of $250-$300/sqft
- Assumes a Public / Private partnership to achieve activation of Pump House #2



Main Level 1:750



Second Level 1:750

RPP AAPR
Scope Definition
Phase 01 Program Scenario

P1

Phase 01
Immediate Term [1-2 Years]

Immediate Term Programming Summary

The Priority 01 proposed programming engages the key spaces of the Rossdale Power Plant to begin its transition from an industrial relic to cultural hub for the city. The goal is to reach as many people as possible in a variety of ways that speak to the City's diversity and the site's potential.

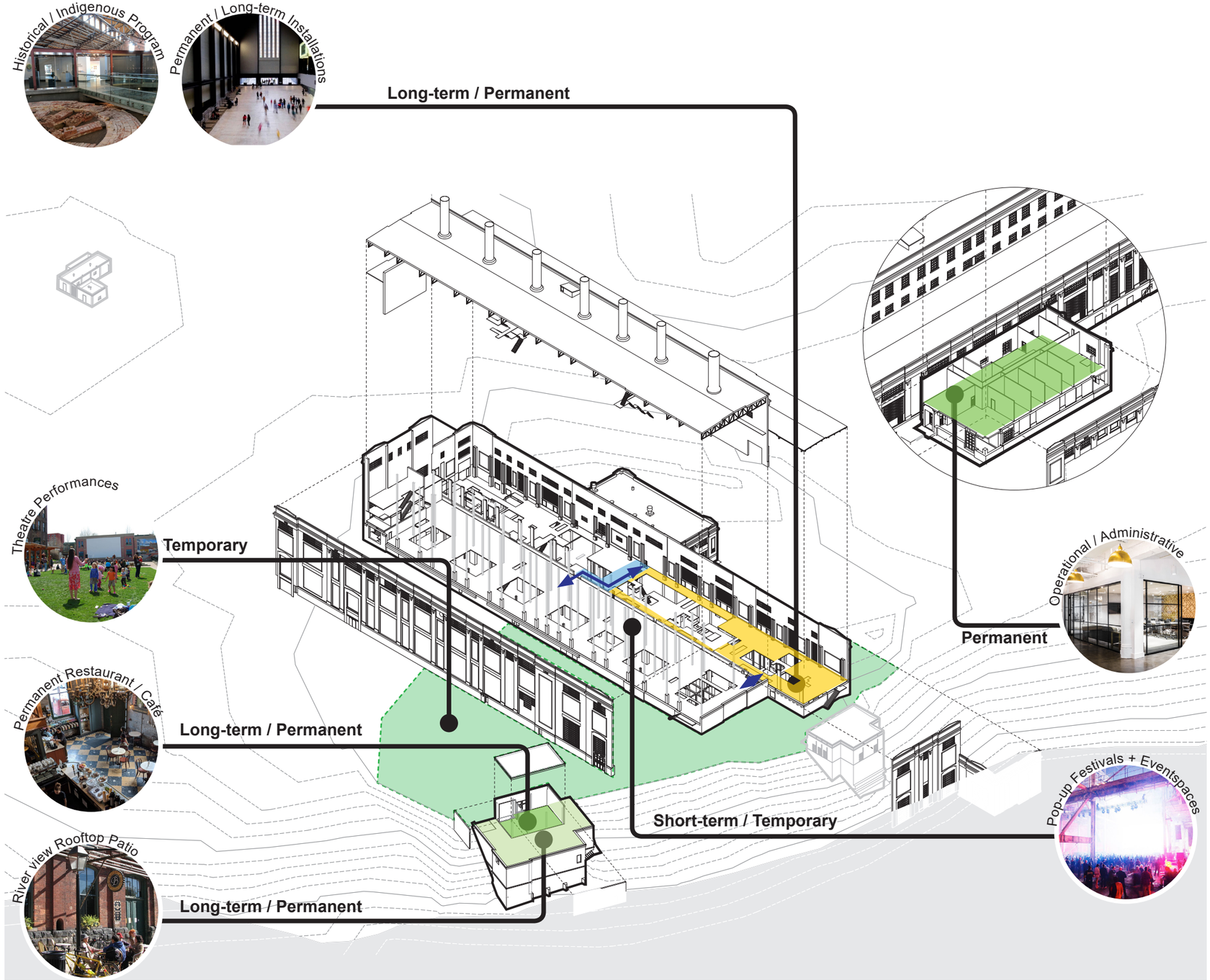
Priority 01 envisions a range of programmatic possibilities that activate the buildings and site through various different activation strategies. The best way to reach the most people involves a mix of permanent / long-term programming with temporary / event-based usage. The RPP is characterized by flexible spaces that are great for hosting temporary, event-based programs characterized by their specific focus, intensity and excitement. Importantly, certain parts of the RPP are more amenable to hosting more traditional historical / heritage spaces that can educate visitors about the significance of the site and its importance to the city both in the past and in the future. These 'anchor' programs create a steady stream of visitors and can generate broad interest in the site. Therefore, it is important to express how the LPP is important as a critical feature of the City's cultural landscape.

Examples:

- one-off events: concert performances, holiday celebrations
- weekend events: cask days, music festivals, pop-up shops
- seasonal events: Christmas markets, movie screenings, etc.
- recurring events: food trucks, pop-up markets, art displays
- longer-term: public art installations
- anchor tenants: historical displays, indigenous programming

Considerations

- Provides some washroom facilities on site through the permanent programming in Pump House #2
- Assumes synergy with future 'Touch the Water' site development in a way that provides an open, flexible use area for user 'spill-out' from large events hosted in the LPP
- Assumes the provision of additional washroom amenities and other infrastructure - power, heat, etc. - on a per use basis



RPP AAPR
Scope Definition
Phase 01 Program Scenario

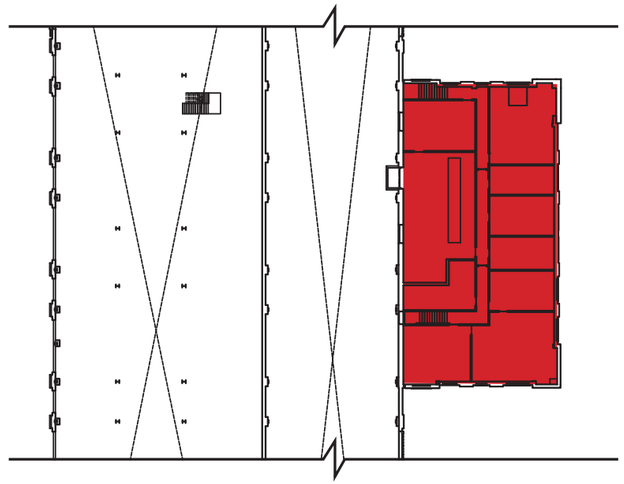
P1

Phase 01
Immediate Term [1-2 Years]

PLAN 1 MAIN FLOOR

1	**LIBRARY** book stacks, multimedia, lounge play, childcare	**N/A**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**1110m²**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**248m²**
4	**MUSEUM / HERITAGE** education, culture, exhibits, events, community gathering	**200m²**
5	**INSTITUTIONAL** climate-centric, tech showcase urban studies, urban farming	**N/A**
6	**FOOD / LOBBY** restaurant, cafe, gathering food production, information centre	**478m²**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**478m²**
8	**THEATRE / HALL** performances, lectures, music conferences,	**N/A**
9	**BUILDING SERVICES** storage, washrooms, M/E	**N/A**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**N/A**

Main Level 1:500



Second Level 1:500

RPP AAPR
Scope Definition
Phase 01 Interventions

P1

Phase 01
Immediate Term [1-2 Years]

Main Floors

ABD Se — Area Security
Provide protective barriers to limit public access in accordance with CPTED principles

ABD Ex — Exits
Address exiting deficiencies with exit facilities:
- Rehabilitate Existing Exits

ABD Gr — Guard Rails
New Guard Rails:
- Replace, repair, or augment existing guards around extant floor openings to meet contemporary code requirements.
- Provide new guards around Pump House #2 rooftop patio

ABD El — Emergency Lighting
Provide emergency lighting to meet minimum Code requirements for occupancy:

ABD Fo — Floor Openings
Repair unguarded floor openings, as well as those covered by insufficient temporary coverings.

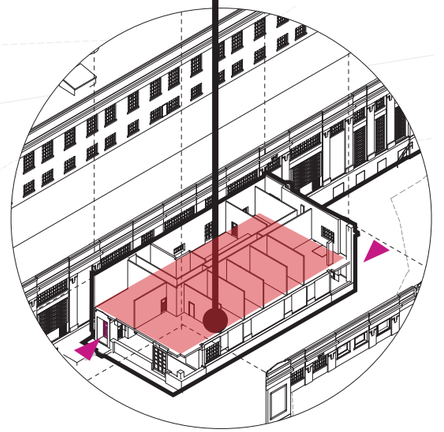
ABD Ac — Accessibility Provisions
Provide accessible access points to meet minimum Code requirements for occupancy.

ABD Wc — Washrooms
Introduce washrooms in limited areas in the LPP or Pump Houses/ ATCO Gas Building to reduce reliance on temporary facilities.

ABCD Me — Mechanical & Electrical Service
Develop and implement new permanent plumbing and electrical systems to select spaces Pump House #2 to new use.

ABCD Fe — Fenestration
Provide new openings to Pump House #2 to support occupancy and connection of use to rooftop patio and view.

LPP Precedent Interventions for Use Scenarios

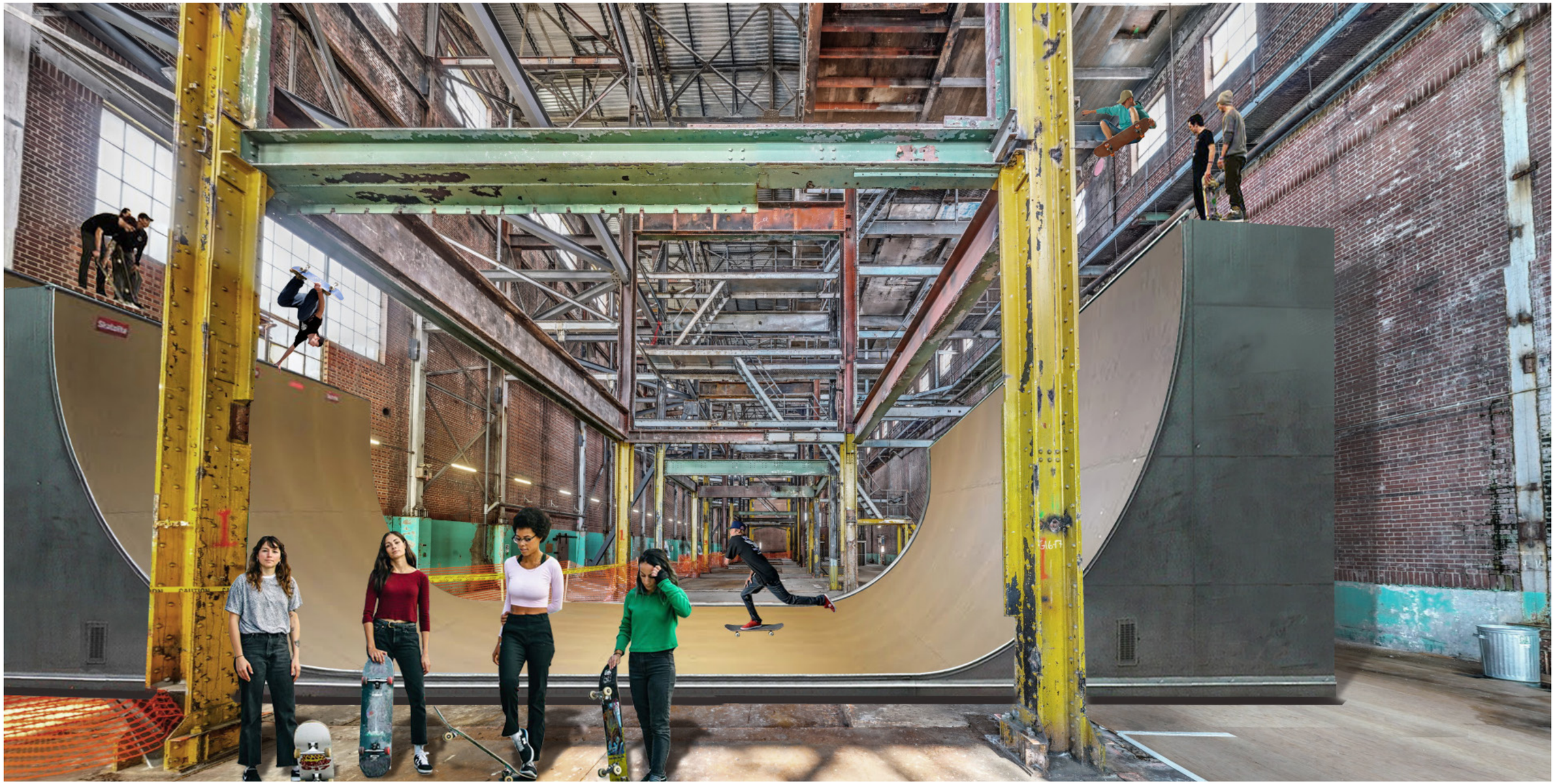


PH2 Precedent Interventions for Use Scenarios

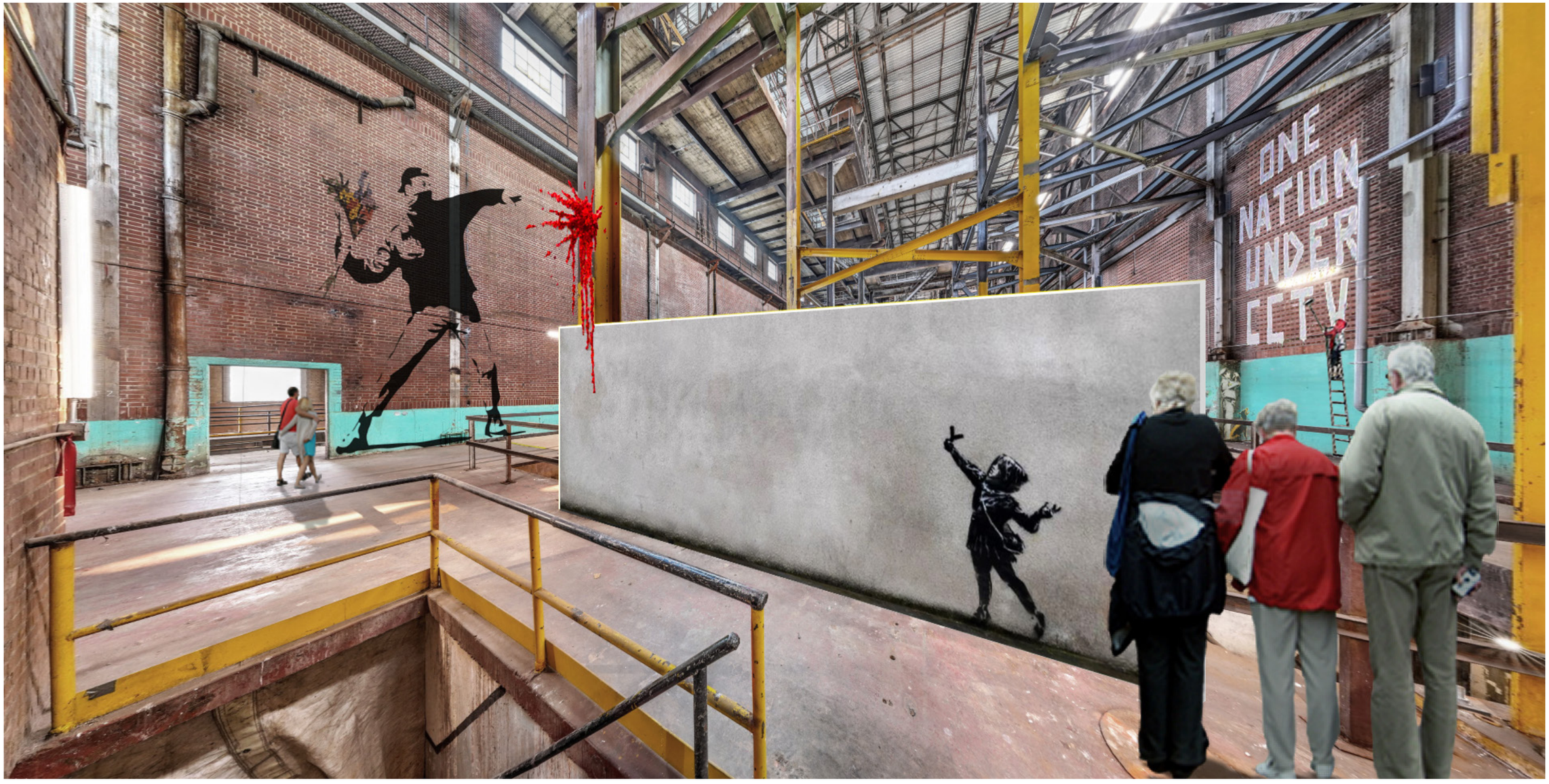
RPP AAPR
Scope Definition
Phase 01 Concept Visualizations

RPP AAPR
Scope Definition
Phase 01 Concept Visualizations

RPP AAPR
Scope Definition
Phase 01 Concept Visualizations



RPP AAPR
Scope Definition
Phase 01 Concept Visualizations



RPP AAPR
Scope Definition
Phase 02 Summary

P2

Phase 02
Medium Term [2-10 Years]

The Phase 02 scopes of work proposed as part of this rehabilitation framework are focused on systemic improvements to the various buildings' structural, mechanical, and electrical infrastructure with the intention of 'preparing the ground' for the next phase of permanent adaptive reuse.

To take advantage of potential synergies between stabilization/ rehabilitation work, and future reuse, this model proposes the integration of certain critical upgrades with elements that support reuse efforts. For example, the structural reinforcement of the Boiler Hall could integrate vertical circulation cores while reinforcing the existing main operating and mezzanine floors for a future assembly occupancy.

Similarly, reinstatement of the windows on the West side of the Boiler Hall enclosed to accommodate the construction of the High Pressure Plant could be implemented in conjunction with new openings at (future) grade that provide direct connectivity to the Touch the Water project and address the Low Pressure Plant's significant exiting deficiencies in a manner that is consistent with the Boiler Hall's architectural and structural logic.

Introducing infrastructure for new washroom facilities at key locations in the Low Pressure Plant (and the other buildings), as well as implementing allowances for future plumbing and HVAC infrastructure will also allow for the smoother integration of permanent uses as part of Phase 03 of the adaptive reuse effort.

RPP AAPR
Scope Definition
Phase 02 Interventions

P2

Phase 02
Medium Term [2-10 Years]

Lower Levels

ABD **Ex**

Exits
Address exiting deficiencies with exit facilities:
- Exiting from the mezzanine level will require careful planning to avoid conflicts with heritage fabric.

ABD **Vc**

Vertical Circulation
Provide new elevator and stair cores to provide permanent access to mezzanine level spaces.

ABD **Sr**

Structural Reinforcement
Reinforce/supplement existing structure where required. To avoid cladding existing steel structure to achieve rating, coat with intumescant paint.

ABD **Ac**

Accessibility Provisions
Provide accessible access points to meet minimum Code requirements for occupancy.

ABD **Wc**

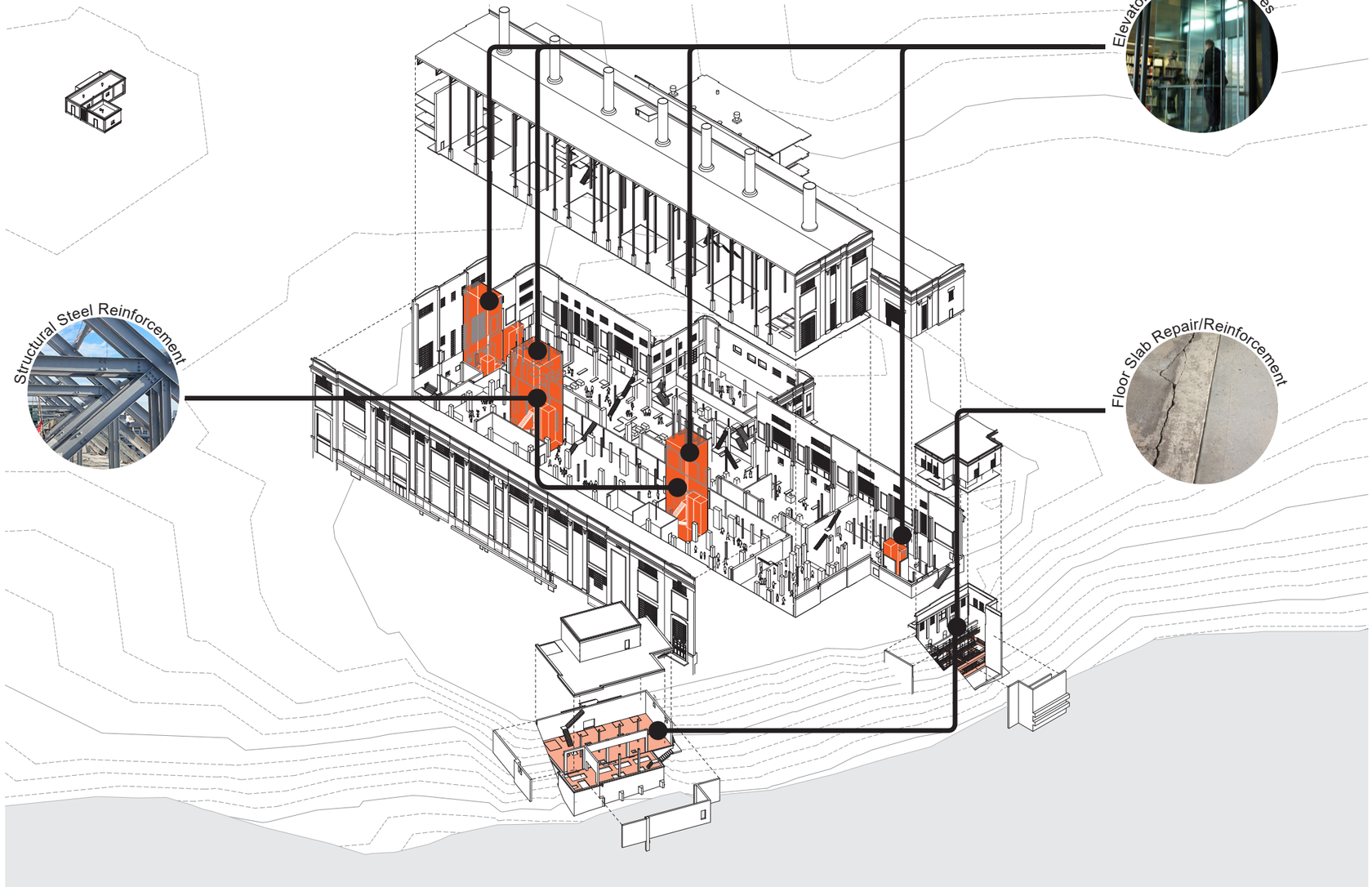
Washrooms
Introduce washroom spaces to existing 'dark program' spaces in the Boiler Hall ash collection tower and mezzanine spaces.

ABCD **Me**

Mechanical & Electrical Service
Develop and implement new permanent plumbing and electrical systems to suit new uses.

ABD **Fs**

Fire Suppression
Introduce fire suppression system(s) to (partially) enable more lenient travel distance to exits.



RPP AAPR
Scope Definition
Phase 02 Interventions

P2

Phase 02
Medium Term [2-10 Years]

Main Floors

ABD **Ex**

Exits
Address exiting deficiencies with exit facilities:
- Exiting from the mezzanine level will require careful planning to avoid conflicts with heritage fabric.

ABD **Vc**

Vertical Circulation
Provide new elevator and stair cores to provide permanent access to mezzanine level spaces.

ABD **Sr**

Structural Reinforcement
Reinforce/supplement existing structure where required. To avoid cladding existing steel structure to achieve rating, coat with intumescant paint.

ABCD **Mr**

Masonry Repair
Repair/repoint existing masonry as required.

ABD **Ac**

Accessibility Provisions
Provide accessible access points to meet minimum Code requirements for occupancy.

ABD **Wc**

Washrooms
Introduce washroom spaces to existing 'dark program' spaces in the Boiler Hall ash collection tower and mezzanine spaces.

ABCD **Me**

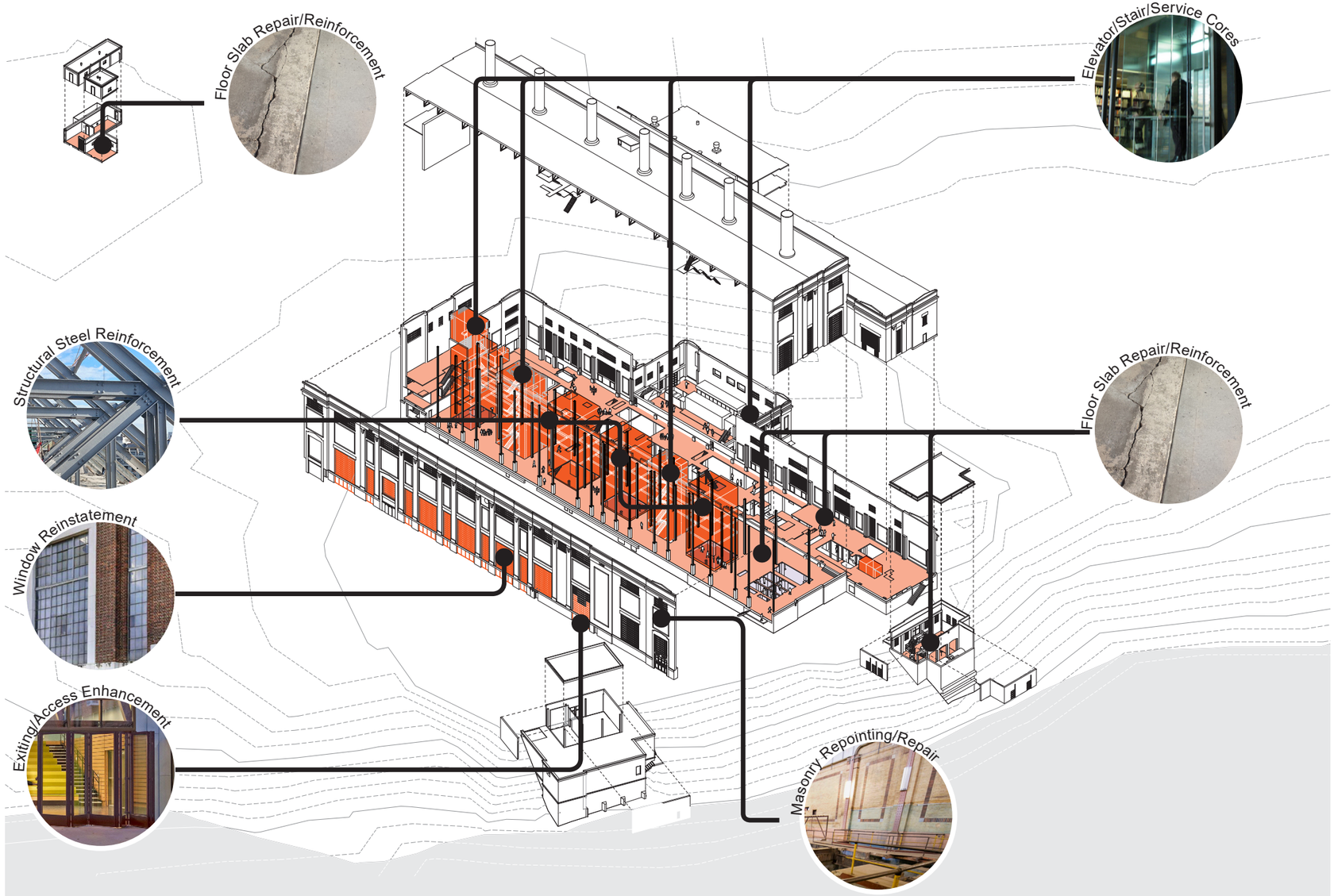
Mechanical & Electrical Service
Develop and implement new permanent plumbing and electrical systems to suit new uses.

ABD **Fs**

Fire Suppression
Introduce fire suppression system(s) to (partially) enable more lenient travel distance to exits.

ABCD **Fe**

Fenestration
Reinstate windows infilled prior to construction of High Pressure Plant. Repair/rehabilitate existing windows.



RPP AAPR
Scope Definition
Phase 02 Interventions

P2

Phase 02
Medium Term [2-10 Years]

Second Floor/Mezzanine Level

ABD **Ex**

Exits
Address exiting deficiencies with exit facilities:
- Exiting from the mezzanine level will require careful planning to avoid conflicts with heritage fabric.

ABD **Vc**

Vertical Circulation
Provide new elevator and stair cores to provide permanent access to mezzanine level spaces.

ABD **Sr**

Structural Reinforcement
Reinforce/supplement existing structure where required. To avoid cladding existing steel structure to achieve rating, coat with intumescant paint.

ABCD **Mr**

Masonry Repair
Repair/repoint existing masonry as required.

ABD **Ac**

Accessibility Provisions
Provide accessible access points to meet minimum Code requirements for occupancy.

ABD **Wc**

Washrooms
Introduce washroom spaces to existing 'dark program' spaces in the Boiler Hall ash collection tower and mezzanine spaces.

ABCD **Me**

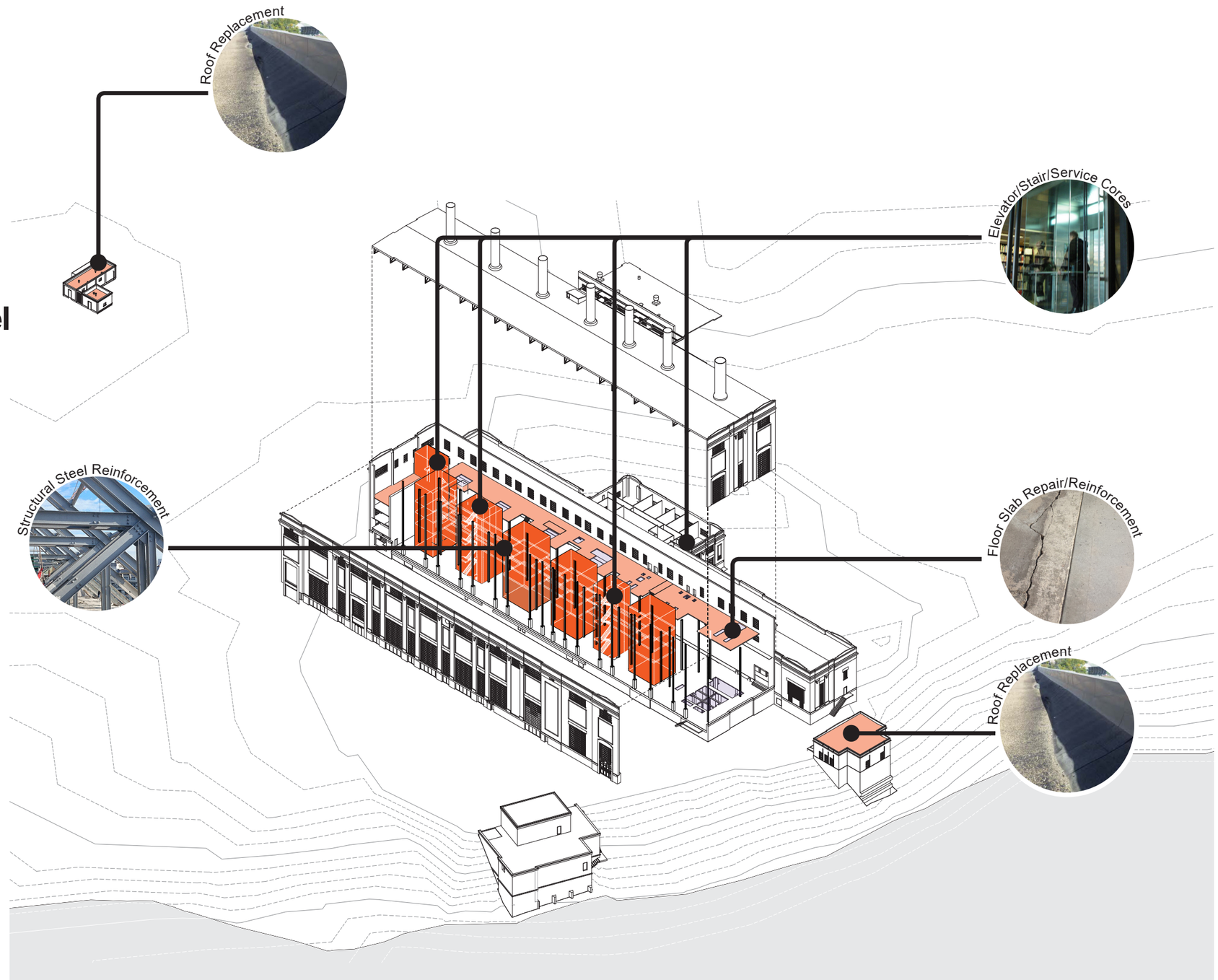
Mechanical & Electrical Service
Develop and implement new permanent plumbing and electrical systems to suit new uses.

ABD **Fs**

Fire Suppression
Introduce fire suppression system(s) to (partially) enable more lenient travel distance to exits.

ABCD **Rr**

Roof Replacement
Replace roofing of ATCO Gas Building and Pump House #1



RPP AAPR
Scope Definition
Phase 03 Program Scenario A

P3

Phase 03
Long-Term [10+ Years]

Art Centre (Primary)

This scenario posits an arts-centric focus to the long term activation of the site, with a post-secondary art school (e.g. Alberta University of the Arts, Emily Carr, etc.) or an arts and culture-focused organization (e.g. the Canadian Centre for Architecture) as the 'anchor' tenant, with complementary and symbiotic community programming playing a supporting role. The site's history as a gathering place and the River Valley's historic connection to many Indigenous communities suggests a possible emphasis on the Plant as a space and place for Indigenous arts and cultural practices.

As is the case in all of the reuse case studies presented in this document, the 'Art Centre' scenario links the spatial qualities of existing spaces with complementary uses. The lower level of the Boiler Hall, for instance, becomes a mixture of open, flexible gallery spaces ideal for controlling lighting and displaying a wide variety of two and three dimensional art by virtue of its robust construction and the ability to control lighting conditions, as well as 'pods' of studio spaces catering to a wide variety of media and modes of production. Similarly, the complex, highly figural topography of concrete pedestals and plinths that define the lower level of the Turbine Hall becomes a natural vessel for art and sculpture.

The main level of the Boiler Hall, meanwhile, maintains its legibility as an 'interior street' with public amenities anchoring the lowest levels of the former boiler voids and the open spaces between them providing the flexibility and expanse necessary for large, event-based gatherings. Rising above the main floor, studio and classroom spaces fill the boiler voids themselves as the program moves from participatory to private.

The main level of the Turbine Hall, in addition to providing views and vantage points to the gallery spaces below, also provides an interpretive grounding for the broader site, while Pump House #1 reinforces the site's industrial heritage as a largely intact museum space.

Finally, the Switch House and Pump House #2 provide administrative and major food service amenity spaces to serve both the campus and the community.

RPP AAPR
Scope Definition
Phase 03 Program Scenario A

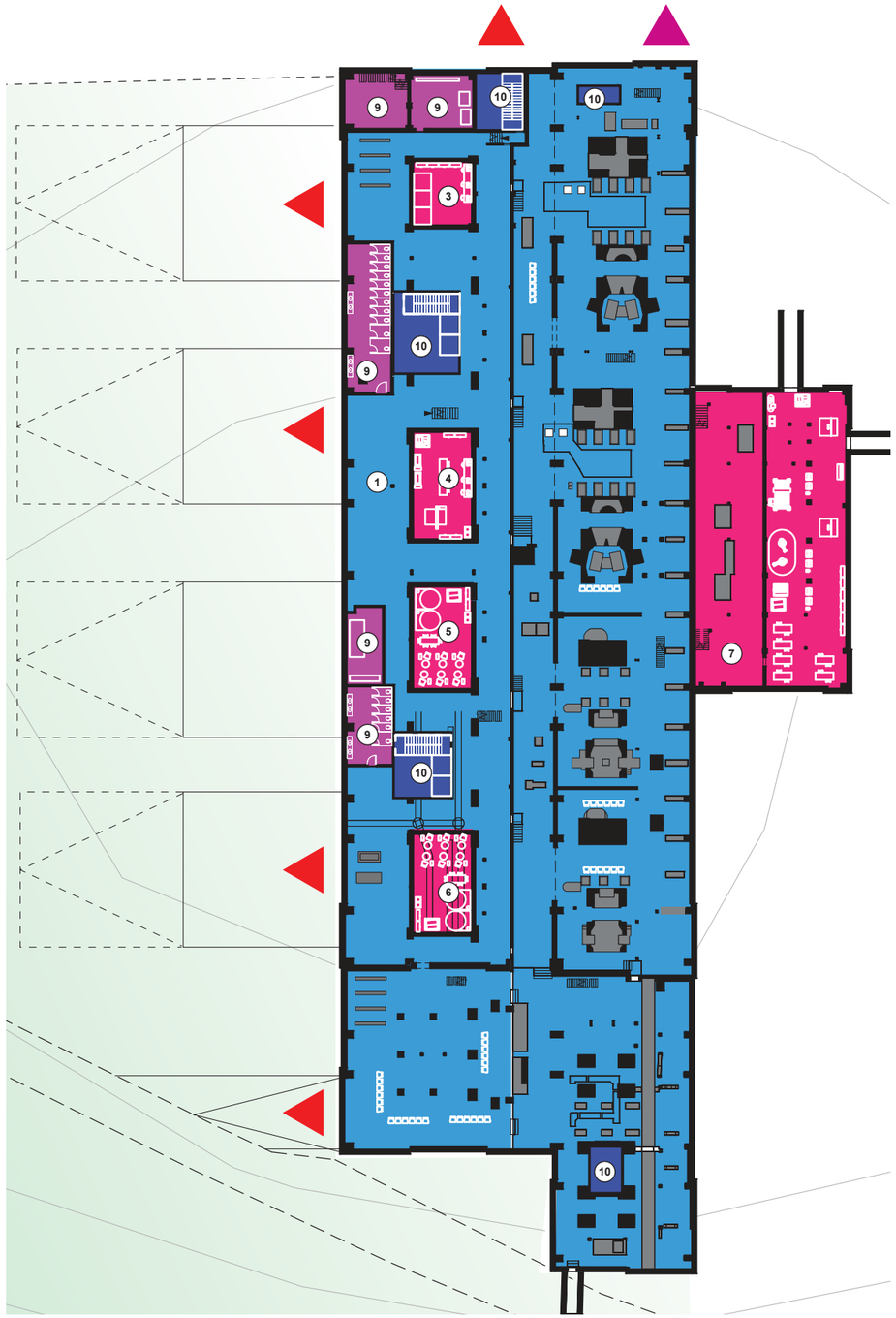
P3

Phase 03
Long-Term [10+ Years]

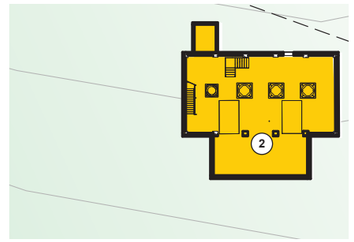
Art Centre (Primary)

LOWER LEVEL FLOOR PLAN

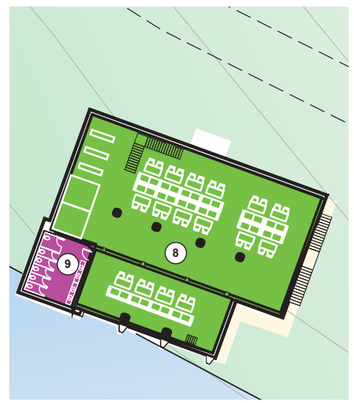
1	**GALLERY SPACE** 2D and 3D art gallery space.	**3320m²**
2	**MUSEUM / HERITAGE** Interpretive centre for site's industrial heritage.	**150m²**
3	**PHOTOGRAPHY/PRINTING STUDIO** Dark Room, photo processing lab space	**45m²**
4	**PRINT MAKING/PUBLICATION STUDIO** Printmaking/silk-screening equipment	**75m²**
5	**CERAMICS/SCULPTURE STUDIO** Pottery wheels, sculpting tables, kiln.	**75m²**
6	**FABRICATION STUDIO** Small CNC machine, laser cutter, workbench and tools.	**70m²**
7	**LARGE FABRICATION STUDIO** Large CNC machine, laser cutters, paint booth welding shop, wood shop, workbenches and tools.	**440m²**
8	**COMMERCIAL SPACE** Restaurant in PH2 Main Operating Floor	**370m²**
9	**BUILDING SERVICES** storage, washrooms, M/E	**250m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



Low Pressure Plant 1:500



Pump House #1 1:500



Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario A

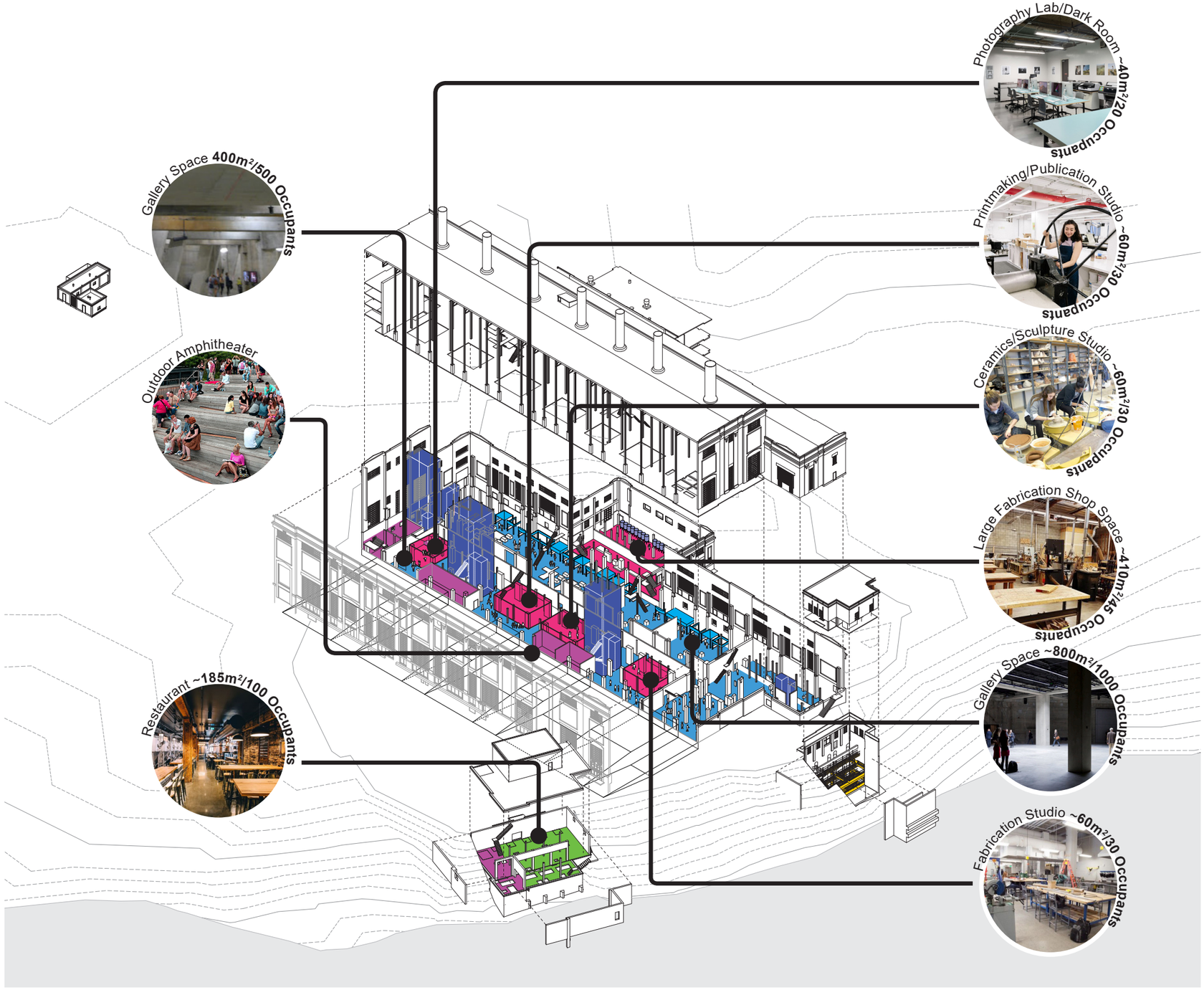
P3

Phase 03
Long-Term [10+ Years]

Art Centre (Primary)

LOWER LEVEL AXONOMETRIC

1	**GALLERY SPACE** 2D and 3D art gallery space.	**3320m²**
2	**MUSEUM / HERITAGE** Interpretive centre for site's industrial heritage.	**150m²**
3	**PHOTOGRAPHY/PRINTING STUDIO** Dark Room, photo processing lab space	**45m²**
4	**PRINT MAKING/PUBLICATION STUDIO** Printmaking/silk-screening equipment	**75m²**
5	**CERAMICS/SCULPTURE STUDIO** Pottery wheels, sculpting tables, kiln.	**75m²**
6	**FABRICATION STUDIO** Small CNC machine, laser cutter, workbench and tools.	**70m²**
7	**LARGE FABRICATION STUDIO** Large CNC machine, laser cutters, paint booth welding shop, wood shop, workbenches and tools.	**440m²**
8	**COMMERCIAL SPACE** Restaurant in PH2 Main Operating Floor	**370m²**
9	**BUILDING SERVICES** storage, washrooms, M/E	**250m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario A

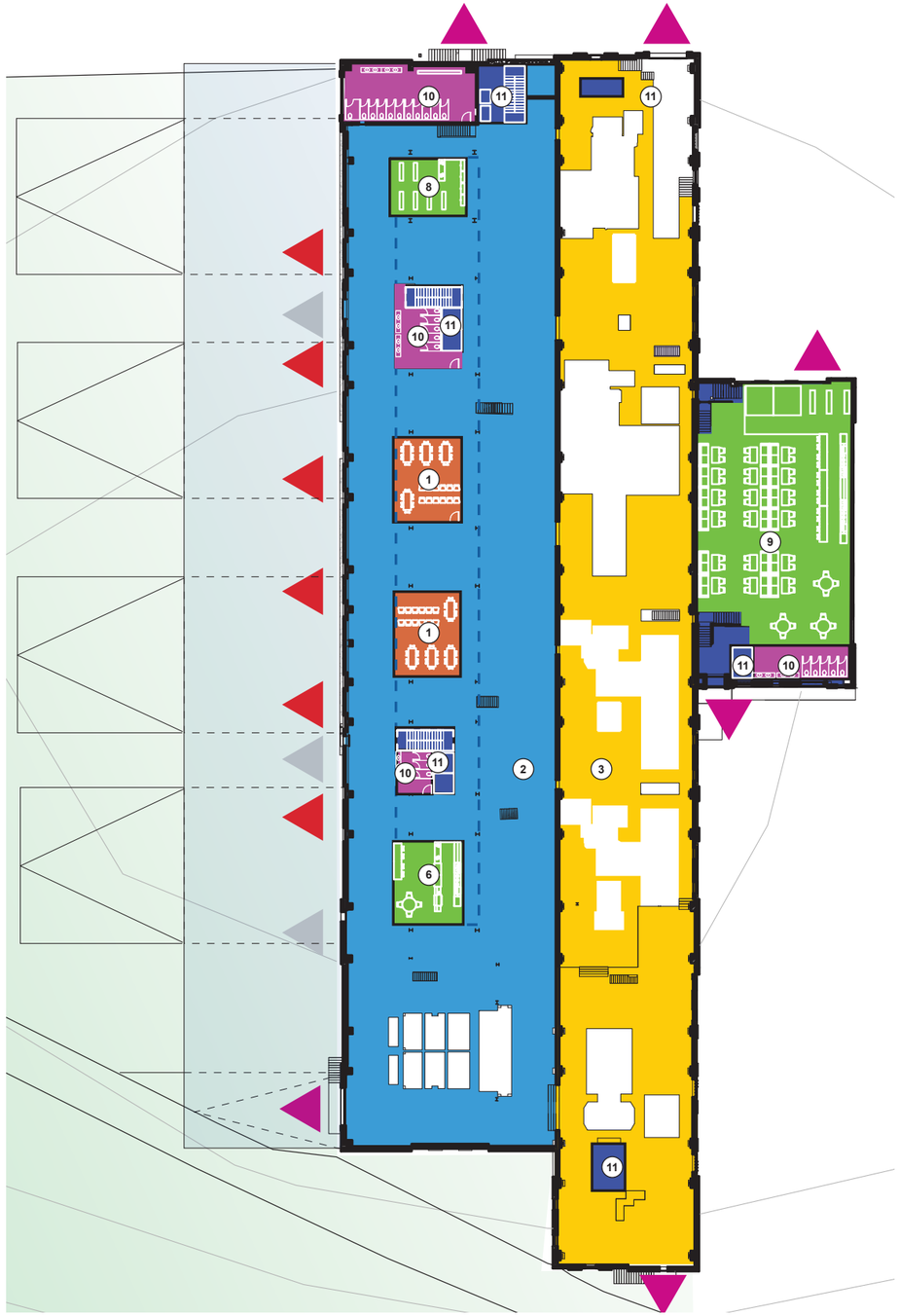
P3

Phase 03
Long-Term [10+ Years]

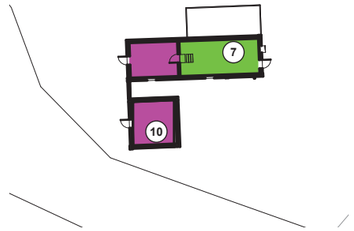
Art Centre (Primary)

MAIN FLOOR PLAN

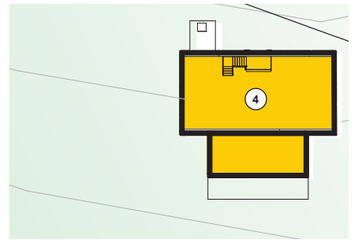
1	**COMMUNITY STUDIOS** Publicly leasable studio and multi-purpose spaces	**~60m² (Each)**
2	**COMMUNITY SPACE** Flexible event/community space, temporary gallery.	**2150m²**
3	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**1000m²**
4	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**150m²**
5	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**120m²**
6	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**60m²**
7	**COMMERCIAL SPACE** C.R.U. (Concession stand).	**25m²**
8	**COMMERCIAL SPACE** C.R.U. (Book shop).	**45m²**
9	**COMMERCIAL SPACE** Restaurant/cafe/bistro.	**370m²**
10	**BUILDING SERVICES** storage, washrooms, M/E	**200m²**
11	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



Low Pressure Plant 1:500



ATCO Gas Building 1:500



Pump House #1 1:500

Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario A

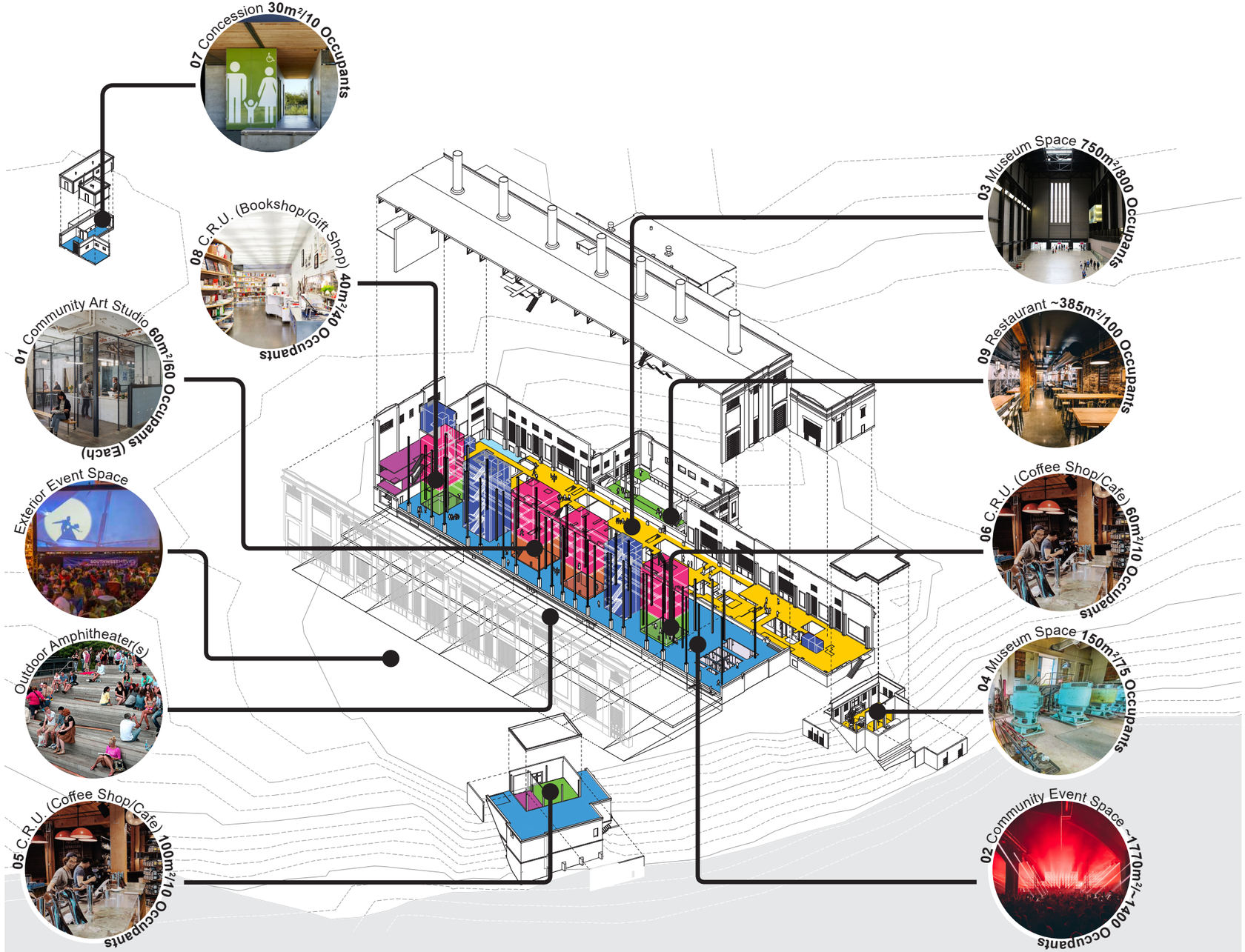
P3

Phase 03
Long-Term [10+ Years]

Art Centre (Primary)

MAIN FLOOR AXONOMETRIC

1	**COMMUNITY STUDIOS** Publicly leasable studio and multi-purpose spaces	**~60m² (Each)**
2	**COMMUNITY SPACE** Flexible event/community space, temporary gallery.	**2150m²**
3	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**1000m²**
4	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**150m²**
5	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**120m²**
6	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**60m²**
7	**COMMERCIAL SPACE** C.R.U. (Concession stand).	**25m²**
8	**COMMERCIAL SPACE** C.R.U. (Book shop).	**45m²**
9	**COMMERCIAL SPACE** Restaurant/cafe/bistro.	**370m²**
10	**BUILDING SERVICES** storage, washrooms, M/E	**200m²**
11	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario A

P3

Phase 03
Long-Term [10+ Years]

Art Centre (Primary)

SECOND/MEZZANINE LEVEL FLOOR PLAN

1	**ART SCHOOL/CENTRE** Board room/admin space.	**155m²**
2	**ART SCHOOL/CENTRE** Office admin space.	**180m² (Total)**
3	**ART SCHOOL/CENTRE** Classroom/studio spaces in Boiler Voids.	**650m² (Total)**
4	**ART SCHOOL/CENTRE** Classroom/studio spaces at Mezzanine Level	**~60m² (Each)**
5	**ART SCHOOL/CENTRE** Social/circulation space at Mezzanine Level	**600m²**
6	**BUILDING SERVICES** Storage, washrooms, M/E.	**170m²**
7	**VERTICAL CIRCULATION** Elevators, lifts, stairs.	**85m²**

Low Pressure Plant 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario A

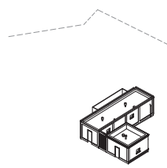
P3

Phase 03
Long-Term [10+ Years]

Art Centre (Primary)

SECOND/MEZZANINE LEVEL AXONOMETRIC

1. **ART SCHOOL/CENTRE** — **155m²**
   Board room/admin space.
2. **ART SCHOOL/CENTRE** — **180m²**
   Office admin space.
3. **ART SCHOOL/CENTRE** — **650m² (Total)**
   Classroom/studio spaces in Boiler Voids.
4. **ART SCHOOL/CENTRE** — **~60m² (Each)**
   Classroom/studio spaces at Mezzanine Level
5. **ART SCHOOL/CENTRE** — **600m²**
   Social/circulation space at Mezzanine Level
6. **BUILDING SERVICES** — **170m²**
   Storage, washrooms, M/E.
7. **VERTICAL CIRCULATION** — **85m²**
   Elevators, lifts, stairs.



RPP AAPR
Scope Definition
Phase 03 Program Scenario B

P3

Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

The emphasis of this scenario is on the Plant as a locus of community commercial and cultural activity.

The lower level of the Boiler Hall, as in other schemes, maintains a focus on the arts, with gallery space for two and three dimensional art supplemented by a modest ‘black box’ theatre space. In the lower levels of the Turbine Hall, the heroic concrete infrastructure is reoccupied by vibrant community markets.

On the main level of the Boiler Hall, a generous and seamless connection to the Touch the Water project on the West elevation creates an exceptional event space that spans interior and exterior, while the boiler hall void spaces provide incubator spaces for small, community-based coffee shops and cafes as well as rentable spaces for community members to use for smaller events.

Above the main level, and including the mezzanine, leasable office space provides both an engaging place to work and helps to support a self-sustaining revenue stream for the ongoing operation and maintenance of the entire complex.

The Switch House provides a range of programming potential on its three primary levels. The robust construction of its lower level is an ideal setting for micro-brewery or micro-distillery, while the main level could play host to a larger restaurant or brewpub. The upper level of the Switch House, meanwhile, resumes its original function as an administrative center, with spaces for a potential building operator and additional leasable community or private work spaces.

As with the other scenarios, the ATCO Gas Building becomes an amenity pavilion, Pump House #1 serves as an interpretive glimpse into the site’s industrial past, and Pump House #2 anchors the exterior riverfront promenade with multiple scales of food service amenities, indoor and out.

RPP AAPR
Scope Definition
Phase 03 Program Scenario B

P3

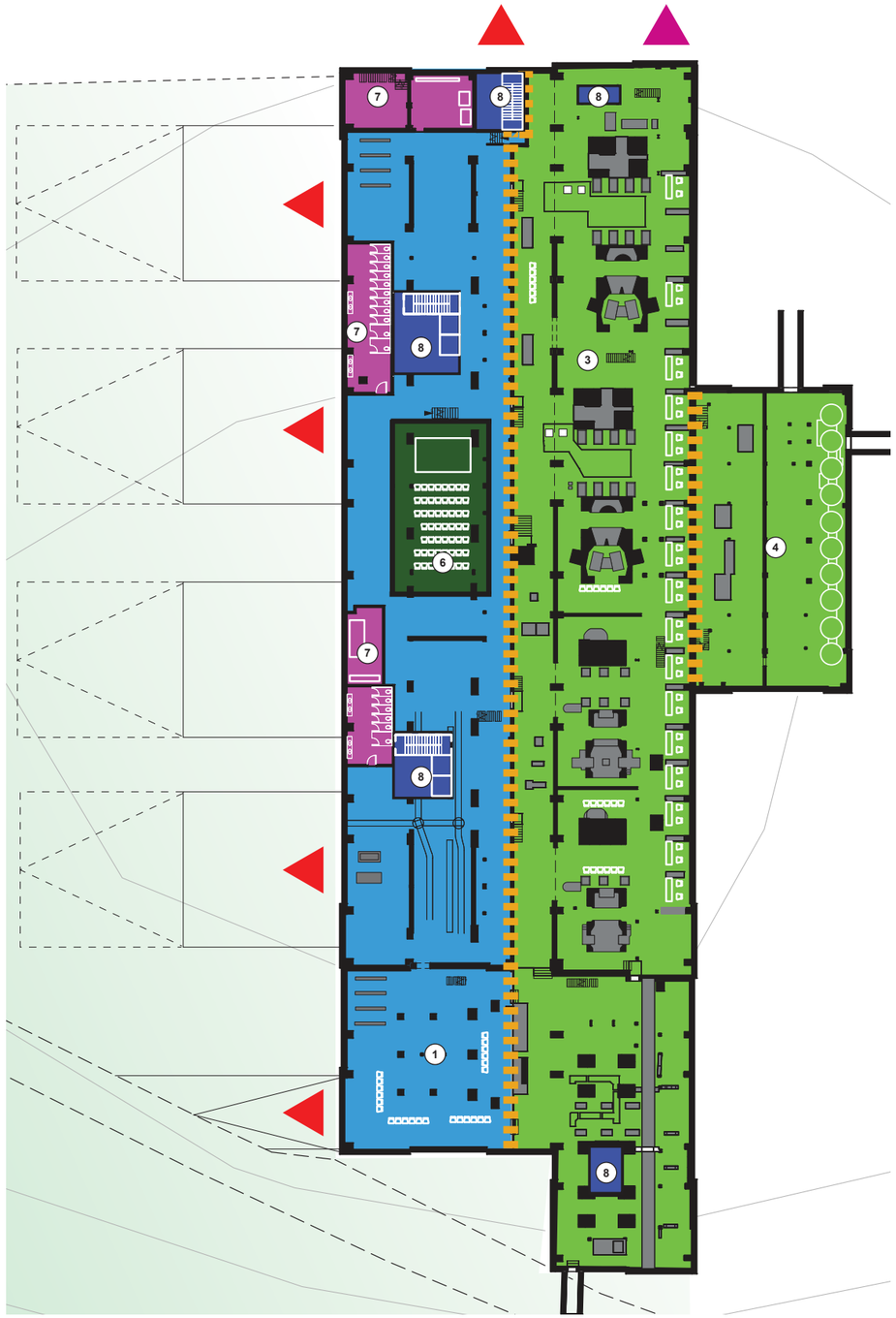
Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

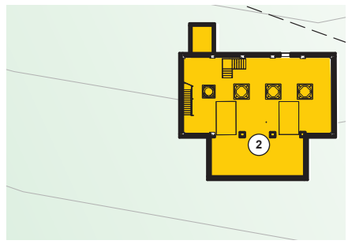
LOWER LEVEL FLOOR PLAN

1	**COMMUNITY SPACE** 2D and 3D art gallery space.	**600m²**
2	**MUSEUM / HERITAGE** Interpretive centre for site's industrial heritage.	**150m²**
3	**COMMERCIAL SPACE** Market stalls and circulation space. Approximately 20-30 2m x 3m stalls.	**2000m²**
4	**COMMERCIAL SPACE** Brewery in Switch House lower level.	**460m²**
5	**COMMERCIAL SPACE** Restaurant in PH2 Main Operating Floor	**370m²**
6	**THEATRE** Black box style theatre/lecture space. ~50 seats.	**170m²**
7	**BUILDING SERVICES** storage, washrooms, M/E	**250m²**
8	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**

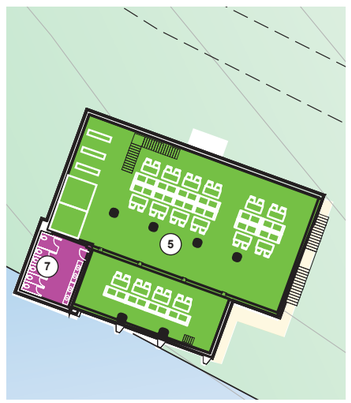
Fire Separation



Low Pressure Plant 1:500



Pump House #1 1:500



Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario B

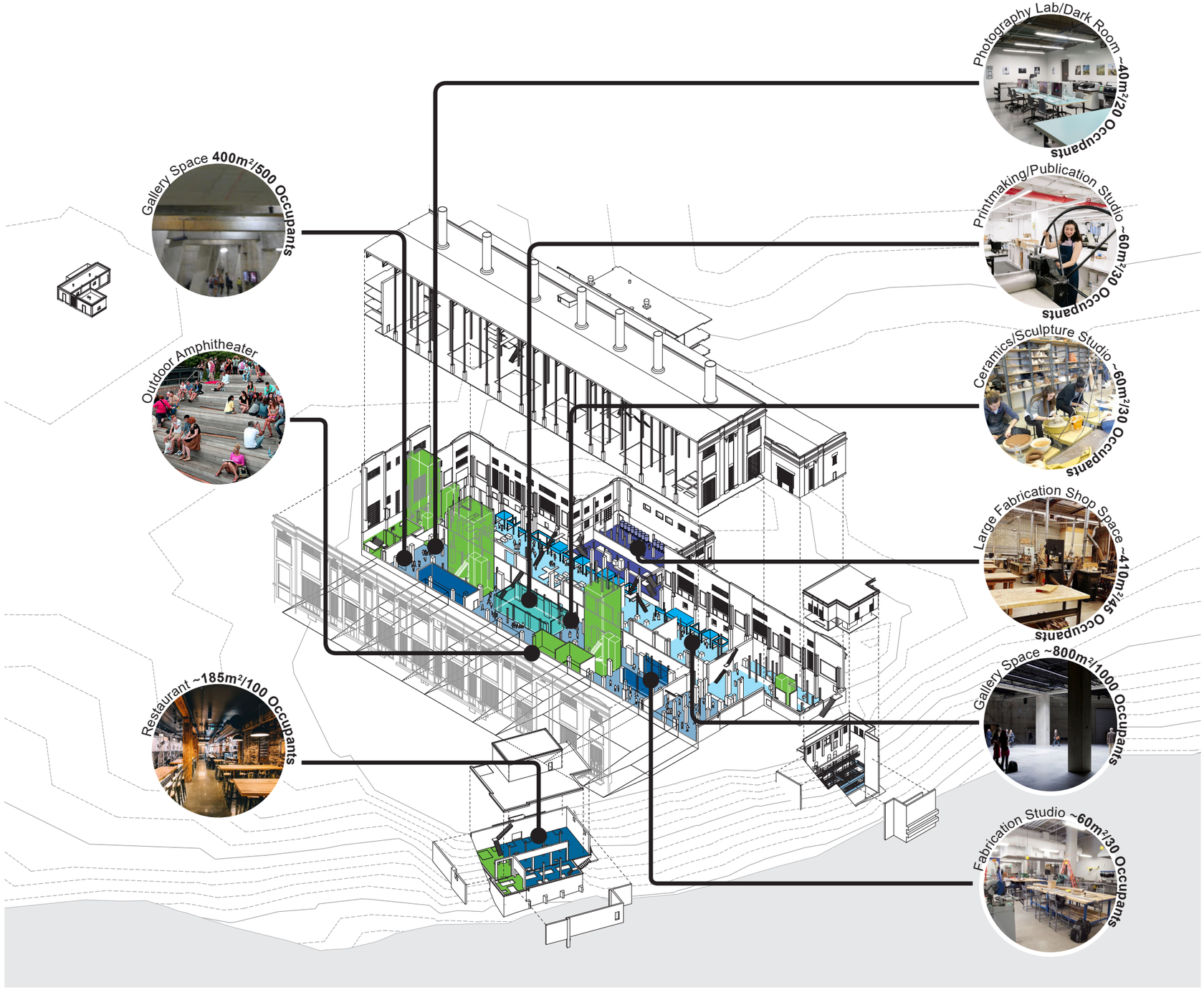
P3

Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

LOWER LEVEL AXONOMETRIC

1	**COMMUNITY SPACE** 2D and 3D art gallery space.	**600m²**
2	**MUSEUM / HERITAGE** Interpretive centre for site's industrial heritage.	**150m²**
3	**COMMERCIAL SPACE** Market stalls and circulation space. Approximately 20-30 2m x 3m stalls.	**2000m²**
4	**COMMERCIAL SPACE** Brewery in Switch House lower level.	**460m²**
5	**COMMERCIAL SPACE** Restaurant in PH2 Main Operating Floor	**370m²**
6	**THEATRE** Black box style theatre/lecture space. ~50 seats.	**170m²**
7	**BUILDING SERVICES** storage, washrooms, M/E	**250m²**
8	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario B

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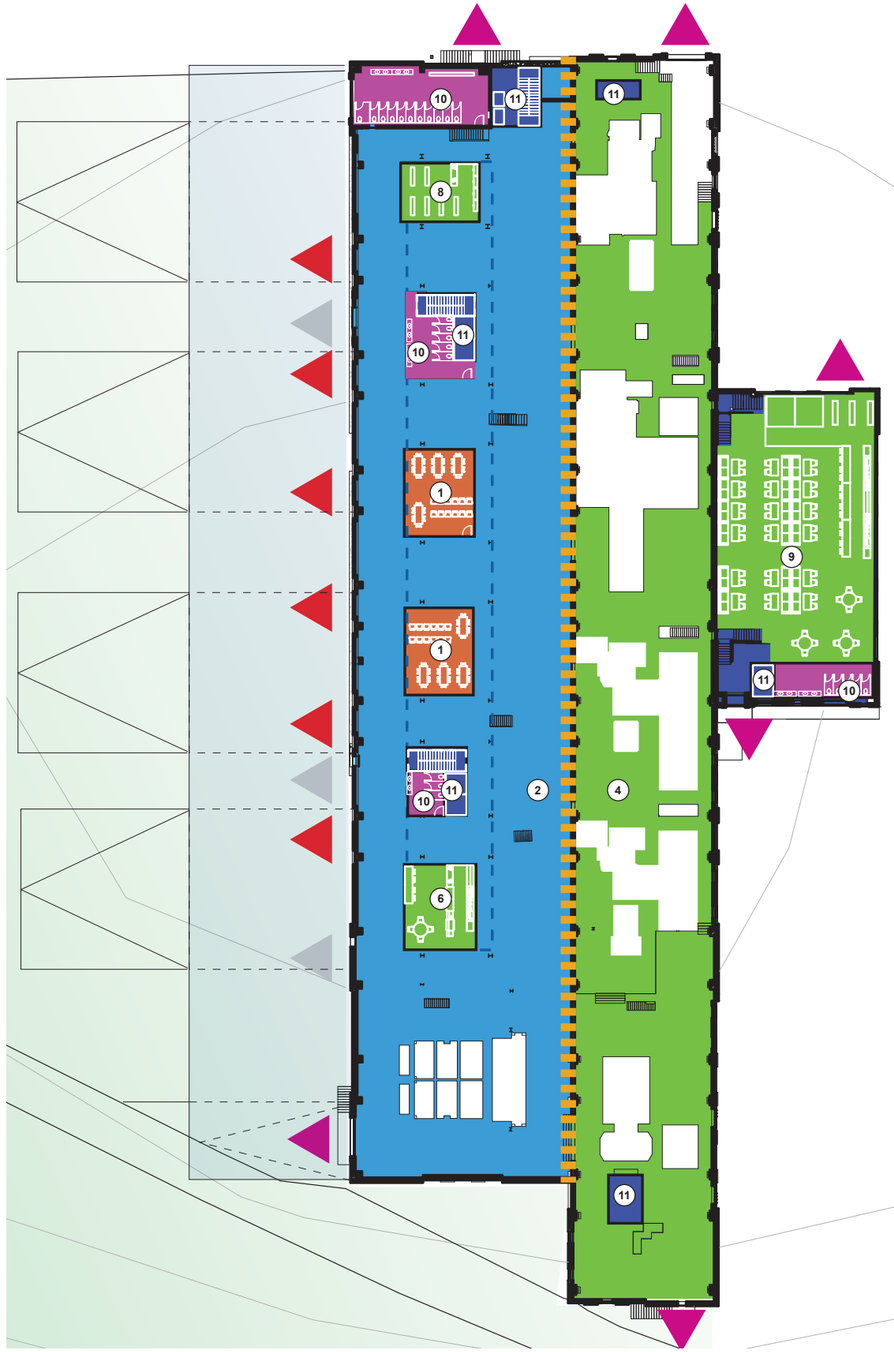
Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

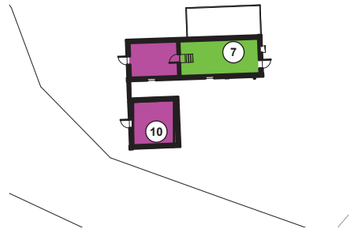
MAIN FLOOR PLAN

1	**COMMUNITY ROOMS** Publicly leasable multi-purpose spaces.	**~60m² (Each)**
2	**COMMUNITY SPACE** Flexible event/community space, temporary gallery.	**2150m²**
3	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**150m²**
4	**COMMERCIAL SPACE** Market spaces.	**1000m²**
5	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**120m²**
6	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**60m²**
7	**COMMERCIAL SPACE** C.R.U. (Concession stand).	**25m²**
8	**COMMERCIAL SPACE** C.R.U. (Book shop).	**45m²**
9	**COMMERCIAL SPACE** Restaurant/cafe/bistro.	**370m²**
10	**BUILDING SERVICES** storage, washrooms, M/E	**200m²**
11	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**

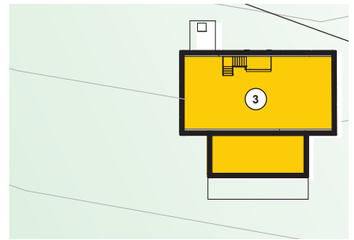
Fire Separation



Low Pressure Plant 1:500



ATCO Gas Building 1:500



Pump House #1 1:500

Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario B

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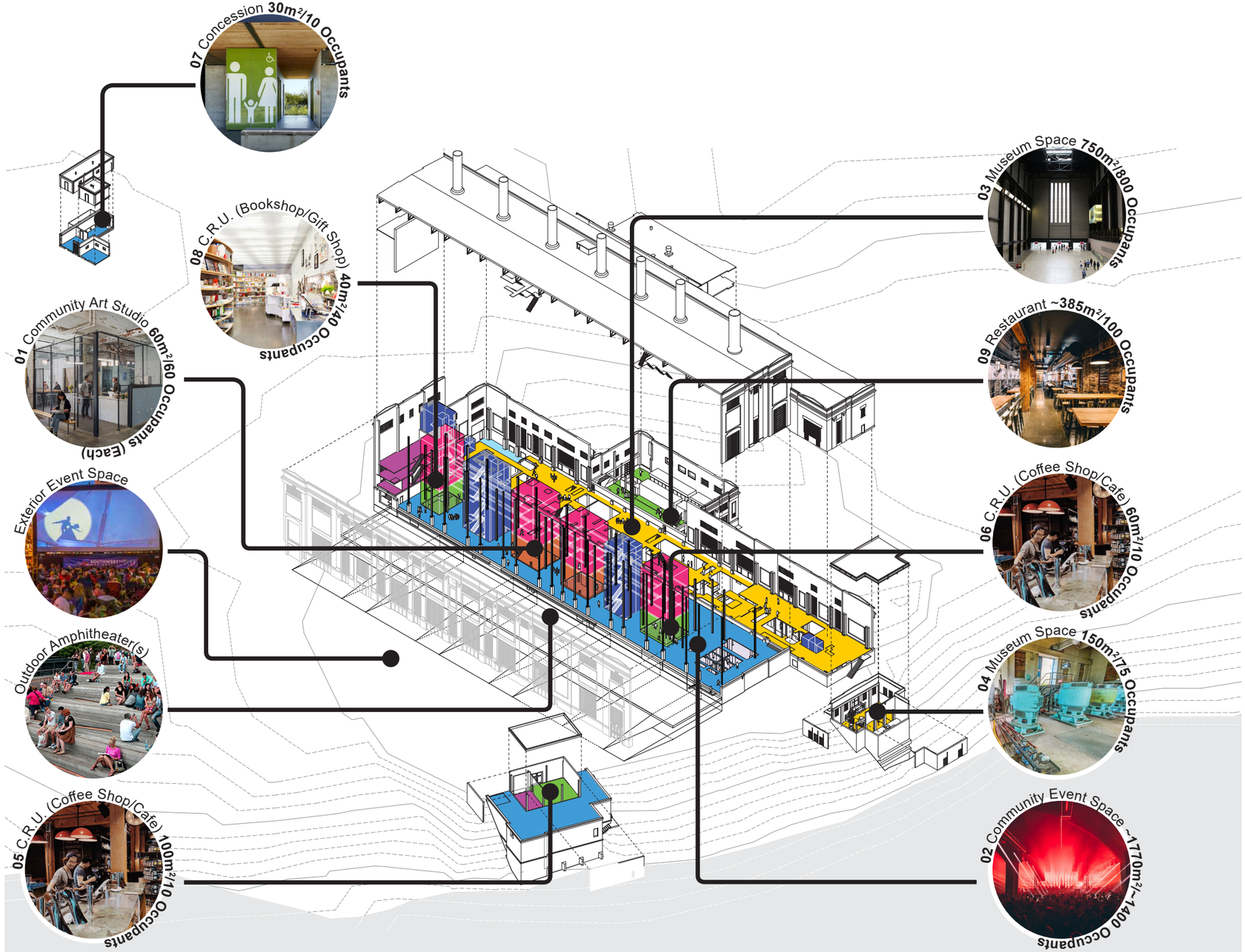
Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

MAIN FLOOR AXONOMETRIC

1	**COMMUNITY ROOMS** Publicly leasable multi-purpose spaces.	**~60m² (Each)**
2	**COMMUNITY SPACE** Flexible event/community space, temporary gallery.	**2150m²**
3	**MUSEUM / HERITAGE** Interpretive and exhibit space.	**150m²**
4	**COMMERCIAL SPACE** Market spaces.	**1000m²**
5	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**120m²**
6	**COMMERCIAL SPACE** C.R.U. (Cafe/coffee shop).	**60m²**
7	**COMMERCIAL SPACE** C.R.U. (Concession stand).	**25m²**
8	**COMMERCIAL SPACE** C.R.U. (Book shop).	**45m²**
9	**COMMERCIAL SPACE** Restaurant/cafe/bistro.	**370m²**
10	**BUILDING SERVICES** storage, washrooms, M/E	**200m²**
11	**VERTICAL CIRCULATION** elevators, lifts, stairs	**140m²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario B

P3

Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

SECOND/MEZZANINE LEVEL FLOOR PLAN

1. **OFFICES / STUDIOS** — **155m²**
   Board room/admin space.
2. **OFFICES / STUDIOS** — **180m² (Total)**
   Office admin space.
3. **OFFICES / STUDIOS** — **650² (Total)**
   Classroom/studio spaces in Boiler Voids.
4. **OFFICES / STUDIOS** — **~60m² (Each)**
   Classroom/studio spaces at Mezzanine Level
5. **OFFICES / STUDIOS** — **600m²**
   Social/circulation space at Mezzanine Level
6. **BUILDING SERVICES** — **170m²**
   Storage, washrooms, M/E.
7. **VERTICAL CIRCULATION** — **85m²**
   Elevators, lifts, stairs.

Low Pressure Plant 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario B

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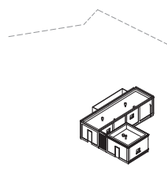
Phase 03
Long-Term [10+ Years]

Commercial Hub (Primary)

SECOND/MEZZANINE LEVEL AXONOMETRIC

1. **OFFICES / STUDIOS** — **155m²**
   Board room/admin space.
2. **OFFICES / STUDIOS** — **180m² (Total)**
   Office admin space.
3. **OFFICES / STUDIOS** — **650² (Total)**
   Classroom/studio spaces in Boiler Voids.
4. **OFFICES / STUDIOS** — **~60m² (Each)**
   Classroom/studio spaces at Mezzanine Level
5. **OFFICES / STUDIOS** — **600m²**
   Social/circulation space at Mezzanine Level
6. **BUILDING SERVICES** — **170m²**
   Storage, washrooms, M/E.
7. **VERTICAL CIRCULATION** — **85m²**
   Elevators, lifts, stairs.



RPP AAPR
Scope Definition
Phase 03 Program Scenario C

P3

Phase 03
Long-Term [10+ Years]

Institutional (Primary)

Scenario 3 is anchored by an Institutional Program with an emphasis on climate-centered education and outreach. The institutional focus would create a long-term presence guided by an explicit agenda and a distinct outlook. The opportunity exists to create partnerships across industries, academic centers and government entities that would encompass economic, educational and legislative interests to serve the growing Rossdale community and the greater City of Edmonton.

It is important to create space for indigenous and heritage programming in all of the various space planning permutations. It is crucial to create a space of understanding and retrospection that can steer future research and actions in a positive direction. Knowledge and respect for the land and its caretakers will strengthen the community responsibilities to future inhabitants.

As the surrounding community grows, the City of Edmonton's stewardship of the Rossdale site must focus on climate change as industrial heritage gives way to environmental studies. The trend towards city living suggests that an urban studies agenda is a critical aspect of climate change and therefore should be part of any institutional program. Mapping resource distribution, material flow and land use as wide-ranging environmental phenomena will generate new urban cartographies to shape future communities.

The Turbine Hall and Switch House spaces work well to house educational / research facilities, technology prototyping (e.g. vertical/ urban farms) and climate research offices/labs as well as public engagement spaces and heritage/ museum to spaces make history and research accessible to the community.

The Boiler Hall space is well-suited to serve as an community event space, a common space for occupants, a community library with interactive programming to support community outreach anchored by the climate-centric and urban studies research mandates.

RPP AAPR
Scope Definition
Phase 03 Program Scenario C

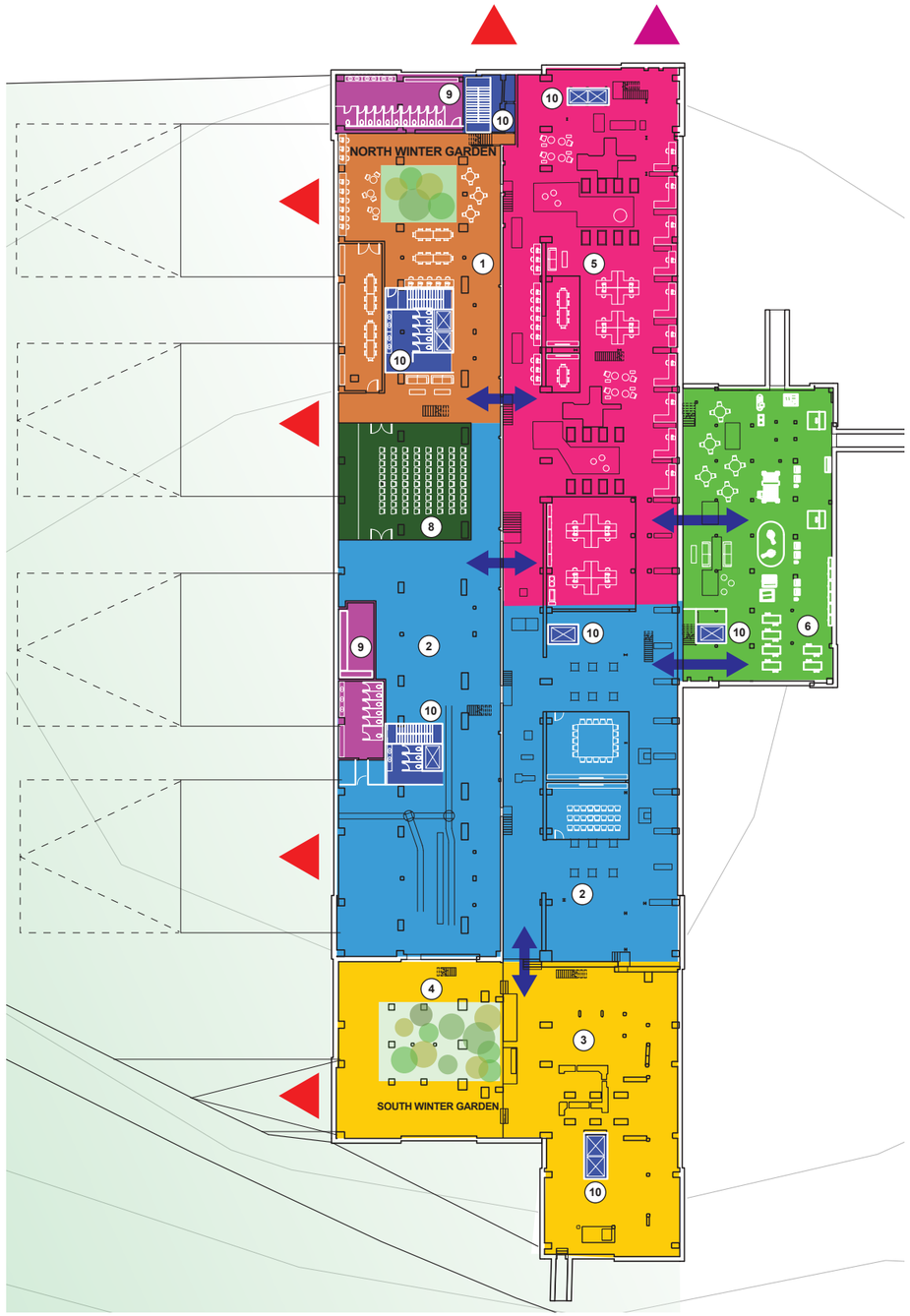
P3

Phase 03
Long-Term [10+ Years]

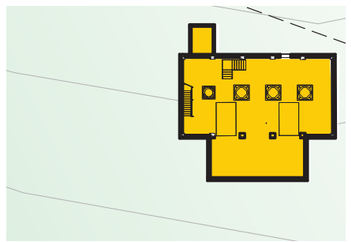
Institutional (Primary)

LOWER LEVEL FLOOR PLAN

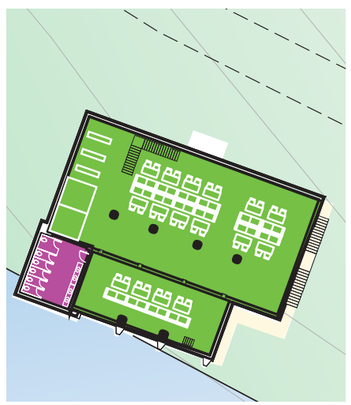
1	**LIBRARY** book stacks, multimedia, lounge play, childcare, interactive learning	**440m²**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**1284m²**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**477m²**
4	**MUSEUM / HERITAGE** education, culture, exhibits events, community gathering	**300m²**
5	**INSTITUTIONAL** climate-centric, tech showcase, urban studies, urban farming	**964m²**
6	**FOOD / LOBBY** food production, research demonstration	**473m²**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**N/A**
8	**THEATRE / HALL** performances, lectures, music conferences,	**162m²**
9	**BUILDING SERVICES** storage, washrooms, M/E	**148m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**156m²**



Low Pressure Plant 1:500



Pump House #1 1:500



Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario C

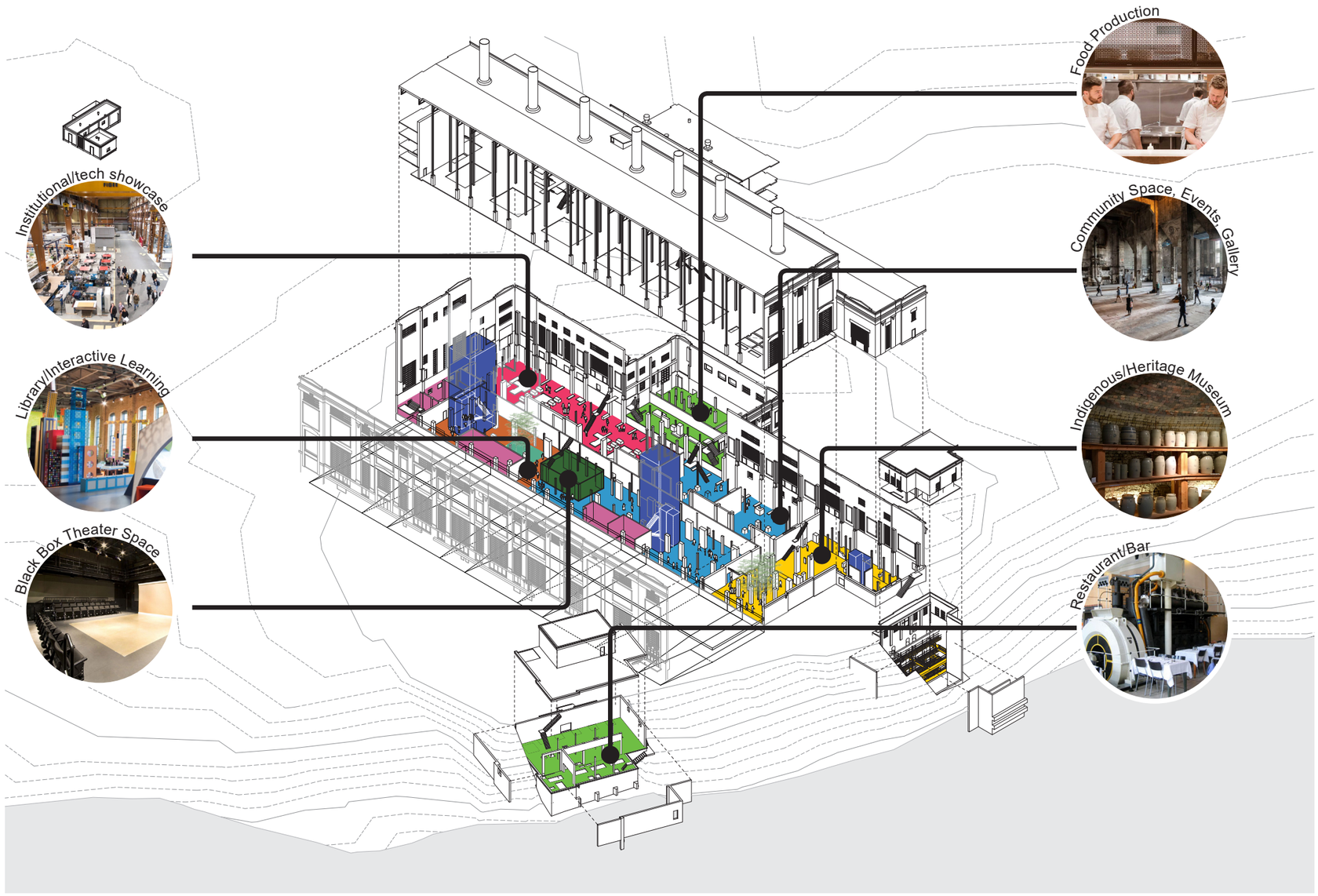
P3

Phase 03
Long-Term [10+ Years]

Institutional (Primary)

LOWER LEVEL AXONOMETRIC

1	**LIBRARY** book stacks, multimedia, lounge play, childcare, interactive learning	**440m²**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**1284m²**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**477m²**
4	**MUSEUM / HERITAGE** education, culture, exhibits events, community gathering	**300m²**
5	**INSTITUTIONAL** climate-centric, tech showcase, urban studies, urban farming	**964m²**
6	**FOOD / LOBBY** food production, research demonstration	**473m²**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**N/A**
8	**THEATRE / HALL** performances, lectures, music conferences,	**162m²**
9	**BUILDING SERVICES** storage, washrooms, M/E	**148m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**156m²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario C

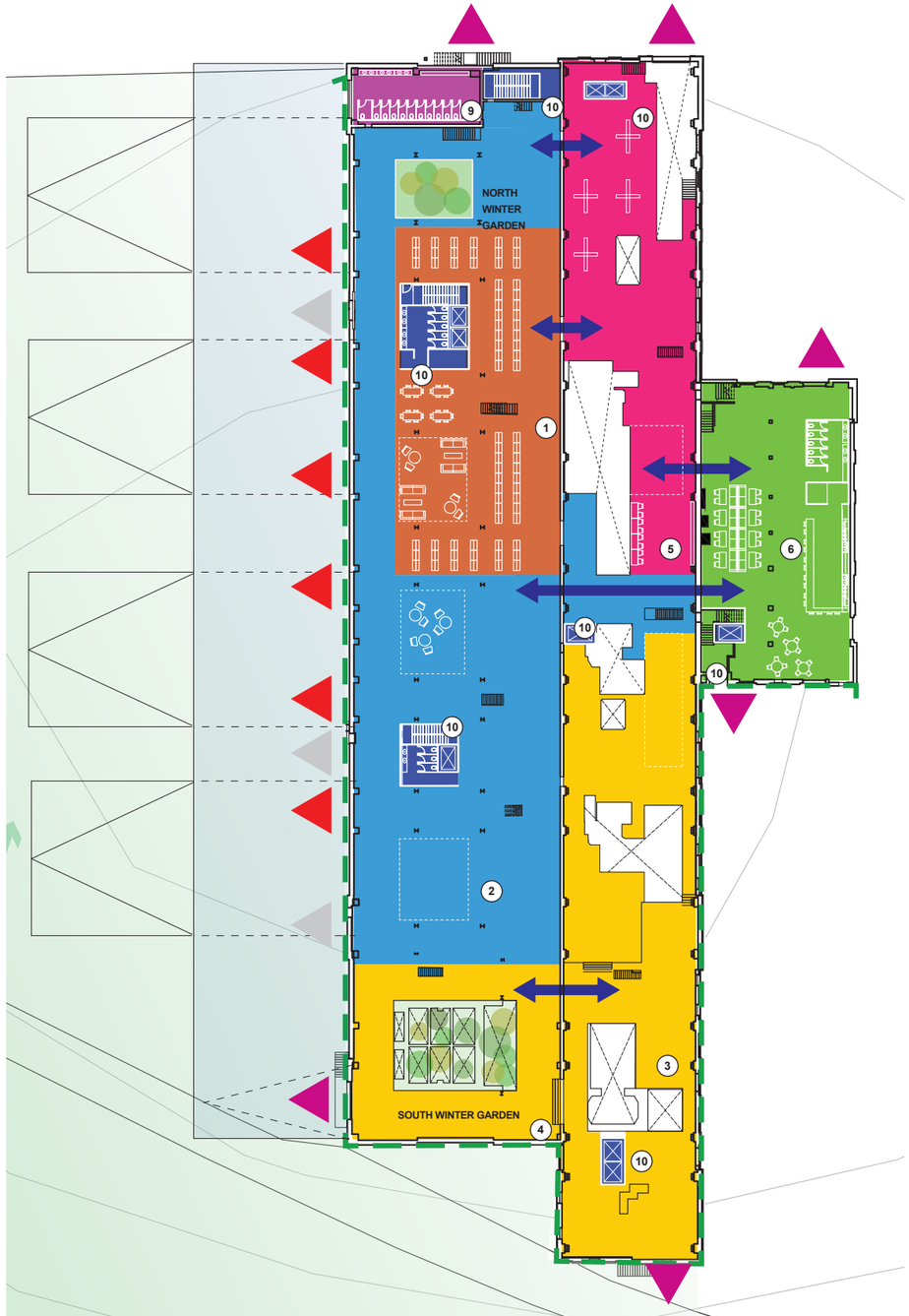
P3

Phase 03
Long-Term [10+ Years]

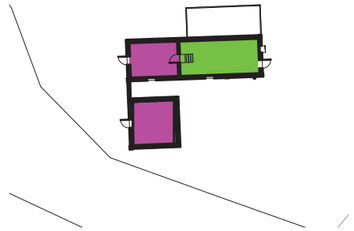
Institutional (Primary)

MAIN FLOOR PLAN

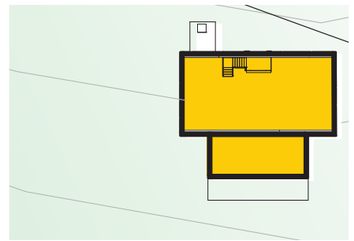
1	**LIBRARY** book stacks, multimedia, lounge play, childcare	**500m²**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**1000m²**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**690m²**
4	**MUSEUM / HERITAGE** education, culture, exhibits, events, community gathering	**282m²**
5	**INSTITUTIONAL** climate-centric, tech showcase urban studies, urban farming	**485m²**
6	**FOOD / LOBBY** restaurant, cafe, gathering food production, information centre	**478m²**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**N/A**
8	**THEATRE / HALL** performances, lectures, music conferences,	**N/A**
9	**BUILDING SERVICES** storage, washrooms, M/E	**80m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**150m²**



Low Pressure Plant 1:500



ATCO Gas Building 1:500



Pump House #1 1:500

Pump House #2 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario C

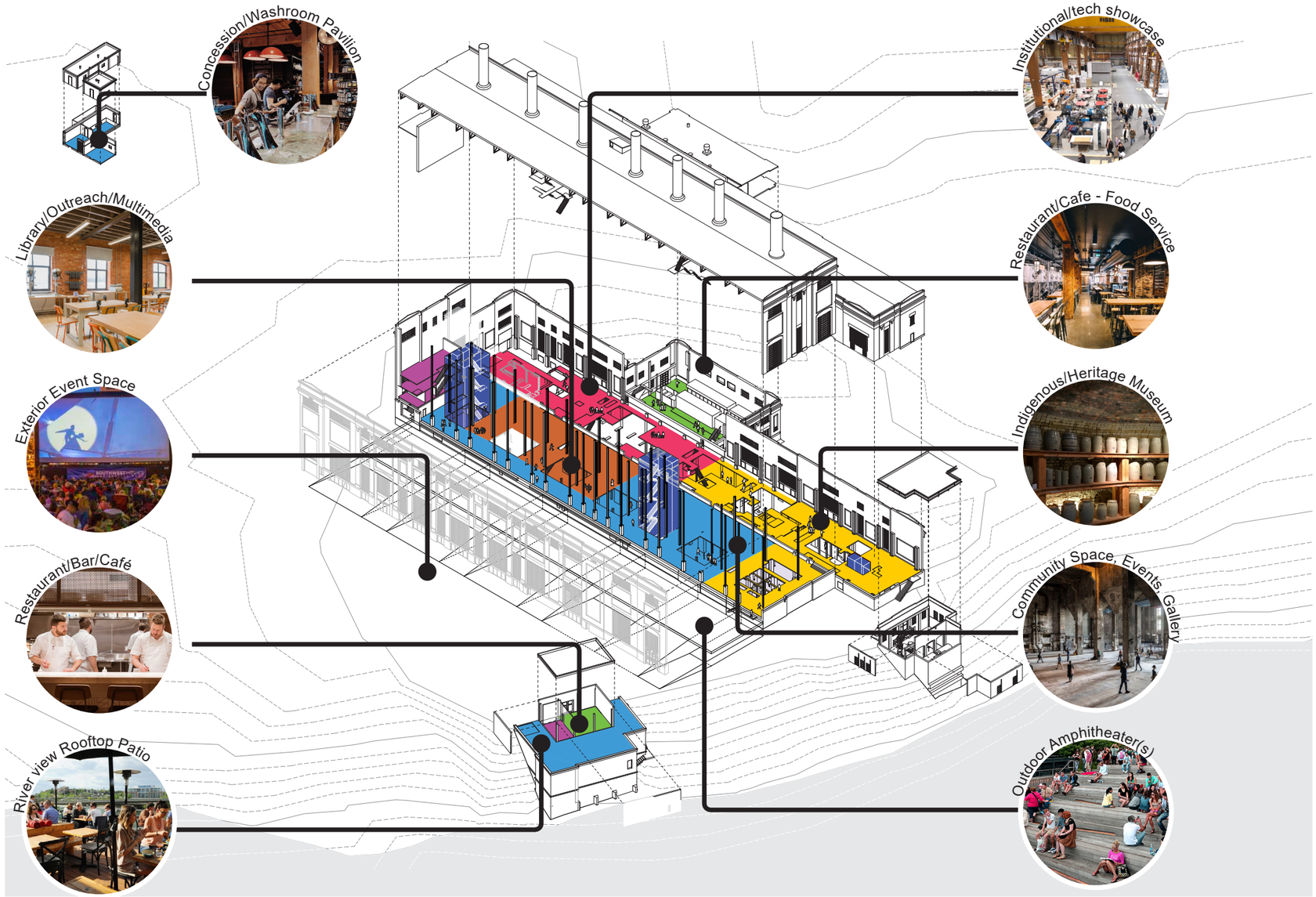
P3

Phase 03
Long-Term [10+ Years]

Institutional (Primary)

MAIN FLOOR AXONOMETRIC

1	**LIBRARY** book stacks, multimedia, lounge play, childcare, interactive learning	**500m²**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**1000m²**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**XXXm²**
4	**MUSEUM / HERITAGE** education, culture, exhibits events, community gathering	**XXXm²**
5	**INSTITUTIONAL** climate-centric, tech showcase, urban studies, urban farming	**XXXm²**
6	**FOOD / LOBBY** food production, research demonstration	**XXXm²**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**XXXm²**
8	**THEATRE / HALL** performances, lectures, music conferences,	**N/Am²**
9	**BUILDING SERVICES** storage, washrooms, M/E	**XXXm²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**XXXm²**



RPP AAPR
Scope Definition
Phase 03 Program Scenario C

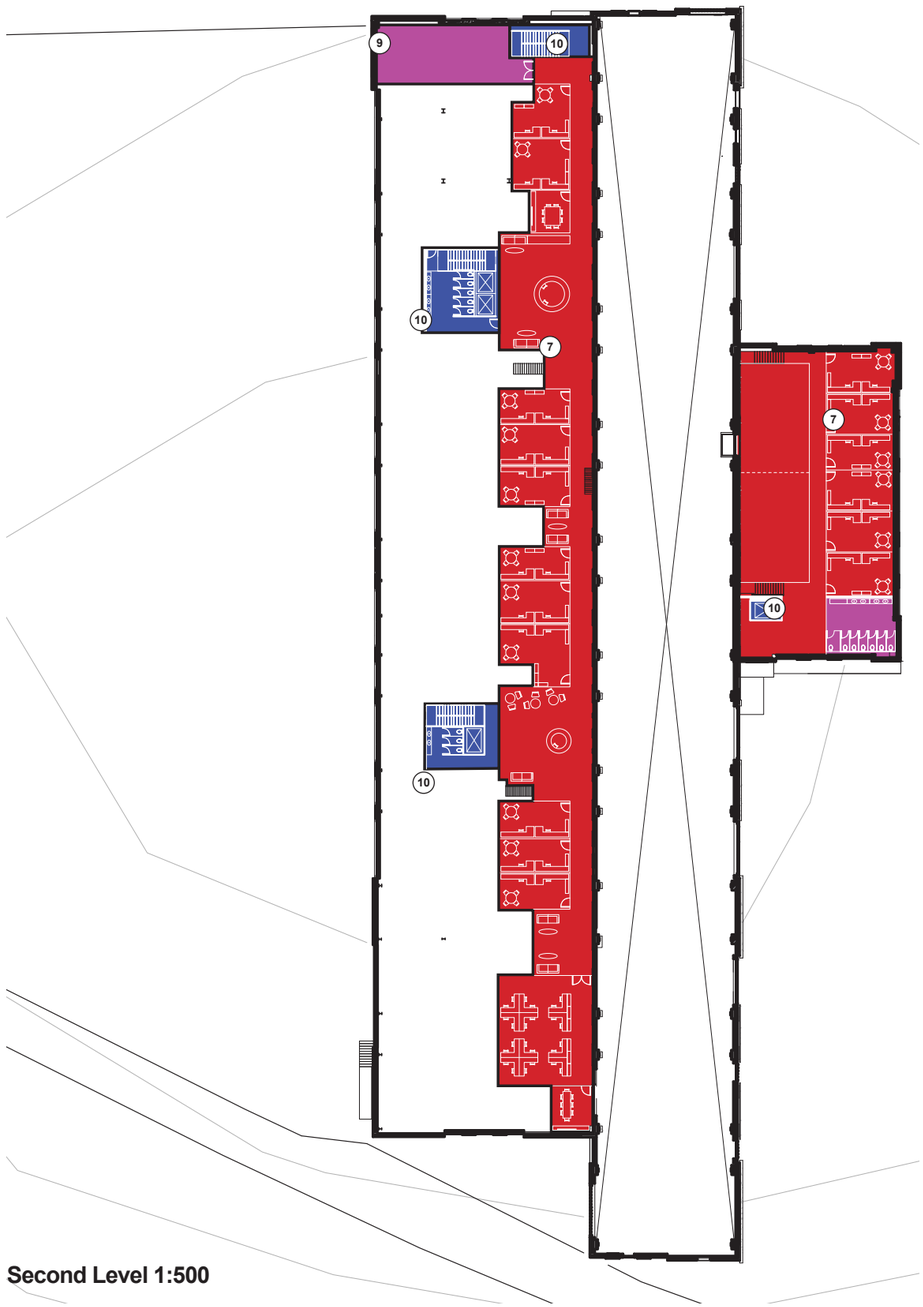
P3

Phase 03
Long-Term [10+ Years]

Institutional (Primary)

SECOND/MEZZANINE LEVEL FLOOR PLAN

1	**LIBRARY** book stacks, multimedia, lounge play, childcare	**N/A**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**N/A**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**N/A**
4	**MUSEUM / HERITAGE** education, culture, exhibits, events, community gathering	**N/A**
5	**INSTITUTIONAL** climate-centric, tech showcase urban studies, urban farming	**N/A**
6	**FOOD / LOBBY** restaurant, cafe, gathering food production, information centre	**N/A**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**1353m²**
8	**THEATRE / HALL** performances, lectures, music conferences,	**N/A**
9	**BUILDING SERVICES** storage, washrooms, M/E	**130m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**120m²**



Second Level 1:500

RPP AAPR
Scope Definition
Phase 03 Program Scenario C

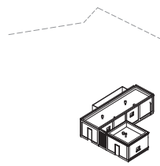
P3

Phase 03
Long-Term [10+ Years]

Institutional (Primary)

SECOND/MEZZANINE LEVEL AXONOMETRIC

1	**LIBRARY** book stacks, multimedia, lounge play, childcare	**N/A**
2	**COMMUNITY SPACE** event space, gallery, exhibits community space	**N/A**
3	**INDIGENOUS HERITAGE** education, culture, exhibits events, community gathering	**N/A**
4	**MUSEUM / HERITAGE** education, culture, exhibits, events, community gathering	**N/A**
5	**INSTITUTIONAL** climate-centric, tech showcase urban studies, urban farming	**N/A**
6	**FOOD / LOBBY** restaurant, cafe, gathering food production, information centre	**N/A**
7	**OFFICES / STUDIOS** offices, studios, meeting rooms support spaces	**1353m²**
8	**THEATRE / HALL** performances, lectures, music conferences,	**N/A**
9	**BUILDING SERVICES** storage, washrooms, M/E	**130m²**
10	**VERTICAL CIRCULATION** elevators, lifts, stairs	**120m²**



RPP AAPR
Scope Definition
Phase 03 Concept Visualizations

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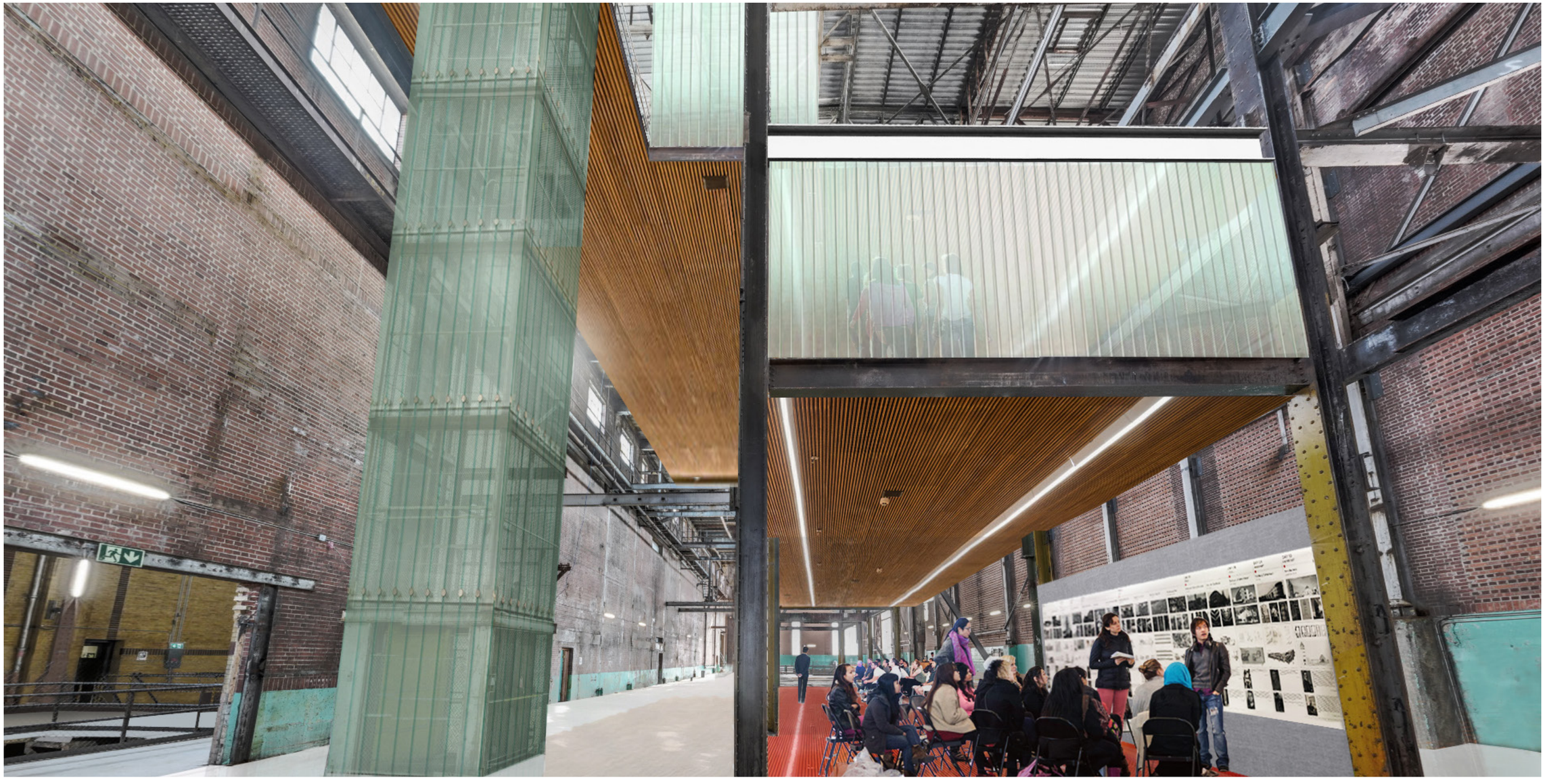

RPP AAPR
Scope Definition
Phase 03 Concept Visualizations

RPP AAPR
Scope Definition
Phase 03 Concept Visualizations

RPP AAPR
Scope Definition
Cost Estimate Summary

Overview

Building on the condition assessment work and subsequent scope definition completed as part of this project, this Class 5 Cost Estimate lays the groundwork for future design phases by providing probable costs of construction associated with the three broad phases of rehabilitation and growth work described in this document.

The estimate captures probable costs of construction, and therefore excludes ‘soft cost’ elements including land costs; professional fees; municipal and connection fees; permits; management overhead; project contingency; furniture, fittings, and equipment; and financing costs.

The estimate does include a 25% design contingency to account for future refinement of design parameters during future design stages, as well as an 8% construction contingency. Figures are quoted in 2021 and do not include values for escalation.

For further details, please refer to Appendix A - Class 5 Cost Estimate.

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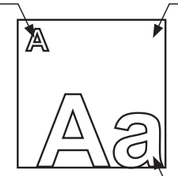

Priority Urgency
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- Immediate Term [1-2 Years]
- Medium Term [2-10 Years]
- LongTerm [10-20+ Years]

Scope Abbreviation
Shorthand descriptor for the recommended scope element. Scopes may appear in multiple priority stages.

Phase/ Priority	#	Criteria Qualifier	Abbreviation	Scope Name/BLDG Code	Scope Description/Rationale	Rehabilitation/Growth	Estimated Cost
P1	1	BCD	Fe^{PH2}	Pump House #2 Fenestration	1. Provide new openings to Pump House #2 to support occupancy and connection of use to rooftop patio and view.	Growth	1. $25,300.00
P1	2	ABD	Sr^{PH2}	Pump House #2 Structural Rehabilitation	1. Rehabilitate/reinforce Pump House #2's structure to support rooftop (and future main operating floor) occupancy.	Growth/Rehabilitation	1. $158,600.00
P1	3	ABD	Fo	Floor Openings	1. Repair unguarded floor openings, as well as those covered by insufficient temporary coverings.	Rehabilitation	1. $116,100.00
P1	4	BD	Ac	Accessibility Provisions	1. Provide accessible access points to meet minimum Code requirements for occupancy.	Rehabilitation	1. $426,600.00
P1	5	BD	Me^{SWH}	Switch House M/E	1. Rehabilitate existing washroom fixtures in Switch House to support near term occupancy.	Rehabilitation	1. $54,700.00
P1	6	BD	Me^{PH2}	Pump House #2 M/E	1. Develop and implement new permanent plumbing and electrical systems to select spaces Pump House #2 to new use.	Growth	1. $125,700.00
					2. Implement new washroom fixtures in Pump House #2 to serve future occupancy.	Growth	2. $50,100.00
P1	7	BD	El	Emergency Lighting	1. Provide emergency lighting to meet minimum Code requirements for occupancy.	Rehabilitation	1. $370,900.00
P1	8	ABD	Gr	Guard Rails	1. Replace, repair, or augment existing guards around extant floor openings to meet contemporary code requirements.	Rehabilitation	1. $100,400.00
					2. Provide new guards around Pump House #2 rooftop patio.	Rehabilitation	2. $47,100.00
P1	9	ABCD	Dr/Ex	Exterior Door Rehabilitation	1. Rehabilitate/repair all exterior heritage doors.	Rehabilitation	1. $154,000.00
					2. Retrofit doors to be reused as future exits	Rehabilitation	2. $79,000.00
P1	10	ABCD	Ts	Tunnel Sealing (ROS 106, ROS 107, ROS 108, ROS 109)	1. Seal all points of water ingress in basements for Dry & Wet Wells of the Pump Houses.	Rehabilitation	1. $158,000.00
					2. Block off north tunnel from water ingress.	Rehabilitation	2. $158,000.00
P1	11	ABCD	Ti	Switch House Second Floor Level Offices	1. Introduce new structure to support elevator and stair elements to serve second floor	Growth/Rehabilitation	1. $701,400.00
P1	12	ABCD	LpA	Lead Paint and Asbestos Abat ment (to turbine hall, Boiler hall, Switch House and Pump House #2) Phase 1	1. Abate lead paint on all extant 'heritage' steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.	Rehabilitation	1. $2,400,000.00
P1	13	ABCD	Sr	Pump House #2 Main Operating Floor/Lower Level Structural Rehabilitation (ROS 109)	1. Introduce new structure to support elevator and stair elements to serve main operating floor.	Growth/Rehabilitation	1. $9,100.00
					2. Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	Growth/Rehabilitation	2. $58,400.00
					3. Infill constructed floor voids in main operating floor with translucent floor covering c/w fire rating.	Growth/Rehabilitation	3. $412,900.00
					4. Create openings in West, East, and/or South elevations to provide access to Touch the Water promenade.	Growth/Rehabilitation	4. $216,000.00
P1 Sub-Total							**$5,921,200.00**
P2	11	AC	Wi	Window Repair (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	1. Reputty all extant windows.	Rehabilitation	1. $872,000.00
					2. Repair broken panes	Rehabilitation	2. $3,042,200.00
P2	12	ACD	Wr^{BLH}	Window Reinstatement (ROS 107)	1. Reinstate windows infilled on West elevation of Boiler Hall. Windows to match existing fenestration.	Rehabilitation	1. $3,172,600.00

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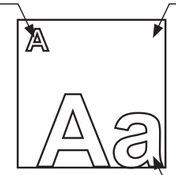

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Scope Abbreviation
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Phase/ Priority	#	Criteria Qualifier	Abbreviation	Scope Name	Scope Description/Rationale	Rehabilitation/Growth	Estimated Cost
P2	13			Masonry Stabilization (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	1. Re-set displaced cast masonry units	Rehabilitation	1. $584,600.00
					2. Replace broken bricks (cracks & spalls)	Rehabilitation	2. $1,753,800.00
					3. Repoint areas of failing mortar.	Rehabilitation	3. $292,300.00
					4. Use the same mortar specifications as per the 1938 addition, adjusted for contemporary portland strengths. All bricks to match existing, as close as feasible, in both colour and material properties.	Rehabilitation	4. $158,000.00
					5. Paint Removal/Cleaning Mock-Up	Rehabilitation	5. $182,500.00
P2	14	ABD	Lp	Lead Paint Abatement (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	1. Abate lead paint on all extant ‘heritage’ steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.	Rehabilitation	1. $4,377,300.00
P2	15	ABCD	Sr^{BLH}	Boiler Hall Structural Rehabilitation (ROS 107)	1. Complete detailed structural analysis to confirm bracing requirements.	Rehabilitation	1. $158,000.00
					2. Reinforce/brace existing roof structure.	Rehabilitation	2. $800,800.00
					3. Introduce new structure to support floor framing, elevator, and stair elements in existing boiler voids.	Growth	3. $705,100.00
					4. Augment/replace existing West elevation bracing with new members braced back to new cores in boiler hall voids.	Rehabilitation	4. $826,500.00
					5. Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	Rehabilitation	5. $2,386,100.00
					6. Repair/reinforce existing mezzanine (inlcuding infilling of floor voids) to support assembly occupancy and future wall partitions.	Rehabilitation	6. $1,012,700.00
					7. Stabilize/brace existing heritage stair and catwalk steel.	Rehabilitation	7. $ 45,700.00
					8. Coat all new and existing steel elements with intumescent paint to achieve fire ratings for future occupancy.	Rehabilitation	8. $950,800.00
P2	16	ABD	Fi^{BLH}	Boiler Hall Floor Infill (ROS 107)	1. Infill constructed floor voids at South end of Boiler Hall with translucent floor covering c/w fire rating.	Rehabilitation	1. $790,000.00
	17	BD	Ex^{BLH}	Boiler Hall West Elevation Exits (ROS 107)	1. Create new openings (coordinated with existing structural bays) on West Elevation of Boiler Hall to provide connection to the future Touch the Water grade and address the lack of exiting capacity in the existing Boiler Hall (and Low Pressure Plant more broadly).	Growth	1. $573,600.00

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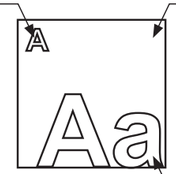

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P2	18	ABCD	Sr^{TBH}	Turbine Hall Structural Rehabilitation (ROS 106)	1. Complete detailed structural analysis to confirm bracing requirements.	Rehabilitation	1. $158,000.00
					2. Reinforce/brace existing roof structure.	Rehabilitation	2. $362,000.00
					3. Introduce new structure to support elevator and stair elements in existing turbine/equipment voids.	Rehabilitation	3. $42,300.00
					4. Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	Rehabilitation	4. $1,164,600.00
					5. Repair/replace existing guard rails at floor openings to meet current Building Code requirements.	Rehabilitation	5. $323,500.00
P2	19	ABCD	Sr^{PH2}	Pump House #2 Main Operating Floor/Lower Level Structural Rehabilitation (ROS 109)	1. Introduce new structure to support elevator and stair elements to serve main operating floor.	Growth	1. $9,100.00
					2. Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	Rehabilitation	2. $58,400.00
					3. Infill constructed floor voids in main operating floor with translucent floor covering c/w fire rating.	Rehabilitation	3. $314,100.00
					4. Create openings in West, East, and/or South elevations to provide access to Touch the Water promenade.	Growth	4. $216,000.00
P2	20	ABCD	Rr^{PH1}	Pump House #1 Roof Replacement	1. Replace Pump House #1 roof.	Rehabilitation	1. $99,600.00
P2	21	ABCD	Rr^{AGB}	ATCO Gas Building Roof Replacement	1. Replace ATCO Gas Building roof.	Rehabilitation	1. $45,600.00
P2	22	BD	Fs^{BLH}	Boiler Hall Fire Suppression	1. Introduce mains and infrastructure for branch lines for a fire suppression system in the Boiler Hall.	Growth	1. $549,100.00
P2	23	BD	Fs^{TBH}	Turbine Hall Fire Suppression	1. Introduce mains and infrastructure for branch lines for a fire suppression system in the Turbine Hall.	Growth	1. $331,000.00
P2	24	BD	Wc^{LPP}	Low Pressure Plant Washrooms	1. Implement rough-ins for dedicated washroom spaces in the Low Pressure Plant to meet future occupancy needs.	Growth	1. $950,500.00
P2 Sub-Total							**$ 26,710,800.00**
P3	25	ABCD	Ti^{BLH}	Boiler Hall Tenant 'Improvements' (ROS 107)	1. New walls/partitions in lower level to suit programming.	Growth	1. $674,000.00
					2. New floors and partition walls in boiler void infills to suit program.	Growth	2. $1,363,300.00
					3. Access stairs to Mezzanine and intermediary floors.	Growth	3. $338,300.00
					4. New elevators in boiler void cores.	Growth	4. $1,109,200.00
					5. Lighting and electrical fit-up for all new 'infill' program spaces.	Growth	5. $4,342,900.00
					6. Washroom fit-up for all new washroom spaces.	Growth	6. $632,600.00
					7. Mechanical system fit-up for Boiler Hall.	Growth	7. $7,198,500.00
					8. Architectural finishes for all new 'infill' program spaces.	Growth	8. $3,406,200.00
					9. Allowance for fire rated assemblies (if required) between major occupancies.	Growth	9. $465,800.00

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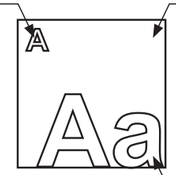

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P3	26	ABCD	Ti^{TBH}	Turbine Hall ‘Tenant Improvements’ (ROS 106)	1. New walls/partitions in lower level to suit programming.	Growth	1. $235,500.00
					2. New/rehabilitated guards at main level to address fall hazards at turbine openings.	Rehabilitation/Growth	See 18.5
					3. Accessibility provisions to address changes in level on main floor.	Growth	3. $41,100.00
					4. New stair/elevator cores to connect main and lower levels.	Growth	4. $657,300.00
					5. General lighting in lower and main floor spaces.	Growth	5. $2,509,700.00
					6. Lighting and electrical fit-up for all new ‘infill’ program spaces.	Growth	6. $1,075,600.00
					7. Mechanical system fit-up for Turbine Hall.	Growth	7. $4,338,200.00
					8. Architectural finishes for all new ‘infill’ program spaces.	Growth	8. $1,670,700.00
					9. Allowance for fire rated assemblies (if required) between major occupancies.	Growth	9. $559,900.00
					10. Allowance for fire rated closures at floor openings if main and lower floor major occupancies are different occupancy types requiring a fire separation having a fire resistance rating.	Growth	10. $853,300.00
P3	27	ABCD	Ti^{SWH}	Switch House ‘Tenant Improvements’ (ROS 105)	1. New walls/partitions in lower level to suit programming.	Growth	1. $259,000.00
					2. New walls/partitions at main level to suit programming.	Growth	2. $267,100.00
					3. New elevator/stairs to second level (and access to Turbine Hall).	Growth	4. $328,600.00
					4. Lighting and electrical fit-up for all new/rehabilitated program spaces.	Growth	5. $1,234,000.00
					5. Mechanical system fit-up for the Switch House.	Growth	6. $1,866,500.00
					6. Architectural finishes for all new ‘infill’ program spaces.	Growth	7. $1,005,700.00
					7. Allowance for fire rated assemblies (if required) between major occupancies.	Growth	8. $742,500.00
P3	28	ABCD	Ti^{PH1}	Pump House #1 ‘Tenant Improvements’ (ROS 108)	1. Accessibility provisions to main level.	Rehabilitation	1. $39,500.00
					2. Lighting and electrical fit-up for all new/rehabilitated main floor level spaces.	Rehabilitation	2. $157,400.00
					3. Allowance for equipment rehabilitation/stabilization.	Rehabilitation	3. $31,600.00
					4. Mechanical system fit-up for Pump House #1.	Rehabilitation	4. $158,700.00
P3	29	ABCD	Ti^{PH2}	Pump House #2 ‘Tenant Improvements’ (ROS 109)	1. Accessibility provisions to main level.	Growth	1. $15,800.00
					2. Lighting and electrical fit-up for all new/rehabilitated main operating floor spaces.	Growth	2. $1,423,900.00
					3. New walls/partitions at main operating floor to suit programming.	Growth	3. $74,000.00
					4. New elevator/stairs to main operating floor.	Growth	4. $252,800.00
					5. Washroom fit-up for all new washroom spaces.	Growth	5. $144,600.00
					6. Mechanical system fit-up for the main operating floor.	Growth	6. $ 1,020,500.00
					7. Architectural finishes for main operating floor.	Growth	7. $500,800.00

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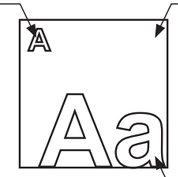

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P3	30	ABCD	Ti^{AGB}	ATCO Gas Building 'Tenant Improvements' (ROS 112)	1. Accessibility provisions to main level.	Growth	1. $15,800.00
					2. Lighting and electrical fit-up for all new spaces.	Growth	2. $84,100.00
					3. Washroom fit-up for all new washroom spaces.	Growth	3. $144,600.00
					4. Mechanical system fit-up.	Growth	4. $65,400.00
					5. Architectural finishes for main floor spaces.	Growth	5. $22,900.00
					6. New walls/partitions at main floor to suit programming.	Growth	6. $59,100.00
P3 Sub-Total							**$41,387,000.00**
Grand Total P1-P3							$74,019,000.00

RPP AAPR
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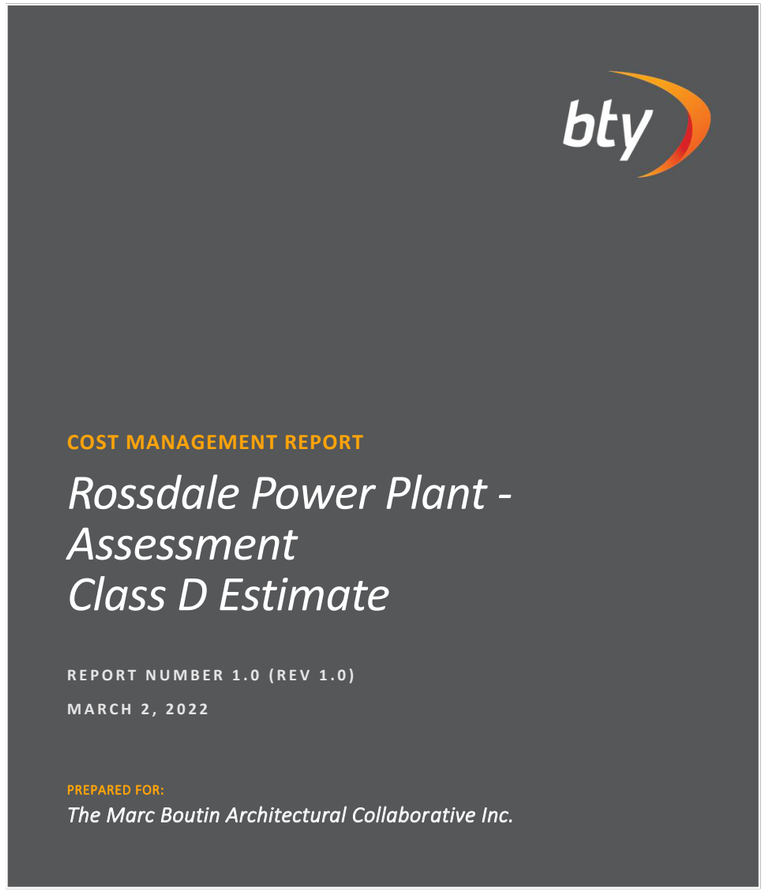
Appendix A - Class 5 Cost Estimate



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Contents

Prepared By	Reviewed By	Date
Ian Estillore	Allen Reid	3/2/2022

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1.0 *Introduction*

1.1 Instructions Received

This Report ("Report") has been prepared by BTY Group at the request of Marc Boutin Architectural Collaborative Inc. (MBAC) ("Client").

The Client has appointed BTY to provide an Order of Magnitude estimate developed for the Rossdale Power Plant - Assessment at, Edmonton, A.B. (the "Project"). The Project will be delivered using a Stipulated Price Contract construction model and, therefore, BTY strongly recommends that estimates are prepared at each of the key design milestones. This report has been prepared in accordance with the scope of our Fee Proposal, dated July 13, 2020, which was prepared in response to Rossdale Power Plant Advanced Assessment and Priority Rehabilitation date June 23, 2020, and is subject to the terms of that appointment.

1.2 Reliance upon the Report

This Report is owned by BTY Group, and it is provided for the benefit and sole reliance of MBAC and City of Edmonton. BTY Group, its directors, staff, or agents do not make any express or implied representation or warranty whatsoever as to the factual accuracy of the information provided to us on behalf the MBAC and City of Edmonton, its subcontractors, or agents, upon which this Report is based. This Report contains confidential, proprietary information and related intellectual property rights of BTY Group which is licensed on a non-exclusive and limited basis to MBAC and City of Edmonton and the Report may not be reproduced, transferred, copied, shared or distributed, in whole or in part, to any party other than the Lender, without the express prior written permission of BTY Group.

1.3 Reporting Qualifications

This Report has been prepared based on information provided to us by the Client up to the date of issue of this Report. BTY Group does not accept any liability or accountability for information that has not been provided, or made available to us, at the time of preparing this Report. Any advice, opinions, or recommendations within this Report should be read and relied upon only in the context of the report as a whole. The contents do not provide legal, insurance or tax advice or opinion. Opinions in this report do not an advocate for any party and if called upon to give oral or written testimony it will be given on the same assumption.

1.4 Contacts

Should you have any queries regarding the content of this report, please do not hesitate to contact either of the following:

Allen Reid
Director: Prairies Region
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Ian Estillore
Cost Consultant
Tel: 403 269 5155
Email: ianestillore@bty.com

2.0 *Executive Summary*

2.1 Report Purpose

The purpose of this report is to provide a realistic estimate of the Project cost based on the information available at the time of writing.

The opinion expressed in this report has been prepared without the benefit of detailed architectural, structural, mechanical, electrical drawings and should, therefore, be considered an Order of Magnitude (Class D) estimate. Based on the documents reviewed, our estimate should be correct within a range of approximately +/- 15% to 20%.

In order to provide an accurate cost estimate for the Project, BTY Group strongly recommends that a professional Quantity Surveying organization, such as BTY Group, be retained to provide a detailed analysis of any design information produced on behalf of the Client during the remaining stages of design.

2.2 Project Background and Description

The proposed development consists of rehabilitation, renovation, and repurposing of existing Rossdale Power Plant's Low-Pressure Plant (LPP), Pump House #1 & 2 and ATCO gas Building.

The proposed project has three (3) levels of priority. Priority 1 consist of architectural rehabilitation of southern area of LPP, basement and ground level of Switch house and Pump house #2 main level. Includes installation of safety measures around openings, new accessible ramps and exits, emergency lighting and providing new washrooms to Pump house #2. Priority 2 includes structural rehabilitation of LPP, Pump house #1 and 2, and ATCO building. Includes repair and rehabilitation of exterior windows and claddings, addition of new exits to west side of Boiler Hall, structural modification of interior steel bracing and addition of new steel support for new elevator and stairs, rehabilitation and reinforcing existing all floor slab to accommodate new occupancy, install translucent infills to Boiler Hall and Pump house # 2 lower level and new floor infill to Boiler Hall mezzanine, install fire suppression to LPP, and construction of new washrooms to LPP. Allowance for Lead paint abatement has been also carried to this estimate. Priority 3 is to provide complete architectural finish, mechanical and electrical fit outs to LPP, Switch house, Pump house # 1 & 2 and ATCO Building tenants' requirements.

RPP AAPR
Scope Definition
Appendix A - Class 5 Cost Estimate

Executive Summary (Cont'd)

2.3 Project Overview

Construction Budget Status	Details
Budget	not specified
Current Estimate	$74,019,000
Current Cost / m²	$6,320 /m²
Project Specifics	
GFA	11,712 m²
Construction Start	not specified
Construction Completion	not specified
Duration	not specified
Escalation	excluded
Design Contingency	25%
Construction Contingency	8%

3.0 *Development Cost Summary*

The current estimated cost of the project may be summarized as follows:

	Item	Estimated Costs ($)
A	Land Cost (Excluded)	0
B	Construction	58,559,700
C	Contingencies	15,459,300
D	Professional Fees	0
E	Municipal & Connection Fees	0
F	Management & Overhead	0
G	Project Contingency	0
H	Furnishing, Fittings & Equipment	0
I	Financing Costs	0
J	Goods & Services Tax	0
	Total Project Cost (March 2022 Dollars)	**$74,019,000**
K	Escalation (excluded)	0
	Escalated Project Cost (March 2022 Dollars)	**$74,019,000**

Please note that, where zero-dollar values are stated, BTY has excluded these costs and the values should be carried in a separate budget (if applicable).

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4.0 *Basis & Assumptions*

The construction estimate is based on the following list of assumptions:

1. The estimate has been made in reference to RPP AAPR scope definition, 2021 07 20 update.
2. Structural steel reinforcement allowance of 10kg/m2 to existing deck floor, 20kg/m2 to roof reinforcements and 35kg/m2 for new structures.
3. Allowances for new accessibility ramp to main entrances to LPP, Switch House, and Pump house #2.
4. Allowances to seal all point of water ingress to basements.
5. Assume 60% of total existing window area to be re-putty and 40% will be replaced.
6. New openings to West Boiler Hall wall will be prepared to accept new windows similar to existing.
7. Allowances to repair, reset and replace existing masonry walls.
8. Allowance for Hazmat removal has been included in the estimate for budget purpose only. Hazmat consultant should verify the budget provided in this estimate.
9. Architectural finishes and M&E fit-outs allowances are included based on new occupancy. See Appendix II Cost Plan for details.
10. Touch the Water site development, included in this estimate.

Please note that BTY is not qualified to act as design consultant. The assumptions in our estimate should be reviewed and corrected by the design team.

5.0 *Exclusions*

The construction estimate includes all direct and indirect construction costs derived from the drawings and other information provided by the Consultants, with the exception of the following:

1. Land costs
2. Professional fees and disbursements
3. Planning, administrative and financing costs
4. Legal fees and agreement costs / conditions
5. Construction Bonds and Insurance(s)
6. Building permits and development cost charges
7. Temporary facilities for user groups during construction
8. Loose furnishings and equipment
9. Winter Conditions
10. Unforeseen ground conditions and associated extras
11. Environmental remediation outside building footprint
12. Servicing outside the project site boundary (Main hydro service)
13. Phasing of the works and accelerated schedule
14. Decanting & moving
15. Costs associated with "LEED" certification
16. Project commissioning (Third Party)
17. Erratic market conditions, such as lack of bidders, proprietary specifications
18. Cost escalation

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Scope Definition
Appendix A - Class 5 Cost Estimate

6.0 *Construction Cost Summary*

The estimated construction cost of the project may be summarized as follows:

Description	Estimated Cost $	Cost/GFA $/m²	%
Construction Cost	46,847,400	4,000	80%
General Requirements & Fees (25%)	11,712,000	1,000	20%
Net Construction Cost	**$58,559,400**	**$5,000 /m²**	**100%**
Contingencies (33%)	15,459,600	1,320	
Total Construction Cost	**$74,019,000**	**$6,320 /m²**	
Escalation Allowance (excluded)	0	0	
Escalated Construction Cost	**$74,019,000**	**$6,320 /m²**	
Gross Floor Area (m²)	11,712 m²		
Net Construction Cost /m²	$5,000 /m²		
Total Construction Cost /m²	$6,320 /m²		
Escalated Construction Cost /m²	$6,320 /m²		

7.0 *Areas*

Location	Pump House No. 1 m²	Pump House No. 2 m²	Low Pressure Plant			ATCO Gas Building m²	Total m²
			Switch House m²	Turbine Hall m²	Boiler Room m²		
Lower Levels		130					130
Basement		435	501	2,231	1903.7		5071
Main Floor	166	119	501	1,260	2296	76	4418
Mezzanine					1593		1593
Upper Floors			500				500
Total	**166**	**684**	**1502**	**3491**	**5793**	**76**	**11712**
Roof	166	446	515	17.97	2385	76	3606

8.0 *Taxes*

The estimate excludes the Goods & Services Tax (G.S.T.).

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9.0 *Project Schedule & Escalation*

No cost escalation allowance has been included in the estimate. BTY strongly recommends that the client establish a separate budget to cover the escalation cost from the date of this estimate to the mid-point of construction for the project.

Our current projected escalation rates are shown below. In the event that there is slippage in the schedule, further escalation based on the projected escalation rate per annum should be included in the estimate.

	2022	2023	2024
Current BTY Group Forecast	5%~6%	4%~5%	4%~5%

In general escalation is increasing through 2021 and 2022 at a higher rate than the average of the last 4 years. This is largely due to the effects of Covid 19 pandemic on labour availability and productivity as well as the effects it has had on material production and the supply chain for receiving material to site. This coupled with an increasingly active construction market has led to higher construction costs. It is our expectation that these increases will not subside until the effects of Covid 19 are withdrawn from the economy.

10.0 *Pricing*

This estimate has been priced at first quarter 2022 rates assuming on current market. The unit rates utilized are considered appropriate for a project of this type, bid under a Stipulated Price Contract in an open market, with a minimum of five (5) bids, supported by a sufficient number of sub-contractors to ensure competitiveness.

The estimate is based on current material, labour, and productivity rates. It does not take into account extraordinary market conditions that may result due to the current pandemic such as site closures, shortages of specified materials no other issues that may be affecting productivity and capacity.

11.0 *Risk Mitigation*

BTY Group recommends that the Owner, Project Manager and Design Team carefully review this document, including exclusions, inclusions and assumptions, contingencies, escalation, and mark-ups. If the project is over budget, or if there are unresolved budgeting issues, alternative systems/schemes should be evaluated before proceeding into the next design phase.

Requests for modifications of any apparent errors or omissions to this document must be made to BTY Group within ten (10) days of receipt of this estimate. Otherwise, it will be understood that the contents have been concurred with and accepted.

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This report has been prepared at the request of The Marc Boutin Architectural Collaborative Inc. and is the exclusive property of BTY Group. The information must be treated as confidential and not to be disclosed, reproduced, or permitted to be disclosed to any party without the prior consent of BTY Group.

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Appendix A - Class 5 Cost Estimate

Risk Mitigation (Cont'd)

It is recommended that BTY Group design and propose a cost management framework for implementation. This framework would require that a series of further estimates be undertaken at key design stage milestones and a final update estimate be produced which is representative of the completed tender documents, project delivery model and schedule. The final updated estimate will address changes and additions to the documents, as well as addenda issued during the bidding process. BTY Group is unable to reconcile bid results to any estimate not produced from bid documents including all addenda.

12.0 *Contingencies*

12.1 Design Contingency

A design contingency of Twenty-five Percent (25%) has been included in the estimate to cover modifications to the program, drawings, and specifications during the design.

12.2 Construction Contingency

Construction contingency of Eight Percent (8%) for changes occurring during the construction period of the project. This amount may be expended due to site conditions or if there are modifications to the drawings and specifications.

13.0 *Documents Reviewed*

The list below confirms the information that we have reviewed in order to prepare our opinion contained within this report:

Description		Revised Date
Report, Drawings & Specifications		
	RPP AAPR Scope Definition 2021 07 20 (88 pages)	July 20, 2021
	RPP AAPR ROS105 ROS106 ROS107 LPP Historic Building Record	March 15, 2021
	RPP AAPR ROS105 Switch House Archival Photographic Record	March 15, 2021
	RPP AAPR ROS106 Turbine Hall Archival Photographic Record	March 15, 2021
	RPP AAPR ROS107 Boiler Hall Archival Photographic Record	March 15, 2021
	RPP AAPR ROS108 Pump House 1 Archival Photographic Record	March 15, 2021
	RPP AAPR ROS108 Pump House 1 Historic Building Record	March 15, 2021
	RPP AAPR ROS109 Pump House 2 Archival Photographic Record	March 15, 2021
	RPP AAPR ROS109 Pump House 2 Historic Building Record	March 15, 2021
	RPP AAPR ROS112 ATCO Gas Building Archival Photographic Record	March 15, 2021
	RPP AAPR ROS112 ATCO Gas Building Archival Photographic Record	March 15, 2021

COST MANAGEMENT REPORT

Rossdale Power Plant - Assessment

APPENDICES

APPENDIX I	Cost Summary	4 pages
APPENDIX II	Cost Plan	13 pages

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People to count on.
Knowledge to build with.

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Appendix A - Class 5 Cost Estimate

APPENDIX I

Cost Summary

4 PAGES

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People to count on.
Knowledge to build with.

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
SUMMARY

Phase/ Priority	Item		Repair Details		Estimated Cost	Total Cost
P1	1	Pump House #2 Fenestration	1.1	Provide new openings to Pump House #2 to support occupancy and connection of use to rooftop patio and view.	$ 25,300	$ 25,300
	2	Pump House #2 Structural Rehabilitation	2.1	Rehabilitate/reinforce Pump House #2's structure to support rooftop (and future main operating floor) occupancy.	$ 158,600	$ 158,600
	3	Floor Openings	3.1	Repair unguarded floor openings, as well as those covered by insufficient temporary coverings.	$ 116,100	$ 116,100
	4	Accessibility Provisions	4.1	Provide accessible access points to meet minimum Code requirements for occupancy.	$ 426,600	$ 426,600
	5	Switch House M/E	5.1	Rehabilitate existing washroom fixtures in Switch House to support near term occupancy.	$ 54,700	$ 54,700
	6	Pump House #2 M/E	6.1	Develop and implement new permanent plumbing and electrical systems to select spaces Pump House #2 to new use.	$ 125,700	$ 175,800
			6.2	Implement new washroom fixtures in Pump House #2 to serve future occupancy.	$ 50,100	
	7	Emergency Lighting	7.1	Provide emergency lighting to meet minimum Code requirements for occupancy.	$ 370,900	$ 370,900
	8	Guard Rails	8.1	Replace, repair, or augment existing guards around extant floor openings to meet contemporary code requirements.	$ 100,400	$ 170,500
			8.2	Provide new guards around Pump House #2 rooftop patio.	$ 70,100	
	9	Exterior Door Rehabilitation	9.1	Rehabilitate/repair all exterior heritage doors.	$ 154,000	$ 308,900
			9.2	Retrofit doors to be reused as future exits	$ 79,000	
			9.3	Introduction of new exit facilities in Switch House, Boiler and Turbine Halls	$ 75,900	
	10	Tunnel Sealing (ROS 106, ROS 107, ROS 108, ROS 109)	10.1	Seal all points of water ingress in basements for Dry & Wet Wells of the Pump Houses.	$ 158,000	$ 316,000
			10.2	Block off north tunnel from water ingress.	$ 158,000	
	11	Switch House second floor Level offices	11.1	Introduce new structure to support elevator and stair elements to serve main operating floor.	$ 701,400	$ 701,400
	12	Lead Paint and Asbestos Abatement (to turbine hall, Boiler hall, Switch house and pump house #2) Phase 1	12.1	Abate lead paint on all extant 'heritage' steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.	$ 2,400,000	$ 2,400,000
	13	Pump House #2 Main Operating Floor/Lower Level Structural Rehabilitation (ROS 109)	13.1	Introduce new structure to support elevator and stair elements to serve main operating floor.	$ 9,100	$ 696,400
			13.2	Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	$ 58,400	
			13.3	Infill constructed floor voids in main operating floor with translucent floor covering c/w fire rating.	$ 412,900	
			13.4	Create openings in West, East, and/or South elevations to provide access to Touch the Water promenade.	$ 216,000	
	Subtotal for P1					**$ 5,921,200**

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Scope Definition
Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
SUMMARY

Phase/ Priority	Item		Repair Details		Estimated Cost	Total Cost
P2	14	Window Repair (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	14.1	Re-putty all extant windows.	$ 872,000	$ 3,914,200
			14.2	Repair/replace broken panes	$ 3,042,200	
	15	Window Reinstatement (ROS 107)	15.1	Reinstate windows infilled on West elevation of Boiler Hall. Windows to match existing fenestration.	$ 3,172,600	$ 3,172,600
	16	Masonry Stabilization (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	16.1	Re-set displaced cast masonry units	$ 584,600	$ 2,971,200
			16.2	Replace broken bricks (cracks & spalls)	$ 1,753,800	
			16.3	Repoint areas of failing mortar.	$ 292,300	
			16.4	Use the same mortar specifications as per the 1938 addition, adjusted for contemporary Portland strengths. All bricks to match existing, as close as feasible, in both color and material properties.	$ 158,000	
			16.5	Paint Removal/Cleaning Mock-Up	$ 182,500	
	17	Lead Paint Abatement (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	17.1	Abate lead paint on all extant 'heritage' steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.	$ 4,377,300	$ 4,377,300
	18	Boiler Hall Structural Rehabilitation (ROS 107)	18.1	Complete detailed structural analysis to confirm bracing requirements.	$ 158,000	$ 6,885,700
			18.2	Reinforce/brace existing roof structure.	$ 800,800	
			18.3	Introduce new structure to support floor framing, elevator, and stair elements in existing boiler voids.	$ 705,100	
			18.4	Augment/replace existing West elevation bracing with new members braced back to new cores in boiler hall voids.	$ 826,500	
			18.5	Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	$ 2,386,100	
			18.6	Repair/reinforce existing mezzanine (including infilling of floor voids) to support assembly occupancy and future wall partitions.	$ 1,012,700	
			18.7	Stabilize/brace existing heritage stair and catwalk steel.	$ 45,700	
			18.8	Coat all new and existing steel elements with intumescent paint to achieve fire ratings for future occupancy.	$ 950,800	
	19	Boiler Hall Floor Infill (ROS 107)	19.1	Infill constructed floor voids at South end of Boiler Hall with translucent floor covering c/w fire rating.	$ 790,000	$ 790,000
	20	Boiler Hall West Elevation Exits (ROS 107)	20.1	Create new openings (coordinated with existing structural bays) on West Elevation of Boiler Hall to provide connection to the future Touch the Water grade and address the lack of exiting capacity in the existing Boiler Hall (and Low Pressure Plant more broadly).	$ 573,600	$ 573,600
	21	Turbine Hall Structural Rehabilitation (ROS 106)	21.1	Complete detailed structural analysis to confirm bracing requirements.	$ 158,000	$ 2,050,400
			21.2	Reinforce/brace existing roof structure.	$ 362,000	
			21.3	Introduce new structure to support elevator and stair elements in existing turbine/equipment voids.	$ 42,300	
			21.4	Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	$ 1,164,600	
			21.5	Repair/replace existing guard rails at floor openings to meet current Building Code requirements.	$ 323,500	

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
SUMMARY

Phase/ Priority	Item		Repair Details		Estimated Cost	Total Cost
P2	22	Pump House #1 Roof Replacement	22.1	Replace Pump House #1 roof.	$ 99,600	$ 99,600
	23	ATCO Gas Building Roof Replacement	23.1	Replace ATCO Gas Building roof.	$ 45,600	$ 45,600
	24	Boiler Hall Fire Suppression	24.1	Introduce mains and infrastructure for branch lines for a fire suppression system in the Boiler Hall.	$ 549,100	$ 549,100
	23	Turbine Hall Fire Suppression	23.1	Introduce mains and infrastructure for branch lines for a fire suppression system in the Turbine Hall.	$ 331,000	$ 331,000
	26	Low Pressure Plant Washrooms	26.1	Implement rough-ins for dedicated washroom spaces in the Low Pressure Plant to meet future occupancy needs.	$ 950,500	$ 950,500
	Subtotal for P2					**$ 26,710,800**
P3	27	Boiler Hall Tenant 'Improvements' (ROS 107)	27.1	New walls/partitions in lower level to suit programming.	$ 674,000	$ 19,530,800
			27.2	New floors and partition walls in boiler void infills to suit program.	$ 1,363,300	
			27.3	Access stairs to Mezzanine and intermediary floors.	$ 338,300	
			27.4	New elevators in boiler void cores.	$ 1,109,200	
			27.5	Lighting and electrical fit-up for all new 'infill' program spaces.	$ 4,342,900	
			27.6	Washroom fit-up for all new washroom spaces.	$ 632,600	
			27.7	Mechanical system fit-up for Boiler Hall.	$ 7,198,500	
			27.8	Architectural finishes for all new 'infill' program spaces.	$ 3,406,200	
			27.9	Allowance for rated assy	$ 465,800	
	29	Turbine Hall Tenant 'Improvements' (ROS 106)	29.1	New walls/partitions in lower level to suit programming.	$ 235,500	$ 11,941,300
			29.2	New/rehabilitated guards at main level to address fall hazards at turbine openings.	scope included in item 22.5	
			29.3	Accessibility provisions to address changes in level on main floor.	$ 41,100	
			29.4	New stair/elevator cores to connect main and lower levels.	$ 657,300	
			29.5	General lighting in lower and main floor spaces.	$ 2,509,700	
			29.6	Lighting and electrical fit-up for all new 'infill' program spaces.	$ 1,075,600	
			29.7	Mechanical system fit-up for Turbine Hall.	$ 4,338,200	
			29.8	Architectural finishes for all new 'infill' program spaces.	$ 1,670,700	
			29.9	Allowance for fire rated assemblies (if required) between major occupancies.	$ 559,900	
			29.10	Allowance for fire rated closures at floor openings if main and lower floor major occupancies are different occupancy types requiring a fire separation having a fire resistance rating.	$ 853,300	
	30	Switch House 'Tenant Improvements' (ROS 105)	30.1	New walls/partitions in lower level to suit programming.	$ 259,000	$ 5,703,400
			30.2	New walls/partitions at main level to suit programming.	$ 267,100	
			30.3	New elevator/stairs to second level (and access to Turbine Hall)	$ 328,600	
			30.4	Lighting and electrical fit-up for all new/rehabilitated program spaces.	$ 1,234,000	
			30.5	Mechanical system fit-up for the Switch House.	$ 1,866,500	
			30.6	Architectural finishes for all new 'infill' program spaces.	$ 1,005,700	
			30.7	Allowance for fire rated assemblies (if required) between major occupancies.	$ 742,500	
	31	Pump House #1 'Tenant Improvements' (ROS 108)	31.1	Accessibility provisions to main level.	$ 39,500	$ 387,200
			31.2	Lighting and electrical fit-up for all new/rehabilitated main floor level spaces.	$ 157,400	
			31.3	Allowance for equipment rehabilitation/stabilization.	$ 31,600	
			31.4	Mechanical system fit-up for Pump House #1.	$ 158,700	

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Scope Definition
Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
SUMMARY

Phase/ Priority	Item		Repair Details		Estimated Cost	Total Cost
P3	32	Pump House #2 'Tenant Improvements' (ROS 109)	32.1	Accessibility provisions to main level.	$ 15,800	$ 3,432,400
			32.2	Lighting and electrical fit-up for all new/rehabilitated main operating floor spaces.	$ 1,423,900	
			32.3	New walls/partitions at main operating floor to suit programming.	$ 74,000	
			32.4	New elevator/stairs to main operating floor.	$ 252,800	
			32.5	Washroom fit-up for all new washroom spaces.	$ 144,600	
			32.6	Mechanical system fit-up for the main operating floor.	$ 1,020,500	
			32.7	Architectural finishes for main operating floor.	$ 500,800	
	33	ATCO Gas Building 'Tenant Improvements' (ROS 112)	33.1	Accessibility provisions to main level.	$ 15,800	$ 391,900
			33.2	Lighting and electrical fit-up for all new spaces.	$ 84,100	
			33.3	Washroom fit-up for all new washroom spaces.	$ 144,600	
			33.4	Mechanical system fit-up.	$ 65,400	
			33.5	Architectural finishes for main floor spaces.	$ 22,900	
			33.6	New walls/partitions at main floor to suit programming.	$ 59,100	
	Subtotal for P3					**$ 41,387,000**
	Total Construction Cost					**$ 74,019,000**
					Gross Floor Area	$ 11,712
					Cost/m2	$ 6,320

APPENDIX II

Cost Plan

13 PAGES

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Scope Definition
Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
Cost Plan

Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
P1	1 Pump House #2 Fenestration	1.1	**Provide new openings to Pump House #2 to support occupancy and connection of use to rooftop patio and view.**				$25,300
		1.1.1	Allowance for new opening, install new exterior door to main level.	1	no.	$ 25,300	$25,300
P1	2 Pump House #2 Structural Rehabilitation	2.1	**Rehabilitate/reinforce Pump House #2's structure to support rooftop (and future main operating floor) occupancy.**				$158,600
		2.1.1	Reinforce existing roof deck with structural steel reinforcement to accommodate new occupancy load.	328	m2	$ 269	$88,100
		2.1.2	Reinforce existing main level floor with structural steel reinforcement to accommodate new occupancy load.	119	m2	$ 592	$70,500
P1	3 Floor Openings	3.1	**Repair unguarded floor openings, as well as those covered by insufficient temporary coverings.**				$116,100
		3.1.1	Pump house #2: Repair make good existing roof hatch.	1	sum	$ 15,800	$15,800
		3.1.2	Pump House #2 : Allowance to repair and make good existing steel floor gratings to lower 1 Level	73	m2	$ 237	$17,300
		3.1.3	Modular partition to public areas of boiler and turbine hall	40	lm	$ 870	$34,800
		3.1.4	Modular guard railings to unguarded floor openings of boiler	87	lm	$ 506	$44,000
		3.1.5	Wire mesh partition to stairs, say 1.8m high	17.7	lm	$ 237	$4,200
P1	4 Accessibility Provisions	4.1	**Provide accessible access points to meet minimum Code requirements for occupancy.**				$426,600
		4.1.1	Pump house #2: Allowance for a accessible steel ramp c/w guardrails to main entrance	1	loc	$ 39,500	$39,500
		4.1.2	Boiler hall: Allowance for a accessible steel ramp c/w guardrails to main entrance	1	loc	$ 7,900	$7,900
		4.1.3	Boiler hall: Allowance for two (2) steel exit stairs c/w guardrails to main entrance	2	loc	$ 39,500	$79,000
		4.1.4	Boiler hall: Allowance for a new interior accessible steel ramp c/w guardrails inside broiler room	1	loc	$ 23,700	$23,700
		4.1.5	Turbine hall: Allowance for a new interior accessible steel ramp c/w guardrails inside turbine hall room	1	loc	$ 23,700	$23,700
		4.1.6	Switch house: Allowance for two (2) new accessible concrete ramp c/w guardrails to main entrances	2	loc	$ 23,700	$47,400
		4.1.7	Switch house and Broiler Hall: Allowance new opening in masonry walls	1	loc	$ 39,500	$39,500
		4.1.8	Switch house: New Elevator	1	loc	$ 142,200	$142,200
		4.1.9	Switch house: New stair	1	loc	$ 23,700	$23,700
P1	5 Switch House M/E	5.1	**Rehabilitate existing washroom fixtures in Switch House to support near term occupancy.**				$54,700
		5.1.1	Remove & replace ex washroom fixtures to 2nd level	10	no.	$ 3,950	$39,500
		5.1.2	Allowance to make good/repair existing washroom, floor and ceiling finishes	40	m2	$ 293	$11,700
		5.1.3	Allowance to repair, make good and paint existing washroom walls and doors	80	m2	$ 44	$3,500

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
Cost Plan

Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
P1	6 Pump House #2 M/E	6.1	**Develop and implement new permanent plumbing and electrical systems to select spaces Pump House #2 to new use.**				$125,700
		6.1.1	Plumbing & drainage to main level only	109	m2	$ 103	$11,200
		6.1.2	Fire Suppression to main level only	109	m2	$ 48	$5,200
		6.1.3	HVAC to main level only	109	m2	$ 237	$25,800
		6.1.4	Controls to main level only	109	m2	$ 55	$6,000
		6.1.5	Lighting and electrical fit-up to main level only	109	m2	$ 711	$77,500
		6.2	**Implement new washroom fixtures in Pump House #2 to serve future occupancy.**				$50,100
		6.2.1	New washroom fixtures for future occupancy	10	m2	$ 1,900	$19,000
		6.2.2	Lighting and electrical fit-up	10	m2	$ 1,420	$14,200
		6.2.3	Allowance for architectural finishes and specialties	10	m2	$ 1,690	$16,900
P1	7 Emergency Lighting	7.1	**Provide emergency lighting to meet minimum Code requirements for occupancy.**				$370,900
		7.1.1	To boiler room and turbine hall to Phase 1 areas only	2338	m2	$ 95	$221,600
		7.1.2	To switch house main and 2nd level to Phase 1 areas only	1002	m2	$ 126	$126,700
		7.1.3	To pump house #2 to Phase 1 areas only	119	m2	$ 190	$22,600
P1	8 Guard Rails	8.1	**Replace, repair, or augment existing guards around extant floor openings to meet contemporary code requirements.**				$100,400
		8.1.1	Allowance to remove and replace existing guardrails floor openings on turbine and boiler hall public areas	155	lm	$ 648	$100,400
		8.2	**Provide new guards around Pump House #2 rooftop patio.**				$70,100
		8.2.1	Remove existing chain-link fence, patch and make existing good parapet where old fence was taken off	32	lm	$ 316	$10,100
		8.2.2	Allowance for new steel railings to patio	76	lm	$ 789	$60,000
P1	9 Exterior Door Rehabilitation	9.1	**Rehabilitate/repair all exterior heritage doors.**				$154,000
		9.1.1	LPP: Allowance to carefully remove doors repair and make good existing single insulated entrance exterior door and frame, install new exterior door hardware.	3	lvs.	$ 8,067	$24,200
		9.1.2	LPP: Allowance to carefully remove, repair and make good existing entrance exterior barn doors and frame, install new exterior door hardware.	3	lvs.	$ 8,067	$24,200
		9.1.3	LPP: Allowance to carefully remove oversized doors repair and make good existing double entrance exterior door and frame, install new exterior door hardware.	1	no.	$ 16,600	$16,600
		9.1.4	Switch house and boiler hall: Allowance to carefully remove oversized French doors repair and make good existing double entrance exterior door and frame, install new exterior door hardware.	4	pairs	$ 16,200	$64,800
		9.1.5	Pump House #2: Allowance to carefully remove doors repair and make good existing double and single entrance exterior door and frame, install new exterior door hardware.	3	lvs.	$ 8,067	$24,200
		9.2	**Retrofit doors to be reused as future exits**				$79,000
		9.2.1	Allowance to rectify existing heritage exterior doors	1	sum		$79,000

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Appendix A - Class 5 Cost Estimate

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Class D Cost Estimate (Rev. 1.0)
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Phase/ Priority		Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
			9.3	**Introduction of new exit facilities in Switch House, Boiler and Turbine Halls**				**$75,900**
			9.3.1	Allowance for emergency exit to Switchhouse	2	no.		$19,000
			9.3.2	Allowance for interim exit to Boiler and Turbine halls	6	no.		$56,900
P1	10	Tunnel Sealing (ROS 106, ROS 107, ROS 108, ROS 109)	**10.1**	**Seal all points of water ingress in basements for Dry & Wet Wells of the Pump Houses.**				**$158,000**
			10.1.1	Allowance to apply water sealer to walls in Pumphouse #1	1	sum	$ 79,000	$79,000
			10.1.2	Allowance to apply water sealer to walls in Pumphouse #2	1	sum	$ 79,000	$79,000
			10.2	**Block off north tunnel from water ingress.**				**$158,000**
			10.2.1	Allowance to seal all water ingress in North Tunnel	1	sum	$ 158,000	$158,000
P1	11	Switch House second floor Level offices	**11.1**	**Introduce new structure to support elevator and stair elements to serve main operating floor.**				**$701,400**
			11.1.1	Allowance to rehabilitate existing 2nd floor offices including electrical and mechanical fit outs.	460	m2	$ 1,525	$701,400
P1	12	Lead Paint and Asbestos Abatement (to turbine hall, Boiler hall, Switch house and pump house #2) Phase 1	**12.1**	**Abate lead paint on all extant 'heritage' steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.**				**$2,400,000**
			12.1.1	LPP: Lead and asbestos paint abatement allowance only (Phase 1 only)	3,340	m2	$ 553	$1,847,000
			12.1.2	Pumphouse #2	1000	m2	$ 553	$553,000
P1	13	Pump House #2 Main Operating Floor/Lower Level Structural Rehabilitation (ROS 109)	**13.1**	**Introduce new structure to support elevator and stair elements to serve main operating floor.**				**$9,100**
			13.1.1	Allowance for new steel structure to support new elevator 1 from Main Level to Lower level 1, include allowance to make an opening to main level	3	m2	$ 1,167	$3,500
			13.1.2	Allowance for new steel structure to support new elevator 2 from Lower level 1 to Lower level 5	3	m2	$ 1,867	$5,600
			13.2	**Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.**				**$58,400**
			13.2.1	Reinforce existing Lower level suspended slab with structural steel reinforcement to accommodate new occupancy loads.	435	m2	$ 134	$58,400
			13.3	**Infill constructed floor voids in main operating floor with translucent floor covering c/w fire rating.**				**$412,900**

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Phase/ Priority		Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
			13.3.1	Allowance new structural steel framing to floor voids included in section 19.2.1				$0
			13.3.2	Remove floor void steel gratings	75	m2	$ 237	$17,800
			13.3.3	Translucent floor infill	75	m2	$ 3,951	$296,300
			13.3.4	Allowance for new floating rooftop deck supported by pedestals	250	m2	$ 395	$98,800
			13.4	**Create openings in West, East, and/or South elevations to provide access to Touch the Water promenade.**				**$216,000**
			13.4.1	Allowance for new door openings to lower 1 level	1	no.	$ 1,600	$1,600
			13.4.2	Install new single insulated door and frame	1	no.	$ 5,500	$5,500
			13.4.3	Allowance to make wall opening on lower 1 level south side, say 5m x 4m.	40	m2	$ 633	$25,300
			13.4.4	Install new curtain wall to new wall opening	40	m2	$ 3,950	$158,000
			13.4.5	Allowance for new exterior steel deck with concrete topping supported by steel frame to exterior lower 1 level, southeast side.	25	m2	$ 708	$17,700
			13.4.6	Allowance for stainless steel guardrails	10	m	$ 790	$7,900
P2	14	Window Repair (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	**14.1**	**Re-putty all extant windows.**				**$872,000**
			14.1.1	Switch house: re-putty existing windows, say 100% of total	55	m2	$ 947	$52,100
			14.1.2	Turbine Hall: re-putty existing windows, say 100% of total window	237	m2	$ 948	$224,700
			14.1.3	Boiler Hall: re-putty existing windows, say 100% of total window	557	m2	$ 948	$528,000
			14.1.4	Pump House #1: re-putty existing windows	28	m2	$ 947	$26,900
			14.1.5	Allowance for window sealant	849	m2	$ 47	$40,300
			14.1.6	Removal of asbestos to existing window putty included in section	877	m2	$ -	$0
			14.2	**Repair/replace broken panes**				**$3,042,200**
			14.2.1	Switch house: repair/replace broken window panes, say 60% of total window area	33	m2	$ 5,924	$195,500
			14.2.2	Turbine Hall: repair/replace broken window panes, say 60% of total window area	142	m2	$ 5,925	$842,500
			14.2.3	Boiler Hall: repair/replace broken window panes, say 60% of total window area	334	m2	$ 5,925	$1,980,100
			14.2.4	Allowance for window sealant	509	m2	$ 47	$24,100
P2	15	Window Reinstatement (ROS 107)	**15.1**	**Reinstate windows infilled on West elevation of Boiler Hall. Windows to match existing fenestration.**				**$3,172,600**
			15.1.1	Carefully remove existing brick infill walls to form new window opening,	320	m2	$ 395	$126,400
			15.1.2	Install windows similar to existing windows	320	m2	$ 9,480	$3,033,600
			15.1.3	Allowance for window sealant	320	m2	$ 39	$12,600

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Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
P2	16 Masonry Stabilization (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	**16.1**	**Re-set displaced cast masonry units**				**$584,600**
		16.1.1	Allowance to re-set displaced masonry units, assume 10% of total brick masonry area	370	m2	$ 1,580	$584,600
		16.2	**Replace broken bricks (cracks & spalls)**				**$1,753,800**
		16.2.1	Allowance to replace broken bricks allow 20% of total brick masonry area	740	m2	$ 2,370	$1,753,800
		16.3	**Repoint areas of failing mortar.**				**$292,300**
		16.3.1	Allowance to repoint existing bricks veneers allow 25% of total brick masonry area, say interior and exterior sides	1850	m2	$ 158	$292,300
		16.4	**Use the same mortar specifications as per the 1938 addition, adjusted for contemporary Portland strengths. All bricks to match existing, as close as feasible, in both color and material properties.**				**$158,000**
		16.4.1	Allowance for all bricks to match existing	1	sum		$158,000
		16.5	**Paint Removal/Cleaning Mock-Up**				**$182,500**
		16.5.1	Allowance to remove and clean mock-up	1	sum	$ 31,600	$31,600
		16.5.2	Allowance to power wash exterior and interior brick veneer walls to LPP	3700	m2	$ 40	$146,200
		16.5.3	Allowance to power wash exterior wall surface of ATCO gas Building	120	m2	$ 39	$4,700
P2	17 Lead Paint Abatement (ROS 105, ROS 106, ROS 107, ROS 108, ROS 109, ROS 112)	**17.1**	**Abate lead paint on all extant 'heritage' steel elements in Low Pressure Plant, Pump House #1, Pump House #2, and ATCO Gas Building.**	**1**	**sum**		**$4,377,300**
		17.1.1	LPP: Lead paint abatement allowance only (remaining Areas)	9,786	m2	$ 395	$3,865,400
		17.1.2	Pump House #1 : Lead paint abatement allowance only	166	m2	$ 553	$91,800
		17.1.3	Pump House #2 : Lead paint abatement allowance only	684	m2	$ 553	$378,100
		17.1.4	ATCO Building : Lead paint abatement allowance only	76	m2	$ 553	$42,000
			Note: Allowances provided for hazardous material removal above should be verified to a hazardous material consultant.				
P2	18 Boiler Hall Structural Rehabilitation (ROS 107)	**18.1**	**Complete detailed structural analysis to confirm bracing requirements.**				**$158,000**
		18.1.1	Allowance for structural assessment	1	sum	$ 158,000	$158,000

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Class D Cost Estimate (Rev. 1.0)
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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
		18.2	**Reinforce/brace existing roof structure.**				**$800,800**
		18.2.1	Allowance for structural steel reinforcement of existing roof framing, say 100% of existing roof area (2,385m2).	2385	m2	$ 336	$800,800
		18.3	**Introduce new structure to support floor framing, elevator, and stair elements in existing boiler voids.**				**$705,100**
		18.3.1	Allowance for new steel structure to support new elevator and stairs, and existing boiler voids, say 3 levels.	1500	m2	$ 470	$705,100
		18.4	**Augment/replace existing West elevation bracing with new members braced back to new cores in boiler hall voids.**				**$826,500**
		18.4.1	Remove existing steel bracing to boiler halls west side. Include allowance for temporary shoring and support of existing structure.	750	m2	$ 632	$474,000
		18.4.2	Reinforce existing structure with new steel support and frame	750	m2	$ 470	$352,500
		18.5	**Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.**				**$2,386,100**
		18.5.1	Allowance to reinforce existing floor with new structural steel framing	2254	m2	$ 269	$605,400
		18.5.2	Repair and make good existing suspended slab, say 100% of existing main level floor slab (2,254m2)	2254	m2	$ 790	$1,780,700
		18.6	**Repair/reinforce existing mezzanine (including infilling of floor voids) to support assembly occupancy and future wall partitions.**				**$1,012,700**
		18.6.1	Allowance to reinforce existing mezzanine floor and extensions with new structural steel framing	1593	m2	$ 470	$748,800
		18.6.2	Remove existing floor void gratings, temporary cover and misc. protruding floor structures on mezzanine floor.	110	m2	$ 237	$26,100
		18.6.3	Infill floor voids and mezzanine extensions with steel deck with concrete topping, steel frame under item 15.6.1	496	m2	$ 395	$195,900
		18.6.4	Remove existing rail guards	265	m	$ 158	$41,900
		18.7	**Stabilize/brace existing heritage stair and catwalk steel.**				**$45,700**
		18.7.1	Allowance to reinforce existing catwalk with structural steel framing	170	m2	$ 269	$45,700
		18.8	**Coat all new and existing steel elements with intumescent paint to achieve fire ratings for future occupancy.**				**$950,800**
		18.8.1	Allowance for intumescent paint to under slab of mezzanine level structural framing of mezzanine level.	1593	m2	$ 498	$792,800
		18.8.2	Allowance for intumescent paint to other exposed vertical structural steel components	1	sum	$ 158,000	$158,000
P2	19 Boiler Hall Floor Infill (ROS 107)	**19.1**	**Infill constructed floor voids at South end of Boiler Hall with translucent floor covering c/w fire rating.**				**$790,000**
		19.1.1	Allowance new structural steel framing to floor voids, included in item 15.5.1				$0
		19.1.2	Translucent floor infill	200	m2	$ 3,950	$790,000

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Appendix A - Class 5 Cost Estimate

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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
P2	20 Boiler Hall West Elevation Exits (ROS 107)	20.1	Create new openings (coordinated with existing structural bays) on West Elevation of Boiler Hall to provide connection to the future Touch the Water grade and address the lack of exiting capacity in the existing Boiler Hall (and Low Pressure Plant more broadly).				$573,600
		20.1.1	New openings to west side of Boiler elevation allowance for shoring and temporary support	85	m2	$ 427	$36,300
		20.1.2	Allowance for new structural framing	85	m2	$ 791	$67,200
		20.1.3	Allowance to install new storefront c/w exit doors	85	m2	$ 5,531	$470,100
P2	21 Turbine Hall Structural Rehabilitation (ROS 106)	21.1	Complete detailed structural analysis to confirm bracing requirements.				$158,000
		21.1.1	Allowance for structural assessment	1	sum	$ 158,000	$158,000
		21.2	Reinforce/brace existing roof structure.				$362,000
		21.2.1	Allowance for structural steel reinforcement to existing roof framing, allow 100% of roof structure	1797	m2	$ 201	$362,000
		21.3	Introduce new structure to support elevator and stair elements in existing turbine/equipment voids.				$42,300
		21.3.1	Allowance for new steel structure to support new elevator and stairs, say 2 levels	90	m2	$ 470	$42,300
		21.4	Repair/reinforce existing main floor slab to accommodate assembly occupancy loads.	1260	m2	$ 924	$1,164,600
		21.4.1	Allowance to reinforce existing floor with new structural steel framing	1260	m2	$ 134	$169,200
		21.4.2	Repair and make good existing suspended slab, say 100% of existing floor slab	1260	m2	$ 790	$995,400
		21.5	Repair/replace existing guard rails at floor openings to meet current Building Code requirements.				$323,500
		21.5.1	Remove existing guardrails to main level	315	m	$ 158	$49,800
		21.5.2	Install new stainless steel pipe guardrails to main level	315	m	$ 869	$273,700
P2	22 Pump House #1 Roof Replacement	22.1	Replace Pump House #1 roof.				$99,600
		22.1.1	Remove existing Pump house #1 roof	166	m2	$ 158	$26,200
		22.1.2	Install new roof assembly	166	m2	$ 442	$73,400
P2	23 ATCO Gas Building Roof Replacement	23.1	Replace ATCO Gas Building roof.				$45,600
		23.1.1	Remove existing ATCO Gas Building roof	76	m2	$ 158	$12,000
		23.1.2	Install new roof assembly	76	m2	$ 442	$33,600
P2	24 Boiler Hall Fire Suppression	24.1	Introduce mains and infrastructure for branch lines for a fire suppression system in the Boiler Hall.				$549,100
		24.1.1	Fire suppression allowance (Fully fitted)	5,793	m2	$ 95	$549,100
P2	23 Turbine Hall Fire Suppression	23.1	Introduce mains and infrastructure for branch lines for a fire suppression system in the Turbine Hall.				$331,000
		23.1.1	Fire suppression allowance (fully Fitted)	3,491	m2	$ 95	$331,000

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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
P2	26 Low Pressure Plant Washrooms	26.1	Implement rough-ins for dedicated washroom spaces in the Low Pressure Plant to meet future occupancy needs.				$950,500
		26.1.1	Lower level rough-ins	108	m2	$ 714	$77,100
		26.1.2	main level rough-ins	158	m2	$ 703	$111,100
		26.1.3	Second floor/Mezzanine rough-ins	32	m2	$ 750	$24,000
		26.1.4	Allowance for new electrical fixtures and lighting	298	m2	$ 790	$235,400
		26.1.5	Allowance for architectural finishes and specialties	298	m2	$ 1,688	$502,900
P3	27 Boiler Hall Tenant 'Improvements' (ROS 107)	27.1	New walls/partitions in lower level to suit programming.				$674,000
		27.1.1	Allowance for CMU elevator and stair core walls to basement	519	m2	$ 606	$314,500
		27.1.2	New acoustic wall partition to proposed theater	500	m2	$ 514	$256,800
		27.1.3	Misc partition allowance	1	sum	$ 102,700	$102,700
		27.2	New floors and partition walls in boiler void infills to suit program.				$1,363,300
		27.2.1	Allowance for CMU elevator and stair core walls from main level to mezzanine level	1,325	m2	$ 606	$802,600
		27.2.2	Wall partition to community rooms and commercial spaces to main floor	427	m2	$ 411	$175,400
		27.2.3	New wall partition to offices / studios to mezzanine	1,173	m2	$ 329	$385,300
		27.2.4	Floor voids infill with steel deck with concrete toppings supported by structural steel frame, carried under item 15.6				$0
		27.3	Access stairs to Mezzanine and intermediary floors.				$338,300
		27.3.1	Steel pan stairs from basement to mezzanine including mid landings, Stairs 1, 2 & 3	3	loc	$ 112,767	$338,300
		27.4	New elevators in boiler void cores.				$1,109,200
		27.4.1	Passenger elevators, 4 cabs	3	stops	$ 369,733	$1,109,200
		27.5	Lighting and electrical fit-up for all new 'infill' program spaces.				$4,342,900
		27.5.1	Lighting and electrical fit-up for all new 'infill' program spaces.	5,793	m2	$ 750	$4,342,900
		27.6	Washroom fit-up for all new washroom spaces.				$632,600
		27.6.1	Lower level washroom rough ins	108	m2	$ 2,251	$243,100
		27.6.2	Main floor washroom rough ins	124	m2	$ 2,523	$312,800
		27.6.3	Second Floor/Mezzanine washroom rough ins	32	m2	$ 2,397	$76,700
		27.7	Mechanical system fit-up for Boiler Hall.				$7,198,500
		27.7.1	Plumbing & drainage	5,793	m2	$ 216	$1,249,300
		27.7.2	Fire Suppression	5,793	m2	$ 154	$892,400
		27.7.3	HVAC	5,793	m2	$ 719	$4,164,400
		27.7.4	Controls	5,793	m2	$ 154	$892,400

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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
		27.8	**Architectural finishes for all new 'infill' program spaces.**				**$3,406,200**
		27.8.1	Allowance for new interior doors c/w interior hardware	60	lvs.	$ 5,135	$308,100
		27.8.2	Allowance for gypsum board ceiling to infill spaces to basement and main level, assumed entire mezzanine will be enclosed with GWB ceiling and bulk heads.	2,100	m2	$ 308	$647,000
		27.8.3	Allowance clearing, making good existing floor ready to receive new finish	5,793	m2	$ 41	$238,000
		27.8.4	Allowance for architectural floor finish (combination of carpet, resilient, tiles, etc.), ceiling (painting of exposed ceiling) and wall finishes (painting of walls)	5,793	m2	$ 269	$1,558,700
		27.8.5	Allowance for metals, millwork, specialties and equipment	5,793	m2	$ 113	$654,400
		27.9	**Allowance for rated assy**				**$465,800**
		27.9.1	Allowance to provide install 2 layers of GWB type x to demising wall between Boiler and Turbine Hall	1,890	m2		$465,800
P3	29 Turbine Hall Tenant 'Improvements' (ROS 106)	**29.1**	**New walls/partitions in lower level to suit programming.**				**$235,500**
		29.1.1	Allowance for CMU elevator and stair core walls from basement to mezzanine	270	m2	$ 606	$163,600
		29.1.2	Misc partition allowance	1	sum	$ 71,900	$71,900
		29.2	**New/rehabilitated guards at main level to address fall hazards at turbine openings.**				**$0**
		29.2.1	Allowance to install painted steel guard rails to main level openings, included in item 18.5.2				$0
		29.3	**Accessibility provisions to address changes in level on main floor.**				**$41,100**
		29.3.1	Accessibility ramp	2	loc	$ 20,550	$41,100
		29.4	**New stair/elevator cores to connect main and lower levels.**				**$657,300**
		29.4.1	Passenger elevators, 4 cabs	2	stops	$ 328,650	$657,300
		29.5	**General lighting in lower and main floor spaces.**				**$2,509,700**
		29.5.1	Lighting in lower and main floor	3491	m2	$ 719	$2,509,700
		29.6	**Lighting and electrical fit-up for all new 'infill' program spaces.**				**$1,075,600**
		29.6.1	Lighting and electrical fit-up for all new 'infill' program spaces.	3491	m2	$ 308	$1,075,600
		29.7	**Mechanical system fit-up for Turbine Hall.**				**$4,338,200**
		29.7.1	Plumbing & drainage	3491	m2	$ 216	$752,900
		29.7.2	Fire Suppression	3491	m2	$ 154	$537,800
		29.7.3	HVAC	3491	m2	$ 719	$2,509,700
		29.7.4	Controls	3491	m2	$ 154	$537,800

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Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
		29.8	**Architectural finishes for all new 'infill' program spaces.**				**$1,670,700**
		29.8.1	Allowance for architectural floor finish (combination of carpet, resilient, tiles, etc.), ceiling (painting of exposed ceiling) and wall finishes (painting of walls)	3,491	m2	$ 269	$939,300
		29.8.2	Allowance clearing, making good existing floor ready to receive new finish	3,491	m2	$ 41	$143,400
		29.8.3	Allowance for metals, millwork, specialties and equipment	3,491	m2	$ 168	$588,000
		29.9	**Allowance for fire rated assemblies (if required) between major occupancies.**				**$559,900**
		29.9.1	Allowance to provide install 2 layers of GWB type x to demising wall between Boiler and Turbine Hall and Switch House.	2,272	m2		$559,900
		29.10	**Allowance for fire rated closures at floor openings if main and lower floor major occupancies are different occupancy types requiring a fire separation having a fire resistance rating.**				**$853,300**
		29.9.1	Allowance to remove and replace interior windows between turbine hall and switch house with fire rated windows	7	m2	$ 5,443	$38,100
		29.9.2	Allowance for application of intumescent paint to basement ceiling	1260	m2	$ 647	$815,200
P3	30 Switch House 'Tenant Improvements' (ROS 105)	**30.1**	**New walls/partitions in lower level to suit programming.**				**$259,000**
		30.1.1	Remove existing interior partitions	450	m2	$ 164	$74,000
		30.1.2	Allowance for new partitions	450	m2	$ 411	$185,000
		30.2	**New walls/partitions at main level to suit programming.**				**$267,100**
		30.2.1	Allowance for CMU elevator and stair core walls from main level to 2nd level (2 locations)	102	m2	$ 606	$61,700
		30.2.1	Allowance for new partitions to main and 2nd level	1	sum	$ 205,400	$205,400
		30.3	**New elevator/stairs to second level (and access to Turbine Hall).**				**$328,600**
		30.3.1	Passenger elevators, 2 cabs (2 locations)	2	stops	$ 164,300	$328,600
		30.4	**Lighting and electrical fit-up for all new/rehabilitated program spaces.**				**$1,234,000**
		30.4.1	Lighting and electrical fit-up for all new/rehabilitated program spaces.	1502	m2	$ 822	$1,234,000
		30.5	**Mechanical system fit-up for the Switch House.**				**$1,866,500**
		30.5.1	Plumbing & drainage	1502	m2	$ 216	$323,900
		30.5.2	Fire Suppression	1502	m2	$ 154	$231,400
		30.5.3	HVAC	1502	m2	$ 719	$1,079,800
		30.5.4	Controls	1502	m2	$ 154	$231,400

RPP AAPR
Scope Definition
Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
Cost Plan

Phase/ Priority		Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
			30.6	**Architectural finishes for all new 'infill' program spaces.**				**$1,005,700**
			30.6.1	Allowance for new interior doors c/w hardware	30	lvs.	$ 5,137	$154,100
			30.6.2	Allowance for architectural floor finish (combination of carpet, resilient, tiles, etc.), ceiling (painting of exposed ceiling) and wall finishes (painting of walls)	1,502	m2	$ 269	$404,200
			30.6.3	Allowance clearing, making good existing floor ready to receive new finish	1,502	m2	$ 41	$61,700
			30.6.4	Allowance for metals, millwork, specialties and equipment	1,502	m2	$ 257	$385,700
			30.7	**Allowance for fire rated assemblies (if required) between major occupancies.**				**$742,500**
			30.7.1	Allowance to provide install 2 layers of GWB type x to demising wall between Turbine Hall and Switch House.	382	m2		$94,200
			30.7.2	Allowance for application of intumescent paint to basement and ground level ceiling	1,002	m2	$ 647	$648,300
P3	**31**	**Pump House #1 'Tenant Improvements' (ROS 108)**	**31.1**	**Accessibility provisions to main level.**				**$39,500**
			31.1.1	Allowance for accessibility lift	1	no.	$ 39,500	$39,500
			31.2	**Lighting and electrical fit-up for all new/rehabilitated main floor level spaces.**				**$157,400**
			31.2.1	Lighting and electrical fit-up for all new/rehabilitated main floor level spaces.	166	m2	$ 948	$157,400
			31.3	**Allowance for equipment rehabilitation/stabilization.**				**$31,600**
			31.3.1	Allowance to rehabilitate existing equipment	1	sum	$ 31,600	$31,600
			31.4	**Mechanical system fit-up for Pump House #1.**				**$158,700**
			31.4.1	Plumbing & drainage	166	m2	$ 166	$27,500
			31.4.2	Fire Suppression	166	m2	$ 119	$19,700
			31.4.3	HVAC	166	m2	$ 553	$91,800
			31.4.4	Controls	166	m2	$ 119	$19,700
P3	**32**	**Pump House #2 'Tenant Improvements' (ROS 109)**	**32.1**	**Accessibility provisions to main level.**				**$15,800**
			32.1.1	Allowance for accessibility provision	1	sum		$15,800
			32.2	**Lighting and electrical fit-up for all new/rehabilitated main operating floor spaces.**				**$1,423,900**
			32.2.1	Lighting and electrical fit-up for all new/rehabilitated main operating floor spaces.	1,502	m2	$ 948	$1,423,900

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
Cost Plan

Phase/ Priority		Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
			32.3	**New walls/partitions at main operating floor to suit programming.**				**$74,000**
			32.3.1	Allowance for CMU elevator and stair core walls from main to basement (2 locations)	147	m2	$ 466	$68,500
			32.3.2	New wall partition to washroom	19	m2	$ 284	$5,500
			32.4	**New elevator/stairs to main operating floor.**				**$252,800**
			32.4.1	Passenger elevators, 2 cab (2 locations)	2	stops	$ 126,400	$252,800
			32.5	**Washroom fit-up for all new washroom spaces.**				**$144,600**
			32.5.1	New washroom fit up	48.8	m2	$ 2,963	$144,600
			32.6	**Mechanical system fit-up for the main operating floor.**				**$1,020,500**
			32.6.1	Plumbing & drainage	1,502	m2	$ 71	$106,800
			32.6.2	Fire Suppression	1,502	m2	$ 95	$142,400
			32.6.3	HVAC	1,502	m2	$ 442	$664,500
			32.6.4	Controls	1,502	m2	$ 71	$106,800
			32.7	**Architectural finishes for main operating floor.**				**$500,800**
			32.7.1	Allowance for architectural floor finish (combination of carpet, resilient, tiles, etc.), ceiling (painting of exposed ceiling) and wall finishes (painting of walls)	1,502	m2	$ 207	$310,900
			32.7.2	Allowance for metals, millwork, specialties and equipment	1,502	m2	$ 126	$189,900
P3	**33**	**ATCO Gas Building 'Tenant Improvements' (ROS 112)**	**33.1**	**Accessibility provisions to main level.**				**$15,800**
			33.1.1	Accessibility ramp	1	loc	$ 15,800	$15,800
			33.2	**Lighting and electrical fit-up for all new spaces.**				**$84,100**
			33.2.1	Lighting and electrical fit-up for all new spaces.	76	m2	$ 1,107	$84,100
			33.3	**Washroom fit-up for all new washroom spaces.**				**$144,600**
			33.3.1	New washroom fit up	48.8	m2	$ 2,963	$144,600
			33.4	**Mechanical system fit-up.**				**$65,400**
			33.4.1	Plumbing & drainage	76	m2	$ 71	$5,400
			33.4.2	Fire Suppression	76	m2	$ 118	$9,000
			33.4.3	HVAC	76	m2	$ 553	$42,000
			33.4.4	Controls	76	m2	$ 118	$9,000

RPP AAPR
Scope Definition
Appendix A - Class 5 Cost Estimate

Rossdale Power Plant - Assessment
Class D Cost Estimate (Rev. 1.0)
March 2, 2022
Cost Plan

Phase/ Priority	Scope Name/ Building Code		Scope description / BTY Assumptions (scope of work)	Qty	Unit	Unit Rate	Total Amount
		33.5	**Architectural finishes for main floor spaces.**				**$22,900**
		33.5.1	Allowance for architectural floor finish (combination of carpet, resilient, tiles, etc.), ceiling (painting of exposed ceiling) and wall finishes (painting of walls)	76	m2	$ 207	$15,700
		33.5.2	Allowance for metals, millwork, specialties and equipment	76	m2	$ 95	$7,200
		33.6	**New walls/partitions at main floor to suit programming.**				**$59,100**
		33.6.1	Remove existing walls and install mew interior partitions	170	m2	$ 348	$59,100

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RPP AAPR
Scope Definition
Servicing

The servicing strategy proposed for the future development of the Low Pressure Plant and Pump Houses #1 and #2 attempts to work within the logic of the site to balance efficient access to the most frequently used interior spaces of the campus, while also providing both emergency vehicle access and ‘amenity access’ (for food trucks, event setup, and the like).

Leveraging the existing doors and loading space at the North end of the Turbine Hall, the proposed service strategy provides a staging area for the Low Pressure Plant. This space functions as a sorting space and loading dock for the larger facility. From this loading zone, smaller, electric or hand operated delivery vehicles would be utilized to service the program ‘blocks’ on the addresses along the ‘interior street’ on the east side of the Boiler Hall.

Similarly, the Switch House could be served by a more modest loading area located on the north side of the building, again making use of the large existing double doors.

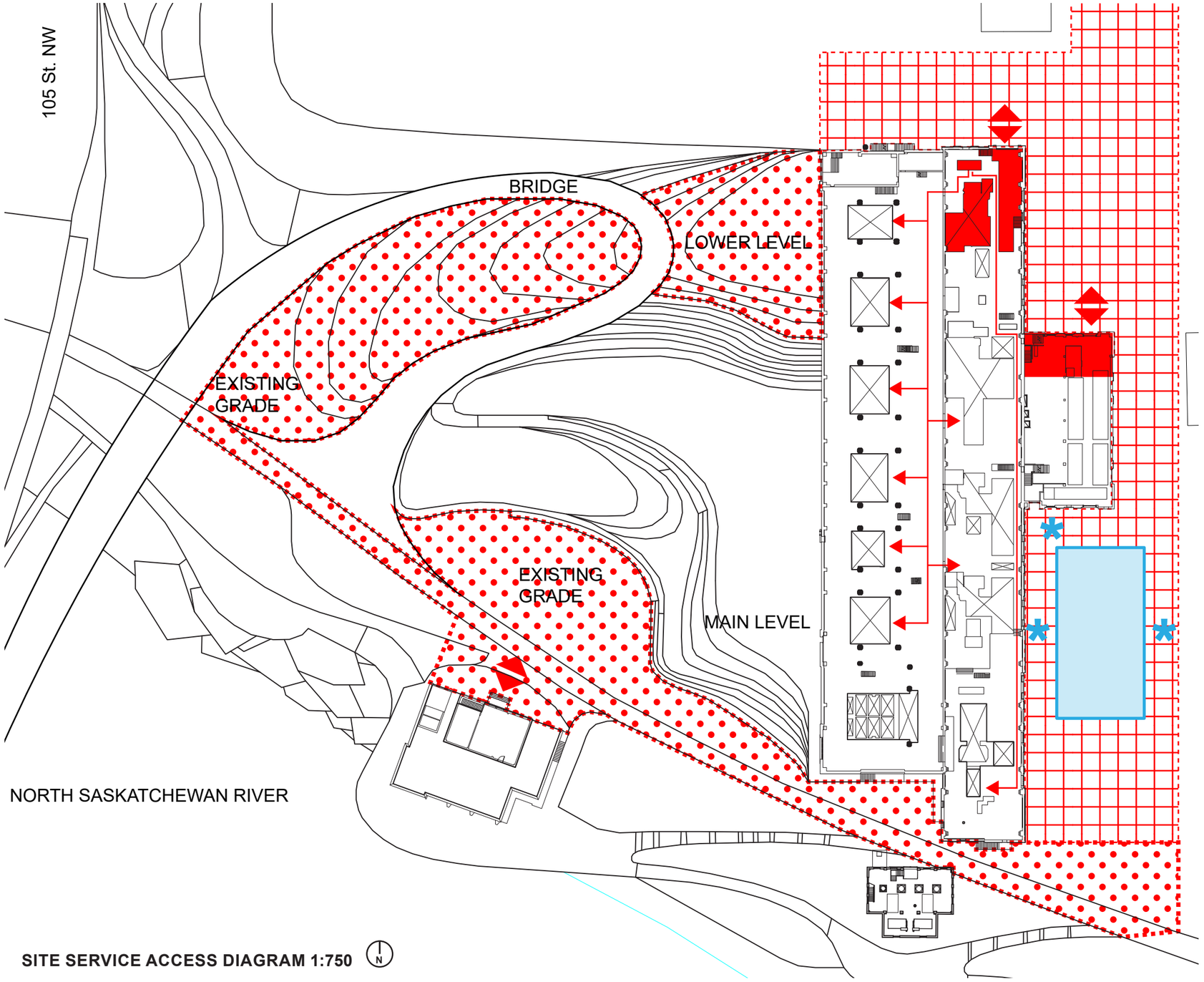
Emergency vehicle access will need to be coordinated with the pathway design of the Touch the Water project. Ideally the design of this access will allow the multi-modal pathway and plaza spaces to ‘read’ as spaces and surfaces intended for occupation, while providing enough sub-grade support to manage the loads of large emergency vehicles.

On the east side of the Low Pressure Plant, access is constrained by a number of factors, including the restricted point of entry to the site from 95th Avenue/Rossdale Road, the proximity of the EPCOR site, and the limited space available for parking or drop off areas.

The proposed Prairie Sky gondola station east of the Low Pressure Plant also creates limited site access and servicing options. Further coordination with the Prairie Sky team will be required to identify and take advantage of any potential shared services or amenities between the projects.

LEGEND

- EXISTING SERVICE ACCESS POINT (RECALIBRATED FOR USE AS LOADING ZONE FOR DELIVERIES, WASTE AND RECYCLING COLLECTION, ETC.)
- PERMEABLE PAVING OR EQUIVALENT FOR EMERGENCY VEHICLE ACCESS AND SHORT TERM EVENT SERVICING
- HARD SURFACE PAVING FOR REGULAR SERVICE ACCESS, PARKING, AND GENERAL SITE ACCESS
- DEDICATED INTERIOR LOADING/STAGING SPACES
- INTERIOR DELIVERY ROUTES
- APPROXIMATE EXTENT OF GONDOLA STATION (ASSUMING A 30m x 14m FOOTPRINT FOR LOADING AND MACHINERY ONLY - ANCILLARY PROGRAM WOULD BE IN ADDITION)
- POTENTIAL AREAS OF CONFLICT BETWEEN FUTURE PRAIRIE SKY GONDOLA AND LPP PUBLIC ACCESS/DROP OFF/EMERGENCY VEHICLE ACCESS



SITE SERVICE ACCESS DIAGRAM 1:750

RPP AAPR
Scope Definition
Prairie Sky Gondola Interface

Alternate Location Scenarios

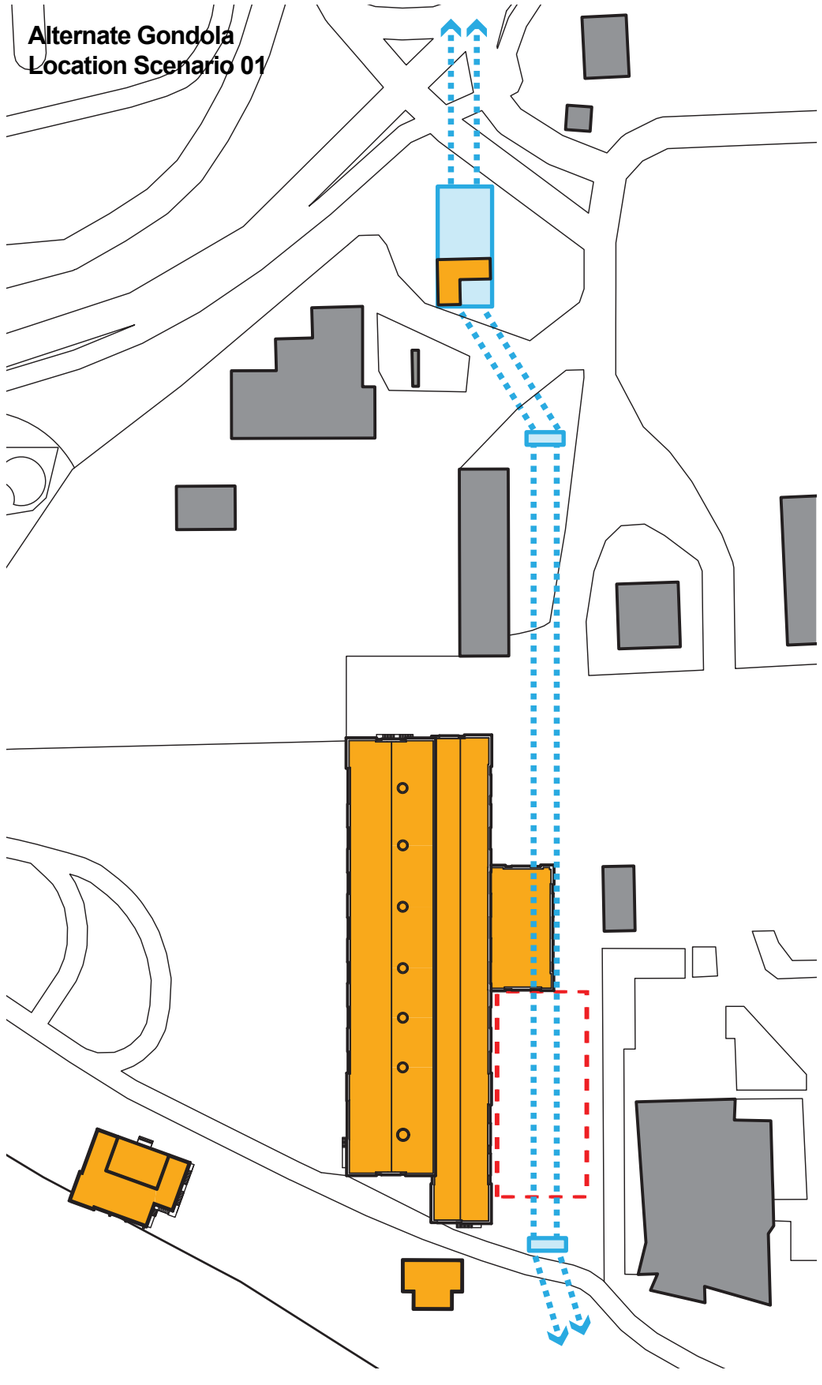
The current proposed location of the Prairie Sky Gondola station at the Rossdale Power Plant poses a number of challenges related to the the interface between the projects in the area (Touch the Water, the Rossdale Power Plant Rehabilitation, and the Roadway Improvement Project). The proposed Rossdale Station does have the ability to bring people to the site of both Touch the Water and the Rossdale Power Plant without the need for significant parking capacity, which, given the adjacency of the EPCOR water treatment facility and electrical substation, is a significant challenge on the site.

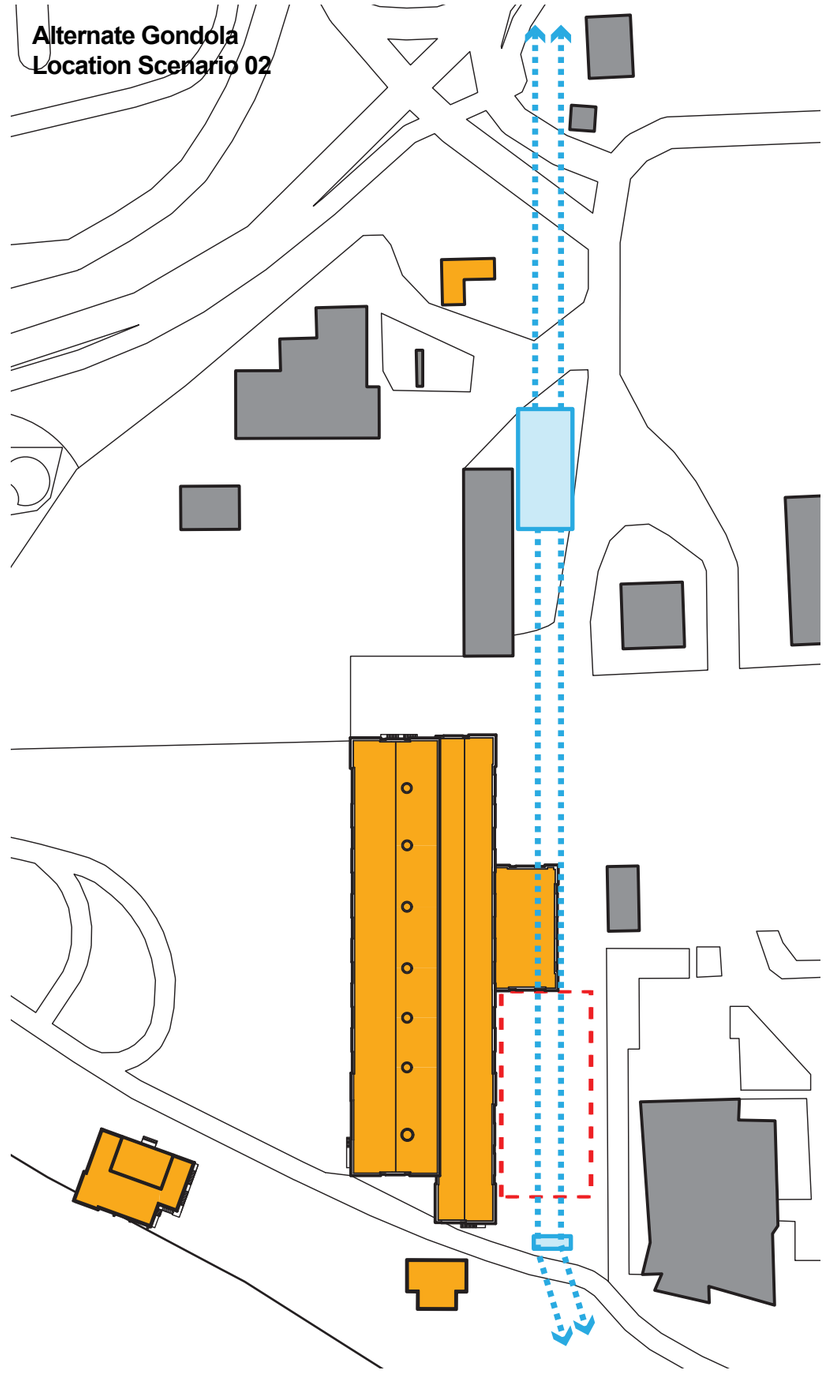
Based on the limited publicly available information concerning the gondola project, the station appears to occupy a significant area adjacent to the Switch House and Turbine Hall. The current siting of the proposed station presents the following challenges from an access, heritage conservation, and programming perspective:

- Emergency vehicle access to the south end of the Switch House and Turbine Hall appears to be limited by the location of the station.
- Emergency vehicle access to Pump House #1, #2, and the west side of the Boiler Hall.
- The proximity of the station to the Turbine Hall detracts from the legibility of the heritage fabric and undermines the intentions of the Conservation Plan to preserve unobstructed views of the Low Pressure Plant.
- The current proposed station includes significant amounts of program that may be redundant with future program in the Power Plant itself.

Alternate Gondola Location 01
One alternative to the proposed station location would be to relocate it to the current location of the ATCO Gas Building. The Scope Definition Document proposes uses for the ATCO Gas Building that include leveraging its proximity to Rossdale Road to serve as a gateway or point of entry into the broader site. The station could conceivably be integrated into and over top of the ATCO Gas Building, providing a legible entry to the site, convenient access to both the Power Plant and Touch the Water projects as well as other components of the River Crossing Business Plan located North of Rossdale Road.

Alternate Gondola Location 02
Another alternative location for the Rossdale Station could be adjacent to the existing EPCOR building next to the electrical substation. This location leverages existing open space to the east of the EPCOR building, bringing visitors to the site slightly closer to the Power Plant while avoiding co-location with the ATCO Gas Building.





LEGEND

APPROXIMATE EXTENT OF CURRENT PROPOSED STAITON

PROPOSED ALTERNATE STATION LOCATION(S)

PROPOSED ALTERNATE TOWER LOCATION(S) (FOR CHANGE IN DIRECTION

APPROXIMATE OVERHEAD CABLE PATH

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Consultant Responses to CP-9673 RPP AAPR PD02 - Alberta Culture Review

2022-03-02

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Scope Definition and Cost Estimate	N/A	Overall, I agree with the approach and suggestions with the caveat that it remains flexible enough to allow for more activities (i.e. rock climbing facilities in basement, etc.) as well as for circling back through the steps – as recommended in the Standards & Guidelines.	Noted. Yes, the conversation around reuse will be an iterative one.
02	Scope Definition and Cost Estimate	N/A	Some proof reading recommended (i.e. "Immedite" in P2 title sections is probably "Intermediate", Medicine Hat Brickand Tile example is also a PHR, etc.).	Noted and updated.
03	Scope Definition and Cost Estimate	N/A	With the structural concerns recently discussed, there is another component to these possible site developments that may require attention – mechanical systems that in my experience appear to take up quite a bit of space and that would probably need to be accommodated in the basements both for heritage aesthetics and structural impacts as well as maintenance/access.	Yes, mechanical systems will be a major consideration moving forward. The 'building-within-a-building strategy proposed in the Scope Definition Document may help to manage and mitigate the need for highly visible mechanical systems (particularly in the 'monumental' spaces of the LPP). The nature of these systems will need to be further defined when a reuse strategy is adopted.
04	Scope Definition and Cost Estimate	N/A	As usual, my stronger concerns will come later when the "how" is further determined – so far I'm flagging the reinstatement of windows, new/rehabilitated exits, guardrail augmentation vs. replacement, etc. but the overall approach for new elevators/ stairs appear reasonable.	Yes, all broad measures defined in this document will need further development through design. The intent of this document is to provide an overarching approach that is compatible with the Standards and Guidelines at a high level.
05	Scope Definition and Cost Estimate	N/A	Legends for the "Program-Space Compatibility" table and the "Design Components" list should probably be includedand my earlier comment on including the "Heritage" letter code in the list for almost all components still applies.	Noted and updated.
06	Scope Definition and Cost Estimate	N/A	The last "Concept Vision" with the painted gentleman and "One Nation Under CCTV" words on the boiler hall walls are washable, right?	Of course!

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Consultant Responses to CP-9673 RPP AAPR PD02 - Architectural Review

2022-03-02

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Scope Definition and Cost Estimate	89	Construction contingency of 8% seems too low for heritage structures.	Noted.
02	Scope Definition and Cost Estimate	90	Cost estimate summary - Are these numbers before the costing required? Adding numbers to cost could be confusing for the reader.	The numbers are intended to correlate to the subsection of each scope.
03	Scope Definition and Cost Estimate	90	Cost estimate summary - Is the estimated cost for each item inclusive of design and construction contingencies? Please add a note that these are 2021 dollars and do not include escalation.	Yes, contingencies are included. Updated to include note requested.

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Consultant Responses to CP-9673 RPP AAPR PD02 - City Planning Review

2022-03-02

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Scope Definition and Cost Estimate	N/A	I love this report! The character-defining elements and rehab / reuse intervention strategies are appropriate (and important) appetizers to the precedents and program scenario menus that follow.	Noted, thanks!
02	Scope Definition and Cost Estimate	3	In explaining that the report lays out a range of potential scopes, it might be good to more explicitly state that there's potential for mixing and matching the three scenarios in the report and other use opportunities indicated on pp. 47-49.	Noted and updated.
03	Scope Definition and Cost Estimate	12	Should be "condenser" instead of "condensor" in two places	Updated.
04	Scope Definition and Cost Estimate	44	Should read "...galleries that entertain and educate".	Updated.
05	Scope Definition and Cost Estimate	45	Should be "cultural" instead of "cultura".	Updated.
06	Scope Definition and Cost Estimate	47-49	The River Crossing District Energy Feasibility Study is pointing to a biomass system that would require a 400 - 500 m2 energy centre with 4-5 wood pellet-fired boilers.The power plant might not be the right place for it to go simply from a geographic centrality perspective, or from the perspective of site access / unloading for pellet delivery vehicles. But then again, the power plant might end up being the best location for this. Could you add an energy centre to the Program Capacities and Opportunities table, and to the matrix on p. 49?	Added/updated.
07	Scope Definition and Cost Estimate	49	Couldn't certain types of makers use the basement of the Turbine Hall in the short term if washrooms were an early priority in the Low Pressure Plant? Pump House #2 seems like it could have more uses in the short term, like bike or canoe rentals.	Yes, the matrix has been updated to reflect such an approach.
08	Scope Definition and Cost Estimate	61	The Fenestration text refers to Pump House #2 so the text appears to duplicate what's on p. 54.	Updated.
09	Scope Definition and Cost Estimate	63	ACAD has renamed itself Alberta University of the Arts	Noted and updated.

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COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
10	Scope Definition and Cost Estimate	71, 73	What do the dashed orange lines along the walls between the Switch House, Turbine Hall, and Boiler Hall represent? They aren't explained that I can see.	This has been updated for clarity.
11	Scope Definition and Cost Estimate	81	"Plan 0 Basement Floor" should read "Main Floor Axonometric"	Updated.

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Consultant Responses to CP-9673 RPP AAPR PD02 - Mechanical PRT Review

2022-03-02

COMMENT #	REFERENCE	PAGE	COMMENT	CONSULTANT'S RESPONSE
01	Scope Definition and Cost Estimate	N/A	Please Scope all sanitary and storm lines BEFORE and AFTER construction	Noted.
02	Scope Definition and Cost Estimate	N/A	Are current mechanical services sized to accommodate the maximum capacity proposed by scope redevelopment in each building? Are services readily available to connect to?	TBD. Scope definition estimate includes for revised services when re-use directions are confirmed.
03	Scope Definition and Cost Estimate	N/A	In Pump house's basements is there proper drainage? Being at river level would a septic lift system be required?	Existing pumping infrastructure may need to be upgraded in concert with sealing the existing openings.
04	Scope Definition and Cost Estimate	N/A	If pump house 2 to be used as a restaurant/cafe/coffee shop please follow CRU guidelines. As well as any other commercial kitchen space.	Noted. The intent is for the SD phase to provide broad allowances for a range of potential CRU configurations.
05	Scope Definition and Cost Estimate	N/A	There was talk about leaving the LP plant without temperature controls. Without building envelope being properly insulated, how do we prevent it from getting too cold in the winter and too hot in the summer? How would this affect attracting potential clients? Would buildings need to be winterized? Is the roof engineered to hold the weight of any roof top equipment needed?	The intent was to explore tempering the LPP's monumental spaces and potentially introducing fully conditioned 'building-within-a-building' interventions to manage the inherent energy performance challenges of the existing envelope. Placement of rooftop units would likely require additional structural reinforcement.
06	Scope Definition and Cost Estimate	N/A	Do Museum/gallery/heritage/library spaces require humidity control?	Depending on the nature of media on display, temperature and humidity controls will be considerations. As noted above, isolating specific zones within the LPP to address particular climate control requirements would be the recommended approach.
07	Scope Definition and Cost Estimate	N/A	Will tenants be responsible for any Abnormal HVAC requirements? Bigger exhaust fans for workspaces?	That will need to be determined once a re-use strategy is adopted.
08	Scope Definition and Cost Estimate	N/A	Will there be added parking and will it have storm drainage sized accordingly?	The design team has provided analysis on parking and loading requirements. Site access and development is being managed through a separate City of Edmonton project, but certainly some level of on site vehicle access will be required.

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