Public

NATIONAL CAPITAL COMMISSION / COMMISSION DE LA CAPITALE NATIONALE		**No.**	2024-P290
		To	Board of Directors
For	DECISION	**Date**	2024-10-01

Subject/Title

Public Services and Procurement Canada (PSPC) – Transportation Safety and Technology Science (TSTS) Hub Facility - National Research Council Canada (NRC) Campus (Montreal Road) – Schematic Design 100%-Federal Land Use and Design Approval

Summary

- The purpose of this submission is to obtain approval from the Board of Directors for the 100% Schematic Design for the Transportation Safety and Technology Science (TSTS) Hub Facility Proposal at 1200 Montreal Road, Ottawa (NRC Headquarters Campus).
- The main goal of the TSTS project is the creation of a national Centre of Excellence to advance transportation safety and science research. The Hub incorporates the Transportation Safety Board of Canada (TSB) Engineering Lab, the TSB Head Office, and NRC Structures and Material Performance Laboratory science program personnel and resources, into a new single purpose building at the north side of the NRC Montreal Road Campus.
- The Proposal is in alignment with the NCC's Plan for Canada's Capital, Capital Urban Lands Plan and the NRC Campus Master Plan approved by the NCC in April 2024.
- Complex projects are reviewed and approved by the NCC in a sequential order to confirm the progress of the project in conformity with the *NCC federal approvals review framework*, substantially reducing project and procurement risk to the proponent.
- The approval of the 100% Schematic Design is the first approval being sought for this project to confirm the design assumptions before the proponent moves to the design development phase. This approval does not permit project execution.
- Upon approval of the 100% Schematic Design, separate level 2 approvals will be submitted to the Executive Committee of the Board to enable early works (mobilization and, preparatory works).

Risk Summary

- No significant risks that could impact the National Capital Commission (NCC) have been identified in relation to this submission's recommendation, however, delay in receiving this approval will affect the project schedule including PSPC project agreements, and the approval process for early works.

Public

Recommendation

- That the Federal Land Use and Design Approval (FLUDA) for the 100% Schematic Design for the Transportation Safety and Technology Science Hub Facility be granted, pursuant to section 12 of the *National Capital Act,* subject to the following conditions:
    - That the Developed Design be submitted as a Level 3 to the National Capital Commission (NCC) for review and approval prior to implementation.
    - That Early works be subject to a separate Level 2 federal review and approval process, prior to implementation.
- That the preparation and signature of the FLUDA documents be delegated to the Vice-President, Capital Planning Branch.

Submitted by:

DocuSigned by:

8F8319D91759427...

Alain Miguelez, Vice President Capital Planning Branch

1. Strategic Priorities

- National Capital Commission (NCC) Corporate Plan 2023-2024 to 2027-2028 – Strategic Direction #1:
  - Foster an inclusive and meaningful National Capital Region of national significance reflective of all Canadians, including Indigenous peoples, and all levels of government.
- NCC Corporate Plan 2023-2024 to 2027-2028
  - Priority #2: Plan, rehabilitate and revitalize key assets and transportation networks in the National Capital Region.
  - Priority #4: Demonstrate national leadership in achieving an environmentally sustainable and climate-resilient National Capital Region.
- Federal Government initiatives:
  - Laboratories Canada – A federal government initiative (2018)
  - Federal Sustainable Development Strategy, 2022-2026 (2022)
  - Greening Government Strategy: A Government of Canada Directive (2020)
  - Pan-Canadian Framework on Clean Growth and Climate Change (2016)
  - Public Services and Procurement Canada (PSPC) Real Property Sustainable Development and Environmental Strategy: 2020-2023 (2023)
  - PSPC Placemat - Baseline Greening Commitments (2021)
  - PSPC National Carbon Neutral Portfolio Plan (2017)

2. Authority

National Capital Act, section 12.

3. Context

Project Background:
Laboratories Canada (Labs Canada) is a federal government initiative establishing a 25-year strategy to deliver on its vision to strengthen federal science in Canada. The strategy focuses on achieving scientific excellence through creating a national network of modern, multipurpose, scientific infrastructure. The Labs Canada initiative involves innovative delivery models to renew aging science infrastructure, creating a modern platform to support evidence-based policy, and enable cost-effective scientific program delivery. New facilities will house modern laboratories and collaborative spaces that are environmentally sustainable, accessible, and fitted with technology tailored to meet the needs of federal scientists. New labs will bring together science-based departments and strengthen their research through enhanced interdisciplinary work, collaboration, and shared facilities and equipment.

The Transportation Safety and Technology Science (TSTS) Hub project incorporates the Transportation Safety Board of Canada (TSB) Engineering Lab, currently based at 1901 Research Private, the TSB Head Office, and National Research Council Canada (NRC) Structures and Material Performance Laboratory science program personnel and resources, into a new single purpose building at the north side of the NRC Montreal Road Campus. This location was identified by PSPC in 2021 through a Siting Options Analysis.

The TSTS Hub aims to reduce safety risks for Canadians by encouraging collaboration and integrated innovation within a co-located community of scientists, engineers and technologists working on the design, development and integrity of transportation systems. TSTS will also enhance the development of safety certification, accident investigations and help sustain transportation platforms. Greater collaboration means that the latest research and technical developments investigated by NRC scientists can be shared with TSB engineers, who in turn can provide information to NRC, to help define new research projects related to improving transportation safety. Facilitating this two-way exchange of ideas, skills, knowledge, and resources is a critical consideration while designing the new TSTS Hub.

NRC, as site custodian, has engaged Public Services and Procurement Canada (PSPC) to implement the initiative. PSPC subsequently retained a multi-disciplinary team led by Architecture49 Inc., B+H Architects Corp. and engineering partners at WSP to develop two schematic design options for the new TSTS Hub. Construction is expected to be complete in 2029.

Campus Master Plan:
Development of the TSTS Hub is guided by the new NRC Montreal Road Campus Master Plan, approved by the NCC Board in April 2024. The new Master Plan reflects a campus that is people-focused, connected, and engaged with nature and the surrounding communities. It outlines planning strategies and phased implementation over a 30-year horizon. The new vision is representative of a 21st century science campus that builds upon the NRC legacy as a primary research hub and provides a framework to create an attractive top tier workplace for researchers and scientists in pursuit of leading-edge discoveries.

Site:
The site is approximately 90 metres by 266 metres (23,940 m^2) and located within the northern portion of the NRC Campus. The subject lands are within the Capital Urban Lands Plan (2015) area. The TSTS Hub will occupy what is currently a large central lawn bordered by Legget Avenue to the south and west, Howlett Street to the east, and Hutcheon Road to the north. The project site has served as the location of building M-21

(built in 1954) and the central greenspace for the campus since its inception. In recent years, the site evolved with the addition of a parking lot on the southeast corner (56 spaces) and the removal of a baseball/softball diamond. The TSTS Hub will be situated south of the northernmost portion of the site, which contains an underground service tunnel, minimal trees and vegetation, and building M-21 (to be retained), to minimize the complexity of construction.

Program/Functional Requirements:
The Schematic Design has been informed by the needs defined in the Functional Program (FP) and shaped by earlier Pre-Design, Siting Option and Test Fit reports. The FP identified key functional, operational, and spatial requirements for the project's design program. Program requirements were then verified through a series of workshops and detailed reviews of equipment and workflows.

The Hub must provide sufficient and appropriate accommodations to renew science infrastructure and fulfill program requirements for 261 employees: 70 from NRC, 28 from TSB engineering laboratory and 148 from the TSB Head Office, with provision for an additional 15 employees for growth.

The 21,200 m^2 building will include:

- Laboratories, workshops, and support spaces.
- Office accommodations and support spaces.
- TSB Head Office.
- Collaborative spaces to accommodate external partners (i.e., academia, other levels of government, non-governmental and non-profit organizations, local schools, indigenous groups, etc.).

Exterior operational spaces will include:

- Yard for exterior wreckage storage with outdoor canopy.
- Enclosed storage, garbage and recycling with hazardous waste area.
- Fuel farm and fuel storage.
- Loading area.

The interior spaces of science facilities are organized into neighbourhood groups representing the diverse scientific and investigatory operations undertaken by TSB and NRC. Neighbourhood groups, or functional science areas, include the following categories: High Temperature Materials Research and Development, Structural Integrity Science, Non-Destructive Evaluation, Metallography and Microscopy Analysis, Extraction and Analysis of Vehicle Data, Electrical and Electronic System Failure Analysis,

Mechanical System Failure Analysis, and Image Analysis and Simulation. The layout prioritizes functional adjacencies, ensuring operational flexibility and optimizing resource management.

The existing 56-space parking lot will be removed, and 24 new parking spots will be provided on-site with the remaining needs for parking addressed by the existing campus parking lots. A total of 16 visitor spaces will be provided in the existing lot north of building M-21 along Hutcheon Ave, four accessible spaces are located along the east entrance, and four spaces for fleet vehicles are within the secure fenced exterior storage area. The fleet parking spaces, accessible spaces, and seven of the visitor spaces were identified as program requirements and will be dedicated to TSTS Hub.

Schematic Design Proposal:

Design Vision Statement and Principles:

The design vision for the TSTS Hub reflects the commitment to innovation, collaboration and inclusivity. It is a place where scientists push the boundaries of human knowledge where the building itself acts as a catalyst for discoveries.

Seven design principles have been established by Labs Canada to guide all laboratory projects across Canada, including the TSTS Hub. The design principles included in the Labs Canada Repeatable Laboratory Design Framework (RLDF) are:

- Design Excellence
- Collaboration
- Flexibility
- Functional Suitability and Expandability
- Sustainability
- Universal Accessibility
- Intelligent Building Infrastructure

NRC Campus Master Plan (2024) Guidance:

The Master Plan envisions a community-oriented environment with plazas connected to a central green spine along Howlett/McCallum Streets, which link the North and South NRC campus with the TSTS building.

Master Plan Guiding Principles that have influenced the design include:

- Be the Aspiration: Bold and iconic landscape architectural designs provide a desirable and inspiring working environment.

- People-focused Design: Providing accessible and comfortable outdoor plazas and sitting areas.
- We are a Laboratory: The exterior amenities provided in the landscape supports the functions of the building as a lab and workspace.
- Future Flex: The landscape is designed to adapt to future growth and change including initiatives identified in the master plan.
- Resilient Thinking: Using bioswales and native plant materials. Introducing green roofs.
- Nature by Design: Introducing natural systems such as bioswales, tree planting. Preserving existing trees and planting beds.
- Secure the Future: The landscape responds to the site security requirements and CPTED principles.
- Tell our story: Creating unique storytelling design features that relate to the functions of the TSTS Lab facility.

Architecture:

The north end of the campus is defined by two- to three-story industrial buildings, characterized by their light-colored materials such as cinderblock, precast concrete, and more recently, pre-painted metal panels and glass. The entire campus is an amalgamation of architectural styles developed over the years, unified by a modernist aesthetic with an industrial character. Notably, the horizontal window stratification, vertical window alignments and solid walls of robust materiality, and the off-white/grey color palette contributes to a cohesive visual identity for the campus.

Building upon this architectural heritage, the TSTS Hub endeavors to articulate a contemporary architectural expression that complements the existing architectural ethos. Materials such as precast concrete, pre-painted metal panels, and a curtain wall glazing system with frit glass are used to mitigate the building's mass, creating a more human-scale and universally accessible environment. This composition and massing strategy aim to integrate a sustainable TSTS Hub into its surroundings while paying homage to the campus's architectural legacy.

The architectural legacy of the campus is embraced, through the retention of building M-21 which exemplifies a modern and globally inspired design. By situating the facility south of the existing underground service tunnel and building M-21, the plan liberates resources, enables increased green space, and contributes to a more condensed building mass, aligning with the goal of creating a universally accessible, welcoming site. Efforts have been made where possible to increase building setbacks along the building’s

east side, enhancing the pedestrian space in this area. The design options prioritize integration into the campus landscape, respecting architectural expressions and blending established forms with innovative designs, thereby serving as a focal point for the north campus.

The design prioritizes minimizing secondary structures such as antennas and transparent free-standing forms. Instead, the focus is on strategically integrating building elements such as external shades, screens, grilles, shutters, and louvres.

Program Layout:

From North to South, the grade layout aligns with the materials yard and deliveries area, leading to multi-storey labs for both the NRC and TSB teams. These areas and adjacent support rooms transition into the mid-section of the building, housing workshops and other smaller labs. The majority of science labs and materials facilities are situated in the "South Block," facilitating a linear flow of materials and people. This design accounts for adjacency requirements, functionally appropriate flows, and workshop efficiencies. The second floor predominantly houses the science office accommodations and TSB offices and accommodations, featuring shared spaces to enhance collaborative capabilities. The building design includes an atrium and central entry, providing public functionality with an auditorium and access to most facility workspaces, shared areas, and collaborative zones. The program and layout comprehensively address the integration of design, physical security, and IT, as well as mechanical and electrical infrastructure.

Landscape:

To create a distinct sense of arrival, the landscape creates a series of view corridors that allow for glimpses of the building massing upon approach. From the moment of entry to the North campus, a series of views through planted trees offer glimpses of what is to come along the buildings progressing through the streets. These vantage points also create visual landmarks and encourage exploration of the public realm, allowing visitors to appreciate the harmony between the natural and built environments. Pathways lead the visitor to a common plaza animated with art installations and highlighting the campus’s cultural identity.

A plaza at the south end of Howlett Street engages the frontages and entrances of existing buildings with that of the new TSTS Hub. The building's design responds to the street plaza space by incorporating ground floor articulation, and alignment of the main building entrance. This prominent zone is celebrated by a gateway building articulation, connects mobility pathways, and creates new campus views and vistas.

Security:

Landscape design prioritizes safety and the safe use of space in the public realm, including:

- Bioswales and below and above grade initiatives are used instead of bollards as vehicle protection measures for around the perimeter of the building.
- The placement and location of benches and planters and the use of strategic site grading will serve as anti-ramming features.
- Pedestrian-scaled landscape lighting will be integrated along pathways and within the plaza areas to provide site visibility.
- Solid fencing and gates are provided around the exterior storage area.

Green Roof:

A green roof is proposed adjacent to the TSB Head office to enhance the local native habitat and promote biodiversity. Occupants will benefit from this outdoor space, enjoying an enriched open space experience and promoting inclusivity.

Design:

The project team developed two schematic design options for the new TSTS Hub. Both options were developed to include a balance of flexible, adaptable, and scalable laboratory spaces, and meet key scientific objectives, programming goals, operational models, and sustainable whole-building design ambitions for the users in accordance with principles identified in the RLDF document.

Ultimately, PSPC's consultants have recommended Option 2:

- The façade treatment uses two systems for expression, a precast concrete panel system as well as a metal panel system, the building elements are accented with material and colour. The building is characterized by sculptural volumes that command attention and create a seminal presence in its surroundings. As one approaches, the façade meticulously unfolds, beckoning visitors to come in and participate in its environs.
- Colour serves as a wayfinding tool, guiding individuals through the space while adding vibrancy and depth to the structure's visual identity.
- To maximize light transmission throughout the office areas, open workstations are placed facing the atrium and east side glazing, while enclosed areas are in the interior of the floorplate. Glazed fronts for offices and meeting rooms will be used wherever possible to allow for exterior views and light penetration.

- The landscape design introduces a rotated grid pattern on the ground plane, drawing attention to the southeast Howlett Street gateway and the building's main entrance.
- The South Gateway Plaza incorporates a two-dimensional pivoted grid with permeable paving, sod, and integrated seating, lighting, and planting. A central entryway provides a direct connection between the building and the plaza.
- The East Entry Landscape features a distinctive canopy serving as a gateway element, along with seating areas overlooking a landscaped bioswale.
- The West Entrance and Paths facilitate access to the building's utility area, featuring a grid paving pattern extending to the west entry foyer.
- The Green Roof continues the geometric theme, integrating raised planters for tree planting and movable seating, providing an inviting outdoor space.

Universal Accessibility:
The design adheres to the guidelines and best practices for accessible design for the built environment, including:

- The inclusion of pedestrian pathway connections to all building entrances and open spaces at-grade and at rooftop levels.
- All at-grade crossings at road intersections have tactile walking surface indicators and curb depressions.
- Where there are changes in grade for walking surfaces such as pathways and curbs, design accommodates a less than a 5% slope to reduce the need for stairs and ramps. Where ramps and stairs are necessary, railings and tactile walking surface indicators are provided.
- A wayfinding and signage strategy will be developed during Design Development to provide clear and universally accessible circulation and orientation to and through the building site.
- Labs are designed to go above and beyond building code and universal accessibility standards for science laboratory facilities in Canada.

Sustainability:
Six sustainability principles govern the project design: Occupant Health and Wellness, Environmental Health, Net-zero Energy Ready**,** Net-zero Carbon, Climate Resiliency, and Economic Vitality. The project is targeting both LEED® GOLD and Fitwel two-star certifications. At the 100% SD Stage, the TSTS Hub project is tracking towards LEED v4 BD +C Gold and Fitwel v3 1-Star.

Part of the Schematic Design phase included the exploration of a range of sustainability measures within GHG Option Analyses, which evaluated four options and identified a

right-fit option specific to the TSTS Labs project. Given the project's budget constraints and the challenge of balancing project requirements with expected cost escalations, further optimization is anticipated as the project moves into the next phases of design.

Engineering:
Topography:

While the site appears relatively flat, it in fact resembles a bowl. This topography poses challenges for facility positioning, particularly concerning access to the multi-storey lab and exterior storage yard. Opportunities to meet the challenges presented by the +/-2m disparity in site grading have been investigated and further analysis will be undertaken as the project proceeds to detailed design.

Transportation:

- The circulation around the TSTS Hub site is configured to enhance accessibility and circulation efficiency. A network of pathways, shared bike lanes, and optimized vehicular routes creates safe movement across the campus.
- Existing parking facilities are used to reduce the need to provide new parking areas. Accessible parking spaces are provided near the main building entrance.
- The Hub accommodates indoor and outdoor, short and long-term bicycle parking storage along with showers and change facilities for users. Key connections will be made from the site to the existing NRC Campus pathway network that leads to bike routes and to the Montreal Road transit stops.
- Connected pedestrian crossings are provided to access the major pathway network. Pedestrian pathways are provided to access building entrances on the east, south and west sides of the project site, and to the parking area to the north.
- All three building entrances are universally accessible.
- Large trucks will require access to the external storage area and the fuel farm. Turning movements will be impacted by the site grading.

4. Options Analysis / NCC Staff Analysis

Policy Framework Analysis:
In its review of the proposal, staff has worked to ensure the proposal is compatible and in alignment with the strategic framework and policies of the following NCC plans:

- Plan for Canada's Capital, 2017–2067 (2017)
    - Goals:
        - Thriving and Connected: Support a liveable, attractive, resilient, accessible and economically competitive Capital Region. Promote

sustainable mobility, and support transit-oriented development in the Capital Region.
    - Milestones:
        - Milestone 3: National Cultural and Scientific Institutions
        - Milestone 14: Improved Urban Integration of Federal Employment Areas

- Capital Urban Lands Plan (2015)
    - The site is designated as a Major Federal Employment Area in the Capital Urban Lands Plan. Plan policies support:
        - Integrating federal employment areas into their urban context.
        - Encouraging improvements to the public realm.
        - A welcoming public-facing presence at headquarter buildings.
        - Pedestrian, cycling and transit-supportive improvements.

- NRC Montreal Road Campus Master Plan (2024)
    - The site is designated as a Future Buildable Area in the NRC Montreal Road Campus Master Plan. Site-specific guidelines are included in the Master Plan.

ACPDR:

The 90% Schematic Design was presented to the NCC's Advisory Committee on Planning, Design, and Realty (ACPDR) on May 30, 2024, for review and comment. The committee positively supported the direction of the design, and in particular the preferred option (Option 2). The committee made suggestions to consider as the development of the project progresses, including the following:

- Continue to explore measures to improve the pedestrian realm surrounding the Hub, including the connections between the inside and outside of the building.
- Continue to consider opportunities to provide shade, vegetation, and spaces that promote socialization.
- Consider how the location of the plaza could be used to enhance interaction by aligning it with building entrances.
- Ensure that all building entrances are universally accessible, as well as access to any building amenities (i.e., green roof).
- Explore the visual connections to the site from beyond the site boundary to understand how the Hub can contribute to the public realm experience along Montreal Road.
- Apply a distinctive treatment along the building's front façade to signal the northern entrance to the campus; add an entrance along the front façade.

The ACPDR meeting minutes are available in Appendix F.

Summary of FLUDTA Staff Analysis:
The TSTS Hub Facility is the first project following the approval of the NRC Montreal Road Campus Master Plan (MP), which provides a 30-year vision for the entire campus and was triggered by the TSTS project and a TerraCanada Hub proposed as part of the Labs Canada initiative. Overall, the building aligns with the vision and guidelines of the MP. The science hub facility will be a keystone project in realizing the campus vision. Key areas of alignment are indicated below:

- The project contributes to the MP goal to consolidate a main north-south spine connecting the campus by creating a unifying landscaped corridor along Howlett Street.
- The design is aligned with the MP's District Design Guidelines for the North Campus/Howlett Street. These guidelines outline a framework for architectural integration, layout, landscape architecture, and mobility. The design adheres to the guidelines as follows:
    - The façade along Howlett Street is activated by the main entrance, and the canopy gateway element.
    - The building volume is modulated to reduce mass effect.
    - The building contributes to the green spine along Howlett Street.
    - Pedestrian entrances are located along the front façade and Howlett Street. An additional entrance is also added on the west façade, retaining the existing east-west connection through the site.
    - All building entrances will be universally accessible.
    - The south-facing plaza and building entrance help to signal the Northern entrance to the campus and adds visual interest from Montreal Road.
- The building's architecture is in alignment with guidelines related to future architectural styles on the campus through the accentuation of horizontality to complement existing buildings.
- The TSTS Hub's south-facing plaza will complement the future linear park along Montreal Road.
- Security features are integrated into the streetscape, open spaces and landscape features of the property in a sympathetic manner. For example, bioswales will be used in place of bollards for vehicle protection, and benches and planters will be strategically placed to serve as anti-ramming features.
- The project aims to meet federal sustainability targets, including net-zero carbon, with further optimization of methods expected in the next design phases.
- The project encourages sustainable and active mobility by limiting the inclusion of new parking spaces and prioritizing pedestrian movement and cycling.

As the project is at Schematic Design phase, many of the finer details will become refined during Design Development. The following should be addressed in the next phase of the project:

- Review visual connections from key neighbourhood access points to understand how the project can strengthen these connections.

- Continue to explore measures to improve the pedestrian experience along long blank facades.
- While the limited inclusion of parking spaces is consistent with the provisions of the approved MP, undertake a Transportation Demand Management study to identify measures to adequately prepare for the development.
- Undertake a sun/shadow study to assess the impact of the building on the surrounding area.
- Determine what mitigation measures, if any, are required to lessen public realm impacts of truck access to the site, including the fuel farm.
- Continue to advance conversation with the City of Ottawa related to the intended exceeding of maximum building heights.

5. Financial Details

- Not Applicable – External project, therefore financial details are not available.

6. Opportunities and Expected Results

- The NRC and PSPC's development of the Labs Canada TSTS Hub facility will be a key step in the implementation of the NRC Montreal Road Master Plan and will support the implementation of key policies and objectives identified in the NCC's planning framework.

7. Alignment with Government and NCC Policies

- An Environmental Effects Evaluation will be completed for this project as part of the determination under the *Impact Assessment Act* at the developed design phase prior to implementation.
- The Proposal is aligned with the Federal Sustainable Development Strategy, 2022–2026 (2022), which PSPC is responsible for following.
- Labs Canada projects are designed for universal accessibility, as indicated in the Repeatable Laboratory Design Framework. GBA+ considerations were embedded as part of the universal accessibility for the TSTS project.

8. Risks and Mitigation Measures

Risk	Likelihood	Impact	Mitigation Measure
Implementation of design changes to address NCC requirements and recommendations identified at the	Low	Low	• NCC staff to provide comments to inform the future stages of design and submission requirements. • The schematic design approval letters will include conditions requiring outstanding requirements

schematic design stage.			to be addressed at developed design. • The developed design will not be recommended for approval until the outstanding requirements have been addressed.
Delay in receiving approval affects project schedule and related PSPC project agreements	Low	Medium/ High	• Proceeding with the approval of the Schematic Design will allow the design development to advance.

9. Public Engagement and Communications

- Stakeholder consultations carried out by the proponent have been primarily limited to internal discussions with representatives from the NRC and TSB.
- Engagement with Indigenous groups was previously initiated by the Labs Canada Indigenous Engagement team and will continue at all stages of the project.
- The NRC has published public information on their website for neighbouring communities to stay informed about the NRC Master Plan, which includes the location of the proposed TSTS Hub.
- A meeting was held in 2023 between PSPC, NCC, and the City of Ottawa to introduce the project. PSPC will continue to consult with the City of Ottawa Planning Division for comment on the designs of TSTS Hub.

10. Next Steps

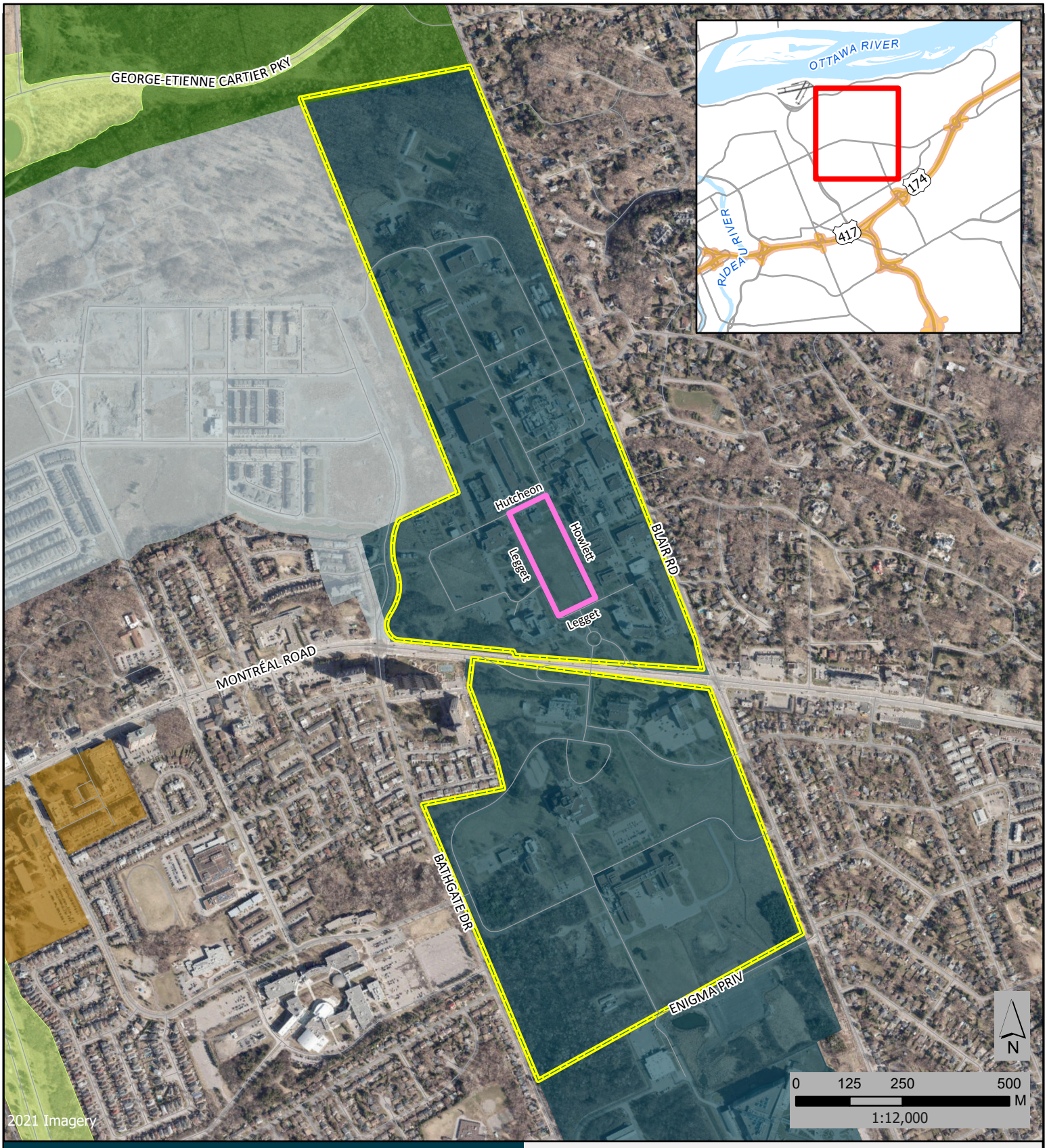
- Developed Design – Fall 2024 -Spring2025
- Mobilization and preparatory works – TBD – Subject to L2 federal approvals
- ACPDR and NCC Board of Directors Developed Design – TBD
- Substantial Completion – 2029

11. List of Appendices

- Appendix A – Location Map
- Appendix B – Executive Summary
- Appendix C – Building Drawings and Elevations
- Appendix D – Landscape
- Appendix E – Renderings
- Appendix F – ACPDR Meeting Minutes May 2024

12. Authors of the Submission

- Alain Miguelez, Vice-President, Capital Planning Branch (CP)
- Isabel Barrios, Director, Federal Approvals and Heritage, and Archaeology Programs (FAHA), CP
- Kate-Issima Francin, Chief, Federal Land Use and Transactions Approvals, FAHA, CP
- Monica Belliveau, Senior Planner, Land Use and Transactions, Federal Land Use and Transaction Approvals, FAHA, CP



Location Map: 1200 Montréal Road
Carte de localisation: 1200, chemin de Montréal

2024-04-23

National Capital Commission
Commission de la capitale nationale

Préparé par les Services Géomatiques / Prepared by the Geomatics Services

Site Boundary / Limites du Site

Property Boundary / Limites de la propriété

Capital Urban Lands Designations (2015) / Désignations des terrains urbains de la capitale (2015)

- Major Federal Employment Area / Principale zone d'emploi fédérale
- Other Federal Facility / Autre installation fédérale
- Valued Natural Habitat / Habitat naturel valorisé
- Capital Urban Greenspace / Espaces verts urbains de la capitale
- Urban Redevelopment / Urban Redevelopment

TSTS HUB : PROJECT, SITE AND PLANNING

1.1 Synopsis

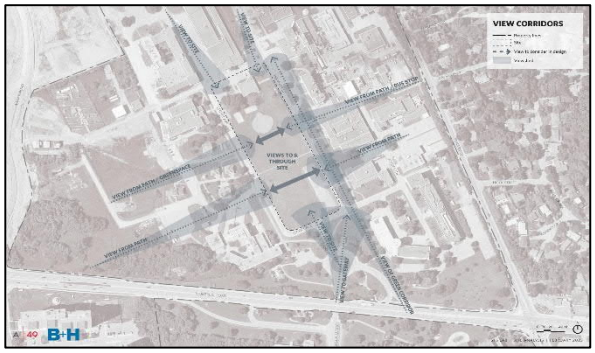
The "Innovation at the Edge" master plan serves as a blueprint for transforming the campus landscape by fostering connectivity, sustainability, socialization, and innovation. At the heart of this vision lies the strategic placement of the TSTS facility, symbolizing a commitment to creating a dynamic environment conducive to collaboration and engagement. Through meticulous design elements such as a linear green boulevard, integrated interior and exterior circulation, and preservation of architectural heritage, the facility at 1200 Montreal Road embodies the National Research Council's and Transportation Safety Board's dedication to creating a sustainable, vibrant hub for scientific discovery. The neighborhood's vision blends heritage with contemporary design, integrating existing features into modern structures while emphasizing sustainability and fostering collaboration with adjacent communities and local institutions. Anchored by the NRC campus, it aims to create a cohesive, diverse, and vibrant community through innovative urban planning, exemplified by the TSTS development. The Hub project epitomizes this vision, blending contemporary architectural expression with sustainable practices to create an iconic landmark that enriches the campus community and serves as a catalyst for future innovation.

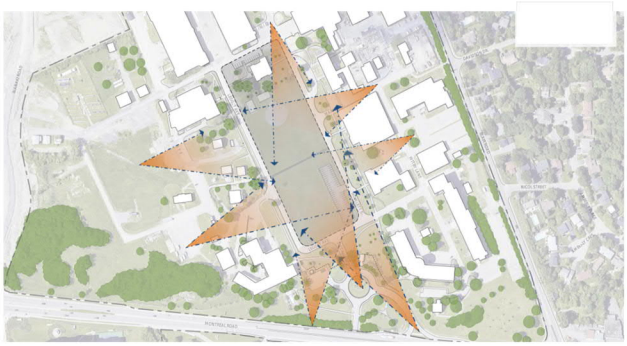
1.2 TSTS Hub Facility and NCC Plan for Canadas Capital

The TSTS Hub facility reflects NRC's commitment to integrate existing landmark buildings, strategic viewports of the building massing, and establish signature human-level views. The plan envisions a community-oriented environment with plazas connected to a central green spine along Howlett/McCallum Streets which link the North and South NRC campus with the TSTS building.

The master plan, outlined in the "Innovation at the Edge", strategically locates the TSTS facility to harmonize and connect the north and south of the campus with simplified infrastructure.

Howlett Street, running North-South, functions as both a mobility connector but also a vibrant green space, adorned with a double allée of native trees, shrubs, and perennials. Situated centrally on the lot, the facility maintains a North Green space and a significant South Plaza, providing tranquil escapes and encouraging outdoor gatherings, promoting health and wellness within the campus community. The master plan advocates for a generous green boulevard with wider setbacks between the buildings and roadways, along the eastern extent of the Hub Facility with a clear entrance for arrivals.





The design creates a street plaza zone for people and the community at the south end of Howlett Street engaging the frontages and entrances of existing buildings with that of the new TSTS Hub. The building's design responds to the street plaza space by incorporating ground floor articulation, and alignment of the main building entrance. This prominent zone is celebrated by a gateway building articulation, connects mobility pathways, and creates new campus views and vistas.

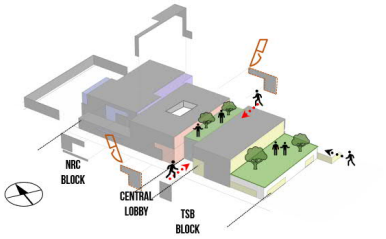
The architectural legacy of the campus is embraced, maintaining buildings like M21 which exemplifies a modern and globally inspired design, deserving of a prominent place within the project site. The north end of the campus is defined by two to three-story industrial buildings, characterized by their light-colored materials such as cinderblock, precast concrete, and more recently, pre-painted metal panels and glass. These structures reflect what was a forward-thinking approach to design, space, and functionality, embracing principles of simplicity while eschewing ornamentation. The entire campus is an amalgamation of architectural styles developed over the years, unified by a modernist aesthetic with an industrial character. Notably, the horizontal window stratification, vertical window alignments and solid walls of robust materiality, and the off-white color palette contributes to a cohesive visual identity for the campus.

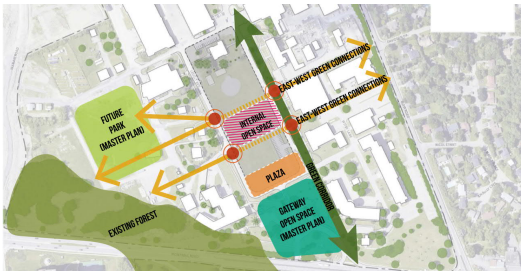
Building upon this rich architectural heritage, the TSTS Hub endeavors to articulate a contemporary architectural expression that not only complements the existing architectural ethos, but also incorporates sustainability goals within an ambitious 25-year plan to revitalize federal science. Carefully selected materials such as precast concrete, pre-painted metal panels, and a curtain wall glazing system with frit glass are orchestrated to mitigate the building's mass, creating a more human-scale and universally accessible environment. This thoughtful composition and massing strategy aim to seamlessly integrate a sustainable TSTS Hub into its surroundings while paying homage to the campus's architectural legacy, inclusive of the adjacent communities and the greater Ottawa area.

1.2.1 Building Form and Perspective

The design of the TSTS HO and Entry/Atrium space prioritizes maximizing fenestration and opportunities for natural light. This is achieved through strategic use of a glazed curtain wall systems, providing clear vision panels and insulative spandrel panels as required. Heightened transparency to the lush green boulevard and the outdoor environment is seamlessly integrated

into the interior workspaces, enhancing the building's overall appeal, while offering captivating exterior views for occupants and visitors alike.





The visual connectivity of the exterior environment to the interior spaces is continuously experienced throughout the building. Both the East and West sides are carefully articulated to reduce building mass and create distinct areas. The arrangement of the high bay and the mid bays reflect the desired relationship and requirements for the distinct program areas. Along the building's east side, the building mass is further articulated to address the boulevard and create welcoming entryways into the building. Through thoughtful planning of the building layout, choice of materials and textures, the large building mass is broken down into more refined distinct forms, adding a unique sculptural quality to the architecture.

1.2.2 Option Typologies and Context

The two Design Options are very distinct. In Option 1, the architectural façade treatment embodies a multifaceted approach aimed at harmonizing the scale of the building within its environment. It is comprised of unitized metal panel systems supported along the perimeter of the building by a back-up wall and structure. By utilizing a repetitive modular metal panel system oriented vertically, and complemented by a landscape design motif, the building form is seamlessly integrated with the surrounding campus landscape. This design strategy mitigates the imposing scale of the building creating a more human scale relationship that is harmonious and inviting to its surroundings.

In Option 2, the architectural facade treatment blends artistry and functionality. Using two systems for expression, a precast concrete panel system as well as a metal panel system, the building elements are accented with material as well as color. Characterized by attractive sculptural volumes that command attention and create an seminal presence in its surroundings, the design strikes a balance between assertiveness and intricacy. As one approaches, the facade meticulously unfolds, beckoning visitors to come in and participate in its environs.

Color, thoughtfully employed, serves as a wayfinding tool, guiding individuals through the space while adding vibrancy and depth to the structure's visual identity. This architectural treatment not only captivates with its striking form and color but also enhances the human experience, making every interaction with the building an engaging and memorable encounter.

A noteworthy design element is the Green Roof, positioned adjacent to the TSB Head office. This area is planned to serve as an additional flora and fauna, featuring medium to high-intensity landscaping. Its purpose is to enhance the local native habitat and promote biodiversity. Occupants benefit from this outdoor space, enjoying an enriched open space experience and promoting inclusivity.

Because of the modern industrial nature of the architecture, the design prioritizes minimizing secondary structures such as antennas and transparent free-standing forms. Instead, the focus is on strategically integrating building elements such as external shades, screens, grilles, shutters, and louvres. The integration of these structures not only elevate the architectural aesthetics but also contributes significantly to building energy efficiency and enhancing the mobility friendly experience and connectivity.

Sustainability serves as a fundamental guiding principle in shaping the design of the TSTS Hub project, aligning seamlessly with the master plan's emphasis on sustainable development practices. The project's sustainability goals aim to establish a resilient facility that minimizes adverse environmental impacts across its lifecycle. This is in line with the overarching objectives outlined in the master plan.

1.2.3 TSTS Hub and the Community

The TSTS Hub will occupy what is currently significantly large central formal grass open space devoid of trees and vegetation and surrounded by industrialist modern architecture. The loss of this very underutilized open space will be replaced by a 'living' green building and distinct open spaces in the heart of the campus. This new presence prioritizes ecological factors, engages and responds to existing buildings, provides useable and functioning flexible open space, introduces tree canopy and plant diversity, provides new wildlife habitat, and encourages the growth of native flora to the area. Architectural features are incorporated to enhance the local biota within a welcoming, accessible, friendly environment. Stormwater features such as planted bio-swales add to creating a more diverse natural environment.

The vision for this neighborhood's development seeks to seamlessly blend its rich heritage with contemporary design, employing strategies to conserve existing features while seamlessly integrating them into modern structures. Neighboring communities, like Rockcliffe, represent a vibrant tapestry of activities where residents can live, work, shop, and access amenities all within close proximity. Emphasizing sustainability, this plan aligns with Ottawa's commitment to environmental stewardship, offering opportunities for collaboration with adjacent neighborhoods, institutions, and government agencies. The NRC campus serves as a central hub, promoting a cohesive community ethos. Diverse housing options will cater to a range of preferences, incomes, and lifestyles, reflecting the eclectic nature of the surrounding area. Ultimately, the aim is to cultivate a sustainable and dynamic neighborhood that celebrates its heritage while catering to the evolving needs of its residents in a new modern direction through the TSTS form.

By situating the facility south of the existing underground service tunnel and historical building

M21, the plan liberates resources, enables increased green space, and contributes to a more condensed building mass, aligning with the goal of creating a universally accessible, friendly site. Efforts have been made where possible to increase building setbacks along the building's east side, enhancing the pedestrian nature of the site in this area. The design options prioritize seamless integration into the campus landscape, respecting architectural expressions and blending iconic forms with innovative designs, thereby enriching the local neighborhood and serving as a focal point for the north campus.

To create a distinct sense of arrival, the landscape creates a series of view corridors that allow for glimpses to the building massing upon approach. From the moment of entry to the North Campus, a series of views through planted tree groves offer glimpses of what is to come along the buildings progressing through the streets. These vantage points also create visual landmarks and encourage exploration of the public realm, allowing visitors to appreciate the harmony between the natural and built environments. Pathways lead the visitor to a common plaza animated with art installations and highlighting the campus's cultural identity, a stage set to the entry sequence that follows.

The circulation around the TSTS Hub site is configured to enhance accessibility and circulation efficiency. A network of friendly pathways, shared bike lanes, and optimized vehicular routes creates safe movement across the campus which is compatible with what is envisioned for the North Campus.

Option 1's landscape design draws inspiration from the vertical striping of the building's façade, particularly evident in the layout of the south plaza. The design considers vertical window expressions scattered around the immediate campus, alongside expansive stretches of blank walls. These elements are being regarded as precedents, providing a foundation for anchoring their architectural compositions in the context of the new development. Here, the South Gateway Plaza extends the vertical striping horizontally, integrating raised seating, water features, and planting beds. The design includes adaptable seating arrangements to accommodate various events, accessible from the building's south staff entryway. The East Entry Landscape defines the building's main entrance, creating a focal point along Howlett Street South. The West Entrance and Paths offer practical access to the building's utility area, featuring enhanced unit pavers, seating, and planters. The Green Roof is envisioned as a visually striking geometric feature, harmonizing with the building's aesthetic through lush greenery and movable seating options.

Option 2's landscape design introduces a rotated grid pattern on the ground plane, drawing attention to the southeast Howlett Street gateway and the building's main entrance. The South Gateway Plaza incorporates a two-dimensional pivoted grid with permeable paving, sod, and integrated seating, lighting, and planting. The East Entry Landscape features a distinctive canopy serving as a gateway element, along with seating areas overlooking a landscaped bioswale. The West Entrance and Paths facilitate access to the building's utility area, featuring a grid paving pattern extending to the west entry foyer. Continuing the geometric theme, the Green Roof integrates raised planters for tree planting and movable seating, providing an inviting outdoor space.



1.2.4 Summary TSTS Hub and NCC priorities

The TSTS Hub represents a bold vision for a sustainable and people-centric community type environment for both those who work at the NRC campus to the surrounding neighborhoods, the City of Ottawa and as a signature campus of the National Capital Region. The new facility will merge the beauty of nature with cutting-edge design, prioritizing connectivity and accessibility, and ensuring the design is source of inspiration and intellectual exchange. Embarking on this transformative journey, the aim is to create a space where innovation thrives, relationships flourish, and the pursuit of knowledge is a shared endeavor.

The design is intended to bring the various subject matter experts of the NRC and TSB together into a single nucleus, to enable complementary research, share and pool resources with respect to similar lab assets, and leverage communal knowledge in an environment that adapts to emerging technologies. The new building will provide modern yet timeless collaborative spaces and an opportunity to strengthen partnerships within the scientific community.

Representative Architecture plays a crucial role in expressing cultural identity, values, and inspirations. It serves as a visual representation of a community's identity. As a landmark, The TSTS Hub, will fosters a sense of belonging and pride, and will contribute to the urban fabric by creating a memorable, inspiring, and iconic cityscape. Overall, the TSTS Hub project demonstrates a thoughtful integration of the principles outlined in the "Innovation at the Edge" master plan, contributing to the realization of a vibrant, sustainable, and universal campus environment.

1.2.5 Labs Canada and Overall Objectives

Integrating the principles outlined above with the overarching vision of the TSTS Hub project further reinforces its alignment with the "Innovation at the Edge" master plan and the Labs Canada long term vision and commitment to excellence, collaboration, sustainability, and responsible stewardship:

Science Excellence: The design and functionality of the TSTS Hub will support top talent in delivering high-impact science that informs decision-making for emergent challenges. State-of-the-art laboratories and research facilities will be equipped to facilitate cutting-edge research and innovation, ensuring that scientists have the resources they need to excel in their fields.

Collaboration: The TSTS Hub will serve as a hub for collaboration, bringing together interdisciplinary teams and fostering a culture of engagement with partners and stakeholders. Modern and collaborative spaces within the facility will facilitate knowledge sharing, idea generation, and collaborative research initiatives, further strengthening partnerships both within the NRC community and beyond.

Modern and Inclusive Workspaces: The TSTS Hub will help attract and retain a diverse pool of talent, enhancing Canada's capacity for scientific innovation. Emphasizing diversity and inclusivity will foster creativity and innovation, driving scientific advancements and contributing to Canada's

position as a global leader in research and development.

Agility and Responsiveness: Flexible and adaptable spaces within the TSTS Hub will enable scientists to respond quickly to shifting priorities and emerging challenges. The design will prioritize agility, ensuring that researchers can stay at the cutting edge of their fields and adapt to evolving scientific landscapes with ease.

Environmental Responsibility: The TSTS Hub will embody environmental responsibility, reflecting a commitment to green operations and sustainability. Climate-resilient and carbon-neutral facilities will minimize environmental impact, demonstrating the NRC's dedication to sustainable practices and reducing its carbon footprint.

Responsible Public Stewardship: Through responsible stewardship, the TSTS Hub will deliver a portfolio of fit-for-purpose facilities that maximize space, reduce redundancy, and optimize investments. By ensuring efficient use of resources and infrastructure, the project will demonstrate fiscal responsibility and maximize the value of public investments in scientific research and innovation.

This can be considered as a neighborhood understanding by examining how the TSTS Hub project integrates with and contributes to the surrounding community:

Engagement with Stakeholders: The emphasis on collaboration and engagement with partners and stakeholders reflects a commitment to involving the local community in the development and operation of the TSTS Hub. By fostering relationships with neighboring businesses, organizations, and residents, the project promotes a sense of community involvement.

Community Impact: The design of the TSTS Hub takes into account its impact on the local neighborhood, considering factors such as traffic flow, individual accessibility, and aesthetic integration. By prioritizing mobility-friendly pathways, green spaces, and visual aesthetics, the project aims to enhance the overall quality of life for education, residents and businesses in the surrounding area.

Environmental Sustainability: The commitment to environmental responsibility and green operations extends beyond the boundaries of the TSTS Hub, positively impacting the broader neighborhood. Climate-resilient and sustainable facilities contribute to a healthier environment for local residents, supporting efforts to mitigate climate change and promote ecological stewardship.

Talent Attraction and Retention: By providing modern and inclusive workspaces, the TSTS Hub contributes to the vitality of the local neighborhood by attracting and retaining top talent. The presence of skilled professionals within the community can stimulate economic growth, spur innovation, and create opportunities for collaboration and knowledge exchange with local businesses and institutions.

Cultural Identity: The iconic architecture of the TSTS Hub serves as a visual representation of the community's identity, contributing to the character and aesthetic appeal of the neighborhood. As a landmark structure, the Hub fosters a sense of pride and belonging among residents, enhancing the overall attractiveness and desirability of the area.

In summary, by considering factors such as community engagement, environmental sustainability, economic impact, and cultural identity, the TSTS Hub project demonstrates a holistic understanding of its role within the neighborhood and seeks to contribute positively to its social, economic, and environmental fabric.

ARCHITECTURAL DRAWING LIST	
A000	COVER SHEET
A001	GENERAL NOTES & LEGENDS
A002	SITE LOCATION COMPOSITE PLAN
A005	FIRE RATING AND EXITING PLANS
A006	FIRE RATING AND EXITING PLANS
A010	STC RATING PLANS - GROUND & MEZZANINE LEVELS
A011	STC RATING PLANS - SECOND & THIRD LEVELS
A101	FLOOR PLANS - GROUND & MEZZANINE LEVELS
A102	FLOOR PLANS - SECOND & THIRD LEVELS
A103	FLOOR PLANS - ROOF LEVEL
A110	DEPARTMENTAL AREA DIAGRAM- GROUND & MEZZANINE LEVELS
A111	DEPARTMENTAL AREA DIAGRAM- SECOND & THIRD LEVELS
A120	SCIENCE AREA TYPOLOGY- GROUND & MEZZANINE LEVELS
A121	SCIENCE AREA TYPOLOGY- SECOND & THIRD LEVELS
A150	GROUND LEVEL - PARTIAL FLOOR PLAN - AREA A
A151	GROUND LEVEL - PARTIAL FLOOR PLAN - AREA B
A152	GROUND LEVEL - PARTIAL FLOOR PLAN - AREA C
A155	MEZZANINE LEVEL - PARTIAL FLOOR PLAN - AREA A
A156	MEZZANINE LEVEL - PARTIAL FLOOR PLAN - AREA B
A157	MEZZANINE LEVEL - PARTIAL FLOOR PLAN - AREA C
A161	SECOND LEVEL - PARTIAL FLOOR PLAN - AREA B
A162	SECOND LEVEL - PARTIAL FLOOR PLAN - AREA C
A166	THIRD LEVEL - PARTIAL FLOOR PLAN - AREA B
A167	THIRD LEVEL - PARTIAL FLOOR PLAN - AREA C
A300	BUILDING ELEVATIONS
A320	BUILDING SECTIONS
A321	BUILDING SECTIONS
A330	EXTERIOR WALL SECTIONS
A900	DOOR & FRAME SCHEDULE
I405	ROOM FINISH SCHEDULE

Canada

Public Works and Government Services Canada
Real Property Branch

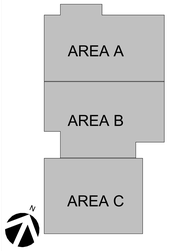
Travaux publics et services gouvernementaux Canada
Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
3	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
2	ISSUED FOR 100% SD - COSTING	24.05.07
1	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17

A detail no. / no. du dessin
B location drawing no. / sur dessin no.
C drawing no. / dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

COVER SHEET

Designed By	L. Abrosimov/D. Stavros	Conçu par
Date	2024 / 06 / 06	(yyyy/mm/dd)
Drawn By	A49/B+H	Dessiné par
Date	2024 / 06 / 06	(yyyy/mm/dd)
Reviewed By	L. Abrosimov	Examiné par
Date	2024 / 06 / 06	(yyyy/mm/dd)
Approved By	J. Gupta	Approuvé par
Date	2024 / 06 / 06	(yyyy/mm/dd)
Tender		Soumission
Project Manager	SOPHIE HARVEY	Administrateur de projets
Project no.		No. du projet

R.107402

Drawing no. / No. du dessin: A000-V2

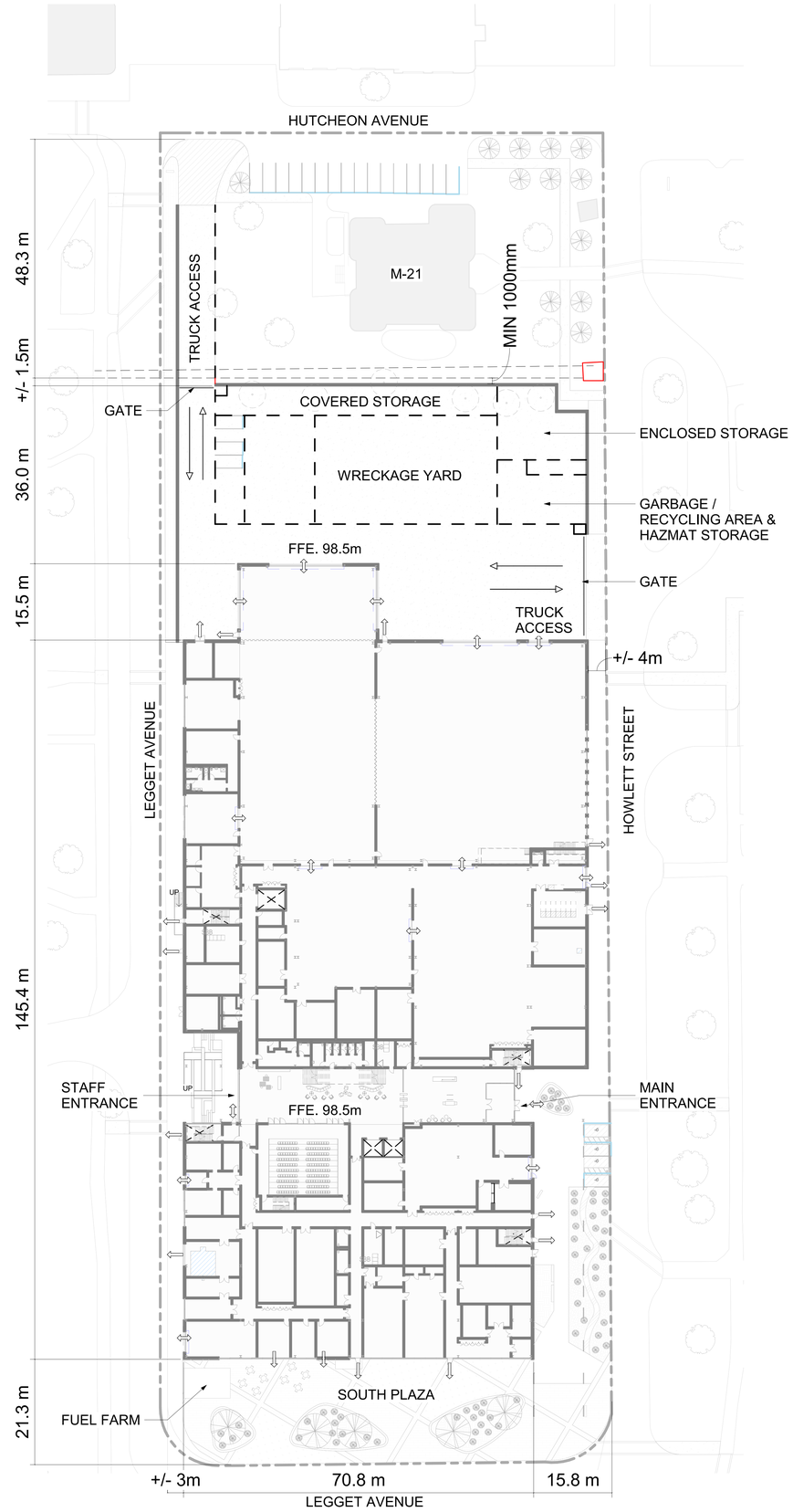
Rev #: 3

2024-07-09 8:55:05 PM

TPSGC-PWGSC A0 (1189x841)

C

0 10 20mm 40 60 80 100 120 140 160 180 200mm



1 A002 LEVEL 1 SITE
1 : 400

1:400 8000 0 8000 16000 24000 mm

Canada

Public Works and Government Services Canada
Real Property Branch

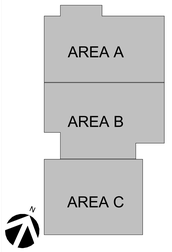
Travaux publics et services gouvernementaux Canada
Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
5	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
4	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
3	ISSUED FOR 100% SD - COSTING	24.05.07
2	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17
1	ISSUED FOR COSTING- 90%SD	23.09.25

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

SITE LOCATION COMPOSITE PLAN

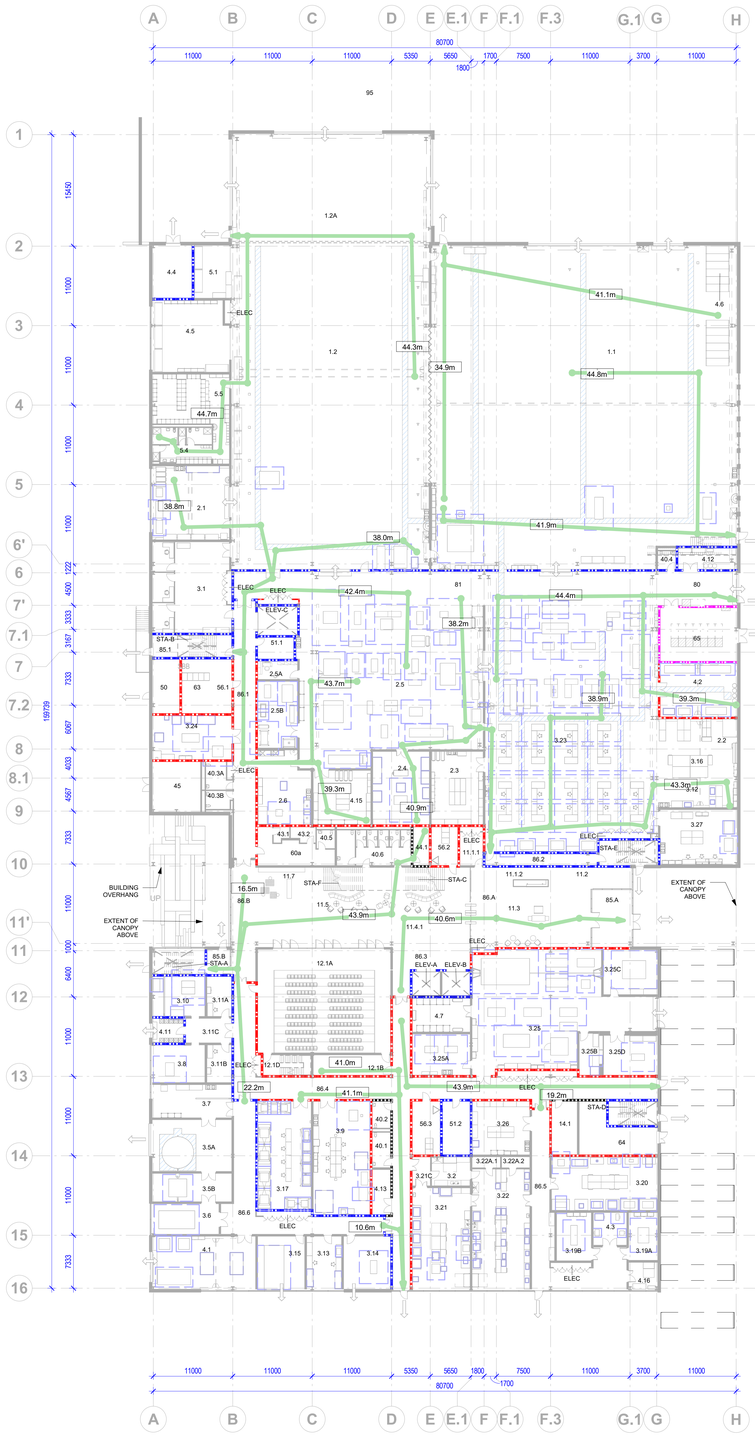
Designed By / Conçu par	L. Abrosimov/D. Stavros	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Drawn By / Dessiné par	A49/B+H	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Reviewed By / Examiné par	L. Abrosimov	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Approved By / Approuvé par	J. Gupta	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Tender / Soumission		
Project Manager / Administrateur de projets	SOPHIE HARVEY	
Project no. / No. du projet	R.107402	
Drawing no. / No. du dessin	A002-V2	Rev # 5

2024-07-09 6:35:08 PM

TPSGC-PWGSC A0 (1189x841)

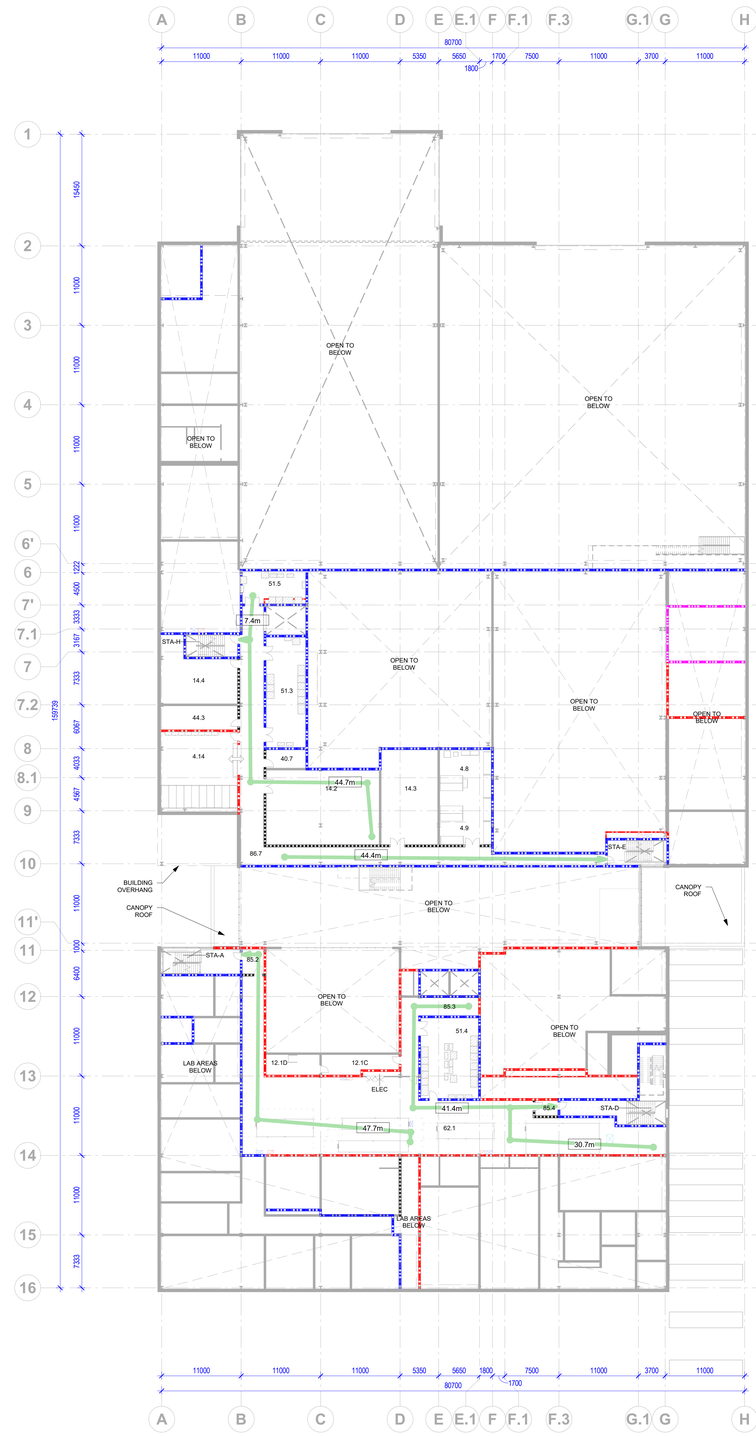
0 10 20mm 40 60 80 100 120 140 160 180 200mm

LEVEL 1-ROOM NUMBER/ ROOM NAME			
NAME	SPACE ID No.	ROOM NUMBER	Room in View
NRC HIGH BAY	1.1	1.1	Area A
TSB HIGH BAY	1.2	1.2	Area A
TSB DECONTAMINATION BAY	1.2	1.2A	Area A
TEAR DOWN WORKSHOP	2.1	2.1	Area B
MATERIAL TESTING PREP SHOP	2.2	2.2	Area B
INSTRUMENTATION WORKSHOP	2.3	2.3	Area B
WOOD WORKSHOP	2.4	2.4	Area B
MACHINE WORKSHOP	2.5	2.5	Area B
MACHINE SHOP OFFICE	2.5A	2.5A	Area B
WORKSHOPS	2.5B	2.5B	Area B
WELDING WORKSHOP	2.6	2.6	Area B
PHOTO LAB	3.1	3.1	Area B
CHEMICAL LAB	3.2	3.2	Area C
SPIN RIG - TEST CELL	3.5A	3.5A	Area C
SPIN RIG - VACCUM SKID	3.5B	3.5B	Area C
CONTROL ROOM SPIN RIG	3.6	3.6	Area C
SPIN RIG PREP RM.	3.7	3.7	Area C
TGST RIG	3.8	3.8	Area C
HTM R&D LAB	3.9	3.9	Area C
HOT ISOSTATIC PRESS	3.10	3.10	Area C
CONTROL HOT ISO	3.11A	3.11A	Area C
CONTROL TGST RIG	3.11B	3.11B	Area C
VEST.	3.11C	3.11C	Area C
HTM PREP RM.	3.12	3.12	Area B
BURNER RIG CONTROL RM.	3.13	3.13	Area C
BURNER RIG #1	3.14	3.14	Area C
BURNER RIG #2	3.15	3.15	Area C
FULL SCALE TESTING PREP RM.	3.16	3.16	Area B
HEAT TREATMENT AND COATING LAB	3.17	3.17	Area C
SEM LAB - A	3.19A	3.19A	Area C
SEM LAB - B	3.19B	3.19B	Area C
MICROSCOPE LAB	3.20	3.20	Area C
METALLOGRAPHY SECTIONING AND SPECIMEN EXTRACTION	3.21	3.21	Area C
VEST.	3.21C	3.21C	Area C
METALLOGRAPHIC SAMPLE PREPARATION	3.22	3.22	Area C
SAMPLE STO.	3.22A	3.22A.1	Area C
SAMPLE STO.	3.22A	3.22A.2	Area C
MATERIAL AND COMPONENT TESTING	3.23	3.23	Area B
EXPERIMENTAL MECHANICS LAB	3.24	3.24	Area B
NON DESTRUCTIVE EVALUATION	3.25	3.25	Area C
MPI/LPI LAB	3.25A	3.25A	Area C
OBSERVATION X-RAY AREA	3.25B	3.25B	Area C
X-RAY ROOM-A	3.25C	3.25C	Area C
X-RAY ROOM-B	3.25D	3.25D	Area C
PHYSICAL AND FRACTO ANALYSIS RM.	3.26	3.26	Area C
MATERIAL TESTING AND EVALUATION	3.27	3.27	Area B
SPIN AND BURNER RIG EQUIPMENT SUPPORT	4.1	4.1	Area C
PUMP RM.	4.2	4.2	Area B
SEM LAB SUPPORT RM.	4.3	4.3	Area C
BATTERY STORAGE RM.	4.4	4.4	Area A
WRECKAGE STORAGE	4.5	4.5	Area A
FULL SCALE TESTING EQUIPMENT STORAGE	4.6	4.6	Area A
NDE EQUIPMENT STORAGE	4.7	4.7	Area C
CYLINDER STORAGE	4.11	4.11	Area C
OIL STORAGE RM.	4.12	4.12	Area A
BURNER RIG STORAGE	4.13	4.13	Area C
MACHINE SHOP TOOL RM.	4.15	4.15	Area B
SEM PREP RM.	4.16	4.16	Area C
TSTS SHIPPING AND RECEIVING	5.1	5.1	Area A
UNIVERSAL LOCKER RM. & CLEAN RM.	5.4	5.4	Area A
PROTECTIVE PERSONAL EQUIPMENT STORAGE	5.5	5.5	Area A
SECURITY ROOM	11.1	11.1.1	Area B
SECURITY AREA	11.1	11.1.2	Area B
WAITING AREA	11.2	11.2	Area B
RECEPTION	11.3	11.3	Area B
LOBBY	11.4	11.4.1	Area B
LOBBY	11.4	11.4.2	Area B
INFORMAL GATHERING	11.5	11.5	Area B
DISPLAY INTERPRETATIVE CENTRE	11.7	11.7	Area B
AUDITORIUM	12.1A	12.1A	Area C
AUDITORIUM KITCHENETTE	12.1B	12.1B	Area C
VEST. AV ROOM	12.1D	12.1D	Area C
SPARE	14	14.1	Area C
ALL ACCESS WASHROOM	40	40.1	Area C
ALL ACCESS WASHROOM	40	40.2	Area C
ALL ACCESS WASHROOM	40	40.3A	Area B
ALL ACCESS WASHROOM	40	40.3B	Area B
ALL ACCESS WASHROOM	40	40.4	Area A
ALL ACCESS WASHROOM	40	40.5	Area B
ALL ACCESS WASHROOM	40	40.6	Area B
SHOWER	43	43.1	Area B
SHOWER	43	43.2	Area B
JANITOR	44	44.1	Area B
BIKE PARKING	45	45	Area B
EF RM.	50	50	Area B
ELEC	51	51.1	Area B
ELEC	51	51.2	Area C
TR-1C	56	56.1	Area B
TR-1A	56	56.2	Area B
TR-1B	56	56.3	Area C
LOCKERS	60a	60a	Area B
MAIN EQ. RM.	63	63	Area B
WATER ENTRY	64	64	Area C
MAIN SWITCHGEAR	65	65	Area B
MATERIAL COMPONENT TESTING LOADING BAY	80	80	Area B
MATERIAL AND COMPONENT ACCESS	81	81	Area B
VEST.	85	85.1	Area B
VEST.	85	85.A	Area B
STAFF ENTRANCE	85	85.B	Area C
CIRC.	86	86.1	Area B
CIRC.	86	86.2	Area B
G-ELEVATOR LOBBY	86	86.3	Area C
CIRC.	86	86.4	Area C
CIRC.	86	86.5	Area C
CIRC.	86	86.6	Area C
RECEPTION	86	86.A	Area B
CIRC.	86	86.B	Area B
ELEVATOR	ELEV-A	ELEV-A	Area C
ELEVATOR	ELEV-B	ELEV-B	Area C
ELEVATOR	ELEV-C	ELEV-C	Area B
STAIR	STA-A	STA-A	Area C
STAIR	STA-B	STA-B	Area B
STAIR	STA-C	STA-C	Area B
STAIR	STA-D	STA-D	Area C
STAIR	STA-E	STA-E	Area B
STAIR	STA-F	STA-F	Area B



1 A005 LEVEL 1
1 : 300

LEVEL 1.5-ROOM NUMBER/ ROOM NAME			
LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 01.5 MEZZANINE	MATERIAL TESTING EQUIPMENT STORAGE	4.8	4.8
LEVEL 01.5 MEZZANINE	HTM TESTING EQUIPMENT STORAGE	4.9	4.9
LEVEL 01.5 MEZZANINE	SECURED STORAGE FOR CONTROL GOODS	4.14	4.14
LEVEL 01.5 MEZZANINE	STORAGE ROOM FOR AUDITORIUM	12.1C	12.1C
LEVEL 01.5 MEZZANINE	VEST. AV ROOM	12.1D	12.1D
LEVEL 01.5 MEZZANINE	SPARE	14	14.2
LEVEL 01.5 MEZZANINE	SPARE	14	14.3
LEVEL 01.5 MEZZANINE	SPARE	14	14.4
LEVEL 01.5 MEZZANINE	ALL ACCESS WASHROOM	40	40.7
LEVEL 01.5 MEZZANINE	CUSTODIAL & MAINTENANCE	44	44.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.4
LEVEL 01.5 MEZZANINE	ELEC	51	51.5
LEVEL 01.5 MEZZANINE	M&E	62	62.1
LEVEL 01.5 MEZZANINE	VEST.	85	85.2
LEVEL 01.5 MEZZANINE	VEST.	85	85.3
LEVEL 01.5 MEZZANINE	VEST.	85	85.4
LEVEL 01.5 MEZZANINE	CIRC.	86	86.7
LEVEL 01.5 MEZZANINE	STAIR	STA-G	STA-G
LEVEL 01.5 MEZZANINE	STAIR	STA-H	STA-H



2 A005 LEVEL 1.5 - MEZZANINE
1 : 300

6000 0 6000 12000 mm
1:300

FIRE RATING LEGEND

- 0 HOUR F.R.R. SEPARATIONS
- 1 HOUR F.R.R. SEPARATIONS / 45min (0.75hr) DOORS
- 1.5 HOUR F.R.R. SEPARATIONS / 60min (1hr) DOORS
- 2 HOUR F.R.R. SEPARATIONS / 90min (1.5hrs) DOORS
- 3 HOUR F.R.R. SEPARATIONS / 120min (2hrs) DOORS

PATH 1 45m — TOTAL EGRESS DISTANCE

TRAVEL DISTANCE

GENERAL NOTES

- ALL STUD PARTITIONS ARE DIMENSIONED TO FACE OF STEEL STUD UNLESS NOTED OTHERWISE.
- ALL CONCRETE MASONRY PARTITIONS ARE DIMENSIONED TO FACE OF CONCRETE MASONRY, UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- STC RATED DOORS IN STC45 PARTITIONS ARE NOT REQUIRED FOR OFFICES, FOCUS ROOMS, PHONE BOTHS, AND COLLABORATIVE SPACES LOCATED WITHIN GENERAL OFFICE SPACE. SOA & TSB HO.

Canada

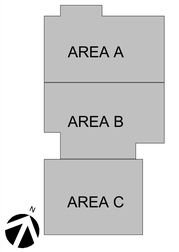
Public Works and Government Services Canada / Travaux publics et services gouvernementaux Canada
Real Property Branch / Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
4	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
3	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
2	ISSUED FOR 100% BD - COSTING	24.05.07
1	ISSUED FOR COSTING- 90%SD	23.09.25

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

FIRE RATING AND EXITING PLANS

Designed By / Conçu par	L. Abrosimov
Date (yyyy/mm/dd)	2024 / 06 / 06
Drawn By / Dessiné par	A49/B+H
Date (yyyy/mm/dd)	2024 / 06 / 06
Reviewed By / Examiné par	L. Abrosimov
Date (yyyy/mm/dd)	2024 / 06 / 06
Approved By / Approuvé par	J. Gupta
Date (yyyy/mm/dd)	2024 / 06 / 06
Tender / Soumission	
Project Manager / Administrateur de projets	SOPHIE HARVEY
Project no. / No. du projet	R.107402
Drawing no. / No. du dessin	A005-V2
Rev #	4

2024-07-09 6:35:15 PM

TPSGC-PWGSC A0 (1189x841)

C
0 10 20mm 40 60 80 100 120 140 160 180 200mm

STC 45
STC 50
STC 55
SPEECH PRIVACY
FLOOR ASSEMBLY STC 55

GENERAL NOTES

- ALL STUD PARTITIONS ARE DIMENSIONED TO FACE OF STEEL STUD UNLESS NOTED OTHERWISE.
- ALL CONCRETE MASONRY PARTITIONS ARE DIMENSIONED TO FACE OF CONCRETE MASONRY, UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- STC RATED DOORS IN STC45 PARTITIONS ARE NOT REQUIRED FOR OFFICES, FOCUS ROOMS, PHONE BOTHS, AND COLLABORATIVE SPACES LOCATED WITHIN GENERAL OFFICE SPACE, SOA & TSB HO.

LEVEL 1-ROOM NUMBER/ ROOM NAME

NAME	SPACE ID No.	ROOM NUMBER	Room in View
NRC HIGH BAY	1.1	1.1	Area A
TSB HIGH BAY	1.2	1.2	Area A
TSB DECONTAMINATION BAY	1.2	1.2A	Area A
TEAR DOWN WORKSHOP	2.1	2.1	Area B
MATERIAL TESTING PREP SHOP	2.2	2.2	Area B
INSTRUMENTATION WORKSHOP	2.3	2.3	Area B
WOOD WORKSHOP	2.4	2.4	Area B
MACHINE WORKSHOP	2.5	2.5	Area B
MACHINE SHOP OFFICE	2.5A	2.5A	Area B
WORKSHOP5	2.5B	2.5B	Area B
WELDING WORKSHOP	2.6	2.6	Area B
PHOTO LAB	3.1	3.1	Area B
CHEMICAL LAB	3.2	3.2	Area C
SPIN RIG - TEST CELL	3.5A	3.5A	Area C
SPIN RIG - VACCUM SKID	3.5B	3.5B	Area C
CONTROL ROOM SPIN RIG	3.6	3.6	Area C
SPIN RIG PREP RM.	3.7	3.7	Area C
TGST RIG	3.8	3.8	Area C
HTM R&D LAB	3.9	3.9	Area C
HOT ISOSTATIC PRESS	3.10	3.10	Area C
CONTROL HOT ISO	3.11A	3.11A	Area C
CONTROL TGST RIG	3.11B	3.11B	Area C
VEST.	3.11C	3.11C	Area C
HTM PREP RM.	3.12	3.12	Area B
BURNER RIG CONTROL RM.	3.13	3.13	Area C
BURNER RIG #1	3.14	3.14	Area C
BURNER RIG #2	3.15	3.15	Area C
FULL SCALE TESTING PREP RM.	3.16	3.16	Area B
HEAT TREATMENT AND COATING LAB	3.17	3.17	Area C
SEM LAB - A	3.19A	3.19A	Area C
SEM LAB - B	3.19B	3.19B	Area C
MICROSCOPE LAB	3.20	3.20	Area C
METALLOGRAPHY SECTIONING AND SPECIMEN EXTRACTION	3.21	3.21	Area C
VEST.	3.21C	3.21C	Area C
METALLOGRAPHIC SAMPLE PREPARATION	3.22	3.22	Area C
SAMPLE STO.	3.22A	3.22A.1	Area C
SAMPLE STO.	3.22A	3.22A.2	Area C
MATERIAL AND COMPONENT TESTING	3.23	3.23	Area B
EXPERIMENTAL MECHANICS LAB	3.24	3.24	Area B
NON DESTRUCTIVE EVALUATION	3.25	3.25	Area C
MPI/LPI LAB	3.25A	3.25A	Area C
OBSERVATION X-RAY AREA	3.25B	3.25B	Area C
X-RAY ROOM-A	3.25C	3.25C	Area C
X-RAY ROOM-B	3.25D	3.25D	Area C
PHYSICAL AND FRACTO ANALYSIS RM.	3.26	3.26	Area C
MATERIAL TESTING AND EVALUATION	3.27	3.27	Area B
SPIN AND BURNER RIG EQUIPMENT SUPPORT	4.1	4.1	Area C
PUMP RM.	4.2	4.2	Area B
SEM LAB SUPPORT RM.	4.3	4.3	Area C
BATTERY STORAGE RM.	4.4	4.4	Area A
WRECKAGE STORAGE	4.5	4.5	Area A
FULL SCALE TESTING EQUIPMENT STORAGE	4.6	4.6	Area A
NDE EQUIPMENT STORAGE	4.7	4.7	Area C
CYLINDER STORAGE	4.11	4.11	Area C
OIL STORAGE RM.	4.12	4.12	Area A
BURNER RIG STORAGE	4.13	4.13	Area C
MACHINE SHOP TOOL RM.	4.15	4.15	Area B
SEM PREP RM.	4.16	4.16	Area C
TSTS SHIPPING AND RECEIVING	5.1	5.1	Area A
UNIVERSAL LOCKER RM. & CLEAN RM.	5.4	5.4	Area A
PROTECTIVE PERSONAL EQUIPMENT STORAGE	5.5	5.5	Area A
SECURITY ROOM	11.1	11.1.1	Area B
SECURITY AREA	11.1	11.1.2	Area B
WAITING AREA	11.2	11.2	Area B
RECEPTION	11.3	11.3	Area B
LOBBY	11.4	11.4.1	Area B
LOBBY	11.4	11.4.2	Area B
INFORMAL GATHERING	11.5	11.5	Area B
DISPLAY INTERPRETATIVE CENTRE	11.7	11.7	Area B
AUDITORIUM	12.1A	12.1A	Area C
AUDITORIUM KITCHENETTE	12.1B	12.1B	Area C
VEST. AV ROOM	12.1D	12.1D	Area C
SPARE	14	14.1	Area C
ALL ACCESS WASHROOM	40	40.1	Area C
ALL ACCESS WASHROOM	40	40.2	Area C
ALL ACCESS WASHROOM	40	40.3A	Area B
ALL ACCESS WASHROOM	40	40.3B	Area B
ALL ACCESS WASHROOM	40	40.4	Area A
ALL ACCESS WASHROOM	40	40.5	Area B
ALL ACCESS WASHROOM	40	40.6	Area B
SHOWER	43	43.1	Area B
SHOWER	43	43.2	Area B
JANITOR	44	44.1	Area B
BIKE PARKING	45	45	Area B
EF RM.	50	50	Area B
ELEC	51	51.1	Area B
ELEC	51	51.2	Area C
TR-1C	56	56.1	Area B
TR-1A	56	56.2	Area B
TR-1B	56	56.3	Area C
LOCKERS	60a	60a	Area B
MAIN EQ. RM.	63	63	Area B
WATER ENTRY	64	64	Area C
MAIN SWITCHGEAR	65	65	Area B
MATERIAL COMPONENT TESTING LOADING BAY	80	80	Area B
MATERIAL AND COMPONENT ACCESS	81	81	Area B
VEST.	85	85.1	Area B
VEST.	85	85.A	Area B
STAFF ENTRANCE	85	85.B	Area C
CIRC.	86	86.1	Area B
CIRC.	86	86.2	Area B
G-ELEVATOR LOBBY	86	86.3	Area C
CIRC.	86	86.4	Area C
CIRC.	86	86.5	Area C
CIRC.	86	86.6	Area C
RECEPTION	86	86.A	Area B
CIRC.	86	86.B	Area B
ELEVATOR	ELEV-A	ELEV-A	Area C
ELEVATOR	ELEV-B	ELEV-B	Area C
ELEVATOR	ELEV-C	ELEV-C	Area B
STAIR	STA-A	STA-A	Area C
STAIR	STA-B	STA-B	Area B
STAIR	STA-C	STA-C	Area B
STAIR	STA-D	STA-D	Area C
STAIR	STA-E	STA-E	Area B
STAIR	STA-F	STA-F	Area B

LEVEL 1.5-ROOM NUMBER/ ROOM NAME

LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 01.5 MEZZANINE	MATERIAL TESTING EQUIPMENT STORAGE	4.8	4.8
LEVEL 01.5 MEZZANINE	HTM TESTING EQUIPMENT STORAGE	4.9	4.9
LEVEL 01.5 MEZZANINE	SECURED STORAGE FOR CONTROL GOODS	4.14	4.14
LEVEL 01.5 MEZZANINE	STORAGE ROOM FOR AUDITORIUM	12.1C	12.1C
LEVEL 01.5 MEZZANINE	VEST. AV ROOM	12.1D	12.1D
LEVEL 01.5 MEZZANINE	SPARE	14	14.2
LEVEL 01.5 MEZZANINE	SPARE	14	14.3
LEVEL 01.5 MEZZANINE	SPARE	14	14.4
LEVEL 01.5 MEZZANINE	ALL ACCESS WASHROOM	40	40.7
LEVEL 01.5 MEZZANINE	CUSTODIAL & MAINTENANCE	44	44.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.4
LEVEL 01.5 MEZZANINE	ELEC	51	51.5
LEVEL 01.5 MEZZANINE	M&E	62	62.1
LEVEL 01.5 MEZZANINE	VEST.	85	85.2
LEVEL 01.5 MEZZANINE	VEST.	85	85.3
LEVEL 01.5 MEZZANINE	VEST.	85	85.4
LEVEL 01.5 MEZZANINE	CIRC.	86	86.7
LEVEL 01.5 MEZZANINE	STAIR	STA-G	STA-G
LEVEL 01.5 MEZZANINE	STAIR	STA-H	STA-H

1 A010 LEVEL 1
1 : 300

2 A010 LEVEL 1.5 - MEZZANINE
1 : 300

1:300 6000 0 6000 12000 mm

2024-07-09 8:35:19 PM

TPSGC-PWGSC A0 (1189x841)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

Canada

Public Works and Government Services Canada
Travaux publics et services gouvernementaux Canada
Real Property Branch
Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan

AREA A
AREA B
AREA C

Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
5	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
4	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
3	ISSUED FOR 100% SD - COSTING	24.05.07
2	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17
1	ISSUED FOR COSTING- 90%SD	23.09.25

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

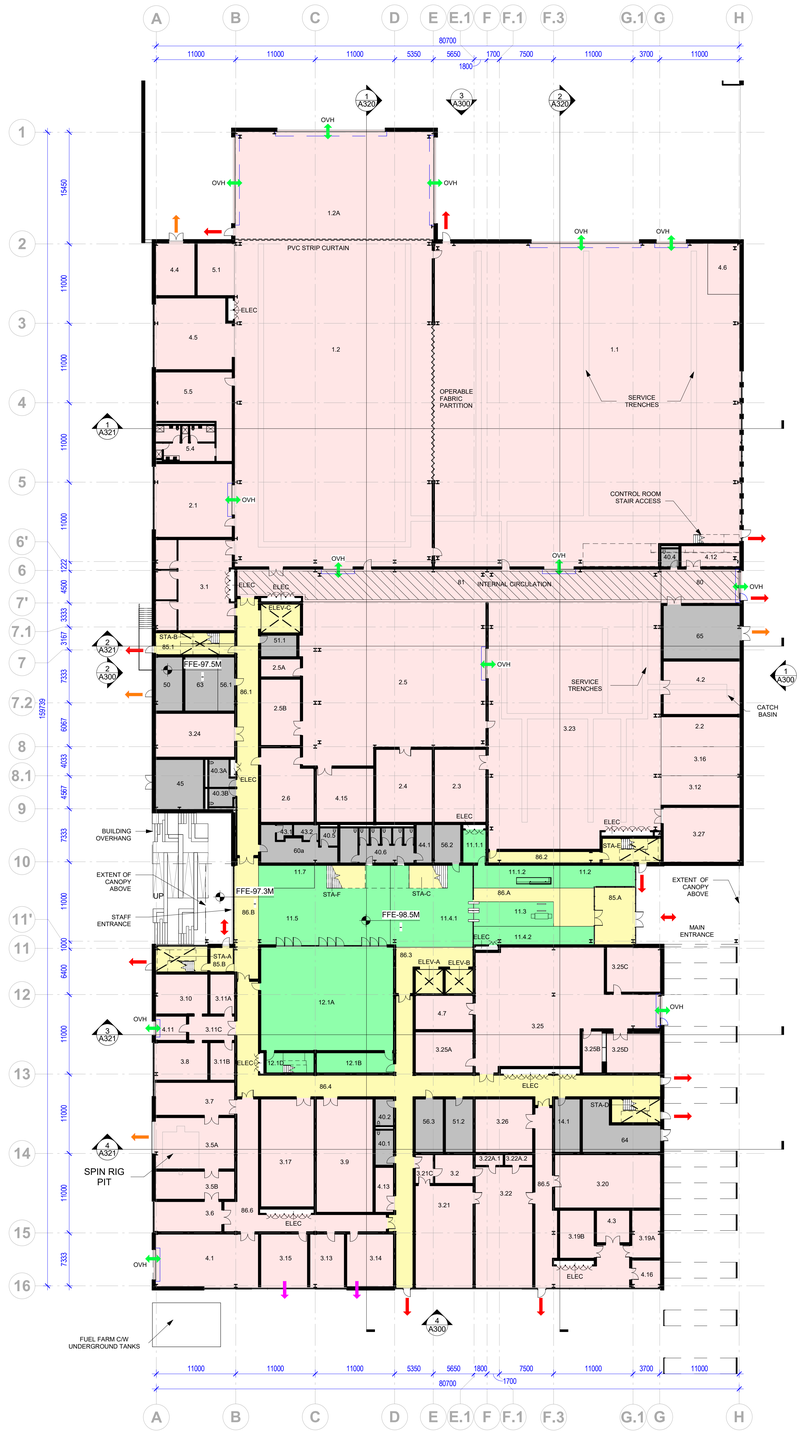
STC RATING PLANS - GROUND & MEZZANINE LEVELS

Designed By / Conçu par	L. Abrosimov
Date	2024 / 06 / 06 (yyyy/mm/dd)
Drawn By / Dessiné par	A49/B+H
Date	2024 / 06 / 06 (yyyy/mm/dd)
Reviewed By / Examiné par	L. Abrosimov
Date	2024 / 06 / 06 (yyyy/mm/dd)
Approved By / Approuvé par	J. Gupta
Date	2024 / 06 / 06 (yyyy/mm/dd)
Tender / Soumission	
Project Manager / Administrateur de projets	SOPHIE HARVEY
Project no. / No. du projet	R.107402
Drawing no. / No. du dessin	A010-V2
Rev #	5

LEGEND

- BASE BUILDING
- CIRCULATION
- LABORATORY SPACES & SUPPORT
- SHARED (TSTS-TSB HO)

LEVEL 1-ROOM NUMBER/ ROOM NAME			
NAME	SPACE ID No.	ROOM NUMBER	Room in View
NRC HIGH BAY	1.1	1.1	Area A
TSB HIGH BAY	1.2	1.2	Area A
TSB DECONTAMINATION BAY	1.2	1.2A	Area A
TEAR DOWN WORKSHOP	2.1	2.1	Area B
MATERIAL TESTING PREP SHOP	2.2	2.2	Area B
INSTRUMENTATION WORKSHOP	2.3	2.3	Area B
WOOD WORKSHOP	2.4	2.4	Area B
MACHINE WORKSHOP	2.5	2.5	Area B
MACHINE SHOP OFFICE	2.5A	2.5A	Area B
WORKSHOPS	2.5B	2.5B	Area B
WELDING WORKSHOP	2.6	2.6	Area B
PHOTO LAB	3.1	3.1	Area B
CHEMICAL LAB	3.2	3.2	Area C
SPIN RIG - TEST CELL	3.5A	3.5A	Area C
SPIN RIG - VACCUM SKID	3.5B	3.5B	Area C
CONTROL ROOM SPIN RIG	3.6	3.6	Area C
SPIN RIG PREP RM.	3.7	3.7	Area C
TGST RIG	3.8	3.8	Area C
HTM R&D LAB	3.9	3.9	Area C
HOT ISOSTATIC PRESS	3.10	3.10	Area C
CONTROL HOT ISO	3.11A	3.11A	Area C
CONTROL TGST RIG	3.11B	3.11B	Area C
VEST.	3.11C	3.11C	Area C
HTM PREP RM.	3.12	3.12	Area B
BURNER RIG CONTROL RM.	3.13	3.13	Area C
BURNER RIG #1	3.14	3.14	Area C
BURNER RIG #2	3.15	3.15	Area C
FULL SCALE TESTING PREP RM.	3.16	3.16	Area B
HEAT TREATMENT AND COATING LAB	3.17	3.17	Area C
SEM LAB - A	3.19A	3.19A	Area C
SEM LAB - B	3.19B	3.19B	Area C
MICROSCOPE LAB	3.20	3.20	Area C
METALLOGRAPHY SECTIONING AND SPECIMEN EXTRACTION	3.21	3.21	Area C
VEST.	3.21C	3.21C	Area C
METALLOGRAPHIC SAMPLE PREPARATION	3.22	3.22	Area C
SAMPLE STO.	3.22A	3.22A.1	Area C
SAMPLE STO.	3.22A	3.22A.2	Area C
MATERIAL AND COMPONENT TESTING	3.23	3.23	Area B
EXPERIMENTAL MECHANICS LAB	3.24	3.24	Area B
NON DESTRUCTIVE EVALUATION	3.25	3.25	Area C
MPI-PLP LAB	3.25A	3.25A	Area C
OBSERVATION X-RAY AREA	3.25B	3.25B	Area C
X-RAY ROOM-A	3.25C	3.25C	Area C
X-RAY ROOM-B	3.25D	3.25D	Area C
PHYSICAL AND FRACTO ANALYSIS RM.	3.26	3.26	Area C
MATERIAL TESTING AND EVALUATION	3.27	3.27	Area B
SPIN AND BURNER RIG EQUIPMENT SUPPORT	4.1	4.1	Area C
PUMP RM.	4.2	4.2	Area B
SEM LAB SUPPORT RM.	4.3	4.3	Area C
BATTERY STORAGE RM.	4.4	4.4	Area A
WRECKAGE STORAGE	4.5	4.5	Area A
FULL SCALE TESTING EQUIPMENT STORAGE	4.6	4.6	Area A
NDE EQUIPMENT STORAGE	4.7	4.7	Area C
CYLINDER STORAGE	4.11	4.11	Area C
OIL STORAGE RM.	4.12	4.12	Area A
BURNER RIG STORAGE	4.13	4.13	Area C
MACHINE SHOP TOOL RM.	4.15	4.15	Area B
SEM PREP RM.	4.16	4.16	Area C
TSTS SHIPPING AND RECEIVING	5.1	5.1	Area A
UNIVERSAL LOCKER RM. & CLEAN RM.	5.4	5.4	Area A
PROTECTIVE PERSONAL EQUIPMENT STORAGE	5.5	5.5	Area A
SECURITY ROOM	11.1	11.1.1	Area B
SECURITY AREA	11.1	11.1.2	Area B
WAITING AREA	11.2	11.2	Area B
RECEPTION	11.3	11.3	Area B
LOBBY	11.4	11.4.1	Area B
LOBBY	11.4	11.4.2	Area B
INFORMAL GATHERING	11.5	11.5	Area B
DISPLAY INTERPRETATIVE CENTRE	11.7	11.7	Area B
AUDITORIUM	12.1A	12.1A	Area C
AUDITORIUM KITCHENETTE	12.1B	12.1B	Area C
VEST. AV ROOM	12.1D	12.1D	Area C
SPARE	14	14.1	Area C
ALL ACCESS WASHROOM	40	40.1	Area C
ALL ACCESS WASHROOM	40	40.2	Area C
ALL ACCESS WASHROOM	40	40.3A	Area B
ALL ACCESS WASHROOM	40	40.3B	Area B
ALL ACCESS WASHROOM	40	40.4	Area A
ALL ACCESS WASHROOM	40	40.5	Area B
ALL ACCESS WASHROOM	40	40.6	Area B
SHOWER	43	43.1	Area B
SHOWER	43	43.2	Area B
JANITOR	44	44.1	Area B
BIKE PARKING	45	45	Area B
EF RM.	50	50	Area B
ELEC	51	51.1	Area B
ELEC	51	51.2	Area C
TR-1C	56	56.1	Area B
TR-1A	56	56.2	Area B
TR-1B	56	56.3	Area C
LOCKERS	60a	60a	Area B
MAIN EQ. RM.	63	63	Area B
WATER ENTRY	64	64	Area C
MAIN SWITCHGEAR	65	65	Area B
MATERIAL COMPONENT TESTING LOADING BAY	80	80	Area B
MATERIAL AND COMPONENT ACCESS	81	81	Area B
VEST.	85	85.1	Area B
VEST.	85	85.A	Area B
STAFF ENTRANCE	85	85.B	Area C
CIRC.	86	86.1	Area B
CIRC.	86	86.2	Area B
G-ELEVATOR LOBBY	86	86.3	Area C
CIRC.	86	86.4	Area C
CIRC.	86	86.5	Area C
CIRC.	86	86.6	Area C
RECEPTION	86	86.A	Area B
CIRC.	86	86.B	Area B
ELEVATOR	ELEV-A	ELEV-A	Area C
ELEVATOR	ELEV-B	ELEV-B	Area C
ELEVATOR	ELEV-C	ELEV-C	Area B
STAIR	STA-A	STA-A	Area C
STAIR	STA-B	STA-B	Area B
STAIR	STA-C	STA-C	Area B
STAIR	STA-D	STA-D	Area C
STAIR	STA-E	STA-E	Area B
STAIR	STA-F	STA-F	Area B



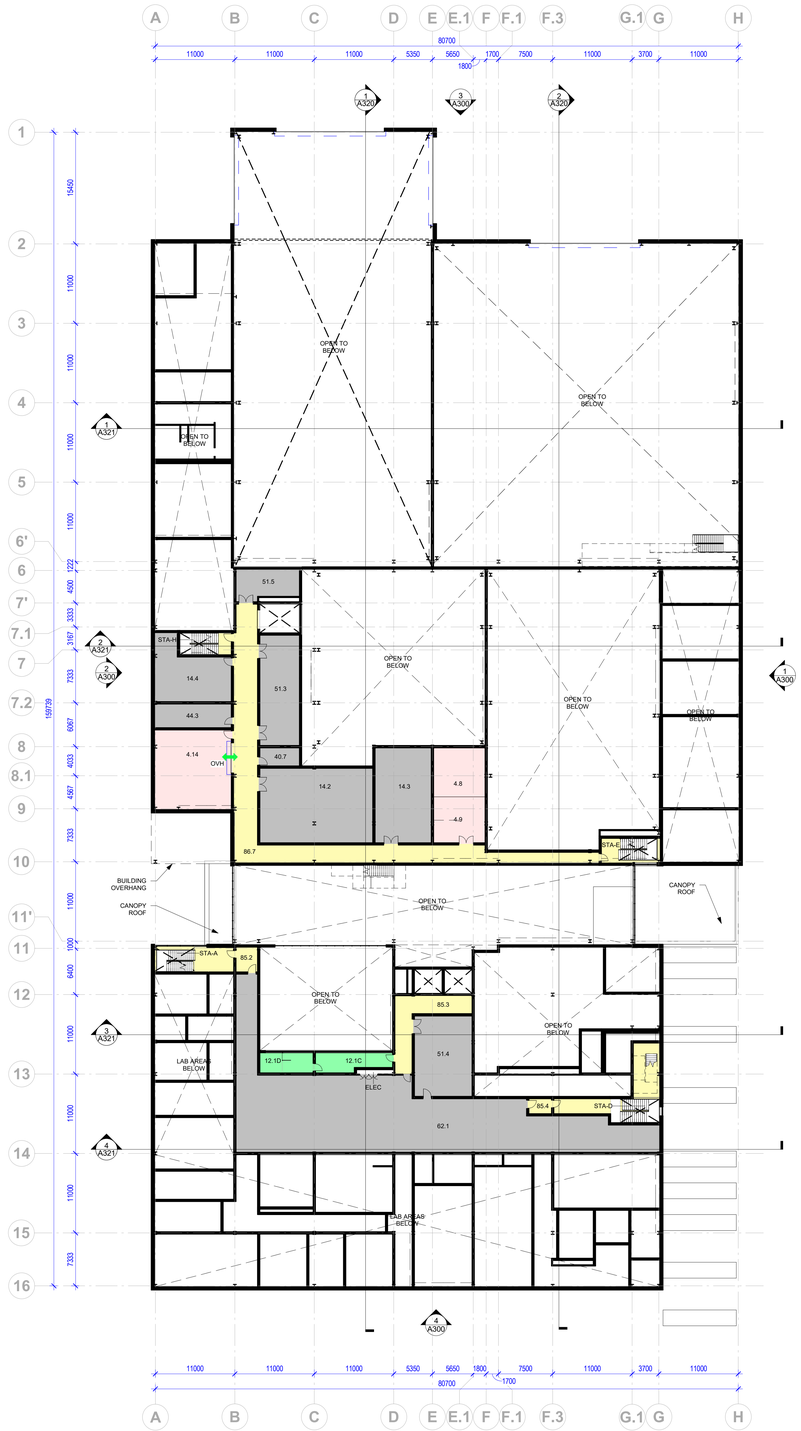
1 A101 LEVEL 1

1 : 300

LEGEND

- BASE BUILDING
- CIRCULATION
- LABORATORY SPACES & SUPPORT
- SHARED (TSTS-TSB HO)

LEVEL 1.5-ROOM NUMBER/ ROOM NAME			
LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 01.5 MEZZANINE	MATERIAL TESTING EQUIPMENT STORAGE	4.8	4.8
LEVEL 01.5 MEZZANINE	HTM TESTING EQUIPMENT STORAGE	4.9	4.9
LEVEL 01.5 MEZZANINE	SECURED STORAGE FOR CONTROL GOODS	4.14	4.14
LEVEL 01.5 MEZZANINE	STORAGE ROOM FOR AUDITORIUM	12.1C	12.1C
LEVEL 01.5 MEZZANINE	VEST. AV ROOM	12.1D	12.1D
LEVEL 01.5 MEZZANINE	SPARE	14	14.2
LEVEL 01.5 MEZZANINE	SPARE	14	14.3
LEVEL 01.5 MEZZANINE	SPARE	14	14.4
LEVEL 01.5 MEZZANINE	ALL ACCESS WASHROOM	40	40.7
LEVEL 01.5 MEZZANINE	CUSTODIAL & MAINTENANCE	44	44.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.4
LEVEL 01.5 MEZZANINE	ELEC	51	51.5
LEVEL 01.5 MEZZANINE	M&E	62	62.1
LEVEL 01.5 MEZZANINE	VEST.	85	85.2
LEVEL 01.5 MEZZANINE	VEST.	85	85.3
LEVEL 01.5 MEZZANINE	VEST.	85	85.4
LEVEL 01.5 MEZZANINE	CIRC.	86	86.7
LEVEL 01.5 MEZZANINE	STAIR	STA-G	STA-G
LEVEL 01.5 MEZZANINE	STAIR	STA-H	STA-H



2 A101 LEVEL 1.5 - MEZZANINE

1 : 300

1:300 6000 0 6000 12000 mm

DIRECTIONAL ARROW LEGEND

- OVH-DOOR EQUIPMENT ACCESS
- EQUIPMENT REMOVAL
- BUILDING ACCESS
- PRESSURE RELIEF PANEL
- EXIT ONLY
- YARD ACCESS

GENERAL NOTES

- ALL STUD PARTITIONS ARE DIMENSIONED TO FACE OF STEEL STUD UNLESS NOTED OTHERWISE.
- ALL CONCRETE MASONRY PARTITIONS ARE DIMENSIONED TO FACE OF CONCRETE MASONRY, UNLESS NOTED OTHERWISE.
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
- STC RATED DOORS IN STC45 PARTITIONS ARE NOT REQUIRED FOR OFFICES, FOCUS ROOMS, PHONE BOTHS, AND COLLABORATIVE SPACES LOCATED WITHIN GENERAL OFFICE SPACE. SOA & TSB HO.

Canada

Public Works and Government Services Canada / Travaux publics et services gouvernementaux Canada

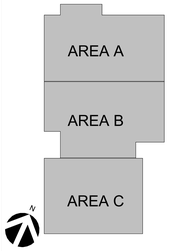
Real Property Branch / Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
6	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
5	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
4	ISSUED FOR 100% SD - COSTING	24.05.07
3	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17
2	ISSUED FOR COSTING- 90%SD	23.09.25
1	ISSUED FOR 50% SCHEMATIC DESIGN	23.07.24

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

FLOOR PLANS - GROUND & MEZZANINE LEVELS

Designed By / Conçu par	L. Abrosimov/D. Stavros
Date	2024 / 06 / 06 (yyyy/mm/dd)
Drawn By / Dessiné par	A49/B+H
Date	2024 / 06 / 06 (yyyy/mm/dd)
Reviewed By / Examiné par	L. Abrosimov
Date	2024 / 06 / 06 (yyyy/mm/dd)
Approved By / Approuvé par	J. Gupta
Date	2024 / 06 / 06 (yyyy/mm/dd)
Tender / Soumission	
Project Manager / Administrateur de projets	SOPHIE HARVEY
Project no. / No. du projet	R.107402
Drawing no. / No. du dessin	A101-V2
Rev #	6

2024-07-09 8:35:23 PM

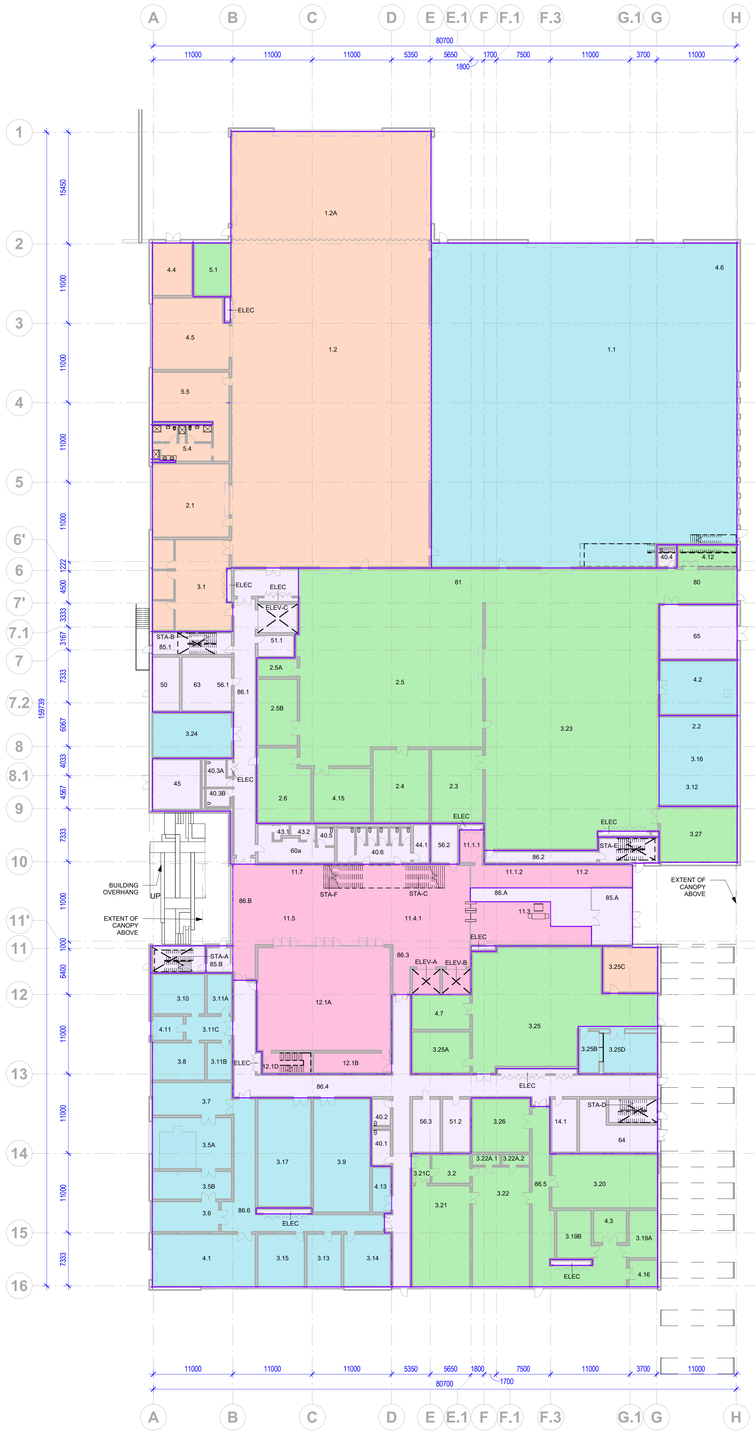
TPSGC-PWGSC A0 (1189x841)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

LEGEND

- Base Building
- NRC Science
- Shared Space (TSTS & TSB HO)
- TSB Science
- TSTS Hub

LEVEL 1-ROOM NUMBER/ ROOM NAME			
NAME	SPACE ID No.	ROOM NUMBER	Room in View
NRC HIGH BAY	1.1	1.1	Area A
TSB HIGH BAY	1.2	1.2	Area A
TSB DECONTAMINATION BAY	1.2	1.2A	Area A
TEAR DOWN WORKSHOP	2.1	2.1	Area B
MATERIAL TESTING PREP SHOP	2.2	2.2	Area B
INSTRUMENTATION WORKSHOP	2.3	2.3	Area B
WOOD WORKSHOP	2.4	2.4	Area B
MACHINE WORKSHOP	2.5	2.5	Area B
MACHINE SHOP OFFICE	2.5A	2.5A	Area B
WORKSHOPS	2.5B	2.5B	Area B
WELDING WORKSHOP	2.6	2.6	Area B
PHOTO LAB	3.1	3.1	Area B
CHEMICAL LAB	3.2	3.2	Area C
SPIN RIG - TEST CELL	3.5A	3.5A	Area C
SPIN RIG - VACCUM SKID	3.5B	3.5B	Area C
CONTROL ROOM SPIN RIG	3.6	3.6	Area C
SPIN RIG PREP RM.	3.7	3.7	Area C
TGST RIG	3.8	3.8	Area C
HTM R&D LAB	3.9	3.9	Area C
HOT ISOSTATIC PRESS	3.10	3.10	Area C
CONTROL HOT ISO	3.11A	3.11A	Area C
CONTROL TGST RIG	3.11B	3.11B	Area C
VEST.	3.11C	3.11C	Area C
HTM PREP RM.	3.12	3.12	Area B
BURNER RIG CONTROL RM.	3.13	3.13	Area C
BURNER RIG #1	3.14	3.14	Area C
BURNER RIG #2	3.15	3.15	Area C
FULL SCALE TESTING PREP RM.	3.16	3.16	Area B
HEAT TREATMENT AND COATING LAB	3.17	3.17	Area C
SEM LAB - A	3.19A	3.19A	Area C
SEM LAB - B	3.19B	3.19B	Area C
MICROSCOPE LAB	3.20	3.20	Area C
METALLOGRAPHY SECTIONING AND SPECIMEN EXTRACTION	3.21	3.21	Area C
VEST.	3.21C	3.21C	Area C
METALLOGRAPHIC SAMPLE PREPARATION	3.22	3.22	Area C
SAMPLE STO.	3.22A	3.22A.1	Area C
SAMPLE STO.	3.22A	3.22A.2	Area C
MATERIAL AND COMPONENT TESTING	3.23	3.23	Area B
EXPERIMENTAL MECHANICS LAB	3.24	3.24	Area B
NON DESTRUCTIVE EVALUATION	3.25	3.25	Area C
MPI/LPI LAB	3.25A	3.25A	Area C
OBSERVATION X-RAY AREA	3.25B	3.25B	Area C
X-RAY ROOM-A	3.25C	3.25C	Area C
X-RAY ROOM-B	3.25D	3.25D	Area C
PHYSICAL AND FRACTO ANALYSIS RM.	3.26	3.26	Area C
MATERIAL TESTING AND EVALUATION	3.27	3.27	Area B
SPIN AND BURNER RIG EQUIPMENT SUPPORT	4.1	4.1	Area C
PUMP RM.	4.2	4.2	Area B
SEM LAB SUPPORT RM.	4.3	4.3	Area C
BATTERY STORAGE RM.	4.4	4.4	Area A
WRECKAGE STORAGE	4.5	4.5	Area A
FULL SCALE TESTING EQUIPMENT STORAGE	4.6	4.6	Area A
NDE EQUIPMENT STORAGE	4.7	4.7	Area C
CYLINDER STORAGE	4.11	4.11	Area C
OIL STORAGE RM.	4.12	4.12	Area A
BURNER RIG STORAGE	4.13	4.13	Area C
MACHINE SHOP TOOL RM.	4.15	4.15	Area B
SEM PREP RM.	4.16	4.16	Area C
TSTS SHIPPING AND RECEIVING	5.1	5.1	Area A
UNIVERSAL LOCKER RM. & CLEAN RM.	5.4	5.4	Area A
PROTECTIVE PERSONAL EQUIPMENT STORAGE	5.5	5.5	Area A
SECURITY ROOM	11.1	11.1.1	Area B
SECURITY AREA	11.1	11.1.2	Area B
WAITING AREA	11.2	11.2	Area B
RECEPTION	11.3	11.3	Area B
LOBBY	11.4	11.4.1	Area B
LOBBY	11.4	11.4.2	Area B
INFORMAL GATHERING	11.5	11.5	Area B
DISPLAY INTERPRETATIVE CENTRE	11.7	11.7	Area B
AUDITORIUM	12.1A	12.1A	Area C
AUDITORIUM KITCHENETTE	12.1B	12.1B	Area C
VEST. AV ROOM	12.1D	12.1D	Area C
SPARE	14	14.1	Area C
ALL ACCESS WASHROOM	40	40.1	Area C
ALL ACCESS WASHROOM	40	40.2	Area C
ALL ACCESS WASHROOM	40	40.3A	Area B
ALL ACCESS WASHROOM	40	40.3B	Area B
ALL ACCESS WASHROOM	40	40.4	Area A
ALL ACCESS WASHROOM	40	40.5	Area B
ALL ACCESS WASHROOM	40	40.6	Area B
SHOWER	43	43.1	Area B
SHOWER	43	43.2	Area B
JANITOR	44	44.1	Area B
BIKE PARKING	45	45	Area B
EF RM.	50	50	Area B
ELEC	51	51.1	Area B
ELEC	51	51.2	Area C
TR-1C	56	56.1	Area B
TR-1A	56	56.2	Area B
TR-1B	56	56.3	Area C
LOCKERS	60a	60a	Area B
MAIN EQ. RM.	63	63	Area B
WATER ENTRY	64	64	Area C
MAIN SWITCHGEAR	65	65	Area B
MATERIAL COMPONENT TESTING LOADING BAY	80	80	Area B
MATERIAL AND COMPONENT ACCESS	81	81	Area B
VEST.	85	85.1	Area B
VEST.	85	85.A	Area B
STAFF ENTRANCE	85	85.B	Area C
CIRC.	86	86.1	Area B
CIRC.	86	86.2	Area B
G-ELEVATOR LOBBY	86	86.3	Area C
CIRC.	86	86.4	Area C
CIRC.	86	86.5	Area C
CIRC.	86	86.6	Area C
RECEPTION	86	86.A	Area B
CIRC.	86	86.B	Area B
ELEVATOR	ELEV-A	ELEV-A	Area C
ELEVATOR	ELEV-B	ELEV-B	Area C
ELEVATOR	ELEV-C	ELEV-C	Area B
STAIR	STA-A	STA-A	Area C
STAIR	STA-B	STA-B	Area B
STAIR	STA-C	STA-C	Area B
STAIR	STA-D	STA-D	Area C
STAIR	STA-E	STA-E	Area B
STAIR	STA-F	STA-F	Area B



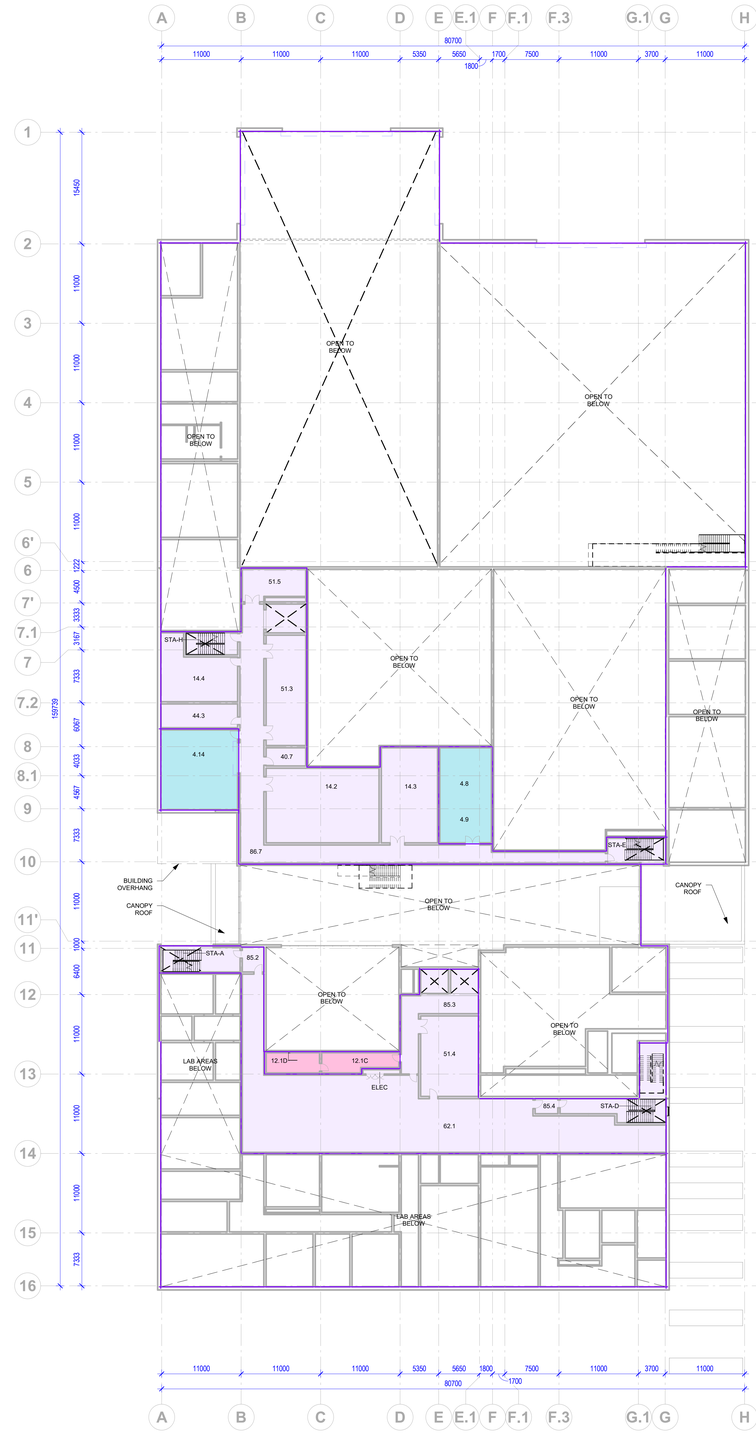
1 A110 LEVEL 1

1 : 300

LEGEND

- Base Building
- NRC Science
- Shared Space (TSTS & TSB HO)

LEVEL 1.5-ROOM NUMBER/ ROOM NAME			
LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 01.5 MEZZANINE	MATERIAL TESTING EQUIPMENT STORAGE	4.8	4.8
LEVEL 01.5 MEZZANINE	HTM TESTING EQUIPMENT STORAGE	4.9	4.9
LEVEL 01.5 MEZZANINE	SECURED STORAGE FOR CONTROL GOODS	4.14	4.14
LEVEL 01.5 MEZZANINE	STORAGE ROOM FOR AUDITORIUM	12.1C	12.1C
LEVEL 01.5 MEZZANINE	VEST. AV ROOM	12.1D	12.1D
LEVEL 01.5 MEZZANINE	SPARE	14	14.2
LEVEL 01.5 MEZZANINE	SPARE	14	14.3
LEVEL 01.5 MEZZANINE	SPARE	14	14.4
LEVEL 01.5 MEZZANINE	ALL ACCESS WASHROOM	40	40.7
LEVEL 01.5 MEZZANINE	CUSTODIAL & MAINTENANCE	44	44.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.4
LEVEL 01.5 MEZZANINE	ELEC	51	51.5
LEVEL 01.5 MEZZANINE	M&E	62	62.1
LEVEL 01.5 MEZZANINE	VEST.	85	85.2
LEVEL 01.5 MEZZANINE	VEST.	85	85.3
LEVEL 01.5 MEZZANINE	VEST.	85	85.4
LEVEL 01.5 MEZZANINE	CIRC.	86	86.7
LEVEL 01.5 MEZZANINE	STAIR	STA-G	STA-G
LEVEL 01.5 MEZZANINE	STAIR	STA-H	STA-H



2 A110 LEVEL 1.5 - MEZZANINE

1 : 300

6000 0 6000 12000 mm

1:300

C

0 10 20mm 40 60 80 100 120 140 160 180 200mm

TPSGC-PWGSC AO (1189x841)

2024-07-09 6:35:27 PM

Canada

Public Works and Government Services Canada / Travaux publics et services gouvernementaux Canada

Real Property Branch / Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan

AREA A

AREA B

AREA C

N

Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
4	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
3	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
2	ISSUED FOR 100% SD - COSTING	24.05.07
1	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17

A detail no. / no. du dessin

B location drawing no. / sur dessin no.

C drawing no. / dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

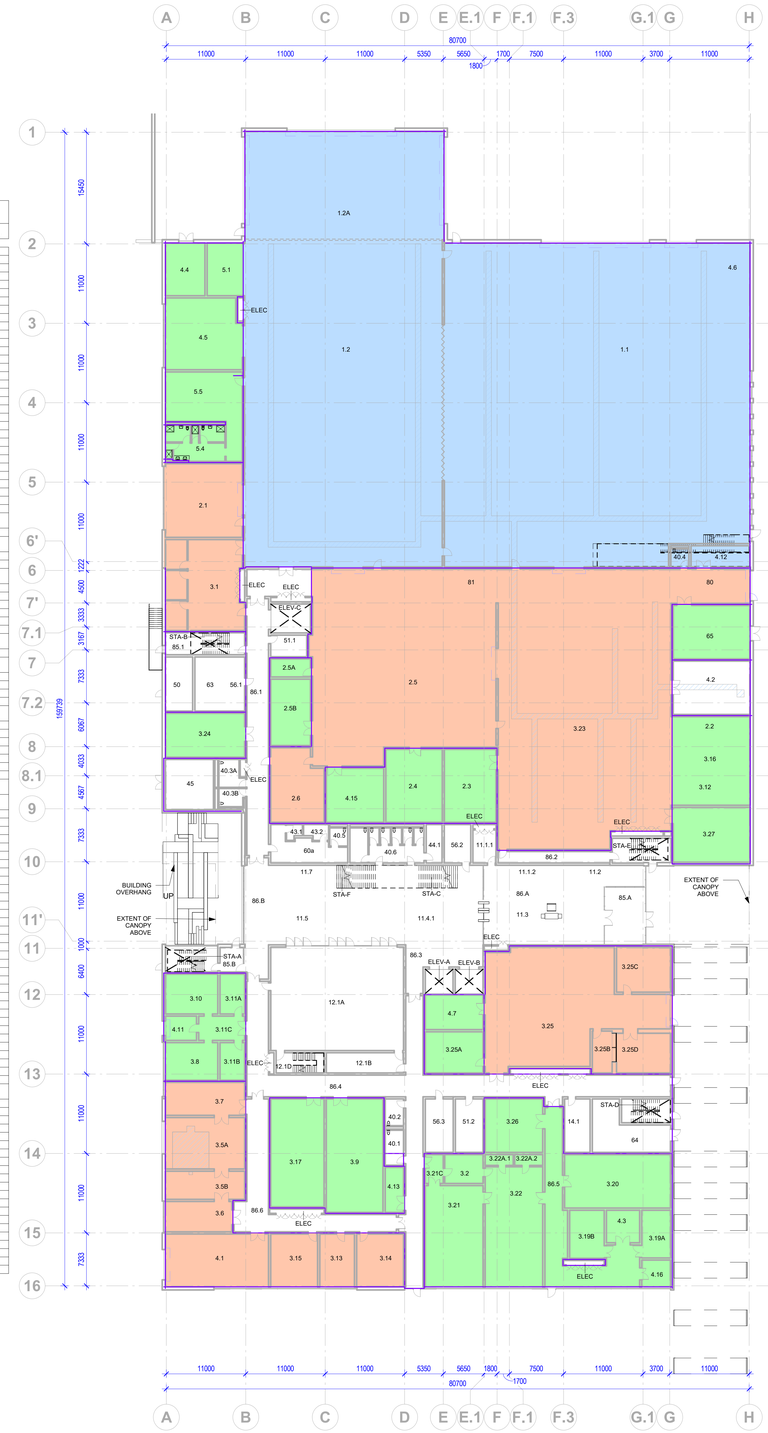
DEPARTMENTAL AREA DIAGRAM- GROUND & MEZZANINE LEVELS

Designed By	Conçu par
L. Abrosimov/D. Stavros	
Date 2024 / 06 / 06	(yyyy/mm/dd)
Drawn By	Dessiné par
A49/B+H	
Date 2024 / 06 / 06	(yyyy/mm/dd)
Reviewed By	Examiné par
L. Abrosimov	
Date 2024 / 06 / 06	(yyyy/mm/dd)
Approved By	Approuvé par
J. Gupta	
Date 2024 / 06 / 06	(yyyy/mm/dd)
Tender	Soumission
SOPHIE HARVEY	
Project Manager	Administrateur de projets
Project no.	No. du projet
R.107402	
Drawing no.	No. du dessin / Rev #
A110-V2	4

Science Area Typology

- High Bay
- Mid Bay
- Typical Wet/ Dry Labs Workshops & other support areas

LEVEL 1-ROOM NUMBER/ ROOM NAME			
NAME	SPACE ID No.	ROOM NUMBER	Room in View
NRC HIGH BAY	1.1	1.1	Area A
TSB HIGH BAY	1.2	1.2	Area A
TSB DECONTAMINATION BAY	1.2	1.2A	Area A
TEAR DOWN WORKSHOP	2.1	2.1	Area B
MATERIAL TESTING PREP SHOP	2.2	2.2	Area B
INSTRUMENTATION WORKSHOP	2.3	2.3	Area B
WOOD WORKSHOP	2.4	2.4	Area B
MACHINE WORKSHOP	2.5	2.5	Area B
MACHINE SHOP OFFICE	2.5A	2.5A	Area B
WORKSHOPS	2.5B	2.5B	Area B
WELDING WORKSHOP	2.6	2.6	Area B
PHOTO LAB	3.1	3.1	Area B
CHEMICAL LAB	3.2	3.2	Area C
SPIN RIG - TEST CELL	3.5A	3.5A	Area C
SPIN RIG - VACCUM SKID	3.5B	3.5B	Area C
CONTROL ROOM SPIN RIG	3.6	3.6	Area C
SPIN RIG PREP RM.	3.7	3.7	Area C
TGST RIG	3.8	3.8	Area C
HTM R&D LAB	3.9	3.9	Area C
HOT ISOSTATIC PRESS	3.10	3.10	Area C
CONTROL HOT ISO	3.11A	3.11A	Area C
CONTROL TGST RIG	3.11B	3.11B	Area C
VEST.	3.11C	3.11C	Area C
HTM PREP RM.	3.12	3.12	Area B
BURNER RIG CONTROL RM.	3.13	3.13	Area C
BURNER RIG #1	3.14	3.14	Area C
BURNER RIG #2	3.15	3.15	Area C
FULL SCALE TESTING PREP RM.	3.16	3.16	Area B
HEAT TREATMENT AND COATING LAB	3.17	3.17	Area C
SEM LAB - A	3.19A	3.19A	Area C
SEM LAB - B	3.19B	3.19B	Area C
MICROSCOPE LAB	3.20	3.20	Area C
METALLOGRAPHY SECTIONING AND SPECIMEN EXTRACTION	3.21	3.21	Area C
VEST.	3.21C	3.21C	Area C
METALLOGRAPHIC SAMPLE PREPARATION	3.22	3.22	Area C
SAMPLE STO.	3.22A	3.22A.1	Area C
SAMPLE STO.	3.22A	3.22A.2	Area C
MATERIAL AND COMPONENT TESTING	3.23	3.23	Area B
EXPERIMENTAL MECHANICS LAB	3.24	3.24	Area B
NON DESTRUCTIVE EVALUATION	3.25	3.25	Area C
MPI/LPI LAB	3.25A	3.25A	Area C
OBSERVATION X-RAY AREA	3.25B	3.25B	Area C
X-RAY ROOM-A	3.25C	3.25C	Area C
X-RAY ROOM-B	3.25D	3.25D	Area C
PHYSICAL AND FRACTO ANALYSIS RM.	3.26	3.26	Area C
MATERIAL TESTING AND EVALUATION	3.27	3.27	Area B
SPIN AND BURNER RIG EQUIPMENT SUPPORT	4.1	4.1	Area C
PUMP RM.	4.2	4.2	Area B
SEM LAB SUPPORT RM.	4.3	4.3	Area C
BATTERY STORAGE RM.	4.4	4.4	Area A
WRECKAGE STORAGE	4.5	4.5	Area A
FULL SCALE TESTING EQUIPMENT STORAGE	4.6	4.6	Area A
NDE EQUIPMENT STORAGE	4.7	4.7	Area C
CYLINDER STORAGE	4.11	4.11	Area C
OIL STORAGE RM.	4.12	4.12	Area A
BURNER RIG STORAGE	4.13	4.13	Area C
MACHINE SHOP TOOL RM.	4.15	4.15	Area B
SEM PREP RM.	4.16	4.16	Area C
TSTS SHIPPING AND RECEIVING	5.1	5.1	Area A
UNIVERSAL LOCKER RM. & CLEAN RM.	5.4	5.4	Area A
PROTECTIVE PERSONAL EQUIPMENT STORAGE	5.5	5.5	Area A
SECURITY ROOM	11.1	11.1.1	Area B
SECURITY AREA	11.1	11.1.2	Area B
WAITING AREA	11.2	11.2	Area B
RECEPTION	11.3	11.3	Area B
LOBBY	11.4	11.4.1	Area B
LOBBY	11.4	11.4.2	Area B
INFORMAL GATHERING	11.5	11.5	Area B
DISPLAY INTERPRETATIVE CENTRE	11.7	11.7	Area B
AUDITORIUM	12.1A	12.1A	Area C
AUDITORIUM KITCHENETTE	12.1B	12.1B	Area C
VEST. AV ROOM	12.1D	12.1D	Area C
SPARE	14	14.1	Area C
ALL ACCESS WASHROOM	40	40.1	Area C
ALL ACCESS WASHROOM	40	40.2	Area C
ALL ACCESS WASHROOM	40	40.3A	Area B
ALL ACCESS WASHROOM	40	40.3B	Area B
ALL ACCESS WASHROOM	40	40.4	Area A
ALL ACCESS WASHROOM	40	40.5	Area B
ALL ACCESS WASHROOM	40	40.6	Area B
SHOWER	43	43.1	Area B
SHOWER	43	43.2	Area B
JANITOR	44	44.1	Area B
BIKE PARKING	45	45	Area B
EF RM.	50	50	Area B
ELEC	51	51.1	Area B
ELEC	51	51.2	Area C
TR-1C	56	56.1	Area B
TR-1A	56	56.2	Area B
TR-1B	56	56.3	Area C
LOCKERS	60a	60a	Area B
MAIN EQ. RM.	63	63	Area B
WATER ENTRY	64	64	Area C
MAIN SWITCHGEAR	65	65	Area B
MATERIAL COMPONENT TESTING LOADING BAY	80	80	Area B
MATERIAL AND COMPONENT ACCESS	81	81	Area B
VEST.	85	85.1	Area B
VEST.	85	85.A	Area B
STAFF ENTRANCE	85	85.B	Area C
CIRC.	86	86.1	Area B
CIRC.	86	86.2	Area B
G-ELEVATOR LOBBY	86	86.3	Area C
CIRC.	86	86.4	Area C
CIRC.	86	86.5	Area C
CIRC.	86	86.6	Area C
RECEPTION	86	86.A	Area B
CIRC.	86	86.B	Area B
ELEVATOR	ELEV-A	ELEV-A	Area C
ELEVATOR	ELEV-B	ELEV-B	Area C
ELEVATOR	ELEV-C	ELEV-C	Area B
STAIR	STA-A	STA-A	Area C
STAIR	STA-B	STA-B	Area B
STAIR	STA-C	STA-C	Area B
STAIR	STA-D	STA-D	Area C
STAIR	STA-E	STA-E	Area B
STAIR	STA-F	STA-F	Area B

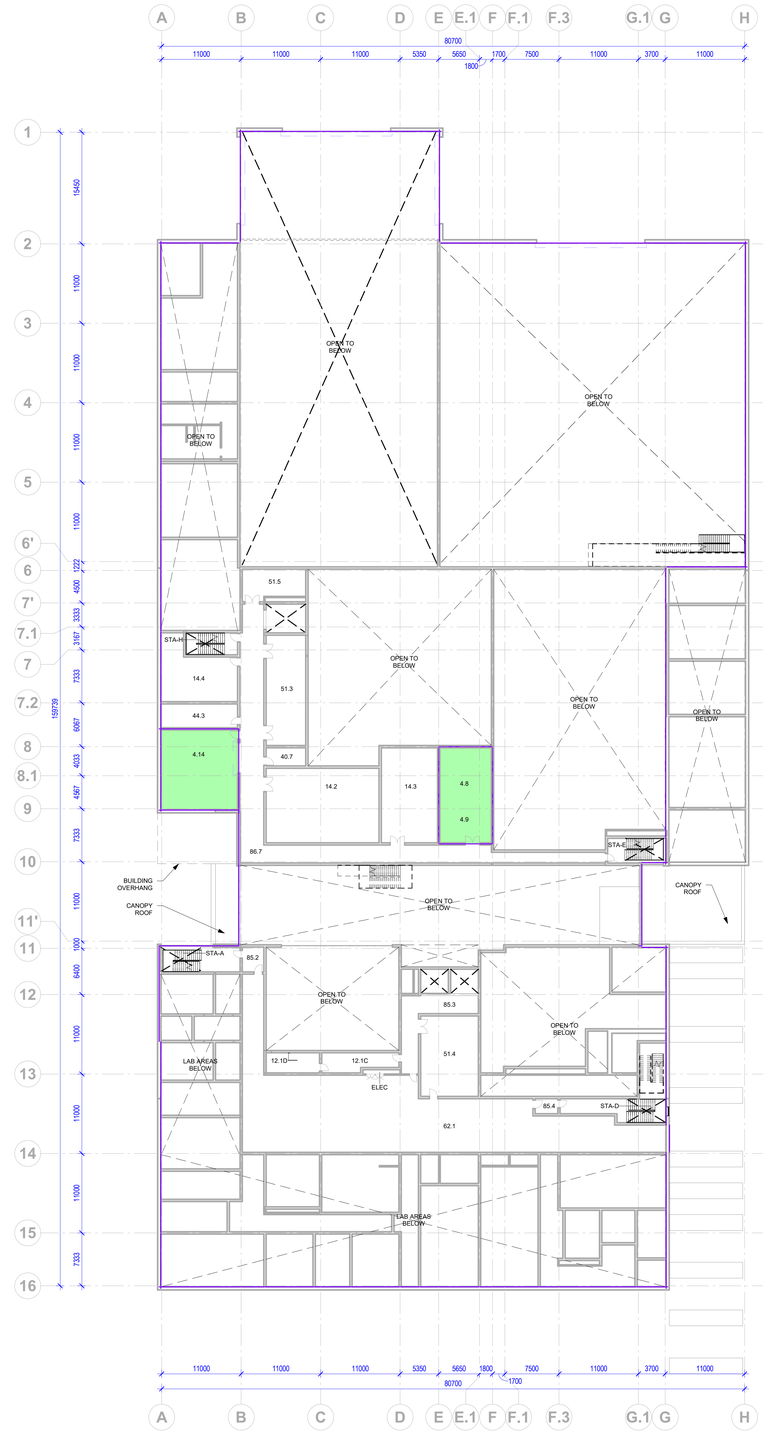


1 A120 LEVEL 1
1 : 300

Science Area Typology

- Typical Wet/ Dry Labs Workshops & other support areas

LEVEL 1.5-ROOM NUMBER/ ROOM NAME			
LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 01.5 MEZZANINE	MATERIAL TESTING EQUIPMENT STORAGE	4.8	4.8
LEVEL 01.5 MEZZANINE	HTM TESTING EQUIPMENT STORAGE	4.9	4.9
LEVEL 01.5 MEZZANINE	SECURED STORAGE FOR CONTROL GOODS	4.14	4.14
LEVEL 01.5 MEZZANINE	STORAGE ROOM FOR AUDITORIUM	12.1C	12.1C
LEVEL 01.5 MEZZANINE	VEST. AV ROOM	12.1D	12.1D
LEVEL 01.5 MEZZANINE	SPARE	14	14.2
LEVEL 01.5 MEZZANINE	SPARE	14	14.3
LEVEL 01.5 MEZZANINE	SPARE	14	14.4
LEVEL 01.5 MEZZANINE	ALL ACCESS WASHROOM	40	40.7
LEVEL 01.5 MEZZANINE	CUSTODIAL & MAINTENANCE	44	44.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.3
LEVEL 01.5 MEZZANINE	ELEC	51	51.4
LEVEL 01.5 MEZZANINE	ELEC	51	51.5
LEVEL 01.5 MEZZANINE	M&E	62	62.1
LEVEL 01.5 MEZZANINE	VEST.	85	85.2
LEVEL 01.5 MEZZANINE	VEST.	85	85.3
LEVEL 01.5 MEZZANINE	VEST.	85	85.4
LEVEL 01.5 MEZZANINE	CIRC.	86	86.7
LEVEL 01.5 MEZZANINE	STAIR	STA-G	STA-G
LEVEL 01.5 MEZZANINE	STAIR	STA-H	STA-H



2 A120 LEVEL 01.5 MEZZANINE
1 : 300

6000 0 6000 12000 mm
1:300

C

0 10 20mm 40 60 80 100 120 140 160 180 200mm

TP9GC-PWGSC A0 (1189x841)

2024-07-09 6:35:39 PM

Canada

Public Works and Government Services Canada
Real Property Branch

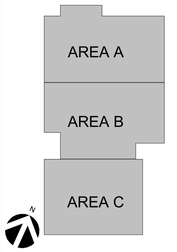
Travaux publics et services gouvernementaux Canada
Direction générale des biens immobiliers

In Association with

A49 | B+H

WSP

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
4	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
3	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
2	ISSUED FOR 100% SD - COSTING	24.05.07
1	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

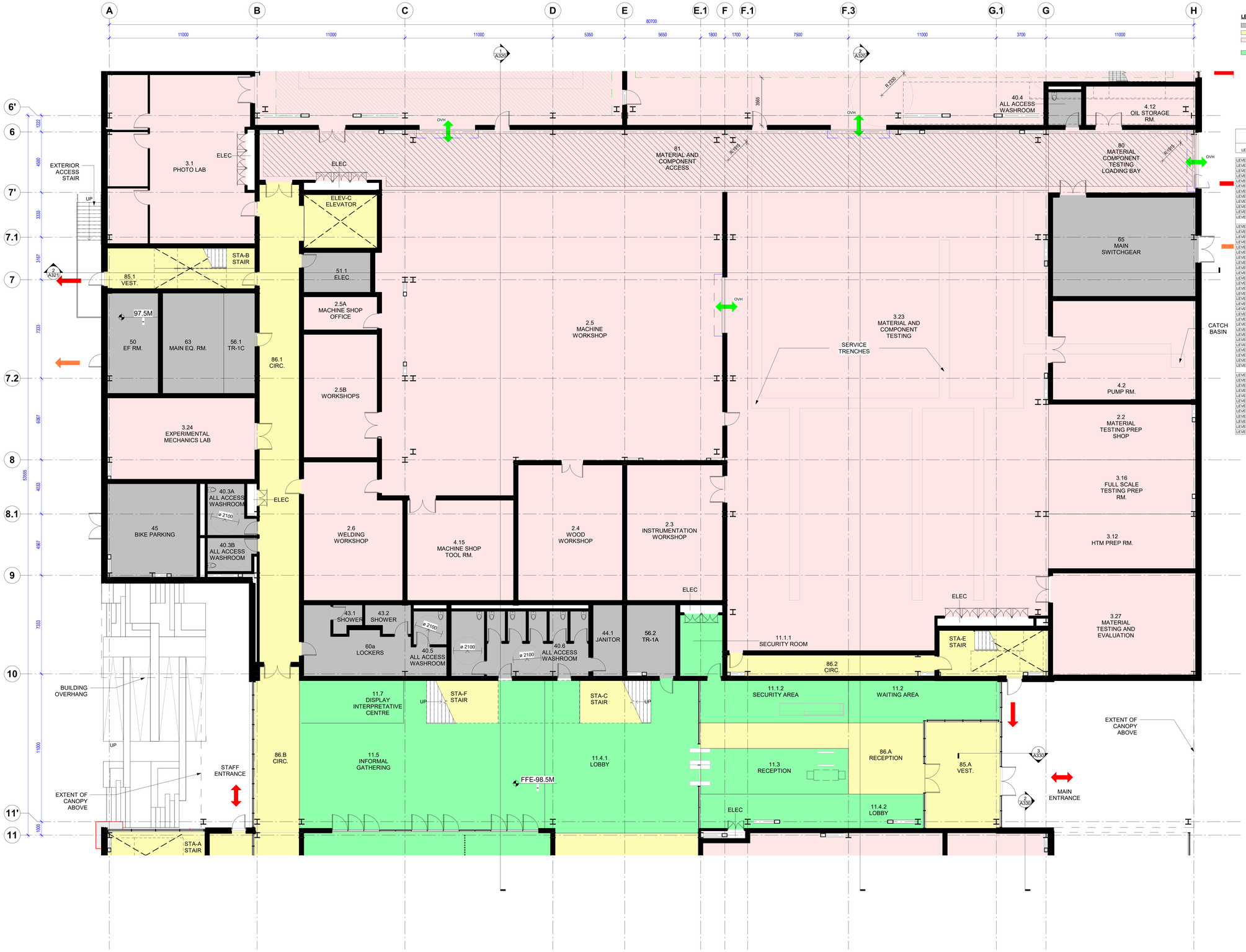
project / projet

TSTS HUB PROJECT

drawing / dessin

SCIENCE AREA TYPOLOGY- GROUND & MEZZANINE LEVELS

Designed By / Conçu par	L. Abrosimov/D. Stavros
Date (yyyy/mm/dd)	2024 / 06 / 06
Drawn By / Dessiné par	A49/B+H
Date (yyyy/mm/dd)	2024 / 06 / 06
Reviewed By / Examiné par	L. Abrosimov
Date (yyyy/mm/dd)	2024 / 06 / 06
Approved By / Approuvé par	J. Gupta
Date (yyyy/mm/dd)	2024 / 06 / 06
Tender / Soumission	SOPHIE HARVEY
Project Manager / Administrateur de projets	
Project no. / No. du projet	R.107402
Drawing no. / No. du dessin	A120-V2
Rev #	4



LEGEND

- BASE BUILDING
- CIRCULATION
- LABORATORY SPACES & SUPPORT
- SHARED (TSTS-TSB HO)

DIRECTIONAL ARROW LEGEND

- OVH-DOOR EQUIPMENT ACCESS
- EQUIPMENT REMOVAL
- BUILDING ACCESS
- PRESSURE RELIEF PANEL
- EXIT ONLY
- YARD ACCESS

LEVEL 1-ROOM NUMBER/ ROOM NAME - (Area B)

LEVEL	NAME	SPACE ID No.	ROOM NUMBER
LEVEL 1	TEAR DOWN WORKSHOP	2.1	2.1
LEVEL 1	MATERIAL TESTING PREP SHOP	2.2	2.2
LEVEL 1	INSTRUMENTATION WORKSHOP	2.3	2.3
LEVEL 1	WOOD WORKSHOP	2.4	2.4
LEVEL 1	MACHINE WORKSHOP	2.5	2.5
LEVEL 1	MACHINE SHOP OFFICE	2.5A	2.5A
LEVEL 1	WORKSHOPS	2.5B	2.5B
LEVEL 1	WELDING WORKSHOP	2.6	2.6
LEVEL 1	PHOTO LAB	3.1	3.1
LEVEL 1	HTM PREP RM.	3.12	3.12
LEVEL 1	FULL SCALE TESTING PREP RM.	3.16	3.16
LEVEL 1	MATERIAL AND COMPONENT TESTING	3.23	3.23
LEVEL 1	EXPERIMENTAL MECHANICS LAB	3.24	3.24
LEVEL 1	MATERIAL TESTING AND EVALUATION	3.27	3.27
LEVEL 1	PUMP RM.	4.2	4.2
LEVEL 1	MACHINE SHOP TOOL RM.	4.15	4.15
LEVEL 1	SECURITY ROOM	11.1	11.1.1
LEVEL 1	SECURITY AREA	11.1	11.1.2
LEVEL 1	WAITING AREA	11.2	11.2
LEVEL 1	RECEPTION	11.3	11.3
LEVEL 1	LOBBY	11.4	11.4.3
LEVEL 1	LOBBY	11.4	11.4.2
LEVEL 1	INFORMAL GATHERING	11.5	11.5
LEVEL 1	DISPLAY INTERPRETATIVE CENTRE	11.7	11.7
LEVEL 1	ALL ACCESS WASHROOM	40	40.3A
LEVEL 1	ALL ACCESS WASHROOM	40	40.3B
LEVEL 1	ALL ACCESS WASHROOM	40	40.5
LEVEL 1	ALL ACCESS WASHROOM	40	40.6
LEVEL 1	SHOWER	43	43.1
LEVEL 1	SHOWER	43	43.2
LEVEL 1	JANITOR	44	44.1
LEVEL 1	BIKE PARKING	45	45
LEVEL 1	EF RM.	50	50
LEVEL 1	ELEC	51	51.1
LEVEL 1	TR-1C	56	56.1
LEVEL 1	TR-1A	56	56.2
LEVEL 1	LOCKERS	60a	60a
LEVEL 1	MAIN EQ. RM.	63	63
LEVEL 1	MAIN SWITCHGEAR	65	65
LEVEL 1	MATERIAL COMPONENT TESTING LOADING BAY	80	80
LEVEL 1	MATERIAL AND COMPONENT ACCESS	81	81
LEVEL 1	VEST.	85	85.1
LEVEL 1	VEST.	85	85.A
LEVEL 1	CIRC.	86	86.1
LEVEL 1	CIRC.	86	86.2
LEVEL 1	RECEPTION	86	86.A
LEVEL 1	CIRC	86	86.B
LEVEL 1	ELEVATOR	ELEV-C	ELEV-C
LEVEL 1	STAIR	STA-B	STA-B
LEVEL 1	STAIR	STA-C	STA-C
LEVEL 1	STAIR	STA-E	STA-E
LEVEL 1	STAIR	STA-F	STA-F

1 A151 PARTIAL FLOOR PLAN - LEVEL 1 AREA B

1 : 100

1000 0 1000 2000 3000 4000 5000 6000 7000 mm

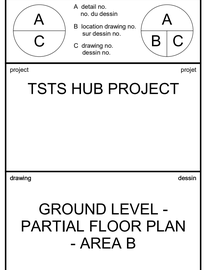
1:100

0 10 20mm 40 60 80 100 120 140 160 180 200mm

2024-07-09 8:35:1 PM

TPSGC-PWGSC A0 (1189x841)

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
6	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
5	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
4	ISSUED FOR 100% SD - COSTING	24.05.07
3	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17
2	ISSUED FOR COSTING- 90%SD	23.09.25
1	ISSUED FOR 50% SCHEMATIC DESIGN	23.07.24

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

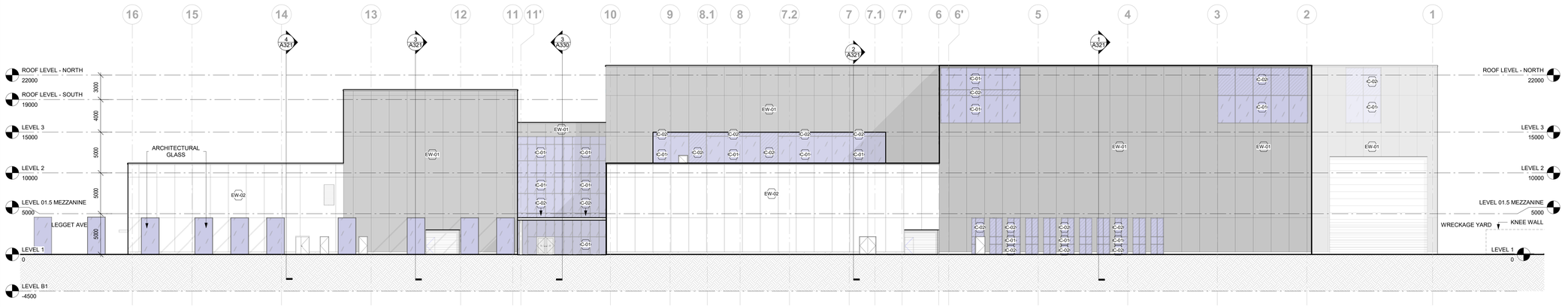
project / projet

TSTS HUB PROJECT

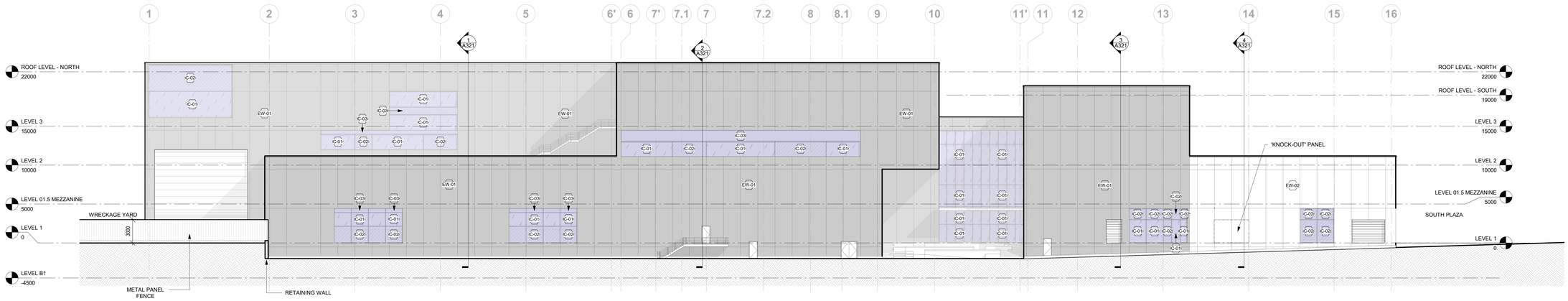
drawing / dessin

GROUND LEVEL - PARTIAL FLOOR PLAN - AREA B

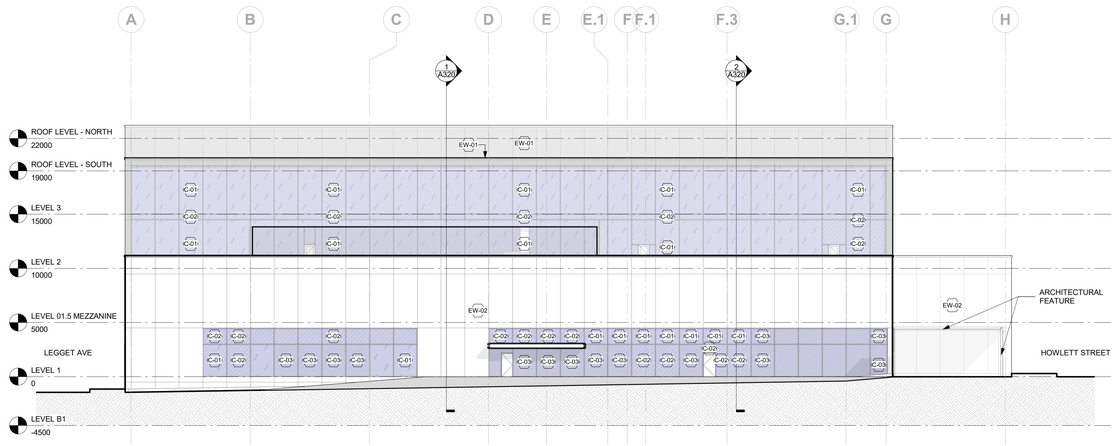
Designed By / Conçu par	L. Abrosimov/D. Stavros
Date	2024 / 06 / 06 (yyyy/mm/dd)
Drawn By / Dessiné par	A49/B+H
Date	2024 / 06 / 06 (yyyy/mm/dd)
Reviewed By / Examiné par	L. Abrosimov
Date	2024 / 06 / 06 (yyyy/mm/dd)
Approved By / Approuvé par	J. Gupta
Date	2024 / 06 / 06 (yyyy/mm/dd)
Tender / Soumission	
Project Manager / Administrateur de projets	SOPHIE HARVEY
Project no. / No. du projet	R.107402
Drawing no. / No. du dessin	A151-V2
Rev #	6



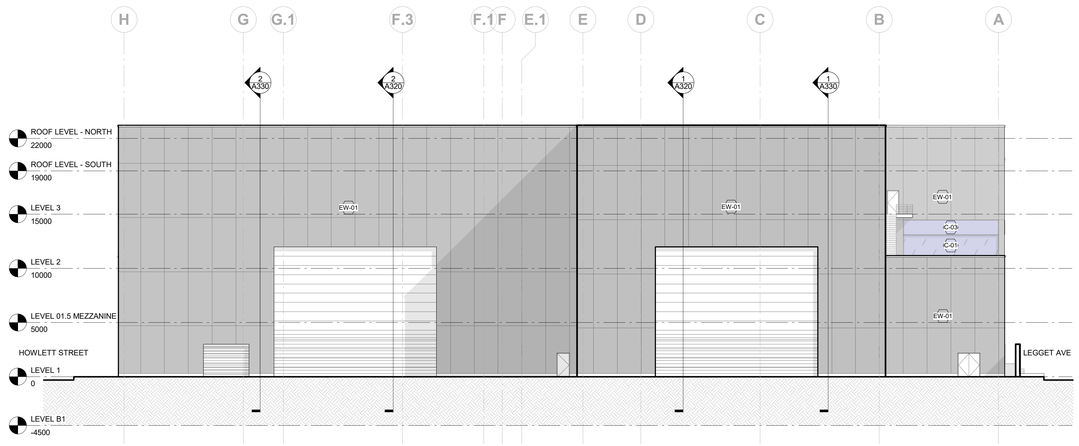
1 / A300 East Elevation
1 : 200



2 / A300 West Elevation
1 : 200



4 / A300 South Elevation
1 : 200



3 / A300 North Elevation
1 : 200

1:200 4000 0 4000 8000 12000 mm

0 10 20mm 40 60 80 100 120 140 160 180 200mm

2024-07-09 8:35:59 PM

TPSGC-PWGSC A0 (1189x841)

ELEVATION LEGEND

C-01	GLASS
C-02	SPANDREL TYPE 1
C-03	SPANDREL TYPE 2
C-03	PRECAST SANDWICH PANEL
EW-01	PRECAST PANEL
EW-02	ALUMINUM METAL PANEL
EW-03	LIGHTWEIGHT METAL CLADDING

Canada

Public Works and Government Services Canada
Real Property Branch

Travaux publics et services gouvernementaux Canada
Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan

AREA A
AREA B
AREA C

Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
6	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
5	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
4	ISSUED FOR 100% SD - COSTING	24.05.07
3	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17
2	ISSUED FOR COSTING- 90%SD	23.09.25
1	ISSUED FOR 50% SCHEMATIC DESIGN	23.07.24

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

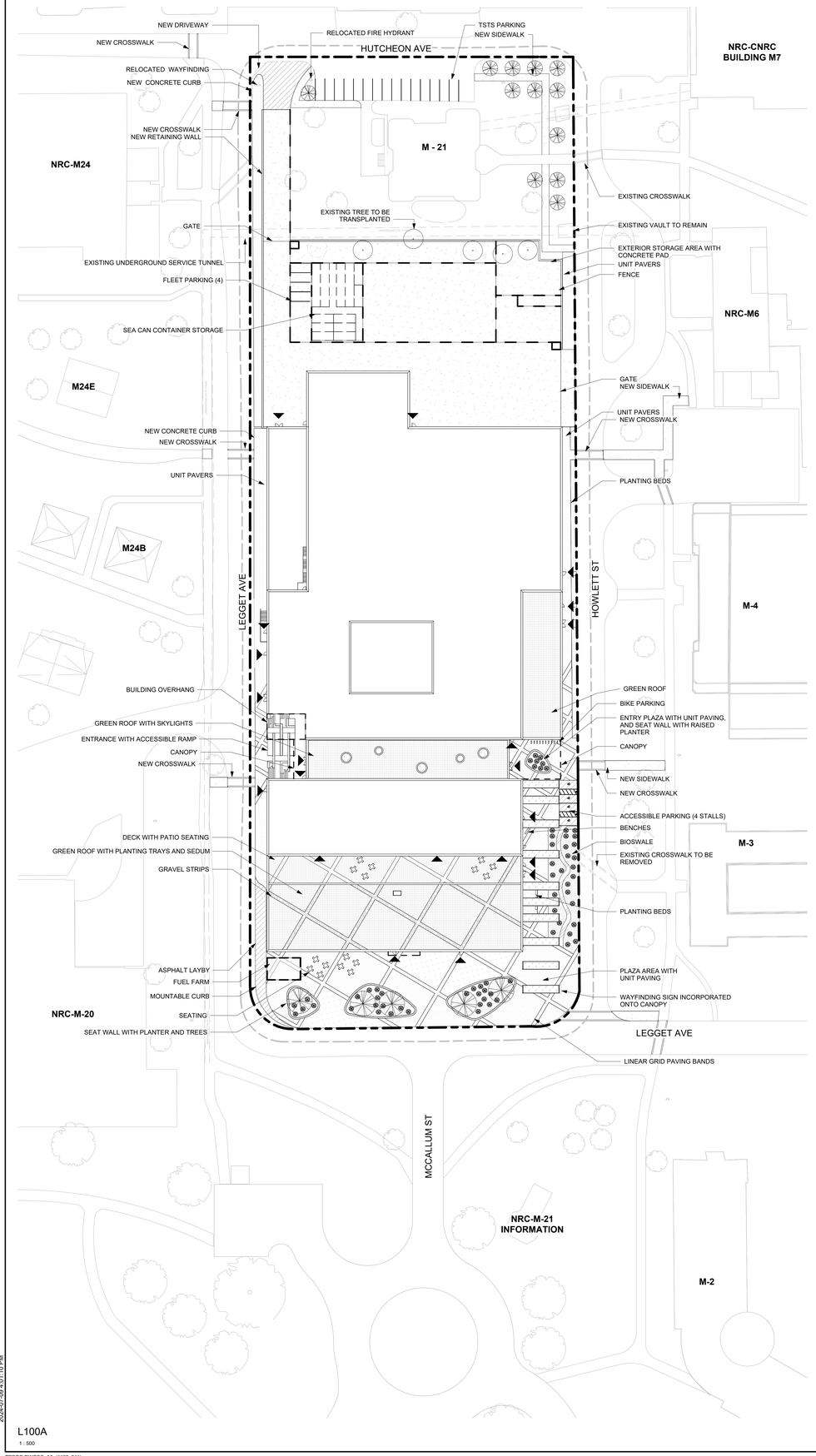
project / projet

TSTS HUB PROJECT

drawing / dessin

BUILDING ELEVATIONS

Designed By / Conçu par	D. Stavros/G. Keith	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Drawn By / Dessiné par	A49/B+H	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Reviewed By / Examiné par	L. Abrosimov	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Approved By / Approuvé par	J. Gupta	
Date	2024 / 06 / 06	(yyyy/mm/dd)
Tender / Soumission		
Project Manager / Administrateur de projets	SOPHIE HARVEY	
Project no. / No. du projet	R.107402	
Drawing no. / No. du dessin	A300-V2	Rev # 6



L100A
1 : 500

2024-07-09 4:01:10 PM

TPSGC-PWGSC A0 (1189x841)

0 10 20mm 40 60 80 100 120 140 160 180 200mm

MATERIAL LEGEND

- CONCRETE PAD
- UNIT PAVING
- ROOF DECK
- SOD
- PLANTING BED
- BIOSWALE
- SIDEWALK
- ASPHALT
- SEDUM PLANTING MIX

SITE LEGEND

- PROPOSED TREE
- EXISTING TREE
- EXISTING TREE TO BE REMOVED
- EXISTING TREE TO BE TRANSPLANTED
- PROPOSED SHRUB
- SEAT WALL
- NEW CROSSWALK
- EXTENT OF WORK
- UNDERGROUND UTILITY TUNNEL
- FIRE ROUTE
- EXTENT OF ROAD REALIGNMENT
- BUILDING ENTRANCE

SITE STATISTICS

16 PARKING SPACES
4 FLEET PARKING
4 TYPE B ACCESSIBLE PARKING SPACES
20 BIKE PARKING SPACES

Canada

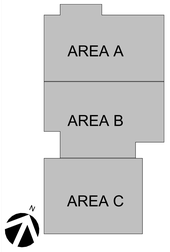
Public Works and Government Services Canada
Travaux publics et services gouvernementaux Canada
Real Property Branch
Direction générale des biens immobiliers

In Association with

A49 | B+H

wsp

Key Plan



Professional Seals

NOT FOR CONSTRUCTION

Contractor to verify all dimensions & conditions on site and immediately notify the engineer of all discrepancies

L'entrepreneur doit vérifier toutes les dimensions et conditions sur le site et aviser immédiatement le représentant du ministère de toute divergence.

revisions	description	date
4	ISSUED FOR 100% R1-SCHEMATIC DESIGN	24.07.10
3	ISSUED FOR 100% SCHEMATIC DESIGN	24.06.06
2	ISSUED FOR 100% SD COSTING	24.05.07
1	ISSUED FOR 90% SCHEMATIC DESIGN	23.10.17

A detail no. no. du dessin
B location drawing no. sur dessin no.
C drawing no. dessin no.

project / projet

TSTS HUB PROJECT

drawing / dessin

SITE PLAN

Designed By	AARON HIROTA / GAIL SHILLINGFORD	Conçu par
Date	2024/07/10	(yyyy/mm/dd)
Drawn By	LARA KUROSKY	Dessiné par
Date	2024/07/10	(yyyy/mm/dd)
Reviewed By	AARON HIROTA	Examiné par
Date	2024/07/10	(yyyy/mm/dd)
Approved By	JAYANT GUPTA	Approuvé par
Date	2024/07/10	(yyyy/mm/dd)
Tender		Soumission
Project Manager	SOPHIE HARVEY	Administrateur de projets
Project no.	R.107402	No. du projet
Drawing no.	L100A-V2	Rev # 4

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

2024-P290 – Transportation Safety and Technology Science (TSTS) Hub Facility – 100% Schematic Design: Renderings

NATIONAL CAPITAL COMMISSION
COMMISSION DE LA CAPITALE NATIONALE

Advisory Committee on Planning, Design and Realty

Thursday, May 30, 2024

IN CAMERA MEETING
40 Elgin Street, Ottawa, Room 324

MINUTES

The committee has not yet approved these minutes.

Comité consultatif de l'urbanisme, du design et de l'immobilier

Le jeudi 30 mai 2024

SÉANCE À HUIS CLOS
40, rue Elgin, Ottawa, pièce 324

PROCÈS-VERBAL

Le comité n'a pas encore approuvé ce procès-verbal.

Transportation Safety and Technology Science (TSTS) Hub Facility (NRC Campus)

90% Schematic Design

Connectivity and Accessibility

- East and west doors must allow clear, universally accessible circulation, which are the minimum standards.
- Remove the steps at the building's main entrance to enable universal accessibility.
- For safety reasons, benches and planters placed outside the building must be anchored to the ground.

Structure and Design

- Make the atrium space more social: include a café for staff lunch breaks. The design of this space could be the result of a landscaping competition.

Science de la sécurité et de la technologie des transports (SSTT) du campus du Conseil national de recherches du Canada

Avant-projet sommaire à 90 %

Connectivité et accessibilité

- Les portes Est et Ouest doivent permettre une circulation claire et accessible universellement qui sont les normes minimales.
- Supprimer les marches à l'entrée principale du bâtiment afin de permettre une accessibilité universelle.
- Pour des raisons de sécurité, prévoir l'ancrage au sol des bancs et des jardinières qui seraient disposés à l'extérieur du bâtiment.

Structure et conception

- Rendre l'espace servant d'atrium plus social : y prévoir un café afin de permettre au personnel d'y prendre les pauses repas. Le design de cet espace peut être le résultat d'un éventuel concours d'aménagement paysager.

- Take advantage of the building's location to create a visual presence from Montreal Road.
- Develop the concept of green roofs: this will save energy in the long term.
- Plant trees around the building to make it more attractive from the outside and create a promenade for passers-by.
- Provide facilities inside the building for parking bicycles and electric mopeds.
- Highlight the different facades by differentiating colors.

Selected option

- Option 2 is preferred for the design and structure of the building, as it integrates the environment. However, Option 1 is better in terms of landscaping.

- Saisir l’opportunité de l’emplacement du bâtiment pour avoir une présence visuelle depuis le chemin Montréal.
- Développer la réflexion autour des toits verts : cela permettra une économie d’énergie sur le long terme.
- Prévoir des arbres autour du bâtiment afin de le rendre plus attractif de l’extérieur et créer une promenade pour les passants.
- Prévoir des infrastructures à l’intérieur du bâtiment pour le stationnement des vélos, et les mobylettes électriques.
- Mettre en valeur les différentes façades en différenciant les couleurs.

Option choisie

- L’option 2 est préférée pour la conception, structure du bâtiment du fait qu’elle intègre l’environnement. Toutefois l’option 1 est meilleure au niveau de l’aménagement paysager.