



# VARSITY MULTI-SERVICE REDEVELOPMENT DESIGN BRIEF

CPC2020-0926 - Attach 4  
ISC: UNRESTRICTED



# PROJECT OVERVIEW

## INTRODUCTION

The marc boutin architectural collaborative inc. (MBAC) was retained by The City of Calgary to deliver the Varsity Multi-Service Redevelopment (VMSR) project in September 2018 following a Conceptual Exploratory Master Plan completed in July 2018 by Group2. The VMSR is to be an integrated facility where several stakeholders will be hosted within a single site. It will be one of the first projects of its kind constructed by the City of Calgary. In contrast to historic City of Calgary projects that are typically single-use facilities, the aspirations of this multi-service facility include the creation of flexible spaces with maximized efficiency through the avoidance of redundancy and duplication of effort.

## COUNCIL INITIATIVE

In 2015, Council initiated the Integrated Civic Facility Planning (ICFP) program as an initiative designed to transform the way The City plans and delivers facilities by more efficiently utilizing City land, optimizing capital and operational dollars and designing facilities that support the goals of the Municipal Development Plan. The VMSR project is one of the first projects resulting from this program. Going forward, this approach to planning and delivering facilities is a valuable Council Policy and will be The City's standard approach for providing best value for investment.

## MULTI-USE FACILITIES

This strategy reduces the duplication of physical space and creates greater efficiencies for facility users and maintenance requirements. Although the VMSR project might be the first of its kind for the City of Calgary, it is not the first example of a combined facility. There are examples of similar pairings within Calgary and other major cities:

- Vancouver Fire Hall #5, is Fire and Housing
- Tuscany Fire Hall #42 is Fire, Corporate and Community Space
- Seton Multi Service Facility is Fire, Bylaw, Parks, Police and Community Space
- Douglas Glen is Fire and Corporate
- Mindapore, Country Hills and Saddle ridge are all Fire, Police and Bylaw

- Royal Vista is Fire, Police and Corporate
- Eau Claire is Fire and Residential
- McKenzie Towne is Fire and Corporate

## PROJECT OVERVIEW

The VMSR project is located on a parcel at the corner of 37 Street NW and 32 Avenue NW at 3740 32 Avenue NW. The site is situated north of the University of Calgary Campus and on the edge of the University Research Park and the Varsity community residential area. The total site parcel is 14,800 square metres with Fire Station No. 17 and a Household Hazardous Waste Drop-Off currently located on the southern portion of the site. The proposed integrated facility is to be located on the northern portion of the site so that the fire station can remain operational with no disruption in response time or service during the development of the new facility.

The stakeholders involved in this project are:

- The Calgary Fire Department
- Calgary Housing
- City of Calgary Corporate Accommodation
- A Commercial Retail Unit (designed to accommodate a future child care centre)
- Household Hazardous Waste Drop-Off

The Calgary Fire Department (CFD) portion of the facility is to be the new upgraded Fire Station No. 17. Serving the community for over 45 years, the existing fire station is at the end of its lifecycle and a new station is required to meet the increasing needs of a growing and redeveloping community. The existing station will maintain servicing during construction of the new facility on the northern portion of the site, and will be vacated once the new integrated facility is operational. The new fire station will provide 16 dorm rooms and increase the number of apparatus bays from the current three bays to five bays. CFD will occupy four out of the five bays and Alberta Health Services (AHS) ambulance service will occupy the fifth bay.

Calgary Housing (CH) administers safe and affordable housing to families and individuals throughout the City and as part of the VMSR, will provide 48 residential units which includes studio units, 1-bedroom units, 2-bedroom units, and 3-bedroom units with a specific focus on providing homes for multi-generational families. Also designed for flexibility and families with greater needs, 10 barrier free units are proposed and four of the three-bedroom units include direct interior access to adjacent studio units to allow for more convenient multi-generational living. The Calgary Housing program includes amenities for residential use, such as private balconies for each unit, a Resource Room with exterior deck and shared social spaces on each level of the Calgary Housing to provide ease of access to people of all abilities.

The Corporate Accommodation (CA) program will act as satellite working spaces for City of Calgary employees and provide an alternative to having to travel to City Hall downtown. The spaces include individual offices, workstations, meeting rooms, and crush space. There is also the potential for the meeting rooms to be rented out and function as community spaces.

The Commercial Retail Unit (CRU) space is currently being designed to accommodate 60 children for a child care space. The space will be constructed to base-building requirements including services and systems infrastructure and the future tenant will be required to provide complete tenant improvement for the interior spaces. Embedded into the terraced landscape feature, exterior spaces are included to meet child care outdoor play space licensing requirements should a child care provider pursue the space.

A City-operated Household Hazardous Waste Drop-Off (HHWD) site is currently located on the Fire Station No. 17 property. This location is one of the most popular HHWD sites in Calgary and is a highly valued community service by surrounding residents. One of the project mandates is to incorporate a relocated HHWD on the integrated facility site with specific considerations for site circulation and access.

As an integrated facility, the project is dependent upon long-term development strategies, a holistic integration of sustainability, and an intelligent approach to urban living. This building initiative is dedicated to the improvement of the public realm and through the optimized and integrated use of facility assets, the future-proofing of City buildings.

## PROPOSED LAND USE OVERVIEW

The parcel is proposed to be divided into three lots, separated by lot boundary lines:

- **LOT 1:** Located on the north portion of the parcel, Lot 1 will include the Varsity Multi-Service Redevelopment project, and is proposed to be zoned as a Direct Control District with Multi-Residential - Medium Profile Support Commercial District (M-X2) land use as a base district.
- **LOT 2:** Located on the southeast portion of the parcel, this part of the site is the current location of the existing Fire Station 17 and the Household Hazardous Waste Drop-Off. Lot 2 is proposed to be zoned as a Mixed Use - General District (MU-1), which will provide a high degree of flexibility for its future development and allow for street oriented mixed-use development adjacent to 32 Avenue NW.
- **LOT 3:** Located in the southwest corner of the parcel, Lot 3 is proposed to be redesignated as Special Purpose - School, Park and Community Reserve (S-SPR) District. As 10% of the parcel will be required to be dedicated as municipal reserve at the time of subdivision per the Municipal Government Act and the City's Municipal Development Plan, this land use is applicable as it is only to be applied to land dedicated as school reserve, municipal school reserve, community reserve, and reserve pursuant to the Municipal Government Act. As a future park, the municipal reserve is intended to become a new community amenity to serve the public as an active and passive recreation space.

### Coordinated Civic Facility Planning & Development



# CONCEPTUAL DRIVERS & INTEGRATED PROGRAM

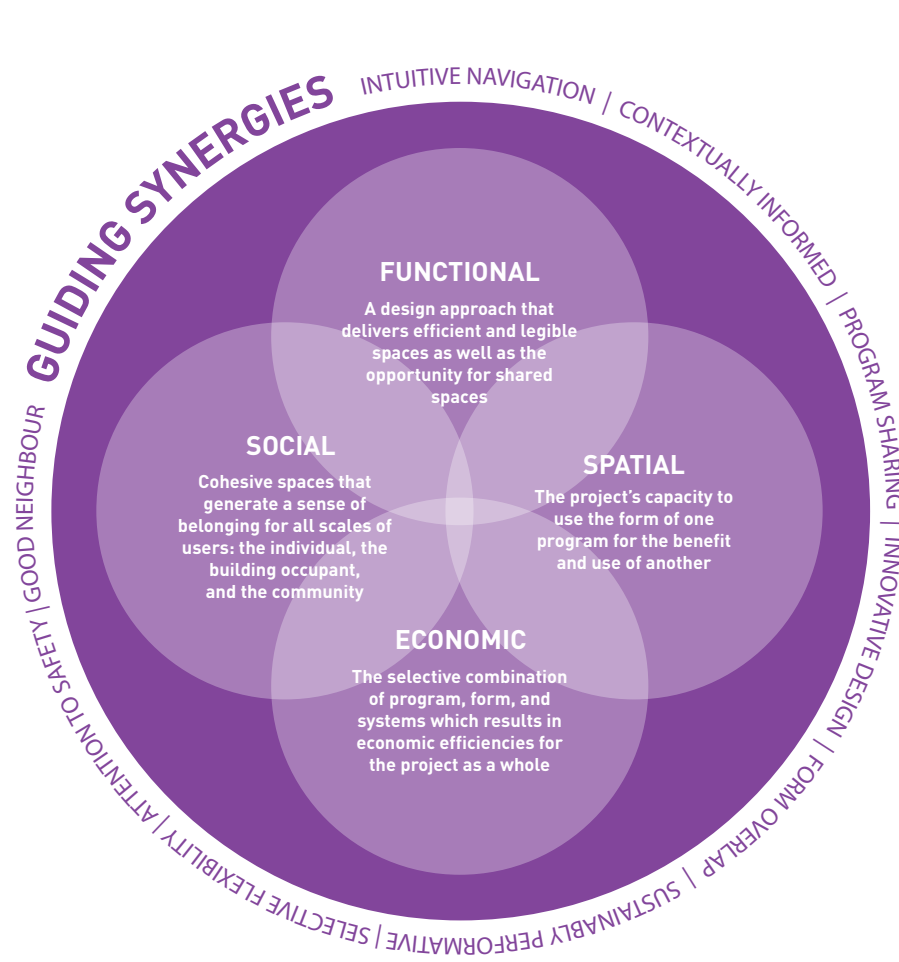
## GUIDING SYNERGIES

Illustrated in the diagram on the right, the guiding synergies diagram was developed at the outset of the project to capture the project's integration mandate.

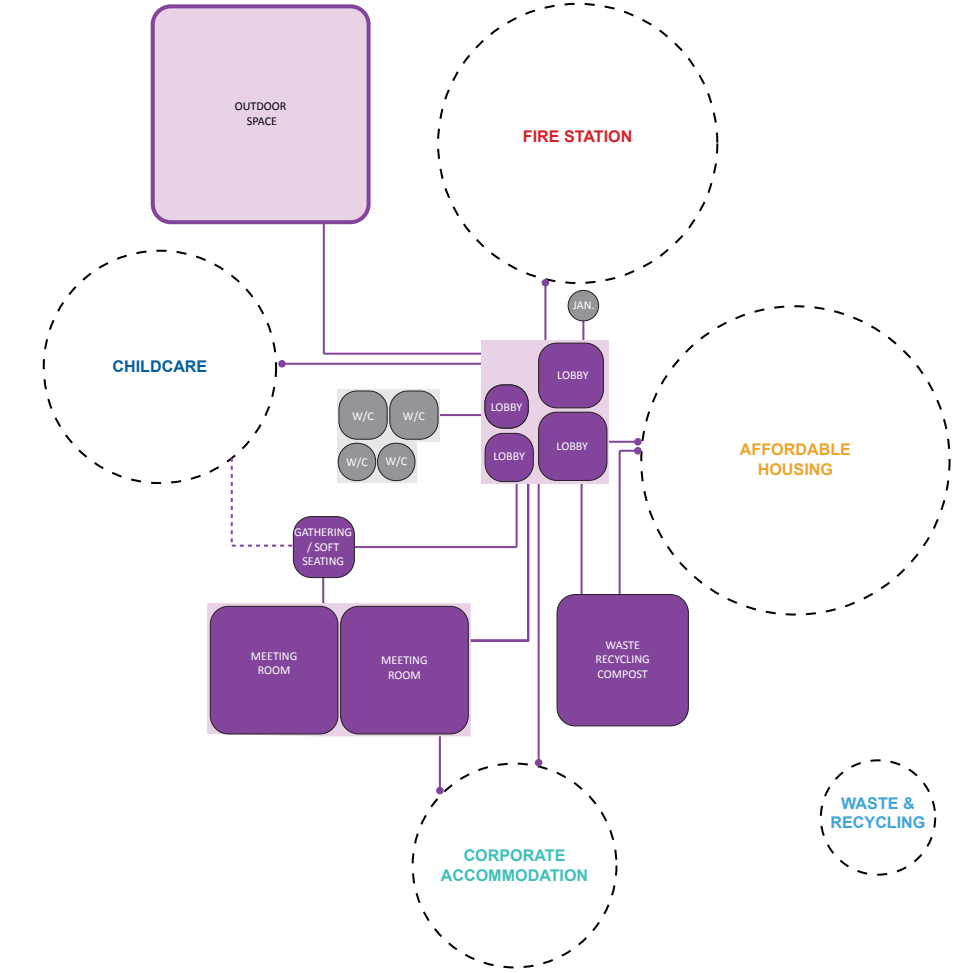
Integration at its core involves the combination of elements in a precise and conscious manner, where the result is a functional program and architectural form that is more beneficial than if each individual program has been designed separately. This is the concept of synergy. By studying the unique and similar requirements of each individual program, the design team arrived at the understanding that synergies could be produced in four different methods and function as guiding drivers for the project's design.

## INTEGRATED FUNCTIONAL PROGRAM

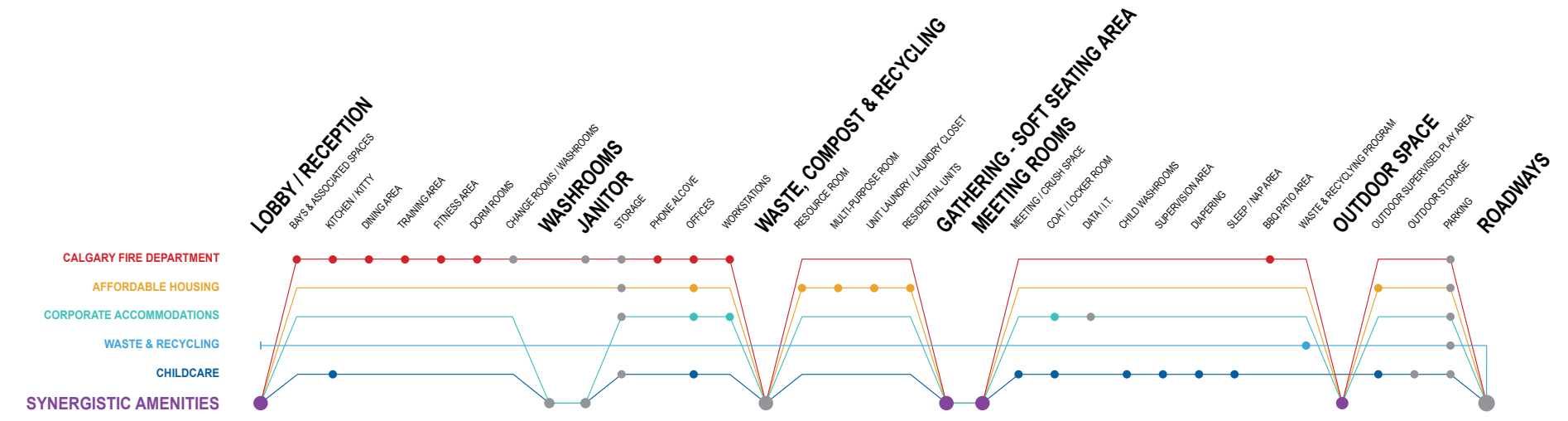
Building on the guiding synergies, the project's integrated program was developed with the primary goal to identify the different synergistic opportunities. The diagram on the bottom illustrates the programmatic outcome of this analysis: synergistic amenities - spaces that could be shared, reduced in size, or could benefit from other program types. This allowed the program to align with its mandate for optimizing and integrating use of facility assets and guide the development of the architectural design. The adjacency diagram was a key step in arranging the program diagrammatically whereby spacial synergies and planning logic could then be realized through architectural form and massing.



GUIDING SYNERGIES



HIGH LEVEL ADJACENCY DIAGRAM



PROGRAM SYNERGIES DIAGRAM

# CONTEXT OVERVIEW

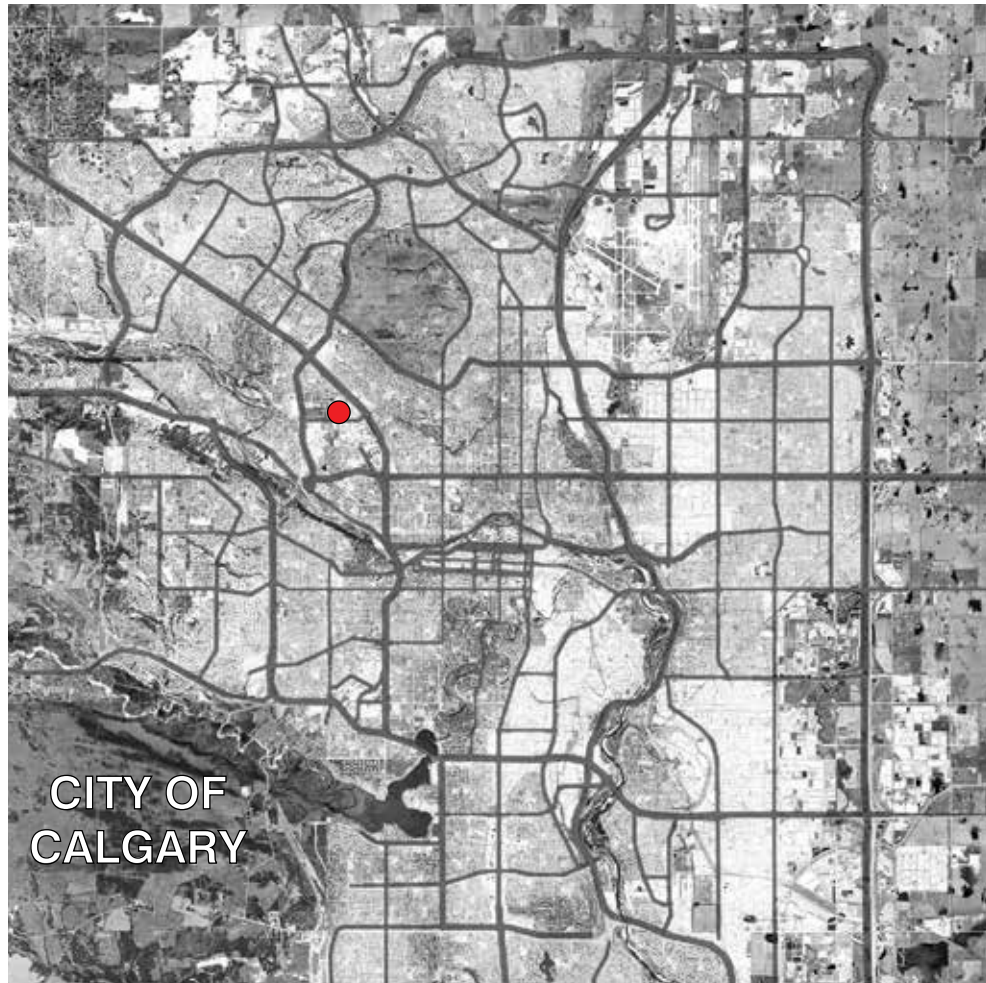
## THREE DISTINCT CONTEXTS

The subject parcel for the VMSR project is located within three distinct adjacent contexts: the University Research Park to the north and east, the University of Calgary to the south and the Varsity residential community to the west. The prevailing typologies include:

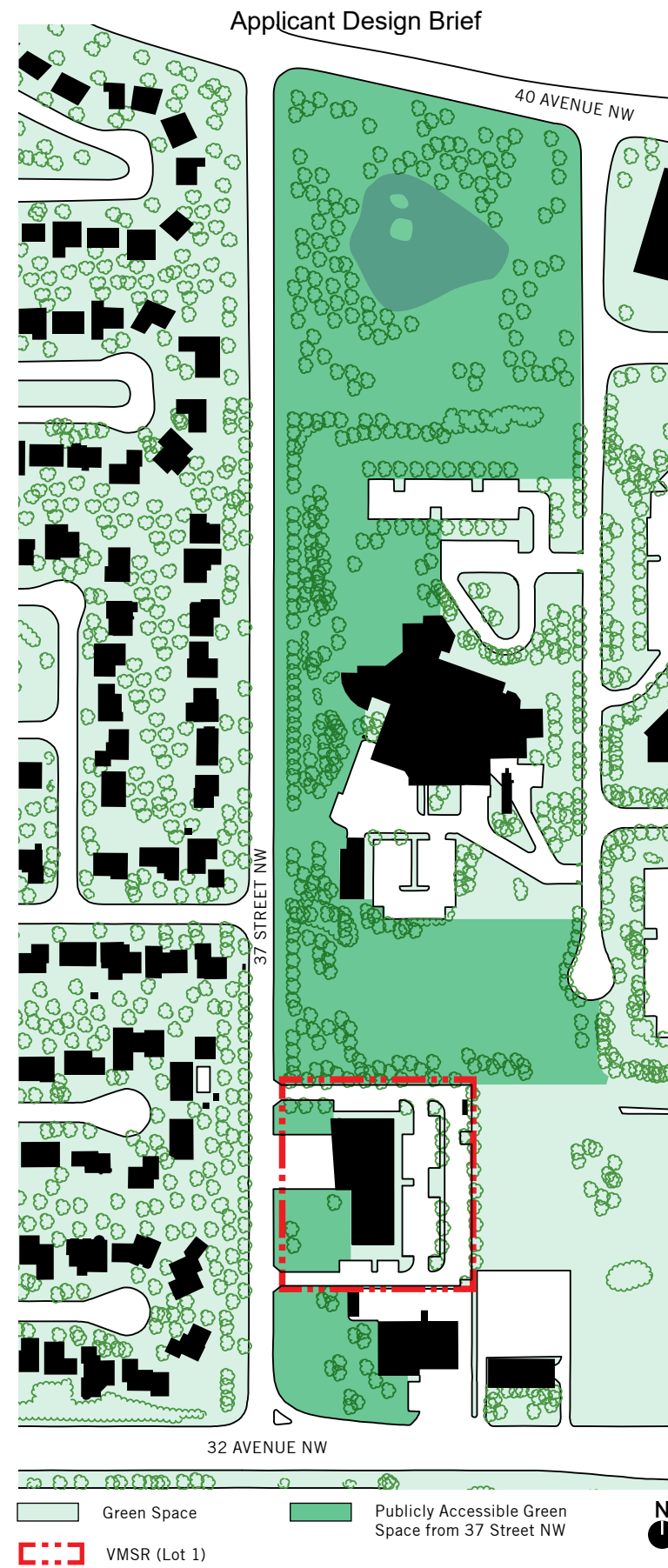
- 'Objects in the landscape' (University of Calgary & Research Park)
- Front porch condition (Varsity community)

## 37 STREET NW: A PARK STREET

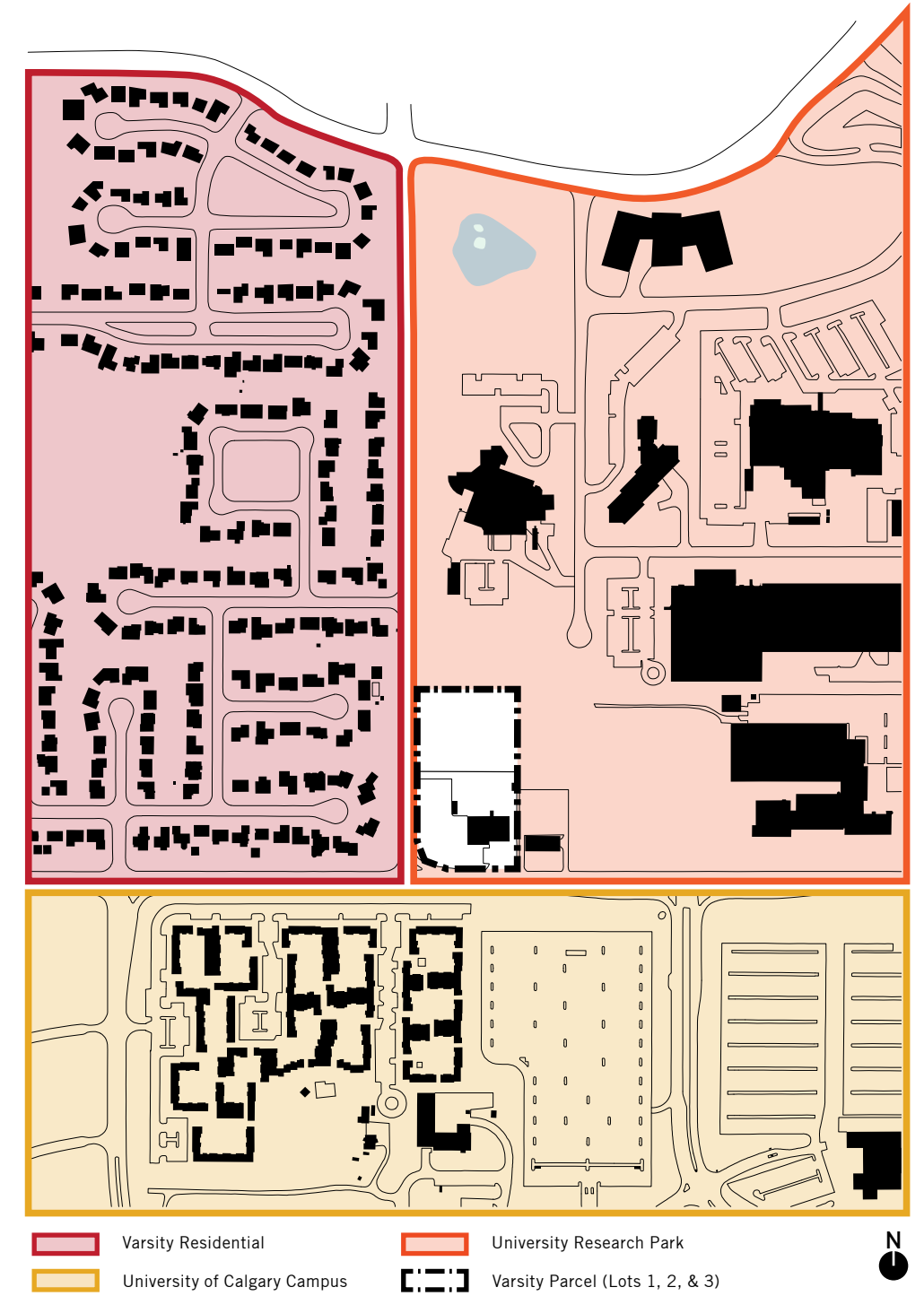
Within the three contexts is the predominant feature of 37 Street NW as a Park Street. This is characterized by a matured treed canopy along either side of the street with a large green setback along the east edge. The set back functions as a buffer to the existing structures of University Research Park, creating the 'objects in the landscape' quality of the area while providing an enjoyable green corridor for pedestrians and cyclists.



LOCATION KEY PLAN



37 ST NW: PARK STREET



THREE DISTINCT CONTEXTS



VARSITY RESIDENTIAL: FRONT PORCH CONDITION



UNIVERSITY RESEARCH PARK: "OBJECTS IN A LANDSCAPE"



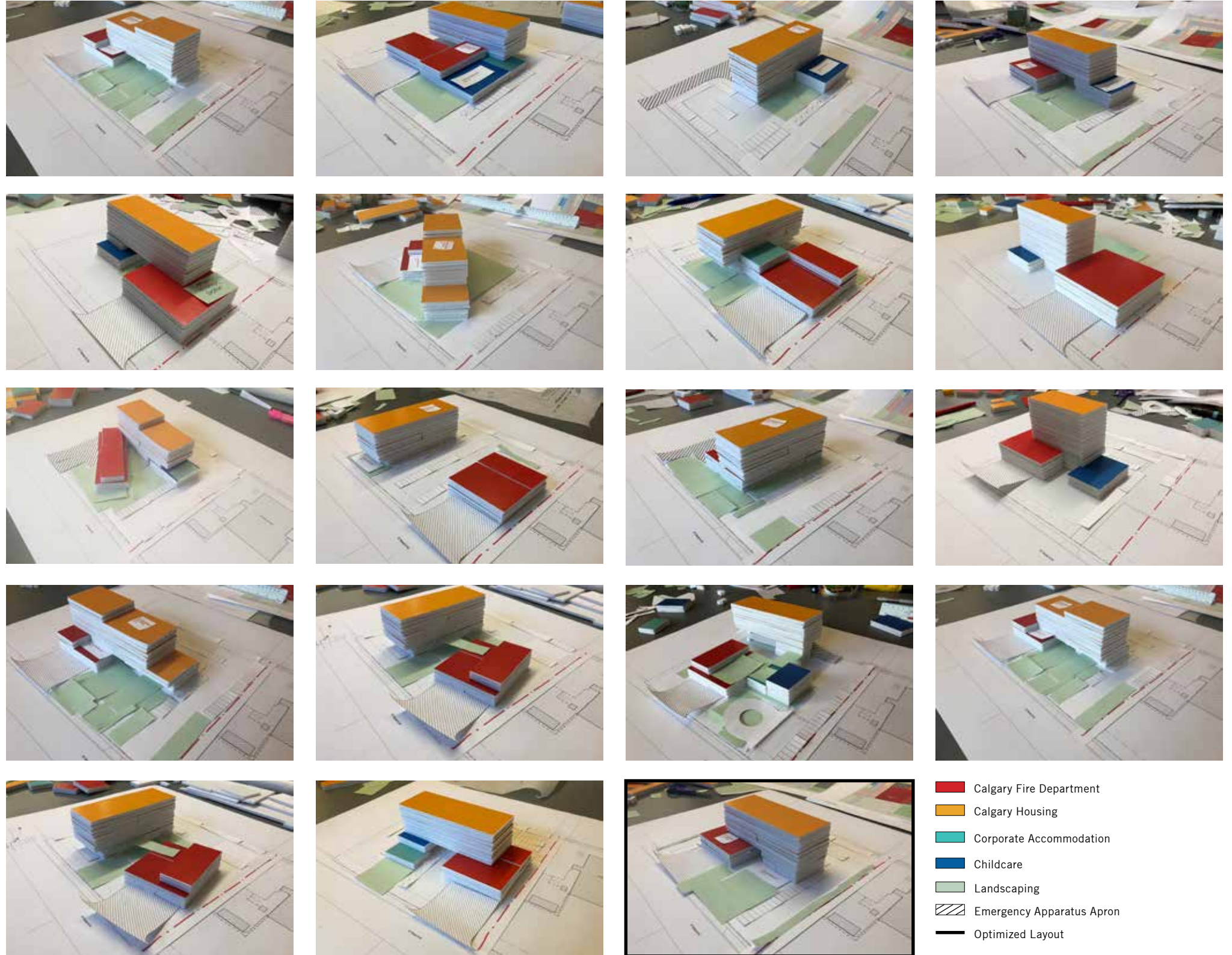
UNIVERSITY OF CALGARY CAMPUS: "OBJECTS IN A LANDSCAPE"



# MASSING & SITE EXPLORATIONS

Through a series of layout and massing explorations, an optimized site layout emerged. Compact and efficient in design, the layout featured many of the project's objectives:

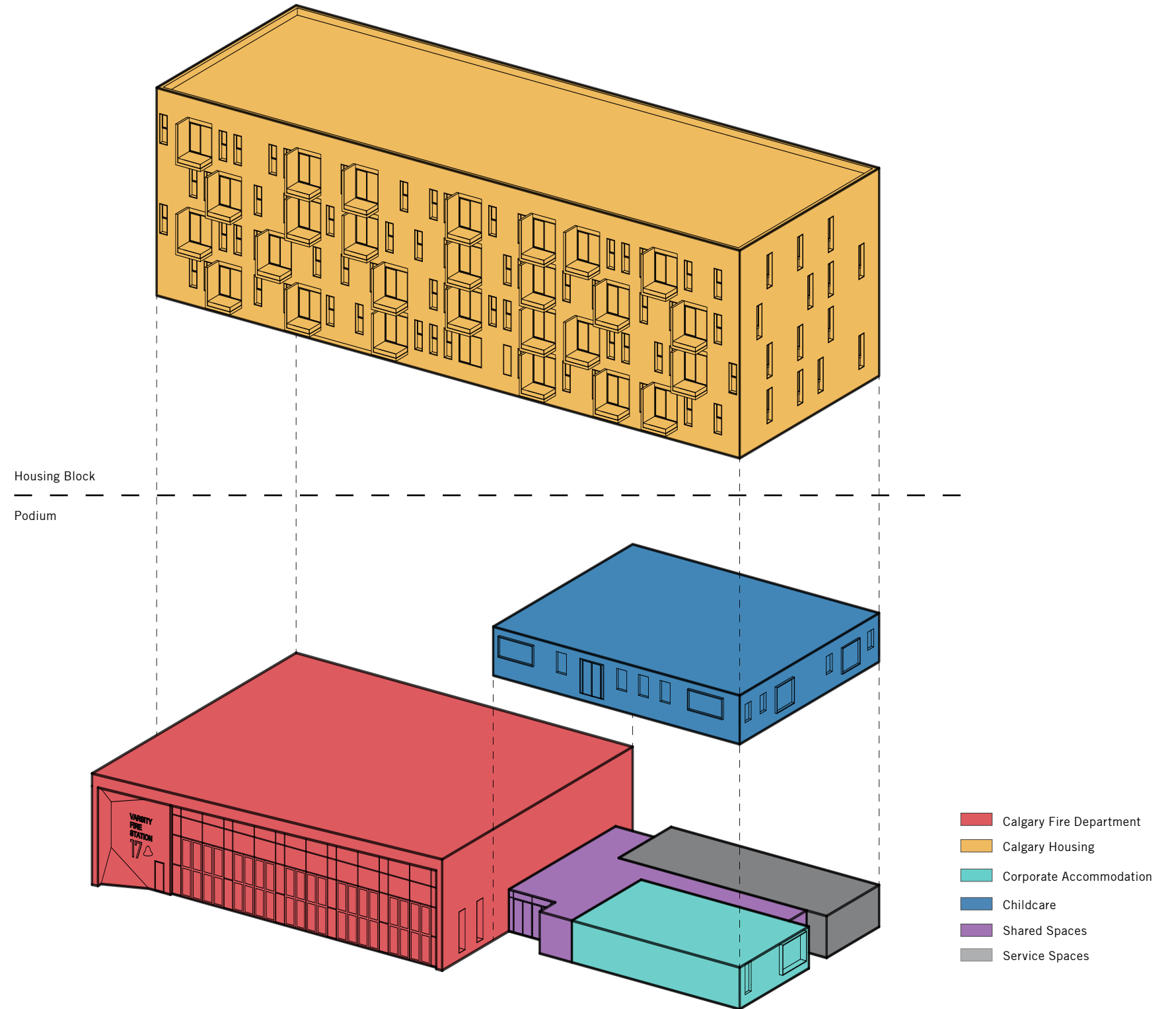
- **REDUCTION OF OVERALL AREA:** Stacking the program together maximizes efficiency through the avoidance of redundancy and duplication of effort, achieving the synergistic project drivers
- **EMULATES CONTEXT:** Centrally locating the building emulates the surrounding 'objects in the landscape' and front porch typologies
- **SUPPORTS PARK STREET:** Building setback creates a publicly fronted green space onto 37 Street NW, further enhancing the Park Street identity
- **GOOD NEIGHBOUR:** Building setback acts as a good neighbour to the single family residences across 37 Street NW
- **RIGHT TO LIGHT:** The north / south bar orientation allows natural daylight into all residential units on the west and east elevations
- **EFFECTIVE PEDESTRIAN WAYFINDING:** Intuitive pedestrian circulation can be located on each edge of the building
- **DISCREET PARKING:** Facility parking is located away from 37 Street NW behind the facility
- **SAFETY & EMERGENCY RESPONSE APRON SEPARATION:** Calgary Fire Department emergency response apron is separated from other programs to provide quick and efficient egress from the facility as well as create a safe environment for the other uses



- Calgary Fire Department
- Calgary Housing
- Corporate Accommodation
- Childcare
- Landscaping
- ▨ Emergency Apparatus Apron
- Optimized Layout

# PROGRAM DISTRIBUTION

As an efficient stacked mass, the building is conceptualized as a two-storey podium consisting of the shared lobby and services, Calgary Fire Department, Corporate Accommodation offices, and Commercial Retail Unit with the four-storey Calgary Housing situated above. This generates a vertical gradient of public to private with the most public program located on the ground floor of the building and the private program located on the highest floors.



# COMMUNITY ENGAGEMENT TIMELINE & OUTCOMES SUMMARY

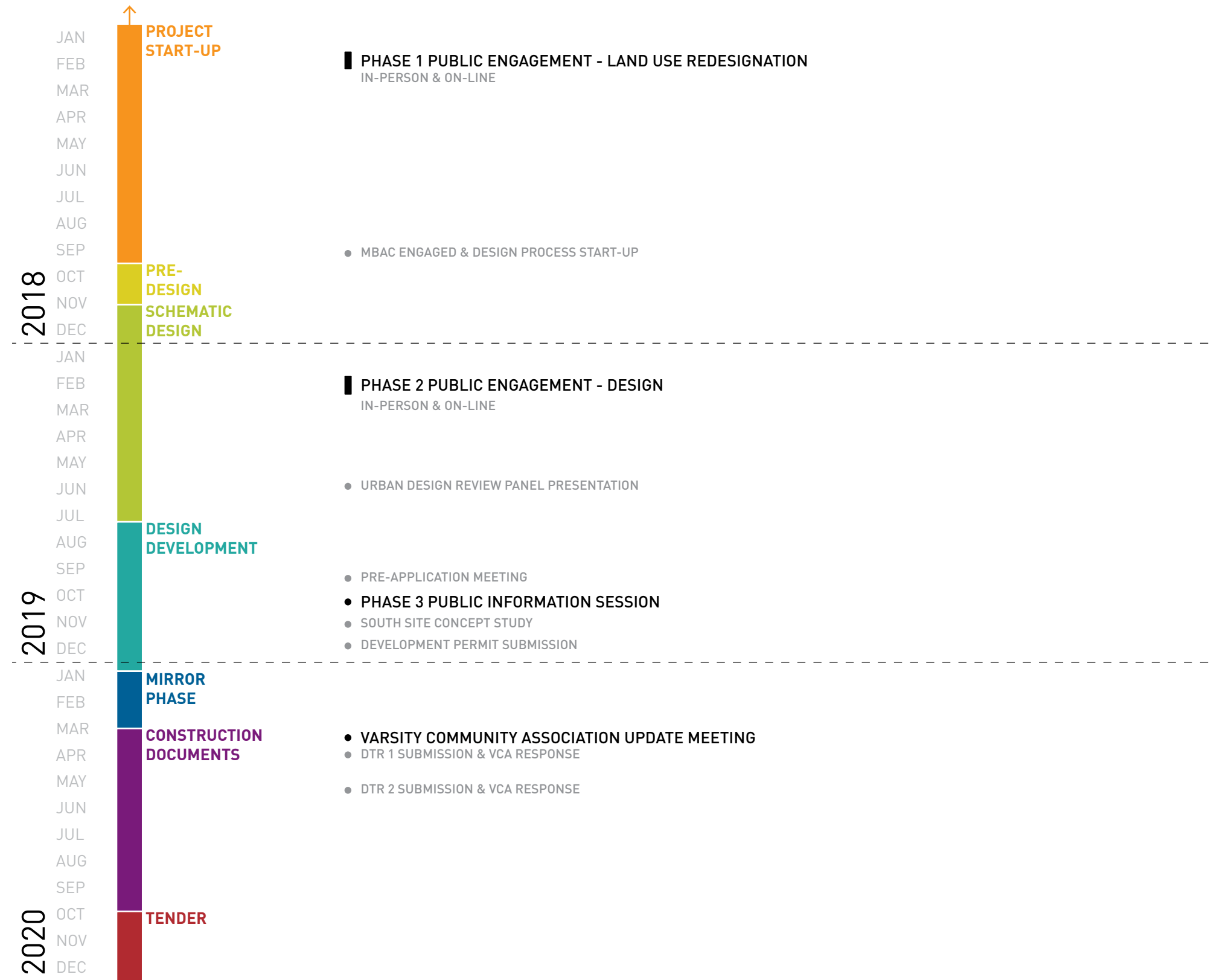
In addition to the continued and ongoing communications conducted by The City of Calgary with the Varsity Community Association throughout the project, the Public Engagement strategy included three major engagement phases.

**Phase 1 Public Engagement** focused on the proposed land use re-designation, which proposed the inclusion of a residential component and other services and amenities in addition to the existing emergency services use. An in-person session was held for adjacent property owners on January 24, 2018 and a drop-in session on January 31, 2018 for all Varsity residents. The on-line feedback form was available February 2 - 16, 2018. Four high-level themes came out of the discussions and comments: project site, potential amenities or services, traffic, and design elements along with other general comments about the project.

**Phase 2 Public Engagement** focused on the design of the new site (Lot 1) as well as report back from Phase 1 and showed the progress of the design. Two drop-in sessions open for all Varsity residents were held on February 7, 2019 and February 9, 2019. The on-line feedback from was available from February 7 - 24, 2019. High level themes arose from the discussion and comments including the preference for the Fire Station to be a traditional, brick exterior, the proposed greenspace seen as potential gathering for contemplative and unstructured activities, preference for integrated seating style, and generally participants wanted to see good design of the facility to mesh with the community.

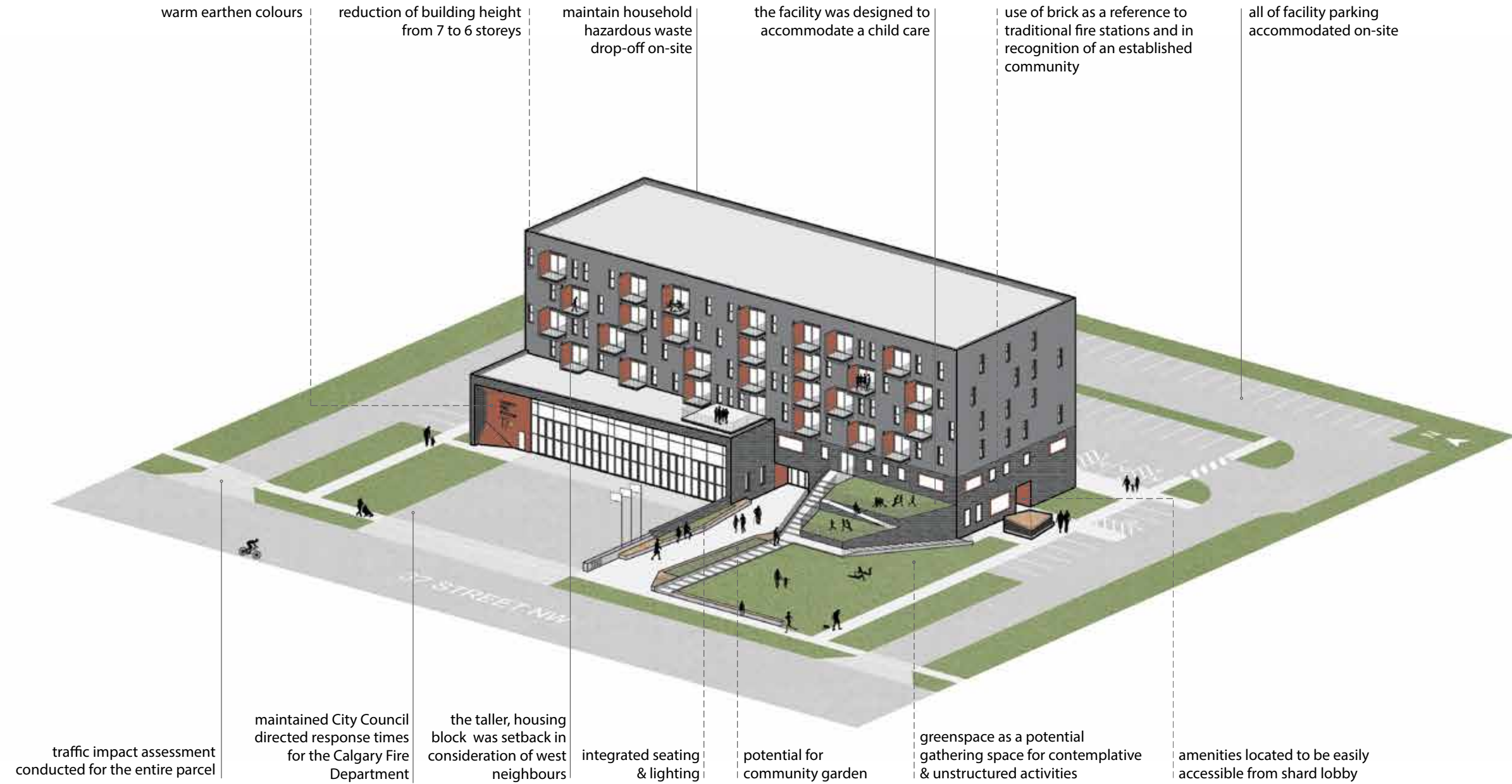
**Phase 3 Public Engagement** included a Public Information Session, held on October 17, 2019. This in-person session showed the public where the project was in the design process prior to submission of the development permit, as well as illustrated outcomes of integrated community feedback from the previous sessions. The majority of the responses received in person or from feedback forms reflected a positive response to the current design presented and to the process that was followed to reach this stage of the design.

The Public Engagement process connected with Varsity residents with additional targeted communications with adjacent land owners, the Ward Councilor and the VCA. The engagement resulted in positive impacts to the project including design changes, such as the type of exterior materials proposed, the lowering of the height by one story, and conducting a traffic impact assessment.





Applicant Design Brief



PUBLIC ENGAGEMENT OUTCOMES

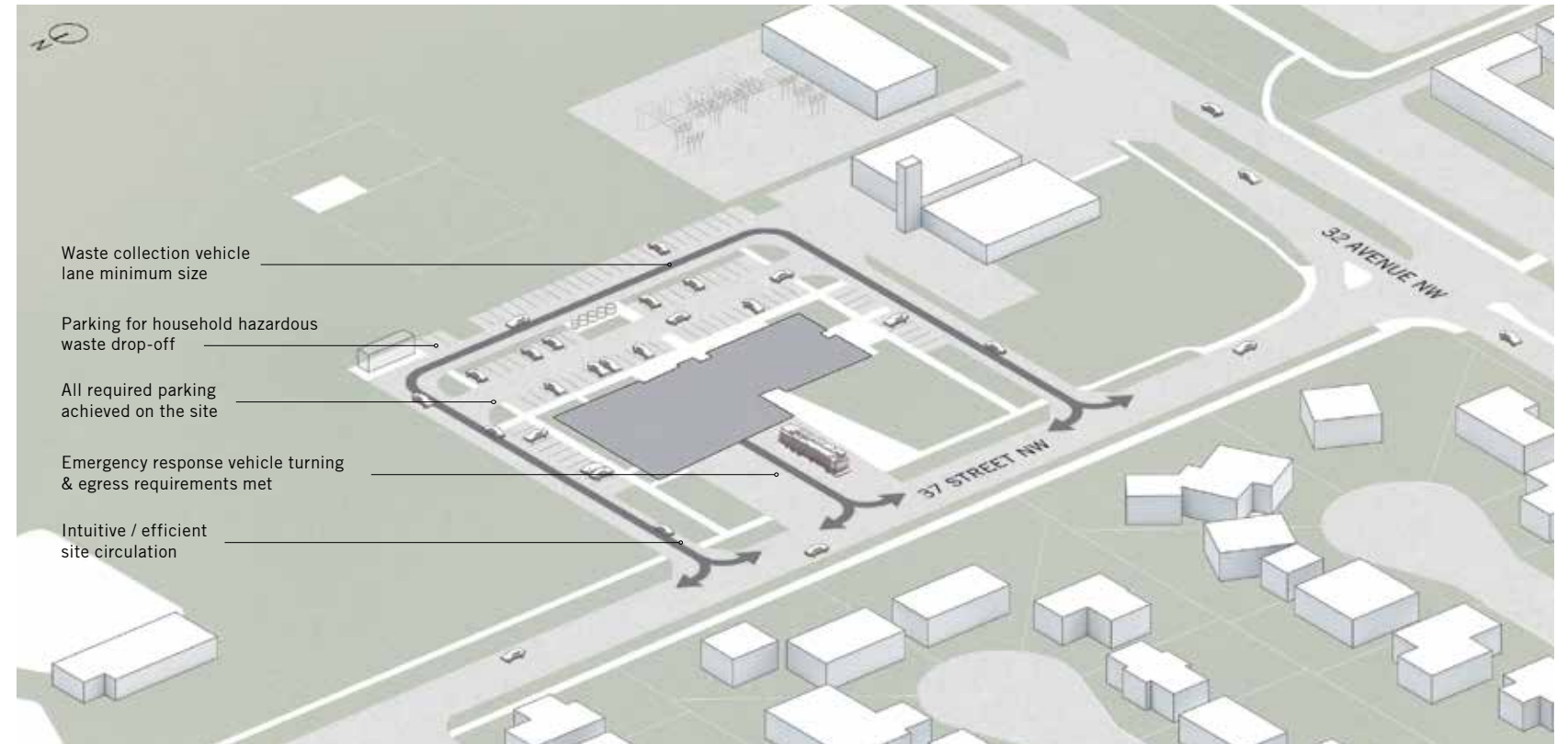
- Phase 1 Engagement Outcome
- - - Phase 2 Engagement Outcome

# DESIGN OVERVIEW

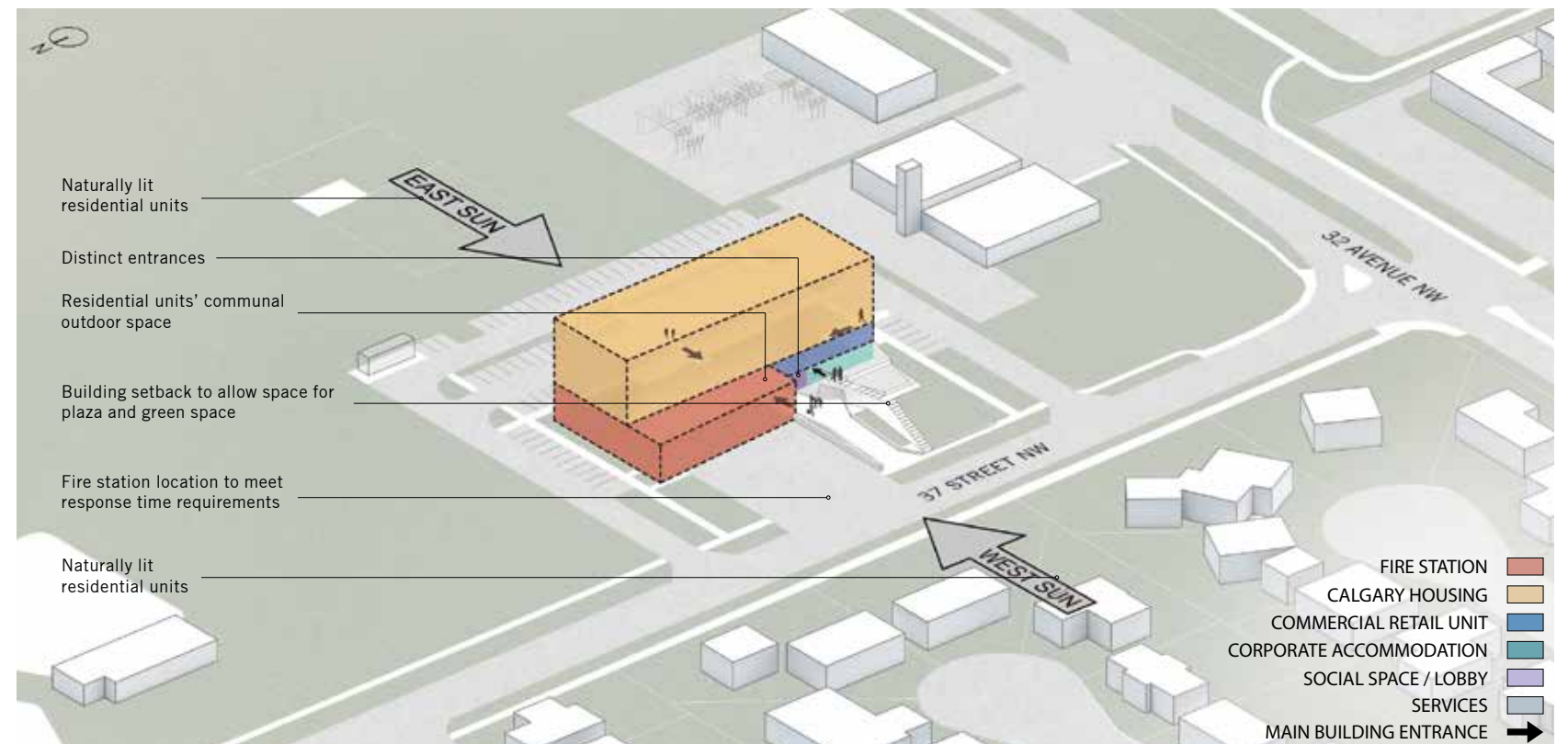
From a site planning perspective, the design creates a formal, public front that is characterized by the absence of parking, the presence of formal and informal soft and hardscapes, and honorific urban and architectural elements that signal the presence of different programmes. The front public green space is understood as a continuation and extension of the large street trees and green space along 37th Street, an informal social space that can be occupied by the adjacent community and building users, but also acts as a buffer to the adjacent small-scale suburban fabric. This softscape area connects to the daycare outdoor play areas, the semi-public roof deck for the affordable housing, the main entry plaza and entry, and various forms of outdoor seating conducive to an animated public realm.

The site planning on the north, east and west sides is optimized based on shared parking, dedicated parking, circulation routes for multiple modes of use, and the public access to the Household Hazardous Waste Drop-Off. The design is compact and efficient, with dedicated parking adjacent to the related uses, including childcare drop-off connected to both interior and exterior access to the childcare space. The facility's garbage and recycling area is located directly across from a facility entry and screened by landscaping. The site design also features two accesses, due to the complexity of circulation, with the secondary drive aisle to the south designed to be shared with the development of the south parcel.

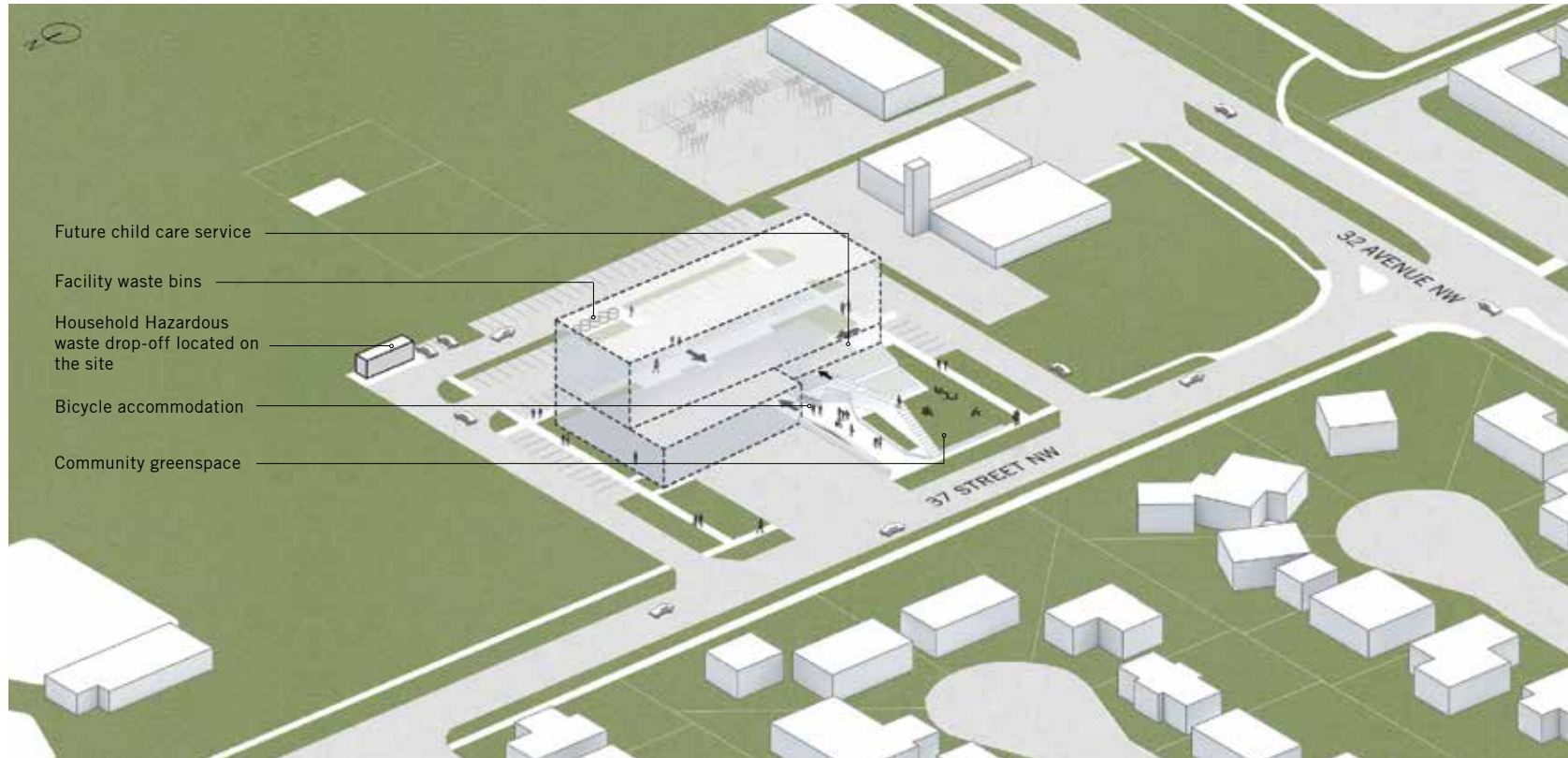
As an urban form, the building mass is a manifestation of the three adjacent contexts and their primary typologies. Specifically, the building mass echoes the 'objects in a landscape' typical in the University Research Park and the University of Calgary, but also emulates the front yard condition typical of the residential fabric of Varsity. This urban form pushes the major mass to the 'back' of the site, away from the small-scale residences to the west, and uses the public podium and related landscape development as a scalar threshold and 'front porch' area, providing a gradation of public to private appropriate to the context as well as the building's uses. Critical to the development of the 'front yard' was the legibility of the facility and its programmes from both the pedestrian experience as well as the vehicular trajectory. Finally, in terms of urban form, it was key that the residential block be oriented north-south in order to provide the most equitable access to natural light.



ROAD & PARKING LAYOUT



BUILDING LAYOUT



FACILITY AMENITIES



SITE LANDSCAPING & PEDESTRIAN ORIENTED DESIGN



SITE PLAN



SOUTH WEST RENDER

# EXTERIOR DESIGN & MATERIALS

From an architectural perspective, the potential and necessary synergies inherent in an integrated facility are most fully manifested in the two-storey podium, a brick-clad form that transforms to create site-specific and programme-specific spaces and places while maintaining an overall legibility. Specific formal transformations within the brick podium include the heroic cantilever of the fire station within which is nestled the full glazed doors exhibiting the fire trucks inside and symbolic bell outside, the extension of the podium wall into a habitable landscape wall incorporating the building address and emblematic flag poles, the canted brick retaining wall within which is housed the bike parking, the outdoor play areas for the childcare spaces, and entry deformations that protect the user from inclement weather. Specific formal 'ruptures' within the podium are clad in terracotta coloured masonry to highlight key programmes or symbols: for example, the bike parking and the emblematic bell. The materials of the podium, brick and curtainwall, are robust and of institutional quality, appropriate for high-use public areas.

Alongside these primary form-based transformations, there are two families of fenestration. The first type is a base-line window that is compositionally connected with the affordable housing fenestration. The second type of window celebrates unique programmatic aspects within the facility (such as the childcare rooms) and are larger and armed with an urban-scale frame that is coloured differently from the podium brick, as a user-centric animation of the façade.

Above the podium is the affordable housing block, a simple volume clad in a residential, fibre cement board panel finished in a complimentary colour to the brick. Within this overall form are the balcony punctuations, expressed as projected additive forms. These balconies, composed in an asymmetrical manner on the facade, are an expression of the individuals and individual families living within the facility and are clad fibre-cement panels, finished in a warm red tone on the interior of the balcony to relate to the warm earthen terracotta within the podium.



## A: PODIUM



A1 - BRICK PODIUM



A2 - TERRACOTTA CLADDING & SOFFIT

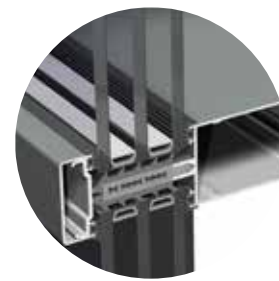


A3 - HIT & MISS BRICK FEATURE

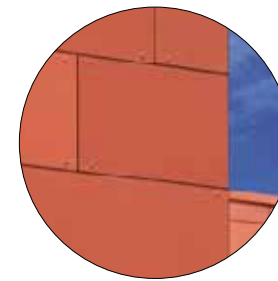
## B: HOUSING BLOCK



B1 - FIBRE CEMENT BOARD CLADDING



B2 - FIBRE GLASS CURTAIN WALL



B3 - HIGH PRESSURE LAMINATE PANELS

## C: LANDSCAPE ELEMENTS



C1 - WOOD CLAD LINEAR SEATING



C2 - SAW-CUT BRUSHED CONCRETE



C3 - HDPE MOVABLE FURNITURE



NORTH ELEVATION



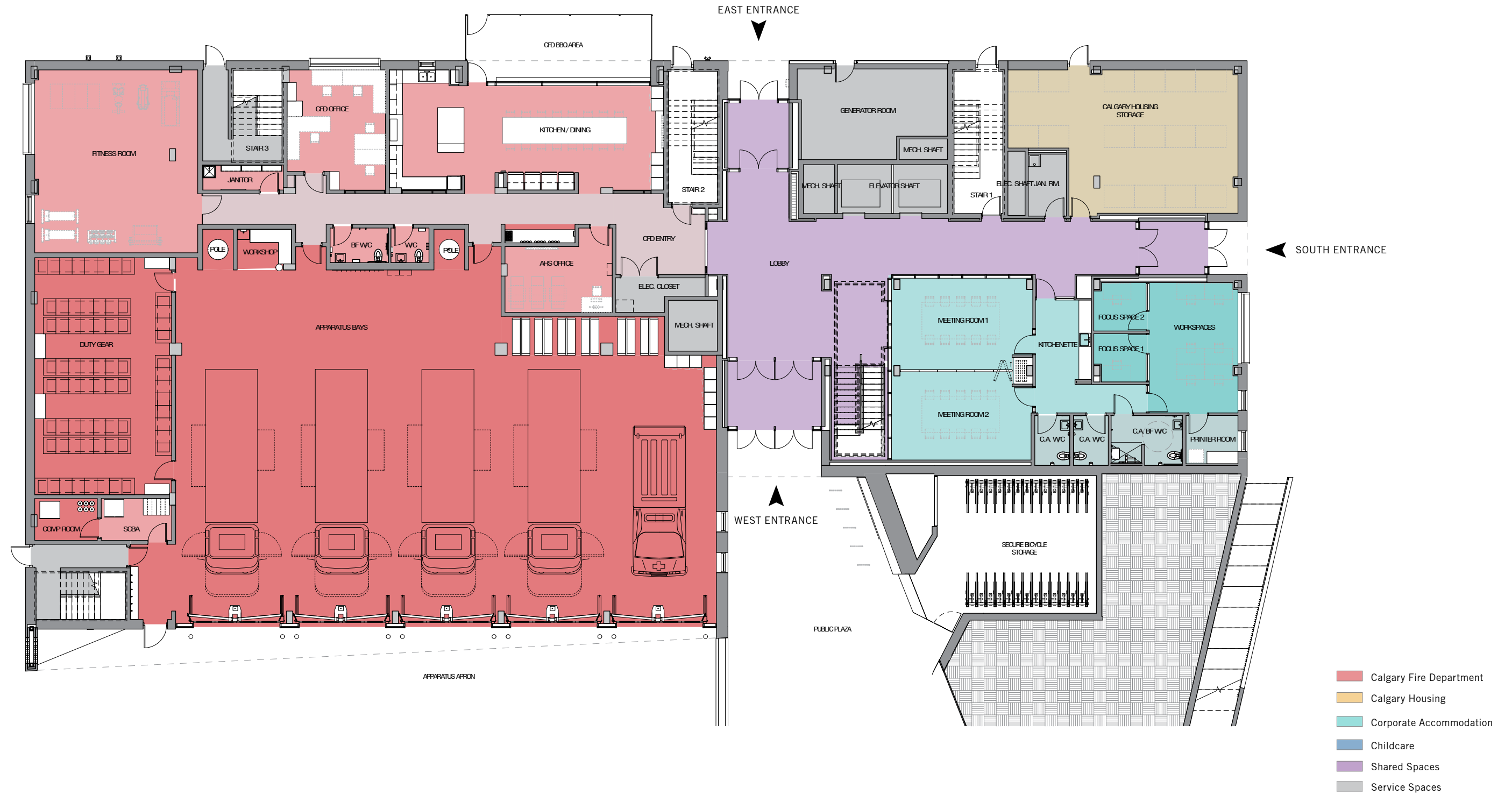
EAST ELEVATION



SOUTH ELEVATION



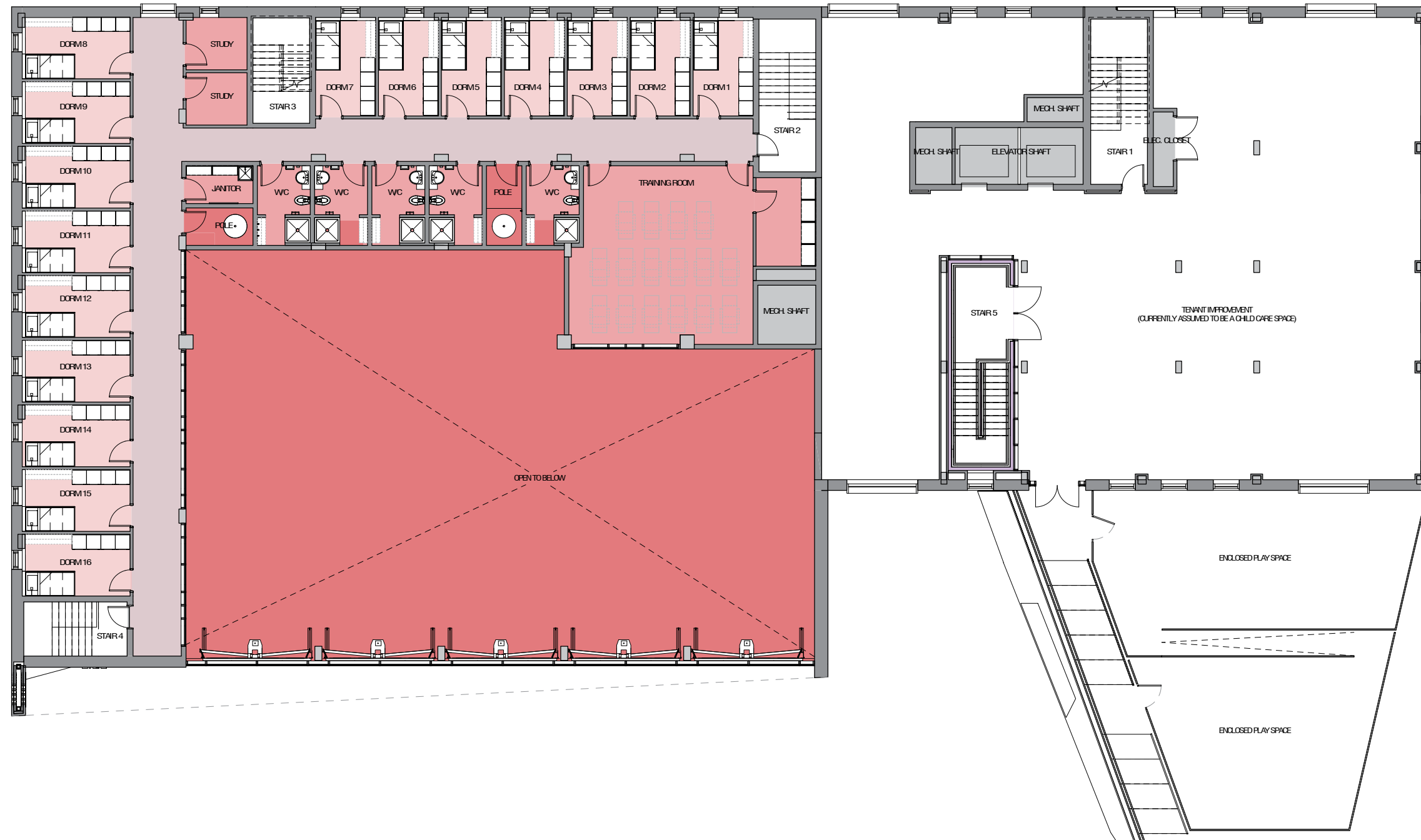
WEST ELEVATION



LEVEL 1 FLOOR PLAN







LEVEL 2 FLOOR PLAN



LEVEL 3 QUANTITY SUMMARY:

|                  |   |
|------------------|---|
| STUDIO UNITS:    | 2 |
| 1-BEDROOM UNITS: | 6 |
| 2-BEDROOM UNITS: | 3 |
| 3-BEDROOM UNITS: | 1 |
| RESOURCE ROOM    | 1 |



- Calgary Fire Department
- Calgary Housing
- Corporate Accommodation
- Childcare
- Shared Spaces
- Service Spaces

LEVEL 3 FLOOR PLAN



| LEVELS 4, 5 & 6 QUANTITY SUMMARY |    |
|----------------------------------|----|
| STUDIO UNITS:                    | 6  |
| 1-BEDROOM UNITS:                 | 15 |
| 2-BEDROOM UNITS:                 | 12 |
| 3-BEDROOM UNITS:                 | 3  |
| SOCIAL SPACE                     | 3  |



- Calgary Fire Department
- Calgary Housing
- Corporate Accommodation
- Childcare
- Shared Spaces
- Service Spaces

LEVEL 4, 5 & 6 FLOOR PLANS  
(BALCONY LOCATIONS DIFFER PER FLOOR, REFER TO ELEVATIONS)



# SOUTH SITE CONCEPT STUDY SUMMARY

Following a Pre-Application Meeting (PE2019-01644) held on October 9, 2019 for the Varsity Multi-Service Redevelopment (VMSR) project, the marc boutin architectural collaborative inc. (MBAC) was retained by The City in November 2019 to complete a concept study for the remaining south portion of the parcel, primarily as a response to the Urban Design Review Panel outcomes to address potential future connections and opportunities on the south portion of the parcel. The purpose of this concept study is to illustrate the holistic future development opportunities for the entire parcel located at 3740 - 32 Avenue NW (Plan 1799GC Block 2 Lot 9).

The south portion of the site is proposed to be divided into two lots: Lot 2 and Lot 3. Importantly, the subject parcel is owing 10% of its area to municipal reserve at the time of subdivision. Although subdivision is not being pursued at this time, this area is being proposed to be set aside as a future park to strategically plan for the future and meet the requirements of the owed municipal reserve when subdivision takes place.

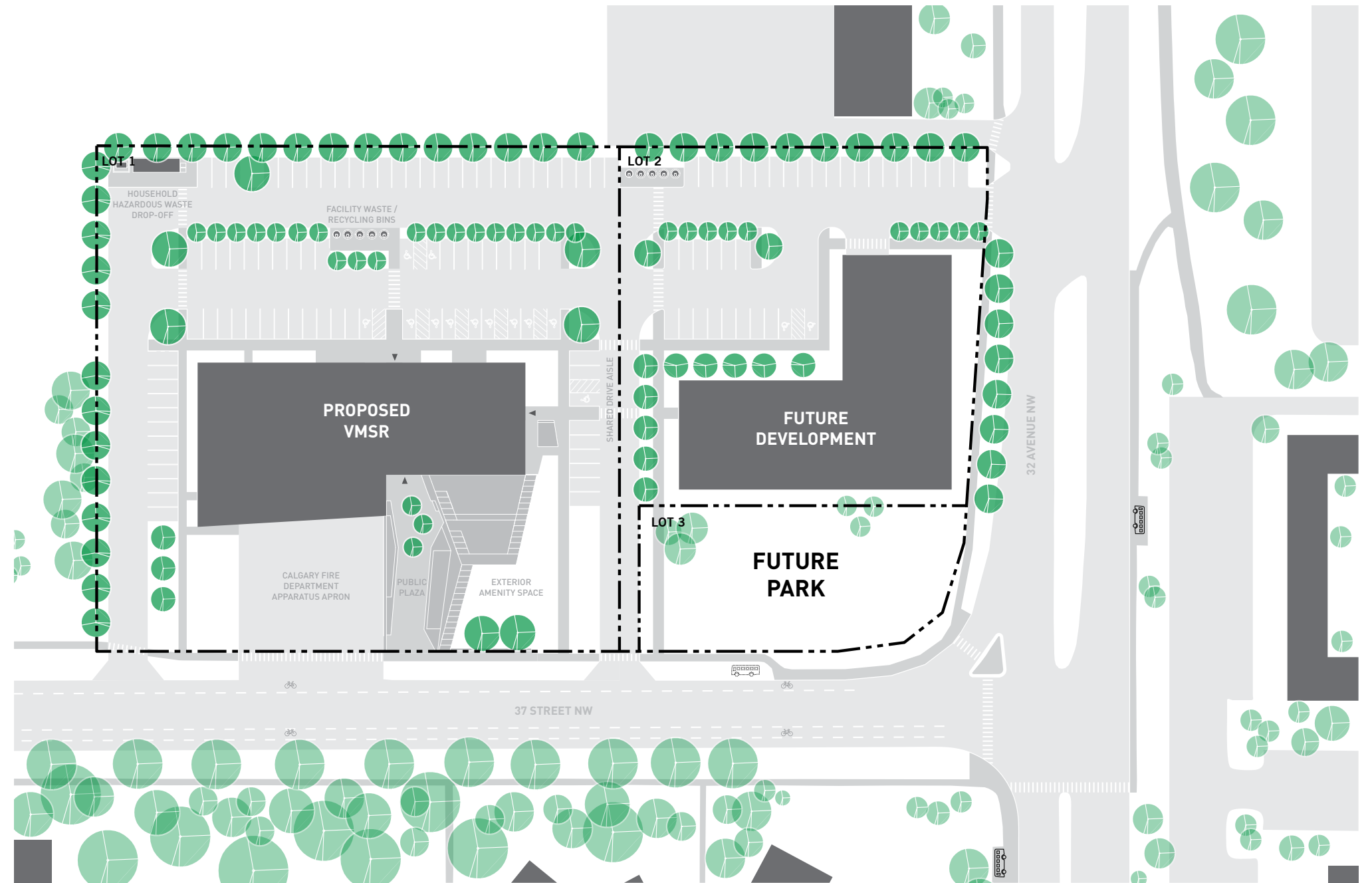
Arising out of the South Site Concept Study, the proposed locations for Lots 2 and 3 are based on a series of objectives:

- To situate the future development of Lot 2 to emulate the surrounding context condition of 'objects in a landscape',
- To create a setback to encourage future development of Lot 2 to act as a good neighbour to the single family residential homes to the west of 37 Street NW,
- To maintain 37 Street NW's park street identify with the proposed park use on Lot 3,
- To allow the continued operations of the existing fire station during the development of Lot 1, and
- To provide the highest development flexibility for Lot 2.

Following this analysis, a series of massing and concept studies test fit potential future development for both lots. Lot 2 assessed a similar scale development to the Varsity development on Lot 1, and resulted in a proposed MU-1 land use redesignation to allow for a mixed-use development but with recommended restrictions on height to minimize impact to the surrounding community. The study for Lot 3 included two park design concepts.

## Highlighted Outcomes

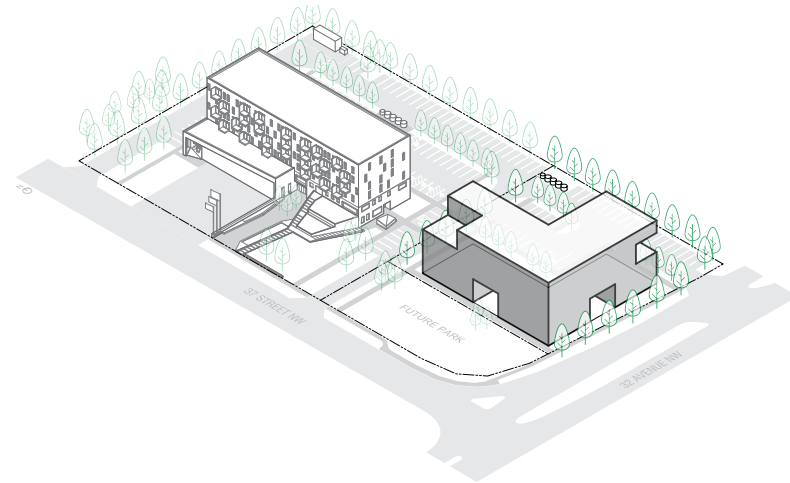
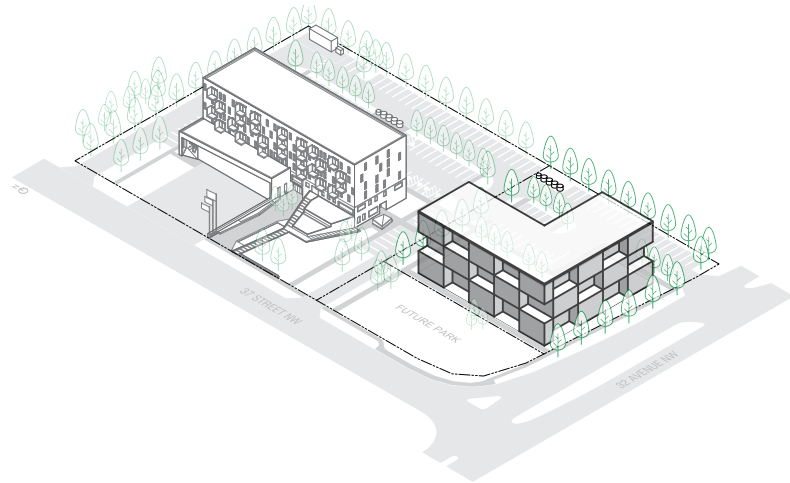
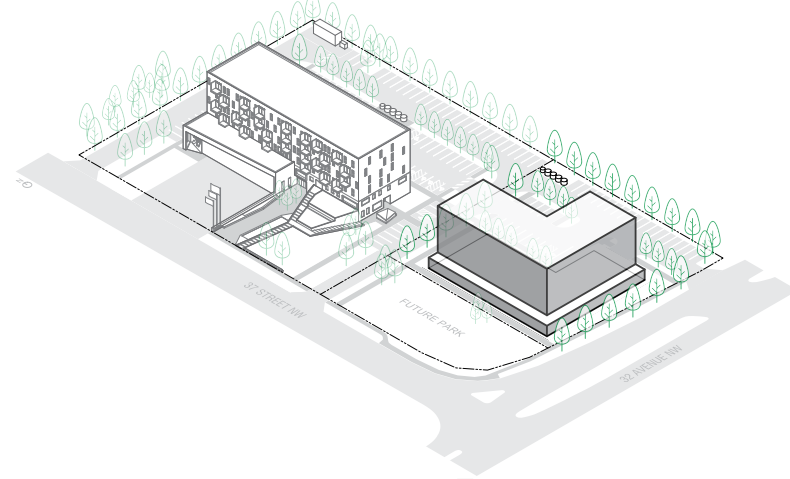
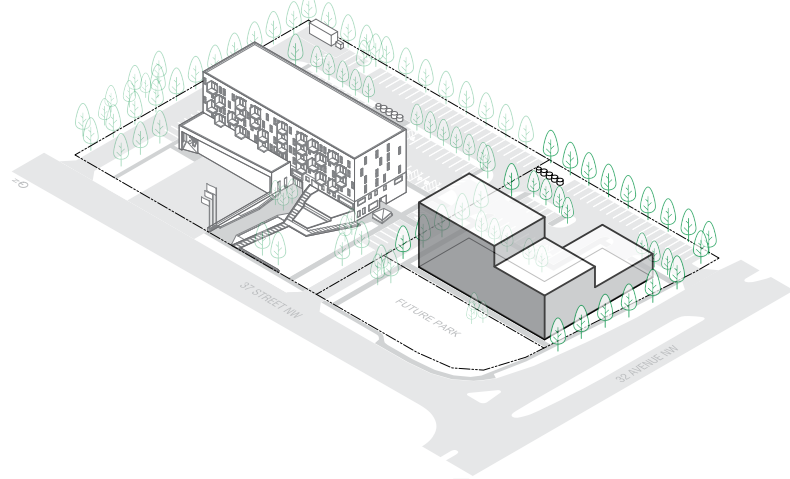
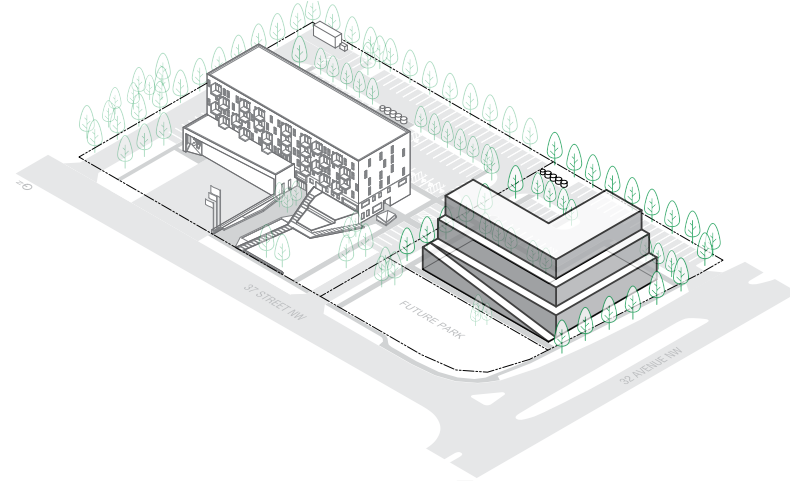
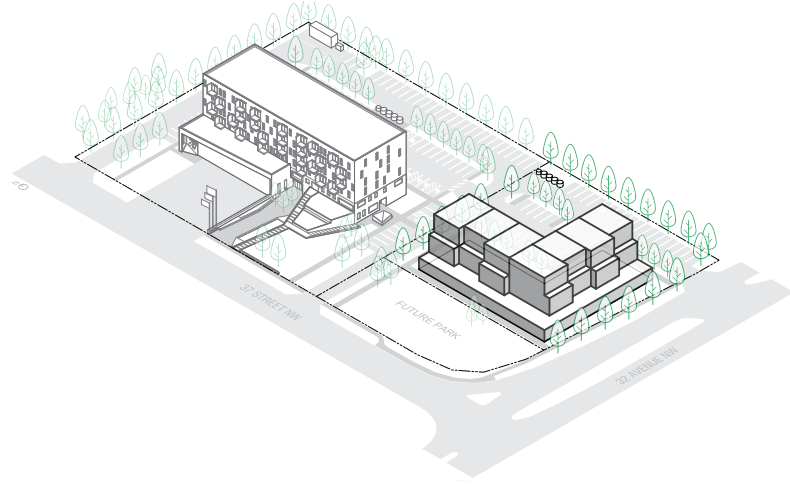
An important result of this concept study was a decision to mirror the project in the north / south orientation while maintaining the overall program. With a better location for CFD emergency response to the northern edge of Lot 1, this allowed for stronger connections of the public uses and pedestrian connections of Lot 1 to the future developments of Lot 2 and Lot 3.



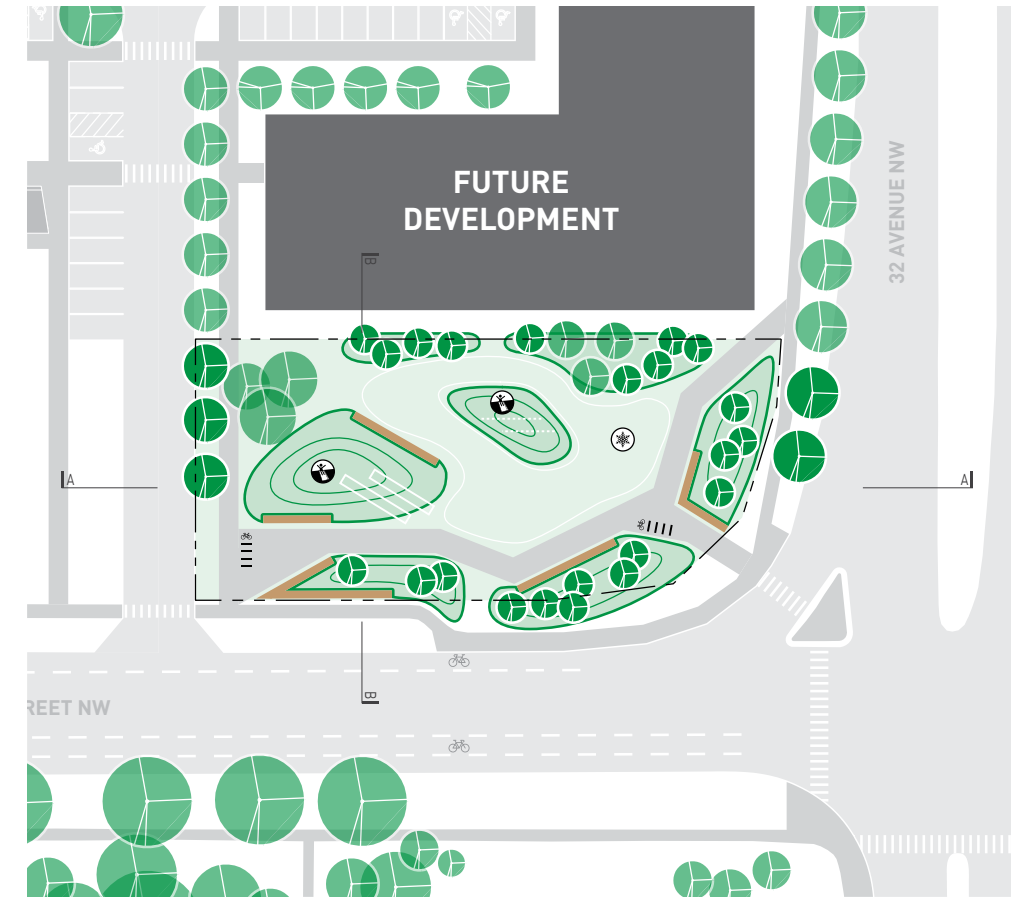
CONCEPT SITE PLAN

## LEGEND

- buildings
- existing trees
- proposed trees
- 🚲 bike lanes
- 🚏 active bus stop
- 🚏 inactive bus stop



LOT 2: MASSING STUDIES



LOT 3: PARK CONCEPT DESIGN OPTION 1

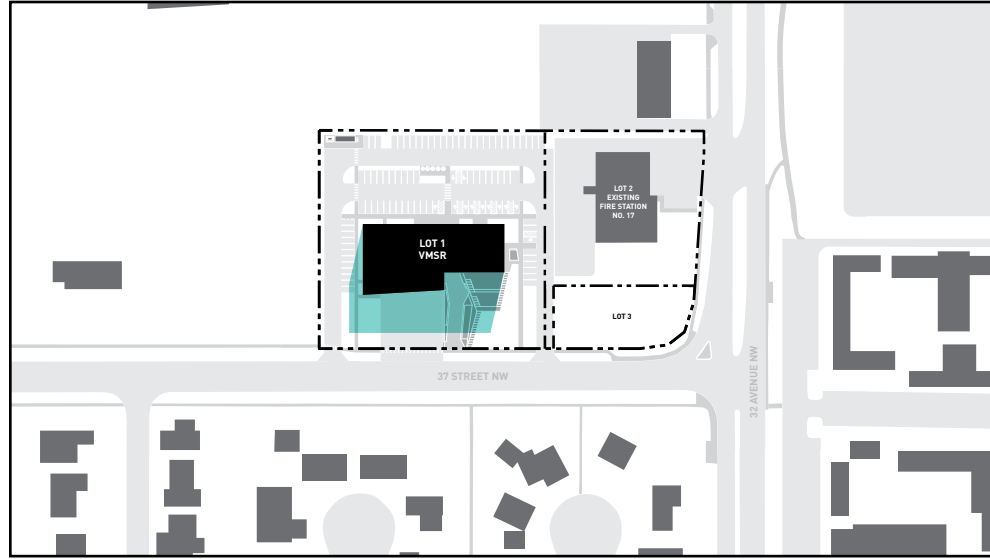


SECTION A

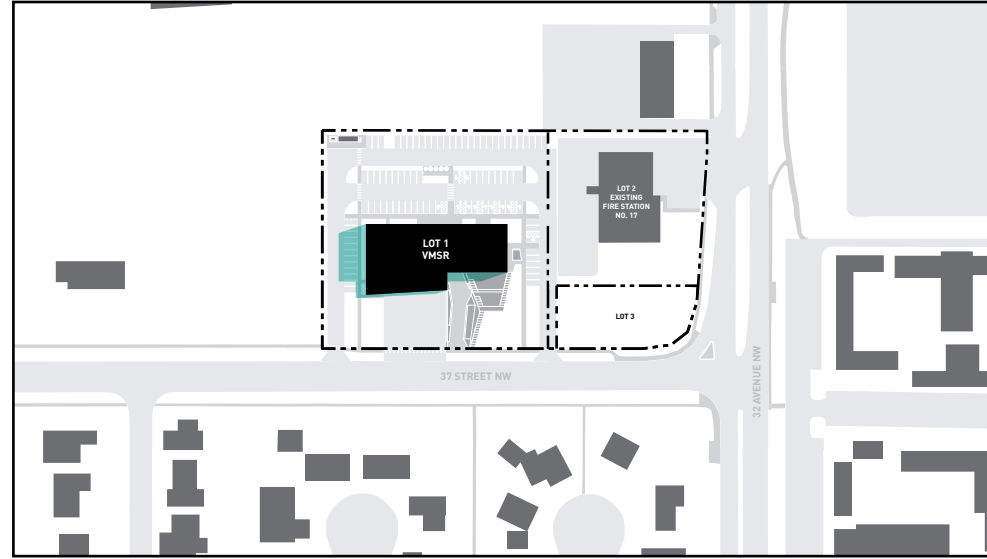


SECTION B

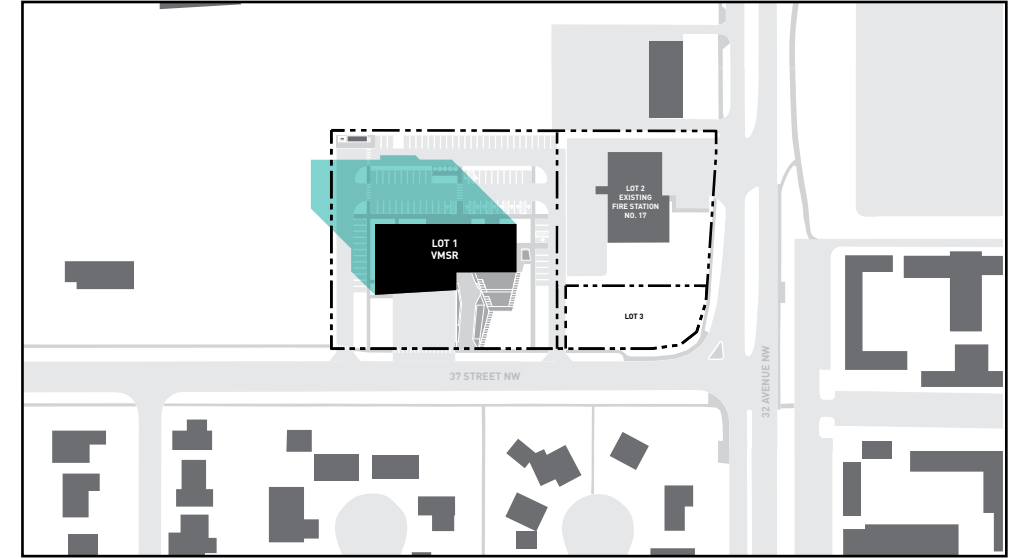
# LOT 1 SHADOW STUDIES



JUNE 21 - 9:00AM



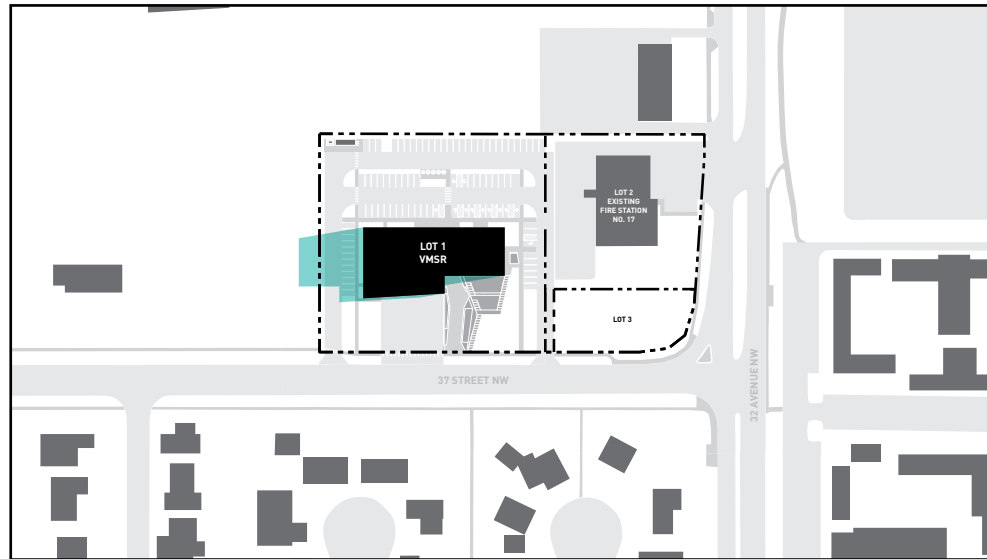
JUNE 21 - 12:00PM



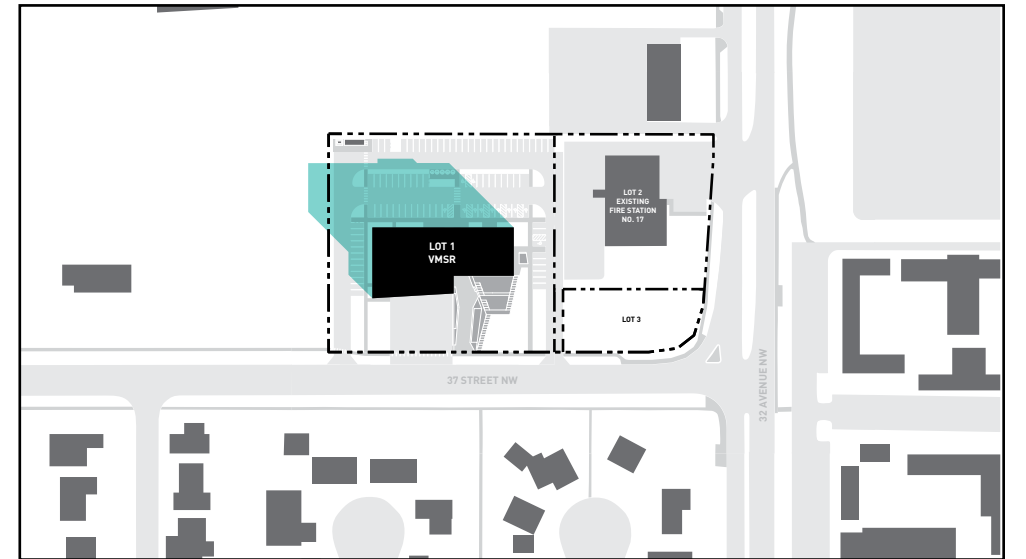
JUNE 21 - 3:00PM



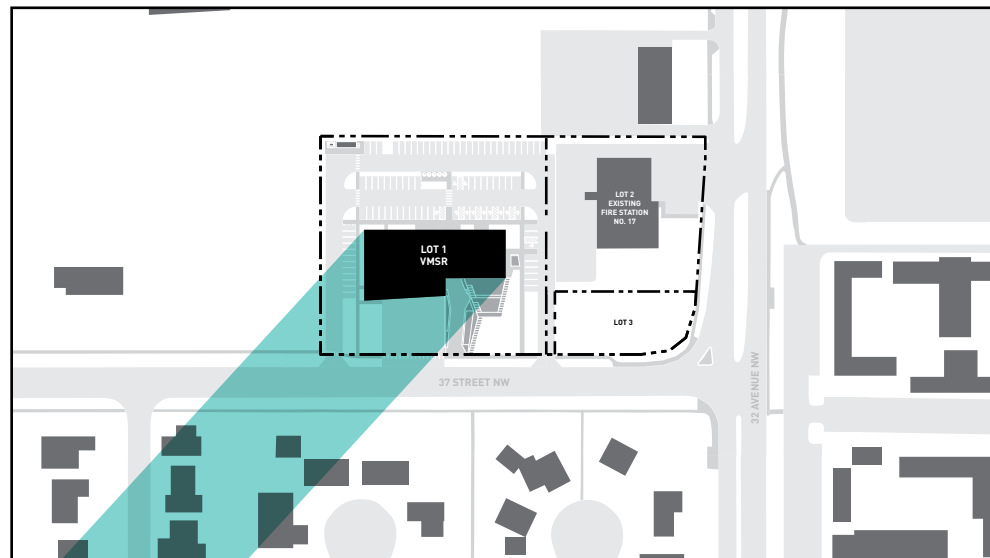
SEPTEMBER 21 - 9:00AM



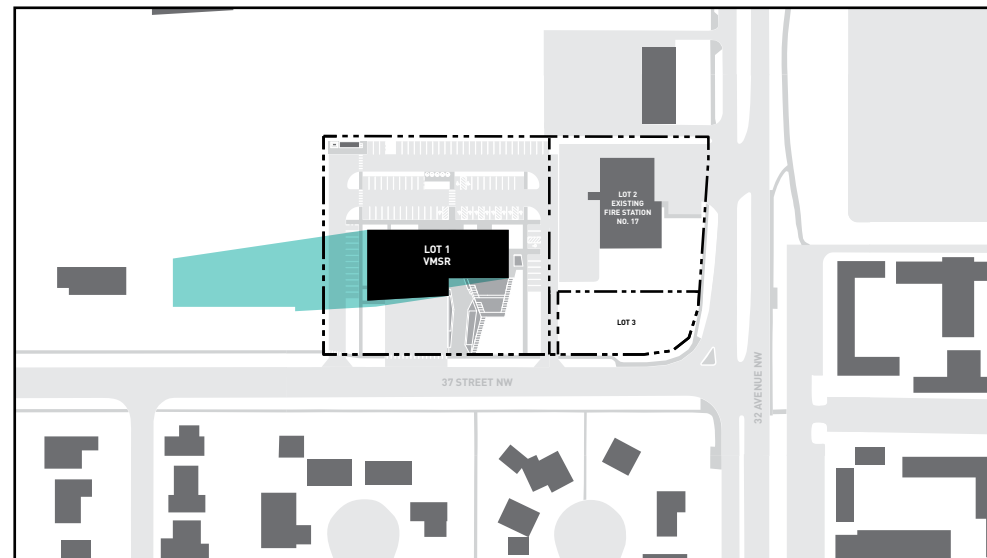
SEPTEMBER 21 - 12:00PM



SEPTEMBER 21 - 3:00PM



DECEMBER 21 - 9:00AM



DECEMBER 21 - 12:00PM



DECEMBER 21 - 3:00PM