

re-imagining neonatal intensive care.

Design for Dwelling ENVR3013

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The first year of a newborn's life is the most crucial to their development into a healthy childhood because the brain of a newborn most rapidly develops during this first stage of life. During this time, frequent communication and interactions between a newborn and their caregiver (oftentimes the parents) are important since it helps establish the essential relationship newborns need to secure with their parents, as well as promote the newborn's foundation for childhood learning (Winston and Chirot 12). Considering these conditions, it begins to question the current circumstances some parents face when their newborn is birthed prematurely and requires additional medical attention: How does this challenge the quality of the crucial first year for these premature newborns?

Parents and caregivers of these children are put in a position that requires them to spend most of their time in the hospital beside their newborns. The parental presence allows for these premature newborns to receive the intimate relationship they need for healthy development. However, parents are often unable to stay as long as they wish because their homes are further away from the hospital – this separation makes it physically, mentally and emotionally taxing for families during these difficult times. By re-imagining the West Island at Ontario Place into a Neonatal Intensive Care Unit (NICU) with individual dwelling units for parents to temporarily stay in while their child receives care, these realities can be improved for these families.

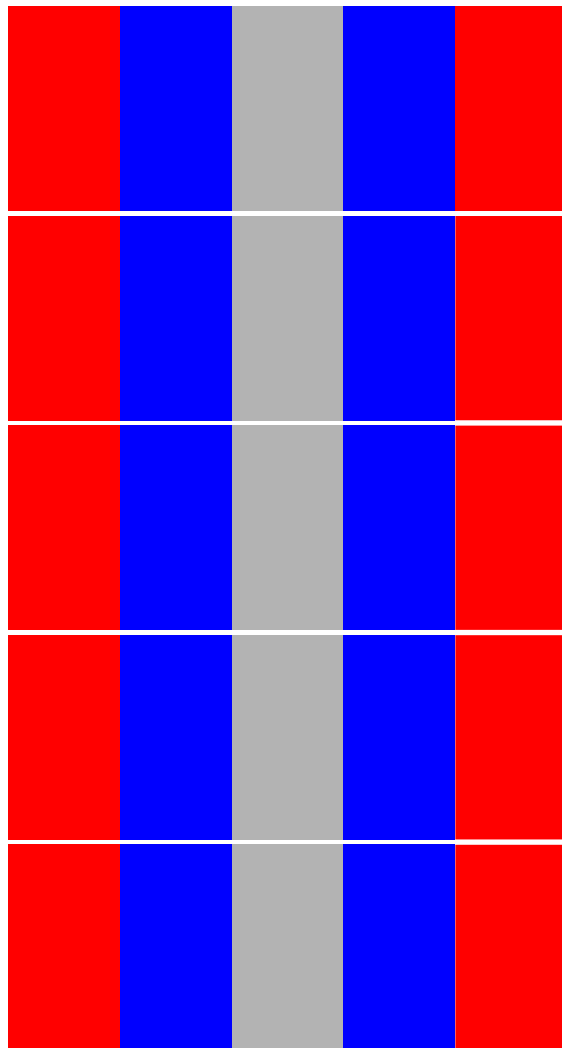
The duration of a newborn's stay in a NICU depends on the severity of their illness (how premature the newborn is). Certain hospitals in the GTA and Ontario offer different levels of Neonatal care – Level One NICUs are for mildly premature newborns who require a few days to a week of treatment, while Level Three and Four NICUs tend to significantly more premature newborns who require a few weeks to months of treatment. In Toronto and the surrounding area, these hospitals offer different levels of care: St. Michael's Hospital offers a Level 2 NICU, Mount Sinai Hospital and Sunnybrook Hospital offer Level 2 and 3, The Hospital for Sick Children offer Level 3 and 4, and St. Joseph's Hospital (the hospital closest to the project site) offers Level 2.

The West Island at Ontario Place is both within close proximity to St. Joseph's Health Centre yet well situated into more urban nature. This project seeks to expand St. Joseph's NICU into a Level 3 unit by leveraging the West Island's optimal setting to better provide young families with the opportunity to be closer with their newborn while they receive treatment.



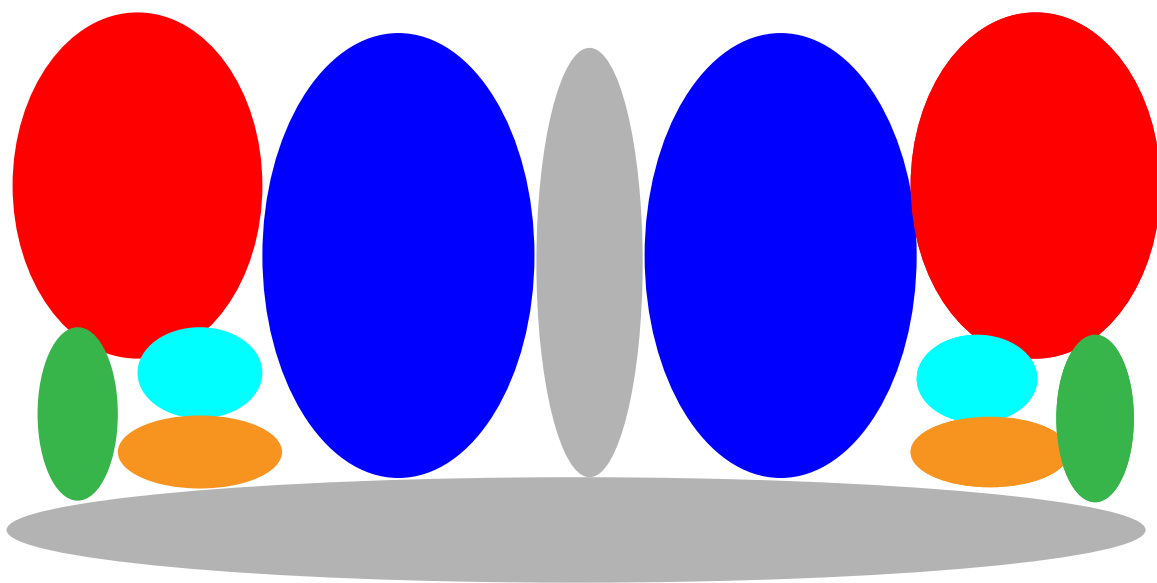
Case 1:

Proposed stacking diagram for this case



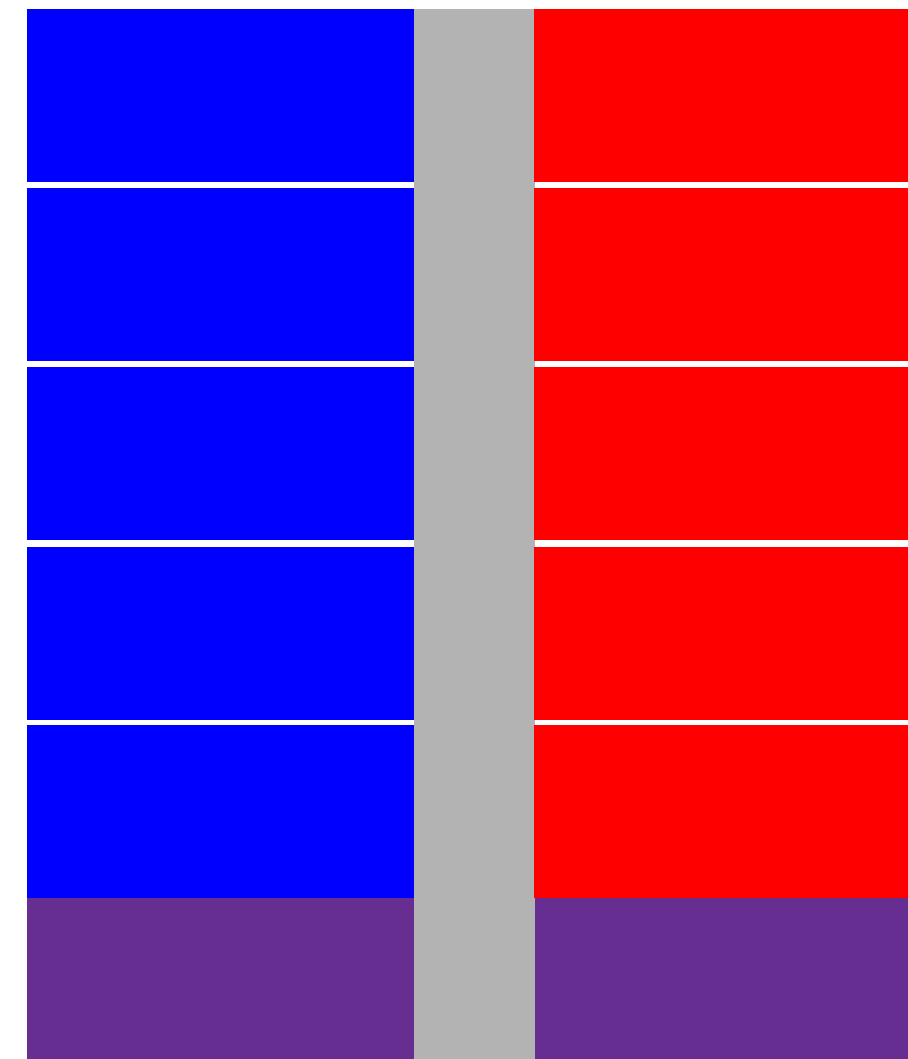
This particular program diagram shows mixed use buildings, indicated with individual dwellings beside their related NICU room. Two dwelling areas per floor, segregated from each other using circulation methods. Addresses a lack of community and interaction.

Proposed bubble diagram for this case



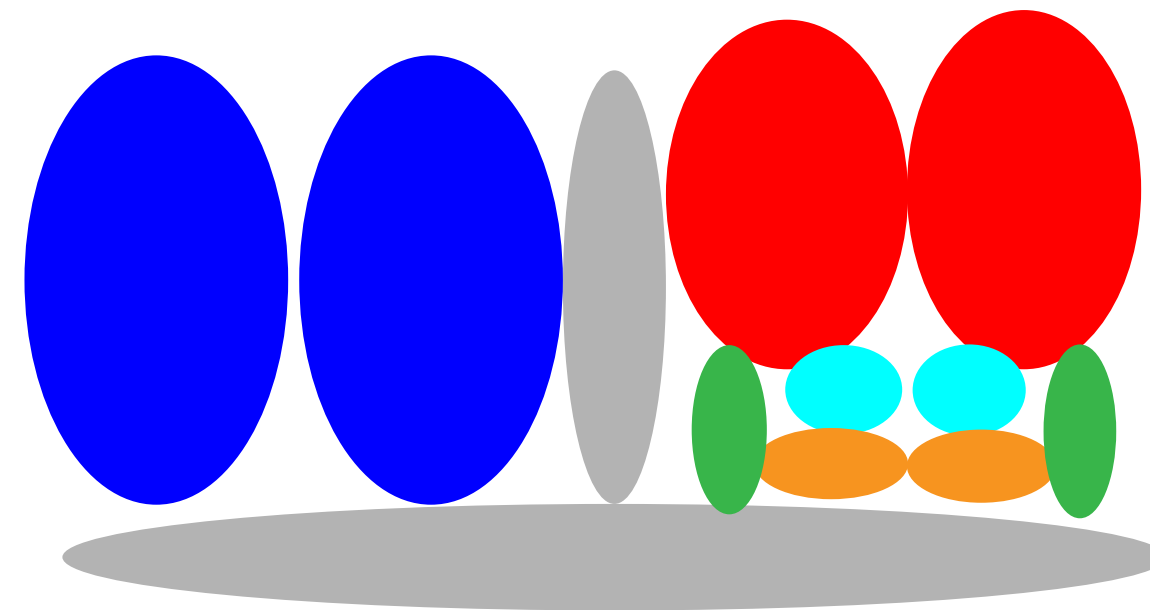
Case 2:

Proposed stacking diagram for this case



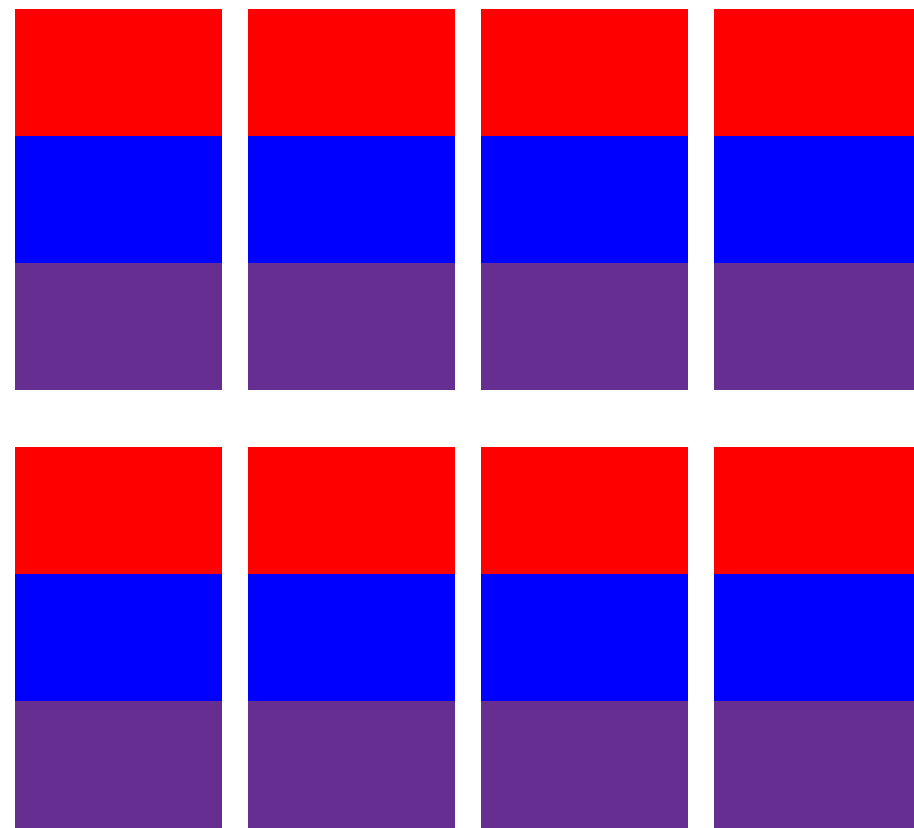
This particular program diagram shows the different aspects of program segregated in two different wings. Split by vertical circulation. Two dwelling per floor with adjacent related NICUs. separates parent from children, however addresses more community and interaction between families. Communal amenities provided on ground floor

Proposed bubble diagram for this case



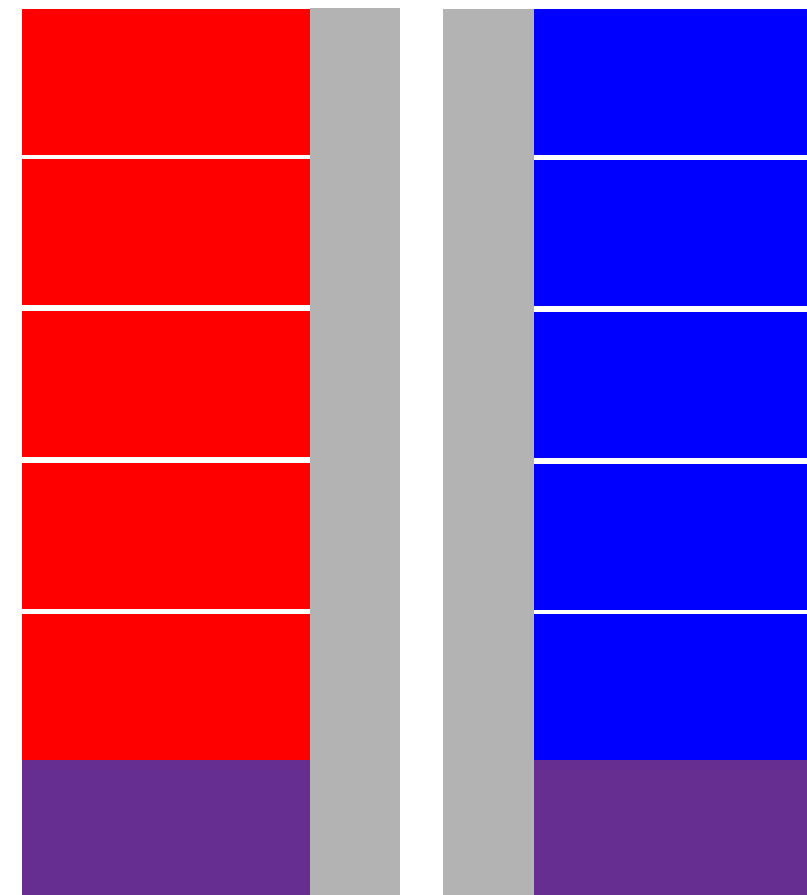
- Legend
- Individual dwelling
 - In dwelling NICU
 - W/C
 - NICU
 - Circulation
 - Dwelling entry
 - Community utilities
 - shared amenities

Case 3:
Proposed stacking diagram for this case



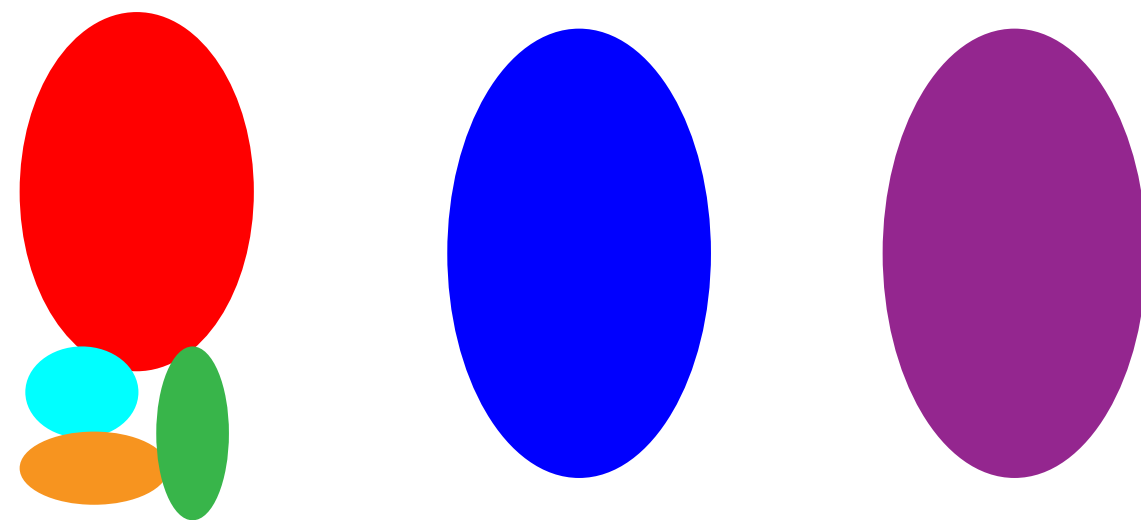
This particular program diagram shows each family's dwelling and NICU together, however separated by building, for privacy. Bottom level would be communal utilities such as groceries and restaurants. Extreme lack of community.

Case 4:
Proposed stacking diagram for this case

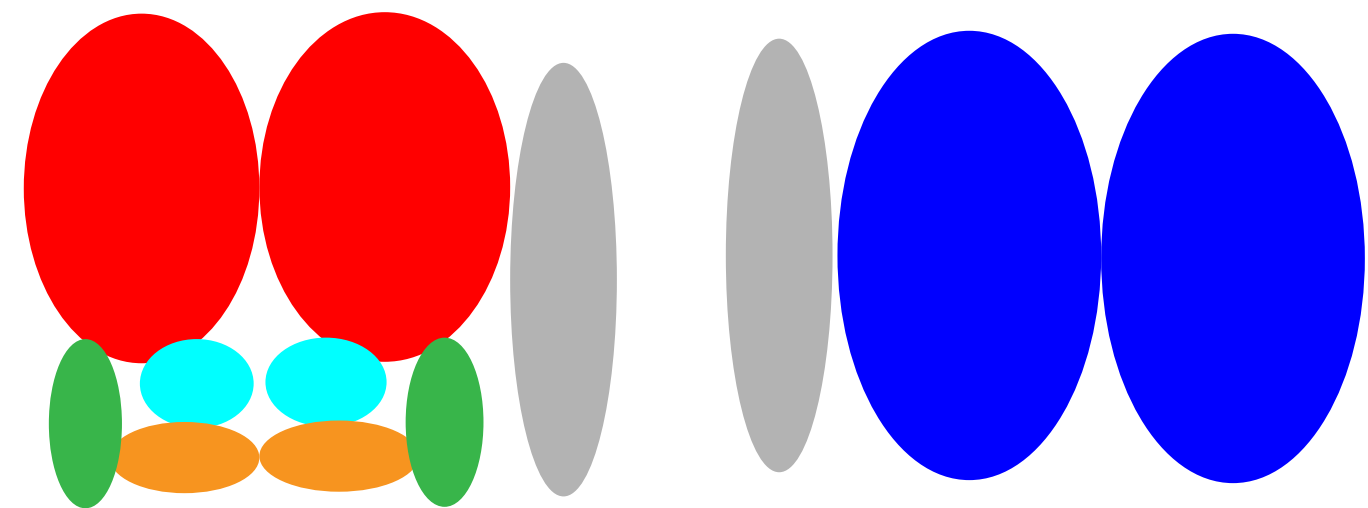


This particular program diagram shows each dwelling and NICU separated by building. Bottom level would be communal utilities such as groceries and restaurants. More community addressed with shared floors, and safety for the NICU babies being separated from the chaos of dwelling units.

Proposed bubble diagram for this case



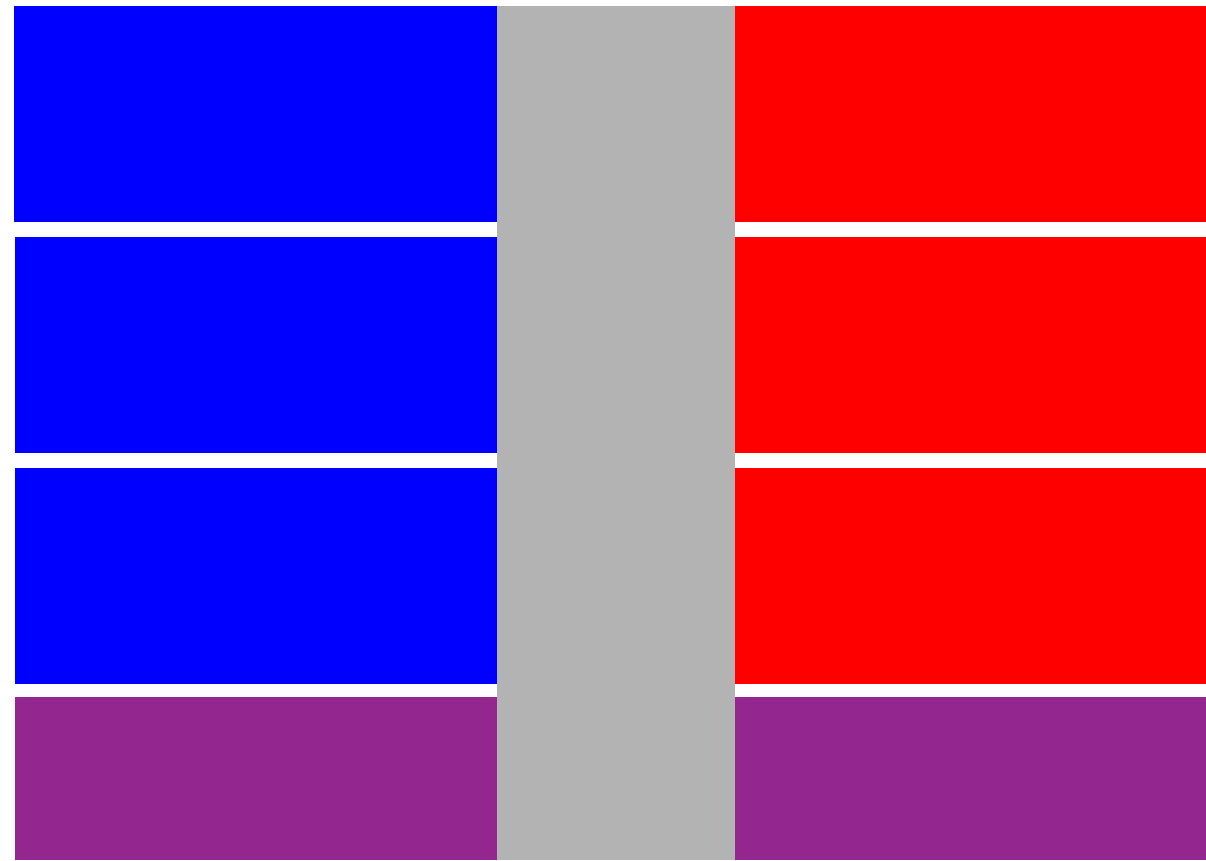
Proposed bubble diagram for this case



- Legend
- Individual dwelling
 - In dwelling NICU
 - W/C
 - NICU
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 - Dwelling entry
 - Community utilites
 - shared amenities

Case 5 (Chosen):

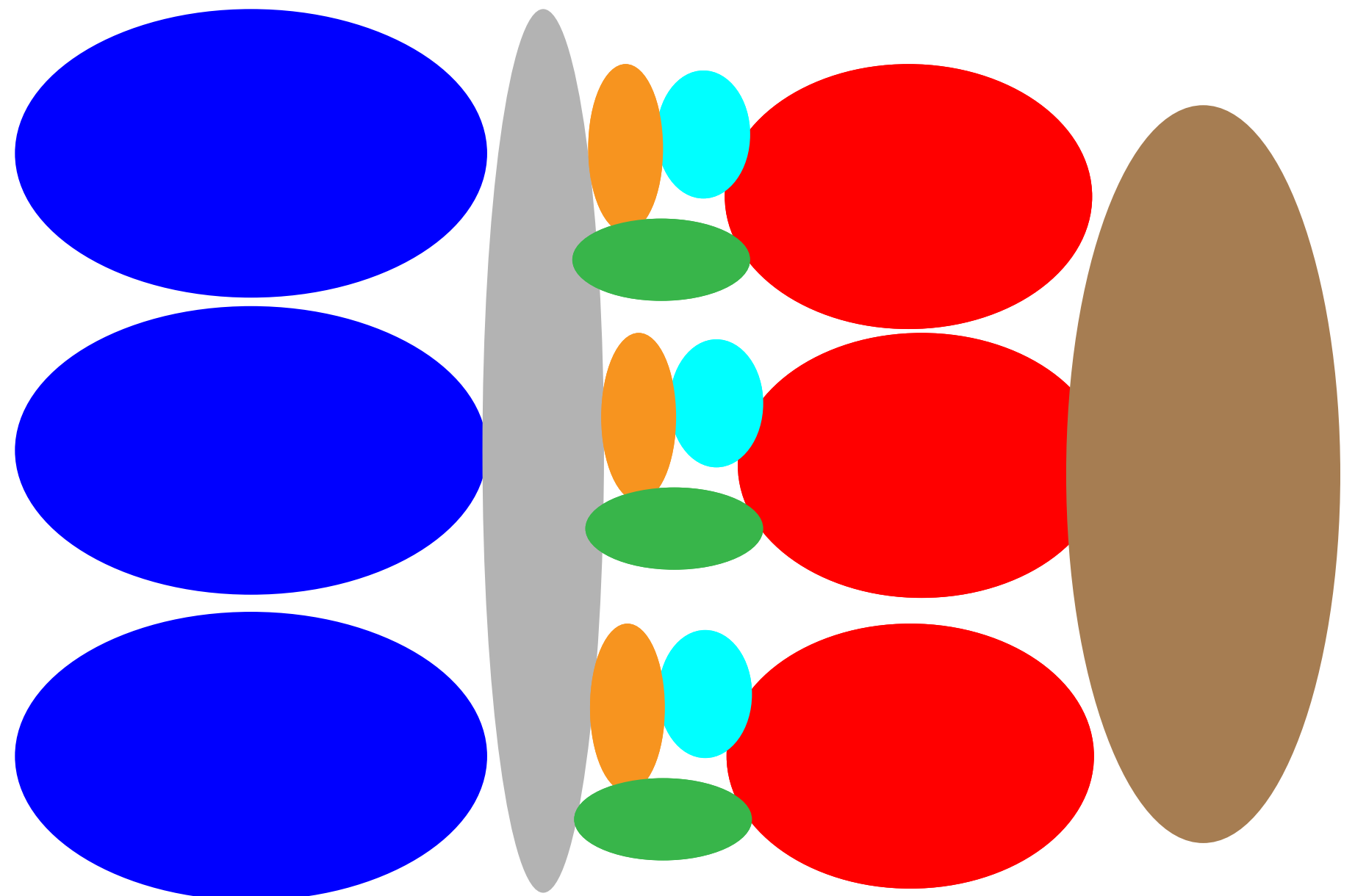
Proposed stacking diagram for this case



- Legend
- Individual dwelling
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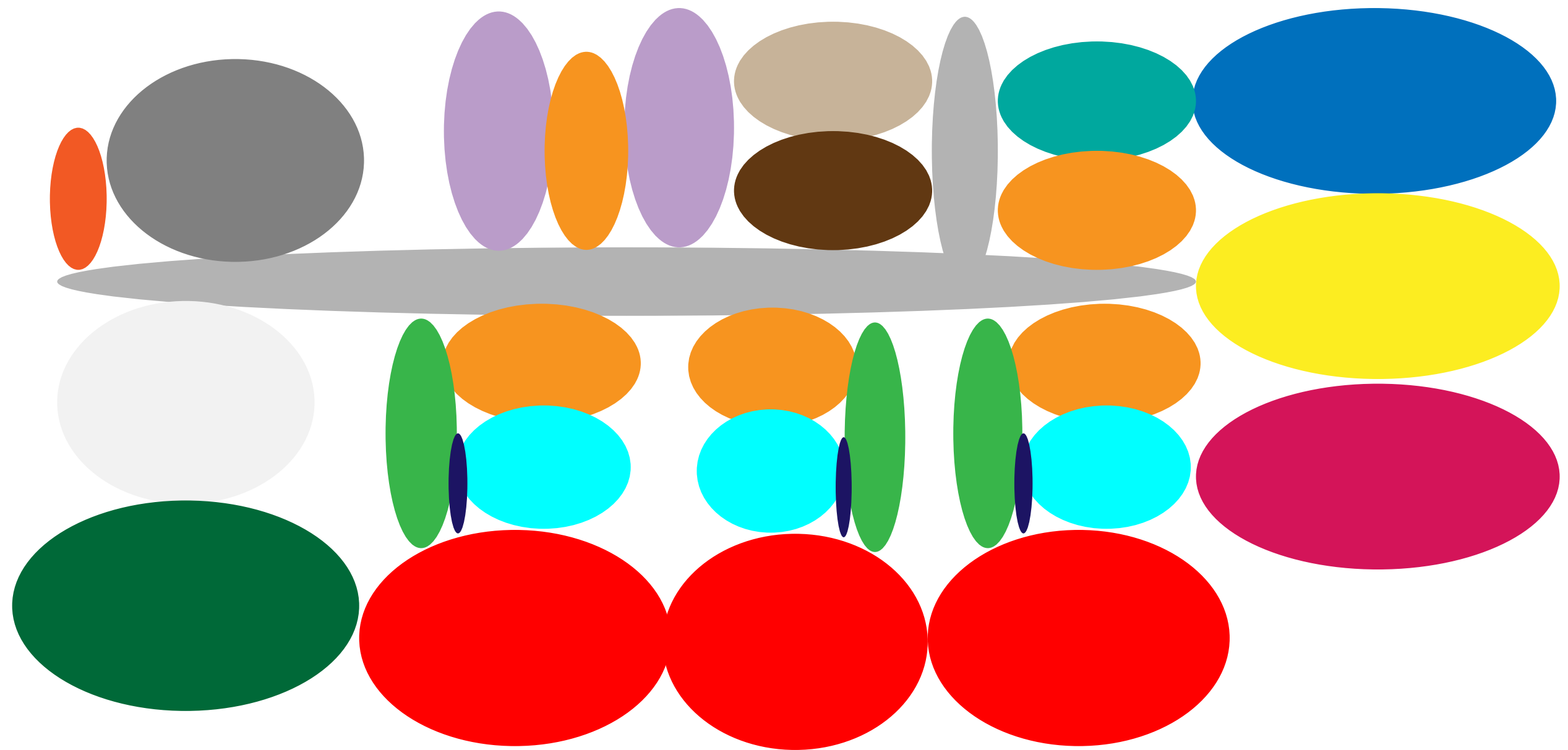
This particular program diagrams a large building with two separated wings connected by vertical circulation. With three family dwellings on each floor and their related NICU across the hall. Sufficient community aspect with shared amenities. The NICUs are separated from the rooms for the babies to rest safely.

Proposed bubble diagram for this case



Bubble diagrams with further refinement

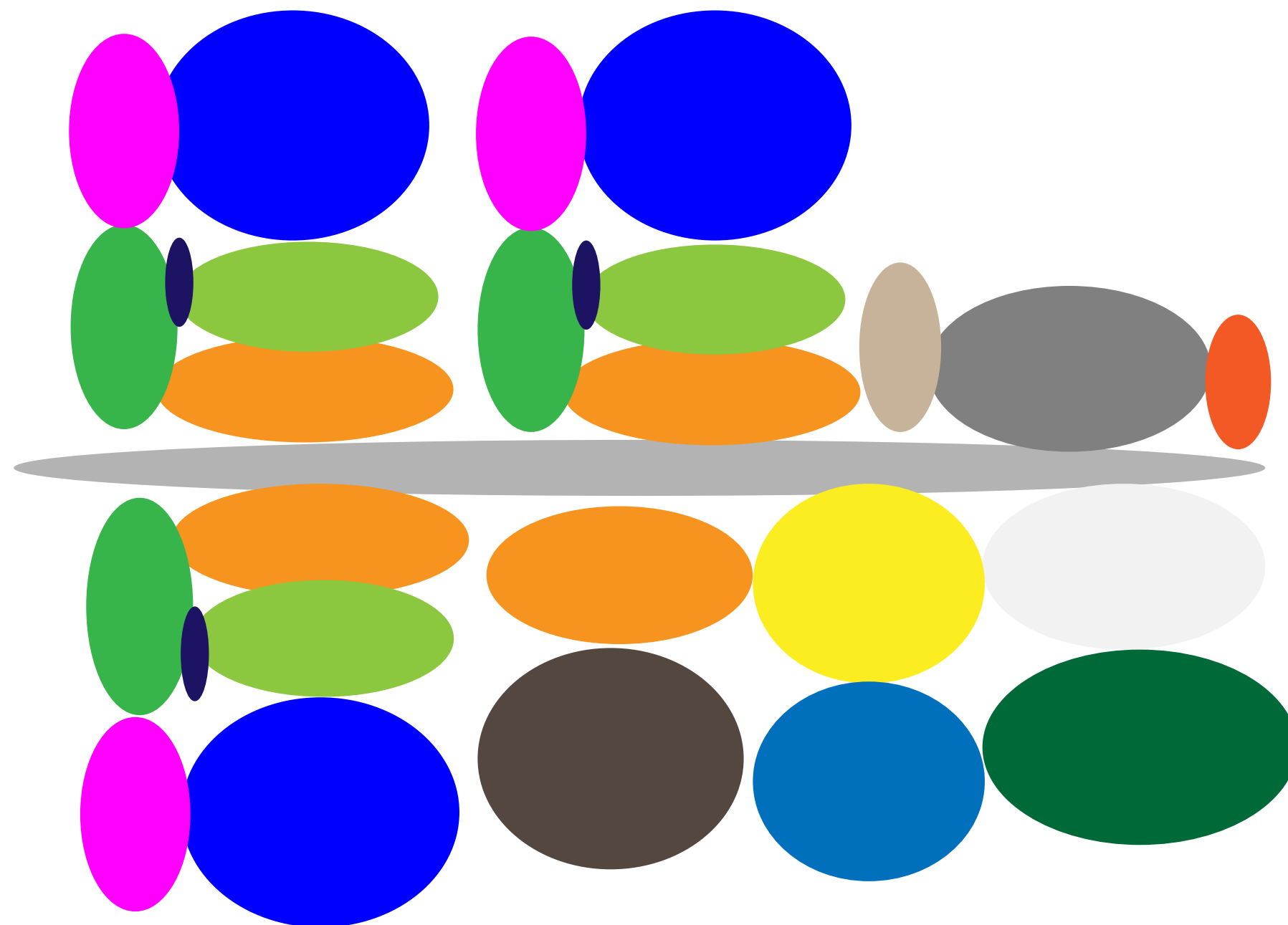
- garbage shoot
- stairs
- circulation
- guest room
- watercloset
- custodial closet
- Laundry
- pantry
- shared kitchen
- shared dining
- shared living space
- infant room
- room entrance
- storage
- dwellings
- patio
- lift



This refinement has addressed shared amenities for community aspects, while giving visitors a space to dwell. Each individual dwelling also provides progressive infants with spaces to dwell.

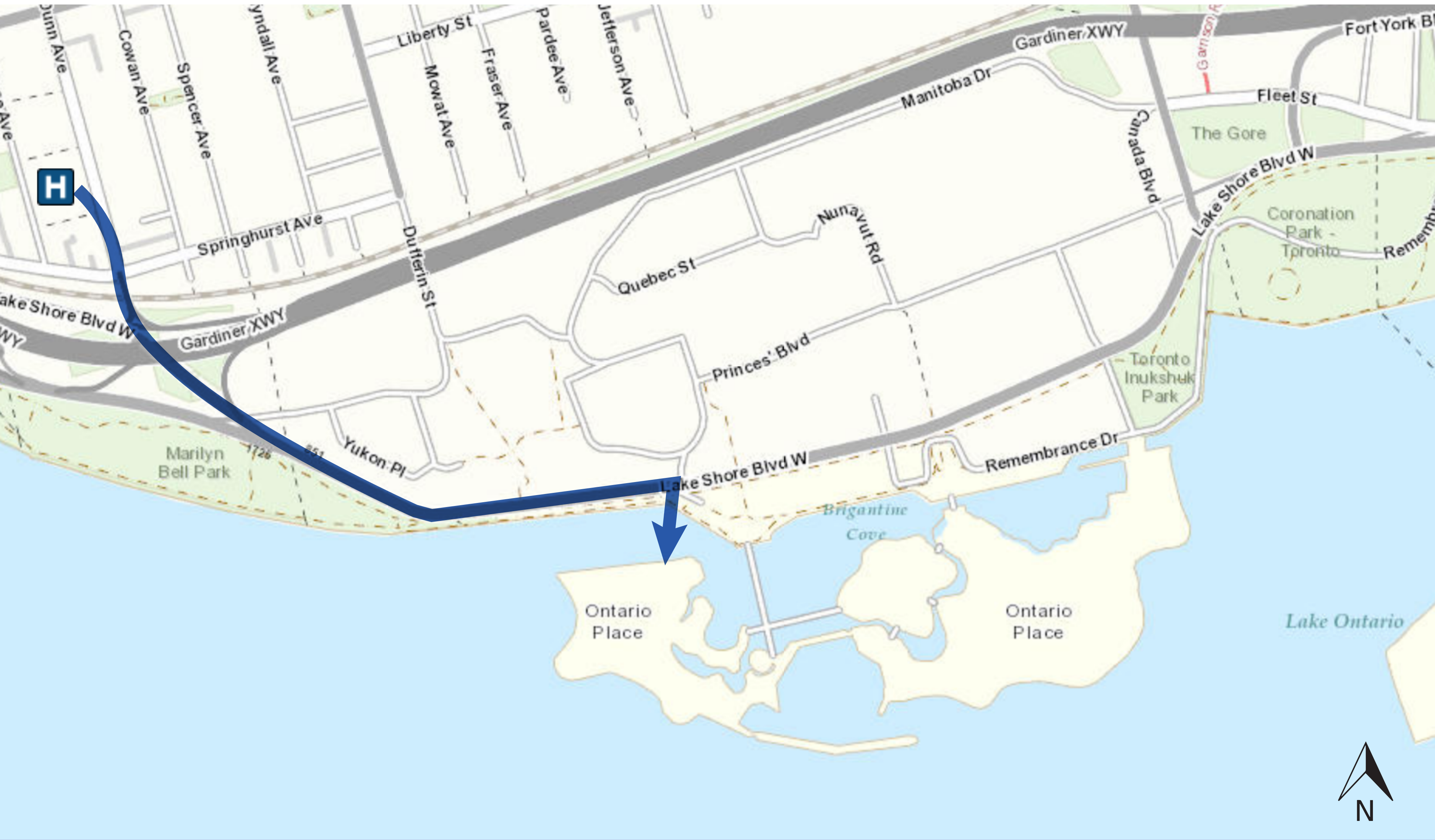
bubble diagramming for NICU wing

This NICU wing addresses more privacy for the benefit of the infant. Providing three NICU units per floor with private bathrooms and family gathering spaces per room. As well as providing the nurses with spaces in the NICU units as well as a shared kitchen, lounge and dining areas.



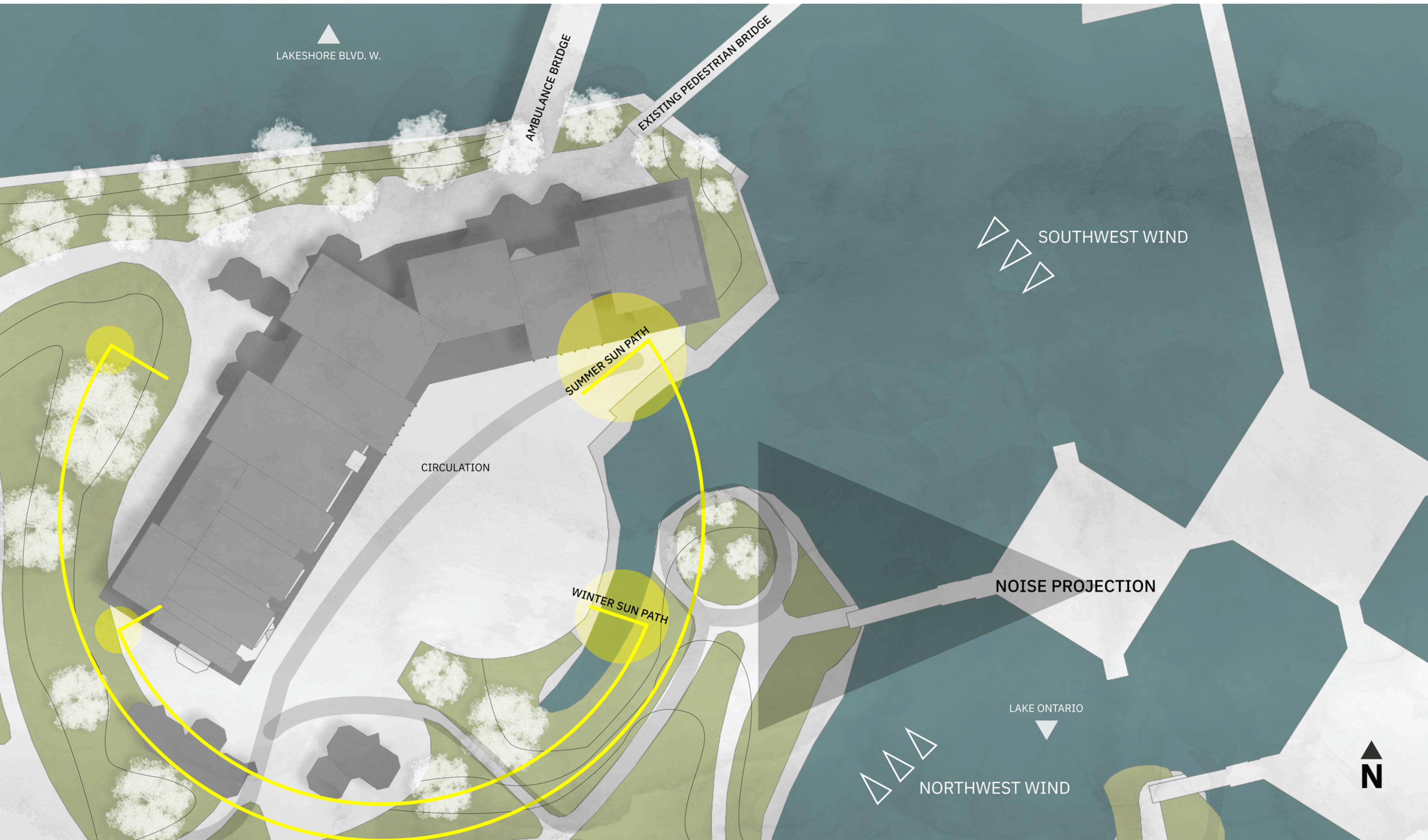
- circulation
- nurse station
- watercloset
- custodial closet
- closet
- nurse lounge
- nurse kitchen
- nurse dining
- patio
- family lounging area
- room entrance
- stairs
- circulation

Ontario Place West Island – Adjacency to St. Joseph’s Health Centre



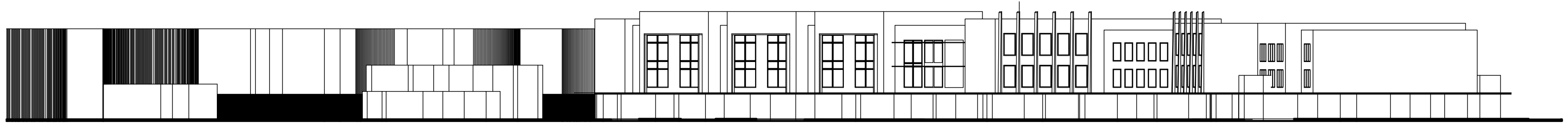
Site Plan – Ontario Place West Island

Analysis of Site Circulation, Seasonal Sun Pattern, Potential Winds, and Exterior Noise Sources.



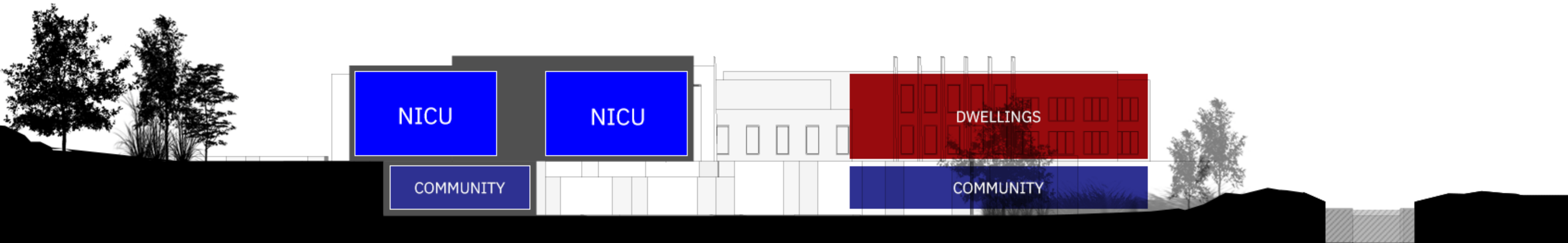


Site Plan – Proposed Program Adjacencies



West Elevation

North Section





THE FLOOR PLAN

Architect: [illegible]



