

HILLCREST URBAN DESIGN WORK GROUP

Meeting 2 – Regulatory and Design Basics for
Buildings and Lots



Hampden & Charles, St. Paul, MN

HOMework

Represent history

- + Celebrate and preserve key aspects of the golf course's history.

Lively and complex programming

- + "More than just a walking path," like at Mears Park.

Expressing the inside, outside

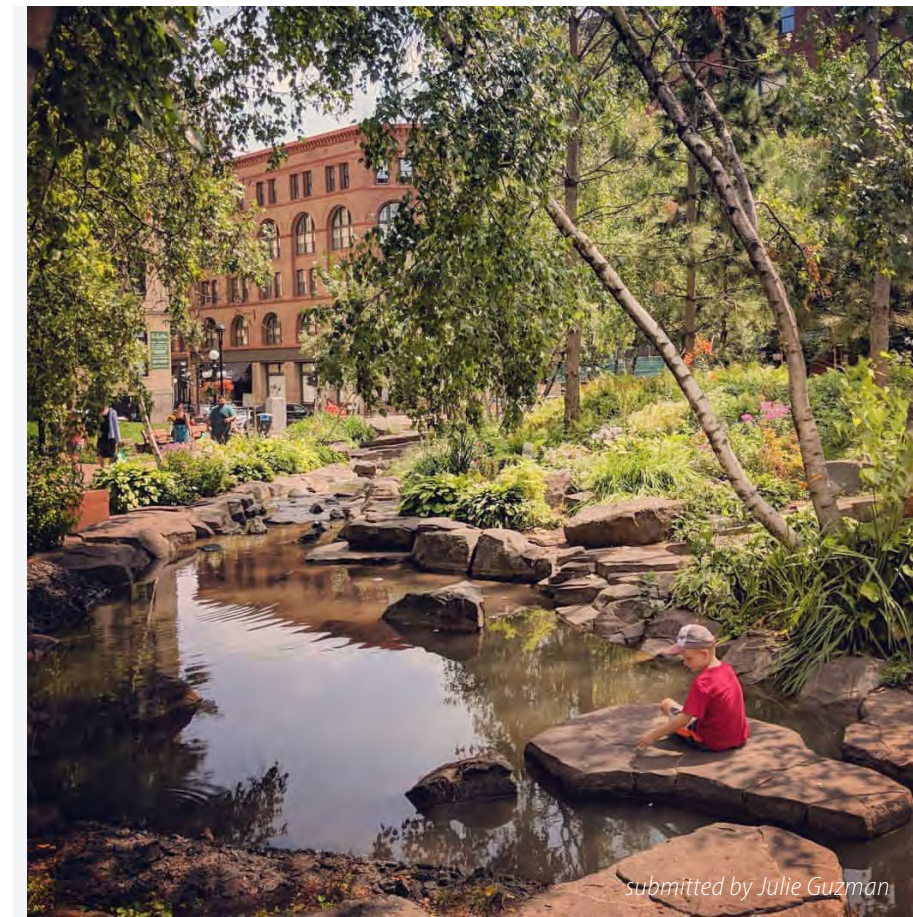
- + Create buildings that let passersby know what's going on inside the building.

Reallocate space that would be typically devoted to cars – give it back to people!

- + Explore options to reduce overall neighborhood dependency on cars.

Community Unity Art Sculptures

- + Celebrate community identity and community pride.



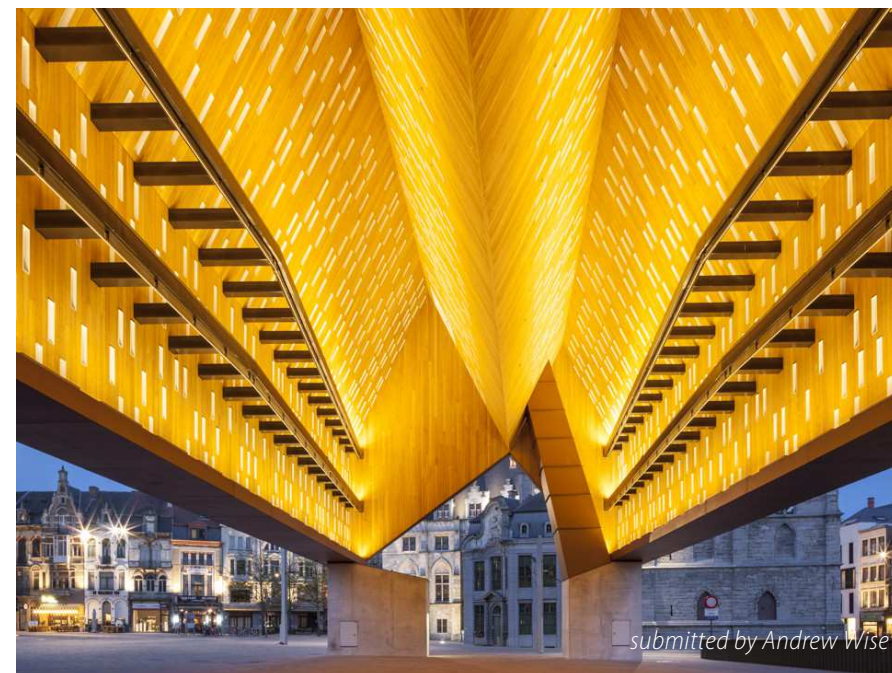
HOMework

Employ meaningful materials

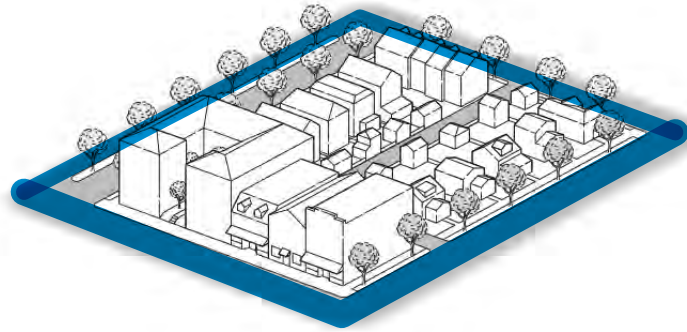
- + Provide material cohesion with lots of opportunity for variation.
- + Emphasize human-scale and honesty in materiality.

Architectural Character

- + Blend new construction into the existing neighborhood aesthetic, or
- + Radically modern aesthetics that reflect sustainable/net-zero goals.

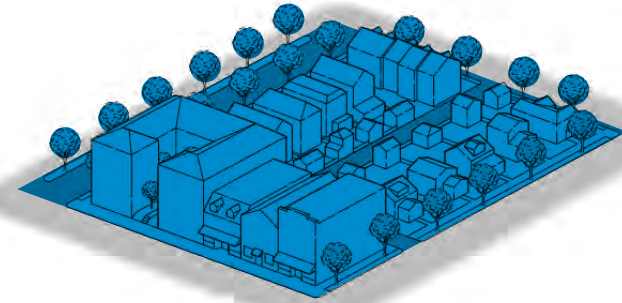


DESIGN SCALE FRAMEWORK



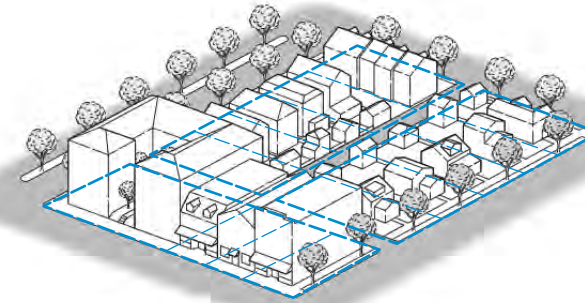
Streets

- + St. Paul 2040 Comprehensive Plan
- + Watershed requirements (RWMWD)
- + Hillcrest Master Plan
- + St. Paul Street Design Manual
- + District stormwater, utility, and traffic needs



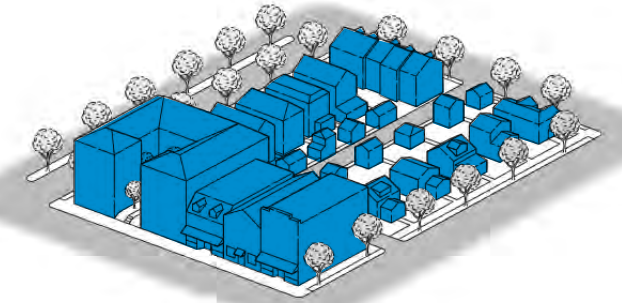
Blocks

- + Hillcrest Master Plan
- + City of St. Paul Zoning Code
- + City Council Ordinance 19-39: City Council Bonding Approval for Acquisition
- + LEED for Communities Platinum Pre-Certification



Lots

- + City of St. Paul Zoning Code
- + Watershed requirements (RWMWD)
- + Operations & Maintenance
- + Crime Prevention through Environmental Design (CPTED)
- + Market feasibility



Buildings

- + City of St. Paul Building Code
- + LEED certification
- + Arts/Employment District concept
- + Sustainability requirements



LOTS

1

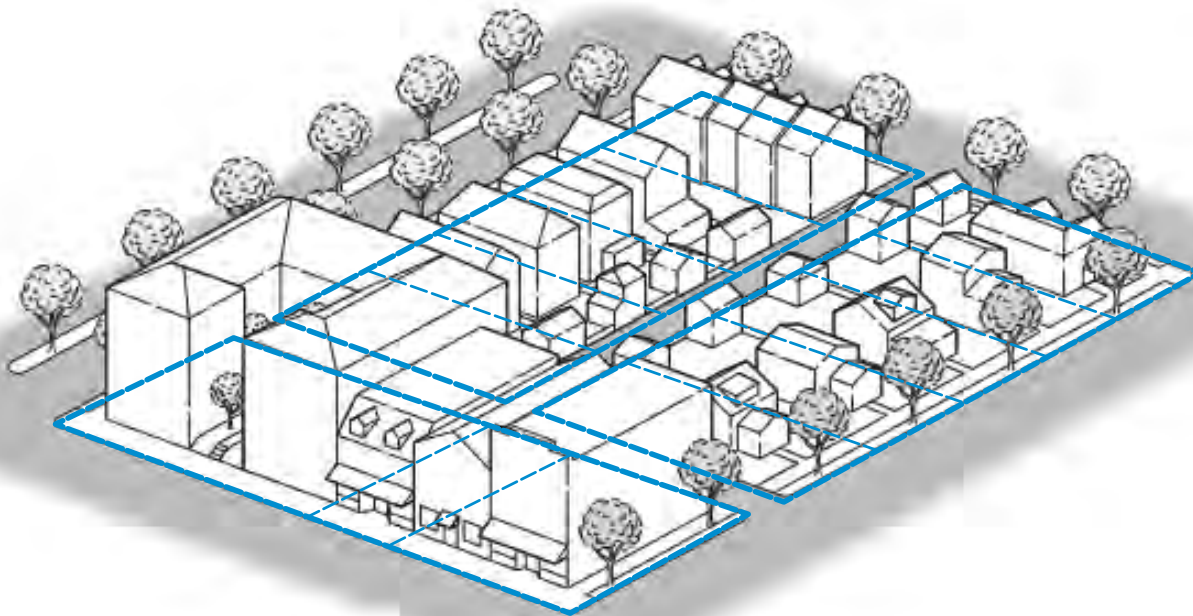
The lot lines have not yet been established throughout Hillcrest. They will be platted after the overall Infrastructure package has been reviewed by the City of St. Paul.

2

Parcels may be subdivided further based on market interest.

3

In general, the smallest lots will be associated with T1 zoning, and become larger with T2 and T3 zoning. The largest lots will be found on the Light Industrial blocks (to be discussed during Meeting 5).



MASTER PLAN

Lot Types and the Zoning Code

- + The Master Plan for Hillcrest designates four zoning types throughout the site:
 - T1 – Traditional Neighborhood
 - T2 – Traditional Neighborhood
 - T3 – Traditional Neighborhood
 - IT – Transitional Industrial (Meeting 5)
- + Each zoning type has specific requirements for density, lot size, minimums, building heights, and yard setbacks.
- + The way these lots are organized has a direct impact on the look and feel of the public realm.

Refer to library.municode.com/mn/st._paul/codes/code_of_ordinances



ST. PAUL ZONING CODE

ARTICLE III. - 66.300. TRADITIONAL NEIGHBORHOOD DISTRICTS

Sec. 66.311. - General intent, T traditional neighborhood districts.

- + TN traditional neighborhood districts are intended to **foster the development and growth of compact, pedestrian-oriented urban villages**. All four (4) districts are intended to encourage a compatible mix of commercial and residential uses within buildings, sites and blocks; new development in proximity to major transit streets and corridors; and additional choices in housing.

Sec. 66.312. - Intent, T1 traditional neighborhood district.

- + The T1 traditional neighborhood district is intended to provide for compact, pedestrian-oriented mixed-use areas of limited size, with a variety of residential, office and service uses that primarily serve neighborhood needs. It is also intended to **serve as a transitional use of land** along major thoroughfares, **between** commercial or **industrial districts and residential districts** or other less intensive land uses.

Sec. 66.313. - Intent, T2 traditional neighborhood district.

- + The T2 traditional neighborhood district is designed for use in existing or potential pedestrian and transit nodes. Its intent is to **foster and support compact, pedestrian-oriented commercial and residential development** that, in turn, can **support and increase transit usage**. It encourages, but does not require, a variety of uses and housing types, with careful attention to the amount and placement of parking and transitions to adjacent residential neighborhoods.

Sec. 66.314. - Intent, T3 traditional neighborhood district.

- + The T3 traditional neighborhood district provides for **higher-density pedestrian- and transit-oriented mixed-use development**. It is designed for development or redevelopment of land on sites large enough to support:
 - (a)A mix of uses, including residential, commercial, civic and open space uses in close proximity to one another;(b)A mix of housing styles, types and sizes to accommodate households of varying sizes, ages and incomes;(c)A system of interconnected streets and paths that offer multiple routes for motorists, pedestrians and bicyclists, and are connected to existing and future streets;(d)A system of open space resources and amenities; and incorporation of environmental features into the design of the neighborhood.



Building Type by Zoning District	Density	Lot Size Minimum (per unit)		Building Height (feet)		Yard Setbacks (feet)		
	Min.—Max.(a)	Area (sq. ft.)(a)	Width (feet)	Min.	Max.	Front Min.—Max.	Side Min.	Rear Min.
T1								
1-family dwelling	6—12 units/acre(b)	3500(b)	30	none	35(e)	15—25(i)	(k)	15
2-family/townhouse	8—20 units/acre(b)	2000(b)	20	none	35(e)	10—25(i)	(k)	15
Multifamily	10—25 units/acre(b)	1700(b)	n/a	none	35(e)	10—25(i)	(k)	(k)
Nonresidential or mixed use	0.3—1.0 FAR	n/a	n/a	none	35(e)	0—25	(k)	(k)
T2								
1-family dwelling	6—12 units/acre(b)	3500(b)	30	none	35(e)	15—25(i)	(k)	15
2-family/townhouse	8—20 units/acre(b)	2000(b)	20	none	35(e)	10—25(i)	(k)	15
Multifamily	FAR as for mixed use	n/a	n/a	none	35(e), (f)	10—25(i)	(k)	(k)
Nonresidential or mixed use	0.3—2.0 FAR with surface parking and 0.3—3.0 FAR with structured parking(c)	n/a	n/a	none	35(e), (f)	0—10(j)	(k)	(k)
T3								
1-family dwelling	8—12 units/acre(b)	3500(b)	30	25	35(e)	15—25(i)	(k)	15
2-family/townhouse	10—20 units/acre(b)	2000(b)	20	25	35(e)	10—25(i)	(k)	15
Multifamily	0.5—3.0 FAR(d)	n/a	n/a	25	45(e), (g), (l)	10—25(i)	(k)	(k)
Nonresidential or mixed use	0.5—3.0 FAR(d)	n/a	n/a	25	55(e), (g), (l)	0—10(j)	(k)	(k)

Table 66.331

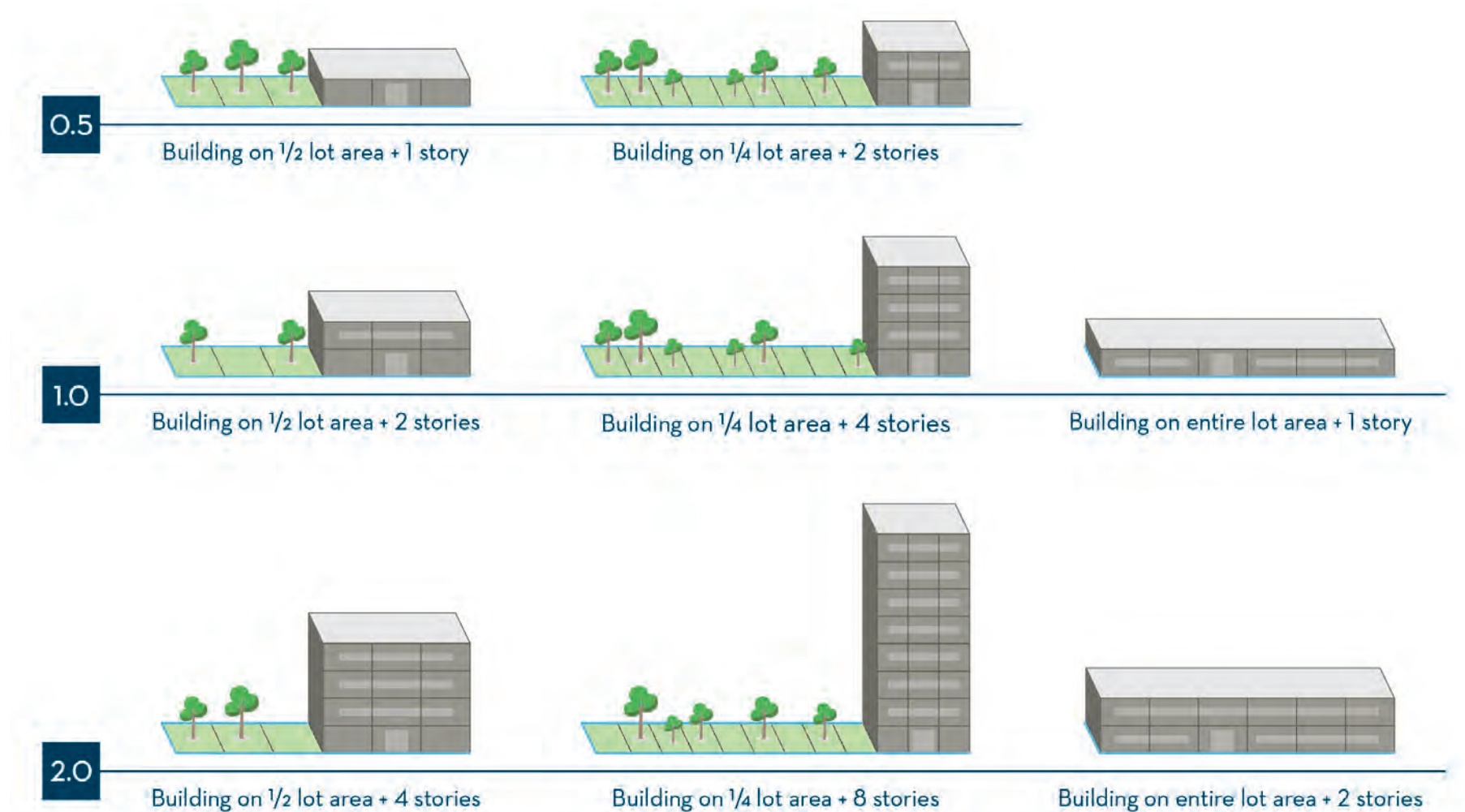
FAR – Floor Area Ratio

Refers to 66.331k Additional info about side and rear yards



FLOOR AREA RATIO

Measures a building's development density relative to the overall area of the lot that it is on.



From: <https://www.cityofboise.org/departments/planning-and-development-services/planning-and-zoning/zoning-and-overlay-districts/>



TRADITIONAL NEIGHBORHOOD DISTRICT DESIGN STANDARDS

(Sec. 66.343)

- + **Land use diversity – building/use diversity is good.**
- + **Transitions to lower density neighborhoods – transitions in density/intensity shall be managed via building height, scale, massing, and solar exposure.**
- + **Buildings anchor the corner – orient building entries toward corners and public streets.**
- + **Front yard landscaping – front yards must be landscaped, and hard surfaced front yard areas must include amenities such as benches, tables, and planters.**
- + Building facade continuity – applies to commercial and mixed use streets.
- + Building facade articulation – the bottom 25' of buildings shall include design elements that relate to the human scale.
- + Building height – 2+ story buildings are encouraged.
- + Definition of residential entries – porches, steps, pent roofs, roof overhangs, hooded front doors, etc., must be used to define all primary residential entries.
- + **Entrance location – must be a primary pedestrian entrance on all arterial or collector streets. In multi-tenant buildings, any ground floor use with street frontage shall have an entrance facing the street.**
- + Door and window openings – windows shall have punched and recessed openings, to create a strong rhythm of light and shadow; glass must be clear or only slightly tinted, to allow views into and out of the interior; window size and shape shall emphasize the intended organization of the facade.
- + Materials and details – residential buildings of 6+ units shall be constructed of high-quality materials.
- + **Screening – outdoor storage, service, or loading areas must be screened with a decorative element at least 6' high.**



ADDITIONAL REQUIREMENTS

Ramsey-Washington Metro Watershed District (RWMWD)

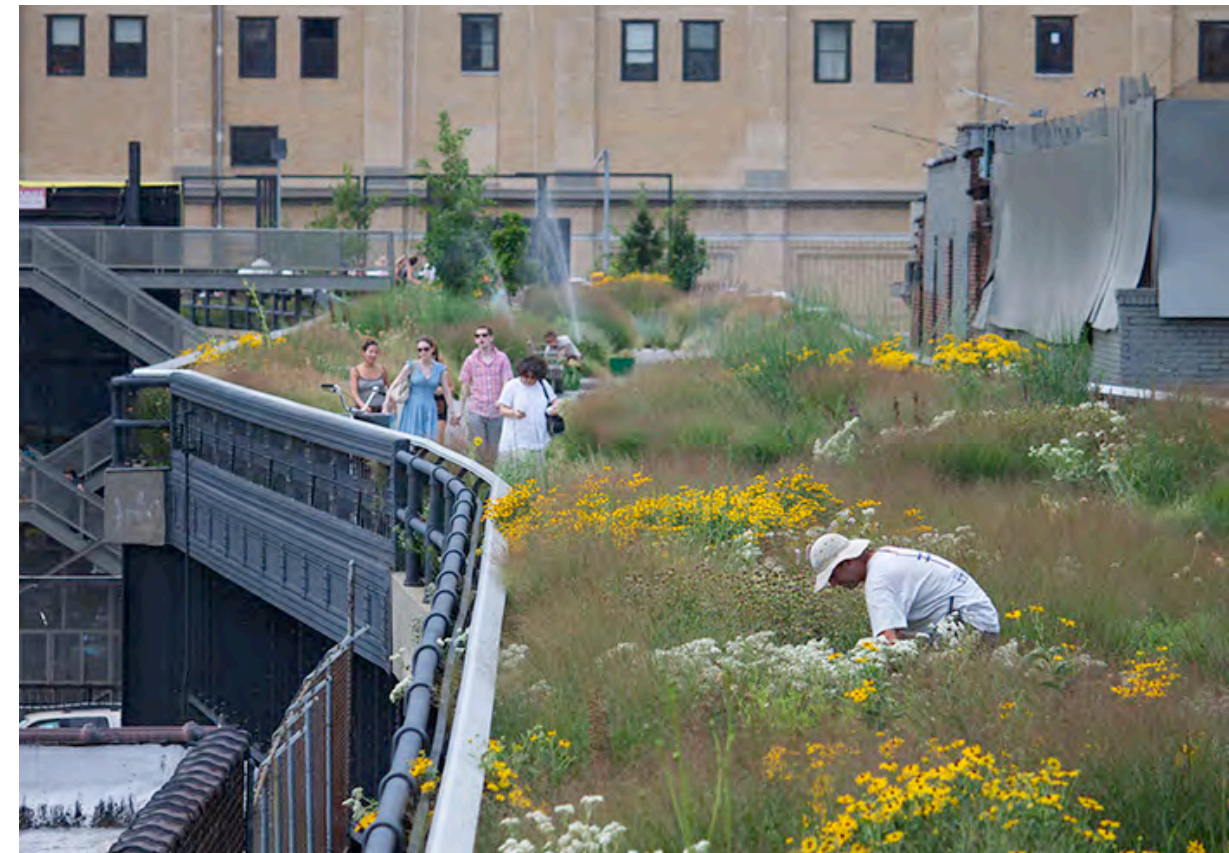
- + RWMWD's rules require 1.1 inches of runoff volume be retained on site over new impervious surfaces.
- + Stormwater water management structures and facilities shall be done in accordance with the Minnesota Stormwater Manual guidance and requirements.
- + All Best Management Practices (BMP's) shall be maintained to assure that the structures and facilities function as originally designed.



ADDITIONAL REQUIREMENTS

Operations & Maintenance

- + Buildings (as well as their grounds) have long-term operations & maintenance requirements that need to be considered during the planning and design phases.



ADDITIONAL REQUIREMENTS

Crime Prevention through Environmental Design (CPTED)

- + Focuses on safety enhancements through visibility, interaction, spatial definition, lighting, and screening.



Large windows promote casual supervision of sidewalk.

Porches and sidewalk encourage interaction between neighbors.

Paving and architectural treatments define public and private zones.

Good pedestrian-scaled lighting on street.

Low landscaping and fences define property lines without creating hiding places.

From: <https://www.ifpo.org/news/power-cpted-glue-holds-security-programs-together-bill-nesbitt/>



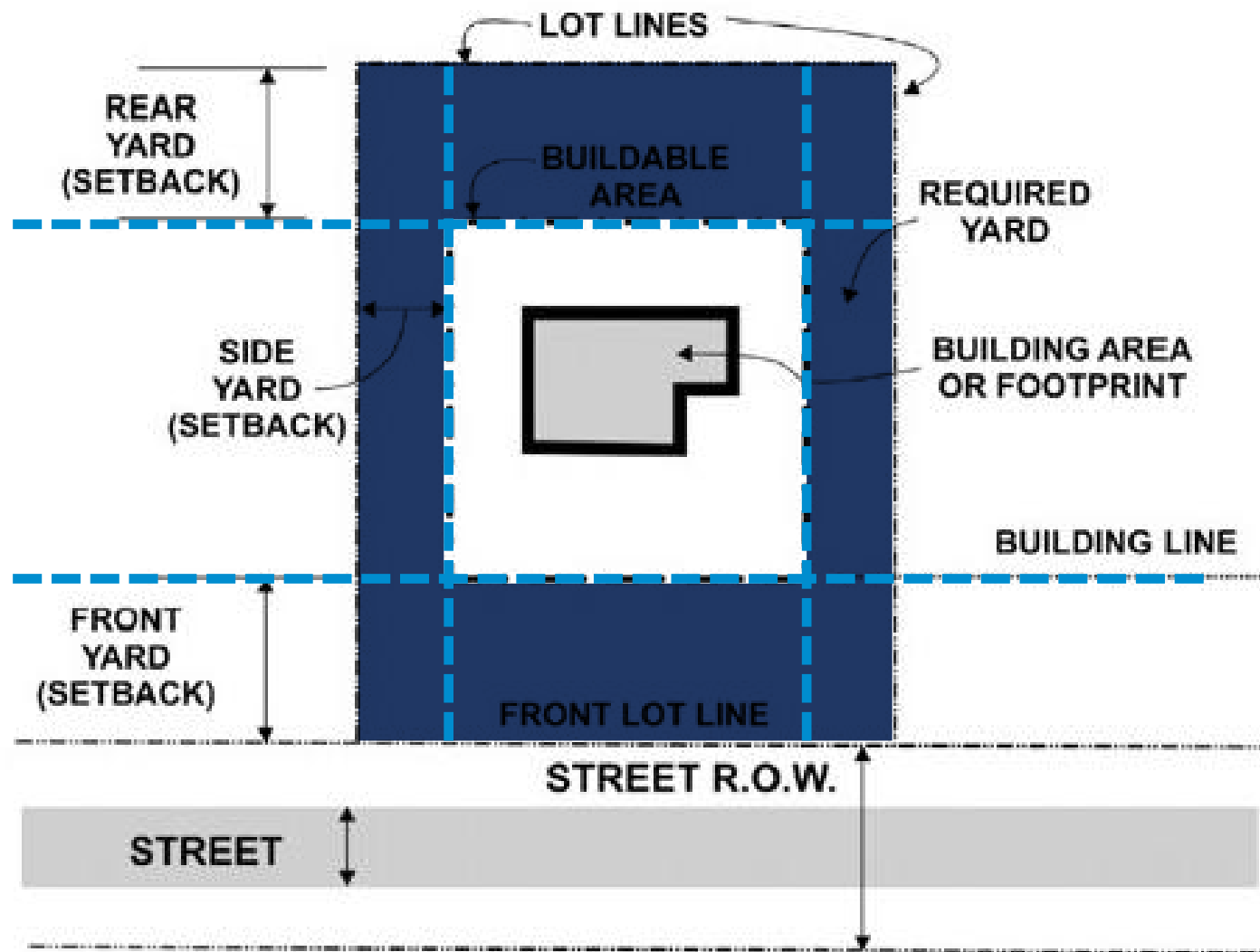
PUBLIC VS. PRIVATE

- + Material transitions and vertical changes signal shifts from public space to semi-private space to private space.



POTENTIAL AREAS OF INFLUENCE

- + **Setbacks** – make requirements more specific than those in the Zoning Code?
- + **Yards**
 - Landscape, patio, and sidewalks
 - Driveways – location, shared, curb cuts, drop-off's sight lines
- + **Ecological value**
 - Planting requirements – biodiversity, pollinator habitat, habitat connectivity, native versus non-native
 - Tree replacement, tree density, shade, overstory
 - Habitat
- + **Parking**
 - Structured versus surface parking
 - Implications of zoning requirements





submitted by Andrew Wise

From: useful-community-development.org



SETBACKS

- + Consistent setbacks offer clear circulation and a logical aesthetic, but it can be nice to have a place to peel off and rest or gather.
- + Inconsistent setbacks can offer places for gathering, resting, or commerce, but can be disjointed from the rest of the neighborhood's development.



YARDS

- + Front yards are the main area of a lot that the public realm visually interacts with. They set the tone for the overall neighborhood aesthetic.
- + Expectations/traditions in yard treatment vary widely across communities.
- + The degree to which vehicles overlap and interact with yards also has a dramatic impact on the character of a neighborhood.





ECOLOGICAL VALUE

There are 40 million acres of turf grass lawn in the lower 48 states, accounting for 1.9% of the surface of the continental United States and making it the single largest irrigated crop in the country.

From: Milesi C, Running SW, Elvidge CD, Dietz JB, Tuttle BT, Nemani RR. Mapping and modeling the biogeochemical cycling of turf grasses in the United States. Environ Manage. 2005 Sep;36(3):426-38. doi: 10.1007/s00267-004-0316-2. PMID: 16086109.



What is the role of private property in creating and maintaining a cohesive and thriving ecological community?

- + Planting requirements – biodiversity, pollinator habitat, native versus non-native
- + Trees – density, shade, overstory, replacement
- + Habitat establishment and connectivity





PARKING

- + Structured versus surface parking
- + Implications of zoning requirements
 - There are no longer parking minimum requirements in the City of St. Paul.
 - This may be advantageous to some types of residential development, but less relevant for others, depending on the projected market need for vehicular transport.





1000 FUTURE RESIDENTS OF ARIZONA NEIGHBORHOOD CAN'T DRIVE THEIR CARS HOME

- + A developer named Culdesac is building an apartment complex with 636 units in Tempe, AZ, that claims to be the first in the country to ban private cars.
- + There is no parking, either on-site or off-site, for residents.
- + There will still be plenty of transportation options – just not private cars – and the developer intends to take this idea to other U.S. cities next.
- + “Cars are especially needy” and use up more than their fair share of space, resources, and environment.

*From: <https://www.caranddriver.com/news/a29874107/cars-banned-arizona-housing-development/>
Serenity's Submission*



BUILDINGS

1

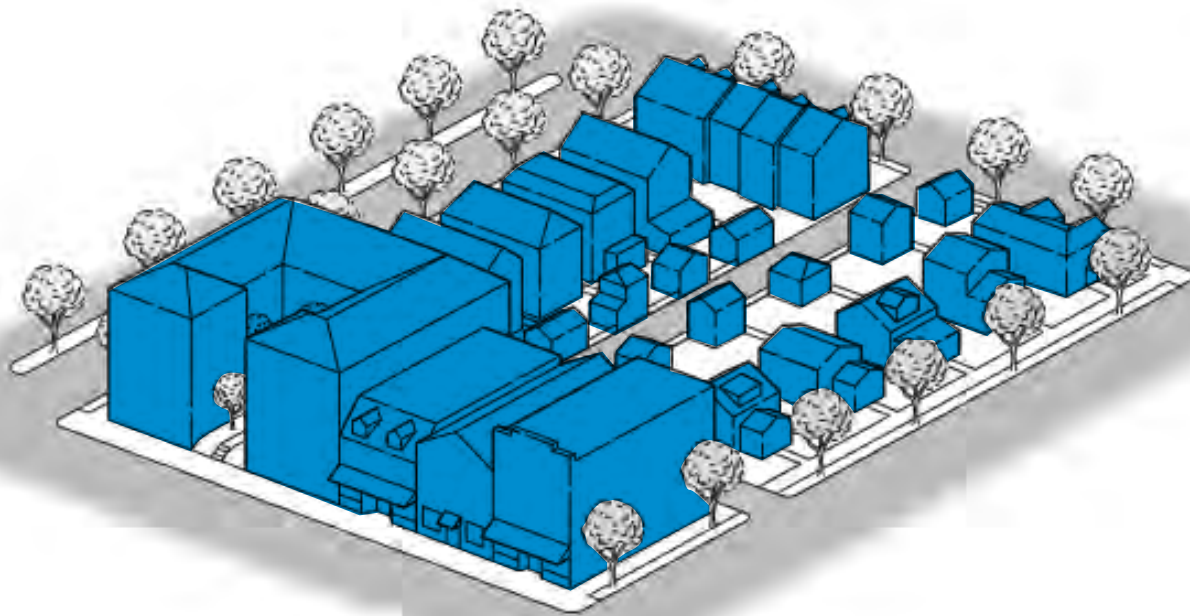
There are several **codes & requirements** in place that already dictate the forms & functions of buildings within Hillcrest

2

Different areas of Hillcrest require **different types of buildings**

3

There are several building components **this group can inform**, and some that are perscribed already

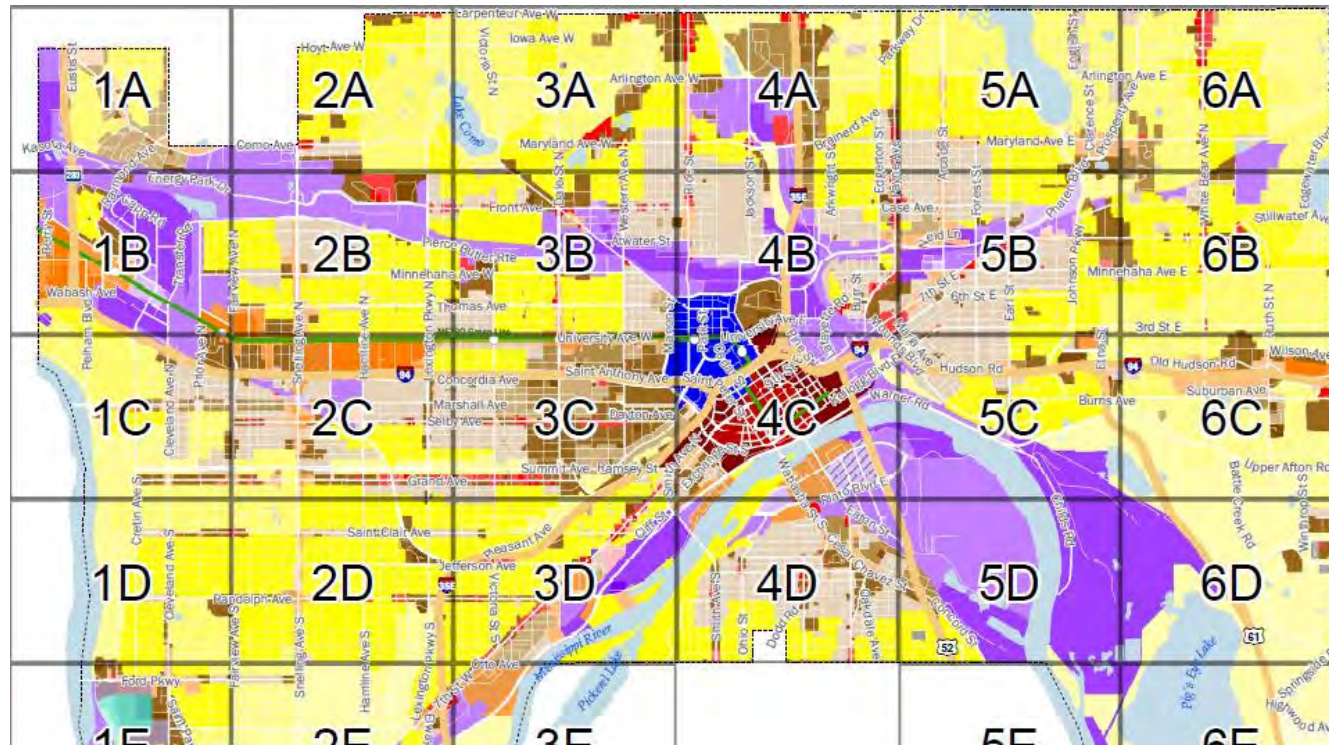


HILLCREST BUILDING TYPES

- + **Light Industrial Buildings** - In eastern portion of site along McKnight & primarily driven by Arts & Employment District requirements if implemented
- + **High Density Apartment Buildings** - 6 stories, in neighborhood node area focused along Larpenteur and McKnight
- + **Medium Density Apartment Buildings** - 4 stories, between neighborhood node & low density housing/ existing neighborhood
- + **Low Density Townhomes & Detached Housing Units** - 2 stories, adjacent to existing neighborhood



CODES & REQUIREMENTS



City of St. Paul Zoning Code

- + Set of regulations that govern the design, construction and modification of commercial buildings, homes and other structures in the jurisdiction.
- + Special attention paid to adjacencies between uses, buildings, open space, and density.

MINNESOTA BUILDING CODE



Minnesota Building Code

- + Provides consistent, minimum standards & ensures safe construction
- + Important for quality, valuation, liability, & reliability among all buildings.
- + Includes references to other state codes: Energy, Plumbing, Electrical, etc.



CODES & REQUIREMENTS



Sustainability Requirements

- + To gain Platinum LEED Certification we must follow certain parameters
- + The Sustainability Work Group is developing their own set of requirements that will inform the covenants as well



Operations & Maintenance

- + Buildings (as well as their grounds) have long-term operations & maintenance requirements that need to be considered during the planning and design phases
- + In addition to maintenance costs, it is also helpful to consider the full life-cycle costs of materials, including removal, disposal, and replacement.



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Table 66.331

FAR – Floor Area Ratio

Refers to 66.331e-h
Additional info about building height



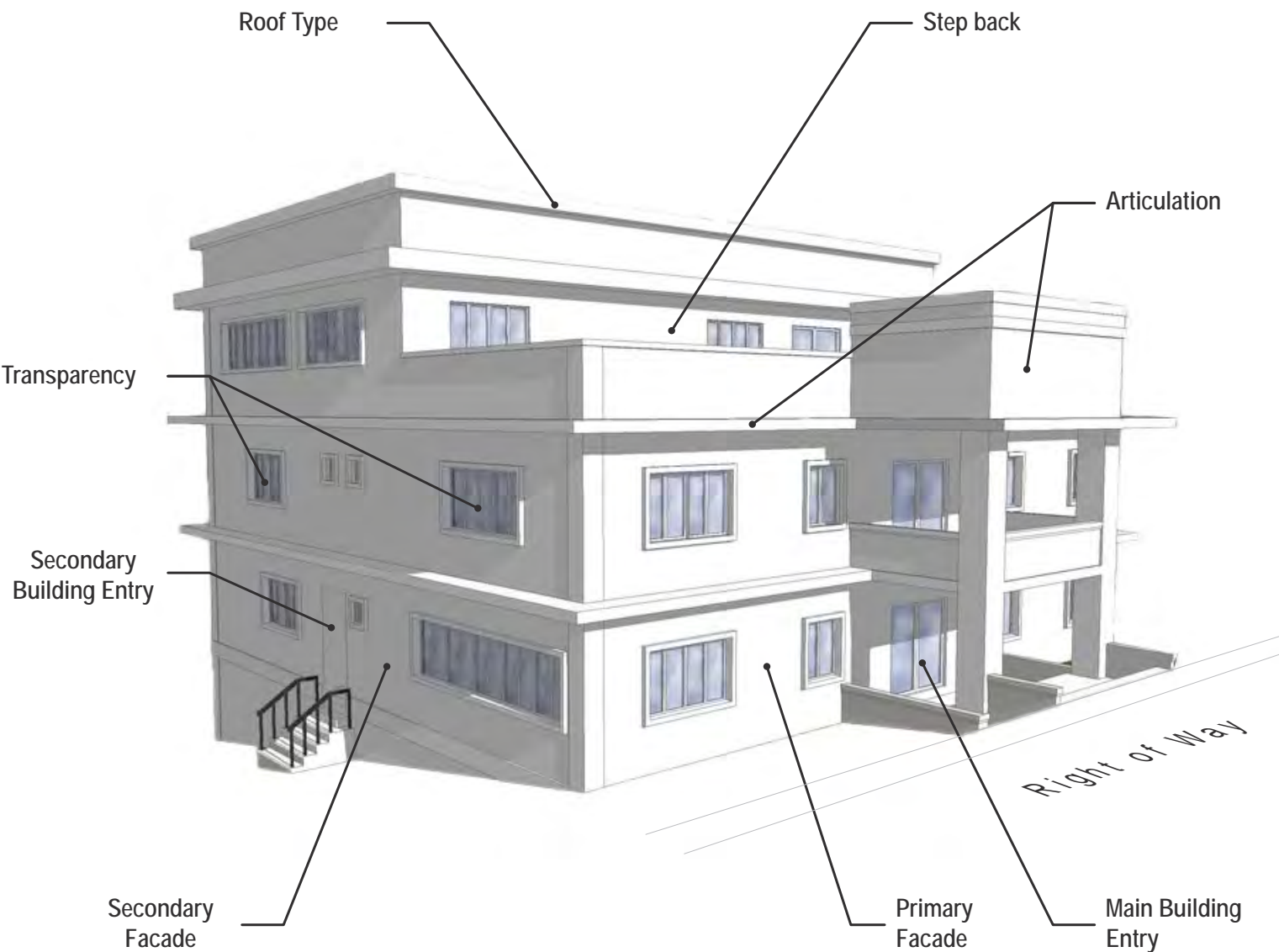
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POTENTIAL AREAS OF INFLUENCE



General Form

- + Sitting on the ground: human-scaled elements
- + Touching the sky: roof type

Entries

- + Primary building & individual unit

Materiality

- + Class of required materials for facades (primary vs secondary)
- + Material ratios difference classes of materials

Transparency

- + Amount of windows & storefront

Articulation

- + Facade variation, including bays, awnings, cornices

General Programming



5-Story Apartment building with step back



How the building meets the ground can differ from
how the building meets the sky
(Andrew's Submission)



5-Story Apartment building without step back



Historic 3 story apartment block



GENERAL FORM & SCALE

- + A building's height & scale greatly influences how a neighborhood feels
- + The addition of human-scaled elements can make buildings feel pedestrian-scaled despite their height
- + Different types of roofs evoke different styles & eras of construction



Townhomes with pitched roofs



New detached home with flat roof



Townhomes with flat roofs



Historic detached home with pitched roof



GENERAL FORM & SCALE

- + Smaller buildings must also navigate how they meet the ground and the sky.
- + Different types of roofs evoke different styles & eras of construction, including forms we associate with “homes.”
- + Dwelling unit entries are critical to establishing relationships to the public realm, including steps, overhangs, places to welcome, and places to gather.
- + Density can vary widely from attached units to detached units.





Apartments with ground floor access



Apartments with one main entrance

ENTRIES

- + Buildings with one entry preserve additional space for shared use of the landscape, biodiversity, and other uses.
- + Multiple entries offer opportunities for personalization, additional human-scaled features, places to gather, and deeper engagement with street life.
- + According to city zoning, entries are subject to requirements on location, articulation, quantity, and materiality.





*Apartments with facade made
of wood
(Andrew's Submission)*



*Apartments with facade made of brick
(Andrew's Submission)*



MATERIALITY

- + Materials are often grouped into classes by city zoning
 - Durable materials: Masonry, metal, glass
 - Intermediate materials: Fiber-cement, wood, phenolic
 - Less desirable materials: Vinyl
- + Materiality choices impact:
 - Aesthetics & associations of warmth, strength, texture
 - Local relatability
 - Sustainability, including embodied energy
 - Maintenance needs
- + Different facades can have different materiality requirements





TRANSPARENCY

- + Balance required between connection between indoors & outdoors, energy performance, and relationship to neighbors and neighborhood.
- + Quantity and placement of openings consistently addressed in traditional neighborhood design standards.
- + Building Design Standards: Window & door openings shall comprise at least 15% of total facades facing public streets or sidewalks, & 10% of all facades on residential buildings
- + Most uses require clear glazing, not tinted or reflective, but some are currently allowed to have glazing that does not create a connection between indoors and out.

Buildings with articulation in the form of awnings, balconies, recessed entries, and step backs



Building with no articulation



ARTICULATION

- + Best used to break down scale of building from street frontage to individual use or unit, to human scale.
- + Types of articulation include:
 - Entry canopies
 - Projected windows
 - Awnings
 - Balconies
 - Cornices & parapets
 - Material articulation, including reveals and brick details
 - Railings & window sills



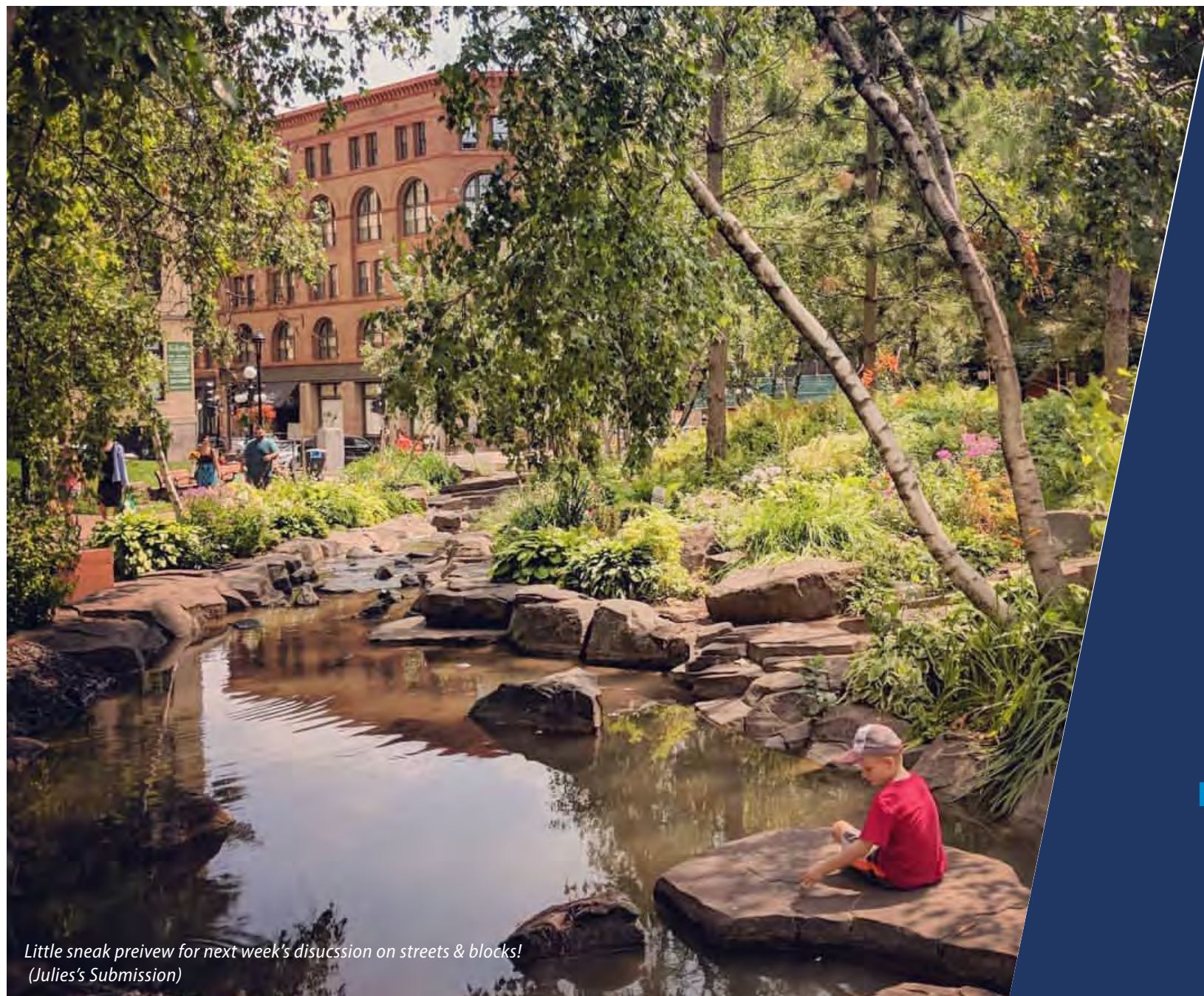


Building programming expressed externally
(Frankie's Submission)

GENERAL PROGRAMMING

- + Buildings can be encouraged to convey their use, values, or program
 - Entry type or frequency
 - Signage
 - Pattern and quantity of openings
 - Public art
 - Shared outdoor space & amenities





*Little sneak preivew for next week's disucssion on streets & blocks!
(Julies's Submission)*



THANK YOU!

Hillcrest Redevelopment Community Engagement
St. Paul Port Authority Technical Team