

Preliminary Land Development Plan | **Riverfront Landing**
May 2012

The Buncher Company

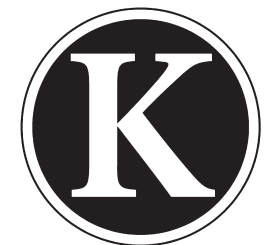


DLA Architecture and Interior Design



with

Klavon Design Associates, Inc.



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Introduction

Purpose

DLA+ and Klavon Design Associates, Inc. (KDA) were retained by the Buncher Company to produce a Preliminary Land Development Plan (PLDP) concept for various riverfront properties that are bounded by 21st Street, Smallman Street, the Monongahela River, and the 16th Street Bridge. The Buncher Company intends to implement a mixed-use development on the 28 acre site.

This PLDP is intended to accomplish the following goals:

1. Provide design guidelines for a premier waterfront development for the City of Pittsburgh.
2. Serve as a document that demonstrates the viability and the need for the project.
3. Serve as a tool to help the Master Developer achieve necessary government approvals for the project:
 - a. Obtain SP zoning for the development (currently UI District zoning)
 - b. Establish the SP zoning code requirements for the development parcels
 - c. Development of a Parcel Plan
 - d. Obtain City Planning approval of the PLDP
 - e. Demonstrate the impact of traffic, transportation, environment and historic resources by the Project
4. Provide the public with information to understand the benefits of the project for the community.
5. Document the agreed upon project development goals between the City of Pittsburgh Planning Department and the Master Developer.

This report will describe the history and character of the project site, provide a development plan, and establish SP Zoning landscape and architectural design principles. The overarching strategy for this PLDP is to provide a flexible set of zoning guidelines that allow for market-driven project types to successfully create a contextual environment and a vibrant urban and waterfront community.

The PLDP and zoning code text amendment should include clear standards for all new development within the new SP District addressing landscaping, and construction materials.

909.01.A - Purpose

The SP, Specially Planned District regulations are intended to provide a framework for alternative forms of development for very large sites. Applicable regulations and procedures are intended to create efficient, functional and attractive urban areas that incorporate high levels of amenities and that meet public objectives for protection and preservation of the natural environment. The regulations are intended to permit a substantial amount of flexibility in site planning because of the large size of the site and because of its relative isolation from any neighborhood context. SP District provisions are intended to apply only to developments that have citywide impacts.

909.01.B - Special Definitions

The following special definitions shall apply throughout the SP district regulations of this section and the Planned Development review and approval procedures of Sec. 922.11.

1. Land development plan means a proposal for a development of a Specially Planned District with detailed provisions outlined according to the procedures and standards established in this chapter of the Zoning Code.
2. Preliminary land development plan means a document in support of a proposal for approval of a development and for the rezoning of a site into a Specially Planned District classification with a unique name attached thereto, submitted to the Planning Commission, in order to demonstrate that a superior development plan shall be followed within the overall bounds of the zoning text. The preliminary land development plan shall contain all that information required by the Zoning Administrator to support the application.
3. Final land development plan means a document submitted to the Planning Commission in support of a proposal for final approval for a Specially Planned District, which shall establish the detailed standards for the development based upon the final results of planning studies which may be required by the Planning Commission. The final land development plan, when approved by the Planning Commission, governs all development within the Specially Planned District. The final land development plan shall contain all that information required by the Zoning Administrator to support the application.
4. Planning studies means those investigative reports required by the Planning Commission for a Specially Planned District which determine the impact of the proposed development on the City. Planning studies may be required on a wide range of topics, including but not limited to:
 - a. Socio-economic impact on the City and region;
 - b. Traffic and parking impact and future potential for increasing capacity;
 - c. Utility capacity, possible points of access and future potential for increasing capacity;
 - d. Geotechnical and ecological analysis;

- e. Analysis of structures or sites of historic, archaeological, architectural, recreational, scenic or environmental significance, and the potential for retention and reuse;
- f. Analysis of views to and from the site, and the possible need for views through the site; and
- g. Analysis of visual impact on surrounding area.

The planning studies shall comply with any data requirements established by the Zoning Administrator. The applicant may utilize studies made by others, and may undertake or contract for any additional studies necessary or useful in the preparation of the land development plan.

5. Special features means those elements of the site plan which the Planning Commission may require because of the unique importance of the site in question and the ability of such elements in conveying or maintaining that importance. Special features may include but are not limited to the use of architectural themes, the retention of a particular structure, or the placement of an important structural or landscaping element in a particular location.
6. Build-to line means a line in a final land development plan for a Specially Planned District with which an exterior wall of a structure is required to coincide in a manner described for that particular Specially Planned District.
7. Development subdistricts means areas of a minimum of five (5) acres for which a final land development plan(s) may be approved by the Planning Commission.
8. Development staging means the process of constructing a development according to a provision within the final land development plan approved by the Planning Commission, which provision details the temporal sequence of construction of development in a Specially Planned District.
9. Implementation program means a provision of the land development plan which details specific actions to be undertaken in stated sequence by the applicant, by specified governmental entities or by others in order to achieve objectives, policies and standards applicable to Specially Planned Districts and shall cover a period of time to be specified in the land development plan, which shall not be more than ten (10) years, but the program may indicate the general nature of future actions to be taken after that period.

The implementation program shall include:

- a. An estimate of the amounts, types, characteristics and general locations of land to be acquired or reserved, and the transportation, utility and community facilities to be required, provided or aided, by the applicant, by the local government or other governmental agencies in order to carry out the implementation program;
- b. An estimate of the number of persons and land uses to be displaced by the implementation program, the environmental, social and economic consequences of the displacement, and any relocation programs to be undertaken by the applicant or by governmental agencies;

- c. A statement of the assumptions regarding future private and public development upon which the implementation program is based;
 - d. An estimate of the cost of carrying out the implementation program and a statement of sources of the private or public funds actually or potentially available; and
 - e. An estimate of the overall environmental, social and economic consequences of the implementation program including the impact on population distribution, employment, economic and environmental conditions and an evaluation, to the extent feasible, of the consequences of alternative implementation programs.
10. Land development report means a written document submitted to the Planning Commission which outlines the progress of the development of the Specially Planned District. The land development report shall contain, but shall not be limited to information regarding the following:
 - a. The extent to which the implementation program has accomplished its objectives;
 - b. The extent to which there have been significant changes in the assumptions upon which the land development plan was based; and
 - c. Possible changes in the objectives, policies and standards of the land development plan.

909.01.C - Applicable Standards

The approval of an improvement subdivision site plan and the enactment of an SP District as an amendment to the Zoning Code shall require compliance with all applicable regulations of this Code and with the standards and regulations contained in the Subdivision Regulations and Standards pursuant to the Act of May 13, 1927, (PL. 1101) as amended, adopted by the Planning Commission.

1. The SP District regulations of this section establish standards governing development intensity, building height; setbacks, open space; off-street parking; off-street loading and other basic site criteria that shall apply within SP Districts.
2. The Subdivision Regulations and Standards adopted by the Planning Commission shall govern the spatial arrangement of uses and structures on the site and all other elements of site design and improvement, including the design and improvement of pedestrian and vehicular circulation and parking; the location and improvement of open spaces for light, air, recreation and other purposes; provisions for utilities, facilities and services; and the relationship of the SP District to adjacent areas.
3. The Environmental Performance Standards of Chapter 915 shall apply within SP District. It shall be the responsibility of the Planning Commission to determine, through application of standards contained in the adopted subdivision regulations, that the environmental characteristics and physical capacity of an SP District site and of land adjacent

to the site are suitable for the character and intensity of development proposed. When necessary to protect the natural environment, to prevent hazardous development or otherwise to protect the public welfare, the Planning Commission may require a lower intensity of development or more restricted development on all or portions of a site than otherwise required by the provisions of this Code.

4. The Sign Regulations of Chapter 919 and the Parking, Loading and Access Regulations of Chapter 914 shall apply within an SP District unless the Planning Commission determines that the nature or impact of the proposed development warrants more restrictive standards. The Planning Commission may require compliance with more restrictive standards than specified in this Zoning Code, when determined necessary to protect the natural environment, adjacent properties or the public welfare.

909.01.D - General Provisions

The provisions in this section apply to all SP subdistricts, unless otherwise stated.

909.01.D.1 - Criteria for Establishment of an SP District

- a. Land Area

An SP District shall comprise a contiguous area of land of not less than fifteen (15) acres, except as separated by public streets, public ways, rivers or railroad tracks; shall comprise a reasonable unit for planned development; shall not be less than fifteen (15) acres, the calculation of which shall exclude land with slopes greater than twenty-five (25) percent and areas of water with a designated harbor line.
- b. Unified Control

One hundred (100) percent of the land in an SP District shall be controlled by the applicant for the SP District at the time of application through ownership or sales options. A final land development plan shall not be approved and rezoning of an SP District shall not become effective until proof of ownership of the land or proof of control of the land through sales agreement has been submitted by the applicant.
- c. Compliance with Plans, Policies and Other Regulations

An SP District shall be in a location suitable for the proposed development, as evidenced by compliance with plans and policy documents adopted from time to time by the Planning Commission and by demonstrated compatibility of the proposed development with development in adjacent areas.

Suitability for the SP District, in compatibility with plans and policy documents adopted from time to time by the Planning Commission and compatibility with development in adjacent areas, may be demonstrated and achieved by requirements the

Planning Commission may impose through the Improvement Subdivision Regulations and Standards, including, but not limited to, impact mitigation measures, impact fees, performance bonds, management plans and public access requirements.

d. Adequate Public Facilities

An SP District without current, sufficient infrastructure may be designated provided the final land development plan includes an implementation program and provided development is not allowed until such appropriate infrastructure is available through either public or private improvements, in accord with the Improvement Subdivision Regulations and Standards.

909.01.D.2 - Use Regulations

Uses allowed within SP Districts shall be established for each district, according to the provisions of Section 909.01.E.

909.01.D.3 - Site Development Standards

a. Floor Area Ratio

The maximum permitted floor area ratio within any SP District shall be set in the text in each individual SP District.

b. Light Access

Buildings shall be designed to allow light access through windows of existing buildings.

c. Urban Open Space At least ten (10) percent of the land area within any SP District shall be improved as Urban Open Space in accordance with the following standards:

1. Components

The particular functions and kinds of Urban Open Space to be provided at a development site shall be based upon consideration of existing and projected pedestrian volumes and circulation patterns; the location, size and character of existing Urban Open Space in the vicinity of the development site; existing and proposed land use patterns; relation to public transportation; and objectives contained in the adopted plan and policy documents pertaining to the GT District.

2. Development Standards

- i Urban Open Space designed to facilitate pedestrian circulation or relieve pedestrian congestion shall be at the same level as abutting public sidewalks and shall provide a clear path or area for movement. There shall be no vehicle entrance or exit points within the Urban Open Space which would impede movement or endanger pedestrians, other than access which may be required for emergency vehicles. The Urban Open Space shall be paved in accordance with City standards for sidewalk finishes. Street trees and landscape elements shall be located so as not to impede pedestrian movement and shall comply with all City street-related improvements

in the downtown area. An Urban Open Space designed to facilitate pedestrian movement or to relieve congestion shall be accessible to the handicapped throughout its entire area and shall be open without restriction to the general public at all reasonable times.

- ii Urban Open Space designed to provide passive recreation Space or informal activity areas shall abut and be accessible from a public sidewalk or from an established Urban Open Space designed to facilitate pedestrian circulation or relieve pedestrian congestion. A majority of the Urban Open Space shall be visible from such abutting Space. Access to the Urban Open Space shall not be interrupted by vehicle entrances or exits. A plaza or park may be located above or below the level of the abutting sidewalk or open space provided it is accessible to the handicapped. A plaza or park shall contain seating, permanent landscaping and lighting for night time illumination. A park or plaza may contain tables and facilities for food service, but a majority of the Space shall be available for general public use without charge or purchase of any services which may be offered. A park or plaza shall be sited and oriented to maximize the access of sun light and air to the Urban Open Space. The Urban Open Space shall be open without restriction to the general public at least during business hours normal to the area in which it is located and during periods of heavy pedestrian movement in the area.
- iii When a development site is adjacent to a bus stop or transit station, the required Urban Open Space shall be designed to provide access to it and the waiting areas for transit riders.
- iv Every Urban Open Space provided under the requirements of this Code shall be located and developed to relate harmoniously with development on adjacent sites and to contribute to the attractiveness and efficient functioning of the overall environment of the district.

3. Maintenance

A legally binding agreement, in a form acceptable to the City, shall be executed for each Urban Open Space provided and approved under the requirements of this Code. This agreement shall include provision for the permanent maintenance of the Urban Open Space by its owner.

d. Useable Open Space

Useable Open Space shall be provided for residential uses within an SP District in accordance with the Land Use Intensity Rating System of the Subdivision Regulations and Standards.

909.01.E - Establishment of SP Districts

The following SP Districts are hereby established:

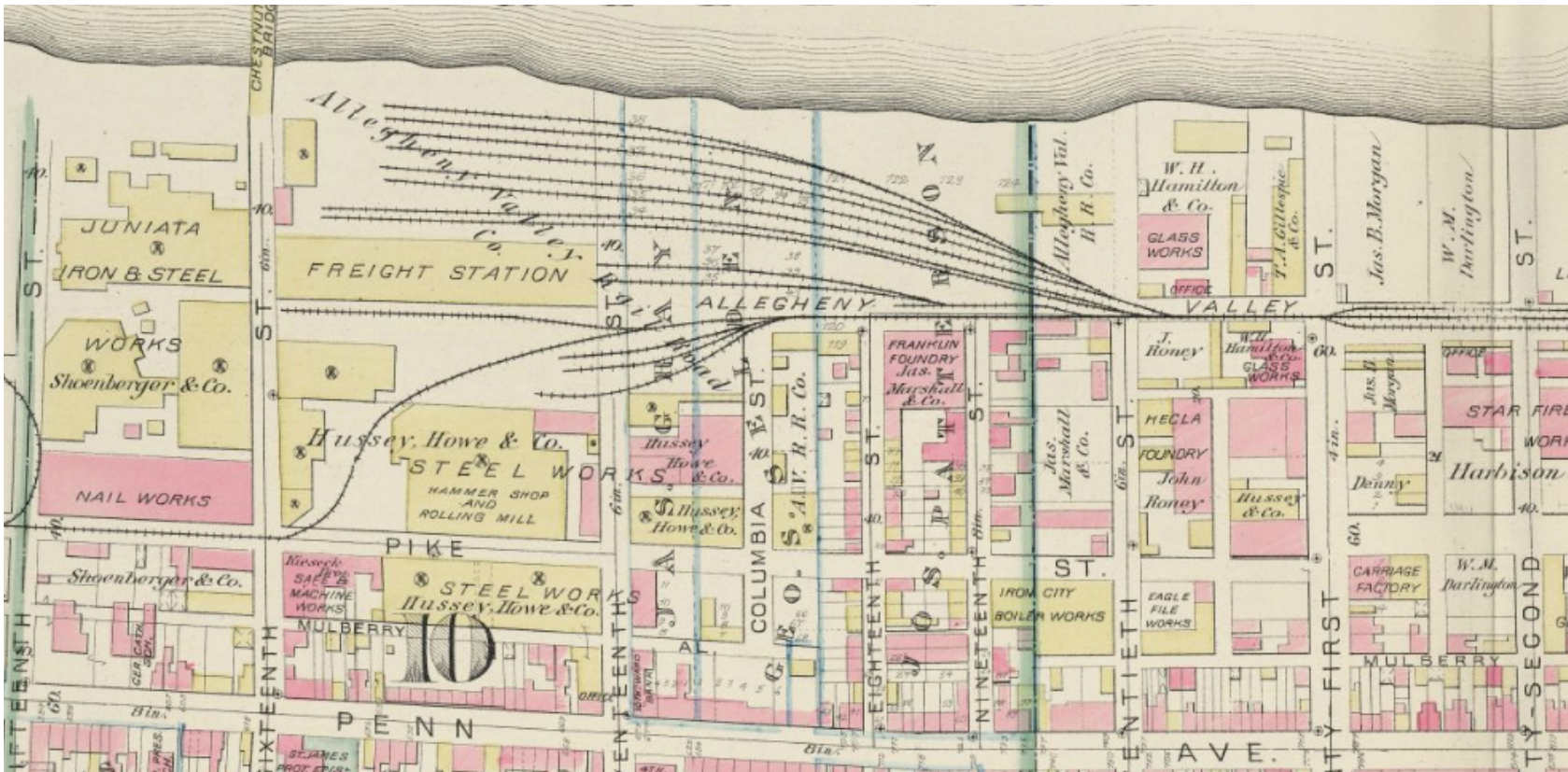
- a. SP-1, Pittsburgh Technology Center
- b. SP-2, Herr’s Island
- c. SP-3, Public Safety Complex
- d. SP-4, Station Square
- e. SP-5, South Side Works
- f. SP-6, Palisades Park

Background and Existing Conditions

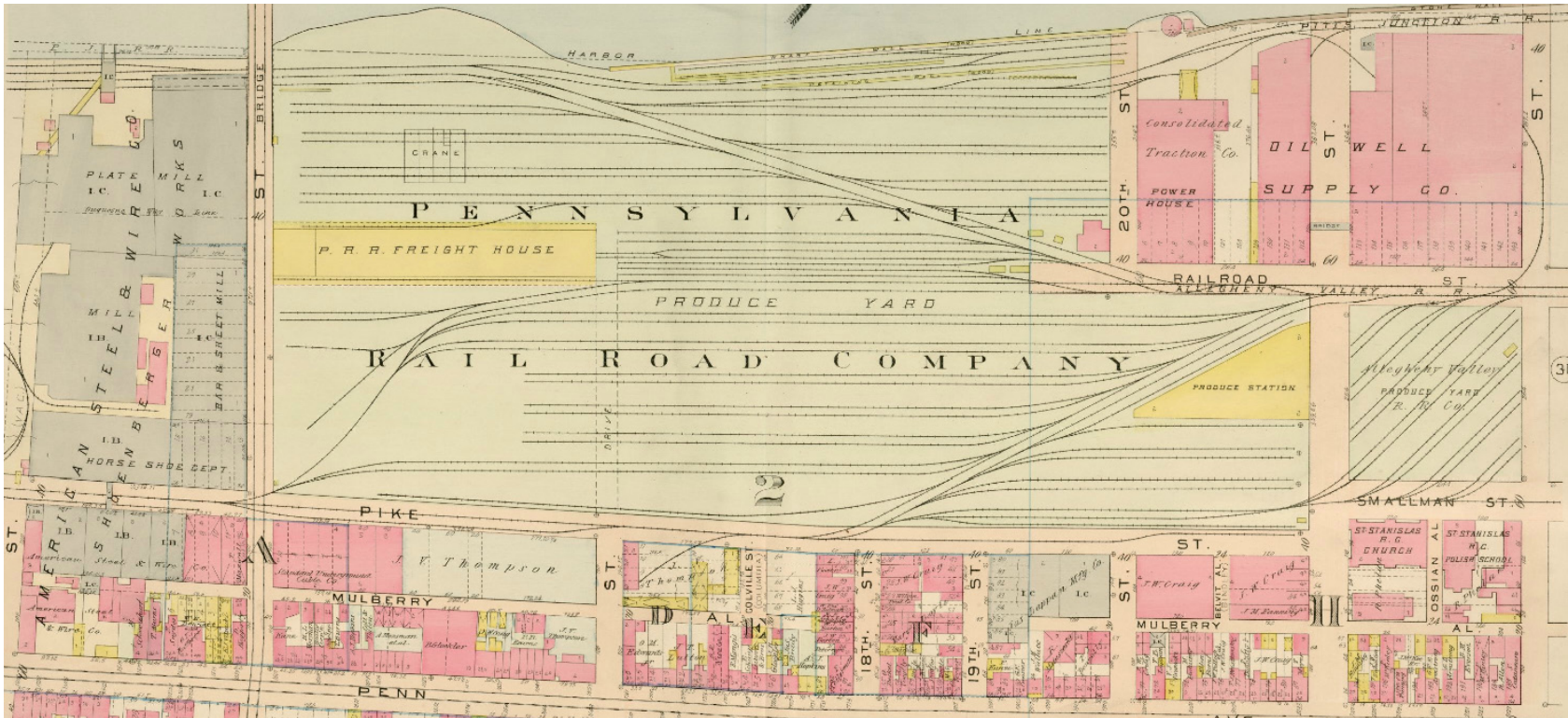
Beginning in the early 1800s, the Strip District was a dynamic site, and host to the several industries that have been crucial to the development of Pittsburgh as a whole. Steel, glass, the railroad, and produce have all played major roles in the development of the current site, and its surrounding community.

In 1824, Dr. Peter Schoenberger established the Juniata Iron Works which was located on the site next to the current Produce Terminal building, and was the first significant iron production facility in the area.

The main line of the Pennsylvania Railroad, located on Liberty Avenue, was completed in 1852, and sparked the further development of the strip district area. The Allegheny Valley Railroad completed its connection from Oil City to Pittsburgh in 1870 along the South Side of the Allegheny. The large scale transportation improvements established by these two entities, spawned increased industrial development on the site. The Hussey, Wells and Company steel mill was constructed in 1857, which by 1870, became the largest crucible steel plant in Pittsburgh. Colman, Rahm and Company established their mill in the 1860s. The City Boiler Works was established in 1872, and the Franklin Foundry operated from the 1860s through the 1880s. William H. Hamilton established a glassworks company in 1863 on Railroad Street. However, by 1906, all of the buildings between 18th and 22nd streets, and Smallman and Railroad Streets were demolished for a rail yard and a fruit depot.



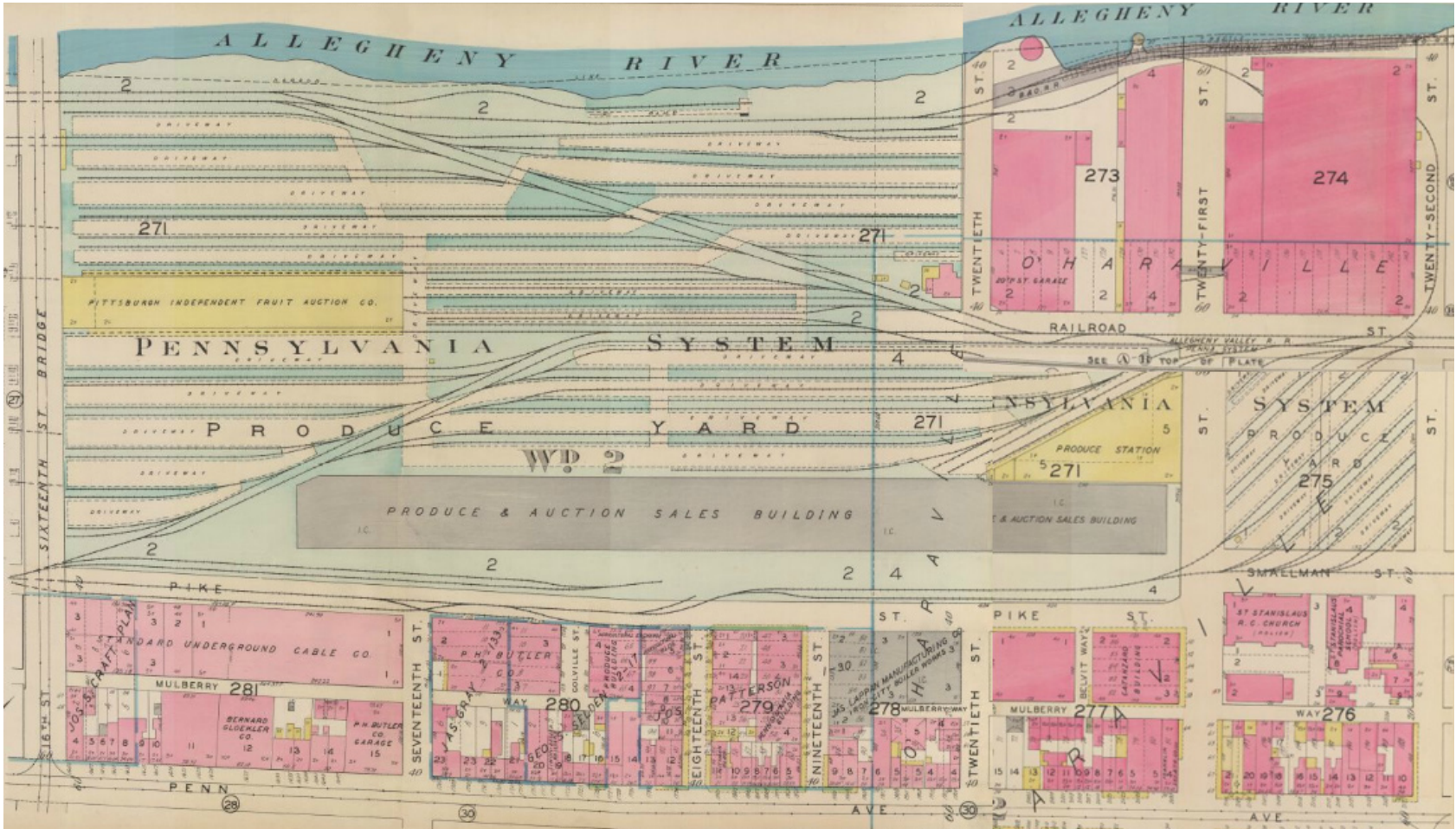
Strip District - 1882



Strip District - 1914

Post World War I, the nature of the industrial uses of the site changed. The steel mills closed, and businesses on the site started to focus more on produce. Large warehouses were constructed, and residential areas considered to be substandard were demolished, changing the architectural fabric of the district. In 1906, the Pennsylvania Railroad removed its tracks along Liberty Avenue. As a result, the organization of the area shifted again, as produce wholesalers moved closer to the tracks along the river. Warehouses were constructed along Smallman (then Pike Street) and Penn Avenue, in closer proximity to the Allegheny Valley Railroad tracks along the river. By 1930, the Pennsylvania Railroad (which had by then purchased the Allegheny Valley Railroad) had expanded its rail yard to include the entire site between 11th and 21st streets, north of Smallman Street.

The Produce Building, originally called the Pennsylvania Railroad Fruit Auction and Sales Building, was opened on March 4, 1929. It was designed to maximize efficiency of produce distribution on the site. However, by the 1960s, due to the shift away from small local grocers to large grocery chains, the site again became untenable for produce distribution, and by the mid 1970's, only 24 wholesalers were still operating. After a renovation in the 1980s, a fraction of the Produce Terminal Building is still used for produce warehousing, however other uses, such as the Society for Contemporary Craft, have also taken up residence in the structure.



Strip District - 1929

Site History Sources:

- Text: Pennsylvania Historical and Museum Commission Bureau for Historic Preservation
- Maps: Historic Pittsburgh.



1 Terminal Parking Along Smallman
90 degree parking along Smallman Street relates to the historic nature of the buildings.



2 Loading Docks
Loading docks are elevated.



3 + 4 Historic Sales Building Converted into Contemporary Craft Gallery
Remnants from historic uses add to the texture and feel of the area. The Center for Contemporary Craft now occupies the Fruit Auction and Sales Building.



LEGEND



SP DISTRICT BOUNDARY



5 Warehouse Facilities
Numerous former warehouses still existing in the project area. The predominant material of buildings in the area are brick and glass.



6 Northwest View of Smallman
Smallman Street hosts a complicated mix of vehicular, bicycle and pedestrian traffic.



7 Nostalgic Signs
Signs from past and current uses provide a sense of history.



8 St. Stanislaus Kosta Church
St. Stanislaus Kosta Church is one of the oldest structures in the project area.

LEGEND

 SP DISTRICT BOUNDARY



9 New Commercial Development

Contemporary commercial development in the area has followed existing architectural precedents.



10 Tree Lined Streets

Existing landscape treatments serve as a precedent for future development.

LEGEND





11 View of Pittsburgh Skyline

There are wide views of downtown Pittsburgh from the project site.

LEGEND

 SP DISTRICT BOUNDARY



12 Panorama of Property



13 Rear of the Terminal

LEGEND





14 View of Downtown Pittsburgh
Existing trail along the Allegheny River.



15 Vegetation Obstructs Views of Allegheny River
Vegetation along the trail blocks views to the river.



16 View Away from Downtown
View up Allegheny River trail towards the project site.

LEGEND

 SP DISTRICT BOUNDARY



17 Overgrown Trail

The Buncher Company has granted an easement to the City of Pittsburgh for the trail along the Allegheny River.



18 Stairs to Parking Lot

Connection to the Overlook and trail.



19 View of Allegheny River from Overlook

Views of the river and Pittsburgh's North Side are extensive along the northern edge of the project site.

LEGEND

 SP DISTRICT BOUNDARY



20 View of Downtown Pittsburgh and the Convention Center



21 One Waterfront Place

LEGEND



SP DISTRICT BOUNDARY



22 Veterans Bridge Underpass

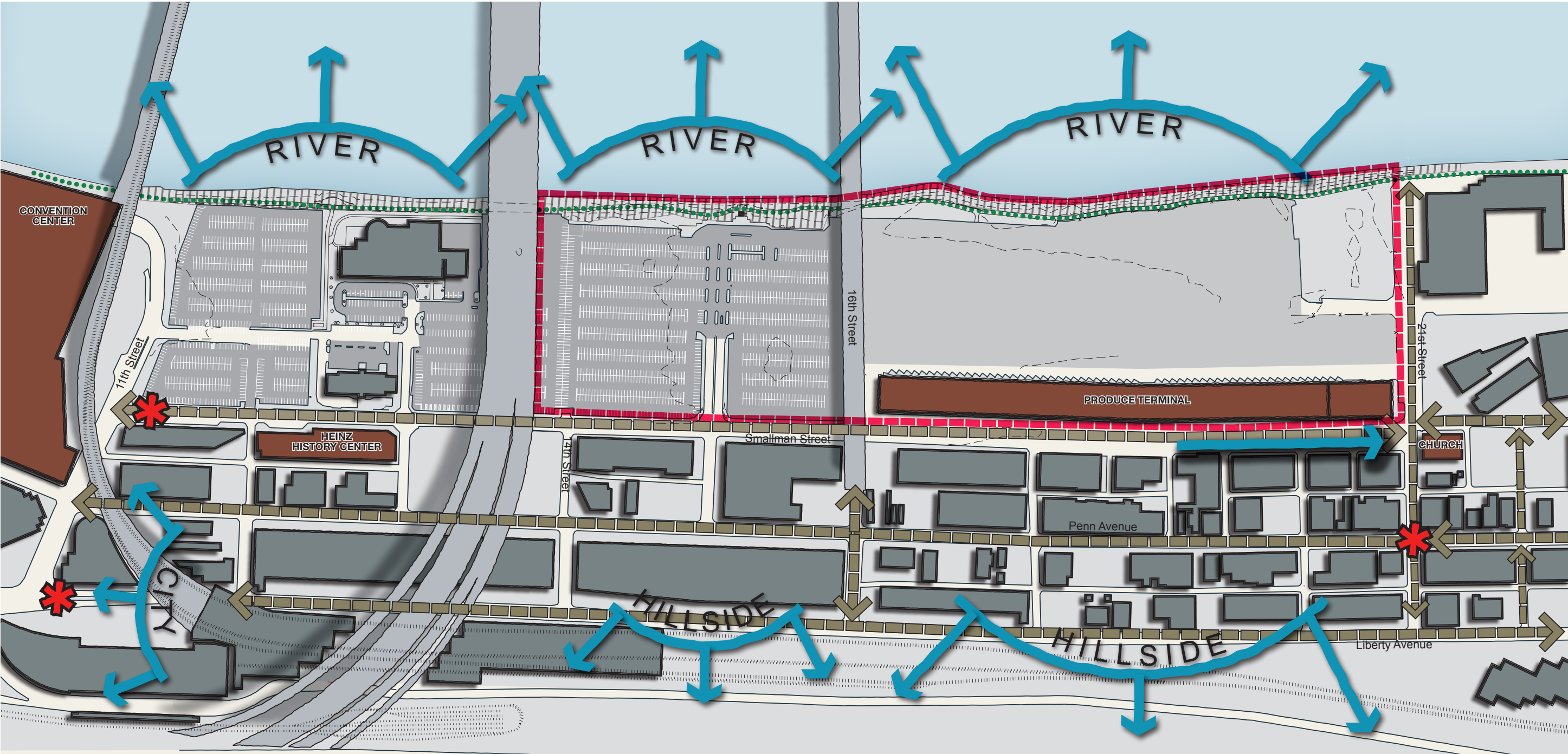
The underpasses located adjacent to, and on the project site are appropriately utilized for parking.



23 16th Street Bridge Underpass

LEGEND

 SP DISTRICT BOUNDARY



LEGEND

- | | | | | | |
|------------------------|------------------|-----------------------------|-----------------------|------------------------------|----------------------|
| STEEP SLOPE | VIEW | MAJOR VEHICULAR CIRCULATION | EXISTING BUILDINGS | PARKING | SP DISTRICT BOUNDARY |
| MAJOR VEHICULAR ACCESS | PEDESTRIAN TRAIL | MINOR VEHICULAR CIRCULATION | ARCHITECTURAL FEATURE | OPEN SPACE/ OVERFLOW PARKING | |

Streets Design

The goal for circulation through the site is to establish a system that is aesthetically appealing, environmentally sustainable, safe and efficient. In order to achieve the above, the following objectives were followed in the development of the site:

- The system includes a hierarchy of roadways, that clearly indicate major and minor throughways, and separates functions as much as possible;
- Roadways should connect to, and enhance the existing grid system in the surrounding community; and
- Vehicular, bicycle and pedestrian movements should be clearly defined, while co-existing in the same space.

Roadways

Primary roadways (e.g., Smallman Street and Waterfront Place) are defined potentially by a wider width, shade trees, and pedestrian walks. These roads have a higher rate of speed for vehicles, and are more appropriate for larger vehicles, and through traffic. Parking can either be parallel, or perpendicular (of varying degrees).

Secondary Roadways (e.g., 17th and 21st Streets) are defined by standard street widths. Landscape can either consist of shade trees or small flowering trees and lawn. Parking will only be parallel.

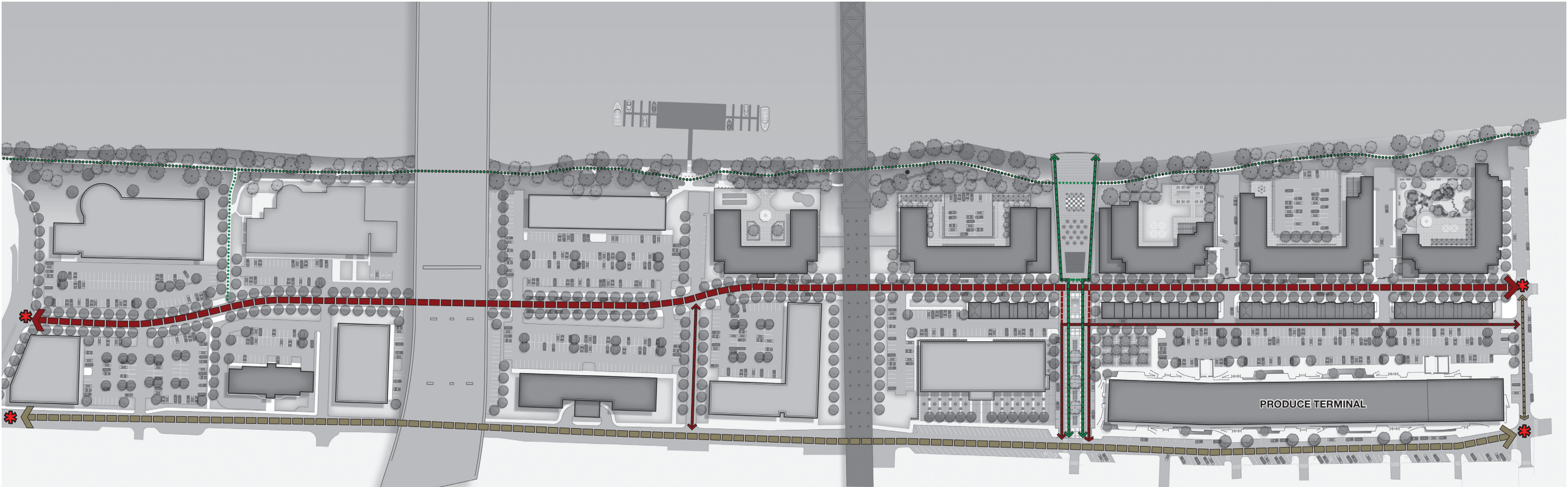
Pedestrian Circulation

It is the goal of this PLDP to encourage pedestrian circulation. The surrounding community has high pedestrian movement, and this PLDP aims to support and contribute to a walker-friendly neighborhood.

Pedestrian walks are located to provide pleasant, and safe pedestrian experiences. Usually separated from the street by trees, verges, and lighting, the site design aims to create a comfortable, well-lit, and protected pedestrian zone.

Streetscape Sections

THE FOLLOWING SECTIONS ARE NOT MEANT TO BE TAKEN AS FINAL DESIGN, BUT ARE SHOWN AS EXAMPLES OF STRUCTURAL AND AESTHETIC TREATMENTS OF THE VARIOUS STREETS ON THE SITE.

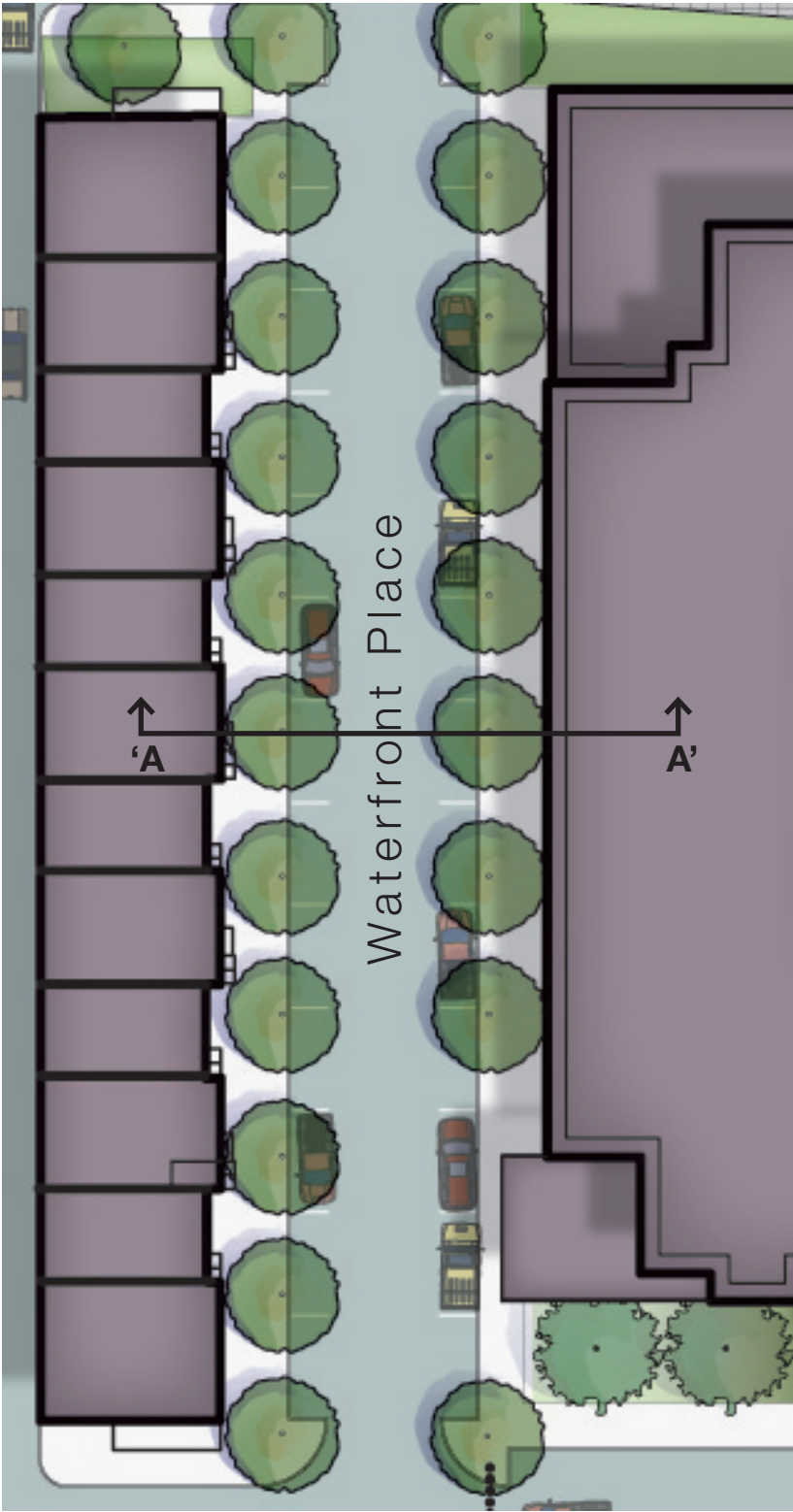


STREETSCAPE HIERARCHY PLAN

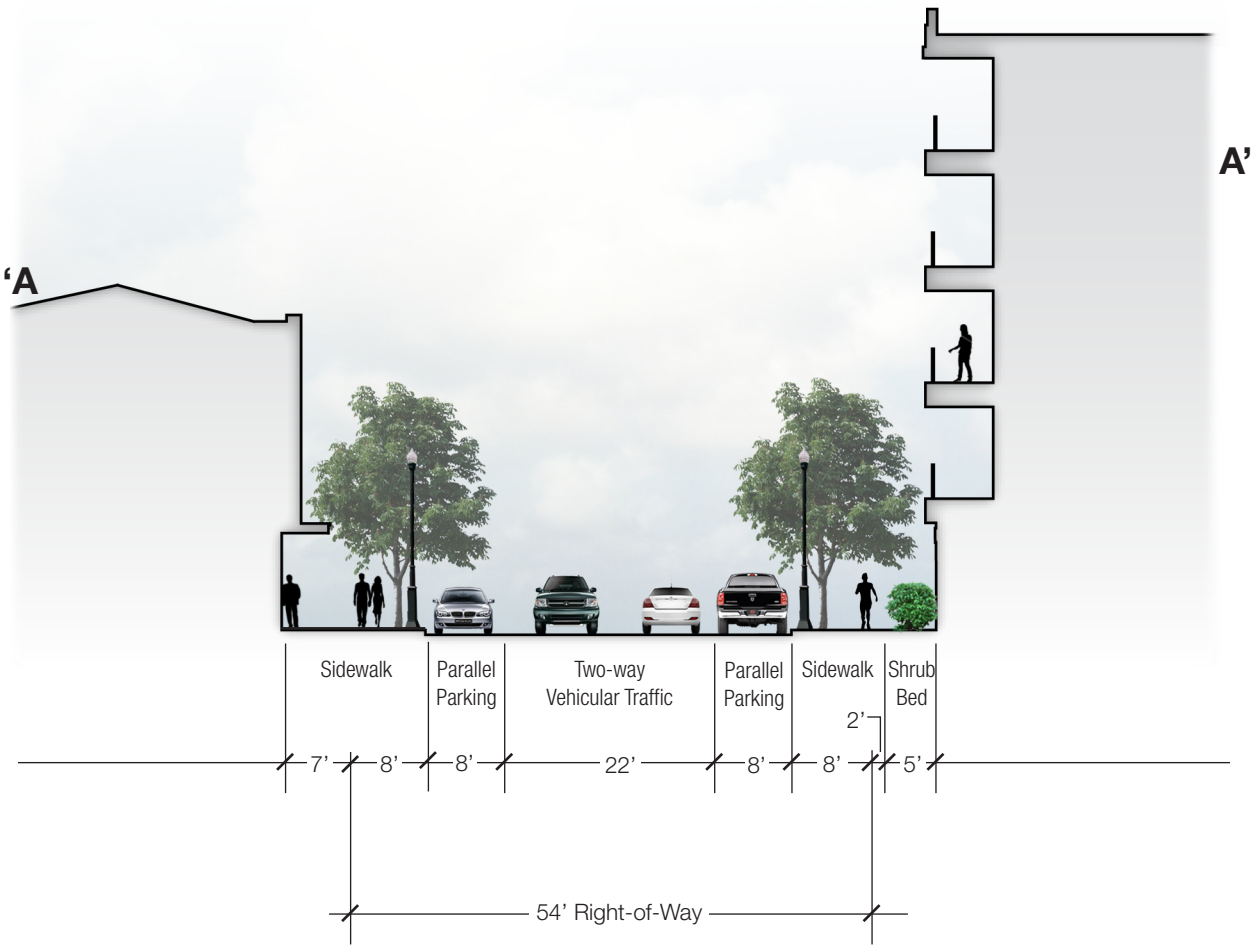


LEGEND

- | | | | |
|--|---|--|---|
|  MAJOR VEHICULAR ACCESS |  PRIMARY VEHICULAR CIRCULATION |  PROPOSED PRIMARY VEHICULAR CIRCULATION |  PROPOSED PRIMARY PEDESTRIAN ROUTE |
| |  SECONDARY VEHICULAR CIRCULATION |  PROPOSED SECONDARY VEHICULAR CIRCULATION |  PEDESTRIAN TRAIL |



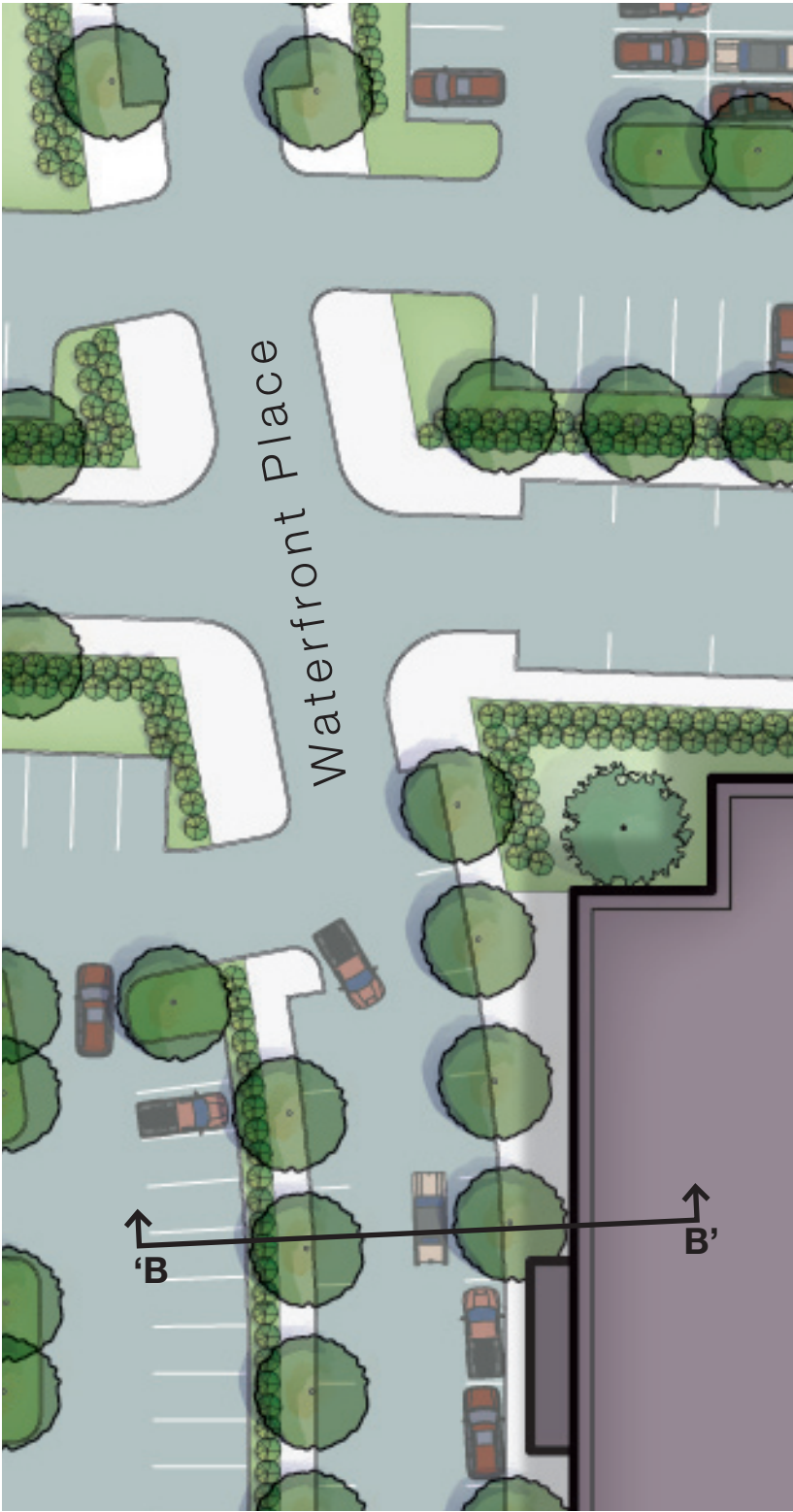
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Section 'A-A' Conceptual Example: Waterfront Place East

Note: The conceptual design shown is for graphic purposes only.





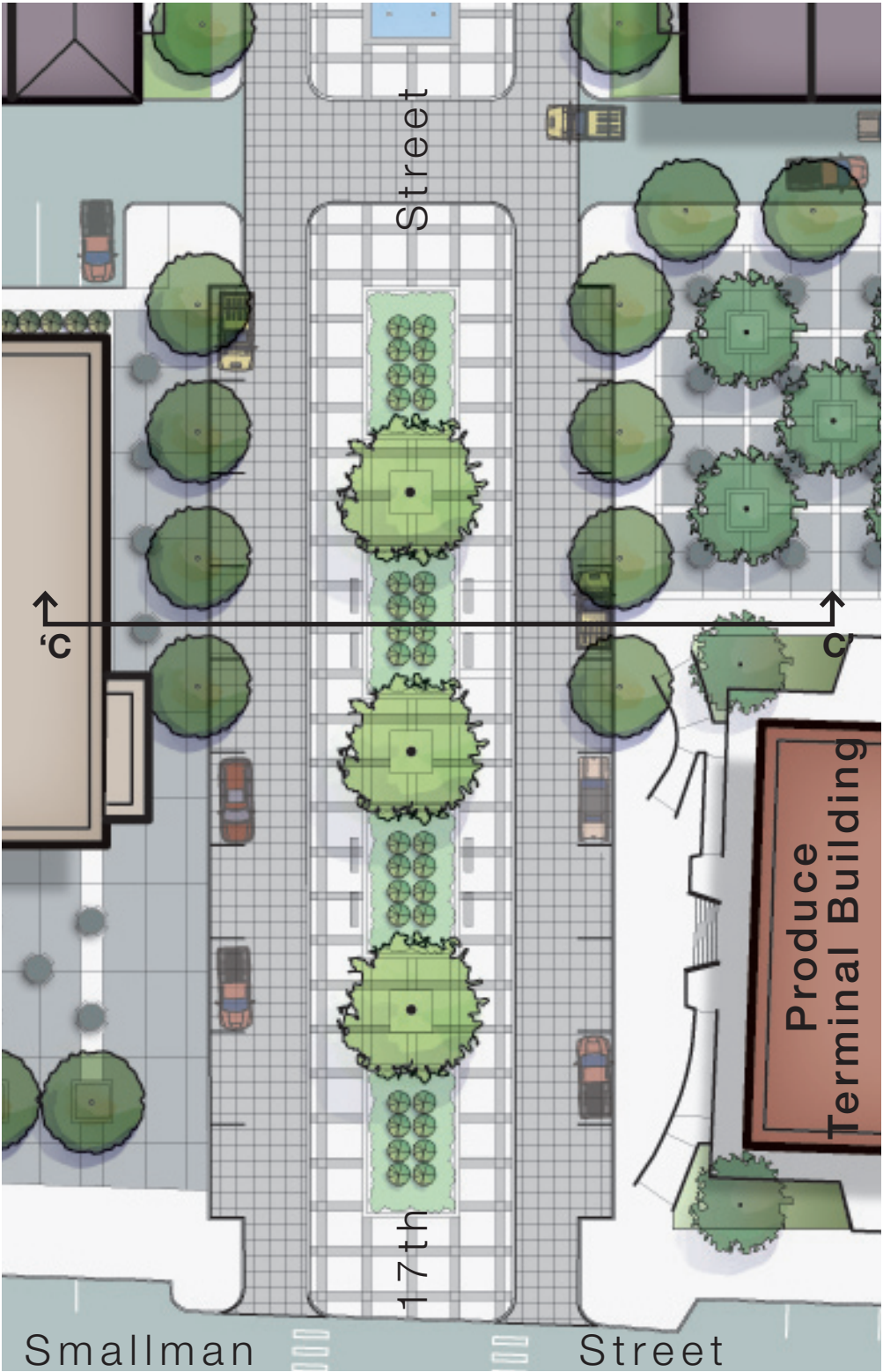
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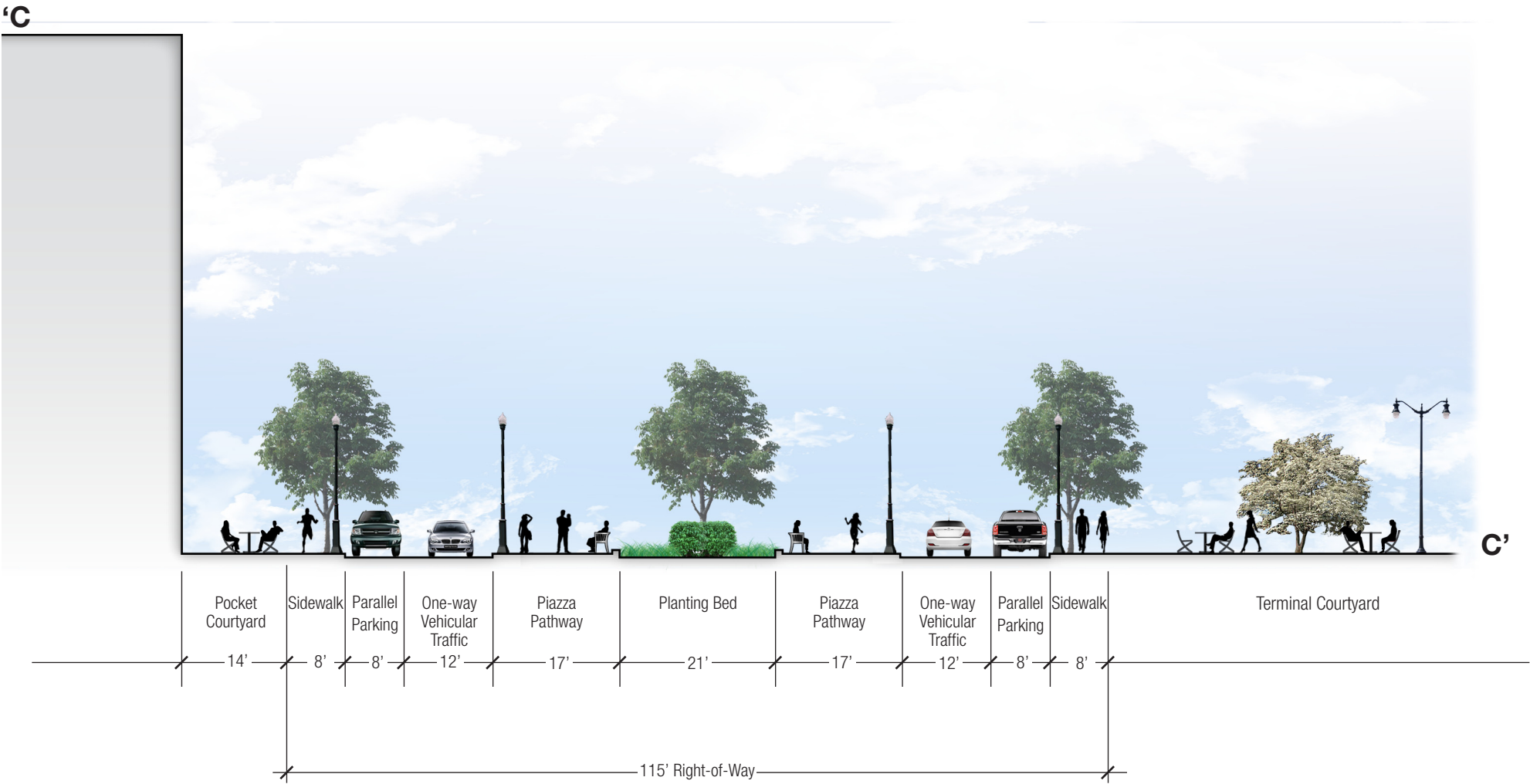
Section 'B-B' Conceptual Example: Waterfront Place West

Note: The conceptual design shown is for graphic purposes only.





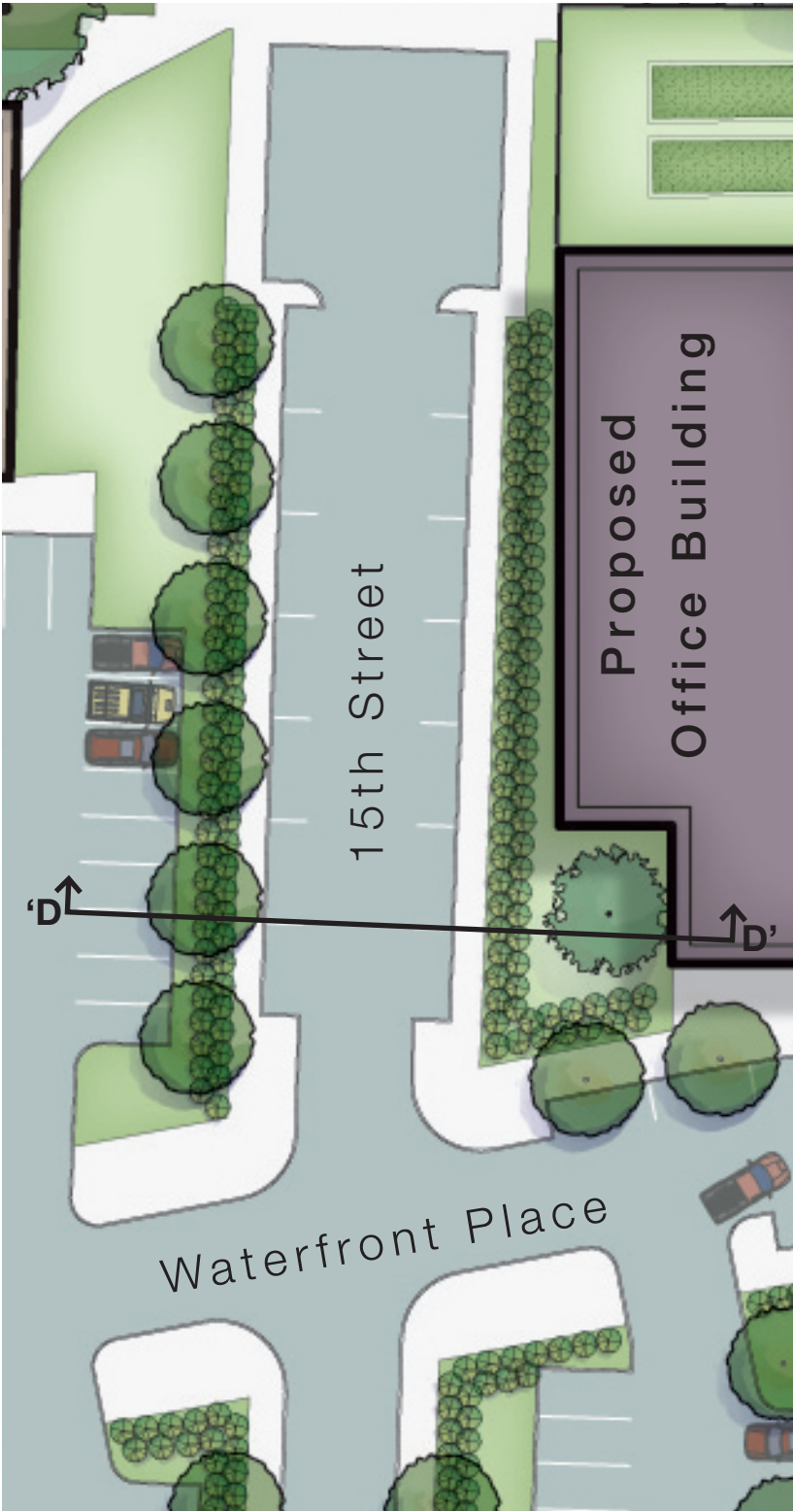
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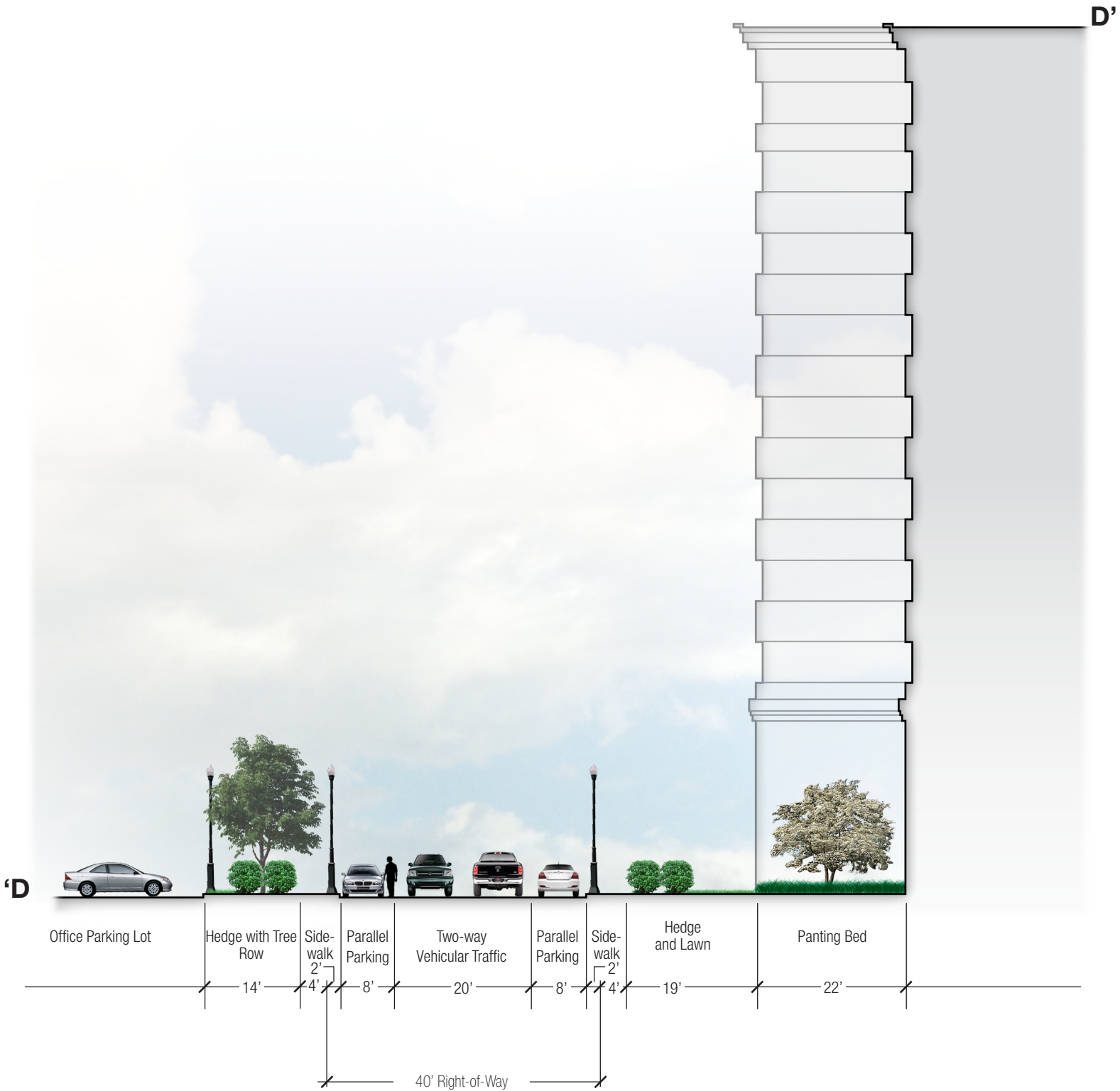
Section 'C-C' Conceptual Example: 17th Street South

Note: The conceptual design shown is for graphic purposes only.





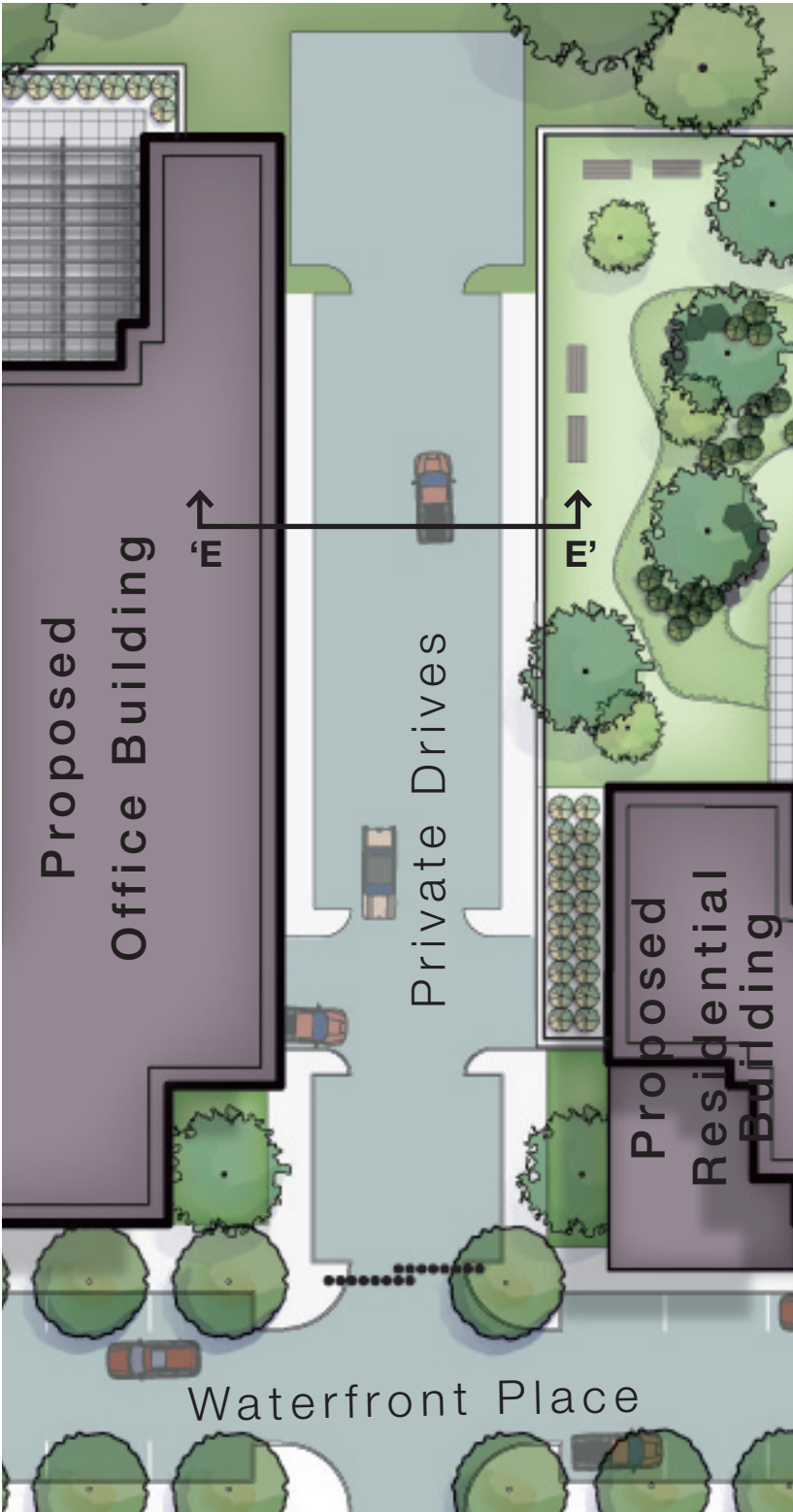
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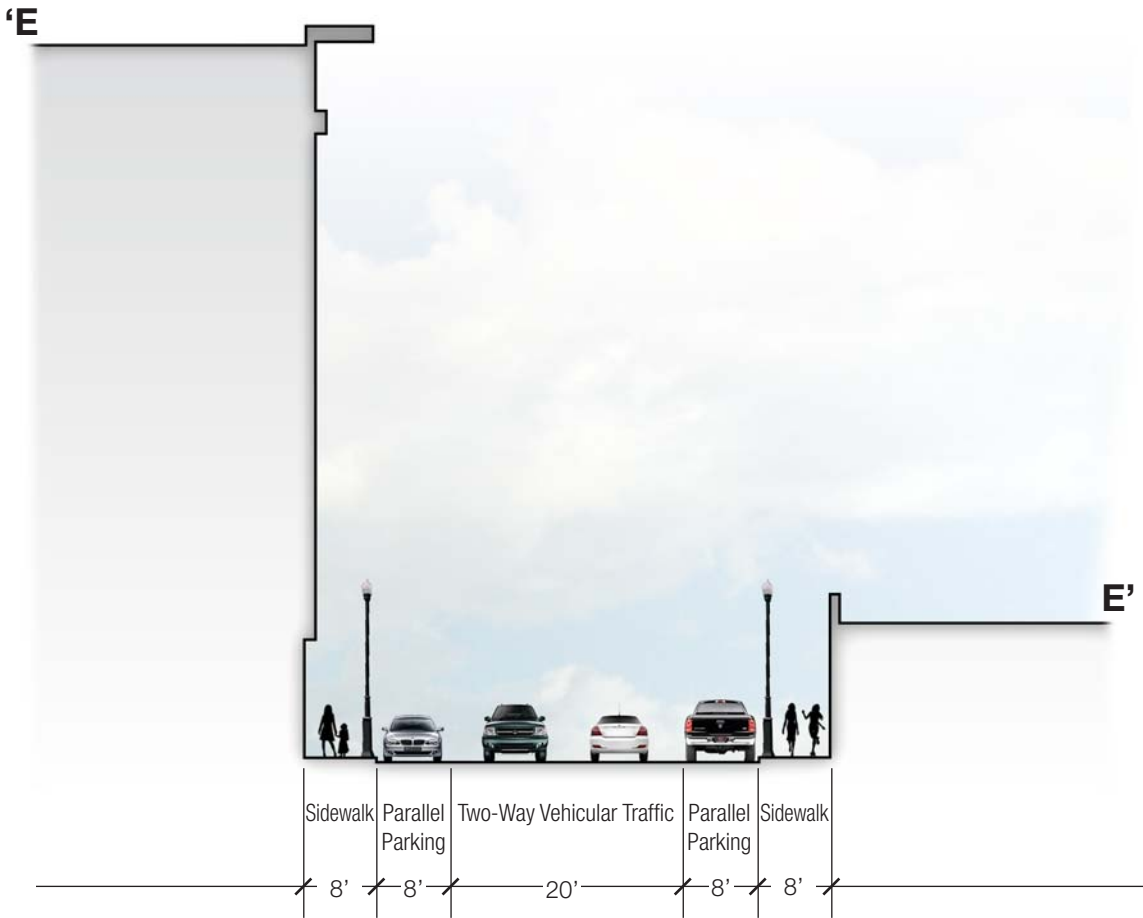
Section 'D-D' Conceptual Example: 15th Street

Note: The conceptual design shown is for graphic purposes only.





PLAN



Section 'E-E' Conceptual Example: Private Drives

Note: The conceptual design shown is for graphic purposes only.



Regulating Plans



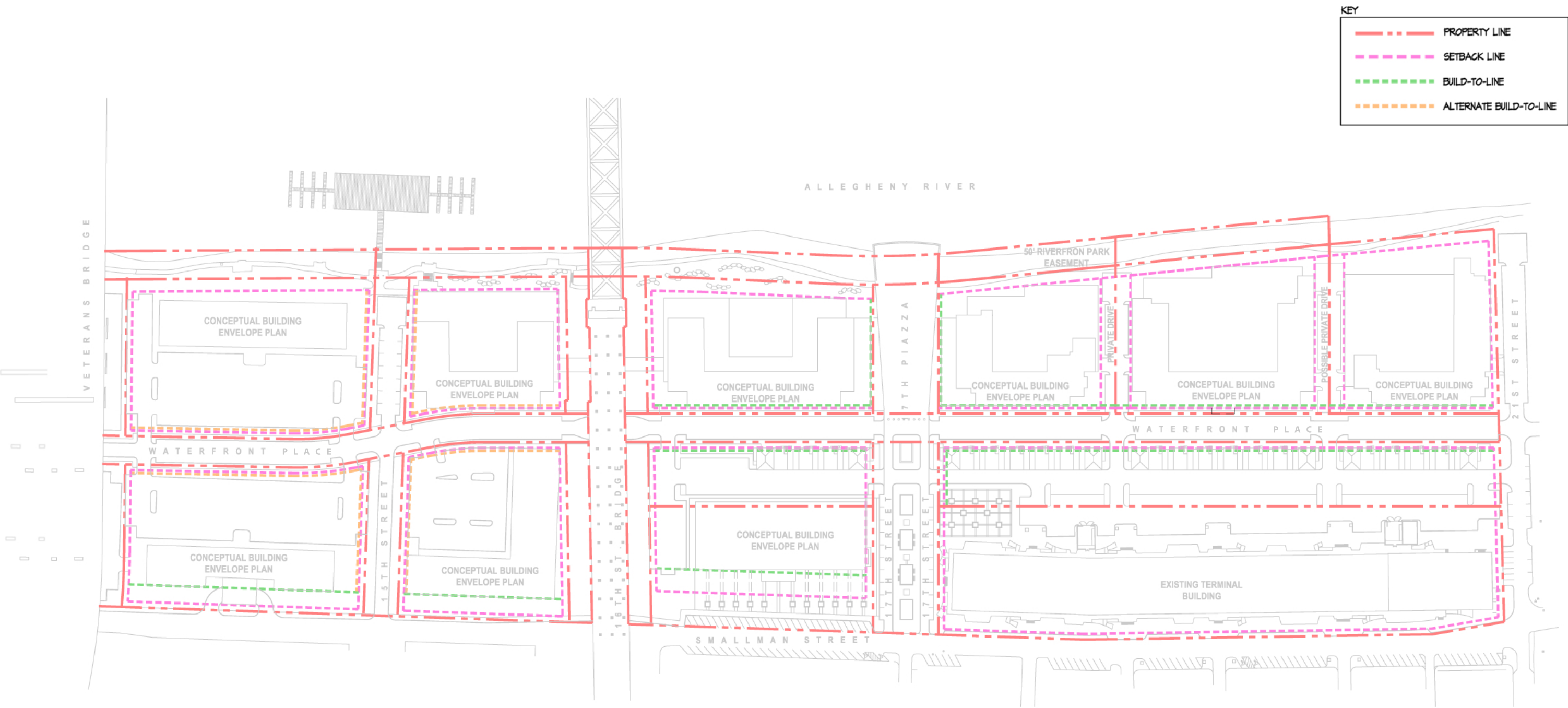
CONCEPTUAL PLAN

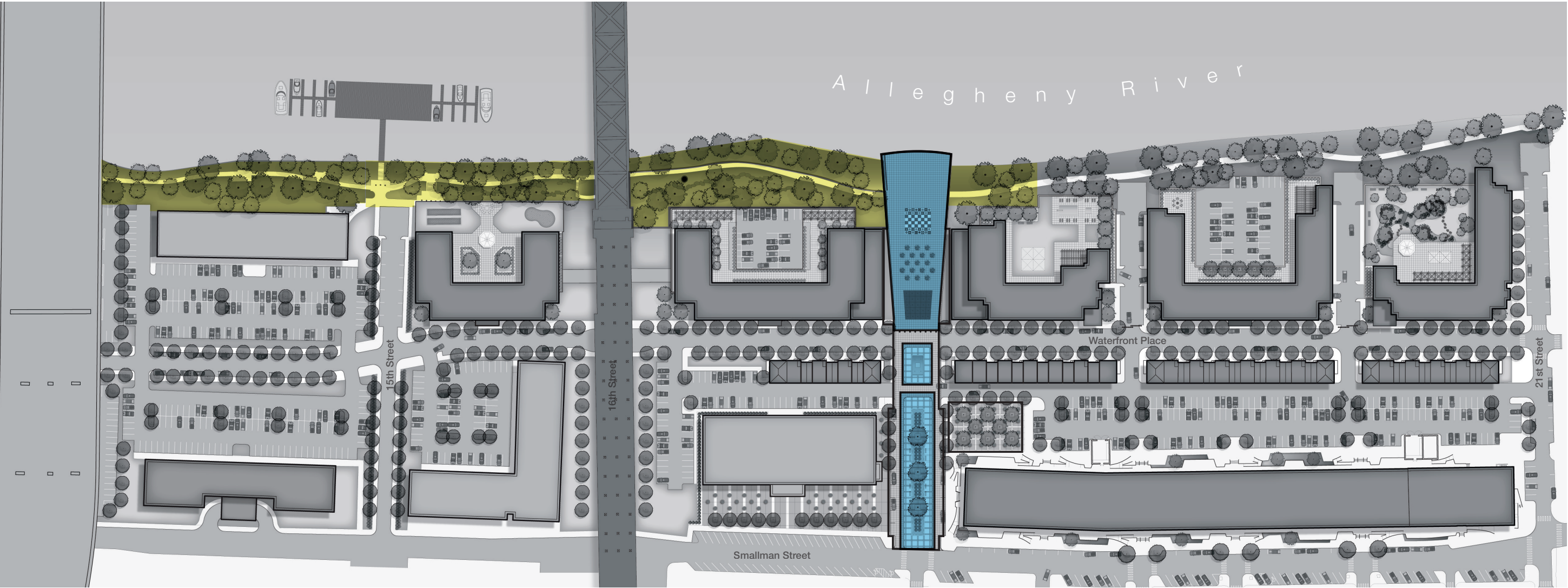


LEGEND

	PROPOSED RETAIL
	PROPOSED OFFICE
	PROPOSED RESIDENTIAL
	PROPOSED HOTEL

Public Parking Spaces:	
Terminal Building	189
On-Street Parking	330
Building 1	149
Building 2	115
Building 3	68
Building 4	77
TOTAL	928





OPEN SPACE PLAN



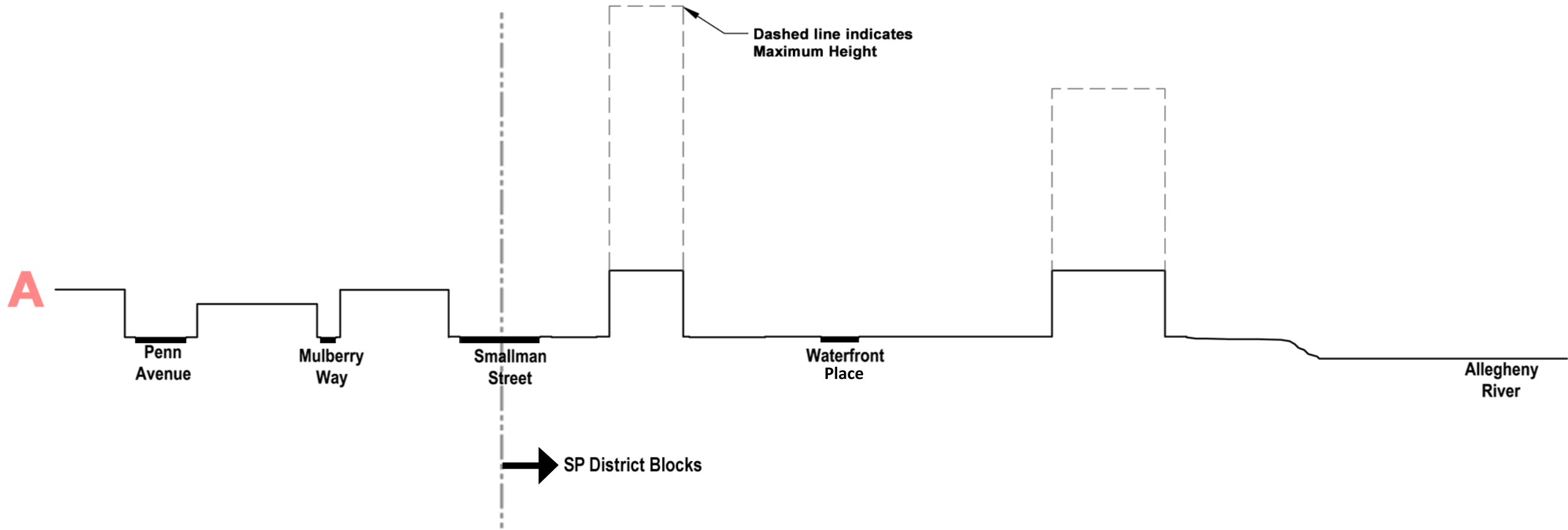
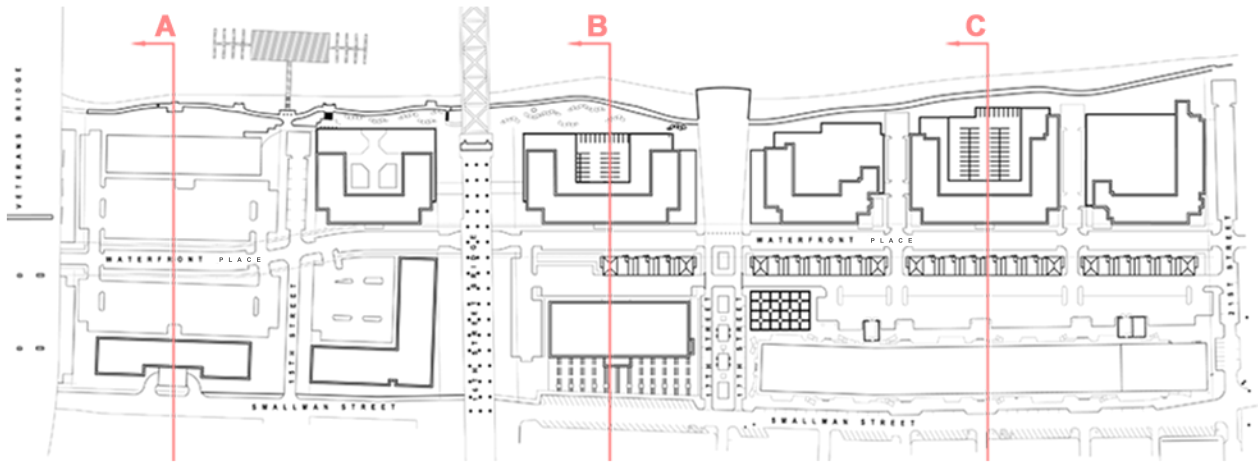
One of the basic differences between urban and suburban models of living is the density of human cohabitation. Open space in an urban setting is aggregated and collectively utilized, varying in form and function. The City of Pittsburgh Zoning Code specifies that at least 10 percent of the land area within any SP district shall be improved as Urban Open Space.

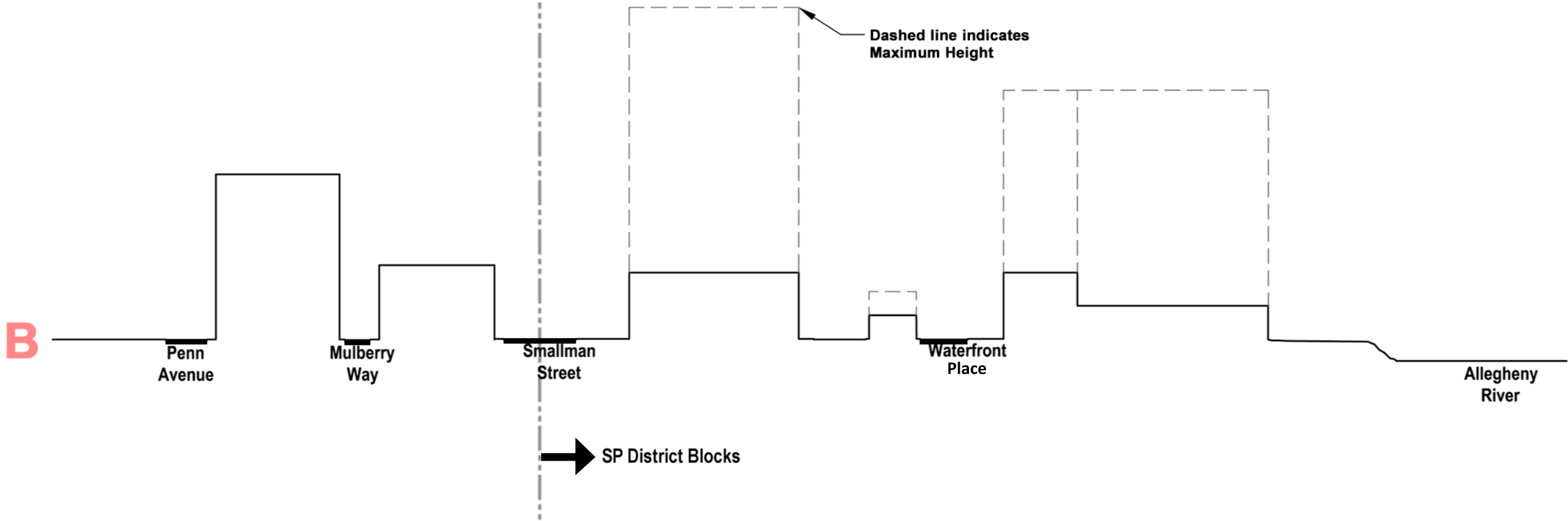
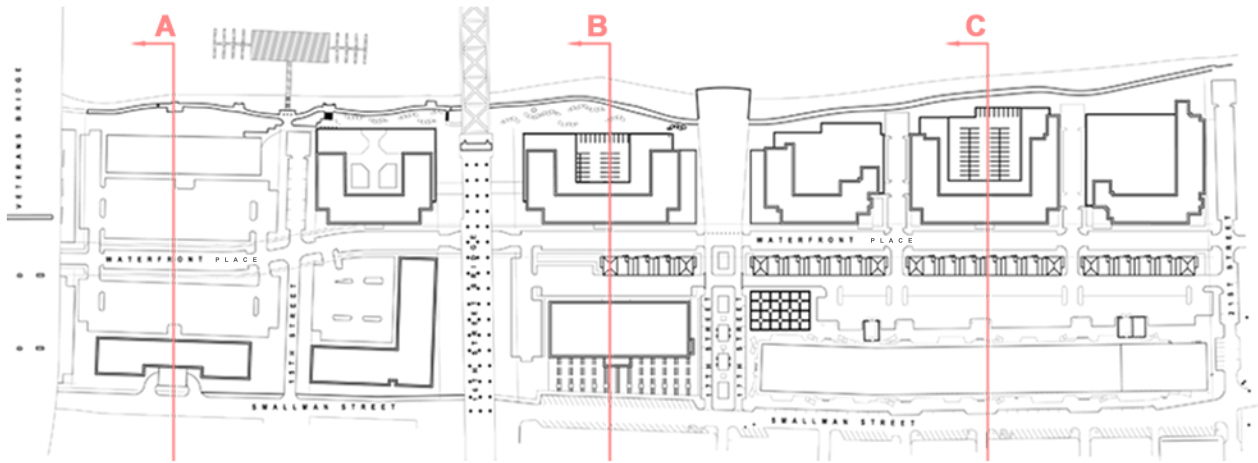
This PLDP incorporates 3.87 acres of open space (equal to 10 percent of the total development area of 38.7 acres), distributed throughout the site. The PLDP includes three open space types: A Piazza, Courtyards, and the “Lawn” Park. These sites provide an array of outdoor activities, while maintaining the character of the Strip District.

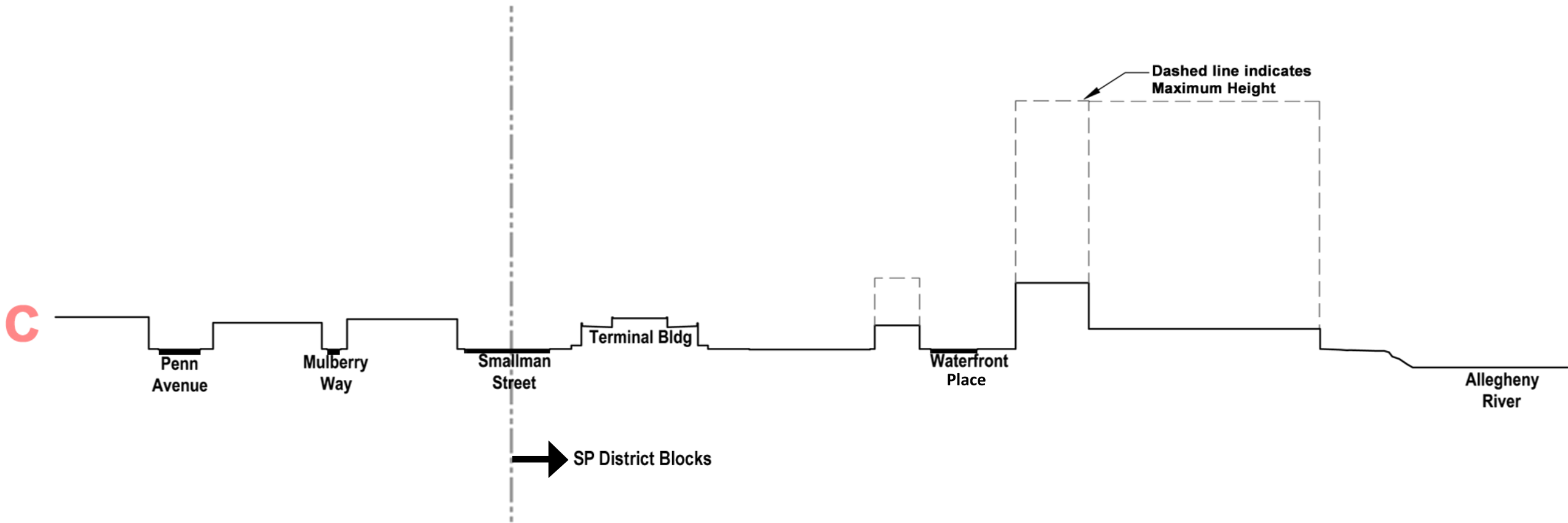
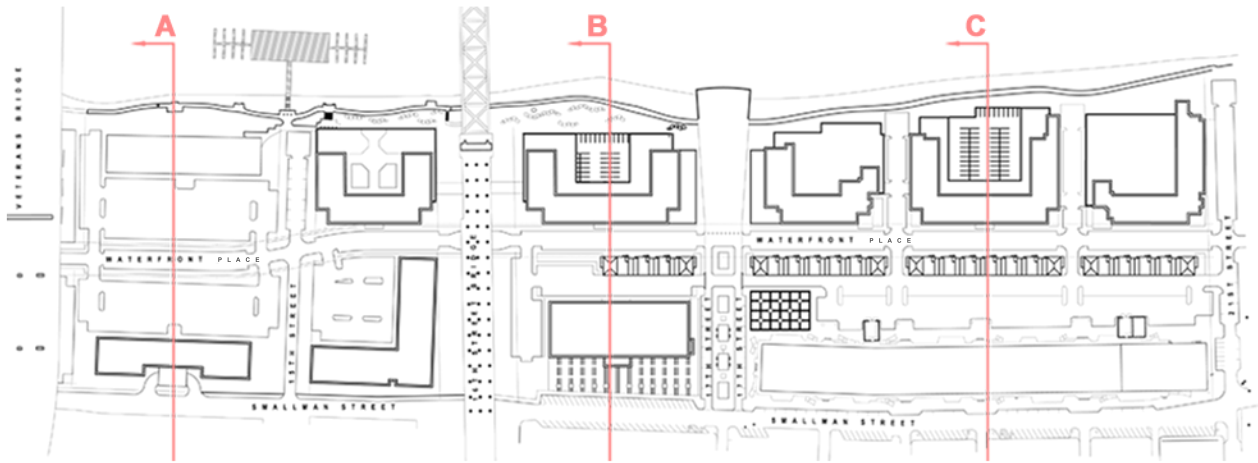
Privately owned plazas are not part of the open space calculations.

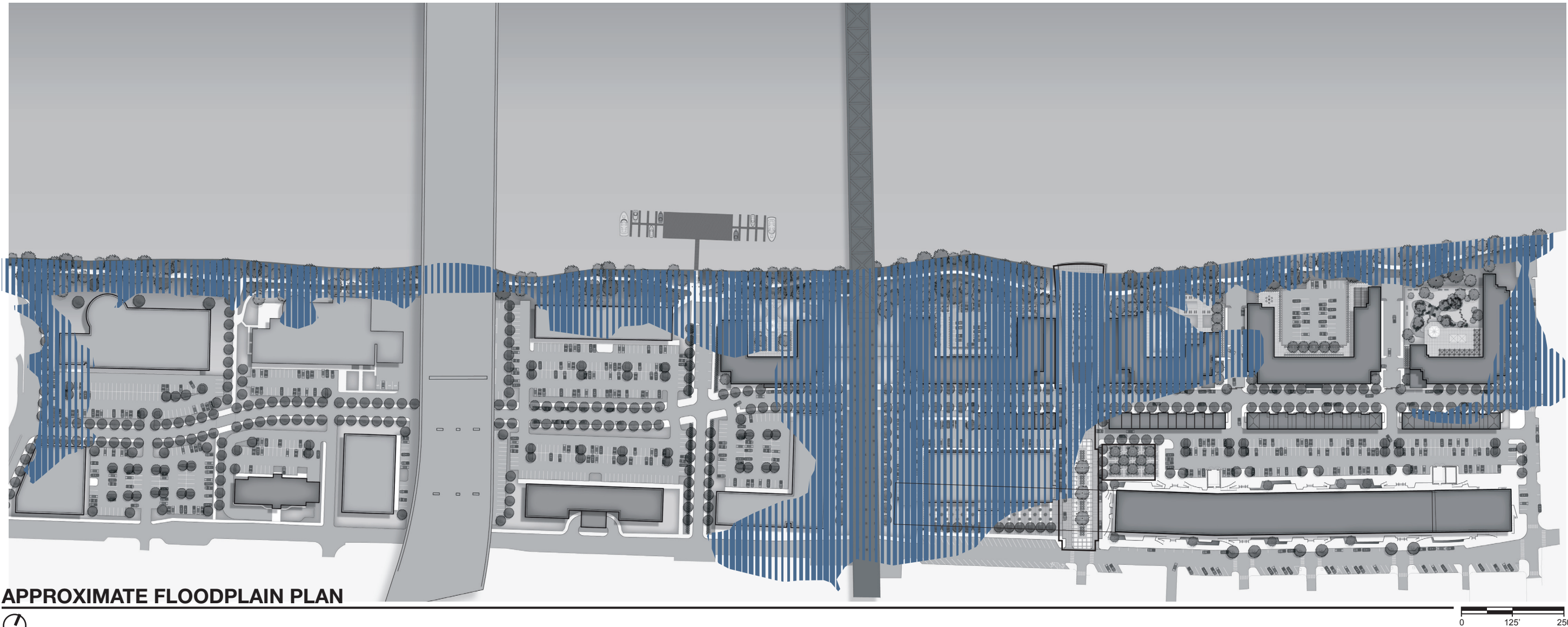
LEGEND

-  PIAZZA (1.06 ACRES)
-  THE “LAWN” PARK (2.84 ACRES)









APPROXIMATE FLOODPLAIN PLAN



The site currently falls within Pittsburgh's 100 year flood plain.
The site will be modified by the developer to ensure that any
structures will be above this level.

INTRODUCTION

This Master Plan for Post-Construction Storm Water Management has been prepared for The Buncher Company in anticipation of the redevelopment of a section of the Strip District located in the City of Pittsburgh, Allegheny County, Pennsylvania. This area is generally located between the Veteran’s Bridge and 21st Street, and bound by Smallman Street to the south and the Allegheny River.

The proposed redevelopment area encompasses land on the order of 37 acres in the area. However, prior and ongoing redevelopment in the area will reduce this acreage, as will the dedication of streets and public thoroughfares. This Master Plan, therefore, is designed to outline the management practices on individual lots within this area. The Buncher Company has established two separate Subdivision Plans, spanning in sequential order the area from the Veteran’s Bridge to the 16th Street Bridge and from the 16th Street Bridge to 21st Street. Both of these Subdivision Plans encompasses four to eight lots and associated parcels to be positioned around a restored street grid.

Due to past use of the land, the Site is considered a Brownfield Redevelopment. In accordance with this, the redevelopment of this land will adhere to all the necessary requirements of the Pennsylvania Department of Environmental Protection (PADEP) as indicated in the pending approval of the Act 2 plan. At one time, the subject Site was completely covered with impervious surfaces (roofs, roadways, etc.). Although most of the buildings have been demolished, supplemental pavements and impervious surfaces remain. The proposed redevelopment will decrease the impervious area of the Site (relative to the original condition) due to the incorporation of green space within the lots and along the public thoroughfares. In conjunction with potential storm water Best Management Practices (BMPs), these modifications will consequently decreased the storm water runoff. This decrease in runoff will satisfy the storm water management requirements of the Commonwealth, as well as the ordinances of the City of Pittsburgh. Thus by meeting these requirements, the redevelopment will not present any adverse impacts upon the local watercourses. No wetlands were located on the Site nor will be impacted by redevelopment

This plan was prepared by Harold P. McCutcheon, P.E., from KU Resources, Inc. Mr. McCutcheon has over 29 years of experience designing Erosion and Sedimentation and Storm Water Management Plans. He is a Certified Professional in

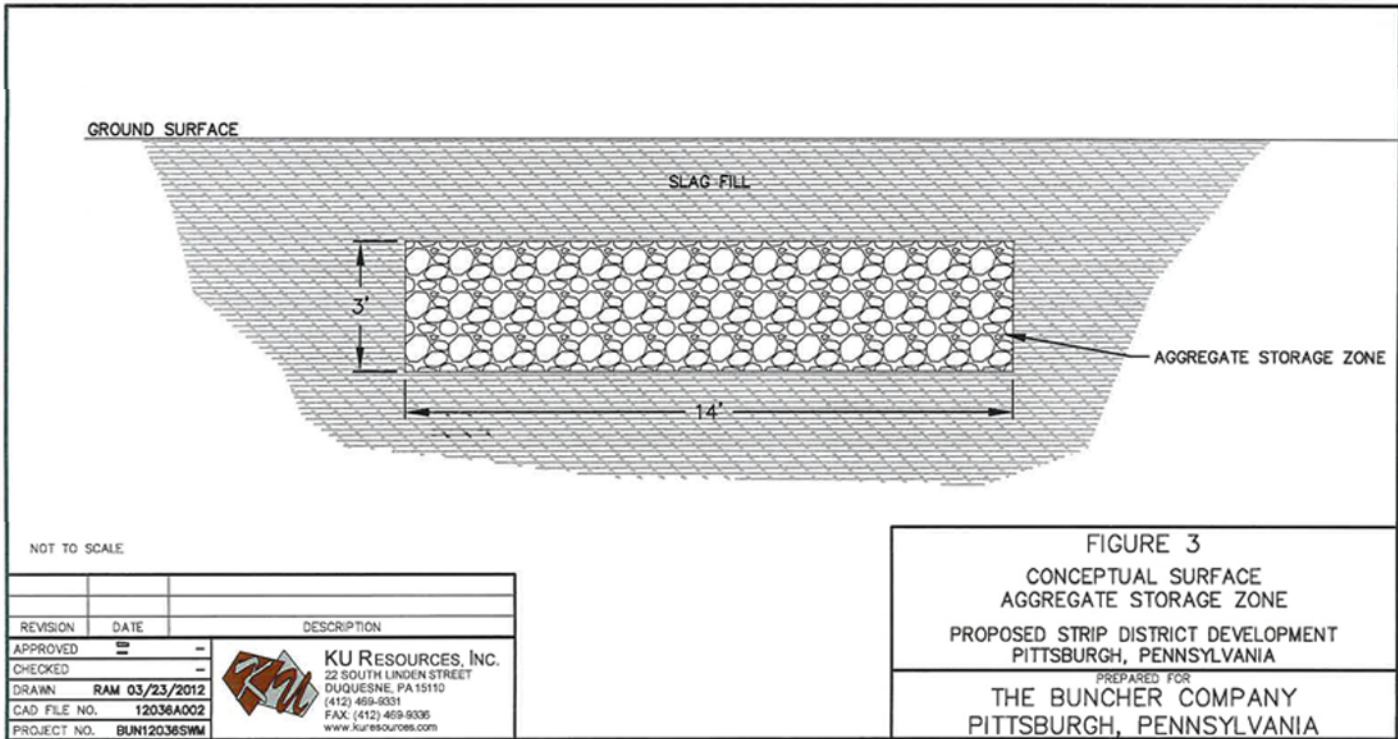
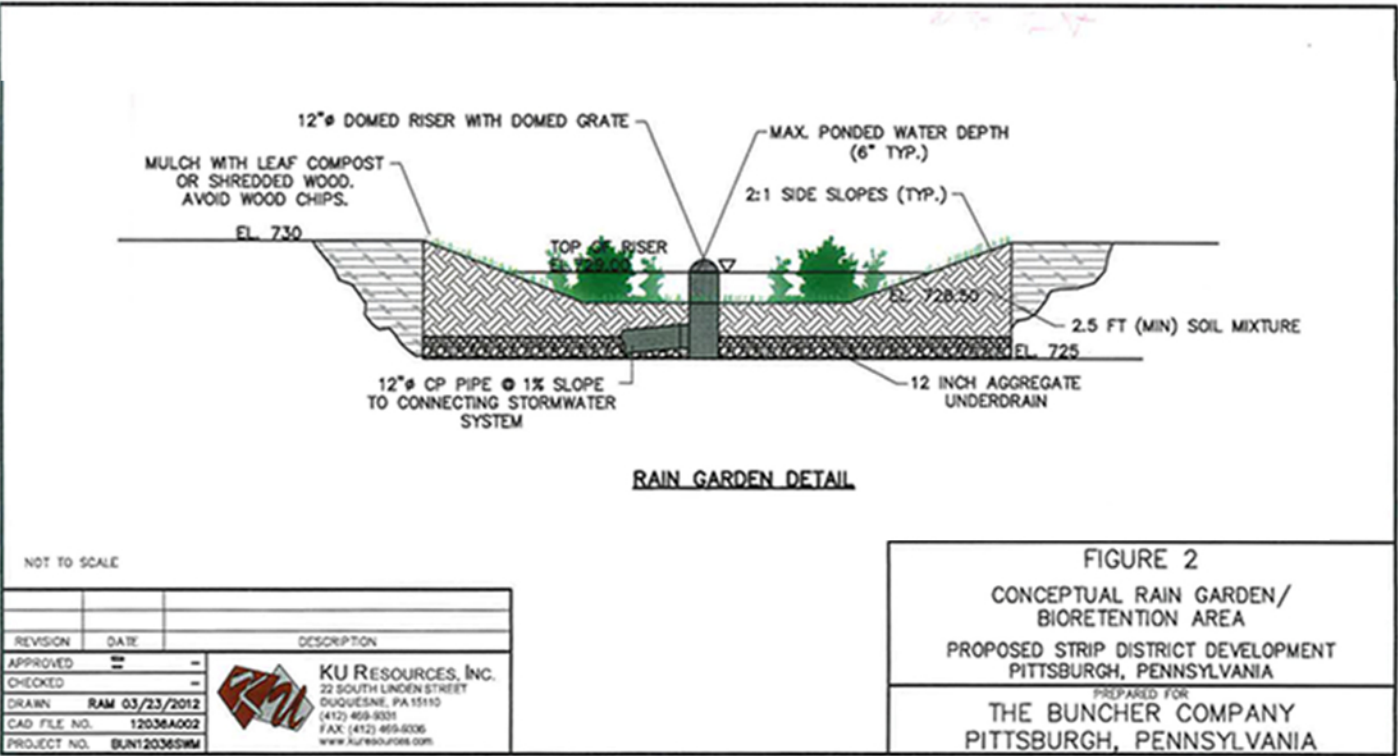
Erosion and Sediment Control (CPESC) and a Certified Professional in Storm Water Quality (CPSWQ) of in the International Erosion Control Association (IECA).

This “Post-Construction Storm Water Management Master Plan” has been prepared to guide the future management practices at the development – detailed design engineering and selection of individual BMPs for a particular lot or area are not part of this plan. When a particular lot is to be developed, the BMPs will be tailored to the type and function of structure to be erected, considering the ancillary aspects of parking and pavement required to support the facility. The purpose of this Master Plan is to show the type and scale of BMPs that could be utilized to fulfill the requirements.

When appropriate, a lot-specific storm water management plan will be prepared and implemented in accordance with certain rules and regulations promulgated by the PADEP and the ordinances of the City of Pittsburgh. This will cover the handling of storm water, the topographic features of the lot, the staging of earthwork, and any temporary and permanent control measures. The interpretations and opinions are to be used only for the purpose of estimating and evaluating BMPs suitable for eliminating, minimizing, and/or controlling pollution of the streams and waterways.

HISTORICAL AND EXISTING CONDITIONS

Historically, commercial and industrial operations have occurred on the property and adjoining properties, dating back to the early 1800s. in the late 1800s through the very early 1900s, the property was occupied by manufacturing operations related to the steel industry and railroad freight yards. These operations were located on the floodplain of the Allegheny River. From the late 1920s to the 1970s, the property was occupied mainly by railroad tracks and warehouses. The existing Produce Building structure was built in 1926. From the 1970s until the early 2000s, the property was used for public parking, except for the Produce Building which remained a warehouse.



PROPOSED SITE CONDITIONS

The bulk of the proposed land disturbance will be associated with re-contouring of the surface materials to comport with the installation of buildings, parking areas, roadways, utilities, storm water controls, and green space. Other than the designated green space areas, the proposed land use will create impervious surfaces. Detailed layouts for individual lots have not been completed at this time, pending future utilization plans of potential parcel occupants.

The layout of individual parcels will conform to the City of Pittsburgh requirements. For example, each area will have 35 square feet of designated green space for each parking stall on the development area. These pre-designated green spaces will be incorporated into the proposed storm water management program outlined under this master plan.

PROPOSED CONTROL FEATURES

In the preparations of this Master Plan, which outlines potential control features for storm water at the Site, several criteria were considered for evaluation. First, existing or ongoing development areas are being excluded from the plan. These lots have been or are being treated individually to meet the applicable requirements. This Master Plan will not alter these areas. As previously stated, these include the protion of Produce Building that will remain. Further, the designated parcels dedicated to the trail along the Allegheny River have been essentially developed, and likewise are not included in this Plan.

Second, each lot will have it own control system, independent of the adjacent parcels. This will define long-term management responsibility for the BMPs.

The BMPs have been selected based upon the projected development of the project, so as to be functional on each lot while not being burdensome on the future owners.

The first BMP that is envisioned is utilizing the designated green space as a BMP, either in the form of vegetated swale, rain garden, or other similar control BMP. As an example, 25 SF of green space is anticipated per parking stall with an estimated 125 parking stalls on a given lot, there is a minimum amount of green space planned for each lot. This will provide minimum of 3,125 SF of green space.

The general rule of thumb utilized by the PADEP and the County Conservation Districts is that 2,900 SF of a properly designed bioretention area will capture and treat 1 inch of runoff from 1 acre of pavement. Figure 2 presents a general depiction of what this BMP will look like. Using this as a basis of calculation, the 3,125 SF of area will provide 3,912 CF of volume control. Where adjacent green space was available, this control volume based upon the anticipated development can be significantly increased, as show. The volume of the controlled water was then subtracted from the required management volume to determine what additional controls might be necessary. In the locations with supplemental green space, no additional controls are required.

For each of the lots requiring additional controls to meet the minimum requirements, three different types of BMPs were evaluated. First, it was determined what additional area vegetated swale/bioretention area might be utilized above the minimum planned green space. The utilization of the BMP will be predicated upon the ultimate layout configuration of the building and parking areas on the parcel. If limited space is available, the additional vegetated swale/bioretention area BMP could be utilized in conjunction with another BMP to control the required volume.

The second BMP evaluated was a subsurface aggregated containment area, sized to capture the excess runoff. The BMP might be configured as presented in Figure 3. In the BMP, it was presumed that the thickness would be 3 feet, with a 30% porosity (void space). The data presented in the tables shows that aerial extent of this BMP required to meet the control goals. This BMP can be constructed under the proposed parking areas so as not to be intrusive to the development of any particular lot.

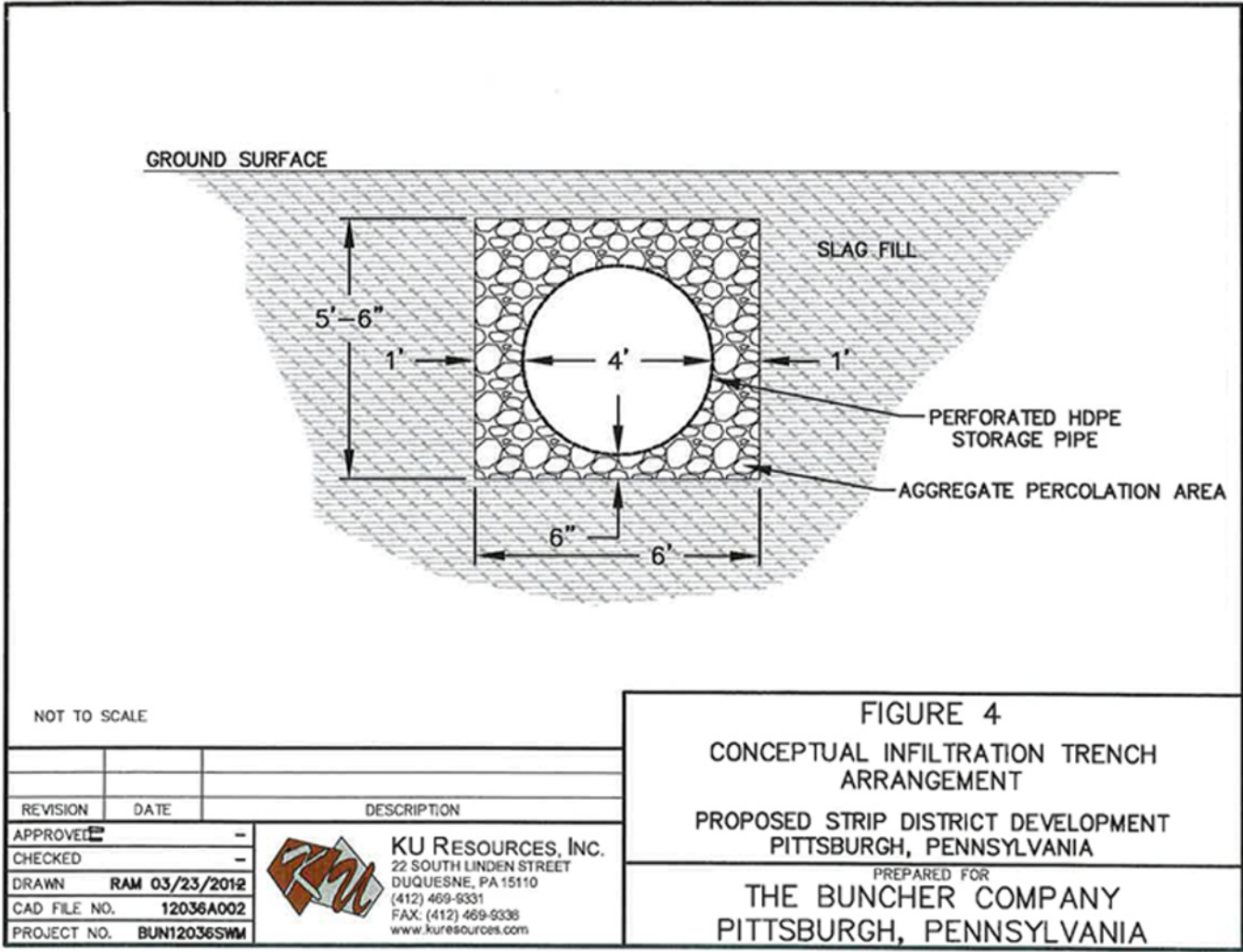
The third BMP evaluated was an exfiltration gallery, which makes use of a conduit and gravel pack to capture and infiltrate the runoff into the slag. For evaluation purposes, it was assumed that a 4-foot diameter perforated pipe would be installed in aggregate bedding, as shown on Figure 4. Models were run on each lot to determine the length of installation of this system on each lot to control required volume. This is purely representative, as other pipe sizes then structure. This BMP can be utilized as part of the typical catch basin/conduit system typically employed at sites to capture runoff, so as not to be as a major cost factor in the development. In the Strip District, we would envision that the pipes between catch basins could be perforated rather than the typical solid wall construction to achieve the performance function of this BMP.

OWNERSHIP

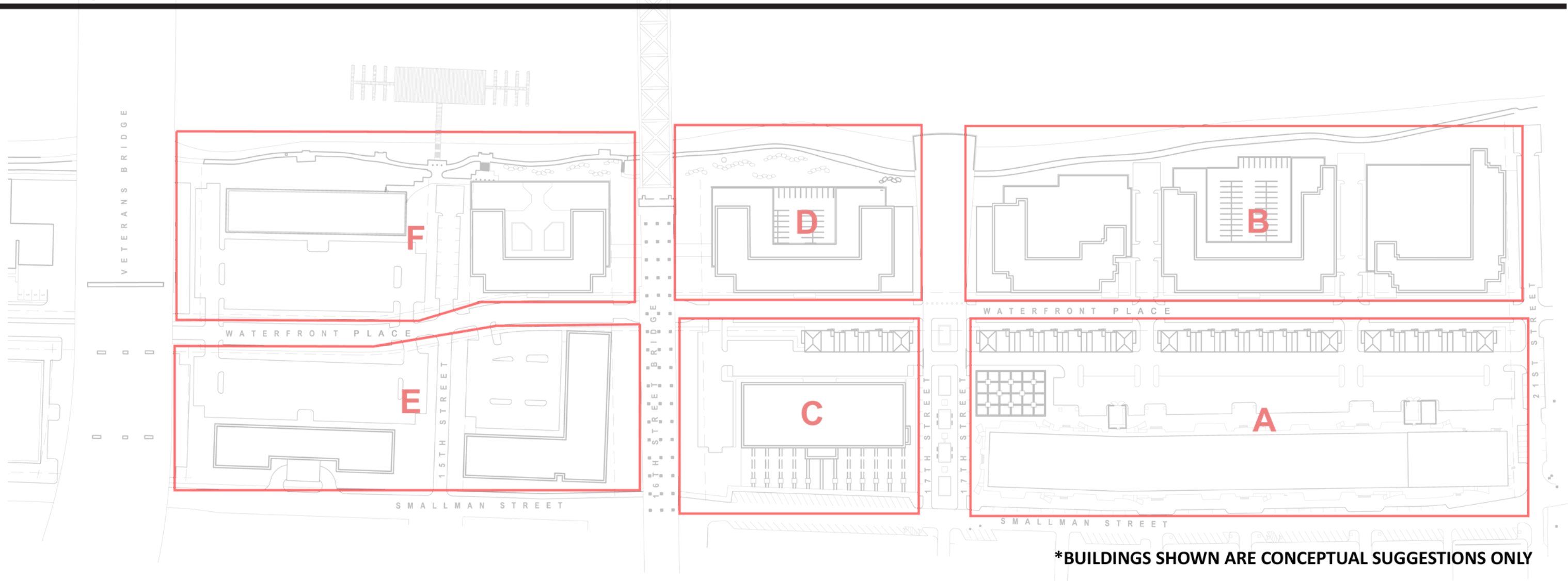
Upon completion of the development of any particular lot, ownership and thus long-term maintenance of the BMPs installed will be responsibility of the property owner.

SUMMARY AND CONCLUSION

In general, it appears that the 1.5 inches of runoff required to be captured, per the City of Pittsburgh ordinance, can be effectively managed with the use of standard, common BMPs. The proposed green space required for each lot will be a major control feature, and can be supplemented with other BMPs as outlined in this document or others that may prove more conducive to the development. Each of these BMPs will need to undergo a detailed engineering design once a building and parking layout has been developed.



Development Blocks

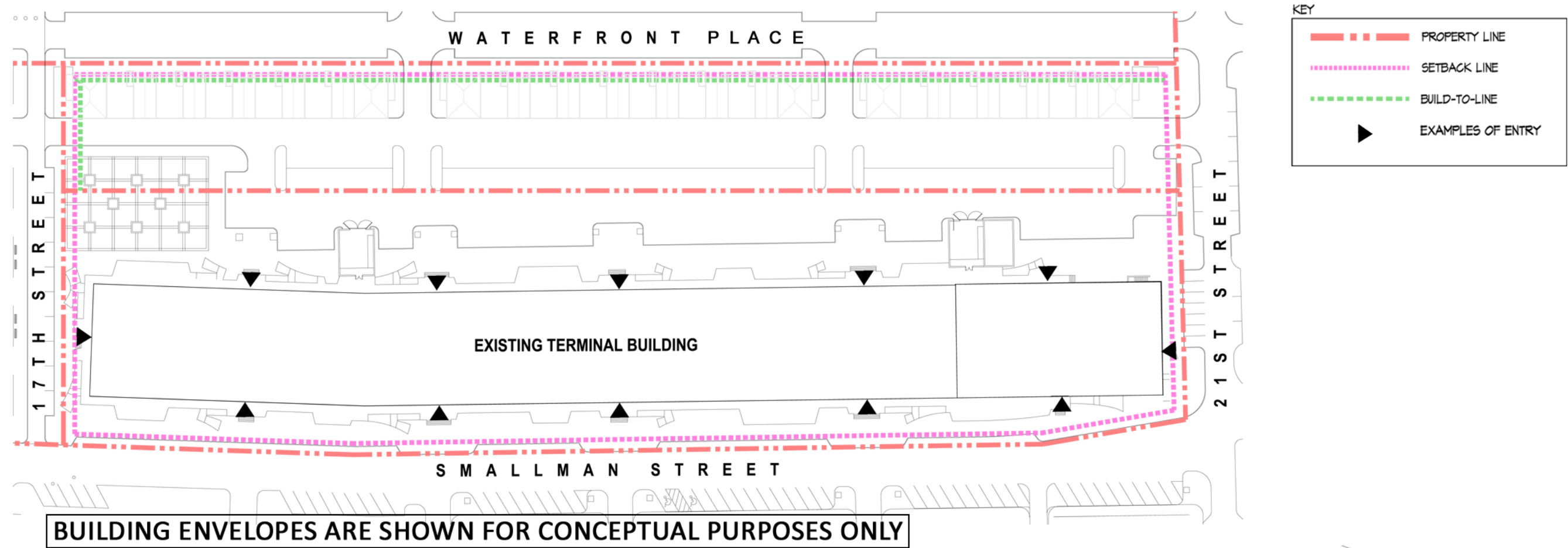


Introduction

The intent of the Master Plan is to provide for a flexible mixed use environment. The proposed plan is a guide to the overall site development. While specific public spaces and the street grid and building parcels shall remain fixed, the placement of individual building uses on the site is flexible.

The development blocks are divided into Zones. The Zones are as follows:

- Zone A - The Terminal Building
- Zone B - 17th Street to 21st Street
- Zone C - 16th Street to 17th Street (Smallman Side)
- Zone D - 16th Street to 17th Street (Waterfront Side)
- Zone E - Veterans Bridge to the 16th Street Bridge (Smallman Side)
- Zone F - Veterans Bridge to the 16th Street Bridge (Waterfront Side)



Zone "A"

A: Allowable building types

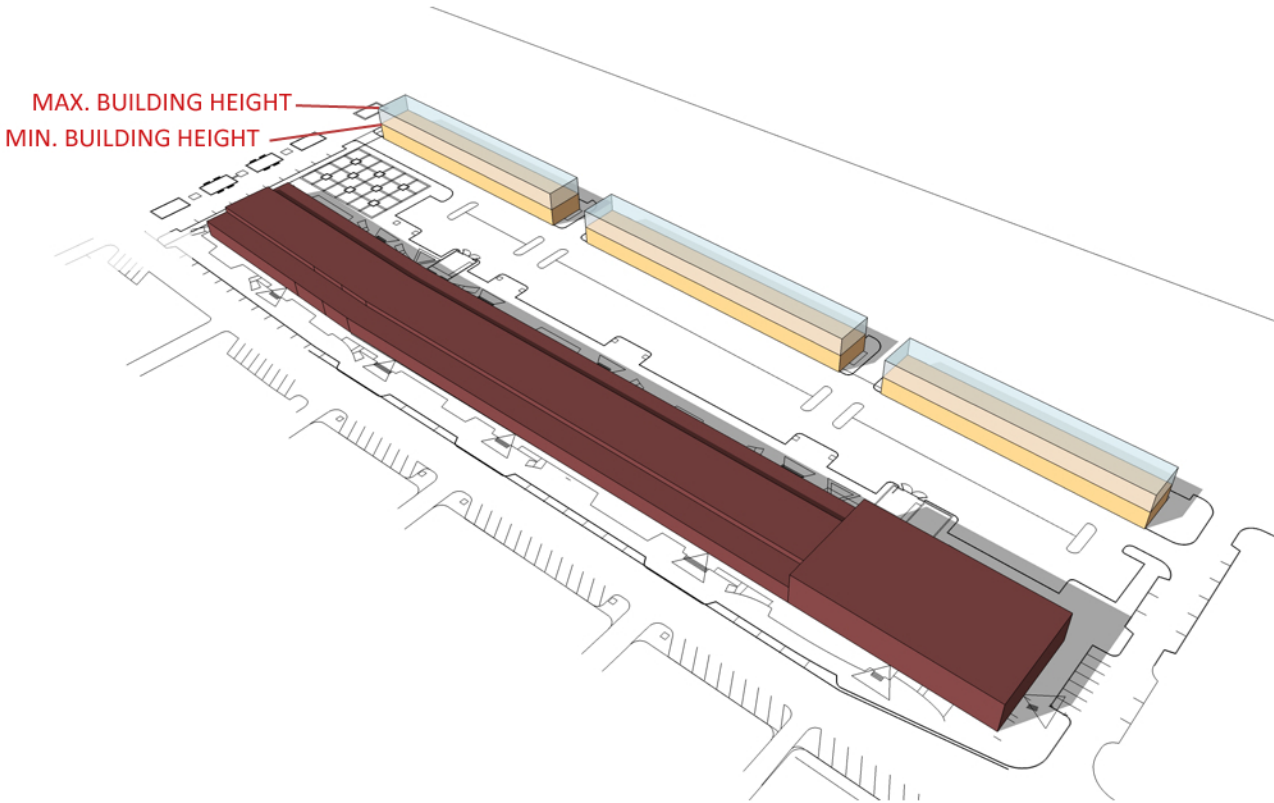
- New building types are allowed
- Parking garages are allowed as part of other building types

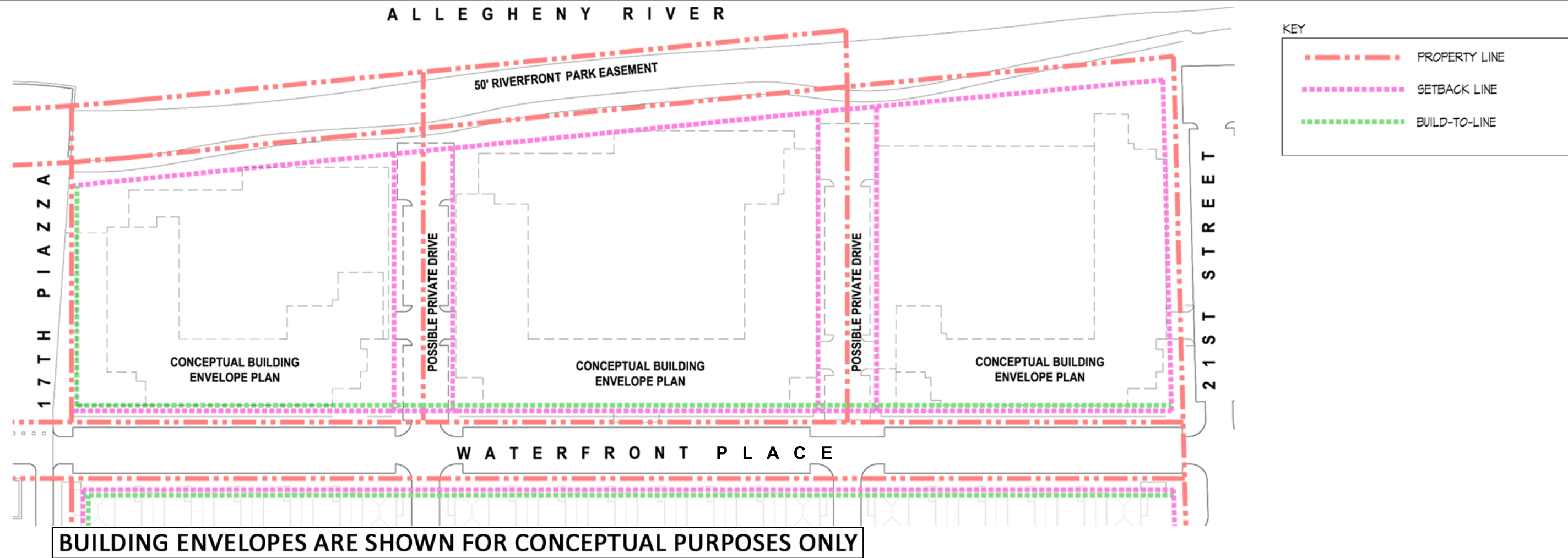
A: Envelope Limitations for New Buildings Shall Be:

- Build to line on Waterfront Place: 10' for 75% of property length.
- Build to line on 17th Street: 15' for 30% of Property Length, and for minimum of 1 story
- Setback 17th Street: 10'
- Setback Smallman Street side :10'
- Setback 21st Street: 10'
- Setback Waterfront Place: 10'
- Maximum Building Height: 3 stories or 40'
- Minimum Building Height: 2 story or 20'
- Parcels can be combined
- Property along Waterfront Place can be subdivided for the purposes of erecting allowable building types/uses.

A: Frontage

- New Buildings main entrances shall face Primary Frontage.
- Porches are allowed to encroach into setbacks by maximum of 5'
- Waterfront Place shall be considered primary frontage
- Building service entrances shall not be allowed to face Waterfront Place.





Zone "B"

B: Allowable building types

- All building types are allowed
- Parking garages are allowed as part of other building types.

B: Envelope Limitations Shall Be:

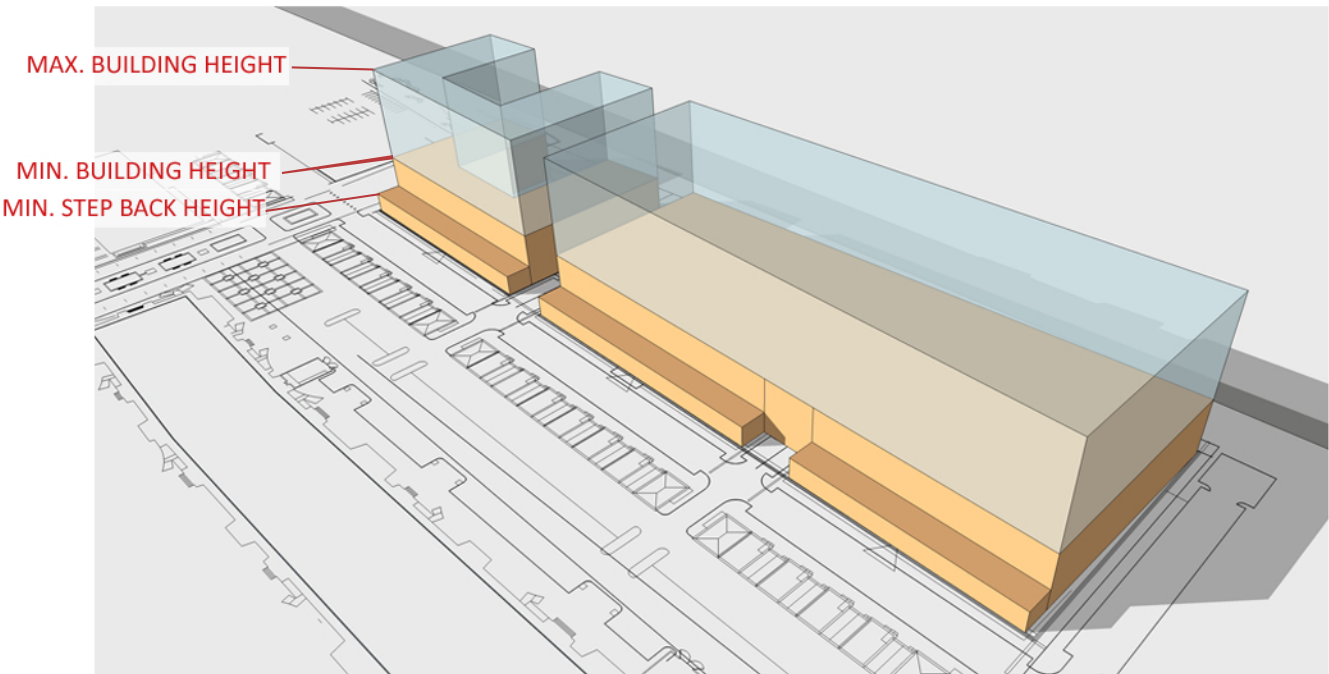
- Setback Waterfront Place: 6'
- Build to line on 17th Piazza: 0' for 100% of property length between river and Waterfront setbacks, and for minimum of 1 story or 18' height
- Setback river side: 20'
- Setback 21st Street: 10'
- Setback at Private Drives: 26'
- Maximum building height: 15 stories or 210'
- Minimum building height: 4 stories or 56'
- Any Two adjacent parcels along Waterfront Place can be combined for the purpose of erecting a single building
- Build to line on Waterfront Place : 19' for 50% of Property length, and for minimum of 2 stories or 24' in height

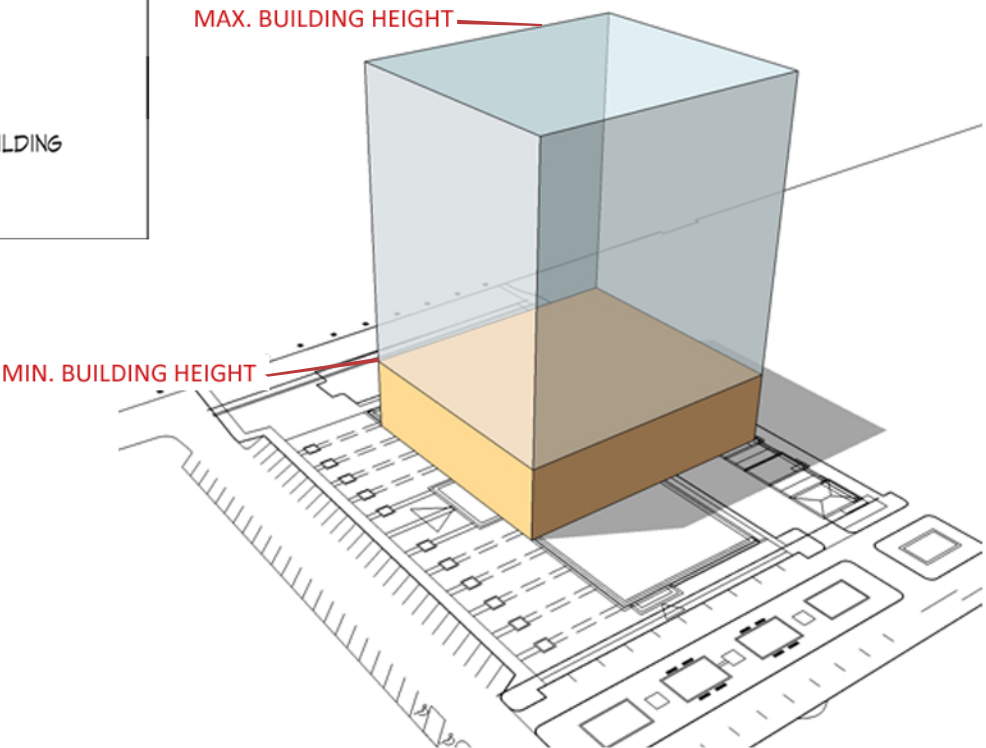
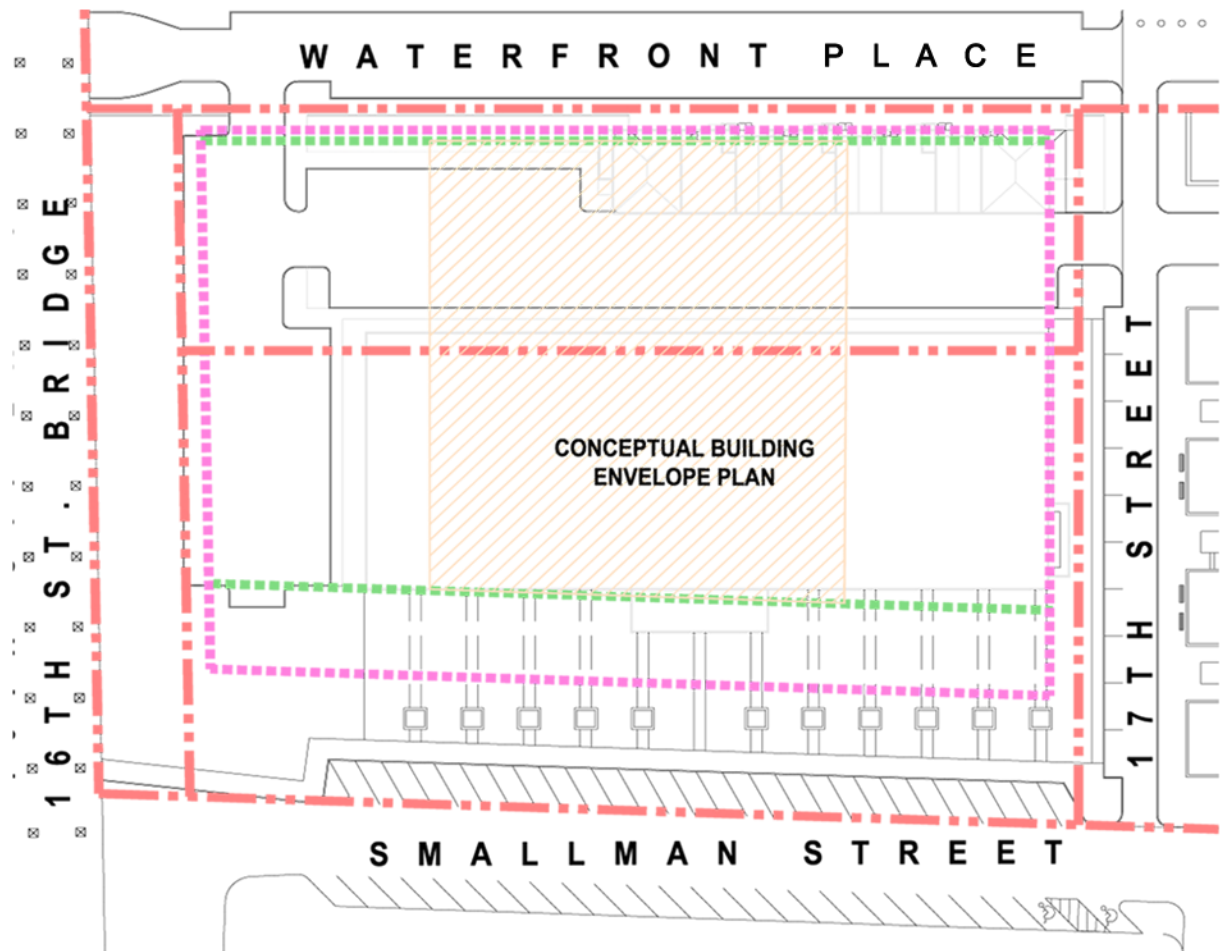
B: Frontage

- Residential uses shall be designed to maximize river and/or CBD views
- Commercial, and common residential spaces are encouraged on first floors facing Waterfront Place, and 17th Piazza
- No service structure shall face Waterfront Place, and there shall be no access to parking structures from Waterfront Place
- No parking structure shall face 17th Piazza, and there shall be no access to parking structures from 17th Piazza
- Building Service Entrances shall not face Waterfront Place, or 17th Piazza, or River.

B: Screening

- Refer to page 62 "Screening" for Screening of Parking/Service Areas





Alternate Building Envelope Diagram

BUILDING ENVELOPES ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY

Zone "C"

C: Allowable building types

- All building types are allowed
- Parking garages are allowed as part of other building types.

C: Envelope Limitations Shall Be:

- Build to line on Waterfront Place: 10' for 50% of property length.
- Setback 17th Street: 10'
- Setback Smallman Street side: 60' (measure to midpoint of Terminal)
- Setback 16th Street Bridge: 10'
- Maximum building height for townhomes: 3 stories or 40'
- Minimum building height for townhomes: 2 stories or 20'
- Maximum building height: 20 stories or 280'
- Minimum building height: 4 stories or 56'
- Build to line on Smallman Street : 100' for 50% of property length.
- Parcels can be combined

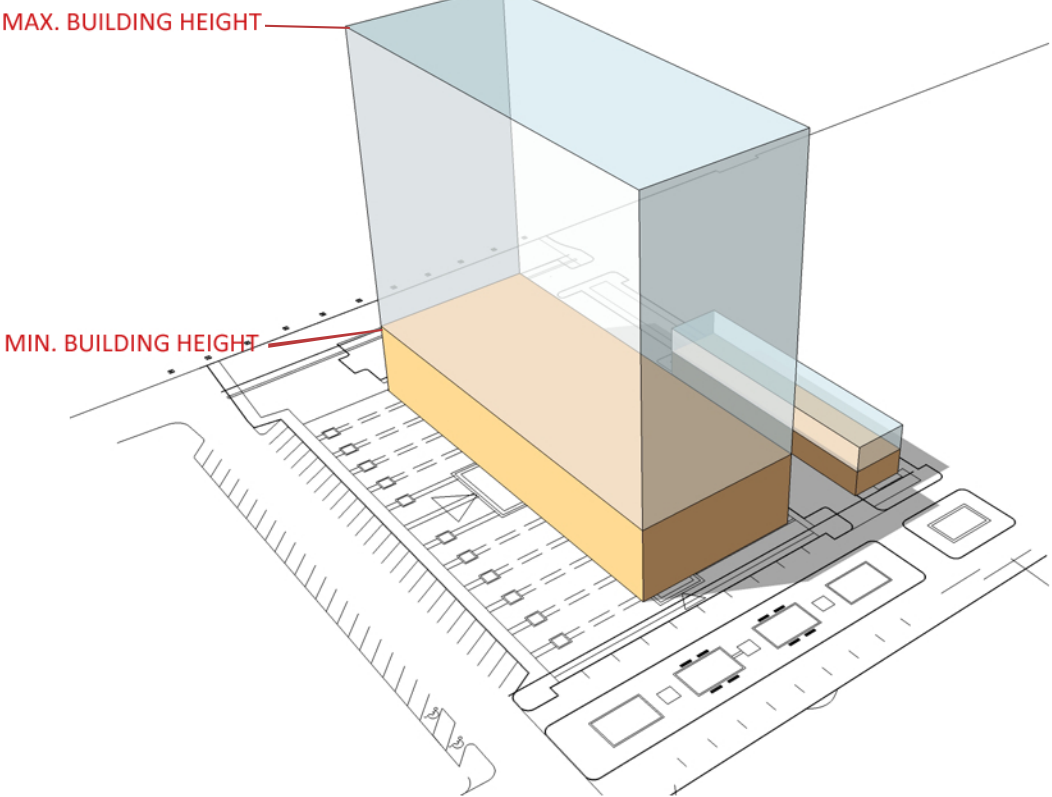
- Property along Waterfront Place can be subdivided for the purposes of erecting allowable building types/uses.
- Buildings are permitted to have frontage on 17th Street

C: Frontage

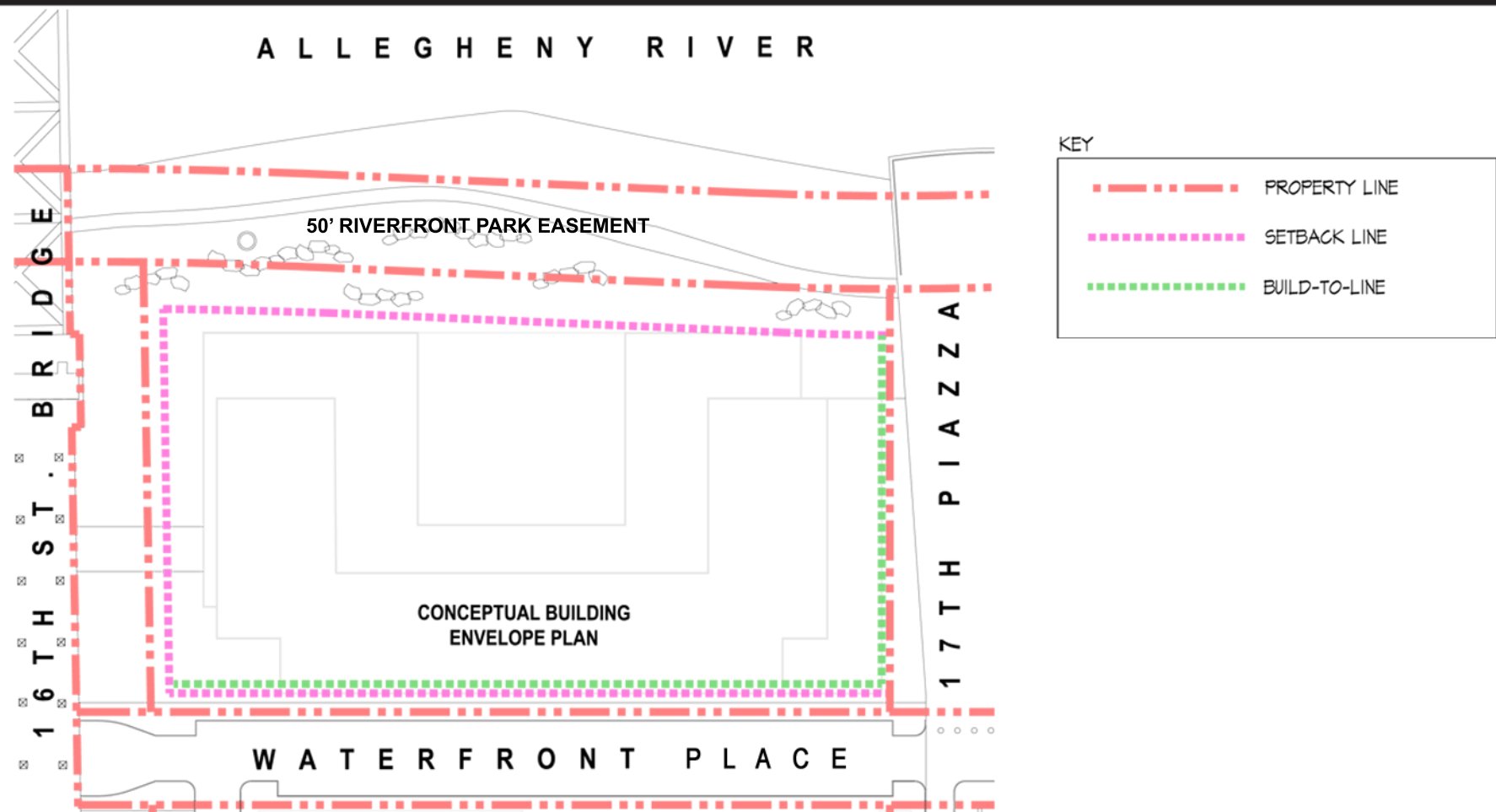
- Smaller allowable building types/uses main entrances shall face Waterfront Place
- All other building types' main entrances shall face Smallman Street
- Commercial, and common residential spaces are encouraged on first floors facing Smallman Street, and 17th Street.
- Building service entrances shall face 16th Street only.

C: Screening

- Refer to page 62 "Screening" for Screening of Parking/Service Areas.



Building Envelope Diagram



BUILDING ENVELOPES ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY

Zone "D"

D: Allowable building types

- All building types are allowed
- Parking garages are allowed as part of other building types.

D: Envelope Limitations Shall Be:

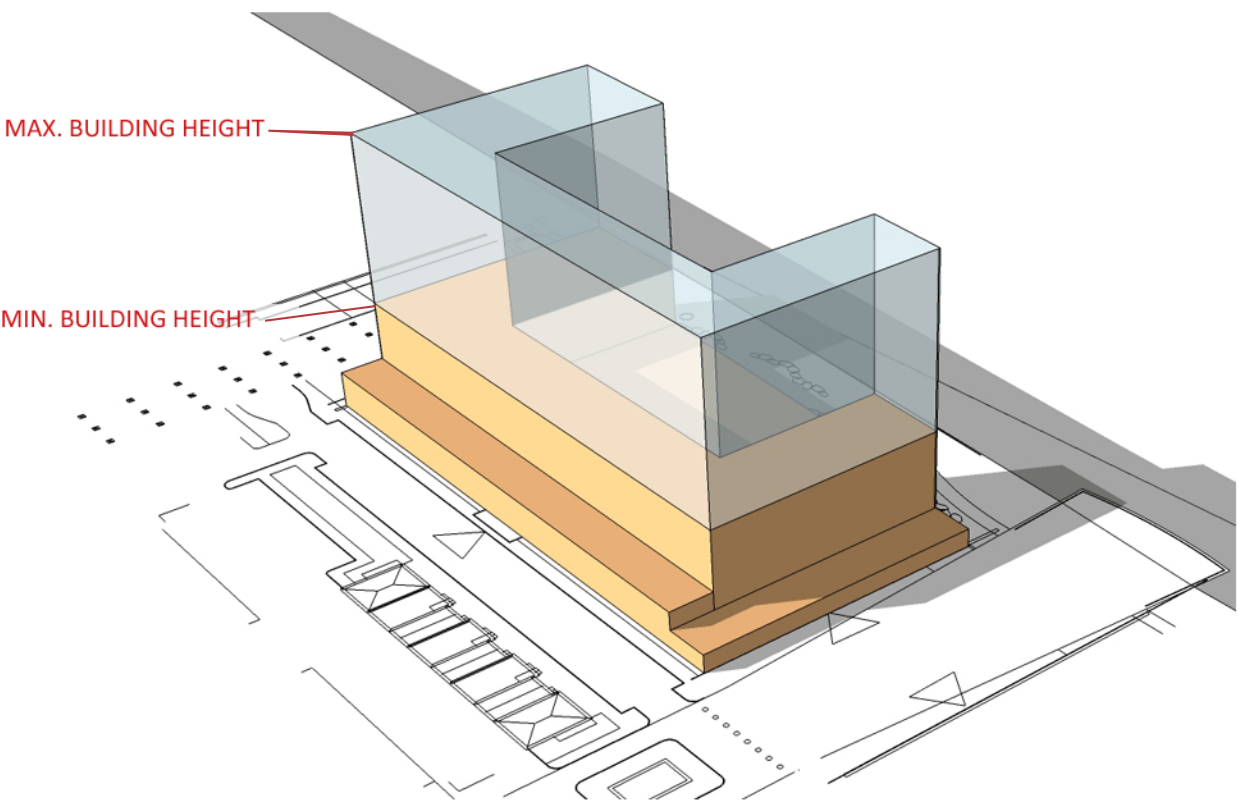
- Setback Waterfront Place: 6'
- Build to line on Waterfront Place: 19' for 50% of Property Length, and for minimum 2 stories or 24' in height
- Build to line on 17th Piazza: 0' for 100% of building length, and for minimum of 1 story or 12' height
- Setback river side: 20'
- Setback 16th Street Bridge: 10'
- Maximum building height: 15 stories or 210'
- Minimum building height: 4 stories or 56'

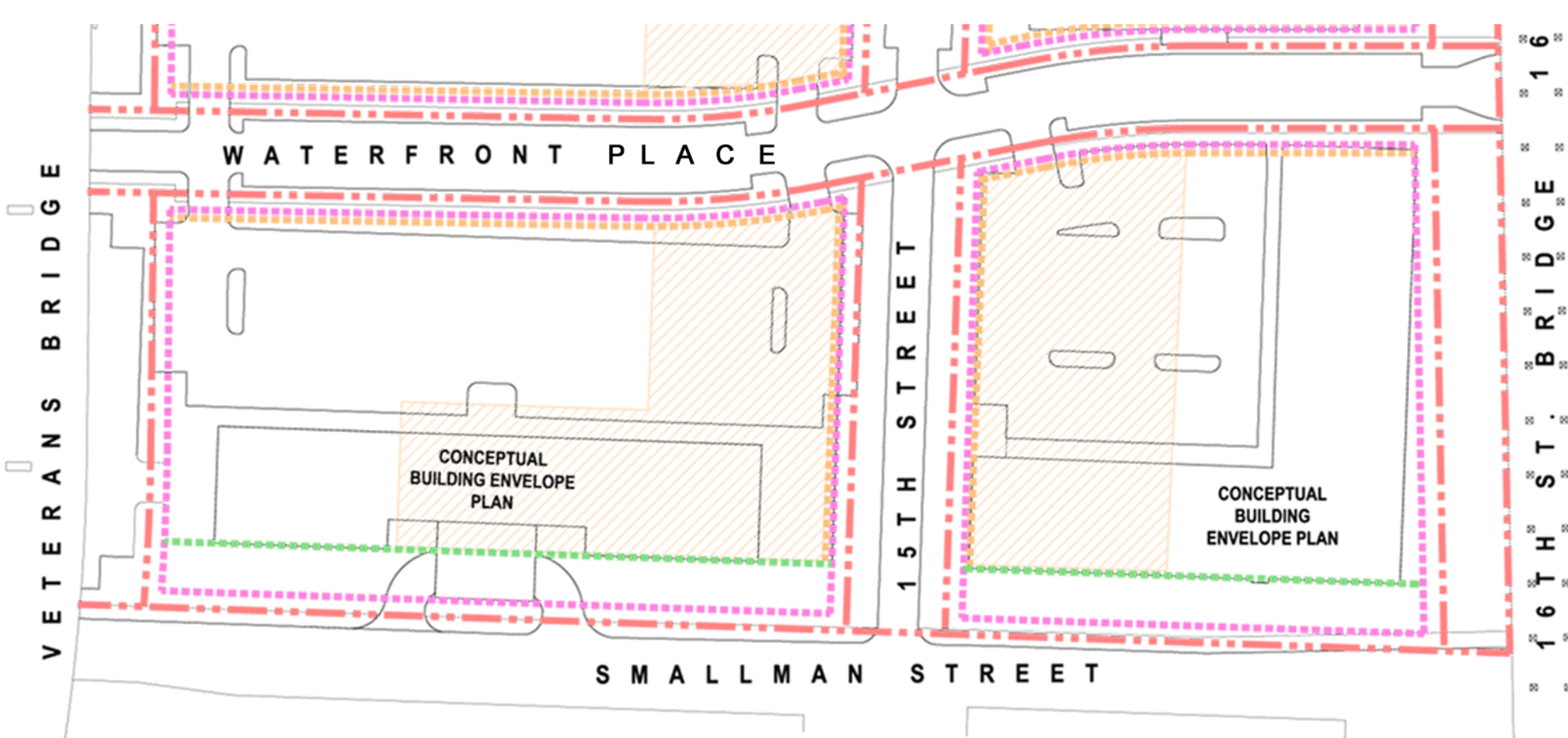
D: Frontage

- Residential building types shall be designed to maximize river and/or CBD views
- Commercial, and common residential spaces are encouraged on first floors facing Waterfront Place, and 17th Piazza
- No service structure shall face Waterfront Place, and 17th Piazza, and there shall be no access to parking structures from Waterfront Place or 17th Piazza.
- Building Service Entrances shall face 16th Street only.

D: Screening

- Refer to page 62 "Screening" for Screening of Parking/Service Areas.





BUILDING ENVELOPES ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY

Zone "E"

E: Allowable building types

- All building types are allowed
- Parking garages are allowed as part of other building types

E: Envelope Limitations Shall Be:

- Build to line Smallman Street: 40' for 50% of Property Length
- Setback 16th Street Bridge: 10'
- Setback 15th Street: 10'
- Setback Smallman Street: 10'
- Setback Waterfront Place: 10'
- Setback Veterans Bridge: 10'
- Maximum building height: 20 stories or 280'
- Minimum building height: 4 stories or 56'

E: Frontage

- Residential building types shall be designed to maximize river views

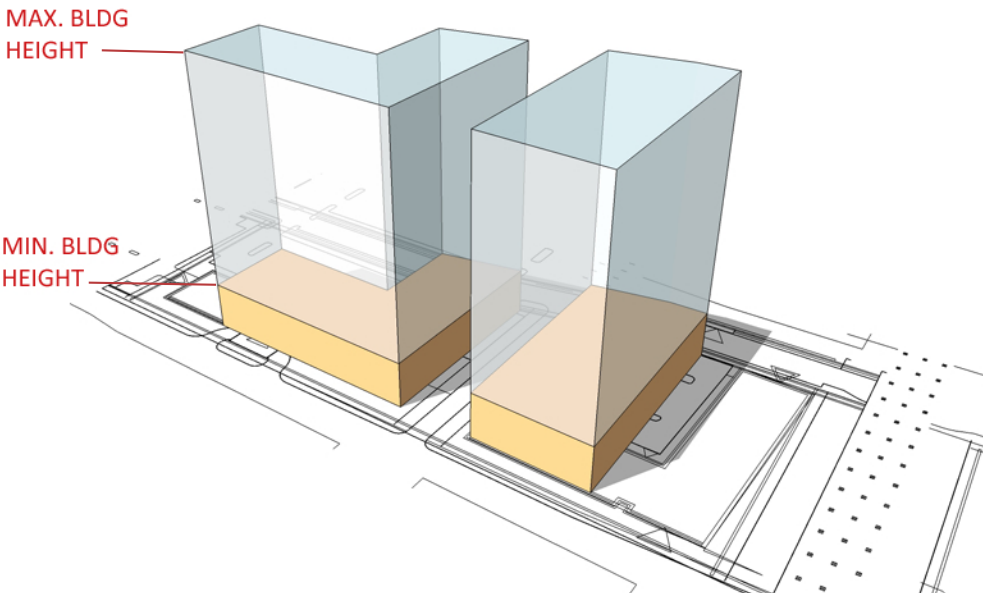
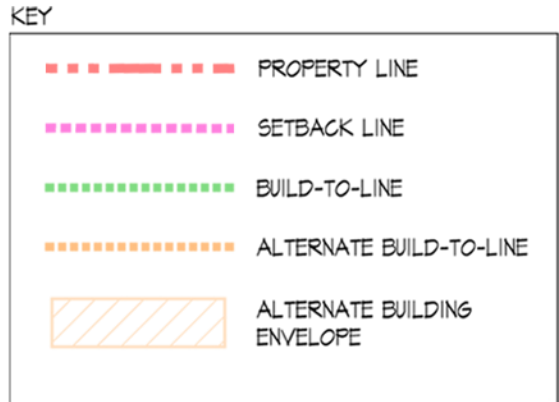
- Commercial, and common residential spaces are encouraged on first floors facing Waterfront Place, and Smallman Street
- No service structure shall face Smallman Street, and there shall be no access to parking structure from Smallman Street
- Building frontage on Waterfront Place is encouraged
- Smallman Street is considered primary frontage

E: Alternate Frontage on 15th Street

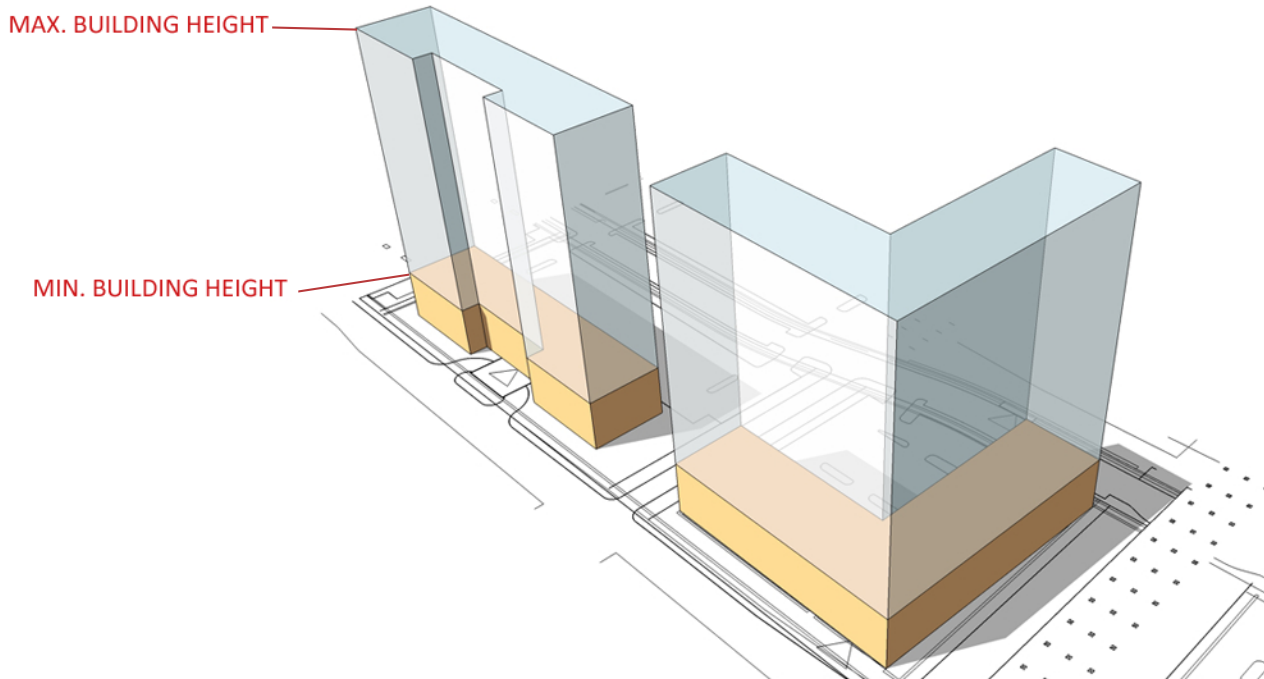
- Build to line 15th Street: 15' for 75% of Property Length
- Build to line Waterfront Place: 15' for 30% of Property Length

E: Screening

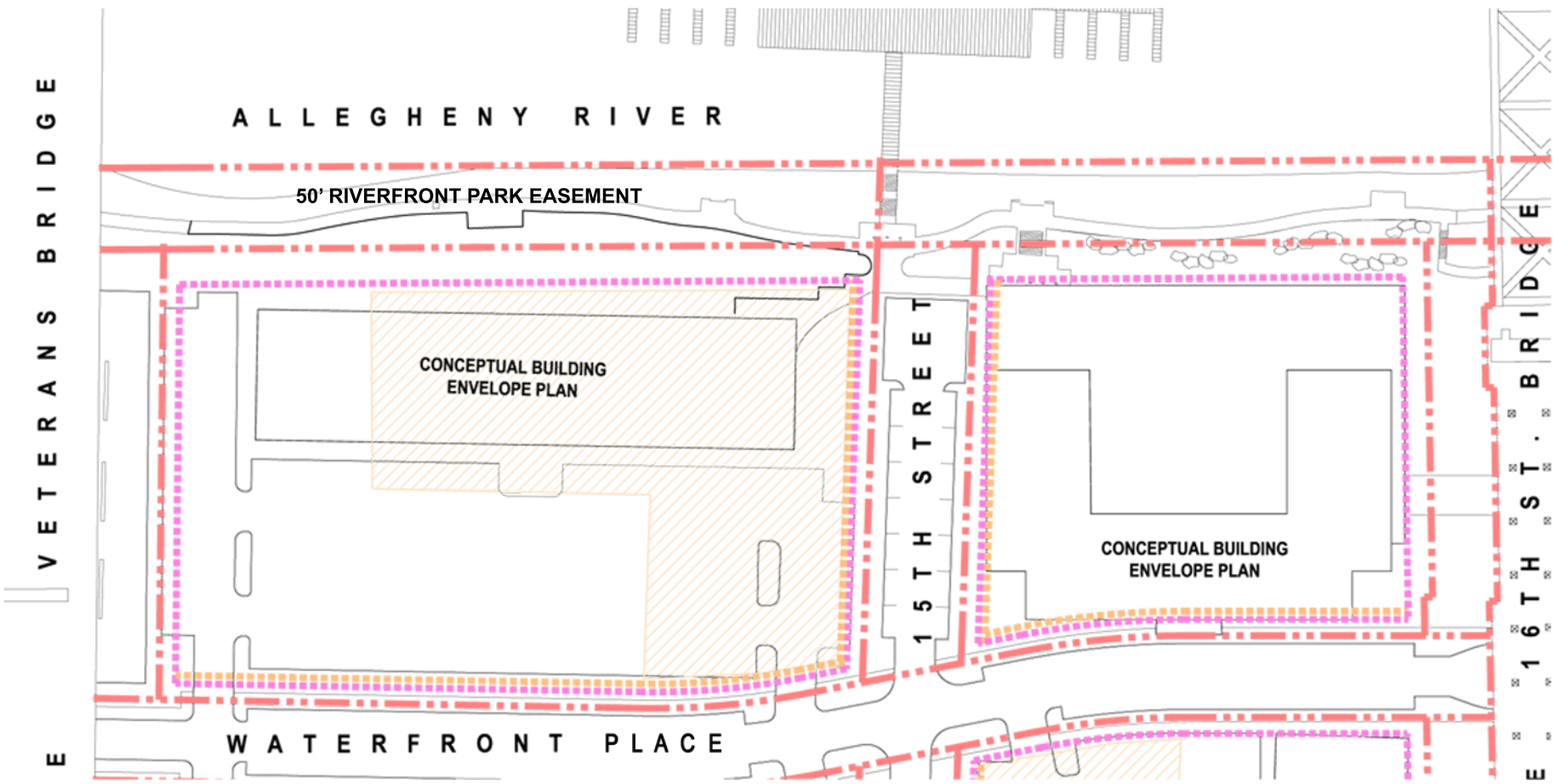
- Refer to page 62 "Screening" for Screening of Parking/Service Areas.



Building Envelope Diagram For Frontage on 15th Street



Building Envelope Diagram For Frontage on Smallman Street



BUILDING ENVELOPES ARE SHOWN FOR CONCEPTUAL PURPOSES ONLY

Zone "F"

F: Allowable building types

- All building types are allowed
- Parking garages are allowed as part of other building types

F: Envelope Limitations Shall Be:

- Setback river side: 20'
- Setback Waterfront Place: 6'
- Setback Veterans Bridge: 10'
- Setback 16th Street Bridge: 10'
- Setback 15th Street: 10'
- Maximum building height: 15 stories or 210'
- Minimum building height: 4 stories or 56'

F: Frontage

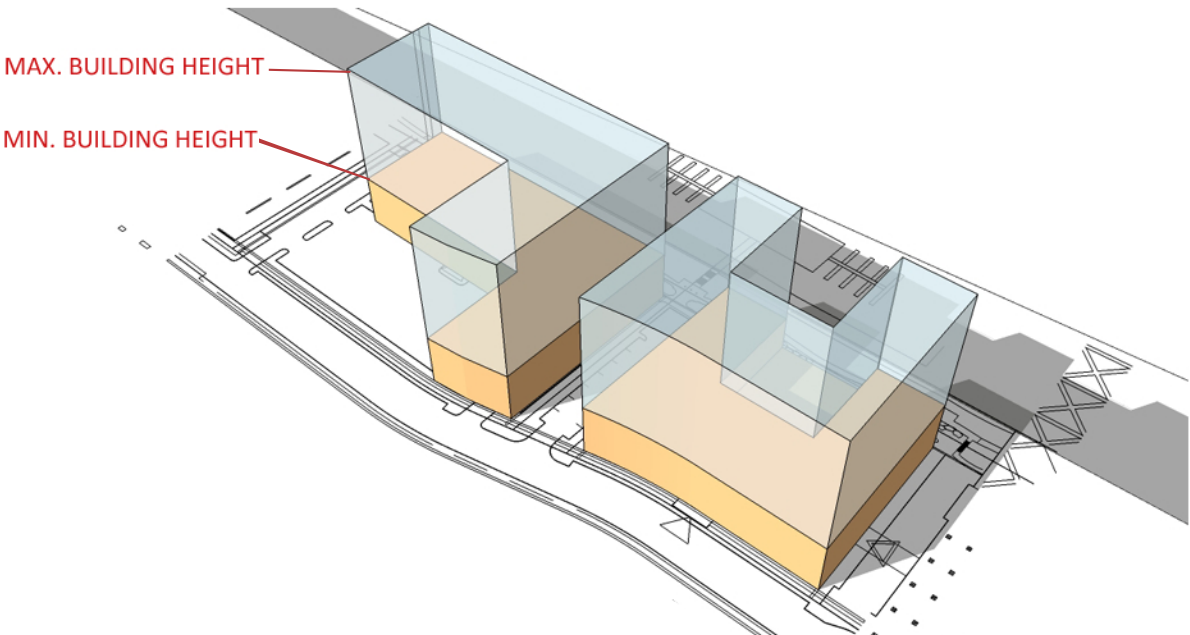
- Commercial, and common residential spaces are encouraged on first floors facing Waterfront Place
- Residential building types shall be designed to maximize river and/or CBD views.

F: Alternate Frontage

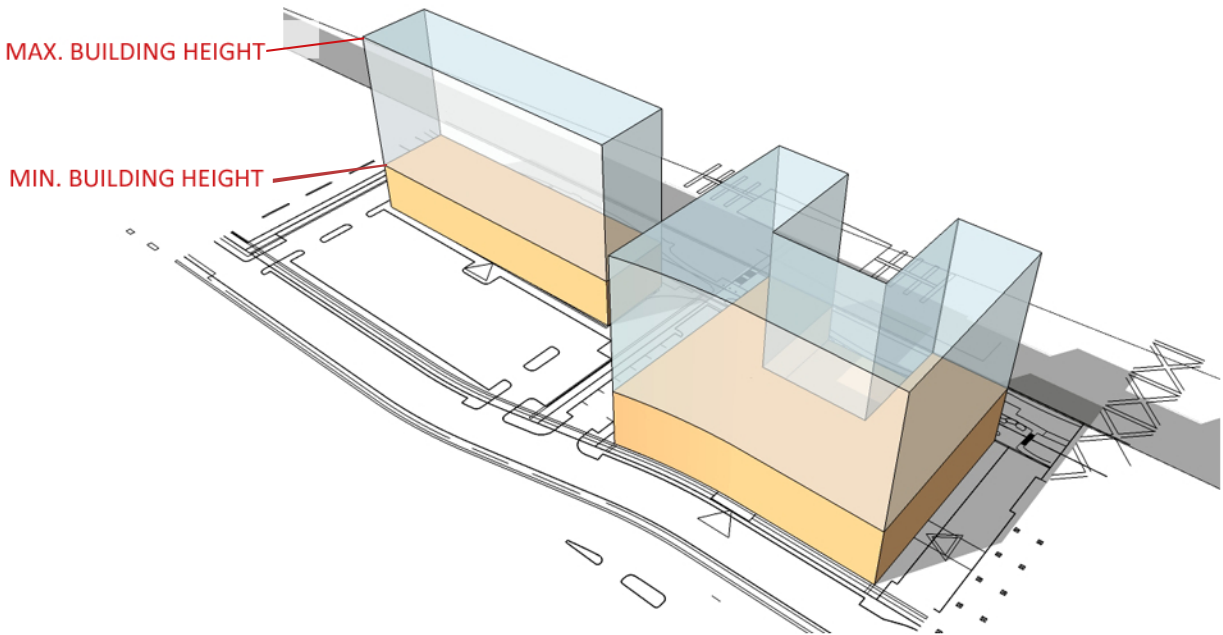
- Build to line 15th Street: 15' for 75% of Property Length
- Build to line Waterfront Place: 15' for 30% of Property Length

F: Screening

- Refer to page 62 "Screening" for Screening of Parking/Service Areas.



Building Envelope Diagram For Frontage on 15th Street



Building Envelope Diagram

Building Types

Building Types Introduction

The Following List is a Sample of Uses and is Not Comprehensive

- **COMMERCIAL**
 - o Retail
 - o Restaurant with Liquor
 - o Research Laboratory
 - o Hotel
 - o Assembly such as Conference Centers
 - o Office
 - o Medical Office
 - o Micro Brewery and production
 - o Distillery and Production
- **MULTI UNIT RESIDENTIAL**
- **TOWNHOME**
- **PARKING STRUCTURE**
- **MIXED USE**
 - o Townhomes are not allowed in mixed use buildings
 - o Research lab and medical office are not allowed in buildings with residential uses



MATERIALS

The concept for the site is to provide a vibrant, interesting urban environment that respects the historic context of the Strip District, yet relates to modern design. "Transitional" style is the best descriptor for the intended image of the development. Appropriate materials shall include masonry, cast stone, tinted and formed precast panels, natural stone, glass, aluminum window framing and architectural metal panels. Storefront facades shall be composed of high quality, aesthetically pleasing materials.

Detailed drawings illustrating proposed building materials and their locations on the proposed structures are required to be submitted for review as part of each Final Development plan.

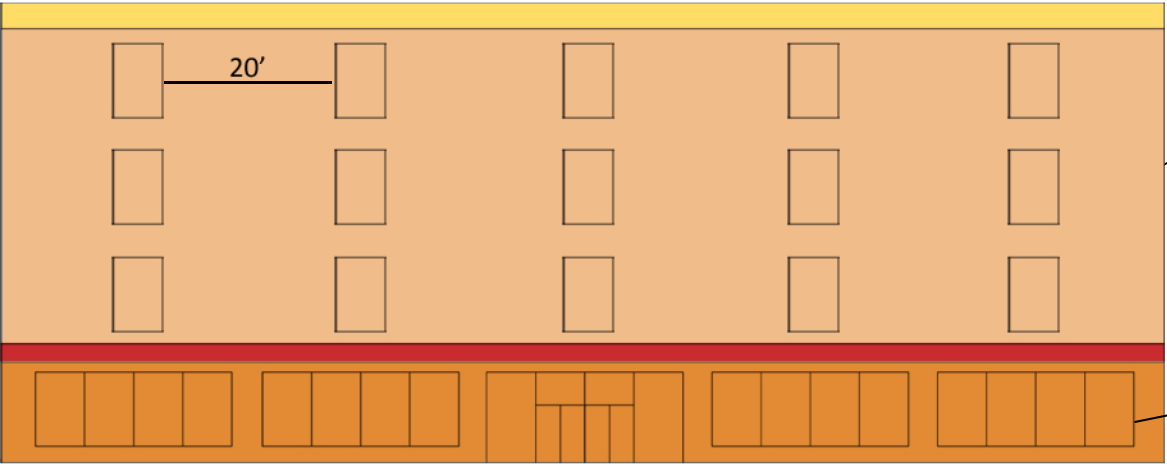
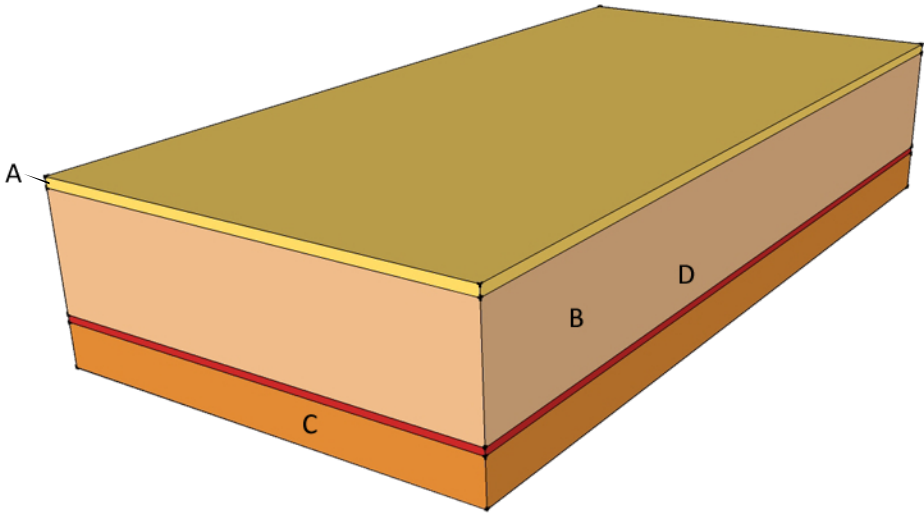
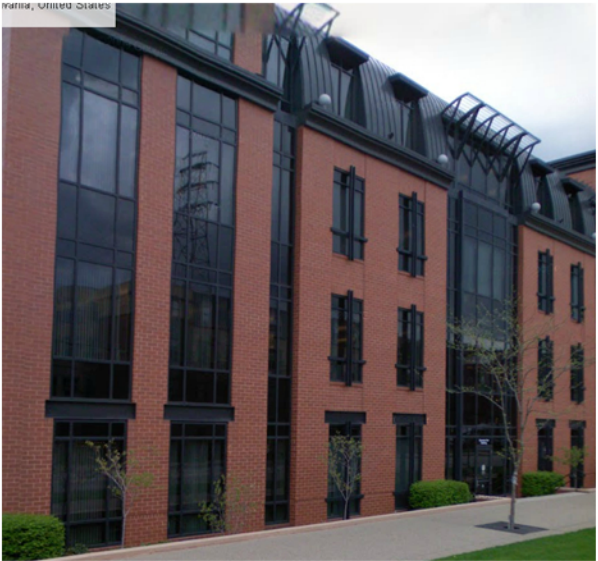
ARTICULATION

The master plan will be characterized by a moderate to a high level of building articulation, with attention to detail and the use of appropriate materials. Buildings shall endeavor to respect the historic character of the Strip District Context, while at the same time incorporate a modern flavor into the building composition. Entrances to buildings and parking facilities should be easily identifiable from the street. Building facades shall maintain the street edge for at 1 to 2 stories above grade. Buildings may step back from the street edge by at least 5 feet above the 2nd story. The goal is to provide an appropriate street scale and to create architectural bases for the buildings.

TRANSPARENCY

The goal of the development is to enhance the pedestrian experience at street level. Therefore, the ground level facade shall have a mix of approximately 60% windows and 40% solid material. The upper story facade should consider a minimum of 20% glazing and maximum blank wall length of 20'.

3D CONCEPTUAL MODEL EXAMPLES & PHOTOS



- A. Detailed cornices are encouraged to delineate how building meets sky.
- B. Upper story facade minimum 20% glazing and blank wall max. length = 20'
- C. Street level 60% min. glazing at commercial/common residential areas
- D. Cornices are encouraged for separating the first level of the building from the upper levels

MATERIALS

The concept for the site is to provide a vibrant, interesting urban environment that respects the historic context of the Strip District, yet relates to modern design. "Transitional" style is the best descriptor for the intended image of the development. Appropriate materials shall include masonry, cast stone, tinted and formed precast panels, natural stone, glass, aluminum window framing and architectural metal panels.

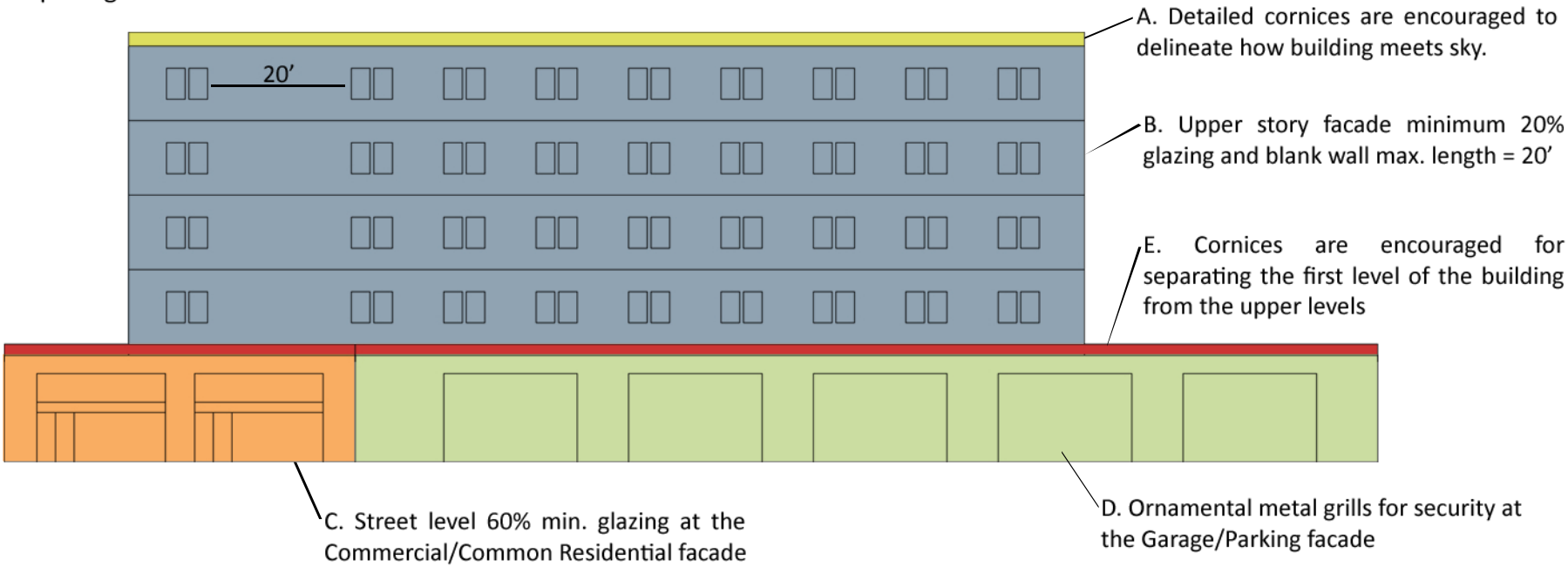
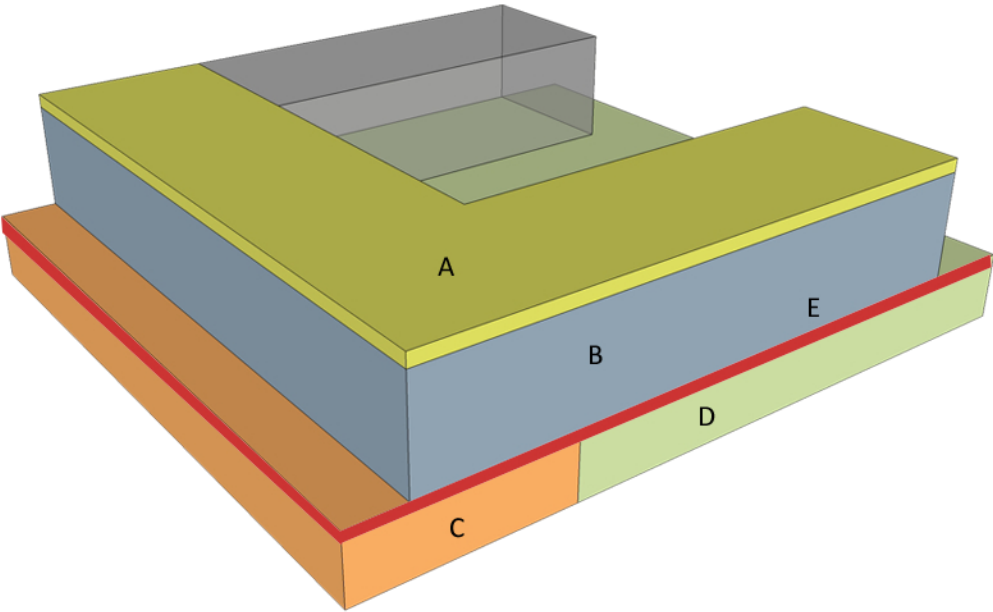
Detailed drawings illustrating proposed building materials and their locations on the proposed structures are required to be submitted for review as part of each Final Development plan.

ARTICULATION

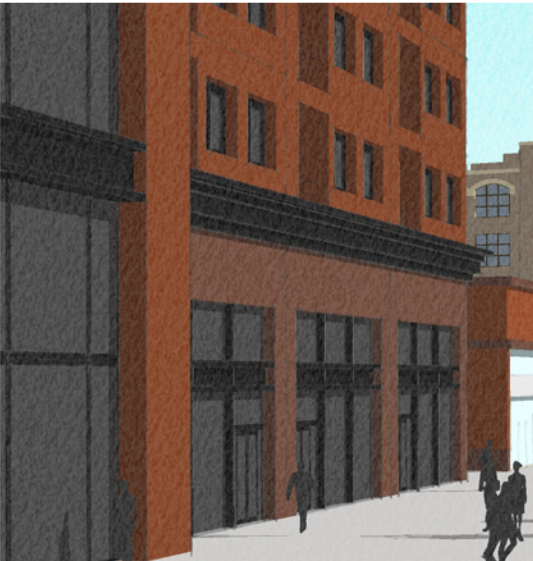
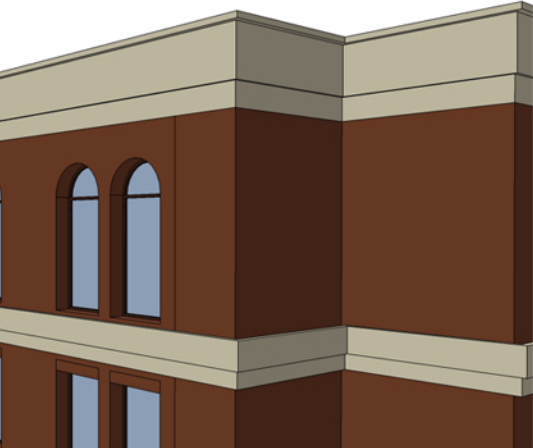
The facades of the riverfront shall provide views to the river and be predominantly glazed and provide visual interest from the opposite side of the riverfront. Internal courtyards and lightwells are not permitted in Residential building types. Parking structures located along the riverfront, whether integrated into buildings or not, shall be of the same architectural character described for buildings noted above. The garage facades shall have architectural detailing that integrates them into the building or adjacent context of buildings.

TRANSPARENCY

The goal of the development is to enhance the pedestrian experience at street level. Therefore, the ground level facade shall have a mix of approximately 60% windows and 40% solid material. The upper story facade should consider a minimum of 20% glazing and maximum blank wall length of 20'. The garage area "D" shall consist of a mix of 60% openings and 40% solid materials.



3D CONCEPTUAL MODEL EXAMPLES & PHOTOS



MATERIALS

Single and multi-unit attached or detached residential units and commercial buildings, if developed, may utilize materials including masonry, cast stone, tinted and formed precast panels, natural stone, glass, aluminum window framing and architectural metal panels. Residential grade vinyl clad wood windows and 30 year shingles, clay tile or synthetic slate shingles are acceptable for sloped roofs (for residential only). Synthetic or wood siding should be pre-finished material. Aluminum and vinyl siding/trim are not permitted. High quality storefronts can be used for commercial types.

Detailed drawings illustrating proposed building materials and their locations on the proposed structures are required to be submitted for review as part of each Final Development plan.

ARTICULATION

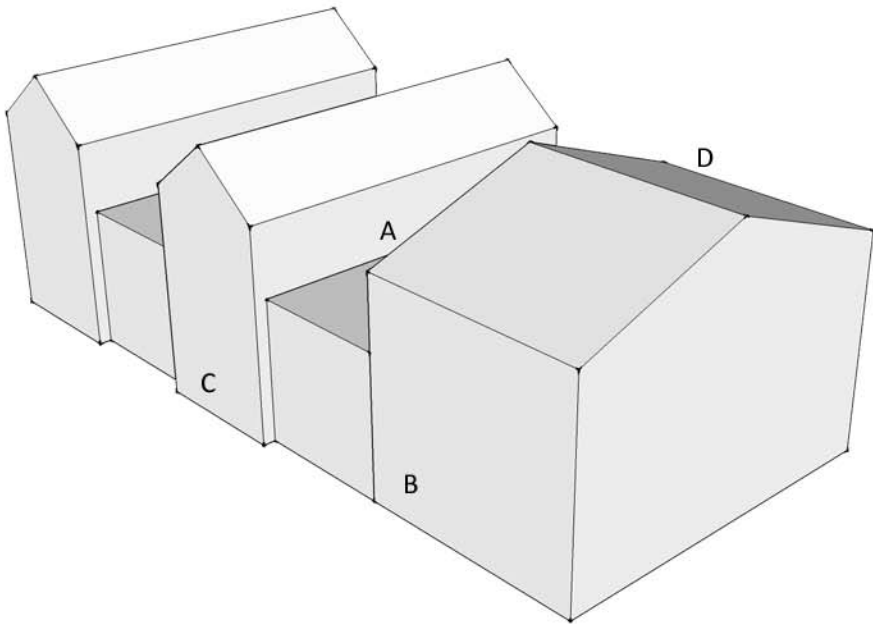
The master plan will be characterized by a moderate to a high level of building articulation, with attention to detail and the use of appropriate materials. Buildings shall respect the historic character of the Strip District Context, while at the same time incorporate a modern flavor into the building composition. Entrances to buildings shall be easily identifiable from the street. Building facades shall maintain the street edge for at 1 to 2 stories above grade. The goal is to provide an appropriate street scale and to create architectural bases for the buildings.

Differentiation of individual units through building and roof modulation to reduce the appearance of large building masses is preferred.

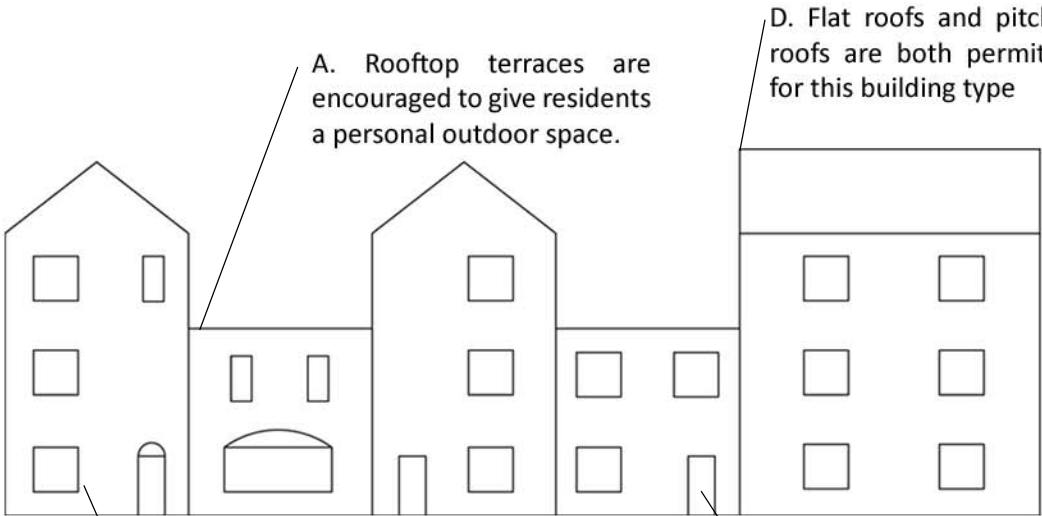
Allowable building types/uses shall differ in selection of materials and articulation to express a sense of variety and individuality while at the same time displaying a cohesive street facade. The variations will also reflect the architectural style of the Strip District.

RESIDENTIAL TRANSPARENCY

Transparency of townhomes shall be proportionate to typical residential openings. Windows should provide the appropriate amount of light and views for the resident, without hindering their privacy.



3D CONCEPTUAL MODEL EXAMPLES & PHOTOS



A. Rooftop terraces are encouraged to give residents a personal outdoor space.

D. Flat roofs and pitched roofs are both permitted for this building type

C. 10% min. glazing

B. Entrances shall face the primary street. Garages are not permitted to face the primary street



MATERIALS

The concept for the site is to provide a vibrant, interesting urban environment that respects the historic context of the Strip District, yet relates to modern design. "Transitional" style is the best descriptor for the intended image of the development. Appropriate materials include masonry, cast stone, tinted and formed precast panels, natural stone, glass, aluminum window framing and architectural metal panels.

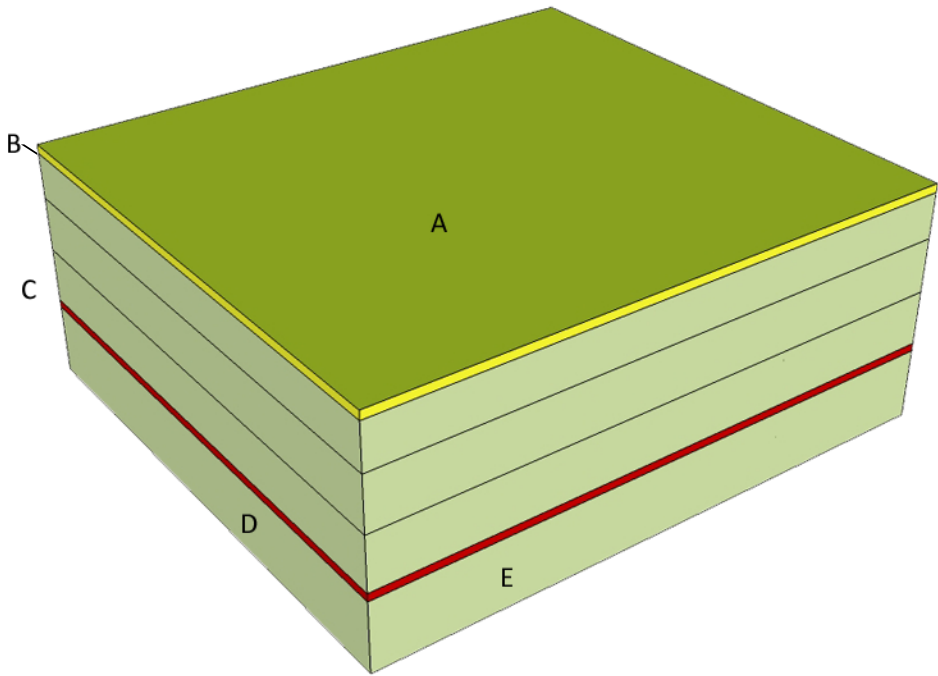
Detailed drawings illustrating proposed building materials and their locations on the proposed structures are required to be submitted for review as part of each Final Development plan.

ARTICULATION

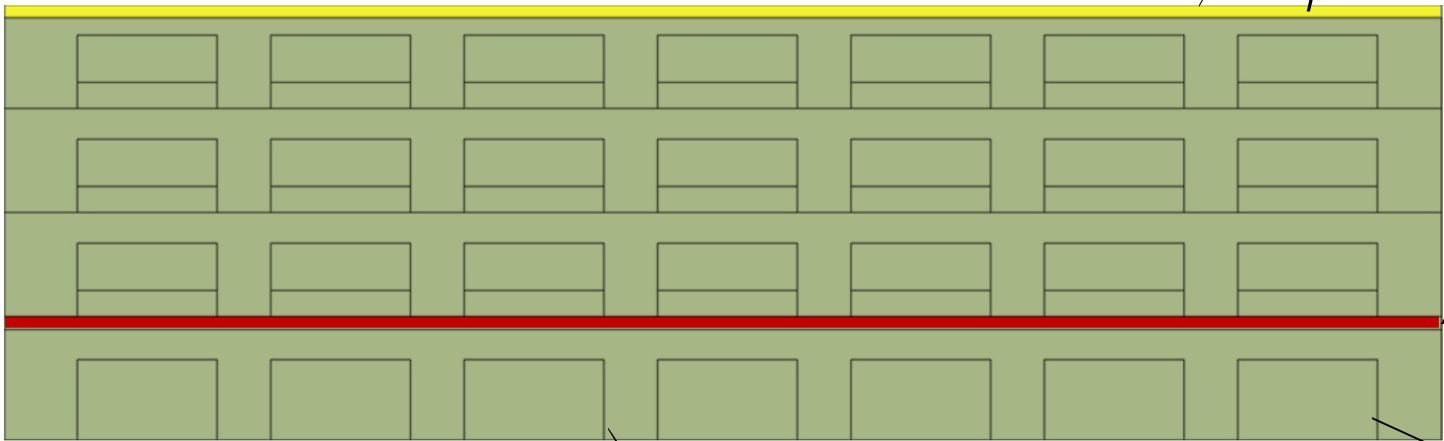
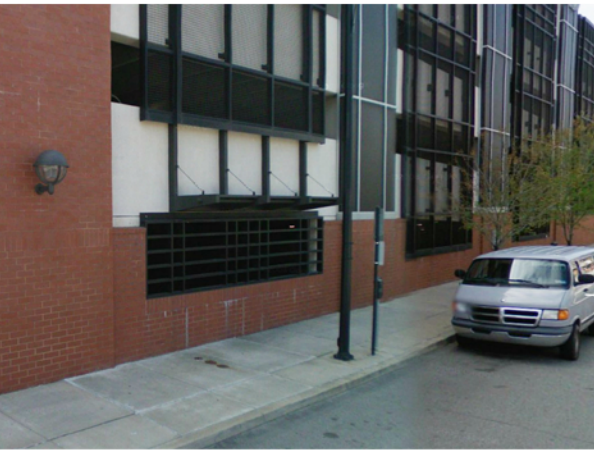
Parking structures located along the riverfront, whether integrated into buildings or not, shall be of the same architectural character described for buildings noted above. The garage facades shall have architectural detailing that integrates them into the building or adjacent context of buildings.

SCREENING

The goal of the development is to enhance the pedestrian experience at street level. Therefore, the ground level facade shall consider a mix of approximately 60% openings and 40% solid material. Screening shall be limited to the first level only.



3D CONCEPTUAL MODEL EXAMPLES & PHOTOS



A. Rooftop gardens are allowed on parking structure roofs.

B. Detailed cornices are encouraged to delineate how building meets sky.

C. Cornices are encouraged for separating the first level of the building from the upper levels

D. Street level opening shall contain a mixture of 60% opening and 40% solid materials

E. Lower level shall provide screening over openings for security and aesthetics.

MATERIALS

The concept for the site is to provide a vibrant, interesting urban environment that respects the historic context of the Strip District, yet relates to modern design. "Transitional" style is the best descriptor for the intended image of the development. Appropriate materials include masonry, cast stone, tinted and formed precast panels, natural stone, glass, aluminum window framing and architectural metal panels.

Detailed drawings illustrating proposed building materials and their locations on the proposed structures are required to be submitted for review as part of each Final Development plan.

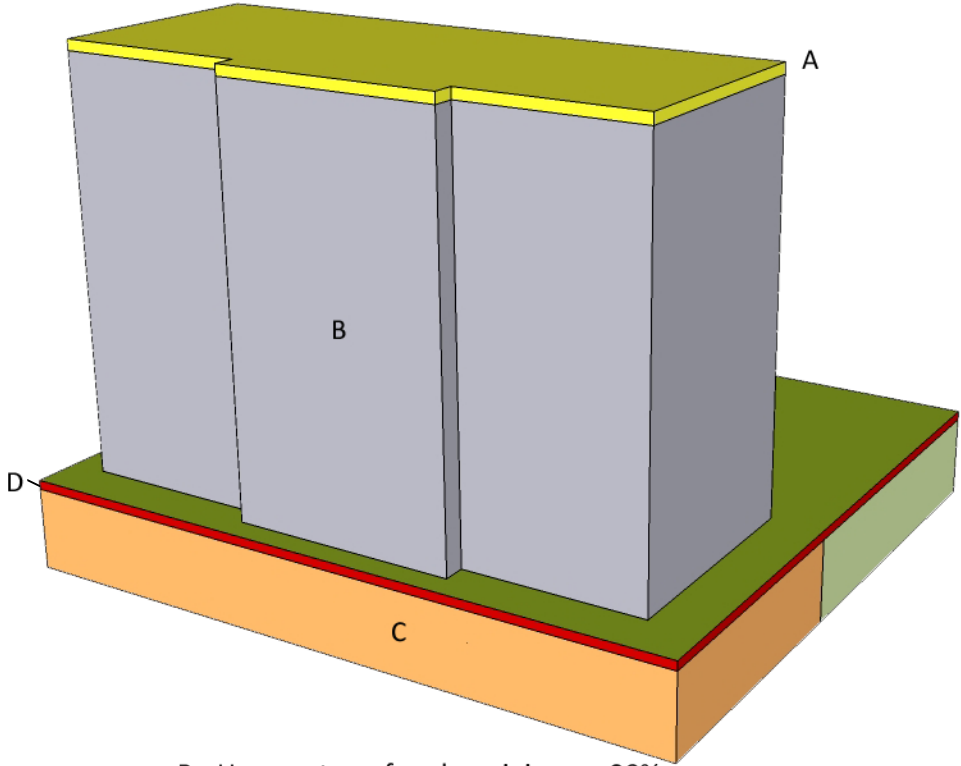
ARTICULATION

The facades of the riverfront shall provide views to the river and be predominantly glazed and provide visual interest from the opposite side of the riverfront. Parking structures located along the riverfront, whether integrated into buildings or not, shall be of the same architectural character described for buildings noted above. The garage facades shall have architectural detailing that integrates them into the building or adjacent context of buildings.

Mixed use buildings with storefront facades shall create visual interest at the street level (for example: staggering the frontage of the building, recessing doors and windows, and providing awnings and canopies for weather protection).

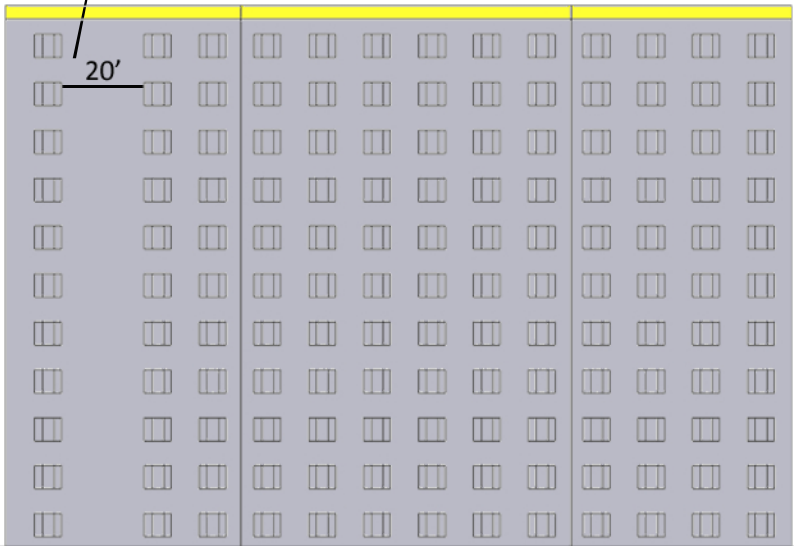
TRANSPARENCY

The goal of the development is to enhance the pedestrian experience at street level. Therefore, the ground level facade shall have a mix of approximately 60% windows and 40% solid material. The upper story facade should consider a minimum of 20% glazing and maximum blank wall length of 20'.



B. Upper story facade minimum 20% glazing and blank wall max. length = 20'

A. Detailed cornices are encouraged to delineate how building meets sky.



D. Cornices are encouraged for separating the first level of the building from the upper levels



C. Street level 60% min. glazing at Commercial/Common Residential facade

MIXED USE EXAMPLES FROM THE STRIP DISTRICT AREA



Signage

For Architectural Signage Guidelines reference the **City of Pittsburgh Code of Ordinances** Chapter 919 specifically Ch 919.03.M.7 Golden Triangle District Signage. For additional remarks and revisions refer to the following:

Wall Mounted Signage

- Not to project above roof parape, except along Smallman Street as stated above.

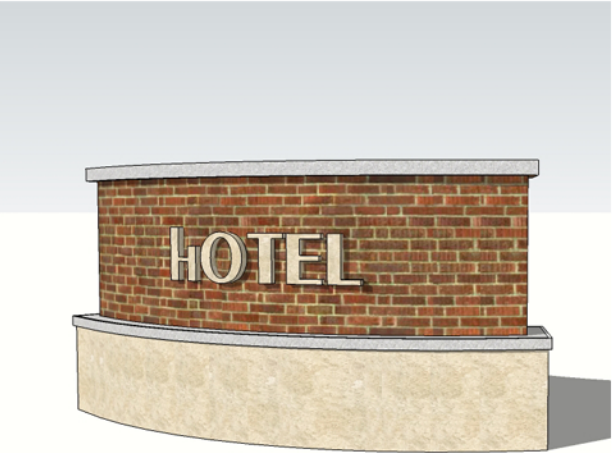
Marquee or Canopy Signs

- Signs attached to, painted on, or inscribed on marquees or canopies are allowed
- Signs shall be allowed to be installed above, and below marquees or canopies, provided that such signs meet safety and accessibility regulations
- Signs shall be allowed to be board signs or free standing letters

Vertical Signs

- Vertical projecting signs and banners mounted on building walls are allowed provided that they meet safety and accessibility regulations
- Vertical banners are allowed on light fixture poles, and pylons

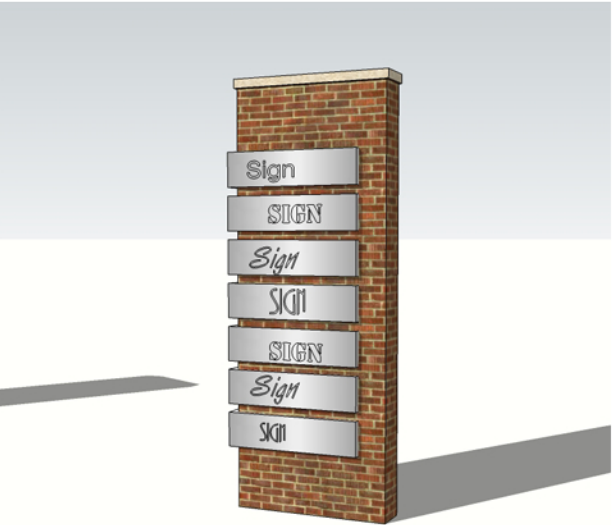
Signage Design should be compatible with the building architecture. Historical architectural elements should not be covered or damaged by building signage.



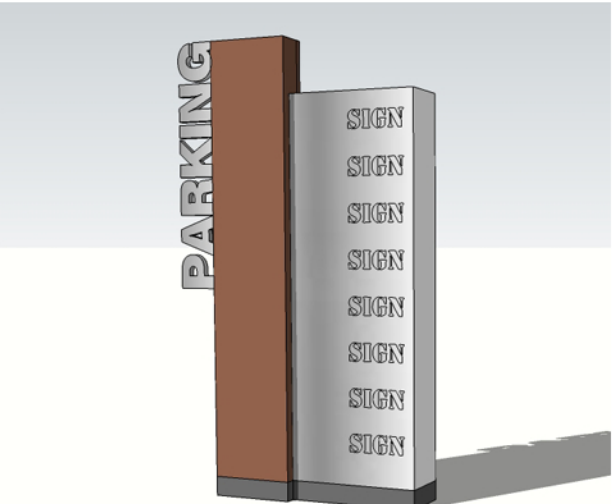
CONCEPTUAL EXAMPLE



CONCEPTUAL EXAMPLE



CONCEPTUAL EXAMPLE



CONCEPTUAL EXAMPLE

Site Amenities

Lighting is one of the most important elements in the landscape. The type of light used can make a tremendous difference in the way a space is perceived, in terms of use, and safety.

As of April, 2011, the City of Pittsburgh has approved a new Lighting Code. The city is also in the process of approving a plan to change all street lights to Light Emitting Diodes (LEDs). While Metal Halide is still acceptable, the new code strictly prohibits the use of lights with Mercury Vapor Lamps.

All lights shown have been used in city projects, and are acceptable for the PLDP. The City of Pittsburgh has standard light fixtures approved for use on city streets. However, lighting recommendations may change based on revisions to the City's standards, and availability. The City of Pittsburgh streetscape components catalogue should be referred to for further direction.

Streetscape Lighting

As a component to a streetscape, street lighting injects character, vitality, and is a unifying element along streets. Adequate lighting provides nighttime safety, and creates an atmosphere of usability from day to night.

Pedestrian lighting should not be limited to street poles, but it is also important to light storefronts to attract customers and uplight buildings.

Piazza Lighting

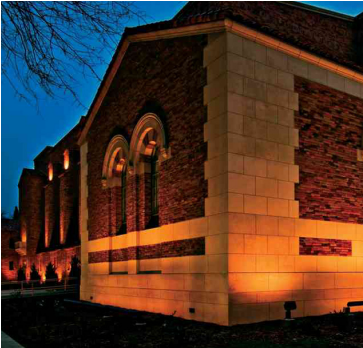
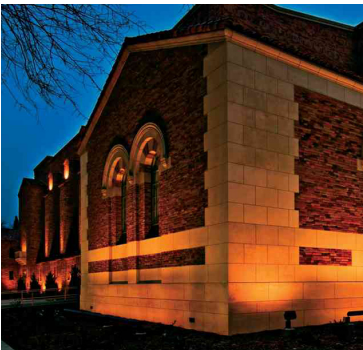
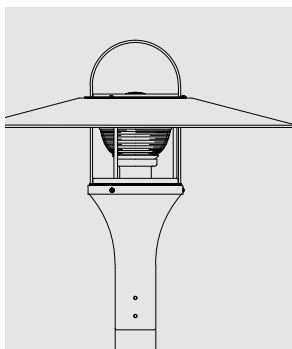
Piazza lighting should utilize the city standard fixture. However, there is room for additional lighting elements to make the space more contemporary, pedestrian friendly, and safe. Lit bollards should be utilized to prevent vehicles where applicable. In-grade lights, whether spot lights, or strips of light can be used to provide direction, or create light art.

Courtyard Lighting

Courtyard lighting should be implemented on a much more pedestrian scale. The city standard for pedestrian poles can be utilized, however there is an opportunity for lighting that is more contemporary, and intimate in nature. Downlighting of trees, and the use of pendant, and pin lights can help to create a space that is welcoming at all hours.

Trail Lighting

The City of Pittsburgh has lighting standards for trail lighting. In areas on the Buncher Company property, particularly in the "Lawn" Park, the lighting should connect more to the pedestrian streetscape aesthetic.

Architecture	Landscape		Bollards	Street Lights		STREETSCAPE
 Facade uplighting	N/A		 Standard Bollard	 Streetscape Light (City St.)	 Pedestrian Light (City St.)	
 Facade uplighting	 Line lighting	 Pin Lighting	 Lit Bollard	 Streetscape Light (City St.)	 Pedestrian Light (City St.)	PIAZZA
 Facade uplighting	 Tree downlighting	 Pin Lighting	 Lit Bollard	 Pedestrian Light (City St.)	 Pendant Light	COURTYARD
N/A	N/A		 Standard Bollard	 Waterfront Light (City St.)	 Pedestrian Light (City St.)	TRAIL

The site furnishings guidelines are meant to evoke a type of feeling, and level of quality. The different spaces created in this should have different identities, however, their styles should complement one other, and work overall as a whole.

The specified site furnishings include benches, litter receptacles, bike racks, and tables and chairs. These elements are necessary for the comfort of pedestrians and to maintain clean and safe neighborhoods. However, these elements can also be treated as pieces of art, and as items to help set the character of a neighborhood. Building upon the city of Pittsburgh’s existing site furnishings palette the following items should be addressed:

- Potentially employing local artisans to create certain streetscape elements.
- Revisit the aesthetics and quality of all the street furnishings (i.e. Are they outdated? Do they hold up to constant wear and tear? Are they easily maintained? Are they readily available? Are they cost effective?)

The site furnishings are selected to blend the classic, historical character of the Strip District with the sleek, contemporary details of the PLDP. In order to accommodate the varying program of each open space, four coordinating palettes of furnishings are used on site.

- The Street Palette is centered around simplicity, durability.
- The Plaza Palette accommodates a range of uses.
- The Courtyard Palette is of a more comfortable, pedestrian scale.
- The Trail Palette has a more historic, yet minimal feel, leaning toward the traditional and romantic.

Tables & Chairs	Bike Racks	Litter	Benches	STREETSCAPE
	 The 'Three Rivers' bike rack (City Standard)	 City Standard		
				PIAZZA
				COURTYARD
		 City Standard		TRAIL

Open Space and Landscape Standards

This section provides an outline of the proposed materials to be utilized for pedestrian walks and plazas in the SP District. All of these pavements are typical Pittsburgh paving choices, and have been utilized in city projects.

Elements were chosen with an eye toward minimal maintenance, durability, and sustainability, but also to emphasize the historic nature of the site, lend a sense of elegance, and accommodate the unique programming of each space. The proposed elements are categorized into the following groups: paving, site furnishings, lighting, signage, and landscaping.

WALK PAVING

Broom Finished Concrete

Paving is a crucial element in the formation of an urban palette. Broom finished — or brushed — concrete is the most common material utilized, is consistent with other walks in the Strip District, and is the minimum standard for all sites within the development. If concrete is used, care should be taken to utilize a scoring patterns that is consistent, and related to any elements in its proximity.

Stamped Concrete

Stamped concrete can cost-effective choice to replicate materials such as pavers, or natural stone. Installation is quicker and can mimic natural materials in color and design.

ACCENT PAVING

Accent paving can be used for public open spaces.

Exposed Aggregate

Exposed aggregate is a tasteful alternative to plain concrete. It adds color and texture to the ground plane, and it is comparably priced with concrete. There are a multitude of options available, so the pavement can be made to coordinate with its surrounding.

Terrazzo

Terrazzo is similar to exposed aggregate with a glossy finish. This paving is predominantly used in the downtown area, and adds significantly to the character of a neighborhood. It is and elegant and durable material, and complements the strength of the architectural fabric. Contemporary use of terrazzo paving can link old and new, be used in limited ways to distinguish path and direction, and create transition into other adjacent neighborhoods.

Cut Stone Paving

Stone pavers are beautiful, flexible, and depending on their thickness, durable. There are a spectrum of stone types, colors, and textures to choose from, and they can be cut into various shapes to create an endless number of stunning patterns. Cut stone pavers are the best choice for public gathering spaces, where people can linger and appreciate their beauty. These pavers can not bear the weight of vehicular traffic unless they are cut thick enough, which can be very pricey. Fortunately, repair is simple. One broken stone paver can be removed and replaced with a matching one.

Belgium Block

Belgium block combines a classic elegance with outstanding durability. It is a pyramidal cobblestone that has been used to pave some of the most iconic streets in the world. Made from natural stone, Belgium block is beautiful, extremely durable, and low maintenance, but it is also expensive. While it may not be economical to pave every road with Belgium block, it can make be a bold accent when combined with more cost-effective paving materials. It can be used to pave a public gathering space, especially when the space is shared by vehicles. It can be used as an edge, adding interest and variety to exposed aggregate or concrete. It can also be a tasteful alternative to a painted crosswalk.

When installed correctly, Belgium block can also be very sustainable. Belgium block can be dry laid over sand to allow rainwater to infiltrate between stones, greatly reducing runoff. This technique also greatly reduces maintenance costs. Because the blocks are not fixed in mortar, damage caused by shrink and swell habits in minimized, and utilities can be accessed without having to demolish and rebuild the road.

Brick

Brick is another durable paving material suitable for both roads and sidewalks. Red brick comprises many buildings and the remaining smokestacks that are scattered throughout the city of Pittsburgh. Brick pavement can create a beautiful surface, while being reminiscent of Pittsburgh’s industrial history. Depending on the type of brick and the paving pattern, brick can be either bland or bold, so give this material a great deal of consideration.

TRAIL PAVING

Crushed Limestone

Crushed limestone is a material used in a limited fashion on private paths. Once compacted, it becomes a strong, and stable surface that is perfect for trails.

Bituminous Pavement

Bituminous pavement is a long-lasting, economical material that is suitable for trail paving. The existing trail is largely bituminous, so the utilization of this material would be consistent.

PERVIOUS PAVEMENT

Grasspave

A strategy for providing vehicular or emergency access to sites that are intended to remain green is the use of a pervious paver, such as the grasspave system. These pavers are structural enough to hold the weight of vehicles, yet allow grass to grow.



Broom Finished Concrete



Stamped Concrete



Terrazzo



Exposed Aggregate



Cut Stone Paving



Belgium Block



Clay/Concrete Paver



Brick Pavers



Crushed Limestone



Bituminous



Grasspave



INTRODUCTION

The various types of open space proposed by this PLDP require very different treatments in terms of materials, planting, and site furnishings.

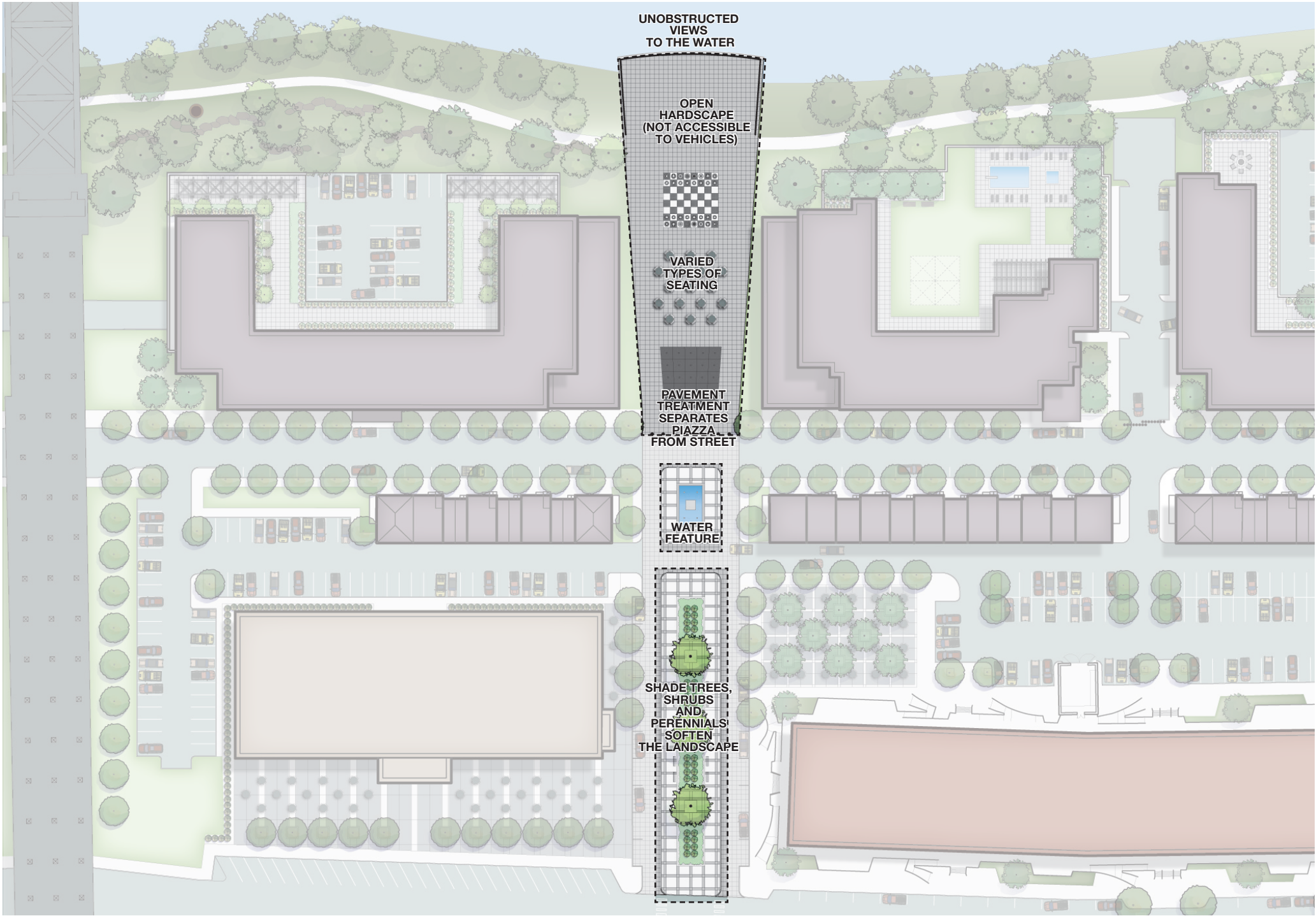
This section provides some general guidelines for the various open spaces introduced by the PLDP. They are not meant to be utilized as final designs for these sites, but are simply very general design recommendations to be utilized for future design efforts.

PIAZZA

Large urban spaces, like piazzas, are particularly crucial to fostering a sense of community and livability in a neighborhood. Well designed urban squares or piazzas function like a communal back yard, providing a dynamic space to relax, gather, and recreate. The Piazza forms a pedestrian channel from the existing Strip District, through the Buncher Company PLDP, to the Allegheny Riverfront Trail, and helps unify adjacent amenities. The piazza will cultivate continuity between the plan and the City of Pittsburgh, attracting visitors and potential lessees, providing easy access to nearby commercial and civic amenities, and ultimately, increasing desirability of the plan.

The Piazza design may include features such as:

- A water feature
- Varied types of seating (moveable and fixed)
- Open hardscape for public events (concerts)
- Landscaping
- Accent paving to delineate Piazza from the street paving
- Maintained open views to the River
- Parking near retail locations



CONCEPTUAL PLAN - Piazza



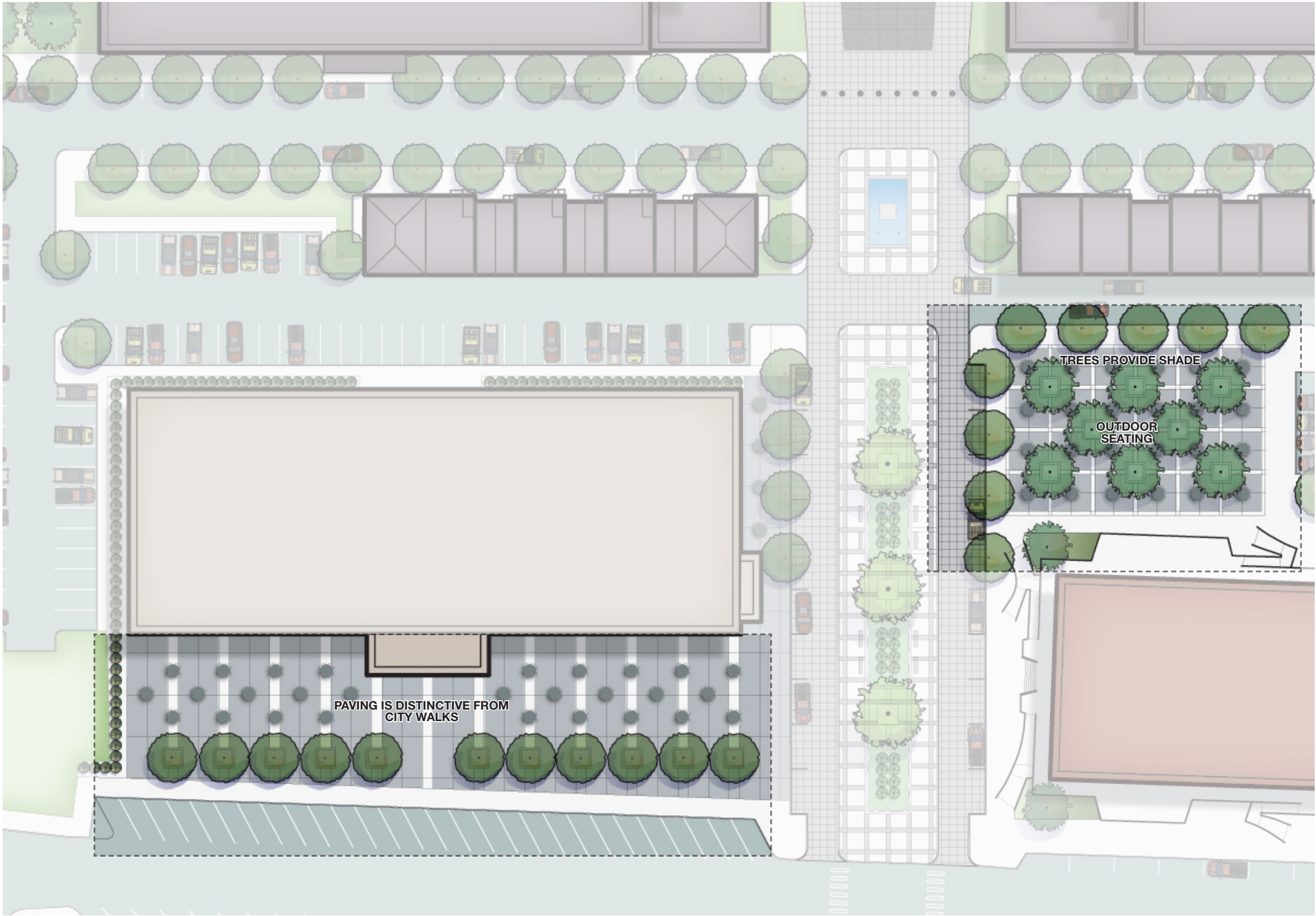
The conceptual design shown is for graphic purposes only.

PRIVATELY OWNED COURTYARDS

Scale plays an important role in the success of privately owned public spaces. Different scales promote different uses and give dwellers the freedom to choose their surrounding. In addition to the vast Piazza, two small courtyards are incorporated into the PLDP in order to provide more intimate public outdoor space.

Courtyards may include:

- Landscaping
- Seating (fixed and moveable)
- Accent paving
- Design styles that complement the architectural style of adjacent buildings



CONCEPTUAL PLAN - Courtyard



0 15' 30' 60'

The conceptual design shown is for graphic purposes only.

PUBLIC OPEN SPACE - RIVERFRONT TRAIL

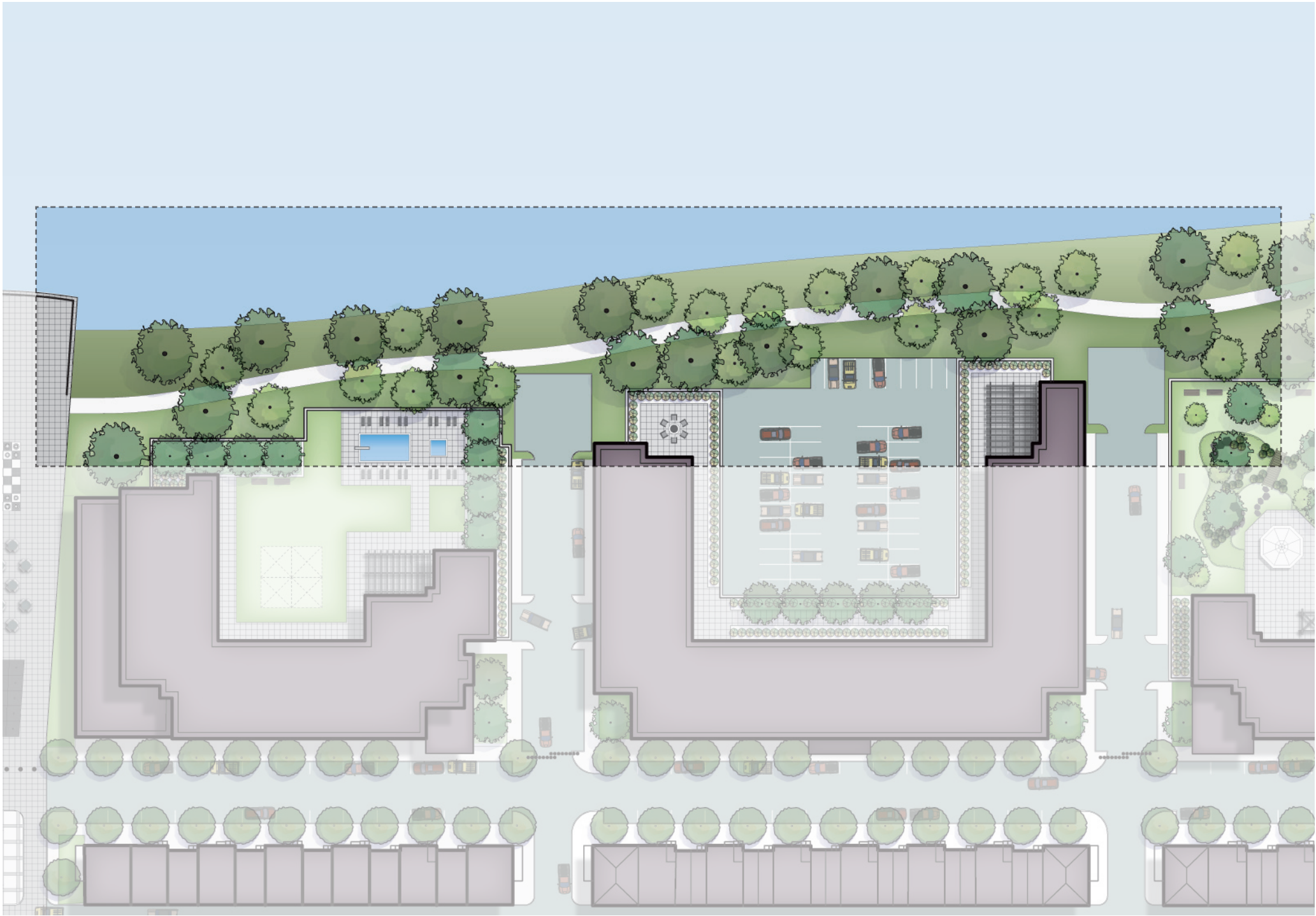
The Buncher Company PLDP’s proximity to the Allegheny River makes it a tremendously desirable property. An existing riverfront trail rests within a 50’ easement granted to the City of Pittsburgh by The Buncher Company. It provides an excellent opportunity for residents to access the riverfront, while fostering connectivity with the rest of the city.

The riverfront trail is the most naturalized portion of The Buncher Company property, making it an excellent opportunity to incorporate ecological design. This can be achieved by enhancing the condition of the riverbank, utilizing a native plant palette, and fostering wildlife habitat. If done properly, this type of landscape strategy can be very low maintenance. The wider feel of the trail will provide citizens with a naturalized sanctuary, and will be a welcomed juxtaposition to the grid of the Strip District.

Given that the riverfront trail will receive activity from the whole city, it presents opportunities to market the development. Signage or demonstration areas placed along the trail can educate passers-by about the sustainable strategies that may not be immediately evident. This kind of promotion will let the public know that The Buncher Company PLDP is more than a generic new construction project but a sustainable enhancement of the urban fabric of Pittsburgh.

The Riverfront Trail may:

- Remain part of the City’s Three Rivers Park
- Remove invasive plant species
- Provide selectively cleared open views of the river and adjacent communities
- Provide connectivity to adjacent developments
- Provide accessibility to parking areas
- Provide The Buncher Company an opportunity to work with other organizations on the development of other concepts to enhance the trail



CONCEPTUAL PLAN - Riverfront Trail



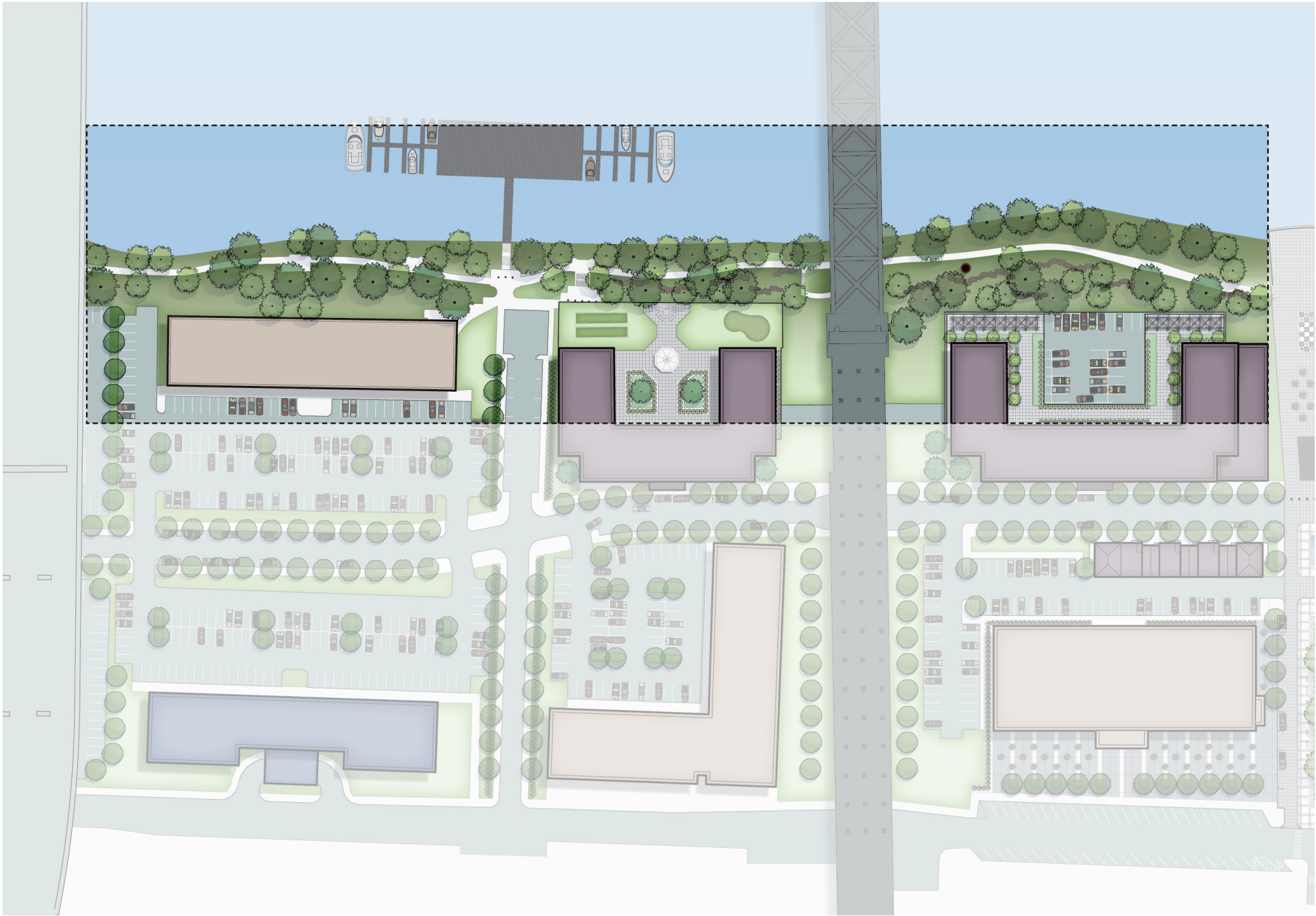
The conceptual design shown is for graphic purposes only.

PUBLIC OPEN SPACE - “LAWN PARK”

The “Lawn” Park is a secondary trail and park off of the Riverfront Trail. This park will provide a casual, and manicured area along the river. Varied types of seating will provide places for shady passive recreation, with views out to the river.

The “Lawn” Park may:

- Provide a secondary circulation connected to the existing riverfront trail
- Be grubbed for invasive species
- Provide views to the river, and North Side of Pittsburgh
- Provide varied types of seating
- Provide an area that is ADA accessible
- Provide water features located in the River



CONCEPTUAL PLAN - The “Lawn”



The conceptual design shown is for graphic purposes only.

For Architectural Screening Guidelines reference the **City of Pittsburgh Code of Ordinances** Chapter 918.03

Architectural Screening Materials should match the adjacent building materials or should be in the spirit of existing architecture in the Strip District.

Screening methods should be utilized for the screening of parking/service areas on both primary and secondary building frontage.



CONCEPTUAL EXAMPLE



FENCE SCREENING EXAMPLES



PLANT SCREENING EXAMPLES

PLANTING DESIGN PRINCIPLES

Plant selection is governed by three basic concepts: upholding an appropriate scale and aesthetic, utilizing sustainable native vegetation, and minimizing maintenance. Ultimately, the objective is to improve the physical and psychological well-being of the people who live and work in the area developed based on this PLDP. This is achieved by:

- Preserving and enhancing any viable existing vegetation,
- Improving the overall visual quality of the Buncher Company PLDP through the use of native plant material (where possible),
- Respecting the historic integrity of certain buildings,
- Establishing an urban ecology that improves Pittsburgh's ecological health,
- Providing scale and comfort for pedestrians,
- Directing and framing crucial views of the neighborhood and the surrounding city, and
- Minimizing maintenance through the use of native plant materials suitable to the urban environment.

General Landscaping

City of Pittsburgh Zoning laws governing landscaping are intended to:

- Encourage the planting of appropriate new vegetation and the preservation of existing vegetation to enhance the built environment and protect and sustain the natural environment.
- Reduce potential nuisances by requiring a visual screen between uses to mitigate the adverse effects of wind and air turbulence; heat and noise; motor vehicle headlight glare and other artificial light intrusion; and other adverse impacts associated with adjoining or nearby uses.

City of Pittsburgh Zoning Code states that any portion of a developed lot or property that is not used for the location of buildings, structures, accessory uses, off-street parking, loading areas, sidewalks or similar features shall be landscaped.

Landscape Screening

The following site features are required to be screened:

- Refuse Receptacles and Waste Removal Areas
- Open Storage and Open Structures
- Loading Docks, Service Yards, and Exterior Work Areas
- Off-Street Parking Areas

Parking Landscapes

Parking areas can be designed and enhanced to provide a more pleasing impact and a more comfortable physical experience for the user. All parking areas shall be landscaped per City of Pittsburgh Zoning Code, and the City of Pittsburgh Landscape and Architectural Screening Guidelines.

Street Trees

Streets shall be landscaped, at a minimum, per City of Pittsburgh Zoning laws.

Planting Design Concepts

Landscapes are living, constantly changing systems, so they are inherently unpredictable. Therefore, in planting design, it is best to set a trajectory or general (rather than definite) direction for the landscape's future. More specifically, it is important to plan for any variety of potential developments or hazards that a landscape may encounter in its long lifespan. There are some standard design recommendations that assist in the creation of a successful planting scheme:

- Avoid monocultures to prevent the spread of disease
- Amend degraded urban soils when possible or import new high quality growing medium
- Informal plantings shall reflect a naturalized landscape with clustered groups (odd numbers of individuals), variation in spacing, and irregular arrangement of plants
- Plants should decrease in scale in correspondence with to the proximity to the viewer (low lying vegetation should be planted closest with shrubs planted behind, followed by trees)
- Use evergreens to screen
- Structural pruning must be performed at early stages of tree development to ensure pleasant branching, and perhaps more importantly, avoid safety hazards like falling branches. This will also eliminate the need for costly and potentially detrimental pruning of mature branches in the future.
- Utilize plants appropriate for specific growing conditions (i.e. microclimate, soil condition, water availability, the urban environment in general, etc.)

PLANT PALETTE

Certain plants are more appropriate for certain spaces than others. These selections are part of what makes certain landscapes successful. Each space aims to achieve a distinctive character, so the chosen plant palettes must support this goal. Plants are specifically selected for their aesthetic and functional suitability for each type of space. Additionally, all plant palettes are selected to maximize beauty throughout all four seasons.

Urban Planting - General Conditions

Structural parameters and shallow soil limit the survivability of certain plants, so those utilized should have relatively low biomass and be adaptable to shallow relatively infertile, soil. Also, the selected vegetation should be fast growing to achieve full cover as quickly as possible.

Streetscape

Plantings are formal in order to blend into the grid organization of the existing urban landscape. Streetscapes require very hardy vegetation that is adaptable to challenging urban growing conditions.

Plantings are, generally speaking, limited to street trees, lawn, and perhaps groundcover.

Piazza

Plantings should still have a certain level of formality, should provide some shade, but should also be more of a pedestrian scale.

Plantings generally consist of shade trees, small ornamental trees, shrubs, lawn and groundcover.

Courtyard

Courtyard plantings can be less formal, and should provide shade for comfortable gathering, and/or outdoor dining. Plantings are more of a pedestrian scale, and be utilized to create smaller "rooms" for pedestrian occupation.

Plants generally consist of shade trees, small ornamental trees, shrubs, lawn, decorative perennials and annuals.

Trail

Informal, naturalized plantings along the trail very greatly in scale and diversity of vegetation. Also, with less pavement and better soil quality than the urban areas, there is greater viability for native and specimen plants.

Riparian plantings aim to replicate existing vegetative systems along the Allegheny river, and help to minimize contamination and runoff.

Plantings generally consist of shade trees, riverbank species, small understory trees, and native grasses, ferns and perennials.

Terminal Building

The Produce Terminal will not receive the typical streetscape treatment, out of respect for the historic nature of the building, and its location. Any trees utilized in the landscape will be placed in planters for temporary effect.



Streetscape Plantings are more formal



Piazza plantings are still formal, provide shade



Courtyard plantings provide shade, and create rooms



Trail plantings are more naturalistic

Plant Palette

	BOTANTICAL NAME COMMON NAME	USE	EVERGREEN/ DECIDUOUS	MATURE HEIGHT	SPREAD	FORM	SOIL PREFERENCE	LIGHT REQUIREMENTS	INSTALLATION SIZE	SPACING	COMMENTS
		PK (Park) ST (Streetscape) PI (Piazza) CT (Courtyard) TR (Trail)									
	<i>Acer campestre</i> Hedge Maple	PK, ST, PI, TR	Deciduous	25'-35'	25'-35'	Round	Acidic-Neutral	Full Sun-Part Shade	3 1/2"-4" cal.	20-30'	Attractive medium size tree. Excellent tolerance to drought and heat.
	<i>Acer rubrum</i> Red Maple	PK, ST, PI, TR	Deciduous	40-100'	40-80'	Round	Acidic-Neutral	Full Sun-Part Shade	3 1/2"-4" cal.	25-40'	Relatively fast growing native; excellent fall color; very tolerant species
	<i>Betula papyrifera</i> White Birch	PK, PI, CT, TR	Deciduous	40-70'	25'-45'	Upright	Acidic	Full Sun-Part Shade	3 1/2"-4" cal.	25'-30'	Native shade tree; showy white, exfoliating bark; not tolerant of pollution, should be reserved for best soils; dependable, bright yellow fall color
	<i>Gleditsia triacanthos 'Skycole'</i> Skycole Honey Locust	PK, ST, PI, CT, TR	Deciduous	50'-60'	40'-50'	Upright	Neutral	Full Sun	3 1/2"-4" cal.	25'-40'	Provides pleasant dappled shade; ideal for plazas; fragrant flowers; vivid yellow fall color
	<i>Liriodendron tulipifera</i> Tulip Poplar	TR	Deciduous	70-90'	40-70'	Pyramidal-Irregular	Acidic-Neutral	Full Sun	3 1/2"-4" cal.	30-40'	Stately, fast growing native; straight trunks appear as columns when pruned; yellow fall color
	<i>Nyssa sylvatica</i> Black Gum	ST, PI, CT,TR	Deciduous	30-50'	20-30'	Pyramidal	Acidic	Full Sun	3 1/2"-4" cal.	20-30'	Allegheny native with exceptional fall color; very pleasant branching structure
	<i>Pyrus calleryana 'Autumn Blaze'</i> Autumn Blaze Flowering Pear	ST	Deciduous	30'-40'	10-25'	Pyramidal	Any	Full Sun	3 1/2"-4" cal.	15'-20'	Tolerates harsh conditions; showy flowers late April-May; deep red fall color
	<i>Quercus alba</i> White Oak	PK, TR	Deciduous	60-100'	50-80'	Spreading-Upright	Acidic	Full Sun	3 1/2"-4" cal.	30-40'	Stately, long-lived, native tree; aesthetic bark; attractive branching; long period of deep red autumn foliage
	<i>Ulmus americana 'Frontier'</i> Frontier Elm	PK, ST, PI, TR	Deciduous	35'-50'	25'-35'	Upright Vase	Varied	Full Sun	3 1/2"-4" cal.	25-40'	Stately, long-lived, native tree; aesthetic bark; attractive branching; long period of deep red autumn foliage
RIVERBANK TREES	<i>Acer rubrum</i> Red Maple	PK, ST, PI, TR	Deciduous	40-100'	40-80'	Round	Acidic-Neutral	Full Sun-Part Shade	3 1/2"-4" cal.	20-40'	Relatively fast growing native; excellent fall color; very tolerant species
	<i>Betula nigra</i> River Birch	PK, TR	Deciduous	50'-70'	25'-45'	Upright	Acidic	Full Sun-Part Shade	3 1/2"-4" cal.	20'-30'	Native shade tree; stunning exfoliating bark; tolerates wet conditions
	<i>Robinia pseudoacacia</i> Black Locust	PK, TR	Deciduous	40-70'	30-50'	Upright-Irregular	Any	Full Sun-Part Shade	3 1/2"-4" cal.	15-30'	Exceptionally adaptable native species; ideal for riverbank stabilization
	<i>Amelanchier laevis</i> Serviceberry	PK, PI, CT, TR	Deciduous	10-60'	10-40'	Irregular	Acidic-Neutral	Full Sun-Shade	3 1/2"-4" cal.	15-25'	Fast growing native; ecologically important; fragrant flowers; attracts birds and butterflies; interesting foliage; tolerant to flooding; stabilizes banks
ORNAMENTAL TREES	<i>Amelanchier canadensis</i> Serviceberry	PK, PI, CT, TR	Deciduous	6'-20'	10-20'	Multi-stemmed	Acidic	Full Sun-Part Shade	3 1/2"-4" cal.	10-20'	Small native tree with 4 season appeal; showy flowers; excellent fall color; beautiful branching pattern
	<i>Cercis canadensis</i> Eastern Redbud	PK, PI, CT, TR	Deciduous	15-30'	15-35'	Spreading-Upright	Acidic-Neutral	Full Sun-Part Shade	3 1/2"-4" cal.	10-20'	Small native tree with showy pink flowers; seeds provide food to songbirds; bark becomes ornamental with age
	<i>Crataegus crus-galli 'Inermis'</i> Thornless Cockspur Hawthron	PK, ST, PI, TR	Deciduous	15'-20'	15-20'	Rounded	Varied	Full Sun	3 1/2"-4" cal.	10-20'	Rounded small tree with white flowers in June, followed by red fruit in winter. Fruit usually persists late fall and into winter.
	<i>Cornus florida</i> Flowering Dogwood	PK, PI, TR	Deciduous	20-30'	20-30'	Rounded	Acidic	Full Sun	3 1/2"-4" cal.	15-20'	Densely flowering native species; showy fruit provides food for wildlife; burgundy fall color
	<i>Franklinia alatamaha</i> Franklinia	PK, TR	Deciduous	10'-20'	6'-15'	Upright	Acid	Full Sun-Part Shade	5' Ht.	12-20'	Native flowering tree with strong fall color, and fragrant white flowers in summer.
	<i>Magnolia virginiana</i> Sweetbay Magnolia	PK, PI, CT, TR	Semi-Evergreen	10-30'	10-30'	Irregular	Acidic	Full Sun-Part Shade	3 1/2"-4" cal.	10-20'	Native tree with uniquely textured summer foliage and lemon scented flowers;

	BOTANTICAL NAME COMMON NAME	USE	EVERGREEN/ DECIDUOUS	MATURE HIEGHT	SPREAD	FORM	SOIL PREFERENCE	LIGHT REQUIREMENTS	INSTALLATION SIZE	SPACING	COMMENTS
EVERGREEN TREES	<i>Abies balsamea 'Canaan'</i> Canaan Fir	PK	Evergreen	30-40'	15-20'	Dense Pyramidal	Any	Full Sun- Part Shade	8' Ht.	10-12'	Uniform growing native evergreen. Adaptable to many soils, including wet, laomy sites.
	<i>Ilex opaca</i> American Holly	PK	Evergreen	15-30'	15-30'	Dense Pyramidal	Acidic	Full Sun- Part Shade	3 1/2"-4" cal.	8-15'	Persistent green foliage through winter; bright red berries appear on pollinated females
	<i>Pinus strobus</i> White Pine	PK, TR	Evergreen	80-100'	40-60'	Dense Pyramidal	Acidic	Full Sun- Part Shade	3 1/2"-4" cal.	8-15'	Fine, delicate, evergreen foliage; dwarf vatieties available
UPLAND SHRUBS	<i>Clethra acuminata</i> Mountain Sweet Pepperbush	PK, PI, CT, TR	Deciduous	12-20'	8-15'	Dense	Acidic	Part Shade	No. 3 Cont.	10-25'	Upland native; white, spicy smelling flowers; yellow-orange fall color; persistent seed pods provide winter interest
	<i>Cornus sericea</i> Red-osier Dogwood	PK,	Deciduous	6-10'	6-12'	Loose	Any	Full Sun- Part Shade	No. 3 Cont.	6-12'	Unique native with 4 season appeal; white flowers in spring; purple-red fall color; red branches have tremendous winter appeal
	<i>Euonymus americanus</i> Hearts-a-Bursting Strawberry Bush	PK, TR	Deciduous	6-12'	4-8'	Loose	Neutral	Part Shade- Shade	No. 3 Cont.	4-8'	Native specimen shrub; unique, showy fruit in fall; strange flowers; tolerates wet soils
	<i>Fothergilla gardenii</i> Dwarf Fothergilla	PK, PI, CT, TR	Deciduous	3'	3-4'	Irregular	Acidic	Full Sun- Part Shade	No. 5 Cont.	2.5'-3'	Spring-blooming native with white fragrant flowers; bright yellow-orange/red fall color; low maintenance
	<i>Fothergilla major</i> Large Fothergilla	PK, PI, CT, TR	Deciduous	6'-10'	4'-6'	Irregular	Acidic	Full Sun- Part Shade	No. 5 Cont.	5'	Spring-blooming native with white fragrant flowers; bright yellow-orange/red fall color; low maintenance
	<i>Hamamelis virginiana</i> Witchhazel	PK, TR	Deciduous	10-15'	8-15'	Irregular	Acidic	Full Sun- Part Shade	No. 5 Cont.	8-12'	Fall-blooming native with yellow fragrant flowers; tolerates some pollution; low maintenance
	<i>Hydrangea arborescens</i> Wild Hydrangea	PK, PI, CT, TR	Deciduous	3-5'	4-8'	Round	Acidic- Neutral	Part Shade	No. 3 Con.	4-8'	Fast-growing native shrub with full white flowers; various cultivars available
	<i>Hydrangea quercifolia</i> Oakleaf Hydrangea	PK, PI, CT, TR	Deciduous	3'-6'	3'-6'	Round	Acidic- Neutral	Full sun- Part Shade	No. 5 Cont.	4-8'	Fast-growing native shrub with full white flowers; various cultivars available
	<i>Ilex glabra</i> Inkberry	PK, PI, CT, TR	Evergreen	4-8'	4-8'	Dense	Acidic	Full Sun- Part Shade	No. 5 Cont.	3-6'	Dense evergreen native; requires both male and female to flower; various cultivars available
	<i>Lindera benzoin</i> Spicebush	TR	Deciduous	8-12'	8-12'	Loose	Any	Full Sun- Part Shade	No. 5 Cont.	8-12'	Strong native species; yellow flowers in spring; showy yellow foliage in fall; aromatic leaves and branches
	<i>Myrica pensylvanica</i> Northern Bayberry	PK, CT, TR	Deciduous	5-6'	3-6'	Upright	Acidic	Full Sun- Part Shade	No. 5 Cont.	5-6'	Very tolerant native; stabilizes soil; pleasant white berries on females; leathery, aromatic foliage; requires 20% male population for good fruiting
	<i>Rhododendron arborescens</i> Smooth Azalea	PK,TR	Deciduous	8-12'	8-12'	Loose	Acidic	Part Shade	B&B	8-12'	Fast-growing native; fragrant bell-shaped flowers in spring; glossy foliage turns deep red in fall
	<i>Rhododendron cv.</i> Rhododendron cultivars	PK, PI, CT, TR	Evergreen	3-20'	3-20'	Round	Acidic	Part Shade- Shade	B&B	3-25'	Leathery evergreen leaves are pleasing year-round, droop in cold temperatures; beautiful full flowers; can be used as screen
RIVERBANK SHRUBS	<i>Rhus aromatica 'Gro Low'</i> 'Gro-Low' Sumac	PK, PI, CT, TR	Deciduous	6-12'	6-12'	Loose	Neutral	Shade	No. 3 Cont.	6-12'	Extremely hardy native azalea; tolerates height pH; pink or purple flowers in spring; blue-green foliage turns purplish in fall
	<i>Alnus serrulata</i> Smooth Alder	PK, TR	Deciduous	12-20'	10-20'	Round	Neutral	Full Sun- Shade	No. 3 Cont.	10-25'	Ecologically important native; prefers wet growing conditions; fixes nitrogen, improving soil quality
	<i>Aronia arbutifolia 'Brilliantissima'</i> Brilliant Red Chokeberry	TR	Deciduous	6-10'	3-5'	Upright	Any	Full Sun- Part Shade	No. 3 Cont.	3-5'	Native shrub with 4 season interest; pleasant flowers; excellent fall color; showy fruit; tolerant of various growing conditions; stabilizes banks
	<i>Cornus racemosa</i> Swamp Dogwood	PK, TR	Deciduous	10-15'	10-15'	Spreading	Any	Full Sun- Shade	B&B	6-12'	Very adaptable native; viable for riverbank or difficult growing sites; white flowers in spring; unique branching structure; provides food and shelter to wildlife
	<i>Ilex verticillata</i> Winterberry	PK, PI, CT, TR	Deciduous	6-10'	6-10'	Upright	Acidic	Full Sun- Part Shade	B&B	6-10'	Native shrub tolerant of wet soils; white flowers in summer; showy, bright red fruit in fall and winter; attracts birds; requires both male and females to fruit

	BOTANTICAL NAME COMMON NAME	USE	MATURE HIEGHT	SOIL PREFERENCE	MOISTURE PREFERENCE	LIGHT REQUIREMENTS	BLOOM COLOR	BLOOM PERIOD	INSTALLATION SIZE	SPACING	COMMENTS
GROUND COVER	<i>Coreopsis lanceolata</i> Lanceleaf coreopsis	PK, PI, CT	12-30"	Neutral	Medium-Low	Full Sun-Shade	Yellow	Spring-Early Summer	No. 1 Cont.	15-18"	Native groundcover with lacey foliage; self-sowing
	<i>Liriope muscari</i> 'Big Blue' Big Blue Lily Turf	PK, PI, CT	6-14"	Neutral-Acidic	Medium	Full Sun-Part Shade	Pale Blue-Violet	Early-Late Summer	No. 1 Cont.	9-12"	Very tolerant; evergreen grass-like perennial; ornamental edging
	<i>Phlox stolonifera</i> Creeping Phlox	PK, PI, CT, TR	6-10"	Neutral-Acidic	Medium	Full Sun-Shade	White, Blue, or Purple	Spring	No. 1 Cont.	6-9"	Spreading, native groundcover; pleasant semi-evergreen foliage
	<i>Ajuga reptans</i> 'Burgundy Glow' Burgundy Glow Ajuga	PK, PI, CT, TR	6"	Acidic-Neutral	Medium-Low	Part Shade-Shade	Blue	Late Spring-Early	No. 1 Cont.	6-9"	Low-lying groundcover; dark foliage add spectacular contrast; attracts birds and butterflies
	<i>Tiarella cordifolia</i> 'Running Tapestry' 'Running Tapestry' Foamflower	PK, PI, CT, TR	6-12"	Acidic	Medium	Part Shade-Shade	White	Mid Spring-Early	No. 1 Cont.	9-12"	Native groundcover with attractive, fuzzy leaves; blooms repeatedly
	<i>Pachysandra procumbens</i> Allegheny Spurge	PK, PI, CT	6-12"	Acidic	Medium	Full Sun-Shade	Pink or White	Late Winter	No. 1 Cont.	15-18"	Evergreen native; blooms early; attractive foliage
	<i>Epimedium rubrum</i> Red Bishop's Cap	PK, PI, CT, TR	6-12"	Neutral	Medium	Part Shade	Red or Pale Yellow	Mid Spring-Early	No. 1 Cont.	12-15"	Semi-evergreen groundcover; gorgeous red and green foliage
	<i>Arctostaphylos uva-ursi</i> Bearberry	PK, PI, CT, TR	6-12"	Neutral-Acidic	Medium	Full Sun\	White to Pink	Early Spring	No. 1 Cont.	12-15"	Glossy evergreen foliage: cascades over walls
GRASS	<i>Carex pensylvanica</i> Pennsylvania Sedge	PK, TR	6-12"	Neutral-Acidic	Medium-Low	Full Sun-Shade	X	X	No. 1 Cont.	12"	Native, grassy groundcover; spreads readily; enriches soil; attracts birds
	<i>Pennisetum alopecuroides</i> & varieties Fountain Grass	PK, PI, CT	3'-4'	Neutral	Medium	Full Sun	Creamy Tan	Mid Summer-Late Fall	No. 2 Cont.	18-36"	Clump-forming grass; blue foliage turns purple in fall and lasts through winter; valuable to wildlife
	<i>Schizachyrium scoparium</i> 'The Blues' Blue Little Bluestem	PK	18-24"	Neutral	Low	Full Sun-Part Shade	Purplish Bronze	Mid Summer-Late Fall	No. 2 Cont.	18-36"	Clump-forming native grass; blue foliage turns purple in fall and lasts through winter; valuable to wildlife
	<i>Sorghastrum nutans</i> Indian Grass	PK	36-96"	Neutral	Medium-Low	Full Sun-Shade	Creamy Tan	Late Summer-Mid Fall	No. 1 Cont.	18-24"	Daught-tolerent, clump-forming grass with gorgeous seed head; self-sowing
	<i>Sporobolus heterolepsis</i> Prairie Dropseed	PK, PI, CT	36-96"	Neutral	Medium-Low	Full Sun-Shade	Creamy Tan	Mid Summer	No. 2 Cont.	18-24"	Daught-tolerent, clump-forming native grass with gorgeous seed head; self-sowing
FERNS	<i>Adiantum pedatum</i> Maidenhair Fern	PK, PI, CT, TR	8-20"	Neutral	Medium	Part Shade-Shade	X	X	No. 1 Cont.	18"	Delicate fern for shady areas, naturalized landscape; native
	<i>Athyrium augustatum</i> <i>felix-femina</i> Lady Fern	PK, PI, CT, TR	30-36"	Neutral	Medium	Part Shade-Shade	X	X	No. 1 Cont.	18"	Delicate fern for shady areas, naturalized landscape
	<i>Dennstaedtia punctiloba</i> Hay-scented Fern	PK, PI, CT, TR	15-18"	Neutral	Medium	Part Shade-Shade	X	X	No. 1 Cont.	18"	Delicate fern for shady areas, naturalized landscape
	<i>Dryopteris marginalis</i> Marginal Shield Fern	PK, PI, CT, TR	15-18"	Neutral	Medium	Part Shade-Shade	X	X	No. 1 Cont.	18"	Evergreen fern for shady areas, naturalized landscape; native
	<i>Matteuccia pennsylvanica</i> Ostrich Fern	PK, PI, CT, TR	36-48"	Acidic	Medium	Part Shade-Shade	X	X	No. 1 Cont.	24-36"	Spreads by spores to form colonies; provides gorgeous textural contrast; native

Public art not only enhances the aesthetic, educational, and cultural value of the urban realm, but it can be an attraction in and of itself, drawing visitor to the downtown. Over the years, the Office of Public Art and City Planning have been working together to catalogue existing works, and encourage the incorporation of new installations into the fabric of our city. From murals to sculptures to manhole covers, site specific art and ornamentation can be used to mark entries, anchor open spaces, and/or help define and characterize neighborhoods.

The Strip District is already a culturally rich neighborhood with a blend of artistic attractions mixed into a mosaic of markets, shops, and restaurants. Located on the property, attached to the historic Produce Terminal Building, The Contemporary Craft Society gallery is one such of these attractions. The presence of local artists provide an excellent opportunity for temporary and permanent displays of artwork to beautify the Buncher PLDP and benefit local business owners.

Sculpture

Sculpture has long been part of the fabric of Pittsburgh's streets and open spaces. Sculpture can be utilized for seating, or pavement, for example. Sculpture can be monumental, or as simple as weaving a chain link fence.

Light

Lighting is a crucial element to any landscape due to the need for accessibility and safety at night. This necessity also grants an opportunity to create stunning, evocative works of art. Pittsburgh has already commissioned several permanent, public, light installations including the Carin Mincemoyer's piece "Diamond Diamond", and Jenny Holzer's piece at the Convention Center.

Water

The use of water in public art can create varied spaces that can be enjoyed year round. What flows in the Spring Summer and Fall, freezes in winter to completely transform an object.

Murals

Pittsburgh has a very strong history in the use of murals. From local artists like Brian Holderman, to world-famous artists like Romare Bearden, murals of tile, or paint can transform a blank wall. However, the use of murals can become excessive, so their use should be carefully considered.

Recommendations will include:

- Providing opportunities for creatively designed streetscape elements such as manhole covers, tree grates, benches, and planters.
- Utilize carefully considered light as art
- New development projects may include works of public art into the project through collaboration with artists and/or the Pittsburgh Department of Public Art from the beginning of the design process.



Sculpture as object

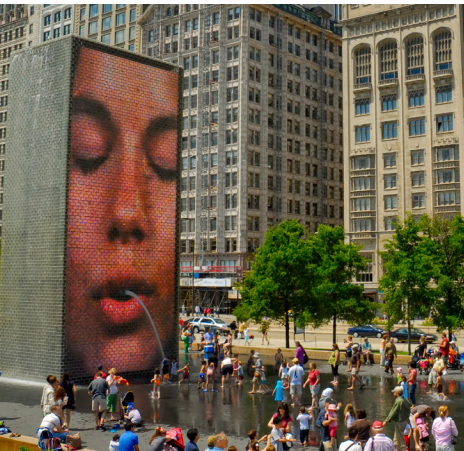


Sculpture as pavement



Sculpture can be simple

Sculpture



Water can create playful spaces

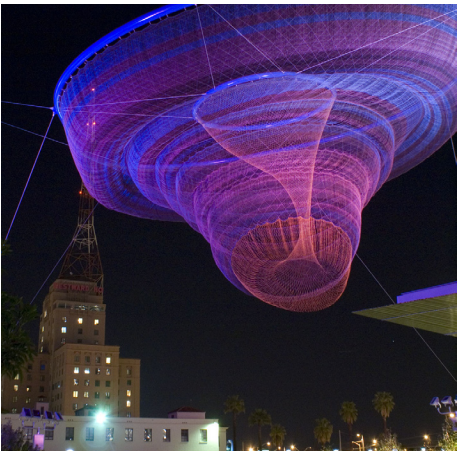


Water creates a sense of mystery



Water becomes sculpture

Water



Light art can be mysterious



Light as sculpture



Light makes a statement

Light



Murals can tell the story of our city



Murals can brighten up a blank wall

Murals

Appendix A

