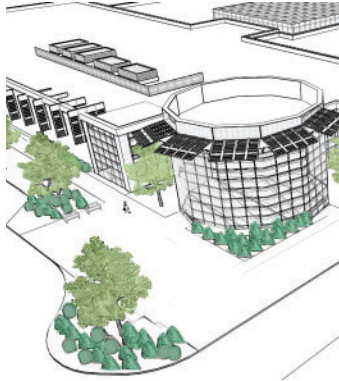


PIRT District



Planned Innovation, Research, and Technology District

Design Guidelines

South Whitehall Township, Pennsylvania

July 30, 2025



Prepared by:



The PIRT District

The Planned Innovation, Research, and Technology (PIRT) District provides an opportunity to support the growing tech industry while modernizing South Whitehall’s industrial zone. Promoting a unique blend of land uses, the PIRT aims to establish a hub for fostering technological innovation and provide a place for aspiring students, tech professionals, innovators, and entrepreneurs to interface and grow their careers.

Through the use of detailed design standards, developments within the PIRT should blend cohesively as a campus yet still maintain appropriate buffering and landscaping to project the iconic, rural setting of the Jordan Valley.

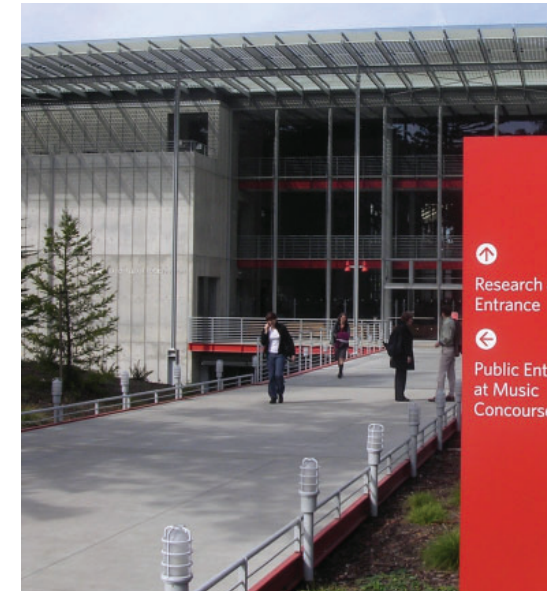
The imagery, depictions, and descriptions within this Design Guideline are intended to help illustrate the design standards required in the PIRT District and provide real-world examples of these designs in place.

Planned Innovation, Research, and Technology (PIRT) District*

Minimum Lot Size	2.5 acres
Minimum Lot Width	100'
Max. Building Height (Principal Structures)	40'
Max. Impervious Coverage	75%
Max. Building Coverage	65%
<u>Setbacks: Primary Use</u>	
From Existing Public Roads (Front or Side)	200'
From New Public Roads (Front or Side)**	50'
From Industrial Uses (Front or Side)	50'
From All Other Uses (Front or Side)	200'
<u>Setbacks: Accessory Use</u>	
From Existing Public Roads (Front or Side)	150'
From New Public Roads (Front or Side)**	50'
From Industrial Uses (Front or Side)	25'
From All Other Uses (Front or Side)	100'

**Standards for Permitted Uses in the PIRT District - Special Use Types may have additional bulk requirements - refer to the Data Center Special Use types guidelines*

*** Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads.*



Primary Facades in the PIRT District will avoid long, monotonous, uninterrupted walls and have an expressed Main Building Entry.



Public-facing buildings must have architectural features and articulated facades.



The PIRT district encourages research and technology-related businesses located within a campus-like setting with consistent architecture located around common open spaces.



PIRT developments will include research and technology-related businesses within a campus-like setting.



Each building with a Primary Facade shall have a defined building entry.



Primary Facades will avoid long, monotonous, uninterrupted walls or roof planes.

The purpose and intent of the PIRT District is to:

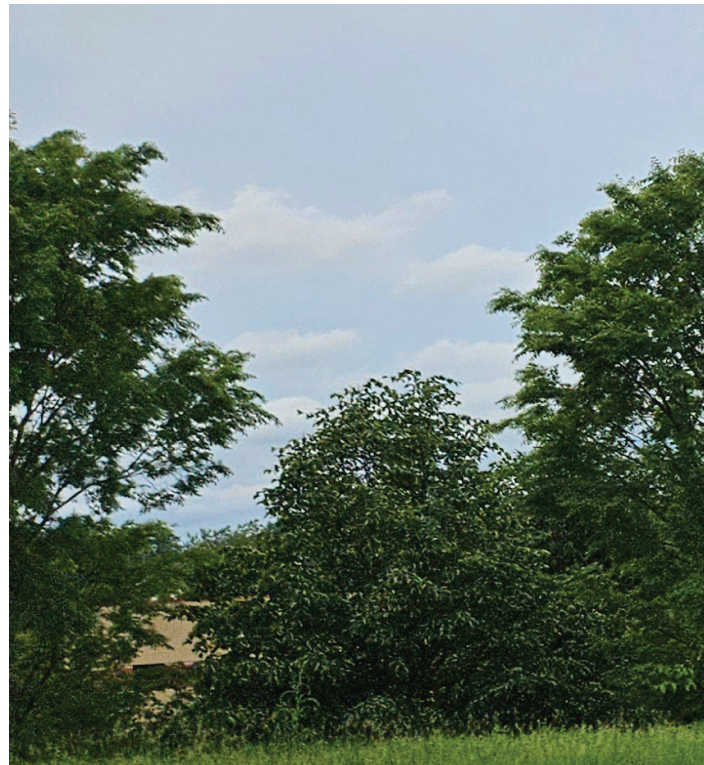
1. Provide a controlled and protected environment for the orderly growth and development of research and technology-related businesses within a campus-like setting.
2. Provide an option for new, technologically centered industrial uses that place minimal impact on the surrounding transportation network.
3. Provide opportunities for South Whitehall Township to grow its economic base while appropriately buffering industrial uses from public roadways and non-industrial land uses.

Site Design





Viewsheds and frontages along public rights-of-way shall be preserved, maintained, and enhanced with landscape buffering.



Heavy landscape & buffering are required to offer very limited views of the buildings and ancillary equipment.



Screening for waste and recycling should include walls, fences and/or landscaping that blend with the site.



PIRT facilities with multiple buildings should be designed as a campus with shared amenities and open space



Security Fences and other non-decorative type fences shall be black or a dark color located between and the principal structure(s) on the property.

Site Design & Screening

PIRT facilities with multiple buildings should be designed as a campus with shared amenities and open space

Natural landscapes and viewsheds are to be preserved and maintained at the periphery of the properties and may include light agriculture accessory uses and fencing types consistent with a rural landscape.

Preservation of woodland and of existing vegetation and/or natural topography may be substituted for the buffering requirements. The Landscape and Shade Tree Commission will determine if the existing vegetation can provide screening at the density, depth, and height equivalent to the buffering standards.

Parking and circulation are to be discretely located and screened.

Buildings within a courtyard or campus are encouraged to consolidate and share waste facilities and loading areas and equipment to the extent practicable.

Loading docks, solid waste facilities, recycling facilities and other service elements shall be placed in visually unobtrusive locations with minimum impacts on view. Screening should be achieved through the use of walls, fences and/or landscaping.

Pedestrian Zone

The Pedestrian Zone shall be located on the property, parallel to all public road frontages between an intersection and another intersection or a property line. The Pedestrian Zone shall encompass the first twenty feet (20') of the property starting at the Right-of-Way.

Shade trees shall be required to be planted within the Pedestrian Zone between the road and the trail/walkway following the provisions of §312-40 of the Subdivision and Land Development Ordinance.

A minimum ten foot (10') wide pedestrian trail/walkway shall be constructed in the Pedestrian Zone between the row of Shade Trees and fence row in accordance with the Township's standards.

Split rail/horse rail decorative fencing shall be constructed parallel to the trail/walkway as a visual barrier between the Pedestrian Zone and Buffer Zone.



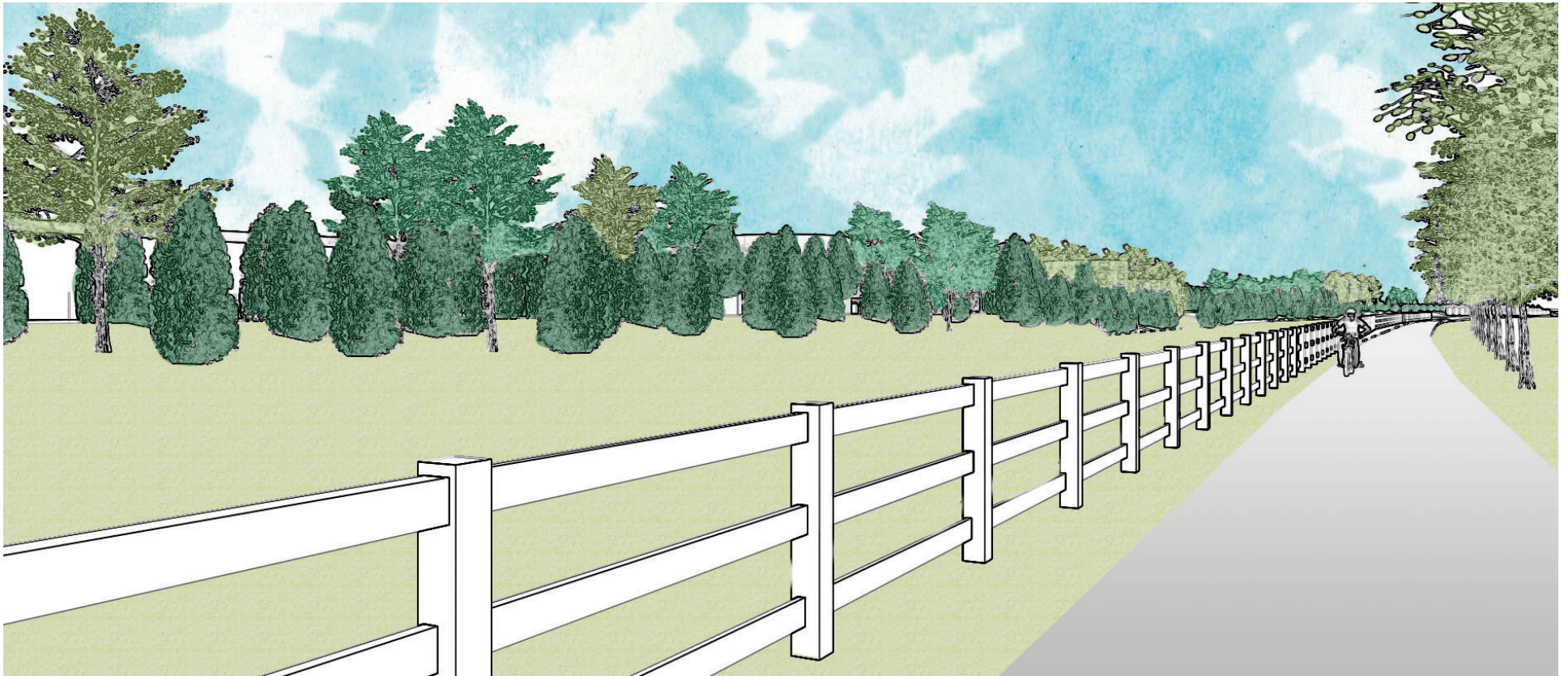
A 10' wide pedestrian trail/walkway shall be constructed in the Pedestrian Zone between the row of Shade Trees and fence row.



White horse rail fencing is to be located along the edge of the required pedestrian zone in PIRT public frontage buffers.



The trail/walkway is to be constructed per the Township standards as used in parks and other areas of South Whitehall.



Passive recreation and pedestrian and bicycle, trails are permitted within the required buffer areas.



The Pedestrian Zone shall be located along public road frontages with shade trees, a 10' multiuse path, and fencing.

Buffer Zone

A minimum fifty-foot-wide (50') buffer zone shall be established and maintained along all lot lines between dissimilar types of uses (i.e., residential, commercial, industrial, or institutional).

The Buffer Zone shall be allowed within the required setback area.

Openings for driveways and Township-required access drives shall be permitted to cross buffer zones in a perpendicular direction. Plantings in the buffer zone shall be located as to not obstruct vision for traffic entering and leaving the site and shall be subject to the clear site triangle requirements of the Township Code.

Buffer zones shall consist of a combination of dense hedges, evergreens, and shrubbery designed to provide adequate visual screening year-round between dissimilar uses. Trees shall be at least six feet (6') in height at planting and spaced close together to provide adequate screening.

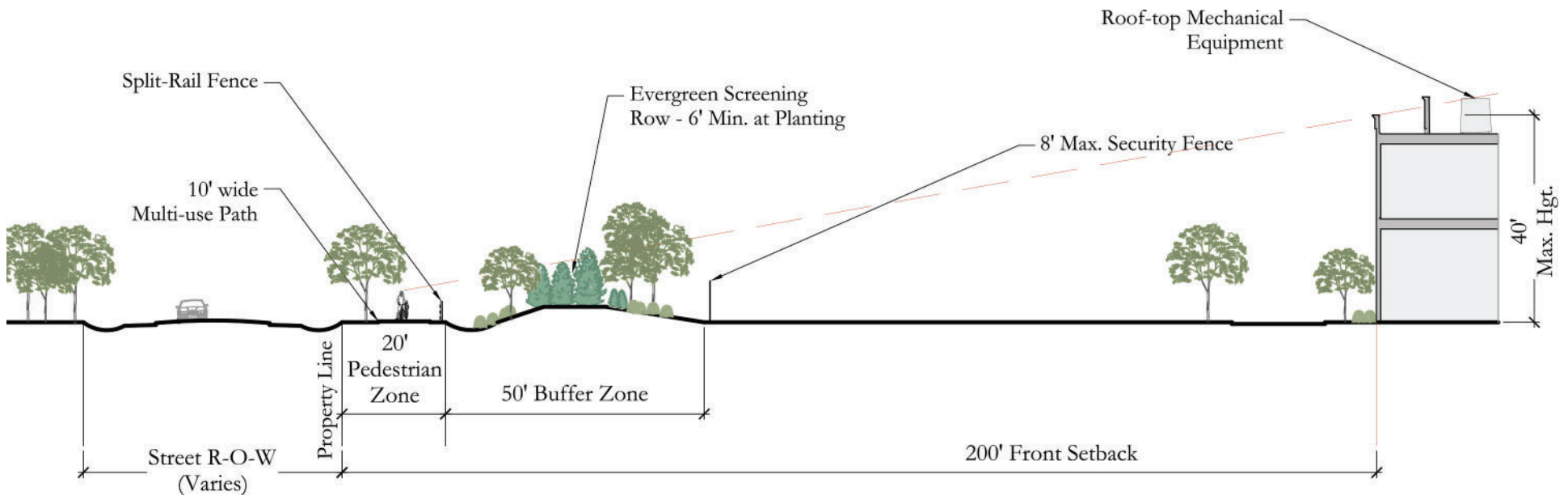
The location of required buffers may vary between the lot line and the proposed structures provided the required plantings and berms meet the required width throughout the full length of the yard area.

Security Fences and other non-decorative type fences shall be located between the required

buffering and the principal structure(s) on the property.

When necessary for site access, private roads and driveway entrances may cross the buffer in a generally perpendicular direction.

Passive recreation and pedestrian and bicycle trails are permitted within the required buffer areas provided that the screening and planting requirements are met.



Buffering Examples: From Existing Public Roads

Scale: 1"=30'-0"



Buffer zones shall consist of a combination of dense hedges, evergreens, and shrubbery designed to provide adequate visual screening year-round



Split rail/horse rail decorative fencing shall be constructed parallel to the trail/walkway as a visual barrier and to provide consistency to the streetscape.



Buffering Examples: Between Dissimilar Uses (Residential)

Scale: 1"=30'-0"

Façade Standards

Primary Façades will avoid long, monotonous, uninterrupted walls or roof planes. Primary Façades must have visual vertical breaks at a minimum of 75' of horizontal length. Some examples of vertical breaks may include, but are not limited to:

- 2' min. offset in façade plane
- Green Walls and trellis (min. 20' width)
- Change in façade material (min. 20' width)
- Fenestration or entry elements (min. 8' width)

Buildings with multiple Primary Façades, the architectural treatment of those façades shall be consistent and should continue the major features on all applicable façades in style, materials, colors and details.

Primary Façades should have a defined base and cap. The cap of the building includes the building cornice, parapet or eaves at the top of the building wall. The cap and base shall have a change in material, color, and/or a projection to distinguish it from the main body of the façade.

Main Building Entries located on Primary Façades must either project or recess from the facade plane, and/or be distinguished from the remainder of the building façade by a change in building material.

Any Mechanical Equipment, including condensers, generators, and cooling equipment; attached to or mounted on the building façade must be completely visually

screened from view at the ground level from all existing and planned public roads and adjoining residential parcels.

The screening can be used to create the required cap to Primary Façades. Taller parapet walls or screens of mesh, lattice, cladding, or grillwork or a combination of these elements can be applied to create the screening to the extent practicable to allow for code-compliant ventilation.

Accessory structures located outside of the required buffering (gatehouses, security, storage, utilities, etc.) are encouraged to be architecturally consistent with the other structures on the property.



Primary Façades must have vertical breaks and avoid long, monotonous, uninterrupted walls or roof planes.



Primary Façades should have a defined base and cap with a change in material, color, and/or a projection to distinguish it from the main body of the façade.



Green walls are encouraged on Primary Façades to soften long walls and introduce natural elements.



Use of natural and subdued color palettes are encouraged to blend in the landscape.



Mechanical equipment must be blocked from view on Primary Facades using walls and screens.



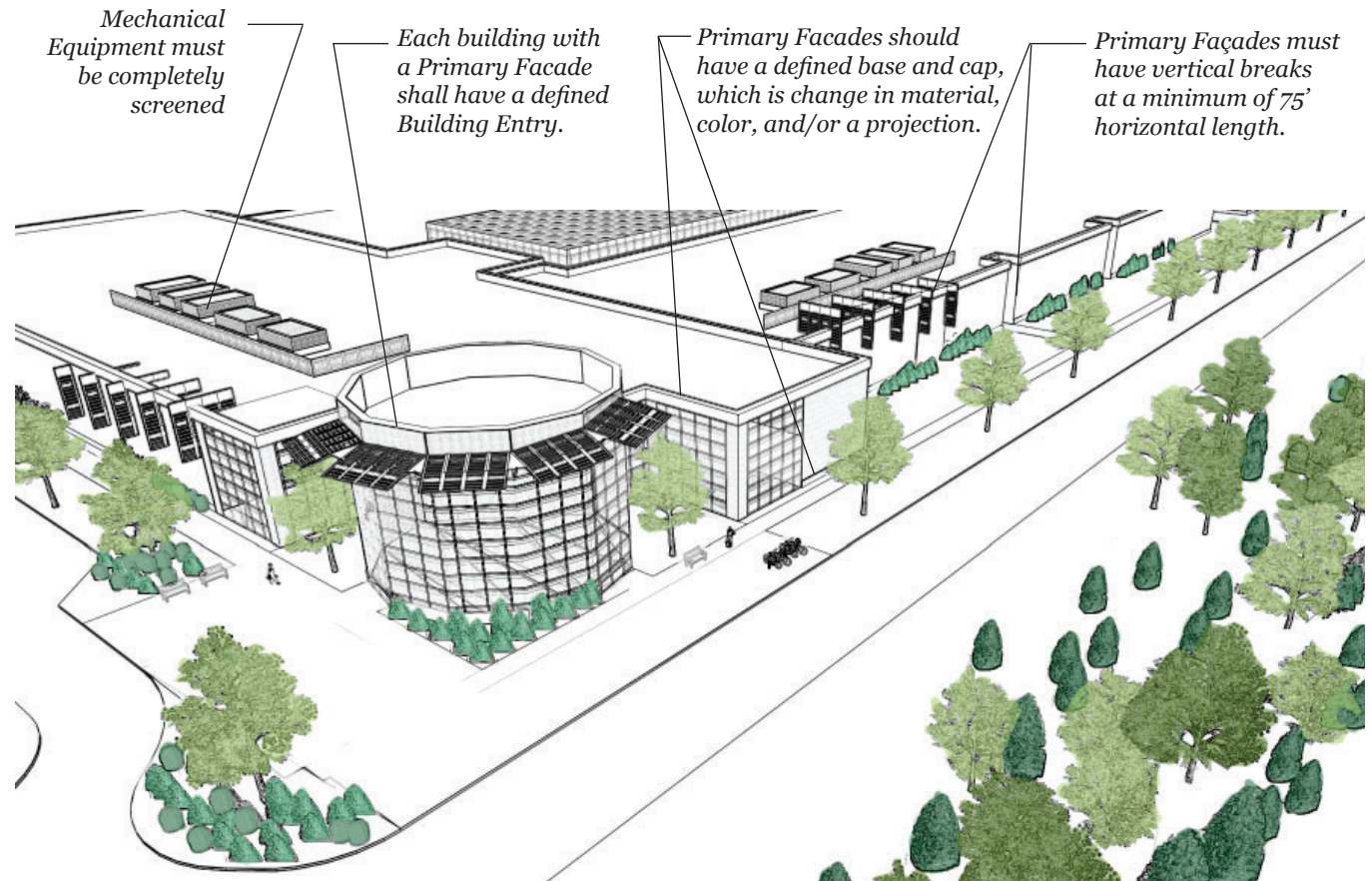
Screening can be used to create the required cap to Primary Facades & allow for code-compliant ventilation.



The cap shall have a change in material, color, and/or a projection. Primary Facades must have with visual vertical breaks at a minimum of 75' of horizontal length.



Buildings with multiple Primary Façades, the architectural treatment of those façades shall be consistent and should continue the major features on all applicable facades in style, materials, colors and details.



Special Use Type - Data Centers

Data Centers have become a critical part of digital infrastructure for data storage and processing. Requiring larger sites and a high demand for energy consumption, locating and siting these facilities require special conditions. These special uses are to be separated by conserved open space and buffered from nearby agricultural, residential and mixed-use areas

A Data Center is an establishment engaged in the storage, management, processing, and/or transmission of digital data, and housing computer and/or network equipment, systems, servers, appliances, and other associated components related to digital data operations. As a special use type within the PIRT zone, Data Centers are to be sited and screened to maintain the scenic views and rural character.

Natural landscapes are to be preserved and maintained at the periphery of the properties and may include light agriculture accessory uses.

Refer to the PIRT District Design Guidelines for the particular requirements for Facade Design, Buffering, and Service Areas for Data Center uses.

PIRT Special Use Type - Data Centers			
Minimum Lot Size	10 acres		
Minimum Lot Width	200'		
Max. Building Footprint	500,000 sf		
Max. Building Height (Principal Structures)*	50'	<u>Setbacks: Accessory Structure(s)</u>	
Max. Building Height (Accessory Structures)	35'	From Existing Public Roads (Front or Side)	200'
Max. Impervious Coverage	75%	From New Roads (Front or Side)**	50'
Max. Building Coverage	65%	From Industrial Uses (Front or Side)	25'
		From All Other Uses (Front or Side)	200'
		<u>Setbacks: Ancillary Equipment (Ground-Mounted)</u>	
<u>Setbacks: Primary Use</u>		From Existing Public Roads (Front or Side)	200'
From Existing Public Roads (Front or Side)	350'	From New Roads (Front or Side)**	50'
From New Public Roads (Front or Side)**	150'	From Industrial Uses (Front or Side)	25'
From Industrial Uses (Front or Side)	50'	From All Other Uses (Front or Side)	200'
From All Other Uses (Front or Side)	350'		
*Rooftop structures considered Ancillary Equipment may exceed the 50' height limitation subject to the provisions of §350-42(h).			
** Public roads constructed as part of a development in the PIRT District shall be considered New Public Roads.			



Data Centers are special uses that are to be separated by conserved open space and buffered from nearby uses.



Transition Zones preserve existing viewsheds, farmland, natural landscapes where possible.



Landscaped buffers screens the buildings, parking and service areas of Data Centers.

Data Center Buffering Standards

Pedestrian Zone

Data Centers shall be required to include a Pedestrian Zone – refer to the PIRT Pedestrian Zone requirements.

Transition Zone

The Transition Zone is intended to preserve existing viewsheds, farmland, natural landscapes, and/or to provide pollinator habitat between the Pedestrian Zone and the Buffer Zone. The Transition Zone shall prioritize preserving existing farmland wherever possible.

Where preserving farmland is not possible, the Transition Zone shall be designed as a Managed Natural Area as identified in the 2024 South Whitehall Landscapes plan.

Plant material shall consist of diverse species native to Pennsylvania.

Landscaping shall be designed in a way to maintain natural resources and provide visual aesthetics from the Pedestrian Zone. i.e. wildflower meadows, grasslands, woodlands, constructed wetlands, or natural stormwater management systems.

Buffer Zone Option A–Landscaping

Where space allows, a landscaped buffer shall be required to screen the nearest Principal Structure from the Pedestrian Zone or the property line where a Pedestrian Zone is not required.

The landscaped buffer shall provide a visual barrier of at least eighteen feet (18’) higher than the elevation of either the Pedestrian Zone or property line through one of the following ways:

Existing topography and vegetation subject to the approval of the Township Landscape and Shade Tree Commission.

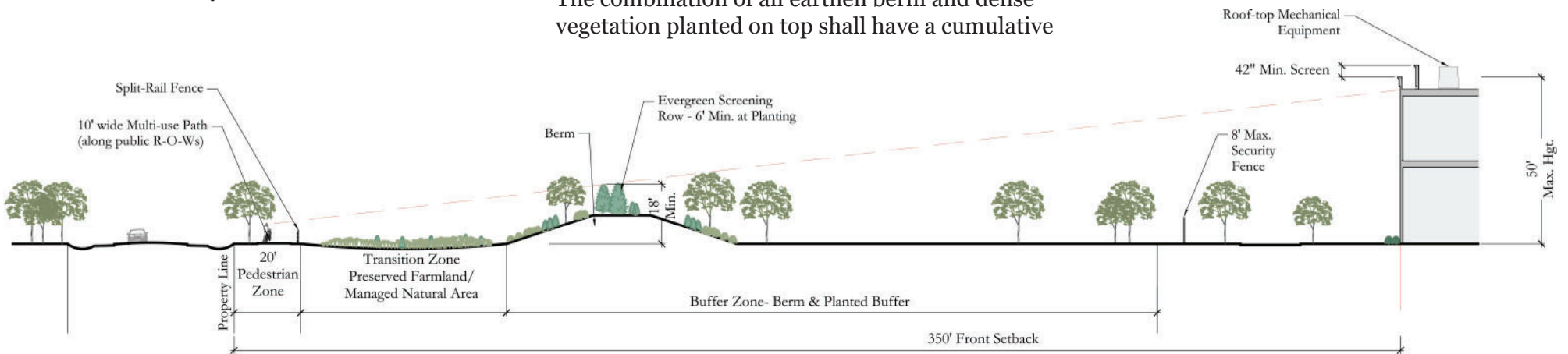
The combination of an earthen berm and dense vegetation planted on top shall have a cumulative

height of both the berm and vegetation being at least eighteen feet (18’) or higher. For example, a six foot (6’) tree planted on a twelve foot (12’) berm or an eight foot (8’) tree planted on a ten foot (10’) berm.

Dense vegetation planted without a berm if natural topography or the size of the vegetation at planting provides a visual barrier of at least eighteen feet (18’).

All new plant material shall be of nursery stock, and grown under the same climatic conditions at the development site within the appropriate hardiness zone.

Two staggered rows of evergreen trees at least six feet (6’) in height at time of installation shall be planted, either on top of a berm or at the rear of the Buffer Zone. Rows shall be offset in order to achieve maximum visual screening and trees within a row shall be spaced at an interval of one tree per fifteen feet (15’) or less.



Data Center Buffering Example: Buffer Zone Option A – Landscaping

Scale: 1"=30'-0"

Canopy trees shall be planted interspersed along the front face of the berm or in front of the evergreens if a berm is not included.

Ornamental or “flowering” trees shall be planted between the canopy trees and either the Pedestrian Zone or the property line. Trees shall be at least two inches (2”) in caliper when planted and spaced at an interval of one tree per forty feet (40’), either in a row or staggered.

Shrubs shall be dispersed throughout the Landscaped Buffer to break up the visual plan. Shrubs shall be a combination of evergreen and deciduous species, with a minimum of 50% being evergreen.

Buffer Zone Option B – Retaining Wall

Where space is limited between either the property line or Pedestrian Zone and the Principal Structure, a combination of retaining walls and landscaping may be utilized as a buffer.

Any retaining or landscape walls shall be located as close to the Pedestrian Zone or property line as possible.

A decorative split rail or horse rail fence shall be erected at the top of the retaining wall as required by code.

Dense evergreens or shrubs shall be planted behind the split rail fence as vegetative screening.

The combination of retaining wall and vegetative screening shall cover at least eighteen feet (18’) above the elevation of either the adjacent Pedestrian Zone or property line

Perimeter Fences and Walls.

Security fences and associated infrastructure shall be permitted within the building setback behind the Buffer Zones.

Security fencing shall be a maximum of eight feet (8’) high and made of dark metal material.

Portions of fence that are visible from a public road (i.e. near the entrance gate to

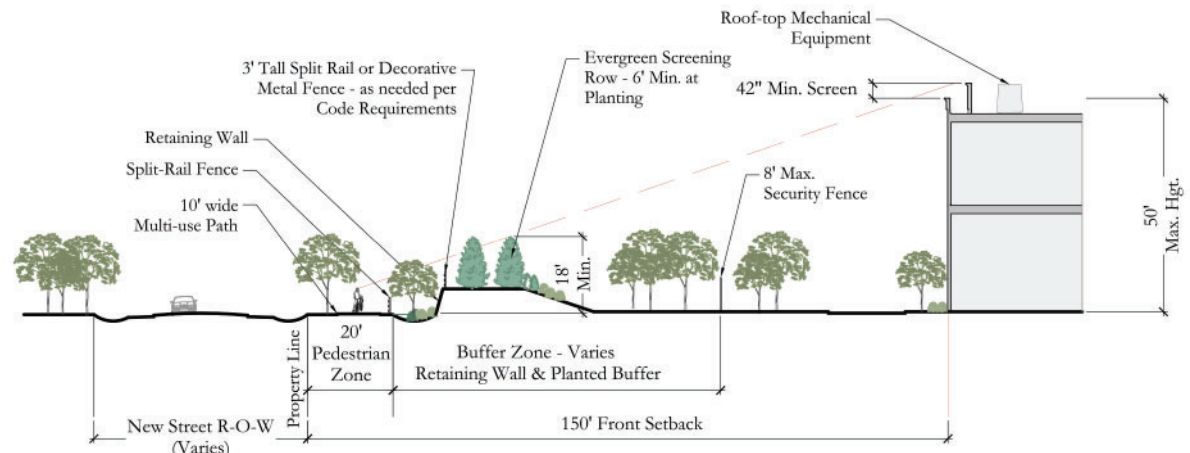
the facility) shall not include barbed wire or razor wire.

In lieu of or in addition to security fencing, solid security/perimeter walls shall be permitted.

Security/Perimeter walls visible from public roads or thoroughfares shall be constructed of either stone or masonry.

Entrance gates visible from a public road shall not include barbed wire or razor wire.

Bioretention, rain gardens, and other forms of vegetative stormwater management improvements are permitted within buffering provided that the screening and planting requirements are met.



Data Center Buffering Example: Buffer Zone Option B – Retaining Wall

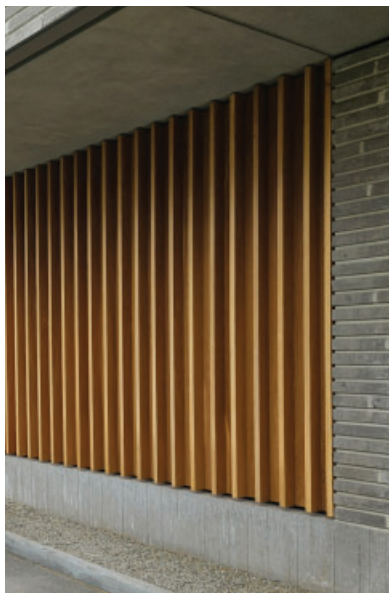
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Cornices and parapets can be used as a cap and should be an accent element with materials and colors.



Caps on a Primary Façade shall include a decorative roof parapet to help visually screen rooftop equipment.



Use of natural wood accents are encouraged to reflect the rural character of the Township.



Main building entries shall project and/or feature a change in building material.



Primary Facades shall include a vertical break or change in massing at least every 150 linear feet.

Facades

Data Centers are to comply with all base design requirements in the PIRT District Design Guidelines for Site Design, Buffering, and Facade Design.

The Primary Façade refers to the main exterior or wall of a building that faces a public road, public thoroughfare, or dissimilar land use (i.e. residential, commercial, etc.).

Primary Facades shall include a visual vertical break at least every 150 linear feet.

Primary Facades shall have a defined base and cap, with a change in material, color, and/or projection to distinguish it from the main body of the façade.

The roof edge on a Primary Façade shall include a decorative roof parapet of at least forty-two inches (42”) in height to help visually screen rooftop equipment. Decorative roof parapets shall be exempt from the maximum building height specified in the dimensional table.

Main building entries located on Primary Facades shall either project or recess from the façade plane or feature a change in building material.

Buildings with multiple Primary Facades shall utilize consistent architectural treatments, styles, materials, colors, and details.

Site Design & Ancillary Equipment

All ground-level Ancillary Equipment shall be located behind the Buffer Zone as to not be visible from a public road or thoroughfare.

Any ground level Ancillary Equipment (including substations) that cannot be hidden behind the Buffer Zone shall be screened from public roads or thoroughfares through the use of a vegetative buffer or screen wall.

Dense evergreens may be used as a buffer and shall be planted in a manner that provides eight

feet (8') or higher screening around three sides of the Ancillary Equipment.

In lieu of plantings, a decorative screen wall of either a natural material or made to look like a natural material shall be erected in a manner that provides eight feet (8') or higher screening around three sides of the Ancillary Equipment.

Loading docks, dumpsters, waste facilities, and/or utilities shall be located behind the Buffer Zone.

Any rooftop mechanical equipment, including, but not limited to condensers, generators, and/or cooling equipment shall be visually screened using a solid or louvered sound wall containing soundproofing materials designed to absorb noise. Rooftop sound walls shall incorporate consistent styles and/or colors of the Primary Façade.

Rooftop sound walls shall be reviewed as Ancillary Equipment when considering height limitations.



Primary Facades on Data Centers are to comply with all base design requirements in the PIRT District Design Guidelines.



Screening should be achieved through the use of walls, fences and/or landscaping.



Bioretention, rain gardens, and other forms of vegetative stormwater management improvements are encouraged.



Decorative screen walls provide eight feet (8') or higher screening around three sides of the Ancillary Equipment.

