



College Avenue

Focus Project 2 (Catalyst - Allen Street Intersection)

3-F: College Avenue

Enhance College Avenue as a great street that reinforces its town-gown role of integrating Penn State University with Downtown State College. Implement the Allen Street intersection as part of the Catalyst project.

*Implementation: **Borough of State College, Penn State University***

Streetscape Type A - Primary and Secondary

(The concept and design details described below are feasible under PennDOT guidelines; however, more flexibility may be possible if the Borough participates in PennDOT's Turnback Program. See Recommendation 3-G for a complete description of this alternative.)

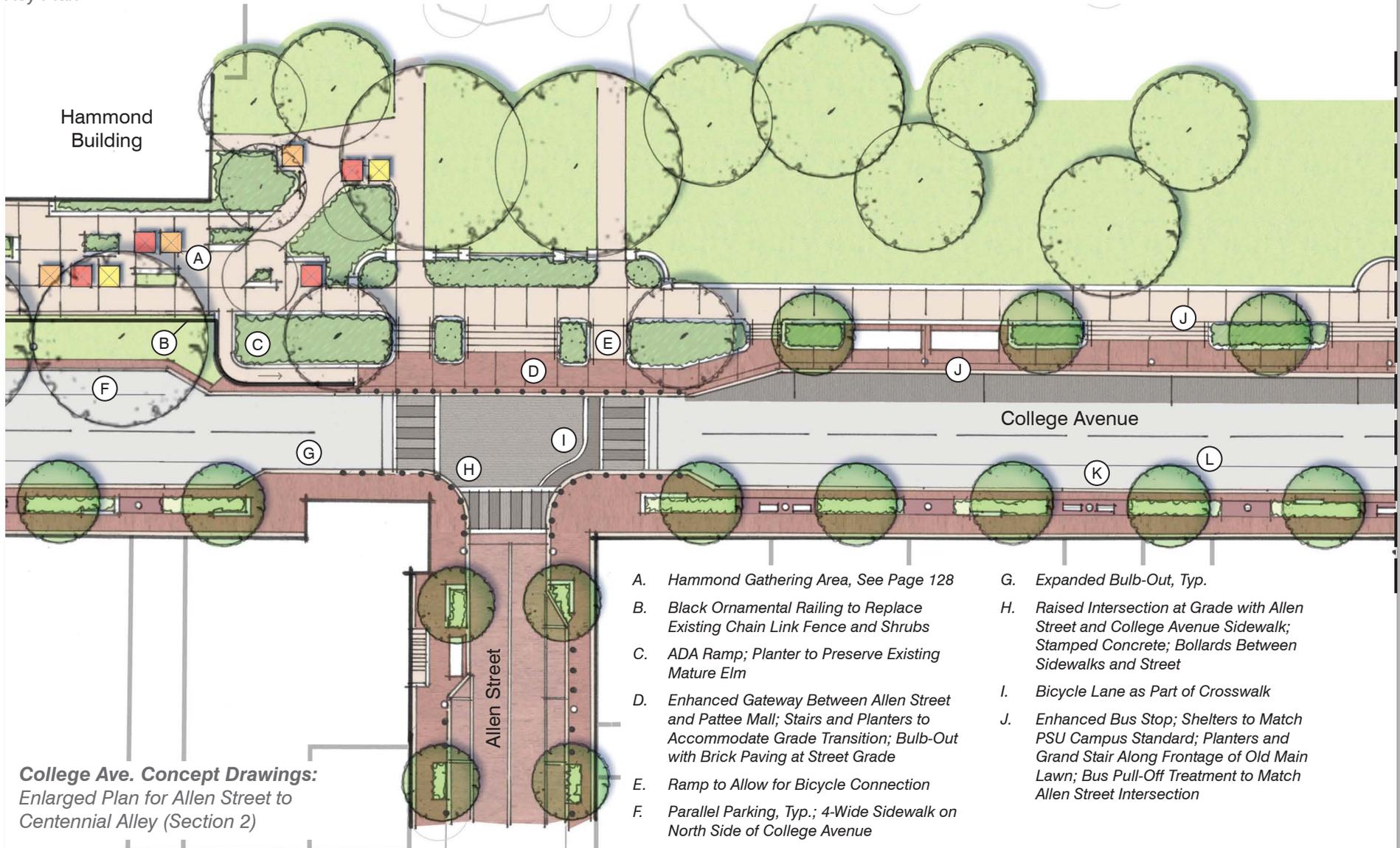
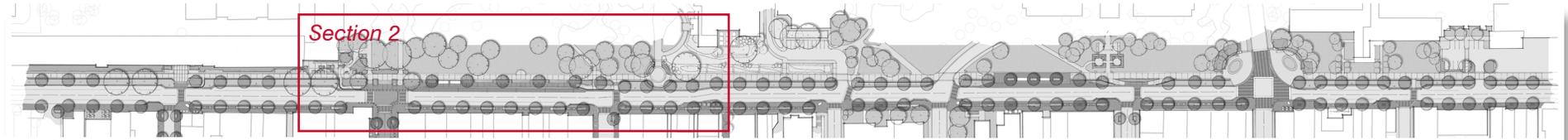
Concept: The overall concept for College Avenue is to create a distinct brand, safe and comfortable pedestrian environment and unified streetscape image that complements the unique qualities of each side of the street: the broad lawns and traditions of the Penn State University campus and the vibrant college town environment of downtown State College. While the land uses are very different on each side, unified streetscape elements and materials will provide for a cohesive image that reinforces the town-gown role of this important street. The highest level of design will occur within the segment between Atherton Street and Garner Street (the College Avenue Core or Streetscape Type-A Primary). The section between Garner Street and University Drive (Streetscape Type-A Secondary) will utilize the same family of materials as the Core but will include less intensive paved pedestrian areas (the south side sidewalk will not be expanded and parking will remain on both sides where it currently exists); however, a narrow brick sidewalk will be added along the north side parking curb. The segment between Atherton Street and Buckhout Street

College Avenue's unique character stems from its vibrant college town environment on the Borough side (top right) and its rich campus image on the University side (bottom right).



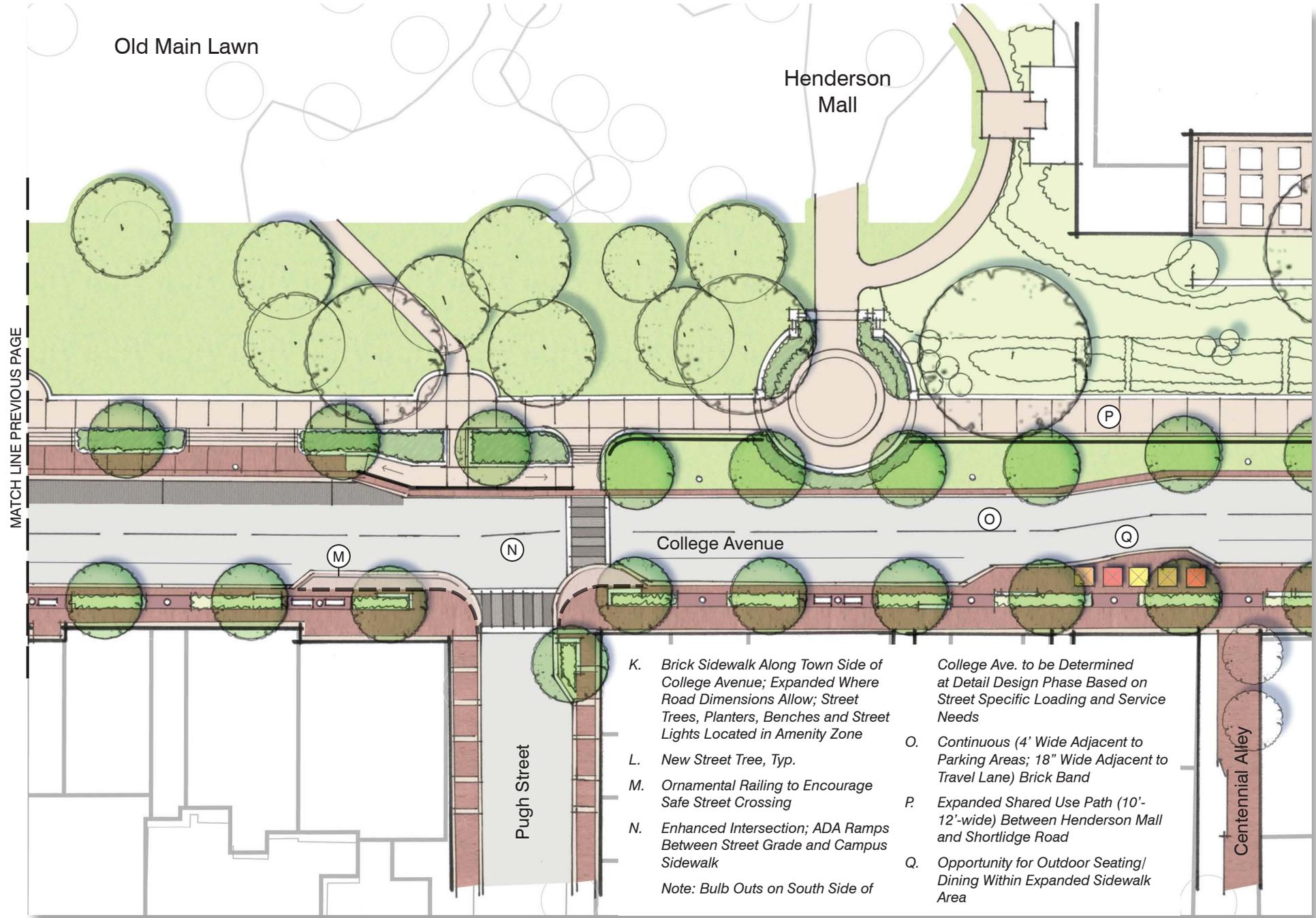
will utilize the same family of materials, but will not be as extensive. This section of College Avenue is described later in this section of the report.

Key components of the College Avenue streetscape are illustrated in the concept drawings on the following pages, and describe in the narrative following that.



College Ave. Concept Drawings:
 Enlarged Plan for Allen Street to Centennial Alley (Section 2)

- A. Hammond Gathering Area, See Page 128
- B. Black Ornamental Railing to Replace Existing Chain Link Fence and Shrubs
- C. ADA Ramp; Planter to Preserve Existing Mature Elm
- D. Enhanced Gateway Between Allen Street and Pattee Mall; Stairs and Planters to Accommodate Grade Transition; Bulb-Out with Brick Paving at Street Grade
- E. Ramp to Allow for Bicycle Connection
- F. Parallel Parking, Typ.; 4-Wide Sidewalk on North Side of College Avenue
- G. Expanded Bulb-Out, Typ.
- H. Raised Intersection at Grade with Allen Street and College Avenue Sidewalk; Stamped Concrete; Bollards Between Sidewalks and Street
- I. Bicycle Lane as Part of Crosswalk
- J. Enhanced Bus Stop; Shelters to Match PSU Campus Standard; Planters and Grand Stair Along Frontage of Old Main Lawn; Bus Pull-Off Treatment to Match Allen Street Intersection
- K.
- L.



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Old Main Lawn

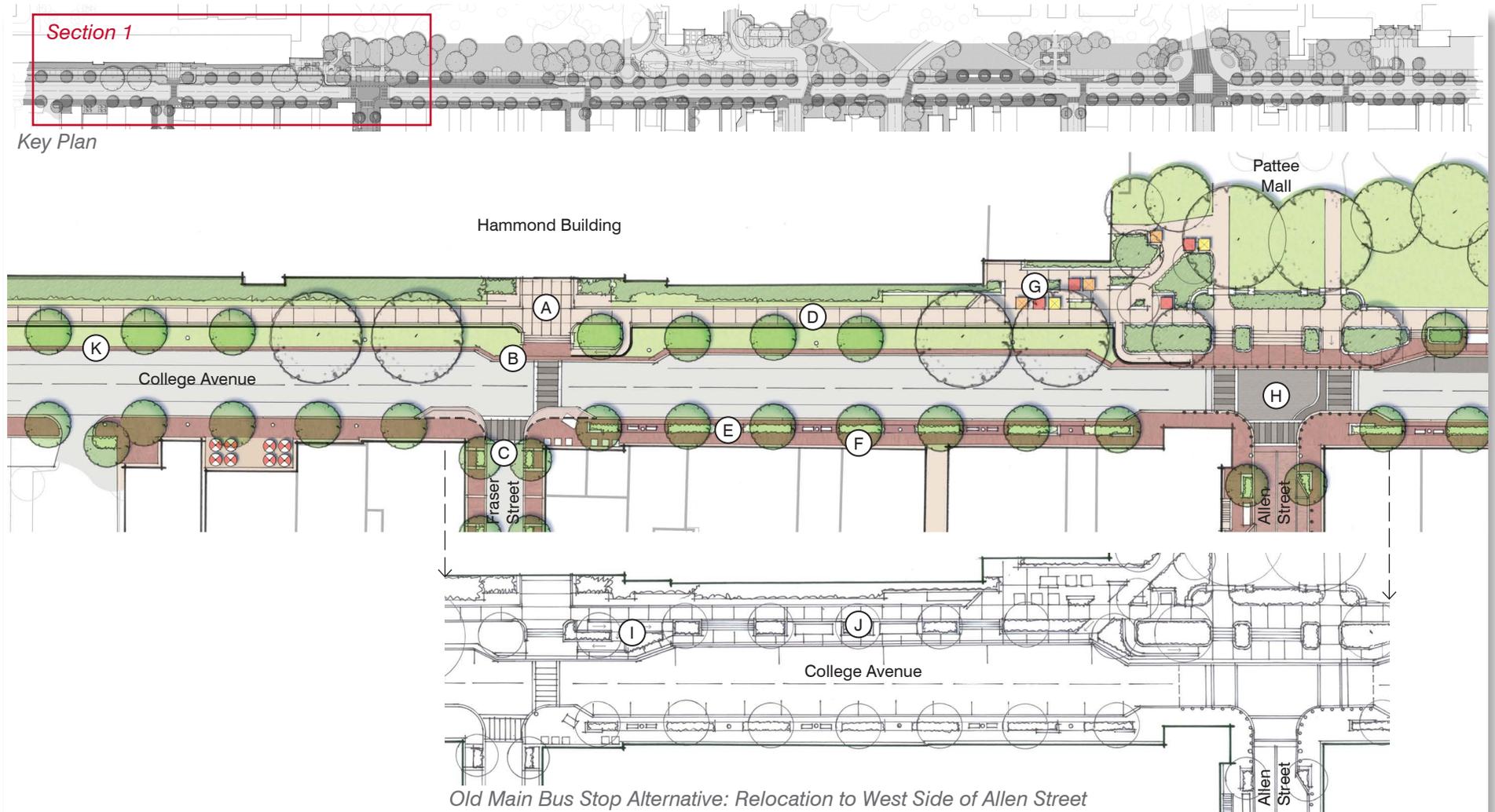
Henderson Mall

College Avenue

Pugh Street

Centennial Alley

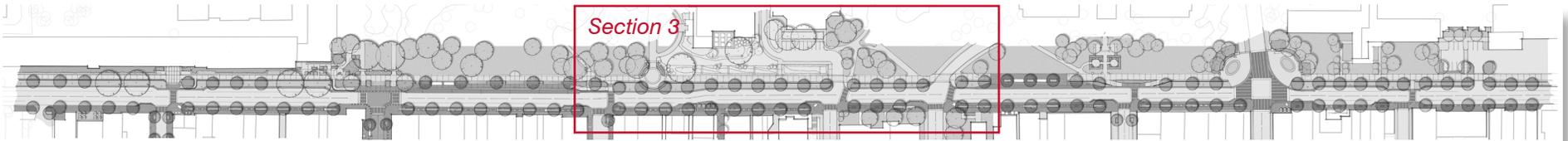
- K. Brick Sidewalk Along Town Side of College Avenue; Expanded Where Road Dimensions Allow; Street Trees, Planters, Benches and Street Lights Located in Amenity Zone
- L. New Street Tree, Typ.
- M. Ornamental Railing to Encourage Safe Street Crossing
- N. Enhanced Intersection; ADA Ramps Between Street Grade and Campus Sidewalk
- Note: Bulb Outs on South Side of College Ave. to be Determined at Detail Design Phase Based on Street Specific Loading and Service Needs
- O. Continuous (4' Wide Adjacent to Parking Areas; 18" Wide Adjacent to Travel Lane) Brick Band
- P. Expanded Shared Use Path (10'-12'-wide) Between Henderson Mall and Shortlidge Road
- Q. Opportunity for Outdoor Seating/ Dining Within Expanded Sidewalk Area



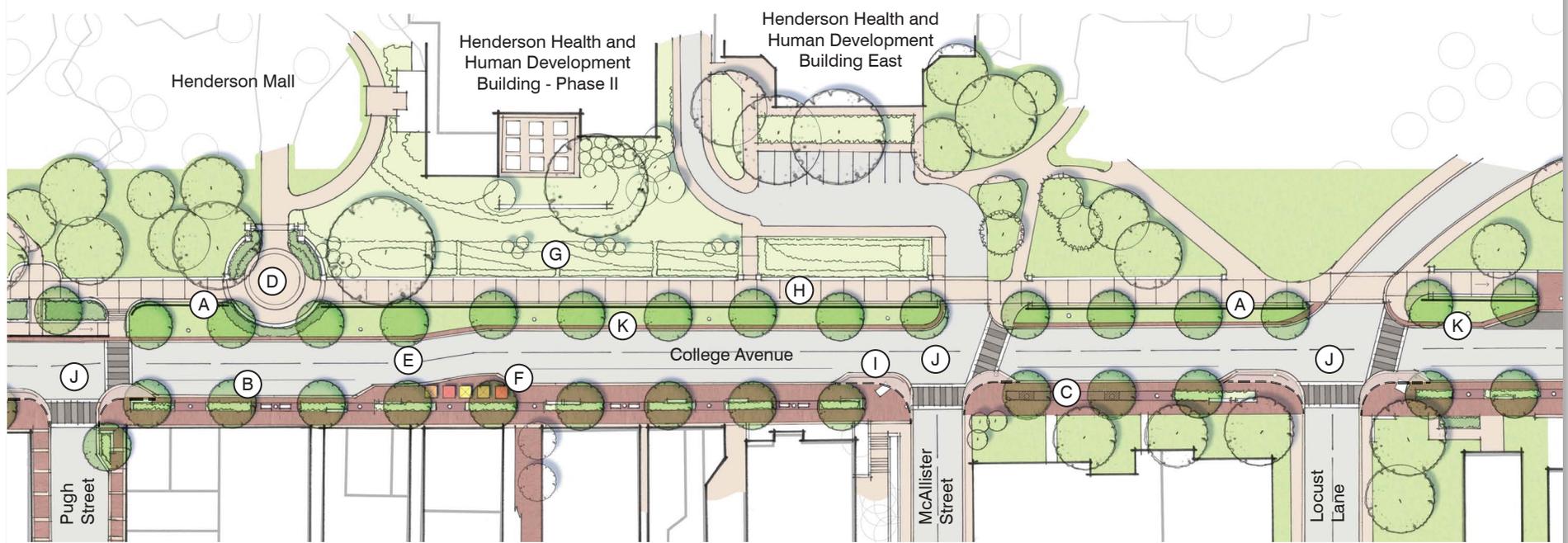
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|---|--|--|
| A. Enlarged Plaza Space at Entry to Hammond Building | E. Brick Sidewalk Along Town Side of College Avenue; Expanded Where Road Dimensions Allow; Street Trees, Planters, Benches and Street Lights Located in Amenity Zone | I. ADA Ramp Connection to Fraser Street and Bus Loading Area |
| B. Expanded Brick Paving Area to Highlight Campus Entrance at Fraser Street | F. New Street Tree, Typ. | J. Enhanced Bus Stop; Shelters to Match PSU Campus Standard; Planters and Grand Stair; Bus Pull-Off Treatment to Match Allen Street Intersection |
| C. Completed Streetscape Along Fraser Street | G. Hammond Gathering Area, See Page 128 | K. 4' Brick Walkway Adjacent to Parking on North Side of College Avenue. |
| D. Expanded Shared Use Path (10'-12'-wide) Between Burrows Street and Pattee Mall | H. Raised Intersection at Grade with Allen Street and College Avenue Sidewalk, See Page 126 | |

College Ave. Concept Drawings:

Plan for Fraser Street to Allen Street (Section 1)



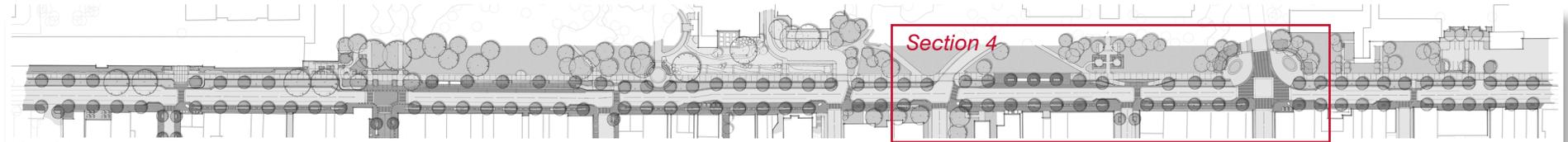
Key Plan



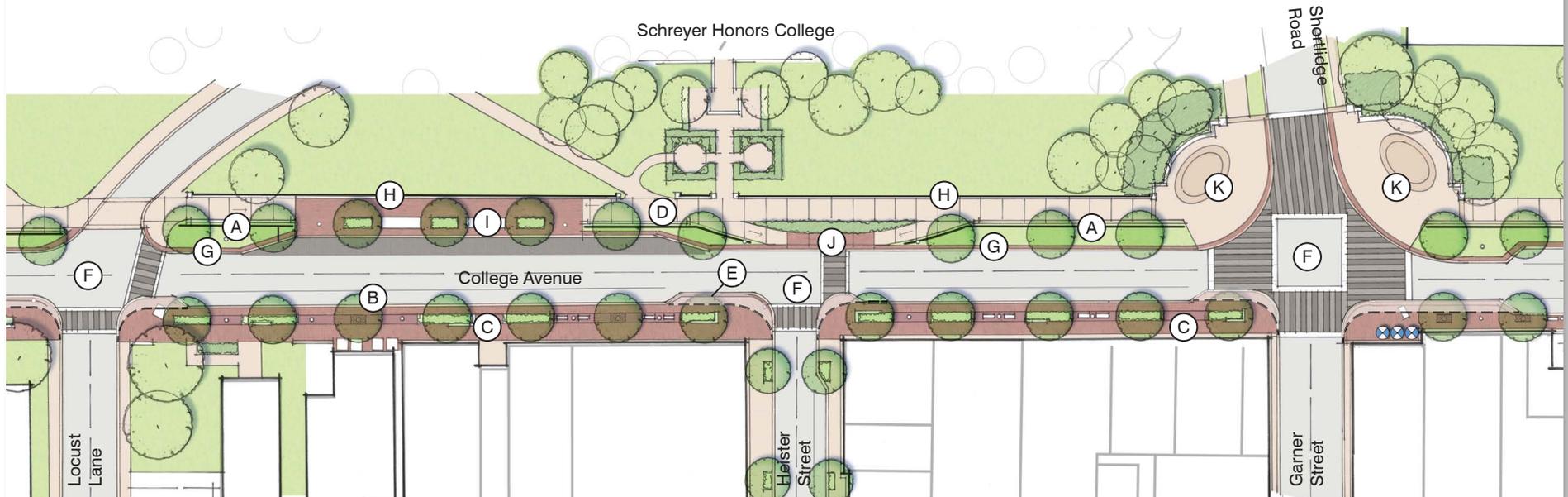
- A. *Black Ornamental Railing to Replace Existing Chain Link Fence and Shrubs, Typ.*
- B. *New Street Tree, Typ.*
- C. *Brick Sidewalk Along Town Side of College Avenue; Expanded Along South Side with Elimination of Parking on North Side; Street Trees, Planters, Benches and Street Lights Located in Amenity Zone*
- D. *Preserve and Enhance Plaza and Walls at Terminus of Henderson Mall*
- E. *Typical Roadway, Chicane*
- F. *Opportunity for Outdoor Seating/Dining in Expanded Sidewalk*
- G. *Landscape Enhancements as Part of Henderson Building Improvements*
- H. *Expanded Shared Use Path (10'-12'-wide) Between Henderson Mall and University Drive*
- I. *Ornamental Railing to Encourage Safe Street Crossing*
- J. *Enhanced Intersection; Curb Bulb-Outs and Stamped Concrete Crosswalks, Typ.*
- K. *Continuous (4' Wide Adjacent to Parking; 18" Wide Adjacent to Travel Lanes) Brick Band*

Note: Bulb Outs on South Side of College Ave. to be Determined at Detail Design Phase Based on Street Specific Loading and Service Needs

College Ave. Concept Drawings:
Plan for Pugh Street to Locust Lane (Section 3)



Key Plan



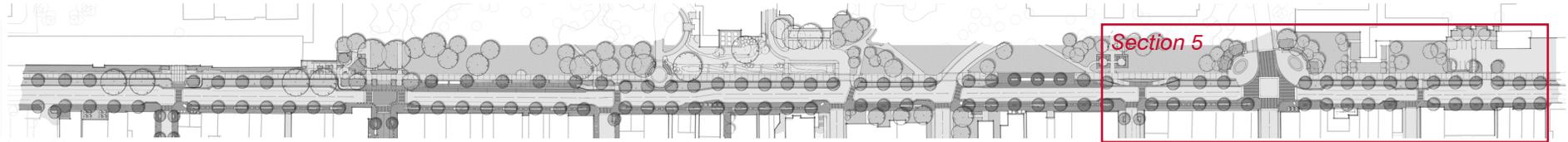
- A. Black Ornamental Railing to Replace Existing Chain Link Fence and Shrubs, Typ.
- B. New Street Tree, Typ.
- C. Brick Sidewalk Along Town Side of College Avenue; Expanded Along South Side with Elimination of Parking on North Side; Street Trees, Planters, Benches and Street Lights Located in Amenity Zone
- D. Expanded Shared Use Path (10'-12' wide) Between Henderson Mall and University Drive

- E. Ornamental Railing to Encourage Safe Street Crossing
- F. Enhanced Intersection; Curb Bulb-Outs and Stamped Concrete Crosswalks, Typ.
Note: Bulb Outs on South Side of College Ave. to be Determined at Detail Design Phase Based on Street Specific Loading and Service Needs
- G. Continuous (4' Wide Adjacent to Parking; 18" Wide Adjacent to Travel Lanes) Brick Band
- H. Retaining Wall to Allow for Grade Transition from Shared Use Path to Bus Stop Area

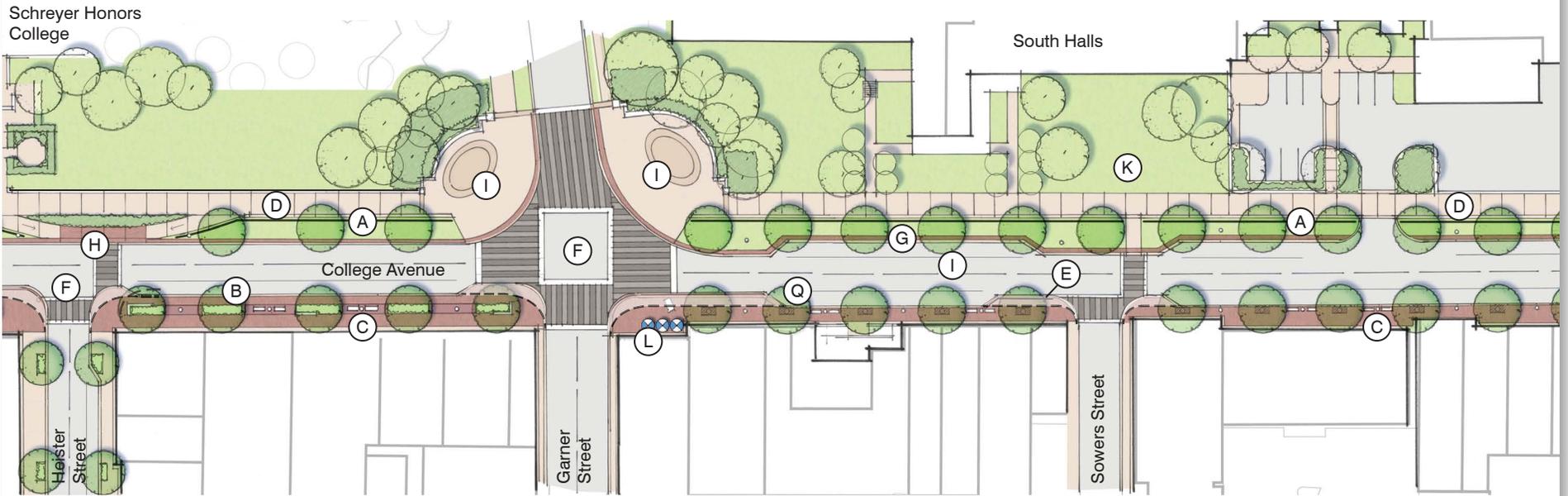
- I. Enhanced Bus Stop; Shelters to Match PSU Campus Standard; Brick Paving at Bus Stop Depressed to Match Curb Height
- J. Brick Paving to Highlight Campus Entrance at Heister Street
- K. Enhanced Campus Gateway; Expanded Plaza Spaces on North Side of College Avenue for Seating and Gathering; Consider Special Paving

College Ave. Concept Drawings:

Plan for Locust Lane to Garner Street (Section 4)



Key Plan

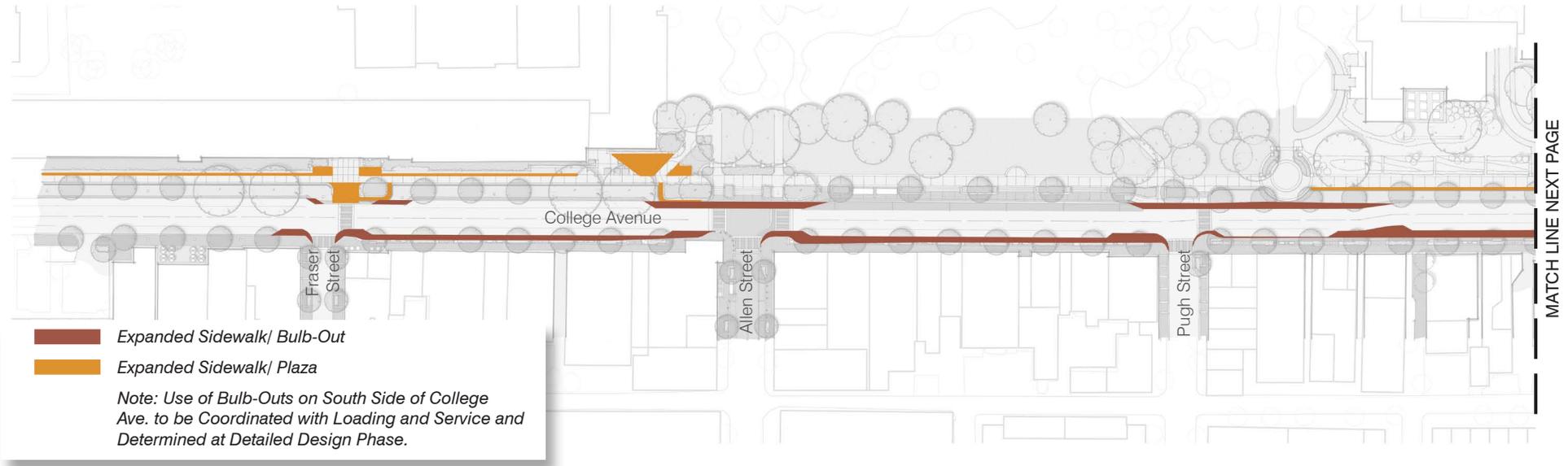


- A. Black Ornamental Railing to Replace Existing Chain Link Fence and Shrubs, Typ.
- B. New Street Tree, Typ.
- C. Brick Sidewalk Along Town Side of College Avenue; Expanded Along South Side with Elimination of Parking on North Side; Street Trees, Planters, Benches and Street Lights Located in Amenity Zone
- D. Expanded Shared Use Path (10'-12'-wide) Between Henderson Mall and University Drive

- E. Ornamental Railing to Encourage Safe Street Crossing
- F. Enhanced Intersection; Curb Bulb-Outs and Stamped Concrete Crosswalks, Typ.
Note: Bulb Outs on South Side of College Ave. to be Determined at Detail Design Phase Based on Street Specific Loading and Service Needs
- G. Continuous (4' Wide Adjacent to Parking; 18" Wide Adjacent to Travel Lanes) Brick Band
- H. Brick Paving to Highlight Campus Entrance at Heister Street

- I. Enhanced Campus Gateway; Expanded Plaza Spaces on North Side of College Avenue for Seating and Gathering; Consider Special Paving
- J. Brick Paving; No Sidewalk Expansion; Preserve Existing Street Section
- K. Landscape Enhancements and Parking Reconfiguration Part of South Halls Renovation
- L. Opportunity for Outdoor Seating/Dining Within Expanded Sidewalk Area

College Ave. Concept Drawings:
Plan for Heister Street to Sowers Street (Section 5)



College Ave. Concept Drawings:
Streetscape Improvement Diagrams

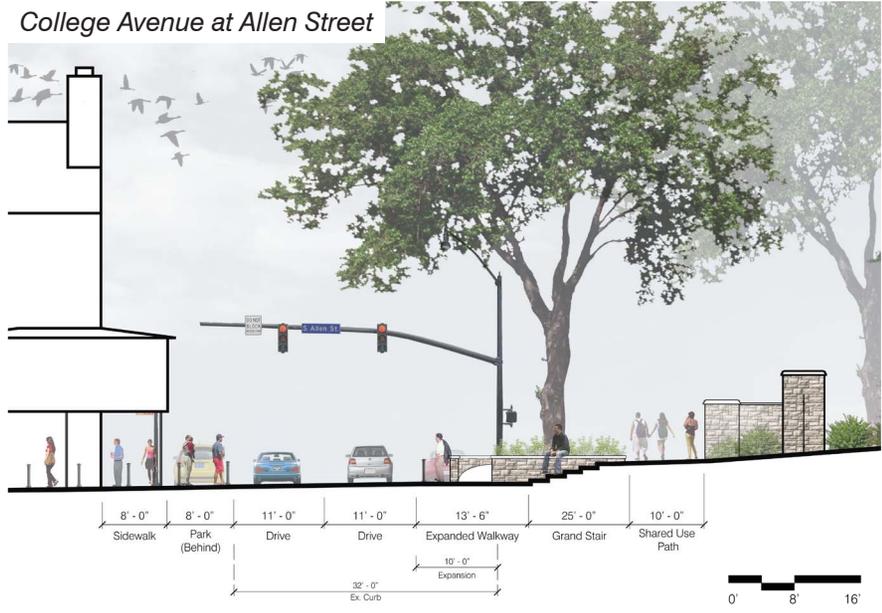
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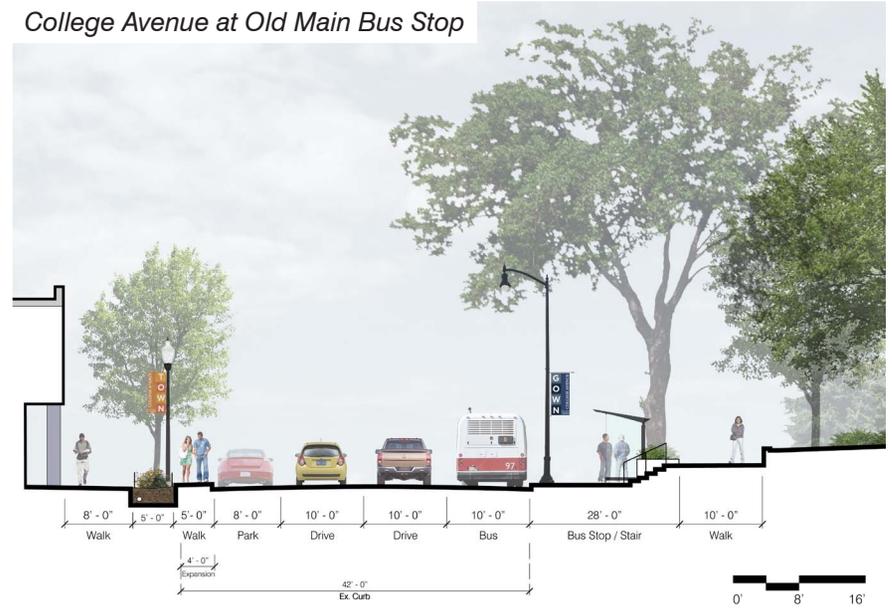
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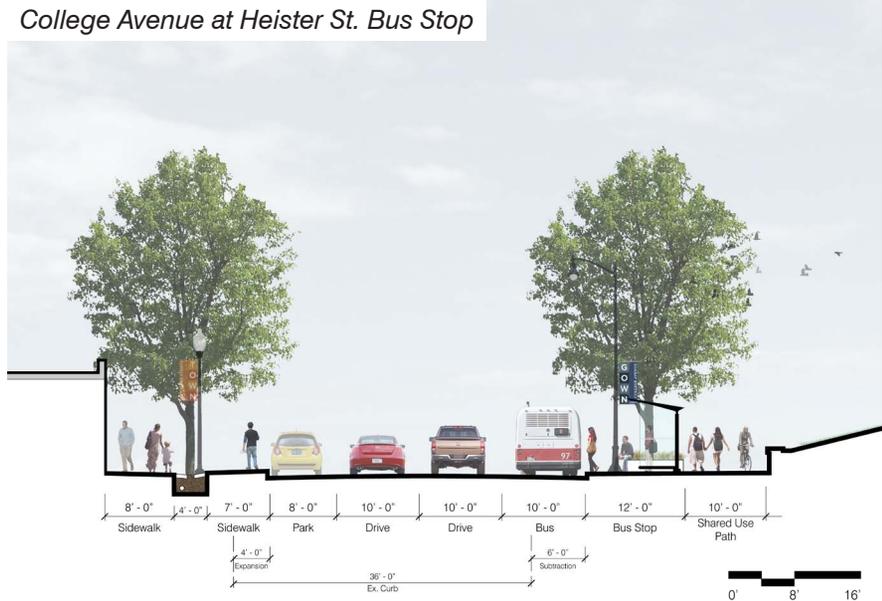
College Avenue at Allen Street



College Avenue at Old Main Bus Stop



College Avenue at Heister St. Bus Stop



College Avenue Between Garner St. and Heister St.



College Ave. Concept Drawings: Proposed Condition Cross Sections

College Avenue Narrative

Coordination: It will be important that the detailed planning and design for College Avenue is a coordinated planning effort among the Borough, University, and College and Ferguson Townships, particularly at gateways

Branding and Identity: Launch a distinct identity for College Avenue. The idea of town-gown is more prominent in State College along College Avenue than in many of its peer communities. A simple “TOWN GOWN” system that emphasizes this unique street will help elevate the street to be one of the greatest college streets in the United States. In fact, a distinct tagline for College Avenue “The Best College Street in America” is both something to aspire to and is achievable through the recommendations included in this report. Use of banners and signage will need to be closely coordinated with other site furniture to minimize unnecessary “visual clutter.”

Top right: The brand identity and tagline for College Avenue are tied to its importance as the place where the Borough and University meet.

Bottom right: The downtown State College brand should be visible every time improvements are made to help promote and preserve positive connotations of downtown with users. The example shown could be deployed during the implementation of the streetscape recommendations for College Avenue.

Far Right: A distinct identity system should be launched for College Avenue that celebrates its unique sense of place within downtown, specifically its prominence as the edge between “town” and “gown.”



Campus Visibility: An important goal of many of the detailed design components described below is to open up views to the campus and make it more visible for pedestrians and motorists using College Avenue.

Expanded Pedestrian Areas: Because of the intense pedestrian activity along College Avenue, it will be important to expand pedestrian areas as much as possible, particularly between Burrowes and Garner Streets. This can be done with the following techniques:

- **Bulb-outs:** Use sidewalk bulb-outs at most intersections along College Avenue to provide additional pedestrian refuge and shorten crossing distances. In particular, extended bulb-outs should be used on the north side of the road to better integrate ADA requirements into campus pedestrian gateways and improve connections between the campus and downtown. At the time of detail design it will be important to maintain loading zones which may not allow for bulb-outs at some intersections. Consideration may be given to keeping bulb-outs in these areas flush with street level, but distinguishing them with stamped concrete.

Important Notes:

The Borough continues to debate whether or not to include bulb-outs on the west side of the unsignalized intersections. With good reason, there is concern that the bulb-outs will encourage pedestrians to cross College Avenue on the west side where crossing is to be discouraged. Conversely, there is recognition that the expanded sidewalk area provides space for streetscape amenities and additional pedestrian refuge which is so important.

Because it is important to increase pedestrian areas wherever possible along College Avenue, the concept plans include these bulb-outs. However, more detailed design and discussion should occur when this becomes a design project. Some consideration might be given to utilizing ornamental railings at the west side bulb-



Top left: View looking west on College Avenue from the McAllister Street intersection. The existing condition along much of College Avenue includes a narrow curb-to-curb dimension; undersized parallel parking stalls on both sides of the street; inadequate sidewalk widths for typical pedestrian volumes on the south side of the street; and a shrub and fence along the north side of the street that buffers the campus walkway from the roadway, but also prohibits views to the campus.



Bottom left: View from the southwest corner of the intersection of College Avenue and Pugh Street. Inappropriate plant material and utilities obstruct the view to campus, notably the pathway connection to the Old Main lawn.

outs (the same that is proposed on the campus side) to discourage pedestrian crossings.

The concept plan also illustrates an expanded bulb-out at Fraser Street. Previous investigations have identified several utility conflicts in this area, changes to which would result in additional expense. The cost/benefit of this should be examined at the time of design in context with the ability to create an improved campus gateway and with the potential to relocate the bus stop to the

Top right: Curb bulb-out in Monroe, WI is flush with street to accommodate trucks when necessary while conveying an expanded pedestrian zone.

Middle right: View of Charles Street in Baltimore, MD showing visual impact of simple brick paving.

Bottom right: Bump-outs along Canal Street in New Orleans, LA utilize trench drains to accommodate drainage back toward the sidewalk.



west side of Allen Street. An alternative to consider would be to provide the expanded bulb-out and ramp on the west side of the intersection, then utilizing an ornamental railing to discourage pedestrians from crossing College Avenue on the west side of the intersection. During final design, the design of bulb-outs with changes in the curb configuration need to address drainage concerns, particularly at intersections where problems currently exist such as the intersection of McAllister and College.

- Sidewalk Widening (South Side): Widen the south side sidewalk in some areas. Specifically, the sidewalk can be widened west of Pugh Street (where the existing road dimension is widest) by narrowing the travel lane widths to 10'. Between Pugh and Garner Street, the sidewalk can be narrowed by removing the parking along the north side of the street. East of Garner Street, sidewalk widening is not as critical and parking should be maintained on the north side of the street. It is anticipated that approximately 40 parking spaces along the north side will be removed to accommodate the sidewalk widening. It is important that this be considered in context to the overall parking strategies for downtown as described in earlier recommendations and to be developed as part of the proposed parking study.

Because of the existing grades of the roadway crown and sidewalk area, as well as PennDOT's requirement for an 8" curb, sidewalk widening on the south side of the street will require a variety of techniques to accommodate drainage. These techniques include the use of infiltration planters and/or permeable paving zones with a sub drain that ties into the storm drain system and the potential use of trench drains.

So that these different techniques can be organized effectively in terms of sidewalk function and aesthetics, the concept proposes that they occur within a consistent amenity zone, essentially the zone where street trees and lights are currently located at the existing curb line. This amenity zone will also include lighting, street trees and



Left: L Street NW in Washington, DC illustrates a sidewalk treatment similar to that proposed for the Borough side of College Avenue and includes: continuous brick paving; an amenity zone containing street trees, groundcover plantings and street furnishings; and a paved area between the parallel parking spaces and amenity zone. (Image courtesy: Google Maps)

street furniture. Conditions along each block will vary depending on the grades and will be determined at the detail design phase of the project once detailed survey information is obtained.

Important Notes:

While it would be desirable to locate the amenities closer to the proposed curb line to maximize contiguous pedestrian area, the existing grade conditions will likely not allow for this. Once detail surveys are developed and the detail design occurs for each block, an important goal is to maximize pedestrian flow with as much uninterrupted pedestrian space as possible. Where planters and sloped paving is required to provide a grade transition, it will be important to provide periodic breaks to allow pedestrian passage between zones.

It may be possible to locate the amenity zone closer to proposed curb in some blocks, while leaving it in its current location for others, and this should be evaluated at time of design.

An advantage to the planters is the ability for to accommodate some stormwater infiltration. The proposal suggests that planters are, for the most part, in enclosed concrete planter box (below grade). However, geotechnical studies should be completed once this is a design project to determine if there are areas where pure infiltration could be provided without the risk of encouraging sink holes.

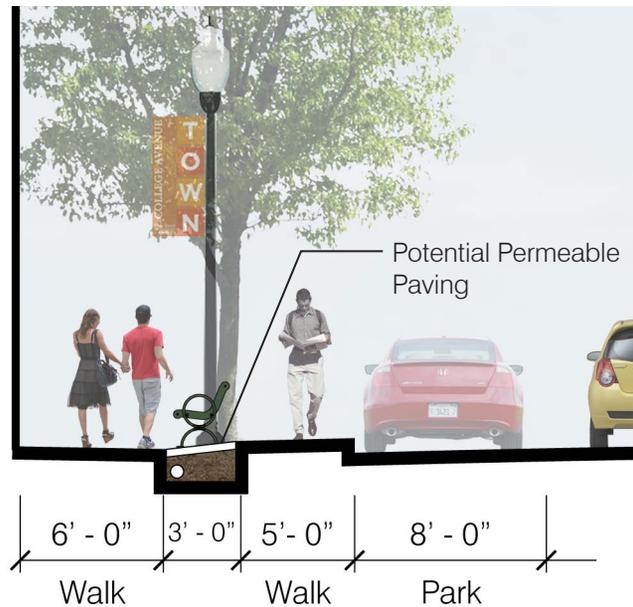
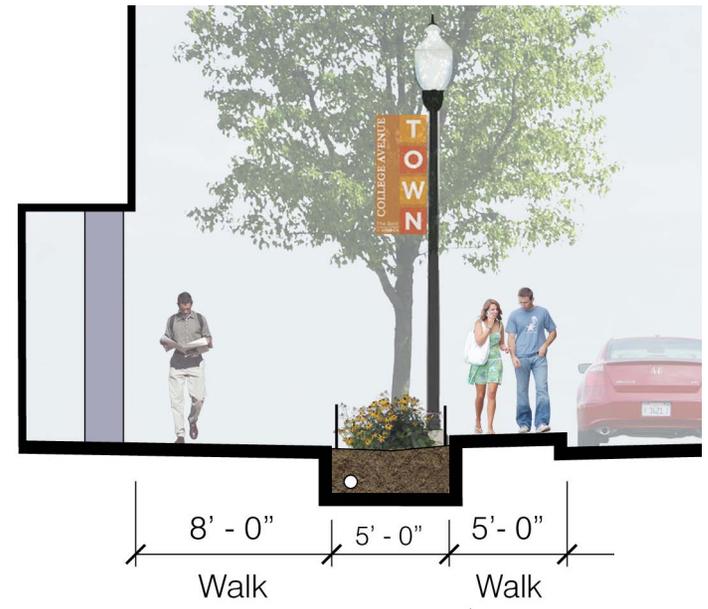
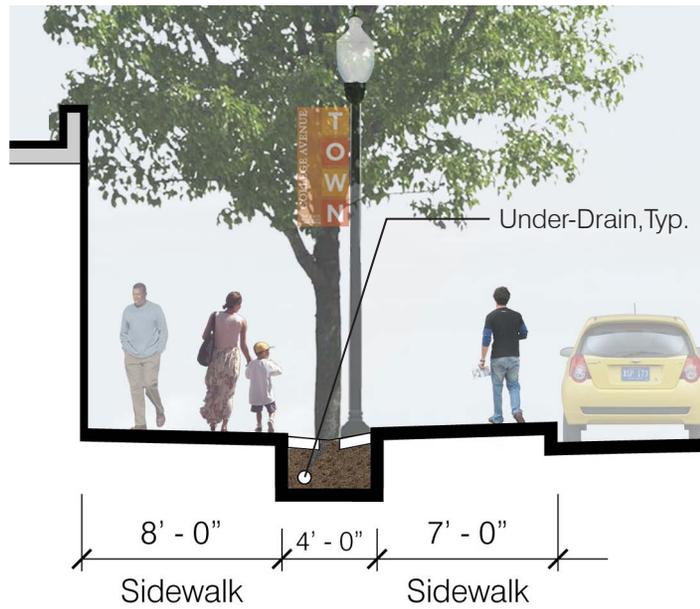
Maintaining the existing alignment of existing amenities also allows for integrating preservation of significant existing trees into the overall streetscape design.

- North Sidewalk: Provide a minimum sidewalk of 4-5' along the north side curb in areas where parallel parking is maintained to provide safe pedestrian access to intersections and appropriate crossing points.

College Avenue Shared-Use Path: The planning team and stakeholders explored options to include a dedicated bike lane along College Avenue and it was determined that it was not feasible as it would limit the ability to provide expanded

The section enlargements to the right illustrate some of the variables associated with sidewalk expansion along the south side of College Avenue. Widths of sidewalks and amenity zones, as well as the slope between the curb and the amenity zone, are largely dependent on the adjacent road grade. In each condition, pedestrians and those loading/unloading from vehicles benefit.

Far right, bottom: In locations where positive drainage can be achieved when tying the sidewalk and curb into the existing street grade, the amenity zone may be paved to allow for a continuous pedestrian area from the faces of buildings to the curb.



College Ave. Proposed Cross Sections Enlargements:
Varying Treatments of Amenity Zone



College Avenue: Existing Condition

pedestrian areas as described above. As described earlier under the recommendation to expand the bicycle network, the existing sidewalk on the campus side of College Avenue can be expanded to 10-12' in width to accommodate two-way bicycle and pedestrian traffic. This would provide for a connection from the east to Henderson Mall and from the west to Pattee Mall. The shared-use path would not extend between Pattee and Henderson Malls where it is important to maintain historic campus elements. It will be important to educate bicyclists to ride with caution near the bus stop at Heister Street and to make them aware that bikes are prohibited between Pattee and Henderson Malls.

Campus Gateways at Intersections: As described above, bulb-outs at the College Avenue intersections will better accommodate ADA access to the campus and will allow for more aesthetically-pleasing solutions. In addition, these expanded planting areas will provide opportunities for ornamental planting and seasonal color to enhance the campus image. It will be important to utilize low planting and tall canopy trees in this area so that important sight lines are preserved.

Allen Street Intersection: As one stakeholder noted, the intersection of College Avenue and Allen Street is the "Times

Left and opposite page: Before and after views of the south side of College Avenue looking toward Pugh Street in front of PNC Bank. The after view illustrates how the sidewalk expansion provides better accommodations for pedestrians; continuous brick paving; and an amenity zone in which street trees, site furnishings and signage are located (varies by block).



College Avenue: Proposed Condition



Allen Street Intersection: Existing Condition

Square of State College.” With College Avenue and Allen Street Promenade streetscape improvements (described earlier), there is an opportunity to make this a more attractive and safer intersection. The recommendation includes the proposal to eliminate the curbs at the intersection and raise the intersection to sidewalk level. The construction of a raised intersection would provide added visibility to this high use pedestrian area and is an approved traffic calming technique fully described in PennDOT’s Publication 383, Pennsylvania’s Traffic Calming Handbook. Stamped concrete paving of the intersection would highlight the intersection as a special place and signify a more pedestrian-oriented environment to motorists. Construction of a “grand stair” and large planters would give more prominence to the campus gateway and provide opportunities for seating and seasonal color. The existing mature elms are preserved in planters that carry the pattern and materiality of the Allen Street gates.

A raised intersection could provide improved ADA and bicycle accessibility between the Downtown and Pattee Mall sidewalk networks due to the flexibility to adjust grades in and adjacent to the intersection. Long ramps would be provided on both vehicle approaches to the intersection (College Avenue and Allen Street) to avoid an abrupt “speed hump” effect. Raised intersection treatments have been shown to reduce vehicle speeds overall. It will be important

to design this for heavy duty use considering the bus traffic at this intersection.

The design of a raised intersection would need to include drainage and bus stop location considerations. In addition, it will be important that final designs clearly designate how bikes navigate from the proposed Allen Street Bike Route through the intersection to the Pattee Mall shared use path. In addition to the physical improvements described, this recommendation includes consideration of an exclusive pedestrian signal phase as described below.

Pedestrian Safety: In addition to the bulb-outs, expanded sidewalk areas, improved ADA facilities at campus gateways and Allen Street intersection improvements, proposed pedestrian safety enhancements include the following:

- **Crosswalk Locations:** Continue to limit crosswalks to the east side of most College Avenue intersections to minimize conflicts with vehicles turning left onto College Avenue. Campus walks connecting to the Locust Lane and Heister Street intersections should be realigned to direct pedestrians to the east side of the intersection as shown on the concept drawing.
- **Exclusive Pedestrian Signal Phase:** Consider exclusive pedestrian signal phase (also known as “Barnes Dance” or “pedestrian scramble”) at intersection of Allen and College where channelization to the east side crosswalk is neither feasible nor appropriate. This concept will need detailed traffic analysis to determine feasibility. (For consistency, it would be appropriate to evaluate all downtown traffic signals for the exclusive pedestrian signal phase since the traffic signals are all part of a coordinated system. This would eliminate confusion as to whether pedestrians had exclusive or concurrent crossing at various intersections. However, if the intersection of Allen and College is the only location because of its unique character and elevated importance, this may not be an issue).
- **Pedestrian Channelization:** Because mid-block crossings on College Avenue continue to be a serious concern,

Right: Existing view of the Allen Street gates to the University campus. The intersection is often filled with street activity due to its function as a significant pedestrian entrance to campus as well as the location of a major downtown bus stop. The steep-sloping concrete between the campus walkway and College Avenue is not conducive to seating and gathering and does not comply with ADA guidelines.



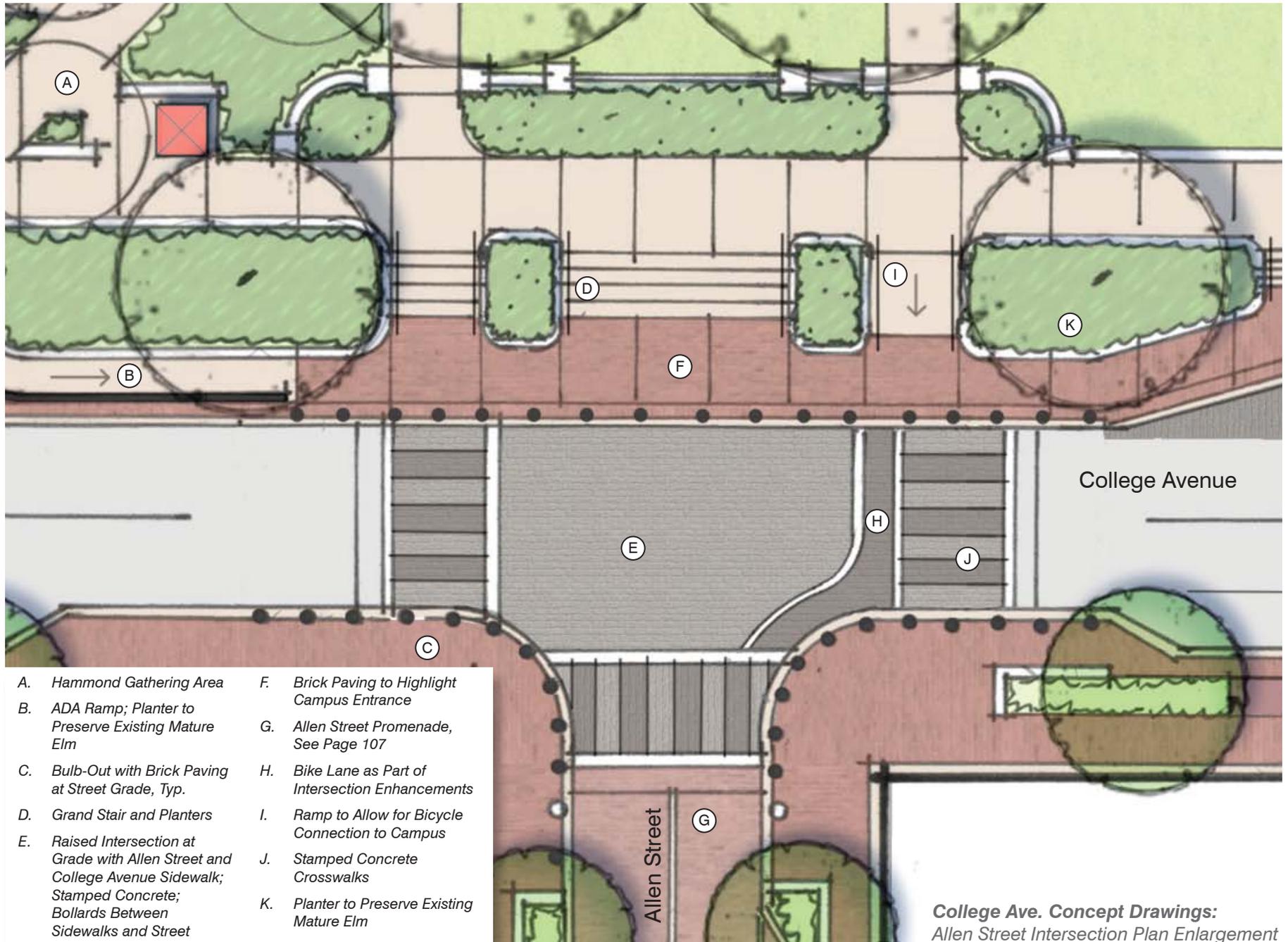
Allen Street Intersection: Proposed Condition

Above: View of the College Avenue-Allen Street intersection showing the potential improvements outlined in the master plan recommendations.

the use of aesthetically pleasing barriers to channeling pedestrians to crosswalks is appropriate. However, rather than the use of the hedge and fence which forms a visual barrier, the use of a low (42" high) black ornamental railing in select areas would provide an effective barrier while allowing views into the campus. The railing could be used on its own or with the use of limestone piers compatible with the historic Old Main Wall and Allen Street Gate (or brick piers east of Garner Street). While the idea of using the campus post and chain standard was explored, the planning and design team along with many stakeholders do not feel that this would be sufficient to deter mid-block crossings along College Avenue.

Transit Stops: Improve the functionality and aesthetics of transit stops along College Avenue at Burrowes, Allen and Heister Streets. Enhancements for each stop to include elements described in Theme 2, Recommendation 2-L. ADA accommodations also need to be enhanced at each transit stop. A minimum distance of 8' needs to be free of obstructions at each stop where boarding and de-boarding occur. Specifically, the following enhancements will be provided at each stop:

- Burrowes: The existing grades at this stop are level and will allow for the paved area between the sidewalk and curb to be expanded to accommodate a higher level of pedestrian volume. This expanded paved area will utilize the brick paving used along College Avenue. Additionally



Top right: The existing borough standard is a 24' dimension for on-street parking spaces/shared zone and 48' light pole spacing

Bottom right: Example of a pedestrian gathering area at the terminus of the pathway connecting to Pattee Mall across Old Main lawn.



a transit shelter should be provided at this stop.

- Allen Street: Redesign the transit stop to include grand stairs and planters that relate to the historic Allen Street gates, Old Main Lawn and Wall. Extend the length of the bus stop to approximately 300' to accommodate 5-6 buses per CATA needs, where a bulb-out is proposed ahead of the bus stop, it will be important to include a queue-jump mechanism. Provide transit shelters in

locations that minimize obstructed views to the Allen Street Gates and Old Main while allowing minimum 8' clearance (greater distance desired) for wheelchair use.

- Allen Street Alternate Location: In addition, continue to explore feasibility of relocating the bus stop to west side of Allen Street, once Hammond is upgraded to include air conditioning which will reduce conflicts with bus exhaust and noise. The relocation of the stop will not be feasible until such time that the remaining Elms near Allen Street become diseased and are removed and enhancements to Hammond Building are complete. The concept design on page 112 illustrates this option. Depending on the timing of the College Avenue improvements, this option can occur initially or phased in at a later date.
- Heister: Utilize a retaining wall on the north side of the shared-use path to allow the grade of the path to be lowered to street level. This will allow for an expanded gathering area for pedestrians (allow 8' min. clearance for wheelchairs). In addition, expand the bus pull-off zone to 10' by relocating the curb further to the north by approximately 2'. The design will need to be coordinated with the shared use path design to minimize conflicts between cyclists and pedestrians waiting for transit.

Pedestrian Gathering Areas: With the exception of some wall elements at the College Avenue intersections of Shortlidge and Burrowes Streets and at some transit stops, the Old Main Wall is the only real gathering place for pedestrians to hang out and enjoy the activity of College Avenue. The narrow sidewalks on the south side of the street limit the potential for outdoor gathering and dining. More importantly, the south side is often in shade while the north side of College Avenue enjoys southern exposure and is often in full sunshine. During the spring and fall shoulder seasons, this could make a difference in whether or not a place is comfortable to sit.

There is the opportunity to create larger gathering areas at select nodes on the campus side of the street. These include the intersection of Burrowes, the Hammond "portal"

- A. Black Ornamental Railing to Replace Existing Chain Link Fence and Shrubs
- B. Hammond Building Plaza; Opportunities for Outdoor Seating/Dining; Potential Planters and Seat Walls
- C. ADA Ramp Between Plaza and College Avenue; Planter to Preserve Existing Mature Elm
- D. Outdoor Seating/Dining Opportunities Outside Entrance to Hammond Building



College Ave. Concept Drawings:
Hammond Gathering Area Plan Enlargement

College Avenue

Precedent images show seating options as well as the overall character of the proposed Hammond Plaza.

Top: Penn State

Middle: Boston, MA

Bottom: Greenville, SC



at Fraser Street, the west side of the Pattee Mall at the corner of Hammond Building (Hammond Plaza), the terminus of Henderson Mall and at the intersection of Shortlidge. Additionally, the attractive gateway at Eastview Terrace could become a more significant gateway area with safe pedestrian crossings provided across College Avenue at High Street (described below as part of the High Street intersection reconfiguration).

For some of these areas, the use of portable umbrella tables and chairs could be added to provide seating and color, particularly in front of Hammond Building which could be enlivened with color. In others, seat walls and benches could be utilized. In addition, the transit areas can be treated with broad stairs to provide more informal seating for pedestrians as they wait for the bus. Should the Hammond Building ever be demolished, consideration with new campus development should be given to establish uses that help engage and activate the College Avenue frontage and take advantage of the southern exposure.

Service and Loading: Maintain existing restrictions on loading and provide for designated loading areas. These areas should be determined at time of detail design and coordinated with the overall streetscape design and location of curb bulb-outs.

High Street Intersection Reconfiguration: Reconfigure this intersection to establish a true intersection rather than a free-flowing movement from High Street to eastbound College Avenue. The development of Eastview Terrace on the Penn State Campus has resulted in increased pedestrian activity on the eastern end of the College Avenue corridor. Frustratingly, this is a very attractive campus gateway and one of the few that aligns with the existing downtown street network, yet pedestrians can't "get there from here." Accessibility between the downtown sidewalk network and the campus sidewalk network is limited in this area. Crosswalks extend across College Avenue at the University Drive ramp to the east and Hetzel Street to the west, but this leaves approximately ¼ mile in-between with no suitable crossing opportunities.

Because this intersection is such an obvious place to connect downtown and the campus, hazardous pedestrian crossing behaviors occur frequently. Also, the multi-lane free-flow of traffic on High Street makes crossing High Street difficult for pedestrians. For these reasons, the following have been evaluated and proposed:

- **Traffic Signal:** Pedestrian volumes were counted at the intersection (and adjacent mid-block locations) in the Fall of 2012. The pedestrian volumes observed meet the warrant #4 threshold in the Manual on Uniform Traffic Control Devices (MUTCD) for installation of a traffic signal based on pedestrian activity. To evaluate the feasibility of this improvement, pedestrian and traffic volumes were modeled with signalized intersection control in traffic analysis software. The traffic analysis indicates the intersection would operate at acceptable levels of service (LOS) if a traffic signal were installed and coordinated with adjacent signals. In the feasibility analysis, traffic volumes were conservatively forecasted assuming a 20 year design horizon.
- **Reduced Curb Radii:** Reduce the curb radii to require traffic to stop or slow significantly before turning on to College Avenue.
- **Crosswalks:** Provide a crosswalk on both the west and east side of this intersection.
- **Lane Narrowing:** Narrow travel lanes to allow for addition of platform and pedestrian ramp on north side of College Avenue in vicinity of the gateway walls.

Unified Materials: Utilize a cohesive family of materials and streetscape elements along the College Avenue corridor. Specifically, the streetscape elements will include:

- Brick paving (south side walks and lower walks/paved areas on north side, adjacent to curb)
- Signal mast arms (Borough standard)
- Street and pedestrian lighting (Borough standard)
- Site furnishings (black in color - campus standards north

side; Borough standards south side)

- Wall elements (limestone, west of Garner Street intersection or brick, east of Garner Street intersection)
- Planting – unified palette emphasizing low shrubs, groundcovers and seasonal plantings and tall canopy shade trees
- Wayfinding signage (proposed downtown standard illustrated in Theme 2)

Street Trees: Work with Borough Arborist and Tree Commission to determine existing trees to protect and incorporate into the final streetscape design. Tree preservation is an important goal, however, the decision to preserve or protect a tree will need to be carefully balanced with other goals.

These are further described in detail in Appendix C: Design Guide



Left: The intersection of College Avenue and High Street is especially hazardous for pedestrians due to the free flow traffic lanes and the absence of crosswalks over College Ave.

- A. Parallel Parking and Bump-Out at Intersection
- B. Switchback ADA Ramp
- C. Brick Sidewalk Along South Side of College Avenue
- D. Stair Connection from College Avenue to East View Terrace
- E. Expanded Sidewalk Area with Brick Paving to Highlight Campus Entrance; 18" Wide Brick Band East and West of Intersection
- F. Proposed Traffic Signal
- G. Existing University Sign
- H. Reduced Curb Radii; Elimination of Free-Right Turn Lanes
- I. Stamped Concrete Crosswalks
- J. Ornamental Tree and Groundcover Planting on Slope
- K. Lane Narrowing to Allow for Sidewalk Expansion on North Side
- L. Ornamental Fence to Channel Pedestrians to Crosswalk



College Ave. Concept Drawings:
High Street Intersection Plan Enlargement

3-G: PennDOT Turnback Program

Negotiate PennDOT's Highway Transfer "Turnback Program," which allows transfer of state-owned roads, serving primarily a local traffic purpose, to local government ownership.

Implementation: Borough of State College, PennDOT

The turnback of College and Beaver Avenues from PennDOT to the Borough is an available option. The turnback program has been previously discussed between both groups for the Downtown corridor and other State Routes within the Borough. As PennDOT publication 310, State Highway Transfer Policies and Procedures Manual states, the objectives of the turnback program are:

To provide for the rehabilitation, maintenance and transfer of those highways identified as functionally local State Highways to the local municipalities in which they are located;

- To provide municipalities an additional opportunity to improve their local transportation system, further develop their community and positively impact the economic development of their municipality.
- The turnback of College and Beaver Avenues would include a negotiation process between PennDOT and the Borough to determine the cost to bring the roadways to "satisfactory condition" prior to transfer of ownership. Once transfer terms are agreed upon, PennDOT would provide annual maintenance payments in the amount of \$4,000 per mile to the Borough. The maintenance payment amount is set by law and was last increased in 2006.
- Consideration of the turnback program should include a detailed analysis of future maintenance costs. The annual \$4,000 per mile maintenance payment is likely insufficient to cover maintenance costs on the multi-lane corridors of College and Beaver Avenue. When analyzing future maintenance costs, it should be noted that the Borough is currently responsible for maintenance costs of sidewalks, streetlights, traffic

signals and drainage structures on College and Beaver Avenues based on current State law.

- Other factors, however, may make the turnback option desirable. Some potential benefits include:
- Greater design flexibility since PennDOT criteria would not be required;
- Reduced implementation time frames since PennDOT review and approval would not be required;
- Potential cost reduction for construction since PennDOT standards would not be required;
- Potential State funding for streetscape improvements visioned in Downtown Master plan as part of the "satisfactory condition" negotiation process with PennDOT.

Future direction on the turnback of College and Beaver Avenue will likely influence the final implementation of the Downtown Master Plan since significant differences exist in the feasibility of many elements between PennDOT's jurisdiction of the road and the Borough's.

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