

MEMORANDUM

To: Paul Cincotta
From: JP Shadley / Ian Ramey
Date: April 19, 2013
Project: University Station – Westwood, MA
RE: Responses to April 9, 2013 Peer Review Comments

Paul,

The following peer review comments pertain to urban design and landscape architectural issues noted in BETA Group / GLA's April 9th 2013 Memorandum. Following each comment is Shadley Associates' response.

April 9, 2013 Memorandum from BETA Group / GLA:

The purpose of this memorandum is to provide and update to our Urban Design and landscape comments based on the Proponents March 22, 2013 Plan Submission. As the plans near completion the following items are noted.

General:

G-1) *Please provide written responses to our January 2, 2013 comments.*

Response: Shadley Associates provided responses to the January 2, 2013 comments in a separate memo.

G-2) *Continue to advance plans to construction level documents. This includes but not is not limited to finalization and coordination of the overall urban design layout with other streetscape design elements including but not limited to signage, signal equipment, street furniture, plantings and lighting. We note that the plan also needs updating in accordance with the latest curblines geometry, most notably the additional cross walks along University Avenue. Ensure that all Plans reflect the various Architectural renderings presented during the course of the design development.*

Response: Shadley Associates will advance the landscape drawings to a Construction Document level following the Town Meeting. This will include incorporating the on-going coordination between various disciplines.

- G-3)** *Locations of other site equipment such as Transformers are not indicated. The proponent should define these locations and screen transformer boxes and all other multi-utility cabinets from view from sidewalks and project roadways.*

Response: Shadley Associates will advance the landscape drawings to a Construction Document level following the Town Meeting. This will include incorporating the on-going coordination between various disciplines.

- G-4)** *The buffer plan for adjacent Whitewood Road Neighborhood should consider further adjustments to understory planting plan and consider an additional planting berm on the neighborhood side of the existing sound attenuation fence.*

Response: Please refer to the updated drawings L-1 and L-1B for the proposed buffer treatments along the Whitewood Neighborhood. The plans include significant new plantings and a revised layout of the sound attenuation wall. The revisions are the result of an extensive design review and comment process held directly with the affected abutters.

- G-5)** *Provide signage design submission for Gateway, Directional, Wayfinding and Directory signs.*

Response: Please refer to the updated signage design package which addresses these items.

- G-6)** *As requested by the Town, please provide memorandum summarizing overall LEED commitments of the project.*

Response: Please refer to project sustainability document submitted separately.

- G-7)** *One proposed rain garden is noted near Restaurant A. We recommend that further opportunities for rain gardens and other Low Impact Development techniques be identified and integrated to the extent possible.*

Response: The project is committed to creating 8 acres of significant stormwater treatment areas which employ state of the art water quality measures and displays them as major features of the development. The Gateway Park at the northern end of the project is a major focal component of the project providing 5.5 acres of useable park space integrated with the stormwater area.

The following Low Impact Development techniques were considered for the project:

- **Porous Pavement:** Porous pavement was considered as an alternative to a conventional pavement and drainage system. Porous pavement would allow stormwater to infiltrate where it falls. The project applicant has extensive

operational knowledge of porous pavement as the owner of one the largest porous pavement installation in the northeast, located in Greenland, NH. Porous pavement systems provide winter maintenance challenges and often require heavier applications of deicing chemicals in order to maintain an ice free surface, which is a must in retail setting. Deicing chemicals tend to leach through the porous pavement as opposed to creating a brine as it would on standard pavement, which reduces the effectiveness.

- **Rain Gardens:** Rain gardens were considered as a mechanism to promote local infiltration. The presence of ledge along the building fronts in the core retail area and poor infiltration rates in the center of the core retail parking field are significant constraints and limits the potential sites for rain gardens. Rain gardens in retail settings also tend to accumulate litter, which reduces the functionality. Finally, in the event of a small fuel or oil leak, rain gardens would not capture the pollutants in the same manner as a catch basin, and would allow the pollutants leach directly into the aquifer. For these reasons, the rain garden located in front of Restaurant A is the most suitable location for a rain garden.
- **Smaller, localized infiltration systems:** Ledge and poor soil infiltration rates have limited the location of the infiltration systems. Infiltration systems have been located in areas where the soils are suitable for infiltration and have been designed to maximize groundwater recharge.
- **Utilize On-site materials:** The project will utilize ledge excavated from and processed on the project site for multiple applications ranging from stormwater infiltration / detention systems to subsurface base materials to landscape walls. This reduces both material export and import and the associated construction traffic.
- **Drought tolerant, hardy, native plantings:** The planting design will rely on drought tolerant, hardy, native species as a mechanism to reduce irrigation needs. By reducing irrigation requirements, cisterns and/or rainwater harvesting systems are not needed and rainwater can be directed to infiltration systems to improve aquifer recharge.

G-8) Consistent with the project LEED initiatives the proponent should provide alternative lighting design which evaluates the feasibility of LED lighting along public roadways.

Response: Please refer to the updated site lighting package and response memo which addresses these issues.

G-9) Provide final details and material selection of retaining walls. As indicated in the architectural review comments, site walls materials, textures and overall appearance should be coordinated throughout the site, both in terms of adjacent walls and buildings. Taller walls (over six feet) should have larger block dimensions.

Response: Please refer to the updated wall elevations which describe the intended scale and color range of the proposed wall treatments.

G-10) For future project phases, note that the building designated for Assisted Living is located right next to the train tracks. To what extent has noise impact on these residences been considered and how might that affect the urban design plans.

Response: Shadley Associates will advance the landscape drawings to a Construction Document level following the Town Meeting. This will include incorporating the on-going coordination between various disciplines.

G-11) Provide calculation, including graphic back up demonstrating that Section 9.8.5.2.5 of the by-law has been met.

Response: Please refer to the March 22, 2013 Stormwater Management Report, Section 3.1.3 describing the groundcover percentages.

G-12) Provide construction plan level of detail for all exposed storage areas, exposed machinery of electric installations, loading dock, dumpsters etc in accordance with the requirement of Section 9.8.11.2

Response: Shadley Associates will advance the landscape drawings to a Construction Document level following the Town Meeting. This will include incorporating the on-going coordination between various disciplines.

G-13) Provide elevation, plans and details of proposed sound barriers indicating proposed materials and construction. Final Design Plans should include Structural Calculations demonstrating the stability of the wall shall be stamped by a Structural Engineer Licensed in the State of Massachusetts.

Response: Please refer to the attached photographs of the relocated wood sound barrier fence in the Phase 1 area of the project (Gateway Park). The fence will be 8' high and will maintain the same frequency of wildlife crossing points as previously installed in this area.

Landscape Design and Plantings:

L-1) Consider including a Legend or Symbols Key on the first few sheets, on an initial General Notes sheet, or on the first sheet of each section for ease of use.

Response: Shadley Associates will take this into consideration as we advance the landscape drawings to a Construction Document level following the Town Meeting.

- L-2)** *Consider using a callout label with a detail key for each item on the layout plans, keying that item to a detail sheet, for ease and clarity.*

Response: Shadley Associates will take this into consideration as we advance the landscape drawings to a Construction Document level following the Town Meeting.

- L-3)** *The one-inch bar in bottom right of each sheet should be checked for accuracy.*

Response: Shadley Associates will review.

- L-4)** ***Sheet C-130:** A more detailed set of notes on the first sheet of the Erosion and Sediment Control plans, or a note that says, "See Detailed Notes on Sheet C-501," would be appropriate here and would help direct the contractor.*

Response: As suggested, a note will be added to C-130 will be added to direct the Contractor to Sheet C-501.

- L-5)** ***Sheet C-132:** Consider running silt fence around the northwest side of the Bordering Vegetated Wetland.*

Response: Comment acknowledged. Silt fence or filter soxx locations will be reviewed and addressed on the Construction Documents.

- L-6)** ***Sheet C-501:** Add a detail for Rain Garden construction in accordance with state Storm Water Guidelines.*

Response: A rain garden detail will be provided as part of the Construction Documents to ensure compliance with the MA DEP Stormwater Management Policy

- L-7)** ***Sheets C-510 & C-511:** Locations and limits of these basins should be shown more clearly on appropriate the layout plans. Repeating contours to indicate basic slope limits is suggested. (use a locus plan).*

Response: Our Layout Plans do not typically show contour lines. For clarity, the upper limit of these basins can be shown with a note referring the contractor to the Grading and Drainage Plan. This will be shown on the Construction Documents.

- L-8)** ***Sheet L101:** See streetscape comments regarding adjustment of pole heights of all pole lighting more in keeping with a pedestrian and village-scale experience.*

Response: Please refer to the April 8th memo from Engineering Advantage addressing the adjusted heights of the site lights.

L-9) Sheet L101: *Study more carefully the location of trees in relation to the light poles, some interfere with each other.*

Response: The lights and trees have been coordinated. Please refer to the updated overall site plan.

L-10) Sheet L101: *Suggest adding a loop of tall evergreen buffer immediately to the west of the walkway that is west of the water feature, behind the ornamental tree on the west side of the walkway, to screen a view from the house to the northwest.*

Response: Please refer to the updated drawing L-1B which shows the stand of existing mature white pine trees and proposed additional evergreen tree planting.

L-11) Sheets L-102 & L-103: *Adjust light/tree heights and locations as mentioned above.*

Response: Please refer to the updated overall site plan which shows the coordinated light and tree placement, as well as the April 8th memo from Engineering Advantage.

L-12) Sheets L-102 & L-103: *Where trees and lightpoles occur close together in parking lot islands, more columnar deciduous trees are suggested. See suggestions on Plant Schedule. Otherwise for parking lot trees a spreading habit is good for adding shade.*

Response: Columnar and fastigate tree species have been specified in landscape areas that are in close proximity to site lights. Please refer to the updated overall site plan and supplemental plan enlargements.

L-13) Sheet L-105: *At Restaurant Building C, depending on how high the buffering wall between the dining patio and the busy intersection is, add more planted buffer at the corner curve for noise and sight screening. If the wall is less than 3-4 feet, trees would be appropriate.*

Response: The wall has been removed in favor of the maximizing the rain garden area. Please refer to the updated site plan.

L-14) Sheet L-301: *On locus plan, make Site Section "M" label larger and clearer for clarity/ease.*

Response: We will adjust this as we advance the landscape drawings to a Construction Document level following the Town Meeting.

L-15) Sheet L-400: *General Landscape/Open Space: Would like to see more variety of native trees that will work well in open space/buffer areas. Suggest Siverbell,*

Redbud, Yellow and Sweet Birch, Yellowwood, Beech, Sugar Maple. For non-natives, Katsura. For these larger open spaces, add the option of some larger evergreens: White Pine, Junipers, Spruce, and Fir. Add the option of some native grasses.

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. We have added the suggested species to the preliminary plant list.

- L-16) Sheet L-400: Wetland Areas:** *Would like to see more variety. Take out sycamore. Add Hammamelis, Tupelo, even a willow or two. Substitute Juniperus Virginiana for Thuja. We suggest consideration of some Typha (cattails); in our area invasive Phragmites is outstripping cattails, which are seed sources for many birds, so badly that we recommend every opportunity to re-introduce them.*

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. We have added several of the suggested species to the preliminary plant list.

- L-17) Sheet L-400: Streetscapes & Parking Lot Islands:** *Would like to see more variety. Use mixed natural groupings of different trees, and vary the sizes. Suggestions for more fastigate trees: Tilia Americana "McK Sentry," Quercus Palustris "Emerald Pillar," Sophora Japonica "Fastigiata," Gingko "Princeton Sentry," Amelanchier Alnifolia "Obelisk."*

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. We have added the suggested species to the preliminary plant list.

- L-18) Sheet L-400: Ornamental grasses:** *Recommend use of more, such as Little Bluestem and Helictotrichon "Sapphire."*

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. We have added the suggested species to the preliminary plant list.

- L-19) Sheet L-400: Parks and plazas:** *Recommend consideration of specimen evergreens such as Hinoki, Weeping Alaska Cedar, or Japanese White Pine.*

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. We would like to minimize the use of too many exotics into the planting palette.

- L-20) Sheet L-1 & L-2: Plant Schedules:** *We suggest addition of White Fir, Foxtail Spruce. Populus is not ideal, use maple, Oak and Beech instead. Other Birch varieties can*

be added---“Heritage” is very good choice for a forested screening area. Fagus Grandiflora is not an appropriate understory planting; it is a tree that will get huge Suggest for understory fillers: Arrowwood, Rhododendron Maximum, Ilex Opaca, Spicebush, Blueberry, Bayberry.

Response: We will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting. For the understory “whip” area, the intent is to supplement the existing pine-oak forest with additional white pines which will provide screening as they mature.

L-21) *Sheet L-1 & L-2: Sections: If possible a planted berm between the houses and the sound wall will add to the visual and sound screening. Could be immediately behind the wall at top. We recommend that an extended warranty be provided for a min 2 year period for all underplantings.*

Response: Please refer to the updated drawing L-1B . There is not enough room for an additional berm behind the fence as it will impact the existing trees. We have required a 2-year warranty for the plants in this area.

Urban Design Comments:

U- 1) *L-101 Noted improvements*

- A. More green space along southern parking area improves gateway feeling*
- B. Pedestrian Flow is improved.*

Opportunity areas

- 1. Is the overlook planted? If so what is the access to the benches. is there?*

Response: Please refer to the updated site plan for this area.

- 2. Drop-off area puts vehicles entering from University Avenue on the opposite side of the entry. May want to consider one way entry.*

Response: Shadley Associates will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting.

- 3. Light pole type F is in the visual corridor of residential entry to kinetic sculpture*

Response: Please refer to the updated site plan for this area.

- 4. Consider clustering benches along walks in areas with views of focal features (Vertical water feature and Kinetic sculpture) instead of even spacing, perhaps even reducing quantity in non-significant areas.*

Response: Shadley Associates will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting.

- 5. As vegetated storm water basin develops consider placement of boulders, boulder weirs, log vanes and other bio-engineering mechanisms to create a natural feeling and ecosystem diversity as warranted from water depth, flow rate and flooding frequency.*

Response: Shadley Associates / Tetra Tech will take this into consideration as we advance the planting design to a Construction Document level following the Town Meeting.

U- 2) L-102 Noted improvements

A. Improved buffer along residential building A2

Opportunity areas

1. *As requested by the Board, increase the planting strips to every other parking sleeve. This will also help provide conformity with the lighting layout.*

Response: Minimum parking quantities are required based on Tenant agreements. Further reduction of spaces will negatively impact those agreements and will require smaller, less successful planting conditions for the trees.

2. *Consider moving crosswalk to intersection*

Response: We will take this into consideration as we advance the drawings to a Construction Document level following the Town Meeting.

3. *Consider carrying paving band along entry to anchor building*

Response: We will consider this.

4. *Consider moving one of the two kiosks to outside building M*

Response: Noted, we will consider this.

5. *Sheet keyplan does not accurately reflect drawing, drawing cuts off some of the plan*

Response: This will be adjusted as the drawings are advanced during the Construction Document phase.

U- 3) L-103 Noted improvements

A. Pedestrian Flow is improved

Opportunity areas

1. *As requested by the Board, increase the planting strips to every other parking sleeve. This will also provide conformity with the lighting layout*

Response: Minimum parking quantities are required based on Tenant agreements. Further reduction of spaces will negatively impact those agreements and will require smaller, less successful planting conditions for the trees.

2. *Sheet keyplan does not accurately reflect drawing, drawing cuts off some of the plan*

Response: We will adjust this as we advance the drawings to a Construction Document level following the Town Meeting.

U- 4) L -104 Noted improvements of sidewalk connections.

Opportunity areas

U- 5) L -105 Noted improvements

Opportunity areas

1. Consider increasing width of sidewalk and use of enhanced pavements connecting mixed-use to MBTA for better wayfindings

Response: We will address this when we advance the future phase design

U- 6) L -106 Noted improvements

- A. Improved pedestrian connection
- B. Better screening of the DWWD pump station

Opportunity areas

1. Consider connection between the upper and lower walks of University Avenue

Response: We recommend not providing stair access because there is not adequate space for universal access ramps in the same location.

2. Consider berming the park along the train tracks

Response: The grade cannot be raised or bermed in this area because the meadow open space serves as flood storage. Please refer to the Stormwater Management Report for more detail.

U- 7) L -107 Noted improvements

Opportunity areas

1. Consider connection between the upper and lower walks of University Avenue

Response: We recommend not providing stair access because there is not adequate space for universal access ramps in the same location.

Street Lighting Design Comments:

- SL-1)** Finalize Project lighting level design criteria in accordance with Peer Review Comments prepared by Power Engineers.

Response: This has been done and submitted.

- SL-2)** Lighting selection should be refined so that all fixtures relate to one another. There is a large height disparity between lighting types E and G along University Avenue. We recommend that slightly shorter pole be used for Type E and slightly taller pole for Type G be evaluated. Fixture type 'A-D' does not have the same design features as other fixtures We anticipate this will also improve the overall street aesthetic, particularly in the early life of the project until tree plantings fill in. In particular

Response: Main parking area fixtures were changed to round body. See new submittal.

- SL-3)** A design option using lower wattage should be evaluated. 200 W to 250 W fixtures are commonly used for streets of this type.

Response: Roads were changed to 250 watt except at intersections.

SL-4) *We anticipate that uniformity at the intersections will require placement of a pole on each corner of the intersection. The benefits of this condition should be evaluated.*

Response: See new submittal.

SL-5) *The lighting plan shall also include the following illumination information in a table format: Minimum, Maximum, Average to Minimum, and Maximum to minimum light levels for **each individual** roadway or parking field. Individual tables should be provided for each roadway and each parking area.*

Response: See drawing SL-1 of new submittal.

SL-6) *At the northerly limit of University Avenue, beyond the median, it is unlikely that the required uniformity will be met lighting from one side. We recommend the use of the Type F on both sides of the roadway. We anticipate this will also improve the overall street aesthetic, particularly in the early life of the project until tree plantings fill in.*

Response: Type F poles added to park side of roadway.

SL-7) *As with the northerly section of University Avenue, South of Harvard Street lighting should be placed on either side of the roadway and diagonally spaced to achieve the required uniformity. We anticipate this will also improve the overall street aesthetic, particularly in the early life of the project until tree plantings fill in. improve the overall street aesthetic. Continuation of this arrangement to a point just north of Harvard Street may also be appropriate for consistency in the overall corridor.*

Response: Lighting changed to staggered pattern south of Harvard Street.

SL-8) *The lighting at the southerly driveway will be overpowered by the parking lot lighting. We suggest that the parking lot lighting be moved back from the sidewalk at least one bay into the lot. We anticipate this will also improve the driveway aesthetic.*

Response: We will take this into consideration.

SL-9) *Use of the smaller median fixture in the median of the northerly driveway should also be evaluated in an effort to create similar characteristics at both main driveways. As with the southerly driveway, moving the parking lot lighting back*

from the driveway sidewalk will assist with this. The location of the parking lot lighting where currently shown may all be a nuisance to residents.

Response: Poles on this driveway shortened to 20 foot mounting height.

SL-10) Table of light levels indicates lighting will be provided in the Meadow Area. Plans should be updated to show proposed lighting concepts.

Response: See new submittal.

Additional Comments:

A-1) The dumpster located adjacent to building "O" should be relocated outside zone 1 into the parking lot or placed within the building.

Response: Dumpster locations for Building O are being studied. The Construction Documents will provide a design solution that conforms to the requirements of the University Avenue Mixed Use Overlay District zoning requirements.

A-2) South of Harvard Street, consider use of "Sharrows" on the roadway.

Response: The use of "Sharrows" will be considered on the roadway. If deemed appropriate, they will be shown on the roadway design plans.

A-3) Verify that the Fire Department will accept a curbed single lane access on the northerly driveway. An alternative design that reduces the median width and expands the lane width to allow for provision for a stalled car or emergency by-pass could be considered. Min lane width for this condition would be 18 feet.

Response: The northern site drive was reviewed with the Fire Chief on April 18th and the layout will be revised to provide 18' of drive access width from University Avenue to the Residential building. Please refer to the updated Civil plans for more detail on mountable curbing and rumble strip layout.

A-4) Signage indicating shared use for pedestrian and bicycles should be provided for the mixed use trail on University Avenue.

Response: Please refer to the updated signage design package which addresses this issue.

A-5) A raised walk should be incorporated to emphasize continuation of the walk through the parking lot at Restaurant A.

Response: The crossing is well demarcated with pavement materials and the planting islands.

A-6) Show Dumpster location for Restaurant A

Response: The dumpster that will serve Restaurant A is shown on the revised Civil Layout Plan and located outside of the Zone 1.

A-7) Adjust walk layout in the Meadow and around the assisted living facility to improve continuity and connections. See attachment 1 for additional comments.

Response: We agree. Please see updated site plans showing this revision.

A-8) L-402 -Bike rack standard shown on detail sheet is not acceptable to the Town and should be deleted. Per By-law, Town to provide standard to be used.

Response: Proposed bike rack detail has been deleted from the set.

A-9) L-402 -Ash urn should not be used on the project. Delete detail.

Response: Proposed ash urn has been deleted from the set.

A-10) L-402 – Trash receptacle should be larger, and incorporate both trash removal and recycling receptor

Response: A new combined litter and recycling receptacle will be selected during the Construction Documents phase.

A-11) Since the westerly elevation of Building E is exposed to both Harvard and NStar Way, as is part of the rear portion of building E-I, ensure that the exposed elevations have the reasonable level of aesthetic.

Response: Please refer to updated architectural drawings.

A-12) Provide a raised walk at the driveway crosswalk linking buildings C and E.

Response: A continuous sidewalk is provided in this location as suggested. This sidewalk will be detailed as part of the Construction Documents.

A-13) Per attachment add planting island in vicinity of retail building C.

Response: Adding more planting islands in the parking lot will be assessed during the Construction Documents phase.

Shadley Associates, P.C.

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A-14) *Examine crosswalk location at corner of Harvard and Nstar way to ensure optimal visibility for both directions.*

Response: The crosswalk location will be analyzed as part of the roadway design plans. The final locations will be shown on the roadway design plans.

A-15) *Ensure that all walks shown exiting the residential building are aligned with the current door locations. See attachment 3 for typical example.*

Response: Please refer to updated site plan drawings. All walks at the residential building will be coordinated with door locations. This coordination will be picked up as part of the Construction Documents.

END OF MEMORANDUM

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