ENGINEERING SUCCESS **TOGETHER**

December 11, 2013

Town of Westwood
Planning Board
Town House
50 Main Street
Westwood, Massachusetts 02052-2009

Attn.: Mr. Bruce H. Montgomery, Chairman of Planning Board

Re: Life Time Fitness, University Station
Project Development Review (PDR)

Dear Mr. Montgomery:

The BETA Group Team has completed the Project Development Review of the proposed Life Time Fitness Facility in University Station in Westwood for compliance with the University Station Master Plan, Town of Westwood bylaws and regulations, and general engineering practice. This letter is provided to outline BETA's findings and recommendations.

BASIS OF REVIEW

BETA received the following items from the office of the Planning Board:

- ***University Station LifeTime Fitness PDR Response to Peer Review Comments*** letter to Paul Cincotta, New England Development dated December 2, 2013 submitted by Tetra Tech, Framingham, MA. Documents included:
  - HydroCAD Model for POA 1 and miscellaneous drainage calculation documents dated Nov. 21, 2013
  - Stormwater Infiltration Data Report Basin 27P dated Nov. 21, 2013
  - Life Time Fitness – University Station Examples of Site Furnishings (1 sheet)
  - Life Time Fitness Fire Truck Egress Plan (2 sheets)
- Plans (29 Sheets) entitled: ***Life Time Fitness – PDR Submittal University Station Westwood, Massachusetts***, dated September 27, 2013 revised December 2, 2013, prepared by Tetra Tech, Framingham, MA and others.

COMMENT STATUS KEY

The BETA team reviewed this project and provided initial comments in a November 5, 2013 letter to the Planning Board (written in standard font style). Proponent responses to these comments are provided herein and indicated by *"R:" and written in italics*. The BETA team has reviewed the

supplemental documents and provided an updated status annotated by "**S:" and written in bold standard**.

INTRODUCTION

The proposed project is located on a 7.9 acre parcel in Development Area C of the University Station project within the University Avenue Mixed Use District (UAMUD). The majority of the site is also located in the Watershed Resources Protection Overlay District (WRPOD).

Currently, the majority of the site is fully developed, with a 139,000± sq. ft. commercial/industrial building with associated paved parking and loading areas. Abandoned railroad tracks with spur lines are located along the east side of the building. The primary site access is off Harvard Street via two separate driveways. Access is also available from abutting property to the south. Trucks from the abutting property have been observed utilizing this access to enter and exit off Harvard Street. The facility is serviced by utilities (water, sewer, electric, cable and gas) off Harvard Street. The topography is generally flat with grades between elevations 52-54 around the site. Stormwater runoff is collected via a roof drain system and catchbasins around the building. The majority of the site runoff flows to the existing swale to the west and the remainder is routed to the drainage system in Harvard Street. The entire site is located within a wellhead aquifer protection area (zone 2). There are no identified wetland resources as defined by the Massachusetts Wetlands Protection Act within proximity of the site.

This project includes constructing a 3 story (60 feet), 126,000 square foot fitness center with an outdoor pool and bistro, 563 space parking area, landscaping, stormwater management system, and utilities. The proposed layout and grading of the site will eliminate the existing access to the abutting property to the south.

REVIEW CRITERIA

ZONING BYLAW

The application indicates that this facility "will provide fitness, sports, and recreational programs and activities including, without limitation, weight-lifting equipment, running and aerobic exercise equipment; game courts; indoor and outdoor swimming pools; chiropractic, physical therapy, and massage services; day camps; wellness assessment; and fitness classes and programs." The proposed fitness facility with an outdoor recreation component, is an allowed use by right in Development Area C (§ 9.8.4.1.2.c)

The project meets the dimensional requirements including the minimum lot area, maximum height and maximum floor area ratio (§ 9.8.7.1)

DESIGN AND PERFORMANCE STANDARDS – As specified in Section 9.8.11 of the Zoning Bylaw

Submission Requirements (§6.0) Rules and Regulations

SR1. Provide Property owner of record on Landscaping, Lighting and Architectural drawings. (6.2.2) - *R: The requested information will be provided on the revised drawings noted above.* **S: Information provided – issue resolved.**

SR2. Provide sheet numbers and titles on Architectural drawings. (6.2.4) - *R: Sheets will be updated to reflect numbers and titles.* **S: Information provided, update Cover sheet as required.**

SR3. Provide scale and north arrow on Irrigation Plan drawings. (6.2.6) - *R: The scale and north arrow symbols will be added.* **S: Information provided – issue resolved.**

SR4. Provide lot numbers on General Layout Map. (6.4) - *R: Lot numbers will be added to the PDR Plans once ANR Plans have been endorsed by the Planning Board.* **S: Information not yet provided – recommend including as a condition.**

SR5. Provide designation of any trees with a caliper size 6" or greater to be removed if any (6.5.3). On C-111, Demolition Sheet, clarify tree symbols to coordinate with Notes 14 and 17 as to which trees are to be removed; they are shown 2 different ways. - *R: All trees located within the proposed limit of work are to be removed.* **S: Explanation provided – issue resolved.**

SR6. Provide dimensions to show the net floor areas. (6.8.1) - *R: The net floor areas are: First floor: 45,630 sf±*; *Second floor: 43,765 sf± & Third floor: 34,088 sf ±* **S: Information provided – issue resolved.**

SR7. Provide dimensional information on elevations relative to finish grade (6.8.2) to show conformance with maximum building height. (9.8.7.1) - *R: Elevation sheets will be updated to include dimensional information from finished grade to top of roof and top of parapet. Site Furnishings will be detailed in the landscape drawing package. The landscape plans will reference the locations of these items.* **S: Clarify Height of the Bistro Building and of the adjacent fence surrounding the pool deck. Provide section/ elevation of the pool deck fence confirming measure of privacy.**

SR8. Landscape Plan Requirements (6.9):

a. Provide location and/or details for any benches, bollards, trash cans, recycling containers, planters, trellis, and other enhancements (6.9.6 & 7) - *R: Site Furnishings will be detailed in the landscape drawing package. The landscape plans will reference the locations of these items.* **S: Plans do not indicate any benches, trash cans along façade walks, locate as applicable.**

b. Provide clarification of proposed surface finishes throughout the site. It appears that the same hatch pattern is used for different surfaces. - *R: The updated Landscape Plans and Civil Plans identify pavement materials Additional notes describing the specific surface*

treatments have been added to the respective plans as well. The updated plans are included with this letter. **S: Plans revised – issue resolved.**

c. Provide greater detail for layout of bike rack(s) and backup for bike rack design in accordance with the Town of Westwood Planning Board Bicycle Parking Design Guidelines including number of bikes to be accommodated. Coordinate bike rack location on Sheets L-100 and C-131. - *R: Bike racks are shown to the west of the building entrance.* **S: Information provided – issue resolved.**

d. Clarify irrigation for grass pave access drive area (detail and irrigation plan should be consistent) - *R: The Irrigation plans will be coordinated to show irrigation at the grass pave area.* **S: Clarification and coordination provided – issue resolved.**

Building Design: (§9.8.11.1)

The building appears to conform in building dimensional requirements. The overall building design conforms, to make a visually pleasing, unifying and compatible image for the development as a whole. There are sufficient number and size of windows, texture and scale. For the most part, the materials are of sufficient quality and of natural building materials. Public entryways incorporate architectural features. Vertical alignments and horizontal relationships are evident in the design.

The master plan provided for a 2 story 112,000 sq. ft. building for this site. The application indicates the proposed development will include a 3-story, 125,643 sq. ft. building which is 12% larger than the master plan.

Façade Treatments (c) and Relationships Among Structures and Components (d) conforms to master plan.

B1. Provide more specific information on exterior materials, including precast panels at the cornice, glass types, window framing systems and masonry (b). - *R: Exterior elevations will be updated to include supplemental information on materials. Material information included will be as follows.*

1. *Cornice to be of colored architectural precast.*
2. *Glass types utilized will be clear vision glass, spandrel and frosted.*
3. *Window framing system to consist primarily of clear anodized aluminum storefront with curtain wall utilized at main entry, northeast building corner, and west elevation at grand stair.*
4. *Masonry will consist of thin brick cast into precast wall panels as well as field applied limestone.*

S: Present materials board at pending hearing. Provide photocopy of same in application

B2. Provide a rooftop plan showing equipment layout and screening (f). - *R: A supplemental rooftop plan will be provided. Mechanical units have been located such that all screening is being provided by building parapet walls.* **S: Equipment layout is shown on the roof plan however, heights are not included. Height of the equipment and any parapet should be clarified, to explain if any equipment will be visible.**

Visual Mitigation and Screening of Infrastructural Elements. (§9.8.11.2)

The outdoor pool area of the site is appropriately screened all around. The parking lot has appropriate screening within the internal islands and medians and along the northerly, easterly and southerly sides.

V1. Provide landscape screening along westerly edge of the parking lot to be consistent with the Master Plan. - *R: The Stormwater treatment area to the west of the parking lot is considered an aesthetic amenity for the LTF site. The intent is to maintain a strong visual connection between the LTF site and the Stormwater area. The Stormwater basins will also have shade trees planted within them, which will contribute to the screening of the parking lot from the west. Further, the landscape plans for the stormwater basin have been amended to increase the amount of shade trees proposed in that area.* **S: Explanation provided – issue resolved.**

V2. The following comments are offered for evaluation regarding particular screening plants throughout the plan:

1. Consider replacing euonymus fortuneii with juniperus conferta due to scale insect affecting large plantings of euonymus;
2. Consider replacing miscanthis sinensis with panicum virgatum 'Dallas Blue' due to suspected invasiveness of miscanthus; specifying hydrangea arborescens 'White Dome' as it will not flop over the entryway paving as 'Annabelle' does;
3. Consider adding winter interest plant to the parking island with the pin oaks; replacing cotoneaster apiculatus with buxus 'Green Gem', thuja 'Hetz Midget', or similar due to tendency of cotoneaster to collect garbage.

R: We will take recommendation a, b &c into consideration as we complete the CDs. **S: Defer to design landscape architect.**

4. In addition, evaluate fruit drop of kousa dogwood in pool area. Consider as alternatives oxydendrum arboreum or viburnum sieboldii, or specify a kousa with late fruit drop such as 'Milky Way.' - *R: We agree with this comment and will specify an appropriate substitution for the kousa dogwood.* **S: Defer to design landscape architect.**

V3. Along with required screening of rooftop equipment (Comment B2 above), revise PDR application to provide details of methods of screening for loading area, dumpsters and transformer including all fencing and enclosures. Note pool fencing and gate should be in conformance with building code requirements. - *R: All requested supplemental information listed above will be provided.*

1. *Landscape screening will be utilized at transformer (and manual switch gear) location.*
2. *Trash enclosure will be limestone to match limestone used on building exterior elevation with a non transparent gate.*
3. *All pool fencing and gates will comply with governing codes.*

S: Drawing L-100 references the Architectural Drawings for the dumpster fencing however no details are provided. Provide a detail/section/elevation of the dumpster screening. Provide detail of pool deck fence.

Utilities. (§9.8.11.3)

In accordance with this section, all proposed utilities are underground. Water and sewer connections to the public system are shown. The need for easements is not anticipated; however, this should be confirmed as part of the development of Construction Plans.

U1. Provide documentation that the Fire Chief is in agreement with the locations of all fire hydrants. It should be noted that the fire hydrant at the rear of the building is constructed on a 2:1 slope. - *R: The comments included with the November 13, 2013 letter from the Fire Chief have been incorporated into the site plan. Hydrant locations were reviewed at the November 22, 2013 meeting that was attended by the Fire Chief.* **S: Information provided – issue resolved.**

U2. Provide documentation that DWWD is in agreement with the water service connection. - *R: Initial discussions with DWWD staff indicate that they are in agreement with the layout of the proposed water service connections.* **S: Defer to DWWD**

U3. The water line at the rear of the building appears to be at the bottom of the slope. If below the sewer line, encasement may be required. - *R: The proposed water main will be encased where sufficient clearance between it and the proposed sewer line cannot be met or where the water line is located beneath the proposed sanitary sewer service.* **S: Noted on plan – issue resolved. Recommend raising top of wall to be level with driveway along rear of building.**

U4. Show existing utilities in Harvard Street more clearly on Utility Plan C-151 - *R: The Utility Plan (Sheet C-151) has been updated to more clearly indicate the existing utility infrastructure in Harvard Street.* **S: Plans revised – issue resolved.**

U5. Show connections to overhead utilities in Harvard Street - *R: Proposed utility connections to Harvard Street are shown on Sheet C151. Specific connection requirements are being coordinated with the respective providers. Electric and telephone connections will be obtained from existing pole mounted services. Once the services are dropped from the pole, they will run subsurface to the proposed Life Time Fitness facility. All other utility services are currently anticipated to be subsurface.* **S: Information provided – issue resolved.**

Land Uses and Common Areas. (§9.8.11.4)

The site is connected to the core development area via sidewalks along Harvard Street and sidewalks that lead up to the building entrance. The westerly length of property adjacent to the storm water basins area is left open for access to a potential bimodal pathway.

Street Design. (§9.8.11.5)

Streets, interior drives and related infrastructure are generally designed with sufficient capacity to accommodate anticipated trips and turning movements. Parking stall dimensions and aisle widths are also consistent with the Master Plan.

The entry roadway bisecting the site provides 12-foot roadways delineated by concrete curb on both sides. A median separated roadway can be restrictive for large vehicles, in particular emergency vehicles. There is also limited area for snow storage.

The following items are noted for clarification:

SD1. We suggest the Fire Department verify that the median separated entrance road is acceptable. At a minimum, a curb to curb width of 14 feet is suggested. If the ability to pass stationary vehicles in the driveway is required, minimum lane width would be approximately 18 to 20 feet. Pending evaluation of lane width, the median nose at Harvard may need to be pulled back to facilitate fire truck entry. Relocating the driveway median to a parking lot median, thereby allowing the driveway to be a typical two way road may be preferred and should be considered. - *R: The comments included with the November 13, 2013 letter from the Fire Chief have been incorporated into the updated site plan, including a second point of access for emergencies. Additional fire truck turning movements have been provided as a stand-alone figure. As discussed on November 22nd, the main access drive lane widths will be increased to 13 feet and the median will be edged with sloped granite curbing with a 3" reveal.* **S: Information provided as agreed upon at the Nov. 22nd meeting – issue resolved.**

SD2. The turning template for the E-100 Fire Truck at the southeast corner is restricted. We recommend a minimum clearance of 2 feet between (i) curb lines and wheels and (ii) overhang and adjacent obstructions. Confirm that the fire chief does not require more. - *R: The additional feedback received from the Fire Chief in the November 13, 2013 letter has been incorporated into the updated site plan. All turning movements are designed so that the fire truck will not encounter curb lines with tires and/or vehicle overhangs. A stand-alone figure has been prepared demonstrating turning movements per the November 22nd meeting.* **S: Information provided – issue resolved.**

SD3. The Site Layout Plan (C-131) shows the turning path of a fire truck from Harvard Street into the facility entry roadway, from the facility roadway to the front of the building, and around the curbed island within the parking area. The turning path should also be shown leaving the parking area, either by the roadway in front of the building or by the mid-lot access point. - *R: A stand-alone turning figure has been prepared based on the November 22nd meeting demonstrating that the site layout can accommodate the turning movements requested by the Fire Chief.* **S: Plan provided – issue resolved.**

SD4. Provide turning template indicating fire truck can enter the parking lot via the curb cuts midway along the driveway. Show how that same truck can access the aisle. - *R: A stand-alone turning figure has been prepared based on the November 22nd meeting demonstrating*

that the site layout can accommodate the turning movements requested by the Fire Chief. **S: Fire Chief requested minor revisions see sketches (2) attached.**

SD5. Provide information on trucks that will service this building including size, location, frequency, and loading operations. Show that loading operations will not impede emergency access. - *R: A majority of the loading operations associated with the Life Time Fitness facility will occur through the front door of the facility. During deliveries, vehicles will be positioned in a way such that they do not impede access along the main site driveway, front access aisle, or side driveway.* **S: Explanation provided – issue resolved.**

SD6. The grass lane at the rear of the building does not appear to extend the full length of the back of the building. Clarify construction detail for the other portion of the access lane. We also note the edge detail for the grass lane (L-300) is not consistent with the plan (L-100). Edging grass lane with curb is preferred. Show depth of gravel base; a minimum of 12" is suggested. Character of sub-base should be verified. - *R: The reinforced grass emergency lane has been increased in width to 14 feet and extends approximately 110 feet between the western end of the asphalt service drive (near the mid-point of the building) to the southern end of the pool fence (at the southwest corner of the building). The grass lane will be edged on both sides by flush concrete curb. The depth and specification of the base and sub-base materials will be provided in the CDs.* **S: Plan updated – issue resolved.**

SD7. Provide less severe curves in the alignment for the bi-modal path to make it more user-friendly. This may require reconfiguring the wet basins or relocating the path. – *R: Adjustments to the configuration of the bi-modal pathway have been made to facilitate pedestrian and bicycle use. Curve radii along the eastern edge of the basin, immediately abutting the proposed Life Time Fitness pool deck have been increased. Accordingly, the grading associated with stormwater management area 30P has been revised to accommodate the increased radii. The hydraulics of the basin has been checked to confirm that it will perform in a manner consistent with the Master Development Plan.* **S: Lot and path alignment revised – issue resolved.**

SD8. Confirm that the grass lane can withstand winter plowing and loading from fire truck. - *R: The reinforced grass lane will utilize a product such as GrassPave2 (or equal) that is designed specifically for emergency fire lanes. The manufacturer of the reinforced grass emergency lane product recommends that any of the following practices be employed during snow plowing operations: A.) snow plow blades be lifted $^{3}/_{4}$ inch above the surface, B.) Use a plow blade with a flexible rubber edge, C.) use a plow blade with skids on the lower outside corners so that the plow blade does not come in contact with the reinforced grass units. Fire Chief has reviewed and is comfortable with the use of the reinforced grass material.* **S: Information provided – issue resolved.**

SD9. Show irrigation layout on irrigation plan. - *R: The Irrigation plan will be advanced to show the layout of the irrigation lines as we complete the CDs.* **S: Information provided – issue resolved.**

Circulation, Traffic Impact & Public Street Access. (§9.8.11.6)

Walkways and crosswalks are provided to allow a continuous, accessible pedestrian path from the front door of the facility to the sidewalk adjacent to Harvard Street, which in turn connects to University Avenue. At approximately 125,000 sq. ft., the facility is approximately 13,000 sq. ft. larger than the building size indicated in the Master Plan and also includes an outdoor pool and bistro area.

The narrative statement included in the Application states that "Non-merchandising facilities such as health clubs and recreational facilities are considered a part of a shopping center and treated under the same Land Use Code 820." The narrative assumes that trips generated by the Life Time Fitness facility have been accounted for in the 610,000 square feet accounted for within the previous traffic impact study prepared and reviewed for the University Station project. This would be a valid assumption for a smaller facility integrated into a shopping center; however, the Life Time Fitness facility occupies a stand-alone building with a dedicated parking area adjacent to, but not included within, the main retail core of the University Station development.

- Provide traffic counts for similar stand-alone Life Time Fitness facilities adjusted for building size with outdoor pool and bistro or use Land Use Code 492 (Health/Fitness Club) to establish trip rates for the proposed facility. - *R: The proposed Life Time Fitness facility is not located on an isolated site and is not a stand-alone facility, but rather is an integral component of the 2,100,000 s.f. University Station mixed-use development and should be analyzed as such. Moreover, the reduction of 126,000 s.f. of retail space within the University Station project needs to be accounted for in trip generation analyses performed for the Life Time Fitness facility. Therefore, in order to correctly estimate the trip generation of the project, the trip generation for the entire University Station project was recalculated to include the updated land uses which include:*
    - *The addition of a 126,000 s.f. health club facility*
    - *Reduction of the total retail/restaurant/grocery store space from 750,000 s.f. to 624,000 s.f.*
    - *Reduction of the total retail/restaurant space 610,000 s.f. to 484,000 s.f.*

  The updated analysis was conducted in accordance with the approved methodology and assumptions presented in the November 2012 TIS and the following assumptions regarding the fitness center:

    - *All trips would be generated by automobiles,*
    - *10 percent of trips would be internal trips*
    - *20 percent of fitness trips would be either pass-by or diverted link trips*

  The trip characteristics for the Life Time Fitness Facility were obtained from Trip Generation LUC Code 492 – Health/Fitness Club

  The trip generation calculations for the updated University Station project, which accounts for the proposed Life Time Fitness facility and smaller retail/restaurant component are attached and summarized in Table 1. Also, shown in Table 1 are the summaries of the

original University Station trip generation from Table 14 of the Nov. 2012 TIS along with the differences between the original and updated analyses. As shown in the table, the change in use of Retail Building R from a retail use to a fitness facility results in no significant change in traffic generated by University Station. In fact, the project will be expected to generate approximately 100 fewer trips during the Saturday midday peak hour with the reduction in retail/restaurant space.

Table 1 University Station Trip Generation Comparison

	New Trips								
	Weekday Morning			***Weekday Afternoon***			***Saturday Morning***		
Peak Hour	***In***	***Out***	***Total***	***In***	***Out***	***Total***	***In***	***Out***	***Total***
Updated Analysis	*1,005*	*559*	*1,564*	*1,559*	*1,692*	*3,251*	*1,895*	*1,767*	*3,662*
Nov. 2012 Analysis	*1,028*	*536*	*1,564*	*1,519*	*1,716*	*3,235*	*1,971*	*1,791*	*3,762*
Difference	***-23***	***23***	***0***	***40***	***-24***	***16***	***-76***	***-24***	***-100***

S: Information provided – issue resolved.

T2. The Life Time Fitness facility occupies Retail Building R, which is a stand-alone building south of Harvard Street included in the UAMUD. Previous trip distribution assumptions included in the University Station traffic impact study included Retail Building R in the overall retail trip distribution, and assumed that retail trips originating from I-93 and from I-95/Route 128 north of the site would generally utilize the North Site Drive and South Site Drive to access the retail parcels. Trips generated by Life Time Fitness are far more likely to proceed directly to Harvard Street to access the site; trip distribution for the facility should consider the increase in trips and the associated impact on the intersection of University Avenue and Harvard Street. - *R: Response: The distribution of University Station trips will be altered by the change in use of Building R. The following assumptions were made to update the future 2017 and 2022 Build peak hour traffic volumes at the University Avenue/Harvard Street intersection:*

- *Trips generated by Life Time Fitness will arrive and depart the site based on the regional distribution patterns shown on Figures 23 and 24 of the Nov. 2012 TIS.*
- *Life Time Fitness traffic arriving from the south (24 percent in 2017 and 36 percent in 2022) will turn left from University Avenue onto Harvard Street.*
- *Life Time Fitness traffic arriving from the north (76 percent in 2017 and 64 percent in 2022) will turn right from University Avenue onto Harvard Street.*

The University Avenue/Harvard Street intersection was reanalyzed for the weekday and Saturday peak hours, with the updated Build peak hour volumes, to confirm that the intersection as currently designed can accommodate the redistribution of University Station trips resulting from the LifeTime Fitness facility. Consistent with the Nov. 2012 TIS, the intersection was analyzed for the future 2017 and 2022 weekday and Saturday peak hour conditions. The results of the analyses are summarized in Tables 2 and 3.

S: Information provided – issue resolved.

T4. Provide location for a future shuttle or bus stop as required by the UAMUD rules and regulations. - *R: To the extent that shuttle or bus service will be provided in the future, it would be provided to the front door of the facility.* **S: Explanation provided – issue resolved.**

Parking (§9.8.8.1-3, 5)

The site layout provides 568 parking spaces (including accessible spaces) and provides both bike racks and a dedicated motorcycle parking area. This equates to 4.52 parking spaces per 1,000 sq. ft. of floor area. This exceeds the 4.29 spaces/1,000 sq. ft. provided as part of the "Core Retail Area" in the Master Development Plan. Parking stall dimensions and aisle widths are consistent with Master Plan.

PA1. ITE's *Parking Generation Manual*, 4th Edition, 2010 provides an average peak period parking demand of 5.27 vehicles per 1,000 sq. ft. of floor area for Land Use Code 492 (Health/Fitness Club). This rate necessitates 662 spaces for the proposed 125,643 sq. ft. Life Time Fitness facility. The Applicant should demonstrate why the industry-accepted ITE rate is not being met. - *R: The parking ratio associated with the proposed Life Time Fitness facility is 4.5 spaces / 1,000 square feet. This ratio is consistent with the Life Time Fitness program requirements for a facility of this nature, and is consistent with the Master Development Plan.* **S: Explanation provided – issue resolved.**

PA2. Provide additional grading and detail to indicate the intention of either flush curbing or ADA ramps along the front parking spaces at west side of the building. - *R Additional grading detail has been provided to indicate the configuration of the front sidewalk ADA ramps will be installed to accommodate pedestrian access in these locations.:* **S: Supplemental grades provided – issue resolved.**

PA3. Provide information on the proposed management of snow for the site. - *R: Consistent with the Master Development Plan, snow will be removed from the Life Time Fitness site in the event that it cannot be adequately stored in on-site locations that do not impede site operations or create safety or nuisance concerns.* **S: Include snow maintenance plan in the Site specific O&M Plan.**

Public Safety (§9.8.11.7)

PS1. Provide documentation from DWWD that there is sufficient water supply and infrastructure for both potable and fire protection purposes. - *R: DWWD's consultant, Weston & Sampson issued a letter dated September 5, 2013 stating that the District can adequately serve the University Station project.* **S: Provide letter for the Planning Board's records.**

PS2. Provide documentation from both the Fire and Police Departments stating that they are in agreement with this design. - *R: A second point of access for emergency vehicles has been provided as well as additional information regarding points of access to the pool deck A follow up meeting will be scheduled with the Fire and Police Chief to review the updated*

plans. **S: Confirm that follow up meeting has been completed and that Police and Fire Department comments are resolved.**

Stormwater Management (§9.8.11.8)

The proposed design substantially conforms to the system approved as part of the Master Development Plan review process. Minor revisions to proposed plans do not adversely affect stormwater management objectives.

SW1. Provide supplemental soils data including a minimum of four saturated hydraulic conductivity tests at the bottom elevation of infiltration basin 27P (preferably at each of the corners) and a minimum of two deep hole tests at each of the two up-gradient corners of the basin to determine seasonal high groundwater elevations. - *R: Four tests were performed within the limits of the proposed Life Time Fitness stormwater infiltration area (IFB-27P) to determine hydraulic conductivity. A copy of the results from this assessment and accompanying report are enclosed with this letter.* **S: Rate is greater than ½ of lowest value. 3 of 4 tests are in upper portion (outside of existing building). Test in middle of structure has much lower value. Recommend that condition be included that requires that the excavation be observed prior to installation of system.**

SW2. Provide a site-specific, stand-alone stormwater management operation and maintenance plan. - *R: A site specific stormwater management and operations and maintenance plan will be prepared for the LifeTime Fitness site, consistent with the University Station Stormwater O&M Plan.* **S: Provide a Site specific O&M Plan.**

SW3. Proposed grading directs stormwater runoff to low points at center islands. Revise grading or provide additional catchment to eliminate ponding. - *R: Site grading is designed such that low points are located at the approximate mid-point of the parking areas. Additional spot grades have been added to the site plan to indicate positive drainage away from landscape islands to these stormwater catchment areas.* **S: Grading revised – issue resolved.**

SW4. Catchment areas for CBs 621, 624, and 625 are each greater than 1.4 Ac. and have high calculated stormwater flows (8± cfs). Inlets are unlikely to be able to effectively capture these flows. Provide additional catchment, where necessary, to reduce peak flows to inlets. - *R: Double grate catch basins have been added in catchments where stormwater flows are anticipated to exceed a single grate capacity. Additional catch basins have been added to reduce stormwater flows in larger catchments. The Grading and Drainage Plan (Sheet C-141) has been updated accordingly.* **S: Design revised – issue resolved.**

SW5. Provide hydraulic profile of drainage system up to proposed basin 27P. – *R: The hydraulic profile of the stormwater management system to the proposed stormwater infiltration basin (IFB-27) are enclosed with this letter.* **S: Information provided – issue resolved.**

SW6. Cover over proposed HDPE drainage lines is as little as 1.2± feet. Include provisions for protecting drainage lines from construction vehicle loadings. - *R: The proposed drainage system has been adjusted such that the pipes maintain a minimum of two feet of cover at all*

locations. The Grading and Drainage Plan (Sheet C-141) has been updated and is attached. **S: Plan revised – issue resolved.**

SW7. Include provisions for protecting the infiltrative capacity of existing soils beneath proposed basin 27P. Detail B on sheet C-507 calls for compacted earth subgrade. - *R: The design and construction of IFB-27 will be consistent with the details provided with the Master Development Plan for the GeoStorage infiltration systems.* **Monitor compaction of bottom of system during construction.**

SW8. Indicate proposed locations of double catch basin, grease trap, and oil and grease separator included on details sheets. - *R: The Grading and Drainage Plan has been updated to show the location of double grate catch basins. The proposed grease trap is indicated on the Utility Plan (Sheet C-151). The Standard Oil and Grease Separator Detail (for use in loading areas) has been eliminated from the detail sheet. The revised plan sheets are enclosed with this letter.* **S: Plan updated – issue resolved.**

Final Construction plans for the infiltration structures (sheet C-507) should include details and design calculations stamped by a Massachusetts licensed Structural Engineer indicating the wall types, materials, layout, and elevations of the various system components. Provide any required subsurface explorations, geotechnical and/or subsurface information, as required by the Massachusetts State Building Code. Final design plans for the recharge structures should consider the following:

SW9. Provide design criteria to the Contractor for the design of the system (i.e. HS 25 live load, max. slab deflection, etc.). - *R: The slab design criteria for IFB-27 will be consistent with the GeoStorage details previously provided as part of the Master Development Plan. The construction documents associated with the proposed GeoStorage infiltration systems will be sealed and signed by a Massachusetts licensed engineer.* **S: Review for compliance as part of Construction Document Submission.**

SW10. Consider increasing the end panel overlap with the geo-grid wall below (currently shown as 6"). - *R: The design of the Geostorage infiltration system for IFB-27 will be consistent with the details previously submitted with the Master Development Plan.* **S: Defer to Proponent Design Engineer.**

SW11. Consider requiring the application of a membrane waterproofing on the top and side surfaces of the concrete panels. - *R: The design of the Geostorage infiltration system for IFB-27 will be consistent with the details previously submitted with the Master Development Plan.* **S: Defer to Proponent Design Engineer.**

SW12. Ensure there are sufficient access points for future inspection and maintenance operations. - *R: Access ports associated with IFB-27 are now indicated on the Grading and Drainage Plan (Sheet C-141). The updated plan is enclosed with this letter.* **S: Plan updated – issue resolved.**

SW13. Consider requiring the use of coating (epoxy, galvanized, etc.) for the welded wire baskets and steel reinforcement. - *R: The welded wire baskets simply act as a form during*

construction of the Geostorage system and do not provide any structural support. As such, coating is not required. **S: Defer to the Proponent Design Engineer.**

SW14. Provide monitoring for structural integrity in operation and maintenance plan. - *R: The operation and maintenance of the Geostorage infiltration system for IFB-27 will described further in the site specific Stormwater O&M Plan.* **S: Include inspection and maintenance of the structure in the Site specific O&M Plan.**

Outdoor Lighting. (§9.8.11.9)

The proposed parking is listed as 568 parking spaces adjacent to the building, with access to and from Harvard Street. The project narrative states that the site lighting will be in accordance with the Site Lighting plans dated 4/17/2013. The narrative also states that LED lighting will be considered as an alternative, once pricing is received.

Drawings E0.2 (Photometric Site Plan) and E0.2A (Photometric Cut Sheets) have been reviewed. The photometric plans are based on the use of LED fixtures. The lights include 23 foot square steel poles, with dark bronze fixtures and LED wall exterior lights.

The photometrics list an acceptable 0.5 fc minimum level for the parking area, which is consistent with the industry standard IESNA RP-20 for parking areas. The average/minimum uniformity ratio of the parking lot is shown as 3.92, which is close to and below the 4.0 ratio listed in Table 1 from the April 2013 proposed project lighting.

L1. Paragraph 9.8.11.9 of the University Ave Mixed Use District (UAMUD) requires that "Lighting shall be designed so as to avoid any material light trespass and glare on adjacent neighborhoods, business areas, and streets. Exterior lighting fixtures shall be of the full-cutoff type, and hoods and shields shall be incorporated as needed to prevent light trespass and glare." The lighting levels at the parking lot western edge appear to be 0.4-0.6 fc and should be reduced to minimize trespass off the property. - *R: As discussed in the November 22nd meeting, the lighting design is in conformance with the by-law.* **S: Explanation provided – issue resolved.**

L2. The lighting design does not provide photometric contribution for the outdoor pool area, which could add to the lighting levels, and lighting trespass. If the pool area is to be lit, include these values in the photometric plans. - *R: Pool area lighting will be reflected on the updated photometric plans.* **S: Information provided – issue resolved.**

L3. The proposed lighting fixtures are listed as dark bronze in color. The applicant should consider black fixtures to be consistent with the lighting design approved in April 2013 for the overall project. - *R: As discussed in the November 22nd meeting, the Applicant prefers that the light fixtures remain bronze.* **S: Information provided – issue resolved.**

Mixed Uses and Activities. (§9.8.11.10)

The Life Time Fitness project provides a complementary program to the overall University Avenue Master Development Plan. The Life Time project itself is described as containing a mix of uses within the PDR Report: "The Project provides a full range of fitness, sports, and exercise

opportunities for the community and is intended to complement the range of uses envisioned for the University Station project, including commercial, residential, and office uses (p. 11)."

M1. Provide hours of operation, maintenance schedules and seasonal use patterns, especially pertaining to the use and operation of the outdoor swimming pool and bistro. - *R: As indicated in the November 13th meeting with the Planning Board, the hours of the pool deck will be as follows:*

- *Lap Swim: dawn to dusk*
- *Family Swim: 10:00 AM to 8:00 PM*
- *Pool Slide: 11:00 AM to 7:00 PM*
- *Bistro: 11:00 AM to 7 :00 PM*

S: Information provided – issue resolved.

Energy Efficiency. (§9.8.11.11)

The application includes various commitments to energy efficiency which are consistent with the requirements outlined in the sustainability memorandum submitted as part of the Master Development Plan. It is expected that the design details of these commitments will be provided in the Construction Plan submission and will need to be validated by the Building Commissioner and or/Peer Review Team at that time.

Sustainability. (§9.8.11.12)

The application includes various commitments to sustainability which are consistent with the requirements outlined in the sustainability memorandum submitted as part of the Master Development Plan. It is expected that the design details of these commitments will be provided in the Construction Plan submission and will need to be validated by the Building Commissioner and or/Peer Review Team at that time.

Public Gathering Areas. (§9.8.11.13)

We note that a public gathering area was not considered for this site area as part of the general Master Plan development discussions and as such we do not see this criterion as applicable.

Air Quality, Noise, Vibration, Etc. (§9.8.11.14)

This performance standard states that the PDF shall comply with "applicable DEP standards…" The project shall not result in "noxious" impacts to the environment or the community, and the air quality, noise, and vibration impacts shall be appropriate for the project and the character of surrounding uses.

No quantitative sound level or air quality analyses were submitted as part of this PDR. The noise impact assessment done by University Station's consultant, Tech Environmental, Inc. (TEI), measured an existing ambient sound level of 47 dBA during nighttime hours at Partridge Drive (NSA-1) in the vicinity of this development [Noise Impact Analysis for University Station,

Westwood, MA, February 20, 2013, TEI]. The outdoor pool will be approximately 1400 feet from the nearest residence to the northwest along Canton Street. The 3-story building will be slightly further away than the outdoor pool.

Control measures for outdoor activity at the pool will be hours of operation (5 AM to 10 PM). These are reasonable. Mechanical rooftop equipment will probably be less than 45 dBA based on drop-off with distance alone. This assumes the loudest rooftop equipment assumed in the Core Development Areas analyzed by TEI of 106 dBA (sound power level). This is quieter than the quietest nighttime background of 47 dBA listed above, and thus is not expected to be an issue. Delivery truck activity will be controlled by limiting hours**.** Air quality impacts, if any, will be from vehicular traffic. As long as traffic levels are reasonably close to those predicted in the Master Development Plan, no adverse air quality impacts would be expected from operation of this PDR.

Construction Solid Waste Management. (§9.8.11.15)

C1. Provide a general outline of the demolition process in the application narrative. This should include the extent and timing of inspections for hazardous material such as lead paint and asbestos, and crushing and re-use of materials including BUD determinations. Inspection for pest issues should also be appropriate. Copies of filings to the EPA should be provided to the Health Department as required. - *R: A Demolition Permit will be obtained. Demolition and abatement will be performed in accordance with applicable local and state rules, laws and regulations.* **S: Defer to Building Department.**

C2. The application indicates the Proponent's commitments to the requirements of this section of the Bylaw and enforcement is largely a field coordination issue. With regard to the removal of tracks on the easterly portion of the existing site, we recommend that DWWD identify any special requirements with regard to limits of material that should be removed along with the track as dictated by water supply protection policy. Track material removed should be characterized in accordance with state and federal guidelines and stored or removed as dictated by those guidelines. - *R: Track removal will be performed in accordance with applicable local and state rules, laws and regulations.* **S: Information provided – compliance monitoring to be conducted by the Town Engineer as part of Construction Observation.**

C3. Also regarding track removal, the proponent should verify that the required discontinuances are approved. - *R: The Secretary of Transportation issued a Chapter 40, Section 54A consent letter on November 14, 2013.* **S: Provide letter for the Board's records.**

Water Quality. (§9.8.11.16)

The proposed design substantially conforms to the system approved as part of the Master Development Plan review process. Minor revisions to proposed plans do not adversely affect water quality objectives. Runoff from all buildings is directed to recharge areas as required by Section 9.8.5.2.6.

WQ1. Provide details of proposed emergency generator to document compliance with Section 9.3.7.5. - *R: No on-site emergency generator will be included as part of the Life Time Fitness*

project, however, a manual transfer switch will be provided to be used in conjunction with a temporary mobile emergency generator for building back-up power. Containment requirements for the mobile emergency generator will be addressed in the site specific Operations and Maintenance Plan. . **S: Provide narrative of key requirements including purpose, type, and location of temporary power generator, spill protection and response measures, for discussion with Board and inclusion in the Site specific O+M Plan.**

WQ2. Describe source of runoff to 18" pipe adjacent to pool deck. Discharge of pool water will require approval of DWWD. - *R: The 18" drainage line connection to the pool deck is intended to collect runoff from the Bistro building roof as well as surface drainage from the Life Time Fitness pool deck. It is not intended to collect discharges generated from the pool. This drainage line has been reduced from 18" to 12" to reflect the evolution of the Life Time Fitness building design. The updated Grading and Drainage plan is enclosed with this letter.* **S: Revise plan to indicate 12" pipe not 18".**

WQ3. Clarify the location of the Water Protection Overlay District (WRPOD). The WRPOD delineation line does not indicate which side the district is located on. - *R: Additional clarification has been added to the plans to indicate which side of the line the Water Resource Protection Overlay District (WRPOD) the site lies on.* **S: Plan revised – issue resolved.**

WQ4. Provide a copy of DWWD review comments and responses for review and consideration by the Planning Board. - *R: Coordination with DWWD is ongoing.* **S: Provide DWWD review comments and written responses for the Board's records.**

<u>Spill Prevention and Response. (§9.8.11.17)</u>

The overall Master Plan O+M plan includes detailed outlines on the requirements for spill prevention and response which will be applied to the Lifetime Development.

Given the unusually sensitive location of the overall University Station Development Site, and to promote general awareness of facility management, Lifetime should develop their own management plan which should reference the overall Project O+M as appropriate but also detail circumstances unique to Lifetime and how they would be managed. While the specifics of an O+M plan may be provided as part of a full Construction Document submission, key issues should be highlighted now. The following may highlight additional considerations for the Town.

SP1. Provide specifics on chemical or hazardous material storage or usage as it relates to use of the pool, health and wellness activities etc. that may be unusual or unique to the facility. - *R: Pool chemicals and/or hazardous materials will be stored on-site. Additional supplemental information related as such will be provided and addressed in a Life Time Fitness specific spill response plan.* **S: Provide Spill Response Plan in the Site specific O+M Plan.**

SP2. Provide information on emergency power service. - *R: Please note the response to item WQ1 above.*

Water Efficiency. (§9.8.11.18)

The narrative indicates that the current design expects water usage in the facility to be approximately 10,000 GPD less than was indicated in the Master Plan water budget calculations. This would generate a substantial improvement to the projected annual water budget surplus. Also noted is the Proponent's continued commitment to the use of water sense fixtures.

WE1. Provide back up on the basis of the water demand using existing Life Time fitness facilities. - *R: Water usage bills from Life Time Fitness facilities located in New Jersey have been summarized in a spreadsheet and attached for reference.* **S: Provide additional data to confirm comparable size and types of facilities.**

WE2. Provide details of proposed Water Sense fixtures and document how 20% water use reduction is obtained compared to baseline building code requirements as part of the construction document submission. - *R: Fixtures bearing the WaterSense labels are certified by the US EPA to reduce water consumption by 20%.* **S: Defer to Building Department.**

WE3. Document total landscape area and water use requirements for irrigation. - *R: The total landscape area is approximately 60,000 SF, of which approximately 30,000 SF is to be irrigated. The majority of the irrigation will be provided via an efficient drip system and the proposed plants are primarily native/drought tolerant species. The estimated peak summer demand could be as high as 13,000 gallons for certain summer weeks, and about half of that for most of the spring and fall (6,500 gallons per week).* **S: Information provided – issue resolved.**

Signage (§9.8.10)

S1. Section 9.8.10: Conformance cannot be established. Signage shown on exterior building elevations is not dimensioned, and no materials are identified. There is no signage description in the PDR Report. Section 9.8.10.2 states that the wall signs shall not exceed 2 sq. ft. of signage for each linear foot of façade. - *R: Supplemental building signage shall be provided to demonstrate conformance and it shall indicate:*

1. *Building wall signage will consist of halo lit, raised letters in a combination of brushed or polished aluminum.*
2. *Building wall signage will comply with signage size regulations with a protrusion of no more than 5" from building face.*

S: Information provided – issue resolved.

S2. Development Identification Sign (called a monument sign in the plans) conforms to Section 9.8.10.1. - *R: We concur.* **S: Provide monument sign detail that was deleted from prior plan set.**

S3. Provide dimensions of wall signs relative to exterior elevations to demonstrate conformance. - *R: Please note the response to item S1 above.*

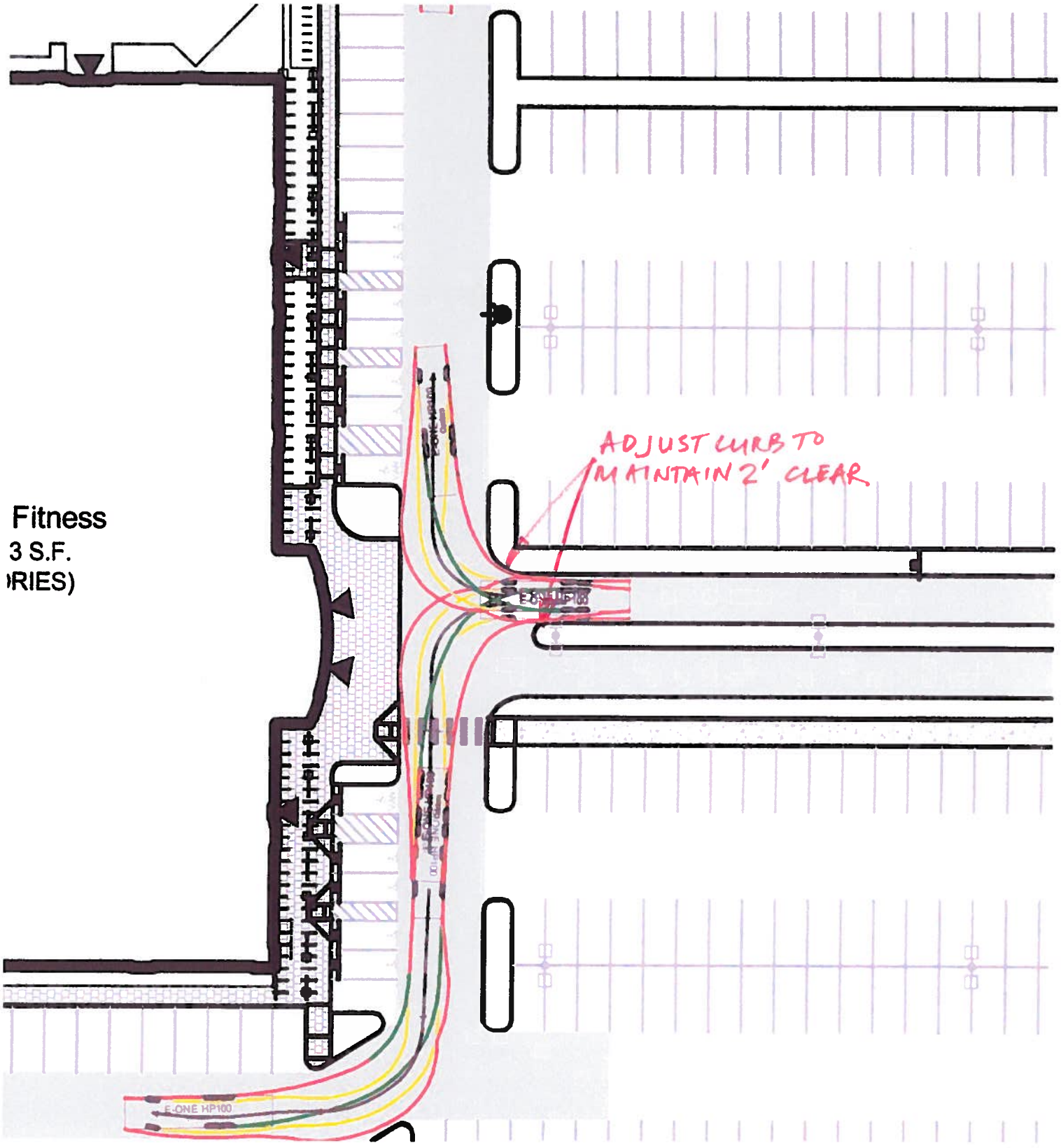
S4. Provide information regarding sign illumination. - *R: Please note the response to item S1 above.*

If we can be of any further assistance regarding this matter, please contact us at our office.

Very truly yours,
BETA Group, Inc.

Merrick Turner, PE
Associate

cc: Nora Loughnane



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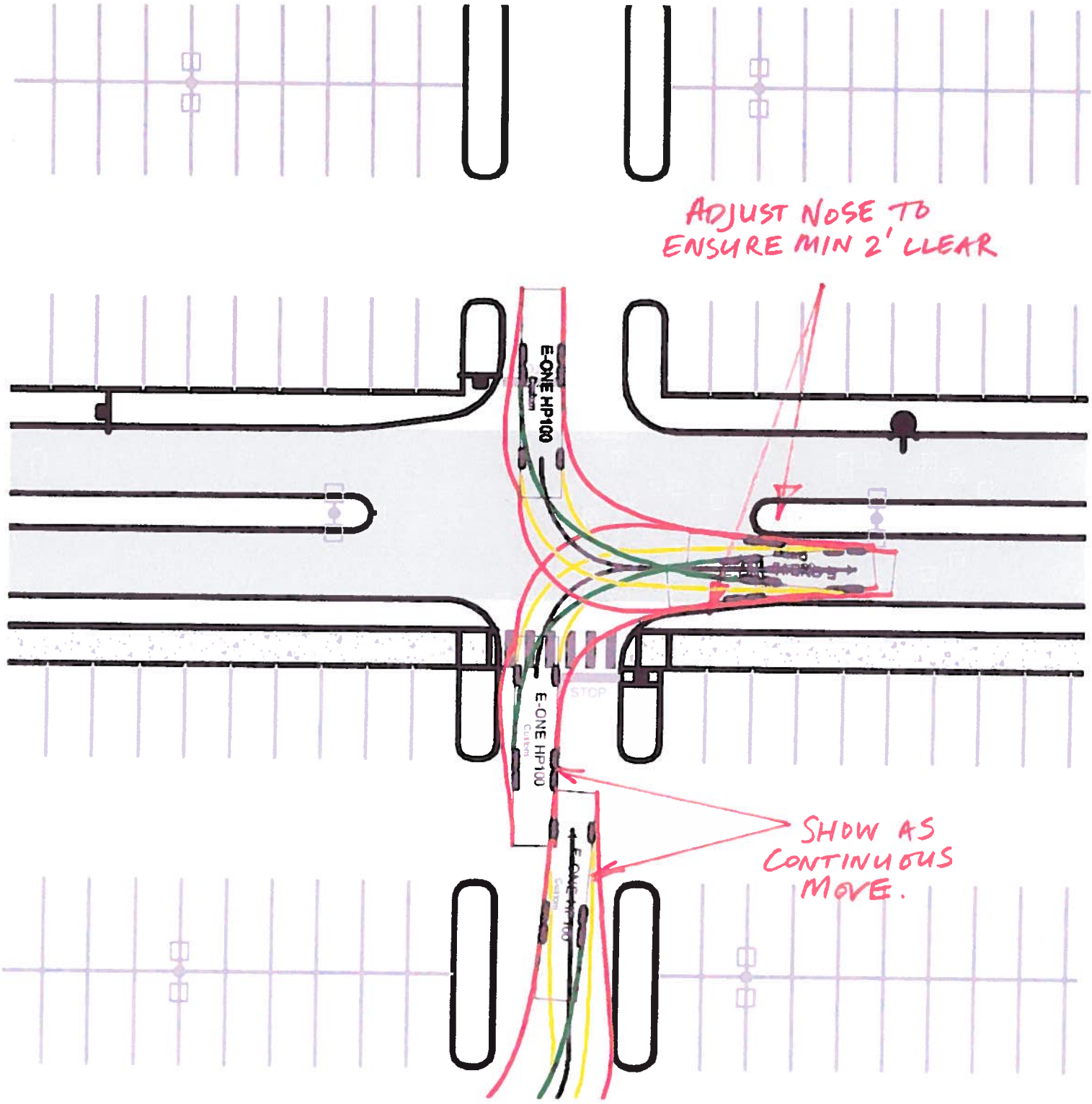
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