



January 3, 2020
(revised March 5, 2020)
(revised March 20, 2020)

Mr. John J. McNicholas
Chair, Medfield Zoning Board of Appeals
Town House
459 Main Street
Medfield, MA 02052

**Re: **Aura at Medfield – Comprehensive Permit
 Engineering Peer Review
 Medfield, Massachusetts****

Dear Mr. McNicholas:

Tetra Tech (TT) has reviewed specific submittal materials for the above-referenced Project to assist the Medfield Zoning Board of Appeals (Board) in its Comprehensive Permit review of the proposed Aura at Medfield development. The following letter provides comments generated during our review of Applicant submittals and generally focus on substantive concerns that speak to issues whose eventual resolution may substantially impact Project design or could otherwise result in potentially unsafe conditions or unanticipated impacts.

Our review is based on materials received from the Board comprising the following pertinent documents:

- A Comprehensive Permit Application titled “Aura at Medfield”, dated October 31, 2019, prepared by Mayrock Development LLC (MDL).
- A plan (Plans) set titled "Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA", dated October 29, 2019, prepared by Legacy Engineering LLC (LEL).
- An architectural plan set titled “Aura at Medfield, 50 Peter Kristof Way – Medfield, MA” dated October 24, 2019, prepared by CJC Architectural Design (CJC).
- A Stormwater Management Report (Stormwater Report) titled “Stormwater Report for Aura at Medfield” dated October 29, 2019, prepared by LEL.
- A water-sewer project letter dated October 19, 2018, prepared by LEL (formerly Merrikin Engineering, LLP).
- A Traffic Impact Assessment (TIA) titled “Proposed American Legion Apartments (40B)” dated October 30, 2019, prepared by MDM Transportation Consultants, Inc. (MDM).

The Plans and accompanying materials were reviewed for good engineering practice, overall site plan efficiency, stormwater, utilities, traffic and public safety. In general, the plans and supporting materials were well prepared and we appreciate the clarity and completeness of documents provided. Our initial comments are provided below.

TT 3/5/20 Update

The Applicant has supplied TT with a revised submission addressing comments provided in our previous letter. The submission includes the following documents:

- A plan (Plans) set titled "Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA", dated October 29, 2019, revised February 4, 2020, prepared by LEL.

- A Stormwater Management Report (Stormwater Report) titled “Stormwater Report for Aura at Medfield” dated October 29, 2019, revised February 4, 2020, prepared by LEL.
- A Response to Comments letter dated February 6, 2020, prepared by LEL.

The revised Plans and supporting information were reviewed against our previous comment letter (January 3, 2020) and comments have been tracked accordingly. Text shown in gray represents information contained in previous correspondence while new information is shown in black text.

TT 3/20/20 Update

The Applicant has supplied TT with a revised submission addressing comments provided in our previous letter. The submission includes the following documents:

- A Response to Comments letter dated March 5, 2020, prepared by MDM.

The revised Plans and supporting information were reviewed against our previous comment letter (March 5, 2020) and comments have been tracked accordingly. Text shown in gray represents information contained in previous correspondence while new information is shown in black text.

SITE DESIGN

The Site Plans provide a good introduction to the Project and its various components and shows the Project is placed in an appropriate location on the site in upland area and is largely contained within existing disturbed areas. The following specific comments are offered to identify areas where additional information is required, or changes are requested to address questions or support further review.

1. Emergency access to the rear of the building has not been proposed. We recommend a condition requiring the Applicant to further coordinate with Medfield Fire Department regarding access to the rear of the building.
 - *LEL 2/6/20 Response: The applicant would agree to such a condition. Note also that a reinforced turf lane has been added along the easterly end of the building for the fire department access.*
 - TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.
2. Snow storage areas do not appear to be adequate to serve the site. We recommend a condition requiring the Applicant provide additional snow storage areas.
 - *LEL 2/6/20 Response: Additional snow storage areas have been added to the plan. On sheet C-3, snow storage notes also indicate that snow will be plowed into windrows along the edge of pavement, and that where on-site capacity is exceeded, snow will be removed from the site in accordance with state, local and federal regulations.*
 - TT 3/5/20 Update: Comment resolved.
3. Light spill along the western property boundary with Peter Kristof Way is proposed based on the Lighting Plan of Land, Sheet C-5. However, we do not anticipate this to be an issue as there are no residential abutters to the project. Additionally, lighting has not been proposed at the rear of the building particularly at the rear building access points. We recommend a condition requiring the Applicant coordinate lighting with Town.
 - *LEL 2/6/20 Response: The applicant has no objections to such a condition. Additional lighting has been added behind the building.*
 - TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.

4. A formal landscape plan has not been provided. We recommend a conditions requiring the Applicant provide a landscape plan during final review of the Project.
 - *LEL 2/6/20 Response: The applicant has no objection to such a condition.*
 - TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.

STORMWATER

The Site Plans depict a comprehensive system of infrastructure collecting and conveying runoff to on-site mitigation prior to final discharge. The site contains wetland resource areas on the northern and eastern sides of the property and is also located in the Zone II Wellhead Protection Area. The proposed stormwater design was reviewed against the Massachusetts Department of Environmental Protection's (MA DEP) Stormwater Standards (Standards) and appurtenant Stormwater Handbook (Handbook) and good engineering practice. The following specific comments are offered specific to the Project Stormwater design and related analysis and unless otherwise stated all comments shall be included as conditions in the Comprehensive Permit Decision to be completed prior to final acceptance of the project by the Board.

5. The Applicant has included gravel surfaces as impervious in the existing conditions HydroCAD analysis. While the gravel may be compact and may have a high runoff potential it is not standard practice to include these as impervious surfaces in analysis of the site.
 - *LEL 2/6/20 Response: The curve number for gravel has been reduced to 88-90.*
 - TT 3/5/20 Update: Comment resolved.
6. The test pit log provided in the Stormwater Report shows fill, medium sand and loamy sand (top to bottom) within the test pit at the proposed location of the UIF. In this case, the loamy sand layer is the limiting layer with a Hydrologic Soil Group "A" rating with an associated Rawl's Infiltration Rate (Rawl's rate) of 2.41 inches per hour (in/hr). The Applicant used a Rawl's rate of 8.27 in/hr associated with the medium sand layer in the analysis. Exfiltration from the system in the HydroCAD analysis should reflect the limiting layer in the test pit and the 2.41 in/hr Rawl's rate.
 - *LEL 2/6/20 Response: While we are of the view that this is a conservative approach since highly porous sand surrounds the system and extends 2.75 feet below the bottom of the system, we have revised the stormwater calculations to reflect the suggested Rawl's rate. As a result the UIF has increased in footprint and the lower profile 100HD Cultec units are used instead of the previously specified 300XLHD units.*
 - TT 3/5/20 Update: Comment resolved.
7. The UIF reaches a peak elevation of approximately 146.8 which is also the rim elevation of the double catch basin connected to the system which captures much of the flow from the western side of the site. This may cause a flooding issue if the basin reaches capacity during a storm event or if multiple storm events occur successively. We recommend the Applicant provide freeboard in the basin to account for this situation.
 - *LEL 2/6/20 Response: Multiple changes have been made to the HydroCAD model to address other comments. As a result, the peak elevation in the system only reaches elevation 145.9, ensuring that the catch basin rim in question will not be impacted. Freeboard is mostly provided for open basins to account for variability in the construction of earthen berms and to ensure that those berms are not overtopped and eroded. UIF systems do not have those concerns.*

- TT 3/5/20 Update: Comment resolved.
- 8. We recommend the Applicant install Cultec Separator row to ensure the system can be cleaned if necessary.
 - *LEL 2/6/20 Response: A separator row has been added to the infiltration field design.*
 - TT 3/5/20 Update: Comment resolved.
- 9. Proposed UIF is located below a curbed island with proposed trees. We recommend relocating the system completely below paved surface to limit root infiltration and possible damage to the system.
 - *LEL 2/6/20 Response: The plan has been revised to specify small bushes instead of trees for the island above the field.*
 - TT 3/5/20 Update: Comment resolved.
- 10. We recommend the Applicant provide sizing calculations for proposed stormwater piping.
 - *LEL 2/6/20 Response: Every significant stormwater pipe segment is modeled in HydroCAD, demonstrating their adequacy for anticipated flows.*
 - TT 3/5/20 Update: Comment resolved.
- 11. We do not recommend placing filter fabric below the proposed UIF. However, installation shall be conducted per manufacturers recommendation.
 - *LEL 2/6/20 Response: The infiltration field detail has been revised accordingly. The separator row is to be wrapped entirely in fabric per the manufacturer's recommendation.*
 - TT 3/5/20 Update: Comment resolved.

EROSION AND SEDIMENTATION CONTROL

The Applicant has supplied a Stormwater Pollution Prevention Plan (SWPPP) in the Stormwater Report. The following comments are offered specific to the Project and potential for off-site erosion during construction.

- 12. The Project will require coverage under the United States Environmental protection Agency (US EPA) National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges from Construction Activities (CGP) and appurtenant SWPPP, a template for the permit coverage has been included in the Stormwater Report. We recommend a condition requiring the Applicant provide proof of coverage under the permit prior to start of construction.
 - *LEL 2/6/20 Response: The applicant has no objection to such a condition.*
 - TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.
- 13. Inlet protection should be included on the SWPPP Plan since drainage will be installed early in the construction process. Additionally, careful grading throughout construction should be established to prevent low spots at the proposed catch basin locations to ensure sediment laden runoff does not enter the stormwater system and impact the UIF. Additionally, we anticipate the need for temporary sedimentation basins to control stormwater on-site during the construction process.
 - *LEL 2/6/20 Response: A note has been added to the SWPPP plan calling for inlet protection and additional notes are provided on sheet C-1 of the site plan. We do not anticipate the need for sedimentation basins because the site is small and sheds in all directions via sheet flow. Site*

soils are also good for infiltration. However, the SWPPP includes a section on page 11 calling for sedimentation basins to be constructed if needed.

- TT 3/5/20 Update: Comment resolved.
- 14. Proposed material storage areas, equipment storage/fueling locations, etc. should be shown on the SWPPP plan. Much of the site is included in buffer zone to adjacent resource areas and we anticipate Medfield Conservation Commission will require these areas be located outside of the buffer zone. We recommend a condition that all material storage be provided outside of resource area buffer zones.
 - *LEL 2/6/20 Response: The SWPPP plan has been changed accordingly. The applicant has no objection to such a condition.*
 - TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.

WATER

The Applicant has not supplied narrative related to proposed water demand at the site. The Plans indicate the Project will be served by public water via connection to an 8-inch water main in Peter Kristof Way. Items provided below should be coordinated with the Town of Medfield Water Department (MWD) to determine if the project meets town water standards and whether the development can be adequately served by the municipal water system. The following comments are offered specific to the Project water system and related analysis or lack thereof.

- 15. We recommend the Applicant provide water demand and fire flow calculations for the Project. We do not anticipate issues with water supply to the site, however water demand should be calculated to confirm with MWD and to provide basis for determining if the Project is viable as proposed based on current water supply conditions or if additional mitigation to the water system is required. Calculations should be provided prior to issuance of the Comprehensive Permit Decision.
 - *LEL 2/6/20 Response: The proposed building has 56 units with a total of 90 bedrooms. Max day water consumption estimates are based on the Title V sewage design rates per bedroom and the assumption that 95% of water use flows to the sewer. Therefore, the following calculation is used:
9,900 gpd sewer flow / 95% = 10,425 gpd.*

Average day water consumption flow rates are approximately 50% of max day consumption and is estimated at 5,200 gpd.

These figures have been discussed with the MWD, who has indicated that the municipal water systems are adequate to supply water to the proposed development.

Fire flow calculations will be provided to the town during the Building Permit phase as part of the building's fire suppression system rating.

 - TT 3/5/20 Update: Comment resolved.

SEWER

The Applicant has not supplied narrative related to proposed sewer generation at the site. The Site Plans indicate the Project will connect to municipal gravity sewer in West Street, wastewater from the Site will be conveyed by gravity to the proposed connection to existing sewer infrastructure located on the west side of Peter Kristof Way adjacent to the intersection with West Street. In all items provided below, the Applicant should coordinate with the Town of Medfield Sewer Department (MSD) to determine if the project meets town

standard and whether the development can be adequately served by the municipal sewer system. The following comments are offered specific to the Project sewer system and related analysis or lack thereof.

16. The Applicant has not provided analysis of the existing sewer system and whether it can support the proposed development. The project is expected to generate a maximum daily flow rate of approximately 9,900 gpd (90 bedrooms @ 110 gpd/bedroom) based on MA Title V design flow rates. We recommend the Applicant provide documentation demonstrating adequate capacity exists within the municipal sewer system downstream of the project connection and coordination with MSD has been sought. Documentation should be provided prior to issuance of the Comprehensive Permit Decision.

- *LEL 2/6/20 Response: The proposed sewer connection point is at an 8" sewer main, which is approximately 350 feet upstream of a major interceptor line. The max daily flow rate (based on Title V design flows) is 9,900 gpd and the average day flow rate is approximately 4,950 gpd. Estimated peak flow rates from the proposed development are 0.1-0.2 cfs. An 8" sewer main laid at 1% slope has a full capacity of 1.4 cfs.*

There are only a handful of users connected to the 8-inch main and it has ample capacity for the proposed development. We are in the process of discussing the configuration of the proposed sewer connection with DPW and will respond further on this topic at a later date.

- TT 3/5/20 Update: Comment resolved for the purposes of this phase of review. We recommend a condition that a final sewer plan be provided which is acceptable to Medfield DPW prior to final approval of the project.

17. Information should be provided documenting the anticipated connection fees and describing any proposed inflow/infiltration (I/I) mitigation measures or related fees to be paid by the Project. We recommend the Applicant provide documentation related to I/I mitigation measures and coordination with MSD has been sought. Documentation should be provided prior to issuance of the Comprehensive Permit Decision.

- *LEL 2/6/20 Response: DPW has indicated that sewer connection fees will be \$2,000.00 per dwelling unit. DPW has further indicated that I/I mitigation or related fees are not required.*

- TT 3/5/20 Update: Comment resolved.

18. Existing septic systems on-site are proposed to be abandoned. The work should be completed to Medfield Board of Health (BOH) standards and we recommend a condition requiring the Applicant provide documentation from the BOH once the work is completed.

- *LEL 2/6/20 Response: The applicant has no objection to such a condition.*

- TT 3/5/20 Update: Comment resolved for the purposes of this phase of review.

TRAFFIC

The project calls for the demolition of the existing American Legion facility located on site to accommodate the construction of a new 4-story multifamily residential building with 56 units, a 1,500 square foot (sf) function room and 96 off-street parking spaces. As part of the project, the existing two site access driveways on Kristof Way (a dead-end roadway) will be closed and a new single, unsignalized site driveway will be constructed on Kristof Way approximately 60 feet south of the driveway serving Medfield Veterinary Clinic (51 Kristof Way).

Tetra Tech has reviewed the October 2019 TIA for conformance with standard professional practices in the state of Massachusetts for the preparation of traffic impact studies for projects of the size and nature of the proposed Aura at Medfield residential development. The following traffic study elements have been reviewed and generally conform to industry standards:

- Study area intersections evaluated
- Time periods evaluated (weekday peak commuter periods from 7AM to 9AM and 4PM to 6PM)
- Study intersection turning movement count (TMC) data
- Seasonal adjustments
- Consideration of public transportation services in the area
- Crash analysis based on Massachusetts Department of Transportation (MassDOT) crash data
- Study time horizon reflecting Design Year 2024 (5-year forecast period)
- General background traffic growth rate (1 percent per year)
- Area background projects
- Project trip generation, distribution and assignment

Tetra Tech offers the following comments on the traffic study:

TT 3/5/20 Update: TT has not received a response letter from MDM. However, we do not believe the comments below will materially affect the layout of the proposed project and we recommend the Board condition relevant traffic items for review prior to final acceptance.

Tetra Tech has reviewed the transportation-related responses prepared by MDM Transportation Consultants, Inc. (MDM) in their March 5, 2020 memo titled *Response to Comments, Proposed American Legion Apartments (40B), 110 Peter Kristof Way – Medfield, MA* and the latest site plans received by Tetra Tech (*Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA* prepared by Legacy Engineering LLC; dated October 29, 2019 Latest Revision February 4, 2020).

The Proponent has addressed many of Tetra Tech's initial comments dated January 3, 2020 with the exception of the following four items:

- Demonstrate that adequate sight distance will be provided at the Peter Kristof Way intersection with West Street by including the SSD and ISD triangles on the final site plans
- Install MUTCD-compliant Stop lines and Stop bars at the proposed site driveway approach to Peter Kristof Way and the Peter Kristof Way approach to West Street
- Install an ADA-compliant sidewalk between the site and the proposed school bus stop location on West Street and indicate the location of the bus stop on the final site plans
- Ensure that any on-site islands are constructed with mountable curbing, where needed, to accommodate emergency vehicles circulating through the site

Tetra Tech recommends that, as a condition of approval for the project, these items be included in the final site plans and that the site access and circulation be reviewed and approved by the Medfield Fire Department. Our specific comments to the latest submission materials are provided below.

Traffic Volumes

19. The 24-hour automatic traffic recorder (ATR) counts were conducted during the same week as the TMCs on Tuesday, October 30, 2018. The data was collected on West Street east of the site driveway. The weekday morning and evening peak hour volumes from the TMCs were nearly twice the peak hour volumes collected using the ATRs. We recommend a condition requiring the Applicant confirm the discrepancy between the TMC and ATR data.

- *MDM 3/5/20 Response: The 24-hour automatic traffic recorder (ATR) counts were conducted on Tuesday, October 30, 2018, the same day as the TMCs. The ATR counts were conducted along West Street to the east of the site driveway and to the east of West Mill Street. The peak hour ATR traffic volumes are consistent with the peak hour TMCs to the east of West Mill Street. The ATR with the re-labeled count location is included in the Attachments.*
 - TT 3/20/20 Update: Tetra Tech has reviewed the ATR data based on the re-labeled ATR location and agrees that the ATR traffic volumes are consistent with the TMC volumes along West Street to the east of West Mill Street. No further analysis is required, comment resolved.

Sight Distance

20. Tetra Tech recommends that the Applicant provide the horizontal sight triangles for both stopping sight distance (SSD) and intersection sight distance (ISD) on the site plans at the Peter Kristof Way/West Street intersection to ensure that adequate sight lines will be provided based on AASHTO-required stopping sight distances (SSD) and AASHTO-recommended ideal ISD for the observed 85th percentile travel speeds. SSD and ISD criteria should be based on A Policy on Geometric Design of Highways and Streets 7th Edition, 2018. The SSD and ISD sight triangles should be within the public right-of-way and should be kept clear of objects greater than 2 feet tall as recommended in the TIA.

- *MDM 3/5/20 Response: The sight triangles will be included in the final plan set by Legacy Engineering.*
 - TT 3/20/20 Update: The stopping sight distance (SSD) and intersection sight distance (ISD) triangles are not provided in the latest site plans received by Tetra Tech (*Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA* prepared by Legacy Engineering LLC; dated October 29, 2019 Latest Revision February 4, 2020). Tetra Tech recommends that, as a condition of approval of the project, that the SSD and ISD sight triangles be provided on the final site plans to ensure that minimum sight distance criteria published by the American Association of State Highway Transportation Officials (AASHTO) is satisfied.

Trip Generation

21. Trip Generation Land Use Code (LUC) 221 – Multifamily Housing (Mid-Rise) trip rates were applied to 56 units which is reasonable for a project of this size and type. The TIA takes credit for the traffic generated by the recent school bus use at the site parking lot. Although the peak period turning movement count data for the site driveway at Peter Kristof Way was not provided in the TIA, the trip generation credit taken was not significant (less than one vehicle trip per minute) and did not materially impact the capacity analysis results. Therefore, the trip generation used in the TIA is reasonable and no further analysis is needed.

- *MDM 3/5/20 Response: No Response required.*
 - TT 3/20/20 Update: Comment resolved.

Intersection Capacity Analysis

22. The TIA states that the Proponent will work with the Town to implement the near-term/low-cost safety improvements outlined in the June 2019 MassDOT Road Safety Audit (RSA) prepared for the Route 27/North Meadows Road intersection including traffic calming measures, signal clearance time evaluation, improved signage, stop bar placement review, vegetation clearing and approach lane

narrowing. In addition to the items listed in the TIA, it is recommended that the Applicant also include in their mitigation package traffic signal timing and optimization which is one of the near-term/low-cost improvements outlined in the RSA. Additionally, we recommend a condition requiring the Applicant to confirm which mitigation measures are being committed to prior to issuance of the Comprehensive Permit Decision.

- *MDM 3/5/20 Response: The Proponent has committed to working with the Town to implement the near-term/low-cost safety improvement outlined in the June 2019 MassDOT Road Safety Audit (RSA) prepared for the Route 27/West Street. Specifically, as part of the Memorandum of Understanding (MOU) executed between the Proponent and the Town of Medfield, "As mitigation for the proposed Project, Developer shall pay the Town a sum of Fifteen Thousand Dollars (\$15,000) for the Route 27/North Meadows Road and West Street intersection improvements. Payment shall be made the issuance of the comprehensive permit for said project." Based on a review of the recommended improvements and discussions at the last ZBA hearing on Thursday, January 9, 2020, it is recommended that the Town use the funds as follows or to advance roadway improvements at the Route 27/West Street intersection:*

- *Update the pavement markings and signage to include dedicated left turn lanes on the Route 27 approaches to the intersection.*
- *Re-evaluate clearance times (yellow and all-red) based on the regulatory and 85th percentile travel speeds.*
- *Install "signal" ahead signs (W3-3) on the Route 27 approaches to West Street.*
- *Review of signal timing to determine if current signal phasing is proportionately allocated based on volumes to reduce driver impatience and the likelihood of red light running. Consider alternative time of day single phasing if necessary. (Complete – not warranted)*

As stated in the TIA the signalized intersection of Route 27 and West Street is fully-actuated based on traffic demands and will continue to operate below capacity at LOS C or better during peak hours, therefore, beyond re-evaluating clearance times, traffic signal retiming and commitment will be provided in the form of funding to be used at the Town's discretion for intersection improvements at Route 27/West Street.

- *TT 3/20/20 Update: Noted – no further analysis is required, comment resolved.*

23. Tetra Tech identified discrepancies with some of the data entries in the capacity analysis worksheets including lane configuration assumptions at the signalized intersection and heavy vehicle percentages. For example, the TIA evaluated the eastbound and westbound approaches to the Route 27/West Street intersection as an exclusive left-turn lane and a shared through/right-turn lane in each direction. Tetra Tech observed them to generally accommodate one lane of travel, on average, rather than two travel lanes. Should the Town require the Proponent to include signal timing modifications as part of the project's traffic mitigation, we recommend a condition requiring the Applicant revisit the capacity analysis entries and settings as part of any traffic signal optimization analyses.

- *MDM 3/5/20 Response: The capacity analysis at the intersection of Route 27 and West Street was run based on the observed intersection operating conditions. Specifically, given the pavement width of the Route 27 approaches and the intersection storage area, through and right-turn vehicles were observed by-passing left turning vehicles on all approaches to the intersection. For comparison purposes the capacity analyses for under Build conditions were re-evaluated for the intersection of Route 27 and West Street assuming all single-lane approaches. The results of*

the intersection capacity are summarized below in Table R1. Detailed analysis results are presented in the Attachments.

As summarized in Table R1, the alternative analysis methodology result in highly comparable results to those used in the TIAS. The intersection will continue to operate below capacity at LOS C or better during peak hours and no signal re-timing is warranted.

- TT 3/20/20 Update: Tetra Tech agrees that the alternative single-lane approach capacity analysis results reported in Table R1 are highly comparable to the multi-lane approach capacity analysis results reported in the October 2019 TIA. No further analysis is required, comment resolved.

Site Access/Emergency Access

24. The proposed site driveway on Peter Kristof Way (a dead-end roadway) is offset from the existing veterinary driveway by approximately 60 feet. Although Peter Kristof Way is a very low-volume roadway, we recommended the Applicant evaluate the feasibility of relocating the proposed site driveway further north to align with the existing veterinary driveway.

- *MDM 3/5/20 Response: Based on a review of the driveway location and initial discussions with the Fire Department the preference for the proposed site driveway is to remain offset from the existing veterinary driveway to provide the most efficient emergency route for the department with respect to the site layout. As a condition of the project, the Proponent will obtain the fire department's approval for the site circulation including the final driveway locations.*
 - TT 3/20/20 Update: Noted – no further analysis is required, comment resolved.

25. The TIA recommends that the Proponent install stop sign and stop line pavement markings on the proposed site driveway approach to Peter Kristof Way and the Peter Kristof Way approach to West Street. Tetra Tech agrees with this recommendation and further recommend the Stop bars and Stop lines be compliant with the Manual on Uniform Traffic Control Devices (MUTCD).

- *MDM 3/5/20 Response: MDM concurs that the Stop signs and Stop lines to be installed on the proposed site driveway approach to Peter Kristof Way and the Peter Kristof Way approach to West Street shall be compliant with the MUTCD. The final Legacy site plan will include these features which can be included as a condition of approval.*
 - TT 3/20/20 Update: The MUTCD-compliant Stop signs and Stop lines are not provided in the latest site plans received by Tetra Tech (*Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA* prepared by Legacy Engineering LLC; dated October 29, 2019 Latest Revision February 4, 2020). Tetra Tech recommends that, as a condition of approval of the project, that the Stop signs and Stop lines be provided on the final site plans.

26. Since Peter Kristof Way is a dead-end roadway, the Applicant should discuss school bus pick-up/drop-off with the Medfield Public Schools and/or their school bus service provider to determine the most appropriate location for a bus stop. We recommend a condition requiring the Applicant ensure that any required pedestrian accommodations connecting the site to an off-site bus stop be ADA-compliant. Additionally, if the bus stop will be located on Peter Kristof Way or on site, we recommend a condition requiring the Applicant conduct an AutoTurn analysis of a school bus to ensure that it can be adequately accommodated.

- *MDM 3/5/20 Response: It is understood that the bus stop location will be at the corner of West Street and Peter Kristof Way. As such the Proponent will install an ADA compliant sidewalk connection between the Site and West Street with an appropriate waiting area. The final Legacy site plan will include these features. It is our understanding that the bus will pick-up and drop-off students on the Peter Kristof Way side of West Street so they will not have to cross West Street. The Proponent will continue work with the Medfield Public Schools as the project proceeds with respect to the future bus stop.*
 - TT 3/20/20 Update: The sidewalk and bus stop are not provided in the latest site plans received by Tetra Tech (Aura at Medfield, 50 Peter Kristof Way, Site Plan of Land in Medfield, MA prepared by Legacy Engineering LLC; dated October 29, 2019 Latest Revision February 4, 2020). Tetra Tech recommends that, as a condition of approval of the project, the bus stop and sidewalk be provided on the final site plans.

27. Tetra Tech recommends that the Applicant conduct an AutoTurn analysis of the largest emergency apparatus operated by the Town and review with the Medfield Fire Department to ensure safe and efficient emergency mobility in and around the site. We recommend a condition requiring the analysis and coordination with Medfield Fire Department has been sought prior to final submission of Plans.

- *MDM 3/5/20 Response: Legacy Engineering has prepared an AutoTurn analysis for the Medfield Fire Truck (see Attachments). The Proponent will continue to work with the fire department regarding their access needs for the Site.*
 - TT 3/20/20 Update: The AutoTurn analysis indicates the wheels of the fire truck evaluated may need to travel over the proposed island within the site parking lot. It is recommended that the Proponent consider reducing the size of the island or installing a mountable curb at this location. Per MDM's Response 5, the Proponent will obtain the fire department's approval for the site circulation as a condition of approval of the project. Tetra Tech recommends that, as a condition of approval of the project, that the final site plans be reviewed and approved by the Medfield Fire Department as they relate to emergency vehicle site access and circulation.

Parking

28. The TIA states that on-site parking supply is proposed to be 93 spaces (1.66 spaces per unit) and the proposed parking supply shown on the October 29, 2019 Site Plan of Land Sheet C-3 is 96 spaces (1.71 spaces per unit). Both proposed parking ratios are below the Town standard of 2 spaces per unit but exceed the industry standard average peak parking demand of 1.23 spaces per unit published by ITE. We recommend a condition requiring plans and supporting information be consistent prior to final submission and we believe relief from the town parking requirement is suitable based on review of parking ratios for similar projects in the area and proposed scope of this Project.

- *MDM 3/5/20 Response: MDM concurs that the industry standard (ITE) average parking demand is 1.23 spaces per unit and that the parking ratio provided at the Site is suitable to meet the demand of the project. The on-site parking supply is proposed to be 96 spaces (1.71 spaces per unit) as shown on the Site Plan Set prepared by Legacy Engineering and is subject to refinement on the final plan set.*

- TT 3/20/20 Update: Tetra Tech concurs that the parking ratio of 1.71 spaces per unit is suitable to meet the demand of the project. No further analysis is required, comment resolved.

These comments are offered as guides for use during the Town's review and additional comments are likely to be generated during the course of review. The Applicant shall be advised that any absence of comment shall not relieve him/her of the responsibility to comply with all applicable local, state and federal regulations for the Project. If you have any questions or comments, please feel free to contact us at (508) 786-2200.

Very truly yours,



Sean P. Reardon, P.E.
Vice President



Steven M. Bouley, P.E.
Senior Project Engineer

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