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June 6, 2022

Carver Planning Board
108 Main Street
Carver, MA 02330

Re: Ricketts Pond Business Park, Lot 1 – Site Plan Review
Property Owner: RPBP, LLC
Applicant: American Electrical Construction, Inc.
Spring Street
Carver Massachusetts

Dear Planning Board Members,

This letter is in response to a review letter dated May 19, 2022 from Andrew G. Glines, P.E. of Fuss & O'Neill on behalf of the Town of Carver Planning Board.

Enclosed herewith are copies of the following:
This letter is in response to questions and comments in review Memorandum dated May 19, 2022 from Andrew G. Glines, P.E., of Fuss & O'Neil (F&O) for the above referenced project.

Enclosed herewith are the following:

- Plans entitled "Site Development Plans, Ricketts Pond Business Park, Lot 1, Off Spring Street, Carver, Massachusetts" prepared by McKenzie Engineering Group, Inc. (MEG) dated February 28, 2022 with a latest revision date of June 6. (Seven (7) full size and seven (7) 11 x 17)
- "Spill Containment and Management Plan" (Seven (7) copies)
- Drainage Calculations and Stormwater Management Plan prepared by MEG dated February 28, 2022 with a latest revision date of June 6, 2022. (Two (2) copies)
- Wall Pack Cut Sheet prepared by ASD Lighting. (Seven (7) copies)

Responses by McKenzie Engineering Group, Inc. (MEG) correspond to the outline of the review letter. MEG responses are italicized and in blue.

General Comments

1. F&O understands that Lot 1 and Ricketts Pond Drive are part of an active construction site. F&O requests an updated survey be completed to provide F&O and the Town with the information to verify that the proposed development of Lot 1 is consistent with the previously approved Definitive Plan.

2. Now that Lot 1 is closer to the proposed subgrade elevation, test pit data shall be provided to verify seasonal high groundwater elevation and soil textural classification. F&O requests copies of the test pits conducted for the septic system, as well as one within the vicinity of the existing Infiltration Basin No. 2.
   Test pit data and locations have been added to Dwg. No. C-3. Test pit data has also been added to the Existing Conditions Plan (EX-1).

3. If approved, F&O recommends a **condition** requiring that Rickets Pond Drive and associate utilities be constructed for the entire frontage of Lot 1 prior to the issuance of a Certificate of Occupancy.
   No Response Required.

4. If approved, F&O recommends a **condition** requiring a bond to be established to cover the cost of the remaining portion of Rickets Pond Drive to ensure the rest of the road and associated stormwater components and utilities will be constructed.
   No Response Required.

Zoning By-Laws

1. Section 2230 – Principal Use
   a. The site is located within the Spring Street Innovation Zoning District (SSID).
   b. Office is a permitted use authorized by Site Plan Review within this District.
   c. Warehouse is a use authorized by Special Permit within this District.
   d. Earth Removal is a prohibited use in this District. However, the proposed project does not meet the Town's definition of Earth Removal. Therefore, Earth Removal is not a proposed use.
      i. The "Earth Removal" definition states that the following does not constitute earth removal: moving of earth materials under the provisions of a duly approved subdivision plan; work necessary for the construction of streets and the installation of utilities; work in connection with the excavation and grading of land incidental to construction of duly permitted structures. Since the Rickets Pond Business Park received Definitive Plan approval, the excavation underway is required to construct the proposed Rickets Pond Drive, utility distribution mains and services, as well as the associated commercial structures (which are each individually reviewed under Site Plan Review and/or Special Permit), the proposed earthwork

and site grading does not meet the Town's current definition of "Earth Removal". Therefore, Earth Removal is not a proposed use.

An "Earth Removal Permit" was issued prior to and in consideration of the subsequent Ricketts Pond Business Park Definitive Subdivision.

2. Section 2330: The Planning Board shall include findings for this section within the Decision Letter.
    a. Section 2331: F&O does not have any concerns with the building placement in regard to causing danger from fire. However, building layout shall also be reviewed and approved by the Fire Department.

    An "Emergency Vehicle Access Plan" (Dwg. No. EVA-1) has been prepared and included in the plan set. The vehicle depicted is a 100' Aerial truck to allow for mutual aid response.

    b. Section 2332: F&O does not have any concerns with the emergency access. However, emergency access shall also be reviewed and approved by the Fire Department.

    No Response Required.

    c. Section 2333: F&O does not have any concerns with the proposed pedestrian routes from parking facilities to the existing and proposed buildings.

    No Response Required.

3. Section 3130.b: Provide building elevations.
Building plans and elevations are being provided as part of this response.

4. Section 3130.c: Applicant shall address all Fire Department comments pertaining to fire protection measures. Including but not limited to fire protection cistern, proposed 20,000 SF building, and dry fire protection hydrant network in Rickets Pond Drive.
Fire protection measures will be addressed by the fire protection engineer under separate cover.

5. Section 3130.g: Applicant has requested a wavier for providing existing trees 10" in caliper. F&O requested that the applicant provide an updated survey showing the current vegetation limits before making a recommendation to the Planning Board regarding this request.
The site has been entirely cleared of vegetation in conjunction with the Earth Removal Permit.

6. Section 3130.h: Provide Site Lighting Plan and details. Building-mounted lighting must meet the requirements of Section 3166, and pole-mounted site lighting must meet the requirements of Section 3347.
   Site lighting consisting of wall pack exterior lighting has been added to the plans.

7. Section 3130.j. Provide certified list of abutters.
   A certified list of abutters was provided to the Planning Board with the Site Plan submission.

8. Section 3161: F&O requests the following items be provided so that concerns regarding the cut/fill volumes, risk of sedimentation, and risk of water pollution can be assessed.
   a. Provide an updated survey of the lot which includes current topography represented with 2-foot contours.
      Updated topography for Lots 1 & 2 was prepared from an on the ground survey performed by McKenzie Engineering Group, Inc. and is shown on the Existing Conditions Plan, Sheet EX-1. The updated topography for Lots 1 & 2 is shown in red overlaying the original survey performed in February of 2018.
   b. Provide test pit data which identifies soil textural classification, seasonal high groundwater, and presence of ledge (if encountered).
      Test pit data and locations have been added to Dwg. No. C-3.
   c. Provide Erosion and Sediment Control Plan that includes, at a minimum, location of construction entrance, temporary sediment basin, catch basin inlet control and perimeter controls.
      An "Erosion and Sediment Control Plan (Dwg. No. ESC-1) has been added to the plan set.

9. Section 3168: F&O defers to Board of Health for the review and approval of the proposed wastewater treatment system.
   The Title 5 septic system design plan for the first building has been reviewed and approved by the Board of Health. Construction of the other buildings will require separate septic system design plan submissions.

10. Section 3200: Provide Landscape Plan meeting the requirements of this section.
    a. Section 3251: Confirm that proposed buildings will not contain public entrances, which would require landscaping adjacent to the building.
       The proposed buildings are not intended for public access. Any future change will require modification of the application.

b. Section 3242: Applicant has requested a waiver for providing a 16-foot landscape buffer along the perimeter of at least three sides of the parking area. F&O would like to review the Landscape Plan prior to making a recommendation to the Planning Board regarding this waiver request.
A "Landscaping Plan" (Dwg. No. LA-1) has been added to the plan set.

11. Section 3341: Applicant has requested a waiver for locating parking spaces in front of the principal building. Twenty-one spaces are proposed in front of two buildings. It should be noted that there is a 16-foot wide landscape island is proposed between Ricketts Pond Drive and the parking along the front of the building, and the rows of parking include landscape islands. However, F&O would like to review the Landscape Plan prior to making a recommendation to the Planning Board regarding this waiver request.
A "Landscaping Plan" (Dwg. No. LA-1) has been added to the plan set.

12. Section 3345: Applicant has requested a waiver for bicycle racks. Due to the location and proposed use, F&O recommends approval of this waiver.
No Response Required.

13. Section 4364: The applicant shall provide an Emergency Response Plan per Section 4364. F&O defers to the Fire Department to review and approve the Emergency Response Plan.
A "Spill Containment and Management Plan" was submitted with the "Best Management Practices Long Term Operation and Maintenance Plan" for the "Definitive Plan Set - Ricketts Pond Business Park" and is part of the record thereof. A separate copy of the same document is being submitted herewith.

14. Section 5330: The Planning Board shall include findings for this section within the Decision Letter. F&O believes that the benefits of the proposed Use outweigh any detrimental impacts, but ultimately defers to the Planning Board to make the determination.
No Response Required.

Drainage Report

1. Provide updated tables for:
   a. Pre-and Post-Development peak rates of runoff
   Peak rates of runoff for the pre- and post-development conditions have been added to the Drainage Calculations and Stormwater Management Plan.
   b. Pre-and Post-Development peak volumes of runoff
   Peak volumes of runoff for the pre- and post-development conditions have been

added to the Drainage Calculations and Stormwater Management Plan.

c. Groundwater recharge volume
Groundwater Recharge volume calculations have been added to the Drainage Calculations and Stormwater Management Plan.

d. Water Quality volume required versus volume provided
Water Quality volume calculations have been added to the Drainage Calculations and Stormwater Management Plan.

2. The peak rates of runoff and peak volume of runoff tables shall maintain consistent design points for pre-and post-development for ease of comparison and to clearly demonstrate, no increase in peak flow or volume. For example, pre-development Design Point 4 (Northeast Prop. Line) should also be Design Point 4 in the post-development, not renamed to Design Point 2 and the table should list all the design points (DP-1, DP-2, DP-3 and DP-4) in both the Pre-and Post-Development tables. The applicant shall review the tables to ensure there is no increase in peak runoff rates or volumes for the 2-, 10-, 25- and 100-year storm events.
The pre- and post-development peak rates and volumes of runoff have been revised and are included in the Drainage Calculations and Stormwater Management Plan as noted. A comparison of the pre-development and post-development peak rates and volumes of runoff indicates that the peak rates and volumes of runoff for the post-development condition will be equal or less than the pre- development condition for all storm events for Design Points 1, 2 & 3. Runoff directed at Design Point 4 will be captured and treated by infrastructure to be located on the Plympton Parcel to mitigate the increase in peak rates and volumes.

3. Sediment Forebay sizing should be updated to confirm the required storage volume is provided for each basin. F&O noted that Subwatershed 2S is larger than it was when the Definitive Plan stormwater design was conducted, which will require the sediment forebay size to be increased. This will require disturbance of the existing sediment forbay and infiltration basin.
Sediment Forebay Sizing Requirements have been included in the Drainage Calculations and Stormwater Management Plan. Sediment Forebay #F2 (Infiltration Basin #2, East Forebay) associated with the drainage design for Lot 1, has been resized to treat the revised contributing impervious area calculated for the subcatchment.

4. Subwatershed 1S should be divided so show that each sediment forebay shown on the drainage area plan meets the required storage volume.
Subcatchment 1S is associated with the development on the western side of Ricketts Pond Business Park. Drainage calculations for Lots 3, 4 & 5 located on the western side of the Ricketts Pond Subdivision have not changed from the original Definitive Subdivision submittal approved by the Carver Planning Board. Further information regarding the development of

Lots 3, 4 & 5 and their associated drainage designs will be included in the Site Plans submitted for each Lot.

5. Provided updated pipe sizing calculations for the Lot 1 drainage system.
   Please see revised Storm Drainage Computations within Appendix D of the Drainage Calculations and Stormwater Management Plan.

6. Provide catch basin grate capacity calculations for on-site catch basins as well as catch basins adjacent to Lot 1 within Ricketts Pond Drive.
   Please see revised Storm Drainage Computations within Appendix D of the Drainage Calculations and Stormwater Management Plan. Closed Drainage Calculations for the entire subdivision roadway was submitted in the 2019 Drainage Report associated with the approved Definitive Subdivision Plan.

7. Provide record information on the soil infiltration rate, test pit locations, and seasonal high- water table elevation to confirm the design model.
   Please see Appendix E of the Drainage Calculations and Stormwater Management Plan for all soil testing data.

8. Provide site-specific Stormwater Pollution Prevention Plan (SWPPP).
   Prior to commencement of construction, a SWPPP will be prepared as part of the requisite Notice of Intent application to EPA for a National Pollution Discharge Elimination System (NPDES) Permit.

Plan Set

1. Existing Conditions Plan, Sheet EX-1
   a. Existing conditions plan does not reflect the current existing conditions such as the completed construction of the road, current topography, infiltration basin, or other current existing features. Survey shall be completed to provide up-to-date Existing Conditions Plan for Lot 1 and frontage of Ricketts Pond Drive.
      Updated topography for Lots 1 & 2 was prepared from an on the ground survey performed by McKenzie Engineering Group, Inc. and is shown on the Existing Conditions Plan, Sheet EX-1. The updated topography for Lots 1 & 2 is shown in red overlaying the original survey performed in February of 2018.

2. Site Layout Plan, Sheet C-2
   a. Callout locations and dimensions for bay doors as well as pedestrian doors.
      Locations and dimensions for bay and pedestrian doors have been added to the Site Plan (Dwg. C-2) for Building#1 (7,500 s.f.). Specific locations of doors for

Building #2 (20,000 s.f.) Building #3 (7,500 s.f.) have not been determined to date.

b. Add callout for 4-foot cement concrete walkway adjacent to 7,500 SF building.
Sidewalks have been revised to 5 ft. wide and are labeled as "Prop. 5' Wide Cem. Conc. Sidewalk" on the plans.

c. Add callouts to clarify intent of monolithic concrete curbing where concrete sidewalks abut parking spaces.
Monolithic concrete curbs are denoted as "MCC" on the "Site Plan" (Dwg. No. C-2).

d. Show location of loading area (minimum 12-feet by 50-feet) for all buildings in accordance with Section 3240.
A 12 ft. wide by 100 ft. long "Loading Zone" is indicated for each of the two 7,500 s.f. buildings, while a 12 ft. wide by 200 ft. long "Loading Zone" is indicated for each of the 20,000 s.f. building.

e. Identify dimension of dumpster pad and show any proposed gates.
The dumpster pad has been labeled "Prop. 2 – 10 ft. x 20 ft. Cem. Conc. Dumpster Pads w/ 6' High Vinyl Enclosure" and gates have been graphically depicted.

f. Include "6' high vinyl enclosure" in dumpster pad callout. Currently only called out on Grading & Utility Plan
The dumpster pad has been labeled "Prop. 2 – 10 ft. x 20 ft. Cem. Conc. Dumpster Pads w/ 6' High Vinyl Enclosure" and gates have been graphically depicted.

g. Remove erroneous text, "150.0' Septic offset", or clarify the intent.
The text has been removed as requested.

h. Revise location of "78.4-foot" dimension so it extends from the property line to the southwest building corner. Currently the dimension is to the sidewalk. Update Land Usage Table as needed.
The dimension has been corrected and the Land Usage Table updated as requested.

i. Show locations for all ADA accessible signs including van accessible signs.
ADA van accessible signs have been added to the plan and denoted.

j. Definitive Plan approval required a sidewalk on one side of Rickets Pond Drive. Either confirm that the sidewalk will be located on the other side of the road or add the the plan. Presence of sidewalk will impact the grading and landscaping of the proposed landscape islands along the lot frontage.
The proposed sidewalk has been added to the plan on the east side of the road, therefore not affecting the grading or landscaping on Lot 1.

3. Grading & Utility Plan, Sheet C-3

a. Additional catch basins are required to reduce the flow length between drain inlets. Some are greater than 300 feet. F&O recommends reducing travel paths to 250 feet.

Considering high points in the proposed pavement grading, indicated by a dashed line labeled "Grade Break", the longest flow path is approximately 265 ft. which is generally consistent with requested flow path length of 250 ft.

b. Provide rim and invert elevation for catch basins within Ricketts Pond Drive since a portion of this system will be relied on to manage stormwater from Lot 1.

Rim and invert elevations for drainage structures in Ricketts Pond drive have been added to the plan as requested.

c. Revise gutter line for southern eastern driveway and/or relocate catch basin in Ricketts Pond Drive. With current grading and catch basin layout, stormwater runoff from site will bypass catch basin.

A note has been added to the plan stating, "Maintain Cape Cod berm through entrance to Lot 1 to contain gutter flow on Ricketts Pond Drive".

d. Add spot grades to clarify top and bottom of monolithic concrete curb at sidewalks.

Spot grades have been added at top of monolithic concrete curb as requested.

a. The fire cistern location, accessibility, and side slopes shall be reviewed and approved by the Fire Department. F&O recommends reconfiguring this layout and slope.

MEG defers to review by Carver Fire Department.

b. Provide clarification on how 2:1 slope downgradient of cistern will be stabilized.

A note has been added to the plan stating "Prop. 2:1 slope to be stabilized with New England Erosion Control/Restoration (Seed) Mix from New England Wetland Plants, Inc. (or equal)".

c. Add drain inlets in northwest corner of property to collect stormwater runoff and prevent runon from slope onto pavement.

It is MEG's opinion that the highly permeable nature of the underlying soil together with proposed revegetation of the graded areas at the northwest corner of the site will not warrant installation of drain inlets.

d. Add top of wall and bottom of wall elevations along the length of the wall.

   i. If project is approved, a **Condition** is recommended to reiterate that a Building Permit will be required for the retaining wall in excess of 4 feet. A slope- stability analysis is recommended for the 15-foot retaining wall with 2:1 upgradient slope. Revising layout and grading at this location is recommended by F&O.

   Top of wall and bottom of wall elevations have been added to the plan. The

retaining wall has been reconfigured and regraded. The note for the modular block wall has been amended to state, "Prop. Modular Block Wall (Typ.) Wall will require a building permit. Design of wall shall be by a civil structural engineer registered in the Commonwealth of Massachusetts".

e. Add spot grades at the ADA parking space of the westerly building to ensure proper construction and compliance with ADA requirements.
Additional spot grades have been added in the vicinity of the accessible parking space at the westerly building to illustrate compliance with ADA requirements.

f. Show electric, telephone and cable service connections.
Electric, telephone and cable service connections have been added and are shown on the new "utility Plan" (Dwg. No. C-4).

g. The Post-Dev. Watershed Plan, WS-2, shows a catch basin on the parking lot side of the northerly curb cut but Sheet C-3 does not include that catch basin. Review the plans and update accordingly for consistency. If a catch basin is included, update the subcatchment areas to show the area draining to the catch basin.
The Post-Dev. Watershed Plan, WS-2 has been revised to reconcile with the drainage system layout indicated on the Grading & Drainage Plan (C-3).

h. Revise location of proposed propane tank for southern building so that it will not be located on top of proposed storm drain.
The location of the proposed propane tank (now shown as a 1,000 gallon tank) has been revised as requested.

i. Show propane tanks and gas connections for the northerly and westerly buildings.
Proposed propane tanks and gas connections have been added for the northerly and westerly buildings as requested and are shown on the new "utility Plan" (Dwg. No. C-4).

j. The plans appear to show the Infiltration Basin 2P as proposed. Since this pond is constructed, it should be shown as existing with any proposed modifications shown and called out.
Infiltration Basin 2 is labeled as "Existing".

k. Provide grading such as spot grades along the 12-foot fire lane access. Also identify the material of the fire access road and add a construction detail. Grading and material shall be approved by Fire Department.
Spot grades have been added to the plan with a reference to "See Detail". A detail has been added to Dwg. No. D-3.

l. Add spot grades for Dumpster Pad.
Spot grades for the dumpster pad have been added as requested.

m. A generator pad has been included for the southerly building. Clarify if the

other buildings require a generator pad. Is so, please add them to the plan.

Generator pads are not planned for the northerly and westerly buildings at this time.

n. The plan does not identify how the roof will drain. Clarify roof drainage approach, roof drain locations, and associated storm drain pipe network. As discussed during the Technical Review Committee meeting, F&O suggests that roof drains be connected directly to storm drain pipe network which discharges to Infiltration Basin.

Roof drain connections have been added to the plan as requested.

o. Provide an identification label for each drainage structure (e.g. CB1, DMH1, etc.)
Identification labels for drainage structures have been added to the plan. Each label has a prefix "1" (e.g. CB 1-1, CB1-2) to identify it as a Lot 1 drainage structure.

p. Add water service locations to the plan.
Water service as well as fire protection services are shown on the new "utility Plan" (Dwg. No. C-4).

q. Move callouts for Siltsock Erosion Control Barrier to Soil Erosion & Sediment Control Plan.

"Prop. Compost Filter Tube Barrier (Limit of Work)" is labeled on the "Erosion and Sediment Control Plan" (Dwg. No. ESC-1).

4. Construction Details, Sheet D-2
   a. Clarify on plan sheet where the following details will be utilized
      i. Precast Monolithic Cement Concrete Curb
      Monolithic Cement Concrete Curb has been denoted by "MCC" labels on plans.
      ii. Deciduous and Evergreen Tree Planting
      Refer to "Landscaping Plan" (Dwg. No. LA-1).
      iii. Typical Shrub Planting
      Refer to "Landscaping Plan" (Dwg. No. LA-1).
      iv. Seeded of Sodded Lawn
      Refer to "Landscaping Plan" (Dwg. No. LA-1).
   b. Provide sign details for all proposed signs, included ADA, van accessible and no parking.

   The sign detail on Dwg. No. D-1 has been revised to a "Van Accessible Sign Detail".

We believe that the revisions to the plans and calculations as noted above adequately address the comments from F&O.

Please contact me at your convenience if you have any questions or require additional information.

Very truly yours,

MCKENZIE ENGINEERING GROUP, INC.

Alan Loomis
Project Manager

Bradley C. McKenzie, P.E.
President

Cc: Dawn Egan, American Electrical Construction, Inc.