TOWNSHIP OF MORRIS

ENVIRONMENTAL COMMISSION

50 WOODLAND AVENUE
PO BOX 7603
CONVENT STATION, NEW JERSEY 07961-7603
FAX NO. (973) 605-8363
WWW.MORRISTWP.COM

BRIAN MORGAN
CHAIRPERSON

To: Morris Township Planning Board
From: Morris Township Environmental Commission
Re: PB-06-22 Red Bulls Training Complex – Proposed Development
Date: August 5, 2022

At the June 9, 2022 Environmental Commission (EC) meeting, the application for development of the Red Bulls Training Complex at the former Honeywell Headquarters on Columbia Turnpike was discussed.

- **PB-06-22**, Red Bull Arena, Inc., Block 9101, Lot 4 & 5, 101-103 Columbia Road, OL40-PUD zone. Applicant proposes to construct a Red Bull training facility with other related improvements.

The EC has completed its review of the application and notes the following:

Findings of Fact

The following findings are from the applicant's Planning Board checklist as well various site plans provided by the applicant.

- The site is located on 101-103 Columbia Road at Block 9101, Lots 4 and 5. The location is the former headquarters of Honeywell Industries.
- The development plan is to build soccer training facilities, dormitory buildings, an indoor half field and outdoor soccer fields and parking spaces for over 400 vehicles.
    - Six buildings to be used for indoor training, dormitories, field house, maintenance, and storage
    - Nine outdoor training fields (7 grass, 2 artificial turf)
    - Parking lot area is being reduced from 3600 spaces (for the previous office use) to 400 spaces
- The property area is around 81 acres with about 55% of it being utilized.

Findings of Impact

A property site inspection was conducted by members of the Environmental Commission on June 30, 2022.

- Site is currently being completely excavated and renovated
    - Contaminated soil from Honeywell/Allied Chemical ownership will be capped
    - Non-contaminated soil and gravel will be repurposed for the site
- Stormwater drainage will be piped to two retention ponds located east and south of the facility

- Soil erosion and sediment control plans have been proposed which includes permanent vegetation, temporary and permanent seeding, and tree protection
- Tree removal plans include the removal of 440 trees to be replaced by 720 trees
    - Removal of 353 trees of 8-to-23-inch diameter to be replaced by 247 trees (70% replacement ratio)
    - Removal of 87 trees of 24-inch-and-above diameter to be replaced by 473 trees
    - Trees to be removed include native and non-native species
- Landscape plans include planting of native and adaptive species of trees, grasses, groundcovers, and shrubs. Plans also include a "living wall" made of living and adapted species.
- Some of the buildings will include solar panels on the roof. A generator and chiller are also included in the plans.
- Practice fields will have drainage systems built in
    - The two artificial turf fields (Field 5 and Field 9) show well-drained systems in the plans including perforated turf over drainage gravel leading to drainage pipes
    - Grass fields will have grass laid over drainage gravel
- Public and private parking lots are to be built
    - Parking facilities will have proper drainage systems
    - Site plans do not include EV charging stations even though over 400 parking spaces are being built. The plans show parking for electric vehicles but charging stations are not shown.
- Field lighting includes 172 light fixtures on 80-to-90-foot poles. Fixture wattage is 1430 watts with 160,000 lumens. When all 4 fields are illuminated, this will generate 27,520,000 total lumens of light across a field of 172 lighting points floating roughly 6 stories above the ground. The fixture color temperature is rated at 5700 Kelvin which is extremely strong in the blue spectrum (near daylight). The maximum recommendation for outdoor lighting is 3000 K. This lower color temperature mitigates the impact on nocturnal wildlife and also the level of glare discomfort to humans.

- The environmental impacts of developing this site plan are generally a lighter impact than alternative uses as high density residential or office space, with the one major exception being the light pollution from the field lighting.

Recommendations

The following should be noted:

1. Since the Red Bull facility is being built on the Honeywell/Allied Chemical site, all care should be given to make sure any contaminated soil is capped and will not seep into any drainage system.
2. Although parking facilities are being reduced from 3600 (used by the former facility) to 400 spaces, no EV charging stations seem to be included in the plans. Per the EV Charging Station ordinance, for every 100 parking spaces, at least 3% need to be used for EVs. This equates to 12 EV charging stations that need to be included on the plans.
3. Landscape plans appear to follow recommendations provided by the township (including the "Do Not Plant" list) and are detailed with care to show no non-native or invasive species are to be planted.
   [Reference links: (1) Tree ordinance; (2) Do Not Plant list]
4. The plans appear to show that the practice fields will use proper drainage for good stormwater management. All drainage systems are leading to the two retention ponds.

5. Since the field lighting will be strong (172 pole mounted fixtures each at 160,000 lumens), strong efforts are recommended to mitigate the outdoor light pollution that "can have serious environmental consequences for humans, wildlife, and our climate."

   Components of light pollution include:
   - Glare – excessive brightness that causes visual discomfort
   - Skyglow – brightening of the night sky over inhabited areas
   - Light trespass – light falling where it is not intended or needed
   - Clutter – bright, confusing and excessive groupings of light sources"

   Light Pollution - International Dark-Sky Association

   The fixtures are facing downward therefore, assuming proper shielding, this will minimize sky glow. However, the reflection of these extremely bright lights will still be a material sky glow contributor.

   The lights are mounted nearly 100 feet off the ground and the ground itself is at a high elevation, which means that the lights and their major glare will be in line–of-sight from some distance away.

   The glare is likely to discomfort nearby residents, and the lights will interfere with nocturnal wildlife. To mitigate the impact of outdoor lighting on neighboring residences and wildlife, the planning board should strongly encourage that outdoor lighting should be:
   a. turned on for the shortest periods possible,
   b. mounted low to reduce their field of view,
   c. the minimum total brightness (lumens) required for the application,
   d. low in blue-white spectrum (maximum color spectrum of 3000 Kelvin)
   e. Dark Sky Compliant design (Fixture Seal of Approval - International Dark-Sky Association)

   Light Pollution mitigation requests to reduce the glare and skyglow light pollution inherent in this site plan might include written agreements such as

   1. Installing lighting in fields that are lowest in elevation and/or otherwise best screened from remote line-of-sight viewing;
   2. Redesigning the lighting plan to use significantly shorter poles;
   3. Using Dark Sky Compliant Light fixtures with a color temperature of 3000K;
   4. Using fewer total Lumens to illuminate the fields;
   5. Minimizing the periods of use:
      a. hours per day (eg shut off at 9 PM instead of 10),
      b. days per week (eg only 3 or 4 days),
      c. number of fields to be lit simultaneously (e.g. never or rarely all 4),
      d. specifying that X% of sessions will use a lower level of lighting and only Y% will use the full brightness,
      e. special reductions during TBD sensitive periods for wildlife, eg seasonal migrations and insect breeding seasons (this can be explored in more detail if it is an option to pursue).

6. Specifications should be provided for the proposed chiller and generator. Noise reports should also be submitted to ensure the proposed units meet the Township noise limits. In

addition, the proposed fuel for the generator should be identified and if diesel is proposed spill protection and alarms should be provided.

The New Jersey Global Warming Response Act 80 x 50 Report calls for conversion of residential and commercial buildings within New Jersey from fossil fuel to photovoltaic and/or electric space and water heating by 2050. Although such measures presently are not mandated by the New Jersey State Uniform Construction Code, the Planning Board should strongly encourage the developer to include rooftop solar panels and electric space and water heating in the project as a matter of social responsibility.

The Environmental Commission submits this site application review on condition that it be read and discussed at the Planning Board project hearing.

cc: Environmental Commission Members
James Slate, Township Engineer
Sonia Santiago, Planning Board Secretary