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 Highlands Water Protection and Planning Council
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SUPPLEMENTAL
HIGHLANDS RMP CONSISTENCY DETERMINATION REVIEW

PROJECT INFORMATION			
Project Name: Bloomsbury Redevelopment B 32, L 1.01		Date: May 19, 2017	
Name of Applicant: Stem Brothers			
Municipality: Bloomsbury Borough		County: Hunterdon	
Lot and Block, if applicable: B 32, L 1.01			
Project Review Type: Redevelopment (70% IS)			
Description of Project: The subject property, which encompasses approximately 4.5 acres, is currently developed with a Citgo gas and fuel service center and deli/convenience store. The applicant is proposing to add a 3,000 square foot drive-in restaurant with associated parking. The area of the proposed expansion is currently part of a larger cornfield.			
PRESERVATION AND PLANNING AREAS AND LAND USE CAPABILITY ZONES			
Project Area located in which Highlands Act Area? (Check all that apply):			
Preservation Area <input checked="" type="checkbox"/>		Planning Area <input type="checkbox"/>	
Project Area within which Land Use Capability Zone or Sub-Zone? (check all that apply):			
Protection Zone <input type="checkbox"/> Conservation Zone <input type="checkbox"/> Existing Community Zone <input checked="" type="checkbox"/>			
Conservation – Environmentally Constrained Sub-Zone <input type="checkbox"/> Existing Community – Environmentally Constrained Sub-Zone <input type="checkbox"/>			
Lake Community Sub-Zone <input type="checkbox"/> Wildlife Management Sub-Zone <input type="checkbox"/>			
This review supplements the February 13, 2017 Staff Review of the Bloomsbury Redevelopment B 32 L 1.01 Area application. Because the application remains virtually identical to the original submission, all prior review comments are unchanged. This review focuses only on the new materials submitted by the applicant for Highlands Council reconsideration of the proposal, and their relevance to and any impact on the Redevelopment Area designation.			
*Please note that the asterisked GPOs have been modified from the original RMP text to facilitate ease of review and clarification.			
PART 1 NATURAL RESOURCES – REVISED PORTIONS ONLY			
SUBPART F CARBONATE ROCK (KARST) TOPOGRAPHY			
Project Area within or contributing to Carbonate Rock Area? Yes			
Regional Master Plan Goals, Policies, and Objectives:			C
Objective 1K4b: Applications for site plan or subdivision approval will include a multi-phased geotechnical site investigation (e.g., test borings, test pits) to locate any potential karst features and potential hazards to public health and safety, structures and ground water quality.			<input checked="" type="checkbox"/>
*Objective 1K4c: Ensure that all potential hazards to public health and safety, structures and ground water quality, including but not limited to concentrated surface water flows that dissolve carbonate rock, are fully addressed and mitigated in the construction plans and subsequent approval process, with the maximum emphasis on nonstructural measures, including, but not limited to, avoidance of modifications to the karst features.			<input type="checkbox"/>
Objective 1K4d: Public works projects, including but not limited to water supply, sewerage, stormwater and transportation facilities, shall be constructed and maintained such that the potential for damage from karst features and the contamination of ground water are avoided.			<input type="checkbox"/>
*Objective 1K4e: Prohibit new land uses and facilities that constitute unacceptable risks of discharge due to karst topography where karst features have been identified, including but not limited to: underground storage tanks; solid waste landfills; hazardous waste storage and disposal; and hazardous materials storage and handling.			<input type="checkbox"/>
			N/A

**DRAFT – FOR CONSIDERATION AT THE JUNE 15, 2017 MEETING OF
 THE HIGHLANDS WATER PROTECTION AND PLANNING COUNCIL**

<p>Comments: The subject parcel and the area around it is located in a Carbonate Rock Area. In accordance with Highlands Council standard requirements for multi-phased geotechnical investigations in such instances, the applicant has obtained the services of a qualified geotechnical engineering firm, which conducted a preliminary geotechnical investigation of the site and proposed development area. The investigation included test pit excavations and infiltration testing, consistent with Highlands Council protocols. The preliminary report submitted to the Highlands Council acknowledges that the site is underlain by carbonate bedrock, and recommends that additional exploration and study accompany any approval of the proposed development project to ensure that appropriate measures to reduce/control surface water infiltration are incorporated into the project. This protocol is consistent with Highlands Council standard requirements for development within Carbonate Rock Areas and Carbonate Rock Drainage Areas.</p>			
<p>PART 2 WATER RESOURCES AND WATER UTILITIES – REVISED PORTIONS ONLY</p>			
<p>SUBPART B PROTECTION OF WATER RESOURCES QUANTITY</p>			
<p>Project Area includes Prime Ground Water Recharge Area? Yes</p>			
<p>Has the municipality adopted a municipal groundwater recharge area map and accompanying Stormwater Plan and control ordinance? No</p>			
<p>Does the project require a waiver from strict compliance with the groundwater recharge requirements? Yes</p>			
<p>Regional Master Plan Goals, Policies, and Objectives:</p>	<p><u>C</u></p>	<p><u>I</u></p>	<p><u>N/A</u></p>
<p>Objective 2D3g: Require through Plan Conformance and local health ordinances, that existing land uses that have a significant potential to result in major discharges of pollutants to ground water or to the land surface (including but not limited to non-sanitary wastewater effluent and any major sources of potential discharges such as spills and leaks), such that they may degrade ground water quality within a Prime Ground Water Recharge Area, shall incorporate ongoing management of toxic chemical sources and prohibition of unregulated discharges, so that the potential for ground water contamination is minimized and the opportunity for discharge discovery and control is maximized.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>*Policy 2D4: Restrict development and uses of land within a Prime Ground Water Recharge Area that reduce natural ground water recharge volumes or may directly or indirectly contribute to or result in water quality degradation.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 2D4a: Development shall not occur in Prime Ground Water Recharge Areas unless necessary to avoid Critical Habitat, Highlands Open Waters Buffers and Moderately and Severely Constrained Steep Slopes.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Objective 2D4b: Any development activity approved to occur in a Prime Ground Water Recharge Area shall provide an equivalent of 125% of pre-construction recharge volumes for the affected Prime Ground Water Recharge Area of the site within the following areas, in order of priority: (1) the same development site where feasible; (2) the same HUC14 subwatershed, or (3) an interrelated HUC14 subwatershed as approved by the Highlands Council where no feasible option exists in the same HUC14 subwatershed. This requirement shall apply to all portions of the Prime Ground Water Recharge Area where the recharge is disrupted through impervious surfaces, routing of stormwater runoff and recharge from natural flow paths, and other similar changes.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>*Objective 2D4c: The disruption of Prime Ground Water Recharge Area shall be minimized through the implementation of Low Impact Development Best Management Practices meeting the requirements of Objective 2D3a.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>*Objective 2D4d: The disruption of Prime Ground Water Recharge Area shall be limited to no greater than 15% of the Prime Ground Water Recharge Area on the site and shall be preferentially be sited on that portion of the Prime Ground Water Recharge Area that has the lowest ground water recharge rates and the lowest potential for aquifer recharge.</p>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>*Objective 2D4f: Prohibit new land uses, including those identified through Objective 2D3d, that have a significant potential to result in the discharge of persistent organic chemicals sources (including but not limited to existing discharges of industrial or other non-sanitary wastewater effluent) to ground water or to the land surface within a Prime Ground Water Recharge Area, such that they may degrade or contribute to the degradation of ground water quality.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<p>Objective 2D4g: Require conformance with applicable components of regional stormwater management plans, where applicable, as a mandatory requirement for any site plan application.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Comments: Review of the Highlands Council GIS data indicates that approximately 1.5 acres of the 4.5-acre parcel features mapped Prime Ground Water Recharge Area (PGWRA). The proposed project would encroach into the PGWRA, which is inconsistent with several of the objectives in the Water Resources Quantity section of the Regional Master Plan (as shown in the checklist above). This was explained to the applicant at the September 8, 2016 Pre-Application Meeting. In response, the applicant prepared and submitted a site specific investigation of the site’s soils using data provided by the Natural Resources Conservation Service (NRCS) (“Custom Soil Resource Report for Hunterdon County, New Jersey” prepared by NRCS dated September 13, 2016.) Specifically, the analysis focused on the permeability of the site’s soils (i.e., a determination of what is referred to as “hydrologic soil group code.”) The NRCS determines hydrological soil group codes (Recharge Groups) based on minimum infiltration rates with soils ranked “A” having the highest infiltration rates and “D” having the lowest. Soils with high infiltration rates will permit more precipitation to migrate vertically and provide greater recharge than soils with low infiltration rates. There are three types of soil on the site – Gladstone – Recharge Group B; Washington – Recharge Group B, and Turbotville – Recharge Group C. The majority of the proposed project activities would occur in the Turbotville soil series - Recharge Group C (some development – 12 of the new parking spaces, would occur in the Washington series – Group B). The rear of the property, which will <u>not</u> be developed or improved, falls within the Gladstone soil type – Recharge Group B. With respect to the majority of the proposed development being within Group C, the NRCS states that: “Group C soils are sandy clay loam. They have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure.”</p> <p>The applicant subsequently provided a Preliminary Geotechnical Engineering Report by Geo-Technology Associates, Inc., dated April 10, 2017, and signed by Allison Tether, Geotechnical Project Manager and Denis C. Loh, P.E., Vice President. The document indicates that test pits were excavated and infiltration testing was completed in pertinent locations on the site. Soil types were found consistent with the Hunterdon County Soil Survey. Infiltration tests resulted in rates which were less than the lowest rate typical for soils mapped on site, but fell within the range of infiltration rates of the most limiting layer for each unit. Infiltration tests were performed in only the southern and central portions of the site. Groundwater was not observed within the depths penetrated (approximately 12-13 feet below ground surface) during the investigation.</p> <p>The Highlands Council staff acknowledges the permeability data provided by the applicant and notes that the majority of the proposed development is an area mapped as Group C (low infiltration rates). However, a condition of approval of this Highlands Redevelopment Area Designation will be the requirement for the applicant to provide on-site enhanced ground water recharge, though it is recognized that concentrated infiltration of water on sites that are underlain by karst geology is challenging because infiltrated water may erode the limestone and create more karst conditions. However, low-impact development/best management practices (“green infrastructure”) must be investigated and utilized to the maximum extent feasible in order for the project to be found consistent with the RMP. Another potential mitigation measure (which will be evaluated through the HPAA with redevelopment waiver permit process, through Highlands Council staff coordination with NJDEP staff) would be to revegetate the remaining, rear portion of the parcel that will not be developed (currently cornfield.)</p> <p>Finally, it is noted that the Highlands Act allows a waiver of any provision of a Highlands permitting review on a case-by-case basis for a Highlands Redevelopment Area Designation with Redevelopment Waiver, conditioned upon the finding by NJDEP that it meets the requirements of the narrative criteria described in Section 36 of the Act (N.J.S.A 13:20-34). In regards specifically to the protection of ground water resources, the narrative criteria in the Act states: “...would have a de minimis impact on water resources and would not cause or contribute to a significant degradation of surface or ground water...” In consideration of the low infiltration rates of the soils in that area of the parcel where the majority of the proposed activities would occur, and the fact that Highlands Council will require enhanced ground water recharge through the site’s stormwater management (using Stormwater Best Management Practices) or other on-site mitigation, it is anticipated that the proposed project would not cause or contribute to a significant degradation of</p>			

ground water. It is recommended by Highlands Council staff that the Council waive the Highlands Regional Master Plan's provision regarding proposed development in a mapped Prime Ground Water Recharge Area.						
SEPTIC SYSTEM YIELD						
Septic System Proposed Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (proposed project would utilize existing septic system)						
Proposed Development		Units:		Floor Area:		
Regional Master Plan Goals, Policies, and Objectives:				C	I	N/A
Policy 2L2: To use the median background nitrate concentrations in ground water in the Highlands Region as a basis for establishing on-site wastewater treatment densities through Plan Conformance, local development review, and Highlands Project Review.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Objective 2L2c: Use the NJDEP Highlands Preservation Area rules and nitrate thresholds for the Preservation Area.				<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Comments: The applicant submitted a report providing a preliminary evaluation of the existing on-site septic system which indicates that it was installed in accordance with NJDEP regulations, is in good working order, and is maintained by regular pump outs (as is grease trap) and inspection.						
CONCLUSION – REVISIONS ONLY						
<p>This application is for a Highlands Redevelopment Area Designation wherein the Highlands Council designates an area for redevelopment activities with conditions and waivers as appropriate from the RMP; the second part of the process is that the applicant requests waivers from NJDEP regarding unavoidable impacts to resources affected by the proposal in order to retain economic viability.</p> <p>As described in the February 2017 Consistency Determination, the proposed project does <u>not</u> encroach upon, and would not affect, Forests, Highlands Open Waters and Buffers, Riparian Areas, Steep Slopes, Critical Habitat, Lake Management Areas, and Historic and Scenic Resources. The project site is located within a Tier 1 Wellhead Protection Area, however, as noted in the February Consistency Determination, no issues of concern exist in this regard. The project site is located within a Carbonate Rock Area and encroaches into a Prime Ground Water Recharge Area, conclusions as to which follow below.</p> <p>It is the Highlands Council staff's draft recommendation that any Highlands Council approval of the proposed Highlands Redevelopment Area designation include the following conditions.</p> <ol style="list-style-type: none"> Carbonate Rock Area Geotechnical Investigation: The applicant should continue with the multi-phased geotechnical investigation as indicated by the applicant's geotechnical engineers. They should provide detailed evaluation and recommendations regarding development and construction measures and the municipal engineer's review and approval of these measures should be required prior to start of any construction. Prime Ground Water Recharge Area: Any approval would require a Highlands Redevelopment Area Designation waiver for the Prime Ground Water Recharge Area provisions of the Regional Master Plan. In this regard, the applicant commits to ensuring that the proposed use of Block 32 Lot 1.01 provides on-site enhanced ground water recharge, while mindful that concentrated infiltration of water on Carbonate Rock sites must be carefully assessed because infiltrated water may erode the limestone and create or exacerbate karst conditions. The preliminary septic system evaluation and geotechnical findings of no evident surface subsidence provide a good starting point for moving forward. <p>Consistency with the RMP also requires use of low-impact development/best management practices ("green infrastructure") to the maximum extent feasible. One such measure may include revegetating the remaining, rear portion of the parcel, which is currently a cornfield. Highlands Council staff should evaluate this option during the HPAA (with redevelopment waiver) permit process, in coordination with NJDEP staff.</p>						