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To: Urban Design Committee  
From: Planning and Preservation Division  
Date: July 9, 2015  
RE: **Conceptual Location, Character and Extent Review of a roundabout at the intersection of Belmont Road and West Belmont Road; UDC No. 2015-17**

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**I. APPLICANT**

Michael Sawyer, Department of Public Works, Traffic Engineering Division

**II. LOCATION**

Intersection of Belmont Road and West Belmont Road

**Property Owner:**

City of Richmond

**III. PURPOSE**

The application is for conceptual location, character and extent review of a roundabout at the intersection of Belmont Road and West Belmont Road.

**IV. SUMMARY & RECOMMENDATION**

This is a request to provide a roundabout at the intersection of Belmont Road and West Belmont Road. Overall, Staff is supportive of the proposal to add a roundabout to this intersection. This section of Belmont Road connects to Chippenham Parkway to the south and acts as a gateway into the City. At the same time, this is a long (over 4,600' in the City limits) stretch of road with few intersections and no traffic calming, and the results of the traffic study completed in June show that the mean speed is 10mph over the speed limit. The roundabout will create a raised circular island 65' in diameter (35' of landscaped area in the center and a 15' wide, sloped truck apron on each side of the landscaped area). Prior to entering into the roundabout, the two lanes in each direction of Belmont Road will be merged into a singular lane 13' in width. Currently, there are no provisions for pedestrians to cross the five lanes of Belmont Road. The roundabout will contain marked pedestrian crosswalks at each spoke of the intersection.

Staff finds that this roundabout will have a positive impact in calming vehicular traffic while also improving safety for pedestrians and bicyclists. Staff further finds the proposal consistent with the recommendations of the Master Plan and the Urban Design Guidelines. However, Staff would prefer to see the central island enlarged to further calm traffic. The roundabout is sized to safely accommodate a quint (fire truck) or tractor trailer. The autoturn diagram shows that these oversized vehicles can currently negotiate the roundabout with a minimum intrusion onto the 15' wide apron. The apron on a roundabout exists to provide additional turning radius for over-sized vehicles when necessary. Therefore, it is Staff's preference that the proposed apron be reduced in width, with the excess used to enlarge the central landscaped island, which would provide a stronger visual cue for traffic calming. It would also be Staff's preference to see additional landscaping in the central landscaped island as well as on the splitters, and a continuation of the tree planting in the median on Belmont Road. Therefore, it is

Staff's position that the Urban Design Committee should recommend that the Planning Commission grant conceptual approval with the following conditions:

- That the final plans include a landscape plan and schedule showing plant species, quantity, location and size at the time of installation.
- That the applicant considers providing a larger tree (or multiple smaller trees) in the central landscaped portion of the roundabout.
- That the applicant considers continuing the existing median tree plantings on Belmont Road in the new median extensions.
- That the applicant considers providing landscaping in the newly created, larger planting strips on Belmont Road.
- That the applicant considers landscaping the splitters on W. Belmont Road.
- That the final plans include a lighting plan, showing make, model and finish for any light pole and fixture, as well as fixture light source and color temperature.
- That the final plans include a signage plan.

**Staff Contact:**

Jeff Eastman, (804) 646-6348

**V. FINDINGS OF FACT**

**a. Site Description and Surrounding Context**

The area surrounding the subject intersection is developed with single-family detached dwellings. W. Belmont Road is the dividing line between an R-3 (Single-family detached residential) zoned area to the north and an R-2 (Single-family detached residential) zoned area to the south. Belmont Road carries two-way traffic, with two lanes in each direction separated by an 18' wide, curbed and grassy median, at a posted speed limit of 35mph. W. Belmont Road carries two-way traffic, with one lane in each direction separated by a striped line, at a posted speed limit of 25mph. This area of the City is very close to the border with Chesterfield County, and Belmont Road connects to Chippenham Parkway, thereby acting as a gateway into the City.

**b. Scope of Review**

The proposed roundabout is subject to location, character, and extent review under Section 17.07 of the Richmond City Charter as a "widening, extension, narrowing, enlargement, vacation or change of use of streets".

**c. UDC Review History**

Staff was unable to identify any previously reviewed projects at the subject intersection.

**d. Project Description**

This is a request to provide a roundabout at the intersection of Belmont Road and West Belmont Road. Currently, Belmont Road carries two-way traffic, with two lanes in each direction separated by an 18' wide, curbed and grassy median, at a posted speed limit of 35mph. There are dedicated left turn lanes from each direction of Belmont Road onto W. Belmont Road. W. Belmont Road carries two-way traffic, with one lane in each direction separated by a striped line, at a posted speed limit of 25mph. There are stop signs on W. Belmont Road, but traffic flows freely through the intersection on Belmont Road. Sidewalks are present only on Belmont Road north of the intersection and on the north side of the western portion of W. Belmont Road.

A traffic study conducted in June 2015 showed the Annual Average Daily Traffic (total volume of vehicle traffic of a highway or road for a year divided by 365 days) to be 6,943 on Belmont Road and 958 on the eastern (more busy) leg of W. Belmont. A separate traffic study conducted in 2011 following a fatal accident at the intersection showed that a new traffic signal was not warranted at the intersection and likely would not be in the future.

The roundabout will create a raised circular island 65' in diameter (35' of landscaped area in the center and a 15' wide, sloped truck apron on each side of the landscaped area). The landscaped central portion of the island will be edged with a standard concrete curb, while the exterior of the truck apron will be edged with a 3" tall, mountable curb. The apron, which will be composed of concrete stamped in a brick pattern and tinted red, is used to visually direct the traffic away from/around the island while allowing for larger trucks to negotiate the roundabout without enlarging the overall size. There will also be another 20' of asphalt driving surface between the apron and the exterior concrete curbs. Prior to entering into the roundabout, the two lanes in each direction of Belmont Road will be merged into a singular lane 13' in width. After exiting the roundabout, the road will open back to two lanes in each direction.

Raised medians or splitters are used to divide and guide traffic on all of the spokes of the intersection. These splitters will also provide protected spaces for pedestrians crossing each of the spokes. All crosswalks will now be denoted with ladder-style markings. All existing sidewalks in the project area will remain, and the existing sidewalk on the north side of W. Belmont Road will be connected to the sidewalk on the north side of Belmont Road. The existing and proposed sidewalks in the subject area are composed of concrete.

The conceptual landscaping plan for the roundabout includes a central large evergreen shrub/small tree encircled by concentric rings of evergreen hedge, perennials/bulbs and an evergreen groundcover. Irrigation will not be provided in the central island. No landscaping is proposed in the splitters, which will be composed entirely of concrete, or in the central medians on Belmont Road, which will be planted in turf grass.

There are existing cobrahead lights on wooden poles in the project area, and there are overhead utilities that run diagonally across the intersection. No details are provided on lighting plans at this stage.

The alignment of the proposed roundabout does not necessitate the acquisition of right-of-way from any of the adjacent property owners, but it will require a permanent slope easement from one property owners and a temporary construction easement from another.

The estimated budget for the project is \$450,000, funded through the City's Capital Improvement Plan. Construction is slated to begin in winter 2015/2016.

**e. Master Plan**

The subject intersection is located in the Broad Rock District, as defined by the citywide Master Plan, which designates the surrounding area for Single Family (Low Density) uses. There is no language in the Plan specific to the intersection or the proposed improvements.

**f. Urban Design Guidelines**

The Guidelines note that “intersections should be designed to serve pedestrians, bicyclists and motorists in a safe manner” and that “roundabouts should be considered in certain situations as an alternative to the traditional intersection” (page 7). The Guidelines are supportive of traffic management techniques that slow traffic (page 7) and that add “an aesthetic contribution to the urban character of the neighborhoods in which they are placed” (page 8). In regards to landscaping, the Guidelines note that “landscaping should provide a sense of scale and seasonal interest” and that “shade trees for pedestrian comfort should be the predominant plant material in an urban setting” (page 10).

**VII. ATTACHMENTS**

- a. Vicinity Map**
- b. Application**
- c. Plans**