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Martha's Vineyard Commission

DRI 633- Oak Bluffs Roundabout

MVC Staff Report – 2011-09-01

Note: Newer information is printed in bold type.

1. DESCRIPTION

- 1.1 Applicant:** Oak Bluffs Board of Selectmen; Massachusetts Dept. of Transportation.
- 1.2 Project Location:** Intersection of Edgartown-Vineyard Haven Road and Barnes Road, commonly known as the "Blinker".
- 1.3 Proposal:** To convert a four-way stop into a roundabout.
- 1.4 Zoning:** R-3: Zoning is not applicable to roads.
- 1.5 Local Permits:** The Oak Bluffs Board of Selectmen approved the construction of the project on September 28, 2006. **Oak Bluffs Town Meeting has not voted on the Roundabout as a whole.** Oak Bluffs Town Meeting approved acceptance of temporary construction easements at a Special Town Meeting on June 26, 2011. The Town is not aware of any other local permits the project requires.
- 1.6 Surrounding Land Uses:** Residences; Businesses; a sand and gravel pit; woods.
- 1.7 Project History:**
- **The intersection was created in the 1940's. Until 2003, the intersection was controlled by a 2-way stop with a blinking light.**
 - **Since 2003 the intersection has been controlled by a 4-way stop sign.**
 - In 2001 the Board of Selectmen (BOS) hired MS Transportation to do a study of the Blinker Intersection. The study outlined four options: Increased signage; Traffic signal; Four-way stop; Roundabout. The roundabout was recommended.
 - In 2003, after a series of accidents, the BOS decided to make the intersection a four-way stop. It also approved the principle of building a roundabout and identified the funding and planning costs for the Transportation Improvement Projects (TIP) list. With the project on the TIP the design would be paid for locally but construction is paid for by the state.
 - In 2004 the BOS hired Greenman Pederson Inc. (GPI) to prepare a preliminary design. Later in 2004 the BOS put a hold on the roundabout and asked the MVC to collect data and compare alternatives.
 - In May 2006 the MVC issued its study of intersection alternatives. The BOS subsequently held three public hearings on possible solutions for intersection. On Sept. 28, 2006 the BOS voted in favor of construction of the roundabout.
 - In 2009 or 2010 the BOS made an agreement with the Massachusetts Department of Transportation (MassDOT) whereby MassDOT would take over the project, doing both the design and construction. MassDOT kept GPI as project designers.
 - On April 20, 2011 MassDOT held the 25% Design Public Hearing including an extensive presentation and public comment. After the hearing, MassDOT authorized GPI to complete the plans.

- On May 4, 2011, MVC staff submitted comments on the 25% design questioning the need for some of the bus pullouts and sidewalks, and discussing design issues such as vegetation, curbing, signage, and lighting.
- On June 26, 2011, Oak Bluffs Town Meeting approved acceptance of temporary construction easements allowing the project to proceed.

1.8 Project Summary:

- To convert a four-way stop into a roundabout.
- The project is a combination Town and MassDOT project.
- **The OB Board of Selectmen in 2006 voted to proceed with the project and it was placed on the Transportation Improvement Plan (TIP) by the Joint Transportation Committee (JTC) in 2006.**
- **The project is now estimated to cost \$1,200,000.**

2. ADMINISTRATIVE SUMMARY

2.1 DRI Referral: West Tisbury Board of Selectmen

2.2 DRI Trigger: 1.1 (Discretionary Referral). Also mentions 7.1 (New or expanded transportation facilities), but in itself, this is not a basis for a cross-town referral.

2.3 LUPC: July 25, 2011

2.4 Site visits: None held yet.

2.5 Public Hearing: On August 4, 2011 a Public Hearing **was** held to determine whether this Discretionary Referral for the creation of a "roundabout" at the intersection of Edgartown-Vineyard Haven Road and Barnes Road should be reviewed by the MVC as a Development of Regional Impact. **The MVC accepted the referral of the Roundabout as a DRI. The Public Hearing is scheduled for September 1, 2011 at the M.V. Regional High School Cafeteria at 7:15 pm.**

3. PLANNING CONCERNS

3.1 Some Key Issues

- The intersection is a central vehicular access point connecting the Island.
- How will changing the intersection to a roundabout impact traffic flow and safety?
- Is the roundabout the best solution in light of the alternatives?
- What will the impacts be on natural vegetation and on scenic values?
- Are all the bus stops needed? What are the relative impacts of the paved aprons in terms of loss of vegetation and extent of asphalt? **How heavily will these bus stops be used? Is there a better location for bus stops?**
- **Does the roundabout fit the "character" of Martha's Vineyard?**
- **What happens to the state/federal money allotted to the roundabout if the MVC denies or delays the construction of the roundabout?**
- **Are the predicted benefits of improved flow and safety worth the cost?**
- **Would improving traffic volume at the "Blinker" exacerbate backups at the "Triangle" (Edgartown) and Look Street (Tisbury)?**

- **In 2006 the roundabout was estimated to cost \$450,000, now the estimate is \$1.2 million. Why has this increased so much in 5 years?**
- **Mass DOT has said that the traffic volume at the intersection does not warrant a traffic signal? What is the volume that warrants a roundabout?**

Environment

- **Vegetation:** Some trees may need to be removed for construction of the roundabout, realignment Shared Use (bike) Path, and construction of bus stops. The consultants recently completed a survey and are calculating the proposed grades, which will allow them to determine the impact of the roundabout, SUP, and bus stops on vegetation.
- **Habitat:** This is not an NHESP habitat area.
- **Landscaping:** The MVC has not received a final landscaping plan.
- **Open Space:** N/A
- **Lighting:** There is lighting of the existing intersection and there will continue to be lighting of the intersection. The MVC has not received a final lighting plan.
- **Noise:** N/A
- **Energy/Sustainability:** There should be a decrease in the amount of automobile emission and gasoline consumption resulting from motor vehicles not having to stop when no opposing traffic exists and will only need to slow down to safely enter and exit the roundabout instead of coming to a complete stop.
- **Wastewater / Stormwater:** Potentially increased paved surface and curbing would mean more channelization of stormwater. Additional storm drains are designed as part of the project.

3.2 Transportation

- **There are currently about 3,000 roundabouts in the U.S.**
- **According to the USDOT FHWA, Mass DOT, and a 2006 MVC Study a roundabout would improve traffic flow and safety.**
- **Trip Generation:**
 - **The capacity of a roundabout varies based on the number of entry and circulating lanes, geometry elements (entry angle and lane width) and flow volumes from various approaches.**
 - **According to a 2000 Guide on Roundabouts by the US DOT Federal Highway Administration “the maximum daily service volume of a single-lane roundabout varies between 20,000 and 26,000 vehicles per day, depending on percent of left-turns and distribution between the major and minor roads”.**
 - **In August 2000 the MVC recorded a weekday volume of 14,230 cars in one day on Edg.-VH road west of Barnes Road.**
 - **In August 2005 the MVC recorded a weekday volume of 14,103 cars in one day on Edg.-VH road west of Barnes Road.**
 - **On July 15, 2011 the MVC recorded a weekday volume of 13,462 cars in one day on Edg.-VH road west of Barnes Road.**
 - **Proponents of the roundabout project a 1.5% increase in volume per year as part of the need for the roundabout.**

- **Traffic Congestion:**
 - **MassDOT says that improving traffic flow at the “Blinker” should not displace the problem to other intersections. Thomas Currier of Mass DOT has said that:**
 - **The “Triangle” and Look Street intersection are too far away with too many access and egress points in between.**
 - **“There may be some slight increase in volume through the intersection due to improvements to the intersection drawing traffic away from other routes but, this just relieves congestion on those other routes”.**
 - **“A roundabout does not increase capacity, does not add lanes or create more traffic volume. It only processes existing traffic more safely and efficiently in all directions. This will not cause an increase of vehicles to collect at either destination anymore than they already do”.**
 - **One analogy raised has been the use of the E-Z Pass system at tolls. Does the E-Z pass displace congestion to other locations or does the E-Z Pass simply cut down on total trip time?**
 - **According to MVC Turning Movement Counts (TMC) performed in 2005, 56% of the vehicles travelling east through the “Blinker” were heading towards Edgartown at the AM peak and 46% at the PM peak. So, about half of all eastbound vehicles going through the Blinker are heading towards Edgartown. Traffic Counts are being analyzed to see how many of those are turning off before reaching the Triangle (to the High School, YMCA, Community Services, neighborhoods, etc...). If half of eastbound traffic is turning off before the Triangle then only about 25% of traffic heading east through the Blinker is headed to the Triangle. So even if improving flow at the Blinker was found to move the problem to the Triangle it would only affect 25% of those eastbound vehicles.**
- **Safety:**
 - **Most comparative studies appear to show that a roundabout would be safer and decrease congestion more than any of the other alternatives including traffic lights. See the following studies on the MVC Website: FHWA SA-09-018 (Maryland 2007); IIHS Status Report 3505 (May 2000); US DOT FHWA 2000 Roundabouts Guide; Vermont 1997 Post Roundabout Installation Survey; Wisconsin 2001 Roundabout Study.**
 - **It has been suggested that a raised “table” be constructed where the Shared Use Path crosses Barnes Road in order to improve driver awareness and slow traffic.**
 - **From 1998 to 2002 as a Blinker and a 2-Way stop the intersection experienced 33 traffic accidents according to Mass Highway Accident Records.**
 - **From 2003 to 2007 as a 4-Way stop the intersection experienced 17 traffic accidents according to Mass Highway Accident Records.**

- **A 2008 FHWA “before and after” case study (SA-09-018) on five modern roundabouts in Maryland between 1990 and 2007 showed an overall drop in the number of crashes by 69.1%. Crashes with injuries dropped 88%.**
- **Parking:** Presently, informal parking for police or vendors periodically occurs on the west leg of the intersection. This would presumably no longer be possible.
- **Public Transit:** Planned bus pull-offs and sidewalks could improve safety for transit users.

3.3 **Affordable Housing** - N/A

3.4 **Economic Impact**

- Improving safety and decreasing congestion could lead to less loss of time for commercial and other vehicles and optimize use of public infrastructure.
- **The roundabout is a town project and the development costs will be funded by Mass DOT and the FHWA. The impacts to local taxpayers to develop the roundabout will be minimal.**
- **The long-term maintenance will be paid for by the Town of Oak Bluffs.**
- **The design costs for the project were already paid by the town and primarily by MassDOT.**
- **The 2006 MVC Blinker Intersection Study estimated that the costs were comparable to install traffic signals (\$400 K) and the roundabout (\$450 K)**
- **The cost to construct the roundabout is now estimated at \$1.2 million.**

3.5 **Scenic Values**

- **Streetscape:** The impact on the streetscape and scenic values will depend to a great extent on how a number of design issues are resolved. The intersection currently has a large expanse of asphalt, the extent of which would be reduced with vegetation in the center. However, this reduction in extent of asphalt would be more than offset with the new bus stop aprons.
- **Building Massing:** N/A
- **Architectural Detailing:** See MVC staff notes on 25% design for a discussion of this issue, and ways to reduce the extent of vertical granite curbs, number of sidewalks, the signage, etc.
- **A.D.A. Accessibility:** The sidewalks are in part to provide ADA access at bus stops.

3.6 **Local Impact/Abutters**

- Some abutters have expressed concern about the project. One adjacent business had originally objected to construction of a concrete median that would have blocked access to their business; this was eliminated many years ago.
- Some truckers have expressed concern about the ability of large trucks to get through.
- There should be fewer back ups on both Edgartown-Vineyard Haven approaches to the intersection, resulting in fewer blockages of businesses/residences adjacent to the roundabout

4. **CORRESPONDENCE**

4.1 Town Officials: None.

4.2 Island Organizations: James Lengyel (Land Bank) has written notifying the MVC that three of the four corners of the intersection have been conserved by the Land Bank. As a result legal questions will arise if the road layout is to be relocated.

4.3 Public: Ann Floyd has written an e-mail stating that the only issue she sees is safety. If roundabouts can be proven to be safer than a four-way stop she would be for it. **Sharry**

Grunden has written an e-mail stating that she is in favor of the roundabout because it will improve safety. **Thomas Hodgson** has written an e-mail opposed to the roundabout because it is not in keeping with the Vineyard esthetic, it is a waste of money, and questions whether it will improve traffic flow. It is a complex solution to a simple problem. **Ed Pierce** has written an e-mail opposed to the roundabout because it will be a waste of money and will be irreversible. **John Alley** has written an e-mail opposed to the roundabout because it is a waste of money that is a big city idea that will ruin the charm of the Vineyard. **Mary-Jean Miner** has written opposed to the roundabout because the four-way stop works fine. **Paul Magid** has written an e-mail opposed to the roundabout because in his experience they are difficult to maneuver for first time users. **Madeline Fisher** has written an e-mail opposed to the roundabout because it is not necessary and it should have been referred to the MVC for DRI Review long ago. She notes that in 2004 she gave the OB Selectmen a petition with 1,600 signatures opposed to the Roundabout and the BOS dropped the project. **Susanna Sturgis** has written an e-mail opposed to the roundabout because it is not necessary and it should have been referred to the MVC for DRI Review several years ago. She says that they need to come up with a solution that addresses the problem, if there is one, with the least disruption to the landscape, our lives, and our pocketbooks. **Denise Lopes** has written an e-mail opposed to the roundabout because she thinks they are not safe. **Lindsay Tossberg** has written an e-mail opposed to the roundabout because she thinks it is not necessary, does not fit the island character, and adds too many wild cards. **Arlan Wise** has written an e-mail opposed to the roundabout because he does not think people know how to maneuver around them. **Susanna Sturgis** has written a second e-mail opposed to the roundabout because she does not think \$1.2 million is worth making a relatively safe intersection safer and because it will only move the problem elsewhere. **Everett Whorton** has written an e-mail opposed to the roundabout because he thinks it is too expensive. **Patricia Szucs** has written an e-mail opposed to the roundabout because she thinks it is too expensive and belongs in Hyannis, not Oak Bluffs. **Sandra and Peter Lally** has written an e-mail opposed to the roundabout because they do not think it is necessary. **Craig Hockmeyer** has written an e-mail opposed to the roundabout because it does not fit with the island character and a smart light would work better. **Peter Williams** has written an e-mail opposed to the roundabout because he thinks it is the worst possible solution. **Don Macdonald** has written an e-mail opposed to the roundabout because he thinks a right turn land and traffic light would be a better solution. **Paul Metell** has written an e-mail opposed to the roundabout because he feels a modern traffic light would work better. **Betsy Macdonald** has written an e-mail opposed to the roundabout because people will have difficulty maneuvering around it and a traffic light would work better. **Alice and Phil Upham** has written an e-mail opposed to the roundabout because it's too expensive for a 10-week problem. People are in too much of a hurry. **Rez Williams** has written an e-mail opposed to the roundabout, he favors a timed traffic light such as the one at the Quisset Harbor intersection in Falmouth. **Dan Greenbaum**, a retired traffic engineer, has written a letter in favor saying the proposed roundabout is a safe and effective solution to minimize future traffic congestion. He notes that a small increase in traffic will increase the frequency & severity of backups and the roundabout will not adversely affect other intersections. **Juleann VanBelle** sent an e-mail opposed citing costs and no clear problem. **Nancy Phillips** sent a letter in favor of the roundabout citing safety. **Rene Balter** has written in favor.