Councilmember Middaugh Proposal for Transition Zone 11-30-2015

This proposal is based on the extensive work by the LUNR Committee and Town Council members since 2009, as well as extensive discussions with current residents and fellow Council members. It is based on the desire to be a good neighbor to owners of property adjoining the Protected Land and at the same time respect the Protected Land Trust Area that is highly valued by many Island residents for its great natural beauty, wildlife, recreational and educational value, and protection from storms.

The Transition Zone will be 100 feet, as measured from the RS-zoned lot line (0 ft.) seaward (to 100 ft.) for all Units/Zones and will consist of two, differently managed bands: 0-40 ft. and 40-100 ft.

0-40 feet: Preserve trees of 6" diameter and larger (species to be discussed, see below)
Remove underbrush and shrubs, including myrtles
Trees less than 6" diameter may be removed with a site plan.

The purpose of the site plan is to identify, for possible preservation, small trees of desirable species of that seldom reach 6" diameter at maturity:
Hercules Club/Toothache Tree, Black Cherry, Yaupon, Red Bay

40-100 feet: Thin vegetation to provide a transition to the Protected Land beyond.
All trees to remain (except those on the List of Non-Native Invasive Species).
Underbrush to be removed
In areas adjacent to Forested Areas: all shrubs, including myrtles, to be removed.
In areas adjacent to Maritime Grassland and Maritime Shrubland: Myrtles and Other Maritime Shrubs to be thinned to 1/3 of current coverage.

OCRM Setback Line & Baseline: In areas where the Transition Zone (wholly or in part) lies seaward of the OCRM Setback Line and Baseline (Critical Line), DHEC approval and permit will be required for removal of vegetation.

Rationale for the Proposed Transition Zone Plan

This Proposed Plan achieves the overarching goal of providing a true Transition by providing - clearly and quantitatively - for greater manipulation of the Protected Land vegetation closest to adjacent homes and lesser manipulation seaward where the TZ joins the rest of the Protected Land. This Plan also takes into account the different characteristics of the land across the four Management Units. This is accomplished by specifying two differently managed Bands within a common 100 ft. Transition Zone.

Neither of the two Transition Zones, that have been considered previously, accomplish a real transition.

The Plan for a single 100 ft. Transition Zone for all Units (approved by Council on 5-20-2014) recognized the problem of selecting a different TZ size for each of the four Units, primarily based on distance from the ocean – a factor that could vary within a Unit, overlap across Units, and change over time. No management strategy was included, but it was implied (in discussion) that management would be uniform throughout.

The more detailed LUNR Committee approach (approved by LUNR Committee on April 11, 2014) recognized the strong logic of providing for differences in management based on differences in the

Protected Land itself. This was to be accomplished by specifying a range for the Transition Zone that varied from Unit to Unit (e.g., 40 to 100 ft. for Unit 1, and 25-50 for Unit 3A and 3C). However, there was no guidance on how the management strategy might differ within this range – if at all. Instead, there was adoption of a single strategy for each Unit (e.g., manage by tree removal in Unit 1; manage as grassland for Unit 4) to be carried out uniformly *for the entire range*, and with the likelihood that the range *maximum* would apply.

The Proposed Compromise Transition Zone Plan combines elements of both previous approaches. It adds a practical method for providing a true transition between homes and the Protected Land, and for adapting management strategy for different areas. This is accomplished by specifying two differently managed bands of 0 to 40 feet and 40 t0 100 ft. within a common 100 ft. Transition Zone.

The Rationale for selection of the 0-40 foot Band for heaviest manipulation.

a) 40 ft. is sufficient to achieve the goals of enhancement of breezes and relief from wildlife and mosquitoes by removal of underbrush, shrubs and small understory trees. Also, 30 ft. is the defensible space recommended by the SC Forestry Service for fire management. The LUNR Committee (April 11, 2014) and the Accreted Land Management Draft Plan 3A (November, 2011), include 40 ft. in the recommended Transition Zone Ranges for all four Units. This choice acknowledges this 5+ year body of work.

b) Rationale: 40 ft. is the typical width of a neighborhood road bed (20 ft.) plus 10 ft. ROWS (20 ft.). Island-wide, this provides open space between Residential Lots for breezes and relief from fire hazard and mosquitoes. This 40 ft. of open space allows Owls, Hawks, etc. to spot rodents and snakes crossing from a heavily vegetated lot to a neighbor's yard across the street. 40 ft. will provide the same benefit to homes adjacent to the Land Trust Area.

The Rationale for selection of a 40-100 foot Band for lighter manipulation.

a) In forested areas, 40 to 100 ft. in which underbrush and shrubs are cleared, but no trees removed, will provide significant additional relief and enhanced forest views. This will provide a real transition to the seaward Protected Land without distorting the naturally developing mixture of tree species that belong to a Maritime Forest. It is essential that trees not be removed in this area. Trees will be younger and smaller with greater distance seaward, especially for slower growing hardwoods such as oaks. As a result, if trees are removed in the 40 to 100 ft. Band, based on diameter as in the 0 to 40 ft. Band, a higher proportion of trees will be removed, fewer large trees will remain, and species diversity will be reduced. This is the exact reverse of the desired real transition.

b) In areas where the Transition Zone is adjacent to Maritime Grassland and Maritime Shrubland, clearing of underbrush and thinning of shrubs (including myrtles) to 1/3 of the current coverage will provide the desired relief and automatically increase native maritime grassland vegetation, which is naturally interspersed with maritime shrubs. This will provide a true transition to the Maritime Shrubland beyond. There should be no clear-cutting of myrtles and other maritime shrubs – this will simply produce a wall of shrubs at the 100 ft. line. Appropriate thinning will repair the damage done by years of cutting to 5 ft. and reinstate the natural mixture of maritime grassland, shrubs and trees.

Previously Proposed Transition Zones by Unit/Zone

(in feet, measured from private property line seaward

	By LUNR Committee April 11, 2014	**By ALMP 3A Nov 22, 2011**
Unit 1:	40 to 100	40 to 100
Unit 2:	40 to 70	32 to 40
Unit 3A & 3C:	25 to 50	23 to 40 (3A) 10 to 40 (3C)
Unit 4:	40 to 100	40 to 100

By Town Council May 20, 2014 All Units 100 feet with an additional 20 feet at Council discretion.

For Discussion: Species of Trees (6" in diameter) to be preserved in the 0-40 ft. Band of the TZ

1) Per Zoning Ordinance, Article XVII Tree Commission, Sec. 21-158 p 78 and Sec. 21-164 p 82
   Category I Trees: 16" diameter, is a "Significant" tree, needing Tree Commission Approval
   Category II Trees: 6" diameter of any species (and any size Palmetto), is a "Protected" tree, and a permit is required for removal.
   Category I and II trees must be replaced by the same species for Pecans, Cedars, Oaks, Magnolias, Palmettos.

2) The Tree Commission also has a Protected Tree category (as part of its Approved Tree List).
   These are also the species that must be replaced by the same species under Category II, above.

Eastern Red Cedar	Southern Red Cedar	(Both are Red Cedar variants)
Laurel Oak	Live Oak	
Pecan	Southern Magnolia	
Palmetto		

3) Additional Trees are found in the Protected Land and contribute to the Maritime Ecosystem

Black Cherry	Carolina Willow / Coastal Plain Willow
Red Mulberry	Hackberry / Sugarberry
Longleaf pine	Additional Oak species

4) Additional Small Trees are found in the Protected Land and contribute to the Ecosystem
   (All of these are on the Tree Commission Approved Tree List)

Yaupon Holly	Hercules Club / Toothache Tree
Red Bay	Carolina Cherry Laurel
Wax Myrtle	Groundsel Tree / Baccharis

For Information: Size Considerations for Transition Zone

Council needs to consider more than just depth of Transition Zone; e.g., 100 ft. vs 40 ft. when making management decisions. The Total Area size, in square feet, is an important measurement of the environmental impact and the relative costs of implementation and maintenance of a Plan.

Author/Sponsor: Councilmember Susan Middaugh

Calculation of Estimated Transition Zone Area:

The approximate length of the Transition Zone from Station 16 to Station 28 ½ = 2 miles
2 miles @ 5280 linear ft. per mile = 10,560 linear feet

With a 100 ft. TZ depth: 100 x 10,560 linear feet = 1,056,000 square feet of land Area
With 44,000 sq. ft. per acre: 1,056,000 sq. ft. ÷ 44,000 sq. ft. = 24 acres
Converting to standard half-acre lots: 24 x 2 = 48 half-acre lots

With a 40 ft. TZ depth the values are .4 x 100 ft. values : 422,400 sq. ft. of land Area
9.6 acres
19.2 half-acre lots

Conclusion: Manipulation of a 100 foot deep TZ = manipulation of 48 half-acre lots
Manipulation of a 40 foot deep TZ = manipulation of 19.2 half-acre lots

A plan with more reliance on underbrush clearance and less on tree removal will be more cost-effective.: