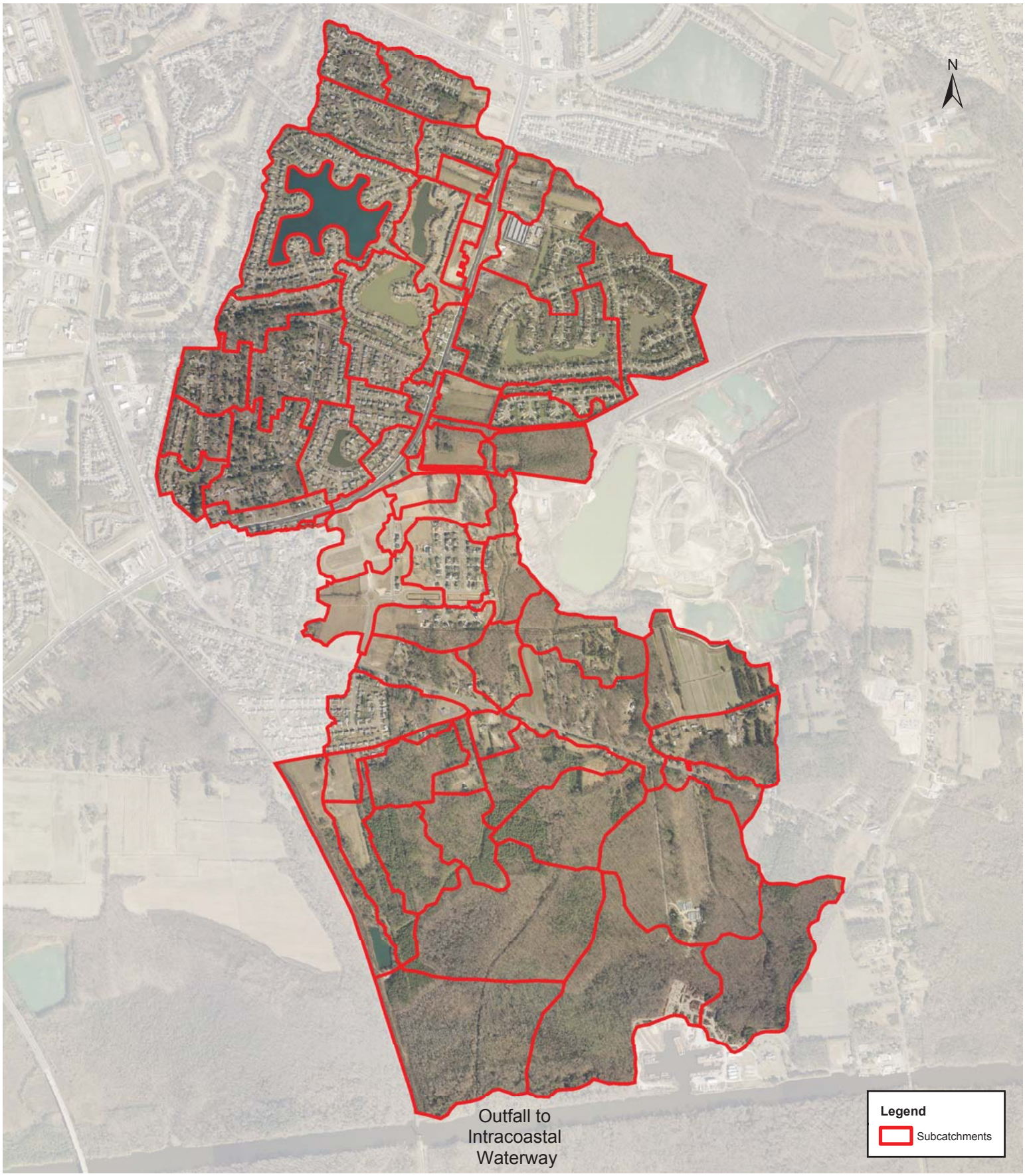
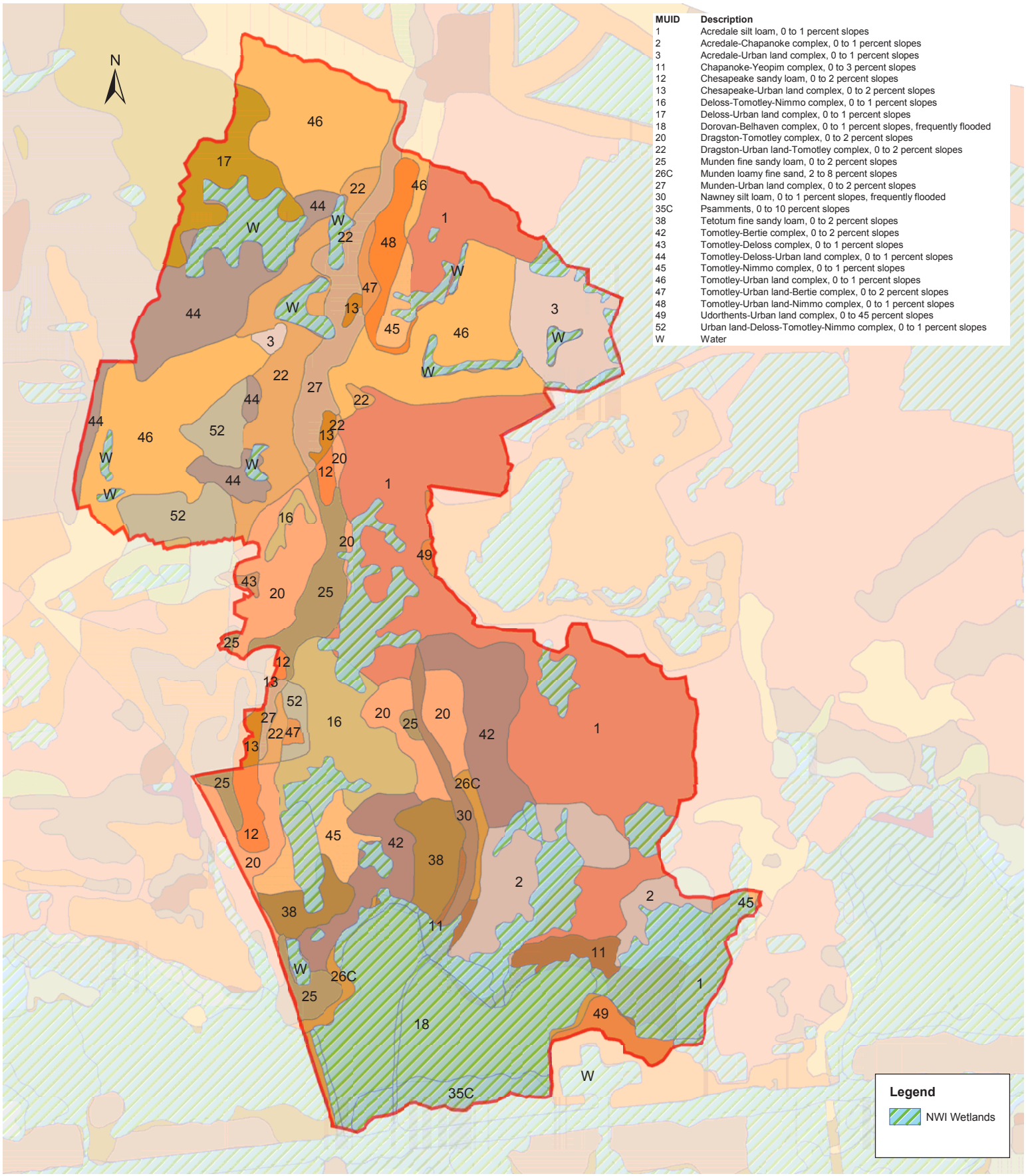


0 500 1,000 2,000
Feet

Aerial Imagery @ 2002 Commonwealth of Virginia.

See GIS for Complete Details

Figure 1. Butts Station Road/Kemp Woods Outfall (NS-2) Watershed MDPU Map



See GIS for Complete Details

Figure 2. Soils with Wetlands Overlay

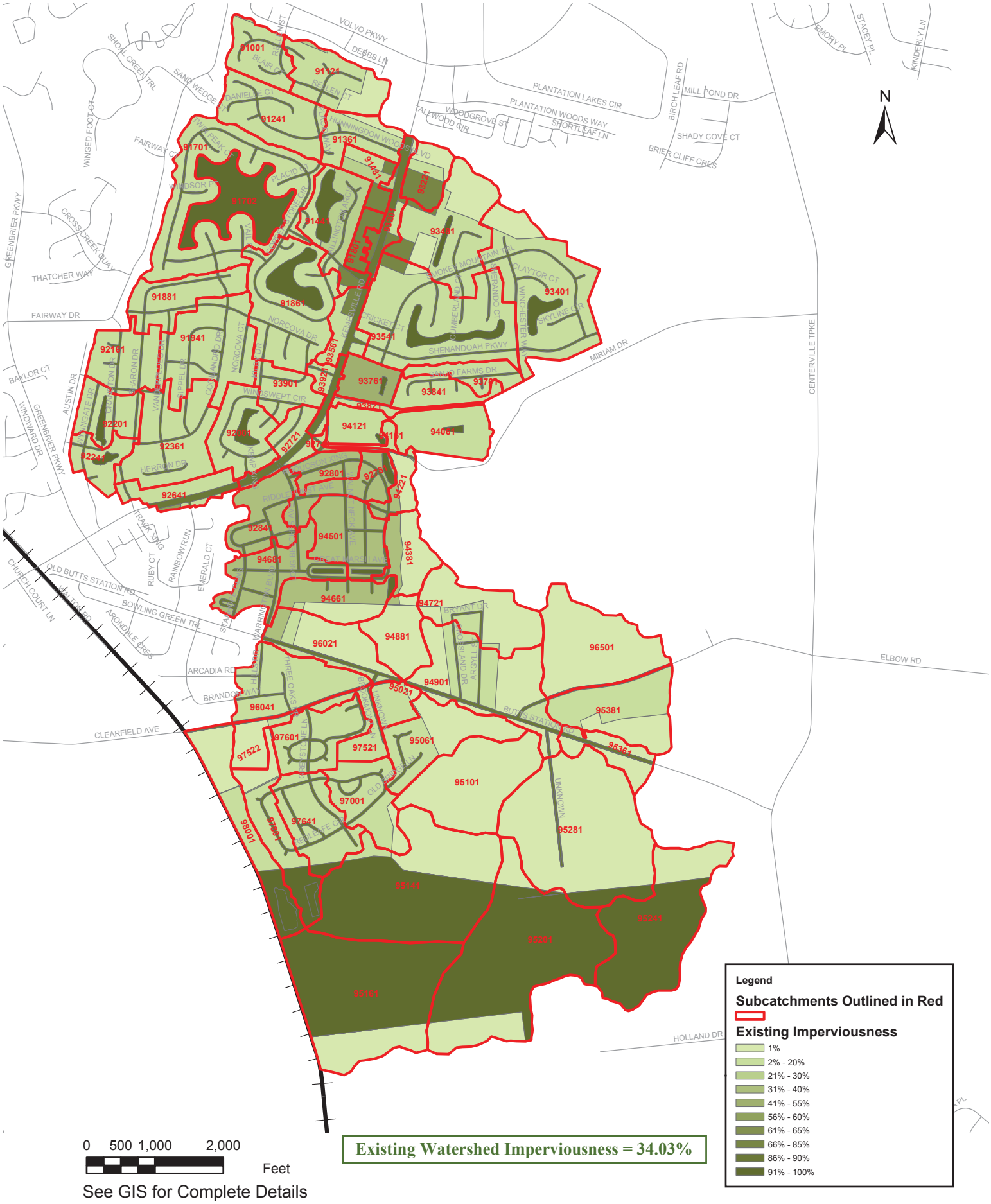


Figure 3. Existing Conditions Subcatchments with Shaded Imperviousness

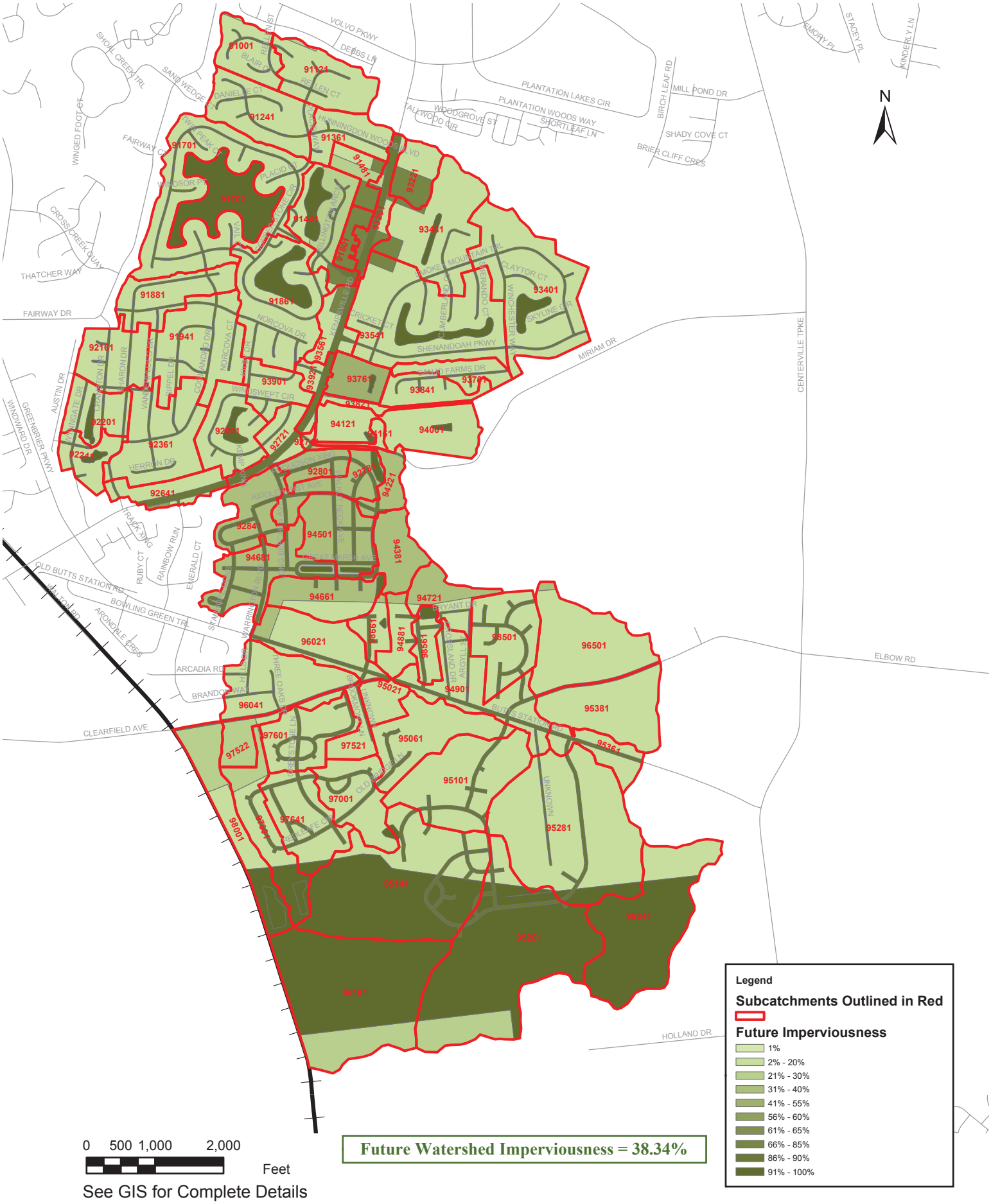
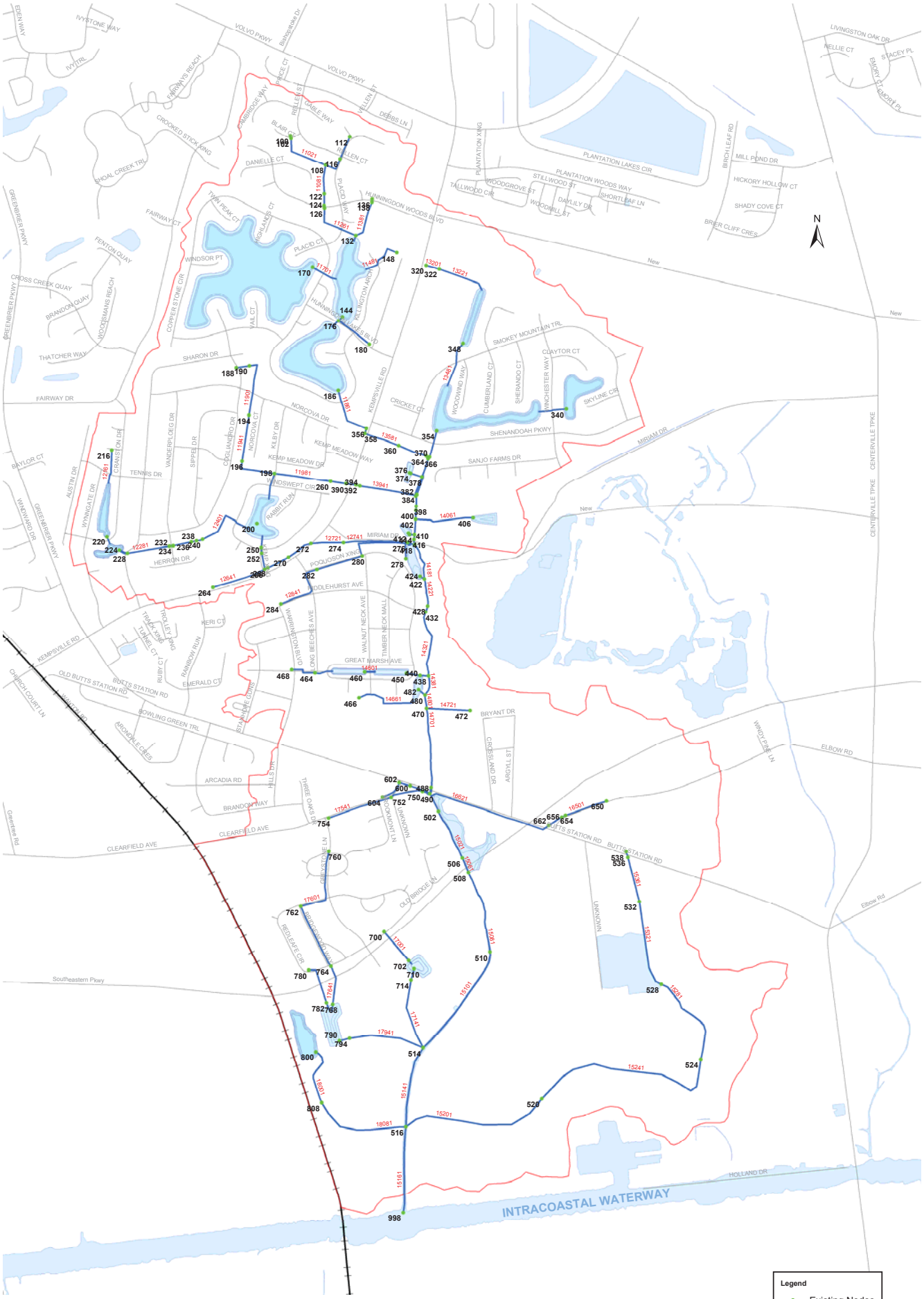
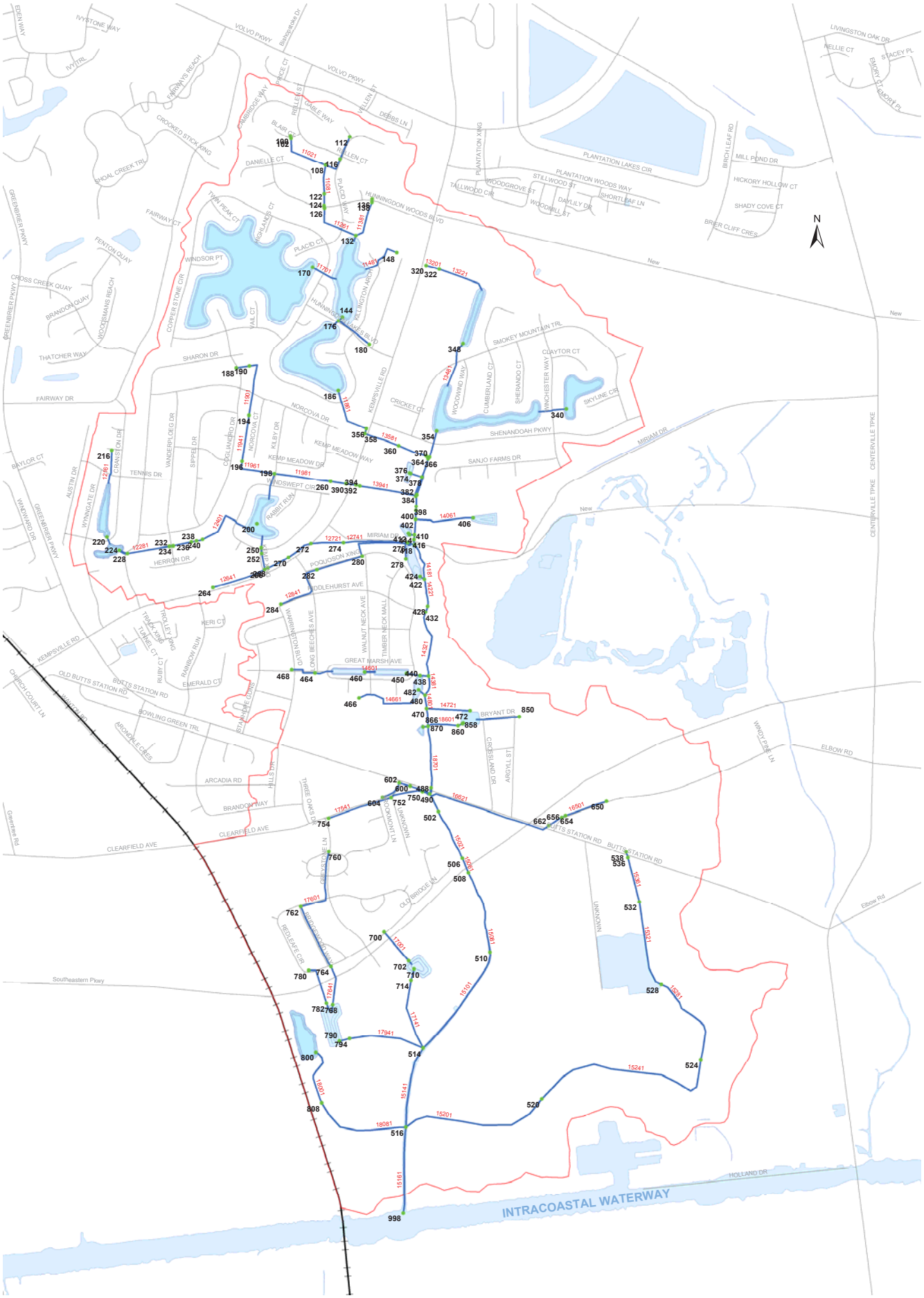


Figure 4. Future Conditions Subcatchments with Shaded Imperviousness



See GIS for Complete Details

Figure 5. Link-Node Diagram - Existing Conditions



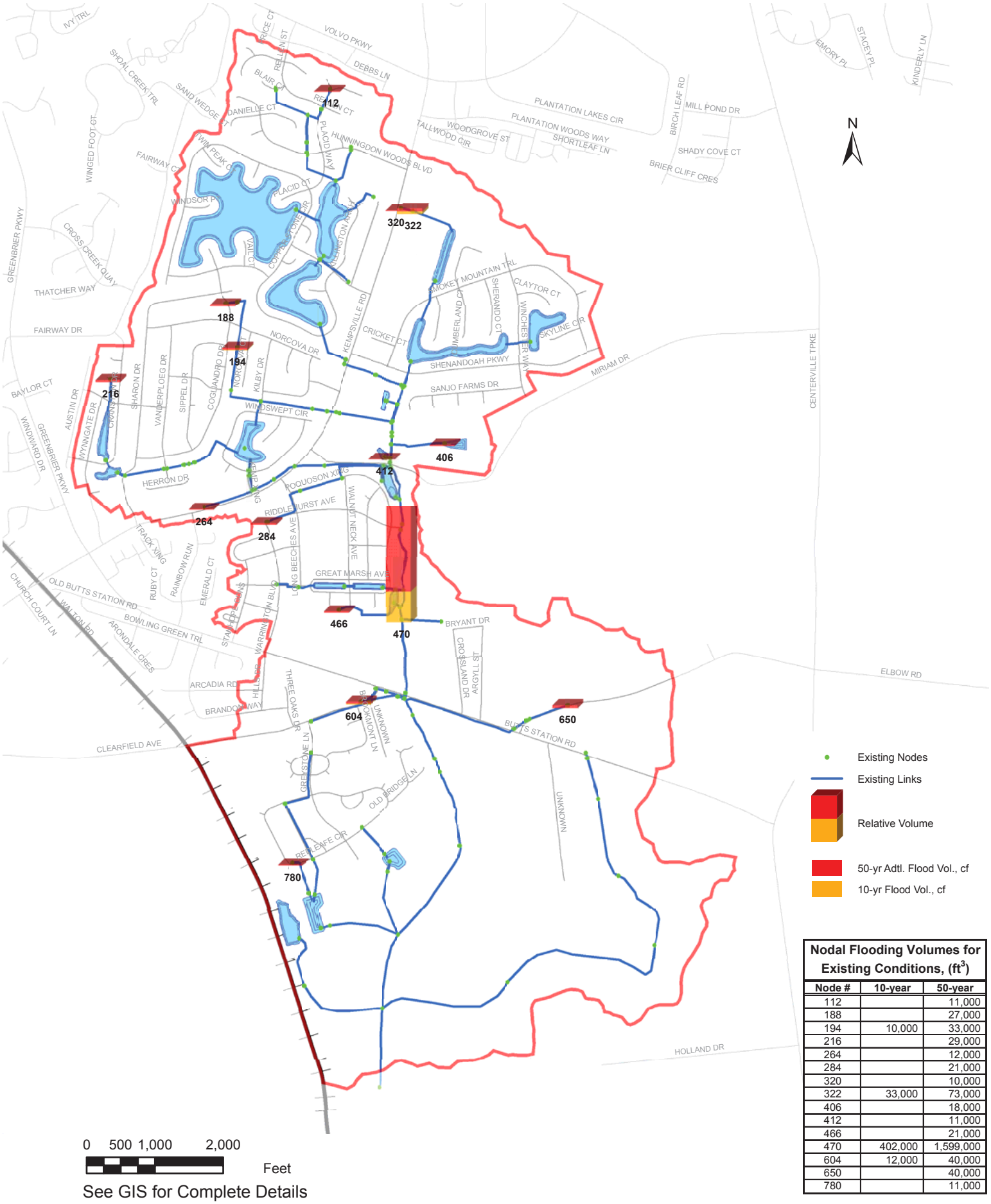
0 500 1,000 2,000 Feet

See GIS for Complete Details

Legend

- Future Nodes
- Future Links

Figure 6. Link-Node Diagram - Future Conditions

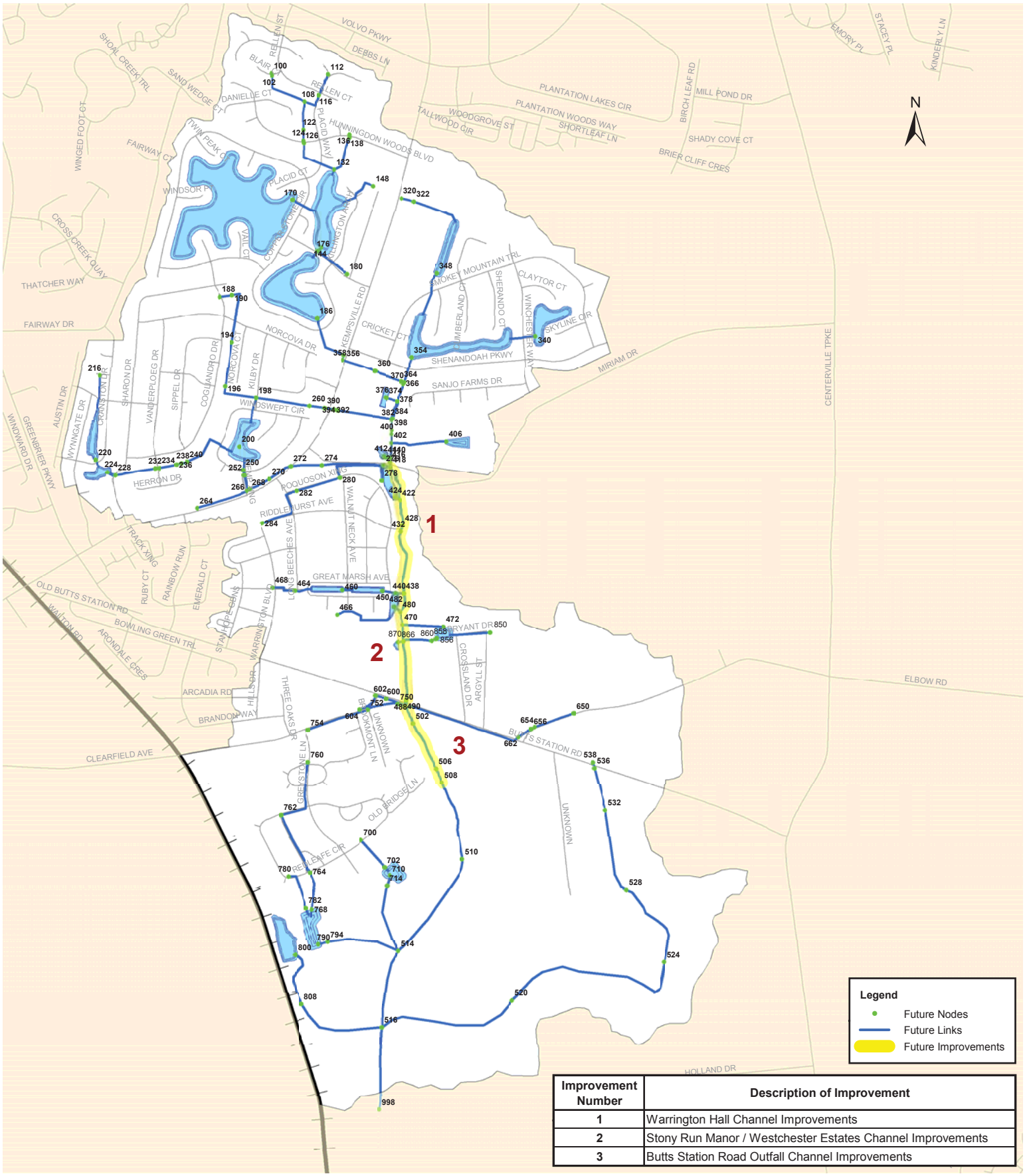


Nodal Flooding Volumes for Existing Conditions, (ft^3)

Node #	10-year	50-year
112		11,000
188		27,000
194	10,000	33,000
216		29,000
264		12,000
284		21,000
320		10,000
322	33,000	73,000
406		18,000
412		11,000
466		21,000
470	402,000	1,599,000
604	12,000	40,000
650		40,000
780		11,000

See GIS for Complete Details

Figure 7. Flooding for 10-Yr and 50-Yr Storms: Existing Hydrology, Existing Drainage



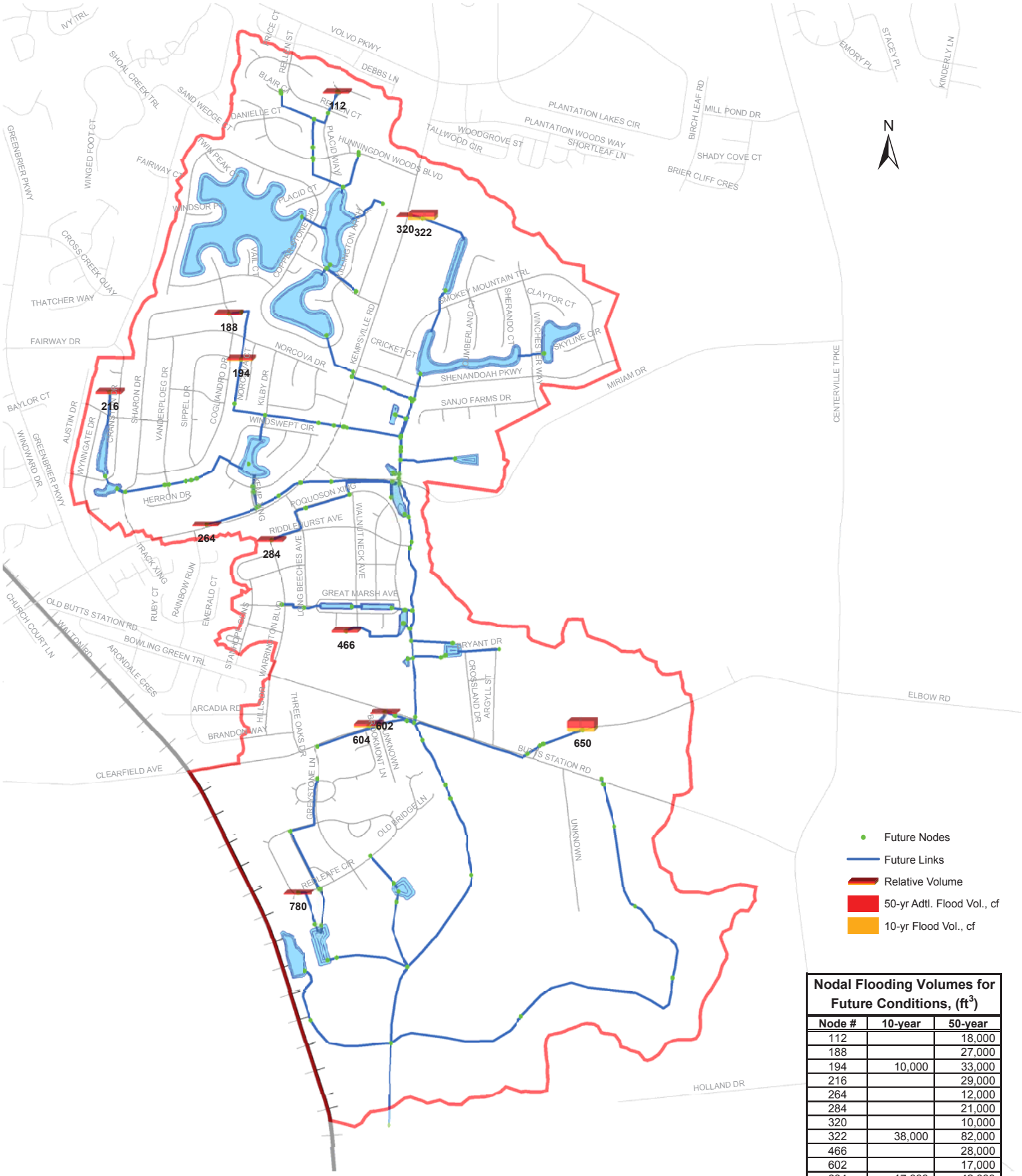
Improvement Number	Description of Improvement
1	Warrington Hall Channel Improvements
2	Stony Run Manor / Westchester Estates Channel Improvements
3	Butts Station Road Outfall Channel Improvements

0 500 1,000 2,000

Feet

See GIS for Complete Details

Figure 8. Future Improvements



Nodal Flooding Volumes for Future Conditions, (ft^3)		
Node #	10-year	50-year
112		18,000
188		27,000
194	10,000	33,000
216		29,000
264		12,000
284		21,000
320		10,000
322	38,000	82,000
466		28,000
602		17,000
604	17,000	42,000
650	38,000	116,000
780		15,000

See GIS for Complete Details

Figure 9. Flooding for 10-Yr and 50-Yr Storms: Future Hydrology, Future Drainage