

An Evaluation Of Open Space Quality In A Neo-traditional Community: A Case Study Of Kentlands

**Elizabeth Brabec
Professor and Department Head
Department of Landscape Architecture and Regional Planning
University of Massachusetts**



H&W CONSTRUCTION CO.
PRESENTS

Masterpiece Meadows

Four Distinctive 1 & 2 Story Homes

1st. FLOOR MASTER SUITES *Priced From..* \$270,000
2,400-2,650 SQ.FT. on 7-9 ACRE LOTS

Call: WALTER AIKENS 667-3752

Development vision does not always equal reality.



Open space is a lost in the development process



Open space serves various critical green infrastructure functions

E. Brabec 2007



Neo-traditional developments offer an alternative to conventional subdivisions.

But do they save open space and open space functions?



Water Quality



Open space can serve critical water quality functions.



Cleansing that is done at the source protects critical recreation and fisheries.

E. Brabec 2007



Open space serves a variety of active and passive recreation functions.



Sidewalks can also serve a recreation function for the community.

Evaluation Scheme

- Ecological
- Recreation
- Visual Quality
- Water Quality and Quantity Mitigation



Evaluation Scheme

- Ecological

- Patch size
- Vegetation type
- Ecotone type
- Connectivity
- Habitat quality

- Recreation

- Visual Quality

- Water Quality and Quantity Mitigation



Evaluation Scheme

- Ecological
- Recreation
 - Active
 - passive
- Visual Quality
- Water Mitigation



Evaluation Scheme

- Ecological
- Recreation
- Visual Quality
 - Visual access and quality of open space
 - View enhancement
- Water Quality and Quantity Mitigation

Evaluation Scheme

- Ecological
- Recreation
- Visual Quality
- Water Quality and Quantity Mitigation
 - Surface
 - Erosion control
 - Sedimentation
 - infiltration

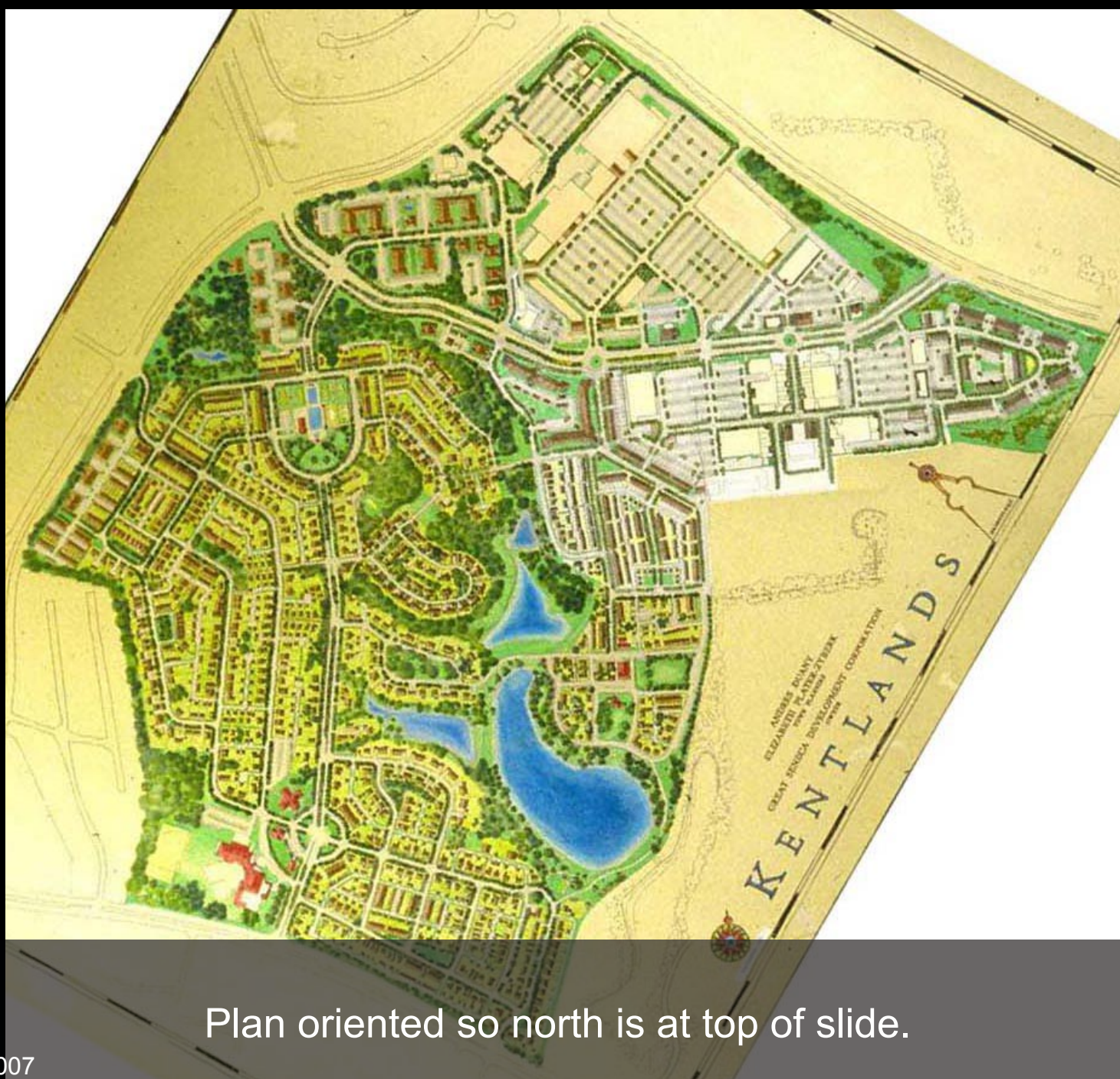


Kentlands

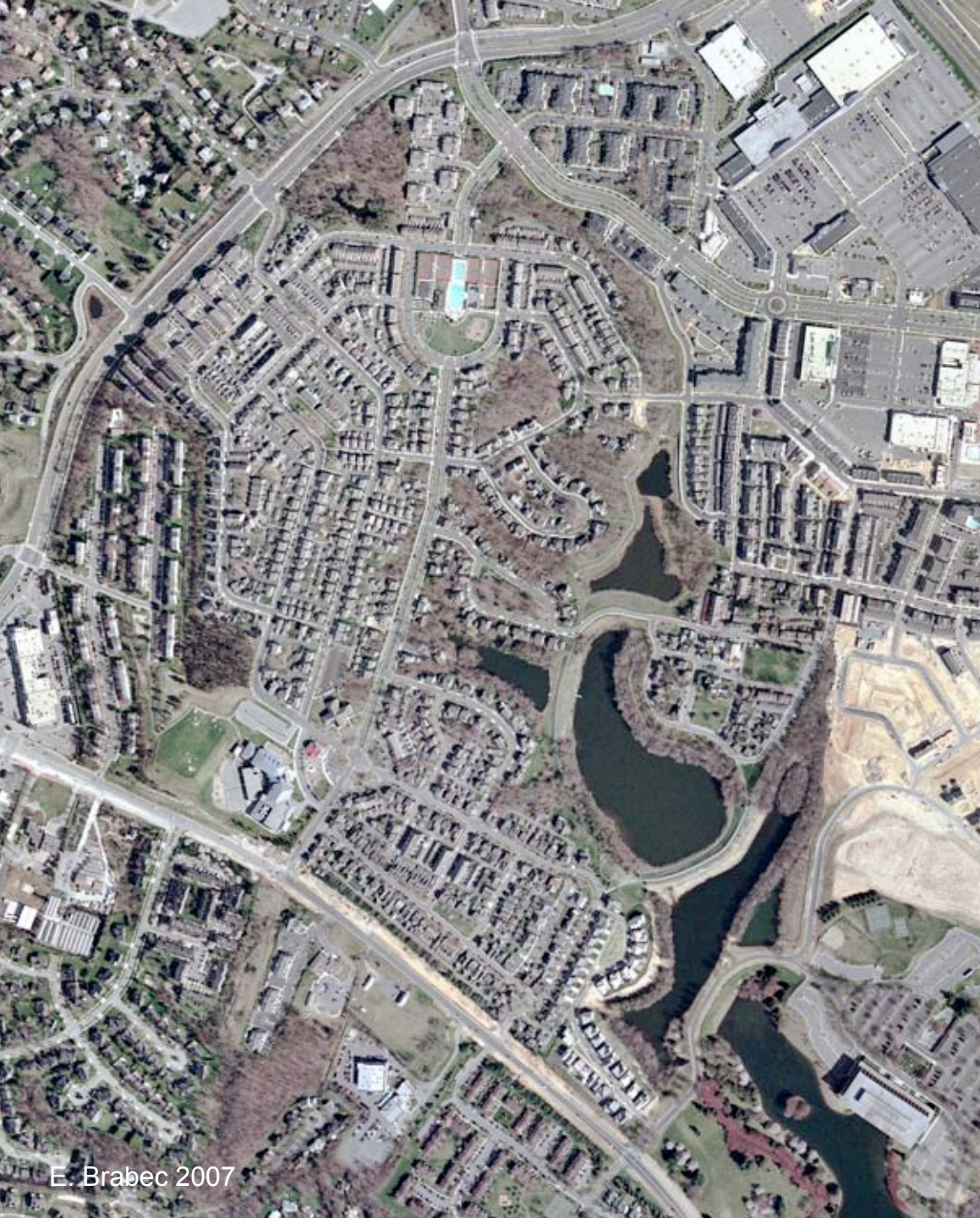
- Gaithersburg, Maryland



Original Plan, 1988



Plan oriented so north is at top of slide.



The residential area of the development composes the main portion of the site, while the commercial area lies to the north east.



The protected open space is owned by either the City, the public school, or the home owners association.



The pre-development stream flowed from north to south on the site. Two additional ponds were added to the lower two, which were already on site.



The original manor house provides a focal point to the development.

Ecological

- Invasive plants
- Maintenance of common areas
- Private easements
- Encroachment on common areas
- Maintenance of mature trees



The various ownerships also have differing open space management schemes.



The difference between the HOA's mowing and City's lack of management is apparent at the boundary of ownership.



**Lack of management of
invasive species can create
a impenetrable mass of the
open space vegetation.**



Although the easement protects the canopy, it does not specify management of the understory – critical wildlife habitat.



Lack of understory also compromises the stormwater infiltration capacity of the open space.



Although careful to protect significant stands of trees throughout the development, a casualty were larger habitat patches.



While the original stream channel was preserved in these front yards, the lack of native vegetation compromises the stormwater and habitat value.





The stream corridor is protected on the left under city ownership, and the continuous forest is under easement in the private yards.



Mature trees from the original forest on the site were protected during development with mixed success.

Water Quality

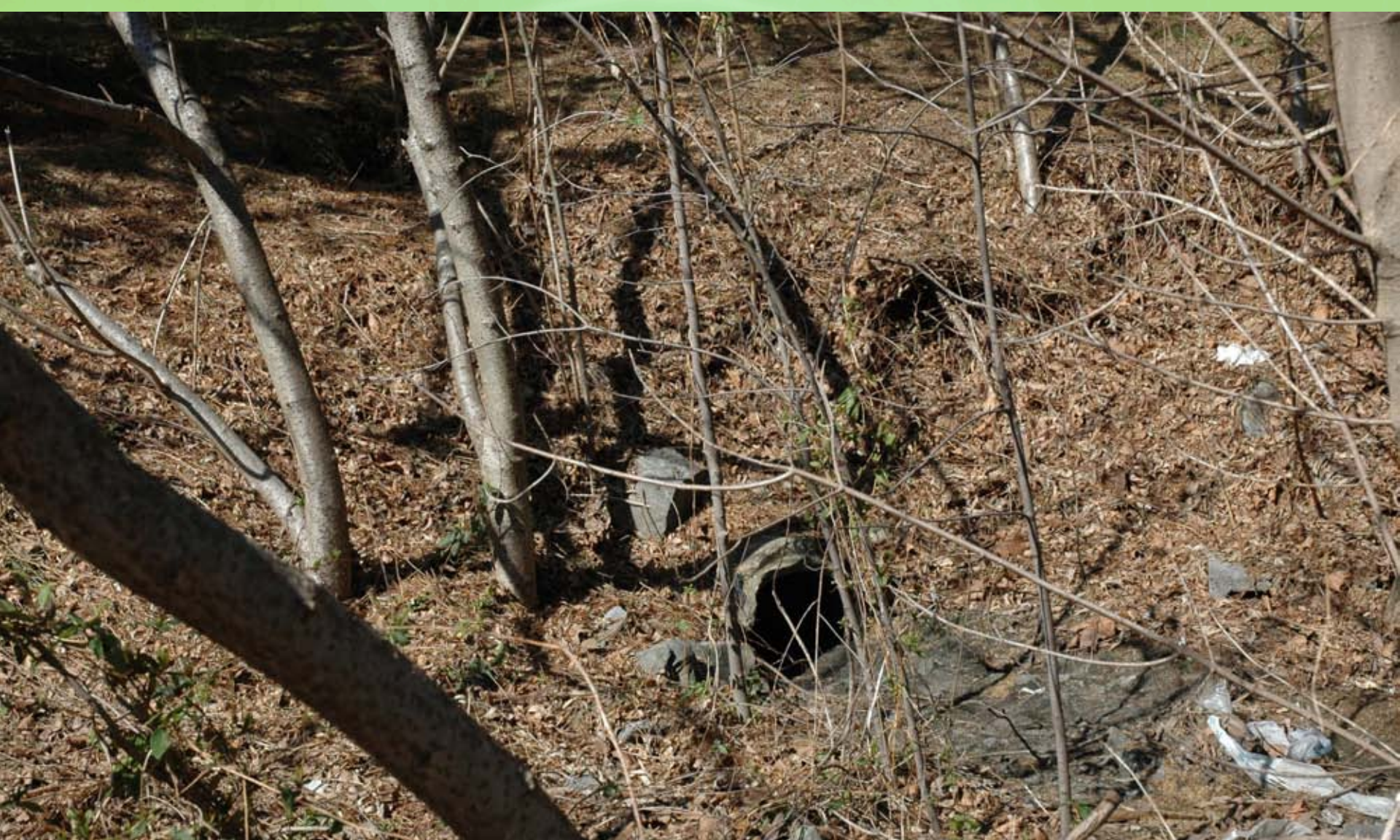
- Overwhelming the natural system
- Direct discharge
- Continued maintenance and refinement of BMPs



While the original stream corridor was maintained, two additional ponds were added to the lower two to improve stormwater cleansing.



Stabilization of the stream corridor was necessary to minimize the impact of the increased post-development flows.



Outflow from a parking lot catch basin was directed into the existing stream.



The addition of check dams in the original stream bed reduces erosion here and down stream.

Recreation

- separation of active and passive uses
- maintenance



The pond site is owned by the City and is popular regionally.



Kentlands has an integrated system of trails that provide access to all parts of the community.



Mid-block connectors increase the walkability of the community.

Visual Quality

- maintenance of views
- level of visual access to open space



Open spaces set at regular intervals through the community increases its visual quality.



Scenic views connect the community to the broader regional landscape.