Stevenson Toyota
LID and Auto Dealerships
LID was part of a larger picture of a LEED facility:

• LID provided options for stormwater that makes the facility more inviting and aesthetically pleasing.
• Design, construction costs, and maintenance costs play into the decision as to which LID elements to include.
• LID provides a more efficient and environmentally friendly way of handling stormwater runoff which was important to the Stevenson family.
• This project proves you can be blend environmentally friendly facilities with first class facilities.

WHY LID at Toyota?
• Cisterns for catching rain water.
• Constructed wetlands in place of conventional methods.
• Larger green space areas for infiltration.
• Indigenous plantings to avoid the need for irrigation.

Incorporated LID Elements
• Treatment system to use the rainwater for toilet/grey water usage.
• Roof capture of 7,290 sq. feet for two (2) 10,000 gallon cisterns.
• Estimated collection of 263,000 gallon per year based on average rainfall.
• This conveys to an estimated usage of 117,000 gallons of rainwater flushed through the toilets versus City water.
• Potential cost savings of greater than $10,000.00 year.
• ROI is recouped within 4 years assuming the above the savings/year.
• Still have to pay sewer costs for water that comes from Cistern.
• All onsite water is collected and treated in constructed wetlands.
• Wetlands provide treatment for the first 1.5” of onsite stormwater runoff as well as attenuate post development flows to pre-development levels per the City of Jacksonville Requirements.
## Constructed Wetland Details

### Wetland #1
- Drainage Area – 7.768 acres
- Impervious Area – 6.132 acres
- Storage Volume – 32,165 cubic feet
- City of Jacksonville Required Surface Area – 31,806 cubic feet
- NCDENR Required Surface Area – 32,151 cubic feet

### Wetland #2
- Drainage Area – 6.757 acres
- Impervious Area – 4.648 acres
- Storage Volume – 24,793 cubic feet
- City of Jacksonville Required Surface Area – 24,341 cubic feet
- NCDENR Required Surface Area – 24,793 cubic feet
### PROS of LID use at Stevenson Toyota

- Cisterns are visible to the general public allowing an opportunity to increase awareness.
- Water consumption is decreased reducing operating costs.
- Constructed wetlands have less maintenance requirements once established.
- The long term cost effectiveness means lower overhead.
- A more aesthetically pleasing facility.
- Positive public perception of implementing practices that protect local waters.
- Increased customer base.
- “Free” marketing.

### CONS of LID use at Stevenson Toyota

- Local and/or State regulations that make LID impossible or more costly.
- Lack of knowledge of permitting staff – not thinking outside the box.
- Lack of knowledgeable companies for maintenance.
- Construction costs can be higher for LID vs. Conventional methods.
- Ensuring employees can correctly convey benefits to customers.
- Different requirements between state and local permitting agencies that require additional permitting and engineering costs.
• Utilizing constructed wetlands versus a stormwater pond.
• Wetlands utilize a series of shallow and deep water pools combined with wetland vegetation.
• Draining impervious areas to pocket rain gardens prior to draining to the constructed wetlands.

Proposed Chevrolet LID
<table>
<thead>
<tr>
<th>Pros of LID at Chevy</th>
<th>CONS of LID at Chevy</th>
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<tbody>
<tr>
<td>• Constructed wetlands will require less maintenance once established.</td>
<td>• Local and/or State regulations that make LID impossible or more costly.</td>
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<tr>
<td>• More green space and open space make a more aesthetically pleasing facility.</td>
<td>• Construction costs can be higher for LID vs. Conventional methods.</td>
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<td>• Positive public perception of implementing practices that protect local waters.</td>
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