

Alternatives Analysis

Lutheran South Site

SWG-2016-00105

Alternatives. A key provision of the 404 (b) (1) guidelines is the “practicable alternative test” which requires that “no discharge of fill material shall be permitted if there is a practicable alternative to the proposed fill which would have less adverse impact on the aquatic ecosystem.” This is especially true when the proposed project is not water dependent. As a result, the Applicant has investigated available alternatives, including the no-action alternative, in order to demonstrate that there are no less damaging sites available and that all onsite impacts to waters of the U.S. have been avoided to the maximum practicable extent possible.

For an alternative to be considered “practicable”, it must be available and capable of being done after taking into consideration cost, existing technology, and logistics in light of the overall project purpose. The applicant considered the following siting criteria to determine the preferred alternative:

- 1) Provide a safe and technically functional sports field complex to serve the increasing number of students of the Lutheran South Academy (LSA) campus.
- 2) Construct the sports complex adjacent to the existing LSA campus.
- 3) Locate the sports complex on existing roadways and access-ways to safely accommodate student and visitor access.
- 4) Create a new sports complex at reasonable cost to LSA, reducing its current requirement to pay unsustainable fees to utilize third party locations.
- 5) Build the new sports complex without disruption or displacement of students during construction.

No action Alternative. The no action alternative, which would result from permit denial or inclusion of permit conditions that would render the proposed facilities unusable, would deprive the existing students as well as new students of required facilities to support extra-curricular activities. Payment of unsustainable fees required to use facilities owned and operated by others would eventually result in the reduction or elimination of extra-curricular sports activities for LSA students. The no action alternative does not fit the project purpose and need.

Offsite Alternatives. In order to serve the purpose and need of the project, property adjacent to LSA is required. A search for available adjacent property or even nearby properties indicated that none are available. Properties surrounding LSA are already developed and occupied.

Onsite Alternatives (Existing LSA Site). There is no space available on the existing LSA campus to construct the required facilities. The existing facilities on the campus are no longer usable due to both disrepair and size constraints. A 33% growth in the size of the student body of LSA is has occurred over the last decade and significant growth is project for the future. The size of the study body had rendered effective rehabilitation and use of existing facilities on the existing site infeasible.

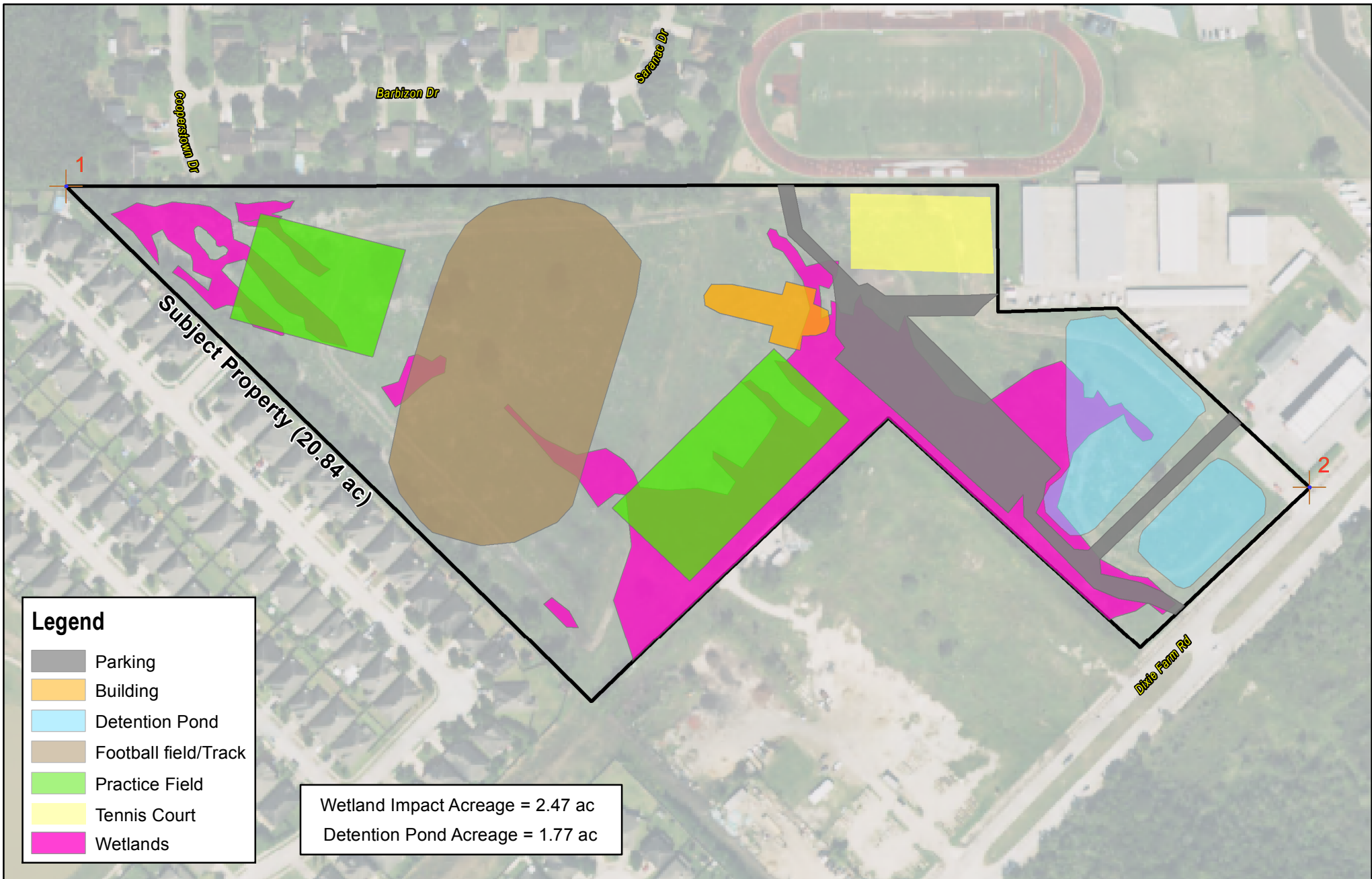
Onsite Layout Alternatives (preferred LSA site). The Applicant’s Preferred Alternative will result in the loss of 4.95 acres of wetlands due to excavation and fill to correct site drainage issues. The preferred site layout can be found within this Appendix.

Alternative Site Layouts 1, 2 and 3. Three alternative site layouts can be found in this Appendix. While alternative site layouts could potentially avoid and/or minimize impacts to WOUS, none of the layouts would serve the project purpose and need because:

- A pipeline easement containing one of more pipelines bisects the site. Structures cannot be built on this easement, and this restricts the orientation of the facilities that are integral parts of the proposed project.
- There is a well-head located on the site, and no facilities can be constructed within a 100 foot radius of this well-head.
- There are drainage issues associated with the site, and the Harris County Flood Control District (HCFCD) requires construction of the detention basins shown. HCFCD will not allow runoff to drain to Dixie Farm Road. The site requires 5.2 acres of detention at a minimum depth of 7'. One 2.6-acre basin out of the total required detention is located west of the field. Since this area is triangular in shape, retainage is its most efficient use. This area is bounded by a 60' wide pipeline easement on the east, which constrains the athletic field to run north and south parallel to the pipeline easement.
- Dixie Farm Road creates a "dam" adjacent to the site, causing water to pond on the property that results in wetlands creation. In addition, the site is surrounded by development constructed on fill that makes adjacent properties higher than the proposed site. These surrounding developments drain onto the site, causing the creation of wetlands. Site drainage must be corrected in order to support the proposed facilities. Thus, the proposed detention basins depicted on the preferred site layout are strategically located on the site.
- The proposed stadium must run north-south due to sun angles. Proper sun angle is essential for competitive sports fields.
- The location of the press box, concession and field house building are critical to the function of the facility. The press box must be close to the parking lot as well as the school and it is part of the bleachers. The concession and field house building has to be close to the parking lot, the school and the stadium. None of these features can impinge on the pipeline easement.

Utilizing the preferred site and the preferred layout would result in impact to six WOUS (wetlands) totaling 4.95 acres out of the 20.84-acre site.

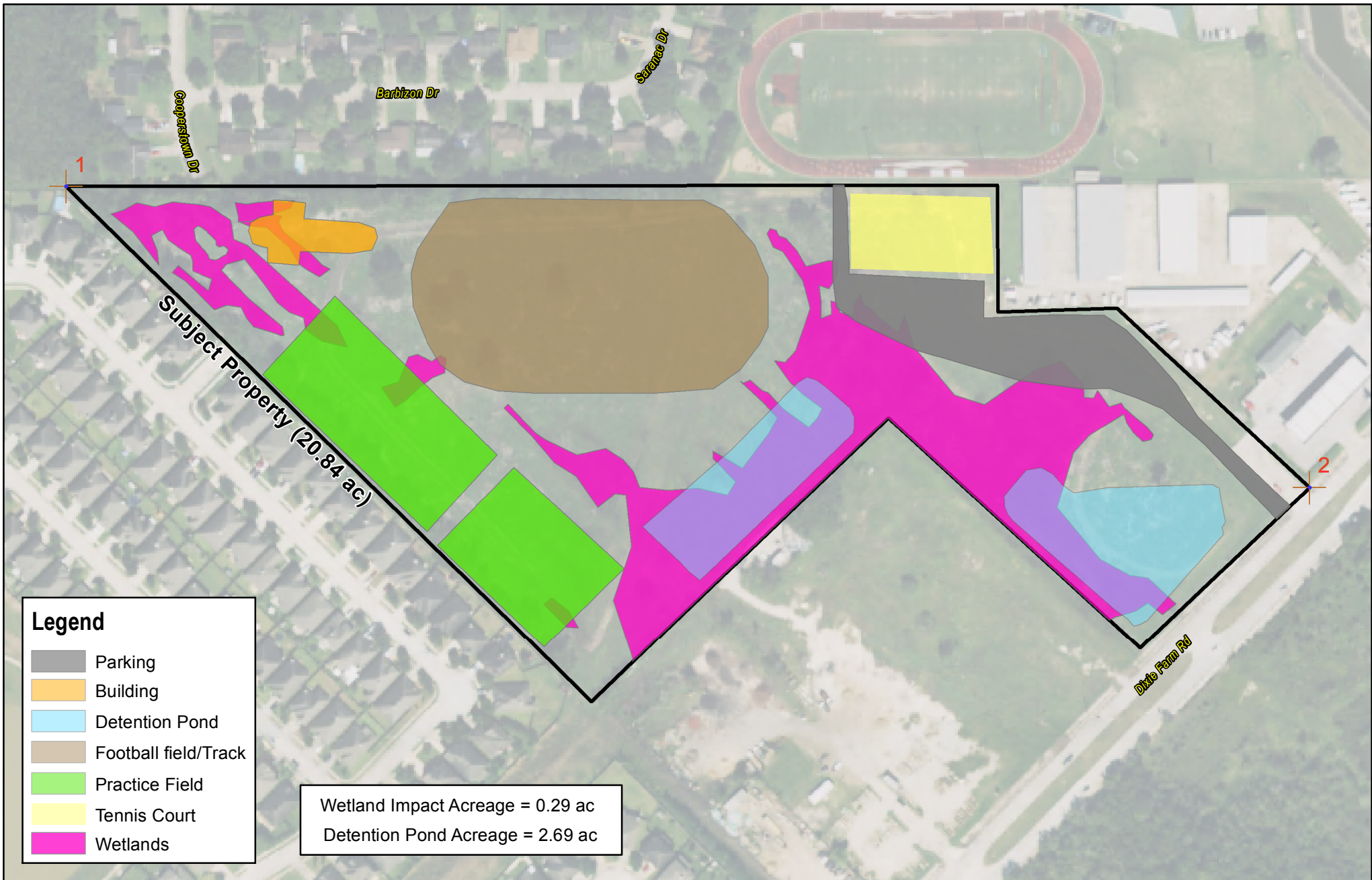
Compensation has been offered to off-set these losses. See plan for compensation in the permit application.



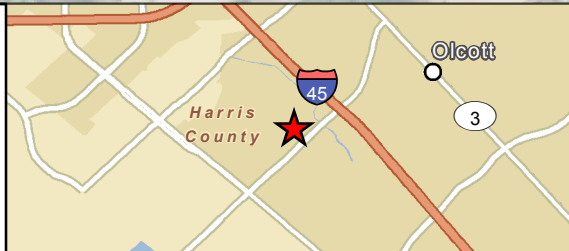
Legend

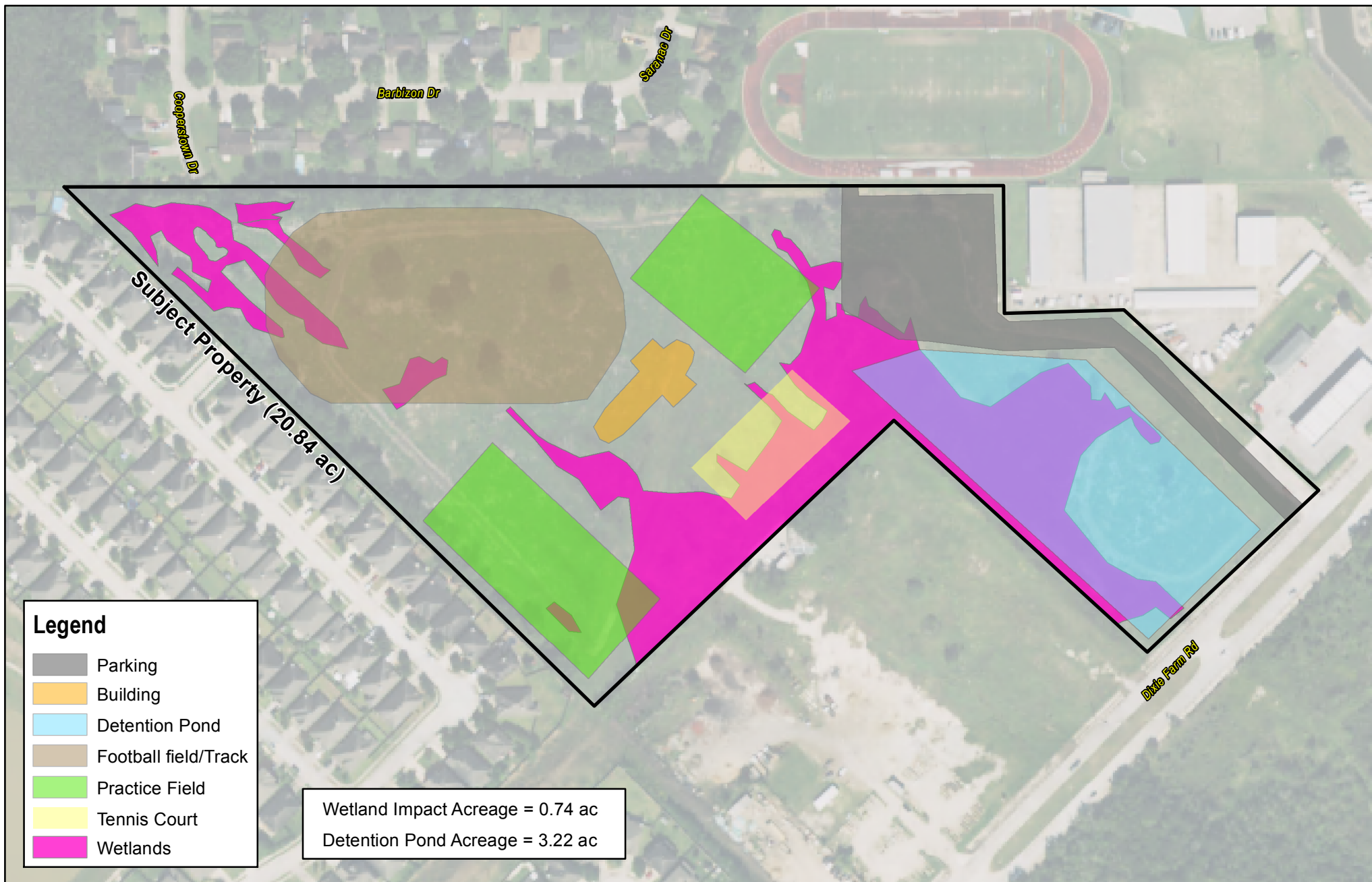
- Parking
- Building
- Detention Pond
- Football field/Track
- Practice Field
- Tennis Court
- Wetlands

Wetland Impact Acreage = 2.47 ac
Detention Pond Acreage = 1.77 ac

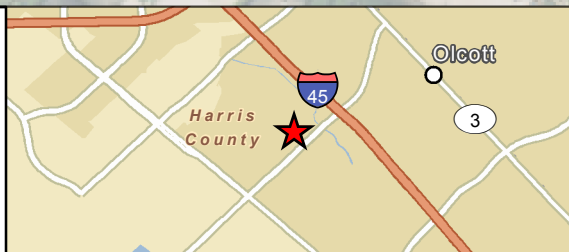


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Feet





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Lutheran Education Association of Houston
Lutheran South Campus

2014 AERIAL PHOTOGRAPH WITH
ALTERNATIVE LAYOUT #2

Harris County, Texas