SITE PLAN EVALUATION SHEET

ENVIRONMENTAL REVIEW 334-5070 M.S. 58

Response to City Staff Comments dated May 11, 2009, specifically

Quality of Wetlands Proposed to be Partly or Completely Removed Hatchet Creek Design Plat (PZ-09-19), Mark A. Garland, Environmental Coordinator, City of Gainesville April 8, 2009

Comment 1: The Hatchet Creek design plat submitted on March 11, 2009, proposes completely removing 17 wetlands and removing parts of 6 more wetlands. In all the plat proposes removing 9.28 acres of wetlands. Section 30-302.1 (d) of the City's land development regulations states in part that "Avoidance of loss of wetland function and wetland habitat is of the highest priority. The owner shall avoid loss of wetland function and wetland habitat by implementing practicable design alternatives to minimize adverse impacts to wetlands." The applicant claims that these wetlands are of such low ecological value that the design plat does not have to avoid or minimize impacts to them, as also allowed by section 30-302.1(d). This part of the section states that "Avoidance through practicable design modifications is not required when the ecological value of the function provided by the area of wetland is low and the proposed mitigation will provide greater long-term ecological value than the area of wetland to be affected."

Response: Correction—The total impact acreage equals 8.412 acres.

Response: Section 30-302.1(d) of the City Land Development Code states,

> "Avoidance through practicable design modifications is not required when the ecological value of the function provided by the area of wetland is low and the proposed mitigation will provide greater long-term ecological value than the area of wetland to be affected."

The City Staff has not analyzed adequately the provisions of this rule and has attempted to interpret the rule out of context with the rule's intent. Staff states that the applicant has claimed that the wetlands are of "such low ecological value" that the design plat does not have to avoid or minimize impacts to them." There are two basic problems with Staff's assertion. First, Staff is attempting to qualify or condition the phrase "low ecological value." The qualification of this phrase by stating "of such low ecological value" assumes that there are "degrees" of low ecological value implied by the rule. The rule simply states, in part, "when the ecological value of the function provided by the wetland is low." Second, the

rule additionally states "and the proposed mitigation will provide greater long-term ecological value than the area of the wetland to be affected." The result of the language described in Rule 30-302.1(d) sets forth a two-part test in which part 1 addresses **wetland impact area value** and part 2 addresses **the value of the mitigation area**. The City comments have both inaccurately and inadequately addressed part 1 related to ecological value and have not addressed part 2, which is the ecological value of the mitigation area. The applicant has provided detailed analysis of all wetland areas on site, wetland areas to be impacted, and provided a mitigation plan with detailed analysis as described in Chapter 62-345, Unified Mitigation Assessment Method. Based on this analysis, impacts to 8.412 acres of on-site wetlands result in Functional Loss Credits of -4.010. The mitigation proposed, which consists of **77.59 acres** of upland and wetland conservation and creation of **10.23 acres** of wetlands, results in a Functional Gain of 9.0520 credits. The Functional Gain offsets the required mitigation by a factor of 2.26X. The ***required*** mitigation to offset impacts, as determined by UMAM, would equal a Functional Gain of 4.010 credits.

The proposed mitigation results in the perpetual preservation of the highest quality wetlands and uplands on site and, in addition, results in a no-net loss of wetlands by wetland creation. The created wetlands will be constructed so that hydroperiods in excess of 200 days per year will be realized so that there will actually be "wet" wetlands on site as opposed to the current condition characterized as severely drained areas in which no surface inundation occurs.

The applicant's position as it relates to the criteria outlined in Section 302.1(d) is, as follows:

a. A detailed historic and current conditions analysis has been provided by the applicant, which inarguably justifies that the "ecological value of the function provided by the area of wetland is low." The wetlands proposed for impacts have been severely hydrologically altered by 41 years of drainage. It is simply not a valid argument to imply that placement of deep drainage ditches completely through on-site wetland systems has not drastically altered hydrology and vegetation composition. The value analysis of all wetlands to be impacted was assessed using the UMAM (Chapter 62-345).
b. As determined by the UMAM, the proposed mitigation will provide greater long-term ecological value than the area of wetland to be affected. The conclusion is based on the State-mandated Mitigation Assessment Method, which is binding on the State of Florida, Water Management District, and all local governments, as described in Chapter 373-414 F.S.

Comment 2: I have attempted to determine whether the wetlands proposed for impact are of such low ecological value that the plat does not need to avoid or minimize impacts to them. I reviewed the applicant's description of each wetland in the Environmental Features Inventory report and visited most of the wetlands myself.

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The City's land development regulations do not define "low ecological value." Since the City's regulations appear to have been adopted from the Water Management District regulations, I assessed each wetland according to the five criteria in the St. Johns River Water Management District's Management and Storage of Surface Waters Applicant's Handbook, section 12.2.2.3:

(a) condition -this factor addresses whether the wetland or other surface water is in a high quality state or has been the subject of past alterations in hydrology, water quality, or vegetative composition.
(b) hydrologic connection -this factor addresses the nature and degree of off-site connection which may provide benefits to off-site water resources through detrital export, base flow maintenance, water quality enhancement or the provision of nursery habitat.
(c) uniqueness -this factor addresses the relative rarity of the wetland or other surface water and its floral and faunal components in relation to the surrounding regional landscape.
(d) location -this factor addresses the location of the wetland or other surface water in relation to its surroundings. In making this assessment, the District will consult reference materials including the Florida Natural Areas Inventory, Comprehensive Plans, and maps created by governmental agencies identifying land with high ecological values.
(e) fish and wildlife utilization -this factor addresses use of the wetland or other surface water for resting, feeding, breeding, nesting or denning by fish and wildlife, particularly those which are listed species.

Response: The City has used criteria outlined in Section 12.2.2.3 of the St. Johns River Water Management District to evaluate wetland value and function. However, there are several problems with this approach. First, the **criteria** stated by the Staff, as referenced to Section 12.2.2.3, are used by the District to evaluate mitigation proposals. However, the **methodology** used by the Staff to enumerate and evaluate these criteria is invalid and is not used by any State, District, or other local agencies to quantify or qualify ecological value and function. The Applicant's Handbook, which includes methodologies for evaluating wetland function, has not been updated since the passage of Chapter 62-345. The Applicant's Handbook still contains methodologies for establishing mitigation ratios, which is no longer acceptable. The first paragraph of Section 12.2.2.3 states:

> **12.2.2.3** The assessment of impacts expected as a result of proposed activities on the values of functions will be based on a review of pertinent scientific literature, ecologic and hydrologic information, and field inspection. When assessing the value of functions that any wetland or other surface water provides to fish, wildlife, and listed species, the factors which the District will consider are: [a through e, as stated above]

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Chapter 62-345.100(2), Intent and Scope states:

> **62-345.100 Intent and Scope.**
>
> (1) The intent of this rule is to fulfill the mandate of subsection 373.414(18), F.S., which requires the establishment of a uniform mitigation assessment method to determine the amount of mitigation needed to offset adverse impacts to wetlands and other surface waters and to award and deduct mitigation bank credits. This Chapter shall apply to those impacts subject to review under Section 373.414, F.S., excluding subparagraphs 373.414(1)(a) 1, 3, 5, and 6 and paragraph 373.414(1)(b) 3, F.S.
>
> (2) Except as specified above, the methodology in this Chapter **provides a standardized procedure for assessing the functions provided by wetlands and other surface waters**, the amount that those functions are reduced by a proposed impact, and the amount of mitigation necessary to offset that loss. It does not assess whether the adverse impact meets other criteria for issuance of a permit, nor the extent that such impacts may be approved. This rule supersedes existing ratio guidelines or requirements concerning the amount of mitigation required to offset an impact to wetlands or other surface waters. Upon a determination that mitigation is required to offset a proposed impact, the methodology set forth in this rule shall be used to quantify the acreage of mitigation, or the number of credits from a mitigation bank or regional offsite mitigation area, required to offset the impact. This method is also used to determine the degree of improvement in ecological value of proposed mitigation bank activities. When applying this method, reasonable scientific judgment must be used.

The intent of the State with creation of the UMAM was to establish a unified, consistent method to evaluate function and value of wetlands to enable assessment of impact and mitigation proposals. It was also the intent of the state that the UMAM would be a standardized procedure for evaluating function and value of wetlands considering conditions A through E stated above as is evidenced by FDEP workshop training materials distributed for the UMAM in 2004, which states:

> Uniform mitigation assessment method must determine the value and functions provided by wetlands and other surface waters considering:
>
> - Current condition
> - Hydrologic connection
> - Uniqueness
> - Use by fish and wildlife
> - Location

City Staff, in direct conflict with the intent of Chapter 62-345, has designed its own unique wetland value and function evaluation protocol, which, at a minimum, lacks specificity, uses assessment methods that

are under-described, uses a qualitative evaluation scale that is based on an undescribed set of parameters and has not been subjected to any type of peer review. To evaluate categories A through E above, the City has used an arbitrary evaluation scale of low, medium, and high with no defined criteria explained as to what factors were evaluated or any relational scoring methodology that relates one category to another. For instance, what is the value of wetlands with a low score for condition and fish and wildlife and a medium score for hydrologic connection. There is simply no procedure established within the methodology used by the City that describes a procedure to ascertain the value of wetland functions or how these wetland scores can be related to wetlands occurring on other sites. The City Code, as per Section 30-302.1(f)(1) specifically references the UMAM for evaluation of mitigation proposals.

Comment 3: In my opinion, factors (c), uniqueness, and (d), location, are similar for all the wetlands on the Hatchet Creek site, and I did not assess these for each wetland.

Uniqueness—Nearly all these wetlands were originally forested, probably with a mix of pond cypress (Taxodium ascendens) and black gum (Nyssa sylvatica var. biflora). These are not unique in this area, though it is unusual to have such a large area of flatwoods and cypress-gum swamps within the city limits of Gainesville. Some of the smallest wetlands may be remains of wet prairies or depression marshes within the flatwoods, but again these are not unique.

Response: The wetlands are severely drained, remnant, historic cypress domes that are not unique to Gainesville or the surrounding area. The wetlands in their current condition would not be classified as cypress domes, cypress ponds, gum ponds, etc. by definition. They currently consist of a mosaic of mixed pines, oaks, and wetland species in a degraded condition.

Comment 4: Location—These wetlands have a high value because of their location. Alachua County designated this area as part of its Buck Bay Flatwoods Strategic Ecosystem. The 1996 KBN/Golder report summarizes this area as follows (emphasis added): "This is a large site of commercial pine flatwoods forest and associated wetlands directly north of Gainesville. It is a major headwaters area, rather like a miniature Green Swamp, supporting the following creek systems to varying degrees: Rocky Creek, Monteocha Creek, Rhuda Branch, Hatchet Creek, Little Hatchet Creek, and a bit of Hog town Creek .... Wetlands occupy large areas and provide a lot of surface water storage and wildlife habitat."

Response: The current project site, although previously mapped by the County as part of the Buck Bay Flatwoods Strategic Ecosystem, is effectively isolated from this system (**Figure 1 and Photos 1 through 11**). The project site is isolated from all parts north of the site by NE 53rd Avenue; all points west by NE 15th Street; areas to the south by NE 39th Avenue, and areas to the east by Waldo Road and the Airport. The only direct connections to the north, west and south are provided by a series of five (5) culverts that receive flow from upstream areas. To the north of the site lies the Buck Bay Flatwoods

Strategic Ecosystem, which lies across the NE 53rd Avenue easement. In addition, there is a large GRU power easement that lies south of NE 53rd Avenue and an easement containing wells lying along the north part of 53rd Avenue. Along the northwest boundary of the site lies the well field, which is surrounded by a tall chain-link fence that forms an additional barrier to wildlife movement. East of the well field north of 53rd Avenue lies additional undeveloped land that is currently timberland, but at a minimum, 50% of this area can be developed based on County Strategic Ecosystem rules. In addition, lands east of the project site have industrial land uses and industrial development has already occurred northeast of the project site between the creek and 53rd Avenue. Based on the condition of the on-site wetlands, the past and existing drainage ditches and drainage conditions, the Golf Course, the Airport, and the isolation by high volume traffic corridors, it is simply unimaginable that the on-site wetlands could be considered as high value based on their landscape position. These wetlands simply do not have significant interaction with adjacent habitats. Movement of wildlife from the site to off-site areas is treacherous and often results in the death of migrating wildlife.

Comment 5: In its 2001 Environmental Resource Report, the City of Gainesville's Nature Operations Division rated this area as one of three sites, in and around the city, of "outstanding environmental quality" and called it one of the "'gems' of Gainesville's remaining natural areas."

The Alachua County Environmental Protection Department's June 2007 report on Gainesville Creeks says "Some areas in the upper watershed [of Little Hatchet Creek] have been ditched and drained to reduce flooding, but retain some natural vegetation in the form of forested wetlands. These areas are important because, although ditched and drained, they contain relatively little impervious area."

Response: In a report addressing the condition of the project site entitled *"Little Hatchet Creek Flatwoods Environmental Site Evaluation"* prepared by the Nature Operations Division, the reviewer states in part "Historically the property's appearance and ecological processes, such as natural fire regime and hydrology, have been significantly altered." The reviewer goes on to state that "These long-term activities have changed both plant and animal species composition and structure." The reviewer further comments that "Hydrologic restoration would be difficult if not impossible."

Comment 6: In my opinion, the value of the location of these wetlands by itself excludes any from being considered of such low ecological value that they need not be avoided **[please see response to Comment 4 above for rebuttal to this statement]**. Nevertheless, the wetlands proposed for impact do vary in quality, and in the table below **[inserted for review by applicant]** I rate each of the wetlands on the remaining three factors: (a) condition, (b) hydrologic connection, and (e) fish and wildlife utilization. For each factor, I give a value of "low," "medium," or "high." The wetlands are arranged from north to south.

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Wetland Number	(a) Condition	(b) Hydrologic Connection	(c) Fish and Wildlife Utilization
52-C	high (for site)	low	medium
20	medium	medium	medium
17	medium	low	medium
23	high (for site)	low	medium
71	medium	low	medium
5151	low	low	low
8700	low	low	low
8741	low	low	low
25	medium	medium (ditch)	medium
700	low	low	low
36	low	medium (ditch)	low
38/38B	medium	medium (ditch)	medium
37	low	medium (ditch)	low
35	medium	medium (ditch)	medium
800	low	low	low
57	low	low	low
27-A	low	medium	low
34	low	low	low
54-A	low	low	low
53	medium	low	medium
29	medium	medium (ditch)	medium
29A	medium	medium (ditch)	medium
32	low	medium (ditch)	low

Response: The City has prepared a table (above) of scores given for (a) condition, (b) hydrologic connection, and (c) fish and wildlife utilization of which scores of low, medium, or high have been given for each category for each proposed wetland to be impacted. For clarification purposes, Wetland 23 will not receive impacts and minimal impacts of 0.05 acres will occur to Wetland 52C. Again, it should be stressed that the City has provided no definition of high, medium, or low, or any description of the factors used to evaluate each category, or any scores or assessments obtained for any valuation category listed above. Responses to wetland evaluation category scores are given, as follows:

(a) **Condition**—with respect to the City's evaluations presented in the attached table: The City has rated the proposed impact wetlands with a condition code of medium and low. Based on the SJRWMD criteria for evaluation of this condition, the following is stated:

> "This factor addresses whether the wetlands or other surface water is in a high quality state or has been the subject of past alterations in hydrology, water quality, or vegetative composition."

All wetlands that have been proposed for impacts have been ditched and drained since 1968, which has resulted in alterations to hydrology, water quality, and vegetation

composition. It is improbable to suggest that wetlands with such intrusive perturbations would be considered to be of medium value regardless of how this is defined. All wetlands proposed for impact show the following degenerative vegetation changes:

a) Existing vegetation is not characteristic of what existed in the historic condition.
b) Remarkable absence of size class structure.
c) No evidence of recruitment of canopy species.
d) Extensive canopy mortality.
e) Absence of wetland canopy or any canopy in many areas.
f) Greater occurrence of pine and oak species in canopy and gallberry, palmetto, braken fern and beautyberry in the groundcover.
g) The absence of OBL and FACW herb species in the groundcover.

(b) **Hydrologic connection**—The City has given a score of medium to all wetlands that have transecting ditches and a score of low for all isolated wetlands. This scoring rationale suggests that wetlands connected by ditches have additional value due to connections with other wetlands while isolated wetlands have lower value. This evaluation provided by the City is irrational and has been misapplied and does not describe the hydrologic value of the wetlands on site. To begin with, most of the isolated wetlands on site typically have a higher water table than those in which ditches are present. Although some isolated wetlands inundate for very short periods in response to major rain events, almost all are continuously dry when it is not raining in large amounts on a daily basis.

The SJRWMD evaluation of hydrological connectivity involves the assessment of interactions of on-site wetlands with off-site water resources. The analysis should involve assessing contributions of on-site wetlands to off-site wetlands as related to detrital export, base flow maintenance, water quality enhancement, and nursery habitat. The on-site wetlands, because of the ditch system and the depth and width of ditches, are severely drained by the ditches. As presented by the City, the ditches are practically assessed as being an enhancement to the wetlands. For instance, Wetland 52C is the wettest wetland on site but has been given a low value for this category. The City, by its analysis, is suggesting that isolated wetlands can be assigned higher value scores if ditches are constructed through them!

Within the project site, there is almost no surface water interaction between wetlands and ditches or interactions among wetlands. All water flowing in the ditches by-passes the wetland with minimal to no interaction. Even during extreme rain events, the water does not exceed the ditch bank. The majority of water treatment or enhancement occurs within the ditches with no contribution for enhancement afforded by the wetlands themselves. The on-site wetlands offer minimal storage of storm flows and minimal

contributions to base flow in excess of that which is provided by on-site uplands. The ditched branches of Little Hatchet Creek, and adjacent ditches are intermittent and currently flow only during periods of intense or prolonged rainfall. The on-site wetlands do not provide, as might be expected, water quality benefits to upstream habitats, which include all off-site areas to the west, south and north of the project site. In addition, water flowing through the site from off-site areas has no interaction with the surface of on-site wetlands. The water flows in the ditches of which the bottom elevation is 4-7 feet below the surface of the wetlands.

In addition, the City, in their analysis, has not considered the hydrologic condition of the wetlands evaluated. The Applicant has provided significant hydrologic data from a series of continuously recording piezometers established in wetland areas. The data show that the majority of these wetlands do not inundate even in response to flooding rain events. These hydrologic data are additionally supported by the long-term physical record, which shows that substantial oxidation of soils has occurred in wetlands causing changes in vegetation structure and vigor, death of canopy trees, tree fall, exposure of roots, etc. There are no on-site wetlands that are proposed to be developed that exhibit a surface hydroperiod that equals 1% of the inundation period in which the wetland historically developed.

(c) **Fish & Wildlife Utilization**—The on-site wetlands provide habitat to generalists animal species such as armadillos, raccoons, opossums, fox, deer, and other animals that would generally be found in uplands. The on-site wetlands proposed for impacts, however, do not provide habitat for aquatic dependent species. These wetlands do not provide habitat for fish or for immature amphibian species or aquatic dependent amphibian or reptile species. These wetlands do not provide breeding habitat or feeding habitat for water fowl or for listed animal species. These wetlands do not provide habitat for animals with specific hydrological requirements.

In comments made March 29, 2007, in review of the applicant's land use application, City Staff stated: "The wetlands, in their currently drained condition, are not significant for listed species or general wildlife habitat."

In conclusion, the on-site wetlands provide more probable habitat for gopher tortoises than they do for fish.

Figure 1. Project site shown in relation to major roadways. NE 15th Street, NE 53rd Avenue, Waldo Road and NE 39th Avenue. These large transportation corridors effectively isolate the site from surrounding habitats and provide significant barriers to wildlife movement between the project site and off-site areas. Other isolating factors include (1) the well field with a large chain-link fence surrounding the property, the Gainesville Airport, and industrial development to the northeast of the site. In addition, future industrial development will occur east of the project site.

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Photo 1. Culvert that routes water under NE 15th Street to the project site from off-site areas to the west. Photo shows degraded water quality of flows originating from the west.

Photo 2. Panoramic view of NE 15th Street and large GRU easement that impedes wildlife movement from the project site to areas lying to the west.

Photo 3. Intersection of NE 15th Street and NE 53rd Avenue.

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Photo 4. Photo of westernmost culvert, which allows water flow under NE 53rd Avenue to a ditch lying south of NE 53rd Avenue. The ditch eventually empties into the North Branch of Little Hatchet Creek (note fence surrounding the well field).

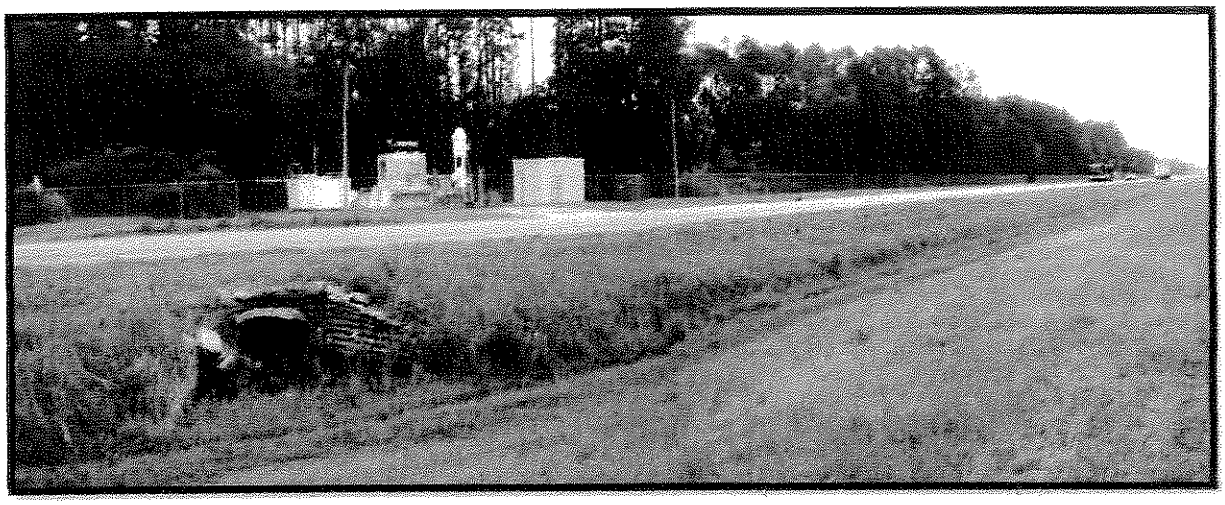

Photo 5. View from north to south of culvert that routes water from the well field to the project site. This is the major hydrologic connection of the project site to all areas north of 53rd Avenue.

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Photo 6. View of NE 53rd Avenue from east to west along the south boundary of 53rd Avenue. Any wildlife movement from the project site must cross the power easement, NE 53rd Avenue, and the fence, which isolates the well field property.

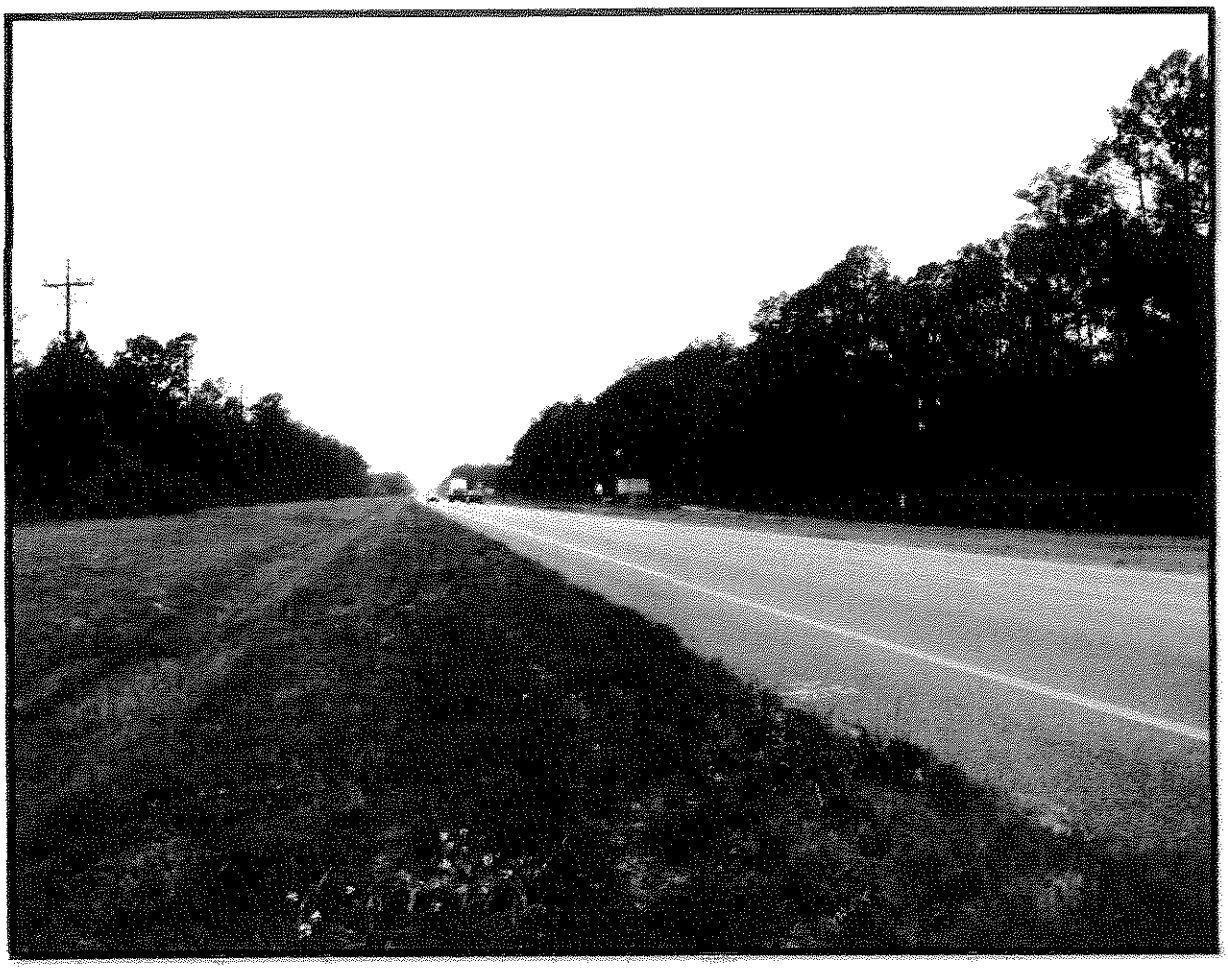

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Photo 7. View of the culvert that forms the major hydrologic connection between the project site and areas lying south of NE 39th Avenue.

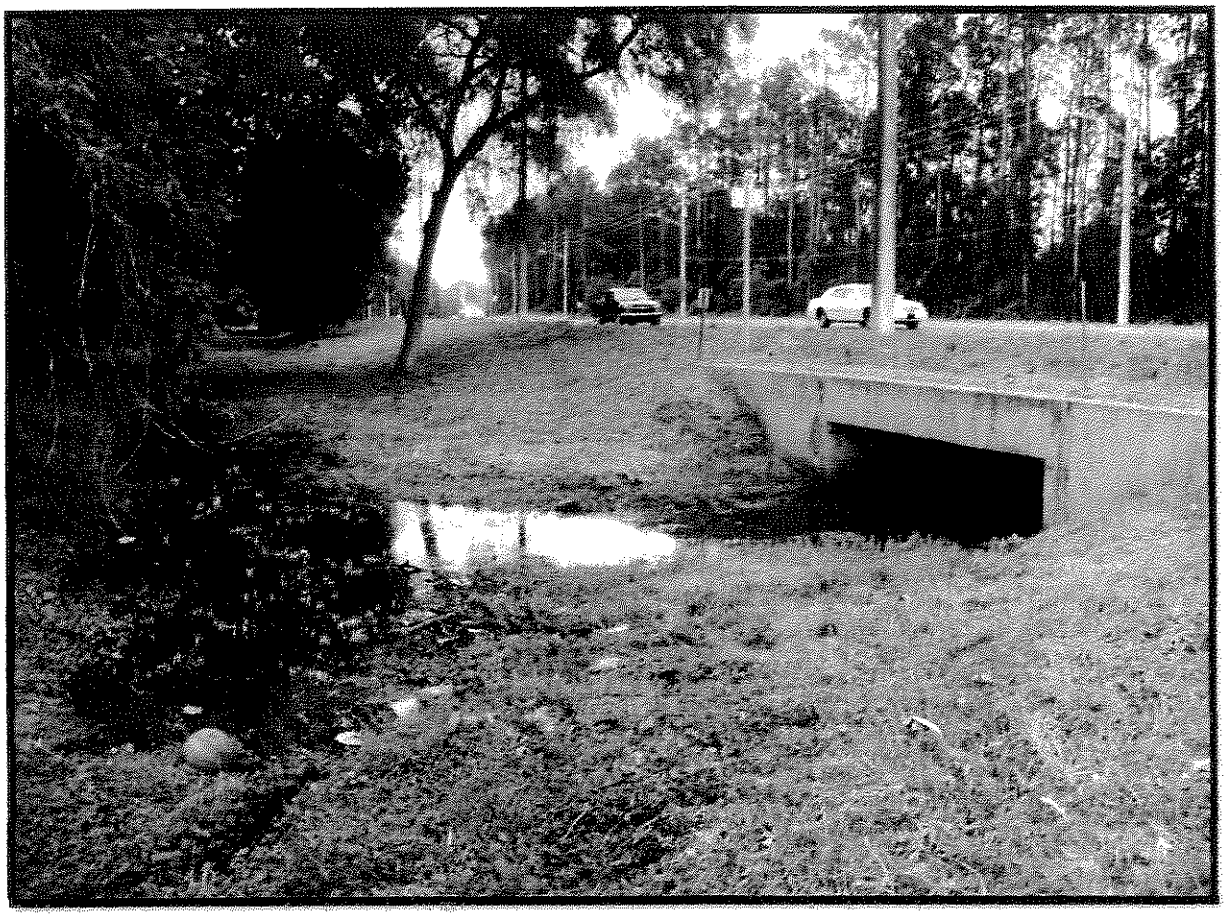

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Photo 8. View of NE 39th Avenue from east to west along the south boundary of the project site. This road forms a major barrier to wildlife movement between the project site and areas to the south.

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Photo 9. Typical fate of wildlife trying to cross the NE 53rd Avenue easement lying north of the project site.