

ENVIRONMENTAL ASSESSMENT

(File No. 200801105)

Applicant: Sevierville Public Building Authority

PROPOSED OLD KNOXVILLE HIGHWAY AND
EAGLES LANDING GOLF COURSE IMPROVEMENTS,
IN SEVIERVILLE, SEVIER COUNTY, TENNESSEE

U.S. ARMY CORPS OF ENGINEERS
Nashville District, Regulatory Branch
in cooperation with the
TENNESSEE VALLEY AUTHORITY

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1.0 Proposed Activity

1.1 Project Description. Sevierville Public Building Authority (SPBA) proposes to realign a portion of the Old Knoxville Highway (OKH) and expand the Eagles Landing Golf Course (ELGC). Plans include construction of 18 additional holes and improvements to the existing golf course. The OKH improvements would result in the relocation of 1,845' of Gists Creek. The proposed relocated stream channel would be 1,556' in length resulting in 289' of stream loss. Also associated with OKH improvements is the elimination of 35' of an unnamed tributary to Gists Creek (Stream Ex-2) and replacement of an existing 25' culvert on Gists Creek. SPBA would replace the culvert with a 152' long triple box culvert. The ELGC expansion would result in the relocation of an unnamed tributary to the LPR (Stream Ex-4), the elimination of an unnamed tributary to Gists Creek (Stream Ex-3), and the elimination of several wetlands. A 337' section of Stream Ex-4 would be relocated into 452' of proposed channel resulting in 115' of additional stream footage. The tributary currently drains an existing lake on the golf course. Approximately 418' of Stream Ex-3 would be filled for the ELGC expansion. Seventeen wetlands throughout the golf course would be eliminated, totaling 2.99 acres. The wetlands are generally low-quality and small (size range from 0.01 to 1.11 acres).

Avoidance and Minimization. SPBA stated that the OKH road improvements are necessary to assist in alleviating traffic congestion in the City and are an essential component of its growth plans (City of Sevierville, Central Business District Project Information Version 3, August 2005). The ELGC expansion is part of the City's development plan to attract visitors to the nearby Sevierville Events Center (SEC) project. Since ELGC and OKH are existing features, the applicant is unaware of a suitable alternative that would be economically feasible and result in less stream and wetland impacts. The applicant further stated that due to the existing topography and existing development, impacts to Gists Creek could not be avoided within the design constraints for the roadway, but the impacts were reduced to relocation rather than encapsulation of the stream.

Mitigation and Monitoring. S&ME, Inc. (S&ME), on behalf of SPBA, has proposed to mitigate the loss of stream footage by restoring a 1,493' long section of Gists Creek that is currently channelized and impounded. The Tennessee Department of Environment and Conservation (TDEC) assessed Gists Creek as not being high quality but fully supporting of its classified uses: Fish and aquatic life, recreation, livestock watering and wildlife, and irrigation. In addition, SPBA states that the stream possesses a Rosgen stream classification (Rosgen, D. (1996). *Applied river morphology*. Wildlife Hydrology, Pagosa Springs, CO) of E4/C4/1. SPBA proposes to remove the impoundment and create 1,245' of sinuous channel in the vicinity of Hole 17. The 375' of stream downstream of the impoundment would have accumulated sediment removed and in-stream habitat measures installed. Additional mitigation footage would also be created by the relocation of Stream Ex-4. Both tributaries proposed to be eliminated would have a french drain system installed to convey any seepage to the receiving stream. The wetland impacts would be compensated by creating a total of 9.02 acres of wetlands at eight locations within the ELGC. Most of the wetlands would be created on the fringe of existing lakes. The mitigation areas would be created by lowering the existing surface elevation to utilize the groundwater resources at the site. The 3:1 mitigation ratio offered is due to the better than average probability of success in establishing the proposed new wetlands since the mitigation project is partially a restoration of wetlands formerly within the Gists Creek and LPR floodplains where the water table is high. Following the stream relocations, wetland mitigation, and associated plantings, a five-year monitoring program would be implemented. The streams and wetlands monitoring program will include vegetation, hydrology, and soils (wetlands) assessments. Annual reports would be prepared which would include ade-

quate photographic documentation. The monitoring report would be used to adjust the site mitigation strategy as needed to achieve the proposed results.

1.2 Purpose and Need. Based on information submitted by SPBA, the *project purpose* is to expand a recreational facility and alleviate traffic congestion. For purposes of the Section 404(b)(1) Guidelines (Guidelines) of the Clean Water Act (CWA) (40 CFR 230), the proposed development fills are presumed to be “non-water dependent.” In reaching this presumption, the Guidelines assume that practical alternatives not involving special aquatic sites (e.g., wetlands, riffle/pool complexes, etc.) or resulting in less damaging impacts on the aquatic environment are available. A compliance document rebutting the above presumptions and showing that the proposal would comply with the Guidelines with appropriate and practical conditions will be prepared and attached to the Corps Statement of Findings (SOF)/Findings of No Significant Impacts (FONSI) document. The Corps SOF/FONSI document is being prepared separately.

1.3 Decisions Required.

1.3.1 Corps of Engineers (Corps). Section 301 of the CWA prohibits the discharge of dredged or fill material into waters of the United States (WUS) unless authorized by the Department of the Army (DA) pursuant to Section 404 of the same Act. Gists Creek, a tributary to Gists Creek, a tributary to the Little Pigeon River (LPR), and several adjacent wetlands impacted by the proposed activities are WUS as defined by 33 CFR 328. A DA permit under Section 404 of the CWA is required for the work.

1.3.2 Tennessee Valley Authority (TVA). Section 26a of the TVA Act (16 USC 831y-1) requires that no dam, appurtenant work, or other obstruction affecting navigation, flood control, or public lands or reservations be constructed and thereafter operated or maintained across, along, or in the Tennessee River or any of its tributaries until plans for such construction, operation, and maintenance have been submitted to and approved by TVA. TVA is a cooperating agency in the preparation of this EA.

1.3.3 Summary. TVA and DA permits are required for the work; therefore, the agencies must decide on one of the following:

- issuance of a permit for the proposal
- issuance of a permit w/modifications or conditions
- denial of the permit

1.4 Other Approvals Required. The proposed work requires a TDEC water quality certification pursuant to Section 401(a)(1) of the CWA. TDEC issued the required certification for the proposal on 2 September 2008 (Appendix A). The certification is valid until 1 September 2011. The certification includes nine special conditions to ensure that the proposed activities will not violate applicable state and federal water quality standards and provisions. Special Conditions (SC) were added to clarify the application, restrict land use, minimize environmental impacts, and enhance periodic monitoring and reporting requirements.

1.5 Scope of Analysis. The Corps must determine the proper scope of analysis for National Environmental Policy Act (NEPA), National Historic Preservation Act (NHPA), Endangered Species Act (ESA), and any other laws related to its permit actions. Once the scope of analysis is established, the Corps can address the impacts of the specific activity requiring a DA permit and those portions of the entire project over which we have sufficient control and responsibility to

warrant federal review. This is generally coincidental with the definition for "Permit Area". NEPA Implementation Procedures for the Corps Regulatory Program (33 CFR 325, Appendix B, Paragraph 7b) list the typical factors to be considered in determining whether sufficient control and responsibility exists to warrant federal review: (a) whether the regulated activity comprises merely a link in a corridor type project, (b) whether there are aspects of the upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity, (c) the extent to which the entire project will be within Corps jurisdiction, and (d) the extent of cumulative federal control and responsibility. In determining whether sufficient cumulative federal involvement exists to expand the scope of federal action outside the "Permit Area," we should consider whether other federal agencies are required to take federal action under other environmental review laws and/or executive orders.

Once the scope of analysis is determined, alternatives to the proposed action (Section 4) and primary, secondary, and cumulative impacts (Section 3.5) must be considered in the appropriate NEPA analysis. However, when analyzing secondary impacts, the strength of the relationship between those impacts and the regulated portion of the activity should be considered, i.e., whether or not the impacts are likely to occur even if the permit is not issued, in deciding the level of analysis and what weight to give these impacts in the analysis. This decision should consider whether another project, not requiring a permit, could likely occur at the site or in the vicinity, and whether its impacts would be similar to impacts of the project requiring a permit.

The proposed action consists of the relocation of a portion of OKH and expansion of ELGC. In light of the above discussion, we have determined that the scope of analysis for this DA permit application must include all properties affected by the golf course expansion and realigned roadway. These areas included in the scope of analysis are classified as the "Permit Area" for purposes of this review.

1.6 Existing Setting. J. Ruben Hernandez, Corps' Regulatory Branch, visited the site on 3 November 2008. Mr. Hernandez observed that most of the existing 18-hole golf course area consists of flat to moderately steep terrain. TVA staff visited the site on 2 October 2008. Extensive clearing of vegetation has occurred except at a few areas such as in the vicinity of the clubhouse, maintenance shop, and adjacent to Gists Creek Road at the southern end. Canopy cover along the riparian zones of the unnamed Gists Creek and LPR tributaries was predominantly open within the cleared portions of the golf course. Gists Creek vegetation canopy was generally dense and stable, particularly along the segments adjacent to Gists Creek Road and OKH. Streambank stability appeared to range from fair to moderate. Wetlands were relatively small and many were not visible from OKH. A large L-shape lake, approximately 8-10 acres in size, exists near the northern end of the golf course.

2.0 Public Involvement Process

2.1 General. On 19 July 2008, the Corps and TVA issued Joint Corps/TVA Public Notice (JPN) No. 08-47 to advertise the proposed work (Appendix B). The JPN was distributed to a wide list of interested parties that included federal, state, and local agencies, elected officials, private/public organizations, news agencies, commercial navigation interests, adjacent property owners, and individuals. Comments to the JPN were received from the Tennessee Historical Commission (THC), U.S. Fish and Wildlife Service (USFWS), and Tennessee Wildlife Resources Agency (TWRA). The comments have been summarized in Section 2.2 and a copy included in Appendix C. Where a response to a comment was warranted, one is provided to clarify the issue(s) raised.

2.2 Public Notice Comments.

2.2.1 In a letter dated 13 August 2008, THC indicated that ongoing consultation was proceeding for this and other area undertakings. THC was of the opinion that some portions of property within the area of potential effect (APE), in particular, the Gists Creek restoration site, may have never been surveyed for archaeological resources. THC requested a survey report of those areas and advised that additional consultation under Section 106 of the National Historic Preservation Act (NHPA) was necessary. *Response:* In a letter to THC dated 26 November 2008, the Corps indicated that the entire golf course expansion project (including the OKH realignment and Gists Creek relocation) was the APE. In addition, the Corps indicated that due to previous disturbances from agricultural activities and golf course construction, it does not believe a survey of the restoration site was warranted. Regarding SPBA's need to place fill material for golf course development in the northern portion of the property, the Corps acknowledged the existence of a historic site (40SV33) which was identified during archaeological surveys conducted by Kathy Manning (SPBA contractor) in 2005. However, the material would be placed using accepted low-impact techniques previously described to THC. Therefore, the Corps determined that the proposed placement of fill over 40SV33 will not affect the historic property. THC responded on 4 December 2008 that it concurred with our determinations.

2.2.2 By letter dated 27 August 2008, TWRA indicated that they do not oppose the issuance of this permit provided the proposed stream mitigation complies with the Tennessee Stream Mitigation Guidelines. SPBA agrees to appropriate annual monitoring and reporting, and to protect the stream and wetland mitigation sites through a Notice of Land Use Restriction which would be registered at the Sevier County Register of Deeds Office. TWRA requested that the permit be held in abeyance until SPBA agrees to the recommended conditions. *Response:* As a result of on-site observations by TWRA Region IV fishery biologist Rob Lindbom during a meeting with Elizabeth Porter (SPBA consultant), TWRA revised their JPN comments as follows: In the second paragraph, last sentence references to wetlands were eliminated. The new sentence reads: "We also request that the fish, amphibians, reptiles, and crustaceans currently existing in the stream channels to be filled be relocated in suitable habitat in adjacent stream channels that will support these aquatic resources."

2.2.3 By letter dated 28 August 2008, USFWS stated that based on available collection records no federally listed or proposed threatened or endangered species were known to occur in the impact area. Therefore, based on the information available at the time, it believed that Corps obligations under Section 7 of the Endangered Species Act had been fulfilled.

Concerning project impacts, USFWS indicated that the amount of mitigation being offered for the 2.99 acres of permanent wetland loss would be inadequate. Based on the creation of 9.02 wetland acres as mitigation for this loss, the offered ratio would be lower than 4:1 (the standard creation ratio in Tennessee). Therefore, SPBA would need to create at least 11.96 acres of wetlands to mitigate the proposed impacts. USFWS does not object to the proposed stream mitigation, provided the relocated stream segments are designed in accordance with the Stream Mitigation Guidelines for the State of Tennessee and the sites are protected in perpetuity. Since the mitigation sites would be located within the boundaries of a golf course, USFWS requests that the boundaries of these sites be permanently marked with appropriate signs that would prevent destruction of the planted vegetation. Finally, the agency recommended that the permit be held in abeyance until the above issues are resolved. If SPBA is not agreeable to the above recommendations, USFWS requests that the permit be denied. *Response:* Except for the mitigation ratio deficit, SPBA's proposal would satisfy all concerns identified by USFWS, i.e., protection of wet-

land mitigation areas in perpetuity, adequate signage, and natural channels designed consistent with the "Stream Mitigation Guidelines for the State of Tennessee". As was explained in the JPN, the 3:1 mitigation ratio offered is due to the better than average probability of success since the mitigation project is partially a restoration of wetlands formerly within the Gists Creek and LPR floodplains. The wetland creation areas are topographically controlled, contain deep and/or gleyed soils, and the presence of adequate hydrology has been determined.

2.3 Applicant's Rebuttal. We furnished SPBA the JPN objections/comments (Section 2.2) on 28 August 2008 for an opportunity for resolution or rebuttal. In a 22 September 2008 email, Elizabeth Porter (SPBA consultant) attached a Wilbur Smith Associates (WSA) letter stating that substantial past disturbances had occurred within the ELGC. Based on the current property conditions, past disturbances, and previous archaeological surveys, WSA recommended that no further archaeological testing be conducted. In a second email that day, Ms. Porter indicated concerning TWRA's comments that SPBA has agreed to move the aquatic life from the existing section of stream to be impacted to the relocated section of Gists Creek. This work will be performed once the new channel is excavated and the upstream and downstream plugs have been removed. As the water begins to flow in the new channel, pools of water will be left in the existing channel. Readily accessible aquatic life in each pool will be transferred to the new channel. If warranted, pumps may be used to draw down the water in the pools to make collection easier. Finally, in a 24 October 2008 email, Ms. Porter expressed that the relocated stream sections had been designed using natural channel design criteria, consistent with the "Stream Mitigation Guidelines for the State of Tennessee". SPBA would protect the mitigation areas in perpetuity using the standard TDEC land use restrictions language, and signs will be used to prevent damage to the vegetation. In some areas, such as ball flight zones, the vegetation will have to be managed to maintain view corridors. These vegetation management areas are labeled on the Stream and Wetland Impacts Map advertised in the JPN. SPBA's rebuttal/response has been included under Appendix D.

3.0 Environmental and Public Interest Factors Considered

3.1 Introduction. 33 CFR 320.4(a) states that the decision whether to issue a DA permit will be based on an evaluation of the probable impacts, including cumulative impacts, of the proposed activity and its intended use on the public interest. All factors that may be relevant to the proposal must be considered (for full list see JPN 08-47, Appendix B). The following sections describe the relevant factors identified and provide a concise description of the impacts of the proposed action. The baseline data discussed in this section has been obtained from information provided by SPBA, field investigations, input to the JPN, agency data, and other sources.

3.2 Physical/Chemical Characteristics and Anticipated Changes. The relevant blocks are checked with a description of the impacts. An unchecked block denotes that negligible to no adverse effects are expected.

(x) substrate – Observations made by S&ME, Inc., included in the DA/TVA permit application indicated that Gists Creek's substrate is primarily silty clay with mud in some segments while the wetlands to be eliminated contain gleyed soils. Approximately 59,288 square feet (ft²) (1.36 acres) of stream substrate and 130,244 ft² (2.99 acres) of wetland substrate would be lost when the existing areas are filled. Proposed stream relocation/restoration efforts would result in 70,380 ft² (1.62 acres) of new substrate. Wetland mitigation efforts are expected to result in the creation

of 390,733 ft² (8.97 acres) of substrate. The proposed project would result in a net increase in both stream and wetland substrate.

(x) currents, circulation or drainage patterns – Although stream modifications would occur as a result of the proposed project, the overall property drainage pattern would not be substantially altered.

(x) suspended particulates, turbidity – There would be minor releases of sediment and turbidity associated with the site development activities. The proper use of best management practices would minimize these impacts. Terms and conditions set forth in the Corps and TVA permits and the TDEC 401 water quality certification would require that all stream relocation and/or enhancement work must be performed in a manner that would prevent violations of water quality standards. Examples of these special conditions include working in the dry and stabilizing channels before diverting flow through them and installing french drains to capture subsurface flows and redirect them to the constructed channels. Water quality conditions in Gists Creek and LPR are expected to return to background levels after construction ceases.

(x) water quality (temperature, color, odor, nutrients, etc) – The proposed OKH improvements and ELGC expansion are located in the Lower French Broad River Watershed (HUC 06010107). The proposed activities would impact Gists Creek, two unnamed Gists Creek tributaries (Streams Ex-2 and Ex-3), an unnamed LPR tributary (Stream Ex-4), and several wetlands adjacent to these streams.

Although assessed as not being high quality, Gists Creek fully supports its classified uses: fish and aquatic life, recreation, livestock watering and wildlife, and irrigation. Gists Creek discharges into the LPR approximately one mile downstream of Sanders Islands. The LPR in turn discharges into the French Broad River. The LPR is a Tier 1 water listed as impaired for 2.4 miles (mouth to Sanders Islands area) in TDEC's Final 2008 303(d) list. The LPR is a category 4a river and is impaired by the presence of *E. coli* from septic tanks and collection system failure. Category 4a means that one or more uses are impaired but the U.S. Environmental Protection Agency (EPA) has approved a fecal coliform TMDL that addresses known pollutants. Gists Creek joins the LPR slightly south of mile marker 1. A water contact advisory exists for LPR between mile 0.0 and 4.6, but the EPA has approved a pathogen Total Maximum Daily Load (TMDL) that addresses the known pollutants. No fish consumption advisories are in effect for streams located in Sevier County.

Excavation and grading activities to expand ELGC and relocate OKH would result in minor to moderate short-term localized increases in turbidity and siltation. However, the employment of sound construction techniques, including use of effective erosion and sedimentation control measures, would minimize impacts to the receiving streams. Sound construction techniques include, but are not limited to adherence to existing codes and laws, use of quality materials, and minimization of errors.

Conditions in the state-issued water quality certification (Appendix A) would require SPBA to perform all stream and wetland work in a manner that would prevent violations of water quality standards. Examples of these special conditions include working in the dry, stabilizing new channels before diverting flow through them, and installing french drains to capture subsurface flows and redirect them to the constructed channels. Water quality conditions in Gists Creek and LPR are expected to return to background levels after construction ceases and continue supporting their currently classified uses.

(x) flood control functions – The proposed project involves the realignment of a portion of the Old Knoxville Highway and an associated relocation of a portion of Gists Creek, the elimination of an unnamed tributary to Gists Creek, and a culvert replacement on Gists Creek. The expansion of the Eagles Landing Golf Course would involve the relocation of unnamed tributaries to the LPR and Gists Creek. These activities would occur within the LPR and Gists Creek 100-year floodplains and are therefore subject to compliance with Executive Order (EO) 11988 (Floodplain Management). Consistent with EO 11988, a culvert is considered to be a repetitive action in the floodplain. Stream relocations and elimination of a stream are not considered to be repetitive actions in the 100-year floodplain. However, the applicant has evaluated alternatives to the stream relocations and elimination of a stream and provided information to document that there is no practicable alternative to performing these activities in the floodplain to facilitate relocation of the OKH and construction of the golf course. Because the relocated streams would provide the same or greater flow area, adverse impacts would be minimized and there would be no increase in flood elevations. Elimination of the small stream would not impact flood elevations because the controlling flood elevations are from the LPR. Therefore, these portions of the project would comply with EO 11988.

(x) storm, wave, and erosion buffers – Storm and wave buffers are not applicable to the proposed action. For a discussion of temporary and permanent erosion and sedimentation measures (controls) that would be employed see “suspended particulates and turbidity” in this section.

(x) baseflow – Baseflow can be defined as the normal dry-weather flow which is mainly derived from groundwater. The proposed filling of the unnamed tributaries would impact baseflow since french drains and pipes would be used in the channel (buried under the fill) to collect subsurface flows. An impermeable layer would be constructed over the french drain and pipe to separate the subsurface flow from the proposed development. Because the impacted channel areas are small and flows are not substantial, the proposed action would have minor negative effects on baseflow in the overall LPR watershed. In addition, most of the wetland mitigation areas to be created on the fringe of existing lakes would require a lowering of the existing surface elevation to utilize the groundwater resources at the site. Because the acreage of impacted areas would be small when compared to acreage in the overall LPR watershed, baseflow impacts would be minor.

3.3 Biological Characteristics and Anticipated Changes. The relevant blocks are checked with a description of the impacts. An unchecked block denotes that negligible to no adverse effects are expected.

(x) special aquatic sites (wetlands, mudflats, pool and riffle areas, vegetated shallows, sanctuaries, and refuges, as defined in 40 CFR 230.40-45) – No riffles and pools complexes exist on the affected segments of Gists Creek and the three unnamed Gists Creek and LPR tributaries. Wetlands exist on the property. Seventeen wetlands throughout the area of the newly expanded golf course would be eliminated, totaling 2.99 acres. The wetlands are generally low-quality and small (size range from 0.01 to 1.11 acres). The 1.11-acre wetland (Area LL) is adjacent to an existing golf course lake. The wetland impacts would be compensated by creating a total of 9.02 acres of wetlands at eight locations within the ELGC. Most of the wetlands would be created on the fringe of existing lakes. The mitigation areas would be created by lowering the existing surface elevation to utilize the groundwater resources at the site. The 3:1 mitigation ratio offered is due to the better than average probability of success due to the fact that the mitigation project is partially a restoration of wetlands within the Gists Creek and LPR floodplains. Following the stream relocations, wetland mitigation, and associated plantings, a five-year monitoring program would be implemented. The streams and wetlands monitoring program would include vegetation, hydrology, and

soils (wetlands) assessments. Annual reports would be prepared which would include adequate photographic documentation. Corrective actions would be taken to address deficiencies identified through monitoring and the monitoring program may be extended as needed until mitigation specifications have been met. Therefore, impacts on special aquatic sites would be minor and insignificant.

(x) habitat for fish and other aquatic organisms – The affected streams are characterized by the presence of silty clay substrate and mud and little to no presence of in-stream habitat (i.e., pools, riffles, and point bars). A few species of small fish, minnows, and macro-invertebrate life occur in this reach of Gists Creek. Based on a channel geomorphology assessment conducted by an SPBA consultant, the Gists Creek study reach possessed relatively stable banks with a sufficient riparian zone, as well as the appropriate dimension, pattern, and profile for the given Rosgen stream type (Section 1.1). Canopy cover along the riparian zones of the unnamed Gists Creek and LPR tributaries was predominantly open within the cleared portions of the golf course. Gists Creek canopy was generally good, particularly along the segments adjacent to Gists Creek Road and OKH. Streambank stability ranges from fair to moderate. Wetlands are characterized by their low functional values and relatively small sizes, 0.01 to 1.11 acres. A large L-shape lake, approximately 8-10 acres in size, exists near the northern end of the golf course.

The proposal would eliminate approximately 4.35 acres of stream and wetland substrate and permanently reduce the biological productivity of that area. The wetland impacts would be compensated by creating a total of 9.02 acres of wetlands at eight locations within ELGC. Most of the wetlands would be created on the fringe of existing lakes. The mitigation areas would be created by lowering the existing surface elevation to utilize the groundwater resources at the site. SPBA offered a 3:1 mitigation ratio ($9.02/2.99 = 3.02:1$) due to the better than average probability of success due to the fact that the mitigation project is partially a restoration of wetlands within the Gists Creek and LPR floodplains. Following the stream relocations, wetland mitigation, and associated plantings, a five-year monitoring and corrective action program would be implemented. The streams and wetlands monitoring program would include vegetation, hydrology, and soils (wetlands) assessments. Annual reports would be prepared which would include adequate photographic documentation. Provided the above stipulations are implemented, the proposal would result in a minor net aquatic habitat increase.

(x) wildlife habitat – SPBA proposes to expand ELGC and improve a portion of the OKH on land located north and northwest of the SEC complex and west of the LPR, in Sevierville, Sevier County, Tennessee. Substantial clearing, grading, and construction activities have occurred in recent years at the SEC project. SPBA obtained permits for previous wetland and stream impacts associated with the present ELGC development. Except for a private residential sector that runs north-south between present Gists Creek and existing OKH, practically the entire property has been cleared for golf course development purposes. Some segments of Gists Creek possess good riparian canopy and ground cover. Numerous ponds and lakes of various sizes are scattered throughout the landscape. Land uses north and west of the project are open fields with some forested areas and residential in nature.

The proposal would result in the relocation of streams, filling and creation of wetlands, and grading activities that would eliminate wildlife habitat. Due to the relative abundance of upland vegetation and common wildlife species in the area and region, including the Great Smoky Mountains National Park and the present disturbed/fragmented state of the property, impacts on wildlife and their habitats would be insignificant.

(x) endangered or threatened species – A review of existing records did not reveal the presence of any federally listed threatened or endangered (T/E) species or designated critical habitat at the project site. In response to JPN 08-47, USFWS stated by letter dated 28 August 2008 (Section 2.2.3), that it believes the requirements of Section 7 of the Endangered Species Act of 1973, as amended, have been fulfilled. Based on a review of all relevant information, the Corps and TVA have reached a “no effect” determination concerning federally-listed T/E species. TVA staff determined that two heronries and three state-listed terrestrial animals have been reported from within a 3-mile radius of the site. The distance between a reported bald eagle (*Haliaeetus leucocephalus*) nest and the project site is sufficient to avoid impacts, and preferred foraging habitat would not be affected. Habitat for the state-listed southeastern shrew (*Sorex longirostris*) and eastern hellbender (*Cryptobranchus alleganiensis*) would not be adversely impacted. No state-listed species are known from the site or immediate impact area.

(x) biological availability of possible contaminants in dredged/fill material – To the Corps’ and TVA’s knowledge, no contaminants have been identified or are suspected in the fill material.

3.4 Human Use Characteristics and Anticipated Impacts. The relevant blocks are checked with a description of the impacts. An unchecked block denotes that negligible to no adverse effects are expected.

(x) existing and potential water supplies; water conservation – The Corps permit database reveals that the City of Sevierville operates two intakes on the LPR. A municipal raw water intake exists at LPR Mile 2.0, left descending bank (LDB), while an irrigation intake is located at LPR Mile 2.8, LDB. The irrigation intake is operated by the city for use in the ELGC. In 2005, TDEC, TVA, and the Corps approved Sevierville Water Systems’ proposal to construct a 12 million gallon per day raw water treatment plant, associated intake, and finished water line on McCroskey Island at French Broad River Mile 27.5L. Neither the Corps nor TVA is aware of any plans for future intakes or dams on any of these rivers. Since SPBA is an agency of the City of Sevierville the owner/operator of the above intakes, we believe that impacts on existing/potential water supplies would be negligible. The proposed action would not affect the availability of water or opportunities to reduce demand and improve efficiency.

(x) water-related recreation – Gists Creek, the two unnamed Gists Creek tributaries, and the unnamed LPR tributary affected by this proposal are not suitable for recreational uses such as canoeing, kayaking, or the operation of any type of motorboat or personal watercraft. Although a limited amount of fishing is possible on Gists Creek, more viable opportunities exist downstream in the LPR (receiving stream). A swimming, i.e., water contact, advisory exists for the LPR between miles 0.0 and 4.6. There are no fish consumption advisories, so fish caught there would be suitable for human use. The proposed action would only have minor adverse effects on the potential recreational uses of Gists Creek and, because there is little or not potential for such use, only negligible adverse effects on the recreational uses of the three unnamed tributaries.

(x) aesthetics – As indicated in previous paragraphs, developmental activity has already modified practically the entire ELGC site. The proposed action would cause an additional short- and long-term disruption to area aesthetics. However, the proposed actions are typical of many recreational developments found in this rapidly growing city and region and would not be out of character. Therefore, impacts would be insignificant.

(x) traffic/transportation patterns –Work at the site, which is located west of the LPR and north of the ongoing SEC project, would affect a portion of OKH adjacent to the northern end of ELGC.

According to SPBA, the proposed road relocation would address traffic increase projections associated with the ELGC expansion, SEC project, and supporting development on the adjacent tracts. In addition, road construction would improve traffic flow and safety. Decisions regarding highway capacity, connections, and geometric design rests with state and/or county highway departments and are normally accepted by the Corps and TVA.

() energy consumption or generation – No adverse effects.

() navigation – No adverse effects.

(x) safety – As expressed in the traffic/transportation patterns section, improvements to OKH to accommodate expected traffic increases would improve transportation safety. During the construction period, decreased vehicular safety would be experienced. However, provided an appropriate traffic control plan (state or locally regulated) is implemented, those impacts would be minor and temporary. The responsibility for enforcing safety laws and determining construction safety compliance matters related to the ELGC and OKH relocation rests with the U.S. Occupational Safety and Health Administration (OSHA) and Tennessee Division of Occupational Safety and Health (TOSHA). The Corps and TVA are not typically involved in decisions pertaining to those issues. Water safety related issues are negligible or non-existent.

(x) air quality – Tennessee is subject to the National Ambient Air Quality Standards which limit outside air concentrations of six pollutants: particulate matter (<2.5 µm & <10 µm), sulfur dioxide, carbon monoxide, ozone (8-hour & 1-hour), nitrogen dioxide, and lead. The EPA Air data website (<http://www.epa.gov/oar/data/geosel.html>) indicates that Sevier County is a "non-attainment" area concerning 8-hour ozone criteria air pollutant.

Construction and utilization of the ELGC expansion and related OKH improvements would result in minor emissions of air pollutants. During construction activities, combustion exhaust would be emitted from fuel-burning engines in vehicles and construction equipment. Fugitive dust could result from disturbance of ground surfaces, blasting of rock, movement of spoil, and placement of fill for the building pads and infrastructure. Best management practices would minimize such emissions. These emissions would be small, temporary, and intermittent during the construction period and would have no substantial impact on air quality. Use impacts would be limited to fuel-burning vehicle exhaust associated with employee and customer transportation to and from the development. Construction and use of the expanded golf course and facilities would have no adverse effect on compliance strategies for achieving attainment of the 8-hour ozone standard.

Section 176(c) of the Clean Air Act (CAA) requires that federal agencies assure that activities they engage in (e.g., agency actions, permits, licenses, etc.) conform to federally approved CAA state implementation plans. The Corps has made a conformity applicability determination for this permit action and has documented such compliance in its Statement of Findings/FONSI document.

(x) noise – Noise intensity would increase moderately above background levels during the construction phase. The operational/utilization phase would result in minor increases above background levels, resulting mostly from highway traffic. Considering that active recreation has been practiced at the site since the 1990s, increased noise levels emanating from the expansion would not be out of character for this area.

(x) historic properties and cultural values – During previous permitting phases for the development of this area, two archaeological surveys were conducted in April and June 2005. The re-

ports, "Archaeological Survey of the Proposed Sevierville Events Complex Infrastructure, Sevier County, Tennessee" and "Archaeological Survey of Proposed Golf Course Reconfiguration, Sevier County, Tennessee" were prepared by Kathy Manning, an SPBA consultant. Copies of the reports have been furnished to THC. Responding to JPN 08-47 (Section 2.1), THC indicated that ongoing consultation was proceeding for this and other area undertakings. THC was of the opinion that some portions of property within the APE, in particular, the Gists Creek restoration site, may have never been surveyed for archaeological resources. In addition, THC requested a survey report of those areas and advised that additional consultation under Section 106 of the NHPA was necessary.

In a letter to THC dated 26 November 2008, the Corps indicated that it had determined that the entire golf course expansion project (including the OKH realignment and Gists Creek relocation) was the APE. The Corps further indicated that due to previous disturbances from agricultural activities and golf course construction, it does not believe a survey of the restoration site was warranted. Regarding SPBA's need to place fill material for golf course development in the northern portion of the property, the Corps acknowledged the existence of historic site 40SV33 which was identified by Ms. Manning in 2005. The development fill would be placed using accepted low-impact techniques previously described to THC. Based on this information, the Corps determined that the proposed placement of fill over 40SV33 will not affect the historic property. By letter dated 4 December 2008, THC concurred with the Corps' determination.

(x) land use classification – The area's predominant historical land use was agricultural. However, as indicated in various sections of this document, substantial clearing, grading, and construction activities have occurred associated with the ELGC development since the mid 1990s. More recently, these changes have also been experienced by the SEC project and adjacent tracts. The proposed activities would continue this land-use change process. Prior to construction, properties need to be properly zoned for the type of use indicated by property owners. Since the primary responsibility for determining zoning and land use matters rests with state, local and tribal governments, the Corps normally accepts decisions by such governments on land zoning issues.

(x) conservation – The ELGC expansion and OKH relocation project would permanently eliminate stream and wetland acreage as well as most of the remaining wildlife habitat within the development property. The affected streams possess limited in-stream habitat (i.e., pools, riffles, and point bars) and fishery while the wetlands are small, disconnected, and low quality. Since ELGC and OKH are existing features, SPBA could not identify a suitable alternative that would be economically feasible and result in less stream and wetland impacts. In addition, SPBA stated that due to the existing topography and existing development, impacts to Gists Creek could not be avoided within the design constraints for OKH, but the impacts were reduced to relocation rather than encapsulation of the stream.

The stream impacts would be compensated with the creation of new channels while the wetland impacts would be compensated by creating wetlands at eight locations. Due to the abundance of upland vegetated areas in this region and the present disturbed/fragmented state of vegetation on the property, wildlife habitat impacts are considered minor.

(x) economics – The economic benefits of many projects are important to the local community and contribute to needed improvements in the local economic base, affecting factors such as employment, tax revenues, community cohesion, community services, and property values. According to City-Data.Com's Internet webpage, Sevierville's population in July 2007 was 16,051

(12,150 in 2000). The estimated median household income in 2007 was \$34,900 (\$30,623 in 2000) which is lower than the Tennessee average of \$42,367. Tourism is likely the primary source of revenue for the city of Sevierville.

The proposal being considered involves improvements to OKH and the expansion of the ELGC. The golf course was opened by the City of Sevierville in 1994 and has the reputation of being one of the best public courses in the state. ELGC is a challenging course and home site for the Tennessee PGA's Calloway Open. The course has hosted important events such as: the Tennessee PGA Championship, Tennessee State Open Qualifying, Tennessee Intercollegiate Championship, and Mid-South Collegiate Championship. Long term, SPBA expects to derive important economic benefits from the completion of the expansion and improvements. However, short-term benefits to the local economy would include the sale of goods and services and construction jobs.

() food and fiber production – No adverse effects.

(x) general environmental concerns - This is a broad factor almost synonymous with the area's quality of life. All the relevant issues falling under this heading have been evaluated in this document. Special conditions have been added to minimize the unavoidable adverse environmental impacts identified.

() mineral needs – No adverse effects.

(x) consideration of private property - Corps regulations at 33 CFR 320.4(g) state that authorization of work by the DA does not convey any property rights, either in real estate or material, or any exclusive privileges. Furthermore, a DA permit does not authorize any injury to property or invasion of rights or any infringement of federal, state or local laws or regulations. The future use of this property would be consistent with the current uses. It is not expected that the expansion of the golf course and roadway improvements would considerably impact nearby public or private properties.

(x) floodplain values – Implementation of this project would result in the relocation of a small but minor amount of soil and rock located within the limits of the 100-year floodplain (elevation 890 feet mean sea level) of LPR and Gists Creek for realignment of OKH and construction of the expanded golf course. Because of the small area involved, mitigation of 289' of stream and 2.99 acres of wetland loss, as well as the numerous similar streams in the area, impacts on natural and beneficial floodplain values would be minor and insignificant. SPBA would mitigate the stream loss by restoring a 1,493' long section of Gists Creek that is currently channelized and impounded. Wetland loss would be compensated by creating a total of 9.02 acres of wetlands at eight locations on the ELGC. These mitigation sites would provide some suitable habitat for some species of resident wetland wildlife and seasonal transient habitat for migrant water birds tolerant of being in close proximity to people.

3.5 Cumulative and Secondary Impacts. The Council on Environmental Quality regulations define cumulative impact as "the environmental impact which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." The Corps considers every DA permit application on its own merits and assesses its environmental impacts within the proper scope of review for National Environmental Policy Act (NEPA) purposes. The scope of analysis for this DA permit application for evaluation of direct effects is limited to the

“Permit Area” which for this particular application includes the property affected by the golf course expansion and roadway relocation. The Permit Area impacts described in this document would result in minor adverse cumulative impacts on areas within our NEPA scope of review. A discussion of these impacts has been presented in Sections 3.1 to 3.4.

This project along with other similar intensive business and roadway developments recently completed or under review (e.g., SEC and Shops at Bridgmont) would occur near the LPR and within the Lower French Broad Watershed. Approximately 2.4 miles of the LPR in Sevier County is on the 303(d) list of impaired waters (see water quality in Section 3.2). Under TDEC’s water quality standards, its anti-degradation policy protects existing uses of all surface waters and prevents degradation of water identified as high quality. TDEC has classified the affected watershed as Tier I. The three unnamed tributaries affected by this proposal are poor quality and confluent to the LPR within the impacted reach.

The Corps’ permit database did not reveal past actions directly affecting the three unnamed tributaries to Gists Creek and LPR. However, a total of 9 actions were identified in Gists Creek, but all upstream of the permit area. In addition, 24 actions were found in LPR main channel (the receiving stream) within six miles of the project (five miles upstream and one mile downstream, i.e., mouth at French Broad River). The permitted actions include bridges, bank stabilization, utility line crossings, and development fills. The actions were permitted between 1977 and 2006, with the majority occurring after the mid 1990s. Neither the Corps nor TVA can predict the number of future DA and Section 26a permit applications that would affect the Gists Creek and LPR channels, floodplains, or watersheds. However, all future applications, including those presently under review, will be thoroughly evaluated for water quality and aquatic resource impacts. Because of the general and special conditions added to DA, TDEC, and TVA permits, the Corps’ national permitting goals for no net loss to waters and wetlands, and the mitigation requirements, cumulative effects to LPR and its tributaries affected by these projects would be substantially reduced or avoided. Special conditions and mitigation (Section 4.4.3) would help ensure that the proposal’s cumulative and secondary effects would be minor. Because of mitigation applicable to these projects, neither the Corps nor TVA expects water quality in LPR to worsen as a result of implementing these projects. See Appendix A for specific mitigation provisions of TDEC’s water quality certification issued to SPBA.

4.0 Alternatives

4.1 Introduction. This section discusses alternatives as required by 40 CFR 230.10 and 33 CFR 320.4(a)(2). The relevant environmental issues identified in Section 3.0 were used to formulate the alternatives. The alternatives considered in detail are described in Section 4.2. Other alternatives not considered in detail are discussed in Section 4.3. The impacts of the alternatives considered in detail are compared in Section 4.4.

4.2 Description of Alternatives

4.2.1 No Action. This alternative is one that results in no golf course construction or road work requiring a Corps or TVA permit. No Action could also be brought about by agency denial or applicant withdrawal of the DA and TVA permit application.

4.2.2 Applicant’s Final Proposal. This alternative consists of the proposal described in Section 1.1. Neither the Corps nor TVA is a proponent or an opponent of this alternative.

4.2.3 Applicant's Final Proposal with Added Special Conditions. This alternative consists of the Applicant's Final Proposal identified in Section 4.2.2 with the inclusion of special conditions to minimize/mitigate unavoidable environmental impacts to the maximum extent practicable.

4.3 Alternatives not Considered in Detail. SPBA stated that the OKH road improvements are necessary to assist in alleviating traffic congestion in Sevierville and is an essential component of the city's growth plans. The ELGC expansion is part of the City's development plan to attract visitors to the nearby events center. Since ELGC and OKH are existing features, SPBA does not believe that a suitable alternative exists that would be economically feasible and result in fewer stream and wetland impacts. The Corps and TVA agree with this statement. Therefore, consideration of off-site alternatives is not warranted in this case. Even if suitable sites available to SPBA did exist in the Sevierville area meeting SPBA's purpose and need, the resulting impacts would likely be similar in nature and magnitude, or greater (in the case of undisturbed land), to those of the selected site. The alternate site would likely require DA permits subject to NEPA provisions if WUS are present. The actual acceptability of any alternate site could only be evaluated after a full public interest review. Therefore, we have decided that further evaluations of potential alternate sites are not warranted in this document.

4.4 Comparison of Alternatives.

4.4.1 No Action. This alternative would result if no work occurs in WUS. No Action would be brought about by agency denial or applicant withdrawal of the DA/TVA permit application or by any development scheme not requiring filling the existing stream channels and wetlands. The potential environmental impacts described in Section 3.0 would not occur. Conversely, the expected socio-economic benefits also described in that section would not be achieved either. No Action would not satisfy SPBA's stated purpose and need described in Section 1.2.

4.4.2 Applicant's Final Proposal. The proposed action described in Section 1.1 would potentially have various adverse and beneficial environmental and socioeconomic effects. These potential effects have been listed in Section 3.0 above.

4.4.3 Applicant's Final Proposal with Added Special Conditions. This alternative would result in similar impacts and benefits to the alternative described in Section 4.4.2 above. Special permit conditions have been developed (list follows) to minimize adverse impacts on water quality and the aquatic environment. The special conditions are reasonably enforceable and would afford appropriate and practicable environmental protection. After evaluating SPBA's discussion of impracticability of alternative sites, we have determined that the current proposal appears to be the "least environmentally damaging practicable alternative" for purposes of satisfying the Section 404(b)(1) Guidelines of the CWA. As with SPBA's final proposal (Section 4.4.2), this alternative would also meet the applicant's stated purpose and need.

The following special permit conditions have been developed to satisfy legal and public interest requirements. In addition, some of these conditions help clarify the permit application and offer appropriate and practicable environmental protection. Many of these permit conditions are standard conditions of TVA Section 26a approvals.

- A preconstruction meeting must be held among representatives of the Nashville District Corps of Engineers, TVA, permittee, and contractor(s) to discuss the conditions of this permit. You should contact Mr. Ruben Hernandez of this office, telephone number (615) 369-7519, to arrange the required preconstruction meeting. *Justification: Clarify the permit application.*

- The work must be in accordance with the plans and information submitted in support of the proposed work, as attached. *Clarify the permit application.*

- You must have a copy of this permit available on the site and ensure all contractors are aware of its conditions and abide by them. *Recommended at 33 CFR 325, Appendix A.*

- You must comply with the conditions specified in the state water quality certification issued for your project as special conditions to this permit. *Satisfy legal requirements.*

- Low-impact techniques shall be used while grading and filling over areas with identified underlying archaeological features, such as the area around holes 8, 9, and 10. Grading operations shall begin with a mowing of the vegetation as closely as possible to the existing ground surface. Without any excavation, fill material shall then be pushed across the area utilizing a low contact pressure dozer, such as a D-4, until a minimum fill thickness of 18 inches is achieved. Finally, compaction of the fill shall begin with standard compaction and earthmoving equipment. *To minimize potential impacts to identified cultural resources.*

- The discharge shall consist of suitable material free from toxic pollutants in toxic amounts. *Minimize impacts on water quality and the aquatic environment.*

- The fill created by the discharge shall be properly maintained to prevent erosion and other non-point sources of pollution. *Minimize impacts on water quality and the aquatic environment.*

- All channel work shall be performed during low flow periods. *Minimize impacts on water quality and the aquatic environment.*

- The relocated stream sections will be designed using natural channel design criteria consistent with the "Stream Mitigation Guidelines for the State of Tennessee". *Minimize impacts on water quality and the aquatic environment.*

- You must move all readily accessible aquatic life from the existing section of Gists Creek to be impacted to the relocated section of the creek. This work shall be performed once the new channel is excavated and the upstream and downstream plugs have been removed. *Minimize impacts on water quality and the aquatic environment.*

- Siltation and erosion control methods, including entrenched silt fences and rock check dams, erosion control mats, etc., shall be used and in place prior to starting any work. All site preparations shall be conducted in a manner which minimizes any siltation of the stream below the project site. Appropriate siltation control shall be utilized in all phases of the work including the mitigation phase. *Minimize impacts on water quality and the aquatic environment.*

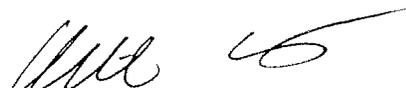
- Wetland impacts shall be compensated by creating a total of 9.02 acres of wetlands at eight locations within the ELGC. The wetlands shall be monitored for five years. The monitoring plan shall include vegetation, hydrology, and soils (wetlands) assessments. Annual reports shall be prepared and include adequate photographic documentation. The monitoring report shall be used to adjust the site mitigation strategy as needed to achieve the proposed results. *Minimize impacts on the aquatic environment.*

- You must protect the mitigation areas in perpetuity using the standard TDEC land use restrictions language. *Minimize impacts on the aquatic environment.*

- Except for some areas, such as ball flight zones, where the vegetation will have to be managed to maintain view corridors, signs shall be used to prevent damage to the vegetation. These areas are specified in Figure 2 which is part of the permit plans. *Minimize impacts on the aquatic environment.*

- The proposed wetland mitigation and monitoring activities must comply with details and information submitted with the original 8 May 2007, DA Permit Application, *Old Knoxville Highway and Eagles landing Golf Club Improvements* (including all subsequent revisions), 6 November 2008, *Conceptual Mitigation Plan – Gist Creek Hole 17*, and 9 July 2008, *Planting Plan and Long-Term Monitoring Plan*. The documents were prepared for SPBA by S&ME (POC: Ms. Elizabeth Porter). *Clarify the permit application.*

12/11/2008
Date



William L. James, Chief
Eastern Regulatory Section
Regulatory Branch
Operations Division

Appendix A
Water Quality Certification



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TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION
DIVISION OF WATER POLLUTION CONTROL
401 CHURCH STREET
7th FLOOR L & C ANNEX
NASHVILLE, TENNESSEE 37243-1534

September 2, 2008

Victor Weals
Sevierville Public Building Authority
P.O. Box 5500
Sevierville, TN 37864-5500

**Subject: §401 Water Quality Certification
State of Tennessee Application NRS 07.154
Eagles Landing Golf Course Upgrades, Sevier County**

Dear Mr. Weals:

We have reviewed your application for the proposed stream relocation, wetland and stream fill, and stream restoration associated with the upgrades to the Eagles Landing Golf Course. Pursuant to §401 of the Federal Clean Water Act (33 U.S.C. 1341), the state of Tennessee is required to certify whether the activity described below will violate applicable water quality standards.

Subject to conformance with accepted plans, specifications and other information submitted in support of the referenced application, the state of Tennessee hereby issues certification for the proposed activity (enclosed). Failure to comply with the terms of this permit or other violations of the Tennessee Water Control Act of 1977 is subject to penalty in accordance with T.C.A. § 69-3-115.

It is the responsibility of the permittee to ensure that all contractors involved with this project have read and understood the permit conditions before the project begins. If you need any additional information of clarification, please contact me at 615-532-0700 or by e-mail at trent.thomas@state.tn.us.

Sincerely,

Trent Thomas,
Natural Resources Section

Cc: Knoxville Environmental Field Office
U.S. Army Corps of Engineers, Nashville District
Tom Welborn, U.S. Environmental Protection Agency, Atlanta, GA
Tennessee Valley Authority, Holston-Cherokee-Douglas Watershed Team
File copy

08 SEP 2008

stream structure, and riparian area. Also, the plans shall include a timeframe for the completion of the relocations and restoration.

2. All wetland impacts shall not commence until detailed mitigation plans are submitted to the division, and the permittee has received written approval to implement the plans. The detailed plans shall include all necessary information needed to create the wetland mitigation areas. Also, the plans shall include a timeframe for the completion of the wetland mitigation and the location of monitoring wells for monitoring the hydrology.
3. The relocated streams, the restored stream segment, and the wetland mitigation areas shall be indentured into a Notice of Land Use Restriction and registered at the Register's Office for Sevier County, within 90 days of completion. In order for the Division to certify that the enhancement has been completed, the permittee shall certify in writing that the enhancement has been completed and provide copies of the Notice of Land Use Restriction that was registered at the Register's Office for Sevier County.
4. The stream relocations shall be implemented in accordance with the accepted plans and the following conditions.
 - a. The existing channels shall have a french-drain system installed in order to capture any subsurface flow or springs feeding the area and deliver that flow to the constructed channel.
 - b. No one species of trees and shrubs planted shall consist of more than 25% of the total trees and shrubs planted.
 - c. The constructed channel shall have channel plugs at the upstream and downstream ends of the channel during construction.
 - d. Prior to diversion of flow the downstream plug shall be removed first and that segment of channel stabilized. The upstream plug shall be removed last and the banks stabilized immediately.
 - e. Flow shall not be diverted into the constructed channel until the constructed channel has been determined to be stable by division personnel. The division shall be notified fifteen (15) days prior to diverting flow so a channel inspection can be completed. Notification shall be given to the Natural Resources Section at 615-532-0700 or by mail at the following address.

7th Floor L&C Annex
401 Church Street
Nashville, TN 37243
5. The permittee must document 75% survival of planted trees and shrubs, stability of the stream channel and stream hydrology for a minimum of 5 years. The survivorship of planted trees and shrubs, stream stability and stream hydrology must be document in annual monitoring reports. The initial monitoring report shall be submitted no later than October 31, 2009. The remaining reports shall be submitted no later than October 31st of the following years (eg., 2010, 2011, 2012, and 2013) and for at least five years following the completion of the relocations and restoration. If the relocations and restoration are not complete by October 31, 2009, notify the division, in writing, of the status. Each monitoring report shall include the following information.
 - a. An assessment of the pre-project condition of the existing streams. The assessment shall include a narrative and photographic description of pre-project conditions.
 - b. A narrative and photographic description of the constructed channel and riparian plantings within 15 days of being completed and flow being diverted (as built description).

culvert and clean rock. All activities shall be performed in the dry to the maximum extent practicable, by diverting flow utilizing cofferdams, berms, temporary channels or pipes. Temporary diversion channels shall be protected by non-erodible material and lined to the expected high water level.

GENERAL CONDITIONS:

1. The work shall be accomplished in conformance with the accepted plans, specifications, data and other information submitted in support of the above application and the limitations, requirements and conditions set forth herein.
2. Impacts to waters of the state other than those specifically addressed in the plans and this permit are prohibited. All streams, springs and wetlands shall be fully protected prior, during and after construction until the area is stabilized. Any questions, problems or concerns that arise regarding any stream, spring or wetland either before or during construction, shall be addressed to the Division of Water Pollution Control, Knoxville Environmental Field Office, 865-594-6035. Wetlands outside of the proposed area of impact shall not be used as storage or staging areas for equipment.
3. All work shall be carried out in such a manner as will prevent violations of water quality criteria as stated in Rule 1200-4-3.-03 of the Rules of The Tennessee Department of Environment and Conservation. This includes but is not limited to the prevention of any discharge that causes a condition in which visible solids, bottom deposits, or turbidity impairs the usefulness of waters of the state for any of the uses designated by Rule 1200-4-4. These uses include fish and aquatic life, livestock watering and wildlife, recreation, irrigation, industrial water supply, domestic water supply, and navigation.
4. Appropriate steps shall be taken to ensure that petroleum products or other chemical pollutants are prevented from entering waters of the state. All spills must be reported to the appropriate emergency management agency, and measures shall be taken immediately to prevent the pollution of waters of the state, including groundwater.
5. Adverse impact to formally listed state or federal threatened or endangered species or their critical habitat is prohibited.
6. This permit does not authorize adverse impacts to cultural, historical or archeological features or sites.
7. It is the responsibility of the applicant to convey all terms and conditions of this permit to all contractors. A copy of this permit, approved plans and any other document pertinent to the activities authorized by this permit shall be maintained on site at all times during periods of construction activity.
8. Work shall not commence until the applicant has received the federal §404 permit from the U. S. Army Corps of Engineers, a §26a permit from the Tennessee Valley Authority or authorization under a Tennessee NPDES Storm Water Construction Permit where necessary. The applicant is responsible for obtaining these permits.

This permit does not preclude requirements of other federal, state or local laws. This permit also serves as a Tennessee Aquatic Resource Alteration Permit pursuant to the Tennessee Water Quality Control Act of 1977 (T.C.A. § 69-3-101 et seq.).

Appendix B
Joint Public Notice



**US Army Corps
of Engineers.**

Public Notice

Public Notice No. 08-47 Date: July 29, 2008

Nashville District Application No. 200801105 Expires: August 28, 2008

Please address all comments to: Regulatory Branch, 3701 Bell
Road, Nashville, TN 37214-2660; ATTN: J. Ruben Hernandez

JOINT PUBLIC NOTICE
US ARMY CORPS OF ENGINEERS
AND
TENNESSEE VALLEY AUTHORITY

SUBJECT: Proposed Old Knoxville Highway and Eagles Landing Golf Course Improvements, in Sevierville, Sevier County, Tennessee

TO ALL CONCERNED: The application described below has been submitted for a Department of the Army Permit pursuant to **Section 404 of the Clean Water Act (CWA)** and Tennessee Valley Authority (TVA) permit pursuant to **Section 26a of the TVA Act**. Before a permit can be issued, certification must be provided by the Tennessee Department of Environment and Conservation (TDEC) pursuant to Section 401(a)(1) of the CWA, that applicable water quality standards will not be violated. The applicant has applied separately for TDEC's certification.

APPLICANT: Sevierville Public Building Authority
P.O. Box 5500
Sevierville, Tennessee 37864-5500

LOCATION: Area north and northwest of the Sevierville Events Complex and west of the Little Pigeon River (LPR), in Sevierville, Sevier County, Tennessee. The work would affect a segment of Gist Creek (beginning at Mile 1.16), two unnamed Gist Creek tributaries, one unnamed LPR tributary, and several small wetlands. The proposed work is located on the Douglas Dam USGS Quad Map (156-NE), coordinates 35°54'41.8"N, 83°35'25.9"W.

DESCRIPTION: The applicant proposes to relocate a portion of the Old Knoxville Highway (OKH) and expand the Eagles Landing Golf Course (ELGC). The OKH improvements would result in the relocation of 1,845' of Gist Creek. The proposed channel would be 1,556' in length resulting in 289' of stream loss. Also associated with OKH improvements is the elimination of 35' of an unnamed tributary to Gist Creek (Stream Ex-2) and replacement of an existing 25' culvert on Gist Creek. The proposed structure would be a triple box culvert 152' long. The ELGC expansion would result in the relocation of an unnamed tributary to the LPR (Stream Ex-4), the elimination of an unnamed tributary to Gist

Creek (Stream Ex-3), and the elimination of several wetlands. A 337' section of Stream Ex-4 would be relocated into 452' of proposed channel resulting in 115' of additional stream footage. The tributary currently drains an existing lake on the golf course. Approximately 418' of Stream Ex-3 would be filled for the ELGC expansion. Seventeen wetlands throughout the golf course would be eliminated, totaling 2.99 acres. According to the applicant, the wetlands are generally low-quality and small (size range from 0.01 to 0.38 acres). The largest wetland (Area LL) is 1.11 acres in size and adjacent to an existing golf course lake.

Avoidance and Minimization. The applicant stated that the OKH road improvements are necessary to assist in alleviating traffic congestion in the City and is an essential component of its growth plans. The ELGC expansion is part of the City's development plan to attract visitors to the nearby events center. Since ELGC and OKH are existing features, the applicant is unaware of a suitable alternative that would be economically feasible and result in fewer stream and wetland impacts. The applicant further stated that due to the existing topography and existing development, impacts to Gist Creek could not be avoided within the design constraints for the roadway, but the impacts were reduced to relocation rather than encapsulation of the stream.

Mitigation and Monitoring. The applicant has proposed to mitigate the loss of stream footage by restoring a 1,493' long section of Gist Creek that is currently channelized and impounded. TDEC has assessed Gist Creek as not being high quality but fully supporting its classified uses: Fish and aquatic life, recreation, livestock watering and wildlife, and irrigation. In addition, the applicant states that the stream possesses a Rosgen channel classification of E4/C4/1 (with low sinuosity). The applicant proposes to remove the impoundment and create 1,245' of sinuous channel. The lower 375' of stream would have accumulated sediment removed and in-stream habitat measures installed. Additional mitigation footage would also be created by the relocation of Stream Ex-4. Both tributaries proposed to be eliminated would have a french drain system installed to convey any seepage to the receiving stream. The wetland impacts would be compensated by creating a total of 9.02 acres of wetlands at eight locations within the ELGC. Most of the wetlands would be created on the fringe of existing lakes. The mitigation areas would be created by lowering the existing surface elevation to utilize the groundwater resources at the site. The 3:1 mitigation ratio offered is due to the better than average probability of success due to the fact that the mitigation project is partially a restoration of wetlands formerly within the Gist Creek and LPR floodplains. Additional wetland and stream mitigation details are available upon request to the Regulatory Branch. Following the stream relocations, wetland mitigation, and

Public Notice No. 08-47

associated plantings, a five-year monitoring program will be implemented. The streams and wetlands monitoring program will include vegetation, hydrology, and soils (wetlands) assessments. Annual reports will be prepared which will include adequate photographic documentation.

Plans of the proposed work are attached to this notice.

The decision whether to issue a permit will be based on an evaluation of the probable impacts including cumulative impacts of the activity on the public interest. That decision will reflect the national concern for both protection and utilization of important resources. The benefit which reasonably may be expected to accrue from the work must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the work will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, cultural values, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, considerations of property ownership, and, in general, the needs and welfare of the people. In addition, the evaluation of the impact of the activity on the public interest will include application of the guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b)(1) of the CWA (40 CFR Part 230). A permit will be granted unless the District Engineer determines that it would be contrary to the public interest.

The Corps of Engineers (Corps) is soliciting comments from the public; federal, state, and local agencies and officials; Indian Tribes; and other interested parties in order to consider and evaluate the impacts of this proposed activity. Any comments received will be considered by the Corps to determine whether to issue, modify, condition, or deny a permit for this proposal. To make this decision, comments are used to assess impacts on endangered species, historic properties, water quality, general environmental effects, and the other public interest factors listed above. Comments are used in the preparation of an Environmental Assessment and/or an Environmental Impact Statement pursuant to the National Environmental Policy Act. Comments are also used to determine the need for a public hearing and to determine the overall public interest of the proposed activity.

An Environmental Assessment will be prepared by this office prior to a final decision concerning issuance or denial of the requested Department of the Army Permit.

Public Notice No. 08-47

An archaeological survey was conducted within the project area by an archaeological contractor in 2005. The report indicated that one historic property lies within the proposed project area delineated in this notice. The Corps is in the process of consulting with the State Historic Preservation Office concerning this property. Copies of this notice are being sent to the office of the State Historic Preservation Officer.

Based on available information, the proposed work will not destroy or endanger any federally-listed threatened or endangered species or their critical habitats, as identified under the Endangered Species Act. Therefore, we have reached a no effect determination and initiation of formal consultation procedures with the U.S. Fish and Wildlife Service is not planned at this time.

Other federal, state, and/or local approvals required for the proposed work are as follows:

a. Tennessee Valley Authority (TVA) approval under Section 26a of the TVA Act. In addition to other provisions of its approval, TVA would require the applicant to employ best management practices to control erosion and sedimentation, as necessary, to prevent adverse aquatic impacts.

b. Water quality certification from the State of Tennessee in accordance with Section 401(a)(1) of the Clean Water Act.

Any person may request, in writing, within the comment period specified in this notice, that a public hearing be held to consider this application. Requests for public hearings shall state, with particularity, the reasons for holding a public hearing.

Written statements received in this office on or before August 28, 2008, will become a part of the record and will be considered in the determination. Any response to this notice should be directed to the Regulatory Branch, Attention: J. Ruben Hernandez, at the above address, telephone (615) 369-7519. It is not necessary to comment separately to TVA since copies of all comments will be sent to that agency and will become part of its record on the proposal. However, if comments are sent to TVA, they should be mailed to Ms. Karen Stewart, Holston-Cherokee-Douglas Watershed Team, 3726 E. Morris Boulevard (MOC 1A-MOT), Morristown, Tennessee 37813-1270.

If you received this notice by mail and wish to view all of the diagrams, visit our web site at:

<http://www.lrn.usace.army.mil/cof/notices.htm>, or contact Mr. Hernandez at the above address or phone number.

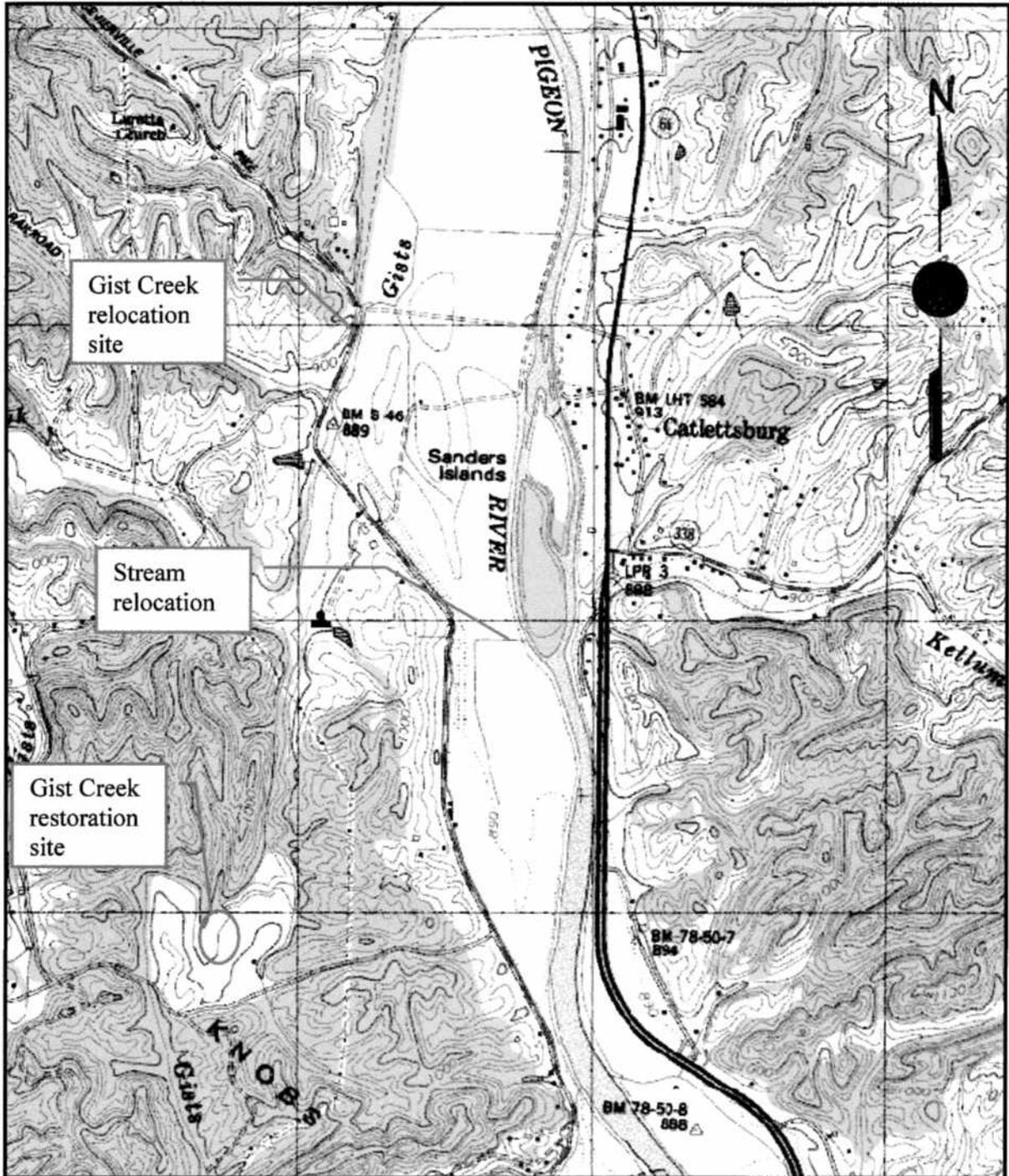


Figure 1: Approximate location of impacts. Wetlands impacts are too numerous to label



NOT FOR CONSTRUCTION

EXHIBIT B
FILE NO. 200801105
P.N. NO. 08-47

FIGURE 2A	DRAWN BY:	CRH
	APPROVED BY:	EMP
	SCALE:	1"=400'
	PROJECT NO.:	1434-04-306S
	DATE:	11-12-07

Gist Creek Relocation and Wetland Mitigation

Proposed Eagles Landing Golf Course
 Sevierville, Tennessee

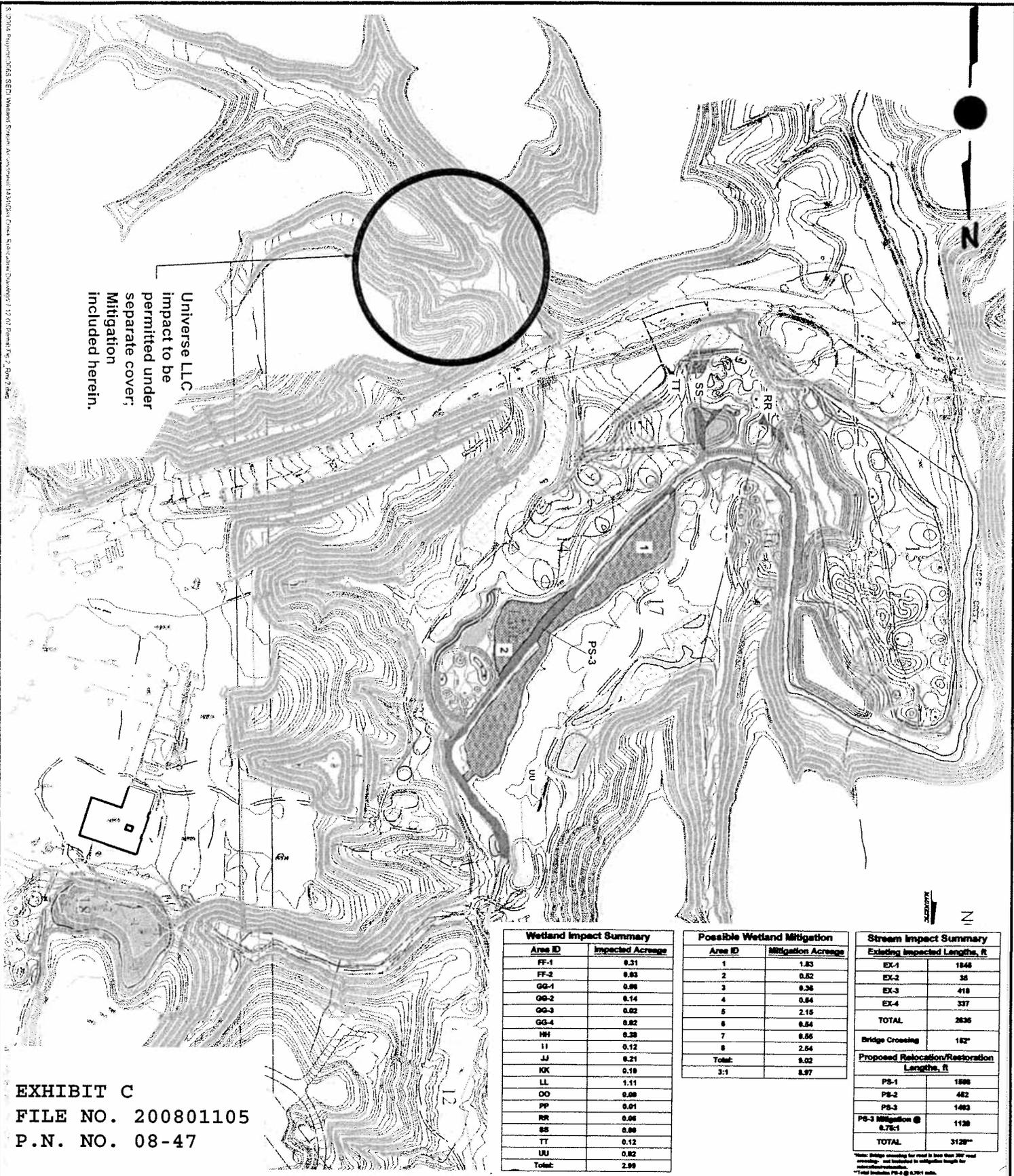


ENGINEERING TESTING
 ENVIRONMENTAL SERVICES
 WWW.SMEINC.COM

1413 Topside Road
 Louisville, Tennessee 37777

Phone: (865) 970-0003
 Fax: (865) 970-2312

S:\2008 Projects\040636 BEG Wetland Stream Avoidance\14434-04-3066\Drawings\2107 Permit\Fig 2B Rev 2.dwg



Universe LLC
 impact to be
 permitted under
 separate cover;
 Mitigation
 included herein.

EXHIBIT C
FILE NO. 200801105
P.N. NO. 08-47

Wetland Impact Summary	
Area ID	Impacted Acreage
FF-1	0.31
FF-2	0.83
GG-1	0.86
GG-2	0.14
GG-3	0.82
GG-4	0.82
HH	0.38
II	0.12
JJ	0.21
KK	0.18
LL	1.11
OO	0.88
PP	0.01
RR	0.06
SS	0.86
TT	0.12
UU	0.82
Total:	2.98

Possible Wetland Mitigation	
Area ID	Mitigation Acreage
1	1.83
2	0.82
3	0.36
4	0.84
5	2.16
6	0.54
7	0.56
8	2.54
Total:	9.02
3:1	8.97

Stream Impact Summary	
Existing Impacted Lengths, ft	
EX-1	1848
EX-2	35
EX-3	418
EX-4	337
TOTAL	2636
Bridge Crossing	182'
Proposed Relocation/Restoration Lengths, ft	
PS-1	1888
PS-2	482
PS-3	1463
PS-3 Mitigation @ 6.75:1	1128
TOTAL	3129'

*Note: Bridge crossing for road is less than 100' road crossing - not included in mitigation length for restoration/avoidance.
 **Total includes PS-3 @ 6.75:1 ratio.

FIGURE 2B

DRAWN BY:	CRH
APPROVED BY:	EMP
SCALE:	1"=400'
PROJECT NO.:	1434-04-306S
DATE:	11-12-07

Additional Proposed Mitigation Areas
 Proposed Eagles Landing Golf Course
 Sevierville, Tennessee

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 Fax: (865) 970-2312

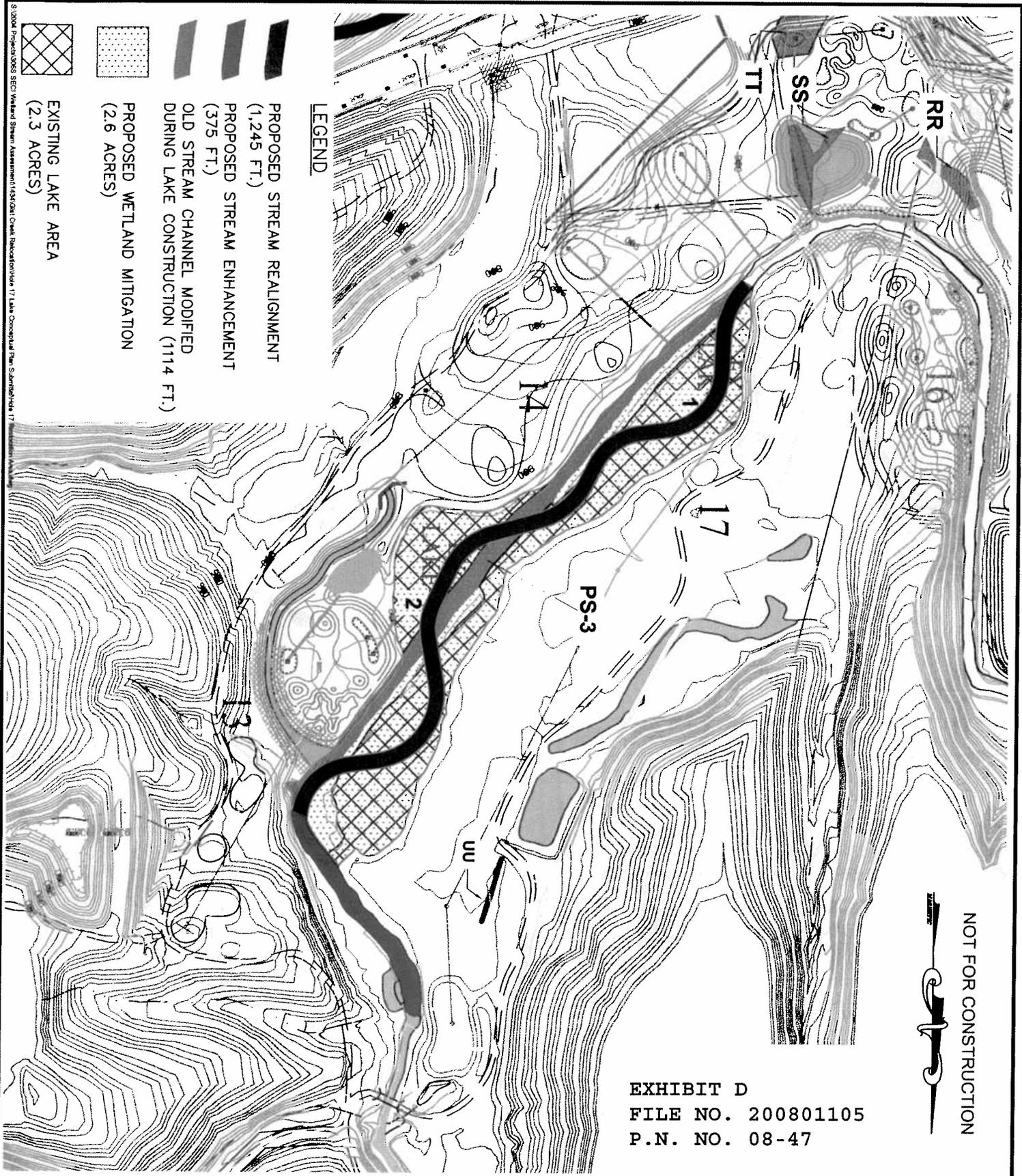


FIGURE 2	DRAWN BY:	MKP
	APPROVED BY:	EMP
	SCALE:	1"=200'
	PROJECT NO.:	1434-04-306S
	DATE:	1-31-08

Conceptual Mitigation Plan
Gists Creek
 Old Knoxville Hwy. & Eagles Landing Golf Club Improvements
 Sevierville, Tennessee


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 Fax: (865) 970-2312

Figure 3: Gist Creek Proposed Condition Cross Section

- Ground Surface
 - ◆ Bankfull Indicators
 - ▼ Water Surface Points
- $Wb_k f \approx 2.3$ $Db_k f \approx 2.05$ $Ab_k f \approx 47.2$

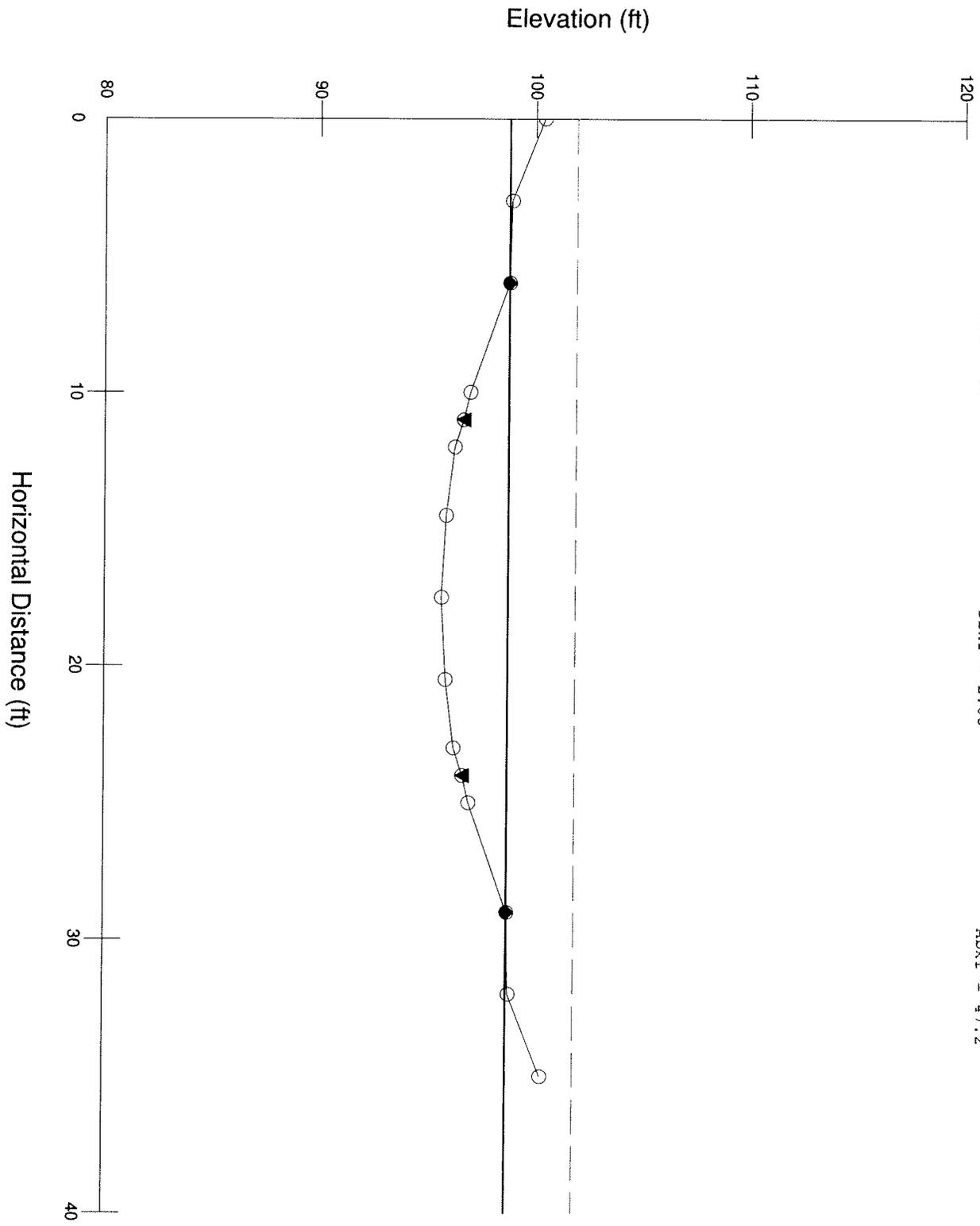
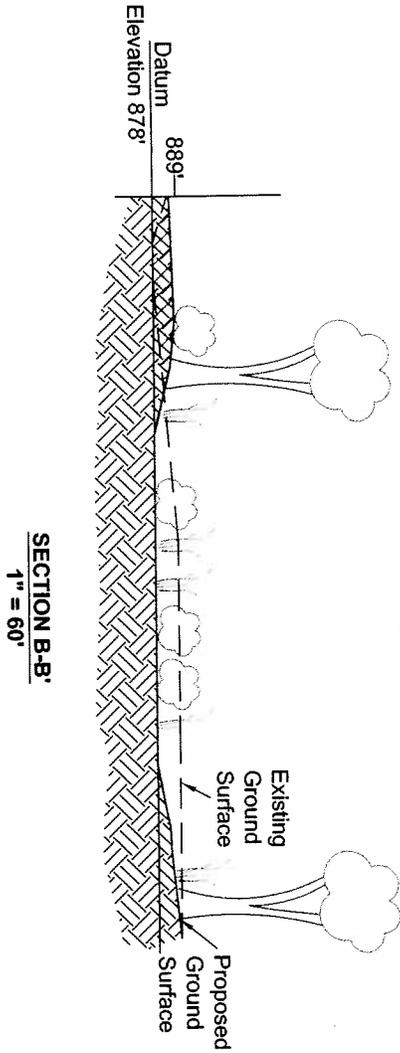
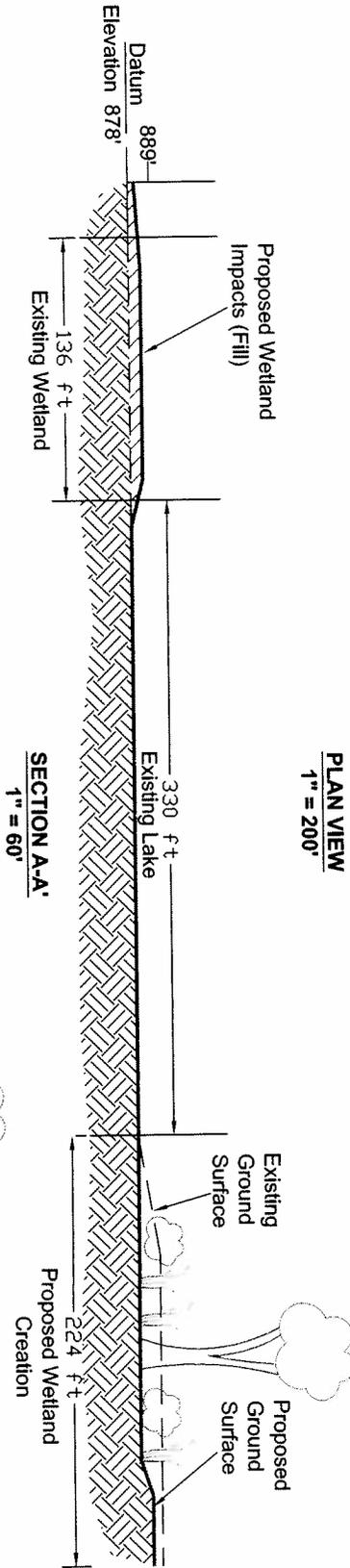
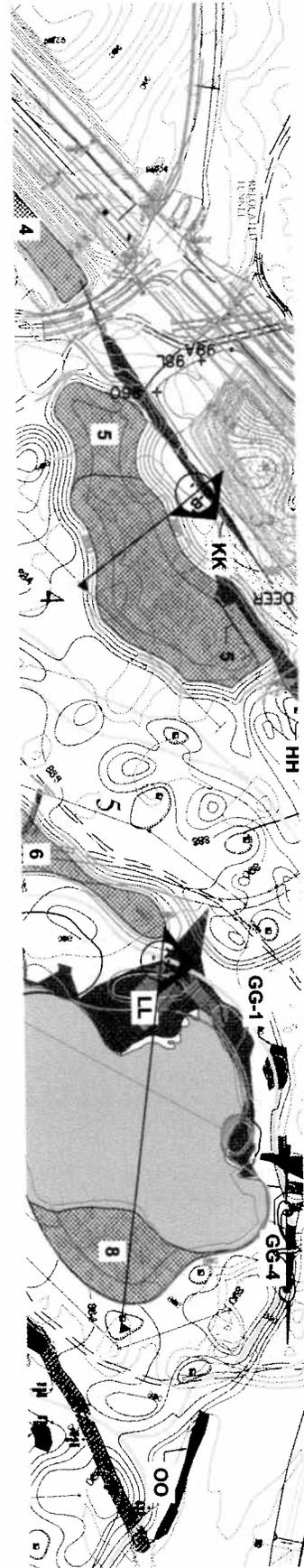


EXHIBIT F
 FILE NO. 200801105
 P.N. NO. 08-47



LEGEND

- Existing Ground Surface Profile
- Proposed Ground Surface Profile
- Fill Area

Revisions			
No.	Date	Description	By.
A	9-20-07	Client Review	CRH

TYPICAL CROSS SECTIONS
 PROPOSED WETLAND MITIGATION

EAGLES LANDING GOLF COURSE
 SEVIERVILLE, TENNESSEE

DRAWN BY:	CRH
APPROVED BY:	EMP
SCALE:	AS SHOWN
PROJECT NO.:	1434-04-306S
DATE:	09-20-07

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 Louisville, Tennessee 37777

Phone: (615) 970-0003
 Fax: (615) 970-2312

FIGURE 7

Appendix C
Public Responses



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

August 13, 2008

Mr. J. Ruben Hernandez
United States Army Corps of Engineers
Nashville District – Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214

RE: COE-N, PN# 08-47/GOLF COURSE & HWY IMPS., SEVIERVILLE,
SEVIER COUNTY

Dear Mr. Hernandez:

The above-referenced undertaking has been reviewed with regard to National Historic Preservation Act compliance by the participating federal agency or its designated representative. Procedures for implementing Section 106 of the Act are codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739).

As the public notice states, Section 106 consultation is ongoing for this undertaking as well as several adjacent undertakings. According to the map included with the notice, it appears that there may be portions of the area of potential effect that have not yet been surveyed for archaeological resources. In particular, the Gist Creek restoration site has not been surveyed. In order to complete our review of this undertaking, we will need to receive from you a detailed archaeological survey report on the portions of the area of potential effect that have not been previously surveyed.

Upon receipt of the survey report through additional consultation, we will complete our review of this undertaking as expeditiously as possible. Until such time as this office has rendered a final comment on this project, your Section 106 obligation under federal law has not been met. Please inform this office if this project is canceled or not funded by the federal agency. Questions and comments may be directed to Jennifer M. Barnett (615) 741-1588, ext. 105.

Your cooperation is appreciated.

Sincerely,

EP
E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

13 AUG 2008

EPM/jmb



TENNESSEE HISTORICAL COMMISSION
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
2941 LEBANON ROAD
NASHVILLE, TN 37243-0442
(615) 532-1550

December 4, 2008

Mr. J. Ruben Hernandez
United States Army Corps of Engineers
Nashville District
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214

RE: COE-N, PN# 08-47/GOLF COURSE & HWY IMPS., SEVIERVILLE, SEVIER COUNTY, TN

Dear Mr. Hernandez:

At your request, our office has reviewed the additional information and plans submitted by your agency regarding the above-referenced undertaking in accordance with regulations codified at 36 CFR 800 (Federal Register, December 12, 2000, 77698-77739). Based on the information provided, we find that the project area contains no archaeological resources eligible for listing in the National Register of Historic Places. Furthermore, we have no objection to the placement of fill over archaeological site 40SV33 provided that no ground-disturbance reaches below that fill level and that development is limited to golf course construction.

If project plans are changed or archaeological remains are discovered during construction, please contact this office to determine what further action, if any, will be necessary to comply with Section 106 of the National Historic Preservation Act.

Your cooperation is appreciated.

Sincerely,

E. Patrick McIntyre, Jr.
Executive Director and
State Historic Preservation Officer

EPM/jmb

17 DEC 2008



TENNESSEE WILDLIFE RESOURCES AGENCY

ELLINGTON AGRICULTURAL CENTER
P. O. BOX 40747
NASHVILLE, TENNESSEE 37204

→ JPH
9/1

August 27, 2008

J. Ruben Hernandez
Nashville District Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, TN 37214

Re: Public Notice #08-47
Applicant: Sevierville Public Building Authority
Proposed Relocation of a Portion of the Old Knoxville Highway and Expand the Eagles
Landing Golf Course Involving Stream and Wetland Impacts
Area North and Northwest of the Sevierville Events Complex and West of the Little
Pigeon River (LPR) in Sevierville
Sevier County, Tennessee

Dear Mr. Hernandez:

The applicant proposes to relocate a portion of the Old Knoxville Highway and expand the Eagles Landing Golf Course involving stream and wetland impacts in Sevier County. The applicant proposes to mitigate the stream impacts of stream length loss, relocation, and channel elimination by restoration of 1,493 feet of a section of Gist Creek. The applicant proposes to mitigate a total of 2.99 acres of wetland impacts by creation of 9.02 acres of wetlands.

The Tennessee Wildlife Resources Agency does not oppose the issuance of a permit for this project provided that the proposed stream mitigation is in compliance with the Stream Mitigation Guidelines for the State of Tennessee" by the Tennessee Department of Environment and Conservation, Division of Water Pollution Control, Natural Resources Section (including a 50 foot vegetated riparian buffer on both sides of the stream channel comprised of woody and herbaceous vegetation), the applicant agrees to conduct annual monitoring of the stream mitigation site to prove hydrologic and vegetative success, provide annual monitoring reports to regulatory agencies, permanently mark the mitigation sites with signs to prevent inadvertent vegetative destruction by maintenance workers, and place a legal instrument of perpetual protection for the stream and wetland mitigation sites. We also request that the fish, amphibians, reptiles, and crustaceans currently existing in the stream channels and wetlands to be filled be relocated in suitable habitat in adjacent stream channels and wetlands that will support these aquatic resources.

The Tennessee Wildlife Resources Agency requests that this permit be held in abeyance until the applicant agrees to above conditions. If the applicant fails to agree to the above conditions, we request that the permit be denied.

The State of Tennessee

IS AN EQUAL OPPORTUNITY, EQUAL ACCESS, AFFIRMATIVE ACTION EMPLOYER

28 AUG 2008



United States Department of the Interior

FISH AND WILDLIFE SERVICE
446 Neal Street
Cookeville, TN 38501

FJRH
v2
9/2

August 28, 2008

Lt. Colonel Bernard R. Lindstrom
District Engineer
U.S. Army Corps of Engineers
3701 Bell Road
Nashville, Tennessee 37214

Attention: Mr. Ruben Hernandez, Regulatory Branch

Subject: Public Notice No. 08-47. Sevierville Public Building Authority, Proposed Stream and Wetland Impacts, Sevier County, Tennessee.

Dear Colonel Lindstrom:

Fish and Wildlife Service (Service) personnel have reviewed the subject public notice. The applicant (Sevierville Public Building Authority) proposes to relocate a portion of Old Knoxville Highway and expand the existing Eagles Landing Golf Course in Sevier County, Tennessee. The proposal would require the relocation of approximately 1,845 linear feet of Gist Creek, elimination of 35 linear feet of an unnamed tributary to Gist Creek, and permanently impact 2.99 acres of wetlands. The proposed stream relocation would result in a loss of 289 linear feet of stream channel. The stream impacts would be mitigated onsite by the replacement of 1,556 linear feet of stream channel, restoration of 1,245 linear feet of stream channel, and the enhancement of 375 linear feet of stream channel. The applicant proposes to mitigate the wetland impacts onsite by creating 9.02 acres of wetlands. The following constitute the comments of the U.S. Department of the Interior, provided in accordance with provisions of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.).

Endangered species collection records available to the Service do not indicate that federally listed or proposed endangered or threatened species occur within the impact area of the project. We note, however, that collection records available to the Service may not be all-inclusive. Our data base is a compilation of collection records made available by various individuals and resource agencies. This information is seldom based on comprehensive surveys of all potential habitat and thus does not necessarily provide conclusive evidence that protected species are present or absent at a specific locality. However, based on the best information available at this time, we believe that the requirements of section 7 of the Endangered Species Act of 1973, as amended, are fulfilled. Obligations under section 7 of the Act must be reconsidered if (1) new

02 SEP 2008

information reveals impacts of the action that may affect listed species or critical habitat in a manner not previously considered, (2) the action is subsequently modified to include activities which were not considered during this consultation, or (3) new species are listed or critical habitat designated that might be affected by the action.

We have concerns with what appears to be an inadequate amount of mitigation being offered for the 2.99 acres of permanent wetland loss. The applicant proposes to create 9.02 wetland acres as mitigation for this loss. In Tennessee, wetland creation would require at least a 4:1 mitigation ratio. Therefore, the applicant would need to create at least 11.96 acres of wetlands to mitigate the proposed impacts. We do not object to the proposed stream mitigation, provided the relocated stream segments include acceptable fluvial geomorphologic designs based on defined reference stream conditions with the appropriate riparian buffer widths (minimum of 50 feet on both sides of the stream) as outlined in the Stream Mitigation Guidelines for the State of Tennessee, and the sites are protected in perpetuity. Since the mitigation sites will be located within the boundaries of a golf course, we request that the boundaries of these sites be permanently marked with appropriate signs that would prevent destruction of the planted vegetation.

We recommend that the permit be held in abeyance until the above issues are resolved. If the applicant is not agreeable to the above recommendations, we request that the permit be denied.

We appreciate the opportunity to review the subject permit application. Please contact Robbie Sykes (telephone 931/528-6481, ext. 209) of my staff if you have questions regarding the information provided in this letter.

Sincerely,



Lee A. Barclay, Ph.D.
Field Supervisor

xc: Robert Todd, TWRA, Nashville, TN
Dan Eagar, TDEC, Nashville, TN
Darryl Williams, EPA, Atlanta, GA
Karen Stewart, TVA, Morristown, TN

Hernandez, Jose R LRN

From: Rob Todd [Rob.Todd@state.tn.us]
Sent: Tuesday, September 02, 2008 10:21 AM
To: Hernandez, Jose R LRN
Cc: Dennis Lindbom
Subject: Modification to Comment Letter Regarding Public Notice 08.47 -Sevierville Public Building Authority

Ruben:

Please make the following changes to our comments regarding public notice 08.47 - Sevierville Public Building Authority dated August 27, 2008.

In the second paragraph, last sentence it reads: "We also request that the fish, amphibians, reptiles, and crustaceans currently existing in the stream channels and wetlands to be filled be relocated in suitable habitat in adjacent stream channels and wetlands that will support these aquatic resources."

We request that the above sentence be replaced with the following sentence: "We also request that the fish, amphibians, reptiles, and crustaceans currently existing in the stream channels to be filled be relocated in suitable habitat in adjacent stream channels that will support these aquatic resources."

Thank you for your cooperation in this matter.

Robert M. Todd
Tennessee Wildlife Resources Agency
Environmental Services Division
Ellington Agricultural Center
P.O. Box 40747
Nashville, TN 37204
Phone: 615-781-6572
Fax: 615-781-6667
E-mail address: Rob.Todd@state.tn.us

Appendix D
Applicant's Rebuttal

Hernandez, Jose R LRN

From: Hernandez, Jose R LRN
Sent: Thursday, August 28, 2008 2:03 PM
To: 'Elizabeth Porter'
Subject: Responses to PN 08-47 (Gist Creek & ELGC)

Attachments: THC Comments_PN 08-47.pdf; PN#08-47 - Sevierville PBA - Comment Ltr - 8-27-2008.doc



THC



PN#08-47 -

nts_PN 08-47.pdevierville PBA - .

Liz:

So far we have received two PN comments to the subject work. Comments were received from THC and TWRA (both attached).

1. THC requested that an archaeological report be prepared on areas of potential effect that had never been surveyed. The Corps usually concurs with this type of request and asks applicants to conduct surveys. If it's ok with you, I can discuss the comment with Kyle Wright next Tuesday and ask for a determination on the appropriateness of the survey before you instruct Sevierville Public Building Authority (SPBA) to start preparing it.
2. TWRA conditioned its approval to a list of commitments/requirements. Please read the letter and indicate whether SPBA would be willing to abide by the commitments/requirements.
3. EPA called me earlier this week and may be putting together some comments to the PN. As soon as I receive them, I will furnish to you.

J. Ruben Hernandez
Project Manager
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214-2660
(615) 369-7519
(615) 369-7501 fax
jose.r.hernandez@usace.army.mil

Note: Please use the above email address in future communications.

Hernandez, Jose R LRN

From: Hernandez, Jose R LRN
Sent: Thursday, August 28, 2008 2:23 PM
To: 'Elizabeth Porter'
Subject: Additional Comments PN 08-47 - USFWS

Attachments: USFWS Comment_PN 08-47.PDF



USFWS

ent_PN 08-47.PDF

Liz:

I just received the USFWS's comment. They believe you have to create more wetlands. You have at least three options: a) Agree to mitigate a larger amount of wetlands, i.e., 11.96 acres; b) Contact them and convince them that the original wetland figure is adequate (if this is successful, document and provide copy of your conversation record, etc.); or 3) Provide me in writing the reasons why constructing the originally proposed amount of wetlands is adequate.

J. Ruben Hernandez
Project Manager
U.S. Army Corps of Engineers
Regulatory Branch
3701 Bell Road
Nashville, Tennessee 37214-2660
(615) 369-7519
(615) 369-7501 fax
jose.r.hernandez@usace.army.mil

Note: Please use the above email address in future communications.

Hernandez, Jose R LRN

From: Elizabeth Porter [LPorter@smeinc.com]
Sent: Monday, September 22, 2008 10:28 AM
To: Hernandez, Jose R LRN
Subject: FW: Gist Creek Response to Comments

Attachments: Microsoft Word - GIST creek letter.pdf; Mitigation Areas 5 08.pdf; image001.jpg



*S&ME
MAY 29
LTR*

Microsoft Word - Mitigation Areas image001.jpg
GIST creek le... 5 08.pdf (1 M... (22 KB)

Ruben - I'll call you to discuss this later today -

Liz Porter, P.G.
Senior Project Manager

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Ph: 865-970-0003
Fax: 865-970-2312
Mobile: 865-804-4336

LPorter@smeinc.com <<mailto:LPorter@smeinc.com>> www.smeinc.com <<http://www.smeinc.com/>>

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From: Holmes, Kathleen C. [<mailto:kholmes@wilbursmith.com>]
Sent: Friday, September 19, 2008 4:27 PM
To: Elizabeth Porter
Cc: Steve Hendrix; Ball, Robert W; Corlew, Charles R; Bowers, Robert W; Grubb, Terry S

Subject: FW: okh

Liz,

Please find attached Robert Ball and David McBride's letter recommending no further archaeological testing along the Gist Creek/OKH Missing Link corridor. If you need any other information, please let me know.

Thanks,
Kassie

Kassie Holmes, PE

Project Manager

Wilbur Smith Associates

1100 Marion Street, Suite 200, Knoxville, TN 37921

w: 865.963.4300 f: 865.963.4301

kholmes@wilbursmith.com

www.WilburSmith.com <<http://www.wilbursmith.com/>>



September 19, 2008

Liz Porter, PG
Senior Project Manager
S&ME, Inc.
1413 Topside Road
Louisville, Tennessee 37777

465 East High Street
Suite 100
Lexington, KY 40507-1939
(859) 254-5759
(859) 254-5764 fax
www.wilbursmith.com

SUBJECT: Gist Creek Relocation: **Disturbed and Previously Surveyed Areas:**

Dear Liz,

After having reviewed the proposed plan for the relocation of a section of Gist Creek within the northern part of Eagle Landing golf course, it is my professional opinion that the past disturbances within the area related to the golf course and other activities have negatively impacted any potential for the occurrence of archaeological sites. In addition, the highest probability area within the proposed relocation area was previously surveyed in 2005 by Kathy Manning in the report titled *Archaeological Survey (Phase I) of the Proposed Sevierville Events Complex Infrastructure, Sevier County, Tennessee*. She did not find any cultural remains within this location. Thus, based on the property's current conditions, past disturbances and previous archaeological surveys, I feel that the area does not warrant any further testing.

If Wilbur Smith Associates can provide further assistance with this project please let me know at your earliest convenience.

Sincerely,
WILBUR SMITH ASSOCIATES

J. David McBride, RPA
Senior Archaeologist
Wilbur Smith Associates
Tel (859) 254-5759 ext 235
Fax (859) 254-5764

Cc: Steve Hendrix

Albany NY, Anaheim CA, Atlanta GA, Baltimore MD, Bangkok Thailand, Burlington VT, Charleston SC, Charleston WV, Chicago IL, Cincinnati OH, Cleveland OH, Columbia SC, Columbus OH, Dallas TX, Dubai UAE, Falls Church VA, Greenville SC, Hong Kong, Houston TX, Iselin NJ, Kansas City MO, Knoxville TN, Lansing MI, Lexington KY, London UK, Milwaukee WI, Mumbai India, Myrtle Beach SC, New Haven CT, Orlando FL, Philadelphia PA, Pittsburgh PA, Portland ME, Poughkeepsie NY, Raleigh NC, Richmond VA, Salt Lake City UT, San Francisco CA, Tallahassee FL, Tampa FL, Tempe AZ, Trenton NJ, Washington DC

Hernandez, Jose R LRN

From: Elizabeth Porter [LPorter@smeinc.com]
Sent: Monday, September 22, 2008 4:23 PM
To: Hernandez, Jose R LRN
Subject: FW: TDEC Authorization Stream Relocation

Importance: High

Attachments: TDEC ELGC Stream relocation 090208.pdf; image001.jpg



TDEC ELGC Stream relocation 090208.pdf (29 KB)
image001.jpg

Ruben - Per our discussion earlier today, I've attached a copy of the TDEC permit for the proposed Gists Creek relocation and associated impacts. Also, as we discussed, and in response to TWRA comments, the applicant has agreed to move the aquatic life from the existing section of stream to be impacted to the relocated section of Gists Creek. This work will be performed once the new channel is excavated and the upstream and downstream plugs have been removed. As the water begins to flow in the new channel, pools of water will be left in the existing channel. Readily accessible aquatic life in each pool will be transferred to the new channel using nets and buckets or other suitable means, depending on the size of the pools of water. If warranted, pumps may be used to draw down the water in the pools to make collection easier.

Please let me know if you need additional information regarding the permit application. Thanks!

Liz Porter, P.G.
Senior Project Manager

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Ph: 865-970-0003
Fax: 865-970-2312
Mobile: 865-804-4336

LPorter@smeinc.com <<mailto:LPorter@smeinc.com>> www.smeinc.com <<http://www.smeinc.com/>>

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From: Bob Moncrief [mailto:bmoncrief@sevierville.tn.org]
Sent: Wednesday, September 10, 2008 3:48 PM
To: Steve Hendrix; Jerry Hickman; Faye Randolph
Cc: rcorlew@wilbursmith.com; Elizabeth Porter
Subject: TDEC Authorization Stream Relocation
Importance: High

Please find attached doc received via mail today.

Thanks,

Bob

Hernandez, Jose R LRN

From: Elizabeth Porter [LPorter@smeinc.com]
Sent: Friday, October 24, 2008 2:34 PM
To: Hernandez, Jose R LRN
Subject: RE: Gist Creek Stream Relocation

Ruben - The relocated stream sections are designed using natural channel design criteria, consistent with the stream mitigation guidelines. The applicant has agreed to protect the mitigation areas in perpetuity using the standard TDEC land use restrictions language, and signs will be used to prevent damage to the vegetation. (In some areas, such as ball flight zones, the vegetation will have to be managed to maintain view corridors. These areas are called out on the Stream and Wetland Impacts Map (Figure 2).)

Please let me know if there are any other questions to be answered - Thanks!

Liz Porter, P.G.
Senior Project Manager

ENGINEERING INTEGRITY.

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-----Original Message-----

From: Hernandez, Jose R LRN [mailto:Jose.R.Hernandez@usace.army.mil]
Sent: Friday, October 24, 2008 3:23 PM
To: Elizabeth Porter
Subject: RE: Gist Creek Stream Relocation

Thanks, Liz.

Since I do not find (that's not unusual) in the original application or subsequent correspondence a formal answer to some questions raised during the PN advertisement, please respond to the following questions:

1. Would the relocated stream segments be designed in accordance with the TN Stream Mitigation Guidelines?
2. Are the relocated streams and wetland sites going to be protected in perpetuity through legal instruments?

3. Would the boundaries of the mitigation sites be permanently marked with appropriate signs that would prevent destruction of the planted vegetation?

J. Ruben Hernandez
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jose.r.hernandez@usace.army.mil

-----Original Message-----

From: Elizabeth Porter [mailto:LPorter@smeinc.com]
Sent: Friday, October 24, 2008 2:07 PM
To: Hernandez, Jose R LRN
Subject: RE: Gist Creek Stream Relocation
Importance: High

Ruben - I looked through the PN again and the information has not changed since that was issued. Also, I've forwarded the e-mail (below) where I responded to the TWRA comments, and attached a copy of the letter submitted to justify the wetland mitigation ratios. I believe these were the only comments to be addressed? Please let me know if you need anything else.

Thanks!

Liz Porter, P.G.
Senior Project Manager

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