



US Army Corps
of Engineers®
Little Rock District

JOINT PUBLIC NOTICE

CORPS OF ENGINEERS – STATE OF ARKANSAS

Application Number: 1776-02176-3

Date: August 25, 2016

Comments Due: September 19, 2016

TO WHOM IT MAY CONCERN: **Comments are invited on the work described below. Please see the Public Involvement section for details on submitting comments.**

Point of Contact. If additional information is desired, please contact the project manager, Gerald Dickson, telephone number: (501) 340-1372, mailing address: Little Rock District Corps of Engineers, Regulatory Division, PO Box 867, Little Rock, Arkansas 72203-0867, email address: Gerald.W.Dickson@usace.army.mil

Project Information. Pursuant to Section 404 of the Clean Water Act (33 U.S. Code 1344), notice is hereby given that

**Mr. Jeff Farmer
5101 Whellis Drive, Suite 310
Memphis, Tennessee 38117**

has requested authorization for the placement of dredged and fill material in waters of the United States associated with the development of four Green Tree Reservoirs (GTRs). The proposed project would involve the construction of 13,255 linear feet of levees and the inundation of approximately 580 acres of bottomland hardwood forested wetlands with multiple associated slough areas, which would encompass four units. Impacts to waters of the United States would include approximately 23 linear feet of an intermittent stream channel and 11.55 acres of bottomland hardwood forested wetlands consisting of 5.63 acres of fill (approximately 17,675 cubic yards) and 5.92 acres of dredging. The proposed project is located in waters of the United States, including forested wetlands, in sections 9, 10, 14, 15, 22, and 23, T. 8 N., R. 4 W., Woodruff County, Arkansas.

The basic purpose of the project is to inundate wooded areas to provide waterfowl hunting opportunities. The overall purpose of the project is to create GTRs, which would enhance the forested wetland areas and create a more dependable habitat for waterfowl in the fall. The construction of a GTR is water dependent.

The primary hydrology would be provided to GTR units 1 through 3 by use of a groundwater well. Unit 4 would be inundated by a proposed water relift on Taylor Bay near Mosquito Slough. The water relift on Taylor Bay would be used to pump water to an existing Wetlands Reserve Program (WRP) area as well as the GTR and will be evaluated by the Memphis District Regulatory Branch due to district boundary jurisdictional limits.

The project involves constructing 11 levee segments along portions of the boundaries of the proposed four GTRs. All levee segments would have a 12-foot top width and 3:1 side slopes. All fill material would come from borrow areas located on the GTR side of the levees. Levee

No. 1 would be approximately 620 linear feet long. Levee No. 2 would be approximately 165 linear feet long. Levee No. 3-1 would be constructed along the southern boundary of the GTR and would be approximately 185 linear feet long. Levee No. 3-2 would be constructed along the northern boundary of the GTR and would be approximately 230 linear feet long. Levee No. 4-1 would be constructed along the western boundary of the GTR along an existing road and would be approximately 3,470 linear feet long. Impacts from Levee No. 4-1 would consist of dredging only as the entire levee would stay within the footprint of an existing road. Levee No. 4-2 would be constructed along the western boundary where the levee would diverge from the existing road and intersect a point of higher elevation and would be approximately 550 linear feet long. Levee No. 4-3 would be constructed along the western and southern boundary from a point of higher elevation along the western boundary to a point of higher elevation along the southern boundary and would be approximately 6,500 linear feet long. Levee No. 4-4 would be constructed across a small slough along the southern boundary of the GTR and would be approximately 95 linear feet long. All impacts from construction of Levee No. 4-4 would be fill impacts. Dredge material used to construct Levee No. 4-4 would be obtained from the borrow area proposed for Levee No. 4-3. Levee No. 4-5 would be constructed along a section of the eastern boundary of the GTR from a point of higher elevation to a point of higher elevation and would be approximately 310 linear feet long. Levee No. 4-6 would be constructed along a section of the northeastern boundary of the GTR from a point of higher elevation to a point of higher elevation and would be approximately 1,050 linear feet long. Levee No. 4-7 would be constructed across a small slough along the northern boundary of the GTR and would be approximately 80 linear feet long.

Seven water control structures would be installed to control hydrology within and immediately outside the GTRs. The water control structures would be built with 24-inch diameter pipe and flashboard risers or equivalent features located on the upstream or downstream end of the pipe or flap gate. A debris rack/deflector may be installed on one or more of the structures to prevent pipe and gate blockage. The water control structures would be placed at the same elevation as the natural wetland bottom elevation. All water control structures were designed by a professional engineer for proper operation.

Water depth at full pool within GTR Unit 1 would range from 0 to 24 inches with approximately 97 percent of the unit at 18 inches or less to include approximately 75 percent at 12 inches or less. Water depth at full pool within GTR Unit 2 would range from 0 to 18 inches with approximately 92 percent of the unit at 12 inches or less. Water depth at full pool within GTR Unit 3 would range from 0 to 18 inches with approximately 93 percent of the unit at 12 inches or less. Water depth at full pool within GTR Unit 4 would range from 0 to 36 inches with approximately 55 percent of the unit at 18 inches or less to include approximately 32 percent at 12 inches or less.

Flooding of the GTRs would begin on or after November 1st of each season. Dewatering of the GTRs would begin after the last day of waterfowl season or February 15th (whichever occurs first).

The applicant has determined that the entirety of the project area and the area immediately adjacent to the project consists of wetlands making avoidance impossible. The impacts would be minimized by constructing the levees within the footprint of existing roads where possible,

minimizing the amount of fill necessary to construct a functional levee system. The applicant proposes onsite mitigation in the form of approximately 59 percent wetland preservation and 41 percent enhancement/buffer activities of the required compensatory mitigation.

The proposed project area is located in its entirety within a mapped Federal Emergency Management Area (FEMA) 100-year floodplain associated with the White River in Woodruff County, Arkansas.

The locations and general plans for the proposed work are shown on the enclosed sheets.

Water Quality Certification. By copy of this public notice, the applicant is requesting water quality certification from the Arkansas Department of Environmental Quality (ADEQ) in accordance with Section 401(a)(1) of the Clean Water Act. Upon completion of the comment period and a public hearing, if held, a determination relative to water quality certification will be made. Evidence of this water quality certification or waiver of the right to certify must be submitted prior to the issuance of a Corps of Engineers permit.

Cultural Resources. A Corps staff archeologist will review topographic maps, the National Register of Historic Places, and other data on reported sites in the area. The District Engineer invites responses to this public notice from Native American Nations or tribal governments; Federal, State, and local agencies; historical and archeological societies; and other parties likely to have knowledge of or concerns with historic properties in the area.

Endangered Species. Our preliminary determination is that the proposed activity will not affect listed Endangered Species or their critical habitat. A copy of this notice is being furnished to the U.S. Fish and Wildlife Service and appropriate state agencies and constitutes a request to those agencies for information on whether any listed or proposed-to-be-listed endangered or threatened species may be present in the area which would be affected by the proposed activity.

Floodplain. We are providing copies of this notice to appropriate floodplain officials in accordance with 44 CFR Part 60 (Floodplain Management Regulations Criteria for Land Management and Use) and Executive Order 11988 on Floodplain Management.

Section 404(b)(1) Guidelines. The evaluation of activities to be authorized under this permit, which involves the discharge of dredged, or fill material will include application of guidelines promulgated by the Administrator, Environmental Protection Agency, under authority of Section 404(b) of the Clean Water Act. These guidelines are contained in 40 Code of Federal Regulations (CFR) 230.

Public Involvement. Any interested party is invited to submit to the above-listed POC written comments or objections relative to the proposed work on or before **September 19, 2016**. Substantive comments, both favorable and unfavorable, will be accepted and made a part of the record and will receive full consideration in determining whether this work would be in the public interest. The decision whether to issue a permit will be based on an evaluation of the probable impact including cumulative impacts of the proposed 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 proposal, must be balanced against its reasonably foreseeable detriments. All factors which may be relevant to the proposal will be considered including the cumulative effects thereof; among those are conservation, economics, aesthetics, general environmental concerns, wetlands, historic properties, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shoreline 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.

The Corps of Engineers 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 of Engineers 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.

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. The District Engineer will determine if the issues raised are substantial and whether a hearing is needed for making a decision.

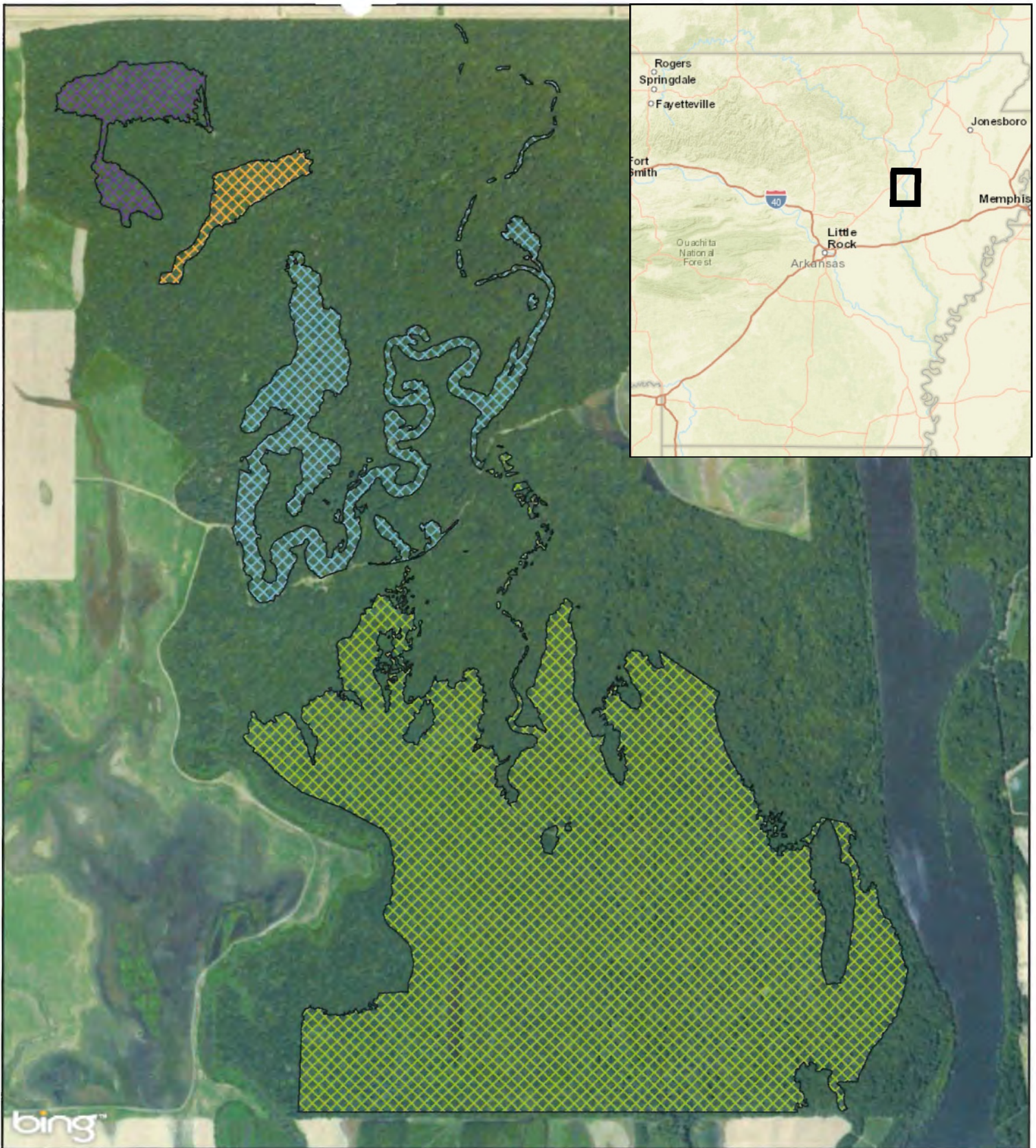
NOTE: The mailing list for this Public Notice is arranged by state and county(s) where the project is located, and includes any addressees who have asked to receive copies of all public notices. Please discard notices that are not of interest to you. If you have no need for any of these notices, please advise us so that your name can be removed from the mailing list.

Enclosures

Approximate Coordinates of Project Center

Latitude: **35.326451** Longitude: **-91.402034**

UTM Zone: **15** North: **3910417.5** East: **645241.8**



White Oaks Duck Woods GTR Development Project

2,000

Feet

GTR Unit 1
GTR Unit 2

GTR Unit 3
GTR Unit 4



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ACTION NO. 1776-02176-3

Mr. Jeff Farmer

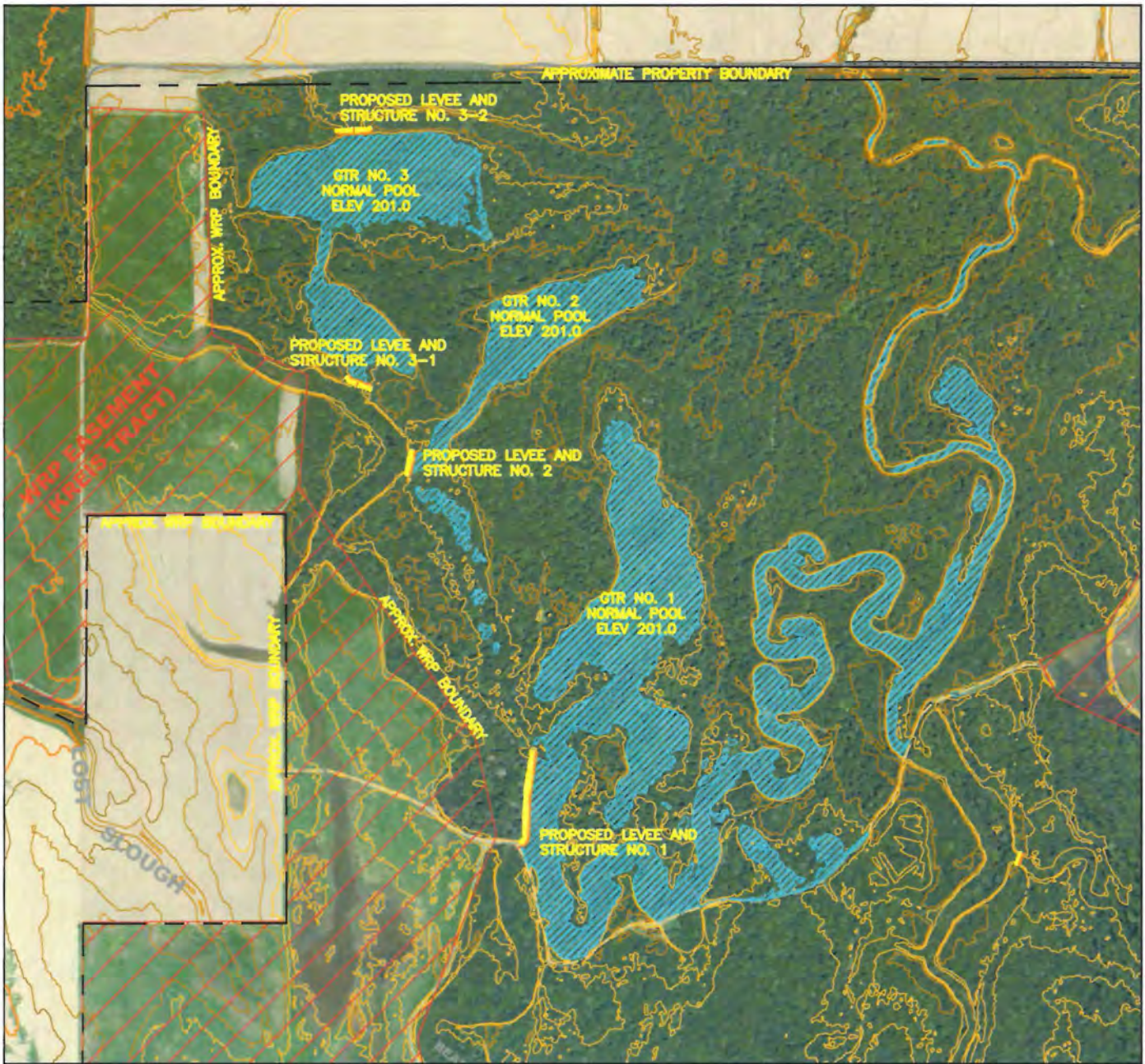
White Oak Duck Woods GTRs

Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.

August 2016

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Figure 3. Map showing overview of project area details based on 2010 Micros

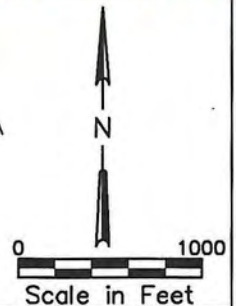


NOTES:


1. PROPOSED NORMAL POOL IN GTR NO. 1, NO. 2 AND NO. 3 TO BE SET AT ELEV 201.0.
2. GTR OUTLET CONTROL STRUCTURES SHALL INCLUDE PIPE AND FLASHBOARD RISER STRUCTURE TO CONTROL EACH GTR LEVEL.
3. REFER TO INDIVIDUAL PROPOSED LEVEE/ STRUCTURE DRAWINGS FOR INFORMATION REGARDING EACH FEATURE AND AREA OF IMPACTS.
4. CONTOURS SHOWN ARE BASED ON LIDAR DATA WHICH HAS BEEN ADJUSTED BASED ON SITE SPECIFIC SURVEY DATA. CONTOURS ARE NOT SURVEY BASED AND ARE SUBJECT TO MINOR VARIATION.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED GREEN TREE
 RESERVOIR NOS. 1, 2 & 3**



By: *BOB*
DATE: JAN 22 2016




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016

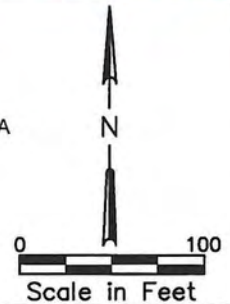


NOTES:



1. NORMAL POOL IN GTR TO BE ELEV 201.0.
2. LEVEE NO. 1 CREST ELEV 202 +/- . STRUCTURE NO. 1 WILL INCLUDE ONE PIPE AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO REDUCE POTENTIAL FOR PIPE OR STRUCTURE BLOCKAGE.
3. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

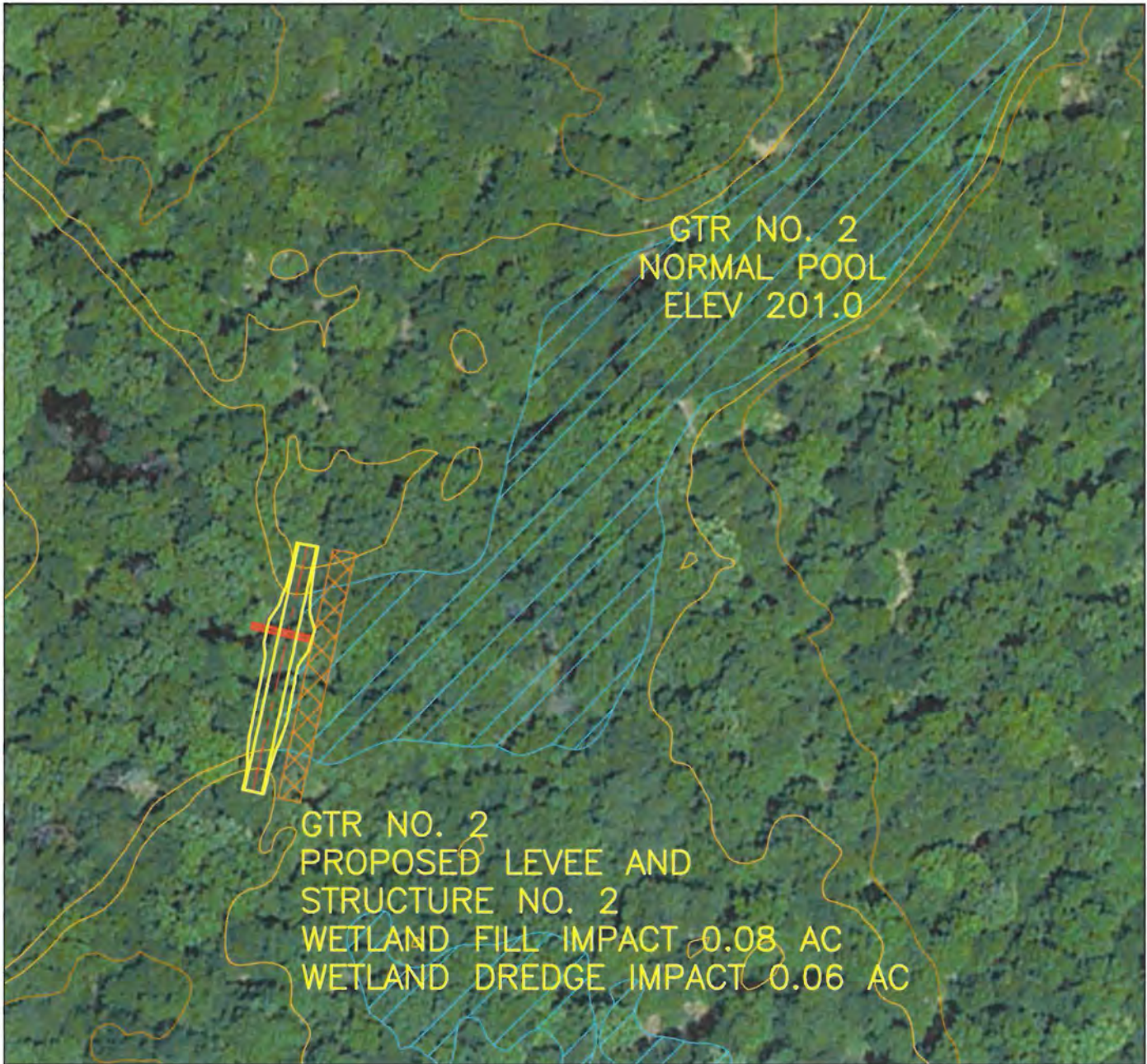
-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED LEVEE AND
STRUCTURE NO. 1

 By: 

ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016

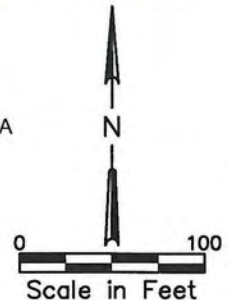


NOTES:

1. NORMAL POOL IN GTR NO. 2 TO BE ELEV 201.0.
2. LEVEE NO. 2 CREST ELEV 202+/- . STRUCTURE NO. 2 WILL INCLUDE ONE PIPE AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO REDUCE POTENTIAL FOR PIPE OR STRUCTURE BLOCKAGE.
3. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

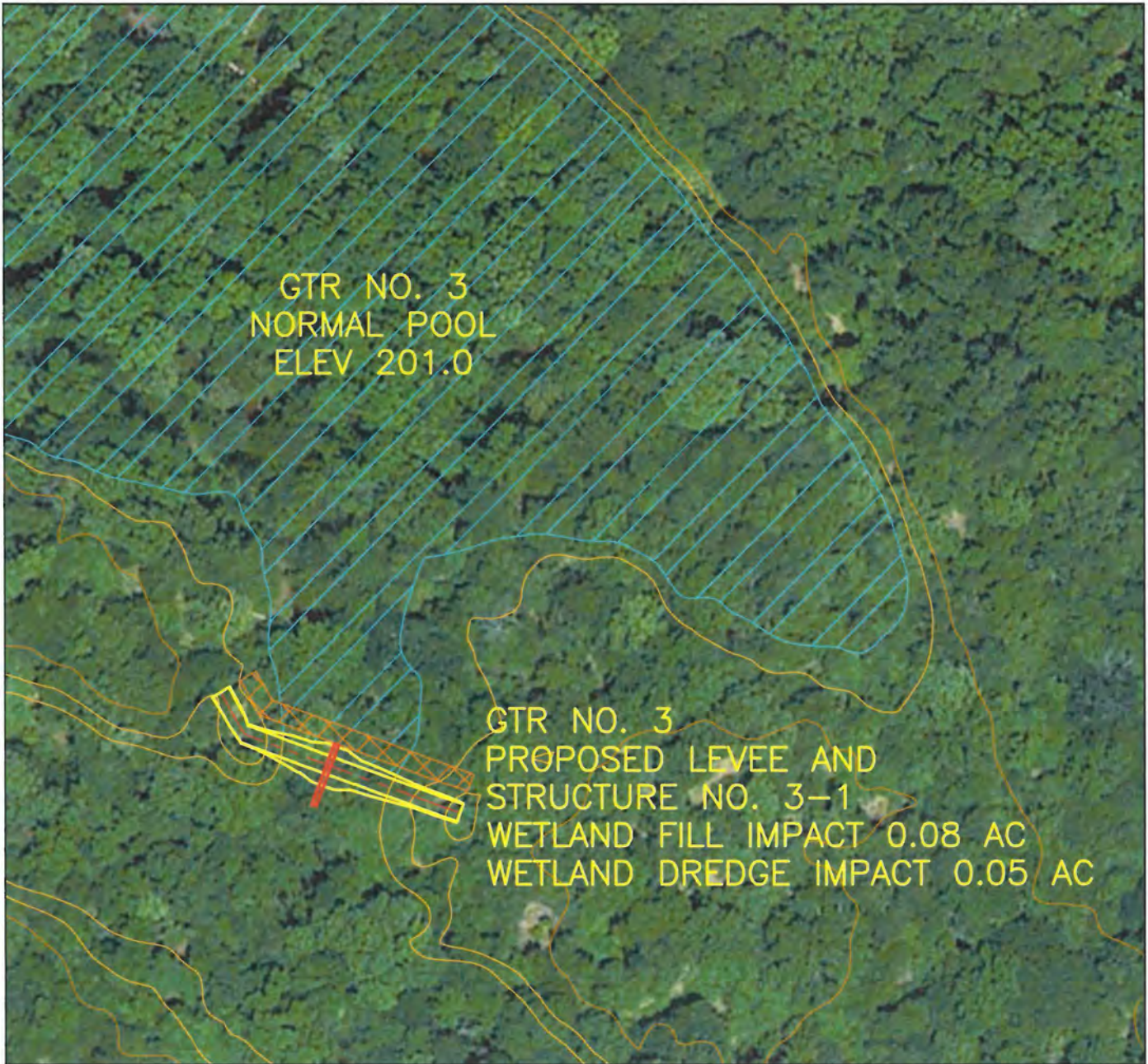
- PROPOSED LEVEE
- PROPOSED BORROW AREA
- PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED LEVEE AND
STRUCTURE NO. 2**

By: *RSB*




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016

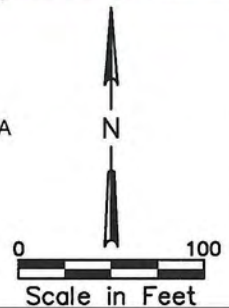


NOTES:


1. NORMAL POOL IN GTR NO. 3 TO BE ELEV 201.0
2. LEVEE NO. 3-1 CREST ELEV 202.0 +/- . STRUCTURE NO. 3-1 SHALL INCLUDE ONE PIPE AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO PREVENT PIPE AND STRUCTURE BLOCKAGE.
3. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED LEVEE AND
 STRUCTURE NO. 3-1**

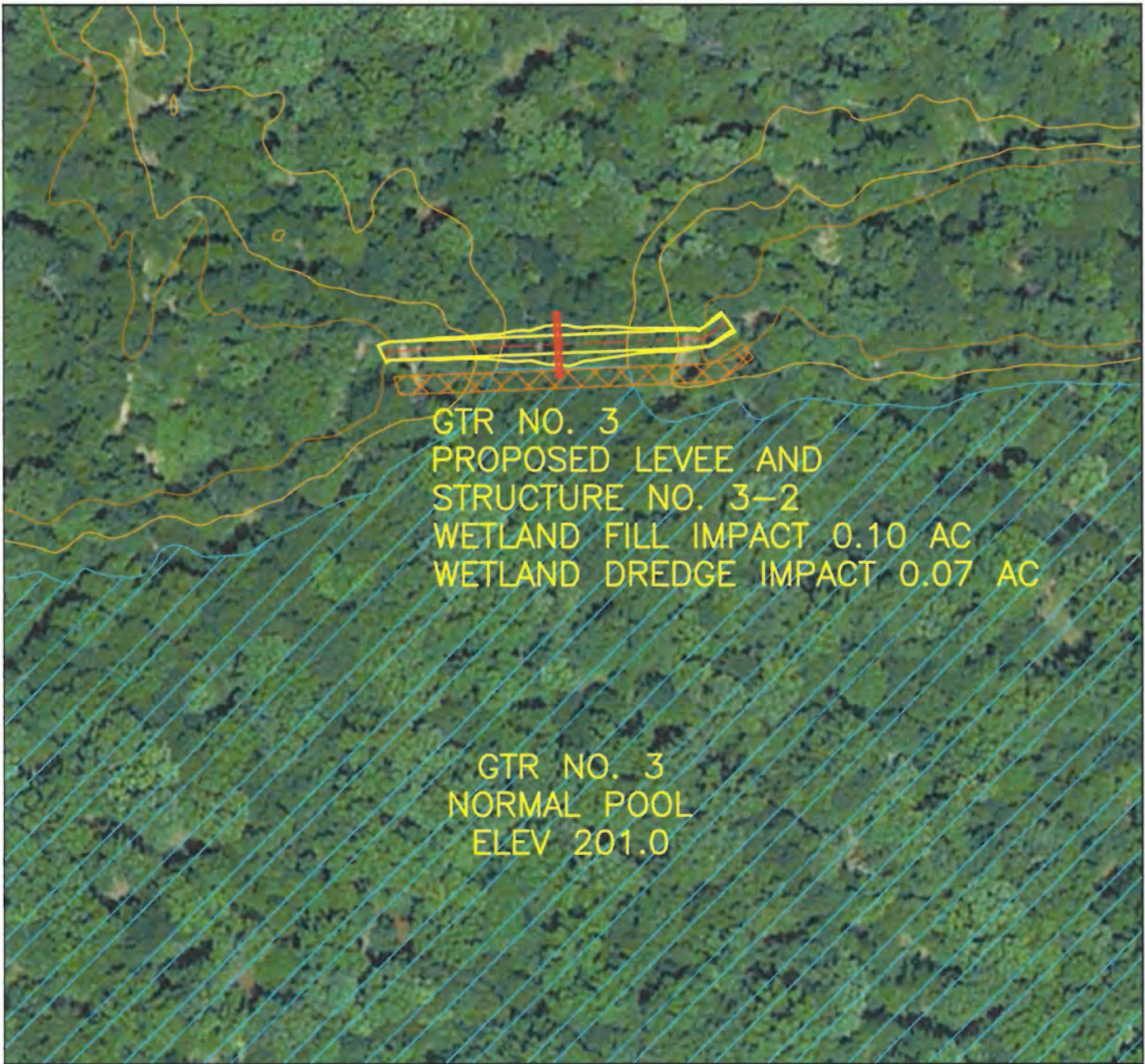


By: *RSB*
 Date: *JAN 22, 2016*

ACTION NO. 1776-02176-3

Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016

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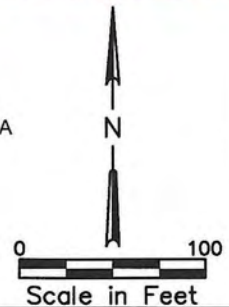


NOTES:

1. NORMAL POOL IN GTR NO. 3 TO BE ELEV 201.0.
2. LEVEE NO. 3-2 CREST ELEV 201.5 +/- . STRUCTURE NO. 3-2 SHALL INCLUDE ONE PIPE AND DOWNSTREAM FLAP GATE TO PREVENT REVERSE FLOW FROM GTR TO UPSTREAM AREAS . DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO PREVENT PIPE AND STRUCTURE BLOCKAGE.
3. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

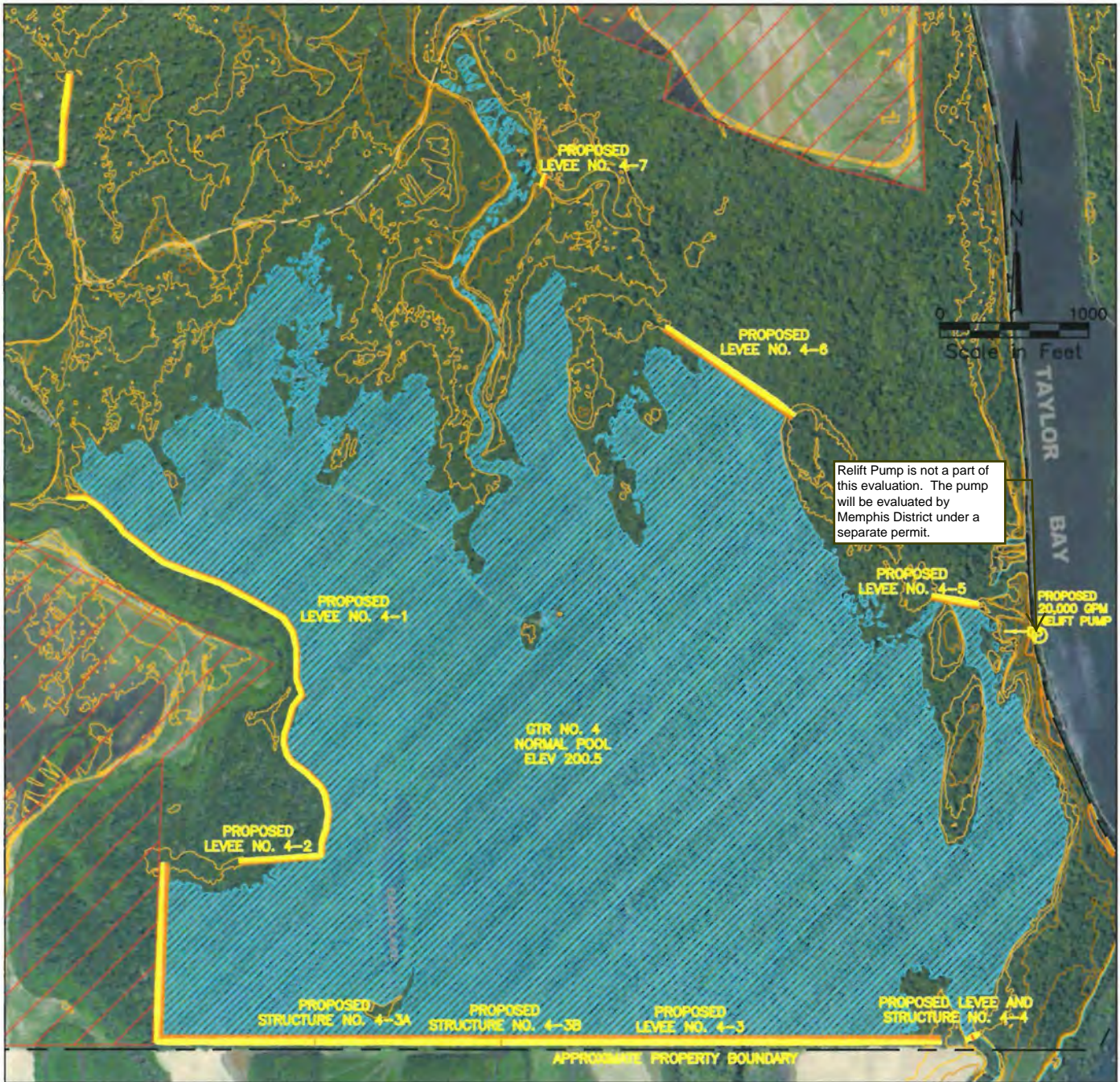
- PROPOSED LEVEE
- PROPOSED BORROW AREA
- PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED LEVEE AND
STRUCTURE NO. 3-2**

By: *ABP*
Date: **JAN 22, 2016**




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016 Sheet 6 of 25




NOTES:

1. PROPOSED NORMAL POOL IN GTR NO. 4 TO BE SET AT ELEV 200.5.
2. GTR OUTLET CONTROL STRUCTURES SHALL INCLUDE PIPE(S) AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION.
3. REFER TO INDIVIDUAL PROPOSED LEVEE/STRUCTURE DRAWINGS FOR INFORMATION REGARDING EACH FEATURE AND AREA OF IMPACTS.
4. CONTOURS SHOWN ARE BASED ON LIDAR DATA WHICH HAS BEEN ADJUSTED BASED ON SITE SPECIFIC SURVEY DATA. CONTOURS ARE NOT SURVEY BASED AND ARE SUBJECT TO VARIATION.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL

**WHITE OAKS DUCK WOODS
PROPOSED GREEN TREE
RESERVOIR NO. 4**

 By: *2016*
Date: JAN 22, 2016




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016 **Sheet 7 of 25**

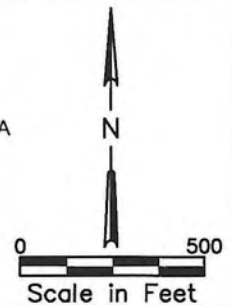


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

1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEL NO. 4-1 CREST ELEV 201.5 +/-.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED
LEVEL NO. 4-1


 By:  Date:  JAN 22 2016




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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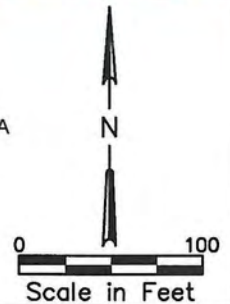


NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE NO. 4-2 CREST ELEV 201.5 +/-.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED
LEVEE NO. 4-2



By: *RSB*

Date: JAN 22 2016

ACTION NO. 1776-02176-3

Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016




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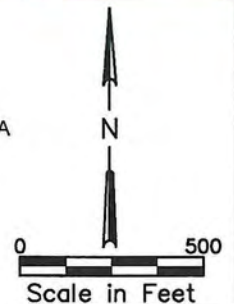


NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE NO. 4-3 CREST ELEV 201.5 +/-.
3. REFER TO SHEETS 10, 11 AND 12 FOR INFORMATION ON CONTROL STRUCTURES IN LEVEL NO. 4-3.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED
LEVEL NO. 4-3



By: *MBB*

Date: JAN 22, 2016

ACTION NO. 1776-02176-3

Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016

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EAGLE LAKE




PROPOSED GTR NO. 4
STRUCTURE NO. 4-3A

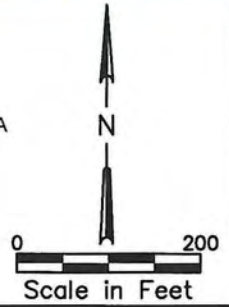
APPROX PROPERTY BOUNDARY

NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE CREST ELEV 201.5 +/- . STRUCTURE NO. 4-3A WILL INCLUDE ONE PIPE AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO REDUCE POTENTIAL FOR PIPE OR STRUCTURE BLOCKAGE.
3. CENTERLINE OF LEVEE SHALL BE 50 FEET +/- FROM PROPERTY BOUNDARY.
4. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED
 STRUCTURE NO. 4-3A**

 By: *RBG*
 Date: JAN 22, 2016




ACTION NO. 1776-02176-3
 Mr. Jeff Farmer
 White Oak Duck Woods GTRs
 Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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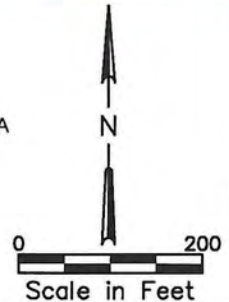


NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE CREST ELEV 201.5 +/- . STRUCTURE NO. 4-3B WILL INCLUDE ONE PIPE AND UPSTREAM FLASHBOARD RISER STRUCTURE SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO REDUCE POTENTIAL FOR PIPE OR STRUCTURE BLOCKAGE.
3. CENTERLINE OF LEVEE SHALL BE 50 FEET +/- FROM PROPERTY BOUNDARY.
4. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



**WHITE OAKS DUCK WOODS
PROPOSED
STRUCTURE NO. 4-3B**



By: *JBF*

Date: JAN 22, 2016

ACTION NO. 1776-02176-3




Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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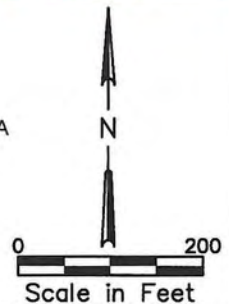


NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE CREST ELEV 201.5 +/- . STRUCTURE NO. 4-4 WILL INCLUDE TWO PIPES AND UPSTREAM FLASHBOARD RISER STRUCTURES SET TO MATCH PROPOSED GTR POOL ELEVATION. DEBRIS RACK/DEFLECTOR(S) MAY BE USED TO REDUCE POTENTIAL FOR PIPE OR STRUCTURE BLOCKAGE.
3. CENTERLINE OF LEVEE SHALL BE 50 FEET +/- FROM PROPERTY BOUNDARY.
4. PIPE SHALL BE 24-INCH DIAMETER.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



**WHITE OAKS DUCK WOODS
 PROPOSED LEVEE AND
 STRUCTURE NO. 4-4**


 By: *RSB*
 Date: JAN 22 2016




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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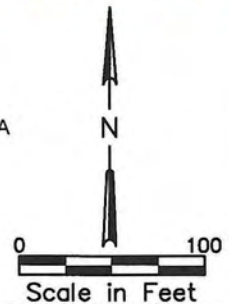


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
1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE NO. 4-5 CREST ELEV 201.5 +/-.

LEGEND

-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED
LEVEE NO. 4-5

 By: 
Date: JAN 22, 2016

ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
August 2016 **Sheet 14 of 25**

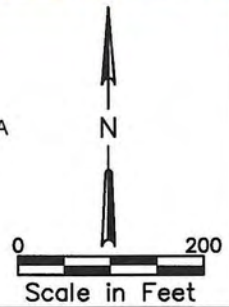


NOTES:

1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE NO. 4-6 CREST ELEV 201.5 +/-.

LEGEND

- PROPOSED LEVEE
- PROPOSED BORROW AREA
- PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
**PROPOSED
 LEVEE NO. 4-6**

By: RJB
 Date: JAN 22, 2016




ACTION NO. 1776-02176-3
Mr. Jeff Farmer
White Oak Duck Woods GTRs
Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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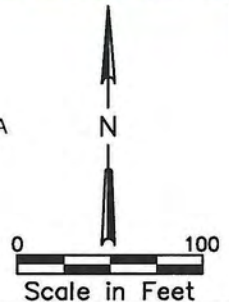


NOTES:


1. NORMAL POOL IN GTR NO. 4 TO BE ELEV 200.5.
2. LEVEE NO. 4-7 CREST ELEV 201.5 +/-.

LEGEND

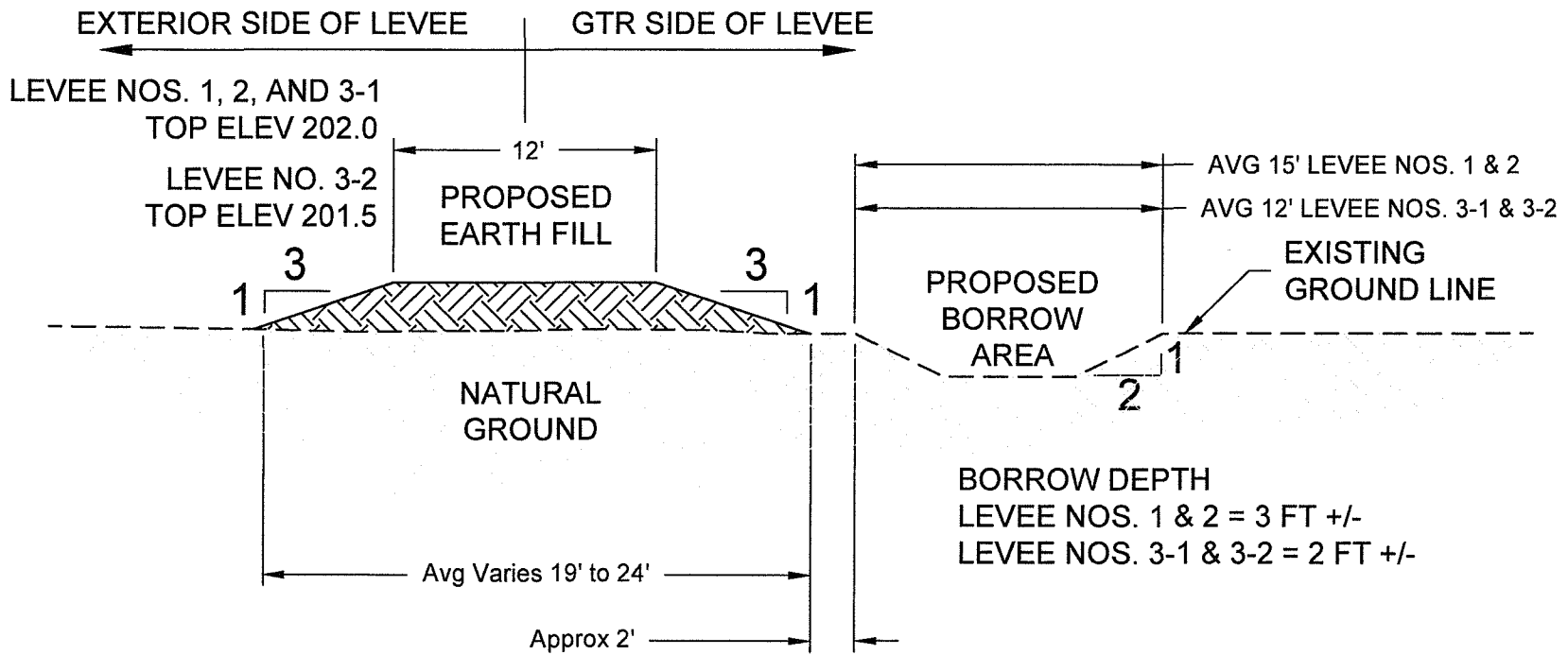
-  PROPOSED LEVEE
-  PROPOSED BORROW AREA
-  PROPOSED GTR POOL



WHITE OAKS DUCK WOODS
PROPOSED
LEVEE NO. 4-7

 By: *JSB*
Date: JAN 22, 2016


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Mr. Jeff Farmer
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Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W.
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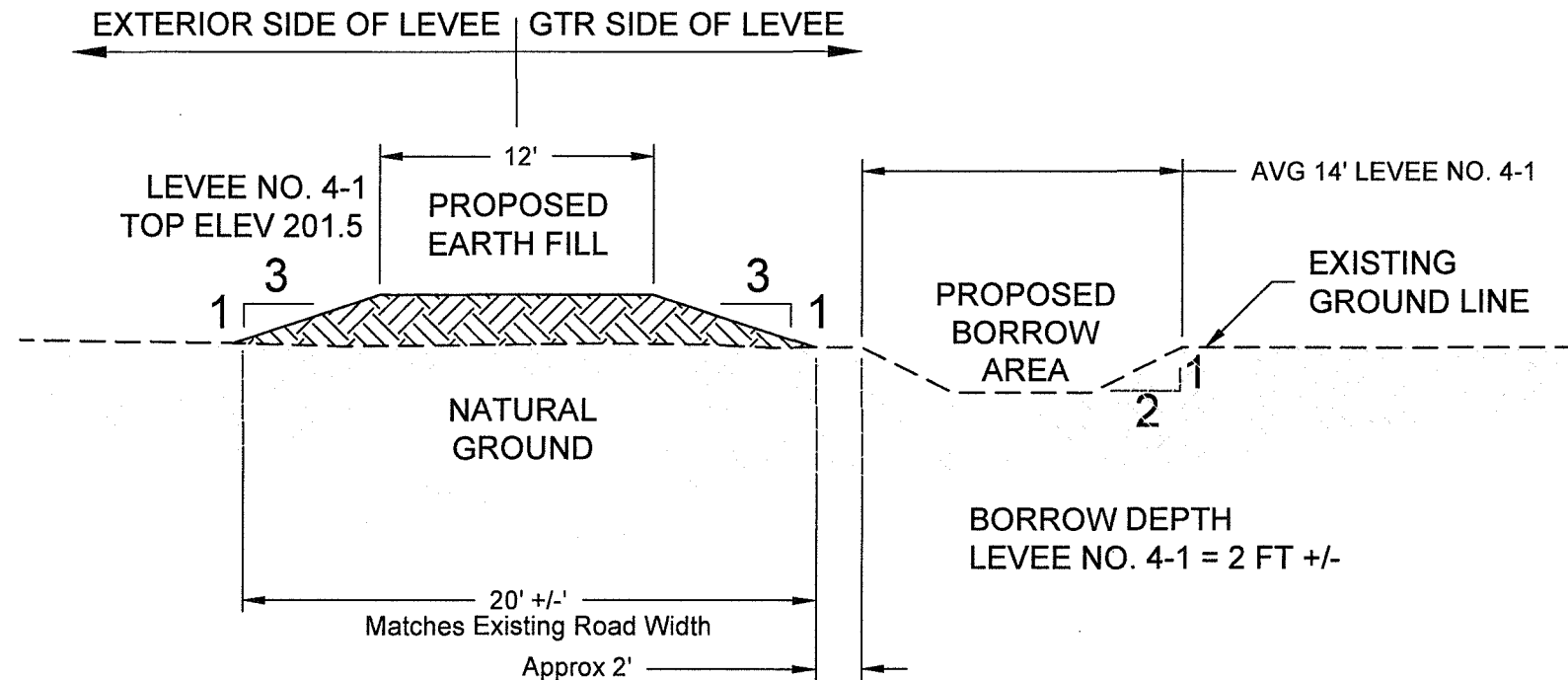
GTR NOS. 1, 2 AND 3
TYPICAL LEVEE SECTION

WHITE OAKS DUCK WOODS

GTR NOS. 1, 2 & 3
TYPICAL LEVEE SECTION

 By: *BBB*


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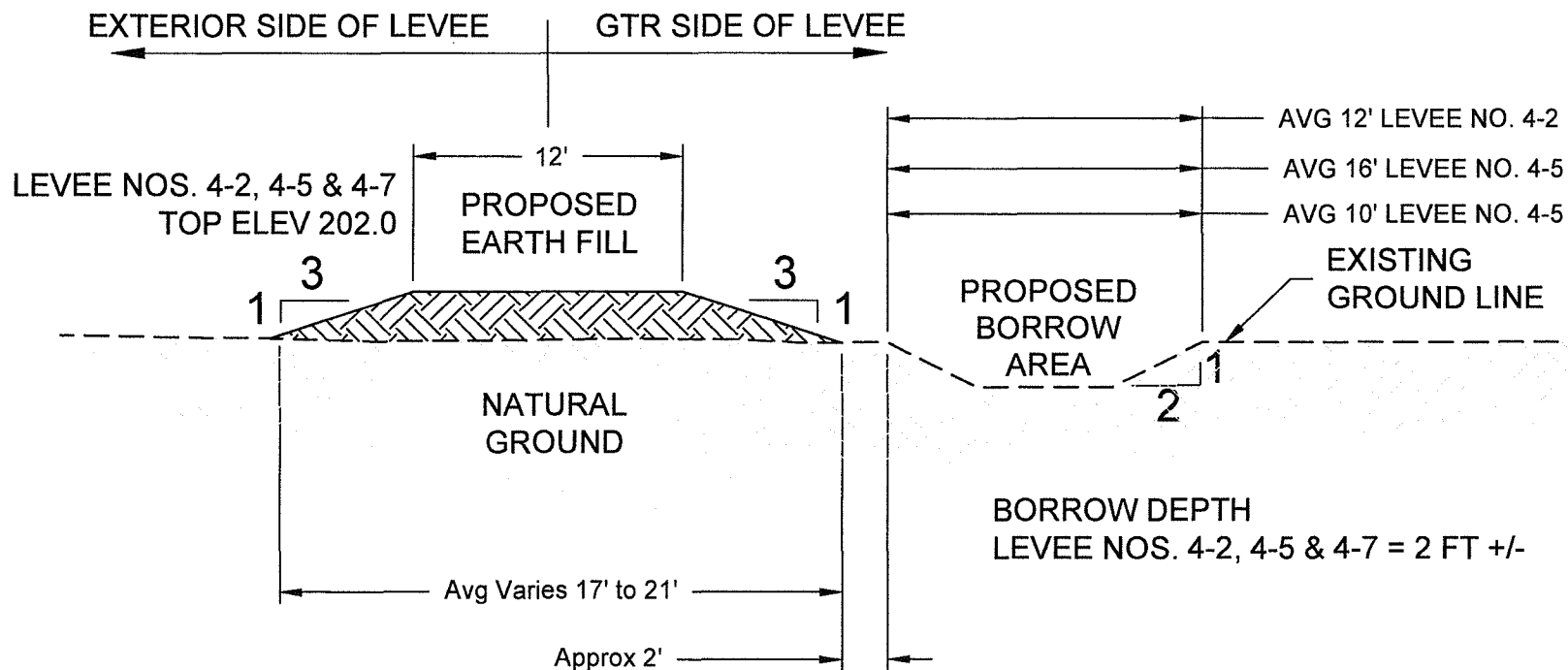


LEVEE 4-1 IS LOCATED ALONG
ALIGNMENT OF EXISTING ROAD

GTR NO. 4
LEVEE NO. 4-1
TYPICAL SECTION

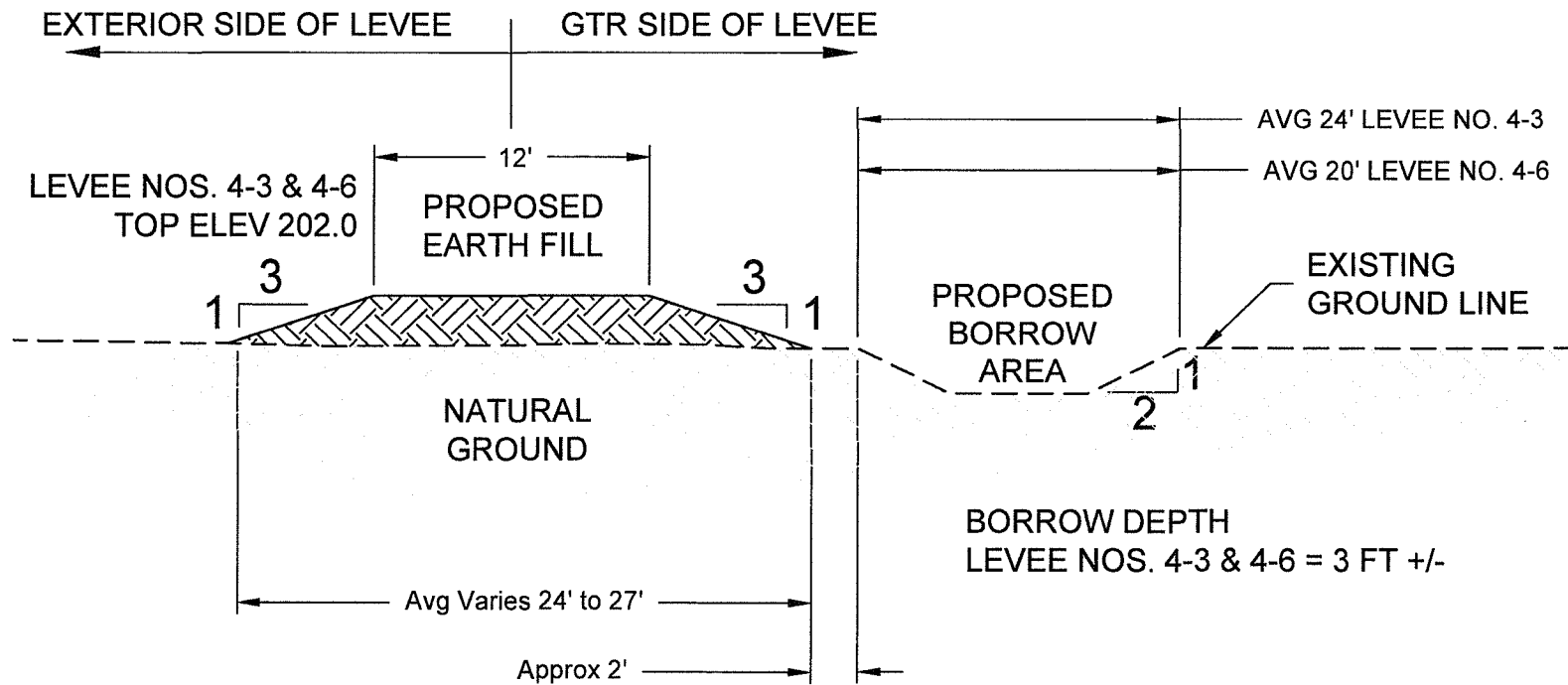
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WHITE OAKS DUCK WOODS	
LEVEE 4-1 TYPICAL SECTION	
	By: <i>BOB</i>
ACTION NO. 1776-02176-3	
Mr. Jeff Farmer	
White Oak Duck Woods GTRs	
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GTR NO. 4
LEVEE NOS. 4-2, 4-5 & 4-7
TYPICAL SECTION


	WHITE OAKS DUCK WOODS LEVEES 4-2, 4-5 & 4-7 TYPICAL SECTION	By: <i>ROS</i>
	ACTION NO. 1776-02176-3 Mr. Jeff Farmer White Oak Duck Woods GTRs Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W. August 2016	



GTR NO. 4
LEVEE NOS. 4-3 & 4-6
TYPICAL SECTION

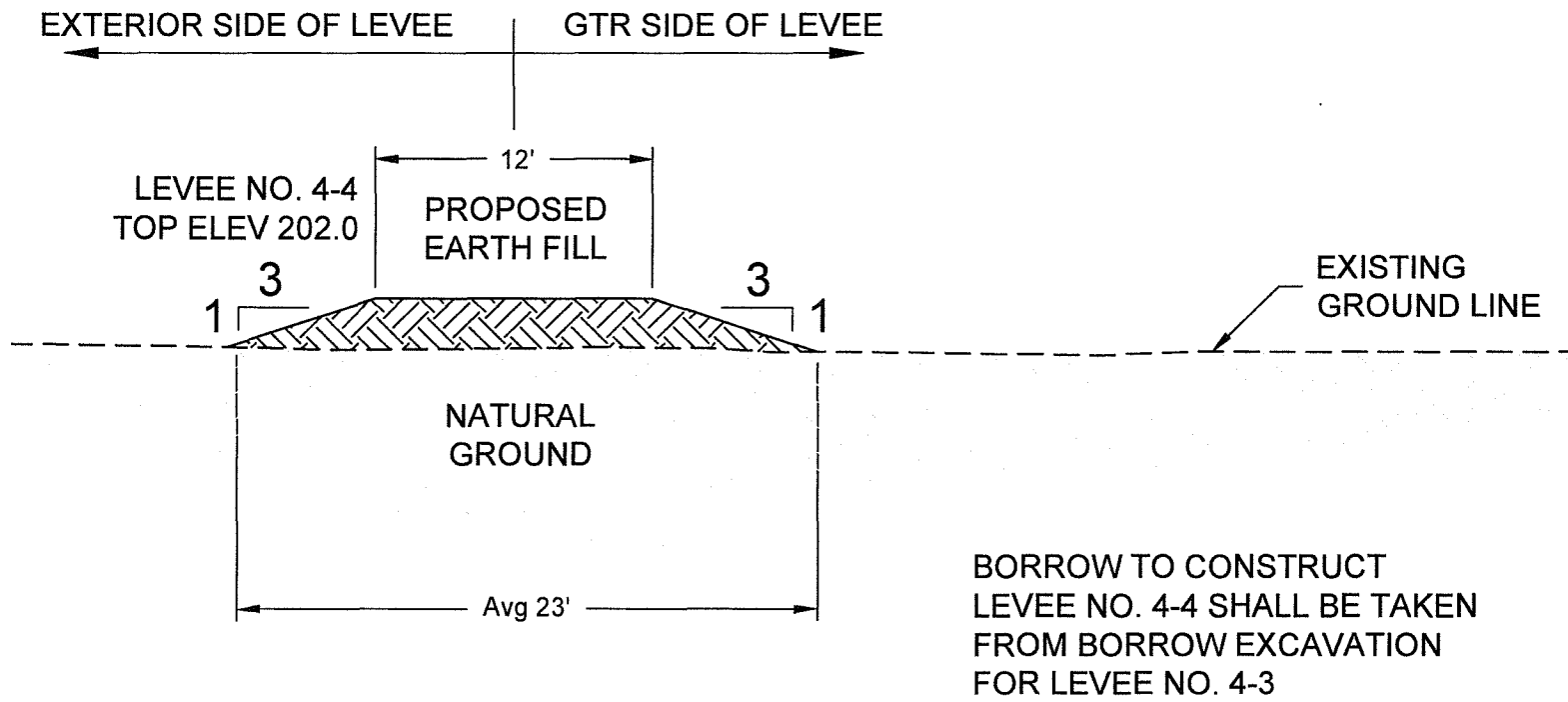
WHITE OAKS DUCK WOODS

LEVEES 4-3 & 4-6
TYPICAL SECTION




By: *asb*

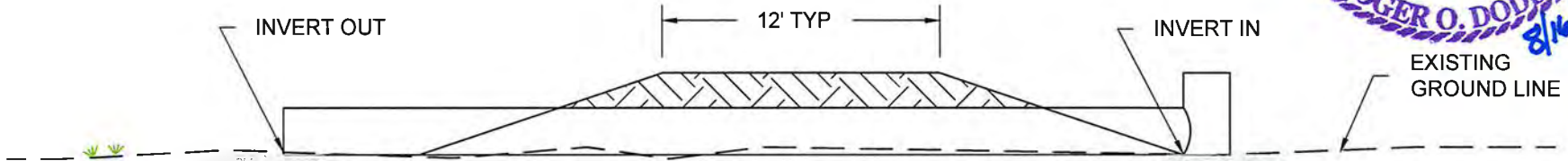
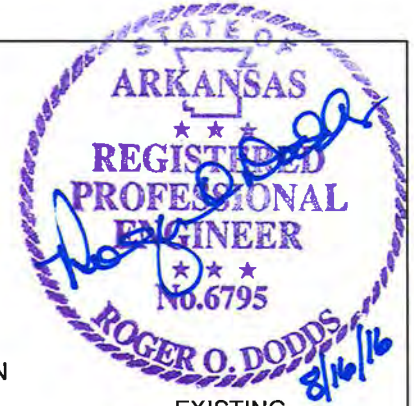
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GTR NO. 4
LEVEE NO. 4-4
TYPICAL SECTION

WHITE OAKS DUCK WOODS	
LEVEE 4-4 TYPICAL SECTION	
	By: <i>WOS</i>
ACTION NO. 1776-02176-3	
Mr. Jeff Farmer	
White Oak Duck Woods GTRs	
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NOTE: PIPES SUPPLIED MAY BE CMP, CONCRETE OR CORRUGATED HDPE. RISERS MAY BE FABRICATED FROM CONCRETE, STEEL OR BE A PREFABRICATED FLASHBOARD RISER COMPATIBLE WITH THE SUPPLIED PIPE. IF PREFABRICATED STANDARD HEIGHT RISERS ARE USED, PROPOSED GTR POOL ELEVATION WILL BE USED TO SET THE STRUCTURE IN PLACE. OTHER ELEVATIONS WILL BE ADJUSTED ACCORDINGLY.



OVERALL LENGTH OF PIPE SHALL BE ADJUSTED SUCH THAT OUTLET END OF PIPE EXTENDS 5 FT (MIN) BEYOND TOE OF LEVEE TO REDUCE POTENTIAL FOR SCOUR AT LEVEE.

RISER TO BE PLACED AT INTERIOR TOE OF LEVEE SLOPE TO ALLOW ACCESS TO STOPLOGS.

**FLASHBOARD RISER STRUCTURE
TYPICAL PROFILE**

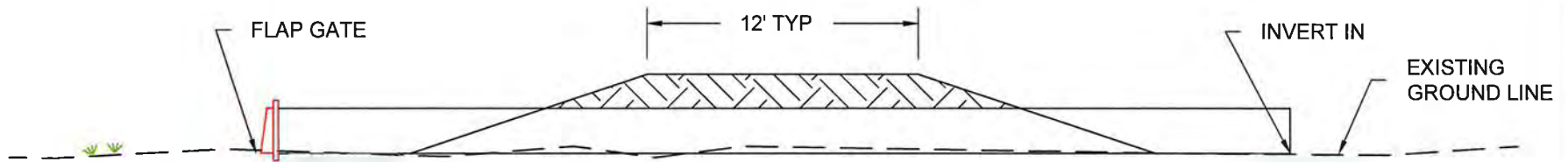
STRUCTURE NO.	PIPE SIZE	# OF PIPES	INVERT IN	INVERT OUT	TOP OF RISER	TOP OF STOP LOGS
1	24"	1	199.50	199.40	202.0	201.0
2	24"	1	199.50	199.40	202.0	201.0
3-1	24"	1	199.50	199.40	202.0	201.0
4-3A	24"	1	197.00	196.90	201.5	200.5
4-3B	24"	1	197.00	196.90	201.5	200.5
4-4	24"	2	197.00	196.90	201.5	200.5



WHITE OAKS DUCK WOODS
FLASHBOARD RISER
TYPICAL PROFILE

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NOTE: PIPES SUPPLIED FOR STRUCTURE 3-2 MAY BE CMP, CONCRETE OR CORRUGATED HDPE. FLAP GATE TO PREVENT BACKFLOW TO UPSTREAM PROPERTY SHALL EITHER BE FABRICATED FOR DIRECT CONNECTION TO PIPE OR APPROPRIATE HEADWALL SHALL BE CONSTRUCTED TO MOUNT GATE. A DEBRIS RACK OR DEFLECTOR MAY BE USED AT UPSTREAM END OF PIPE TO PREVENT DEBRIS FROM ENTERING PIPE AND BLOCKING GATE INTO AN OPEN POSITION.



OVER-EXCAVATE AT OUTLET END OF PIPE AND LINE WITH SACKRETE AND PROVIDE DEPRESSION AT OUTLET TO ALLOW FLAP GATE TO MOVE FREELY.

OVERALL LENGTH OF PIPE SHALL BE ADJUSTED SUCH THAT INLET AND OUTLET ENDS OF PIPE EXTEND 5 FT (MIN) BEYOND TOE OF LEVEE TO REDUCE POTENTIAL FOR SCOUR AT LEVEE.

**STRUCTURE 3-2
PROFILE**

STRUCTURE NO.	PIPE SIZE	# OF PIPES	INVERT IN	INVERT OUT	TOP OF RISER	TOP OF STOP LOGS
3-2	24"	1	199.60	199.50	N.A.	N.A.



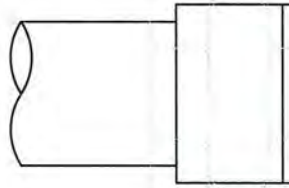
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WHITE OAKS DUCK WOODS
STRUCTURE 3-2
PROFILE

ACTION NO. 1776-02176-3
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White Oak Duck Woods GTRs
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August 2016

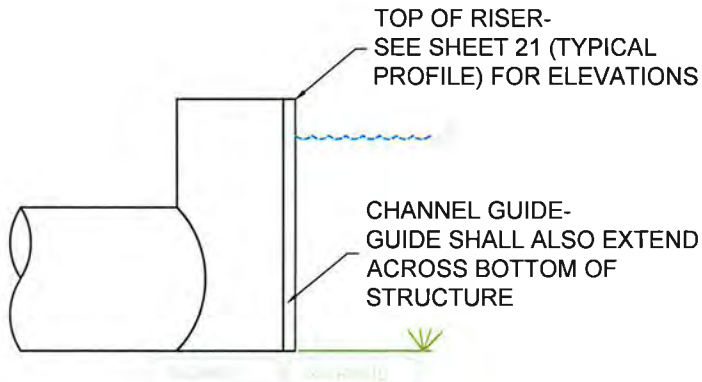
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NOTE:
 STRUCTURE 4-4 SHALL CONSIST OF TWO SEPARATE FLASHBOARD RISER STRUCTURES. CENTERLINE OF PIPES SHALL BE PARALLEL. THERE SHALL BE A MINIMUM OF 3 FEET OF CLEARANCE BETWEEN THE RISERS.



RISER CAN BE BOX SHAPE OR HALF ROUND PIPE AT APPLICANT'S DISCRETION. WIDTH OF STOPLOG OPENING SHALL BE NOT LESS THAN 1 FOOT WIDER THAN PIPE SIZE SPECIFIED.

USE SACKRETE TO PROVIDE STABLE BASE FOR RISERS AND OUTLET END OF PIPES. PLACE IN RUNNING BOND PATTERN.



TOP OF RISER-
 SEE SHEET 21 (TYPICAL PROFILE) FOR ELEVATIONS

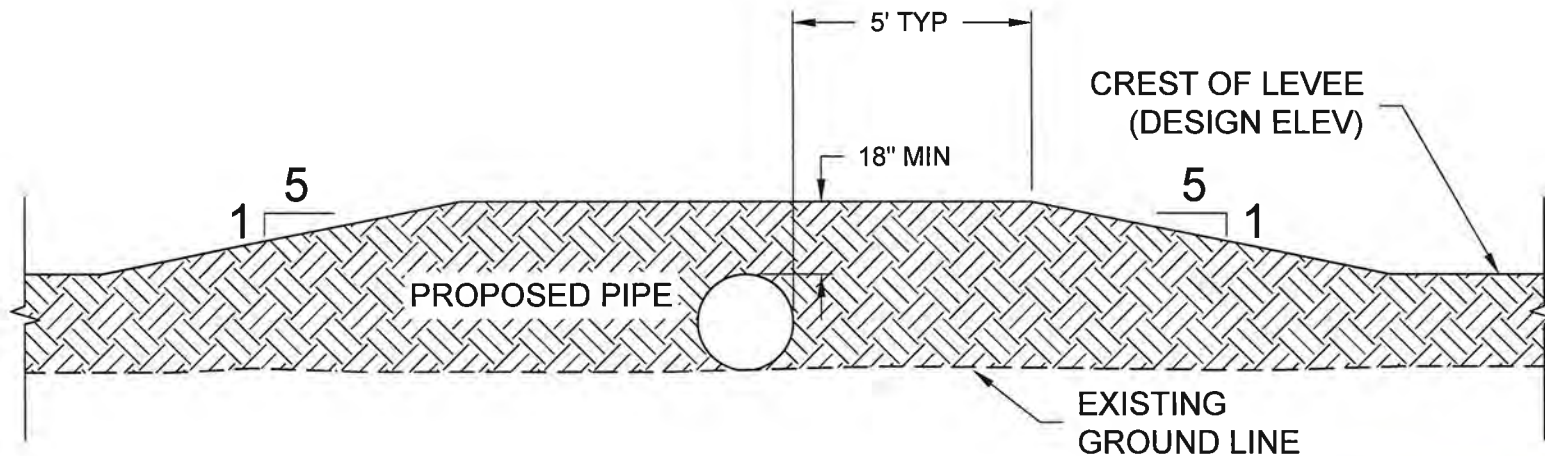
CHANNEL GUIDE-
 GUIDE SHALL ALSO EXTEND ACROSS BOTTOM OF STRUCTURE

**FLASHBOARD RISER
 DETAILS**



WHITE OAKS DUCK WOODS
 FLASHBOARD RISER
 DETAIL


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LEVEE HEIGHT SHALL BE INCREASED AS REQUIRED TO PROVIDE A MINIMUM OF 18" OF COVER OVER PIPES, AS SHOWN.

PIPE COVER
THROUGH LEVEE
TYPICAL SECTION



 <p>WHITE OAKS DUCK WOODS PIPE COVER THROUGH LEVEE</p>
<p>ACTION NO. 1776-02176-3 Mr. Jeff Farmer White Oak Duck Woods GTRs Sec 9, 10, 14, 15, 22, & 23 T. 8 N., R. 4 W. August 2016</p>