

DEPARTMENT OF THE ARMY U.S. ARMY CORPS OF ENGINEERS, SAVANNAH DISTRICT 4751 BEST ROAD, SUITE 140 COLLEGE PARK, GEORGIA 30337-5600

October 17, 2023

Regulatory Division SAS-1996-08550

30-DAY PUBLIC NOTICE Savannah District

The District Engineer has received a proposal to amend the boundaries of a restrictive covenant, executed on February 18, 1999, recorded at plat book 72, page 195 & 196 in the office of the Gwinnett County Clerk of Superior Court, which was established to provide compensation for adverse impacts to aquatic resources resulting from projects sponsored by the Gwinnett County Department of Public Utilities and authorized by Federal and/or State permits.

The comment period for the Department of the Army Permit application will close 30 days from the date of this public notice. Written comments, including suggestions for modifications or objections to the proposal, stating reasons thereof, are being solicited from anyone having interest in this proposal, and must be submitted so as to be received on or before the last day of the comment period. Written comments concerning the amendment proposal must reference the Covenantor and the Regulatory File Number, and be forwarded to the U.S. Army Corps of Engineers (Corps) at the above address, or via the email listed at the end of this notice.

<u>Authority</u>: A public notice regarding this permittee-responsible mitigation amendment proposal is being evaluated under Title 33 Code of Federal Regulations Part 332, entitled "Compensatory Mitigation for Losses of Aquatic Resources, Final Rule", as published in the Federal Register on April 10, 2008.

Regulatory File Number:	SAS-1996-08550
<u>Owner/Covenantor</u> :	Mr. Michael Efeyini Gwinnet County Department of Water Resources 1684 Winder Highway Lawrenceville, Georgia 30045

This public notice does not imply, on the parts of the Corps or other agencies, either favorable or unfavorable opinion of the proposed amendment, but is issued to solicit comments regarding the factors on which final decisions will be based.

<u>Location of Project</u>: The approximately 155-acre mitigation area (composed of 16 parcels) begins immediately east of the intersection Interstate 85 and Interstate 985, traverses approximately 2 miles along Ivy Creek, and terminates at a location approximately 0.43-mile west of the intersection of Interstate 85 and Interstate 20, in

Gwinnett County, Georgia (approximately centered at latitude: 34.0548, longitude: - 84.0125). (REFER TO EXHIBITS 1-2)

<u>Background</u>: On January 17, 1997, under Corps permit number 960008550 (currently SAS-1996-08550), a Nationwide Permit was issued to the Gwinnett County Department of Public Utilities for impacts to 2.64 acres of wetlands in order to construct the North Advanced Water Reclamation Facility (NAWRF), currently known as the F. Wayne Hill Water Resources Center. In order to offset the proposed impacts to aquatic resources, the permittee was required to preserve an approximately 155-acre compensatory mitigation area, protected in perpetuity under a restrictive covenant. The mitigation area consists of 16 parcels that include Ivy Creek and tributaries, adjacent wetlands, and uplands (REFER TO EXHIBIT 3).

Currently, the existing gravity sanitary sewer infrastructure does not have sufficient sewage conveyance capacity to accommodate increased development and population growth within the basin located near Old Peachtree Road, Rock Springs Road, and Buford Highway (Georgia Highway 20 (GA 20)), to be serviced by the F. Wayne Hill Water Resources Center. The increased developments include commercial businesses, a 13-story hospital that is planned at the Rock Springs Road/GA 20 intersection, and a planned high-density residential project along Old Peachtree Road west of GA 20. The proposed amendment to the mitigation area would accommodate Gwinnett County's preferred alternative to address the aforementioned concerns with the current sewage conveyance capacity. The preferred alternative is referred to as the "Rock Springs Medical Sewer Line (RSMSL)".

The proposed RSMSL would enter the mitigation area near its southeastern corner via a new bore under Interstate 85. The proposed 30" RSMSL would essentially parallel the under-sized existing 12" sewer for about 502 feet where it would join with an existing 42" gravity sanitary sewer that enters from the north. At this connection, the new sewer would increase in size to 54" and extend northwest for 356 feet where it would connect to the existing 54" sanitary sewer interceptor. From this point, the sewer is adequately sized for the basin and continues generally westerly along its built alignment to the F. Wayne Hill Water Treatment Plant. Since a new sewer needs to be constructed in this area, it would be sized sufficiently to carry the new 13-story hospital, the residential and commercial customers around Old Peachtree Road/Rock Springs Road/Buford Drive, plus sewage from the Little Suwanee Creek pump station and force main.

<u>Description of Proposed Amendment</u>: Gwinnett County proposes to extinguish a total of 1.205 acres of the mitigation area (0.816-acre of Parcel 7, 0.092-acre of Parcel 8, 0.251-acre of Parcel 9, and 0.046-acre of Parcel 11). Wetland mitigation credits would

be purchased as replacement of the extinguished portions of the mitigation area. The 155-acre mitigation area was utilized to offset the loss of 2.64 acres of wetland; therefore, each acre of the mitigation area is equivalent to 0.017-acre of wetland. The proposed extinguishment of 1.205 acres of the mitigation area would be equivalent to the loss of 0.0205-acre of mitigated wetland.

The loss of 0.0205-acre of high functioning slope wetland would require the purchase of 0.16 Legacy Wetland Credits (or 0.02 Slope (2018) Wetland Credits). As per the March 30, 2023, Savannah District Public Notice, *It is possible that the replacement mitigation will be at significantly higher mitigation ratios (>2:1).* Gwinnett County proposes to utilize a 2:1 mitigation ratio to complete replacement mitigation; therefore, they would purchase a total of 0.32 Legacy Wetland Credits (or 0.04 Slope (2018) Wetland Credits).

<u>Alternatives Analysis</u>: In accordance with the March 30, 2023, Savannah District Public Notice regarding "Amendments to Declarations of Conservation Covenants and Restrictions", an analysis was completed of alternatives that could avoid and/or minimize impacts to the existing wetland mitigation area.

In order to assess the practicability of achieving the project purpose while totally avoiding the wetland mitigation area, Gwinnett County evaluated four (4) alternative force main (FM) alignments that would transport sewer from proposed Little Suwanee Creek to existing sewage line that leads to the F. Wayne Hill Water Treatment Plant. The four FM alignments consist of the following (REFER TO EXHIBITS 4, 5, AND 5B):

- 1. *FM Alt 1*: This alternative would collect sewage from the Little Suwanee Creek Pump Station and the area around Old Peachtree Road/Rock Springs Road/Buford Drive and carry it via force main extending about 2.1 miles along Old Peachtree Road, Tech Center Parkway, and Buford Drive connecting with the existing Ivy Creek sewer interceptor within the northwestern quadrant of the I-85/GA 20 interchange. This alternative would require substantial boring and rock blasting under nearly the entire west side of the I-85/GA 20 interchange. Additionally, aligning the force main along about 0.75-mile of the GA 20 southbound lane with busy, high traffic counts was considered unsafe and not acceptable.
- 2. FM Alt 2: This alternative would collect sewage from the Little Suwanee Creek Pump Station and the area around Old Peachtree Road/Rock Springs Road/Buford Drive and carry it via force main extending about 2.44 miles along Old Peachtree Road, Tech Center Parkway, and Buford Drive, and northeasterly along Laurel Creek Crossing Parkway connecting with the existing

Ivy Creek sewer interceptor about 0.5 miles east of the I- 85/GA 20 interchange. The study of this Laurel Crossing routing also included an alternative I-85 undercrossing, which would have turned north from Laurel Crossing Parkway extending north along the east side of "Top Golf" and a large stormwater detention facility and connecting with the existing Ivy Creek sewer interceptor near the east side of the I-85/GA-20 interchange. Aligning the force main along about 0.75 miles of the GA 20 south-bound lane with busy, high traffic counts was considered unsafe. Additionally, the cost of the required 2.44 miles of force main routing plus boring and rock blasting especially at the Interstate undercrossing is substantial. Use of the alternative I-85 under-crossing was also considered not feasible or practicable due to the possible impacts to the Top Golf commercial facility and construction requirements related to the large stormwater pond.

- 3. *FM Alt 3*: This alternative would collect sewage from the Little Suwanee Creek Pump Station and the area around Old Peachtree Road/Rock Springs Road/Buford Drive and carry it via force main extending about 1.5 miles along Old Peachtree Road, Tech Center Parkway, Ball Park Lane, and Laurel Drive discharging to a proposed Rock Springs Medical Sewer Line that would gravity flow north connecting to a new bore under I-85 and continuing north to the Ivy Creek interceptor. This alignment is much like the Preferred Alternative, but at the time of Alternative 3 development the force main discharge point and pipe sizing were not complete.
- 4. FM Alt 4: This alternative would collect sewage from the Little Suwanee Creek Pump Station and the area around Old Peachtree Road/Rock Springs Road/Buford Drive and carry it via force main extending about 2.4 miles along Old Peachtree Road, Tech Center Parkway, along and crossing under Buford Drive and Rock Springs Road, then continuing northeast along the south side of the power line corridor to I-85. The force main would parallel I-85 easterly for a short distance before being bored under I-85 then connecting to the existing Ivy Creek sewer line. The addition of the sanitary sewer force main along with an existing water line in the same power line corridor would potentially hinder power line operation and maintenance, and thus coupled with the increased materials costs for the longer force main routing makes this not a viable alternative.

In order to assess the practicability of achieving the project purpose by traversing other portions of the wetland mitigation areas, Gwinnett County evaluated the utilization of the other four (4) existing corridors within the wetland mitigation area (Corridors B-E). Utilizing the alternative corridors was determined to not be practicable, capable of being done after taking into consideration cost, existing technology, and/or logistics in light of the overall project purpose. Utilization of each alternate corridor would require the construction of an additional sewage pump station on the south side of Interstate 85. For details regarding additional constraints, REFER TO EXHIBITS 6-21.

OTHER ALTERNATIVES DETERMINED NOT TO BE PRACTICABLE:

- *In-line replacement*: This alternative includes the consideration of installing the new 30" gravity sanitary sewer in the unencumbered corridor where the 12" gravity sanitary sewer exists. The existing unencumbered utility corridor is barely wide enough to operate and maintain the existing 12" gravity sanitary sewer and insufficient in size to additionally facilitate installation of the new 30" gravity sanitary sewer.
- *Re-directing sewage flow to two (2) other existing facilities*: This alternative includes the consideration of directing sewage to the Yellow River Water Reclamation Facility or the Crooked Creek Water Reclamation Facility. Routing sewage tow either of these facilities was determined to not be capable of being done after taking into consideration cost, existing technology, and/or logistics.
- Onsite treatment utilizing a wastewater package plant or a septic system: Neither of these wastewater treatment types are suitable for the sewage volumes that would be produced by the 13-story hospital or the high-density residential development. Further, there is insufficient land space to accommodate these treatment alternatives.

<u>Environmental Resource Review</u>: Preliminary review indicates that: 1) An environmental impact statement would not be required; 2) No species of fish, wildlife, or plant (or their critical habitat) listed as endangered or threatened under the Endangered Species Act of 1973 (PL 93-205) would be affected; and, 3) No cultural or historical resources considered eligible or potentially eligible for listing on the National Register of Historic Places would be affected according to a website review of known listed properties. Additional information may change any of these preliminary findings.

<u>Other Evaluation Factors</u>: The 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 assess impacts on endangered species, historic properties, water quality, general environmental effects, and other public interest factors. Comments are used in the evaluation of the proposed permittee-responsible mitigation amendment per 33 CFR Part 332.

<u>Comment Period</u>: Anyone wishing to comment on this proposal should submit comments via email to justin.m.edwards@usace.army.mil, or in writing to: Commander,

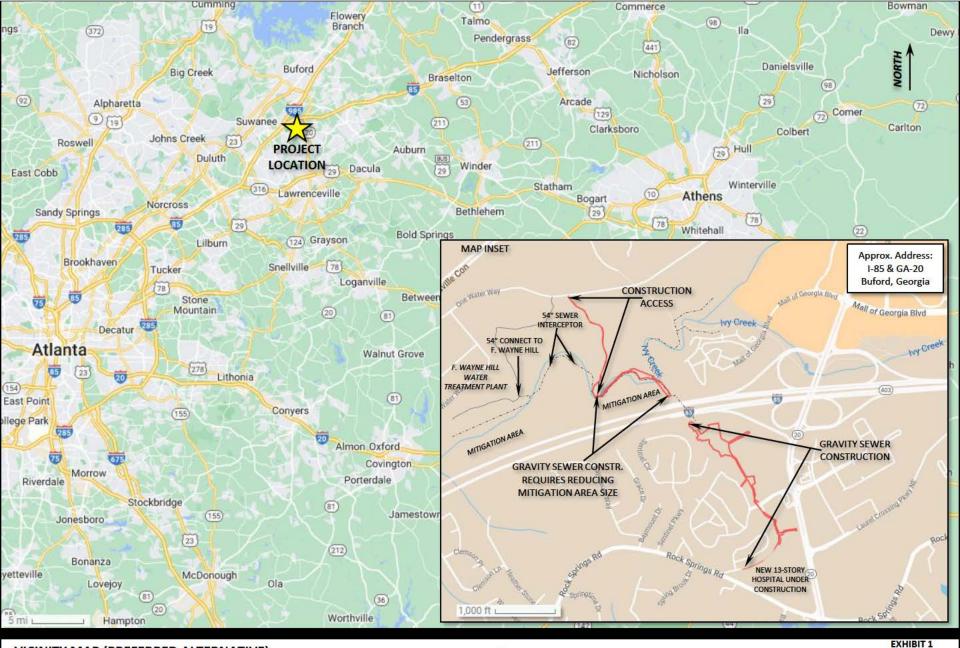
U.S. Army Corps of Engineers, Savannah District, Attention: Justin Edwards, 4751 Best Road, Suite 140, College Park, Georgia 30337-5600, no later than **30-days from the date of this notice**. Please refer to the Regulatory Division file number (SAS-1996-08550) in your comments.

The Corps is particularly interested in receiving comments related to the proposal's probable impacts on the affected aquatic environment and the secondary and cumulative effects. Please note that all comment letters received are subject to release to the public through the Freedom of Information Act.

If you have any further questions concerning this proposed amendment, please contact Justin M. Edwards, Regulatory Specialist, Piedmont Branch at 678-422-2724, or justin.m.edwards@usace.army.mil.

22 Enclosures

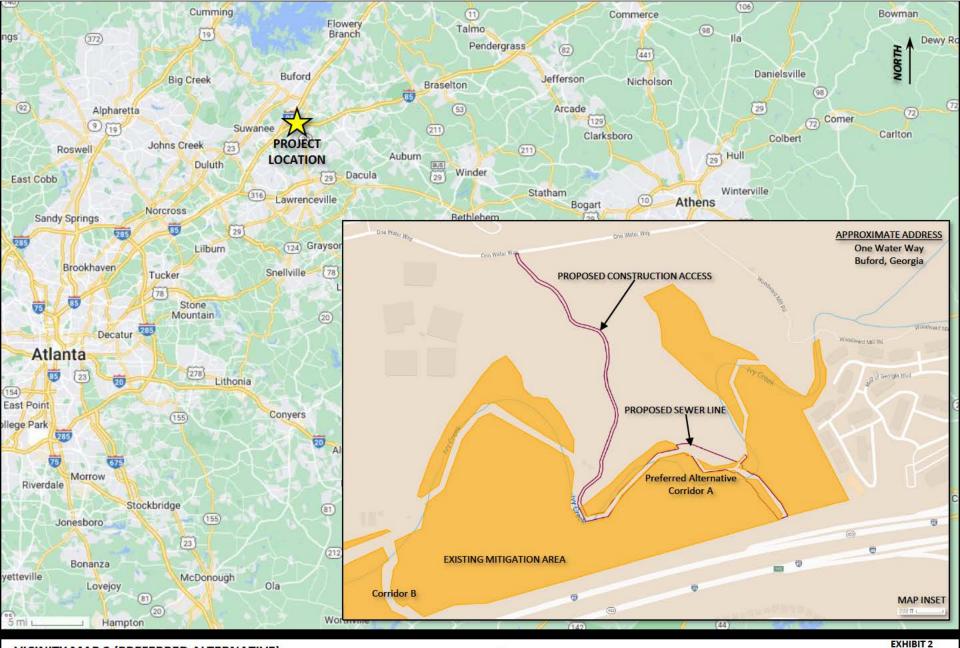
- 1. Exhibit 1: Vicinity Map
- 2. Exhibit 2: Vicinity Map 2
- 3. Exhibit 3: USGS Quadrangle Map
- 4. Exhibit 4: Force Main Alternatives
- 5. Exhibit 5: Force Main Alternatives (Aerial Map)
- 6. Exhibit 5B: Force Main Alternatives (w/ Existing Sewer Lines)
- 7. Exhibit 6: Alternatives Mitigation Area Corridors Considered for Connection to F. Wayne Hill Treatment Plant
- 8. Exhibit 7: Mitigation Area Corridors A-E (Aerial Map)
- 9. Exhibit 8: Mitigation Area Survey
- 10. Exhibit 9: Alternative Corridors
- 11. Exhibit 10: Alternative Corridors with Conflicts Identified
- 12. Exhibit 11: Preferred Alternative Corridor A
- 13. Exhibit 12: Preferred Alternative Corridor A (Aerial Map)
- 14. Exhibit 13: Preferred Alternative Corridor A (Proposed Mitigation Area Amendment)
- 15. Exhibit 14: Corridor B (Analysis)
- 16. Exhibit 15: Corridor B (Depiction)
- 17. Exhibit 16: Corridor C (Analysis)
- 18. Exhibit 17: Corridor C (Depiction)
- 19. Exhibit 18: Corridor D (Analysis)
- 20. Exhibit 19: Corridor D (Depiction)
- 21. Exhibit 20: Corridor E (Analysis)
- 22. Exhibit 21: Corridor E (Depiction)



VICINITY MAP (PREFERRED ALTERNATIVE)

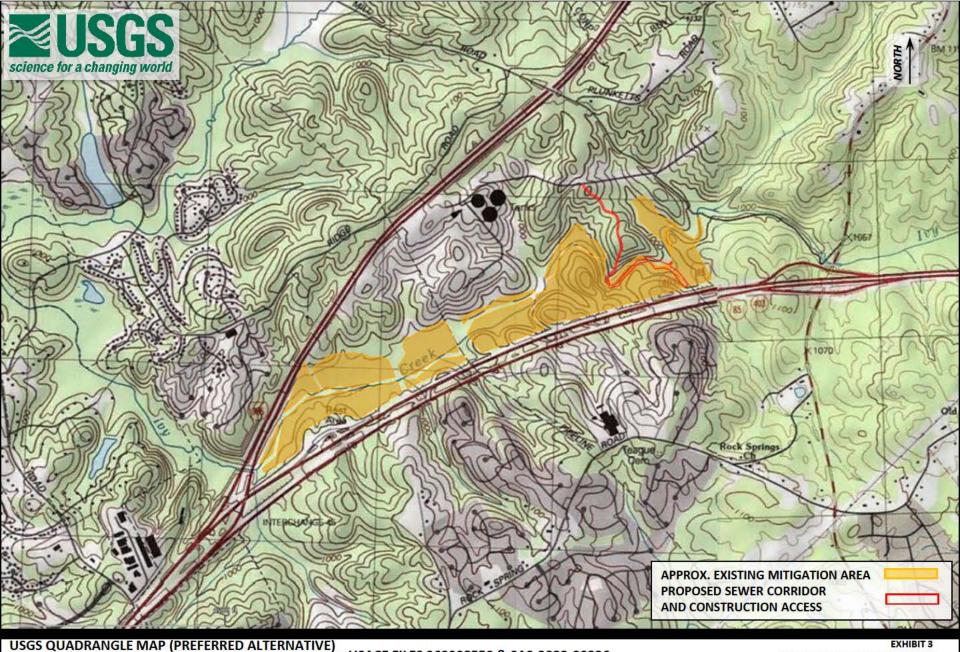
PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



VICINITY MAP 2 (PREFERRED ALTERNATIVE)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

FORCE MAIN ALTERNATIVES

The existing 12" gravity sewer line under I-85 (Corridor A) is insufficient in size to carry the sewage volume sourced from the south side of the interstate – particularly from the new 13-story hospital and the new high density residential development. Since the gravity sewer line would be replaced with a larger pipe, the sewage volume from the Little Suwanee Creek pump station would be routed along this same up-sized Corridor A. Alternative routes for the Little Suwanee Creek volume were considered, as presented in the May 19, 2023 alternatives analysis – summarized in the next exhibit.

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 4 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

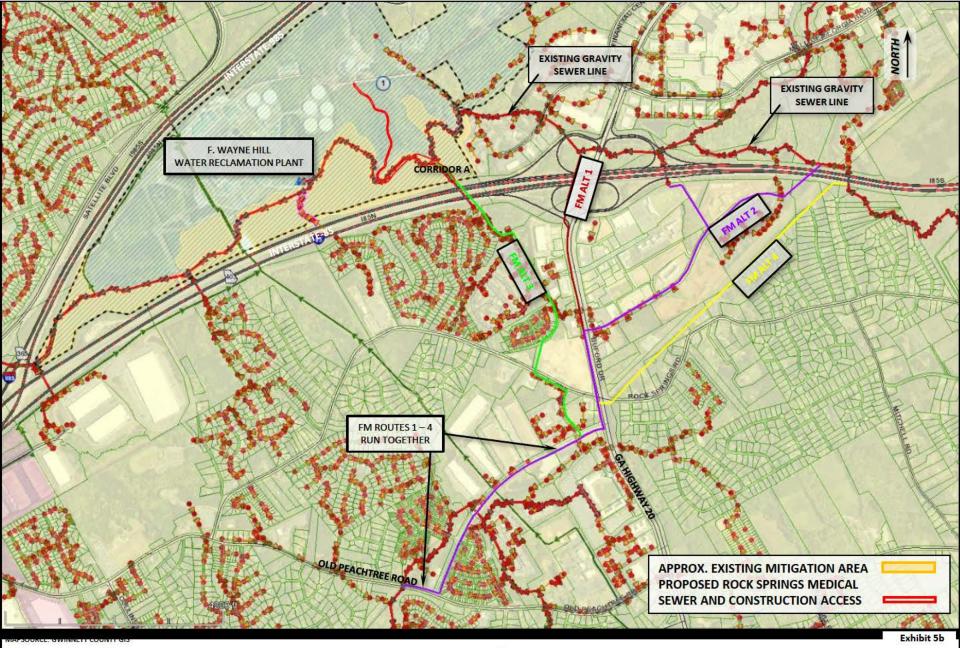


FORCE MAIN ALTERNATIVES (AERIAL MAP)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 5 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



FORCE MAIN ALTERNATIVES (W/ EXISTING SEWER LINES)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

PREPARED: OCTOBER 16, 2023 BY: NELSON ENVIRONMENTAL, INC.

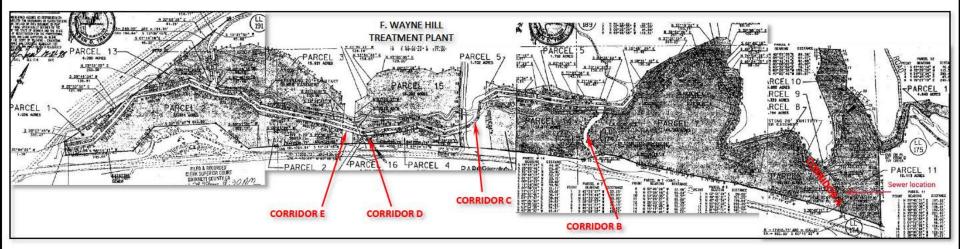
ALTERNATIVE MITIGATION AREA CORRIDORS CONSIDERED FOR CONNECTION TO F. WAYNE HILL TREATMENT PLANT

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 6 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



MITIGATION AREA CORRIDORS A-E (AERIAL MAP) PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



BASE MAP SOURCE FROM USACE PERMIT FILE

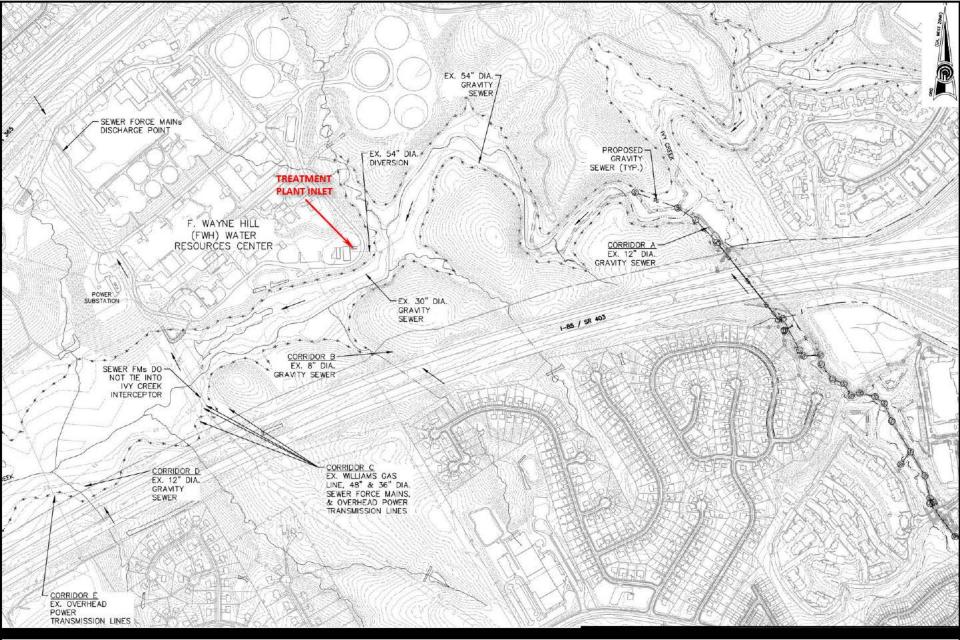
MITIGATION AREA SURVEY

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 8 PREPARED SEPTEMBER 28, 2023 BY:

NELSON ENVIRONMENTAL, INC.



ALTERNATIVE CORRIDORS

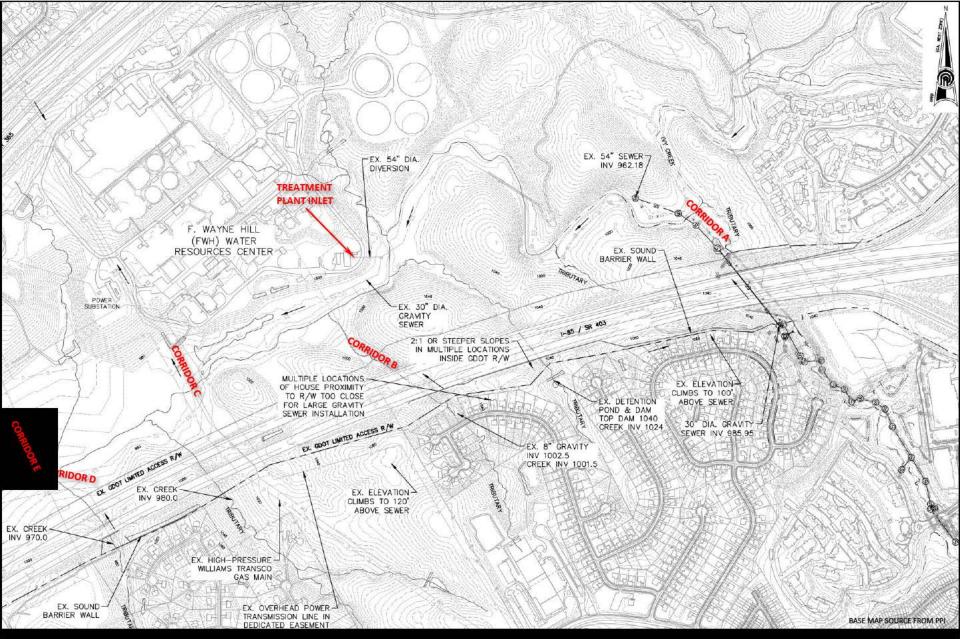
BASE MAP SOURCE FROM PPI

PROJECT SPONSOR:

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 9 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



ALTERNATIVE CORRIDORS WITH CONFLICTS IDENTIFIED

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 10 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

PREFERRED ALTERNATIVE CORRIDOR A EXTINGUISH SUFFICIENT PORTION OF MITIGATION AREA TO CONSTRUCT GRAVITY SEWER LINE REPLACE REDUCED AREA OF MITIGATION AREA WITH COMPENSATORY MITIGATION CREDITS

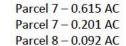
PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 11 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



PREFERRED ALTERNATIVE CORRIDOR A (AERIAL)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 12 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.





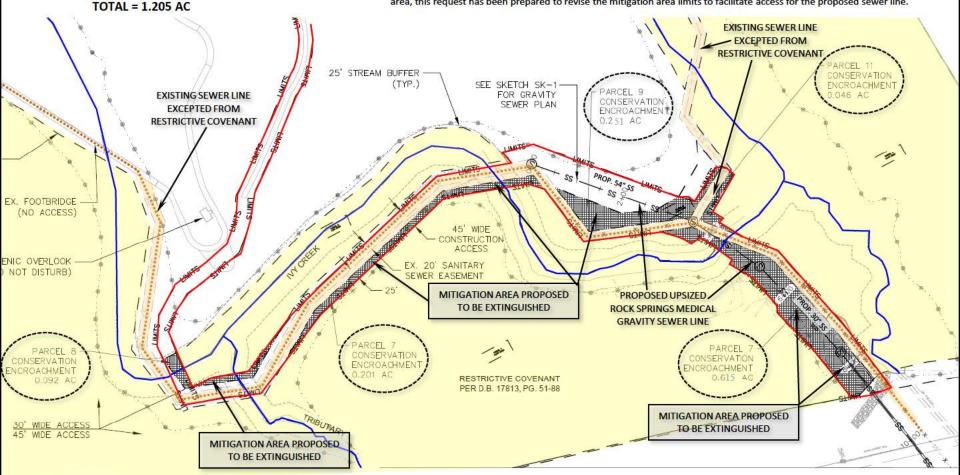
Parcel 9 - 0.251 AC

Parcel 11 – 0.046 AC

Before it was known that this area was protected by a restrictive covenant in favor of the USACE, a PreConstruction Notification had been submitted to the USACE for minor wetland and stream impacts associated with the Rock Springs Medical Gravity Sewer Installation project. The USACE confirmed PCN receipt and assigned the PCN to USACE File SAS-2023-00226.

The restrictive covenant area shown here is a portion of the covenant recorded 11/22/1996 at plat book 72, page 195 and 196 in Gwinnett County for the purpose of compensatory mitigation associated with the North Advanced Water Reclamation Facility referenced in USACE file 960008550.

Now that it has been learned that the Rock Springs Medical Gravity Sewer Installation would impact a protected mitigation area, this request has been prepared to revise the mitigation area limits to facilitate access for the proposed sewer line.



BASE MAP SOURCE:

EX. CONSERVATION EASEMENT SKETCH, SHEET SK-0 PRECISION PLANNING. INC., 04/05/2023

PREFERRED ALTERNATIVE CORRIDOR A (PROPOSED MITIGATION AREA AMENDMENT)

PROJECT SPONSOR:

GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 13 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

CORRIDOR B

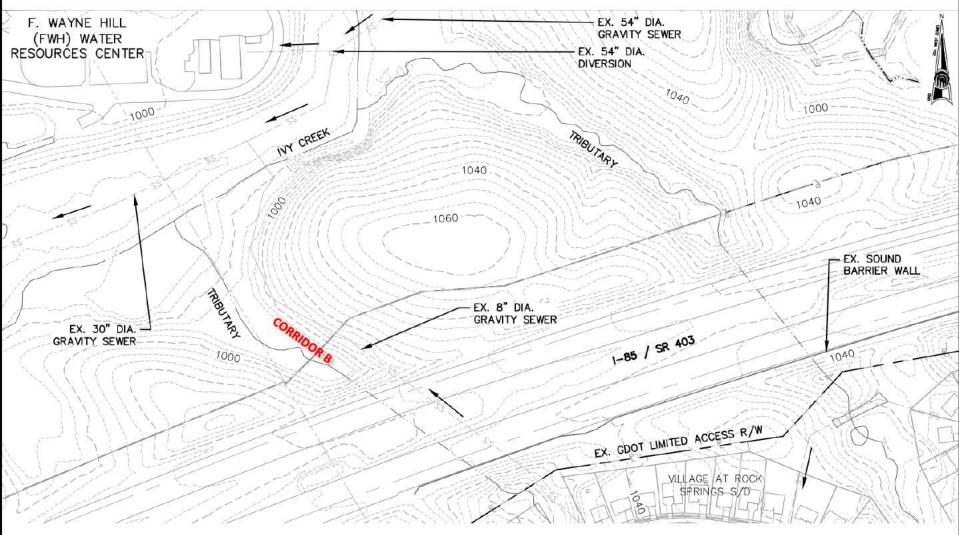
-- In order to get to Corridor B, a sewage pump station would need to be constructed on the south side of Interstate 85 near LAT 34.055339° LON -84.000031°. The sewage would need to be pumped west to Corridor B.

-- In addition to the sewage pump station requirement, the corridor that would carry the sewage along Interstate 85 has several constraints as listed below:

- 1. Elevational changes over 100 feet;
- 2. 2H:1V and steeper slopes along I-85;
- 3. Narrow corridor width between residential subdivisions and I-85;
- 4. Potential conflict with GDOT noise barrier wall;
- 5. Close proximity to existing detention pond and dam; and
- 6. Use of Corridor B would require work in the restricted mitigation area.

CORRIDOR B (ANALYSIS)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 14 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.





BASE MAP SOURCE FROM PPI

CORRIDOR B (DEPICTION)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 **PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA**

EXHIBIT 15 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

CORRIDOR C

-- In order to get to Corridor C, a sewage pump station would need to be constructed on the south side of Interstate 85 near LAT 34.055339° LON -84.000031°. The sewage would need to be pumped west to Corridor C.

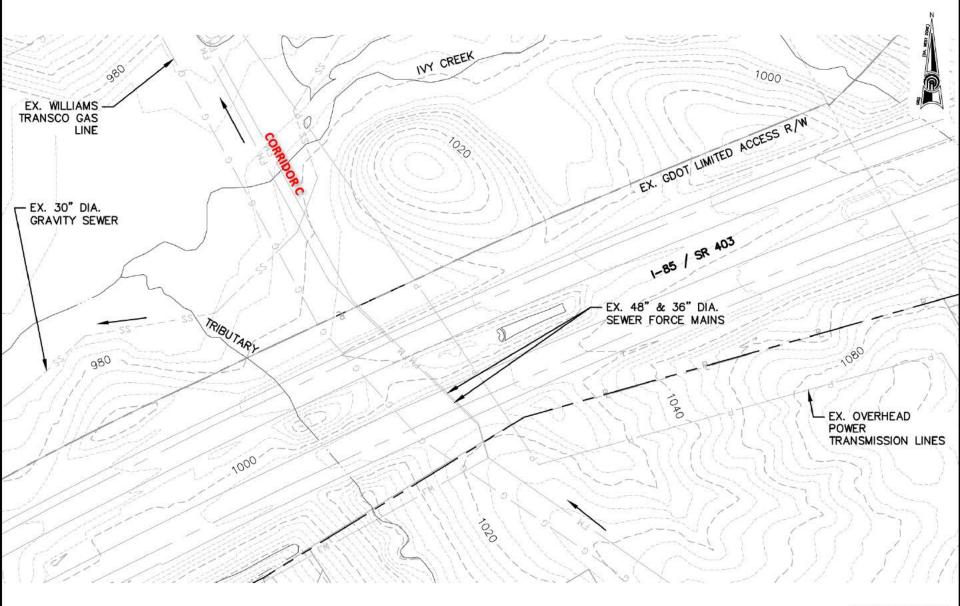
-- In addition to the sewage pump station requirement, the corridor that would carry the sewage along Interstate 85 has several constraints as listed below:

- 1. Elevational changes over 120 feet;
- 2. 2H:1V and steeper slopes along I-85;
- 3. Narrow corridor width between residential subdivisions and I-85;
- 4. Potential conflict with GDOT noise barrier wall;
- 5. Close proximity to existing detention pond and dam;
- 6. A high-pressure gas main and overhead power transmission lines cover Corridor C;
- 7. A 48" AND 36" force main exists already in the Corridor C;
- 8. Corridor C is west of and down-gradient from the treatment plant inlet; and
- 9. Use of Corridor C would require work in the restricted mitigation area.

CORRIDOR C (ANALYSIS)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 16 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



BASE MAP SOURCE FROM PPI

CORRIDOR C (DEPICTION)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 17

PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

CORRIDOR D

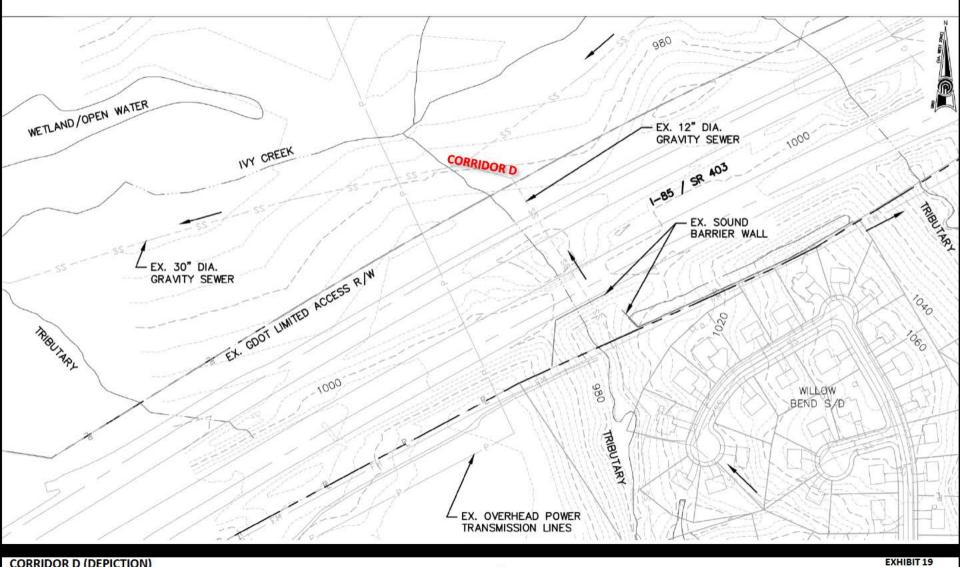
-- In order to get to Corridor D, a sewage pump station would need to be constructed on the south side of Interstate 85 near LAT 34.055339° LON -84.000031°. The sewage would need to be pumped west to Corridor D.

-- In addition to the sewage pump station requirement, the corridor that would carry the sewage along Interstate 85 has several constraints as listed below:

- 1. Elevational changes over 120 feet;
- 2. 2H:1V and steeper slopes along I-85;
- 3. Narrow corridor width between residential subdivisions and I-85;
- 4. Potential conflict with GDOT noise barrier wall;
- 5. Close proximity to existing detention pond and dam;
- 6. Corridor D is insufficient in width to facilitate installation of the upsized sewer line without encroaching into the restricted mitigation area;
- 7. Routing to Corridor D would require crossing over or under a high-pressure gas main;
- 8. Corridor D is west of and down-gradient from the treatment plant inlet; and
- 9. Use of Corridor D would require work in the restricted mitigation area.

CORRIDOR D (ANALYSIS)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA EXHIBIT 18 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



CORRIDOR D (DEPICTION)

PROJECT SPONSOR: **GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC.**

USACE FILES 960008550 & SAS-2023-00226 **PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA**

PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.

CORRIDOR E

-- In order to get to Corridor E, a sewage pump station would need to be constructed on the south side of Interstate 85 near LAT 34.055339° LON -84.000031°. The sewage would need to be pumped west to Corridor E.

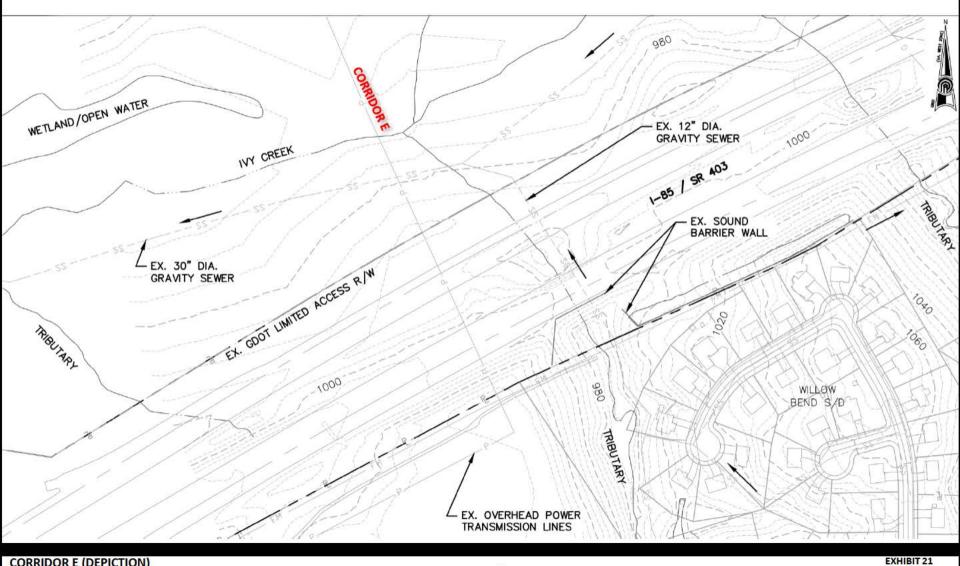
-- In addition to the sewage pump station requirement, the corridor that would carry the sewage along Interstate 85 has several constraints as listed below:

- 1. Elevational changes over 120 feet;
- 2. 2H:1V and steeper slopes along I-85;
- 3. Narrow corridor width between residential subdivisions and I-85;
- 4. Potential conflict with GDOT noise barrier walls;
- 5. Close proximity to existing detention pond and dam;
- 6. Corridor E is insufficient in width to facilitate installation of the upsized sewer line without encroaching into the restricted mitigation area;
- 7. Routing to Corridor E would require crossing under or over a high-pressure gas main;
- 8. Corridor E is west of and down-gradient from the treatment plant inlet; and
- 9. Use of Corridor E would require work in the restricted mitigation area.

CORRIDOR E (ANALYSIS)

PROJECT SPONSOR: GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES ENGINEER: PRECISION PLANNING, INC. USACE FILES 960008550 & SAS-2023-00226 PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA

EXHIBIT 20 PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.



CORRIDOR E (DEPICTION)

PROJECT SPONSOR: **GWINNETT COUNTY DEPARTMENT OF WATER RESOURCES** ENGINEER: PRECISION PLANNING, INC.

USACE FILES 960008550 & SAS-2023-00226 **PROPOSED MITIGATION AREA REVISION GWINNETT COUNTY, GEORGIA**

PREPARED SEPTEMBER 28, 2023 BY: NELSON ENVIRONMENTAL, INC.