January 25, 2024

Via Electronic Mail

Mr. Larry Cole (cole.larry@epa.gov)
U.S Environmental Protection Agency, Region 4 Water Protection Division
Ground Water & UIC Section
Sam Nunn Atlanta Federal Center (SNAFC)
Atlanta Federal Center 61 Forsyth Street
Atlanta, GA 30303-8960

Request for Sole Source Aquifer Review/Concurrence
Atlantic Isle at West of SR A1A (Bridge #874218) PD&E Study
Financial Management Number: 430029-2-22-01
ETDM Number: 14413
County: Miami-Dade

Dear Mr. Cole:

On behalf of the Florida Department of Transportation (FDOT), District VI, a Sole Source Aquifer Review/Concurrence Letter is respectfully requested for a Project Development and Environment (PD&E) study along Atlantic Isle at West of SR A1A (Bridge #874218) in Miami-Dade County, Florida (**see Figure 1**).

The Florida Department of Transportation (FDOT), District Six, is conducting a Project Development and Environment (PD&E) Study to address the deficiencies of the existing Atlantic Isle Bridge (Bridge No. 874218). The Atlantic Isle Bridge is a historic bridge located on Atlantic Island just west of State Road (SR) A1A (Collins Avenue), within the City of Sunny Isles Beach in Miami-Dade County, Florida. The limits of the proposed project encompass the bridge (along Atlantic Avenue) and approaches for a distance of approximately 0.009 mile.

The purpose of the project is to address the structural and functional deficiencies of the existing bridge in order to provide a safe and functional route for the surrounding community/traveling public. According to a bridge inspection conducted on September 29, 2023, the Atlantic Isle Bridge [Bridge Identification Number 874218] has been determined to be 'Functionally Obsolete', with a Sufficiency Rating of 40.9 and a Health Index of 60.39.

The Efficient Transportation Decision Making (ETDM) Programming Screening Summary Report was published on February 4, 2020 (ETDM #14413). For the issue of Water Quality and Quantity, the Environmental Protection Agency's (EPA) degree of effect was determined to be Moderate (reviewed by EPA on December 6, 2019, by Ms. Roshanna White). The comments from the EPA included the following:

In the preliminary environmental discussion (PED), FDOT acknowledges the following resources within the project area: impaired waterbody – Intracoastal Waterway: Miami-Dade County Northern segment, impaired for chlorophyll-a and total nitrogen, Outstanding Florida Water and Aquatic Preserve – Biscayne Bay, Sole Source Aquifer and principal aquifer of the state of Florida – Biscayne Aquifer, recharge area of the Floridan Aquifer, one National Pollutant Discharge Elimination System stormwater permit. The surficial aquifer is vulnerable to contamination. Biscayne Bay Sole Source Aquifer is vulnerable to contamination through its recharge zone, and Biscayne Bay and the Intracoastal Waterway are vulnerable to nutrient pollution. Because of the proximity of these resources to the project area, the EPA assigns a Moderate degree of effect for Water Quality and Quantity until further project development and analysis is available.

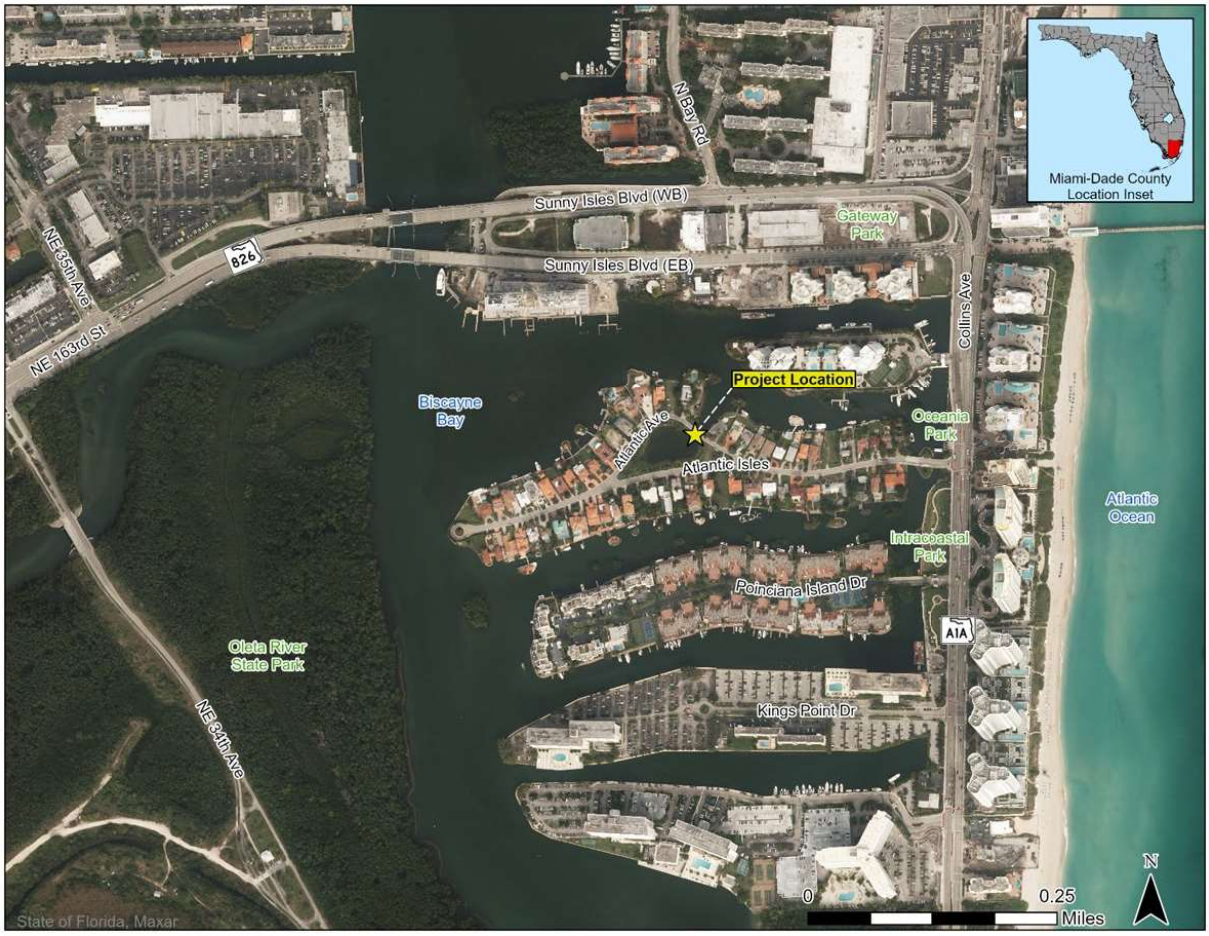


Figure 1 Project Study Area

Preferred Alternative

The Preferred Alternative involves replacing the entire bridge to address the structural and functional deficiencies of the existing superstructure and substructure to enhance operations and remove load restrictions. This would require demolition of the existing bridge and replacement of the bridge at the same location to minimize overall environmental impacts. The proposed bridge typical section would be approximately 27 feet wide to accommodate one 10-foot-wide travel lane, one 8-foot-wide shared use path, 3-foot-wide shoulders, and concrete traffic railings on both sides. A raised sidewalk would separate pedestrians from vehicular traffic.

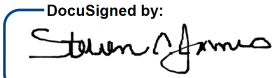
New approach retaining walls would replace the existing retaining walls. A new, non-structural oolitic limestone façade would be placed along the exterior faces of the traffic railings and retaining walls to provide aesthetics similar to the existing bridge. A slightly longer bridge span may be required to span over portions of the existing unknown foundations which may not be able to be removed, in order to eliminate potential conflicts and enhance constructability.

Limestone rock fill with roadway pavement will be placed on the new arch structure. The limestone could be obtained from the original source used to construct the original bridge, or the limestone from the existing bridge could be reused and incorporated into the new bridge. New bridge approach slabs are anticipated and would be the standard length of 20 feet each.

The Preferred Alternative requires temporary roadway widening and a turnout along Atlantic Avenue to maintain two-way access during construction. The turnout would be temporary and removed after rehabilitation of the bridge is complete. The temporary roadway turnout is proposed west of the bridge to accommodate maintenance of traffic. The temporary turnout would require temporary walls (either gravity or sheet pile wall-types). All wall options would require excavation of the soil or installation via driving or vibratory methods near the waterline of the Atlantic Isle Lagoon. The wall is considered temporary and could be removed following completion of the bridge construction work and elimination of the temporary turnouts.

Attached below are the Water Quality Impact Evaluation Checklist and responses to the EPA Region 4 Sole Source Aquifer Project Review Form – Section B: Determination of Potential Project Impacts to the Sole Source Aquifer.

Sincerely,

DocuSigned by:

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Steven Craig James, RLA 1451
District Environmental Manager
Planning and Environmental Management Office

Water Quality Impact Evaluation Checklist

PART 1: PROJECT INFORMATION

Project Name:	Atlantic Isle at West of SR A1A (Bridge #874218) PD&E Study
County:	Miami-Dade County
FM Number:	430029-2-22-01
Federal Aid Project No:	TBD
Brief Project Description:	The Preferred Alternative involves replacing the entire bridge to address the structural and functional deficiencies of the existing superstructure and substructure to enhance operations and remove load restrictions. This would require demolition of the existing bridge and replacement of the bridge at the same location to minimize overall environmental impacts. The proposed bridge typical section would be approximately 27 feet wide to accommodate one 10-foot-wide travel lane, one 8-foot-wide shared use path, 3-foot-wide shoulders, and concrete traffic railings on both sides. A raised sidewalk would separate pedestrians from vehicular traffic. New approach retaining walls would replace the existing retaining walls. A new, non-structural oolitic limestone façade would be placed along the exterior faces of the traffic railings and retaining walls to provide aesthetics similar to the existing bridge. A slightly longer bridge span may be required to span over portions of the existing unknown foundations which may not be able to be removed, in order to eliminate potential conflicts and enhance constructability. Limestone rock fill with roadway pavement will be placed on the new arch structure. The limestone could be obtained from the original source used to construct the original bridge, or the limestone from the existing bridge could be reused and incorporated into the new bridge. New bridge approach slabs are anticipated and would be the standard length of 20 feet each. The Preferred Alternative requires temporary roadway widening and a turnout along Atlantic Avenue to maintain two-way access during construction. The turnout would be temporary and removed after rehabilitation of the bridge is complete. The temporary roadway turnout is proposed west of the bridge to accommodate maintenance of traffic. The temporary turnout would require temporary walls (either gravity or

	sheet pile wall-types). All wall options would require excavation of the soil or installation via driving or vibratory methods near the waterline of the Atlantic Isle Lagoon. The wall is considered temporary and could be removed following completion of the bridge construction work and elimination of the temporary turnouts.

PART 2: DETERMINATION OF WQIE SCOPE

Does project discharge to surface or ground water? ☒ Yes ☐ No

Does project alter the drainage system? ☒ Yes ☐ No

Is the project located within a permitted MS4? ☒ Yes ☐ No
Name: City of Sunny Isles Beach MS4 Co-permittee

If the answers to the questions above are no, complete the applicable sections of Part 3 and 4, and then check Box A in Part 5.

PART 3: PROJECT BASIN AND RECEIVING WATER CHARACTERISTICS

Surface Water
Receiving water names: Biscayne Bay, Intrascoastal Waterway

Water Management District: South Florida Water Management District

Environmental Look Around meeting date: N/A
Attach meeting minutes/notes to the checklist.

Water Control District Name(s) (list all that apply): N/A

Groundwater
Sole Source Aquifer (SSA)? ☒ Yes ☐ No
Name Biscayne Aquifer
If yes, complete Part 5, D and complete SSA Checklist shown in Part 2, Chapter 11 of the PD&E Manual

Other Aquifer? ☐ Yes ☒ No
Name _____

Springs vents? ☐ Yes ☒ No
Name _____

Well head protection area? ☐ Yes ☒ No
Name _____
Groundwater recharge? ☒ Yes ☐ No
Name Floridan Aquifer

Notify District Drainage Engineer if karst conditions are expected or if a higher level of treatment may be needed due to a project being located within a WBID verified as Impaired in accordance with Chapter 62-303, F.A.C.

Date of notification: N/A

PART 4: WATER QUALITY CRITERIA

List all WBIDs and all parameters for which a WBID has been verified impaired, or has a TMDL in **Table 1**. This information should be updated during each re-evaluation as required.

Note: If BMAP or RAP has been identified in **Table 1**, **Table 2** must also be completed.
*Attach notes or minutes from all coordination meetings identified in **Table 2**.*

EST recommendations confirmed with agencies? ☒ Yes ☐ No

BMAP Stakeholders contacted? ☐ Yes ☒ No

TMDL program contacted? ☐ Yes ☒ No

RAP Stakeholders contacted? ☐ Yes ☒ No

Regional water quality projects identified in the ELA? ☐ Yes ☒ No

If yes, describe:

Potential direct effects associated with project construction and/or operation identified? ☐ Yes ☒ No
If yes, describe:

Discuss any other relevant information related to water quality including Regulatory Agency Water Quality Requirements.

PART 5: WQIE DOCUMENTATION

☐ A. No involvement with water quality

☐ B. No water quality regulatory requirements apply.

☒ C. Water quality regulatory requirements apply to this project (provide Evaluator's information below). Water quality and stormwater issues will be mitigated through compliance with the design requirements of authorized regulatory agencies.

☒ D. EPA Ground/Drinking Water Branch review required. ☒ Yes ☐ No

Concurrence received? ☐ Yes ☐ No

If Yes, Date of EPA Concurrence: Click here to enter a date..

Attach the concurrence letter

The environmental review, consultation, and other actions required by applicable federal environmental laws for this project are being, or have been, carried out by the Florida Department of Transportation (FDOT) pursuant to 23 U.S.C. § 327 and a Memorandum of Understanding dated May 26, 2022 and executed by the Federal Highway Administration and FDOT.

Evaluator Name (print): David Lestino	
Title:Environmental Specialist	
Signature: David Lestino	Date:1/25/2024

Table 1: Water Quality Criteria

Receiving Waterbody Name (list all that apply)	FDEP Group Number / Name	WBID(s) Numbers	Classification (I,II,III,IIIL,IV,V)	Special Designations*	NNC limits**	Verified Impaired (Y/N)	TMDL (Y/N)	Pollutants of concern	BMAP, RA Plan or SSAC
Intracoastal Waterway (ICWW) - Miami-Dade County Northern Segment/ Biscayne Bay	4 / Southeast Coast - Biscayne Bay	3226H1	3M	OFW, Aquatic Preserve	Estuary	Yes	No	Nutrients (Chlorophyll A); Nitrogen	N/A

*** ONRW, OFW, Aquatic Preserve, Wild and Scenic River, Special Water, SWIM Area, Local Comp Plan, MS4 Area, Other**
**** Lakes, Spring vents, Streams, Estuaries**

Note: If BMAP or RAP has been identified in Table 1, Table 2 must also be completed.

Table 2: REGULATORY Agencies/Stakeholders Contacted

Receiving Water Name (list all that apply)	Contact and Title	Date Contacted	Follow-up Required (Y/N)	Comments

EPA Region 4 Sole Source Aquifer Project Review Form – Section B: Determination of Potential Project Impacts to the Sole Source Aquifer.

1. Provide Project Information

a) Contact person: Steven C. James or Victoria Vogt
b) Contact email address: Steven.James@dot.state.fl.us or victoria.vogt@dot.state.fl.us
c) Contact mailing address: 1000 NW 11th Avenue, Miami, FL 33172
d) Contact phone number: (305) 470-5221
e) Name of the project: Atlantic Isle at West of SR A1A (Bridge# 874218)
f) Project address or geographical coordinates: 25°55'38.92"N, 80° 7'34.07"W

2. Confirm an SSA project review is needed.

a) Is any portion of the project or the property(ies) involved located within a designated SSA project review area? Yes
b) If the project is located in a SSA, please provide the name of the aquifer. Biscayne Aquifer
c) What Federal funding source is being sought or proposed? The project includes Federal funding from Federal Highway Administration.

3. Provide the location of the project, a map, and the name of the SSA(s) within which the project is located. Descriptions and/or maps with the information below would be helpful if available and applicable. SSA Map has been included below (**see Attachment 1**).

a) What is known about local hydrogeology in the project review area (e.g. soil types, depth to groundwater, groundwater flow direction)? Soils within the project area include non-hydric urban soils that lack definable horizons and consist of human placed fill material. Depth to groundwater is less than ten feet and the general groundwater flow of the aquifer is west to east toward the Atlantic Ocean with minor localized influences due to the Intracoastal Waterway (ICCW).
b) Are there known wells in the project review area (including groundwater wells; shallow injection wells; and oil, geothermal, and mineral exploration wells) and how close are they to the project? There are no known wells in the project review area.
c) Are there any wetlands within the project review area? If applicable, describe any discharge to, loss of, or creation of wetlands by the project. There are wetlands including mangrove and seagrass habitat within the project area. Existing stormwater management systems, including a pollution control box collect runoff with some runoff discharge directly to the Atlantic Isle lagoon and surrounding waterbodies (ICCW, Biscayne Bay). Seven new drainage structures are proposed to convey additional runoff to the existing pollution control box. The proposed stormwater management system for the project will be developed to meet the design and performance criteria established in the SFWMD Environmental Resource Permit Applicants Handbook Volumes I and II for the treatment and attenuation of discharges to nearby waterbodies. A total of 0.015 acres of direct (0.005 acres) and indirect impacts (0.01 acres) to existing seagrass beds and suitable seagrass habitat are anticipated from additional shading caused by proposed bridge widening and the temporary placement of sheet piles for construction.

4. Provide project description, including, but not limited to, answers to the applicable questions below.

The Preferred Alternative involves replacing the entire bridge to address the structural and functional deficiencies of the existing superstructure and substructure to enhance operations and remove load restrictions. This would require demolition of the existing bridge and replacement of the bridge at the same location to minimize overall environmental impacts. New approach retaining walls would replace the existing retaining walls. A slightly longer bridge span may be required to span over portions of the existing unknown foundations which may not be able to be removed, in order to eliminate potential conflicts and enhance constructability. Limestone rock fill with roadway pavement will be placed on the new arch structure. New bridge approach slabs are anticipated and would be the standard length of 20 feet each.

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a) Will the project result in any increase of impervious surface (e.g., concrete, asphalt)? If so, what is the area (e.g., square feet or acres)? The project will result in a permanent increase of 0.02 acres of impervious surface area.
b) What is the depth of excavation? Excavation would be required to construct temporary gravity walls for temporary turnouts. Anticipated excavation depths vary between 1 to 5 feet deep. Additionally, 60-foot long, 42-inch diameter shafts will be drilled for the foundation of the future bridge structure. (**see Attachment 2 and Attachment 3 below**)
c) Will any wells be installed or modified as part of the project (of any use type, including groundwater wells' shallow injection wells; and oil, geothermal, and mineral exploration wells)? For new/proposed wells, indicate depth of wells, depth of casing, casing diameter, and, for water wells, the anticipated average and maximum water demand from the wells during normal operation (gallons per minute). There are no existing wells within the project area and No new wells will be installed as part of the project.
d) Are there deep pilings or foundations (e.g. greater than 10 feet below land surface) that will be installed, modified or disturbed during the project? If yes, include construction procedures and diagrams of these deep pilings or foundations. Although results of a geotechnical investigation (March 2021) to determine the size and type of the existing foundation were inconclusive, the existing foundations are likely greater than 10-feet below land surface. These foundations would be disturbed during the demolition of the existing bridge (**see Attachment 4 below**). Currently, there are no finalized construction procedures for proposed bridge demolition as the design and proposed foundation type will be finalized during the design phase.

5. Describe the stormwater management of the project area.

The existing roadway drainage consists generally of curb and gutter with valley gutter inlets and pipes that collect and convey the stormwater runoff. Runoff from the existing bridge either discharges directly to the surrounding waterbodies or is conveyed to the nearest curb inlet on Atlantic Avenue. The runoff collected by inlets is conveyed toward an existing pollution control device, treated and discharged into the Intracoastal Waterway via a 24-inch pipe. This existing system does not meet the current water quality criteria for SFWMD.

a) Will the project require the use of shallow injection wells (i.e., dry wells, French drains, sumps, and drainfields)? In order to provide additional water treatment and mitigation to compensate for 0.02 acres of increased impervious surface area, French drains or continuous deflective separators are proposed. However, the proposed system is not finalized at this time. Due to the tidal influence in the area, the feasibility of French drains would need to be evaluated.
b) How will stormwater be managed on this site during construction and after the project Is complete, including treatment if applicable? During construction, stormwater will be managed by the existing system which is comprised of curb and gutter, inlets and pipes to connect and convey stormwater. Stormwater from the bridge sheet flows to Atlantic Avenue on either side of the bridge. Runoff is conveyed to an existing pollution control device (Contech Vortech® Stormwater Treatment Model 5000) before it is discharged to the ICCW. Once the project is completed the drainage system configuration will be the same, but with additional drainage structures and pipes to handle the additional impervious area. Upgrades to the existing pollution control device will also be evaluated.

6. Describe chemical use and storage associated with the project.

a) Will quantities of hazardous chemicals or petroleum above routine household quantities be used or stored in the project review area? Storage of petroleum and oil for construction equipment and other chemicals may be required during construction. These hazardous materials will be stored in the appropriate containers with secondary containment measures and storage will be restricted to an approved staging area. Additionally, it is possible that staging of these materials would not be approved within Atlantic Isles and may be stored off-site.

b) Are there any aboveground storage tanks or underground storage tanks present or to be installed? There are existing storage tanks present, and no storage tanks are proposed to be installed.

7. Describe waste management related to the project, including, but no limited to, answers to the applicable questions below.

A. Will any liquid or solid waste be generated during construction (e.g., construction/drilling fluids, excavation dewatering fluids, demolition debris)? If so, how will it be managed? Solid waste from bridge demolition and liquid waste from drilling and dewatering will be generated during construction. Solid waste from bridge demolition would be reused/incorporated into the new bridge or would be taken off-site and disposed of at permitted sanitary landfills. Liquid waste from construction/drilling fluids would also be disposed of at permitted sanitary landfills. Final management plans for liquid or solid waste will be determined by the contractor during construction. A Miami-Dade County Class V permit for dewatering would be acquired by the contractor during construction. Dewatering requirements and management would be determined by the contractor during construction. Human waste would likely be managed by portable toilet systems.

B. How will liquid or solid waste be managed after project completion, other than routine quantities of household wastes to a permitted sanitary landfill or publicly owned treatment works (e.g., describe any on-site treatment/disposal, industrial waste water, or other waste generation)? If applicable provide details about any individual disposal systems such as cesspools, septic tanks with leach fields or seepage areas, pit toilets, or privately owned sewerage systems, including those owned by a homeowner's association. After project completion, no liquid or solid waste will be generated. Therefore, no on-site disposal systems (cesspools, septic tanks, etc.) are proposed. Homeowners on the island utilize a sanitary sewer system managed by Miami-Dade Water and Sewer Department (WASD), which will not be altered by the proposed project.

C. Are there any brownfield or hazardous waste sites in close proximity to the project review area (e.g., sites listed on the EPA National Priorities List [i.e., Superfund sites], state-designated brownfield or clean-up sites)? Do any such contaminated sites have underground plumes, monitoring wells, or soil contamination that may be disturbed by the project? Include details such as the name(s) and location(s) of the brownfield or hazardous waste site(s). There are no brownfield or hazardous waste sites in close proximity of the project area, and therefore, no underground plumes, monitoring wells, or soil contamination that will be disturbed.

D. For agricultural projects involving animals, how will animal wastes be managed? This project is not an agricultural project and will no animal waste will be managed.

E. For burial of flocks or disposal of animals, what Best Management Practices ("BMPs") are planned to protect the SSA from contamination? No burial of flocks or disposal of animals will be required for this project.

8. Provide any other available information (examples below) that could be helpful in determining if this project may potentially create a significant hazard to public health through contamination of a SSA.

a) Are BMPs planned to address any possible risks or concerns? All hazardous waste stored on-site will be stored in appropriate containers and will have secondary containment measures to prevent spills or releases of hazardous materials to the environment (soil and water). For bridge piling installation, temporary sheet piles will be installed, and dewatering will occur so drilling and piling construction will not impact water quality or increase turbidity.

b) Does the project include any improvements that may be beneficial to any SSA, such as improvements to the publicly owned treatment works? Upgrades to the existing stormwater management system will occur including installation of additional drainage structures and conveyance pipes. Additionally, the existing pollution control device (Contech Vortech® Stormwater Treatment Model 5000) will be evaluated.

9. Are any previous environmental assessments available regarding the project or project area? If yes, please provide a copy of any/all assessments. There are no previous environmental assessments for the project/project area.

FDOT

Florida Department of Transportation
District VI
1000 NW 111th Avenue
Miami, FL 33172-5800

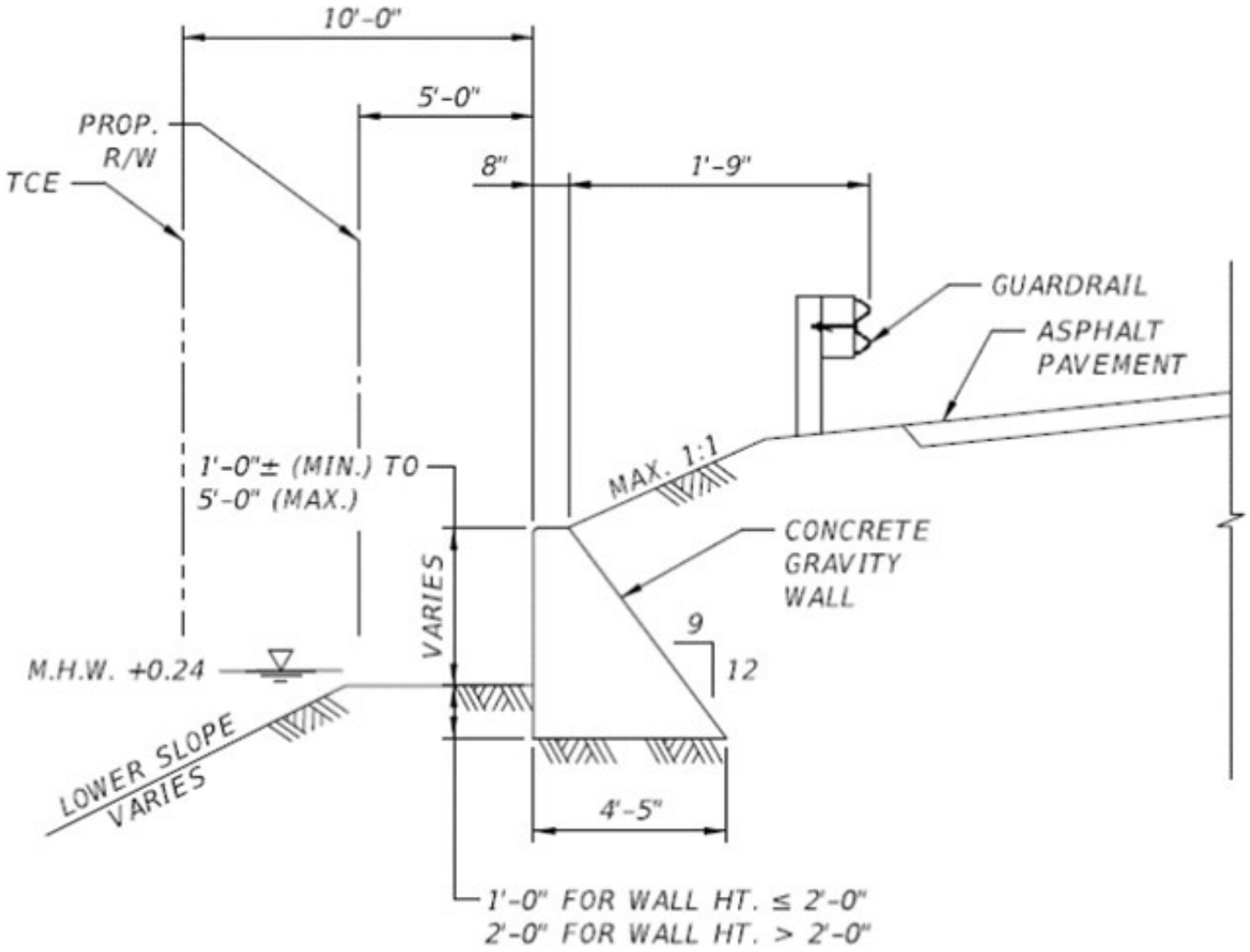
Sole Source Aquifer Map

FM 430029-2-22-01
Atlantic Isle Bridge No. 874218 West of SR-A1A
Miami-Dade County, FL
Section: 14, Township: 52S, Range: 42E

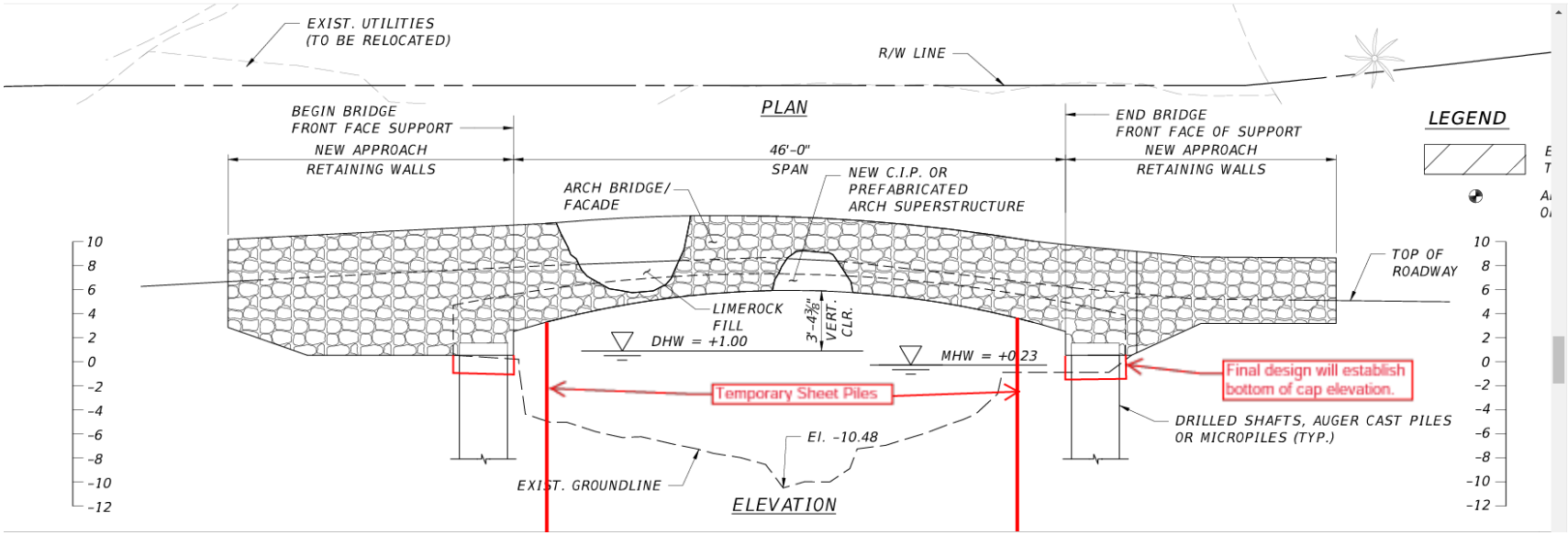
Study Area
Biscayne Sole Source Aquifer

Proposed Improvements
Bridge Deck
Curb
Paved Shoulders
Bridge Pedestrian Wall

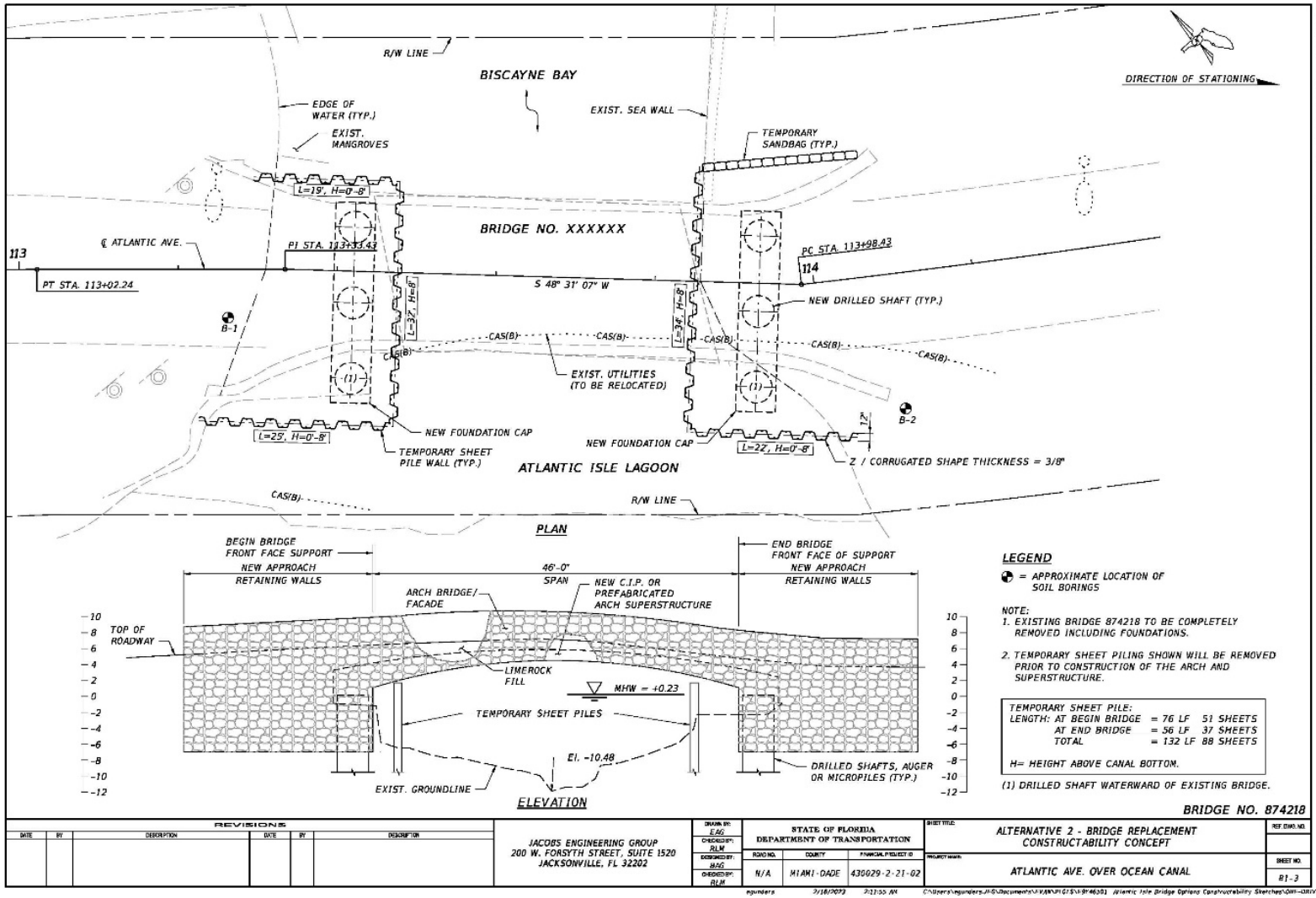
Attachment 1: Project Location and Sole Source Aquifer Map



Attachment 2: Roadway Limits and Gravity Wall Excavation Depths from Conceptual Drainage Report



Attachment 3: Drilled Shaft Diagram



Attachment 4: Bridge Replacement Concept