

CS-21-035

**WORK AUTHORIZATION # CM2286-WA06
NASSAU COUNTY
BOARD OF COUNTY COMMISSIONERS**

Consultant:	Civil Services, Inc.
Contract Number:	CM2286
Contact Name:	Ali A. Najafi, P.E..
Contact Number:	904-309-8593
Email:	anajafi@civilservicesinc.com

CURRENT WORK AUTHORIZATION			
Project Short Title: Structure 3402 – Bonnieview Road Conceptual Design for Culvert Replacement			
		CONTRACT OVERVIEW	
Date Submitted	9/7/2021	Total of Previous Authorizations	\$254,389.83
Amount	\$36,690.74	This Work Authorization	\$36,690.74
Scheduled Completion	6 Weeks	Current Contract Total	\$291,080.57

This Work Authorization is to the AGREEMENT between Nassau County and Civil Services, Inc. (“Consultant”) for Professional Services in Nassau County, Florida, dated May 9, 2016. The services to be provided under this Work Authorization are as follows:

ARTICLE 1. Services Described as:

Civil Services, Inc. shall provide professional engineering services for the conceptual design for culvert replacement of Structure 3402 – Bonnieview Road, pursuant to the Scope of Services dated August 26, 2021, attached hereto as Exhibit “A”.

ARTICLE 2. Time Schedule

The estimated time for completion of this work authorization is six (6) weeks from the issuance of a Notice to Proceed.

ARTICLE 3. Budget

Civil Services, Inc.’s fee for the professional services outlined in the Scope of Services is \$36,690.74. A breakdown for each task in conjunction with the estimated labor hours is included in Exhibit “A”.

Article 4. Other Provisions

The Services covered by this Work Authorization will be performed in accordance with the provisions set forth in the AGREEMENT referenced above and any of its attachments or schedules. This Work Authorization will become a part of the referenced AGREEMENT when executed by both parties.

In presenting this Work Authorization, Consultant agrees that:

Unless detailed herein, all drawings, data, electronic files and other information required for this Work Authorization has been accepted by Consultant. Specifically, all electronic files have been reviewed and accepted for the purposes of this Work assignment. Any additional information, including detailed scope of services are attached.

AGREED TO BY:

BY: Ali Najafi
Print Name: Ali Najafi
Title: Senior Vice President
Date: 10/8/2021

Account number(s):

03405541-546000 BRDGR

RECOMMENDED AND APPROVED BY NASSAU COUNTY:

County Engineer:	<u>Robert Companion</u>	10/6/2021
	Department Head or Designee	
Procurement:	<u>[Signature]</u>	10/7/2021
	Brian Simmons	
Office of Management & Budget:	<u>Megan Diehl</u>	10/7/2021
	Megan Diehl	
County Manager:	<u>Taco E. Pope, AICP</u>	10/8/2021
	Taco E. Pope, AICP	
Ex-Officio Clerk:	<u>N/A</u>	
	John Crawford	
County Attorney:	<u>Michael S. Mullin</u>	10/8/2021
	Michael S. Mullin	

APPROVED by the BOARD OF COUNTY COMMISSIONERS, the ____ day of _____, 2021.

BOARD OF COUNTY COMMISSIONERS
NASSAU COUNTY, FLORIDA

N/A
Thomas R. Ford
Chairman

Account number(s):

03405541-546000 BRDGR



ROADWAY • CIVIL • BRIDGE • WATER RESOURCES

Jacksonville • Riviera Beach • Atlanta • Augusta

August 26, 2021

Exhibit "A"

Caleb Hurst, PE
Senior Development Review Engineer
Nassau Engineering Services
96161 Nassau Place
Yulee, Florida 32097

**Re: Proposal for Bonnieview Road Pipe Replacement
Nassau County Engineering Services
96161 Nassau Place
Yulee, Florida 32097**

Dear Mr. Hurst:

Civil Services, Inc. (CSI) is pleased to provide this proposal to perform Concept Design Services for the culvert system in Amelia River in or adjacent to 3402 Bonnieview Road in Nassau County, Florida. Our understanding of the project is based on emails received from Nassau County Engineering Services and our independent research.

Background: Our understanding of the project is as follows:

- Proposed culvert(s) Replacement across Bonnieview Road located at 3402 Bonnieview Road to carry the flow in Amelia River.
- There are Four (4), R.C. Horizontal Elliptical (43"x68") Pipe Culverts or cross drain pipes at the location which are anchored by sand cement bag(s) head wall.
- Two (2) culverts of the four (4) are plugged.
- The creek is tidally influenced.
- A hydrology and Hydraulics study is requested to determine the type, number, and sizes of culvert needed for the culvert crossing.
- The sand cement bag(s) headwall should be upgraded to concrete to meet FDOT standards.
- Wetland determination and Dredge and fill permitting will be required.
- The Concept Design will recommend either a box culvert or four (4) pipes as replacement and determine if a no-rise certification will be required.

Concept Design Scope: Based on our understanding of the project CSI proposes to perform the following culvert replacement design and permitting services associated with the culvert under 3402 Bonnieview Road:

- Develop the requested synthetic Peak Flow for the affected basin(s).
- Model hydraulics of the Peak Flows referenced above to determine the impacts to the surrounding area(s) caused by the culvert system proposed. This could include a no-rise certification.

Proposal for Bonnieview Road Pipe Replacement
Nassau County, Florida

August 26, 2021

- Submit a Stormwater Report based on the findings of modeling.
- Preliminary Construction cost estimates for the alternatives, which can be used to select a preferred culvert alternative.

Schedule: CSI can begin work immediately upon acceptance of this proposal.

Fee Estimate CSI will perform the scope of services described herein for a lump sum, not to exceed fee as follows:

Plans and Preliminary Construction Cost Estimating Report (by CSI)	\$20,699.54
Hydrology/Hydraulics Modeling (by Taylor Engineering)	\$15,991.20
Total	\$36,690.74

A copy of information for subcontracted services is attached.

We have a strong desire to be your engineering consultant for this project and thank you for considering CSI. We look forward with great enthusiasm to working with you and assure you that we will complete this project on schedule, within budget, and to your complete satisfaction.

If you have any comments or questions or if we can assist you with anything else, please feel free to contact me at my office at (904) 641-1834, on my cell phone (904) 591-3589, or via e-mail at anajafi@civilservicesinc.com.

Sincerely,
CIVIL SERVICES, INC.

Ali Najafi, P.E
Project Manager



ESTIMATE OF WORK EFFORT AND COST - PRIME CONSULTANT

Name of Project: NQ3402 - Bonnieview Road Pipe Replacement Design over Amelia River
 County: Nassau
 FPN: 0
 FAP No.: NA

Consultant Name: Civil Services
 Consultant No.: enter consultants proj. number
 Date: 8/24/2021
 Estimator: Ali Najafi

Staff Classification	Hours From "SH Summary - Firm"	Project Manager	Senior Engineer	Engineer	Designer	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
		\$58.55	\$66.63	\$43.85	\$26.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		
3. Project General and Project Common Tasks	23	2	1	10	9	0	0	0	0	0	0	0	0	22	\$856	\$38.92
4. Roadway Analysis	37	4	2	17	13	0	0	0	0	0	0	0	0	38	\$1,503	\$39.55
5. Roadway Plans	62	6	3	28	25	0	0	0	0	0	0	0	0	62	\$2,429	\$39.18
6a. Drainage Analysis	20	2	1	9	8	0	0	0	0	0	0	0	0	20	\$786	\$39.32
6b. Drainage Plans	6	1	0	3	2	0	0	0	0	0	0	0	0	6	\$242	\$40.35
7. Utilities	4	0	0	2	2	0	0	0	0	0	0	0	0	4	\$140	\$34.93
8. Environmental Permits, Compliance & Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	18	2	1	8	7	0	0	0	0	0	0	0	0	18	\$719	\$39.53
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
12. Structures - Bridge Repair Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
25. Landscape Architecture Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape Architecture Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
30. Terrestrial Mobile LIDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	170	17	8	77	68	0	0	0	0	0	0	0	0	170		
Total Staff Cost		\$995.35	\$526.38	\$3,380.84	\$1,773.20	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$6,675.76	\$39.22

Check = \$6,675.76

Survey Field Days by Subconsultant
 4 = Person Crew.

SALARY RELATED COSTS:			\$6,875.76
OVERHEAD:	180%		\$12,017.04
OPERATING MARGIN:	27%		\$1,802.46
FCCM (Facilities Capital Cost Money):	0.35%		\$23.37
EXPENSES:	2.71%		\$180.91
Survey (Field - If by Prime)	0	4-man crew days @ \$ / day	\$0.00
SUBTOTAL ESTIMATED FEE:			\$20,699.54
Subconsultant: Taylors Engineering - Coastline Hydraulics			\$15,991.20
Subconsultant: CSI-Geo			\$0.00
Subconsultant: ERS			\$0.00
SUBTOTAL ESTIMATED FEE:			\$36,690.74
Geotechnical Field and Lab Testing			\$0.00
SUBTOTAL ESTIMATED FEE:			\$36,690.74
Optional Services			\$0.00
GRAND TOTAL ESTIMATED FEE:			\$36,690.74

- Notes:
 1. This sheet to be used by Prime Consultant to calculate the Grand Total fee.
 2. Manually enter fee from each subconsultant. Unused subconsultant rows may be hidden.

ESTIMATE OF WORK EFFORT AND COST - SUBCONSULTANT

Name of Project: **Bonniview Rd Culvert Replacement, Nassau Co**
 County: **Nassau**
 FPN: **0**
 FAP No.: **1/0/1900**

Consultant Name: **Taylor Engineering**
 Consultant No.: **enter consultants proj. number**
 Date: **8/24/2021**
 Estimator: **insert name**

Staff Classification	Total Staff Hours From "SH Summary - Firm"	Project Manager	Senior Engineer	Engineer	Designer	Staff Classification 5	Staff Classification 6	Staff Classification 7	Staff Classification 8	Staff Classification 9	Staff Classification 10	Staff Classification 11	Staff Classification 12	SH By Activity	Salary Cost By Activity	Average Rate Per Task
3. Project General and Project Common Tasks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
4. Roadway Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
5. Roadway Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
6a. Drainage Analysis	81	0	75	6	0	0	0	0	0	0	0	0	0	81	\$5,153	\$63.62
6b. Drainage Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
7. Utilities	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
8. Environmental Permits, and Env. Clearances	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
9. Structures - Misc. Tasks, Dwgs, Non-Tech.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
10. Structures - Bridge Development Report	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
11. Structures - Temporary Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
12. Structures - Short Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
13. Structures - Medium Span Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
14. Structures - Structural Steel Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
15. Structures - Segmental Concrete Bridge	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
16. Structures - Movable Span	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
17. Structures - Retaining Walls	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
18. Structures - Miscellaneous	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
19. Signing & Pavement Marking Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
20. Signing & Pavement Marking Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
21. Signalization Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
22. Signalization Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
23. Lighting Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
24. Lighting Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
25. Landscape Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
26. Landscape Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
27. Survey (Field & Office Support)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
28. Photogrammetry	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
29. Mapping	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
30. Terrestrial Mobile LiDAR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
31. Architecture Development	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
32. Noise Barriers Impact Design Assessment	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
33. Intelligent Transportation Systems Analysis	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
34. Intelligent Transportation Systems Plans	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
35. Geotechnical	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
36. 3D Modeling	0	0	0	0	0	0	0	0	0	0	0	0	0	0	\$0	#DIV/0!
Total Staff Hours	81	0	75	6	0	0	0	0	0	0	0	0	0	81		
Total Staff Cost		\$0.00	\$4,997.25	\$0.00	\$156.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00		\$5,153.25	\$63.62

Notes:
 1. This sheet to be used by Subconsultant to calculate its fee.

		Check =	\$5,153.25
SALARY RELATED COSTS:			\$5,153.25
OVERHEAD:	185.12%		\$9,539.70
OPERATING MARGIN:	24.00%		\$1,236.78
FCCM (Facilities Capital Cost Money):	0.283%		\$14.58
EXPENSES:	0.910%		\$46.89
SUBTOTAL ESTIMATED FEE:			\$15,991.20
Survey (Field)	0	4-person crew \$ - / day	\$0.00
Geotechnical Field and Lab Testing			\$0.00
SUBTOTAL ESTIMATED FEE:			\$15,991.20
Optional Services			\$0.00
GRAND TOTAL ESTIMATED FEE:			\$15,991.20

**Taylor Engineering
Bonnieview Rd Culvert Replacement**

– SCOPE OF SERVICES –

This scope constitutes the first phase of the culvert replacement design. This phase will examine the feasibility of replacing the culverts with a design similar to the existing configuration and one other design (e.g., a single box culvert). Due to time constraints, this phase will not calibrate the hydraulic model.

TASK 1 Data Collection and Site Visit

Taylor Engineering will collect and review available data. Taylor Engineering will also research and attempt to locate any existing hydraulic models of the site. Taylor Engineering will visit the bridge site to evaluate the stream characteristics, hydraulic properties and the channel geometries.

TASK 2 Hydrologic Modeling

Taylor Engineering will develop a hydrologic model of the site. The results from this model will provide the boundary conditions for the hydraulic model.

TASK 3 Hydraulic Modeling

Taylor Engineering will develop and apply a one-dimensional HEC-RAS model to determine the hydraulic characteristics of the site for the existing and proposed configuration. Taylor Engineering will construct this model from available bathymetric and topographic data. Taylor Engineering understands no additional survey data will be collect for this phase of the project.

TASK 4 Culvert Performance Estimates

Taylor Engineering will follow FDOT Drainage Manual procedures to estimate the effect of the culverts upstream for the storm events required by the FDOT Drainage Manual. In consultation with CSI, Taylor will determine the culvert size required to meet FDOT requirements for upstream stages.

TASK 5 Riprap Protection

Based on the hydraulic model results, Taylor Engineering will estimate the riprap stone size and extent for culvert exit scour protection.

TASK 6 Document the Hydraulic Model Results

Taylor Engineering will document the hydraulic model results (stage and velocity) at the culverts. The documentation will include tables of hydraulic results and riprap protection requirements.

DELIVERABLES

- Hydraulic Model Results Documentation.

I certify that, to the best of my knowledge, the appropriate staff have reviewed and approved this Requisition and no other conditions would prevent approval.

Taco E. Popey AICP

10/11/2021