AMENDMENT #2 TO
BREVARD WWTP PRELMINARY ENGINEERING REPORT
STATEMENT OF WORK

KCI Project No. 412403571

THIS AMENDMENT NO. 1 TO BREVARD WWTP PRELIMINARY ENGINEERING REPORT STATEMENT OF WORK ("**Amendment**") is entered into as of the date of last signature between City of Brevard ("**Client**") and KCI Associates of North Carolina, P.A. ("**KCI**"), hereinafter referred to jointly as the "**Parties**" or singularly as the "**Party**".

1. **Amendment to the Statement of Work**. The following Section of the Statement of Work between the Client and KCI dated July 1, 2024 ("**Statement of Work**") is hereby amended by mutual agreement of the Parties as of the Effective Date:

a) PURPOSE OF AMENDMENT

KCI to provide the following additional services:

7.2	Phase 1: Final Design
7.3	Phase 1: Bidding
7.4	Phase 1: Construction Administration
7.5	Phase 1: RPR
8	Phase 2 & 3 Preliminary Engineering Report
A-1	Funding Assistance Allowance

TASK 7.2: PHASE 1: FINAL DESIGN

- Provide geotechnical investigation of the proposed construction site for use in structural design.
- Prepare detailed design drawings including civil/site, mechanical process, piping and instrumentation diagrams, electrical, structural, and other disciplines as required.
- Perform no-rise modeling study and prepare necessary documents for submission to the Brevard Floodplain Manager.
- Incorporate 30% design review comments into drawings and technical specifications.
- Coordinate with the Client staff and funding agency to prepare Contract Documents ("front-end" documents) conforming with Client and/or funding agency requirements.
- Prepare 60% OPC.
- Deliver 60% Plans, Specifications, Contract Documents, and OPC for Client review.
- Schedule and attend a 60% design review meeting with Client (on-site).
- Incorporate 60% design review comments into Plans, Specifications, and Contract Documents.
- Prepare Final OPC based on 90% Plans and Specifications.
- Update Project Schedule.
- Deliver 90% Plans, Specifications, Contract Documents, OPC, and schedule for Client

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review.

- Schedule and attend a 90% design review meeting with Client (remote).
- Incorporate 90% design review comments into Final Construction Documents (Contract Documents, Plans, and Specifications).
- Deliver Final Construction Documents and application packages, as required, to appropriate review and permitting agencies for approval. KCI assumes agency review is limited to NCDEQ Division of Water Infrastructure for Plan and Specification approval to bid, NCDEQ Water Quality permitting for an Authorization to Construct and Transylvania County for a Floodplain Development Permit.
- Respond to one set of comments from each agency and update Construction Documents accordingly.

Task 7.2 Assumptions:

- Three (3) virtual progress meetings are included in this Task
- Three (3) in-person 3-4 hour workshop will be conducted to review the 60% Plans and Specifications, 90% Plans and Specifications and Final Construction Documents after agency review and approval.

Task 7.2 Deliverables (all in PDF format):

- 60% Plans and Specifications
- 60% OPC
- 90% Plans and Specifications
- 90% OPC
- 90% Contract Documents
- Final Construction Documents for Agency review

TASK 7.3: PHASE 1: BIDDING

- Prepare Contract / Bid Documents and obtain approval to advertise from the City and the funding agencies. It is anticipated that the project will consist of one prime construction contract.
- Coordinate the insertion of an advertisement or invitation to bid in a local newspaper. Notification of the advertisement or invitation to bid will also be sent to area contractors who might be interested in bidding the project.
- Host the Contract / Bid Documents on our website, Quest, for bidders to download.
- Conduct a Pre-bid conference and provide meeting minutes to all plan holders.
- During the bid advertisement / invitation period, provide necessary information to satisfactorily resolve any questions which might arise from potential bidders or equipment/material suppliers.
- Conduct bid opening, review and tabulate all bids received and review the qualifications of any bidder, if deemed appropriate.
- Provide a Recommendation of Award.
- Submit Approval to Award package to NCDEQ.

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Task 7.3 Assumptions:

- One (1) in-person 1-2 hour pre-bid meeting will be conducted for potential bidders.

Task 7.3 Deliverables (all in PDF format):

- Recommendation of Award
- Approval to Award package for NCDEQ approval

TASK 7.4: PHASE 1: CONSTRUCTION ADMINISTRATION (CA)

- Upon authorization to award the construction project, prepare and coordinate the completion and execution of the contract documents. It is anticipated that the project will consist of one prime construction contract.
- Schedule and conduct a pre-construction conference.
- Shop Drawings:
    - Establish and administer a procedure for receiving all tracking all submittals made by the Contractor.
    - Review, approve, or take other appropriate action in respect to Shop Drawings, Samples, and other data in which Contractor is required to submit, but only for conformance with the requirements set for the in the Contract Documents and compatibility with the design concept of the completed project as a functioning whole as indicated by the Contract Documents. Such reviews, approvals, or other actions will not extend to means, methods, techniques, sequences, or procedures of construction or to safety precautions and programs incident thereto.
    - KCI shall meet the review schedule as required by the Contract Documents.
- Construction Site Visits
    - Make periodic site visits to the construction site to confirm that design is completed in accordance with the design documents.
    - Visits shall be appropriate to the various stages of construction and may include attendance at critical activities such as concrete pours.
    - A total of thirty (30) visits is included in the scope. Note that these site visits are exclusive of the routine construction observation included in Task 6 (Resident Project Representative).
- Schedule, prepare for, attend, and conduct progress meetings at the project site to include City staff and Contractor's representative(s). These meetings will normally be held on a monthly basis. Prepare and distribute meeting minutes to all attendees and key team members. A total of twenty-one (21) on-site progress meetings is assumed in the scope, plus three (3) remote meetings during mobilization, demobilization, or other low activity periods.
- Recommend to the City that Contractor's Work be rejected while it is in progress if, on the basis of the KCI's observations, KCI believes that such Work will not produce a completed project that conforms generally to the Contract Documents or that it will threaten the integrity of the design concept of the completed project as a functioning whole as indicated in the Contract Documents.
- Issue necessary clarifications and interpretations of the Contract Documents as appropriate to the orderly completion of Contractor's work. Such clarifications and interpretations will

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be consistent with the intent of and reasonably inferable from the Contract Documents.

- Should the Contractor submit claims related to the project and/or modifications become necessary to meet the City's needs for the project, KCI shall review the claims and/or proposed modifications and advise the City on the approach for resolution of the related issues. KCI shall review justification for all claims for modifications to the project cost and/or schedule and develop recommendations to the City for the fair and equitable resolution of such claims. This will include the review and preparation of Change Orders to the Contract.
- Receive and review certificates of inspections, tests, and approvals required by the Contract Documents. KCI's review of such certificates will be for the purpose of determining that the results certified indicate compliance with the Contract Documents and will not constitute an independent evaluation that the content or procedures of such inspections, tests, or approvals comply with the requirements of the Contract Documents. KCI shall be entitled to rely on the results of such tests.
- Pay Request Review
    - Determine the amounts that KCI recommends the Contractor be paid, based on such observations and review, that, to the best of KCI's knowledge, information, and belief, Contractor's Work has progressed to the point indicated, the quality of such Work is generally in accordance with the Contract Documents, and the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is KCI's responsibility to observe Contractor's Work.
    - By recommending any payment, KCI shall not thereby be deemed to have represented that observations made by KCI to check the quality or quantity of Contractor's Work as it is performed and furnished have been exhaustive, extended to every aspect of Contractor's Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to KCI in this Agreement and the Contract Documents. Neither KCI's review of Contractor's Work for the purposes of recommending payments nor KCI's recommendation of any payment including final payment will impose on KCI responsibility to supervise, direct, or control Contractor's Work in progress or for the means, methods, techniques, sequences, or procedures of construction or safety applicable to Contractor's furnishing and performing the Work. It will also not impose responsibility on KCI to make any examination to ascertain how or for what purposes Contractor has used the moneys paid on account of the Contract Price, or to determine that title to any portion of the Work in progress, materials, or equipment has passed to Owner free and clear of any liens, claims, security interests, or encumbrances, or that there may not be other matters at issue between Owner and Contractor that might affect the amount that should be paid.
- Receive, review, and transmit to the City maintenance and operating manuals, schedules, guarantees, bonds, certificates, or other evidence of insurance required by the Contract Documents, certificates of inspection, tests and approvals, Shop Drawings, Samples, and other data approved as described above.
- Promptly after notice from Contractor that Contractor considers the entire Work ready for its intended use, in company with the City and the Contractor, conduct a pre-final inspection to determine if the Work is substantially complete. If after considering any objections of the City, KCI considers substantially complete, KCI shall deliver a letter

certifying the date of the Substantial Completion to the City and Contractor.

- Prepare a punch list of items for the Contractor to address, assist in resolving punch list items with the Contractor, and perform follow-up visits to verify the satisfactory resolution of all punch list items.
- In company with the City's representative, conduct a final inspection to determine if the completed Work of Contractor is acceptable so that KCI may recommend, in writing, final payment to Contractor.
- Startup Services
    - Prior to final acceptance, observe operational testing of the new WPCP components including: influent pump station, headworks, equalization basin, mixed liquor recycle system, recycle pump station, biosolids handling system, disinfection system, effluent pump station, and effluent and site piping. A total of four (4) one-day startup site visits are included in the scope.
- Based on "as-built" drawings provided by the contractor, prepare final "Record Drawings" and provide to City both a digital PDF copy and one (1) hard copy.
- Arrange for the final inspections with appropriate representatives of the Contractor(s), City, NCDEQ, and other appropriate parties.
- Compile an O&M Manual for the upgraded facility. O&M Manual will address overall facility management; unit process descriptions, design conditions, process narratives, and setpoints; plant operations during normal and emergency conditions; equipment maintenance (including references to manufacturer's manuals and maintenance schedules); and safety.
- Provide related engineering services necessary to complete/close-out the project as required by City, funding agencies, or permitting authorities.

TASK 7.5: PHASE 1: RESIDENT PROJECT REPRESENTATIVE (RPR)

- Provide observations services by a Resident Project Representative (RPR) during construction of the work to ascertain the progress of the work and to ensure general compliance with the contract documents. Observation services shall include an average of 12 hours on-site per week (during the active construction periods, assume 18 months active construction) by a qualified project representative. Additional visits will be provided as required during concrete placement, jacking/boring activities, open cuts of NCDOT roadways, creek crossings, pump station and equipment start-ups, testing activities, and coordination of critical WWTP tie-ins.
- Completion time for all construction activities is anticipated within 550 days of the issuance of a Notice to Proceed to the successful bidder(s).
- Provide a Resident Project Representative (RPR) to be periodically present at the project site to observe and document quality and progress of construction. RPR tasks are inclusive but not limited to the following:
- Report to the City whenever Resident Project Representative (RPR) believes that any part of the Work is defective under the terms and standards set forth in the Construction Contract Documents and provide recommendations as to whether such Work should be corrected, removed and replaced, or accepted as provided in the Construction Contract Documents.

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- Inspections, Tests, and System Start-ups:
    - Consult with the City staff in advance of scheduled inspections, tests, and systems start-ups.
    - Verify that tests, equipment, and systems start-ups and operating and maintenance training are conducted in the presence of appropriate Engineer's personnel, and that Contractor maintains adequate records thereof.
    - Observe, record appropriate details relative to the test procedures and systems start-ups.
- Observe whether Contractor has arranged for inspections required by Laws and Regulations, including but not limited to those to be performed by public or other agencies having jurisdiction over the Work.
- Accompany visiting inspectors representing public or other agencies having jurisdiction over the Work and record the results of these inspections.
- Records:
    - Prepare a report (for each site visit) recording Contractor's hours on the site, subcontractors present at the site, weather conditions, data relative to questions of change orders, work change directives, or changed conditions, site visitors, deliveries of equipment or materials, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures.
    - Photograph (or video when practical) work in progress or site conditions.
- Reports:
    - Furnish to the City periodic reports (monthly) of the progress of the work and of Contractor's compliance with the progress schedule.
    - Furnish to the City copies of inspection, test, and system start-up reports.
    - Review applications for payment with Contractor for compliance with the contract documents and progress of work.
- Completion:
    - Participate in visits to the site regarding Substantial Completion, assist in the determination of Substantial Completion, and prior to the issuance of a Certificate of Substantial Completion submit a punch list of observed items requiring completion or correction.
    - Participate in the visit to the site in the company of Engineer and Contractor, to determine completion of the Work, and prepare a final punch list of items to be completed or corrected by Contractor.

TASK 8 – PHASE 2 & 3 PRELIMINARY ENGINEERING REPORT

- Evaluate up to three (3) treatment technology alternatives utilizing a decision matrix for replacement of the existing 2.5 MGD WWTP capacity and expandability for future flow needs for 3.0 MGD and 4.0 MGD. The equipment decision matrix will consider such factors as:
    - Capital costs
    - Overall footprint
    - Equipment efficiency and energy usage
    - Equipment availability
    - Manufacturing and delivery lead times

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    - Construction sequencing
    - O&M costs
    - Spare parts and maintenance support from the manufacturer
- Preliminary process and hydraulic models will be created for each alternative to confirm feasibility of operation and ability to meet project parameters.
- Conduct a final in-person workshop to review the treatment technology alternatives with Client staff.
- Summarize the workshop conclusions and our final recommendation in a TM for concurrence by the Client.
- After approval of the TM, KCI will prepare a full Preliminary Engineering Report suitable for NCDEQ funding submission.

Task 8 Assumptions:

- Three (3) virtual progress meetings are included in this Task
- Two (2) in-person 3-4 hour workshops will be conducted to review treatment technologies and the engineering alternatives TM (if regionalization partner(s) are identified, intent would be for them to attend this workshop for input/comment).

Task 8 Deliverables:

- Technical Memorandum summarizing treatment technology alternatives.
- Preliminary Engineering Report with proposed treatment technology and equipment alternatives.

TASK A-1: FUNDING ASSISTANCE ALLOWANCE

KCI recommends setting aside an owner-directed allowance for funding assistance to allow KCI to assist in exploring potential funding opportunities with the Client. This task will be billed on a Lump Sum Basis based on the percentage of work completed as authorized by the Client. This could include coordination with existing Division of Water Infrastructure funds, and other potential funding sources (i.e. ARC, WIFIA, SRF, etc.)

EXCLUSIONS AND ADDITIONAL SERVICES

Specific exclusions from the Scope of Services that may be performed as Additional Services at an additional cost are as follows:

1. Preparation of application for individual wetlands permit(s).
2. Additional site visits.
3. Preparation of Environmental Assessments or Environmental Impact Statements.
4. Applicable permit fees (construction, land disturbance, stormwater, etc.).
5. Easement negotiation and preparation of easement documents.
6. New SCADA system design for future upgrades is excluded from Phase 1 scope of services. If Client desires to implement new SCADA system under Phase 1, this can be

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provided for an additional fee.

7. Public road ROW encroachment permit applications.
8. Materials testing (soil compaction, concrete testing, etc.) during construction.

b) The Fee and Payment Section of the Statement of Work is modified as follows:

Task No	Task Description	Duration[1] (Months)	Fee Type Lump Sum / T&E	Estimated Fee
1	*Project Goal Definition*	*1*	*Lump Sum*	*$ 36,900*
2	*Data Collection and Existing Equipment Review*	*1*	*Lump Sum*	*$ 86,100*
3	*Flow Projections and Design Basis*	*2*	*Lump Sum*	*$ 63,000*
4	*Engineering Alternatives Analysis – Site Selection*	*3*	*Lump Sum*	*$ 11,700*
5	*Treatment Technology Evaluation*	*3*	*Lump Sum*	*$ 38,610*
6	*Prepare Final Recommendations and Consolidated Report*	*2*	*Lump Sum*	*$4,800*
7.1	*Phase 1: Preliminary Design*	*4*	*Lump Sum*	*$110,890*
7.2	Phase 1: Final Design	5	Lump Sum	$374,000
7.3	Phase 1: Bidding	2	Lump Sum	$40,000
7.4	Phase 1: Construction Administration	18	Lump Sum	$238,000
7.5	Phase 1: RPR	18	T&E	$189,000
8	Phase 2 & 3 Preliminary Engineering Report	5	Lump Sum	$109,000
A-1	Funding Assistance Allowance	TBD	Lump Sum	$ 25,000
	Total			**$ 1,327,000**

*Tasks in *Gray Italics* were part of Amendment #1

c) Amendment Summary:

Original Contract Amount	$ 352,000
Amount from Previous Amendments	$0
Amount this Amendment	$975,000
Total Revised Contract Amount	**$1,327,000**

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2. **Definitions**. Capitalized terms used and not defined in this Amendment have the respective meanings assigned to them in the Statement of Work.

3. **Statement of Work Remains in Effect**. Except as expressly provided in this Amendment, all of the terms and provisions of the Statement of Work are and shall remain in full force and effect and are hereby ratified and confirmed by the Parties. On and after the Effective Date, each reference in the Statement of Work to "this Statement of Work," "the Statement of Work," "hereunder," "hereof," "herein," or words of like import will mean and be a reference to the Statement of Work as amended by this Amendment.

4. **Counterparts**. This Amendment may be executed in counterparts, each of which is deemed an original, but all of which constitute one and the same agreement. Delivery of an executed counterpart of this Amendment electronically shall be effective as delivery of an original executed counterpart of this Amendment.

KCI:
KCI Associates of North Carolina, P.A.
BY:

_____
Signature

_____
Name

_____
Title

_____
Date

City of Brevard.:
BY:

_____
Signature

_____
Name

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Title

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Date

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