

Baldwin Beach Express
Phase II Complete Plans
(100% Ready To Advertise Construction Plans)

Grade, Drain, Base, Pave and Bridge from Station 868+00 to Station 1142+00

Baldwin County Project No. 0204412

ENGINEERING SCOPE

between

BALDWIN COUNTY COMMISSION

and

PREBLE-RISH, LLC

March 20, 2012

INDEX

ARTICLE I - DEFINITIONS	Page 3
ARTICLE II - DESCRIPTION OF SERVICES	Page 4
ARTICLE III - SCOPE OF WORK	Page 4
Section 1 - Field Study	Page 5
Section 2 – Geotechnical Services	Page 5
Task A: Design Services	Page 5
Section 3 - Contract Plans.....	Page 6
Task A: Roadway Plans	Page 6
Task B: Bridge Plans.....	Page 9
Section 4 – Right-of-Way Map Revisions	Page 9
Section 5 – Utility Relocation.....	Page 10
ARTICLE IV - OBLIGATION OF COUNTY TO THE CONSULTANT	Page 10
ARTICLE V - TIME OF BEGINNING AND COMPLETION	Page 11
ARTICLE VI – PAYMENT	Page 11
ARTICLE VII - MISCELLANEOUS PROVISIONS	Page 12
EXHIBIT A.....	Page 13
SIGNATURE AND NOTARY PAGE.....	Page 14

COUNTY OF BALDWIN

ARTICLE I - DEFINITIONS

The following terms and their definitions shall apply:

- COUNTY** BALDWIN COUNTY, ALABAMA
- COMMISSION** BALDWIN COUNTY COMMISSION
- COUNTY ENGINEER** That person designated by the COMMISSION as COUNTY ENGINEER
- COUNTY ENGINEER'S OFFICE**
Those persons, both professional and non-professional, employed by Baldwin County and performing work at the direction of the County Engineer.
- ALDOT/STATE** Alabama Department of Transportation
- FHWA** Federal Highway Administration
- CONSULTANT** PREBLE-RISH, LLC
- PROJECT** Baldwin Beach Express (G,D,B,P & Bridge Sta. 868+00-1142+00)
Baldwin Project No.0204412
- PHASE 1** Portion of work to be completed under this scope in order for the County to have a complete Right-of-Way map and 60% complete construction plans.
- PHASE 2** Completion of construction plans and ready to bid documents, including Utility Plans and assistance in bidding and letting.

ARTICLE II - DESCRIPTION OF SERVICES

The COUNTY hereby employs Preble-Rish, LLC and the CONSULTANT agrees to perform for the COUNTY all necessary professional engineering services as hereinafter set forth in connection with the PROJECT. Professional engineering services shall include all work necessary for the performance in proper sequence of the items of work as hereinafter set forth.

ARTICLE III - SCOPE OF WORK

The CONSULTANT will perform engineering and field surveys, geotechnical services and prepare contract plans for the proposed Baldwin Beach Express II (from Station 868+00 to Station 1142+00) in a 2-phase process, a total distance of approximately 5.2 miles. This roadway will be functionally classified as a major collector.

Phase 2 will require THE CONSULTANT to provide all services for the preparation of 100% ready to advertise construction plans. Items required for the completion of Phase II including but not limited to: Complete any remaining items from Phase 1

ITEM	PHASE I APPROXIMATE PERCENT COMPLETE	PHASE II PERCENT COMPLETE
Field Survey	100	
Geotechnical (Complete Roadway Materials Report)	80	100
Topographical map / confirmation	60	100
Drainage (Location, Size, Elevations, etc.)	60	100
Bridge TS&L and Bridge Hydraulics	100	
Bridge GP&E and Final Plans	0	100
Utilities	60	100
Roadway plans (including all aspects of plans)	60	100
Right of Way map, sketches and deeds	100	

Cost estimates will also be included in Phase 2 as directed by the COUNTY.

Phase 2 will require the completion of roadway and bridge plans and assistance with bidding and letting services. Phase 2 will require completion of all scope items, including scope items added to this scope (contract).

The applicable work is in connection with:

PROJECT PLAN ASSEMBLY #1: Grade, Drain, Base, Pave and Bridge Baldwin Beach Express II from Station 868+00 to Station 1142+00, a distance of approximately 5.2 miles.

SECTION 1 - FIELD STUDY

The CONSULTANT shall not begin any work on this Section until it receives written authorization by the County. Field Study was performed under Phase 1 Scope. However, additional items of work may be required at the direction of the COUNTY.

SECTION 2 – GEOTECHNICAL SERVICES

The CONSULTANT shall not begin any work on this Section until it receives written authorization by the COUNTY.

Roadway Geotechnical work was performed under Phase 1 Scope. However, additional roadway Geotechnical items of work may be required at the direction of the COUNTY.

TASK A – DESIGN SERVICES

- A-1 Prior to beginning any work on the project, the CONSULTANT and/or his SUB-CONSULTANT will meet with the COUNTY for an orientation concerning the project and an on-site visual inspection of the project. The orientation and visual inspection may be conducted concurrently. During the orientation, the COUNTY will make available to THE CONSULTANT and SUB-CONSULTANT any applicable policies, procedures, sampling frequencies, test methods, guidelines, and specifications.
- A-2 All GEOTECHNICAL services required in this CONTRACT shall be performed for the CONSULTANT by his SUB-CONSULTANT, Geotechnical Engineering Testing, Inc. The CONSULTANT will stake the boring locations for the geotechnical SUB-CONSULTANT.
- A-3 The SUB-CONSULTANT will prepare addendums to the Soils Survey and Materials Reports and Slope Study as required based upon 60% construction plans submitted.
- A-4 The SUB-CONSULTANT will attend meetings or plan reviews as needed.
- A-5 The SUB-CONSULTANT will perform soil borings, sampling, testing and reporting for the bridge foundation, bridge culvert foundation and retaining wall reports in accordance with ALDOT - 398, "Procedure for Conducting Subsurface Investigation & Foundation". (In this instance, COUNTY shall be referred to where ALDOT is referenced throughout the Procedure). Any required temporary access roads, other than by standard forestry mowing operations, constructed to access the boring locations required per ALDOT – 398 will be performed on a cost-plus basis and must be approved by the COUNTY prior to mobilization.
- A-6 In the evaluation of the bridge foundations, the SUB-CONSULTANT shall consider the use of spread footings, piles footings, pile bents, and drilled shafts for foundation support as a minimum.

Borings:

Typically, one boring per substructure unit should be taken to determine the site soil stratigraphy. If the use of drilled shafts is anticipated, the SUB-CONSULTANT should plan to perform a boring for each planned drilled shaft location. Borings should be advanced through unsuitable materials into competent material for bearing capacity support. If artesian flow is encountered while investigating for deep foundations, the foundations must be designed to take into account the projected loss of skin friction due to artesian water flowing up around the foundation.

- A-7 Where applicable, the SUB-CONSULTANT shall provide soil D50 values to the CONSULTANT and COUNTY. Using the D50 soil analysis data the CONSULTANT shall provide the SUB-CONSULTANT and the COUNTY the scour estimate. The SUB-CONSULTANT shall evaluate the foundation alternatives using this scour estimate to calculate the minimum tip elevations at each selected foundation.
- A-8 The SUB-CONSULTANT will address the bridge approaches in the bridge foundation report. This will included all settlement, soft soils, and slope stability issues.
- A-9 The SUB-CONSULTANT will perform soils investigations and prepare bridge culvert foundation reports as needed based upon the 60% construction plans submitted.
- A-10 The SUB-CONSULTANT will perform soils investigations and prepare retaining wall reports as needed based upon the 60% construction plans submitted.
- A-11 The SUB-CONSULTANT's recommendations for the project will adhere to all current COUNTY and ALDOT policies, procedures, guidelines and specifications and will include all supporting documents such as test reports, boring logs, computer printouts and so forth. Prior to formally submitting recommendations for the project, the SUB-CONSULTANT will submit a draft copy of the recommendations to the COUNTY for review and approval. If deemed appropriate, the COUNTY may request a meeting with the SUB-CONSULTANT to discuss the draft recommendations and propose changes or deletions as required. When the COUNTY is in agreement with the SUB-CONSULTANT's recommendations, the SUB-CONSULTANT will formally submit seven copies of the recommendations to the COUNTY. The COUNTY will give final review and approval to the SUB-CONSULTANT's recommendations.

SECTION 3 - CONTRACT PLANS

The CONSULTANT shall not begin any work on this Section until it receives written authorization by the COUNTY.

TASK A - ROADWAY PLANS

THE CONSULTANT will perform the following as applicable:

- A-1 The development of the plans will follow the general procedure as shown in the ALDOT's "Guide for Developing Construction Plans" and "Guidelines for Operation".

- A-2 Study available traffic data to be furnished by the COUNTY, and reaffirm Design Criteria consistent with the policies of the COUNTY, and of criteria established during the design studies.
- A-3 The CONSULTANT will prepare hydraulic designs and supporting calculations according to approved chapters of the ALDOT Hydraulic Manual, otherwise in the absence of direction for the ALDOT Hydraulic Manual in conformity with provisions of the FHWA Hydraulic Circulars or as instructed by the COUNTY.
- A-4 The CONSULTANT will, without compromising safety, select the hydraulic design that is most cost effective from a selection of practicable design alternatives. Designs will comply with the requirements of the COUNTY.
- A-5 Edge of Pavement Profiles with true elevations will be provided in the hydraulic calculations for all horizontal curve transitions and sag vertical curves where curb and gutter sections and/or a paved island is used.
- A-6 The CONSULTANT will prepare Flood Plain Studies for the project to include a "Risk Assessment" and "Risk Analysis" where applicable in the development of designs in accordance with the requirements of Federal Aid Program Guides, 23 CFR 650A. In addition, the form HYD-102 will have to be completed during the preliminary phase of project development.
- A-7 The project plan assembly submitted by the CONSULTANT for hydraulic review will contain no less than the minimum amount of hydraulic and hydrologic data necessary and specified in COUNTY criteria.
- A-8 The CONSULTANT will prepare topographic quad maps showing drainage outfalls and other pertinent project data as required by ADEM for the application of a construction stormwater permit. The CONSULTANT will prepare an erosion control and sedimentation prevention plan including devices and or designs for structural controls that conform with the applicable ADEM regulations regarding the selection and implementation of Best Management Practices (BMPs). The CONSULTANT will prepare an erosion control and sedimentation prevention plan including devices and or designs for structural controls that conform to AASHTO's *Highway Drainage Guidelines, Volume III, Guidelines for Erosion and Sediment Control in Highway Construction (1992)* and to the Alabama Soil and Water Conservation Committee's *Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas (June 2003)*. The CONSULTANT will prepare and submit revised wetland impact areas for the COUNTY to modify COE permit.
- A-9 The project plan assembly will include title, geometric control sheets, summary of quantities, typical section, drainage section, plan and profile sheets, paving layouts, earthwork cross sections, signing, erosion control and sediment prevention and all other sheets required for receipt of bids by the COUNTY for all work including grading, drainage, base and paving and bridge. Drainage structure information will be placed on the plans according to Chapter 2 of the ALDOT Hydraulic Manual, unless otherwise specified. The plans will show all existing topographical features, natural and man-

made, surface and subsurface facilities for the area included in the existing and proposed right-of-way. The contract-plans will be completed in detail for all construction in accordance with current design policies and practices of the ALDOT in effect at the time of the final plan submittal. Side road improvements will be required. Basic computations will be made for alignment and for layout of intersections.

- A-10 Drainage section drawings will be provided for all drains, existing and proposed, along the project centerline and within the project work limit. Streambed data acquired from a field survey should be used where applicable to establish and depict the streambed slope, the drain inlet, the drain outlet and the profile configuration of the ditch or channel as it ties-in to the drain. Drainage outfall improvements are not anticipated, therefore, not included in services to be provided by the CONSULTANT.
- A-11 Prepare designs and detailed contract plans at a horizontal scale of 1 " = 100' and vertical scale of 1 " = 10' and cross sections at 1 " = 20' Horizontal; 1 " = 10' Vertical or as otherwise approved by the COUNTY, completely dimensioned for roadway construction, together with drainage and intersection layouts. Special drawings of complicated intersections may be prepared at scales other than those above as approved by the COUNTY.
- A-12 Prepare estimates of quantities and construction cost for the 100% contract plans, itemized and properly symbolized in accordance with the Standard Specifications noted herein, using unit prices as supplied or approved by the COUNTY on projects of comparable work in the general area of the project, if available. Upon completion of the 100% plans, copies of the quantity computations will be furnished to the COUNTY.
- A-13 Preliminary detailed contract plans and estimates shall be submitted to the COUNTY before the final tracings are completed. The CONSULTANT will prepare Traffic Control Plans for handling traffic during construction that shall conform to the 2009 MUTCD, or current version, and a Sequence of Construction will be prepared for each set of contract plans.
- A-14 The CONSULTANT will coordinate these plans with existing and proposed plans of the COUNTY.
- A-15 The CONSULTANT will be required to prepare plans using size and weight of pens and other drafting techniques that will facilitate the BCHD's development of one-half (1/2) scale drawings.
- A-16 Phase 2 will consist of completing construction plans. The CONSULTANT will provide five (5) sets of plans for a PS&E Inspection, 95% complete review, and a final plan submittal. All submittals shall include a cost estimate, contract documents and design document. Final plans prepared for the COUNTY will be paper plots.
- A-17 The CONSULTANT, at each review stage, and at the completion of this project, will supply all CADD files, and related files, on Compact Disc (CD) with an electronic document listing the contents of each file. The CADD files are required to be completely compatible with the BCHD's current production versions of CADD software,

Bentley's MicroStation V8 and InRoads 2004 (Version 8.5). The InRoads files will include the following: Alignments (.alg files), feature-based Digital Terrain Models (.dtm files), Roadway Templates (.tml files), Roadway Library (.rwl files), and Preferences (Civil.ini and Wysiwyg.ini).

- A-18 The applicable provisions of the *ALDOT Standard Specifications for Highway Construction*, 2012 Edition, or the latest succeeding standard specifications issued by the STATE prior to the time of final plan submission, will apply to all work performed by the CONSULTANT under this CONTRACT. Current ALDOT Special & Standard Drawings, 2009 MUTCD and 2011 "Green Book" 6th Edition, or current, shall be used.
- A-19 The CONSULTANT shall assist the COUNTY in the bidding and letting the project to contract. Services shall include but not limited to attending Pre-Bid Meeting, Bid Opening, Bid Tabulation and contract execution.

TASK B – BRIDGE PLANS

- B-1 Attend hydraulic site inspection with the COUNTY.
- B-2 Design the bridge or bridges based on length as developed in the hydraulic analysis and as approved by the COUNTY.
- B-3 Develop construction plans for the bridge(s) based on current ALDOT design standards.
- B-4 Develop estimated construction cost.
- B-5 Submit plans for review by the COUNTY and applicable agencies. Submittals will include a TS&L (Phase 1), GP&E, and final bridge plans along with the bridge design document.
- B-6 Revise plans as necessary for approval and receipt of bids by the COUNTY.
- B-7 The CONSULTANT and/or his SUB-CONSULTANT will perform any revisions/modifications to the "NO-RISE" report, and or LOMAR (If required), etc.
- B-8 The CONSULTANT and or his SUB-CONSULTANT will perform scour analysis per current ALDOT Specifications and Design Requirements.

SECTION 4 – RIGHT-OF-WAY MAP REVISIONS

The CONSULTANT shall not begin work on this section until it receives authorization from the COUNTY.

- A. The CONSULTANT will be responsible for any map revisions in a timely manner. (This is applicable from Phase I agreement and any map revisions required shall be carried over into Phase II at no additional cost.)

- B. As directed by the COUNTY, the CONSULTANT will stake and flag the required right-of-way in such a manner as to ensure personnel involved with the right-of-way acquisition can show property owners how their property will be affected by the project. Right of way shall be staked two (2) times, at the direction of the COUNTY. Any additional required stakings will be on a cost-plus basis.

SECTION 5 – UTILITY RELOCATION

The CONSULTANT shall not begin any work on this section until it receives written authorization by the COUNTY.

The CONSULTANT will coordinate any required adjustments to utilities with the utility companies involved in accordance with BCHD, ALDOT and FHWA Policies and Procedures as outlined in ALDOT's Utility Manual. Following completion of Phase I Final Review, the CONSULTANT will make the appropriate revisions to the plans, and then submit plans to the utility companies involved to obtain utility relocation information. The CONSULTANT shall make available to the utility companies any electronic files available by the CONSULTANT without modifications for use by the utility company. The CONSULTANT shall conduct necessary reviews and meetings in order to resolve all utility conflicts and to obtain the finalized utility relocation documents. Utilizing the surveyed utilities and the plans sheets developed above, the CONSULTANT shall plot the proposed utilities as provided by the utility owners on the plan sheets, which shall be made part of the final plan assemblies. The CONSULTANT shall ensure that all utility documents conform to BCHD, ALDOT and FHWA's Policies and Procedures. The CONSULTANT shall submit to the COUNTY all finalized utility plans, agreements, estimates, and other required documents for approval and authorization by the COUNTY. The CONSULTANT shall prepare and submit to the COUNTY a Utility Certificate listing the projected time frame for beginning and completion of each utility relocation as outlined in ALDOT Utility Manual.

ARTICLE IV - OBLIGATION OF COUNTY TO THE CONSULTANT

The work to be performed by the COUNTY will include the following:

- A. The COUNTY will, as far as possible, cooperate with the CONSULTANT in making necessary arrangements with public officials and with such individuals as the CONSULTANT may need to contact for advice, counsel, and information.
- B. The COUNTY will circulate required materials to appropriate agencies and governmental bodies for review and receive comments.
- C. The COUNTY will provide the bid document template to the CONSULTANT to revise and modify as applicable to advertise and bid the project.
- D. The COUNTY will secure all appropriate utility agreements and acquire all proposed right-of-way for the project with assistance from the CONSULTANT.

ARTICLE V - TIME OF BEGINNING AND COMPLETION

- A. The CONSULTANT will begin work on the professional services upon written notice to proceed from the COUNTY.
- B. All work included in this SCOPE shall be completed on or before December 6, 2012. No exceptions or extensions will be granted under this scope.
- C. In case the COUNTY deems it advisable or necessary in the execution of the work to make any alteration, which will increase or decrease the scope of work outlined in the SCOPE, the time limit specified herein may be adjusted in accordance with the provisions of EXHIBIT A.

ARTICLE VI – PAYMENT

- A. Phase 2 Design fees shall not exceed \$630,477.65. The CONSULTANT may submit monthly invoices to the COUNTY not to exceed 95% of the fee. Five percent (5%) retainage will be withheld by the COUNTY from the amount earned for work completed under each respective SECTION of ARTICLE I until that particular SECTION is completed and accepted by the COUNTY. Following acceptance by the COUNTY of the work required under a SECTION, the retainage withheld by the COUNTY for that SECTION will be released. The CONSULTANT will be required to submit monthly progress reports regardless of whether an invoice is submitted and whether or not any work is performed during the month.
- B. Phase 2 Geotechnical fees shall not exceed \$121,245.70. The SUB-CONSULTANT may submit monthly invoices to the COUNTY not to exceed 95% of the fee. Five percent (5%) retainage will be withheld by the COUNTY from the amount earned for work completed under each respective SECTION of ARTICLE I until that particular SECTION is completed and accepted by the COUNTY. Following acceptance by the COUNTY of the work required under a SECTION, the retainage withheld by the COUNTY for that SECTION will be released. The CONSULTANT shall submit the SUB-CONSULTANT'S invoice along with the CONSULTANT'S monthly invoice.
- C. If any other SUB-CONSULTANTS, other than the Geotechnical SUB-CONSULTANTS, are used by the CONSULTANT, it shall be the responsibility of the CONSULTANT to pay the SUB-CONSULTANT. The CONSULTANT must obtain written approval from the COUNTY Engineer of any SUB-CONSULTANT prior to utilizing their services.
- D. The acceptance by the CONSULTANT of the final payment will constitute and operate as a release to the COUNTY of all claims and of any and all liability to the CONSULTANT, its representatives and assigns for all things done, furnished or relating to the services rendered by the CONSULTANT under, or in connection with this CONTRACT, or any part thereof, provided no unpaid invoices exist because of extra work required at the request of the COUNTY.

ARTICLE VII - MISCELLANEOUS PROVISIONS

EXHIBIT A attached hereto, is hereby made a part of the SCOPE and the terms and provisions of such exhibits are binding on the parties respectively as fully and completely as they would bind the parties if such terms and provisions were set forth in writing in the SCOPE. References in the aforementioned EXHIBIT referring to the STATE shall be understood to refer to the COUNTY.

EXHIBIT A

CHANGES OF WORK

- a. If during the term of this agreement additional services are required other than those services specified in this agreement, or major changes in the work become necessary or desirable, the COUNTY may, in writing, order the CONSULTANT to perform such services or make such changes, or if the CONSULTANT is of the opinion that the work he was directed to perform is beyond the scope of this agreement and constitutes extra work, the CONSULTANT shall promptly notify the COUNTY in writing of such fact and receive written approval from the COUNTY prior to performing such work. The terms "in writing" and "written approval" may be in the form of normal correspondence such as letters, email, or written conference notes approved by the CONSULTANT and the COUNTY. In the event that the COUNTY determines that such work does constitute extra work, additional terms for completion of contract shall be given and payment for the extra work will be negotiated by supplemental agreement.
- b. **During the term of this agreement, any service in the agreement may be deleted and reduced at the discretion of the COUNTY. If such deletion or reduction becomes desirable, the CONSULTANT will be given advance notice and an equitable reduction in the CONSULTANT's fee will be made on a proportionate basis.**

DELAYS AND EXTENSIONS - TIME PERIOD OF AGREEMENT

In the event that additional work or unavoidable delays prevent completion of the services to be performed under this agreement in the time specified in this agreement, the COUNTY may grant a time extension to any or all phases of the work provided written application is made by the CONSULTANT within ten (10) days after the alleged delay has occurred. In the event the COUNTY determines the time provided for in the agreement for the completion of the work is not sufficient for completion of the work, in keeping with generally acceptable work practices for accomplishment of the work involved, the COUNTY may, at the sole option of the COUNTY, in writing directed to the CONSULTANT, extend the agreement for such time period, or period of time from time to time thereafter as the COUNTY deems necessary for work completion. Writing directed from the COUNTY to the CONSULTANT extending the agreement will be conclusive of the fact that the COUNTY has made the determination of insufficiency of time as above provided.

CONFERENCES, VISITS TO SITE, INSPECTION OF WORK

- a. The parties agree that conferences will be held at the request of COUNTY representatives, or THE CONSULTANT to discuss matters pertinent to any phase of this project. COUNTY representatives may visit the CONSULTANT.'s office during normal working hours with or without advance notice to the CONSULTANT. The CONSULTANT agrees to coordinate the work with the COUNTY throughout all areas and stages as it progresses, assuring that it proceeds expeditiously and is accomplished in an orderly and timely fashion.
- b. The CONSULTANT, when so directed by the COUNTY, agrees to confer with local public agencies, giving consideration to suggestions and plans of such agencies.

IN WITNESS WHEREOF, the parties hereto by and through their duly authorized representatives, hereby acknowledge and agree to abide by the terms and fee amount as stated within the attached scope of work.

COUNTY

_____/_____
Cal Markert, P.E., /Date
COUNTY ENGINEER

CONSULTANT

BY: _____/_____
AS ITS: _____/Date

SUB-CONSULTANT

BY: _____/_____
AS ITS: _____/Date

COUNTY

State of Alabama)
County of Baldwin)

I, _____ Notary Public in and for said County, in said State, hereby certify that, **Cal Markert**, an individual whose name is known to me, acknowledged before me on this day that, being informed of the contents of this agreement, he/she, as **County Engineer of Baldwin County** and with full authority, executed same with full authority to do so.

Given under my hand and official seal, this the ___ day of _____, 2012.

Notary Public

CONSULTANT

State of Alabama)
County of _____)

I, _____ Notary Public in and for said County, in said State, hereby certify that, _____, an individual whose name is known to me, acknowledged before me on this day that, being informed of the contents of this agreement, he/she, as _____ of **Preble-Rish, LLC** and with full authority, executed same with full authority to do so.

Given under my hand and official seal, this the ___ day of _____, 2012.

Notary Public

SUB-CONSULTANT

State of Alabama)
County of _____)

I, _____ Notary Public in and for said County, in said State, hereby certify that, _____, an individual whose name is known to me, acknowledged before me on this day that, being informed of the contents of this agreement, he/she, as _____ of **Geotechnical Engineering Testing, Inc.** and with full authority, executed same with full authority to do so.

Given under my hand and official seal, this the ___ day of _____, 2012.

Notary Public