



Department of Purchasing &
Contracting
1300 Commerce Drive, 2nd Floor
Decatur, Georgia 30030
Fax: (404) 371-7006

Date: July 5, 2019

Request for Quotation No. 19-3003698

BUNKER RENOVATION SERVICES

I. PROPOSED TERM

DeKalb County, Georgia (the County) is requesting a quotation from qualified bidders who can demonstrate substantial experience in Bunker Renovation Services. The County is looking to award a contract for six (6) months to one vendor based on a per square foot cost to perform Bunker Renovation services.

II. ATTACHMENTS

- A. Scope of Work /Minimum Specifications
- B. Quote Form
- C. Reference Form and Reference Check Release Statement
- D. Bidder Affidavit
- E. Insurance Requirements
- F. The Better Billy Bunker Specification

III. PAYMENT TERMS

Net 30

IV. LOCATION

The successful responder will provide an estimate as requested from the DeKalb County Recreation, Parks and Cultural Affairs Department when requested to perform bunker renovation services at Mystery Valley Golf Course located at 6094 Shadow Rock Drive, Lithonia, GA 30058.

The Responder will estimate a per square foot cost for the renovation which includes but is not limited to the removal of existing sand, gravel and drainage tile; minor shaping to the edges, faces, and bottoms as needed; flushing and verification that drainage outfalls are working properly; installation of new

drainage to properly drain bunkers; and the installation of a gravel layer, spray-on Better Billy Bunker liner, and sand per Better Billy Bunker specifications. Sod may be needed to replenish damaged areas from the renovations.

The square footage cost includes all costs incidental to what is defined within the scope of work and the attachment of the Better Billy Bunker Method, Attachment F, which includes approved edging, post testing, Quality Control and maintenance. No additional costs will be approved once the contract is awarded. The cost provided by the responder is a firm, fixed cost which should include all labor, material, transportation, disposal fees, and any other costs associated with the specifications of this RFQ and in Attachment F.

V. FEDERAL WORK AUTHORIZATION PROGRAM

All qualifying contractors and subcontractors performing work with DeKalb County, Georgia must register and participate in the federal work authorization program to verify the work eligibility information of new employees. In order for a Quotation to be considered, it is mandatory that the Bidders Affidavit, Attachment D, be completed with bidder's proposal.

VI. DUE DATE

All questions are due to Jenifer Chapital via email at JChapital@dekalbcountyga.gov on or before 5:00 p.m. EST on Friday, July 12, 2019.

A site visit is scheduled on Thursday, July 11, 2019 at 10:00 a.m. at Mystery Valley Golf Course, 6094 Shadow Rock Drive Lithonia, GA 30058.

Quotes are due on or before 3:00 p.m. Tuesday, July 16, 2019. Bidder must complete and return the quote form, reference form, bidder affidavit and provide a copy of Bidder's valid business license to DeKalb County by email to the attention of Jenifer Chapital at JChapital@dekalbcountyga.gov. **All quotes are to be provided on Attachment B, Quote Form.**

THE COUNTY RESERVES THE RIGHT TO REJECT ANY AND ALL QUOTES, TO WAIVE INFORMALITIES, AND/OR TO RE-ADVERTISE.

Thank you for your interest in doing business with DeKalb County.

Sincerely,



Jenifer Chapital

Procurement Technician

Department of Purchasing and Contracting

ATTACHMENT A

SCOPE OF WORK /MINIMUM SPECIFICATIONS

**Mystery Valley Golf Course
6094 Shadow Rock Drive
Lithonia, GA 30058**

RFQ 19-3003698 for Bunker Renovation Services for Mystery Valley Golf Course.

DeKalb County, Georgia (the County) is seeking a well-qualified contractor to submit qualifications, and pricing for Bunker Renovation Services at Mystery Valley Golf Course.

I. SCOPE OF WORK

The general scope of services required for Bunker Renovation Services includes, but not necessarily limited to the following: labor, material, equipment, supervision, transportation, and other related services. The responder must provide price per square footage to perform the services listed.

The responder is encouraged to visit the golf course and become familiar with local conditions, which may affect the work to be performed, the equipment, materials, and labor required. No additional allowances shall be made due to the lack of knowledge of the conditions at Mystery Valley. **All bunkers located at the golf course may be subject to renovation, so include pricing based on that assumption.**

Recreation, Parks and Cultural Affairs (RPCA) reserves the right to increase or decrease all estimated quantities during the term of this contract or to delete any item or items as it deems appropriate, without affecting the bid pricing or the terms and conditions of the bid.

II. BUNKER RENOVATION SPECIFICATIONS

The specifications are as follows:

1. Clean Out all existing sand, gravel and drainage tile which must be removed and disposed of off-site.
2. The edges, faces, and bottoms must be shaped as necessary to achieve the proper conditions to utilize the Better Billy Bunker method of construction and limit golf ball plugging or “fried egg lies”.
3. The bunker edges must have a minimum of a six-inch vertical lip.
4. The bottoms must be smooth, compacted and properly sloped to achieve excellent drainage. All loose soil must be removed.
5. The floor of the bunkers’ slopes must be equal to or less than the 100% angle of repose of approved sand.
6. Faces may be lowered as needed to achieve desirable results.

7. Drainage trenches must be wide and deep enough to allow a four-inch perforated pipe to be fully enclosed in washed pea gravel (not exceeding ½" in size) and be below the level of the clay bottom of the bunker.
8. The drainage pattern should be such that the perforated drain pipes do not exceed twelve feet from the edge of the bunker or other perforated drain pipe.
9. All connections of perforated drain pipe must be taped and all end of the pipe within the bunker must be capped.
10. Drainage outfalls must allow for gravitational flow of water out of the bunkers.
11. A minimum of a two-inch pea gravel (3/16" – ¼") layer must fully cover the bottom of the bunkers and be brought up within four inches of the edge of the bunkers.
12. The Better Billy Bunker ST410 polymer liner must be applied to dry gravel by a certified and trained installer. Using a proper pressure spray equipment, a uniform layer shall be applied at a rate of one gallon of ST410 Polymer per 30-35 square feet.
13. The polymer shall be allowed to set for 12 to 14 hours prior to inspection for proper applications.
14. Every square foot of the bunker shall be inspected for weak areas and/or loose rock. Any such areas shall be "touched up" with more ST410 Polymer.
15. No exposed edges should be left without sod at the time of or after the application of the polymer.
16. Sand must be installed throughout the bunkers and compacted to a minimum of four inches deep. Care must be taken to avoid damaging the gravel layer, drainage pipes and bunker edges.
17. Sand should be slightly damp when installed.
18. No heavy equipment shall be allowed to cross the edge of the gravel blanket layer.
19. Carts may be driven over sand (minimum of 12") and plywood to assist in sand installation.

Sand Specifications – Pro-Angle Bunker Sand from Bulk Aggregate Golf or equivalent

Color:	White to Pale Yellow
Composition:	Silica or Quartz
Particle Size:	Greater than or equal to 80% in the 0.15mm to 0.5mm range
Predicted Moisture Content:	Greater than or equal to 3.2%
Particle Size:	Low to Medium Sphericity, Angular to Sub Angular
Infiltration Rate:	Greater than or equal to 18 inches per hour
Angle of Repose:	Greater than or equal to 33 degrees
Penetrometer Value:	Greater than or equal to 2.4 in "Fluffed Dry" conditions
Crusting:	Slight to None
Set-up:	Light to None

20. Gravel shall be #89 stone From Bulk Aggregate Golf or equivalent.
21. Washed pea gravel (3/16 inch to ¼ inch in size)
22. Must bridge with approved sand.

Work may be performed during day or night as approved by the RPCA designee and the staff at Mystery Valley Golf Course.

All materials and debris shall be removed from the premises at the end of each workday and disposed of in an appropriate manner. Upon final completion, the awarded vendor shall thoroughly clean up all work areas utilized during service.

All services shall be subject to inspection by RPCA during and after performance of service. The work shall either be approved or if the work is unsatisfactory the area shall be re-cleaned at vendor expense. RPCA at its discretion shall have the right to reject unsatisfactory services and require correction prior to payment.

The RPCA reserves the right to withhold payment to such extent as may be necessary to protect the County from loss due to; work required in the specifications, which is defective, incomplete, or not performed and claims filed.

It is agreed and understood that in the short term, if the responder fails to perform the work as specified herein, RPCA Department (1) will only pay for the amount of service received as determined by RPCA Department with an appropriate downward adjustment in contract price, and/or (2) may have such work completed by RPCA staff or another vendor.

III. PRICING

The successful responder will submit a unit cost per square foot to perform any of the tasks required to successfully fulfill the specifications for this RFQ. The bunkers will be identified once the contract is awarded and will be communicated by DeKalb County personnel. If a site visit is required, no charge for the site visit will be added into the overall project cost.

IV. LICENSES, PERMITS & TAXES

The successful responder shall obtain all required licenses, permits, or other requirements in order to fully perform the scope of work in this RFQ. The successful responder is responsible for contacting 811 prior to any digging at any DeKalb site.

V. UTILITY AND FENCE REPAIR

The successful bidder shall safeguard and repair any damage caused to utility lines and fences during work. If the successful bidder damages utilities and fence due to negligence, the successful bidder is required to pay the full amount of the repair cost.

VI. WASTE AND TRASH REMOVAL

Removal of the successful responder's waste and trash from the site area and transfer to designated waste receptacles will be the sole responsibility of the successful responder. Should it become necessary for the County to remove waste or trash, the successful responder will be billed for all costs associated with trash removal. The County's method of removal shall be at the County's discretion.

VII. MINIMUM QUALIFICATION REQUIREMENTS

The responder must demonstrate the minimum qualifications in order to be considered for award of this RFQ. The successful responder must have a minimum of five (5) Years of experience within the last five (10) years in Bunker Renovation Services. A copy of the responder's company name, either owned or worked for, phone number, location and website. The successful responder must also provide three (3) business references, including both previous managers and customers in which bunker renovation services were performed.

VIII. THE PREMISES

No alterations shall be made or undertaken to the premises without written approval from the Department of Recreation, Parks and Cultural Affairs.

The responder agrees to accept the premises and all buildings, improvements and equipment thereon in their current, as-is condition without any representation, or warranty of any kind by County.

The responder shall not use or permit the use of any portion of the premises for the storage, treatment, use, production or disposal of any hazardous substances or hazardous waste other than those which are store or used in accordance with all applicable laws, rules and regulations.

Contractor agrees not to abandon or vacate the Premises without cause.

TABLE A – LIST OF BUNKER RENOVATIONS PROJECTS COMPLETED

NAME OF GOLF COURSE	SQ. FT. COMPLETED	DATE OF COMPLETION	CONTACT NAME	COST PER SQ. FT.
1.				\$
2.				\$
3.				\$

ATTACHMENT B

QUOTE FORM

The responder, declares that he has carefully examined, RFQ#19-3003698, Bunker Renovation Services for Mystery Valley Golf Course, the Scope of Work contained, and that he proposes and agrees that if his quote is accepted, to provide the necessary services, furnish all materials and labor specified in the RFQ necessary to complete the Work in the manner therein specified within the time specified, as therein set forth for the following Estimated Cost Per Sq. FT. amount which sum is hereinafter referred to as the "Total Quote."

Bunker Renovation Services

_____	Total Quote \$ _____
(State amount in writing on this line)	(In figures)

ATTACHMENT C

Reference Form and Reference Check Release Statement

List below three (3) business references, including both previous managers and customers in which bunker renovation services were performed. Include company name, contract period, contact name, email address and telephone number of the individual who can verify your experience and ability to perform the type of services listed this RFQ.

Company Name/Golf Course Name	Contract Period
Contact Person Name and Title	Telephone Number (include area code)
Email Address	
Project Name:	

Company Name	Contract Period
Contact Person Name and Title	Telephone Number (include area code)
Email Address	
Project Name	

Company Name	Contract Period
Contact Person Name and Title	Telephone Number (include area code)
Email Address	
Project Name	

REFERENCE CHECK RELEASE STATEMENT

You are authorized to contact the references provided above for purposes of this RFQ.

Signed _____

Title _____

(Authorized Signature of Responder)

Company Name _____ Date _____

ATTACHMENT D

BIDDER AFFIDAVIT

By executing this affidavit, the undersigned verifies its compliance with O.C.G.A. § 13-10-91, as amended, stating affirmatively that the bidder submitting a bid, contractor, firm or corporation which is contracting with DEKALB COUNTY, GA, a political subdivision of the State of Georgia, has registered with and is participating in a federal work authorization program* [any of the electronic verification of work authorization programs operated by the United States Department of Homeland Security or any equivalent federal work authorization program operated by the United States Department of Homeland Security to verify information of newly hired employees, pursuant to the Immigration Reform and Control Act of 1986 (IRCA), P.L. 99-603, in accordance with the applicability provisions and deadlines established in O.C.G.A. § 13-10-91, as amended]. The affiant agrees to continue to use the federal work authorization program throughout the contract period.

The undersigned further agrees that, should it employ or contract with any subcontractor(s) in connection with the physical performance of services pursuant to this contract with the COUNTY, contractor will secure from such subcontractor(s) similar verification of compliance with O.C.G.A. § 13-10-91, as amended, on the Subcontractor Affidavit form. Contractor further agrees to maintain records of such compliance and provide a copy of each such verification to the COUNTY, within five (5) days from when the subcontractor(s) is retained to perform such service.

BY: _____
Authorized Officer or Agent
(Bidder's Name)

Federal Work Authorization
Enrollment Date

Title of Authorized Officer or Agent of Bidder

Identification Number

Printed Name of Authorized Officer or Agent

Company Name & Address (do not include a post office box)

SUBSCRIBED AND SWORN
BEFORE ME ON THIS THE

_____ DAY OF _____, 20__

Notary Public

My Commission Expires: _____

Purchasing & Contracting Form No. 25, 7/28/00

ATTACHMENT E

INSURANCE REQUIREMENTS

IMPORTANT NOTICE

IMPORTANT — PLEASE READ CAREFULLY & FOLLOW INSTRUCTIONS LISTED HEREIN

- A. The Contractor shall, without expense to the County, provide certificates of insurance, and copies of signed insurance policies including declarations pages from companies that are authorized to engage in the insurance business in the state of Georgia and are otherwise acceptable to the County Finance Director or his/her designee, attached hereto as Attachment H. Such insurance shall be placed with admitted insurers that maintain an A.M. Best's rating of not less than A (Excellent) with a Financial Size Category of VII or better with coverage forms acceptable to Contractor. The insurance described below shall be maintained uninterrupted for the duration of the project, including any warranty periods, and shall protect Contractor, and others as required by contract, for liabilities in connection with work performed by or on behalf of Contractor, its agents, representatives, employees or Contractors.

- (1) *Workers Compensation Insurance.* Statutory workers compensation insurance is to be provided in compliance with the requirements of Georgia law with limits not less than the following:

Employer's liability insurance by accident, each accident	\$1,000,000
Employer's liability insurance by disease, policy limit	\$1,000,000
Employer's liability insurance by disease, each employee	\$1,000,000

- (2) *Commercial General Liability Insurance.* **Commercial general liability insurance is to be provided with limits not less than the following:**

\$1,000,000 per occurrence for bodily injury and property damage liability
\$1,000,000 personal and advertising injury liability
\$2,000,000 general aggregate
\$2,000,000 products-completed operations aggregate
\$ 100,000 damage to rented premises (each occurrence)
\$ 5,000 medical expense (any one person)

- (3) *Umbrella or Excess Insurance.* Umbrella or excess insurance is to be provided with General Liability, Auto Liability and Employers Liability scheduled as underlying policies with limits not less than the following:

\$5,000,000 per occurrence
\$5,000,000 aggregate

(4) *Comprehensive Automobile Liability Insurance.* Comprehensive automobile liability insurance with form coverage is to be provided for all owned, non-owned and hired vehicles with combined single limit of \$1,000,000. Automobile liability insurance shall be written on ISO Business Auto Coverage Form CA 0001 (1990 edition or later), or a substitute form providing equivalent coverage, and shall cover liability for bodily injury and property damage arising from the use or operation of any automobile, including those owned, hired or otherwise operated or used by or on behalf of Contractor. The policy must include Broadened Pollution Liability Endorsement CA9948 12 93.

(5) *Builder's Risk Insurance Coverage (If Applicable).* DeKalb County shall procure and maintain Builders Risk Insurance on the entire work which provides "All-risk" form that shall at least include insurance for physical loss or damage to the Work, temporary buildings, falsework, and materials and equipment in transit, and shall insure against at least the following perils or causes of loss: fire, lightning, extended coverage, theft, vandalism, malicious mischief, earthquake, collapse, debris removal, demolition occasioned by enforcement of Laws and Regulations, water damage (other than caused by flood), and such other perils or causes of loss as may be specifically required by Supplementary Conditions) until Final Completion and Acceptance of the Project. Such policy of insurance shall contain at least the following sub-limits of insurance and deductibles:

Sub-limits:

Property in Transit	\$1,000,000
Property in Offsite Storage	\$1,000,000
Plans & Blueprints	\$25,000
Debris Removal	25% of Insured Physical Loss
Delay in Completion / Soft Cost	TBD
Ordinance of Law (Increased Cost of Construction)	\$1,000,000
Flood and Earthquake	TBD – Full Contract Value
Deductibles:	
Flood and Earthquake	\$25,000
Water Damage other than Flood	\$100,000
All other Perils	\$10,000

D. The County, its elected officials, officers, employees and agents, hereinafter referred to in this article and in the article entitled "Certificates of Insurance" as "the County and its officers" are to be named as additional insured on all policies of insurance except worker's compensation insurance with no cross suits exclusion. The County and its officers shall be included as additional insureds under commercial general liability and commercial umbrella insurance, for liabilities arising out of both the ongoing and completed operations of Contractor.

Such additional insured coverage shall be endorsed to Contractor's policy by attachment of ISO Additional Insured Endorsement forms CG 20 10 10 01 (ongoing operations) and CG 20 37 10 01 (products-completed operations), or form(s) providing equivalent coverage.

- E. All coverages required of the Contractor will be primary over any insurance or self-insurance program carried by the County.
- F. If the Contractor is a joint venture involving two (2) or more entities, then each independent entity will satisfy the limits and coverages specified here or the joint venture will be a named insured under each respective policy specified.
- G. In addition to procuring and maintaining commercial general liability insurance, automobile liability and commercial umbrella insurance, for the Contract Term, Contractor shall continue to procure and maintain the products-completed operations liability insurance coverage and commercial umbrella insurance after the Work is substantially complete for the entire Contract Term or for the applicable five-year statutory limitation, whichever is greater. For such period of time, all terms and conditions of such coverage shall remain unchanged, including the limits specified herein and the requirement to provide the County with coverage as an additional insured.
- H. Contractor agrees to waive all rights of subrogation and other rights of recovery against the County and its officers and shall cause each Subcontractor to waive all rights of subrogation for all coverage.
- I. Failure of the County to demand such certificate or other evidence of full compliance with these insurance requirements or failure of the County to identify a deficiency from evidence provided will not be construed as a waiver of the Contractor's obligation to maintain such coverage.
- J. Contractor understands and agrees that the purchase of insurance in no way limits the liability of the Contractor.

CERTIFICATES OF INSURANCE

- A. Certificates shall state that the policy or policies shall not expire, be cancelled or altered without at least sixty (60) days prior written notice to the County. Policies and Certificates of Insurance listing the County and its officers as additional insureds (except for workers' compensation insurance) shall conform to all terms and conditions (including coverage of the indemnification and hold harmless agreement) contained in this Contract.
- B. The Contractor agrees to name the County and its officers as additional insured on the commercial general liability insurance, using the ISO Additional Insured Endorsement forms CG20101001 (ongoing operations) and CG20371001 (products-completed operations) forms, or form(s) providing equivalent coverage.

- C. Certificates of Insurance must contain the policy number, policy limits, and policy expiration date of all policies issued in accordance with this Contract; the location and operations to which the insurance applies. Certificates must be provided annually for the duration of the project. If applicable, a specific statement must be included that blasting coverage is included to the extent such risk is present; that Contractor's protective coverage applies to any Subcontractor's operations; and Contractor's contractual liability insurance coverage applies to any Subcontractor.
- D. This insurance for the County as the additional insured shall be as broad as the coverage provided for the named-insured Contractor. It shall apply as primary insurance before any other insurance or self-insurance, including any deductible, non-contributory, and waiver of subrogation provided to the County as the additional insured.
- E. The Contractor shall be wholly responsible for securing certificates of insurance coverage as set forth above from all Subcontractors who are engaged in the Work.

- F. If the County shall so request, the Contractor will furnish the County for its inspection and approval such policies of insurance with all endorsements, or confirmed specimens thereof certified by the insurance company to be true and correct copies.
- G. Contractor shall be responsible and have the financial wherewithal to cover any deductibles or retentions included on the certificate of insurance.
- H. Such certificates should be sent to the County and must identify the "Certificate Holder" as follows:

DeKalb County, Georgia
Director of Purchasing & Contracting
The Maloof Center
1300 Commerce Drive, 2nd Floor
Decatur, Georgia 30030



The Better Billy Bunker Specification

Sand Selection for Bunker

Testing procedure of the bunker sand must be completed in accordance with the specifications for proper particle size, color, drainage characteristics, angularity, angle of repose and bridging with the drainage stone. A "column test" can also be one of the tests on the sand to determine the perched water table over the approved stone. The goal is to have at least an inch of dry sand above the perched water table. It is also important to determine the angle of repose to be tested while the sand is relatively dry. A simple method is to pile the sand on a level surface and measure the angle of the pile using a measuring device such as a calibrated digital level. Testing of the sand and its characteristics should be accomplished by an accredited lab prior to final selection.

Subgrade of Bunker

The subgrade of the bunker shall be graded or shaped or reshaped in according to plans and artistic shaped as described by the golf course architect. The floor of the bunker's slopes where bunker sand will ultimately be placed must be equal to or be less than 100% of the angle of repose of the tested sand (80% of the sand's angle of repose is suggested). The floor should be smooth and compacted.

Drainage

The floor of the bunker must have excavated drainage trenches that are wide enough so that the perforated drain pipe can be installed and surrounded by gravel. The pattern is such that the perforated drain pipes do not exceed 12' (4M) from the edge of the bunker or from other perforated drain pipe. All loose soil shall be removed so that the floor of the bunker is smooth.

A four-inch (101 mm) or greater perforated drain pipe should be installed in the trenches and be surrounded by pea gravel. Gravel surrounding the pipe shall be washed pea gravel as approved and not exceeding ½" (12mm) in size. A locator wire shall then be laid and connected in the trench with the perforated drain pipe system.



Gravel Blanket Layer

A layer of clean approved pea gravel (3/16"-1/4") (4.5mm-6mm) shall be placed over the entire floor of the bunker 2" (two inches) (51mm) deep. This gravel should be brought up within 4" of the edge of the bunker (to account for 4" of bunker sand). The gravel selected is to be tested by an accredited soils lab for bridging with the selected sand. This common criterion is based on engineering principles that rely on the largest 15% of the sand particles "bridging" with the smallest 15% of the gravel particles. The gravel must be placed evenly and raked smooth.

ST410 POLYMER Binder Application

ST410 POLYMER shall be sprayed by a certified and trained installer. Using proper pressure spray equipment, a uniform layer of ST410 POLYMER shall be applied to the gravel in the bunker at a rate 1 gallon of ST410 POLYMER per 30-35 square feet. The gravel must be dry (less than 15% as tested by the certified installer) at application time. The treated bunker shall be allowed to cure for approximately 24 hours prior to sand installation. NOTE: ST410 POLYMER will penetrate approximately ½ - 1" (12mm - 25mm) depth of the gravel. A sturdy pliable layer of glued gravel will be the result.

Sand Installation

The tested and approved bunker sand is installed in the bunker and compacted at least four inches deep. Care must be taken to prevent damage to the gravel layer, perforated drain pipe, and bunker edge while sand is being installed.

Existing fabric liners

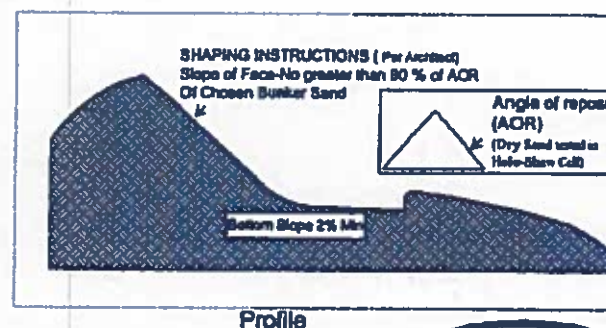
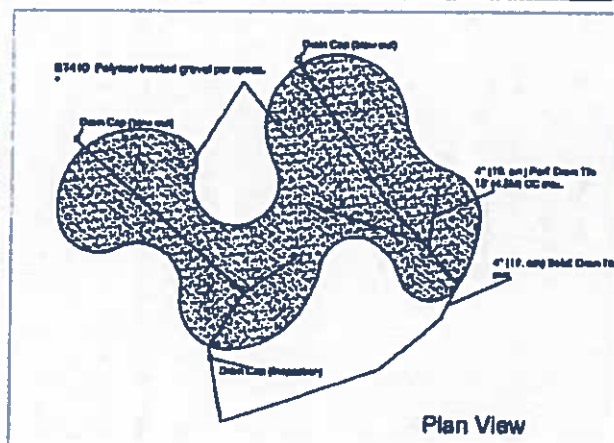
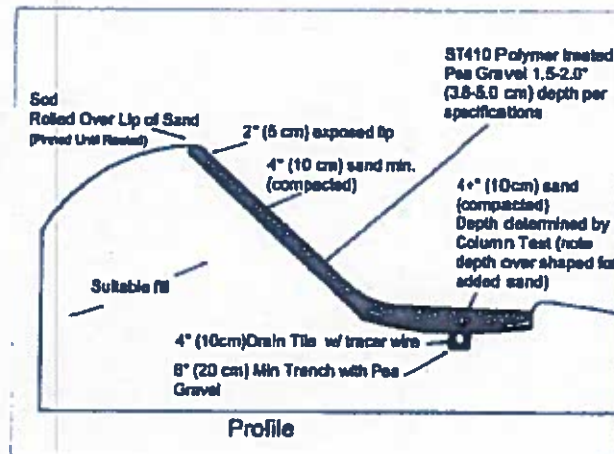
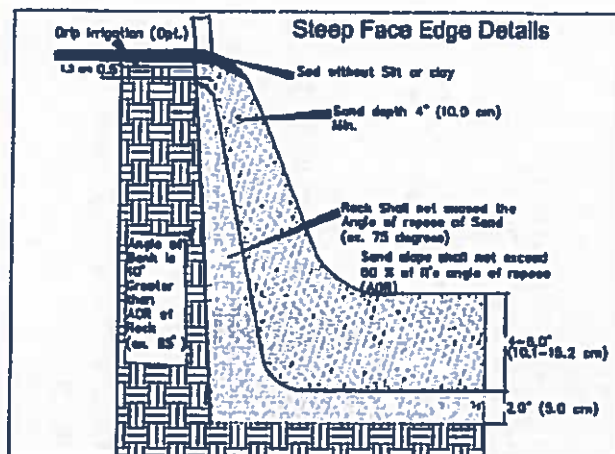
(OPTION – not required) The architect or owner may elect to keep part of an existing liner in a bunker should it be deemed beneficial. The liner will act only as a barrier between the subgrade and the gravel layer. All sand should be total removed above the liner and the two inch layer of stone placed over the liner. No liner should be left over trenches or within three feet of any edge. If a liner is left in an existing bunker it should be smooth and secure in a manner so that it is never exposed. In all cases, BBB Inc. will be notified that an existing liner is to remain.

Sodding

Washed turf grass sod is preferred and is to be placed around the bunker as shown in the approved profiles. Unwashed sod may be used as approved by the golf course architect as long as no contamination will occur. No exposed soil edges should be left without sod or treated gravel or the sand will become contaminated.

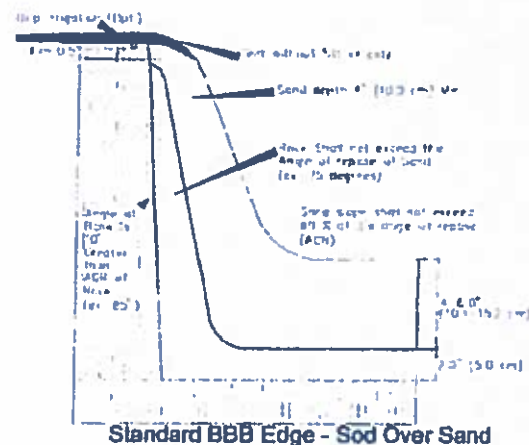


Better Billy Bunker Construction Method with Steep Faces

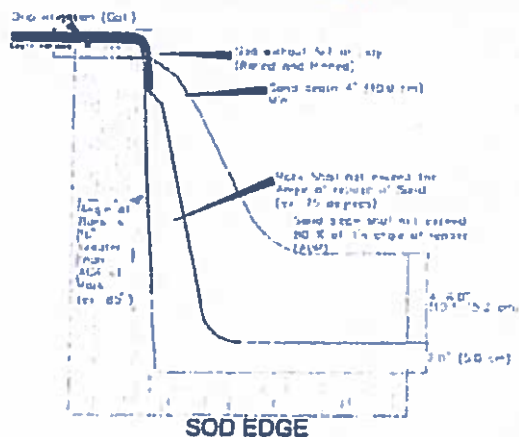




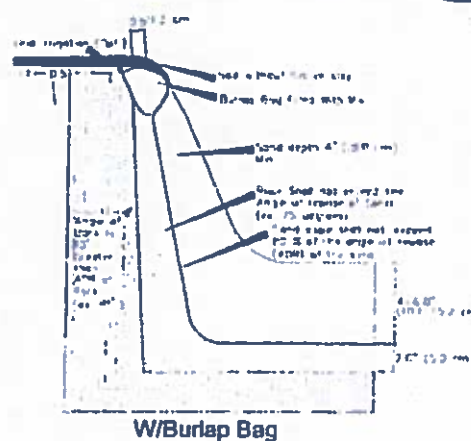
Better Billy Bunker Approved Edges



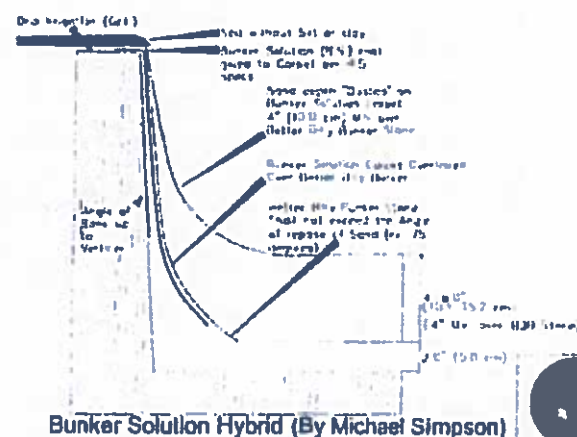
Standard BBB Edge - Sod Over Sand



SOD EDGE



W/Burlap Bag



Bunker Solution Hybrid (By Michael Simpson)





Post-Testing, Quality Control, and Maintenance

Inspection and Quality Control

After 12-24 hours, the ST410 POLYMER application will have cured and an inspection must occur

Every Square foot (meter) of every bunker MUST be inspected prior to the job being considered complete.

Improper application can leave areas weak and rock loose. Those areas must be touched up with more ST410 POLYMER.

Loose rock on the soil or grass next to the bunker that was not treated must be blown away from the bunker or the sand will be contaminated.

It is installer's responsibility to inspect and maintain the highest standards on when installing the Better Billy Bunker.



Sand Installation

Once the bunkers have been inspected and are deemed to be ready for sand, and the ST410 POLYMER has cured for 24 hours, sand may be installed. Sand should always be installed when it is slightly damp. Dry sand should never be installed in the Billy Bunker gravel floor. Installing dry sand will allow some particles to move through the glued stone and may reduce the drainage capabilities of the gravel. Sand may be installed in a number of methods, but at no time may any heavy equipment be allowed to cross the edges of the stone.

Small pronovost wagons with light loads may be used to dump sand along the sides of the bunkers. Once an adequate amount of sand is in the bunker, plywood may be placed over at least twelve inches of sand and the carts may run over the sand and plywood. Conveyor augers are a very good way to install the sand in the bunkers. The installer must make sure that the sand is moist when installing sand using a conveyor.

Sand Compaction

The sand should be compacted in a manner that is consistent with normal practices. We do suggest using a plate tamper on wet sand. Some sands may require no tamping. The lab that did the testing will likely have a recommendation.