

PUBLIC NOTICE  
CITY OF SPRINGFIELD  
BID #1056

The City of Springfield on behalf of The Legacy Golf Course will be accepting sealed bids for the following: BUNKER RENOVATION. Call Chet Frazier, GM of The Legacy, at 615-384-4653 for complete bid information and instructions. Specifications can also be downloaded at [www.springfield-tn.org](http://www.springfield-tn.org). Bids must be received in the Office of the City Recorder, City Hall, 405 N. Main St., Springfield, TN 37172 by 2:00 PM, Local Time, Wednesday, March 7, 2018, when bid packages will be publicly opened and read aloud. The City of Springfield reserves the right to reject any and all bids.

Lisa H. Crockett  
City Recorder

**THE LEGACY GOLF COURSE  
BUNKER RENOVATION SPECIFICATIONS**

**SCOPE OF WORK:**

The City of Springfield is requesting sealed bids from golf course construction companies for the renovation of golf course bunkers at The Legacy Golf Course at 100 Ray Floyd Drive, Springfield, TN 37172. The project will include the renovation of approximately 10,000 square feet of bunkers utilizing the Better Billy Bunker Method of construction. The Legacy may choose to renovate additional bunkers if funds are available. All bidders must be certified by Better Billy Bunkers to install the patented Better Billy Bunker polymer liner or subcontract the installation of the liner to a certified installer.

As a municipally owned and tax-exempt facility, The Legacy will purchase the bunker sand and gravel necessary to complete the project. The contractor will be given authority to contact sand and gravel vendors to order materials and schedule deliveries. The contractor will be responsible for providing all other materials as well as equipment, tools and labor.

The intent of this project is to renovate the existing bunkers. There will be no relocation, reshaping or addition of bunkers.

**SUBMITTALS:**

Contractor shall provide the following materials in the sealed bid submittal:

- A. Proof of certification by Better Billy Bunkers.
- B. Timeline for completing the project.
- C. Project cost analysis including:
  1. Mobilization Fee
  2. Cost per square foot to renovate bunkers per specification (excluding sand and gravel cost)
  3. Cost per linear foot to replace drainage outfall pipe if necessary

**RENOVATION SPECIFICATIONS:**

Better Billy Bunkers has developed a golf course bunker construction method which includes their patented polymer liner. This project shall meet all required specifications by Better Billy Bunker. Please see attached Better Billy Bunker specifications. All existing materials shall be removed and disposed of on site. Drainage outfalls shall be tested for proper water flow and deficiencies shall be corrected. Edges and bottoms shall be shaped to achieve proper depth and drainage qualities as required to meet Better Billy Bunkers specifications. Drainage materials, gravel, liner and sand shall be installed as specified by Better Billy Bunkers.

**TIMELINE**

The management of The Legacy is aware that the completion date of this project will depend on the availability of the contractors. It is our goal to start the project as soon as possible after the award of the bid. It must be completed by June 30,2018.

**RIGHT OF REFUSAL:**

The City of Springfield reserves the right to reject any and all bids.



## **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.

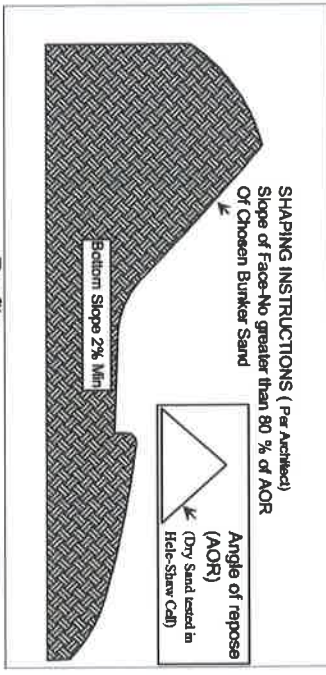
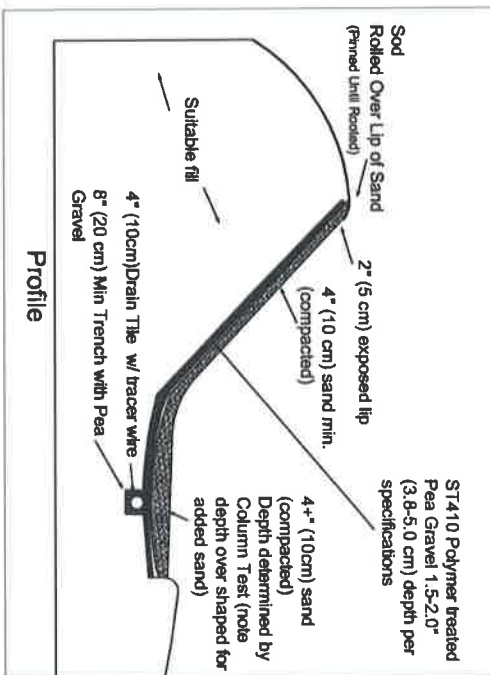
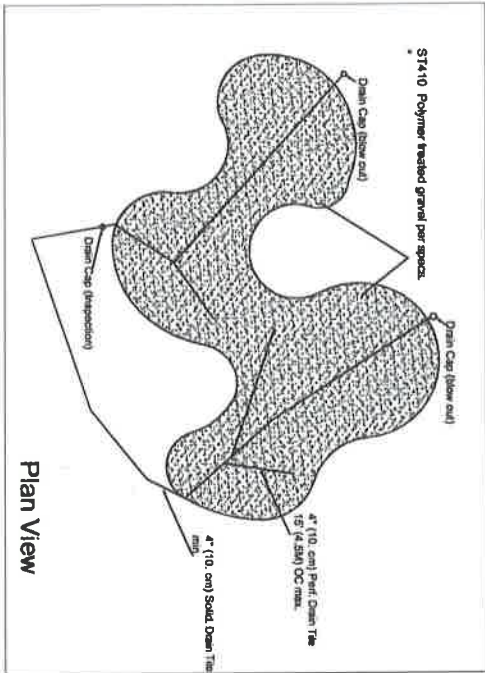
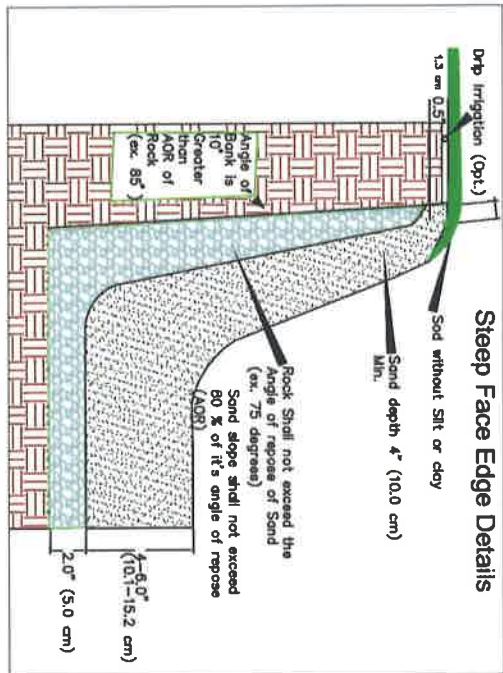
### **Existing fabric liners**

(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**

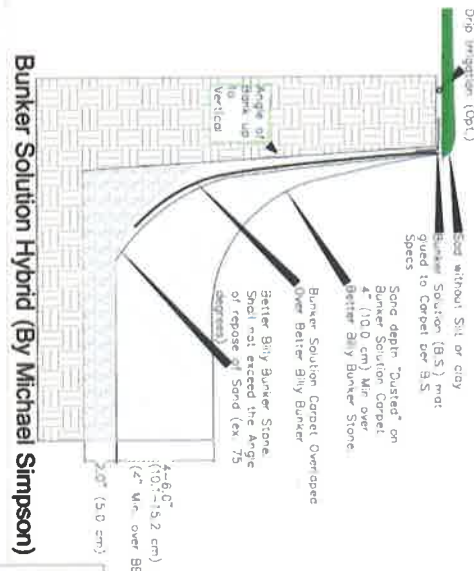
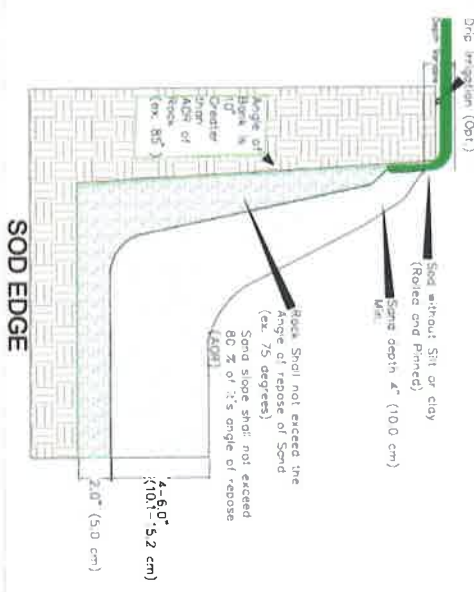
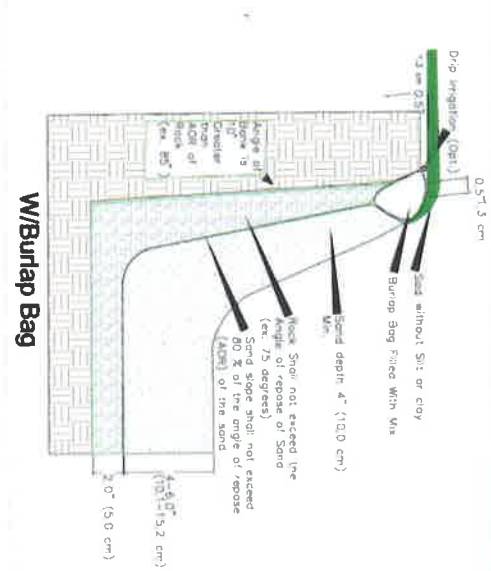
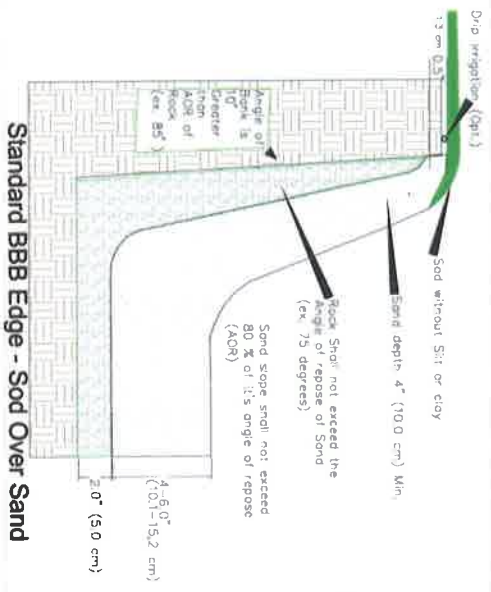
Washed turf grass sod is preferred and is to be placed around the bunker as shown in the approved profiles. Unwashed sod may be used as approved by the golf course architect as long as no contamination will occur. **No exposed soil edges** should be left without sod or treated gravel or the sand will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

## Better Billy Bunker Construction Method with Steep Faces





# Better Billy Bunker Approved Edges







## **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.





## MAINTENANCE PROGRAM FOR BETTER BILLY BUNKERS

### Sand Levels

A minimum depth of **four inches** (102mm) of sand shall be maintained in **all bunkers at all times**.

The selected sand for your bunkers has been tested for your bunkers. One of the tests is a "Column Test" or water release curve analysis which determines the level at which water perches in your sand's profile. For best performance, follow the lab's recommendation so that you will have about 1/4 inch (6mm) of dry sand in the entire bunker and firm moist sand below. If a Column test was not performed, you may easily determine the proper depth based on field observations.

Consistent depths of sand will give the best bunker playability. If the bottom area of a bunker is wet and edges are at the proper moisture during the entire day, adding 1" more sand to the wet areas typically produces a consistent drying.

All bunkers must be probed on a regular basis to ensure proper sand depth. If thin areas of sand are discovered by staff or by golfers, sand depth should be corrected immediately.

### Edging

The first year of a new bunker's maintenance should not include much edging, but allow grass to encroach into the sand a few inches. In the second year, edging can occur into the white sand that will have by then established roots in the pure white sand.

Edging bunkers should be accomplished with string trimmers only; do not use metal blade edging devices to trim around bunker edges.

NEVER edge into soil. This will cause contamination of the sand with soil and void the warranty of your Better Billy Bunker system.

If a weak or damaged spot in the gravel layer ever occurs, it should be repaired immediately by contacting your certified installer.

In the event of a heavy rain event that causes sand to move off the slopes, sand should be replaced immediately to avoid golfers and equipment hitting the exposed rock layer.



### **Raking**

You may rake your bunkers with a hand rake or power rake (Sand Pro Type) as often as you wish. Avoid hitting any edges and disrupting sod or soil that might cause contamination.

Always rake the edges by hand to prevent potential contamination.

Be cautious of entering and exiting bunkers with equipment so as not to disrupt edges.

It is our recommendation that bunkers be raked with toothed leaf rake (hand or power rake) as often as needed to maintain proper aeration within the sand to avoid algae or weed buildup. Leaf rake attachments may help fluff wet areas and assist in drying to produce the desired playing surface. This also helps reduce algae.

Cultivating bunkers too deep and aggressively will result in wet sand and fried egg lies. Keep bunkers firm below. You can manipulate how your sand play by the frequency and depth of raking and type of implement used.

Your new bunkers will require much less maintenance and we encourage you to minimize raking to an as-needed basis as opposed to raking daily or 3 or more times a week. Raking footprints only may be needed - this will not only save labor cost, but also provide great bunkers.

### **Drying**

In some climates and seasons, sands may tend to become dryer deeper than 1" (which is most desired.) Irrigation for turf alone may not re-wet the sand to a good depth that will prevent golf balls from burying. Hand watering and compacting may help reduce the "fried egg lies" caused from excessively dry sand. Wetting agents that help sand (soils) retain water can also be helpful.



### Better Billy Bunker Method 10-Year Limited Product Warranty Agreement

Better Billy Bunker, Inc (BBBI) warrants its Better Billy Bunker branded product to the Customer (End User), for Product purchased and installed globally, in the manner and subject to the limitations hereafter set forth.

The term of this Limited Product Warranty is ten (10) years ("Limited Warranty Period"). For Product purchased and installed directly by a licensed BBBI certified installer, the Limited Warranty Period begins on the date of installation.

The Limited Product Warranty does not cover any ancillary products such as gravel, sand, sod, seed or other bunker related products. It is also further limited as follows:

1. During the Limited Warranty Period, BBBI will provide product support in the form of reviewing and recommending product installation and maintenance guidelines. Failure to comply with these recommendations will void this warranty. The scope of technical support consists of helping the Customer diagnose and resolve problems with potential defects in the product covered by this Limited Product Warranty and to determine if all installation and maintenance guidelines have been followed. On request, BBBI will provide technical support in advance of the installation process to ensure all installation guidelines are followed. BBBI IS NOT THE COMPANY RESPONSIBLE FOR THE INSTALLATION OF ITS PRODUCTS. ANY FAILURE TO COMPLY WITH THE INSTALLATION GUIDELINES BY THE BBBI BY A BBBI CERTIFIED INSTALLER WILL VOID THIS WARRANTY.
2. During the Limited Warranty Period, BBBI warrants that its ST410 POLYMER Product will be free from defects in materials and workmanship. During the Limited Warranty Period, BBBI will, at its option [i] provide replacement product necessary to repair the defective area, or [ii] provide technical assistance to repair the defective area. Replacement product will not include any ancillary products such as gravel, sand, sod, seed or other related products. Replacement ST410 POLYMER product will be provided once [i] the defective product area is confirmed by an on-site inspection by BBBI, or [ii] the defective product area is shipped back to BBBI at the Customer's expense for review by BBBI.
3. This Limited Product Warranty does not cover any misuse or minor imperfections or variations that meet design specification or imperfections that do not materially alter or affect functionality.
4. This Limited Product Warranty does not cover and BBBI is not responsible for:
  - a. Damages caused by misuse, abuse, accidents, fire, theft, disappearance, misplacement, extended sunlight exposure, acts of God (including, but not limited to: earthquakes, floods, tornadoes), reckless, willful, or intentional conduct.
  - b. Damages caused by improper maintenance methods.
  - c. Damages caused by usage that are not in accordance with the Product under normal use as instructed in the installation and maintenance guidelines.
  - d. Product installations where the bunker is not entirely (100%) covered by the Product and covered with at least four inches of sand at all times.
  - e. Cosmetic damage that does not affect functionality.
  - f. Any extreme pressures or stresses from mechanized equipment or any other source
5. Implied Warranties. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY COVERING DAMAGES OR LOSS OF BUSINESS INCURRED BY END USER PERCEIVED AS CAUSED BY PRODUCT DEFECT IS EXCLUDED.
6. Limitation of Warranty. BBBI SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY. BBBI's maximum liability is limited to a Pro Rated Replacement Schedule of 10 years. BBBI is not responsible for matters beyond its control, including without limitation, bunker maintenance costs, equipment damage, sand replenishment, interruption of business, lost profits, and all other consequential, punitive or special damages.

BBBI MAKES NO WARRANTY OF ANY KIND OTHER THAN THOSE CONTAINED HEREIN AND HEREBY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES. THIS WARRANTY BECOMES AN OBLIGATION OF BBBI ONLY UPON RECEIPT OF FINAL PAYMENT FROM THE CUSTOMER. This limited product warranty and all sales of the products shall be governed by the laws of the state of Tennessee, USA, without regard to conflicts of laws rules.

Contact Information: Please send correspondence about this Agreement to Better Billy Bunkers Inc, Attention: Jerry Lemons, 325 Hurst Drive, Old Hickory, Tennessee 37138.

# IRAN DIVESTMENT ACT NOTICE

Tenn. Code Ann. § 12-12-106 requires the chief procurement officer to publish, using credible information freely available to the public, a list of persons it determines engage in investment activities in Iran, as described in § 12-12-105.

For these purposes, the State intends to use the attached list of “Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann §§ 11-57-10, et. Seq.”

While in conclusion on the list would make a person ineligible to contract with the state of Tennessee, if a person ceases its engagement in investment activities in Iran, it may be removed from the list.

If you feel as though you have been erroneously included on this list, please contact the Central Procurement Office at [CPO.Website@tn.gov](mailto:CPO.Website@tn.gov).

HENRY MCMASTER, CHAIR  
GOVERNOR  
CURTIS M. LOFTIS, JR.  
STATE TREASURER  
RICHARD LUCKSTROM, CPA  
COMPTROLLER GENERAL



HUGH K. HATHERMAN, SR.  
CHAIRMAN, SENATE FINANCE COMMITTEE  
W. BRIAN WHITE  
CHAIRMAN, HOUSE BUDGET AND APPROPRIATIONS COMMITTEE  
GRANT GILLESPIE  
EXECUTIVE DIRECTOR

List Date: December 20, 2017

Inquiries/Questions: [irandivestment@mmo.sc.gov](mailto:irandivestment@mmo.sc.gov)

**Entities Ineligible to Contract with the State of South Carolina or any Political Subdivision of the State per the Iran Divestment Act of 2014, S.C. Code Ann. §§ 11-57-10, et seq.**

- |   |  |  |
|---|--|--|
| 1. Abadan Petrochemical Co.   | 27. Hindustan Petroleum Corporation Ltd.             | 53. Oil India Ltd                              |
| 2. Aban Offshore Ltd.   | 28. Hyundai Engineering                              | 54. Oil Industry Investment Co.                |
| 3. Anton Oilfield Services Group                                      | 29. Hyundai Heavy Industries                         | 55. ONGC Videsh Ltd (OVL)                      |
| 4. Arak Petrochemical   | 30. Idemitsu Kosan Co.Ltd                            | 56. Oriental Energy Co., Ltd.                  |
| 5. Arvandan Oil & Gas   | 31. Indian Oil Corporation Ltd.                      | 57. Pardis Petrochemical Co.                   |
| 6. Behran Oil Co.   | 32. Inpex Corporation                                | 58. Pars Oil Co.                               |
| 7. Bharat Petroleum Corporation Ltd.                                  | 33. Iran Power Plant Projects Managements Co.(MAPNA) | 59. Parsian Oil and Gas Development Co.        |
| 8. BP plc   | 34. Japan Drilling Co., Ltd.                         | 60. Petrochemical Industries Investment Co.    |
| 9. China International United Petroleum & Chemical So., Ltd. (Unipet) | 35. Japan Petroleum Exploration Co.,Ltd.             | 61. Petrochemical Transport Co.                |
| 10. China National Offshore Oil Corp.                                 | 36. JXTG Holdings inc                                | 62. PetroChina Co. Ltd.                        |
| 11. China National Petroleum Corp. (CNPC)                             | 37. Khark Petrochemical Co                           | 63. PJSC Lukoil                                |
| 12. China National United Oil Corp.                                   | 38. Koc Holding A.S.                                 | 64. Polskie Gornictwo Naftowe i Gazownictwo SA |
| 13. China Petroleum & Chemical Corp                                   | 39. Korea Gas Corporation                            | 65. Royal Dutch Shell Plc                      |
| 14. Cosmo Energy Holdings Company Limited                             | 40. Linde AG   | 66. Sadid Pipe & Equipments Co.                |
| 15. Daellim Industrial  | 41. Maine Technimont S.p.A.                          | 67. Saras Raffinerie Sarde SPA                 |
| 16. Daewoo Engineering & Construction                                 | 42. Mangalore Refinery & Petrochemicals Ltd.         | 68. Sapehr Energy                              |
| 17. Enel Spa  | 43. Marubeni Corporation                             | 69. Shiraz Petrochemical Co.                   |
| 18. Eni Spa   | 44. Mitsubishi Materials Corporation                 | 70. Showa Shell Sekiyu KK                      |
| 19. Esfahan Oil Refining Co.  | 45. Mitsui & Co. Ltd                                 | 71. Sinopec Group                              |
| 20. Esar Oil Ltd.   | 46. Naftiran Intratrade Company                      | 72. Sk Holdings Co. Ltd                        |
| 21. Farsvaran Petrochemical Co  | 47. National Iranian Oil Co.                         | 73. SK Innovation                              |
| 22. Farabi Petrochemical Co.  | 48. National Iranian South Oil Co.                   | 74. Tabriz Oil Refining Company                |
| 23. Formosa Petrochemical Corp.                                       | 49. National Iranian Tanker Co.                      | 75. Total S.A.                                 |
| 24. Gazprom OAO   | 50. National Shipping Co Of Saudi Arabia             | 76. Toyo Engineering Corporation               |
| 25. Gubre Fabrikeleri T.A.S.  | 51. North Drilling                                   | 77. Turkiye Petrol Rafinerileri AS             |
| 26. Hellenic Petroleum S.A.   | 52. Oil & Natural Gas Corporation Ltd.               | 78. Vitol SA                                   |
|   |  | 79. Zhuhai Zhenrong Company                    |

# IRAN DIVESTMENT ACT

“By the submission of this bid, each bidder and each person signing on behalf of any bidder certifies, and in the case of a joint bid each of a joint bid each party thereto certifies, and in the case of a joint bid each party thereto certifies as to its own organization, under penalty of perjury, that to the best of its knowledge and belief that each bidder is not a person included within the list created pursuant to § 12-12-106.”

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_