BUNKER RENOVATION SPECIFICATIONS

A1. INTENT

The intent and purpose of this invitation to bid is to renovate existing bunkers at the Tierra Verde Golf Club. The bidder must be Billy Bunker Certified.

The City reserves the right to make an award to either one vendor who's bid is the best value for the City, or to multiple vendors.

A2. SCOPE OF WORK

The work to be performed by the Contractor will be the renovation of approximately 50,230 square feet of fairway bunker cavities on golf course hole number's 2, 3, 4, 5, 6, 8, 9, 10, 11, 13, 16, 17, 18, PH2, PH3 and chipping green. The work consists of, but is not limited to, furnishing all equipment and materials and performing all work in connection with the removal and dispose of existing sand, salvaging of the existing sub-surface drainage pipe, reconstitution of bunker cavity to ensure no slopes are greater than 30 degrees, installation of salvaged drainage pipe and fittings, installation of approved pea gravel, installation of Better Billy Bunker ® lining material, installation of approved bunker sand to a compacted depth and finished grading and sodding of all disturbed areas outside of bunker cavity.

Unless otherwise approved by City, Contractor agrees to renovate and complete greenside bunkers prior to renovation of fairway bunkers.

A3. AREA OF DISTURBANCE

All excavation areas shall be marked out in advance of excavation by the City.

A4. DEWATERING

1) Contractor shall remove all water from any source that accumulates during the excavation process and prior to the installation of specified drainage pipe. The embedment or pipe shall not be installed in water.

A5. BUNKER CAVITY PREPARATION

Contractor shall remove all existing bunker sand and prepare sub-grade, gravel, and loose material to a compacted base. Sand bunker edges will be marked for trimming by City. The cavity edges shall be excavated vertically to a depth of six (6") inches. All bunker slopes will not exceed 30 degrees and will be check by a digital level to the satisfaction of the City and Contractor will not be allowed to reconstruct any slopes more than 30 degrees. Where soil material prevents proper foundation preparation at the proposed elevation, the Contractor shall deepen excavation to level where a proper foundation can be prepared. Any materials removed shall be replaced with acceptable fill until stable at proposed grade. Sand limits will be painted in the field by the City. It is the City's intention to re-establish architects sand lines; however, in a few cases the sand lines will be modified by the City to aid in the establishment of an acceptable slope.

A6. DRAINAGE INSTALLATION

The entire foundation area in the bottom of all trench excavation and bunker cavity shall be smooth, firm, stable, and at uniform density and completed immediately prior to the placing of pipe or materials. Drainage of sand bunkers shall be accommodated by a drainage trench or multiple trenches connecting to each other, each trench measuring a minimum of eight (8") inches wide and a minimum of twelve (12") inches deep connecting into an acceptable and functional outfall pipe. Contractor is responsible for ensuring outfall pipe exiting the bunker cavity is not restricted and functioning properly to allow the bunker cavity to drain.

The locations of trenches will be the original drainage design and layout for each bunker. Each sand bunker is to be drained with drainage trenches in a herringbone pattern with no distance between trenches or un-drained area more than twenty feet, unless approved by the City. The top of the pipe shall be set no higher than two (2”) inches below the top surface of the trench and centered within the trench. Each drainage trench shall slope a minimum of one-half percent (.5%) and shall terminate to the low point (or points) of the sand bunker where drainage will be collected and exit via the outfall pipe. Drainage from the bunker floor shall continue downgrade at a greater depth, if necessary, to the edge of the sand bunker where the City has designated the drainage exiting the sand bunker.

The minimum rate of fall shall not be less than one-half percent (0.5%) at any point within the drainage trenches. At the edge of the sand bunker where drainage exits, the perforated pipe shall connect to the existing outfall pipe. All areas of the sand bunkers are to be built with adequate drainage. No water will be permitted to stand in any portion of any bunker. This is to be accomplished by sub-grades draining to the herring-bone drainage system and exiting the bunker via the “outfall” connection point.

Prior to placement of the pea gravel blanket, the Contractor shall provide the City a record drawing (the “As-built”) of the entire drainage system and clearly showing the percentages of fall or show that original design plans were followed. CONTRACTOR WILL NOT BE GRANTED APPROVAL TO INSTALL THE GRAVEL LAYER UNTIL AS-BUILT DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY CITY. The City will visually inspect all drainage installation, with written sign-off required before Contractor is authorized to install the pea gravel layer in bunker cavity.

Installation of new drainage lines may not require flush-out lines, however, if needed and determined by the City, a flush-out line may be required for some sand bunkers. In general, flush-out lines shall extend from the top side of the main drainage line of the sand bunker and terminate to the point where it will connect to a riser and trimmed and finished as specified by the City. Single flush outs will be contained in a six (6”) inch diameter irrigation valve box. When two flush outs are next to each other, the risers will be contained in a single ten (10”) inch irrigation diameter valve box.

A7. BUNKER LINER INSTALLATION

Contractor will not be allowed to deviate from the Better Billy Bunker ® specifications and must not cause any portion of the Better Billy Bunker ® warranty to be voided or disallowed due to construction means and methods.

A8. BUNKER CAVITY PREPARATION

The Better Billy Bunker ® system must be installed in an approved bunker cavity. The area to be covered with the specified liner shall be water settled and mechanically compacted with a hand operated compacting machine to a minimum dry density of ninety-five percent (95%). Absolutely no loose soil shall remain in the bunker cavity prior to liner placement. No liner material will be placed in bunker until the City has approved the bunker shape, depth, and compaction of the bunker cavity.

A9. GRAVEL LAYER BLANKET

A layer of approved pea gravel (3/8”-1/4”) shall be placed over the entire floor of the bunker at a depth of two (2”) inches deep. This gravel shall be brought up to the edge of the bunker. Contractor will not be allowed to use any machines of any type to spread the gravel within the bunker cavity. Gravel must be spread by hand to ensure no damage occurs to the prepared cavity or bunker edges. Contractor must always protect the vertical bunker edges when dumping gravel along the bunker edges. Contractor shall provide test results demonstrating the sand and gravel meets Turf Diagnostics and Design standards. This common standard 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.

A10. ST410 POLYMER BINDER APPLICATION

The ST410 POLYMER shall be installed in accordance with the Better Billy Bunker ® specifications by a certified and trained Better Billy Bunker ® 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 a certified Better Billy Bunker ® 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 the gravel approximately one half to one inch (½" - 1") depth of the gravel. A sturdy pliable layer of glued gravel will be the result.

A11. INSPECTION AND QUALITY CONTROL

After 12-24 hours, the initial ST410 POLYMER application will have cured. The Contractor will walk and inspect every square foot of each bunker at the end of the curing process. Any areas not to have received the specified rate of polymer will be marked with turf paint and re-sprayed prior to calling for a final inspection by the City. Improper application or omitting the inspection process and follow up polymer application will leave areas week and the pea gravel loose. It is the Contractor's responsibility to inspect and maintain the highest standards when installing the Better Billy Bunker ®.

A12. RE-SODING OF DISTRUBED AREAS

- SURFACE PREPARATION. All surfaces within the areas of disturbance shall be re-sodded, which are slicked or glazed shall be scarified, amended, and smoothed by floating or hand raking prior to planting. All areas to be sodded shall be floated in two directions to eliminate water holding depressions and pockets. All lumps and soil clods shall be eliminated.
- SOD QUALITY. Sod will be cut in a uniform thickness width and length. Sod shall be delivered to the job site within twenty-four (24) hours after being harvested. Any sod permitted to dry out or rot maybe rejected if, in the judgment of the City, its survival after placement is doubtful, and shall be replaced at the sole cost of the Contractor.
- INSTALLATION PROCEDURES. Sod shall be placed by hand with close joints and no overlapping. All spaces between sections of sod, openings at angles, and similar gaps shall be plugged with sod. The sod shall be thoroughly watered and then tamped with an approved sod tamper or rolled sufficiently to incorporate the sod with the sod bed and insure tight joints between the sections of strips. Rolling shall not be done to the extent that it causes excessive compaction. Any voids, openings, or crevices before and after tamping or rolling shall be filled with topsoil. Upon completion of the above work, the surface of the sodded area shall coincide with the finish grade and shall be flush with other grassed areas.
- PROTECTION OF SOD PRIOR TO HANDOVER. It will be the responsibility of the Contractor to repair any damage, to newly sodded and established grass areas, at the sole cost to the Contractor until the work area has been turned over to the City. Following the sodding operations within an area of disturbance and after the planted area(s) has been accepted by the City, the maintenance and watering of these areas will be the responsibility of the City. The Contractor accepts responsibility for repairing any damage caused by drainage problems, irrigation breaks and run-off, as result to the construction means and methods of the Contractor until the area has been accepted by the City. The Contractor will be required to repair damaged areas, so the repaired area(s) match the surrounding turf conditions in terms of both plant population and quality of turf.

A13. SAND PLACEMENT

After the entire bunker cavity is lined using the above procedures, sodding has been completed and written approval given, the Contractor will clean the bunker cavity with a hand blower to remove all foreign debris. Absolutely no loose soil shall remain in the bunker cavity prior to sand placement. NO SAND SHALL BE PLACED IN BUNKER UNTIL CITY HAS APPROVED THE SOD INSTALATION, BUNKER LINING INSTALATION AND REMOVAL OF ALL DEBRIS.

After approval by City, the sand shall be spread evenly at a compacted depth of no less than four (4") inches on slopes and no less than four (4") inches on the bottom of the bunker cavity. The Contractor will spread the sand against the bunker edges upon completing the installation of the sand in the specific bunker. The Contractor will not be allowed to use any machines of any type to spread the sand within the bunker cavity. Sand must be spread by hand to ensure no damage occurs to the prepared cavity or bunker edges. The Contractor must always protect the vertical bunker edges when dumping sand along the bunker edges. After spreading, all sand shall be water settled and compacted with a hand operated compaction machine. If any sand bunker has less than four (4") inches of sand, the Contractor shall be responsible for installing additional sand to meet specifications on sand depth.

The Contractor is responsible for controlling and removing any vegetative growth or contamination within sand bunkers during construction.

A14. SAFETY OF WORK CREW

Contractor shall wear and/or display proper warning devices (safety vest, flashers, strobe lights, warning signs, etc.) in order to ensure both employee and public safety. Uniforms are preferred but are not required; contractor and his employees shall dress and remain dressed in a presentable fashion due to high public visibility of these employees. Should problems occur, Contractor will be advised of the circumstances and shall take appropriate action. Dressing problems include but are not limited to bare chest (no shirt), shorts while trimming or edging, and absence or improper use of safety devices. All PPE must meet all applicable OSHA standards and regulations. Contractor shall bear sole responsibility of compliance with PPE requirements.

The Contractor shall be responsible for furnishing all signs and traffic controls in accordance with the Texas Manual on Uniform Traffic Control Devices, and make adjustments as required by Contract Coordinator or designee.

All signs must be mounted on their own stands, not less than three feet (3 ft.) from the bottom of the sign to the natural ground line. Each sign shall have two brightly colored safety flags attached to it. It will not be permissible to hang or lean these signs. The signs shall be erected in such a manner that they will not obstruct the traveling public view of the normal roadway signing.

Contractor must turn in a traffic control plan and equipment staging areas on the Operational Plan. Regulations can be found through the Department of Public Works and Transportation.

Performance measure: Proper warning devices & clothing due to high visibility of employees that work on roadways

A15. CRIMINAL BACKGROUND CHECKS

At their expense, Contractor shall conduct and coordinate criminal background checks on all employees responsible for performing contractual services at any City facility prior to beginning work at such facilities. Contractor employees must not have had any criminal convictions within the past seven (7) years. Contractor represents and warrants that Contractor or Contractor's employees have not been convicted of any criminal offense(s), and is required to maintain the proof of background checks.

Contractor shall provide proof (certification) that all personnel assigned to City facilities have had a criminal background check prior to their assignment.

Under no circumstances is Contractor to allow any employee to work at a City facility who has committed a crime against children or who is under an investigation for a crime against children, there is no time allowance or restrictions regarding this requirement.

A16. IDENTIFICATION

All Contractor vehicles under the performance of this Contract that are licensed for travel on public roads shall have the name of the Contractor neatly exhibited on each side of the vehicle. Vehicles shall park in areas that do not create potential hazardous traffic situations.

The City may require the Contractor to have a magnetic identification decal on the side of their truck that denotes them as a City Contractor.

A17. COMMUNICATION

Contractor will have communication equipment as necessary to perform the services of this Contract. This can include cellular phones, telephone answering devices, fax machine and/or email. Email is the preferred method for communicating with the Contract Administrator or designee.

The Contractor shall respond to communication requests from the Contract Administrator or designee within two (2) hours during the normal working hours of 7:30 a.m. to 5:00 p.m.

Performance measure: Two-hour turnaround time for information between City and Contractor.

A18. REMEDIES FOR NON-COMPLIANCE

Failure on the part of the Contractor during the term of this contract in one or more area(s) would be reasonable cause for the Contract Coordinator or designee to issue a Notice-to-Cure (NTC) warning, in addition to liquidated damages as required. Area(s) can include, but are not limited to, non-performance of service in accordance with the specifications herein; having more than two (2) failed inspections; failure to maintain work schedule; failure to install materials as specified; or failure to show.

Furthermore, the Contractor shall conduct operations in a manner that reflects favorably on the City. Calls from citizens concerning poor performance will be verified and if deemed correct, the Contractor shall be notified. Continued performance issues will result in cancellation of the contract.

It is the goal of the City to resolve disputes at the most minimal level, therefore,

1. Should minor failure(s) occur during the term of this specification, the following will apply; minor is defined as less than four (4) hours worth of work or delayed completion.

- Inspector will verbally warn, and give Contractor instructions to correct minor failure(s), as well as record the corrective action internally. Upon correction as specified, the Contractor will continue on schedule with no written warning.

2. More than two (2) verbal warnings for the same failure within the term of the contract, or a failure to comply with verbal warning(s) shall be sufficient reason for the Contract Coordinator or designee to issue a NTC warning. Some known, but not all cures will be as follows:

- When Contractor fails to maintain the required rate of services per the City's scheduled demand the first time, then Contractor shall respond to NTC by supplying the Contract Coordinator a thorough schedule identifying the service schedule per location affected by NTC, unless otherwise identified within the NTC.

- When Contractor fails to maintain the required rate of services per the City's scheduled demand subsequently, liquidated damages will be incurred.

- When maintenance is performed without proper inspection, as well as any extra or unspecified work is done without written authority by the Contract Coordinator or designee and/or prior to a written agreement by the City, then Contractor is at risk and all work will be considered unauthorized. Such unauthorized work includes any materials, tools, incidentals, mobilization and transportation of crew used, and therefore will not be measured or paid for, and the NTC may order all incorrect services to be corrected at the Contractor's whole expense.

- When maintenance fails inspection, then all rejected areas will be outlined for correction in the NTC and must be corrected within twenty-four (24) hours, or as identified within the NTC.

3. Failure to cure within twenty-four (24) hours, or as identified within the NTC, or as mutually agreed upon; or more than three (3) NTC for same incidents, as specified in the NTC, will result in the following:

- The affected portion of the maintenance, either in whole or in part, will be removed from the Contractor's responsibility and be delegated to a third party contractor at the failed Contractor's whole expense;

o The cost of delegating any portion of work will be deducted from any monies due to, or which may become due to the Contractor.

- The affected portion of maintenance which fails to be corrected will be removed from the Contractor's responsibility and be ordered from an alternate contractor.

- Additional cycles may be suspended until the assigned Project Area(s) are corrected in whole;

o If suspension occurs, Contractor will be required to remediate all failure(s) before continuing future work within the City.

o Each day of suspension will count as a calendar day (work day).

- In the event the Contractor fails to correct in whole per the NTC and to the satisfaction of the City, or fails to correct rejected, or unauthorized work after receiving the NTC, the City shall exercise all rights, including the right to terminate the Contract due to material breach in whole or part with cause.

o The Contractor shall pay all costs and attorneys fees incurred by the City in the enforcement of any provision herein or within this document.

- All responses to the NTC must be in writing by the Contractor and submitted electronically to the City's Contract Coordinator within five (5) calendar days.

It is fully understood by the Contractor that after reasonable and documented attempts between the Contractor and City to bring any failures/unacceptable work to an acceptable level, the City reserves the right to notify Contractor that the City has the intent to hire a third party Contractor. The City may hire a third party Contractor at any costs to repair any unacceptable sites(s) within the assigned Project Area(s) deemed unacceptable in part or whole, in an effort to stay on schedule.