

BOARD OF SUPERVISORS AGENDA ITEM SUMMARY

Requested Meeting Date: April 2, 2013

ITEM SUMMARY, JUSTIFICATION and/or SPECIAL CONSIDERATIONS:

Amendment #1, contract #CT-WW-1200000000000002223, Kimley-Horn and Associates, Inc., to provide Design Services for Regional Wastewater Reclamation Department Security Improvement Projects. Funding source: RWRD Obligations, Administering Department: Regional Wastewater Reclamation Department.

On February 14, 2012 the BOS approved an award of up to \$1 million for RWRD facility security improvements design. This amendment adds the security improvement design of five RWRD facilities projects to the contract, extends the contract termination date, and adds \$593,791.00 to the contract amount to fund the required design services.

Effective Date: April 2, 2013

Termination Date: February 13, 2015

Original Contract Amount: \$502,328.00

Previous Amendment(s): \$0.00

Previous Contract Amount: \$502,328.00

Amount this Amendment: \$593,791.00

Revised Contract Amount: \$1,096,119.00

Project Manager: Rod Graupmann

Contract Officer: Jerome Rizzo, 724-3245
Procurement Department

Cont # : CT-WW-1200000000000002223-01

Effective: 04-02-2013

Term : 02-13-2015

Cost : \$593,791.00

Rev : 0

Tot : \$593,791.00

NTE : \$1,096,119.00

Timex : yes

Renewal : 11-01-2014

on : 02-13-2015

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Vendor is using a Social Security Number: No

PimaCore# CT-WW-1200000000000002223 Ver. 6

Please return to Harry Lewis.

CLERK OF BOARD USE ONLY:

BOS MTG. _____

ITEM NO. _____

Procure Dept 03/27/13 PM 03:01

TO CHH 3:18:13
COB 3:28:13
Agenda 04-02-13
Addendum (1)

PIMA COUNTY REGIONAL WASTEWATER RECLAMATION DEPARTMENT	
PROJECT: Design Services for Regional Wastewater Reclamation Department Security Improvement Projects – Green Valley WRF & Corona de Tucson WRF Security Systems	CONTRACT NO. <u>CT.WW.1200000000000002223</u> AMENDMENT NO. <u>01</u> This number must appear on all invoices, correspondence and documents pertaining to this contract.
CONSULTANT: Kimley-Horn and Associates, Inc.	
CONTRACT NO.: CT-WW-1200000000000002223	
AMENDMENT NO.: One (1)	
FUNDING: RWRD Obligations	

CONTRACT TERM: 02/14/12 to 12/31/13	ORIGINAL CONTRACT AMOUNT:	\$	502,328.00
TERMINATION PRIOR AMENDMENT: N/A	PRIOR AMENDMENT(S):	\$	-
TERMINATION THIS AMENDMENT: 02/13/15	AMOUNT THIS AMENDMENT:	\$	593,791.00
	REVISED CONTRACT AMOUNT:	\$	1,096,119.00

CONTRACT AMENDMENT

WHEREAS, COUNTY and CONSULTANT have entered into the Contract referenced above; and

WHEREAS, on February 14, 2012 the Pima County Board of Supervisors (BOS) approved an award of up to One Million Dollars to CONSULTANT for the engineering design services of security improvements to various Regional Wastewater Reclamation Department (RWRD) facilities (PROJECTS); and

WHEREAS, in the original award the PROJECTS were anticipated to span over a three year period; and

WHEREAS, the contract provided for the security improvements design of the first two projects, the Green Valley and Corona de Tucson Water Reclamation Facilities (WRF); and

WHEREAS, five additional PROJECTS have been identified as requiring design services of security improvements; and

WHEREAS, COUNTY and CONSULTANT have agreed to add these PROJECTS to the contract; and

WHEREAS, CONSULTANT has proposed pricing for these additional PROJECTS acceptable to COUNTY; and

WHEREAS, the parties agree to increase the contract amount for the provision of these security improvements design services.

NOW, THEREFORE, it is agreed as follows:

CHANGE: above captioned PROJECT:

From: "Design Services for Regional Wastewater Reclamation Department Security Improvement Projects – Green Valley WRF & Corona de Tucson WRF Security Systems"

To: "Design Services for Regional Wastewater Reclamation Department Security Improvement Projects"

CHANGE: ARTICLE 1 – TERM AND EXTENSION/RENEWAL/CHANGES, first paragraph:

From: "This Contract shall commence upon execution by the Board of Supervisors, and shall terminate on December 31, 2013 unless sooner terminated or further extended pursuant to the provisions of this Contract."

To: "This Contract shall commence upon execution by the Board of Supervisors, and shall terminate on February 13, 2015 unless sooner terminated or further extended pursuant to the provisions of this Contract."

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SCOPE OF SERVICES

(Rev. 01-31-13)

DESIGN SERVICES FOR RWRD SECURITY IMPROVEMENT PROJECTS**CONTRACT NO.: CT WW 1200000000000002223****AMENDMENT NO.: 1**

The following services are additional services to be provided by Kimley-Horn & Associates (Consultant) under Contract Number CT WW 1200000000000002223 for the design of the following security improvements at Pima County Wastewater Reclamation Department (PCRWRD) (Owner) project sites:

- A. SRF: Project area for this site includes the area within the existing secure perimeter as defined by the existing security fence and the non-secure area (within Pima County's existing property line) where the two entrance driveways will be extended into the existing paved roadway surface (with new curb/gutter) to support the addition of a new license plate reader at the main gate and a new perimeter fence line along the existing paved roadway surface connecting between the two new driveway areas. The areas known as the boneyard is not included as part of this scope of work. However, parts of the boneyard should be able to be covered by this effort depending on final camera placement locations. Security improvements identified for this site consist of relocating the existing main entrance gate with a new card reader system stanchion, replacing the existing main entrance gate with a lighter version gate using the relocated existing gate operator, the existing main exit gate will remain as is, four (4) general surveillance outdoor cameras mounted to existing building structure; up to five (5) new camera pole locations supporting up to five (5) low light fixed cameras with video analytic to establish a virtual detection perimeter within the project site and up to five (5) additional general surveillance outdoor cameras, as required. This scope of work also includes four (4) card reader locations for the main building perimeter doors, no new access control will be provided at the maintenance shop and portable structures, a push button intercom system for opening the main building door from the reception desk, one (1) new indoor camera pointing towards the main entrance door, and two (2) new on-site security workstations (one at the reception desk and one within the SCADA room). Up to two (2) new area lighting poles (one of which will be located in the area of the back gate to the boneyard) are included within this scope of work, using a photo-control unit mounted on each of the luminaires. As part of the design, a portion of the existing paved roadway in front of the facility will need to be demolished in the areas where driveways are being extended. A narrow (approx. 10' wide) native dirt backfill will be designed into demolished roadway area immediately adjacent to the new curb/gutter for the driveways. The Owner will be responsible for adding any necessary landscaping/irrigation to these new dirt areas, after the security improvements are constructed.
- B. Conveyance Yard: Project area for this site includes the area within the existing secure perimeter as defined by the existing security fence and the non-secure area (within Pima County's existing property line) where the new license plate reader will be located for the main gate. Security improvements identified for this site consist of six (6) general surveillance outdoor cameras mounted to existing building structures [three (3) on the Maintenance Warehouse building, two (2) on the Field Services Building, and one (1) on the Administration Building]; a license plate reader for the main gate; five card readers (one with key-pad on the break room door) for secured access to the non-locker room areas of the Field Services Building; two (2) card readers with two (2) fixed position indoor cameras on the storage room doors of the

Maintenance Warehouse building; three (3) card readers with three (3) fixed position indoor cameras on the Administration building doors; and one (1) new standalone intercom system (with and push button door access) for voice communication between dispatch reception room and main public access door of the Administration building.

- C. Mt. Lemmon WRF: Project area for this site includes the primary project site (as defined by the existing perimeter fence line which protects the main building which houses the treatment facility, a pre-fabricated site trailer, and fuel storage tanks); the lift station immediately adjacent to the primary project site; and the disposal facility area which houses a reclaimed water tank with booster station and a spray field area. Security improvements identified for the primary project site consist of four (4) low light fixed cameras with video analytic to establish a virtual detection perimeter within the project site; five (5) outdoor surveillance cameras [for the fuel tanks, card reader doors, and back side of the trailer]; five (5) indoor surveillance cameras; provide door hardening consisting of three (3) doors equipped with card readers (chemical storage room, trailer door, and a door on the main building); door contact detectors on all external doors of the main building and trailer; glass break detectors for some of the windows on the main building and trailer; and replacement of the existing fence along the north perimeter which has been damaged by ground erosion. Security improvements identified for the lift station include adding a new fence with manual swing gate to protect the immediate vicinity of the lift station, one (1) outdoor surveillance camera, and a door contact detector on the new swing gate. Security improvements identified for the disposal facility area include two (2) outdoor surveillance cameras, a card reader on the booster station door, and one (1) indoor camera focused on the new security and network equipment enclosure. The necessary communications upgrades needed to support security network traffic between the booster station and the WRF; and connectivity to the security control center facility, will be provided by the Owner via a separate project.
- D. Randolph Park WRF & Lift Station near Randolph Park WRF: Project area for this site includes the area within the existing secure perimeter as defined by the existing Randolph Park WRF perimeter security fence and the existing Lift Station secure perimeter as defined by the existing security wall. Security improvements identified for this site consist of minor improvements for the existing site perimeter fence, to repair in-kind existing damaged fence areas. General surveillance cameras and video analytics will be designed to monitor and detect human target size movement along the secure side of the site perimeter. Existing inside plant camera locations will be upgraded with the new camera standards for network integration and archiving compatibility. At the WRF, the location of the existing basement camera will change when the new camera is installed, to obtain a better viewing angle of flooding in the blower room. Two (2) new indoor camera locations will be added (one to monitor the new security equipment enclosure location and one to monitor the control room, as recommended by the security master plan in Exhibit 3 – Sub-Regional WRF Critical Assets table). At the Lift Station, the existing beam tower motion detector systems will be replaced with the new video analytic motion detection standard, to monitor and detect human target size movement along the secure side of the site perimeter. The existing site camera locations will be upgraded with the new camera standards for network integration and archiving compatibility. One (1) new camera location will be added (to monitor the new security equipment enclosure). No new card readers or access control system to be designed for these two sites and the existing vehicle gates and the existing gate access control approach will remain as is.
- E. Green Valley WRF Roadway Improvement: Design a new main gate entrance configuration [similar to the one depicted in on Figure 6 of the 30% Design Submittal for the Green Valley WRF Fencing Options report, with the design change of re-using the existing gate (i.e., single

gate concept) and without the bird watcher parking area and the additional interior fence] which allows for a more favorable entrance angle and that also provides some vehicle entrance storage space to accommodate a license plate reader. The design of the perimeter fence reconfiguration to accommodate this new entrance configuration is already included in the basic services of the original contract. The additional services associated with this amendment consist of roadway design services (i.e., new roadway improvement notes/detail sheet, demo sheet, grading sheet with signing and striping design) for the new asphaltic concrete roadway entrance and the design services associated with relocating the existing operator controlled gate to accommodate the new main gate entrance configuration. Survey services will also be required (reimbursable to the Consultant by the Owner) to collect topographical data of the existing features, verify easements, and establish control. Geotechnical services will also be required (reimbursable to the Consultant by the Owner) to provide earthwork recommendations and a pavement design section for the new entrance drive.

The additional services being added to the Green Valley WRF site will be included within and as part of the construction documents (bid documents) currently being developed by the Consultant and may require an adjustment to the final bid schedule or issued as an addendum to the drawings after the bid phase, depending on the date in which NTP is issued for these additional services.

The additional services being added to provide security improvement designs for the new project sites (SRF, Conveyance Yard, Mt. Lemmon WRF, Randolph Park WRF, and the Lift Station near Randolph Park) are anticipated to be delivered using a separate project schedule developed specifically for concurrent construction document development, Owner reviews, and construction phase services. Although each project site will have a separate set of bid/permit construction drawings, these construction drawings will be developed and reviewed concurrently as if they were one set of drawings being developed. A separate owner review meeting with Conveyance Yard and SRF staff may be required, within the same day of the meeting on the other sites.

It is anticipated that only one set of project specifications will need to be developed, reviewed, and used during construction as the standard provisions that will apply to all project sites with security improvements being designed by the Consultant. Only minor changes to these project specifications are anticipated between the project specifications developed for the GV/CDT sites and the project specifications developed for the additional sites being added as part of this contract amendment.

As with the construction phase of the GV and CDT security improvements, the cost estimate for Consultant services during the construction phase of the additional project sites is based upon concurrent construction schedules of the additional project sites; whereas monthly construction meetings and sites visits of the same type can be accomplished within the same day (i.e., meetings cover multiple sites and multiple site visits within the same day).

Task 1.0: Project Management

This task incorporates Consultant project management activities associated with the project. This includes attending meetings with the Owner, contract management, project scheduling, assignment and coordination of staff resources, budget control, invoice preparation and approval, and quality control.

Subtask 1.1: Project Administration

Prepare a separate project schedule for the new project sites being added as part of this addendum.

Subtask 1.2: Monthly Reports and Invoicing

The Consultant will produce monthly status updates, reflecting tasks completed, tasks forecast, schedule review and budget review. In addition, invoices will be prepared and submitted on a monthly basis, at a maximum.

Task 2.0: Information Gathering and Owner Kickoff Meeting

This task begins the process of assembling necessary information and meeting with the Owner to re-confirm project scope (Basis of Design), budget, schedule and deliverables.

Subtask 2.1: Information Request

The Owner will provide the consultant with available electronic AutoCAD sets of facility record drawings for all the sites.

During the course of the project, the Consultant may identify and document the need for additional information beyond that provided during this task. If available the Owner will provide access to the requested information.

Deliverables

- Information Request Document

Task 3.0: Design Concepts Approval

This design phase creates a first-pass of the quantity and locations of the security devices desired by the Owner. The purpose of this phase is to confirm acceptance of the device types (surveillance cameras, cameras with analytics, card readers, key pads, door contacts, etc.) and physical security improvements (gates and fences), intended functionality, layout and general approach for establishing the Owner's desired level of security for each project site.

Within this phase, the Consultant will prepare preliminary design concept figurers and a preliminary opinion of probable construction cost based on the security improvements identified during the scoping phase of these additional project sites. The Consultant will attend an Owner review comment meeting to discuss any requested adjustments to the device layouts that will be included in the Consultant's final design concept deliverable for each of the additional project sites.

Upon Owner approval of the final design concept deliverable (updated figurers and probable construction cost), it is assumed that the device types, intended functionality, layout and general approach for establishing the Owner's desired level of security for each project site is set and the Consultant may proceed with adding the next level of design effort.

Subtask 3.1: Submit Design Concept Documents

The Consultant will provide one set of preliminary design concept figurers and a preliminary opinion of probable construction cost for each of the additional project sites. Upon Owner review and concurrence of the necessary changes to the preliminary documents, the Consultant will prepare a final set of Design Concept documents (updated figurers and probable cost) for Owner final acceptance of the design concepts moving forward.

Deliverables

- Draft Design Concept Documents (figurers & probable construction cost). Five sets of preliminary design concept figurers and preliminary opinion of probable construction cost, and one electronic copy will be produced for Owner review.
- Final Design Concept Documents (figurers & probable construction cost). Five sets of final design concept figurers and opinion of probable construction cost, and one electronic copy will be produced for Owner review.

Subtask 3.2: Owner review

Owner representatives will have the opportunity to review the preliminary design concept documents within a period of 10 working days and provide written feedback in the form of collected review comments assembled into a single format. The Consultant will meet with the Owner at their office and receive the comments.

Deliverables

- Meeting minutes will be provided that summarize comments received from Owner during the meeting.

Meetings

- One meeting at the Owner's office to discuss the preliminary design concept deliverable for all the additional project sites.

Subtask 3.3: Base Plans Preparation and Technology Research

Upon Notice-to-Proceed of these Addendum (#1), the Consultant will start to gather electronic base file information from the owner which will be used as the basis of the existing site infrastructure at each of the additional project sites. Work included consist of changing "proposed" line types from the previous site improvement plans (or future improvement plans that will become an existing condition prior to starting security improvements construction) into "existing" line types for these site improvement plans. Identifying any known inconsistencies between Owner provided electronic information and coordinating with the Owner to resolve any such conflicts. Identify any additional survey services that may be needed to complete the project base files in areas where existing information is not available in AutoCAD format. Starting to "cut" the anticipated plan sheet views and develop the plan sheet key map that will be used within the 75% level drawing deliverable. Technology research to identify options for the new standalone intercom system at the Conveyance Yard administration building visitor entrance may also be performed under this subtask to assess probable construction costs.

Deliverables

- No formal deliverables are anticipated as part of this sub-task.

Task 4.0: 75% Design Development (DD) and 100% Construction Documentation (CD)

The final design phase builds upon the final design concepts approved in the previous phase; by adding support infrastructure design elements (i.e., communications and power conduit, cabling, and interfaces), design details, and project specifications needed to produces bid and permit documents for construction purposes. Two review phases are proposed; 75% and 100% reviews.

Design Development (DD) — 75% Level Submittal. The following work is included in developing the DD submittal for Owner review:

Develop a list of project specifications. The Consultant will review the project specifications developed for the GV/CTD project sites, and identify any new design elements (like the new intercom system for the Conveyance Yard site) that may need to be added to the project specifications. As with the other project sites, it is assumed that the Owner will provide the Division 0 specifications and the Division 1 specifications may need to include some unique project site specific data. Although the Division 0 and Division 1 specifications may be unique to each project site, the content of the other Technical Specification will be developed once to cover all the additional project sites, being added as part of this amendment.

During DD, a preliminary set of drawings will be generated to the 75% level of completion, which includes the following sheets:

- Cover Sheet; General Information, Legend, and Index sheet; and Security Legend sheet.
- Overall CCTV Coverage sheet;
- Overall Video Analytic Detection Coverage sheet, for sites with video analytics;
- Wide Area Network Connectivity Block Diagram;
- Site Local Area Network Connectivity block diagram;
- Access Control Riser diagram;
- CCTV Riser diagram;
- Site and Building Plan view drawings, showing system equipment locations and fence/ gate upgrade locations as identified on the approved design concept figurers with proposed outside plant conduit and pull box locations and proposed inside plant conduit leaders (i.e., line with an arrow at the end & text identifying the location the conduit terminates at);
- Develop the following drawings/details to the Plans, 75% completion level:
 - Develop typical security fence construction details
 - Develop typical vehicle access gates details
 - Develop typical gate operator installation details with primary and secondary protective measurers per code
 - Develop typical card reader pedestal/stanchion (with knox switch, reader, intercom, and window level camera) installation details for vehicle access gates
 - Develop typical installation detail and layout for license plate reader CCTV pole
 - Develop typical installation detail for CCTV pole and building mounts (Fixed & PZT types for general site monitoring)
 - Develop typical equipment cabinet installation details
 - Develop typical installation details (door and device mounting)
 - Develop Typical Security Functional Matrix

Produce a 75% Review Opinion of Probable Construction Cost and Perform (internal) Consultant Quality Assurance review prior to submitting documents for Owner 75% review

Construction Documentation (CD) — 100% Level Submittal. The final design phase builds upon the designs approved in the previous phase; by adding additional detail to finalize the design details needed to produce bid and permit documents for construction purposes. The following work is included in developing the CD submittal for Owner review:

Develop the final project specifications. The Consultant will update the project specification based upon agreed changes resulting from the previous submittal review and the Consultant will also add the door and hardware schedules to the project specifications.

Develop the project drawings to the 100% level of completion, which includes the following:

- Update the design drawings based upon agreed changes resulting from the previous submittal review.
- Advance the following drawing to the 100% level of completion:
 - Typical security fence construction details
 - Typical vehicle access gates details
 - Typical gate operator installation details with primary and secondary protective measurers per code
 - Typical card reader pedestal/stanchion (with Knox switch, reader, intercom, and window level camera) installation details for vehicle access gates
 - Typical installation detail and layout for license plate reader CCTV pole
 - Typical installation detail for CCTV pole and building mounts (Fixed & PZT types for general site monitoring)
 - Typical equipment cabinet installation details
 - Typical installation details (door and device mounting)
 - Typical Security Functional Matrix
- Add the following additional detail to the project drawings:
 - Electrical panel tables, with the new breaker positions
 - Electrical wiring conductor sizes and conductor quantities within each conduit run

Subtask 4.1: Submit 75% DD Review Package

Consultant will submit the 75% DD review package for Owner review.

Deliverables

- 75% Review Drawings and Specifications. Five drawing sets and one electronic copy will be produced for Owner review.

Subtask 4.2: 75% Owner review

Pima County representatives will have the opportunity to review the 75% Drawings within a period of 10 working days and provide written feedback in the form of collected review comments

assembled into a single format. Consultant will meet with Owner at their office and receive the comments in a 4-hour meeting.

Deliverables

- Meeting minutes will be provided that summarize comments received from Owner during the meeting.

Meetings

- One meeting at the Owner's office to discuss the 75% design deliverable for all the additional project sites.

Subtask 4.3: Submit 100% CD Review Package

Consultant will submit the 100% CD review package for Owner review.

Deliverables

- 100% Review Drawings and Specifications. Five drawing sets and one electronic copy will be produced for Owner review.
- Plans Review Sets: 2 full size sets of Drawings; 2 sets of Specifications and Calculations;
- Permit Set: Contract Documents with plans review comments incorporated.

Subtask 4.4: 100% Owner review

Owner representatives will have the opportunity to review the 100% Drawings within a period of 10 working days and provide written feedback in the form of collected review comments assembled into a single format. Consultant will meet with Owner at their office and receive the comments.

Deliverables

- Meeting minutes will be provided that summarize comments received from Owner during the meeting.

Meetings

- One meeting at the Owner's office to discuss the 100% design deliverable for all the additional project sites.

Subtask 4.5: Submit Contract Documents

Consultant will conduct an internal quality assurance review by a registered Professional Engineer prior to submitting the final Contract Documents. When the internal review has been completed Consultant will provide the final drawings, specifications, and cost estimate information.

Deliverables

- The drawings and specifications will be stamped and signed by a Professional Engineer licensed in the state of Arizona at the time.
- 5 complete sets and one electronic copy of drawings and specifications shall be provided to the Owner.

Subtask 4.6 Bid Assistance

Consultant shall assist Owner during the procurement/bid phase of this project, including, but not limited to, attending a pre-bid conference, answering questions from potential bidders and preparing addendums.

Task 5.0: Construction Administration Services

Subtask 5.1 Construction Progress Meetings

Attend monthly construction progress meetings

Subtask 5.2: Submittal review and construction administration services

Consultant will review all of the material submittals and shop drawings for low voltage security systems and electrical power systems to determine general compliance with Pima County security standards and the Contract Documents. The County will review all other submittals (mobilization questions, pay applications, schedule, change orders, etc.) to determine general compliance with Pima County security standards and the Contract Documents.

Consultant will respond the Contractor's written requests for information (RFI) as that pertain to low voltage security systems and electrical power systems. County IT will respond to Contractor's RFIs that pertain to communications systems. The County will be responsible for answering Contractor's field questions that pertain to means and methods of construction and any field adjustments that may be necessary to the work being performed.

Consultant will provide up to 12 hours of labor to address contractor RFIs and provide recommendations to PCRWRD on solutions for the GV WRF roadway improvements construction phase.

Coordination with contractor for submittals and field questions will be in a timely manner. Submittal turnaround will be ten working days, and field questions will be answered within five working days.

Subtask 5.3: Testing, Startup and Commissioning Support

Provide engineering support in the testing, startup and commissioning of engineered systems. This shall include the testing, startup and commissioning of security units of each type; (e.g. card reader installations, indoor camera installations, outdoor camera installations, NVR, video analytics, etc.). County IT will be responsible for testing, startup and commissioning support that pertain to fiber optic and copper cabling systems for Ethernet communications and LAN/WAN system devices.

Subtask 5.4: Site Observation Reports, Punchlists and Record Drawings

During system construction and at completion, the technical lead designer shall walk down systems components and record all defects, using a Site Observation Report. A punch list will be developed at substantial completion with a follow up walk to verify work is complete. Record drawings shall be provided by the Consultant. The following site visits are envisioned:

- Eight (8) Periodic site visits (two per site) to produce Site Observations Reports. (Each visit estimated at 4 hours duration and a total of two sets of two consecutive days for visiting all four sites)
- Four (4) Site visits (one per site) to develop a punch list, once the General Contractor declares substantial completion. (Visit duration estimated at 4 hours per site and a total of two consecutive days for visiting all four sites)
- Four (4) Site visits to confirm final completion of the punch list, once the General Contractor declares completion of the punch list. (Visit duration estimated at 4 hours per site and a total of two consecutive days for visiting all four sites).

Incorporate the red line drawings from the contractor and subcontractor(s) that installed the actual work.

Deliverables

- Site Observation Reports
- Punch List (including final acceptance)
- Record Drawings, incorporating Contractor redlines.

Task 5.5: Closeout

Consultant has complete project archiving procedures that are followed for each project in order to maintain appropriate project documentation following the completion of the project. Closeout documentation identified for this project consists of the following:

- Completion and transmittal to Owner of the Record Drawings for the project. Five printed copies and two electronic copies (CDs) shall be provided.
- Transmittal of the Engineering Calculations Manual for the project records.
- Electronic copies of all consultant files related to these projects

Assumptions

- A separate project will provide security improvements to protect and monitor the fueling station areas and fuel tanks within the Conveyance Yard project site.
- A card reader and door contacts are not desired by the Owner on the network/computer room doors within the Conveyance Yard and SRF project sites.
- F Adding card readers to the the Randolph Park WRF building doors and vehicle entrance gates are not required by the Owner.
- For the Lift Station near Randolph Park WRF, adding card readers and a license plate reader for the site are not required by the Owner.
- It is assumed that the GV WRF roadway improvements will be included in the same bid package as the GV security improvements and only two submittals are required; a Preliminary Set (i.e., design concept level) and the final sealed set included as an amendment to the GV Security improvements drawings.
- It is assumed that GV WRF roadway improvements will be constructed by a job-order contract (JOC) and those sheets will have notes sufficient to inform contractor of any changes in the Pima County/City of Tucson Standard Specifications for Public Improvements. No additional specifications or special provisions are anticipated to be necessary for the JOC bid process.
- It is understood that Construction Administration services will be limited to 12 hours of labor for the GV WRF roadway improvements considering the size and scope of the project. It is assumed that the JOC contractor will conduct their own Quality Control/Quality Assurance and provide PCRWRD with the compaction testing, materials testing, and inspection reports for review and approval. It is assumed JOC contractor will submit all pay requests to PCRWRD.

- It is assumed that the additional services for the main gate entrance configuration improvements does not require traffic engineering and drainage design/analysis work.
- Door contact detectors on non-card-reader doors, glass break detectors, and other types of motion/intrusion detectors (including video analytic detection) are not required by the Owner at the project sites, unless specifically identified otherwise within this scope of services.
- Door hardening / new door hardware is not required by the Owner at the project sites, unless the doors have been specifically identified within the scope of services as needing new card readers.
- Owner will provide AutoCAD record drawings of the additional project sites and building plans, if available. As such, it is understood that survey, geotechnical, potholing, subsurface utility locating services are not needed for this project, unless specifically identified otherwise within this scope of services. If it is later determined that these services are needed then they will be considered additional services.
- Owner will provide County employee escorts on-site or badged entry for Consultant staff working on project.
- Consultant may photograph site conditions at the sites in conformance with the Owner's confidentiality agreements.
- Based on the June 2010 PCRWRD Security Master Plan (page 3-2) statement "...no PCRWD facility contained hazardous chemicals of the type or quantity that would make it vulnerable to the designated design basis threat. Thus, no facility-specific description contains the lists of chemicals observed at the facility sites." It is assumed that the efforts involved in this scope of work will not require any hazardous chemicals security considerations.
- It is understood that this scope of services is limited to providing the just security improvement measurers agreed to during the scoping process of this amendment, as summarized in the few pages of this scope of services. Any services requested beyond these limits will be considered additional services.
- It is understood that the critical assets have already been identified and the recommended improvements for these critical assets are listed in the June 2010 PCRWRD Security Master Plans, Appendix - WRF Critical Asset List, Exhibit 3. It is also understood that some of these recommended improvements within the security master plan have been reviewed by the Owner during the scoping process and some of these recommendations are not included in this scope of services, since they were not desired by the owner at the time this scope of services was developed.
- It is understood that the PCRWRD Project Manager will be involved in the design process, will review the security improvements designs, and will make the decisions necessary to identify any changes to the security improvements / countermeasures that are to be included within this project, while considering the project budget and scope of services limitations. Any services requested beyond these limits will be considered additional services.
- It is understood that no roadway (or parking area) improvements will be needed, beyond what is specifically identified for additional services at the Green Valley main entrance gate. Any roadway improvement services requested beyond these limits will be considered additional services.

- It is understood that no major grade changes or surface water drainage improvements will be designed as part of this project. However there may be some grade changes necessary as part of the roadway improvements additional services for the Green Valley main entrance gate and some minor improvements to address grade in areas where new security improvements (i.e., fences) are being added. It is assumed that a typical grade modification detail for fence installations will be sufficient to address the minor grade improvements. Any services requested beyond these limits will be considered additional services.
- It is understood that no new guard house/booth will be designed as part of this project.
- It is understood that no environmental clearance is needed for this project and preparing related documentation will be considered additional services.
- It is understood that no Landscape Architecture services are needed for this project and preparing related documentation will be considered additional services.
- It is understood that no structural engineering is needed for this project and performing related calculations and preparing related documentation will be considered additional services.
- It is understood that performing site lighting assessments and developing a photometric model is not part of the scope. It is assumed that the additional lighting locations will be based on lighting specific areas of importance, as identified by the Owner, and not to improve lighting levels of large areas (i.e., requiring 2 or more light) to conform with safety or security industry light level standards. Any services requested beyond these limits will be considered additional services.
- It is assumed that the existing power panels within the project sites will have sufficient load capacity for the new electronic security and network devices; as such, the power distribution design for these devices will start at the point of adding a new breaker to the existing panel and designing the branch circuits for which these devices are connected to. Any services requested beyond these limits will be considered additional services. However, this scope of services does include developing electrical panel tables, based on existing condition as-built information and using this information to assess the panel's ability to support the additional electrical loads of the new security equipment. If the existing as-built information is not sufficient to calculate the existing load capacity of these panels, then additional services may be needed to hire an electrical contractor to perform a load test for a period of time, per the NEC, to measure the actual load on the existing panels.
- It is understood that Consultant's hours and fee estimate for this project is based on the following and any services requested beyond these limits will be considered additional services:
 - A 9 month design phase schedule (all four project sites combined)
 - A 4 month bid and award process (all four project sites combined)
 - A 12 month construction phase schedule (all four project sites combined)
 - Review of 40 Contractor submittals (all four project sites combined)
 - Review 12 Contractor shop drawings (all four project sites combined)
 - Respond to 40 contractor Requests for Information (RFIs) (all four project sites combined)

Attachment 1 to APPENDIX B

AMENDMENT NO.1

BUDGET ESTIMATE SUMMARY

Project: RWRD SECURITY IMPROVEMENT

Contract No. CT WW 120000000000002223

ADDITIONAL BASIC SERVICES

Task Description	Estimated Staff Hours											TOTAL COST	
	Principal	Sr. Project Manager	Sr. EE / Systems Engineer	Senior Engineer	EE / Systems Engineer	Professional Engineer	Jr. EE / Systems Engineer	Junior Engineer	Administrator / Junior Professional	Sr. Technical Support	Technical Support		Support Staff
Task 1.0 – Project Management	4.0	125.0	0.0	28.0	10.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	\$ 40,817
Task 2.0 – Information Gathering	0.0	4.0	21.0	21.0	2.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0	\$ 10,474
Task 3.0 – Design Concepts	0.0	16.5	47.5	36.0	67.0	24.0	18.0	4.0	28.0	48.0	0.5	6.0	\$ 49,122
Task 4.0 – 75% Design Development (DD) and 100% Construction Documentation (CD)	0.0	73.0	228.5	156.0	306.0	95.0	170.0	41.0	91.0	138.5	20.0	61.0	\$ 227,683
Task 5.0 – Construction Administration Services	0.0	20.0	248.0	202.0	400.0	18.0	184.0	24.0	0.0	24.0	0.0	25.0	\$ 206,302
Total Hours =	4.0	238.5	545.0	443.0	785.0	140.0	372.0	69.0	159.0	210.5	20.5	92.0	3078,5
Labor Hourly Rates (based a 3 Year Contract Term) =>	\$248.23	\$228.04	\$218.45	\$198.59	\$178.72	\$148.93	\$139.02	\$115.85	\$99.29	\$125.78	\$91.02	\$76.13	
Labor Cost =	\$ 993	\$ 54,388	\$ 119,055	\$ 87,975	\$ 140,295	\$ 20,850	\$ 51,715	\$ 7,994	\$ 15,787	\$ 26,477	\$ 1,866	\$ 7,004	\$ 534,399
Total Labor Cost =												\$ 534,399	
Direct Cost of Reproductions & Courier =												\$ 876	
Direct Cost of Traveling Expenses (Original Contract Amount Should be sufficient to cover additional sites, so no additional cost added)=												\$ -	
Survey - Darling Environmental & Surveying, Ltd. (Subconsultant Survey Services for Green Valley Roadway Improvement) =												\$ 2,860	
Geotechnical - ATEK Engineering Consultants (Subconsultant Geotechnical Services for Green Valley Roadway Improvement) =												\$ 1,500	
Administrative Cost on Subconsultants at 4% =												\$ 174	
AMMENDMENT NO.1 - TOTAL ADDITIONAL BASIC SERVICES =												\$ 539,810	
OWNER CONTINGENCY AT 10% =												\$ 53,981	
AMENDMENT NO.1 - TOTAL ADDITIONAL BUDGET (Not to Exceed) =												\$ 593,791	

Date: January 31, 2013

AMENDMENT NO.1 - PER PROJECT SITE BUDGET SUMMARY

Project: RWRD SECURITY IMPROVEMENT

Contract No. CT WW 120000000000002223

AMENDMENT NO.1 - ADDITIONAL BASIC SERVICES

Project Site	Estimated Staff Hours												TOTAL
	Principal	Sr. Project Manager	Sr. EE / Systems Engineer	Senior Engineer	EE / Systems Engineer	Professional / Engineer	Jr. EE / Systems Engineer	Junior Engineer	Administrator / Junior Professional	Sr. Technical Support	Technical Support	Support Staff	
SRF Total Hours =	1.1	60.8	127.5	88.2	205.9	19.5	85.0	12.5	40.4	36.8	8.1	24.5	710.4
	SRF Subtotal Labor - Design Phase Cost = \$ 71,346												
	SRF Subtotal Labor - Construction Phase Cost = \$ 52,365												
	Direct Cost of Reproductions & Courier = \$ 219												
	SRF Total Cost = \$ 123,930												
Conveyance Yard Total Hours =	1.1	60.8	125.5	80.2	204.9	13.5	85.0	12.5	40.4	36.8	4.1	22.6	687.4
	Conveyance Yard Subtotal Labor - Design Phase Cost = \$ 67,732												
	Conveyance Yard Subtotal Labor - Construction Phase Cost = \$ 52,365												
	Direct Cost of Reproductions & Courier = \$ 219												
	Conveyance Yard Total Cost = \$ 120,316												
Randolph Park WRF & Lift Station Total Hours =	1.0	59.6	111.3	109.2	170.8	24.1	71.6	21.6	38.0	43.7	3.0	22.5	676.4
	Randolph Park WRF & Lift Station Subtotal Labor - Design Phase Cost = \$ 69,798												
	Randolph Park WRF & Lift Station Subtotal Labor - Construction Phase Cost = \$ 47,906												
	Direct Cost of Reproductions & Courier = \$ 219												
	Randolph Park WRF & Lift Station Total Cost = \$ 117,923												
Mt. Lemmon WRF Total Hours =	0.8	52.3	118.2	121.4	195.4	38.9	95.9	22.4	36.2	37.2	4.8	18.3	741.8
	Mt. Lemmon WRF Subtotal Labor - Design Phase Cost = \$ 71,521												
	Mt. Lemmon WRF Subtotal Labor - Construction Phase Cost = \$ 57,267												
	Direct Cost of Reproductions & Courier = \$ 219												
	Mt. Lemmon WRF Total Cost = \$ 129,007												
Green Valley WRF Roadway Improvement Total Hours =	0.0	3.0	0.0	33.5	0.0	44.0	0.0	0.0	0.0	36.0	0.0	2.0	118.5
	Green Valley WRF Roadway Improvement Subtotal Labor - Design Phase Cost = \$ 16,584												
	Green Valley WRF Roadway Improvement Subtotal Labor - Construction Phase Cost = \$ 1,986												
	Survey & Geotech Cost = \$ 4,534												
	Green Valley WRF Roadway Improvement Total Cost = \$ 23,105												
MT. Lemon Booster Sta. Generator Improvement Total Hours =	0.0	2.0	62.5	10.5	8.0	0.0	34.5	0.0	4.0	20.0	0.5	2.0	144.0
	MT. Lemon Booster Sta. Generator Improvement Subtotal Labor - Design Phase Cost = \$ 20,366												
	MT. Lemon Booster Sta. Generator Improvement Subtotal Labor - Construction Phase Cost = \$ 5,163												
	MT. Lemon Booster Sta. Generator Improvement Total Cost = \$ 25,529												
AMMENDMENT NO.1 - TOTAL ADDITIONAL BASIC SERVICES = \$ 539,810													
OWNER CONTINGENCY AT 10% \$ 53,981													
AMENDMENT NO.1 - TOTAL ADDITIONAL BUDGET (Not to Exceed) = \$ 593,791													

Date: 1/31/2013