

# BID DOCUMENTS FOR:



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**ITB #19-008**

**CITY OF KEY WEST  
COMPREHENSIVE CCTV SECURITY SYSTEM**

**ROAD SURVEILLANCE AND MONITORING  
FOR DUVAL STREET, MALLORY SQUARE &  
OUTER MOLE**

**JANUARY 2019**

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**CITY OF KEY WEST**

**MAYOR: TERI JOHNSTON**

**COMMISSIONERS:**

**JIMMY WEEKLEY**

**SAMUEL KAUFMAN**

**BILLY WARDLOW**

**GREGORY DAVILA**

**MARY LOU HOOVER**

**CLAYTON LOPEZ**

PREPARED BY:  
City of Key West Port & Marine Services Department  
Unified Network Consulting, LLC

CITY OF KEY WEST  
KEY WEST, FLORIDA  
BID DOCUMENTS

for

**COMPREHENSIVE CCTV SECURITY SYSTEM  
ROAD SURVEILLANCE AND MONITORING  
DUVAL STREET, MALLORY SQUARE & OUTER  
MOLE**

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CONSISTING OF:

BIDDING REQUIREMENTS  
SUPPLEMENTAL INFORMATION  
DRAWINGS

\*\*\*\*

**CITY OF KEY WEST**  
JANUARY 2019

## BIDDER'S CHECKLIST

(Note: The purpose of this checklist is to serve as a reminder of major items to be addressed in submitting a bid and is not intended to be all inclusive. It does not alleviate the Bidder from the responsibility of becoming familiar with all aspects of the Contract Documents and Proper completion and submission of his bid.)

1. All Bid Documents thoroughly read and understood
2. All blank spaces in Bid filled in black ink.
3. Total and unit Prices added correctly.
4. Addenda acknowledged.
5. Bid signed by authorized officer.
6. Bidder familiar with federal, state, and local laws, ordinances, rules and regulations affecting the proposed purchase.
7. Bidder, if successful, able to obtain and/or demonstrate possession of required licenses and certificates within (10) ten days after receiving a Notice of Award.
8. Bid submitted intact with the volume containing the Bidding Requirements, Contract Forms and Conditions of the Contract, one (1) original, two (2) USB drives.
9. Bid Documents submitted in sealed envelope and addressed and labeled in conformance with the instructions in the Invitation to Bid.
10. Anti-kickback Affidavit; Public Entity Crime Form; City of Key West Indemnification Equal Benefits for Domestic Partners Affidavit; Local Vendors Form. Cone of Silence, and Proof of Insurance
11. Description of proposed work including layout; Equipment Cut Sheets; Warranty Information/Proposal; SUMMARY OF WORK Requirements

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**PART 1**

**BIDDING REQUIREMENTS**

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**BID FORM**

Project Title: **CITY OF KEY WEST -COMPREHENSIVE CCTV SECURITY SYSTEM – ROAD SURVEILLANCE AND MONITORING – DUVAL STREET, MALLORY SQUARE AND OUTER MOLE**

Project No.: **ITB #19-008**

**UNIT PRICE BID**

The bidder agrees to furnish and install the System as specified and defined in this specification. Prices must include all materials, labor, engineering, coordination, programming, training, supervision, project management, testing and any other tasks required to deliver a working security system in accordance with this document. Any work, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for. Pre-purchased Maintenance pricing for software assurance (no charge upgrades and updates) and for system component must be included for years listed. Alternate COMPREHENSIVE CCTV maintenance coverage may be provided as a separate line item. All work and incidental costs shall be included for payment under the several scheduled items of the overall contract, and no separate payment will be made therefore.

**BIDDER'S INFORMATION**

Company Name: Vetted Security Solutions

Address: 4185 35th Street North  
St Petersburg, FL 33714

Contact Name: Ryan Barnett

Email: Rbarnett@vettedsolution.com

Telephone: 901-545-9825

Fax: \_\_\_\_\_

Signature:  Date: 2/10/19

## 1. Cost Itemization

1.1 Complete the following table **BY SITE** for the project:

<b>PORT AREAS ITEMS</b>	<b>Quantity Supplied</b>	<b>Unit Hardware Cost</b>	<b>Extended Cost</b>	<b>Category Total</b>
PTZ Cameras	3	\$4,278.00	\$12,834.00	
Fixed Cameras	6	\$1,288.33	\$7,730.00	
Installation and/or labor cost	4	\$6,000.00	\$24,000.00	
<b>Radio Network</b>	3	\$5,673.33	\$17,020.00	
<b>Outdoor Enclosures and POE switches</b>	5	\$4,644.00	\$23,220.00	
<b>TOTAL</b>			\$84,804.00	
<b>DUVAL STREET ITEMS</b>	<b>Quantity Supplied</b>	<b>Unit Hardware Cost</b>	<b>Extended Cost</b>	<b>Category Total</b>
PTZ Cameras	5	\$4,278.00	\$21,390.00	
Fixed Cameras	10	\$1,340.00	\$13,400.00	
Installation and/or labor cost	5	\$6,000.00	\$30,000.00	
<b>Radio Network</b>	12	\$5,213.08	\$62,556.96	
<b>Outdoor Enclosures and POE switches</b>	7	\$4,644.00	\$32,508.00	
<b>TOTAL</b>			\$159,854.96	
<b>CORE SYSTEM ITEMS</b>	<b>Quantity Supplied</b>	<b>Unit Hardware Cost</b>	<b>Extended Cost</b>	<b>Category Total</b>
<b>Site Survey</b>	1	\$10,000.00	\$10,000.00	
Server Hardware	3	\$29,264.00	\$87,792.00	
Miscellaneous Hardware	15	\$5,715.80	\$85,737.00	
Software License Cost	24	\$372.00	\$8,928.00	
Installation and/or labor cost	5	\$14,174.61	\$70,873.06	
<b>Radio Network Misc.</b>	1	\$5,830.04	\$5,830.04	
<b>Outdoor Enclosures and POE switches</b>	3	\$4,644.00	\$13,992.00	
<b>TOTAL</b>			\$283,152.10	

1.2 Complete the following table as a project summary:

<b>ITEM</b>	<b>Hardware Cost</b>	<b>Software Cost</b>	<b>Total</b>
<b>SYSTEM</b>			
Video Surveillance	\$290,328.00	\$8,928.00	\$299,256.00
Software and Licensing By System			\$0.00
Servers	\$87,792.00	---	\$87,792.00
<b>SERVICES</b>			

Project Management			\$10,000.00	
Installation and programming			\$72,000.00	
Training	-----	-----	---\$0.00	-Included
Prepare As Built Drawings			\$8,000.00	
Mobilization*			\$50,763.06	
General/Supp. Conditions*	-----	-----	---\$0.00	
Demobilization*	-----	-----	---\$0.00	
Payment and Performance Bond			\$26,384.85	
Permits Permitting not included in cost.	Will be billed	separately.		
<b>TOTAL PROJECT COSTS</b>			\$554,195.91	
<b><i>In Words:</i></b>				
MONTHLY FEE TO CLEAN CAMERA LENS			\$1,800.00	
<b>System Maintenance</b>	<b>Annual Fee for full on site service</b>	<b>OPTION FOR Annual Fee for Software/Tech support only</b>		
Year 1	\$52,781.11	\$42,200.00		
Year 2	\$52,781.11	\$42,200.00		
Year 3	\$52,781.11	\$42,200.00		

**\*Total for Mobilization/Demobilization/General/Supp. Conditions cannot total more than 10% of Construction Cost**

**2. Total System Cost Installed**

The pricing information quoted above must be valid for a period of 90 days from the receipt of this bid.

**\*Bidders may submit a request to use alternate equipment other than that specified above. Request must be in writing and must be submitted no later than 10-days prior to bidding. City will review the request to determine if equipment proposed meets the required specifications. City will respond to bidder in writing accepting or denying the alternate. The City's decision is final.**

SUBCONTRACTORS

The Bidder further proposes that the following subcontracting firms or businesses will be awarded subcontracts for the following portions of the work in the event that the Bidder is awarded the Contract:

Wireless network

**Portion of Work**

SECG, LLC

Name

8362 Pines Blvd Suite 330, Pembroke Pines, FL, 33024

Street City State Zip

Gerhold Electric

**Portion of Work**

Gerhold Electric INC

Name

10036 NW 46th St, Sunrise, FL, 33351

Street City State Zip



SURETY

\_\_\_\_\_ whose address is

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_  
Street City State Zip

\_\_\_\_\_  
Phone Resident Agent

BIDDER

The name of the Bidder submitting this Bid is Vetted Security Solutions

\_\_\_\_\_ doing business  
at

4185 35th Street North, St Petersburg, FL, 33714  
Street City State Zip

Rbarnett@vettedsolution.com  
email address

which is the address to which all communications concerned with this Bid and with the Contract shall be sent.

The names of the principal officers of the corporation submitting this Bid, or of the partnership, or of all persons interested in this Bid as principals are as follows:

Name	Title
<u>Ryan Barnett</u>	<u>Owner</u>
_____	_____
_____	_____
_____	_____

If Sole Proprietor or Partnership

IN WITNESS hereto the undersigned has set his (its) hand this \_\_\_\_ day of \_\_\_\_\_ 20\_\_.

\_\_\_\_\_  
Signature of Bidder

\_\_\_\_\_  
Title

If Corporation

IN WITNESS WHEREOF the undersigned corporation has caused this instrument to be executed and its seal affixed by its duly authorized officers this 10 day of February 2019.

(SEAL)

Vetted Security Solutions

\_\_\_\_\_  
Name of Corporation

By 

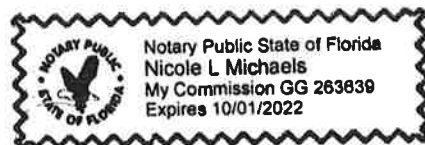
Title Owner

Attest \_\_\_\_\_  
Secretary

Sworn and subscribed before me this 10 day of February 2019.

NOTARY PUBLIC, State of Florida, at Large

My Commission Expires: 10/01/2022



ANTI-KICKBACK AFFIDAVIT

STATE OF Florida )

: SS

COUNTY OF Pinellas )

I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: 

Sworn and subscribed before me this 10 day of February 2019.

NOTARY PUBLIC, State of Florida at Large



My Commission Expires: 10/01/2022

\* \* \* \* \*

**SWORN STATEMENT UNDER SECTION 287.133(3)(A)  
FLORIDA STATUTES, ON PUBLIC ENTITY CRIMES**

*THIS FORM MUST BE SIGNED IN THE PRESENCE OF A NOTARY PUBLIC OR OTHER OFFICER AUTHORIZED TO ADMINISTER OATHS.*

1. This sworn statement is submitted with Bid or Proposal for City of Key West Comprehensive CCTV Security System. ITB#19-008

2. This sworn statement is submitted by Vetted Security Solutions  
(name of entity submitting sworn statement)

whose business address is 4185 35th Street North St Petersburg, FL 33714

and (if applicable) its Federal Employer Identification Number (FEIN) is 45-5289377

(If the entity has no FEIN, include the Social Security Number of the individual signing this sworn statement \_\_\_\_\_)

3. My name is Ryan Barnett  
(please print name of individual signing)

and my relationship to the entity named above is Owner

4. I understand that a “public entity crime” as defined in Paragraph 287.133(1)(g), Florida Statutes, means a violation of any state or federal law by a person with respect to and directly related to the transaction of business with any public entity or with an agency or political subdivision of any other state or with the United States, including but not limited to, any bid or contract for goods or services to be provided to any public or an agency or political subdivision of any other state or of the United States and involving antitrust, fraud, theft, bribery, collusion, racketeering, conspiracy, material misrepresentation.

5. I understand that “convicted” or “conviction” as defined in Paragraph 287.133(1)(b), Florida Statutes, means a finding of guilt or a conviction of a public entity crime, with or without an adjudication of guilt, in any federal or state trial court of record relating to charges brought by indictment information after July 1, 1989, as a result of a jury verdict, nonjury trial, or entry of a plea of guilty or nolo contendere.

6. I understand that an “affiliate” as defined in Paragraph 287.133(1)(a), Florida Statutes, means

1. A predecessor or successor of a person convicted of a public entity crime; or
2. An entity under the control of any natural person who is active in the management of the entity and who has been convicted of a public entity crime. The term “affiliate” includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in the management of an affiliate. The ownership by one person of shares constituting controlling interest in another person, or a pooling of equipment or income among persons when not for fair market value under an arm’s length agreement, shall be a prima facie case that one person controls another

person. A person who knowingly enters into a joint venture with a person who has been convicted of a public entity crime in Florida during the preceding 36 months shall be considered an affiliate.

- 7. I understand that a "person" as defined in Paragraph 287.133(1)(8), Florida Statutes, means any natural person or entity organized under the laws of any state or of the United States with the legal power to enter into a binding contract and which bids or applies to bid on contracts for the provision of goods or services let by a public entity, or which otherwise transacts or applies to transact business with public entity. The term "person" includes those officers, directors, executives, partners, shareholders, employees, members, and agents who are active in management of an entity.
- 8. Based on information and belief, the statement which I have marked below is true in relation to the entity submitting this sworn statement. (Please indicate which statement applies).

Neither the entity submitting this sworn statement, nor any officers, directors, executives, partners, shareholders, employees, members, or agents who are active in management of the entity, nor any affiliate of the entity have been charged with and convicted of a public entity crime subsequent to July 1, 1989, AND (Please indicate which additional statement applies.)

There has been a proceeding concerning the conviction before a hearing of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer did not place the person or affiliate on the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate was placed on the convicted vendor list. There has been a subsequent proceeding before a hearing officer of the State of Florida, Division of Administrative Hearings. The final order entered by the hearing officer determined that it was in the public interest to remove the person or affiliate from the convicted vendor list. (Please attach a copy of the final order.)

The person or affiliate has not been put on the convicted vendor list. (Please describe any action taken by or pending with the Department of General Services.)

*Ryan Barnett*  
(signature)

2/10/19  
(date)

STATE OF Florida

COUNTY OF Pinellas

PERSONALLY, APPEARED BEFORE ME, the undersigned authority,

Ryan Barnett who, after first being sworn by me, affixed his/her  
(name of individual signing)

signature in the space provided above on this 10 day of February 2019.

My commission expires: 10/01/2022



NOTARY PUBLIC

\* \* \* \* \*

**NON-COLLUSION AFFIDAVIT**

STATE OF FLORIDA            )  
  :  
SS COUNTY OF MONROE        )

I, the undersigned hereby declares that the only persons or parties interested in this Proposal are those named herein, that this Proposal is, in all respects, fair and without fraud, that it is made without collusion with any official of the Owner, and that the Proposal is made without any connection or collusion with any person submitting another Proposal on this Contract.

By: 

Sworn and subscribed before me this

10 day of Febuary, 2019.

  
NOTARY PUBLIC, State of Florida at Large




My Commission Expires: 10/01/2022

**CITY OF KEY WEST INDEMNIFICATION FORM**

To the fullest extent permitted by law, the **VENDOR** expressly agrees to indemnify and hold harmless the City of Key West, their officers, directors, agents and employees (herein called the "indemnitees") from any and all liability for damages, including, if allowed by law, reasonable attorney's fees and court costs, such legal expenses to include costs incurred in establishing the indemnification and other rights agreed to in this Paragraph, to persons or property, caused in whole or in part by any act, omission, or default by **VENDOR** or its subcontractors, material men, or agents of any tier or their employees, arising out of this agreement or its performance, including any such damages caused in whole or in part by any act, omission or default of any indemnitee, but specifically excluding any claims of, or damages against an indemnitee resulting from such indemnitee's gross negligence, or the willful, wanton or intentional misconduct of such indemnitee or for statutory violation or punitive damages except and to the extent the statutory violation or punitive damages are caused by or result from the acts or omissions of the **VENDOR** or its subcontractors, material men or agents of any tier or their respective employees.

Indemnification by **VENDOR** for Professional Acts. **VENDOR** hereby agrees to indemnify the City of Key West and each of its parent and subsidiary companies and the directors, officers and employees of each of them (collectively, the "indemnitees"), and hold each of the indemnitees harmless, against all losses, liabilities, penalties (civil or criminal), fines and expenses (including reasonable attorneys' fees and expenses) (collectively, "Claims") to the extent resulting from the performance of **VENDOR**'s negligent acts, errors or omissions or intentional acts in the performance of **VENDOR**'s services, or any of their respective affiliates, under this Agreement. If claims, losses, damages, and judgments are found to be caused by the joint or concurrent negligence of the City of Key West and **VENDOR**, they shall be borne by each party in proportion to its negligence.

**VENDOR:** Vetted Security Solutions  
4185 35th Street North St Petersburg, FL 33714  
Address  
  
Signature  
Ryan Barnett  
Print Name  
Owner  
Title  
**DATE:** 2/10/19

**SEAL:**

NOTARY PUBLIC, State of Florida at Large



My Commission Expires: 10/01/2022

**EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT**

STATE OF Florida )

: SS

COUNTY OF Pinellas )

I, the undersigned hereby duly sworn, depose and say that the firm of \_\_\_\_\_

Vetted Security Solutions

provides benefits to domestic partners of its employees on the same basis as it provides benefits to employees' spouses, per City of Key West Code of Ordinances Sec. 2-799.

By: \_\_\_\_\_

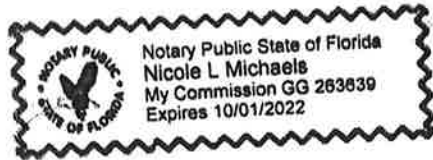


Sworn and subscribed before me this 10 day of Febuary 2019.

NOTARY PUBLIC, State of Florida at Large

My Commission Expires:

10/01/2022



\* \* \* \* \*



**CONE OF SILENCE AFFIDAVIT**

STATE OF Florida )

: SS

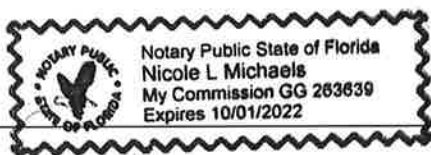
COUNTY OF Pinellas )

I, the undersigned hereby duly sworn, depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of Vetted Security Solutions have read and understand the limitations and procedures regarding communications concerning City of Key West Code of Ordinances Sec. 2-773 Cone of Silence.

By: 

Sworn and subscribed before me this

10 day of Febuary 2019



NOTARY PUBLIC, State of Florida at Large

My Commission Expires: 10/01/2022

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**PART 2**  
**CONTRACT FORMS**

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**DRAFT CONTRACT**

This Contract, made and entered into this 10 day of February 2019,  
by and between the City of Key West, hereinafter called the "Owner", and \_\_\_\_\_  
Vetted Security Solutions

hereinafter called the "Vendor";

WITNESSETH:

The Vendor, in consideration of the sum to be paid him by the Owner and of the covenants and agreements herein contained, hereby agrees at his own proper cost and expense to do all the work and furnish all the materials, tools, labor, and all appliances, machinery, and appurtenances for **ITB #19-008 CITY OF KEY WEST -COMPREHENSIVE CCTV SECURITY SYSTEM – ROAD SURVEILLANCE AND MONITORING – DUVAL STREET, MALLORY SQUARE AND OUTER MOLE** , Key West, Florida to the extent of the Bid made by the Vendor, dated the day of February 2019 , all in full compliance with the Contract Documents referred to herein.

The CONTRACT DOCUMENTS, including the signed copy of the BID, BIDDING REQUIREMENTS, SPECIFICATIONS and DRAWINGS are hereby referred to and by reference made a part of this Contract as fully and completely as if the same were fully set forth herein and are mutually cooperative therewith.

In consideration of the performance of the work as set forth in these Contract Documents, the Owner agrees to pay to the Vendor the amount BID as adjusted in accordance with the Contract Documents, or as otherwise herein provided, and to make such payments in the manner and at the times provided in the Contract Documents.

The Vendor agrees to complete the work within **forty-five (45)** calendar days of Notice to Proceed and to accept as full payment hereunder the amounts computed as determined by the Contract Documents and based on the said BID.

The Vendor agrees to remedy all defects appearing in the work or developing in the materials furnished and the workmanship performed under this Contract during the warranty period after the date of final acceptance of the work by the Owner, and further agrees to indemnify and hold the Owner harmless from any costs encountered in remedying such defects.

It is agreed that the Contract, based upon the BID, shall be fully complete within the stated number of consecutive calendar days from the date the Notice to Proceed is issued.

In the event the Vendor fails to complete the work within the time limit or extended time limit agreed upon, as more particularly set forth in the Contract Documents, **liquidated damages** shall be paid at a rate of **\$250 per day**. Sundays and legal holidays shall be included in determining days in default.

This contract will automatically expire upon completion of the project. Vendor warranty obligations remain in effect.

IN WITNESS WHEREOF, we, the parties hereto, each herewith subscribe the same this

10 Day of February, 2019.

**CITY OF KEY WEST**

By \_\_\_\_\_  
James K. Scholl, City Manager

**VENDOR**

By *Ryan Barnett*

Printed Ryan Barnett

Title Owner

APPROVED AS TO FORM

\_\_\_\_\_  
Attorney for Owner



\* \* \* \* \*

Provide a current Project List including the items for each Project:

1. Project 1

- |   |                                   |
|---|-----------------------------------|
| 1. Project Name:                                | Flagler County Fixed ALPR Project |
| 2. Project Contract Value:                      | \$209,740.00                      |
| 3. Project Completion Date:                     | In Process                        |
| 4. Quantity of Technicians assigned to Project: | 3                                 |

2. Project 2

- |   |                                |
|---|--------------------------------|
| 1. Project Name:                                | Polk County Fixed ALPR Project |
| 2. Project Contract Value:                      | \$682,575.00                   |
| 3. Project Completion Date:                     | In Process                     |
| 4. Quantity of Technicians assigned to Project: | 4                              |

3. Project 3

- |   |                             |
|---|-----------------------------|
| 1. Project Name:                                | Hallandale Beach Fixed ALPR |
| 2. Project Contract Value:                      | \$350,000                   |
| 3. Project Completion Date:                     | In Process                  |
| 4. Quantity of Technicians assigned to Project: | 3                           |

4. Project 4

- |   |                                   |
|---|-----------------------------------|
| 1. Project Name:                                | West Palm Police Department Fixed |
| 2. Project Contract Value:                      | \$275,000                         |
| 3. Project Completion Date:                     | In Process                        |
| 4. Quantity of Technicians assigned to Project: | 4                                 |

Vetted Security Solutions  
4185 35th St. N St. Petersburg, FL 33714  
(901) 545-9825  
rbarnett@vettedsolution.com



## Reference List:

1. St Johns's County Fixed ALPR  
80 Cameras  
Vigilant Solutions  
Completed October 2018  
Scott Quinlan: 217-202-4136
2. Ocala Police Department Fixed ALPR  
26 Cameras  
Vigilant Solutions  
Completed September 2018  
Scott Quinlan: 217-202-4136
3. Pinellas County Fixed ALPR  
50 Cameras  
Vigilant Solutions  
Completed December 2018  
Scott Quinlan: 217-202-4136

# Scott W Quinlan

ADDRESS: 1375 Pinellas Bayway S #39, Tierra Verde, FL 33715 • VOICE: (217) 202-4136 • E-MAIL: [onesquin@yahoo.com](mailto:onesquin@yahoo.com)

## SUMMARY

Results driven leader with 19 years of experience in Information Technology and over 12 years of high level leadership specializing in project management including, but not limited to, application development, ERP Implementations, and enterprise systems and processes all while ensuring customer satisfaction and team development are top priority.

## EDUCATION

University of Illinois at Urbana – Champaign – Bachelor of Science, Engineering

## SKILLS

- ERP Implementations and Upgrades – Custom ERP on System i, Infor Visual Manufacturing for Projects
- Microsoft Windows XP, Windows 7, Windows Server 2003, 2008, Microsoft Exchange 2003, 2007
- Microsoft SQL Server 2005, 2008, TSQL, Business Intelligence & Analytics
- Microsoft SharePoint Server, Project Server, VMWare, SAN - NetApp
- Atlassian Jira, Crowd, & Confluence – Symantec Backup Exec
- Manage the following: .NET Stack, Java Script, AJAX, CSS, HTML, VB Script, Advanced SQL, TSQL, and RPG on System i

## PROFESSIONAL EXPERIENCE

### Software Development Manager – Murphy-Hoffman Company – Leawood, KS – (1/2014 – 3/2017)

- Murphy-Hoffman Company (MHC) is a fast growing company with 40% employee growth since 1/2014 and almost \$4B in revenue. MHC is a network of Kenworth truck dealerships and employs 4000+ across 16 states with over 100 locations.
- Quickly gained the trust of all CXO and EVP positions and communicate with them constantly.
- Manage team of developers and contractors to support and continually enhance the company's Custom Business Systems on System i and .NET platforms. This position is new to the company. My team of direct reports has grown from 5 to 12 employees in less than two years and I am also now managing three new outsourced vendors. During this time 5 additional business systems have been added to my responsibilities.
- Senior Management prefers a Waterfall PMO Process over Agile. With this being the case I explained to the Executives how agile works and they are ok with running select projects as Agile when it makes sense. I also applied Agile principles to our development process even though we are Waterfall. These changes have improved estimates substantially as well as delivering projects on time.
- Continually pushing to modernize our Business Systems and processes since arriving. Examples are:
  - Researching and purchasing modernization toolset to create rich Web UI and native mobile applications on top of our current business logic to decrease user training and enhance the overall business system and user experience. This product also reduces development time.
  - Created a native Windows app to run on Surface Tablets that integrates truck data through a third party API with our custom business system. This app is using WPF, FLUX architecture and is completely OO in design. It is also multi-lingual and designed to integrate with other systems.

# Scott W Quinlan

ADDRESS: 1375 Pinellas Bayway S #39, Tierra Verde, FL 33715 • VOICE: (217) 202-4136 • E-MAIL: [onesquin@yahoo.com](mailto:onesquin@yahoo.com)

## Continued - Software Development Manager – Murphy-Hoffman Company

- Managed the company's first mobile application as well as first e-commerce project. Also managed custom development on the MHC website to integrate truck sales publications with MHC truck inventory in response to the rapidly changing used truck market in late 2015.
- Researched and created partnership with modern EDI VAN allowing our private labeled part division to quickly integrate with all 40 vendors as this VAN allows vendors to use ANSI EDI standards as well as custom import/export files and also web portal for smaller vendors. This change also allowed the division to check shipping data through a portal which our business system does not support at current.
- Successfully brought all .NET development in house by hiring two new .NET resources as well as training current RPG developers with business system knowledge. The .NET developers support and enhance a customer facing web Service Portal that was originally developed by a third party as well as the customer facing Windows Surface App. This move allows MHC to move more quickly on custom development, improve quality, and lower costs and improve support response times.
- Immediately began developing key weekly and monthly metrics to communicate developer efficiency and backlog. Also created reports to show resource allocation by business unit which uncovered trends.
- Increased customer service by setting up automated emails for programming requests as well as responding personally to all requests as soon as they are submitted to communicate schedule.
- Continually meeting with business units on current projects and to research/develop new projects.

## Director Internal Services – Frasca International Inc. – Urbana, IL – (6/2002 – 12/2013)

- Continually increased responsibility over 11 plus year tenure. Progressed from entry level Desktop Technician to Network Administrator to Information Technology Manager to Director Internal Services which was a new position created for the new responsibilities assigned.
- Once promoted to manager I enacted my vision to provide the best customer support and the best services possible which led to eventual assignment of all departments supporting internal customers within Frasca. During my tenure Frasca had a peak employee count of 211 employees.
- Directed 5 departments with 9 direct reports and 19 total employees. The 5 departments are Information Technology, Human Resources, Facilities, Quality, Safety and Training.
- Key member that helped company grow almost 45% from 2008 to 2013.
- Employee Leadership – While as manager, nobody hired by me voluntarily left Frasca in 9 years.
- Strove to understand all aspects of Frasca to help better support and understand the needs of the company and my customers. Intimate with all data and processes to provide information to stakeholders and eliminate bottlenecks. Continually creating ad hoc reports for multiple business units.
- Specialized in new initiatives, project management, and improved processes.
  - Managed ERP implementation and Internal Portal rewrite and Microsoft Project Server implementation simultaneously. The projects were all initiated by me as I was able to gather buy-in from key personnel. They were all delivered on time and on budget.
  - The ERP implementation also included documenting all company processes and work instructions associated with the ERP implementation.
  - Started and managed complete corporate policy effort where we went from zero documented policies to over 500 policies, processes, and work instructions which reduced the time to train new employees by 50-90% in one year.
  - Managed numerous application development projects including home grown CRM, Document Management, and Customer Service rewrites including data migration.



# Scott W Quinlan

ADDRESS: 1375 Pinellas Bayway S #39, Tierra Verde, FL 33715 • VOICE: (217) 202-4136 • E-MAIL: [onesquin@yahoo.com](mailto:onesquin@yahoo.com)

## Continued – Director Internal Services – Frasca International Inc.

- o Managed building additions and remodels with budgets ranging from \$350,000 - \$800,000.
- o Successfully built corporate safety program from scratch by implementing all necessary safety policies. The safety program has near perfect safety metrics (EMR, Work Comp).
- o Member of a team that helped receive ISO 9001:2008 certification and have been managing Quality since Frasca received certification. Recently passed surveillance audit with 0 findings.
- o Managed complete infrastructure overhaul to new networking, backup, storage and virtualized server infrastructure with increased redundancy and 99.9% uptime over the last 5 years.
- o Created from scratch a web based, customer facing application initiative that had its own database backend and integrated with several applications and our product.
- o Initiated and implemented several small web based applications including our policy delivery system, checklist application, and project summary pages.
- o Implemented physical security initiative which included state of the art IP based access control system and integrated surveillance system.
- o Researched and chose HRIS system. The system was implemented 1<sup>st</sup> quarter 2014.
- o Streamlined Engineering Design to Manufacturing to Assembly processes so data flows effortlessly and new designs can be ready to manufacture and assemble immediately.
- Responsible for budgeting and forecasting of all departments.
- Responsible for physical security and telecommunications systems.

## References Available Upon Request



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
01/15/2019

**THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.**

**IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).**

PRODUCER	Mutual Insurance Inc	CONTACT NAME: William Wanless	PHONE (A/C, No, Ext): (727)896-0006	FAX (A/C, No): (727)821-7483
	1900 1st Ave North		E-MAIL ADDRESS: wwanless@mutualinsuranceinc.com	
	PO Box 12350 St Petersburg FL 33713-		INSURER(S) AFFORDING COVERAGE	
INSURED	Vetted Security Solutions LLC 621 Monte Cristo Blvd Tierra Verde FL 33715-	INSURER A : Auto Owners Insurance Co	18988	
		INSURER B : HUL/Commerce & Industry		
		INSURER C : HUL/Covington Specialty Insurance		
		INSURER D : FLU/F C B & I Fund		
		INSURER E :		

**COVERAGES****CERTIFICATE NUMBER:****REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
C	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC OTHER:	X		VBA61104500	04/05/2018	04/05/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ Excluded PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COM/OP AGG \$ 2,000,000 \$
A	<b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			5170148300	04/03/2018	04/03/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
B	<input checked="" type="checkbox"/> <b>UMBRELLA LIAB</b> <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$			EBU015867768	04/05/2018	04/05/2019	EACH OCCURRENCE \$ 3,000,000 AGGREGATE \$ 3,000,000 \$
D	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below		Y/N Y N/A	10660015	04/05/2018	04/05/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

**DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)**  
The City of Cape Coral is named as Additional Insured with respects to the General Liability

**CERTIFICATE HOLDER****CANCELLATION**

AI 027752

City of Cape Coral P O Box 150027 Cape Coral FL 33915-0027	<b>SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.</b>
	AUTHORIZED REPRESENTATIVE 

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**STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

CONSTRUCTION INDUSTRY LICENSING BOARD  
2601 BLAIR STONE ROAD  
TALLAHASSEE FL 32399-0783

(850) 487-1395

Congratulations! With this license you become one of the nearly one million Floridians licensed by the Department of Business and Professional Regulation. Our professionals and businesses range from architects to yacht brokers, from boxers to barbeque restaurants, and they keep Florida's economy strong.

Every day we work to improve the way we do business in order to serve you better. For information about our services, please log onto [www.myfloridalicense.com](http://www.myfloridalicense.com). There you can find more information about our divisions and the regulations that impact you, subscribe to department newsletters and learn more about the Department's initiatives.

Our mission at the Department is: License Efficiently, Regulate Fairly. We constantly strive to serve you better so that you can serve your customers. Thank you for doing business in Florida, and congratulations on your new license!

	<b>STATE OF FLORIDA DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION</b>
CBC1258041	ISSUED: 07/11/2018
BUILDING CONTRACTOR HAYWARD, ADAM KEITH VETTED SECURITY SOLUTIONS LLC	
_____ Signature	
LICENSED UNDER CHAPTER 489, FLORIDA STATUTES EXPIRATION DATE: AUGUST 31, 2020	



**CITY OF KEY WEST**  
 PO Box 1409 (1300 White St.)  
 Key West, FL 33041  
 licensing@cityofkeywest-fl.gov

**BUSINESS TAX RECEIPT**  
**MOBILE SERVICE**  
**ADDENDUM**  
 (Revised 10/2017)

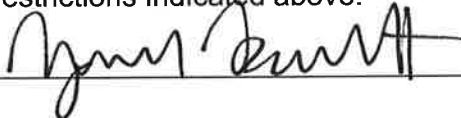
Date: 2/10/19  
 Primary BTR #: \_\_\_\_\_  
 Business Name: Vetted Security Solutions  
 Business Type: Security/ Road Surveillance  
 Home Address: 4185 35th Street North St Petersburg, FL 33714

The following restrictions apply to all businesses assigned "Mobile Service" status on the City of Key West Business Tax Receipt:

- 1) The applicant's primary residence, or any alternate location in the City of Key West where zoning prohibits such activity, may not be used for:
  - a. storage
  - b. stock
  - c. client contact
  - d. repairing or servicing equipment used in the business
- 2) No advertising is permitted at the applicant's primary residence, and no advertising can reference the address of the applicant's primary residence.
- 3) Mobile service is not permitted on city streets or city property.

\*\*\*\*\*

By signing below, I certify that I have read and understand the restrictions associated with my Mobile Service Business Tax Receipt. I understand that my Business Tax Receipt may be revoked for any infraction of the restrictions indicated above.

Signature: 



**Terms and Conditions (Remitter and Payee):**

- \* Please keep this copy for your record of the transaction
- \* The laws of a specific state will consider these funds to be "abandoned" if the Cashier's Check is not cashed by a certain time
  - Please cash/deposit this Cashier's Check as soon as possible to prevent this from occurring
  - In most cases, the funds will be considered "abandoned" before the "Void After" Date
- \* Placing a Stop Payment on a Cashier's Check
  - Stop Payment can only be placed if the Cashier's Check is lost, stolen, or destroyed
  - We may not re-issue or refund the funds after the stop payment has been placed until 90 days after the original check was issued
- \* Please visit a Chase branch to report a lost, stolen, or destroyed Cashier's Check or for any other information about this item

**FOR YOUR PROTECTION SAVE THIS COPY  
CASHIER'S CHECK**

**Customer Copy**

9561406285

02/13/2019

Void after 7 years

**Remitter:** VETTED SECURITY SOLUTIONS LLC

**\$\$\$ 26,384.85 \*\***

**Pay To The Order Of:** CITY OF KEY WEST

Drawer: **JPMORGAN CHASE BANK, N.A.**

**NON NEGOTIABLE**

Memo: \_\_\_\_\_

Note: For information only. Comment has no effect on bank's payment.

282111107 NEW 01/08 8810004306

HOLD DOCUMENT UP TO THE LIGHT TO VIEW TRUE WATERMARK

HOLD DOCUMENT UP TO THE LIGHT TO VIEW TRUE WATERMARK



**CASHIER'S CHECK**

Date 02/13/2019

9561406285

Void after 7 years

25-3  
440

**Remitter:** VETTED SECURITY SOLUTIONS LLC

**Pay To The Order Of:** CITY OF KEY WEST

**Pay:** TWENTY SIX THOUSAND THREE HUNDRED EIGHTY FOUR DOLLARS AND 85 CENTS

**\$\$\$ 26,384.85 \*\***

Drawer: **JPMORGAN CHASE BANK, N.A.**

*Sol Gindi*

Sol Gindi, Chief Administrative Officer  
JPMorgan Chase Bank, N.A.  
Columbus, OH



Memo: \_\_\_\_\_

Note: For information only. Comment has no effect on bank's payment.

Do not write outside this box

⑈ 956 1406 285 ⑈ ⑆ 044000037⑆ 75866 13 26 ⑈

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**PART 3**

**SPECIFICATIONS AND PHOTOGRAPHS**

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## SUMMARY OF WORK

The City of Key West, Florida (City) plans to have COMPREHENSIVE CCTV outdoor video surveillance system designed and installed that will be the platform and basis for expanded services over a period of time. This solution will include:

1. A redundant radio ring as the outdoor network to support the camera locations plotted in this ITB.
2. A radio head end at fire station #2 that will interconnect via City provided fiber link to the main IT data center at City Hall, where the system servers will be located.
3. IP Video Surveillance cameras that meet the specific specifications detailed in this ITB.
4. The licensed capability to support (30) concurrent mobile users to view (2) multiple images on City provided mobile devices, accessed through the Cellular network to a City provided secure internet link at the main IT center at City Hall.
5. An HD work station, specified in this ITB that will be located in the dispatch center at the Key West Police Station, connected via City provided fiber link to the main IT data center at City Hall, where the solution servers will be located.
6. The City will provide all of the required LAN ports and Fiber uplinks at:
  - a. Fire Station #2
  - b. City Hall IT Data Center
  - c. City Police Department Dispatch Center

This ITB covers the requirements for a comprehensive, Redundant Radio Ring Network and Video Surveillance solution for this project. Standard operations for the City are that all of the cameras, radio links and servers will be as redundant as possible for true 24 hour/7 day a week service.

### AREAS COVERED

There are two primary Operational Areas that the City requires coverage for:

- City Port areas
  1. Mallory Square
  2. Mole Pier Cruise Ship checkpoint/Outer Mole Pier docking area
- Duval Street intersections at
  1. Greene Street
  2. Caroline Street
  3. Eaton Street
  4. Petronia Street

Please refer to PDF Drawing in Attachment A for camera sites and radio pathways. Attachment B is a Google Map from Keys Energy which shows all of their power pole locations.

For the purpose of this ITB, assume there are locations on Keys Energy power poles that will be available. **Include in your bid response job labor hours for a site survey to verify radio mounting locations and clear pathways for the point to point radio network.**

## **CAMERA LOCATIONS**

### **City Port Areas**

#### 1. Mallory Square

There is a brick arch feature on the southern side of this public square. It currently has metered power that supports two previous PTZ cameras and a point to point radio antenna. The brick arch feature will support (3) new cameras; (1) PTZ camera in the middle and (2) fixed cameras at each end of the arch feature, cross firing over each other to get a complete view of the main public area and docked cruise ships, including a fixed brick pavilion in the center of the Square that is used for the security check point for cruise ships that docket Mallory.

On top of the Arch feature there will be a two sided radio link; one side pointed to Whitehead St. and the other side pointed to Duval Street.

#### 2. Outer Mole

- A. At the Truman Waterfront Park where Eaton St. terminates into the park, there is a light standard facing the dock area on the Outer Mole Pier. That light pole will support (1) PTZ camera that will show the entire dock area where Cruise Ships dock.
- B. The Port security building/checkpoint is located at the west end of the Truman Waterfront (East Quay Road), next to the security gate between the City property and the US Navy property. All Cruise Ship passengers driven off and on the Mole Pier in Conch Trains and Trolleys pass through this checkpoint. There will be (3) fixed cameras attached to this building, (2) cameras on the street side, at each end of the building, cross firing over each other so that all passengers in the hired vehicles are visible while seated inside the vehicle, and the third camera will face the security gate for additional views.

At this location, the solution shall include eight POE LAN ports sufficient to power all three cameras, provide an uplink to the point to point radio and provide a LAN port for a local City provided PC, so that the (3) fixed cameras on the building can be direct viewed inside the building in addition to the direct feed to the core NVR servers.

### **Duval Street Intersections**

Each of the (4) intersections will have (1) PTZ camera and (2) fixed cameras.



## SYSTEM REQUIREMENTS

The required system is for security hardware and services for the new video surveillance and Radio network technologies (SYSTEM). The City is seeking Bids that will provide the capabilities to monitor and track events, monitor defined event thresholds, and to view, record and archive digital surveillance video for the defined coverage areas. The system must incorporate technologies to optimize transmission on available bandwidth, and provide capabilities to utilize Internet Protocol (IP) for communication from outside the City data network via the Internet. **All equipment must be new and capable of operating in current environment.** The details of the System requirements and features are fully described in later sections of this specification. All devices identified within this specification shall be provided by security contractor unless otherwise identified. The intent of the Documents is to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents. Any work, materials, or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result shall be supplied whether or not specifically called for.

The Video Surveillance functionality expected is as follows:

- Video Surveillance will run 24 hours, seven days a week.
- Video images will be stored for a minimum of **30 days** and then overwritten. The system will provide the ability to manually archive and save additional data.
- NVR shall be configured to store images from all cameras calculated with 100% motion.
- The standard recording speed will be calculated at 30 frames per second (FPS) per camera.
- All cameras shown are outdoor rated, megapixel, and must include design that prevents any fogging inside the camera with either a design that includes the ability to charge the interior with Nitrogen gas or has a built-in heater and/or blower.
- The System Administrator will have full access to view any of the cameras, via software from their PC. The primary viewing position will be in the HD Work Station at the Police Department Dispatch Center.

The solution must include all necessary components to provide complete connectivity as requested. See below for detailed product specifications

## PHYSICAL ENVIRONMENT

The SYSTEM (Main Control Equipment) will be physically located inside one of the Data Cabinets in the existing City Data Center shown on the attached drawings. It is required that all SYSTEM computer server equipment be rack mounted in standard 19" equipment cabinets. The City will provide the UPS for any servers in the City Data Center.

### **Common Work Results for Electronic Safety and Security Conductors and Cables for Electronic Safety and Security**

All branch pathways and cabling from the devices (network, etc.) shall be provided by bidder including ALL of the CAT6 shielded cable and/or CAT6 shielded patch cables to the IP cameras. All other security cabling should be included in the pricing for this Bid.

Labor and materials for terminating, affixing, and dressing of all devices shall be provided by the bidder and shall be included as an “Installation and Labor Cost” item in the pricing section of this document.

Power supplies, devices and connections for networked cameras, camera housings, controllers/panels cabinets and housings shall be provided by the bidder. Additionally, any cabling required to locally interconnect SYSTEM panels (I/O, relay or network patch cables) shall be provided by the vendor. Pricing for these items shall be designated on a separate line item within the pricing section.

The vendor shall include installation and design for configuration of user groups, camera tours, and user database population/integration from the City data sources.

**Pathways for Electronic Safety and Security**

All pathways shall be coordinated with the City and Keys Energy. All electrical boxes and local power outlets shall be provided by the vendor. Termination labor and materials of any of the SYSTEM components within the provided boxes shall be the responsibility of the SYSTEM vendor and shall be designated within the pricing section of this document.

**PRODUCT SPECIFICATION**

The SYSTEM shall consist of the following Manufacturers specific products:

Video Surveillance System: Avigilon Control Center Enterprise Software Package  
 Avigilon Control Center Gateway Software Package

IP Camera types: PTZ and Mini-dome, see chart below:

Minimum camera model requirements (add (1) Axis HE Micro SDXC card 256GB per camera)

<b>Brand</b>	<b>Outdoor Day/Night</b>
<b>PTZ all locations</b>	
Axis	Q6055-S
<b>FIXED at port areas</b>	
Axis	Q3517-SLVE
<b>FIXED on Duval Street</b>	
Axis	Q1786-LE

PLEASE NOTE that the bidder MUST provide redundant storage servers for the entire VMS solution that includes the following minimum specifications:

1. Avigilon HD NVR4 Premium or better, rack mounted server, including;
2. Redundant power supplies
3. RAID 6 storage configuration with adequate storage for the image files detailed in this document

PLEASE NOTE that the bidder MUST provide the primary work station for the Police Department Dispatch Center:

1. Avigilon HD-RMWS3-2MN HD Work Station
2. Avigilon ACC-USB-JOY Joystick
3. (2) 32" 4K video monitors (LG or Samsung)

## **REDUNDANT RADIO RING NETWORK**

The City has reviewed two different Radio systems for this project, they both have provided engineering designs for this project. The City wants the best technical solution to support network growth geographically and from 400 MB to 1 GB duplex throughput.

Siklu Communications

Project designed with EH-600TX-ODU-PoE and EH-614TX-ODU-PoE Devices

Proxim Wireless

Project designed with Tsunami QB-10150L-LINK-US Devices

## **BIDDER MUST INCLUDE MANUFACTURER PROFESSIONAL SERVICES SUPPORT FOR INSTALLATION.**

The City has found an outdoor rated enclosure that shall be included in this project:

**PLEASE NOTE the bidder will provide the dedicated Outdoor rated/ruggedized POE LAN switch to power and connect all of the cameras, and radio antennas and other required LAN ports for this system. See ClearSite PPU-POE below.**

ClearSite Communications

Enclosure (1) PPU-1

(1) PPU-POE

Will be needed per camera location

(For the Security Building at the Outer Mole provide (2) PPU-POE units)

**Keys Energy requires that ALL attachments to their power poles can ONLY be done with Stainless Steel straps.**

## **VIDEO SYSTEM SPECIFICATIONS**

The SYSTEM shall meet the specifications detailed above.

The Video Surveillance component of the SYSTEM shall provide monitoring of the following components:

- IP based Digital Video Management System
- IP Fixed Camera
- IP Performance rated PTZ Camera
- Video storage server (NVR)

### **A. Digital Video Management System (DVMS)**

The DVMS shall provide a digital video recording solution with the following features and capabilities:

- The DVMS shall support Network Video Recorders (NVR) manufactured and supported by the DVMS manufacturer.

- Shall include licensing for 3 concurrent users and 3 client installations (if applicable). Addition of users must not require a migration to or the purchase of another level of software platform to accommodate user licenses
- Recorded or live video shall be available from any workstation on the network
- The NVR shall be capable of storing and archiving a minimum of **30-days** worth of recorded video and provide high resolution playback from the megapixel cameras.
- NVR shall be configured to store images from all cameras calculated with 100% motion
- The standard recording speed will be calculated at 30 frames per second (FPS) per camera.
- The NVR (primary server and/or servers) shall be capable of processing all of the raw image feeds from all of the cameras for this solution. Configure primary server with enough multiple 1 GB NIC ports to support proper throughput from the Core LAN switch.
- Vendor shall provide pricing for DVMS and NVR hardware, and minimum specifications and hardware requirements (owner may choose to purchase directly through current computer vendor)
- The DVMS shall support TCP/IP via Ethernet
- The DVMS shall be modular in scale and support an unlimited number of cameras
- The DVMS shall be able to simultaneously record and display live video and display recorded video
- Recording shall be both event based and continuous
- All recordings shall be marked and available for playback and or archiving at any time
- Up to 30 concurrent mobile users shall be able to access any video feed from any recorder on the network
- User defined profiles with the ability to enforce user authentication for individuals and groups that have access to view live or recorded video
- Independent camera configuration for compression, brightness, and contrast
- The video archive server software shall be independent, providing the ability to user standard storage devices
- The archive server software shall provide the ability to manage and store video information from multiple video recorders to a central location
- The DVMS shall support an advanced matrix view of on-line camera views
- Cameras shall have the ability to be placed into multiple camera groups
- Cameras shall be included within the graphical display maps

**B. Cameras**

The cameras specified:

- Minimum camera model requirements (add (1) Axis HE Micro SDXC card 256GB per camera)

<b>Brand</b>	<b>Outdoor Day/Night</b>
<b>PTZ all locations</b>	
Axis	Q6055-S
<b>FIXED at port areas</b>	

Axis	Q3517-SLVE
<b>FIXED on Duval Street</b>	
Axis	Q1786-LE

- **Cameras should provide image file that can be digitally manipulated for pan, tilt and zoom.**
- Cameras shall support day/night functionality
- Cameras shall support Wide Dynamic Range
- Cameras shall support a minimum of 2+ megapixel and HD 1080p video resolution
- Cameras shall support remote focus and auto Iris control
- Cameras shall be capable of recording up to 30 frames per second (fps) for all resolutions
- Cameras shall be Power over Ethernet (PoE) Class 3 compliant.
- Cameras shall have an integrated housing
- Shall support H.264, Motion JPEG or MPEG-4 video streams
- All cameras/housings shall include appropriate mounting brackets/hardware for affixing cameras to walls/ceilings
- Cameras shall be capable of receiving external triggers from third party devices as well as triggers from motion detection to initiate alarms and image transmission
- Shall provide light sensitivity to 1 lux
- Cameras shall support TCP/IP over Ethernet of at least 100baseTX (Fast Ethernet)

**PLEASE NOTE the bidder will provide the dedicated POE LAN switch to power and connect all of the cameras, and required LAN ports for this system.**

## **DOCUMENTATION TRAINING AND SUPPORT**

### **A. System Documentation**

- The vendor shall document each component of the SYSTEM
- During installation, the vendor shall maintain a separate hard copy set of drawings, elementary diagrams, and wiring diagrams of the SYSTEM to be used for record drawings. This set shall be kept up to date with all changes and additions to all components of the SYSTEM.
- The final as-built documentation shall be provided to the owner within 30-days of final SYSTEM cutover. Copies shall be provided in a hard copy drawing set, and on a USB flash drive.

### **B. Submittal Documentation**

- Prior to installation of any component, the vendor must submit to the Owner a Submittal Package consisting of the following information:
  1. Shop Drawings – Indicate all system device locations on architectural floor plans (AutoCAD file V-12 or newer and PDF file).
  2. Full schematic wiring information for all devices
  3. Product Data – Data sheets specifying manufacturer’s technical data for all material and equipment. An initial binder organized by sections as outlined in this document shall be included prior to initial project start.
  4. The vendor shall document each component of the SYSTEM

5. The vendor must allow two weeks for the Owner's review and comments
6. Any deviations to the approved Submittal Package must be accompanied by written Owner approval

**At system acceptance and turn over to service, the vendor shall provide one complete hard copy of all of the documentation requested above so that the end user will have one "cook book" to look at in the future for system use, including contact information for ongoing service and training support.**

### **C. Contractor System Cutover Support**

- The Contractor shall provide on-site support for the entire cut-over period. Assume a total of (1) complete cut-over.
- At a minimum, the Contractor must provide the Project Foreman. The Project Foreman must remain on-site until dismissed by the Owner. The Contractor's Project Manager must be on-call for the duration of the cutover to assist the Project Foreman in the event assistance is required.
- The Contractor's on-site personnel must be equipped with toners, testers, and other miscellaneous equipment

### **D. General Training Requirements**

The following section defines the training requirements associated with the implementation of the proposed system. These training requirements are an integral part of the system Bid. All pricing associated with training is to be included in the response.

- All SYSTEM user training must be performed at the Owner's site.
- The successful bidder will be required to equip a customer-provided training room with the enough working equipment to facilitate group training. The bidder must describe this equipment configuration.
- The bidder is required to provide sufficient training personnel to train 8 users over a period of 1 day.
- User training must cover all basic and enhanced features associated with each type of instrument installed as part of this ITB.
- The bidder agrees to perform all training in a time frame set by the Owner and as close to the cutover date as possible.
- The bidder agrees to provide at least 2 original manufacturer-supplied training materials and user guides for all equipment covered in this ITB. One full printed copy and one electronic copy
- The bidder agrees to provide training to 2 customer trainers to assist the customer ongoing training of personnel ("train the trainer").

### **E. System Administration Training**

- The bidder must provide complete system administration training on all proposed systems for two administrators.
- Define the administration training course, what topics are covered, the length of time of the training and where the training is to be held.

- Describe any Manufacturer provided training or certification programs available to Owner personnel. Provide details on classroom training locations available, self-paced training, or online training modules.

#### **F. Cabling Quantities**

The Bidder shall provide the cabling type (18/2, 18/4, 22/4, etc.) The Bidder will be providing and installing all CAT 6 shielded cable to the IP cameras, (Note for cameras where an additional low voltage 18/2 power cable is required, the bidder will be providing this cable and shall coordinate the installation with the cabling vendor. Category 6 cables to IP camera devices SHOULD be included in the bidder's quote. The Bidder shall provide all other quantities required to install the security system and devices as specified. This quantity shall be equal to the footages identified in the selected vendor's shop drawings. **Deviations and costs from these quantities and the actual pulled quantities by cabling contractor shall be the responsibility of the bidder.**

This cabling will be purchased and installed as described above. The quantities shall include footages required for appropriate service loops and dressing in all technology rooms and pathways to door controllers. Any cabling required to terminate devices at door locations (for example from controllers to contacts, door hardware etc.) need not be included, since this is the responsibility of the bidder.

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## MOU (La Concha Hotel & Spa)

For this design, it is essential to have roof top access to La Concha Hotel & Spa (430 Duval St, Key West, FL 33040). From this point, there is clear Line-of-Site to the Police Department, City Hall, and Fire Station 2, as well as most of the street level sites.

By using La Concha Hotel & Spa the city gains a superior location that can be used as a connectivity gateway for Emergency Response during a hurricane crisis. The design proposed here will allow for site-to-site connectivity in the event of carrier failure in the city, utilizing 24GHz to interconnect the 3 City buildings.

This site is also critical for any expansion the City may do in the future, as this is one of the highest points in the West end of the island.

## Scalability

The current design puts in infrastructure at the La Concha Hotel & Spa that blankets the West-end of the island with 4-5GHz connectivity points. This infrastructure can be utilized for adding additional city sites or growing the city-wide surveillance system.

## Network

The proposed design will have 3 direct P2P backhuls to The Police Department, City Hall, and Fire Station 2.

The P2P to City Hall will be an active connectivity point, connecting the sites in this project directly to the system for recording and video distribution via the cities network.

The other P2P (Police Department and Fire Station 2) will be failover links, to be utilized for failover and/or load balancing. In the event of a carrier failure or natural crisis, these links can be activated to allow for connectivity between all 3 sites.

The physical network between the 3 buildings and aggregation point will sit on Juniper Routers and switches. We will provide a connection at each site to the cities network.

## Wireless

From our on-site inspection, we have determined that the current street level point-to-point design is inadequate for the real-time video requirements specified in the bid. The City is asking for a 30FPS at 1080P, with the expectation of minimal delayed PTZ control, which demands high bandwidth low latency. The current design with numerous obstructions such as trees, cars, buildings, etc. and excessive hops will create a system that will not meet the expectations of the bid in terms of redundancy or performance.

The ISSUES with this are...

1. 60GHz (EH-600TX-ODU-PoE EH-614TX-ODU-PoE)
  - a. While 60GHz is meant for high throughput, low latency, being in South Florida, rain fade is a major concern and will likely cause latency and drop packets.
  - b. If the intended purpose of these radios is to be used at street level, then these are the following issues:
    - i. Think of 60GHz as a fine laser. Any sway in the poles at these short distances will knock alignment and create/increase latency, retries, and dropped packets.
    - ii. Pedestrian level line of sight obstructions such as vehicles, trees, buildings, festive decorations, and/or balloons will all break a 60GHz link.
    - iii. The 60 GHz frequency bands are very sensitive to various environmental factors like gas, water droplets of rain, fog etc. all of which make these radios less than ideal for ground level installations.
2. 4-6GHz (Proxim Tsunami QB-10150L-LINK-US)
  - a. While these are more appropriate for this application, there are still issues with the current street level P2P topology.
  - b. Even at these short distances, using the P2P link between Greene St and Caroline St, which is only .08 miles (448FT), there is a Fresnel zone requirement of at least (80%) 3.75FT of vertical and horizontal clearance from center. This means trees, cars, and buildings will cause clipping on most of these links. This will result in increased latency, retries and dropped packets, which will result in data loss. Also, having a noticeable effect on live and recorded video.
  - c. Additionally, the current design of the P2P ring will compound these network losses and result in video dropouts and lack of PTZ control.
  - d. Channel (Frequency) separation – With the current design, it would be required to use the 80MHz band due to throughput demand, which means there are only 2 non-overlapping bands. This means radios shooting down the same street or crossing paths at intersections will likely create noise and overhead for each other. This will also create intermittent issues such as dropped packets, retries, and increase latency.
3. Street Level P2P Wireless Ring
  - a. This current design will have compounded issues resulting in data loss. The effects will be noticed in video loss, distortion, lack of PTZ control, and constant drops.
  - b. If we break the between Greene St and Caroline St, Caroline St will have 5 hops back to the Fire Station. Any issues will be multiplied by each hop.
4. Scalability – With the current design, adding a new intersection will be virtually impossible, as you will need to break an existing link to add a new intersection. This means you're now creating more noise and interference, in an environment with only 2 non-overlapping 80MHz channels.
5. Noise – Using the 80MHz band means the radio is utilizing almost all of its available frequencies, which makes it more sensitive to growing consumer grade wireless installations. This means devices in the 4-5GHz range using 5-10-20 MHz bands will create noise for these radios and affect link quality.
6. Wireless Congestion – The growing wireless congestion of consumer grade wireless installations will make the proposed P2P design increasing harder to support. Also, employing such a wide band will make mitigation of the congestion impossible due to the limited number of available channels.

We are proposing a different wireless topology that will reduce latency, downtime, points of failure, and increase throughput availability and expandability for the future. We're proposing a Base Station & Subscriber topology, Each intersection being a single P2P link.

This design will require an MOU at the La Concha Hotel & Spa (430 Duval St).

24GHz Backhauls



Figure 1: 24GHz P2P Backhaul Links

MapLoc	Location	Address	Manuf.	Model No.	Description	Shoots To
P2P24-01	Ocean Key Resort & Spa	0 Duval St	Proxim	GX-824	P2P 24GHz BSU	La Concha Hotel & Spa
P2P24-02	La Concha Hotel & Spa	430 Duval St	Proxim	GX-824	P2P 24GHz BSU	Ocean Key Resort & Spa
P2P24-03	La Concha Hotel & Spa	430 Duval St	Proxim	GX-824	P2P 24GHz BSU	Police Department
P2P24-04	La Concha Hotel & Spa	430 Duval St	Proxim	GX-824	P2P 24GHz BSU	City Hall
P2P24-05	La Concha Hotel & Spa	430 Duval St	Proxim	GX-824	P2P 24GHz BSU	Fire Station 2 (Old Fire House)
P2P24-06	Fire Station 2 (Old Fire House)	Corner of Angela and Simonton	Proxim	GX-824	P2P 24GHz BSU	La Concha Hotel & Spa
P2P24-07	Police Department	1604 N Roosevelt Blvd	Proxim	GX-824	P2P 24GHz BSU	La Concha Hotel & Spa
P2P24-08	City Hall	1300 White St	Proxim	GX-824	P2P 24GHz BSU	La Concha Hotel & Spa
P2P24-09	La Concha Hotel & Spa	430 Duval St	Proxim	GX-824	P2P 24GHz BSU	Pier Guard Shack
P2P24-10	Pier Guard Shack	South Mole Pier	Proxim	GX-824	P2P 24GHz BSU	La Concha Hotel & Spa

Figure 2: Backhaul Locations

## 5GHz BSU and CPE Links



Figure 3: 4-5GHz BSU and CPE Links

MapLoc	Location	Manufacturer	Model No.	Description
BS-01	Ocean Key Resort & Spa	Proxim	MP-10100-BSU	BSU 4-5GHz
BS-02	La Concha Hotel & Spa	Proxim	MP-10100-BSU	BSU 4-5GHz
BS-03	La Concha Hotel & Spa	Proxim	MP-10100-BSU	BSU 4-5GHz
BS-04	La Concha Hotel & Spa	Proxim	MP-10100-BSU	BSU 4-5GHz
BS-05	La Concha Hotel & Spa	Proxim	MP-10100-BSU	BSU 4-5GHz

MapLoc	Location	BSU Location	Manufacturer	Model No.	Description
CPE-01	Mallory Square	BSU-01	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-02	Dual & Front	BSU-01	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-03	Duval & Greene	BSU-02	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-04	Duval & Caroline	BSU-02	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-05	Duval & Eaton	BSU-02	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-06	Duval & Petronia	BSU-03	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-07	South Mole Security	BSU-04	Proxim	MP-10150-CPE	CPE 4-5GHz
CPE-08	Truman Waterfront Park & Eaton <i>Possible Relay Point Needed</i>	BSU-04	Proxim	MP-10150-CPE	CPE 4-5GHz

# VMS

## Cameras

MapLoc	Location	Manufacturer	Model No.	Description	Camera No.
Loc-01	Mallory Square	Axis	AXIS Q6055-S	PTZ	01
Loc-01	Mallory Square	Axis	AXIS Q3517-SLVE	Dome, SS	02
Loc-01	Mallory Square	Axis	AXIS Q3517-SLVE	Dome, SS	03
Loc-01a	Ocean Key Resort & Spa	Axis	AXIS Q6055-S	PTZ	04
Loc-01a	Ocean Key Resort & Spa	Axis	AXIS Q1786-LE	Fixed, 32x	05
Loc-02	Dual & Front	Axis	AXIS Q6055-S	PTZ	06
Loc-02	Dual & Front	Axis	AXIS Q1786-LE	Fixed, 32x	07
Loc-02	Dual & Front	Axis	AXIS Q1786-LE	Fixed, 32x	08
Loc-03	Duval & Greene	Axis	AXIS Q6055-S	PTZ	09
Loc-03	Duval & Greene	Axis	AXIS Q1786-LE	Fixed, 32x	10
Loc-03	Duval & Greene	Axis	AXIS Q1786-LE	Fixed, 32x	11
Loc-04	Duval & Caroline	Axis	AXIS Q6055-S	PTZ	12
Loc-04	Duval & Caroline	Axis	AXIS Q1786-LE	Fixed, 32x	13
Loc-04	Duval & Caroline	Axis	AXIS Q1786-LE	Fixed, 32x	14
Loc-05	Duval & Eaton	Axis	AXIS Q6055-S	PTZ	15
Loc-05	Duval & Eaton	Axis	AXIS Q1786-LE	Fixed, 32x	16
Loc-05	Duval & Eaton	Axis	AXIS Q1786-LE	Fixed, 32x	17
Loc-06	Duval & Petronia	Axis	AXIS Q6055-S	PTZ	18
Loc-06	Duval & Petronia	Axis	AXIS Q1786-LE	Fixed, 32x	19
Loc-06	Duval & Petronia	Axis	AXIS Q1786-LE	Fixed, 32x	20
Loc-07	South Mole Security	Axis	AXIS Q3517-SLVE	Dome, SS	21
Loc-07	South Mole Security	Axis	AXIS Q3517-SLVE	Dome, SS	22
Loc-07	South Mole Security	Axis	AXIS Q3517-SLVE	Dome, SS	23
Loc-08	Truman Waterfront Park & Eaton	Axis	AXIS Q6055-S	PTZ	24

## Storage

Storage requirements based on 24 cameras at 1080p, 30FPS, with 30-day retention comes out to 74TB of required storage. We've added 30%, which puts the storage requirements at 96TB.

For primary video, we added two 80TB (Totaling 160TB Usable) Dell servers utilizing SSD for the OS and disk for video storage. The OS will sit on mirrored (RAID1) SSD and the disk storage will be configured in RAID6. All servers come with a 5-Year ProSupport Plus (NBD) support from manufacturer.

We are adding a backup/failover server as well.

This build will allow for expansion of approximately 26 additional cameras. Totaling 50 cameras.

The above storage calculations are based on the high end of 1080p (9Mbps).



## Scope of Work

Mallory Square					
<b>Location:</b>	Mallory Square		Camera 01:	AXIS Q6055-S	Camera No.: 01
<b>MapLoc:</b>	Loc-01		Camera 02:	AXIS Q3517-SLVE	Camera No.: 02
			Camera 03:	AXIS Q3517-SLVE	Camera No.: 03
<b>Wireless</b>			ClearSite PPU:	1	
<b>Local:</b>	Proxim MP-10150-CPE				
<b>Remote:</b>	Ocean Key Resort & Spa				
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to Ocean Key Resort & Spa				

Ocean Key Resort & Spa					
<b>Location:</b>	Ocean Key Resort & Spa		Camera 01:	AXIS Q6055-S	Camera No.: 04
<b>MapLoc:</b>	Loc-01a		Camera 02:	AXIS Q1786-LE	Camera No.: 05
			Camera 03:		Camera No.:
<b>Wireless</b>			ClearSite PPU:	1	
<b>Local:</b>	Proxim MP-10100-BSU, GX-824				
<b>Instructions:</b>	Installation of 2 cameras, a Proxim MP-10100-BSU and GX-824				

Duval & Front					
<b>Location:</b>	Duval & Front		Camera 01:	AXIS Q6055-S	Camera No.: 06
<b>MapLoc:</b>	Loc-02		Camera 02:	AXIS Q1786-LE	Camera No.: 07
			Camera 03:	AXIS Q1786-LE	Camera No.: 08
<b>Wireless</b>			ClearSite PPU:	1	
<b>Local:</b>	Proxim MP-10150-CPE				
<b>Remote:</b>	Ocean Key Resort & Spa				
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to Ocean Key Resort & Spa				

Duval & Greene						
<b>Location:</b>	Duval & Greene		Camera 01:	AXIS Q6055-S		Camera No.: 09
<b>MapLoc:</b>	Loc-03		Camera 02:	AXIS Q1786-LE		Camera No.: 10
			Camera 03:	AXIS Q1786-LE		Camera No.: 11
<b>Wireless</b>			ClearSite PPU:	1		
<b>Local:</b>	Proxim MP-10150-CPE					
<b>Remote:</b>	Ocean Key Resort & Spa					
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to Ocean Key Resort & Spa					

Duval & Caroline						
<b>Location:</b>	Duval & Caroline		Camera 01:	AXIS Q6055-S		Camera No.: 12
<b>MapLoc:</b>	Loc-04		Camera 02:	AXIS Q1786-LE		Camera No.: 13
			Camera 03:	AXIS Q1786-LE		Camera No.: 14
<b>Wireless</b>			ClearSite PPU:	1		
<b>Local:</b>	Proxim MP-10150-CPE					
<b>Remote:</b>	La Concha Hotel & Spa					
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to La Concha Hotel & Spa					

Duval & Eaton						
<b>Location:</b>	Duval & Eaton		Camera 01:	AXIS Q6055-S		Camera No.: 15
<b>MapLoc:</b>	Loc-05		Camera 02:	AXIS Q1786-LE		Camera No.: 16
			Camera 03:	AXIS Q1786-LE		Camera No.: 17
<b>Wireless</b>			ClearSite PPU:	1		
<b>Local:</b>	Proxim MP-10150-CPE					
<b>Remote:</b>	La Concha Hotel & Spa					
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to La Concha Hotel & Spa					

Duval & Petronia					
<b>Location:</b>	Duval & Petronia	Camera 01:	AXIS Q6055-S	Camera No.:	18
<b>MapLoc:</b>	Loc-06	Camera 02:	AXIS Q1786-LE	Camera No.:	19
		Camera 03:	AXIS Q1786-LE	Camera No.:	20
<b>Wireless</b>		ClearSite PPU:	1		
<b>Local:</b>	Proxim MP-10150-CPE				
<b>Remote:</b>	La Concha Hotel & Spa				
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to La Concha Hotel & Spa				

South Mole Security					
<b>Location:</b>	South Mole Security	Camera 01:	AXIS Q3517-SLVE	Camera No.:	21
<b>MapLoc:</b>	Loc-07	Camera 02:	AXIS Q3517-SLVE	Camera No.:	22
		Camera 03:	AXIS Q3517-SLVE	Camera No.:	23
<b>Wireless</b>		ClearSite PPU:	2		
<b>Local:</b>	Proxim MP-10150-CPE				
<b>Remote:</b>	La Concha Hotel & Spa				
<b>Instructions:</b>	Installation of 3 cameras as detailed in bid. Wireless link shooting to La Concha Hotel & Spa				

Truman Waterfront Park & Eaton					
<b>Location:</b>	Truman Waterfront Park & Eaton	Camera 01:	AXIS Q6055-S	Camera No.:	24
<b>MapLoc:</b>	Loc-07	Camera 02:		Camera No.:	
		Camera 03:		Camera No.:	
<b>Wireless</b>		ClearSite PPU:	1		
<b>Local:</b>	Proxim MP-10150-CPE				
<b>Remote:</b>	La Concha Hotel & Spa				
<b>Instructions:</b>	Installation of 1 camera as detailed in bid. Wireless link shooting to La Concha Hotel & Spa. This site may require a relay point.				

## Fire Station 2

We will install a wall mounted rack inside the building, running a cable to the roof where we will mount a Proxim GX-824 that will shoot to La Concha Hotel & Spa. This link will be programmed as a failover link, in case the primary carrier connectivity goes down. A ClearSite PPU will also be installed at this location to ensure uptime.

Equipment will be mounted to existing infrastructure at this location.

### Police Department

We will install a wall mounted rack inside the building, running a cable to the roof where we will mount a Proxim GX-824 that will shoot to La Concha Hotel & Spa. This link will be programmed as a failover link, in case the primary carrier connectivity goes down. A ClearSite PPU will also be installed at this location to ensure uptime.

Equipment will be mounted to existing infrastructure at this location.

### City Hall

We will install a non-penetrating sled on the roof of City Hall to mount a Proxim GX-824 that will then shoot to La Concha Hotel & Spa. This link will be an active primary backhaul. Meaning all data from the proposed system will pass through this link, then onto the city network for distribution. A ClearSite PPU will be installed at this location as well.

We will provide a 48U rack to house the servers and network equipment.

### La Concha Hotel & Spa

This site is the main aggregation point for this entire system. We will be installing 2 ClearSite PPU's at this location. There will be 5 P2P 24GHz Backhauls coming from this location as well as 4 BSU's that cover a 90-degree area each. This will cover the enter west end of the island if LOS is adequate.

Equipment will be mounted directly to the building.

## Support

We will provide 1-Year support for the system proposed. Remote monitoring and alerting of all equipment status, failures, and abnormalities will be done by using our remote monitoring services. This allows us to respond to issues proactively and keep track of patterns.

On-Site Support will be based on emergency situations determined by the POC.

# Pricing

Manuf.	Part No.	Description	Qty	Unit	Unit	Total
Axis	0945-001	AXIS Q6055-S PTZ Network Camera - Pressurized, stainless steel PTZ with HDTV 1080p	8	\$	4,278.00	\$ 34,224.00
Axis	01237-001	AXIS Q3517-SLVE Network Camera - Stainless steel for solid performance in 5 MP	5	\$	1,278.00	\$ 6,390.00
Axis	01162-001	AXIS Q1786-LE Network Camera - Robust, first-class 4 MP video with 32x optical zoom	11	\$	1,340.00	\$ 14,740.00
Axis	01609-001	Surveillance microSDXC Card 256 GB	25	\$	255.00	\$ 6,375.00
ClearSite	PPU1	Perpetual Power Unit (PPU1)	15	\$	3,714.00	\$ 55,710.00
ClearSite	PPU-POE-60	Hardened PoE Switch 802.3 af/at 60W PoE - Dual SFP	15	\$	930.00	\$ 13,950.00
SECG	SECG-SNMP-CD	Dedicated SNMP Server and Remote Access Portal - 24/7 logging of all network equipment.	1	\$	12,400.00	\$ 12,400.00
Proxim	MP-10100-BSU-WD	Tsunami MP 10100 Base Station, 866 Mbps, MIMO 2x2, Type-N Connectors - Part Number : 901-00227	5	\$	3,038.00	\$ 15,190.00
Proxim	SA5-9014-DP	4.9-5.95GHz, Dual Polarity, Vertical and Horizontal, 14dBi Sector Antenna- 90 degrees. Mounting kit Incd.	5	\$	765.00	\$ 3,825.00
Proxim	MP-10150-CPE-150-WD	Tsunami MP 10150 Customer Premise Equipment, 150 Mbps, MIMO 2x2, 15 dBi panel   Part Number : 901-00258	8	\$	789.00	\$ 6,312.00
Proxim	GX-824-MM-LNK-A30	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 2 ft, 30 cm antenna - Part Number : 952-00318	5	\$	10,850.00	\$ 54,250.00
Proxim	GX-824-PSU-ACDC	110 – 220 VAC to -48 VDC Power Supply Unit for GX-824	10	\$	131.00	\$ 1,310.00
Proxim	GX-824-CAP-MM	MM Fiber weatherproofing cap for GX-824	10	\$	148.00	\$ 1,480.00
Proxim	GX-824-POEINJ	Surge Protected PoE injector (-48 VDC input) for GX-824	10	\$	304.00	\$ 3,040.00
Juniper	SRX320	Juniper Networks SRX320 Services Gateway - Security Appliance	4	\$	1,397.00	\$ 5,588.00
Juniper	SRX-MP-LTE-AE	4G / LTE MPIM support 1-5, 7-8, 12-13, 30, 25-26, 29-30, 41 LTE bands (for Americas and EMEA)	4	\$	918.00	\$ 3,672.00
Avigilon	HD-RMWS3-2MN	Avigilon HD-RMWS3-2MN HD Work Station	3	\$	2,552.00	\$ 7,656.00
Avigilon	ACC-USB-JOY	Avigilon ACC-USB-JOY Joystick	3	\$	1,116.00	\$ 3,348.00
Avigilon		Server / Device Licenses and SUP	24	\$	372.00	\$ 8,928.00
Sabre	C10220010DP	Non-Penetrating Roof Ballast Frame	3	\$	794.00	\$ 2,382.00
Local	Local Pickup	Cinder Block - 30 lbs. Note: 900 LBS = 30, 1800 LBS = 60 -- Building Structural Engineering / Permitting	90	\$	2.00	\$ 180.00

Note:  
 - L3 switches at all aggregation points and City Buildings  
 - Network will be implemented to support Multicast traffic  
 - Direct Backhaul to Police Department, City Hall, and Fire Station 2  
 -- Backhaul to City Hall will be a primary link  
 -- Backhauls to Police Department and Fire station 2 will be failover links  
 -- Network (Sites) will be VLAN and Network segmented  
 - All cameras set to 1080p @ 30FPS

- Total RAW Storage Requirements: 74 TB  
 - Total (RAW + 30%) Storage Requirements: 96 TB  
 - Peak Recording Load: 233 Mbps  
 - Peak Network Load: 532 Mbps

Dell	R740XD	Dell PowerEdge 740XD - NVR (2P, 1B/F) - [Single] Intel Xeon Gold 5120 2.2G, 14C/28T - 32GB Memory - 240GB SSD (RAID1) (OS) - 80TB Usable (96TB Raw) (Storage) - RAID6 - Dual 750 Watt PSU - Windows Server 2016 - Cable Management Arm - iDRAC9 Enterprise - 5-Year ProSupport Plus (NBD) Note: 2 Primary, 1 Failover	3	\$	29,264.00	\$	87,792.00
Vetted	Verizon	LiE SIM Card, Static IP for Juniper SRX320	4	\$	651.00	\$	2,604.00
APC	AR3347	NetShelter SX 48U 750mm Wide x 1200mm Deep Networking Enclosure with Sides Black	1	\$	3,208.00	\$	3,208.00
APC	AR109	NetShelter WX 9U Wall Mount Cabinet	2	\$	290.00	\$	580.00
		Custom NEMA 3R Enclosure, Vented, Outdoor	3	\$	1,054.00	\$	3,162.00
SECG	SECG-MISC-6	Miscellaneous Installation Materials - Straps, connectors, sealants, wireless equipment, mounting equipment, patch cables, SS Screws, PoE injector/midspans, LMR Cable, etc.	1	\$	28,752.00	\$	28,752.00
SECG	SECG-SYSCONF	System Configuration, Engineering, Implementation, 1-Year Support - VMS Installation and Configuration - Wireless Network Configuration - Network Consulting with City IT for Failover Backhauls - Camera Configuration - Remote Monitoring of Entire System	480	\$	150.00	\$	72,000.00
Vetted		Engineering and Project Management	1	\$	18,000.00	\$	18,000.00
SECG	SECG-PEDEM-PM	2019 Per Diem Rates ((\$282.00 + \$66.00) - Project Management	40	\$	348.00	\$	13,920.00
SECG	SECG-PEDEM-ST	2019 Per Diem Rates ((\$282.00 + \$66.00) - Sr. Technician	40	\$	348.00	\$	13,920.00
SECG	SECG-FLT-FLLKW	Travel	6	\$	700.00	\$	4,200.00
		<b>Materials:</b>		\$			387,048.00
		<b>Labor:</b>		\$			90,000.00
		<b>Travel:</b>		\$			32,040.00
		<b>Shipping:</b>		\$			18,723.06
		<b>5% Surety Bond:</b>		\$			26,384.85
		<b>Permitting:</b>					
		<b>Total:</b>		\$			554,195.91

Line No.	Manuf.	Part No.	Description	QTY	Unit	Markup (24% +1)	Total
	Anixter	0945-001	AXIS Q6055-S P12 Network Camera - Pressurized, stainless steel PTZ with HDV1080p	8	\$ 4,278.00	\$	34,224.00
	Anixter	01237-001	AXIS Q3517-SMVE Network Camera - Stainless steel for solid performance in 5 MP	5	\$ 1,278.00	\$	6,390.00
	Anixter	01187-001	AXIS Q1786-LE Network Camera - Robust, first-class 4 MP video with 32x optical zoom	11	\$ 1,346.00	\$	14,740.00
	Anixter	01609-001	Surveillance microBMC Card 256 GB	25	\$ 255.00	\$	6,375.00
	Vetted	ClearSite PPU1	Perpetual Power Unit (PPU1)	15	\$ 3,714.00	\$	55,710.00
	Vetted	ClearSite PPU2	Perpetual Power Unit (PPU2)	0	\$ 3,466.00	\$	
	Vetted	ClearSite PPU-60	Hardened PoE Switch 802.3 at 60W PoE - Dual STP	15	\$ 930.00	\$	13,950.00
	Vetted	ClearSite PPU-Server	PPU Management Server	0	\$ 12,400.00	\$	
	SECG	SECG-SMMP-CD	Dedicated SMMP Server and Remote Access Portal - 24/7 logging of all network equipment	1	\$ 12,400.00	\$	12,400.00
	Wincom	Proxim MP-10100-BSU-WD	Tsunami MP 10100 Base Station, 856 Mbps, MIMO 2x2, Type-N Connection - Part Number: 901-00227	5	\$ 3,038.00	\$	15,190.00
	Wincom	Proxim ISAS-9014-DP	A-S-95GHz, Dual-Polarity, Vertical and Horizontal, 14dBi Sector Antenna- 90 degrees, Mounting kit incl.	5	\$ 765.00	\$	3,825.00
	Wincom	Proxim MP-10150-CPE-150-W	Tsunami MP 10150 Customer Premise Equipment, 150 Mbps, MIMO 2x2, 15 dBi panel   Part Number: 901-00258	8	\$ 789.00	\$	6,312.00
	Wincom	Proxim GX-824-MM-LINK-A3D	Tsunami GX-824 Link, 920 Mbps FD, Gigabit Eth + MM Fiber, 2 ft, 30 cm antenna - Part Number: 952-00318	5	\$ 10,850.00	\$	54,250.00
	Wincom	Proxim GX-824-PSU-ACDC	110-220 VAC to -48 VDC Power Supply Unit for GX-824	10	\$ 131.00	\$	1,310.00
	Wincom	Proxim GX-824-CAP-MM	MM Fiber weatherproofing cap for GX-824	10	\$ 148.00	\$	1,480.00
	Wincom	Proxim GX-824-POEINI	Surge Protected PoE Injector (-48 VDC input) for GX-824	10	\$ 304.00	\$	3,040.00
	Juniper	SRX130	Juniper Networks SRX130 Services Gateway - Security Appliance	4	\$ 1,397.00	\$	5,588.00
	Juniper	SRX-MP-LTE-AE	4G / LTE MPM support 1-S, 7-R, 12-13, 3G, 3G-2A, 2G-3G, 4G LTE bands (for Americas and EMEA)	4	\$ 918.00	\$	3,672.00
	Vetted	Avigilon	HD-BMWS3-2MM Avigilon HD-BMWS3-2MM HD Work Station	3	\$ 2,552.00	\$	7,656.00
	Vetted	Avigilon	ACC-USB-10Y Avigilon ACC-USB-10Y Hostick	3	\$ 1,116.00	\$	3,348.00
	Vetted	Avigilon	Server / Device Licenses and MUP	24	\$ 372.00	\$	8,928.00
	Labra	C10U200100P	Rack Preinstalling Road Ballast Frame	3	\$ 794.00	\$	2,382.00
	Local	Local Pickup	Clinder Black - 30 Res. Note: 500 LBS = 30, 1800 LBS = 60 - Building Structural Engineering / Permitting	90	\$ 2.00	\$	180.00
			Notes: - L3 services at all aggregation points and City Building Network will be implemented to support Multicast traffic. - Direct Backhaul to Police Department, City Hall, and Fire Station 2 - Backhaul to City Hall will be primary link. - Backhaul to Police Department and Fire Station 2 will be failover links. - Network 100% will be MPO and Network 100% will be MPO. - All services will be MPO and Network 100% will be MPO.				
			Total RAW Storage Requirements: 74 TB Total RAW + 30% Storage Requirements: 96 TB Peak Recording Load: 273 Mbps Peak Network Link: 273 Mbps				
	Dell	R740XD	Dell PowerEdge 740XD - NVR (2P, 1U/1F) [Single] Intel Xeon Gold 5120 2.2G, 14C/28T - 32GB Memory - 240GB SSD (RAID1) (OS) - 80TB Usable (96TB Raw) (Storage) - RAID5 - Dual 750 Watt PSU - Windows Server 2016 - Cable Management Arm - iDRAC Enterprise - 5-Year ProSupport Plus (NBD) Note: 2 Primary, 1 Failover	3	\$ 29,384.00	\$	87,792.00
	Vetted	Verizon	LTE SIM Card, Static IP	4	\$ 651.00	\$	2,604.00
	AFC	AR3347	NetShelter SX 48U 750mm Wide x 1200mm Deep Networking Enclosure with Sides Black	1	\$ 3,208.00	\$	3,208.00
	AFC	AR109	NetShelter WX 9U Wall Mount Cabinet Custom REMA 3R Enclosure, Vented, Outdoor	2	\$ 290.00	\$	580.00
				3	\$ 1,054.00	\$	3,162.00
	SECG	SECG-MISC-6	Miscellaneous Installation Materials - Straps, connectors, crimpers, wirelink equipment, mounting equipment, patch cables, SS Screws, PoE injectors/modulators, LAN cables, etc.	1	\$ 28,752.00	\$	28,752.00
	SECG	SECG-SYS-CON1	System Configuration, Engineering, Implementation, 1-Year Support - VMS Installation and Configuration - Wireless Network Configuration - Network Consulting with City IT for Failover Backhaul - Camera Configuration - Remote Monitoring of Entire System	480	\$ 150.00	\$	72,000.00
	Vetted	Vetted				\$	18,000.00
	Gerhold	Gerhold					
	SECG	SECG-PEDEM-PM	2019 Per Diem Rates (\$287.00 + \$66.00) - Project Management	40	\$ 348.00	\$	13,920.00
	SECG	SECG-PEDM-ST	2019 Per Diem Rates (\$287.00 + \$66.00) - Sr. Technician	40	\$ 348.00	\$	13,920.00
	SECG	SECG-FLT-FLKRW	Travel	6	\$ 700.00	\$	4,200.00
	Vetted	Vetted					
	Vetted	Vetted					
	Gerhold	Gerhold					
	Gerhold	Gerhold					
	Gerhold	Gerhold					

Materials:	\$ 387,048.00
Labor:	\$ 90,000.00
Travel:	\$ 32,040.00
Shipping:	\$ 14,629.00
Surety Bond (5%):	\$ 26,384.85
Permitting:	\$
<b>Total:</b>	<b>\$ 554,091.91</b>

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