



PSX Inc.  
**PSX Tampa**  
5940 Benjamin Road  
Tampa, FL 33634



City of Key West  
City Clerk  
1300 White Street  
Key West, FL 33040

**City of Key West**

**Road Surveillance and Monitoring**

**Duval Street, Mallory Square & Outer Mole**

ITB#18-035

Released June 2018

Due July 19, 2018 @ 3:00 PM EDT



Philadelphia  
Pittsburgh  
Cleveland  
Houston  
Denver  
Tampa

PSX Inc.  
5940 Benjamin Road  
Tampa, FL 33634

July 18, 2018

City of Key West  
Attn: City Clerk  
1300 White Street  
Key West, FL 33040

RE: Road Surveillance and Monitoring Duval Street, Mallory Square & Outer Mole  
ITB#18-035 Dated June 2018  
PSX Proposal No.: DHLQ7056

Dear City of Key West:

PSX Inc. (PSX) is pleased to submit this Request for Proposal response to ITB #18-035 City of Key West Road Surveillance and Monitoring Duval Street, Mallory Square and Outer Mole.

The attached response and information follows the format prescribed in the Request for Proposal and provides detailed explanations of our plan to meet the needs of the City of Key West and maintaining video surveillance coverage of the areas identified..

At the core of our beliefs PSX instills and applies best business practices in our design, implementation and service after the sale to all of our customers and always strives for the very best solutions.

We look forward to proving this throughout the remaining phases of your selection process.

Sincerely,

Don Herpin  
Business Development Executive  
don.herpin@psxgroup.com

**PSX Inc. | Tampa**

5940 Benjamin Road, Tampa, FL 33634 | 813.880.8600 | 800.562.3286 | [www.psxgroup.com](http://www.psxgroup.com)



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# A

## **Tab A**

PSX Qualifications

Company Profile

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Past Project Experience & References





# Company Profile: PSX Inc.

## THE FIRM

PSX Inc. (PSX), is a Philadelphia based, privately-held, family run corporation, servicing customers since 1969. PSX continues to expand core business to keep pace with the requirements of evolving technologies and industry needs. PSX services many diverse sectors: Paid Parking, Higher Education & K-12 Schools, Government, Municipal, Energy, Industrial, Critical Infrastructure, Commercial, Corporate, Pharmaceutical, and Health Care.

As a result of our growth and response to the changing marketplace, we have developed a team of highly qualified personnel in the design, implementation, and maintenance of complete parking and security systems along with associated technologies throughout our six offices in Philadelphia, Pittsburgh, Cleveland, Houston, Denver, and Tampa.

Our integrated systems approach gives us the ability and flexibility to design and deliver a custom or specified solution that exceeds customer's expectations, while our size allows us the flexibility to pull resources from multiple offices to meet the needs of a particular installation.

As a full spectrum provider, PSX does the majority of our installations with in-house labor from "brawn to brain" - from pulling cable and mounting equipment, to programming software and setting up networks, ensuring the final product meets our and our customers' expectations.

We have always maintained stringent standards for the manufacturers we represent due to our customer-centered philosophy. All the manufacturers we represent share our corporate values and they are the leaders in their respective industries.

It has always been the PSX philosophy to allow employees to learn systems from the ground up. Nearly two-thirds of our employees hold technical positions and many of our salespeople have graduated from the technical or operational side of the business as well.

All key personnel on the project team have started their careers installing systems or managing parking operations, learning new technologies, and growing their career which allows PSX to grow and benefit our clients. This management model has proven successful and now provides PSX with quality personnel poised to ensure a successful project from design, installation, implementation and service.



SUPPORT  
PROTECTION  
SERVICE  
INTEGRITY  
ACCOUNTABILITY

### MISSION STATEMENT

PSX is the systems firm that partners with clients whose needs are often unaddressed by the mass market, giving them the products and support needed to protect their organizations and interests. Our model should always serve and strengthen both partners, develop the skills of the individuals involved, and ultimately elevate the industry.

Since 1969, our mission has been to demonstrate that a small, family owned company can be built into a global influence by adhering to the universal values of integrity and accountability.

## THE HISTORY OF PSX

**1969**

PSX Founder Anthony Hutchison opens business as Parking Sales-Service Corporation.

**1991**

Paul Hutchison joins the family business

**1996**

Paul drives growth and opens PSX Pittsburgh

**1998**

PSX Cleveland opens

**2003**

Paul is named president of the company. Due to growth in offerings, he changes the company name to PSX Inc.

**2005**

PSX Tampa opens

**2016**

PSX Houston opens with a focus on security solutions

**2017**

PSX Denver opens to support Amano McGann in Colorado

**2018**

PSX Houston expands with Parking Division

# PSX: A National Firm

PSX brings the strength of a national firm, with the support of a local, dedicated, and reliable team. With offices located in Philadelphia, Pittsburgh, Cleveland, Tampa, Houston and Denver, PSX is able to dedicate additional resources to meet a projects deadline.

PSX takes a partnership approach with our clients which includes providing exemplary service and support throughout the project's entirety and beyond.

As highlighted by our customer references, PSX has successfully implemented, managed, and supported client projects throughout the United States and internationally.



## PSX TAMPA

Leading this project, is our PSX Tampa office, with support from local subcontractor Brazon Cox and our national pool of technicians, PSX will be able to meet the needs of the City of Key West for this project.

PSX Philadelphia is home to our administrative, finance, IT, and marketing teams. Each of these departments provide support to all locations.



## OFFICES

**Philadelphia (HQ)**  
708 Terminal Way  
Kennett Square, PA 19348  
p: 610.444.8210

**PSX Pittsburgh**  
2826 Penn Avenue  
Pittsburgh, PA 15222  
p: 412.338.4345

**PSX Cleveland**  
2340 Hamilton Avenue  
Cleveland, OH 44114  
p: 216.622.2920

**PSX Tampa**  
5940 Benjamin Road  
Tampa, FL 33634  
p: 813.880.8600

**PSX Houston**  
1764 West Sam Houston Parkway N.  
Houston, Texas 77043  
p: 281.674.7144

**PSX Denver**  
6753 East 47th Avenue Drive, Unit E  
Denver, CO 80216  
p: 720.724.9877

## FEIN

23-1720124

## DUNS

048613483



# PSX Team: Leadership

## **PAUL HUTCHISON, PRESIDENT**

Leading PSX is President Paul Hutchison. With 27 years of experience in the parking industry, Paul has first-hand knowledge of all aspects of a parking installation from selecting the equipment, installation and service of the equipment, and the importance of maintaining the customer relationship.

During his tenure, he has held all positions. Starting with the company in 1991 as a field technician, Paul worked his way up; promoted to Account Executive in 1995, Vice President in 1998, and President in 2003. Paul is on track to take over ownership of the firm under a scheduled succession plan.

Paul added the Security Division in 2003, a driver in changing the company name to PSX Inc. This increased our company's offerings to include access control, CCTV, mass notification, intrusion, etc. His leadership assures the continuation of state of the art systems being implemented to the satisfaction of our customers.

Over the years, Paul has pushed PSX to new markets, his track record includes several new offices across the country: Pittsburgh, 1996; Cleveland, 1998; Tampa, 2005; Houston, 2016; and Denver, 2017. Paul continues to maintain the family owned company with core values of integrity, professionalism, and customer-focused solutions.

## **KEVIN J. HALLIDAY, VICE PRESIDENT SALES - PARKING**

Kevin is the Vice President of Sales and has been involved in the parking industry for the last 35 years. Since joining PSX in 1984, Kevin has performed most positions that exist in a parking distributor's company. Through training and practice he has extensive knowledge concerning implementation of business systems and incorporating them successfully into organizations both from a technological and business perspective. With a focus on results, and the customer, he has contributed whatever is necessary to help complete the system per the requirements to insure success for the project and the personnel involved.

## **MARK LAMONTE, DIRECTOR TECHNICAL SERVICES**

Before Mark came to the company in 1998, he was the Director of Information Technology for a national healthcare services firm. He now oversees the project and operations managers that PSX field staff report to, and has responsibility for corporate information technology.

Mark is the Director of Technical Services with a strong technology background.

Mark has helped PSX assure the quality control measures on products and installations. One of Mark's strengths is gained as Director of Information Technology at a national toxicology lab company prior to joining PSX. This background enables Mark to "think outside the box" and apply technology to achieve solutions for our clients that were thought to be too difficult to implement. His focus on reliability, quality, and on-schedule completion has pleased many of our clients and made their projects a success.

Mark also leads our high end IT implementations for clients in the education market such as Temple University, University of Delaware, University of Pennsylvania, University of Pittsburgh, Case Western Reserve, UCI, and University of Pittsburgh Medical Center. Mark is manufacture certified by Verint, S2, AmanoMcGann, ONSSI and Vicon.

## **LEADERSHIP TEAM CONTACT INFORMATION**

**Paul Hutchison**  
President

paul.hutchison@psxgroup.com

**Kevin Halliday**  
Vice President

kevin.halliday@psxgroup.com

**Mark LaMonte**  
Director Technical Services  
mark.lamonte@psxgroup.com



# PSX Team: Administrative

The PSX Administrative Team is based out of PSX Headquarters, located in Kennett Square, Pennsylvania.

## **TRACI WINFREE, ADMINISTRATIVE COORDINATOR**

Joining the PSX team in 2004, Traci is our Administrative Coordinator and brings 30 years of experience to her position. In addition to her responsibilities as administrative assistant to both the CEO and president, Traci also manages customer relations and maintains company compliance with multiple contractor and supplier management systems. She is also responsible for billings.

## **ANGEL FANCHER, STAFF ACCOUNTANT**

Angel joins PSX after 14 years in the accounting industry. Her background encompasses diverse aspects of accounts payable and receivables processes, credit analysis, bookkeeping and customer relations in challenging fast paced business.

Angel is an asset to the PSX team with her ability to maintain precise records, proactive approach and ability to establish good working relationships with diverse vendors and service providers.

## **NIKKI CAMPBELL, MARKETING COORDINATOR**

A recent addition to the PSX family, Nikki supports PSX proposal development and maintains the company website, social media, and brand. She holds a bachelors degree from Millersville University in Speech Communications with a Public Relations option.

## **ADMINISTRATIVE TEAM CONTACT INFORMATION**

**Traci Winfree**  
Administrative Coordinator  
[traci.winfree@psxgroup.com](mailto:traci.winfree@psxgroup.com)

**Angel Fancher**  
Staff Accountant  
[accounting@psxgroup.com](mailto:accounting@psxgroup.com)

**Nikki Campbell**  
Marketing Coordinator  
[marketing@psxgroup.com](mailto:marketing@psxgroup.com)



### **JOHN HALSCHEID, NATIONAL SALES DIRECTOR**

Coming to the PSX family with over 15 years of experience, John has extensive experience with large scale integrated security system installations.

John has designed and project managed many enterprise class integrated security system projects for the following industries: Pharmaceutical, Financial, Federal, State and Local Governments, Manufacturing, Distribution, Retail, Healthcare, University, Commercial Property Management and Precious Metals Depositories. John has specifically managed projects for Top Fortune 500 of the Fortune 500 Pharmaceutical Companies, the Federal Government including the IRS, DHS, FPS, the Federal Reserve Bank, international precious metals/catalysts and pharmaceutical manufacturer Johnson Matthey, large regional hospitals Crozer and DCMH, as well as national distribution companies such as Burris Logistics and Jones Distribution/9 West to name just a few.

With his unique hands-on "partnership" approach, John ensures that our customers have one point of contact from the initial meetings throughout the entire installation to ensure that the systems meet the customer's expectations 100%. He continues to support our customers after the installation. With his intimate knowledge of the systems and sites gained from his continual involvement, he provides our customers with the benefit of continuity and familiarity with their systems. His experience allows PSX to assist our customers in leveraging their existing infrastructure while helping them move forward with new technology.

### **RAUL HERNANDEZ, SECURITY DIVISION MANAGER**

Raul is our Security Division Manager and Senior Project manager for PSX and as such, acts as liaison between contractors, suppliers and owner's representation. Raul joined the PSX staff in 2006 and has over 14 years experience in the security industry and also holds a degree in Electronic Engineering.

Raul has spent several years working on critical infrastructure projects like chemical facilities and nuclear power plants for national accounts where he was tasked with design and implementation of the systems as well as develop a thorough testing process to make certain the systems perform as expected.

Raul recently finished a \$1.6 Million project with the Burlington County Bridge Commission and is manufacturer certified by many suppliers including Verint, Milestone, Video IQ, MaXxess, Bosch, Exacq and S2 to name a few.

### **DON HERPIN, BUSINESS DEVELOPMENT MANAGER**

Don's experience spans 35 years of cross sectional experience including public sector communications, mid to large networks and physical security. Don has held positions as a senior vice president, national business development director, operations manager, senior consultant and engineering support in prior roles. Don has developed and worked on numerous notable projects throughout his career and distinguished himself as the lead designer for the first PSIM, (Physical Security Information Management) solution of its kind in the U.S. for Miami International Airport.

Don has been recognized by the Security Industry Association and The American Security Industry Association as a top consultant in the industry developing and designing projects throughout the world, including projects such as Denver International Airport, The Paris Subway System, and Disney Worldwide. Don also specializes in Citywide Security Solutions including implementation of Video Surveillance projects, and integrated communications and physical access control systems.

### **ALBERT W. MANDIA JR., ACCOUNT MANAGER**

Al joins PSX with more than 15 years of experience in security software & IP camera development & security integration. Prior to joining PSX, Al has concentrated his efforts on the design & implementation of large scale integrated security projects for the following industries: malls, commercial properties, manufacturing, distribution, education, and healthcare.

Al has specifically managed several large mall projects for Simon Properties (King of Prussia and Riverside Malls), Macerich Fashion Outlets of Philadelphia, and PREIT.





### **DAVE WILLIAMS, ACCOUNT MANAGER**

Dave has over 19 years experience working with technology in the security industry. In 2011, Dave joined PSX as an Account Manager specializing in perimeter security. Dave is well rounded in nearly all aspects of the security industry and can provide customers a unique insight of a project from design to implementation and continues this dedication to our clients after the sale.

Recently, Dave moved within PSX to the Houston office as the branch operations manager. His experience continues with projects for energy, transportation, critical infrastructure, chemical, manufacturing, public venue, pharmaceutical and government agency clients, among others. Dave is experienced with products from HySecurity, Amano McGann, VMAG, Magnetic Automation, Door King, Chamberlain, Nasatka, Delta and many more. He is factory certified in VMAG products, holds the CAGOI and CAGSD certifications by the Institute Of Door Dealer Education And Accreditation (IDEA) and is licensed in the state of Texas.

### **DAN FOGEL, PROJECT MANAGER**

Dan is a Project Manager/Senior Technician with over 13 years experience in the Security industry. He is factory trained and certified on such manufacturers as Avigilon, S2, Exacq Vision, Bosch, and Genetec. Dan has had extensive safety training and is certified for all aerial lifts. Dan has led projects in a vast variety of job sites including Industrial, Commercial and Residential. Dan also has experience in the Boon Edam product line as well as CEIA metal detectors.

### **ADRIEN MILLER, PROJECT MANGER**

Adrien came to PSX in 2013 after working for another provider in the security integration field. He has 22 years experience in electronic security, including access control, alarm systems and video surveillance.

Adrien holds a degree in Electronic Engineering, is NICET Level IV certified in fire alarms, and holds various licenses for all types of security systems work across a wide geographical area. He is based in Kennett Square, PA at PSX Headquarters.

### **KEVIN BUCHAKJIN, TECHNICIAN**

Kevin joined PSX with seven years experience in security integration. He is a senior technician with industry experience in access control, video integration, intercom, intrusion alarm, fire alarm as well as perimeter security systems. Kevin holds certifications in Honeywell ProWatch, Exacq Vision, S2, DMP, Aiphone, Bosch as well as many other systems.

### **JERON FURBEE, TECHNICIAN**

With 16 years of electronic security industry experience, Jeron joins PSX as a Lead Security Technician. Throughout his experience he developed an understanding of various access control, CCTV, gates, and mass notification systems.

### **WESLEY MAAS, TECHNICIAN**

Wesley bring to PSX over 18 years of experience in installation and network infrastructure management. He is well versed and certified in many parking, data/voice, CCTV, security, fire alarm, intercom, and wireless systems. His expertise also includes Microsoft Windows Operating Systems, IP networking, server/computer hardware troubleshooting, and general software system configuration.

### **DAVID TYSON, CAD TECHNICIAN**

David joined PSX with a degree in electrical design and five years experience in the engineering field, as an electrical designer. With this knowledge David has assisted in implementing up to date standards for Parking and Security layout and construction drawings. With this standardization comes an understanding between both clients and personnel on the job for an easier transition into a more secure environment. Dave is also manufacturer certified with Bogen Communications Inc.



### **BURLINGTON COUNTY BRIDGE COMMISSION**

For the last 13 years, PSX has provided service and new installations to the Burlington County Bridge Commission for three bridges throughout New Jersey. Project value exceeds \$2,000,000.

### **CATHOLIC UNIVERSITY OF AMERICA**

PSX provided a campus wide video surveillance system and continue to service the system across the Washington, D.C. campus. The initial project was valued over \$200,000.

### **EXXON MOBIL**

PSX provides a wide array of security services to multiple Exxon Mobil facilities across the country. Services include the installation and maintenance of access control, video surveillance, and barrier gate projects. Our contracts value over \$4,000,000.

### **JANNEY MONTGOMERY SCOTT**

PSX installed and supports S2 Security systems and video in roughly 70+ locations on the East Coast.

### **RICOH AMERICAS**

PSX installed and supports over 200 locations with access control systems and video in the United States and Canada.

### **SOUTH FLORIDA WORK EXPERIENCE**

**Peter Van Kirk, US Communities/Safeware**

**561.262.8343, [pvankirk@safewareinc.com](mailto:pvankirk@safewareinc.com)**

Our team has worked with US Communities/Safeware on City applications with Peter Vankirk. US Communities/Safeware is the CO-OP contract holder and would be the authority to release information requested from City Police Departments with their consent.

### **REFERENCES**

**Janney Montgomery Scott**  
Chrisinda O'Brien  
Facilities Manager  
215.500.5494

**Ricoh Americas**  
John Kuprevich  
Vice President of Security  
610.563.1169

Dustin Rabbach  
Sr. Manager Security Operations  
484-401-4976

## Tab B

Project Proposal

The Solution

- Overview
- By Location
- System

Options with PSX







# The Solution: Overview

The PSX Team and its broad network of partners is able to offer the entire array of security industry product categories, brands, and technologies. Through project site surveys and a meeting with The City of Key West staff PSX evaluated current and future needs that were outlined and have applied to this project and will be applied to future projects. Here were some of the takeaways that were asked for and some suggestions that will be delivered:

- The solution must be easy to use.
- The solution must be a Mesh Based wireless network.
- Provide camera coverage off all areas outlined for Duval Street Intersections, Mallory Square and The Outer Mole Checkpoint and Outer Mole Dock coverage.
- Provide a wireless self-healing network .
- The system must have full mobile integration (Apple and Android) with upcoming and existing Citywide applications and possible other Hanwha port video management solutions.
- Ability to add and delete users physical access quickly if necessary.
- Will have the ability to push video event clips and alerts through emails or text.
- Video event reports will show the event called up with a labeled report initiated by the operator.
- Low light level cameras will be used to capture night activity.
- The server will have 30 days storage capability.
- Provide all necessary software and licenses for the video and wireless network.
- Video and wireless network to have lighting protection in place.
- Cameras to be vandal resistant.
- Wireless networks shall be secure, reliable and have to ability to balance loads and propagate traffic.
- The video system will possess analytics abilities such as heat mapping to detect crowd gathering.
- Provide at the edge storage.
- All radios, switches and cameras will be equipped with surge suppressors.

PSX will design, install, and service a complete Mesh based Video Surveillance Monitoring solution as requested by the City of Key West. Each Street Intersection and Mallory Square location will have a multi sensor, 4 camera, PTZ configuration to comply with the recent addendum 2 release. The cameras provided will cover all of the intersections as requested in the ITB and included coverage of Mallory Square and the Outer Mole entrance and Port Outer Mole Area, as depicted and requested in your illustration.

All of the pictures, mappings, schematics, storage calculations, throughput calculations and examples in this proposal are derived by utilizing highly reliable design tools. All cameras supplied utilize Pan, Tilt and Zoom technology and have the ability to focus in on the events as needed.

Below, please find a brief synopsis of those solutions that our team would recommend for evaluation. Please note that these options are “open”, meaning that almost all hardware used in these scenarios is non-proprietary, and could be used with other software for future needs.

# The Solution: By Location

## OUTER MOLE

The Head end equipment consisting of a Hanwha Server, Secure MESH switch and monitoring equipment will reside at the outer mole checkpoint trailer and will serve as the control point and access point for mobile applications that will work on your mobile device.

The software's implemented will be the Wisnet Hanwha WAVE software which is a very robust, easy to use Video Management Software which is extremely feature rich. Wave VMS has the abilities to push video events by your operator or automatically by motion detection assigned rules or analytic events defined by you such as loss of video, loss of network connection, obstructed camera view, and other analytic features may be added as you see fit including, heat mapping of crowds gathering and Gun Shot detection.

Two cameras will be installed on the pole directly behind the outer mole trailer.

A Hanwha PNM-9020V panoramic multi sensor 180 degree/PTZ dome cameras will be able to capture the following field of view of the entry area and is an accurate depiction of coverage.

A Hanwha PNP-9200RH 4K (8MP) @ 30fps Pan Tilt Zoom with a built in 656-foot IR Illuminator, 200MM lens, with anti-vibration technology and Auto tracking technology will be installed facing the Port side and will cover the outer mole area up to the docks as illustrated in this field of view example.

Outer Mole Entry Camera



Outer Mole PTZ



# The Solution: By Location

## MALLORY SQUARE

Mallory Square will be monitored by Hanwha's PNM-9020V, four element, four Camera, 180 degree/PTZ which will provide extremely good coverage of the square. Edge storage will consist of 128GB in case of network outage. This storage device can also be utilized for a dual stream device saving vital data only, such as motion detection, after hours events or heatmapping crowd gathering events.

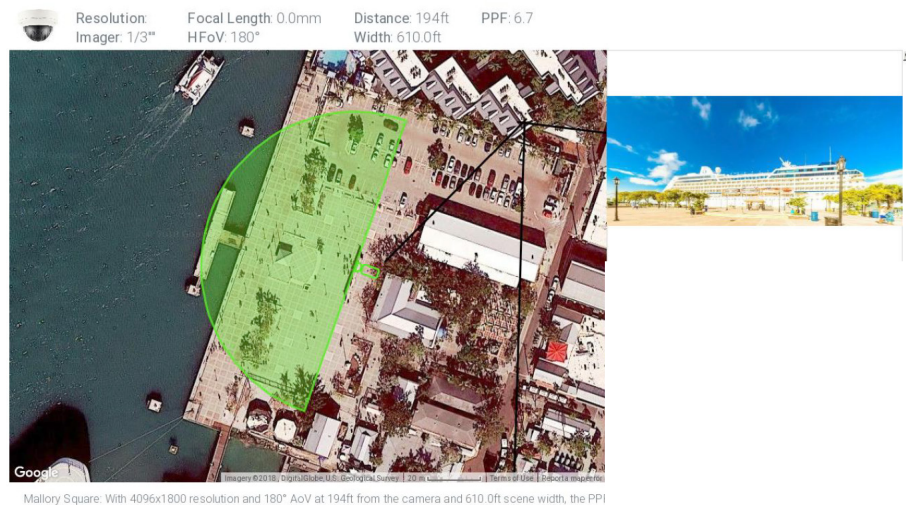
The Demolition will consist of removing the existing Sony PTZ's and conduit on the arches and running new conduit and stainless-steel pull boxes. The existing conduit running under the pavers will be utilized and reconnected on the outside of the building just east of the ATM site. New Conduit will be installed to the existing electrical panel on the side of The Waterhouse Playhouse building. A 24"X 16"X 8"Nema 4 cooled, ventilated, locking cabinet will installed next to the existing power panel and will house a High Voltage ABB disconnect switch for service and One Hardened Transition Network POE switch.

A MESH UAP-AC-M-PRO radio will be mounted on the North Side of the Arches facing into the MESH cloud located in the Duval street sector.

The following shows an example and accurate depiction of coverage and view:

### Mallory Square

Notes: This Camera will be mounted in the middle of the Archway facing the docks. This is a 180 Degree Camera. The



## DUVAL STREET AND CAROLINE STREET

The intersection of Duval and Caroline will be monitored by a four element, four camera Hanwha's PNM-9020V 180-degree PTZ. The camera will be mounted on the street signal light pole at the North West corner to provide for optimum coverage. The POE switch will be mounted in the inground ITS cabinet at the base of the pole to provide power to the switch and end devices. CAT 6 outside plant will be cabled through the pole and connect to the camera and MESH radio.

The MESH radio will be mounted to the back center of the signal lights and the panel will face parallel with Duval street. Edge storage will consist of 128GB in case of network outage, or this storage can be utilized for event storage saving vital data such as motion detection after hours events or heatmapping crowd gathering events.

### Duval And Caroline





# The Solution: By Location

## DUVAL STREET AND EATON STREET

The intersection of Duval and Eaton will be monitored by a four element, four camera Hanwha's PNM-9020V 180-degree PTZ. The camera will be mounted on the street signal light pole at the North West corner to provide for optimum coverage. The POE switch will be mounted in the inground ITS cabinet at the base of the pole to provide power to the switch. CAT 6 outside plant will be cabled through the pole and connect to the camera and MESH radio.

The MESH radio will be mounted to the back center of the lights and the panel will face parallel with Duval street. Edge storage will consist of 128GB in case of network outage, or this storage can be utilized for as an event storage device saving vital data only such as motion detection after hours events or heatmapping crowd gathering events.

## DUVAL STREET AND GREENE STREET

The intersection of Duval and Greene will be monitored by a four element, four camera Hanwha's PNM-9020V 180-degree PTZ. The camera will be mounted on the street signal light pole at the South East corner to provide for optimum coverage. The POE switch will be mounted in the inground ITS cabinet at the base of the pole to provide power to the switch and end devices. CAT 6 outside plant will be cabled through the pole and connect to the camera and MESH radio.

The MESH radio will be mounted to the back center of the lights and the panel will face parallel with Duval street. Edge storage will consist of 128GB in case of network outage, or this storage can be utilized as an event storage device saving vital data only such as motion detection after hours events or heatmapping crowd gathering events.

## DUVAL STREET AND PETRONIA STREET

The intersection of Duval and Petronia will be monitored by a four element, four camera Hanwha's PNM-9020V 180-degree PTZ. The camera will be mounted on the street signal light pole at the South East corner to provide for optimum coverage. The POE switch will be mounted in the inground ITS cabinet at the base of the pole to provide power to the switch and end devices. CAT 6 outside plant will be cabled through the pole and connect to the camera and MESH radio.

The MESH radio will be mounted to the back center of the lights and the panel will face parallel with Duval street.

This location will also have backhaul radio installed that will provide the back leg of the self-healing network ring and will be shot to the Coast Guard tower, and relayed to the outer mole trailer.

Edge storage will consist of 128GB in case of network outage, or this storage can be utilized as an event storage device saving vital data only such as motion detection after hours events or heatmapping crowd gathering events.

### Duval and Eaton



Resolution: Imager: 1/3" Focal Length: 0.0mm Distance: 37ft PPF: 35.6  
HFOV: 180° Width: 114.9ft

Duval and Eaton: With 4096x1800 resolution and 180° AoV at 37ft from the camera and 114.9ft scene width, the PPF is 35.6.

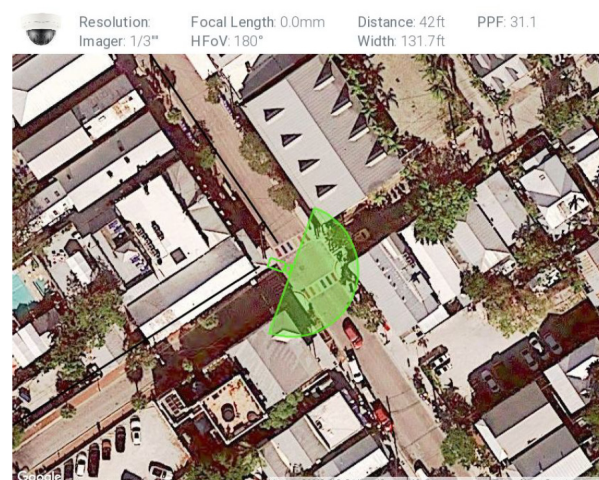
### Duval and Greene Street



Resolution: Imager: 1/3" Focal Length: 0.0mm Distance: 43ft PPF: 30.0  
HFOV: 180° Width: 136.5ft

Duval and Greene Street: With 4096x1800 resolution and 180° AoV at 43ft from the camera and 136.5ft scene width the PPF is 30.0.

### Duval and Petronia



Resolution: Imager: 1/3" Focal Length: 0.0mm Distance: 42ft PPF: 31.1  
HFOV: 180° Width: 131.7ft


Duval and Petronia: With 4096x1800 resolution and 180° AoV at 42ft from the camera and 131.7ft scene width, the PPF is 31.1.

# The Solution: System

## THE SERVER

The Server residing at the outer mole trailer will be a Hanwha 6TB server and has the capacity of adding up to 24 more cameras with the expansion of up to 48 TB of storage. The configuration installed will be 6TB RAW, that supports: up to 32 channels, H.265/H.264/MJPEG, ARB (Automatic Recovery Backup) & Failover (N+1), 8 fixed internal SATA HDDs (with a maximum internal storage capacity of 48TB), e-SATA/iSCSI storage, WiseStream compression technology, dual monitor video out, maximum camera resolution of 12MP recording/display and fisheye dewarping on WEB and CMS. The server will have a wireless keypad and mouse and 32" LED Monitor attached to provide operator monitoring, camera viewing and programming controls.

The following storage calculations and bandwidth network throughput for the proposed system is as follows:



Selected NVR

XRN-2010

■ RAID

■ Total Storage

5.39 TB

■ Total HDD Quantity

1

■ REC Duration

30 days

■ Total Camera Qty

7

■ Total Bandwidth

16.63 Mbit/s

■ System Manager

1

■ Media Gateway

1

PNM-90 20V	Quant ity	Live	REC	N/W Transferring	Total Bandwidth	Storage	Event		Scene Activity	
	6	12.47 Mbit/s	12.47 Mbit/s	12.47 Mbit/s	12.468 Mbit/s	4.04 TB	100 % (Continue Recording)		MIDDLE	
			Streaming Purpose		Video Codec:	Resolution	Bitrate control	Framerate	Compression	Bitrate
	Streaming01		Live Recording N/W		H.264	4096x1800	VBR	30	Single	7168
	Streaming02									
	Streaming03									

PNP-92 00RH	Quant ity	Live	REC	N/W Transferring	Total Bandwidth	Storage	Event		Scene Activity	
	1	4.16 Mbit/s	4.16 Mbit/s	4.16 Mbit/s	4.161 Mbit/s	1.35 TB	100 % (Continue Recording)		MIDDLE	
			Streaming Purpose		Video Codec:	Resolution	Bitrate control	Framerate	Compression	Bitrate
	Streaming01		Live Recording N/W		H.264	3840x2160	VBR	30	Single	12288
	Streaming02									
	Streaming03									

## THE WIRELESS NETWORK

The wireless network is built on the Ubiquiti wireless MESH network platform and is designed as a redundant self-healing ring for the areas specified and covered.

The primary MESH cloud is deployed around Mallory Square and The Duval Street Corridor. Primary Backhaul and access points are, in the following order.

1. The Outer Mole Trailer which will house the MESH Secure switch gateway and the dual redundant 450 Plus Mbps Point to Point radio units will communicate with the 450 Plus units located at the Coast Guard Tower.
2. The Coast Guard Tower will house two 450 Plus Mbps radios communicating from the Coast Guard Tower to Ocean Key House.
3. Ocean Key House will provide MESH connectivity to Mallory Square and One MESH radio will installed at the corner of Front and Duval to assure connectivity to the downline MESH



# The Solution: System

locations of Duval and Caroline, Duval and Eaton, Duval and Greene, and Duval and Petronia,

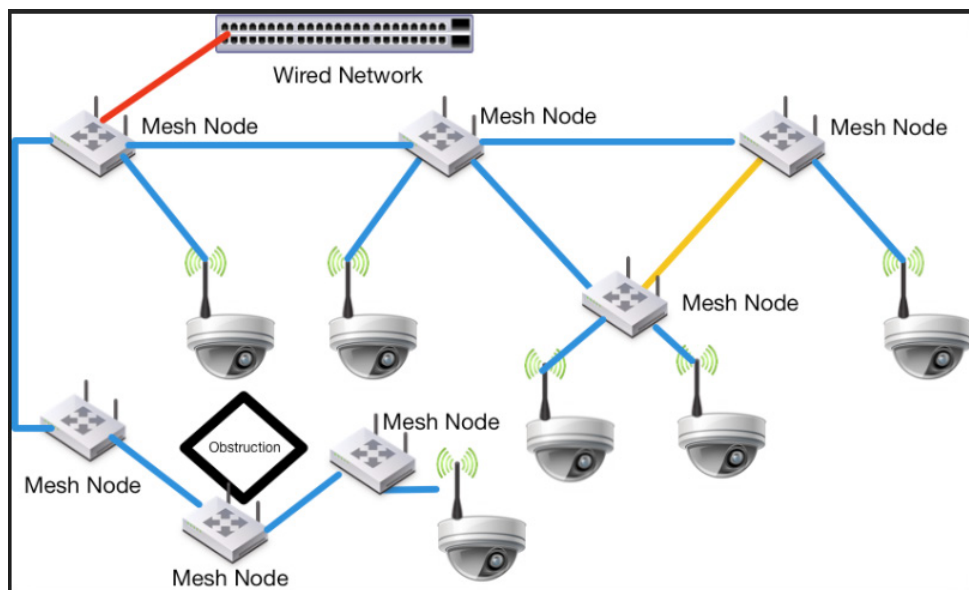
4. Duval and Petronia will have a 450 Plus Mbps Point to Point Radio culminating with the aggregate network at the coast guard tower.

If the City would like to land the head end equipment at Fire Station #2 located at the intersection of Josephine Parker Road and Angela Street. (Per Addendum 2.) This is included in this proposal. However, we feel that the routes shown are the best routes possible and there is sufficient room at the Outer Mole Trailer for the head equipment to be located there. All radios and cameras will be equipped with lightning surge suppressors.

## Diagram of Proposed Wireless Network



## MESH Network Architecture Example



# The Solution: System

## Netware Specifications

NET-i ware PC Recommendation	SSM-RS10/20 PC Recommendation	SSM PC Recommendation
<ul style="list-style-type: none"><li>■ CPU Intel Core i7 (Sandy bridge) above</li><li>■ DRAM 4 GB</li><li>■ OS Windows Server 2003 SP2, Windows 2008 Server 2008</li><li>■ HDD 256MB, 2HDDs (SATA2) above</li><li>■ Network Adapter 1000Mbit NIC</li></ul>	<ul style="list-style-type: none"><li>■ CPU Intel Core i7 Sandy bridge</li><li>■ DRAM 8 GB</li><li>■ OS Windows Server 2008 R2, Windows Server 2012, Windows 7 32/64bit, Windows 8 32/64bit</li><li>■ HDD 256MB, 4DDs (SATA II 7200rpm 64MB) above</li><li>■ Network Adapter 1000Mbit NIC</li></ul>	<ul style="list-style-type: none"><li>■ CPU Intel i7 (Sandy bridge) higher</li><li>■ DRAM 4 GB higher</li><li>■ OS Windows XP 32bit, Windows 7 32/64bit, Windows 8 32/64bit, Windows server 2003, Windows server 2008</li><li>■ Graphics Card 1GB, DirectX8.1 higher, Display resolution : 1280x1024 higher, OpenGL compatible 20GB HDD higher(Needed 10GB higher HDD disk space to save log data)</li><li>■ Network Adapter 1000Mbit NIC</li></ul>



# Options with PSX

## OPTIONS

### IT and Cyber Security

Modern security systems are inextricable from the data network, and many municipal governments have difficulty in identifying and hiring the best talent in the many areas of maintaining such a network: architecture, intrusion detection, encryption, the list goes on.

PSX have an expansive team of specialists and partners available to address any gaps in staffing or expertise that the City of Key West may need to fill in order to spot-check, repair or overhaul any aspect of their data network.

### Monitoring & Central Services

Some clients require assistance in responding to alarms, answering help requests, or even releasing doors and gates for deliveries or visitors. PSX are able to offer an entire suite of such services:

- Alarm Monitoring: Respond to alarm system activations.
- Digital Doorman: Human interaction for visitors and deliveries.
- Video Escort: Video surveillance camera oversight of employees leaving the facility.
- Remote Guard Tour: Scheduled or on-demand visual check of preselected cameras.
- Health Monitoring: Cloud-based oversight of uptime, bandwidth utilization, error messages, etc.
- Remote Cloud Storage solutions: Cloud based data storage for video and access control.



C

## Tab C

Technical Approach

Project Management

Warranty

Service





# PSX Project Management

PSX takes pride in each project that we are awarded, and utilize the following process to ensure a quality design and installation. We believe that these steps help to reduce the number of issues during on-site installation as well as guarantee customer satisfaction.

## PSX PROCESS

### Step 1 – Scheduling

Upon approval of our proposal, PSX will finalize the details of the project and schedule with the City of Key West Representatives. As stated in the RFP, final details will be agreed upon during negotiations.

### Step 2 – Shop Drawings

PSX will provide detailed shop drawings showing equipment placement and wiring configurations.

### Step 3 – Hot Staging

After delivery, PSX stages the equipment at PSX Headquarters warehouse. We conduct initial programming, testing, and configuration. Once the set-up is completed, we commence the stages of installation

### Step 4 – Installation

Since PSX has detailed knowledge of similar Simon locations, requirements and infrastructure, and technicians local to the project, a significant time savings will be realized and simplify the scheduling process while providing a smooth job flow for all parties involved. Once the schedule has been approved, PSX will issue a running purchase order for all the equipment. This will assure all deliveries will be made according to the agreed schedule.

### Step 5 – Testing

Testing will be completed in two phases. The first will be performed prior to installation at PSX Headquarters. This will give the project team the opportunity to localize and address any issues prior to the project completion. Upon project completion, the second phase is an intensive series of tests to ensure the entire system is working according to the specifications.

### Step 6 - Training

The project team believes training is extremely important. PSX will provide all the appropriate training required to help ensure a smooth start-up of maintenance and ongoing operations for the City of Key West. Formal training will be broken up into hardware and software modules. PSX will provide on-going training throughout the project and as needed to ensure a smooth transition.

### Step 7 - Completion

Upon final completion of the system installation, training, and commissioning, PSX will provide all proper documentation that will better serve the property and its personnel now and into the future. PSX will provide the Operation and Supervisor Manuals of each field device and software module. PSX will provide additional project documentation including "As Built" drawings which will detail cable runs, equipment identification, equipment placement, testing results, etc.

PSX Inc. is a professional parking and security systems integrator that you can trust.

We believe that anyone can just sell you parking and security equipment.

Our strength is in designing systems for our clients that deliver maximum value and the best performance for your site with service and support that is unmatched.

Contact us today to experience the difference with PSX!

[www.psxgroup.com](http://www.psxgroup.com)

1.888.562.3285



# Warranty & Service

## WARRANTY

PSX understands the true importance of your video surveillance system and the adverse consequences that may result with a system failure. This is why PSX is committed to providing our clients with top flight service to ensure optimum operations and to eliminate system downtime.

PSX, Inc. is experienced in all facets of the installation requirements including all equipment, software, and its infrastructure. We will assume full responsibility for maintenance and support of the equipment and software during the warranty period.

This service will commence upon completion of the project, for the period of two years. Service beyond the warranty period is also available, please see the proposal cost sheet. As a Gold Partner with Hanwha, the cameras used for this solution, PSX extends a five year parts warranty .

Warranty and Service Agreements become null and void when a party other than PSX Inc. performs work on the covered equipment without the prior written consent of PSX Inc.

## SERVICE CALLS

If you are in need of service, you can call our national service line at 1.800.562.3286 to report the issue. You can also dial the office directly for service, if the call is not answered it is routed to PSX Headquarters to ensure that your service is logged and attended.

All service calls are logged into the PSX system, recording the location, phone number, caller, service requested, technician assigned, and completion date, and service call log number.

Upon entry, our Service Coordinator is notified and works to schedule your service as quickly as possible. All calls are scheduled in the order in which they are received for the service technician in that area.

Calls received by 10:30 a.m. are normally scheduled same day. After 10:30 a.m. calls are usually scheduled within 24 hours.

Normal business hours are from 8am to 4:30pm, Monday through Friday. During non-business hours, our automated service center dispatches service calls that require emergency service.

Service calls not under warranty are billed according to the PSX Hourly Rate schedule.

## WARRANTY STATEMENT

PSX Inc. extends a two year parts and labor warranty from the date of installation (or as stipulated in contract). Warranty and Service Agreements cover failure or malfunction of equipment under normal or routine use.

Items not covered include, but are not limited to, the following:  
misuse, abuse, vandalism, unauthorized or improper service and installation, programming of any kind, natural phenomenon, acts of war or riot, equipment damage caused by power surges, vehicles, storms, replacement of consumable items, i.e., broken gate arms, resetting of passwords, operator functions, and other accidents and defects caused by negligence.

Warranty and Service Agreements become null and void when a party other than PSX Inc. performs work on the covered equipment without the prior written consent of PSX Inc.

# D

## **Tab D**

Financial Proposal

Proposal Cost Sheet

The Solution: Cost & Notes





## Proposal Cost Sheet

Manufacturer	PART #	DESCRIPTION	QTY	LINE PRICE
HANWHA	PNM-9020V	Network IR vandal outdoor Multi-sensor dome camera, Panoramic 180° view, (2MP X 4 camera sensors) 7.3MP @ 30fps, triple codec H.265/H.264/MJPEG with WiseStream technology, defocus detection, PTZ hand over and built in analytics, Heatmap, IP66/IK10	6	\$ 6,171.43
HANWHA	SPB-201HM	Cap Mount	6	\$ 304.71
HANWHA	PNP-9200RH	Network PTZ camera, 4K (8MP) @ 30fps, triple codec H.265/H.264/MJPEG with WiseStream technology, 20x optical zoom, 120dB WDR, built-in IR 656ft (200m), mechanical anti-vibration, auto tracking, built-in video analytics, true D/N, 24VAC, IP66, IK10, -50°C ~ +55°C (-58°F ~ +131°F)	1	\$ 3,822.86
HANWHA	SBP-300WM1	Arm Mount	8	\$ 406.29
HANWHA	SPB-300NB	Installation Box	1	\$ 47.14
HANWHA	SBP-300PM	Pole Mount	8	\$ 406.29
HANWHA	XRN-2010-6TB	4K NVR, 6TB RAW, that supports: up to 32 channels, H.265/H.264/MJPEG, ARB (Automatic Recovery Backup) & Failover (N+1), 8 fixed internal SATA HDDs (with a maximum internal storage capacity of 48TB), e-SATA/iSCSI storage, WiseStream compression technology, dual monitor video out, maximum camera resolution of 12MP recording/display and fisheye dewarping on WEB and CMS.	1	\$ 3,822.86
HANWHA	WAVE-PRO-08	WAVE Professional License. Enables eight (8) IP stream recording, includes life-time SW upgrade. No annual & maintenance cost required.	1	\$ 848.57
NETGEAR	GS418TPP	Netgear GS418TPP - 16-port 2 SFP PoE+ network switch	2	\$ 1,078.94
NETGEAR	AGM731F	Netgear ProSafe AGM731F - 1000Base-SX SFP module	4	\$ 57.14
TRIPPLITE	SRWF2U	Tripplite SRWF2U - low profile network rack cabinet	2	\$ 825.71
Ubiquiti	UAP-AC-M-PRO	UniFi AP, AC Mesh Pro	7	\$ 1,990.00
Ubiquiti	USG-XG-8	10 Gigabit SFP+ UniFi Security Gateway	1	\$ 2,498.57
Ubiquiti	ETH-SP-G2	Ethernet Surge Protector, Gen 2	15	\$ 267.86
Ubiquiti	NS-5AC	450 Plus Mbps Point to Point Radios	8	\$ 1,474.29



Manufacturer	PART #	DESCRIPTION	QTY	LINE PRICE
DDB	SB-24168W-AL	24"x16"x8" OUTDOOR ENCLOSURE FAN AND THERMO, REMOVABLE ALUMINUM BACK PLATE 3 POINT LOCKING HANDLE CENTER MOUNTING STRUT PAINTED WHITE WITH SOLAR SHIELDS ON TOP SIDES AND DOOR NEMA 4/4X RATED DRAWING #01221 NOTE: PROJECT NAME: Key West	2	\$ 1,711.43
DDB	ZZ-4SQUARE-P	Enclosure Installed 4 SQUARE OUTLET	2	\$ 85.71
COMMScope	6O4P24-BK-R-CMS-NR	CAT6OSP(Certified)	340	\$ 476.00
PVC Conduit	67454	3/4 Inch Sch40 PVC	136	\$ 64.11
PVC Conduit	R6141624M	3/4 Inch Sch 40 PVC Coupler	16	\$ 3.20
PVC Conduit	E943E15-UPC	3/4 Inch Sch 40 PVC Box Connector	6	\$ 2.91
CARLON	25170282	3/4" Non-Metallic Liquid Tight	30	\$ 566.14
CARLON	99548958	3/4" Liquid Tight Box Connector	6	\$ 26.23
SQUARE D	9080MH339	Din Rail 35mm	2	\$ 89.91
Altronix	ALT-WP1	12X8X6, 16 GA Steel Junction Box: Powder Coated White NEMA 4/IP65 Outdoor Rated Enclosure	1	\$ 118.94
Transition Networks	TNI-SISTP1040342LRT SISTP1040-342-LRT	Hard UnMDG Switch, 4-port GE POE+, 2 SFP,	6	\$ 2,755.80
ABB	OT25F3	Din Rail HV 110 Disconnect Switch	2	\$ 122.06
W Box	0E-32LEDMON	32 LED MONITOR BNC HDMI VGA	1	\$ 428.57
SanDisk	SDSQUAR-128G-GN6MA	Edge Storage 128GB Micro SDXC UHS-I Card with Adapter	7	\$ 336.10
Dell	332-1396	Wireless Keypad and Mouse	1	\$ 99.99
Subtotal: Parts				\$ 30,909.76
Labor				\$ 24,038.88
Engineering				\$ 3,428.57
Mobilizations				\$ 15,633.56
Plans				\$ 1,428.57
Permits				\$ 2,473.00
Shipping				\$ 1,097.87
Bond				\$ 1,243.32
Warranty Year 1				\$ 2,809.59
Warranty Year 2				\$ 6,645.05
<b>Total Cost</b>				<b>\$ 89,708.17</b>
Supplemental Services	Extended Warranty & Service: Year 3		\$	6,645.00
Supplemental Services	Extended Warranty & Service: Year 4		\$	8,306.31
Supplemental Services	Extended Warranty & Service: Year 5		\$	9,967.58



# The Solution: Cost & Notes

## **COST**

As seen on the previous page, our proposed solution will cost \$89,807.17 (eighty-nine thousand, eight hundred and seven dollars and seventeen cents).

## **NOTES**

PSX will provide & install all equipment listed above, all programming, testing & training as required.

Above pricing is for a turnkey installation including coordination/scheduling & project management.

Work to be performed during the times stated in Addendum 2.

Client responsible to provide source AC power to all system devices.

Project is standard wage not Davis Bacon Prevailing Wage.

The City of Key West will be responsible for AC Power where needed.

The City of Key West Personnel will be responsible for attending weekly project meetings

Payment terms are 30% deposit upon acceptance, 30% at the start of the installation, and the remaining 40% will be invoiced upon completion. All due upon receipt.

Above pricing assumes free and clear access to all areas, including: tower, equipment cabinets, walls, ceilings, and signal light poles and cabinets.

Above system design and parts list is based on the customer provided security layout drawings and devices requested. Any additional parts or labor other than those listed above will be provided at an additional cost.

Any adds, moves, changes or delays will be provided at an additional cost.

Above pricing does not include cost for taxes, additional cost will apply if required.

The equipment listed in this proposal includes a standard manufacturer's warranty. Any product defects, or warranty issues, will be handled by the manufacturer(s) listed in this proposal.

## Tab E

### Attachments

Bid Documents

Addendum No. 1

Addendum No. 2

Certificate of Insurance

Florida Licensure

Product Cut Sheets



# BID DOCUMENTS FOR:



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**ITB #18-035**

**CITY OF KEY WEST  
ROAD SURVEILLANCE AND  
MONITORING DUVAL STREET,  
MALLORY SQUARE & OUTER MOLE**

**JUNE 2018**

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**CITY OF KEY WEST**

**MAYOR: CITY CRAIG CATES**

**COMMISSIONERS:**

**JIMMY WEEKLEY**

**SAMUEL KAUFMAN**

**BILLY WARDLOW**

**RICHARD G. PAYNE**

**MARGARET ROMERO**

**CLAYTON LOPEZ**

PREPARED BY:

ITB DOCUMENTS

CITY OF KEY WEST  
KEY WEST, FLORIDA  
BID DOCUMENTS

for

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

\*\*\*\*

CONSISTING OF:

BIDDING REQUIREMENTS  
CONTRACT FORMS  
SPECIFICATIONS & PHOTOGRAPHS

\*\*\*\*

**CITY OF KEY WEST**  
**JUNE 2018**

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## **PART 1**

# **BIDDING REQUIREMENTS**

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## **INVITATION TO BID**

Sealed Bids for City of Key West (CITY) “**ROAD SURVEILLANCE AND MONITORING – DUVAL STREET**,” **MALLORY SQUARE**” AND “**OUTER MOLE**” addressed to the City of Key West, will be received at the office of the City Clerk, 1300 White Street, Key West, Florida until **3:00 p.m.**, local time, on the **19<sup>th</sup> day of July 2018**, and then will be publicly opened and read. Any bids received after the time and date specified will not be considered.

**Please submit one (1) original bid package and two (2) electronic copies on USB drives with a single PDF file of the entire bid package.** Bid package shall be enclosed in a sealed envelope, clearly marked on the outside “**ITB #18-035 CITY OF KEY WEST – ROAD SURVEILLANCE AND MONITORING – DUVAL STREET**”, **MALLORY SQUARE AND OUTER MOLE**. addressed and delivered to the City Clerk at the address noted above.

The project contemplated consists of providing design, equipment, labor and materials necessary to accomplish the following:

- Design and Installation of a Road Surveillance and Monitoring System at designated locations on Duval Street, Mallory Square and Outer Mole.

The full Invitation to Bid may be obtained from Demand Star by Onvia and The City of Key West website. Please contact Demand Star at [www.demandstar.com](http://www.demandstar.com) or call 1-800-711-1712 or [www.cityofkeywest-fl.gov](http://www.cityofkeywest-fl.gov)

A **Mandatory pre-bid meeting** will be held in the conference room at City Hall, 1300 White Street, Key West, Florida on July 11th, **2018 at 2:30 p.m.**

**EACH BID MUST BE SUBMITTED ON THE PRESCRIBED FORM AND ACCOMPANIED BY BID SECURITY AS PRESCRIBED IN THE INSTRUCTIONS TO BIDDERS, PAYABLE TO THE CITY OF KEY WEST, FLORIDA, IN AN AMOUNT NOT LESS THAN FIVE (5) PERCENT OF THE AMOUNT BID.**

**For information please contact Director Patti McLauchlin or Deputy Director David Monroe, Information Technology Department by email at [dmonroe@cityofkeywest-fl.gov](mailto:dmonroe@cityofkeywest-fl.gov). Verbal communications, per the City’s “Cone of Silence” ordinance is not allowed.**

The Bidder shall furnish documentation showing that he/she is in compliance with the licensing requirements of County, and City licenses as would be required within ten days of the award. The successful Bidder must also be able to satisfy the City Attorney as to such insurance coverage and legal requirements as may be demanded by the Proposal in question. The CITY may reject BID for any and/or all of the following reasons: (1) for budgetary reasons, (2) if the proposer misstates or conceals a material fact in its bid, (3) if the proposal does not strictly conform to the law or is non-responsive to the bid requirements, (4) if the proposal is conditional, or (5) if a change of circumstances occurs making the purpose of the proposal unnecessary to the CITY. (6) if such rejection is in the best interest of the CITY. The CITY may also waive any minor formalities or irregularities in any proposal.

The CITY retains the right to award bid to the bidder or bidders that best meet the needs of the City.

## **INSTRUCTIONS TO BIDDERS**

### **1. CONTRACT DOCUMENTS**

#### **A. FORMAT**

The Bid Documents are divided into parts, divisions, and sections for convenient organization and reference.

#### **B. DOCUMENT INTERPRETATION**

Should there be any doubt as to the meaning or intent of said Bid Documents, the Bidder should request of the Director Information Technology Department, in writing (at least **10** calendar days prior to Bid opening) an interpretation thereof. Any interpretation or change in said Bid Documents will be made only in writing in the form of Addenda to the Documents, which will be furnished to all registered holders of Bid Documents. Bidders shall submit with their Bids, or indicate receipt of all Addenda. The Owner will not be responsible for any other explanation or interpretations of said Documents.

### **2. SCOPE OF SERVICES**

Vendor shall provide necessary wiring, cabling, install, configure and test equipment and materials necessary to add security cameras, to include internet services and licenses to system. Cameras shall be installed in two locations as identified in the SUMMARY OF WORK

### **3. REQUIRED QUALIFICATIONS**

- A. The prospective Bidder must meet the statutorily prescribed requirements before award of Contract by the CITY. Bidders must hold or obtain all licenses and/or certificates as required by the State and Local Statutes in order to bid and provide the product specified herein.
- B. Bidder must perform at least 70% of the required work and sub-contract out no more than 30% of work performed.
- C. Bidder must have (5) years of experience, within the past 7 years, of designing, installing, networking, and managing municipal level citywide surveillance systems via wireless infrastructure. The wireless infrastructure should have supported transmission of high bandwidth video of 30 FPS of distances over one lineal mile.
- D. Bidder must have completed at least (3) previous Public Safety Video Surveillance installations in southern Florida. The installed systems must have been installed for various law enforcement agencies with at least 50% of the cameras being installed on municipal poles. Public Safety is defined as law enforcement agencies and not private security companies.
- E. Bidder must have experience with outdoor municipal long-range wireless deployments of over 2 miles and have deployed mesh network systems in a public

safety environment. This should include Point to Point, Point to Multi Point, and Mesh networks.

- F. Bidder must have experience in the installation of PTZ cameras on City or County traffic poles. Installation is defined as the mounting of individual PTZ cameras on City or County owned poles and connecting them to a power source and providing live and recorded video to a remote location via wireless, cellular, or fiber-optic cable.
- G. Bidder must be certified by the manufacturer to resell, install and configure the specified equipment.

Additionally, all Bidders must meet the minimum qualifications as described in Required Qualifications section.

4. TYPE OF BID

UNIT PRICE BID

Bid unit prices stated in this proposal include all costs and expenses for labor, equipment, materials, disposal and contractor's overhead and profit. Unit prices for the various work items are intended to establish a total price for completing the project in its entirety. 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.

5. PREPARATION OF BIDS

A. GENERAL

All blank spaces in the BID form must be filled in for all schedules and associated parts, as required, preferably in BLACK INK. All price information shall be clearly shown in both words and figures where required. No changes shall be made in the phraseology of the forms. Written amounts shall govern in case of discrepancy between the amounts stated in writing and the amounts stated in figures. In case of discrepancy between unit prices and extended totals, unit prices shall prevail.

Any BID shall be deemed informal which contains omissions, erasures, alterations, or additions of any kind, or prices uncalled for, or in which any of the prices are obviously unbalanced, or which in any manner shall fail to conform to the conditions of the published Invitation to BID.

Only one BID from any individual, firm, partnership, or corporation, under the same or different names, will be considered. Should it appear to the Owner that any Bidder is interested in more than one BID for work contemplated; all Bids in which such Bidder is interested will be rejected.

B. SIGNATURE

The Bidder shall sign his BID in the blank space provided therefor. If Bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of the officer or officers authorized to sign Contracts on behalf of the corporation.

If Bidder is a partnership, the true name of the firm shall be set forth above together with the signature of the partner or partners authorized to sign Contracts in behalf of the partnership. If signature is by an agent, other than an officer of a corporation or a member of a partnership, a notarized power-of-attorney must be on file with the Owner prior to opening of Bids or submitted with the Bid otherwise the Bid will be regarded as not properly authorized.

C. ATTACHMENTS

Bidder shall complete and submit the following forms with his bid:

- Anti-Kickback Affidavit
- Sworn Statement under section 287.133(3)(a) Florida Statutes, on public entity crimes
- Non-Collusion Affidavit
- Indemnification Form
- Local Vendors Form
- City of Key West Business License Tax Receipt
- Domestic Partnership Affidavit
- Cone of Silence Affidavit
- A complete description of the proposed Wireless Surveillance System including layout
- Cut sheets on all equipment
- Warranty information/ proposal (The City requires Bidder to warranty all materials and labor for two (2) years). Warranty to begin once the City determines the system is operating as specified in the specifications for a period of thirty (30) days. Bidder shall submit a warranty proposal to be included as part of a contract.
- All requirements listed in SUMMARY OF WORK

6. MODIFICATION OR WITHDRAWAL OF BID

Prior to the time and date designated for receipt of Bids, any Bid submitted may be withdrawn by notice to the party receiving Bids at the place designated for receipt of Bids. Such notice shall be in writing over the signature of the Bidder or by telegram. If by telegram, written confirmation over the signature of the Bidder shall be mailed and postmarked on or before the date and time set for receipt of Bids. No Bid may be withdrawn after the time scheduled for opening of Bids unless the time specified in paragraph AWARD OF CONTRACT of these Instructions to Bidders shall have elapsed.

7. AWARD OF CONTRACT

Within SIXTY (60) calendar days after the opening of Bids, the CITY will accept one of the Bids or will act in accordance with the following paragraphs. The acceptance of the Bid will be by written notice of award, mailed to the office designated in the Bid, or delivered to the Bidder's representative. In the event of failure of the lowest responsive, responsible Bidder to sign the Contract and provide an acceptable insurance certificate(s) and evidence of holding required licenses and certificates, the Owner may award the Contract to the next lowest responsive, responsible Bidder. Such award, if made, will be made within ninety (90) days after the opening of Proposals.

The CITY reserves the right to accept or reject any or all Bids and to waive any formalities and irregularities in said Bids.



8. BASIS OF AWARD

The award will be made by the Owner on the basis of the BID from the lowest, responsive, responsible BIDDER(s) which, in the Owner's sole and absolute judgment will best serve the interest of the Owner. Low bid(s) selection to be based on an hourly rate comparison.

9. EXECUTION OF CONTRACT

The successful Bidder shall, within 10 working days after receiving Notice of Award, sign and deliver to the Owner a Contract in the form hereto attached together with the insurance certificate examples of the bonds as required in the Contract Documents and evidence of holding required licenses and certificates. Within 10 working days after receiving the signed Contract from the successful Bidder, the Owner's authorized agent will sign the Contract. Signature by both parties constitutes execution of the Contract.

10. CONTRACT BONDS

A. PERFORMANCE AND PAYMENT BONDS

The successful Bidder shall file with the CITY, at the time of delivery of the signed Contract, a Performance Bond and Payment Bond on the form bound herewith, each in the full amount of the Contract price in accordance with the requirements of Florida Statutes Section 255.05 or 713.23, as applicable, as security for the faithful performance of the Contract and the payment of all persons supplying labor and materials for the construction of the work, and to cover all guarantees against defective workmanship or materials, or both, during the warranty period following the date of final acceptance of the work by the CITY. The Surety furnishing this bond shall have a sound financial standing and a record of service satisfactory to the CITY, shall be authorized to do business in the State of Florida, and shall be listed on the current U.S. Department of Treasury Circular Number 570, or amendments thereto in the Federal Register, of acceptable Sureties for federal projects. The CONTRACTOR shall supply the OWNER with phone numbers, addresses, and contacts for the Surety and their agents. Pursuant to Section 255.05(7), Florida Statutes, in lieu of the bond required by law, the contractor may file with the city an alternative form of security in the form of cash, a money order, a certified check, a cashier's check or an irrevocable letter of credit.

A. POWER-OF-ATTORNEY

The Attorney-in-Fact (Resident Agent) who executes this Performance and Payment Bond in behalf of the Surety must attach a notarized copy of his power-of-attorney as evidence of his authority to bind the Surety on the date of execution of the bond. All Contracts, Performance and Payment Bonds, and respective powers-of-attorney will have the same date.

11. FAILURE TO EXECUTE CONTRACT AND FURNISH BOND

The Bidder who has a Contract awarded to him and who fails to promptly and properly execute the Contract or furnish the required Bonds shall forfeit the bid security that accompanied his bid, and the bid security shall be retained as liquidated damages by the

CITY, and it is agreed that this said sum is a fair estimate of the amount of damages the CITY will sustain in case the Bidder fails to enter into a Contract or furnish the required Bonds. Bid security deposited in the form of cash, a certified check, or cashier's check shall be subject to the same requirement as a Bid Bond.

12. PUBLIC RECORDS REQUIREMENTS

In addition to other contract requirements provided by law, each public agency contract for services must include a provision that requires the Vendor to comply with public records laws, specifically to (a) keep and maintain public records that ordinarily and necessarily would be required by the public agency in order to perform the service; (b) provide the public with access to public records on the same terms and conditions that the public agency would provide the records and at a cost that does not exceed the cost provided in this chapter or as otherwise provided by law; (c) ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law; and (d) meet all requirements for retaining public records and transfer, at no cost, to the public agency all public records in possession of the Vendor upon termination of the contract and destroy any duplicate public records that exempt or confidential and exempt from public records disclosure requirements. All records stored electronically must be provided to the public agency in a format that is compatible with the information technology systems of the public agency. If a Vendor does not comply with a public records request, the public agency shall enforce the contract provisions in accordance with the contract.

13. BIDDER'S DECLARATION AND UNDERSTANDING

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

The Bidder further declares that he has carefully examined the Contract Documents and that this Bid is made according to the provisions and under the terms of the Contract Documents, which Documents are hereby made a part of this Bid.

14. INDEMNITY LANGUAGE

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 liabilities, damages, losses and costs, including but not limited to, 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, to the extent caused by the negligence, recklessness, or intentional wrongful misconduct of the CONTRACTOR, its Subcontractors or persons employed or utilized by them in the performance of the Contract. Claims by indemnitees for indemnification shall be limited to the amount of CONTRACTOR's insurance or \$1 million per occurrence, whichever is greater. The parties acknowledge that the amount of the indemnity required hereunder bears a reasonable commercial relationship to the Contract and it is part of the project specifications or the bid documents, if any.

The indemnification obligations under the Contract shall not be restricted in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the VENDOR under Workers' Compensation acts, disability benefits acts, or other employee benefits acts, and shall extend to and include any actions brought by or in the name of any employee of the VENDOR or of any third party to whom VENDOR may subcontract a part or all of the Work. This indemnification shall continue beyond the date of completion of the work.

15. CERTIFICATES OF INSURANCE

Bidder agrees to furnish the Owner, before commencing the work under this Contract, the certificates of insurance as specified below.

VENDOR is to secure, pay for, and file with the City of Key West, prior to commencing any work under the Contract, all certificates for workers' compensation, public liability, and property damage liability insurance, and such other insurance coverages as may be required by specifications and addenda thereto, in at least the following minimum amounts with specification amounts to prevail if greater than minimum amounts indicated. Notwithstanding any other provision of the Contract, the VENDOR shall provide the minimum limits of liability insurance coverage as follows:

Auto Liability	\$1,000,000	Combined Single Limit
General Liability	\$2,000,000	Aggregate (Per Project)
	\$2,000,000	Products Aggregate
	\$1,000,000	Any One Occurrence
	\$1,000,000	Personal Injury
	\$ 300,000	Fire Damage/Legal
Additional Umbrella Liability	\$1,000,000	Occurrence / Aggregate

VENDOR shall furnish an original Certificate of Insurance indicating, and such policy providing coverage to, City of Key West named as an additional insured on a PRIMARY and NON-CONTRIBUTORY basis utilizing an ISO standard endorsement at least as broad as CG 2010 (11/85) or its equivalent, (combination of CG 20 10 07 04 and CG 20 37 07 04, providing coverage for completed operations, is acceptable) including a waiver of subrogation clause in favor of City of Key West on all policies. VENDOR will maintain the General Liability and Umbrella Liability insurance coverages summarized above with coverage continuing in full force including the additional insured endorsement until at least 3 years beyond completion and delivery of the work contracted herein.

Notwithstanding any other provision of the Contract, the VENDOR shall maintain complete workers' compensation coverage for each and every employee, principal, officer, representative, or agent of the VENDOR who is performing any labor, services, or material under the Contract. Further, VENDOR shall additionally maintain the following minimum limits of coverage:

Bodily Injury Each Accident	\$1,000,000
Bodily Injury by Disease Each Employee	\$1,000,000
Bodily Injury by Disease Policy Limit	\$1,000,000

VENDOR shall provide the City of Key West with a Certificate of Insurance verifying compliance with the workman's compensation coverage as set forth herein and shall provide as often as required by the City of Key West such certification which shall also show the insurance company, policy number, effective and expiration date, and the limits of workman's compensation coverage under each policy.

CONTRACTOR's insurance policies shall be endorsed to give 30 days written notice to the City of Key West in the event of cancellation or material change, using form CG 02 24, or its equivalent.

Certificates of Insurance submitted to the City of Key West will not be accepted without copies of the endorsements being requested. This includes additional insured endorsements, cancellation/material change notice endorsements, and waivers of subrogation. Copies of USL&H Act and Jones Act endorsements will also be required if necessary. PLEASE ADVISE YOUR INSURANCE AGENT ACCORDINGLY.

VENDOR will comply with any and all safety regulations required by any agency or regulatory body including but not limited to OSHA. VENDOR will notify City of Key West immediately by telephone at (305) 809-3811 any accident or injury to anyone that occurs on the jobsite and is related to any of the work being performed by the CONTRACTOR.

#### SURETY AND INSURER QUALIFICATIONS

All bonds, insurance contracts, and certificates of insurance shall be either executed by or countersigned by a licensed resident agent of the Surety or insurance company, having his place of business in the State of Florida, and in all ways complying with the insurance laws of the State of Florida. Further, the said Surety or insurance company shall be duly licensed and qualified to do business in the State of Florida.

16. TIME OF COMPLETION

The time of completion of the work to be performed under this Contract is the essence of the Contract. When the Contractor receives a Notice to Proceed, he shall commence work as soon as possible and shall complete all work within the number of calendar days stipulated in this Proposal.

The term of this contract will be **30** days.

17. ADDENDA

The Bidder hereby acknowledges that he has received Addenda No's. \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and agrees that all addenda issued are hereby made part of the Contract Documents, and the Bidder further agrees that his Bid(s) includes all impacts resulting from said addenda.

18. TRANSPORTATION WORKERS IDENTIFICATION CREDENTIAL (TWIC) CARD

The Vendor, vendor's installer and vendor's subcontractor(s) must have or obtain TWIC cards or follow strict guidelines for escorting non-vetted personal.

\* \* \* \* \*

## **BID FORMAT**

Project Title:           **ROAD SURVEILLANCE AND MONITORING  
DUVAL STREET**

Project No.:           **ITB #18-035**

### **UNIT PRICE BID**

Bid unit prices stated in this proposal include all costs and expenses for labor, equipment, materials, disposal and contractor's overhead and profit. Unit prices for the various work items are intended to establish a total price for completing the project in its entirety. 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.

### **BID FORMAT**

The bid must be in a format that includes the following:

1. Detailed narrative list identifying the specific qualifications specified in this document under Section 3 "Required Qualifications" broken down "A through F"
2. Price broken down by the following:
  - a. Manufacturer, Model/Part number and item description with individual cost and a total for each category of equipment.
  - b. Other consumable materials/hardware identified separately.
  - c. Labor/installation costs identified separately
  - d. Maintenance Service plan (section X) identified separately with one, two and three-year options.
  - e. Freight, if any.
  - f. Grand total.
3. A schedule identifying the time necessary to complete the installation in its entirety.

Cost of work to be all inclusive for a complete job including equipment, material, labor, permits, insurance, overhead and profit.

### **BIDDER'S INFORMATION**

Company Name: PSX Inc.

Address: 5940 Benjamin Road

Tampa, FL 33634

Contact Name: Don Herpin

Email: don.herpin@psxgroup.com  
Telephone: 813.880.8600  
Fax: 813.880.8655

Signature:  Date: 18 July 2018

### 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:

Low voltage cabling under 30%

#### **Portion of Work**

Brazon Cox

Name

315 Stan Drive, Suite 7

West Melbourne

FL

32904

Street

City

State

Zip

#### **Portion of Work**

Name

Street

City

State

Zip

## SURETY

Oak Ridge Surety Agency

whose address is

1390 Birmingham Road, Suite 101

West Chester

PA

19382

Street

City

State

Zip

610.701.8699

Martin Hellman

Phone

Resident Agent

## BIDDER

The name of the Bidder submitting this Bid is PSX Inc.

doing business

at

5940 Benjamin Road

Tampa

FL

33634

Street

City

State

Zip

don.herpin@psxgroup.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
Tony Hutchison	CEO
Paul W. Hutchison II	President
Kevin Halliday	Vice President of Sales
Mark LaMonte	Secretary/Treasurer

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 18 day of July 2018.

(SEAL)

PSX Inc.

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

By

Paul W. Hutchison II

Paul W. Hutchison II

Title President

Attest

Secretary

[Signature]

Sworn and subscribed before me this 18 day of July 2018.

NOTARY PUBLIC, State of Pennsylvania, at Large

My Commission Expires:

Jan 6, 2022

Traci L. Winfree

Commonwealth of Pennsylvania - Notary Seal  
TRACI L. WINFREE, Notary Public  
Chester County  
My Commission Expires January 6, 2022  
Commission Number 1220806



**FLORIDA BID BOND**

BOND NO. N/A

AMOUNT: \$ 2,000.00

KNOW ALL MEN BY THESE PRESENTS, that PSX, Inc.

hereinafter called the PRINCIPAL, and AEGIS Security Insurance Company

a corporation duly organized under the laws of the State of Pennsylvania

having its principal place of business at 4507 N. Front St., Ste 200, Harrisburg, PA 17110

in the State of Pennsylvania

and authorized to do business in the State of Florida, as SURETY, are held and firmly bound unto  
City of Key West  
1300 White Street  
Key West, FL 33040

hereinafter CITY OF KEY WEST called the OBLIGEE, in the sum of \_\_\_\_\_

Two Thousand Dollars and 00/100 DOLLARS (\$ 2,000.00 ) for

the payment for which we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these present.

**THE CONDITION OF THIS BOND IS SUCH THAT:**

WHEREAS, the PRINCIPAL is herewith submitting his or its Bid Proposal for **CITY OF KEY WEST – ROAD SURVEILLANCE AND MONITORING – DUVAL STREET, MALLORY SQUARE & OUTER MOLE**

said Bid Proposal, by reference thereto, being hereby made a part hereof.

WHEREAS, the PRINCIPAL contemplates submitting or has submitted a bid to the OBLIGEE for the furnishing of all labor, materials (except those to be specifically furnished by the CITY),

equipment, machinery, tools, apparatus, means of transportation for, and the performance of the work covered in the Proposal and the detailed Specifications, entitled:

**ITB #18-035**

**CITY OF KEY WEST  
ROAD SURVEILLANCE AND MONITORING  
MALLORY SQUARE & OUTER MOLE**

WHEREAS, it was a condition precedent to the submission of said bid that a cashier's check, certified check, or bid bond in the amount of 5 percent of the base bid be submitted with said bid as a guarantee that the Bidder would, if awarded the Contract, enter into a written Contract with the CITY for the performance of said Contract, within 10 working days after written notice having been given of the award of the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the PRINCIPAL within 10 consecutive calendar days after written notice of such acceptance, enters into a written Contract with the OBLIGEE and furnishes the Performance and Payment Bonds, each in an amount equal to 100 percent of the base bid, satisfactory to the CITY, then this obligation shall be void; otherwise the sum herein stated shall be due and payable to the OBLIGEE and the Surety herein agrees to pay said sum immediately upon demand of the OBLIGEE in good and lawful money of the United States of America, as liquidated damages for failure thereof of said PRINCIPAL.

Signed and sealed this 19th day of July, 2018.

PSX, Inc.

By



PRINCIPAL Paul Hutchison, President

AEGIS Security Insurance Company

SURETY

By



Attorney-In-Fact Martin J. Hellman

## CONSENT OF SURETY

KNOW ALL MEN BY THESE PRESENTS, that for and in consideration of the sum of \$1.00, lawful money of the United States of America, the receipt whereof is hereby acknowledged, paid the undersigned corporation, and for other valuable consideration, the **Aegis Security Insurance Company** organized and existing under the laws of the State of **Pennsylvania** and licensed to do business in the State of **Florida** certifies and agrees, that if the accompanying proposal of **PSX, Inc.**

to **City of Key West**

for **Road Surveillance and Monitoring - Duval Street, Mallory Square & Outer Mole**

be accepted and the contract awarded, the undersigned Corporation will execute the bond or bonds as required of the contract documents and will become Surety in the full amount set forth in the contract documents for the faithful performance of all obligations of the Contractor.

Signed and sealed this 19th day of July, 2018.

Aegis Security Insurance Company



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Attorney-in-Fact, Martin J. Hellman

**THIS POWER NULL AND VOID IF NUMBER IS NOT IN RED  
POWER CERTIFICATE NO. PA 193**

**AEGIS SECURITY INSURANCE COMPANY  
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, THAT AEGIS SECURITY INSURANCE COMPANY does hereby make, constitute and appoint: **MARTIN J. HELLMAN**

its true and lawful Attorney-in-Fact, to make, execute and deliver on its behalf surety bonds, undertaking and other instruments of similar nature as follows: **\$5 MILLION**

This Power of Attorney is granted and sealed under and by the authority of the following Resolution adopted by the Board of Directors of the Company on the 4<sup>th</sup> day of February, 1993.

**"Resolved,** That the President, any Vice President, the Secretary and any Assistant Secretary appointed for that purpose by the officer in charge of surety operations shall each have authority to appoint individuals as Attorney-in-Fact or under other appropriate titles with authority to execute on behalf of the Company, fidelity and surety bonds and other documents of similar character issued by the Company in the course of its business. On any instrument making or evidencing such an appointment, the signatures may be affixed by facsimile. On any instrument conferring such authority or on any bond or undertaking of the Company, the seal or facsimile thereof may be imposed or fixed or in any other manner reproduced; provided, however, that the seal shall not be necessary to the validity of any such instrument or undertaking."

**"Resolved,** That the signature of each of the following officers; President, Vice President, any Assistant Vice President, any Secretary or Assistant Secretary and the seal of the Company may be affixed by facsimile to any Power of Attorney or to any Certificate relating thereto, appointing Resident Vice Presidents, Resident Assistant Secretaries or Attorneys-in-Fact for the purpose only of executing and attesting bonds and undertaking and other writings upon the Company and any such power required and certified by such facsimile signature and facsimile seal shall be valid and binding on the Company in the future with respect to any bond or undertaking to which it is attached."

IN WITNESS WHEREOF, AEGIS SECURITY INSURANCE COMPANY has caused its official seal to be hereunto affixed, and these presents to be signed by its President this 5<sup>th</sup> day of July, 2017.

AEGIS SECURITY INSURANCE COMPANY

By:

*W. J. Wollyung III*

W. J. WOLLYUNG, III  
President



Commonwealth of Pennsylvania }

} s.s.: Harrisburg

County of Dauphin }

On this 5<sup>th</sup> day of July, 2017, before me personally came William J. Wollyung, III to me known, who being by me duly sworn, did depose and say that he is President of AEGIS SECURITY INSURANCE COMPANY, the corporation described herein and which executed the above instrument; that he knows the seal of the said corporation, that the seal affixed to the said instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation and that he signed his name thereto by like order.

*Jeanne LP Tennis*

JEANNE LP TENNIS  
Notary Public  
My Commission Expires June 16, 2021



I, the undersigned, Secretary of AEGIS SECURITY INSURANCE COMPANY, a Pennsylvania corporation, DO HEREBY CERTIFY that the foregoing and attached Power of Attorney remains in full force and has not been revoked; and furthermore that the Resolution of the Board of Directors, set forth in the said Power of Attorney, is now in force.

Signed and sealed at the City of Harrisburg, in the Commonwealth of Pennsylvania, dated this 19<sup>th</sup> day of July, 2018

*Rebecca J. Liddick*

REBECCA J. LIDDICK  
Secretary



# Aegis Security Insurance Company

## Statements of Admitted Assets, Liabilities and Capital and Surplus - Statutory Basis

	As of December 31,	
	2017	2016
<b>Admitted Assets</b>		
Bonds	\$ 59,413,126	\$ 50,929,359
Preferred stocks	559,219	446,212
Common stocks - unaffiliated	10,130,928	8,406,062
Common stocks - affiliate	17,834,418	16,949,467
Cash, cash equivalents and short-term investments	16,847,253	12,732,874
Other invested assets	3,750,000	3,750,000
	<hr/>	<hr/>
Total cash, cash equivalents and invested assets	108,534,944	93,213,974
Accrued investment income	537,640	482,598
Premium receivable and agent balances due	27,517,072	26,115,723
Reinsurance recoverable on paid losses	4,649,361	3,450,058
Federal income tax receivable	1,184,982	467,965
Net admitted deferred tax asset	2,831,492	3,665,301
Other assets	-	35,311
Receivable from parent, subsidiaries and affiliates	3,423,309	6,700
Total assets	<hr/> <hr/> \$ 148,678,800	<hr/> <hr/> \$ 127,437,630
<b>Liabilities, Capital and Surplus</b>		
Liabilities:		
Losses and LAE	\$ 25,724,886	\$ 23,278,093
Reinsurance payable on paid loss and LAE	88,380	345,036
Unearned premiums	50,735,681	32,215,782
Commissions payable	1,458,140	868,762
Accounts payable and accrued expenses	658,479	520,097
Taxes, licenses and fees payable	1,073,568	806,060
Ceded reinsurance premiums payable	10,838,092	9,283,899
Funds held under reinsurance treaties	-	2,346
Amounts withheld for account of others	3,493,569	4,570,068
Payable for securities	869,437	7,422
Total liabilities	<hr/> 94,940,232	<hr/> 71,897,565
Capital and surplus:		
Common stock, par value \$1.40 per share; 5,000,000 shares authorized; 3,000,000 issued and outstanding	4,200,000	4,200,000
Paid-in surplus	5,266,827	5,266,827
Unassigned surplus	44,271,741	46,073,238
Total capital and surplus	<hr/> 53,738,568	<hr/> 55,540,065
Total liabilities, capital and surplus	<hr/> <hr/> \$ 148,678,800	<hr/> <hr/> \$ 127,437,630

ANTI-KICKBACK AFFIDAVIT

STATE OF Pennsylvania )

: SS

COUNTY OF Chester )

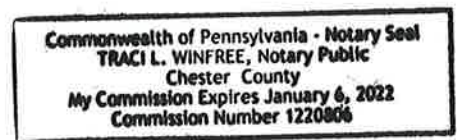
I, the undersigned hereby duly sworn, depose and say that no portion of the sum herein bid will be paid to any employees of the City of Key West as a commission, kickback, reward or gift, directly or indirectly by me or any member of my firm or by an officer of the corporation.

By: Paul W. Hutchison II Paul W. Hutchison II, President

Sworn and subscribed before me this 18 day of July 2018.

PA. Traci L. Winfree  
NOTARY PUBLIC, State of Florida at Large

My Commission Expires: Jan 6, 2018



\* \* \* \* \*

**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 ITB # 18-035  
City of Key West Road Surveillance and Monitoring Duval Street, Mallory Square & Outer Mole

2. This sworn statement is submitted by PSX Inc.  
(name of entity submitting sworn statement)  
whose business address is 5940 Benjamin Road, Tampa, FL 33634

and (if applicable) its Federal Employer Identification Number (FEIN) is 23-1720124

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

3. My name is Paul W. Hutchison II  
(please print name of individual signing)  
and my relationship to the entity named above is President

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.)

Paul W. Winfree II  
(signature)

18 July 2018  
(date)

STATE OF Pennsylvania

COUNTY OF Chester

PERSONALLY, APPEARED BEFORE ME, the undersigned authority,

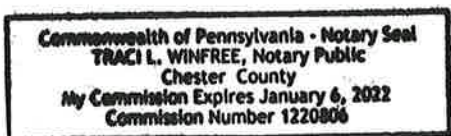
Paul W. Winfree II who, after first being sworn by me, affixed his/her  
(name of individual signing)

signature in the space provided above on this 18 day of July 20 18.

My commission expires:

Traci L. Winfree  
NOTARY PUBLIC

\* \* \* \* \*



## 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: PSX Inc.  
5940 Benjamin Road, Tampa, FL 33634  
Address  
Signature  
Paul W. Hutchison II  
Print Name  
President  
Title  
18 July 2018

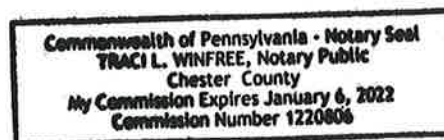
SEAL:

NOTARY PUBLIC, State of Florida at Large

My Commission Expires:

PA  
Jan 6, 2022

\* \* \* \* \*



**EQUAL BENEFITS FOR DOMESTIC PARTNERS AFFIDAVIT**

STATE OF Pennsylvania )

: SS

COUNTY OF Chester )

I, the undersigned hereby duly sworn, depose and say that the firm of PSX Inc.

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.

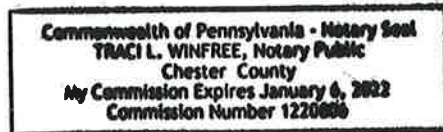
By: Paul W. Hutchison II Paul W. Hutchison II

Sworn and subscribed before me this 18 day of July 20 18.

NOTARY PUBLIC, State of PA Florida at Large

Traci L. Winfree

My Commission Expires: Jan 6, 2022



\* \* \* \* \*

**CONE OF SILENCE AFFIDAVIT**

STATE OF Pennsylvania )

: SS

COUNTY OF Chester )

I, the undersigned hereby duly sworn, depose and say that all owner(s), partners, officers, directors, employees and agents representing the firm of PSX Inc.  
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: Paul W. Hutchison II Paul W. Hutchison II, President

Sworn and subscribed before me this

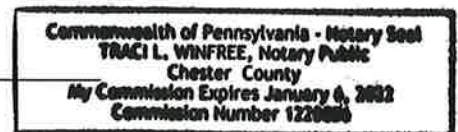
18 day of July 2018.

Traci L. Winfree

NOTARY PUBLIC, State of Pennsylvania at Large

My Commission Expires:

Jan 6, 2022



\* \* \* \* \*

**NON-COLLUSION AFFIDAVIT**

STATE OF ~~FLORIDA~~ State of Pennsylvania

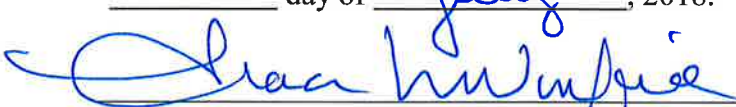
SS COUNTY OF ~~MONROE~~ County of Chester

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.

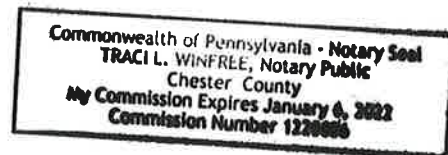
By:   
Paul W. Hutchison II, President

Sworn and subscribed before me this

18 day of July, 2018.

  
NOTARY PUBLIC, State of ~~Florida~~ PA

My Commission Expires: Jan 6, 2022



## 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 2**

**CONTRACT FORMS**

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## CONTRACT

This Contract, made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 2018,

by and between the City of Key West, hereinafter called the "Owner", and \_\_\_\_\_

\_\_\_\_\_  
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 #18-035 CITY OF KEY WEST – 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 2018, 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 PHOTOGRAPHS 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 **thirty (30)** days 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

\_\_\_\_\_ Day of \_\_\_\_\_, 2018.

**CITY OF KEY WEST**

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

**VENDOR**

By \_\_\_\_\_

Printed \_\_\_\_\_

Title \_\_\_\_\_

**APPROVED AS TO FORM**

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

\* \* \* \* \*

**FLORIDA PERFORMANCE BOND**

BOND NO. \_\_\_\_\_

AMOUNT: \$ \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS**, that in accordance with Florida Statutes Section 255.05 \_\_\_\_\_

with offices at \_\_\_\_\_

hereinafter called the CONTRACTOR (Principal), and

\_\_\_\_\_

with offices at \_\_\_\_\_

a corporation duly organized and existing under and by virtue of the laws of the State of Florida, hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto the **CITY OF KEY WEST**, hereinafter called the CITY (Obligee), in the sum of:

\_\_\_\_\_ DOLLARS (\$ \_\_\_\_\_),  
lawful money of the United States of America, for the payment of which, well and truly be made to the CITY, the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

**THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:**

**WHEREAS**, the CONTRACTOR has executed and entered into a certain Contract hereto attached, with the CITY, dated \_\_\_\_\_, 20\_\_, to furnish at his own cost, charges, and expense all the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the Contract Documents as defined therein, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein;

**NOW THEREFORE**, the conditions of this obligation are such that if the above bounden CONTRACTOR:

1. Shall in all respects comply with the terms and conditions of said Contract and his obligation there under, including the Contract Documents (which include the scope of work and conditions as prepared by the CITY, invitation to bid, instructions to bidders, the CONTRACTOR'S bid as accepted by the above CITY, the bid and contract performance and payment bonds (Not required as part of this contract), and all addenda, if any, issued prior to the opening of bids), being made a part of this bond by reference, at the times and in the manner prescribed in the contract; and

2. Promptly makes payments to all claimants, as defined in Section 255.05(1), Florida Statutes, supplying PRINCIPAL with labor, materials, or supplies, used directly or indirectly by PRINCIPAL in the prosecution of the work provided for in the contract; and

3. Pays CITY all losses, costs, expenses, damages, attorney's fees, including appellate proceedings, injury or loss of whatever kind and however arising including, without limitation, delay damages to which said CITY may be subject by reason of any wrongdoing, misconduct, want of care or skill, negligence, failure of performance, breach, failure to petition within the prescribed time, or default, including patent infringements, on the part of said CONTRACTOR, his agents or employees, in the execution or performance of said Contract; and

4. Performs the guarantee of all work and materials furnished under the contract for the time specified in the contract, then this obligation shall be void; otherwise, to remain in full force and effect for the term of said Contract.

**AND**, the said Surety for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract Documents, or to the work to be performed, or materials to be furnished there under shall affect said obligation of said Surety on this Bond, and the said Surety does hereby waive notice of any such changes, extension of time, alterations, or additions of the terms of the Contract Documents, or to the work.

Any action instituted by a claimant under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2), Florida Statutes.

**IN WITNESS WHEREOF**, the above parties bonded together have executed this instrument

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**CONTRACTOR**

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

(SEAL)

ATTEST

**SURETY**

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

(SEAL)

ATTEST

**FLORIDA PAYMENT BOND**

BOND NO. \_\_\_\_\_

AMOUNT: \$ \_\_\_\_\_

**KNOW ALL MEN BY THESE PRESENTS**, that in accordance with Florida Statutes Section

255.05, \_\_\_\_\_ with offices at \_\_\_\_\_

\_\_\_\_\_ hereinafter called the  
CONTRACTOR, (Principal), and

\_\_\_\_\_ with offices at \_\_\_\_\_

a corporation duly organized and existing under and by virtue of the laws of the State of \_\_\_\_\_

\_\_\_\_\_, hereinafter called the SURETY, and authorized to transact business within the State of Florida, as SURETY, are held and firmly bound unto CITY OF KEY WEST, hereinafter called the City (Obligee), in the sum of:

\_\_\_\_\_ DOLLARS( \_\_\_\_\_),  
lawful money of the United States of America, for the payment of which, well and truly be made to the CITY, and the CONTRACTOR and the SURETY bind themselves and each of their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents as follows:

**THE CONDITION OF THE ABOVE OBLIGATION IS SUCH THAT:**

**WHEREAS**, the CONTRACTOR has executed and entered into a certain Contract for

**ITB #18-035 CITY OF KEY WEST – ROAD SURVEILLANCE AND MONITORING – DUVAL STREET, MALLORY SQUARE AND OUTER MOLE** attached hereto, with

the CITY, dated \_\_\_\_\_, 20\_\_, to furnish at his own cost, charges, and expense the necessary materials, equipment, and/or labor in strict and express accordance with said Contract and the plans, drawings (if any), and specifications prepared by the CITY, all of which is made a part of said Contract by certain terms and conditions in said Contract more particularly mentioned, which Contract, consisting of the various Contract Documents specifically mentioned herein and relative hereto, is made a part of this Bond as fully and completely as if said Contract Documents were set forth herein.

**NOW THEREFORE**, the conditions of this obligation are such that if the above bounden CONTRACTOR shall in all respects comply with the terms and conditions of said Contract and his obligation thereunder, including the Contract Documents, which include Scope of work and conditions prepared by the CITY, invitation to bid, instructions to bidders, the

CONTRACTOR'S bid as accepted by the CITY, the bid and contract and payment bonds (Not required as part of this contract), and all addenda, if any, issued prior to the opening of bids), and further that if said CONTRACTOR shall promptly make payments to all persons supplying materials, equipment, and/or labor, used directly or indirectly by said CONTRACTOR or subcontractors in the prosecution of the work for said contract in accordance with Florida Statutes, Section 255.05 or Section 713.23, then this obligation shall be void; otherwise to remain in full force and effect for the term of said contract, including and all guarantee periods as specifically mentioned in said Contract Documents.

**AND**, the said SURETY for value received, hereby stipulates and agrees that no change involving any extension of time, or addition to the terms of the Contract or to the work to be performed, or materials to be furnished thereunder, or in the Contract Documents and specifications accompanying the said contract shall affect said obligation of said SURETY on this Bond, and the said SURETY does hereby waive notice of any such changes, extension of time, alternations, or additions of the terms of the Contract, or to the work, to the Contract Documents, or to the specifications.

Claimant shall give written notice to the CONTRACTOR and the SURETY as required by Section 255.05 or Section 713.23, Florida Statutes. Any action instituted against the CONTRACTOR or SURETY under this bond for payment must be in accordance with the notice and time limitation provisions in Section 255.05(2) or Section 713.23, Florida Statutes.

**IN WITNESS WHEREOF**, the above parties bounded together have executed this instrument

this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, the name and corporate seal of each corporate party being hereto affixed and those presents duly signed by its undersigned representative, pursuant to authority of its governing body.

**CONTRACTOR**

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

(SEAL)

ATTEST

**SURETY**

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

(SEAL)

ATTEST

### **LICENSE REQUIREMENT AND COST**

License required for this Project. Vendor must have a general contractor license or registration.

Cost Not To Exceed \$410.00.

### **CITY OF KEY WEST BUSINESS LICENSE TAX RECEIPT**

A City of Key West Business License Tax Receipt is required for this project. Vendor must have a general contractor license or registration. Cost not to exceed \$410.00.

City of Key West Business License Tax Receipt may be found on the city website.

<http://www.keywestcity.com/egov/docs/1162843921181.htm>



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**PART 3**

**SPECIFICATIONS AND PHOTOGRAPHS**

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## SUMMARY OF WORK

### **WORK INCLUDED**

1. The Bidder will design and furnish all Road Surveillance and Monitoring System material, equipment, machinery, and labor to accomplish the following minimum requirements:

- a. **Video surveillance camera locations**

- Intersection of Duval and Caroline Street
- Intersection of Duval and Eaton Street
- Intersection of Duval and Greene Street
- Intersection of Duval and Petronia Street
- 

- b. **Video surveillance camera locations**

Mallory Square Security Checkpoint  
See Photographs

Outer Mole Security Checkpoint  
See Photographs

- a. **Minimum camera specifications**

- 1080P resolution
- POE Power
- Day/Night mode
- Overlay text
- Video recording to edge storage
- Live data streaming (H.264 MPEG-4) baseline or equivalent
- Internal storage
- Frame Rate up to 30 fps (50/60 Hz) in HDTV 1080P- 4K storage capacity 32 GB
- Ability to capture live image
- Pan/Tilt/Zoom - where called for
- IP67 rating

- b. **General:**

- System must have remote viewing capabilities and must be fully functional for employee's computers and mobile devices (Apple and Android).
- If a camera or lighting test is necessary to determine the operating parameters of the proposed camera(s), test shall be performed at the expense of the vendor.
- Vendor responsible to provide necessary electrical wiring from City's existing infrastructure to all new equipment. This wiring shall be encased in conduit and
- Vendor shall also provide, install, configure, and test a recording server adequately sized to provide thirty (30) days of recording. This server can be a cloud based solution.

- System shall include all necessary software and licenses.
- There shall not be re-occurring licensing fees.
- System shall have constant coverage of areas.
- Cameras to have battery Back-up: 1hr minimum battery life.
- All devices to have surge protection: 600 joules minimum.
- System shall have day time viewing in color and applicable at night
- System shall be capable of withstanding harsh environment including corrosive conditions caused by saltwater and hurricane winds and/or be in protective housing. If camera is in a housing, the housing must provide stable environmental conditions so that camera operations are not affected by overheating or excessive humidity.
- System shall be capable of withstanding extreme heat and humidity
- Cables/ wiring shall be protected from vandalism by the use of conduit or other means.
- Cameras and housings shall be vandal resistant.
- Vendor to remove, and dispose of, any existing abandoned CCTV equipment.

**c. Technology Requirements**

- Bidder must propose and supply a product line that, to the best of its knowledge, is not obsolete or near obsolete. Only equipment and/or product models that have been satisfactorily demonstrated to the City and that have a demonstrated record of successful deployments by other municipalities, in similar size will be used. The bidder must document successful deployments by including the names and telephone numbers of contact persons as part of the reference requirements of the ITB.
- The equipment supplied must be of new manufacturer (not used or demo units) and best quality installed accordance with approved recommendations of the manufacturer thereof, and must conform to the equipment specifications listed in this ITB.

**d. Communication Network Minimum Requirements**

- Multi-radio, multi-frequency wireless devices.
- Traffic shaping and load balancing
- Adaptive mesh infrastructure
- Dynamically adjust signal strength for high availability
- Self-healing in the event of a radio outage
- Devices must employ encrypted backhaul links utilizing IEEE standards for Wireless Mesh Networks
- Easily scalable capacity and services
- Devices and connection must be IP67 rated

2. Bidder will be responsible for surveying and verifying the locations provided in this ITB for mounting cameras and/or equipment. Bidder will provide a detailed diagram of the mounting location that includes the devices and/or equipment to be mounted to each pole listed in this ITB. Installation diagrams shall be included with Proposal.

3. Bidder to provide a complete written description including system capabilities, type of cameras including brand, capability of cameras, recording ability in quality and quantity and upgrade/ expansion capabilities.
4. Bidder to provide a complete written description including type of system and brand of stand-alone monitoring / retrieval system. Description shall include playback capability, copying to DVD, print screen ability, etc...
5. Bidder to provide a complete system layout showing camera locations, wiring, antennas, etc.
6. Bidder to provide cut sheets on all equipment including cameras, computers, recording devices, wiring, etc.
8. The City is requiring the Bidder to warranty all materials and labor for two (2) years. Warranty will begin once the City determines the system is operating as specified in the technical specifications for a period of 30-days. Provide complete written description of warranty and what it covers. Annual Maintenance of all cameras and equipment to be included in the warranty

During warranty period vendor shall identify and diagnose system/ equipment failures within 24 hours. All system repairs must be made within 72 hours.

If repairs are not completed within the required 72 hours a fine of \$100/day will be imposed until repairs are made

9. Bidder to describe how the cameras, antennas, etc. will be protected in the harsh coastal environment including type of housing units.
10. Bidder to describe how the cameras, antennas, monitoring / recording equipment etc. will be protected against power surge.
11. Bidder to describe the type of training, if any, provided with the proposed system.
12. Bidder shall secure permits as necessary for proper execution and completion of the work and shall ensure that all Federal, State, and Local codes are followed.
13. Bidder shall take the necessary steps to secure the site including fencing, barricades, and/or security to prevent entry by unauthorized persons.
14. Bidder will price each camera location separately as well as a total package.

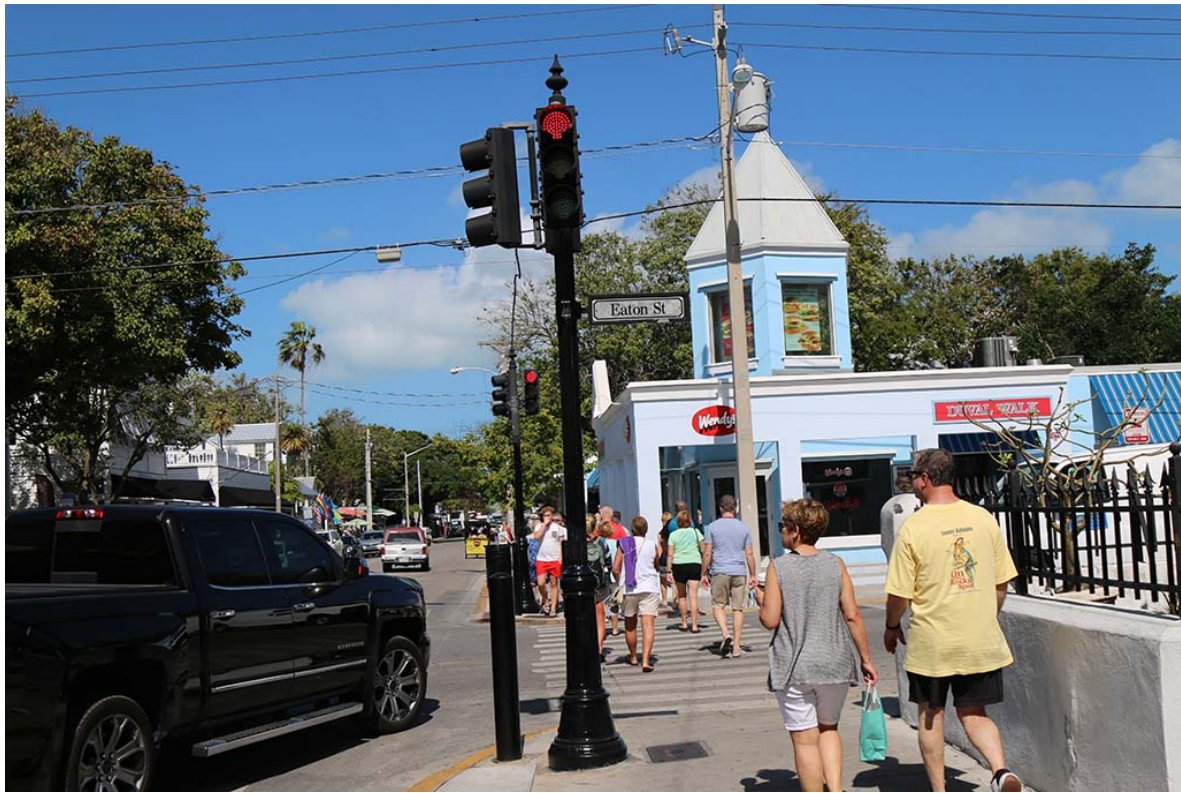
15. City reserves the right to add four additional camera locations on Duval Street subject to available funding.

\*\*\*\*\*



**Intersection of Duval and Caroline**





**Intersection of Duval Eaton**

**Intersection of Duval and Front**







**Intersection of Duval and Greene**



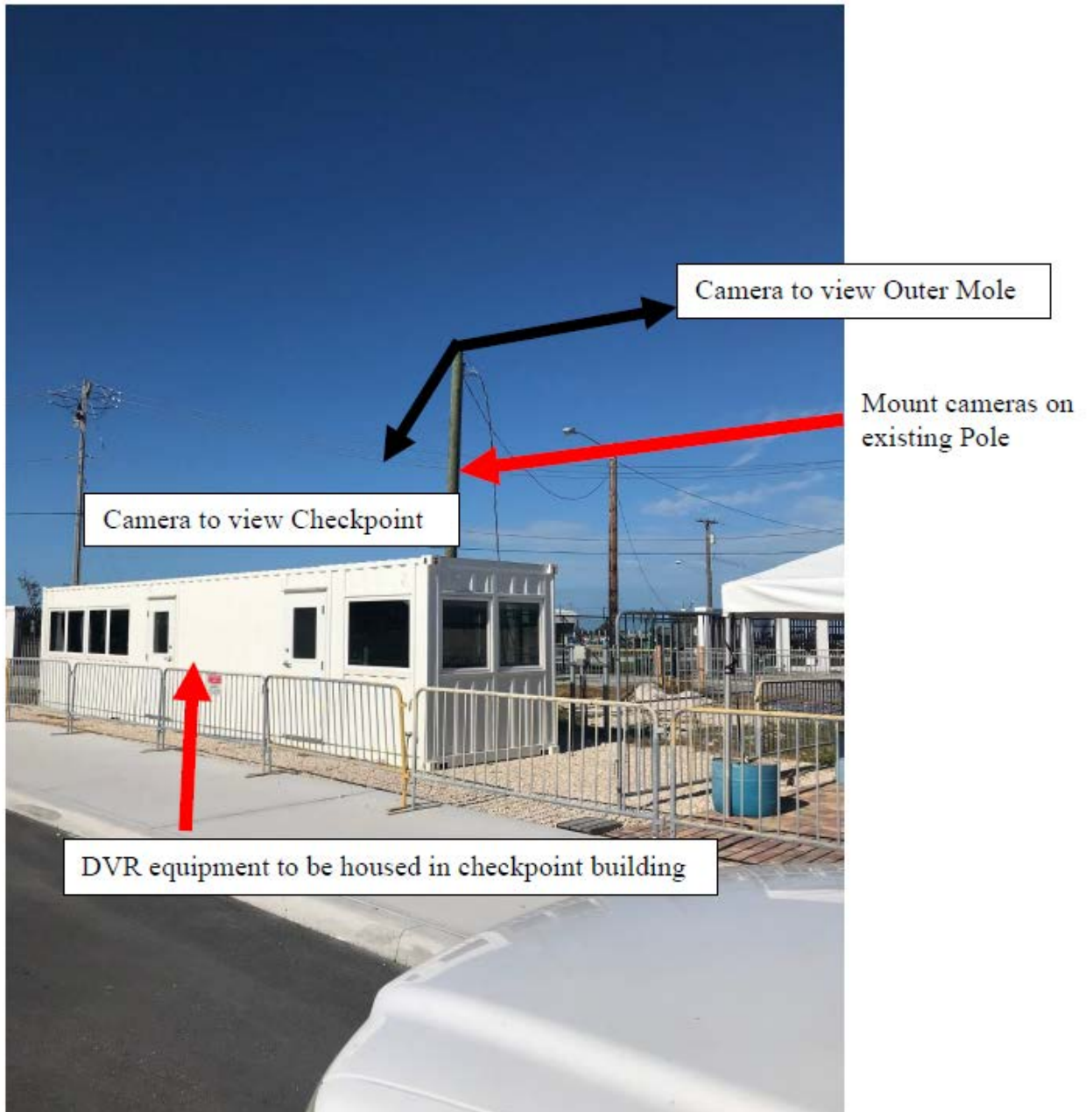
**Intersection of Duval and Greene**





**Intersection of Duval and Petronia**

## Mole Pier Security Checkpoint





Old cameras/antennas  
on arches at Mallory

Ocean Key House-Old location of  
antenna that relayed video from  
Mallory to Outer Mole Security  
Checkpoint





## Mallory Square Arches





**PORT & MARINE SERVICES**

201 William Street  
Key West, FL 33040

**ADDENDUM NO. 1**

**ROAD SURVEILLANCE & MONITORING DUVAL ST  
MALLORY SQUARE & OUTER MOLE  
ITB #18-035**

The information contained in this Addendum adds information to be included in the Bid and is hereby made a part of the Contract Documents. The referenced bid package is hereby addended in accordance with the following items:

**QUESTIONS and CLARIFICATIONS**

1. All requests for additional information or clarification must be received no later than Sunday July 15, 2018 at 5:00pm.
2. The Coast Guard range marker tower, located on Navy property, may be used to mount equipment. See attached photograph.
3. Additional photographs of Mallory Square and the Outer Mole are attached for clarification of camera locations, type and/or quantity and electrical sources.
4. Costs associated with design, permitting and bonds to be broken out in bidder's schedule of values.
5. Mandatory Pre-Bid Sign-In sheet attached.

All other elements of the Contract and Bid documents, including the bid date shall remain unchanged.

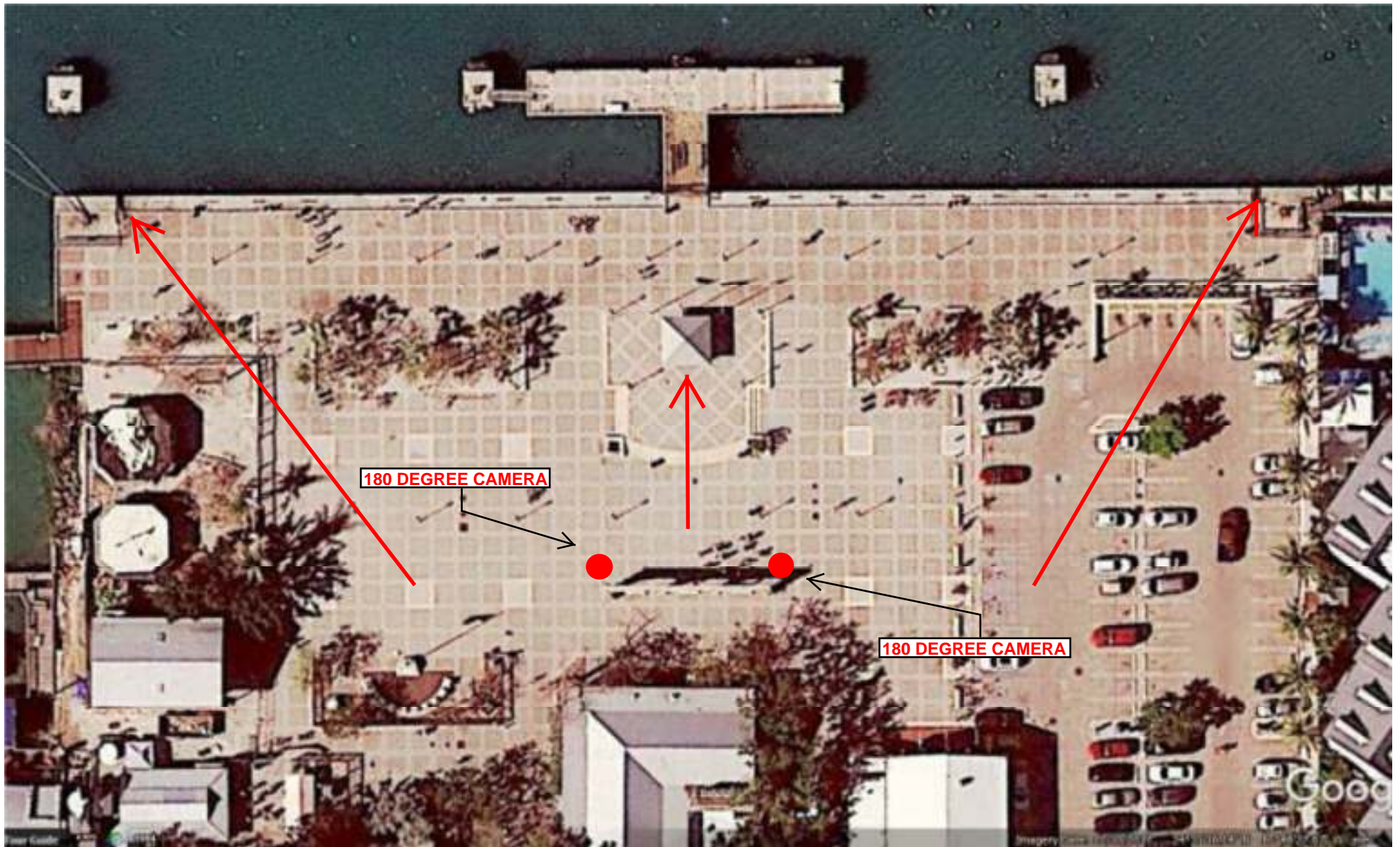
All Bidders shall acknowledge receipt and acceptance of this **Addendum No. 1** by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

  
\_\_\_\_\_  
Signature

PSX Inc.

\_\_\_\_\_  
Name of Business





**MALLORY SQUARE**  
(CAMERA LOCATION MAP)





**OUTER MOLE**  
(CAMERA LOCATION MAP)

Mallory security checkpoint- cameras need to cover this area as well as Cruise Ship







Location of power source for Equipment at Mallory



**USCG RANGE MARKER**



**ROAD SURVEILLANCE & MONITORING DUVAL ST  
MALLORY SQUARE & OUTER MOLE**

**ITB #18-035**

**Mandatory Pre-Bid Meeting SIGN-IN Sheet**

**July 11, 2018**

**2:30 PM**

**NAME / COMPANY**

**CONTACT #**

**EMAIL**

KAREN OLSON CLK 305-809-3803 KOLSON@CITYOFKEYWEST-FL.GOV

Don Herpin PSX 813-955-2318 don.herpin@psxgroup.com

Patti McLaughlin 305-809-3544 p.mclaughlin@keywest.fl.gov

SCOTT SLOUGH FLORIDA KEY ELECTRIC/HY TECH SOLUTIONS 305-296-5111 SSLOUGH@HY-TECHSOLUTIONS.COM

JORDAN SMITH BROADWAVE 305-767-1467 JORDAN@BROADWAVE.COM

STEVEN CARTER BROADWAVE 305-767-1454 SCARTER@BROADWAVE.COM

Andrew Nielsen Broadwave 305-767-1467 anielsen@broadwave.com

Diane Webster BroadWave 305-767-1638 dwebster@broadwave.com

Jonathan Phelps/IFSS 305-834-0924 JPhelps@IFSSI.COM

David Monroe 305-809-3929 dmonroe@cityofkeywest-fl.gov

Theodore Bellis JCI (305) 834-9419 Theodore.Bellis@JCI.COM



## **PORT & MARINE SERVICES**

201 William Street  
Key West, FL 33040

### **ADDENDUM NO. 2**

#### **ROAD SURVEILLANCE & MONITORING DUVAL ST MALLORY SQUARE & OUTER MOLE ITB #18-035**

The information contained in this Addendum adds information to be included in the Bid and is hereby made a part of the Contract Documents. The referenced bid package is hereby addended in accordance with the following items:

#### **CLARIFICATIONS**

1. Duval Street headpoint will be Fire Station #2 located at the intersection of Josephine Parker Road and Angela Street.
2. Two cameras shall be provided at each intersection along Duval Street.

#### **QUESTIONS**

1. Per picture Mole Pier Security Checkpoint, provide a picture inside checkpoint building.

**Space will be provided for all necessary equipment.**

2. Define what equipment is needed at the headends. (Racks, power strips, ect.)

**Contractor to provide all necessary equipment for a complete project.**

3. Define what equipment is needed at the headends. (Racks, power strips, ect.)

**See Clarification item #1.**

4. Define what coverage is required at the following locations:
  - a. Duval and Caroline
  - b. Duval and Eaton
  - c. Duval and Greene
  - d. Duval and Petronia

**Coverage to be 25' back from edge of pavement all directions.**

5. Specify if cameras can be mounted on street light poles, street sign poles, both.

**Cameras may be mounted on decorative light poles, concrete/wood utility poles, other items designated by the City or a combination of all. No cameras shall be mounted on street sign poles.**

6. Specify where on poles cameras can be mounted.

**As determined by contractor for required coverage.**

7. Can equipment be stored inside of poles located on Duval Street

**Only if equipment will fit.**

8. Location of power for equipment at Mallory picture provide location of structure.

**See attached photograph.**

9. (If answer is yes) Provide print of pole with dimensions and where access to inside of pole is available.

**To be field verified.**

10. Provide specs for the pan, tilt, zoom camera.

**As specified in ITB**

11. Provide specs for the 180 degree cameras.

**As specified in ITB**

12. Confirm per print of Mallory Square two 180 degree cameras.

**Confirmed**

13. Confirm per print of Outer Mole two cameras (one PTZ, one 180 degree) to be mounted on the same existing pole featured on page 41.

**Confirmed**

14. Define the long red arrow on the Outer Mole\_picture of addendum 1.

**Direction of PZT camera coverage**

15. Per Outer Mole picture of addendum 1, if the red arrow is area to be covered by PTZ camera provide distance in feet from existing pole to end of coverage area. (1,969/ft. **Google Earth**)



**See question #14**

16. Confirm that headend for both Mallory Square and Outer Mole to be housed at checkpoint building on page 41.

**Confirmed**

17. Confirm that the Mallory Security Checkpoint in addendum 1 is the same structure as the Mallory Square Arches picture on page 44.

**No, see attached photograph (although the checkpoint can be seen in the background).**

18. What are the procedure requirements to gain access to the USCG Range Marker.

**This information will be provided after contract award.**

19. Provide location of USCG Range Marker.

**See attached photograph.**

20. Provide location of Ocean Key House on page 43.

**See attached photograph.**

21. Can new antenna be mounted on existing pole at Ocean Key House?

**Contractor to anticipate mounting antenna on new mount/pole.**

22. Does old antenna at Ocean Key House need to be removed?

**No**

23. What power is provided at Ocean Key House and USCG Range Marker?

**Contractor to connect to existing power source, to be coordinated post contract award.**

24. What hours and days must work be performed.

**Monday through Friday 8:00am to 7:00pm and Saturdays 9:00am to 5:00pm per City's Code of Ordinances**

25. If lifts are required are there any restriction as to their use.

**All equipment must be operated following all applicable safety guidelines. Use of such equipment within the City's right-of-way will require a right-of-way permit and approved MOT plan.**

26. If a street light needs to be disabled during installation, what is the procedure?

**To be coordinated with City staff and Keys Energy Systems.**

27. Is parking provided for work trucks

**A parking pass will be provided for the duration of the project to park, free of charge, in legally designated parking spaces and parking lots.**

28. Provide overview picture of all locations mentioned in ITB #18-035

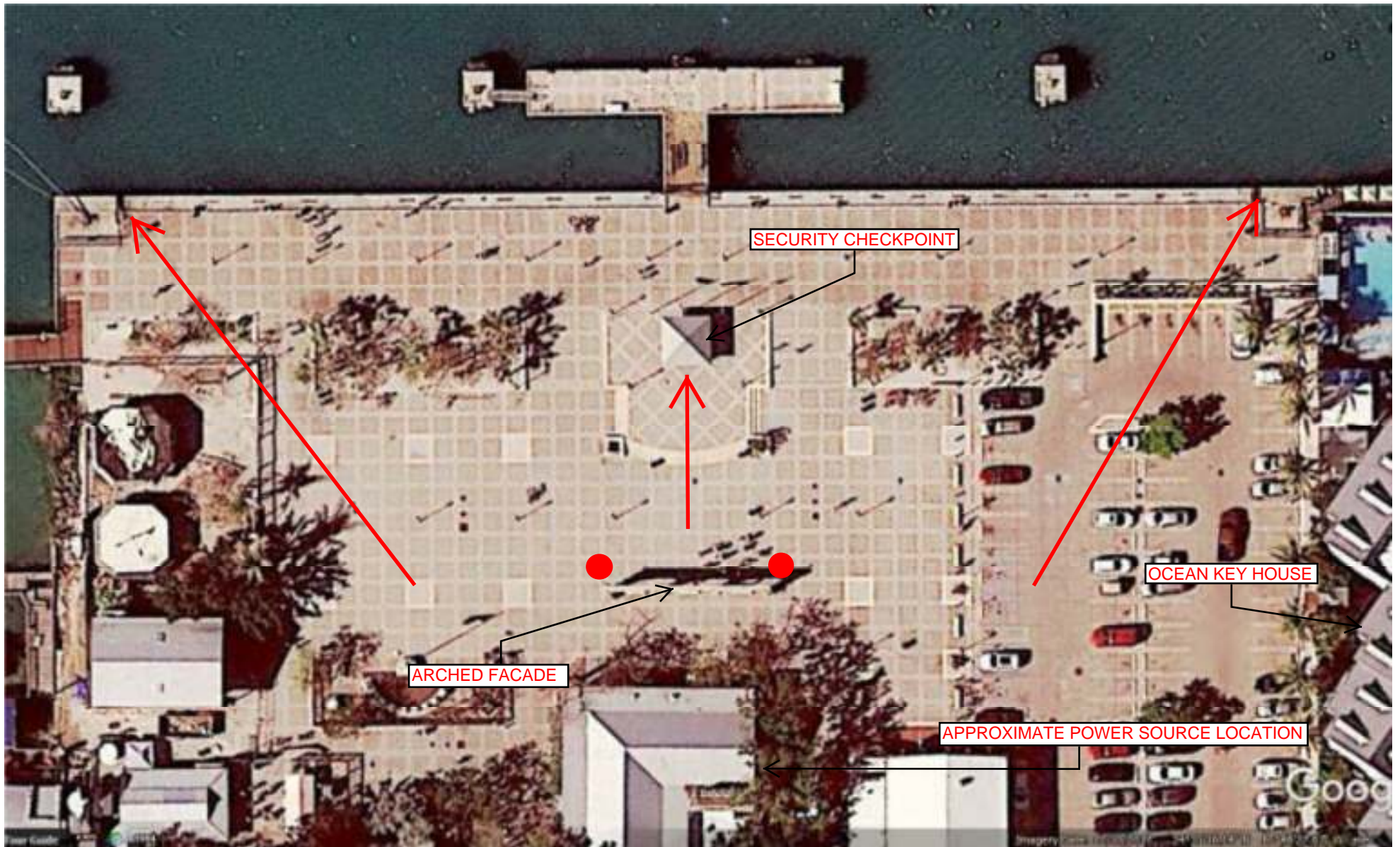
**All locations have been previously provided.**

All other elements of the Contract and Bid documents, including the bid date shall remain unchanged.

All Bidders shall acknowledge receipt and acceptance of this **Addendum No. 2** by submitting the addendum with their proposal. Proposals submitted without acknowledgement or without this Addendum may be considered non-responsive.

  
\_\_\_\_\_  
Signature

PSX Inc.  
\_\_\_\_\_  
Name of Business



## MALLORY SQUARE







OUTER MOLE





PSXIN-1

OP ID: JO

## CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

12/28/2017

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).

<b>PRODUCER</b> TRX Insurance Services, Inc. Post Office Box 987 1288 Valley Forge Rd, Unit 85 Valley Forge, PA 19482 Richard G. Metz		<b>484-928-4000</b>		<b>CONTACT NAME:</b> Richard G. Metz <b>PHONE (A/C, No, Ext):</b> 484-928-4000 <b>FAX (A/C, No):</b> 484-928-4001 <b>E-MAIL ADDRESS:</b>	
<b>INSURED</b> PSX, Inc. 708 Terminal Way Kennett Square, PA 19348				<b>INSURER(S) AFFORDING COVERAGE</b> <b>INSURER A:</b> Travelers Indemnity Company <b>INSURER B:</b> Phoenix Insurance Company <b>INSURER C:</b> Travelers Property Casualty <b>INSURER D:</b> <b>INSURER E:</b> <b>INSURER F:</b>	
				<b>NAIC #</b> 25658 25623 25674	

## 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.

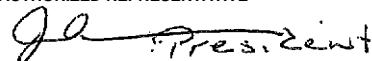
INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
B	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR  GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input checked="" type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:			6305079A379	12/31/2017	12/31/2018	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000 MED EXP (Any one person) \$ 5,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input type="checkbox"/> ANY AUTO OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY			BA5079A379	12/31/2017	12/31/2018	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED <input checked="" type="checkbox"/> RETENTION \$ 10,000			CUP4K4444A	12/31/2017	12/31/2018	EACH OCCURRENCE \$ 10,000,000 AGGREGATE \$ 10,000,000
A	<input checked="" type="checkbox"/> WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) <input type="checkbox"/> Y/N N/A If yes, describe under DESCRIPTION OF OPERATIONS below			UB008J537341	12/31/2017	12/31/2018	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 500,000 E.L. DISEASE - EA EMPLOYEE \$ 500,000 E.L. DISEASE - POLICY LIMIT \$ 500,000
B	Property			6305079A379	12/31/2017	12/31/2018	BPP 1,075,000 PPOthers 250,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

Certificate of Insurance is issued as Evidence of Coverage only.

## CERTIFICATE HOLDER

## CANCELLATION

<b>EVIDENC</b>  Evidence of Coverage	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE 



## 2017 Florida Annual Resale Certificate for Sales Tax

DR-13  
R. 10/16

THIS CERTIFICATE EXPIRES ON DECEMBER 31, 2017

Business Name and Location Address

Certificate Number

PSX INC  
PSX INC OF TAMPA  
5940 BENJAMIN RD  
TAMPA, FL 33634-5102

39-8013787037-4

By extending this certificate or the certificate number to a selling dealer to make eligible purchases of taxable property or services exempt from sales tax and discretionary sales surtax, the person or business named above certifies that the taxable property or services purchased or rented will be resold or re-rented for one or more of the following purposes:

- Resale as tangible personal property.
- Re-rental as tangible personal property.
- Resale of services.
- Re-rental as commercial real property.
- Incorporation into and sale as part of the repair of tangible personal property by a repair dealer.
- Re-rental as transient rental property.
- Incorporation as a material, ingredient, or component part of tangible personal property that is being produced for sale by manufacturing, compounding, or processing.

### **Florida law provides for criminal and civil penalties for fraudulent use of a *Florida Annual Resale Certificate*.**

The *Florida Annual Resale Certificate* is issued to active, registered sales and use tax dealers. **As a buyer**, use your certificate to purchase or rent property or services tax exempt that you intend to resell or re-rent to your customers. You cannot use this certificate to purchase or rent property or services that you will use in your business. **As a seller**, you must collect sales tax and discretionary sales surtax imposed on retail sales or rentals of taxable property or services, unless the transaction is exempt.

**Seller Certificate Verification** – Verify resale or exemption certificates using a customer's sales tax certificate number:

- Phone: **877-FL-RESALE** (877-357-3725)
- Online: Go to **[www.myflorida.com/dor](http://www.myflorida.com/dor)** and select "More e-Services" and then "Verify resale and exemption certificates"
- Mobile App: **Florida Tax (FL Tax)** mobile app for iPhone, iPad, Android phones and tablets, Windows Phone

If you obtain an authorization number for each tax-exempt sale, or for all sales to a specific customer, you do **not** need to keep a copy of the customer's *Florida Annual Resale Certificate*.

**Data Contained In Search Results Is Current As Of 07/17/2018 02:09 PM.**

## Search Results

Please see our [glossary of terms](#) for an explanation of the license status shown in these search results.

For additional information, including any complaints or discipline, click on the name.

License Type	Name	Name Type	License Number/ Rank	Status/Expires
Electrical Business Information	<a href="#">PSX INC</a>	Primary	Business Info	Current
<b>Main Address*:</b> 5940 BENJAMIN RD TAMPA, FL 33634				
Certified Electrical Contractor	<a href="#">PSX INC, OF TAMPA</a>	DBA	EC13006843 Cert Electrical	Current, Active 08/31/2020
<b>License Location Address*:</b> 5940 BENJAMIN RD TAMPA, FL 33634				
<b>Main Address*:</b> 609 1/2 N IRVING BLVD LOS ANGELES, CA 90004				
Electrical Business Information	<a href="#">PSX INC, OF TAMPA</a>	DBA	Business Info	Current
<b>Main Address*:</b> 5940 BENJAMIN RD TAMPA, FL 33634				

[Back](#)
[New Search](#)

### \* denotes

Main Address - This address is the Primary Address on file.

Mailing Address - This is the address where the mail associated with a particular license will be sent (if different from the Main or License Location addresses).

License Location Address - This is the address where the place of business is physically located.

**2601 Blair Stone Road, Tallahassee FL 32399** :: Email: **Customer Contact Center** :: Customer Contact Center: 850.487.1395

The State of Florida is an AA/EEO employer. **Copyright 2007-2010 State of Florida. Privacy Statement**

Under Florida law, email addresses are public records. If you do not want your email address released in response to a public-records request, do not send electronic mail to this entity. Instead, contact the office by phone or by traditional mail. If you have any questions, please contact 850.487.1395. \*Pursuant to Section 455.275(1), Florida Statutes, effective October 1, 2012, licensees licensed under Chapter 455, F.S. must provide the Department with an email address if they have one. The emails provided may be used for official communication with the licensee.

However email addresses are public record. If you do not wish to supply a personal address, please provide the Department with an email address which can be made available to the public.





STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION

ELECTRICAL CONTRACTORS LICENSING BOARD  
1940 NORTH MONROE STREET  
TALLAHASSEE FL 32399-0783

(850) 487-1395

SHAFFER, MICHAEL JOHN  
PSX INC, OF TAMPA  
609 1/2/ N. IRVING BLVD.  
LOS ANGELES CA 90034

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!



STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND  
PROFESSIONAL REGULATION

EC13006843

ISSUED: 06/07/2016

CERTIFIED ELECTRICAL CONTRACTOR  
SHAFFER, MICHAEL JOHN  
PSX INC, OF TAMPA

IS CERTIFIED under the provisions of Ch.489 FS.  
Expiration date : AUG 31, 2016 L1606070001144

DETACH HERE

RICK SCOTT, GOVERNOR

KEN LAWSON, SECRETARY

STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION  
ELECTRICAL CONTRACTORS LICENSING BOARD

LICENSE NUMBER

EC13006843

The ELECTRICAL CONTRACTOR  
Named below IS CERTIFIED  
Under the provisions of Chapter 489 FS.  
Expiration date: AUG 31, 2016

SHAFFER, MICHAEL JOHN  
PSX INC, OF TAMPA  
5940 BENJAMIN RD  
TAMPA FL 33634



ISSUED: 06/07/2016

DISPLAY AS REQUIRED BY LAW

SEQ # L1606070001144



# Product Cut Sheets

The following products have been identified in our solution for the City of Key West Road Surveillance and Monitoring project:

- Ubiquiti
  - AC Mesh
- Hanwha
  - PNM-9020V Camera
  - PNP-9200RH Camera
  - XRN-2010 32CH Network Video Recorder
- Transition Network
  - 4-Port PoE Switch
  - SESPM1040-541-LT-xx Series





# UniFi® AC MESH

802.11AC AP with Plug & Play Mesh

Models: UAP-AC-M, UAP-AC-M-PRO

High-Performance Wide-Area Wi-Fi with UniFi® Mesh Technology

Breakthrough Speeds up to 1300 Mbps in the 5 GHz Band

802.3af PoE Compatibility



## Scalable Enterprise Wi-Fi Management

UniFi® is the revolutionary Wi-Fi system that combines enterprise performance, unlimited scalability, and a central management controller. The UniFi AC Mesh APs have a refined industrial design and can be easily installed using the included mounting hardware.

Easily accessible through any standard web browser and the UniFi mobile app (iOS or Android), the UniFi Controller software is a powerful software engine ideal for high-density client deployments requiring low latency and high uptime performance.

Use the UniFi Controller software to quickly configure and administer an enterprise Wi-Fi network – no special training required. RF map and performance features, real-time status, automatic UAP device detection, and advanced security options are all seamlessly integrated.

## Features

**Save Money and Save Time** UniFi comes bundled with a non-dedicated software controller that can be deployed on an on-site PC, Mac, or Linux machine; in a private cloud; or using a public cloud service. You also have the option of using the UniFi Cloud Key with built-in software.

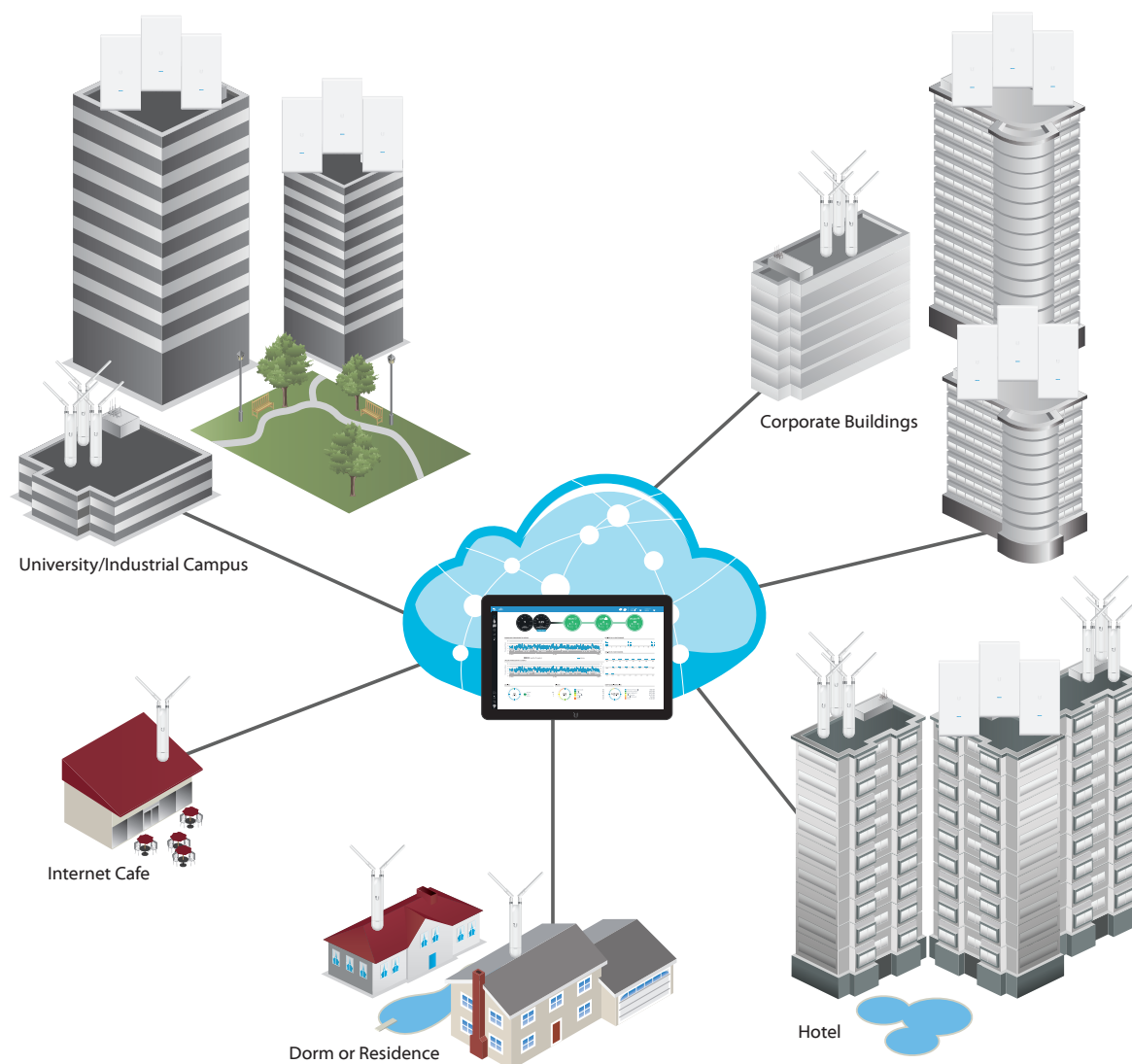
**Powerful Hardware** The UniFi AC Mesh APs feature Wi-Fi 802.11AC with Plug & Play Mesh technology.

**Intuitive UniFi Controller Software** Configure and manage your APs with the easy-to-learn user interface.

**Expandable** Unlimited scalability: build wireless networks as big or small as needed. Start with one and expand to thousands while maintaining a single unified management system.

## Extend Your Coverage

With the UniFi Controller software running in a NOC or in the cloud, administrators can manage multiple sites: multiple distributed deployments and multi-tenancy for managed service providers. Below are some deployment examples.



# UniFi Controller

## Packed with Features

Use the UniFi Controller to provision thousands of UniFi APs, map out networks, quickly manage system traffic, and provision additional UniFi APs.

## Breakthrough RF Map

Use the RF map to monitor and analyze radio frequencies for optimal AP placement, configuration, and troubleshooting.

## Powerful RF Performance Features

Advanced RF performance and configuration features include spectral analysis, airtime fairness, and band steering.

## Detailed Analytics

Use the configurable reporting and analytics to manage large user populations and expedite troubleshooting.

## Wireless Uplink

Wireless Uplink functionality enables wireless connectivity between APs for extended range. One wired UniFi AP uplink supports up to four wireless downlinks on a single operating band, allowing wireless adoption of devices in their default state and real-time changes to network topology.

For devices that support Plug & Play Mesh, this functionality is extended to allow multi-hop wireless uplink – so wirelessly uplinked APs can support uplink to other wirelessly uplinked APs.

## Guest Portal/Hotspot Support

Easy customization options for Guest Portals include authentication, Hotspot setup, and the ability to use your own external portal server. Use UniFi's rate limiting for your Guest Portal/Hotspot package offerings. Apply different bandwidth rates (download/upload), limit total data usage, and limit duration of use.

All UniFi APs include Hotspot functionality:

- Built-in support for billing integration using major credit cards.
- Built-in support for voucher-based authentication.
- Built-in Hotspot Manager for voucher creation, guest management, and payment refunds.
- Full customization and branding of Hotspot portal pages.

## Multi-Site Management

A single cloud-based UniFi Controller can manage multiple sites: multiple, distributed deployments and multi-tenancy for managed service providers. Each site is logically separated and has its own configuration, maps, statistics, guest portal, and admin read/write and read-only accounts.

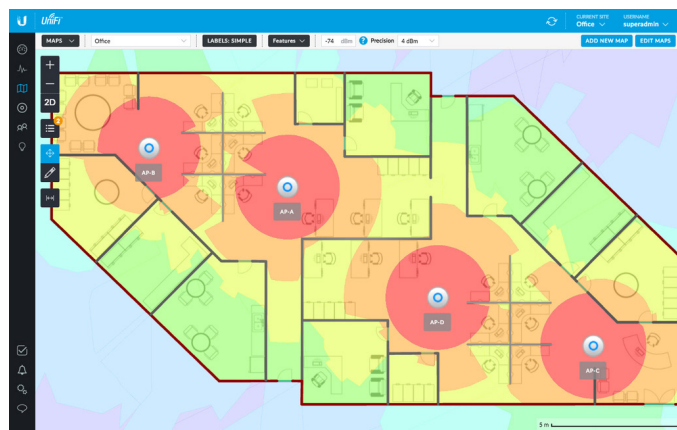
## WLAN Groups

Manage flexible configurations of large deployments. Create multiple WLAN groups and assign them to an AP's radio.



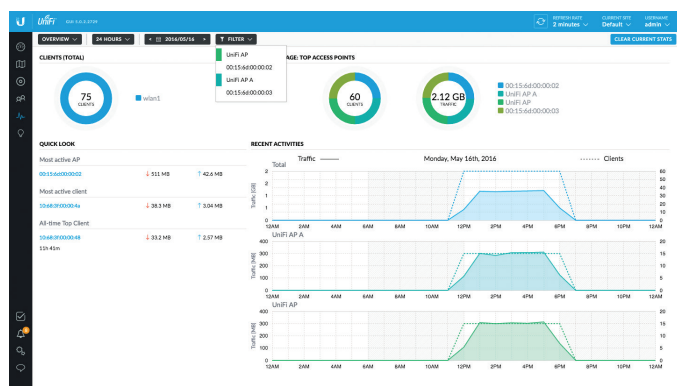
## Dashboard

UniFi provides a visual representation of your network's status and delivers basic information about each network segment.



## RF Map

Monitor UniFi APs and analyze the surrounding RF environment.



## Statistics

UniFi visualizes network traffic in clear and easy-to-read graphs.



## UniFi Mobile App

Manage your UniFi devices from your smartphone or tablet.

## Model Comparison



	UAP-AC-M	UAP-AC-M-PRO
Environment	Indoor/Outdoor	Outdoor
Simultaneous Dual-Band	✓	✓
2.4 GHz Radio Rate	300 Mbps	450 Mbps
2.4 GHz MIMO	2x2	3 x 3
5 GHz Radio Rate	867 Mbps	1300 Mbps
5 GHz MIMO	2x2	3 x 3
Secondary Ethernet Port		✓
PoE Mode	24V Passive PoE 802.3af PoE: Alternative A	802.3af PoE
Wall Mount	✓	✓
Pole Mount	✓	✓
Fast Mount	✓	

## Use Cases

**Mesh Multi-Hop** A large outdoor area, such as a park with minimal infrastructure, can take advantage of a mesh network comprised of the UniFi AC Mesh models.

**Omnidirectional Coverage, Indoors or Outdoors** The UAP-AC-M includes adjustable dual-band omni antennas.

You have the option to use a 5 GHz omni antenna<sup>1</sup> for spot-beam coverage in high-density locations with numerous APs and clients, like a conference hall or event center.

**Directional Coverage, Outdoors** The UAP-AC-M is versatile.

You have the option to use a 5 GHz sector antenna<sup>2</sup> (wide beam in the azimuth plane and narrow in the elevation plane) for broad outdoor coverage.

**Maximum Coverage, Outdoors** The UAP-AC-M-PRO is ideal for applications requiring 3x3 MIMO data rates for close-in omni coverage.

**Temporary Installations** Deploy the UniFi AC Mesh models for outdoor installations requiring quick setup and takedown, such as a street fair, music festival, or concert venue.

<sup>1</sup> Different antenna gains are allowed for each regulatory domain or country. It is the installer's responsibility to check local regulations.

## Application Example



*Both UniFi AC Mesh models provide wireless coverage for a street fair in a city plaza.*



# Hardware Overview

## Model: UAP-AC-M

The UAP-AC-M provides simultaneous, dual-band, 2x2 MIMO technology and is available in single- and five-packs<sup>1</sup>.

**Compact Form Factor** The UAP-AC-M discreetly integrates into any environment.

**Weather-Resistant Enclosure** The UAP-AC-M can be used indoors or outdoors.

**Versatile Mounting** The UAP-AC-M can be mounted on a wall, pole, or fast-mount of an optional Ubiquiti® high-gain antenna<sup>2</sup>. (All accessories are included.)

**Multiple Power Options** The UAP-AC-M is compatible with 802.3af PoE Alternative A and 24V passive PoE. You can power it with the included Gigabit PoE adapter<sup>1</sup> or an 802.3af Alternative A compatible switch, such as the UniFi PoE Switch or EdgePoint™ EP-R6.

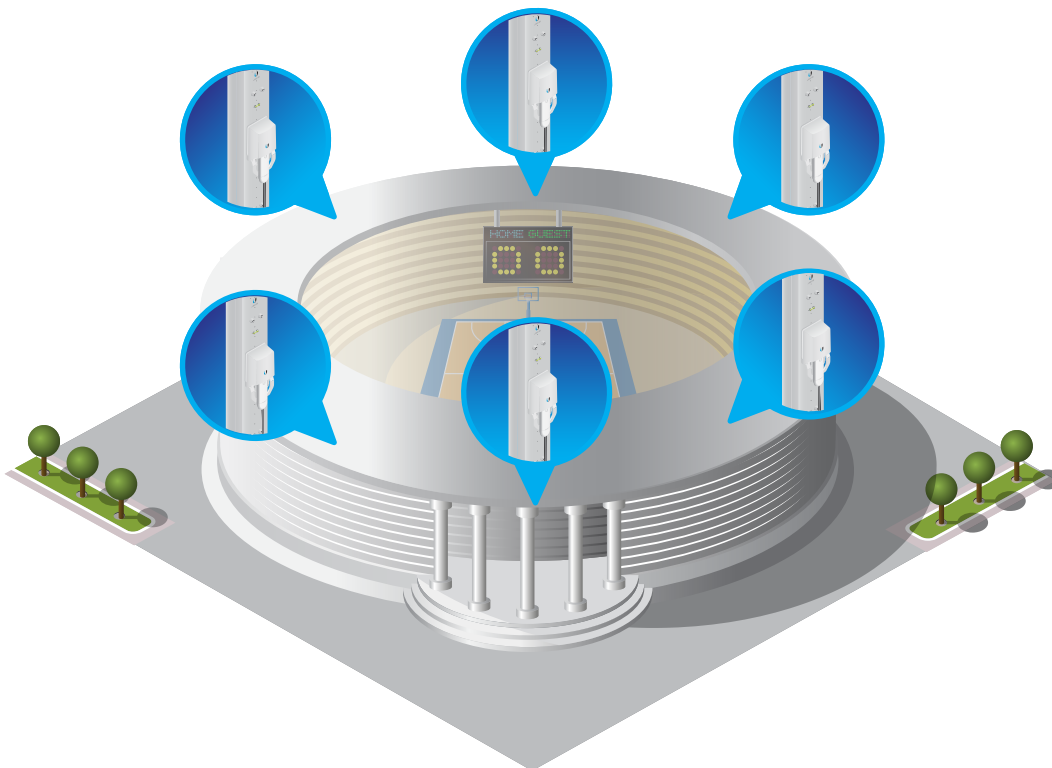
**Antenna Options** Use the included omni antennas, or use the included fast-mount adapter to install the AP on an optional connectorized antenna<sup>2</sup> for expanded range coverage and customized pattern shaping.

<sup>1</sup> Five-packs do not ship with PoE adapters; we recommend powering the UniFi APs with the UniFi PoE Switch instead.

<sup>2</sup> Different antenna gains are allowed for each regulatory domain or country. It is the installer's responsibility to check local regulations.



## Application Example



*The UAP-AC-M utilizes the same antenna connector technology as airMAX® antennas.<sup>2</sup>*

# Hardware Overview

## Model: UAP-AC-M-PRO

The UAP-AC-M-PRO provides simultaneous, dual-band, 3x3 MIMO technology and is available in single- and five-packs\*.

**Weather-Resistant Form Factor** The enclosure of the UAP-AC-M-PRO is designed to withstand the elements, making it ideal for outdoor deployment.

**Powerful Coverage** Built-in dual-band omnidirectional antennas deliver expanded range coverage outdoors.

**Mounting Flexibility** The UAP-AC-M-PRO can be mounted on a wall or pole. (All accessories are included.)

**Dual Gigabit Ethernet Ports** The primary port is for data and PoE; the secondary port is for bridging.

**Multiple Power Options** You can power the UAP-AC-M-PRO with an 802.3af compatible switch, UniFi PoE Switch, or the included Gigabit PoE adapter\*.

\* Five-packs do not ship with PoE adapters; we recommend powering the UniFi APs with the UniFi PoE Switch instead.



## Application Example



*The UniFi AC M Pro APs cover the quad and park on a university campus.*

# UAP-AC-M Specifications

UAP-AC-M	
Dimensions	353 x 46 x 34.4 mm (13.9 x 1.81 x 1.35")
Weight	152 g (5.36 oz) with Antennas
Networking Interface	(1) 10/100/1000 Ethernet Port
Buttons	Reset
Power Method	24V Passive PoE (Pairs 4, 5+; 7, 8 Return); 802.3af Alternative A (Pairs 1, 2+; 3, 6 Return) (Supported Voltage Range: 44 to 57VDC)
Power Supply	24V, 0.5A Gigabit PoE Adapter*
Power Save	Supported
Maximum Power Consumption	8.5W
Maximum TX Power	
2.4 GHz	20 dBm
5 GHz	20 dBm
Antennas	(2) External Dual-Band Omni Antennas
2.4 GHz	3 dBi
5 GHz	4 dBi
Wi-Fi Standards	802.11 a/b/g/n/ac
Wireless Security	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES)
BSSID	Up to 8 per Radio
Mounting	Wall/Pole/Fast-Mount (Kits Included)
Operating Temperature	-30 to 70° C (-22 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC

\* Only the single-pack of the UAP-AC-M includes a PoE adapter.

Advanced Traffic Management	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	250+

Supported Data Rates (Mbps)	
Standard	Data Rates
802.11ac	6.5 Mbps to 867 Mbps (MCS0 - MCS9 NSS1/2, VHT 20/40/80)
802.11n	6.5 Mbps to 300 Mbps (MCS0 - MCS15, HT 20/40)
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11b	1, 2, 5.5, 11 Mbps



# UAP-AC-M-PRO Specifications

UAP-AC-M-PRO	
Dimensions	343.2 x 181.2 x 60.2 mm (13.51 x 7.13 x 2.37")
Weight	633 g (1.40 lb)
Networking Interface	(2) 10/100/1000 Ethernet Ports
Buttons	Reset
Power Method	802.3af PoE (Supported Voltage Range: 44 to 57VDC)
Power Supply	48V, 0.5A PoE Gigabit Adapter*
Power Save	Supported
Maximum Power Consumption	9W
Maximum TX Power	
2.4 GHz	22 dBm
5 GHz	22 dBm
Antennas	(3) Internal Dual-Band Antennas 8 dBi
Wi-Fi Standards	802.11 a/b/g/n/ac
Wireless Security	WEP, WPA-PSK, WPA-Enterprise (WPA/WPA2, TKIP/AES)
BSSID	Up to 8 per Radio
Mounting	Wall/Pole (Pole Kit Included)
Operating Temperature	-40 to 70° C (-40 to 158° F)
Operating Humidity	5 to 95% Noncondensing
Certifications	CE, FCC, IC







\* Only the single-pack of the UAP-AC-M-PRO includes a PoE adapter.

Advanced Traffic Management	
VLAN	802.1Q
Advanced QoS	Per-User Rate Limiting
Guest Traffic Isolation	Supported
WMM	Voice, Video, Best Effort, and Background
Concurrent Clients	250+

Supported Data Rates (Mbps)	
Standard	Data Rates
802.11ac	6.5 Mbps to 1300 Mbps (MCS0 - MCS9 NSS1/2/3, VHT 20/40/80)
802.11n	6.5 Mbps to 450 Mbps (MCS0 - MCS23, HT 20/40)
802.11a	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11g	6, 9, 12, 18, 24, 36, 48, 54 Mbps
802.11b	1, 2, 5.5, 11 Mbps

# UniFi Switch Compatibility

The UniFi switches are compatible with UniFi Access Points and UniFi G3 Video Cameras, as detailed below.

AP/Camera Model	US-8	US-8-60W	US-8-150W	US-16-150W	US-24-250W	US-24-500W	US-48-500W	US-48-750W
UVC-G3			✓	✓	✓	✓	✓	✓
UVC-G3-AF	✓	✓	✓	✓	✓	✓	✓	✓
UVC-G3-DOME	✓	✓	✓	✓	✓	✓	✓	✓
UAP			✓	✓	✓	✓	✓	✓
UAP-LR			✓	✓	✓	✓	✓	✓
UAP-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-LITE	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-LR	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-M	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-M-PRO	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-IW*	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-IW-PRO*	✓	✓	✓	✓	✓	✓	✓	✓
UAP-AC-HD	–	–	✓	✓	✓	✓	✓	✓

✓ Compatible with the UniFi switch

 Requires an Instant 802.3af Gigabit PoE Converter: INS-3AF-I-G  or INS-3AF-O-G 

Note:

\* For the UAP-AC-IW and UAP-AC-IW-PRO, PoE passthrough is supported by all of the switches listed above except for models US-8 and US-8-60W.

## Related Product Datasheets



UniFi Switch 8, UniFi Switch 8-60W:

[dl.ubnt.com/datasheets/unifi/UniFi\\_Switch\\_8\\_DS.pdf](https://dl.ubnt.com/datasheets/unifi/UniFi_Switch_8_DS.pdf)



UniFi PoE Switches:

[dl.ubnt.com/datasheets/unifi/UniFi\\_PoE\\_Switch.pdf](https://dl.ubnt.com/datasheets/unifi/UniFi_PoE_Switch.pdf)

Specifications are subject to change. Ubiquiti products are sold with a limited warranty described at: [www.ubnt.com/support/warranty](http://www.ubnt.com/support/warranty)  
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# PNM-9020V

7.3Megapixel Multi-sensor 180° Panoramic Camera

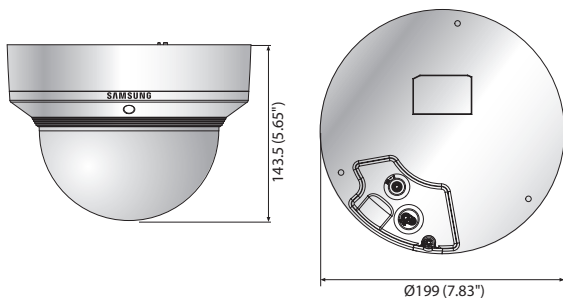


## Key Features

- Max. 7.3M (4096 x 1800) resolution
- Built-in 3.6mm fixed lens
- H.265/H.264 : Max. 30fps at all resolutions  
MJPEG : Max. 15fps at all resolutions
- H.265, H.264, MJPEG codec supported, Multiple streaming
- Motion detection, Hand over to PTZ, Tampering, Defocus detection, Digital auto tracking, Heatmap
- SD/SDHC/SDXC (128GB) memory slot, PoE+ / 12V DC
- WiseStream supported, IP66, IK10

## Dimensions

Unit : mm (inch)



## Accessories (Optional)



PNM-9020V	
<b>VIDEO</b>	
Imaging Device	7.3M (2M x 4)
Total / Effective Pixels	5,152(H) x 1,981(V) / 4,096(H) x 1,800(V)
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux
<b>LENS</b>	
Focal Length (Zoom Ratio)	3.6mm fixed
Max. Aperture Ratio	F2.0
Angular Field of View	[Total 4sensor] H : 180°, V : 84°
Min. Object Distance	1.5m (4.92ft)
Focus Control	Manual
Lens / Mount Type	Fixed / Board type
<b>PAN / TILT / ROTATE</b>	
Pan / Tilt Range	0° ~ 355° / 0° ~ 60°
<b>OPERATIONAL</b>	
Camera Title	Off / On (Displayed up to 45 characters) - W/W : English / Numeric / Special characters - Korea : English / Numeric / Special / Korean characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 6), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W / External / Schedule
Backlight Compensation	Off / BLC
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR III (2D+3D noise filter) (Off / On)
Defog	Off / Auto / Manual
Motion Detection	Off / On (8ea, Polygonal), Hand over
Privacy Masking	Off / On (16ea, Polygonal with 4 lines only) - Color : Grey / Green / Red / Blue / Black / White
Gain Control	Off / Low / Middle / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor (not included Mercury & Sodium)
Electronic Shutter Speed	Minimum / Maximum / Anti flicker
Flip / Mirror	Off / On
Digital PTZ	Support
Intelligent Video Analytics	Tampering, Virtual line, Enter/Exit, (Dis)Appear, Audio detection, Defocus detection, Digital auto tracking, Heat map
Alarm I/O	Input 1 / Output 1
Alarm Triggers	Alarm Input, Motion Detection, Tampering(Scene Change), Virtual Line, Enter/Exit, Appear / Disappear, Audio Detection, Defocus Detection
Alarm Events	File upload via FTP, E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output
Pixel Counter	Support (Plug-in viewer only)
View Composition	Plug-in : Single Panorama, Panorama +3 PTZ, Plug-in Free : 3D View
<b>NETWORK</b>	
Ethernet	RJ-45 (1000BASE-T), Plug-in type
Video Compression Format	H.265/H.264 (MPEG-4 part 10/AVC) : Main/Baseline/High, MJPEG [Panorama] 4096 x 1800, 3584 x 1536, 3072 x 1352, 2560 x 1124, 2048 x 900, 1536 x 676, 1024 x 452, 512 x 224, 720 x 576 [HalfView] 2048x1536 / 1600x1200 / 1024x768 / 800x600
Resolution	H.265/H.264 : Max. 30fps@all resolutions, MJPEG : Max. 15fps
Max. Framerate	Manual mode (Area-based : Sea)/Support
Smart Codec/WiseStream	H.265/H.264, MJPEG : Target bitrate level control
Video Quality Adjustment	H.265/H.264 : CBR or VBR, MJPEG : VBR
Bitrate Control Method	H.265/H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 10 profiles)
Audio In	Line in, Supply voltage : 2.5V DC(4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out (3.5mm stereo mini jack)
Audio Compression Format	G.711 u-law / G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz, G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UPnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	15 users at unicast mode SD/SDHC/SDXC (up to 128GB) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded - Camera can detect automatically when the memory is connected - Memory status display (Normal / Error / Active / Formatting / Lock) NAS (Network Attached Storage), Local PC for instant recording (Plug-in viewer only)
Storage	ONVIF profile S/G SUNAPI (HTTP API), S/NP, Wisenet Open Platform
Application Programming Interface	English, Korean, Chinese, French, Italian, Spanish, German, Japanese, Russian, Swedish, Portuguese, Czech, Polish, Turkish, Dutch, Hungary, Greek
Webpage Language	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in Free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Web Viewer	SmartViewer, SSM
<b>Central Management Software</b>	
<b>ENVIRONMENTAL</b>	
Operating Temperature / Humidity	-40°C ~ +55°C (-40°F ~ +131°F) / Less than 90% RH * Start up should be done at above -35°C (-31°F)
Storage Temperature / Humidity	-40°C ~ +60°C (-40°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP66 / IK10
<b>ELECTRICAL</b>	
Input Voltage / Current	PoE+ (IEEE802.3at) / 12V DC
Power Consumption	Max. 25.5W (PoE+, Heater On), Max 21.0W (DC12V, Heater On)
<b>MECHANICAL</b>	
Color / Material	Ivory / Aluminum
Dimensions (WxH)	Ø199.0 x 143.5mm (Ø7.83" x 5.65")
Weight	2.03Kg (4.5 lb)

\* The latest product information / specification can be found at [hanwha-security.com](http://hanwha-security.com)

# PNP-9200RH

4K 20x Network IR PTZ Dome Camera

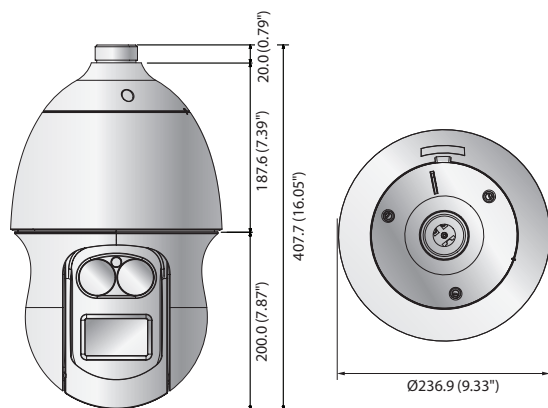


## Key Features

- Max. 8megapixel (3840 x 2160) resolution
- Real 4K 20x IR corrected optical zoom, 16x digital zoom
- Max. Prest 400°/sec (Pan), 300°/sec (Tilt)
- H.265, H.264, MJPEG, WiseStream support
- Max.30fps@4K (H.265, H.264)
- Max. IR viewable length : 200m
- Day & Night (ICR), WDR (120dB)
- Auto tracking, Intelligent video analytics
- SD/SDHC/SDXC memoty slot (Max. 128GB)
- IP66, IK10, Bi-directional audio support

## Dimensions

Unit : mm (inch)



## Accessories (Optional)



SBP-300WM1 SBP-300WM SBP-300CM SBP-300LM SBP-300B SBP-300NB SBP-300PM SBP-300KM

## PNP-9200RH

VIDEO	
Imaging Device	1/2.5" 8M CMOS
Total / Effective Pixels	3,864(H) x 2,202(V), 8.51M pixels / 3,840(H) x 2,160(V), 8.00M pixels
Scanning System	Progressive
Min. Illumination	Color : 0.3Lux / F1.8 (1/30sec, F1.8, 50IRE), 0.005Lux (2sec, F1.8, 50IRE) 0.1Lux / F1.8 (1/30sec, F1.8, 30IRE), 0.0005Lux (2sec, F1.8, 30IRE) B/W : 0Lux (IR LED on)
S / N Ratio	50dB
Video Output	CVBS : 1.0Vpp / 75Ω composite, 720 x 480(N), 720 x 576(P), for installation
LENS	
Focal Length (Zoom Ratio)	4.8 ~ 96mm (Optical 20x)
Max. Aperture Ratio	F1.8(Wide) / F3.6(Tele)
Angular Field of View	H : 65.1°(Wide) ~ 3.8°(Tele) / V : 38.4°(Wide) ~ 2.2°(Tele)
Min. Object Distance	1.5m (4.92ft)
Focus Control	AF / One-shot AF / Manual
Lens / Mount Type	DC auto iris (IR corrected) / Board-in type
PAN / TILT	
Pan Range / Speed	360° Endless / Preset : 400°/sec, Manual : 0.024°/sec ~ 250°/sec
Tilt Range / Speed	190° (-5° ~ 185°) / Preset : 300°/sec, Manual : 0.024°/sec ~ 250°/sec
Sequence / Preset Accuracy	Preset (300ea), Swing, Group (6ea), Trace, Tour, Auto run, Schedule / ±0.2°
Azimuth	Yes (E / W / S / N / NE / SE / NW / SW OSD)
Auto Tracking	Off / On
OPERATIONAL	
Viewable Length	200m (656.17ft)
Camera Title	Off / On (Displayed up to 60 characters) - W/W : English / Numeric / Special characters - Korea : English / Numeric / Special / Korean characters - China : English / Numeric / Special / Chinese characters - Common : Multi-line (Max. 5), Color (Grey / Green / Red / Blue / Black / White), Transparency, Auto scale by resolution
Day & Night	Auto (ICR) / Color / B/W
Backlight Compensation	Off / BLC / WDR
Wide Dynamic Range	120dB
Contrast Enhancement	SSDR (Off / On)
Digital Noise Reduction	SSNR (2D+3D noise filter) (Off / On)
Image Stabilization	Mechanical anti-vibration
Defog	Off / Auto / Manual
Motion Detection	Off / On (4ea, Polygonal zones)
Privacy Masking	Off / On (16ea, Rectangular zones) - Color : Grey / Green / Red / Blue / Black / White, - Zoom ratio option for mask mode
Gain Control	Off / Low / Medium / High
White Balance	ATW / AWC / Manual / Indoor / Outdoor / Mercury / Sodium
Electronic Shutter Speed	Minimum / Maximum / Anti flicker (2 ~ 1/12,000sec)
Digital Zoom	16x, area zoom function support digital zoom 2x
Flip / Mirror	Off / On
Intelligent Video Analytics	Tampering, Virtual line, Enter / Exit, (Dis)Appear, Audio detection - with metadata
Alarm I/O	Input 4ea / Output 2ea (Relay type)
Remote Control Interface	RS-485/422
RS-485 Protocol	Samsung-T/E, Pelco-P/D, Panasonic, Honeywell, AD, Vicon, Bosch, GE
Alarm Triggers	Alarm input, Motion detection, Intelligent video analytics, Network disconnect
Alarm Events	File upload via FTP and E-mail, Notification via E-mail, Local storage (SD/SDHC/SDXC) or NAS recording at event triggers, External output, PTZ preset
Pixel Counter	Support (Plug-in viewer only)
NETWORK	
Ethernet	RJ-45 (10/100BASE-T), SFP (* Only using SBP-302HF)
Video Compression Format	H.265 / H.264 (MPEG-4 part 10/AVC) : Main / Baseline / High, MJPEG
Resolution	3840 x 2160, 2592 x 1944, 2592 x 1464, 1920 x 1080, 1280 x 1024, 1280 x 960, 1280 x 720, 1024 x 768, 800 x 600, 800 x 450, 720 x 576, 640 x 480, 640 x 360, 320 x 240, 320 x 180
Max. Framerate	H.265 / H.264 : 30fps at all resolutions, MJPEG : 15fps at all resolutions
Smart Codec / WiseStream	Manual mode (Area-based : 5ea) / Support
Video Quality Adjustment	H.265 / H.264 : Target bitrate level control, MJPEG : Quality level control
Bitrate Control Method	H.265 / H.264 : CBR or VBR, MJPEG : VBR
Streaming Capability	Multiple streaming (Up to 3 profiles)
Audio In	Selectable (Mic in / Line in), Supply voltage : 2.5V DC (4mA), Input impedance : approx. 2K Ohm
Audio Out	Line out (3.5mm stereo mini jack), Max output level : 1 Vrms
Audio Compression Format	G.711 u-law/G.726 selectable, G.726 (ADPCM) 8KHz, G.711 8KHz G.726 : 16Kbps, 24Kbps, 32Kbps, 40Kbps, AAC-LC : 48Kbps at 16KHz
Audio Communication	Bi-directional audio (2-way)
IP	IPv4, IPv6
Protocol	TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, PPPoE, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, PIM-SM, UpnP, Bonjour
Security	HTTPS(SSL) login authentication, Digest login authentication IP address filtering, User access log, 802.1x authentication (EAP-TLS, EAP-LEAP)
Streaming Method	Unicast / Multicast
Max. User Access	15 users at unicast mode
Edge Storage	SD/SDHC/SDXC (128GB) - Motion images recorded in the SD/SDHC/SDXC memory card can be downloaded. Camera can detect automatically when the memory is connected, Memory status display (Normal / Error / Active / Formatting / Lock) NAS (Network Attached Storage), Local PC for instant recording (Plug-in viewer only)
Application Programming Interface	ONVIF profile S/G, SUNAPI (HTTP API), SVPN 1.2, Wisenet Open Platform
Webpage Language	English, French, German, Spanish, Italian, Chinese, Korean, Russian, Japanese, Swedish, Danish, Portuguese, Turkish, Polish, Czech, Rumanian, Serbian, Dutch, Croatian, Hungarian, Greek, Norsk, Finnish
Web Viewer	Supported OS : Windows 7, 8.1, 10, Mac OS X 10.9, 10.10, 10.11 Plug-in free Webviewer - Supported Browser : Google Chrome 47, MS Edge 20 Plug-in Webviewer - Supported Browser : MS Explore 11, Mozilla Firefox 43, Apple Safari 9 * Mac OS X only
Central Management Software	SmartViewer
ENVIRONMENTAL	
Operating Temperature / Humidity	-50°C ~ +55°C (-58°F ~ +131°F) / Less than 90% RH
Storage Temperature / Humidity	-50°C ~ +60°C (-58°F ~ +140°F) / Less than 90% RH
Ingress Protection / Vandal Resistance	IP66 / IK10
ELECTRICAL	
Input Voltage / Current	24V AC
Power Consumption	Max. 60W/90W (Heater off/on, IR on)
MECHANICAL	
Color / Material	Ivory, Black / Aluminum, Plastic
Dimensions (WxH) / Weight	223.6.9 x 407.7mm (29.33" x 16.05") / 7.1Kg (15.65 lb)

\* The latest product information / specification can be found at hanwha-security.com

\* Design and specifications are subject to change without notice.

# XRN-2010

32CH Network Video Recorder

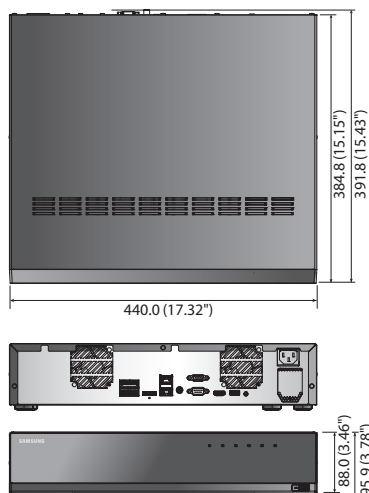


## Key Features

- Up to 32CH, Max. 12megapixel camera supported
- 256Mbps network camera recording
- Support 4K video out on HDMI monitor
- Support Dual monitor video out
- Support H.265, H.264, MJPEG compression
- WiseStream support
- Max. 8 internal HDDs (48TB), e-SATA / iSCSI storage support
- ARB & Failover (N+1) support

## Dimensions

Unit : mm (inch)

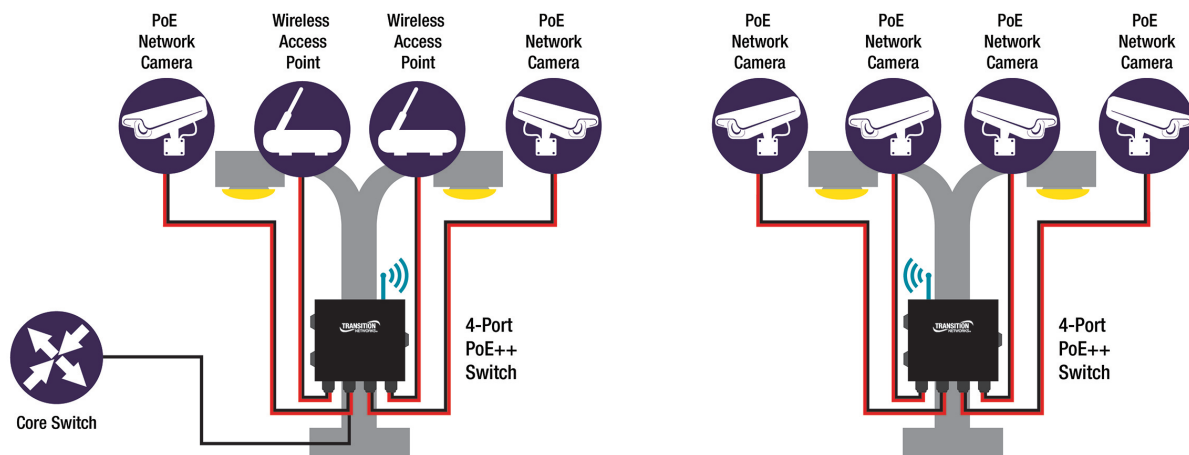


XRN-2010		
<b>DISPLAY</b>		
Video	Inputs	Up to 32CH
	Resolution	CIF ~ 12MP
	Protocols	Samsung, ONVIF
Live	Local Display	1x HDMI, 1x VGA dual monitor
	Multi Screen Display	[Local monitor] 1 / 2V / 3V / 4 / 9 / 16 / 25 / 36 / Sequence, [Web] 1 / 4 / 9 / 16 / 25 / 36 / Sequence
	Performance	[Local monitor] 12MP (30fps), 8.3MP (120fps), 1080p (480fps), 720P (960fps), D1 (960fps)
<b>PERFORMANCE</b>		
Operating System	Embedded	Linux
	Compression	H.265, H.264, MJPEG, WiseStream (H.265, H.264)
	Recording Bandwidth	Max. 256Mbps
Recording	Resolution	CIF ~ 12MP
	Mode	Normal, Schedule (Continuous / Event), Event (Pre / Post)
	Event Trigger	Alarm input, Video loss, Camera event (Sensor, MD, Video analytics)
Search & Playback	Event Action	E-mail, PTZ preset, Alarm out, Buzzer, Monitor out
	Playback Bandwidth	32Mbps (16CH simultaneously)
	Performance	Max. 4 users (Local 1, Remote 3)
Storage	Mode	Date & Time (Calendar) / Event log list / Text search
	Simultaneous Playback	Max. 16CH (Local monitor, CMS)
	Resolution	CIF ~ 12MP
Backup	Fish-eye Dewarping	WEB / CMS
	Playback Control	Fast/Slow Forward/Backward, Move one step up/down
	Built-in / Internal HDD	0TB ~ 6TB / 8 (Max. 48TB)
Sensor	External	iSCSI storage (Max. 384TB), Promise Vess RAID R2600
	File Backup (Via Web)	BU/Exe (GUI), JPG/AVI (Network)
	Function	Multi channel (Up to 16CH) play, Date-time/title display
Audio	Input / Output	8 / 4 (NO/NC selectable)
	Input	32CH (Network)
	Compression	G.711, G.726, AAC (16/48KHz)
NETWORK	Audio Communication	2-way
	Interface	RJ-45, Gigabit ethernet x 2
	Protocol Support	TCP/IP, UDP/IP, RTP (UDP), RTP (TCP), RTSP, NTP, HTTP, DHCP (Server, Client), PPPoE, SMTP, ICMP, IGMP, ARP, DNS, DDNS, uPnP, HTTPS, SNMP, ONVIF (Profile-S), SUNAPI (Server, Client)
DDNS	Transmission Bandwidth	iPOLIS DDNS
	Max. Remote Users	512Mbps (iSCSI off), 256Mbps (iSCSI on)
	IP	Search 3 / Live unicast 10 / Live multicast 20
Language	Security	IPV4 / IPV6
	OS	IP address filtering, User access log, 802.1x authentication, Encryption
	Web Browser	English, French, German, Italian, Spanish, Russian, Turkish, Polish, Dutch, Swedish, Czech, Portuguese, Danish, Rumanian, Serbian, Croatian, Hungarian, Greek, Norwegian, Finnish, Korean, Chinese, Japanese, Thai
Viewer Software	Type	Window 7, 8, 10, Mac OS X (10.8 or above)
	Viewer Software	MS IE, Google Chrome, Mac Safari, Firefox
	CMS Support	SSM, Webviewer, SmartViewer, iPOLIS mobile viewer
<b>FUNCTIONS</b>		
Camera Setup	Register	Auto, Manual
	Setup Items	IP address, Add profile edit, Bitrate, Compression, GOP, Quality, Camera MD setup, Camera video setup (Simple focus, Brightness/Contrast, Flip/Mirror, IRIS, WDR, D&N, SSNR, Shutter, SDR, DIS), Fisheye dewarping mode, Hallway view setup, Camera webpage
	PTZ	Via GUI, Webviewer, SPC-2000 / 255 presets
Smart Phone	Control / Preset	Android, iOS
	Protocol Support	RTP, RTSP, HTTP, CGI (SUNAPI)
	Max. Remote Users	Live (16CH) : Multi-profile support, Playback (1CH)
Redundancy System Control	Failover / ARB	Search 3 / Live unicast 10
	Mouse, Web, SPC-2000 (Controller)	N + 1 / Yes
	Indicator	LED (Status indicator) : 6ea
<b>INDICATOR / INTERFACE</b>		
Front	HDD action 1, Alarm 1, Power 1, Record 1, Backup 1, Network1	
	HDMI	Main : 1 ea (Both support Live / PB / Setup)
	VGA	Support up to 4K (3840 x 2160, Single monitor mode)
Connections	Audio	Sub : 1 ea (Support live screen up to 16 div. mode)
	Ethernet	Out 1 ea (RCA, Line)
	Alarm	RJ-45 2ea (LAN/WAN, 1Gbps)
Storage	USB	In 8ea (Terminal block), Alarm reset 1 ea
	Serial / Reset	Out 4ea (Terminal block) - Relay out1 (NO/NC/COM) - Relay out 2 ~ 4 (NO/COM)
	Power Cord	2ea (Front 1, Rear 1)
<b>SYSTEM</b>		
Log	Log List	1 e-SATA
GENERAL	Input Voltage / Current	Max. 20,000 (System log, Event log each)
	Power Consumption	100 ~ 240V AC ±10%, 50/60Hz / 4 ~ 1.5A
	Operating Temperature	Max. 99W (338BTU, 6TB HDD x 8ea)
Environmental	Operating Humidity	+0°C ~ +40°C (+32°F ~ +104°F)
	Color / Material	20% ~ 85% RH
	Dimensions (WxHxD)	Black / Metal
Mechanical	Weight	440.0 x 88.0 x 384.8mm (17.32" x 3.46" x 15.15") (2U)
		4.86Kg (10.71 lb) (without HDD)

\* The latest product information / sepecification can be found at <http://security.hanwhatechwin.com>



# Self-Enclosed Managed Hardened Gigabit Ethernet PoE++ Switch



## Applications

- In AC- or DC-powered environments, switch can be used as a PSE to provide up to 60 Watts of PoE++ power for up to 4 PoE-powered devices such as high-powered PTZ cameras, digital signage or PoE lighting, or up to 90 Watts of power to one or more devices totaling 240 Watts
- In situations where AC or DC power is not available, use switch as a PoE-powered PD/PSE to provide up to 80 Watts of power to multiple PoE-powered devices and provide auxiliary power for other accessories such as heaters or lighting (switch can also be powered using hybrid fiber copper cabling)
- With optional Wireless Extension port, use switch to provide PoE/PoE+/PoE++ power to up to 4 devices and extend Ethernet signals wirelessly to locations where Ethernet cables and power cannot easily be added

## Features

## Benefits

Integrated NFC	Saves time and labor expense by allowing laborers of any skill level to easily configure switch prior to powering up and to repeat the configuration across multiple switches
Integrated BLE Antenna	Allows remote access to switch for troubleshooting and changing settings, reducing time and hassles related to console cables and ladders or scissor lifts
Wireless Ethernet Extension (Optional)	Extends Ethernet to locations where it is inconvenient or cost prohibitive to run new cabling
Auxiliary Port on PD	Provides additional power source for auxiliary equipment, reducing requirements for new power outlets
Integrated Management Software	Provides method for simple setup, monitoring, and control of connected devices in the network, reducing installation and maintenance costs
Mobile App	Provides mobile interface through BLE and NFC to connect to, configure, and diagnose the switch from a smartphone or tablet
IEEE 802.3af/at/bt (Draft) Compliant	Enables up to 60 Watts power per port simultaneously on all 4 ports or up to 90 Watts per port on individual ports (not to exceed 240 Watts total)
PSE or PD Configuration	Can be used to provide PoE to other devices or to receive and provide PoE where external power sources are not available
6kV Surge Protection	Protects switch and connected devices from lightning or other surges in current
NEMA/IP66 Rated Enclosure	Protects switch from harsh outdoor environments, including rain, dust, and insects and can be easily mounted on a pole, wall or building

# SESPM1040-541-LT-xx Series

## Self-Enclosed Managed Hardened Gigabit Ethernet PoE++ Switch



### (4) 10/100/1000Base-T PoE++ Ports + (1) 10/100/1000Base-T or 100/1000Base-X SFP/RJ-45 Combo Port



Transition Networks' SESP1040-541-LT-xx Switch is a Layer 2 managed switch with (4) 10/100/1000Base-T IEEE 802.3bt (draft) compliant PoE++ ports and (1) combination 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP uplink port (additional optional ports available), that is ideal for use in security and surveillance, PoE lighting, digital signage and many other applications. It is self-enclosed in an outdoor NEMA 4X/IP66 rated enclosure with 6KV surge protection on each port, and additional fuse protection eliminates the need for external circuit cross protection. It can be mounted on a wall or side of a building, or optional brackets are available for mounting on a pole. The switch is available in multiple configurations: as either an AC- or DC-powered power source (PSE) providing 60W of power per port simultaneously on all four ports or up to 90W on individual ports (not to exceed 240W total), or as a PoE-powered device (PD) receiving power over Ethernet or over hybrid fiber copper cable and providing up to 80W of total PoE power. The PD version includes a 12V Aux port which can be used to provide auxiliary power to a PC, lighting or other accessories. A second 10/10/1000Base-T or 100/1000Base-X SFP/RJ-45 combo port can be activated by installing an optional Combo Port Module (sold separately). Alternatively, an 802.11 b/g/n wireless Ethernet

extension port is available as an option (sold separately) to extend the Ethernet network to devices in locations where new Ethernet cable runs are not practical. All versions are equipped with Near Field Communication (NFC) to allow simple and repeatable configuration of the switch using a user-friendly app on a mobile device prior to connecting or powering up the switch. Bluetooth Low Energy (BLE) allows remote access to alarm information or to read or change equipment settings without requiring physical access using ladders or scissor lifts. The switch also incorporates integrated management software for setup, monitoring and control of connected devices.

## Features

- Integrated Management Software
- IEEE 802.3ad LACP Trunking
- Jumbo Frame support 10K bytes max
- Auto-MDI/MDIX
- IPv4 and IPv6
- SNMP
- Link Layer Discovery Protocol (LLDP)
- Secure Shell (SSH)
- Secure Sockets Layer (SSL)
- IEEE 802.1X RADIUS Authentication
- Cable diagnostics
- Auto Power Reset (APR)
- 6 kV surge protection
- PoE port configuration/power management/power scheduling
- Network Time Protocol (NTP) with internet access/Real Time Clock with backup when without internet access
- Tamper detection
- Four Independently Configurable digital I/O channels (optional)
- Web GUI Interface
- CLI
- Syslog
- Telnet Client

## Specifications

Standards	IEEE 802.3 IEEE 802.3af/at/bt (draft) compliant IEEE 802.3ab IEEE 802.1 VLAN
Ethernet Ports	(4) 10/100/1000 Mbps RJ-45 ports (1) 100/1000 Mbps SFP/RJ-45 Combo ports CAT5e cable or higher recommended for 60 Watts; CAT6 cable or higher recommended for 90 Watts
Wireless Ethernet Port (Optional)	802.11b/g/n; RP-SMA connector
Auxiliary Power Port	2-position wire terminal block (≤12AWG) with screw retention
Serial Console Port	RS-232 RJ-45
MAC Address	8K MAC address table
Max Frame Size	10K bytes
Alarm Status	Accessible through CLI access, BLE interface or Integrated Management Software
Dimensions	Width: 10.049" [255.3 mm] Depth: 4.335" [110.1 mm] Height: 8.48" [215.4 mm]
Power Input	90-264VAC hard wired via customer supplied power source or power cord or 90-264VAC provided by internal 500 Watts power supply
Power-over-Ethernet	Max PoE Budget 240 Watts 60 Watts for (4) ports simultaneously Up to 90 Watts on any individual port 12VDC auxiliary power (optional on PD version) 2-position bare wire terminal block with screw retention up to 12AWG wire size
Environment	Operating: -40°C to +70°C (Inside Enclosure) External Operating: -40°C to +50°C Storage: -40°C to +85°C Humidity: 5% to 95% (non-condensing) Altitude: 0-10,000 ft. (with de-rating)
Weight	4.8 lbs. [2.18 kg]
Compliance	Emission EN55022, Class A, Immunity EN55024, Surge Protection GR-1089 CORE Issue 4, ITU-T K.20 6 kV on AC lines, Ingress Protection IP66, NEMA 4X, CE, UL
Warranty	2 Years

## Ordering Information

### SESPM1040-541-LT-AC

AC-powered self-enclosed switch with (4) 10/100/1000Base-T PoE++ ports and (1) combo 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP port

### SESPM1040-541-LT-DC

DC-powered self-enclosed switch with (4) 10/100/1000Base-T PoE++ ports and (1) combo 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP port

### SESPM1040-541-LT-PD

PoE-powered self-enclosed switch with (4) 10/100/1000Base-T PoE++ ports and (1) combo 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP port

### Optional Accessories (sold separately)

### Hardened SFP Modules

### SESPM-2P-1G-CP

Additional Combo Port Module to activate a 2nd 10/100/1000Base-T or 100/1000Base-X combo port

Note: SFP from included combo port is only available on PD version when hybrid power fiber is used

Note: This module cannot be used with Wireless Extension Port Module SESP1040-541-LT-WE

### SESPM-3P-BGN-WE

IEEE 802.11b/g/n Wireless Extension Port Module

Note: This module cannot be used in conjunction with Additional Combo Port Module SESP1040-541-LT-CP

### SESPM-4P-DIG

Digital Input/Output Module with 4 optical isolators

### SESPM-4P-ANT

IEEE 802.11b/g/n Wireless Antenna

### SESPM-4P-PMB

Pole Mount Brackets

Note: For poles ≥4" diameter, use pole straps (not provided) in conjunction with bracket. For poles ≤4" diameter, use a 1 3/8" x 1/4" U-bolt (not provided) in conjunction with bracket.



# SESPM1040-541-LT-xx Series

## Self-Enclosed Managed Hardened Gigabit Ethernet PoE++ Switch



### (4) 10/100/1000Base-T PoE++ Ports + (1) 10/100/1000Base-T or 100/1000Base-X SFP/RJ-45 Combo Port



Mobile Device  
Not Included



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### SESPM1040-541-LT-DC

DC-powered self-enclosed switch with (4) 10/100/1000Base-T PoE++ ports and (1) combo 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP port

### SESPM1040-541-LT-PD

PoE-powered self-enclosed switch with (4) 10/100/1000Base-T PoE++ ports and (1) combo 10/100/1000Base-T RJ-45 or 100/1000Base-X SFP port

### Optional Accessories (sold separately)

### Hardened SFP Modules

### SESPM-2P-1G-CP

Additional Combo Port Module to activate a 2nd 10/100/1000Base-T or 100/1000Base-X combo port  
Note: SFP from included combo port is only usable on PD version when hybrid power fiber is used.  
Note: This module cannot be used with Wireless Extension Port Module SESP1040-3P-BGN-WE

### SESPM-3P-BGN-WE

IEEE 802.11b/g/n Wireless Extension Port Module  
Note: This module cannot be used in conjunction with Additional Combo Port Module SESP1040-2P-1G-CP

### SESPM-4P-DIG

Digital Input/Output Module with 4 optical isolators

### SESPM-4P-ANTKIT-BGN

IEEE 802.11b/g/n Wireless Antenna Kit, includes antenna, surge protector, 48" cable and wall/pole mounting kit

### SESPM-4P-PMB

Pole Mount Bracket Kit  
Note: For poles  $\geq 4$ " diameter, use pole straps (not provided) in conjunction with bracket. For poles  $\leq 4$ " diameter, use a 1 3/8" x 1/4" U-bolt (not provided) in conjunction with bracket.