

SECTION 01321 – STREAMING CONSTRUCTION CAMERA SYSTEM (8K)

PART 1 - GENERAL

1.01 SUMMARY

- A. Section Includes: Construction camera system to include live streaming video, archived photos, and time-lapse videos of the project site during construction duration.
- B. Products and services supplied by System Vendor and installed under this Section:
 - 1. Streaming Construction Camera. Includes all-weather camera with 4G LTE cellular modem, power supply and mounting brackets.
 - 2. Hosting Services:
 - a. Ability to view live video stream from construction camera from Internet connected devices.
 - b. Automatic capture and storage of jobsite photos from construction camera, viewable from Internet connected devices.
 - c. On-demand time-lapse movies
 - d. Edited project-end time-lapse movie
- C. Products supplied and installed by Contractor:
 - 1. 120v AC power at camera mounting location or solar power kit
 - 2. Poles, foundation systems and guy systems for camera mounting
- D. Related Sections:
 - 1. Project Management and Coordination Section for administrative requirements for coordination and project meetings.
 - 2. Construction Progress Documentation Section for reports
 - 3. Photographic Documentation Section for project pictures
 - 4. Quality Requirements Section for Special Inspections
 - 5. Temporary Facilities Section for temporary telephone or broadband utilities and security
 - 6. Division 16 Sections for 120v AC power
 - 7. All equipment shall be covered under Owner's and Contractor's project insurance policies

1.02 SUBMITTALS

- A. Reference Submittal Procedures Section to submit the following items:
 - 1. System Vendor shall submit product data for ultra-high light-sensitive streaming construction camera and hosting services.
 - 2. Architect shall provide project site plan showing proposed mounting location for camera.

1.03 QUALITY ASSURANCE

- A. Overall Standards:
 - 1. Contractor shall maintain a quality control program on all equipment.
- B. System Vendor Qualifications:
 - 1. Experience in producing construction camera systems of the type specified.

1.04 DELIVERY, STORAGE, AND HANDLING

Follow the System Vendor's instructions. All freight shall be included in the Contract Price.

1.05 WARRANTY

- A. Time Period: System Vendor's lifetime warranty.
- B. Conditions: System Vendor's standard warranty conditions.

1.06 CONTRACTOR'S INSTRUCTIONS

- a. Maintenance and Testing:
 - 1. Clean window of camera enclosure as required.
 - 2. Power cycle communication modem/router as required.
- b. Project Closeout:
 - 1. Contractor shall notify System Vendor 14 days prior to the project's completion.
 - 2. Contractor shall remove camera system. Contractor shall carefully package system and ship to destination as directed by Owner (if purchased by Owner) or to System Vendor (if leased).
 - 3. All freight shall be included in Contract Price.

PART 2 - PRODUCTS

2.01 SYSTEM VENDOR

- A. iBEAM Construction Cameras
5320 W Morris Hill Rd
Boise, Idaho 83706
Tel: (800)403.0688 (208) 344.8002
E-mail: sales@ibeamsystems.com
Web site: <http://www.ibeamsystems.com>
- B. Approved Equal as determined by the Architect.

2.02 PERFORMANCE REQUIREMENTS

- A. Streaming Construction Camera
 - A. Streaming web camera
 - a. 1920x1080 multicast live image stream
 - b. 4/3" Progressive Scan CMOS sensor, 41 megapixels
 - c. Auto focus
 - d. Auto day/night mode
 - e. Canon 12-48mm lens with fish-eye correction and 90° horizontal field of view
 - f. Camera access restrictions
 - B. IP66- and NEMA 4X-rated casing
 - C. Pole mounting bracket
 - D. Operating temperature: 4°F to 131°F
- B. Hosting Services
 - 1. Project photos shall be captured daily at 10-minute increments throughout a designated 12-hour time period
 - a. 7680x4320 pixels (333 megapixels), 16:9 widescreen aspect ratio
 - b. JPEG format
 - c. Date/time stamp
 - 2. Project photos shall be uploaded to and stored on a distributed cloud server
 - 3. Web-based access to archived photos
 - a. Password-protected access
 - b. Photos searchable by date and time
 - c. 500% zoom magnification
 - d. Download, print, and email capability
 - e. Link to live camera
 - 4. Web-based access to live video stream
 - a. Password-protected access
 - b. Multicast video stream to support unlimited simultaneous viewers
 - 5. Web-based access to time-lapse movies
 - a. Password-protected access
 - b. User can indicate date and time range of time-lapse movie
 - c. User can indicate speed of movie
 - d. Downloadable in .mp4 format
 - i. Include timestamps
 - ii. 4K Ultra HD, 1080p HD and 720p HD resolution
 - 6. System Vendor shall provide an edited and post-processed start-to-finish 4K Ultra HD time-lapse movie in .mp4 format at end of project
 - 7. Library of all photos (33 megapixels) shall be delivered to Contractor at end of project
 - 8. Unlimited cellular data service shall be provided by System Vendor
 - 9. Customer shall retain all copyrights to project photos and time-lapse movies

2.03 COMPONENTS

- A. Streaming Construction Camera shall be an iBEAM Fixed 8K Titan Construction Camera or approved equal
- B. Hosting services shall be iBEAM hosting service as developed by iBEAM Construction Cameras or approved equal.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Contractor shall install Construction Camera system in accordance with System Vendor's installation instructions.
- B. Position Construction Camera system for optimal view of project accounting for terrain, vegetation, and construction phases.
- C. Contractor shall provide all necessary permits, licenses, and inspections.

3.02 FIELD QUALITY CONTROL

- A. Contractor shall test the Construction Camera system in accordance with System Vendor's startup test procedures.
- B. Contractor shall maintain all components in good condition.

3.03 EXAMINATION

- A. Contractor shall periodically examine camera enclosure window to ensure optical clarity.

3.04 CLEANING

- A. Reference System Vendor's cleaning recommendations.

END OF SECTION 01321