AGENDA ITEM: _____

MEETING DATE: March 25, 2015

TO: Board of Directors

FROM: Michael Cooke, Manager of Aviation and Community Services

SUBJECT: NOMS Arrival Cameras

Recommendation: After review of the attached proposal, staff recommends an addition of 6 arrival cameras to the NOMS system. The proposal offers 4 or 6 camera options. Each FAA-compliant camera pod is fully solar powered with "smart" controllers and operational software to protect them and bring them up or down based on environmental variables.

DISCUSSION: Board Member Van Berkem had requested information on additional capability of the current NOMS system by adding arrival cameras to the fleet. Historically the District has only used cameras to capture departures. For reporting that figure has been doubled to arrive at operational numbers. In 2014 TTAD switched NOMS vendors to accommodate inclusion of data from the MLAT flight tracking system and to update the cameras and software. The fusion of camera data and flight track data makes for a more accurate representation of operations.

Camera data is good on its own, and tail number analytics allow for operator details, but it does not offer insight to operations airborne or track profiles. Flight tracking data on its own is good but does not afford aircraft registration data unless the aircraft transponder is Mode S equipped and turned on. The fusion of camera and flight track data allows District staff and stakeholders a robust tool to visualize and investigate operations and report on them.

Recommendation: After review of the attached proposal, staff recommends an addition of 6 arrival cameras to the NOMS system. The proposal offers 4 or 6 camera options. Each FAA-compliant ground station is fully solar powered with "smart" controllers and operational software to protect them and bring them up or down based on environmental variables.

FISCAL IMPACT: A 4 camera addition will cost $76,000, which includes installation and shipping. This option would require $15,000 in additional annual costs for support, data processing, server storage, and maintenance. A 6 camera addition, all in, would cost $110,000 plus $24,000 annually. The units are $15,000 before shipping and integration. This project was added late in last year's budget cycle and staff used $50,000 to estimate the cost of arrival camera additions. Since both the 4 and 6 camera options exceed budget and there are associated ongoing costs, this proposal will need Board direction and a motion to fund the project either at $26,000 which is the amount over the budgeted

$50,000 figure for a 4 camera system or at $60,000 for a 6 camera system. Funding would come from the Operations Unrestricted Net Assets Fund.

Additionally, staff recommends adding asphalt pavement pads for snow removal at each site before next winter. This could be accomplished during the 2015 paving projects. An estimate from Brandley Engineering came in at $7,000 per pad. A 6-camera addition would bring associated paving costs to $42,000. These funds are available in the Pavement Maintenance Plan; no additional Board Action would be required for paving.

ATTACHMENTS: Vector Proposal

Departure Camera Unit on Taxiway G

280 Sunset Park Drive Herndon, VA 20170 USA 703-817-7777

Mike Cooke
Aviation & Community Services Manager
Truckee Tahoe Airport
10356 Truckee Airport Rd.
Truckee, CA 96160

March 19th, 2015

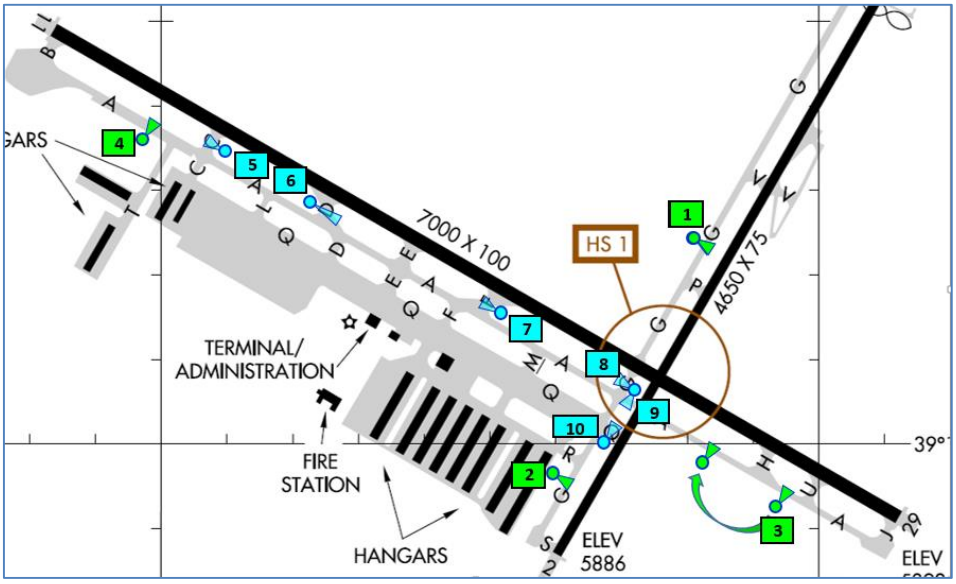
Mike:

Thank you for your interest in expanding the capabilities of your current Vector Aircraft Identification system. The additional equipment quoted below has been selected to cover additional areas at Truckee Tahoe Airport (TRK) that are not covered presently.

This proposal includes two options, the second building on the first. The first option adds four additional cameras to the existing system (cameras numbered 5, 6, 7, and 8 in the diagram below). These will provide coverage in the ramp area, along runway 11/29.

The second option adds another two cameras (numbered 9 and 10) to the four camera option, bringing the total additional cameras to six. The two additional cameras provide coverage of aircraft in the area of the cross wind runway 2/20. Both options include the relocation of existing camera number 3, to capture more arrivals on RWY 11.

The diagram below shows the location of the existing four cameras (numbered 1, 2, 3, and 4), along with the locations of the additional cameras numbered (5 - 10).



The price for this additional equipment, including shipping, and installation is summarized below. The ongoing system operation, processing, monitoring, and maintenance will increase proportionally to cover the additional equipment and data processing.

Camera Configuration	Up-front Price	Ongoing Operation, Processing, Monitoring, and Maintenance
Existing 4-camera system		$25K
Option 1 (+4 cameras)	$60K +$16K (ship & install)	+$15K
Option 2 (+6 cameras)	$90K + $20K (ship & install)	+$24K

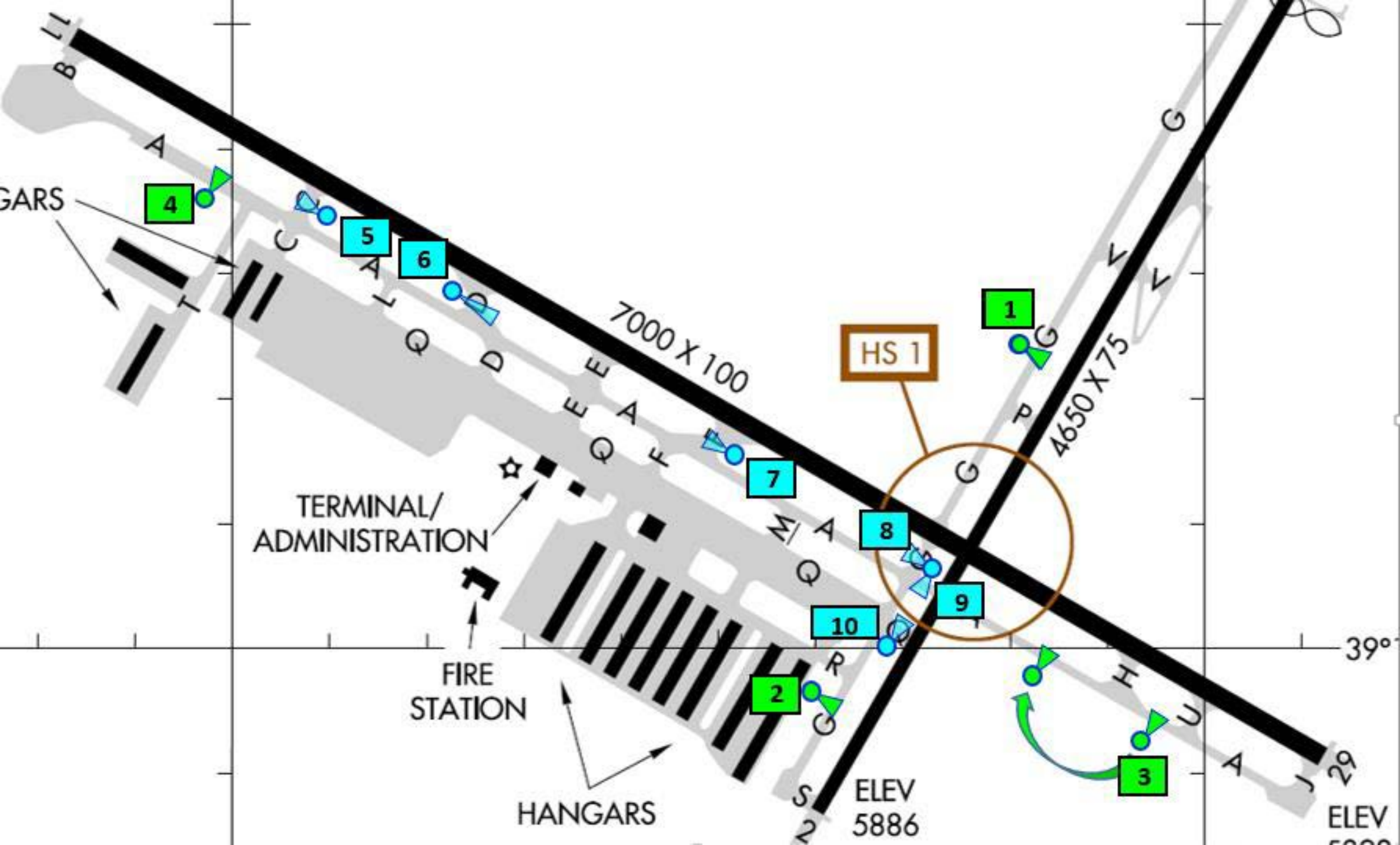
The installation date will be determined after contract authorization. It will take four to six weeks to build the equipment and about a week for shipping. Onsite installation will require another one to two weeks, depending on the weather and surface conditions. No additional hardware or building modifications are required as this installation only involves airfield equipment.

Upon contract authorization, a payment of 1/2 the cost of the hardware is due with the remaining half due upon receipt of the equipment at Truckee. The fee for shipping and installation is due upon successful installation and tuning of the additional cameras. This proposal is valid for six months.

Should you have any questions or require additional information, please don't hesitate to contact me, either by phone at 781-983-1741 or by e-mail at tomb@vector-us.com.

Sincerely,

Tom Breen
VP of Sales & Product Strategy
Vector Airport Solutions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