

parabolic reflector: $G \approx 0.55 \left(\frac{\pi D}{\lambda} \right)^2$
 $\approx 300 \left(\frac{\pi \cdot 2.4}{0.03} \right)^2$

$\approx 0.55 \cdot \left(\frac{\pi \cdot 14,200 \text{ M}}{0.03} \right)^2$
 $\approx 220,348,432$

$0.146 \text{ M} \rightarrow 6 = 48.8$

EXHIBIT No. 1

The experimental project is comprised of the following stations:

No.	Station	Type	Antenna size / Manufacture	Half Power Beam Width (degrees)	Max Transmitter Power / Manufacture	Location (Lat/Long)	Address
1	Camera # 1	Fixed	2.4 meter / Prodelin	0.58	5 watts / LORAL MICROWAVE	39 - 53 - 35 North / 75 - 14 - 05 West	_____
2	Camera # 3	Fixed	2.4 meter / Prodelin	0.58	5 watts / LORAL MICROWAVE	39 - 53 - 50 North / 75 - 10 - 35 West	_____
3	Camera # 7	Fixed	2.4 meter / Prodelin	0.58	5 watts / LORAL MICROWAVE	39 - 56 - 20 North / 75 - 08 - 35 West	_____
4	Camera # 12	Fixed	2.4 meter / Prodelin	0.58	5 watts / LORAL MICROWAVE	39 - 58 - 75 North / 75 - 07 - 15 West	_____
5	Control Center	Fixed	3.7 meter / Prodelin	0.36	5 watts / LORAL MICROWAVE	40 - 02 - 20 North / 75 - 21 - 50 West	200 Radner Chester Road St. Davids, PA 19087
6	Mobile Vehicle	Mobile	2.4 meter / Andrew	0.58	5 watts / LORAL MICROWAVE	_____	Philadelphia, PA Metro Area

EXHIBIT NO. 2

The Department of Transportation of the state of Pennsylvania would like to test new technologies applicable to the transmission of video images from known locations on the interstate highway system and from a mobile vehicle to the main traffic control center located in St. Davids, PA for the purpose of monitoring and controlling traffic flow in urban congested areas.

One technology that the department is highly interested in is the use of domestic Ku-band geosynchronous satellites as a means of relaying the low rate digital video images to the main traffic control center.

The department contracted Massachusetts Electric (a highway construction company) which in turn contracted AEPCO, Inc. "Advanced Engineering and Planning Corporation" (a leading satellite communications integration company) to implement and maintain for a two year period an experimental system that consists of; four antennas mounted on existing camera pole locations on the I-95 highway just outside Philadelphia, PA; one antenna mounted at the traffic control center; and one mobile platform.

It is evident that FCC permission to access space segment is essential for completing this project.

This experimental project falls under the following:

CMS No. 065221

PMS No. 065M5410

Federal Project Nos. 94E-9142-001
94H-9142-001

State Project No. 1 0095 0 7 SAT 0650 376

Contact: Mr. Karl Ziemer, District TMS Engineer, PA DOT, (610)989-9329

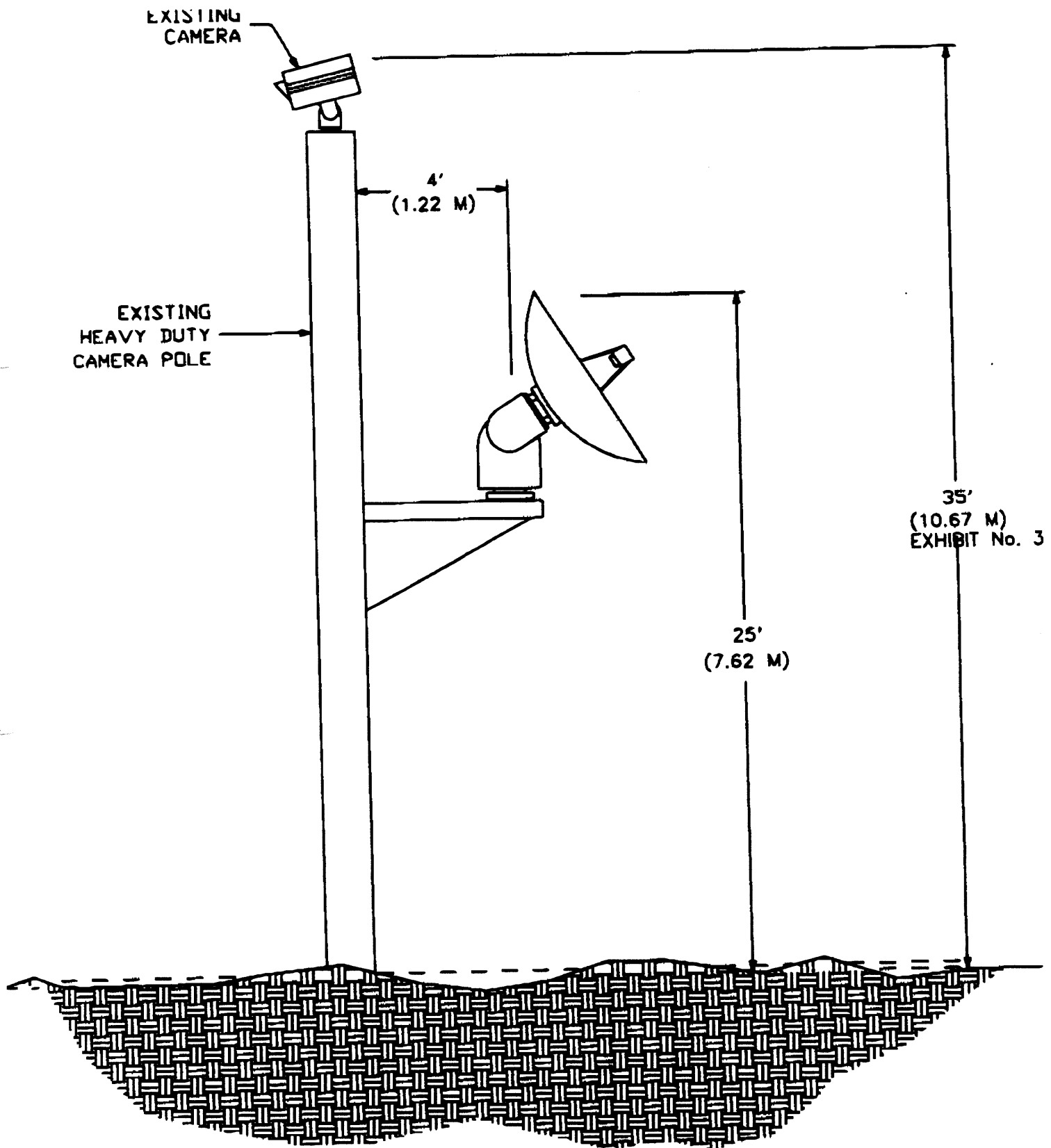


EXHIBIT No. 3

Exhibit No. 3

As shown by the attached vertical sketch drawing, the proposed antennas will be attached to and shielded by camera poles which are approximately 12 meters in height on the Philadelphia highways. Each of the antennas will be placed at approximately the center of the camera poles with the overall height above ground to tip of antenna being 7.6 meters. Out of the five antennas placed on the various camera poles, the closest to the airport is 0.8 kilometers. AEPCO also submits that the camera poles are shielded by the large highway light poles placed along the highway at close intervals. Based on Section 17.14(a) of the Commission rules, no FAA notification is required.
