

## QUOTATION

**TO:** Invenergy  
ATTN: Dylan Masi  
Staff Engineer, Renewable Engineering  
One South Wacker Drive, Suite 1800  
Chicago, IL 60606  
Tel. 312-582-1034

**DATE:** April 12, 2019  
**QUOTATION NO.** 19-0806  
**PROJECT:** Lewis County Wind  
**MANAGER:** Ruppel  
**VALID FOR:** 90 days

QTY	DESCRIPTION	UNIT PRICE, \$	TOTAL PRICE, \$
2	FAA compliant HARRIER Aircraft Detection Lighting System (ADLS) consisting of two (2) radar sensor units and related services	\$ 425,000.00 /radar unit	\$ 850,000.00
<b>Total</b>			

### CONDITIONS & NOTES:

The following conditions and notes apply to this quotation.

#### A. Project Description & Objectives:

1. The project is the Lewis County Wind Farm in New York, a planned wind project. The project is in Lewis County.
2. Estimated project operational date is Q4 2020.
3. The objective is to install a FAA-compliant, on-demand, radar-activated obstruction lighting system that will minimize light pollution by activating obstruction lights only when aircraft are within the 3 mile buffer.

#### B. Proposed Scope of Supply:

1. See Attachment B.

#### C. Items to be provided by customer or others:

1. Support infrastructure and related services, including but not limited to equipment foundations/pads and utilities (electrical, fiber optic network, lighting interfaces, and Internet connectivity).
2. Site access to equipment installation and remote user sites and transportation of equipment within the project boundary.
3. System installation and required services (electrical, network, SCADA connection, mechanical, structural, rigging as applicable).

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Customer: Invenergy

Project: Lewis County Windfarm ADLS

Date: April 11, 2019



4. High speed, secure Internet access to the system for remote user access and DeTect remote monitoring and support.
5. Long term system operation and maintenance in accordance with DeTect procedures.
6. Permits, licenses, taxes (sales, GST, VAT, etc.), duties and import fees, customs expediting and other costs not specifically covered by this proposal.

**D. Terms & Conditions:**

1. All pricing is in US Dollars and the customer assumes all exchange risk unless otherwise noted.
2. Payments terms are 2% 10 days, Net 30 via electronic transfer to the account provided by DeTect on its invoice unless otherwise noted.
3. Progress Payment schedule:

<b>Expected Deliverable Date ARO</b>	<b>Milestone</b>	<b>%</b>
0	At order	60%
30	Start of Manufacturing	20%
60	Completion of manufacturing: Infrastructure (skids, enclosures, towers)	10%
240	At delivery	5%
270	Commissioning and acceptance	5%
<b>TOTAL</b>		<b>100.00%</b>

4. This quotation is valid only for the number of days from the date of issue as referenced above and can be revoked at any time without notice. Price, scope and delivery are subject to change based on DeTect's project and manufacturing backlog at the time of order and design changes made prior to order.
5. The attachments to this proposal are incorporated by reference and will be part of any resulting contract.
6. This quotation and any resulting contract or order will be subject to and will incorporate the Terms and Conditions attached hereto as Attachment A unless exceptions are agreed to by DeTect in advance.
7. Order acceptance and approval by DeTect is subject to customer issuance and execution of a contract, agreement and/or purchase order in a form acceptable to DeTect.

**QUOTATION NO: 19-0806**  
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Project: Lewis County Windfarm ADLS  
Date: April 11, 2019



**E. Delivery schedule:**

7-9 months after receipt of order (ARO).

1. Delivery quoted is Delivered at Place (DAP, INCOTERMS 2015) project site
2. The customer is responsible for transportation of the system within the project boundary to include all risk insurance, duties and taxes.
3. Installation and/or start-up, if included, will occur within 45 days of delivery unless stated otherwise or agreed to by DeTect; after shipment of the equipment, should installation be delayed more than 90 days any remaining progress or milestone payments will accelerate and become immediately due and payable.
4. Failure to make payments in accordance with the terms and schedule may result in production delays and/or extension of delivery date.

**F. Attachments:**

1. Not Used
2. Attachment B – Proposed Scope of Supply
3. Attachment C – Proposed Radar Location(s) and Coverage Plan
4. Attachment D - Representative Specifications and Drawings

We appreciate the opportunity to support you with our technologies. Please do not hesitate to contact us at your convenience with any questions or if you require additional information, or clarifications to this quotation.

Sincerely,

**DeTect, Inc.**

A handwritten signature in black ink that reads "Dylan Ruppel".

Dylan Ruppel  
Project Development Engineer  
DeTect Americas

Cc: Jesse Lewis  
Gary Andrews  
Carol Fuqua

## ATTACHMENT A

### DeTect Standard Terms & Conditions

1. Incorporation of Terms and Conditions. These terms and conditions and DeTect's Proposal/Quotation will be incorporated into any purchase order, contract or agreement (hereinafter "the Order") issued by the Customer for DeTect's products and related services. Special terms and conditions are specified in the Proposal/Quotation.
2. Currency. All pricing is in US Dollars and the Customer assumes all exchange risk.
3. Invoices and Payments. Progress invoices will be submitted by DeTect for payment by the Customer in accordance with the schedule outlined in Proposal. Payment for each invoice is due within the terms as outlined in the Proposal. All payments will be by electronic funds transfer to the account of DeTect as indicated on each invoice. If Customer has any valid reason for disputing any invoice or portion thereof, Customer will so notify DeTect within three (3) calendar days of receipt of invoice by Customer, and if no such notification is given, the invoice will be deemed valid. Any attorney fees, court costs, mediation costs, or other costs incurred in collection of delinquent accounts and repossession of equipment shall be paid by Customer. Failure by the Customer to make payments in accordance with the terms and schedule may result in production delays and/or extension of delivery. If DeTect is able to accelerate the delivery schedule, the Customer will be advised, and the payment schedule will accelerate accordingly.
4. Insecurity. If reasonable grounds for insecurity arise with respect to Customer's ability to pay for the product and any related services in a timely fashion, DeTect may demand in writing adequate assurances of Customer's ability to meet its payment obligations under the Order. Unless Customer provides the assurances in a reasonable time and manner acceptable to DeTect, in addition to any other rights and remedies available, DeTect may partially or totally suspend its performance while awaiting assurances, without liability to Customer. Such grounds include failure of the Customer to make any payment under the Order as per the schedule in the Order. Upon such suspension of performance under this provision, a revised delivery and performance schedule will be set by DeTect upon resolution of the overdue payment. Failure of the Customer to provide adequate assurances under this provision may, at the option of DeTect, result in termination of the Order by DeTect.
5. Proposal Validity. The validity period of is specified in the Proposal/Quotation.
6. Taxes, Licenses and Duties. The price proposed is exclusive any and all applicable costs for sales, GST or other taxes, fees, licenses, duties, import fees, operating permits and other costs resulting from the sale, delivery, transfer, installation, and operation of the system and the Customer will be responsible for obtaining and costs related to such items. DeTect will provide available information for applications, permits and licenses as required by the Customer.



7. Delivery Schedule. Delivery quoted is not guaranteed and is subject to change depending on DeTect's factory production backlog at the time at which the Order is placed.
8. Changes to Order. Any changes to the Order for additional components, features, or work will be submitted in writing and will be priced and agreed to by DeTect and the Customer in writing as an amendment to the Order.
9. Possession of Ownership and Title. Possession of Ownership and conditional title to the equipment will be transferred to the Customer at shipment of the equipment from DeTect's US factory with the final clear title transferred to the Customer upon receipt of all payments due from the Customer to DeTect under this Proposal/Quotation and any subsequent contract(s).
10. Transportation and Shipping. Unless otherwise stated in the Proposal, the Customer is to provide required equipment Ex Works transportation from DeTect's factory to the Customer's installation site, installation, infrastructure (power, communications, etc.) and operating support for system that complies with DeTect's specifications to include equipment pads, power connections and connections for remote system control and display via Customer fiber optic or similar capacity compatible network.
11. Specifications. Specifications are subject to change without notice and equipment/systems will be delivered in general accordance with the Proposal/Quotation and DeTect's system specifications and design currently in effect at time of order and production.
12. Warranty. DeTect provides a standard (1) year full parts and labor warranty that includes repair or replacement of any defective parts for the term of the warranty, exclusive of wear parts. Wear parts are parts which degrade under normal use and include, but are not limited to motor brushes, generator, tires, and other such components, or parts that fails due to deterioration from adverse environments or chemical exposure. The generator, if supplied with the unit, will be covered under a 1-year warranty by the original equipment manufacturer.
13. Limitation of Liability. DeTect's liability, including but not limited to Customer claims of contributions and indemnification related to third party claims arising out of the Order, and for any losses, injury or damages to persons or properties or work performed arising out of or in connection with the Order and for any other claim, shall be limited to the lesser of (i) Five hundred thousand dollars (\$500,000) or (ii) the total payment received by DeTect from Customer under the Order. Notwithstanding anything to the contrary in the Order, DeTect shall not be liable for any special, indirect, consequential, lost profits, or punitive damages.

Customer further agrees to limit DeTect's liability to Customer and any other third party for any damage on account of any product liability, error, omission or negligence to a sum not to exceed the lesser of (i) Five hundred thousand dollars (\$500,000) or (ii) the payment received by DeTect under the Order giving rise to the claim. The limitation of liability set forth herein is for any and all matters for which DeTect may otherwise have liability arising out of or in connection with the Order, whether the claim arises in contract, tort, statute, or otherwise.



14. Remedy. Customer's exclusive remedy for any claim arising out of or relating to the Order will be for DeTect, upon receipt of written notice, either (i) to use commercially reasonable efforts to cure, at its expense, the matter that gave rise to the claim for which DeTect is at fault, or (ii) return to Customer the monies paid by Customer to DeTect for the particular equipment or service provided that gives rise to the claim, subject to the limitations set forth in the previous section. Upon exercise of this provision, any equipment delivered by DeTect will be returned to DeTect upon return of the monies. Customer agrees that it will not allege that this remedy fails its essential purpose.
15. Export Control. Purchase and delivery the system may be subject to the United States International Traffic in Arms Regulations (ITARs). Customers, by executing a contract or order to purchase the equipment, will be agreeing and acknowledging that: (a) DeTect's HARRIER, MERLIN and DroneWatcher radar systems and technologies (defined as technology, hardware and software) may be governed by the United States ITARs; (b) the system will be used solely for the intended commercial purpose and will be used in strict compliance with ITARs; (c) the Customer will implement procedures for restricting access to said system and agrees not to sell, rent, lease or in any manner transfer the system or any component to any country or individual to which such access or transfer is restricted; (d) the Customer will not to export or transfer the equipment outside of the U.S. except as permitted by ITARs and with the express written approval of DeTect; and, (e) any other use of the system may require advance approval under ITARs, and the Customer agrees to advise DeTect prior to any transfer or such use, and will not proceed with such transfer or use without receipt of approval by both DeTect and any required U.S. Government Agencies.
16. Software. The Customer will be granted a single site user license to use the DeTect MERLIN, HARRIER or DroneWatcher operating software as applicable for the intended purpose only as outlined in the Proposal/Quotation. DeTect will deliver a complete set of the operating software executables with the system and periodically will issue updates and patches to the software. Any other such unauthorized use of the software or transfer of or installation of the software to other systems or computers or transfer to other users, companies or individuals is expressly prohibited. Non-compliance with the license requirements will result in revocation of the user license upon notification of which the Customer will immediately and promptly remove, delete, and destroy all copies of said software, providing written certification of compliance of such removal, deletion, and destruction.
17. Site Security and Risk. For foreign projects, a security surcharge may apply for field service and support at sites as determined by the US State Department and posted on its website ([www.state.gov/travel/](http://www.state.gov/travel/)) with the surcharge determined by DeTect prior to the time of travel based on current level of the risk. In the event of an issued alert or warning, DeTect will provide the Customer with the extra cost for security services, insurance and/or other costs, including any applicable DeTect staff hazard pay surcharges, and the costs will be added to the contract price accordingly. In certain instances, the Customer will be required to provide additional security and assurances guaranteeing the safety of DeTect's personnel and/or the field work may be delayed until the security situation improves. Any

such determinations of risk will be made at DeTect's sole determination.

18. Severability. Should any part of the Order for any reason be declared invalid, such decision shall not affect the validity of any remaining provisions, which remaining provisions shall remain in full force and effect as if the Order had been executed with the invalid portion thereof eliminated, and it is hereby declared the intention of the parties that they would have executed the remaining portion of the Order without including any such part, parts, or portions which may, for any reason, be hereafter declared invalid. Any provision shall nevertheless remain in full force and effect in all other circumstances.
19. Modification and Waiver. Waiver of breach of the Order by either part shall not be considered a waiver of any other subsequent breach.
20. Assignment. The Order is not assignable or transferable by Customer. This Order is not assignable or transferable by DeTect without the written consent of Customer, which consent shall not be unreasonably withheld or delayed.
21. Disputes. DeTect and Customer recognize that disputes arising under the Order are best resolved at the working level by the parties directly involved, which will include referral of any issues in dispute to higher authority within each participating party's organization for resolution. Failing resolution of conflicts at the organizational level, DeTect and Customer agree that any remaining conflicts arising out of or relating to this Contract shall be submitted to binding arbitration in London, England UK unless DeTect and Customer mutually agree otherwise. Costs of such arbitration will be paid by the party determined to be at fault.
22. Section Headings. Title and headings of sections of the Order are for convenience of reference only and shall not affect the construction of any provision of the Order.
23. Representations; Counterparts. Each person executing the Order on behalf of a party hereto represents and warrants that such person is duly and validly authorized to do so on behalf of such party, with full right and authority to execute the Order and to bind such party with respect to all of its obligations hereunder. This Order may be executed (by original or facsimile signature) in counterparts, each of which shall be deemed an original, but all of which taken together shall constitute but one and the same instrument.
24. Residuals. Nothing in the Order or elsewhere will prohibit or limit DeTect's ownership and use of ideas, concepts, programming, know-how, methods, models, data, techniques, skill knowledge and experience that were used, developed or gained in connection with its delivery of equipment and services delivered under the Order.
25. Non-solicitation of Employees. During and for three (3) years after the term of the Order, Customer will not solicit the employment of, or employ the Company's personnel, either directly or as a contractor, without DeTect's prior written consent.
26. Governing Law and Construction. This Order will be governed by and construed in accordance with the laws of Florida, USA without regard to the principles of conflicts of law. The language of the Order shall be deemed to be the result of negotiation



among the parties and their respective counsel and shall not be construed strictly for or against any party. Each party (i) agrees that any action arising out of or in connection with the Order shall be brought solely in courts of the State of Florida, in Panama City, (ii) hereby consents to the jurisdiction of the courts of the State of Florida and the United States District Court for Bay County, Florida, and (iii) agrees that, whenever a party is requested to execute one or more documents evidencing such consent, it shall do so immediately.

27. Entire Order; Survival. This Order, including any Attachments, states the entire Order between the parties and supersedes all previous contracts, proposal, quotations, oral or written, and all other communications between the parties respecting the subject matter hereof, and supersedes any and all prior understandings, representations, warranties, agreements or contracts (whether oral or written) between Customer and DeTect respecting the subject matter hereof. This Order may only be amended by an agreement in writing executed by the parties hereto.
28. Force Majeure. DeTect shall not be responsible for delays or failures (including any delay by DeTect to make progress in the prosecution of equipment and services to be provided under the Order if such delay arises out of causes beyond its control. Such causes may include, but are not restricted to, acts of God or of the public enemy, fires, floods, epidemics, riots, terrorism, quarantine restrictions, strikes, freight embargoes, earthquakes, electrical outages, computer or communications failures, and severe weather, and acts or omissions of subcontractors or third parties.
29. Further Assurances. Each party hereto shall execute such further documents and instruments and take such further actions as are necessary, appropriate, or helpful as the other party shall reasonably request in order to carry out the purposes and intent of the Order.
30. Notices. All notices, requests, demands and other communications under the Order shall be deemed to have been duly given on the date of service if served personally on the party to whom notice is to be given, or on the third day after mailing if mailed to the party to whom notice is to be given, by first-class mail, registered or certified, postage pre-paid addressed.

Notices to DeTect shall be issued to DeTect, Inc., 2817 Hwy 77, Panama City, Florida USA 32405 Tel: (850) 763-7200 Attention: Gary W. Andrews. Notices to the Customer shall be issued to the address on the Order. Any party may change such party's address for purposes of this paragraph by giving the other parties written notice of the new address in the manner set forth above.

END OF DOCUMENT





## **SCOPE OF SUPPLY HARRIER AIRCRAFT DETECTION LIGHTING SYSTEM**

### **B.1. System Design, Radar Locations and Coverage Plan**

Based on analysis of the project site, a full coverage HARRIER Aircraft Detection Lighting System (ADLS) for the project site will require two (2) preassembled ground-based skid HARRIER ADLS units positioned within the project boundary to provide reliable, full 360 degree surveillance of the airspace around the wind farm; provide advance detection of approaching aircraft; and provide automatic, advance activation of the wind farm obstruction lighting at sufficient ranges for operational safety in compliance with applicable FAA/Transport Canada/other regulations. The HARRIER ADLS has been evaluated by the FAA and has been determined by the FAA to meet the performance requirements identified in AC 70/74601L. (<http://www.airporttech.tc.faa.gov/Download/Airport-Safety-Papers-Publications/Airport-Safety-Detail/ArtMID/3682/ArticleID/164/Performance-Assessment-of-the-DeTectTM-HARRIER174-X-Band-Aircraft-Detection-Lighting-System-ADLS>). The system will also turn off the obstruction lighting when the aircraft have cleared the control zone around the wind farm or when aircraft are at high altitudes above the wind farm regulatory minimums.

### **B.2. Proposed Detect Scope of Supply:**

1. Two (2) HARRIER 200d radar sensor packages, each consisting of:
  - a. Fully self-contained, assembled, industrial-grade skid mounted system functional at delivery to include radar tower, skid base, NEMA 4 electronics enclosure, electronics and power and fiber optic connection boxes (patch cables included).
    - i. Optionally, the main processor electronics (computers, network hub, datasystem) can be installed at no additional cost at a central equipment room (requires fiber connectivity between the equipment and the radars (up to 50 miles away).
  - b. Commercial power connection box (110/220 VAC, 50/30 amp service required per sensor), includes Uninterruptible Power Supply for 30 minutes battery operation and power conditioning.
  - c. 200 watt solid-state radar sensor with ~17 degree beam upward tilt from ground level, radar tower (8 to 30 foot), radar electronics, Doppler processor, and connections.
  - d. Environmentally-controlled NEMA 4 electronics enclosure with dual backpack environmental control units (a smaller box is use if the remotely located equipment option is elected).
  - e. Rack-mounted radar data processing computer system and network (Microsoft Windows operating system, country-of-delivery version) includes interface and processor computers, network switch, web control relay and ancillary components



- f. Modular HARRIER ADLS radar operating and processing software to include one (1) full HARRIER system project license for Administrator, Processor, Display, Remote (remote control and display software) and Reporter.
2. ADS-B receiver, antenna and HARRIER ADLS integration software.
3. HARRIERSql datasystem for archiving and reporting of processed aircraft detection and track data and lighting activation events; includes AutoReporter (Report and data products to include tabular, graphical and plot output products to meet the agency documentation requirements).
4. Pre-delivery scoping site visit and meeting to occur within 45 days of receipt of order to include supplemental detailed radar coverage modeling to validate preliminary design
5. As-built engineering drawings for system, network and electrical.
6. Permitting support, if required, to include document submittals, agency interface and meeting support.
7. Integration of the system at the operational wind farm to include support for agency flight tests, if required.
8. Reproducible digital copies of Operations & Maintenance (O&M) Manuals (user and technical; one to be installed on main system computer).
9. Delivery to project site continental US.
10. System installation support, start-up and on-site user training.
11. Daily remote QA system check and remote diagnostics with HARRIER FileWatcher for one (1) year after startup (requires Internet connectivity to the system).
12. One (1) site visit by DeTect staff in the first calendar year after start-up; includes system inspection and service.
13. One (1) year 24-7 telephone and Internet technical support.
14. One (1) year full parts and labor warranty.
15. One (1) year HARRIER software upgrades.

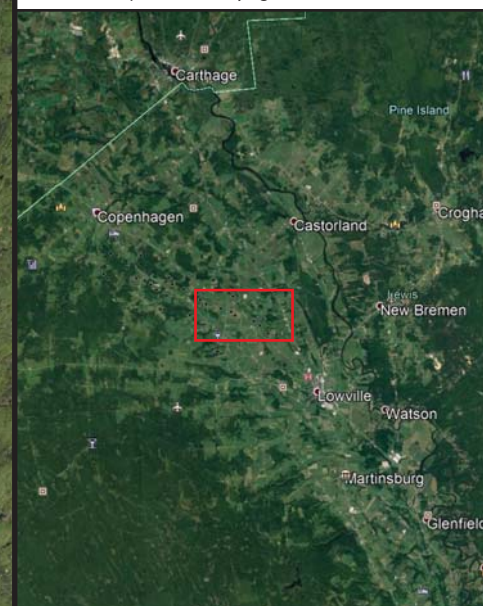


## Lewis County Wind Invenergy

Prepared by: TB      Prepared date: 04/12/2018








Approved by: JL      Approved date: 04/12/2018

**DeTect Confidential** - The information contained in this document / drawing / plan is for the intended recipient(s) only and may not be distributed to third parties in any form without the express written consent of DeTect, Inc. This communication contains confidential, proprietary and / or privileged information of DeTect, Inc. and, the recipient(s) hereby agree to treat it as such.



## Legend



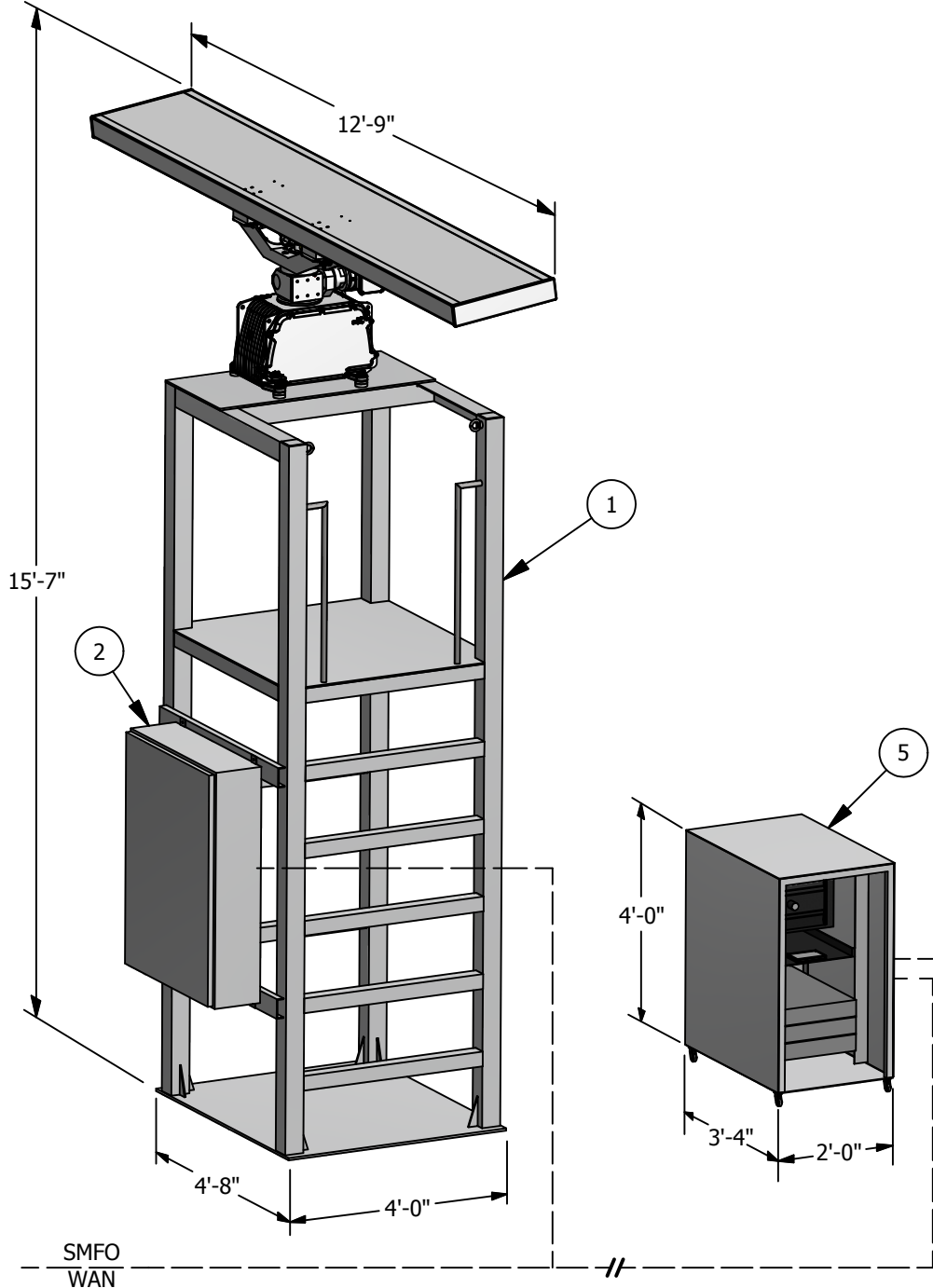
-  West Radar (30' TOWER)
-  East Radar (30' TOWER)
-  Turbines
-  DeTect - Lights on (3.5 NM)
-  FAA - Lights on (3 NM)
-  West Radar - 12 NM Range
-  East Radar - 12 NM Range

0 1.5 3 6 9 12  
Nautical Miles

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community



REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/07/2016	DM




**NOTES:**

- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (AS SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② NEMA 4X ENCLOSURE HOUSES RADAR CONTROL AND COMMUNICATIONS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.
- ⑤ SERVER RACK HOUSES RADAR PROCESSING EQUIPMENT AND CAN BE PLACED UP TO 50 MILES AWAY FROM RADAR VIA FIBER OPTIC LINK.

**\*APPROXIMATE WEIGHTS:**

SERVER RACK: 500 lbs  
RADAR AND TOWER: 1,200 lbs



Avian & Security Radar Systems Group,  
850.763.7200 - www.detect-inc.com

DWG TITLE: <b>HARRIER ADLS - 12' Tower - Remote</b>			
CUSTOMER / PROJECT: <b>DeTect</b>			
DWG #: <b>P16-428</b>	REV: <b>1</b>	SCALE:	SHEET: <b>1 of 1</b>
DESIGNED BY / DATE: <b>DM 03/01/2016</b>	DRAWN BY / DATE: <b>TB 03/01/2016</b>	APPROVED BY / DATE: <b>DM 03/01/2016</b>	

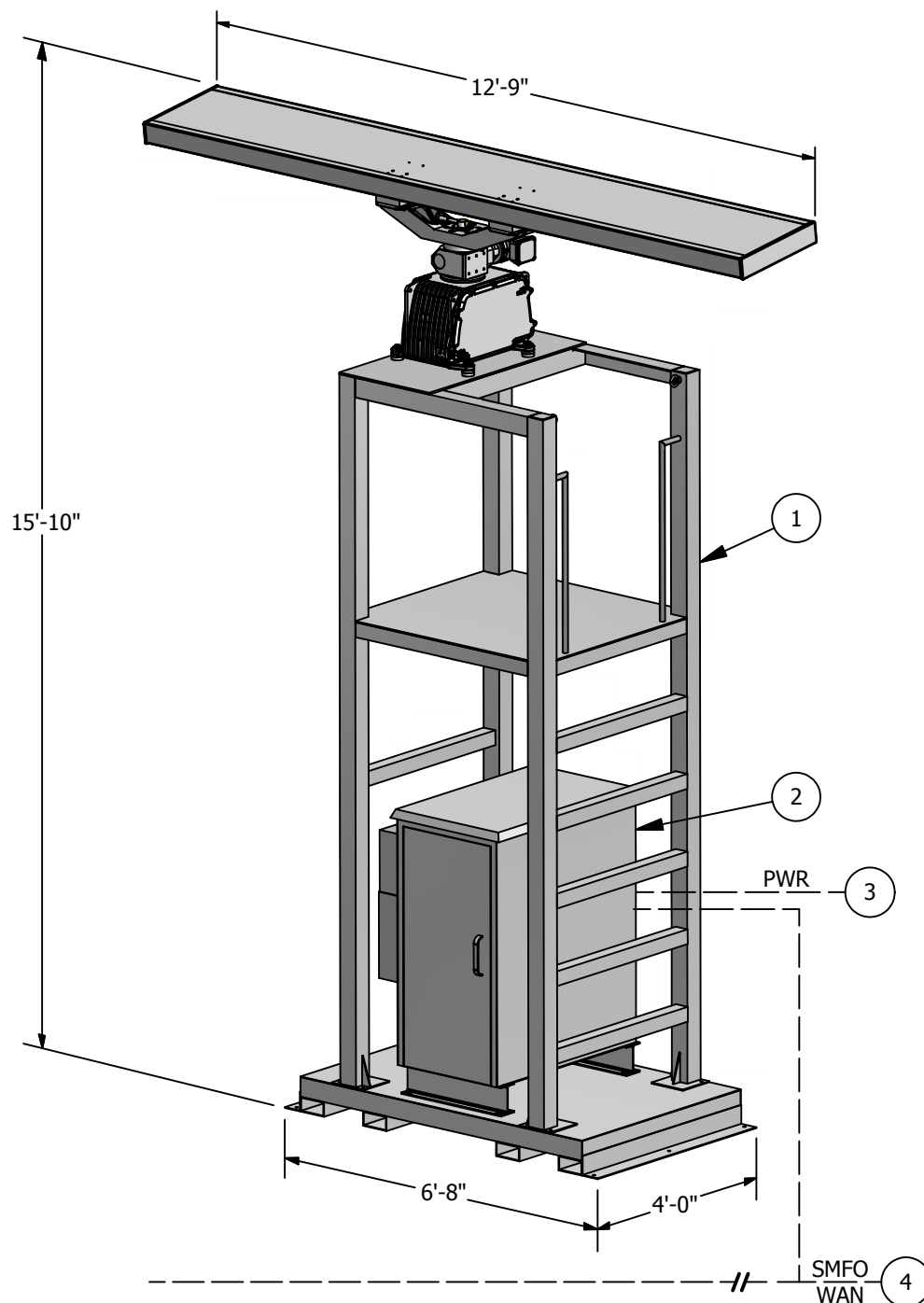
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**FRACTIONAL:**  
UNDER 36" = ± 1/16"  
OVER 36" = ± 1/8"

**DECIMAL:**  
0 = ± .250"  
0.0 = ± .050"  
0.00 = ± .010"  
0.000 = ± .005"  
0.0000 = ± .001"

**ANGULAR:**  
0° = ± 1°  
0.0° = ± .5°  
0.00° = ± .25°

REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/04/2016	DM




## NOTES:

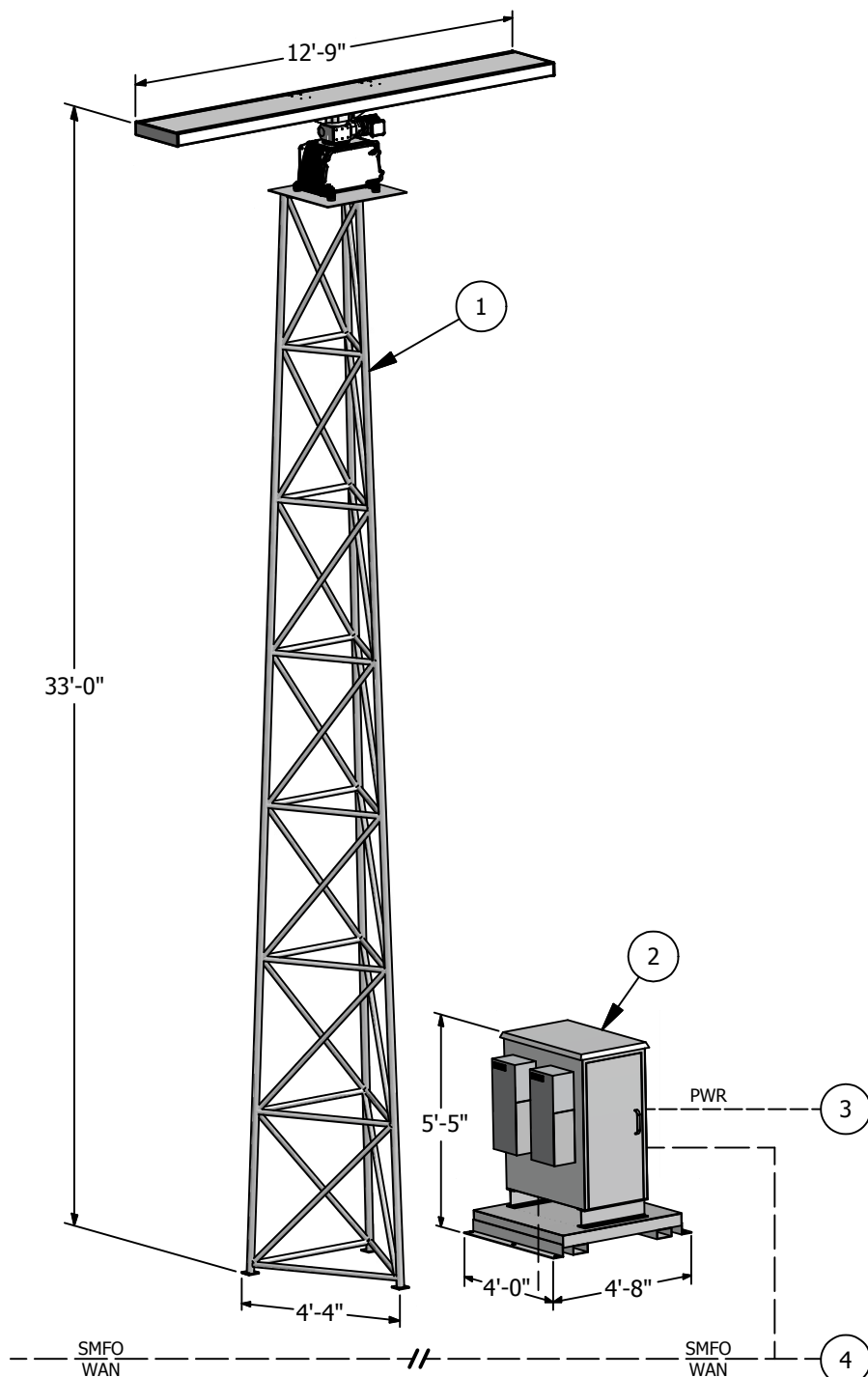
- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (AS SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② ENVIRONMENTALLY CONTROLLED CABINET HOUSES RADAR CONTROL, COMMUNICATIONS, PROCESSING, ADS-B, AND TAS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60 Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.

## \*APPROXIMATE WEIGHT:

RADAR, CABINET, AND SKID: 2,000 lbs

 <p>Avian &amp; Security Radar Systems Group, 850.763.7200 - www.detect-inc.com</p>	DWG TITLE: <b>HARRIER ADLS - 12' Tower - Local</b>				<b>FRACTIONAL:</b> UNDER 36" = ± 1/16" OVER 36" = ± 1/8"  <b>DECIMAL:</b> 0 = ± .250" 0.0 = ± .050" 0.00 = ± .010" 0.000 = ± .005" 0.0000 = ± .001"  <b>ANGULAR:</b> 0° = ± 1° 0.0° = ± .5° 0.00° = ± .25°
	CUSTOMER / PROJECT: <b>DeTect</b>				
	DWG #: <b>P16-429</b>	REV: <b>1</b>	SCALE:	SHEET: <b>1 of 1</b>	
	DESIGNED BY / DATE: <b>DM 03/01/2016</b>	DRAWN BY / DATE: <b>TB 03/01/2016</b>	APPROVED BY / DATE: <b>DM 03/04/2016</b>		
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REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/04/2016	DM




### NOTES:

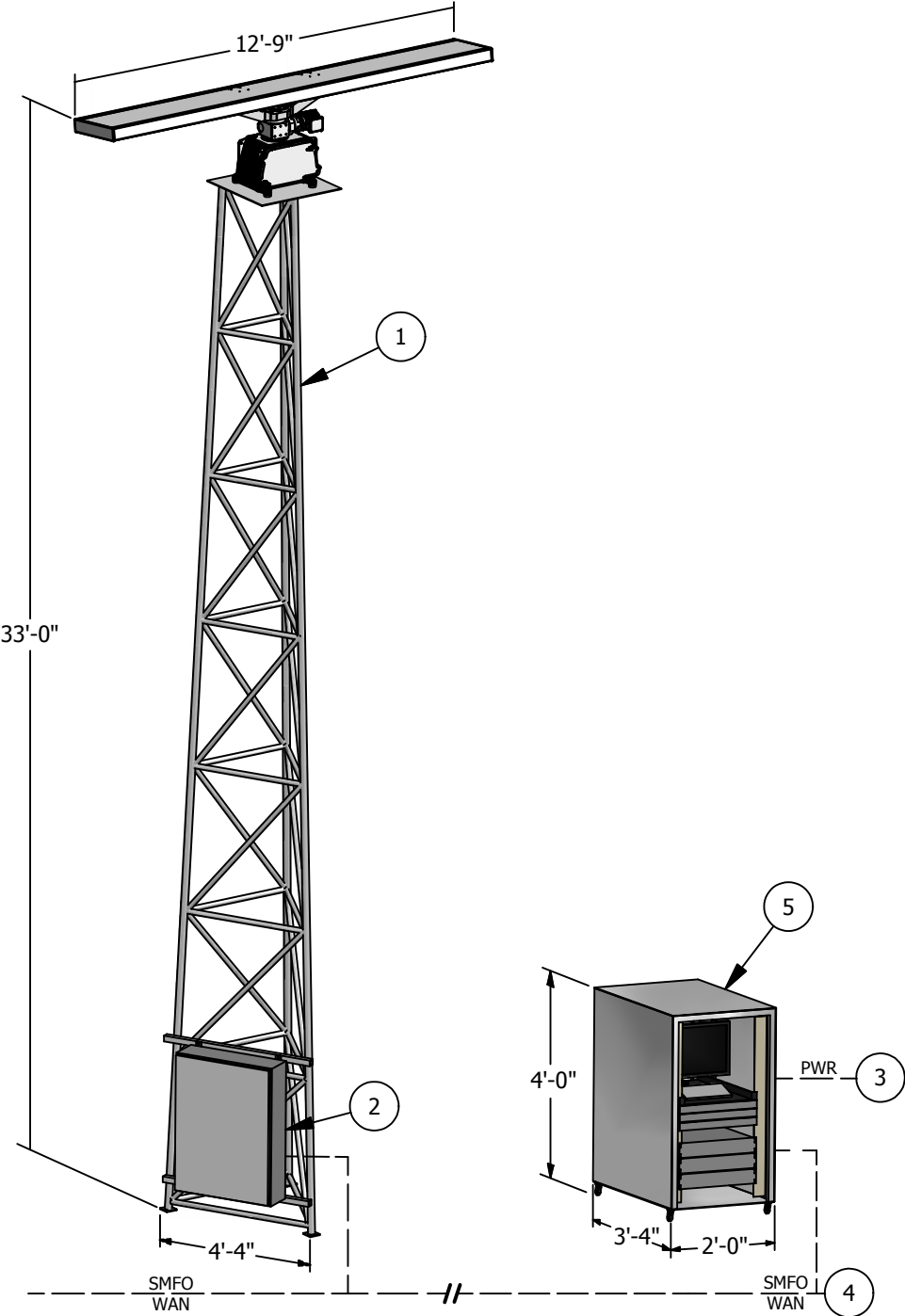
- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (30' SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② ENVIRONMENTALLY CONTROLLED CABINET HOUSES RADAR CONTROL, COMMUNICATIONS, PROCESSING, ADS-B, AND TAS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60 Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.

### \*APPROXIMATE WEIGHTS:

ENCLOSURE/SKID: 800 LBS  
RADAR/TOWER: 3,500LBS

 <p>Avian &amp; Security Radar Systems Group, 850.763.7200 - www.detect-inc.com</p>	DWG TITLE: <b>HARRIER ADLS - 30' Tower - Local</b>			<b>FRACTIONAL:</b> UNDER 36" = ± 1/16" OVER 36" = ± 1/8"  <b>DECIMAL:</b> 0 = ± .250" 0.0 = ± .050" 0.00 = ± .010" 0.000 = ± .005" 0.0000 = ± .001"  <b>ANGULAR:</b> 0° = ± 1° 0.0° = ± .5° 0.00° = ± .25°
	CUSTOMER / PROJECT: <b>DeTect</b>			
	DWG #: <b>P16-431</b>	REV: <b>1</b>	SCALE: <b>1 of 1</b>	
	DESIGNED BY / DATE: <b>DM 03/03/2016</b>	DRAWN BY / DATE: <b>TB 03/03/2016</b>	APPROVED BY / DATE: <b>DM 03/04/2016</b>	
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REV	ZONE	DESCRIPTION	DATE	APVD
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**CODED NOTES:**

- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (30' SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② NEMA 4X ENCLOSURE HOUSES RADAR CONTROL AND COMMUNICATIONS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.
- ⑤ SERVER RACK HOUSES RADAR PROCESSING EQUIPMENT AND CAN BE PLACED UP TO 50 MILES AWAY FROM RADAR VIA FIBER OPTIC LINK.

**\*APPROXIMATE WEIGHTS:**

SERVER RACK: 500 lbs  
RADAR/TOWER: 3,500 lbs

Avian & Security Radar Systems Group,  
850.763.7200 - www.detect-inc.com

DWG TITLE: <b>HARRIER ADLS - 30' Tower - Remote</b>			
CUSTOMER / PROJECT: <b>DeTect</b>			
DWG #: <b>P16-432</b>	REV: <b>1</b>	SCALE: <b>1</b>	SHEET: <b>1 of 1</b>
DESIGNED BY / DATE: <b>DM 03/03/2016</b>	DRAWN BY / DATE: <b>TB 03/03/2016</b>	APPROVED BY / DATE: <b>DM 03/04/2016</b>	

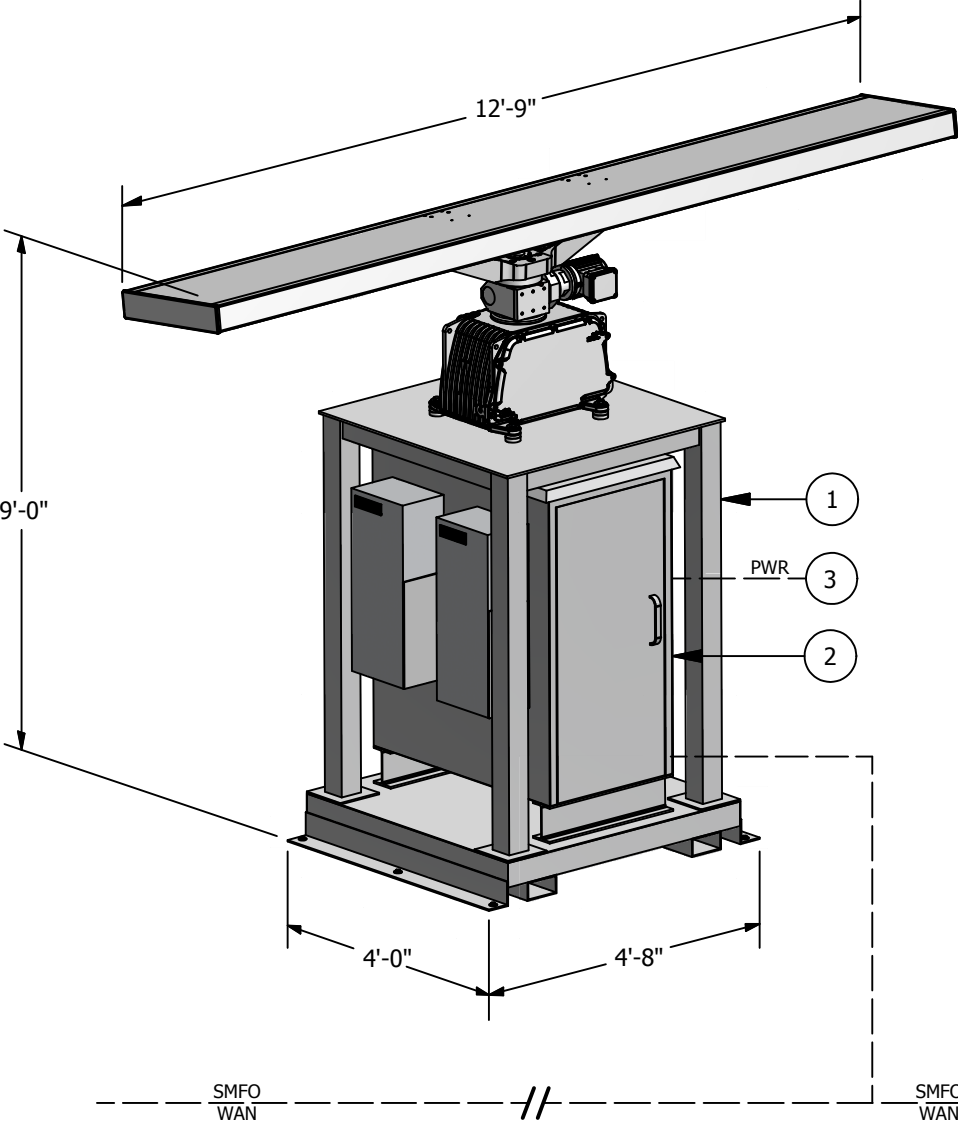
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**FRACTIONAL:**  
UNDER 36" = ± 1/16"  
OVER 36" = ± 1/8"

**DECIMAL:**  
0 = ± .250"  
0.0 = ± .050"  
0.00 = ± .010"  
0.000 = ± .005"  
0.0000 = ± .001"

**ANGULAR:**  
0° = ± 1°  
0.0° = ± .5°  
0.00° = ± .25°

REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/04/2016	DM




**NOTES:**

- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (6' SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② ENVIRONMENTALLY CONTROLLED CABINET HOUSES RADAR CONTROL, COMMUNICATIONS, PROCESSING, ADS-B, AND TAS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60 Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.

**\*APPROXIMATE WEIGHT:**

RADAR, CABINET, AND SKID: 1,000 lbs



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DWG TITLE: <b>HARRIER ADLS - 6' Tower - Local</b>			
CUSTOMER / PROJECT: <b>DeTect</b>			
DWG #: <b>P16-433</b>	REV: <b>1</b>	SCALE:	SHEET: <b>1 of 1</b>
DESIGNED BY / DATE: <b>DM 03/04/2016</b>	DRAWN BY / DATE: <b>TB 03/04/2016</b>	APPROVED BY / DATE: <b>DM 03/4/2016</b>	

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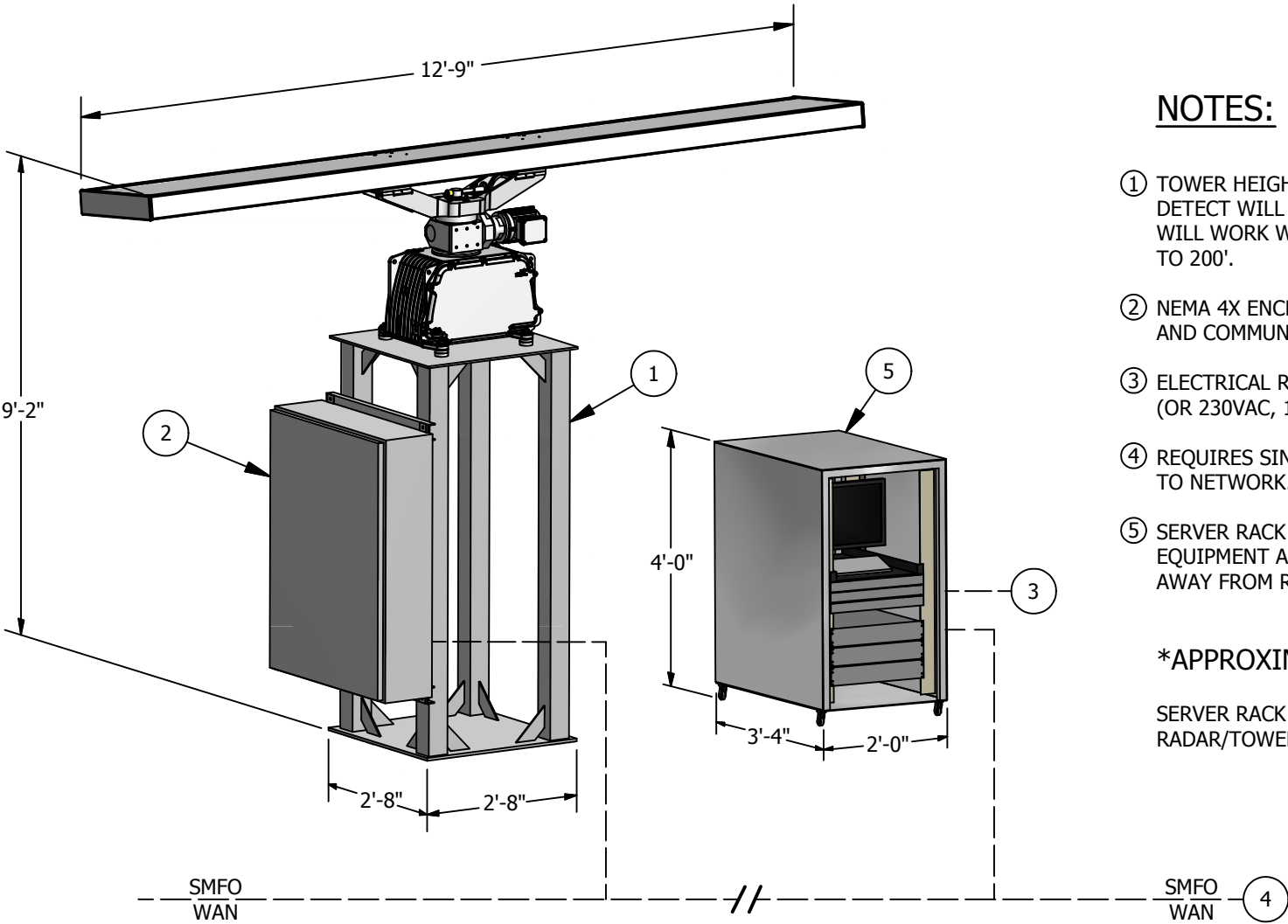
**FRACTIONAL:**  
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OVER 36" = ± 1/8"

**DECIMAL:**  
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0.0 = ± .050"  
0.00 = ± .010"  
0.000 = ± .005"  
0.0000 = ± .001"

**ANGULAR:**  
0° = ± 1°  
0.0° = ± .5°  
0.00° = ± .25°



REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/07/2016	DM



**NOTES:**

- ① TOWER HEIGHT DEPENDENT ON TOPOGRAPHY. DETECT WILL BUILD UP TO 12' (6' SHOWN), AND WILL WORK WITH TOWER VENDORS TO INSTALL UP TO 200'.
- ② NEMA 4X ENCLOSURE HOUSES RADAR CONTROL AND COMMUNICATIONS EQUIPMENT.
- ③ ELECTRICAL REQUIREMENTS: 120VAC, 30A, 60Hz (OR 230VAC, 16A, 50Hz).
- ④ REQUIRES SINGLE MODE FIBER OPTIC CONNECTION TO NETWORK.
- ⑤ SERVER RACK HOUSES RADAR PROCESSING EQUIPMENT AND CAN BE PLACED UP TO 50 MILES AWAY FROM RADAR VIA FIBER OPTIC LINK.

**\*APPROXIMATE WEIGHTS:**

SERVER RACK: 500 lbs  
RADAR/TOWER: 700 lbs

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DWG TITLE: <b>HARRIER ADLS - 6' Tower - Remote</b>			
CUSTOMER / PROJECT: <b>DeTect</b>			
DWG #: <b>P16-434</b>	REV: <b>1</b>	SCALE:	SHEET: <b>1 of 1</b>
DESIGNED BY / DATE: <b>DM 03/07/2016</b>	DRAWN BY / DATE: <b>TB 03/07/2016</b>	APPROVED BY / DATE: <b>DM 03/07/2016</b>	

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0.000 = ± .005"  
0.0000 = ± .001"

**ANGULAR:**  
0° = ± 1°  
0.0° = ± .5°  
0.00° = ± .25°

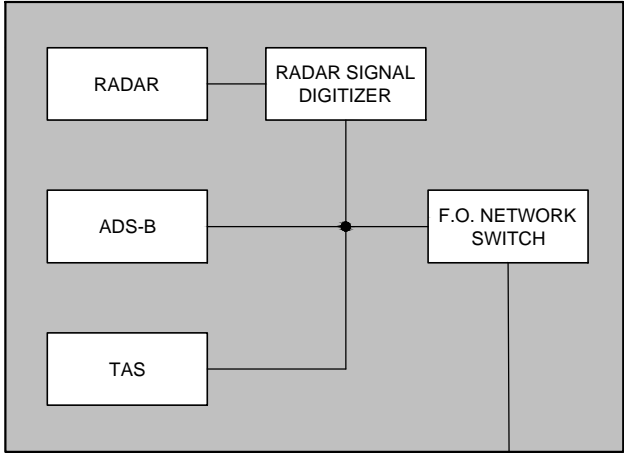
1 2 3 4 5 6 7 8 9 10

REV	ZONE	DESCRIPTION	DATE	APVD
1	N/A	INITIAL RELEASE	03/07/2016	DM

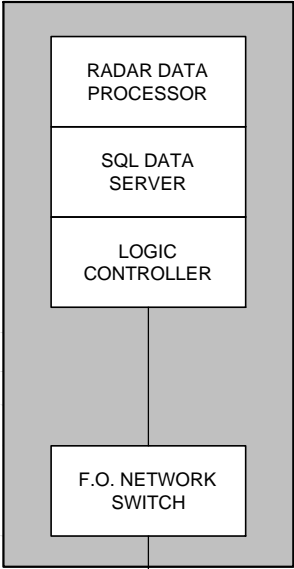
NOTE:

1. PROCESSING EQUIPMENT CAN BE CO-LOCATED W/  
RADAR OR REMOTELY LOCATED IN OPERATIONS BUILDING.

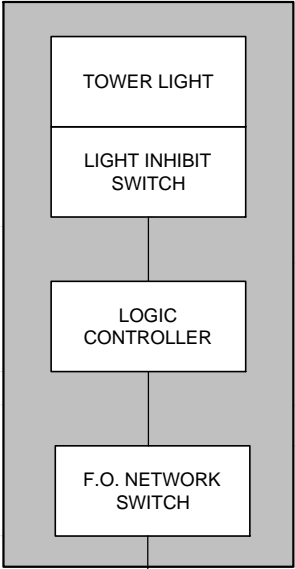
HARRIER ADS RADAR



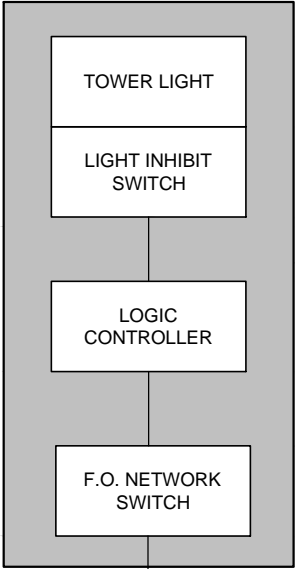
ADLS PROCESSING  
EQUIPMENT  
(\*SEE NOTE 1 ABOVE)



LIGHTED TOWER



LIGHTED TOWER



SINGLE MODE  
F.O. WAN



Avian and Security Radar Systems Group,  
Tel. 850.763.7200 - Web: www.detect-inc.com

DWG TITLE: HARRIER ADLS				DESIGNED: DATE: DM 03/07/2016		DRAWN: DATE: TB 03/07/2016	
DWG TYPE: Block Diagram				APPRVD: DATE: DM 03/07/2016			
PROJECT: DeTect				INTERPRET THIS DRAWING ACCORDING TO ASME Y14.100-2000			
DWG NO: P16-435		REV: 1	SCALE: NTS	SHEET: 1 of 1		DIMENSIONS ARE IN INCHES U.N.O. UNLESS OTHERWISE SPECIFIED TOLERANCE BLOCK APPLIES. TOLERANCES: .X ± 0.1 .XX ± .06 ANGLES: ± 1°	

1 2 3 4 5 6 7 8 9 10