

**SECTION 13 12 00**  
**ROOFTOP ALUMINUM HELISTOP**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section includes one design build aluminum Helistop. Package also includes aluminum decking for Helistop and walkway, safety netting, fire suppression, fuel-water separator, lighting package, snowmelt equipment, non-skid paint, FAA markings, installation, and FAA submittals.

**1.2 RELATED SECTIONS**

- A. Division 05 – Metals: Provisions for and construction of Helistop and walkway structural steel.
- B. Division 09 – Painting: Painting other than paint required by this section.
- C. Division 21 – Fire Suppression: Provisions for and connection to supplied equipment including NFF foam mixing skid and delivery devices.
- D. Division 22 – Plumbing: Provisions for and connection to supplied equipment including fuel-water separators.
- E. Division 26 – Electrical: Provisions for and connection to supplied equipment including lighted windcone, obstruction lights, three color beacon, perimeter lights, walkway floodlights, fuel-water separator, hydronic snowmelt skid, and fire suppression skid and pull stations.

**1.3 REFERENCES**

- A. American Welding Society AWS D1.1 – Structural Welding Code – Steel or International equivalent.
- B. American Welding Society AWS D1.4 – Structural Welding Code – Reinforcing steel or International equivalent.
- C. NFPA 418 – Standard for Heliports, 2024 Edition
- D. FAA Advisory Circular 150/5390-2D, Heliport Design, Dated January 2023

**1.4 SYSTEM DESCRIPTION**

- A. General Description: Aluminum *Helislat*<sup>™</sup> deck dimensions as required with an aluminum walkway per drawings. Also included should be safety netting, Hydronic Snowmelt, H-2 NFF fire suppression skid, fuel-water separators, lighting package, non-skid paint, and FAA markings.

**1.5 SYSTEM PERFORMANCE REQUIREMENTS**

- A. Provide Helistop to accommodate the following loading requirements of the design helicopter. Items i, ii, and iii apply to helistop landing surface only but do not act simultaneously. Gross weight and Impact loading consist of two-point loads 8'-0" apart.
  - 1. Gross weight of helicopter plus snow load plus dead load. Gross weight is defined as ½ of the helicopter maximum take-off weight at each point.
  - 2. Impact load of the helicopter plus dead load. Impact load is defined as ¾ of the helicopter maximum take-off weight at each point.
  - 3. Live load plus dead load in accordance with building code.
  - 4. Concentrated load of 250 pounds applied over any one square foot of safety netting or 25 psf live load.

## **1.6 SUBMITTALS**

- A. General: Submit each item in this article according to the conditions of the Contract and Specification Sections.
- B. Helistop manufacturer shall review shop drawings of steel substructure prior to steel fabrication and coordinate Helistop shop drawings with substructure.
- C. Product Data: Submit manufacturer's specifications to evidence compliance with these specifications.
- D. Owner/General Contractor shall be financially responsible for obtaining any permits required as they apply to the Helistop

## **1.7 QUALITY ASSURANCE**

- A. Designer Qualifications:
  - 1. Helistop supplier shall have an approved and documented quality control system.
  - 2. Each structural component of the helistop shall be designed by a registered structural engineer, in accordance with the local building codes, and said engineer shall be employed by the Helistop manufacturer.
  - 3. Upon request submit statement certified by the registered structural engineer that the design of the structural components of the Helistop is in compliance with provisions of the Contract Documents and the Local Building Codes and is in keeping with generally accepted engineering practice.
  - 4. If requested, submit design calculations bearing the registered structural engineers stamp, to the Local Building Code Official.

## **1.8 DELIVERY, STORAGE, AND HANDLING**

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

## **1.9 PROJECT CONDITIONS**

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

## **1.10 WARRANTY**

- A. Warranty Period: Manufacturer warrants manufactured products and installed systems for 12 months. Manufacturer warrants lighting equipment for 10 years on the housings and 3 years on the electrical components.
- B. Product Warranty: Manufacturer will repair or replace any parts that manufacturer determines are defective during the warranty period. Travel expenses are not included in warranty.
- C. System Warranty: Manufacturer will repair or replace any parts or components of the system that manufacturer determines are defective during the warranty period. Travel expenses are not included in warranty.
- D. Customer's Obligations: The customer shall notify manufacturer of any defects or problems with a part or system within 30 days of the date that the defects or problems were discovered or should have been discovered; failure to notify manufacturer within this 30-day period shall nullify the warranty regarding that defect or problem.
- E. Maintenance: The customer is responsible for preventative and routine maintenance.
- F. Extension of Warranty: The warranty period shall not be extended.
- G. Discrete Warranty Claim: When the system returns to normal operation for a 30-day period following action by manufacturer and the customer under this warranty, the defect or problem shall be considered resolved.

- H. Other Warranty Provisions: Customer may not assign the Warranty to any other person or business entity, including a successor in interest to the customer, without manufacturer's written consent.

## PART 2 - PRODUCTS AND SUPPLIES

### 2.1 SUPPLIERS

- A. Acceptable suppliers of the Helistop and associated equipment:

FEC Heliports, 5228 River Rd., Cincinnati, Ohio 45233. Phone toll free 877-HELIPAD, email: [sales@fecheliports.com](mailto:sales@fecheliports.com), [www.fecheliports.com](http://www.fecheliports.com)

**Standard: Design is based on FEC Heliports Helislat System and other equipment manufactured by FEC Heliports, which is the standard for performance and quality.**

### 2.2 EQUIPMENT

- A. Helistop Decking and Walkway:

1. Helistop surface shall be the Helislat™ system. Slats must be extruded 6005-T5 aluminum 6" in height and 6" in width and length as required. Slats must interlock with a tongue and groove configuration and shall have a petroleum resistant sealant inside each tongue and groove. Extrusion thickness may not be less than 0.19" +/- 0.01. Slats must have an internal extruded cavity to accept a snow-melting system. This cavity must allow the snow-melting element to have contact with the deck surface and must be on 6" centers. Deck surface must be coated with a non-slip coating to ensure safe patient transfer in any weather and to assist in sealing all deck joints against water and fuel leakage.
2. Helistop walkway shall be HP0355 design to connect to the Helislat tongue and groove system. In addition, the walkway shall have the same internal snow melt cavity to coordinate with the Helislat™ system. HP0355 shall also be 6005-T5 alloy and be 1½" in height and 12" in width.

- B. Drainage Gutter: Manufacturer's standard HP0259 gutter along low side of deck. Gutter shall have multiple 4" downspout connections.

- C. Safety Net: All safety netting shall be 5'-0" wide minimum and be design build in accordance with manufacturer specifications. All safety netting shall be made from structural tubing and 1¼" 9-gauge fencing. All safety netting components shall be galvanized steel. Helistop supplier shall supply safety netting, supports, and all necessary hardware. Safety netting shall be designed in accordance with structural requirements of section 1.05

- D. Fuel/Water Separator: HP0285 weather, gravity separator having three chambers, discharge, heater with integral thermostat and high oil level indicator. Tank shall have a minimum fuel storage capacity of 300 gallons. The tank shall have (1) 6" inlet and (1) 6" outlet. Separator to be located as shown on the contract documents. Piping for separator shall be 6" black iron or as stipulated by State or Local Code. Piping running from gutter to separator and from separator to designated location as shown in the Contract Documents shall be supplied by Plumbing/Mechanical Contractor.

- E. Accessories and Anchors:

1. Provide manufacturer's standard 1/8" neoprene isolation between all aluminum and steel support structure as required.
2. Provide manufacturer's standard HP0552 clamping hardware to attach aluminum decking to steel beams.

- F. Lighting Fixtures:

1. Provide HP2090G Green/IR LED perimeter lights as shown on drawings.
2. Provide HP3080P Red/IR LED obstruction lights as shown on drawings.
3. Provide HP0649 LED floodlights to illuminate walkway as shown on drawings.

4. Provide HP2040 LED three color locating beacon as shown on drawings.
  5. Provide HP0832 Radio Lighting Controller as shown on drawings.
- G. Windcone Assembly: Provide (1) HP0908 internally lighted LED windcone assembly as shown on drawings.
- H. Foam Fire Suppression: Provide (1) HP0796-150H-NFF horizontal foam mixing skid to meet the requirements of NFPA 418 and the FAA for an H-2 category helistop. Mixing skid shall consist of a minimum of a deluge valve, foam bladder tank, proportioner, and control panel. All piping required to connect equipment to the building standpipe system and to connect the skid to the deck equipment shall be designed, supplied, and installed by the Sprinkler Contractor. Refer to Contract Documents for equipment location.
- I. Hydronic Snowmelt System: Provide snowmelt circulating skid, all deck tubing, and manifolds. All deck tubing shall be rubber 5/8" ID x 1" OD. Deck manifolds shall be stainless steel with ball valves for balancing and individual tube isolation on both supply and return manifolds. Circulating skid to include two pumps, one for redundancy, heat exchanger, air separator, expansion tank, etc. Piping from heat source to skid and from skid to deck manifolds to be supplied and installed by Mechanical Contractor.

## **PART 3 - EXECUTION**

### **3.1 EXAMINATION**

- A. Examine and verify that receiving substrate surfaces of the structure have no defects or errors which would result in poor or potentially defective application or cause latent defects in workmanship.

### **3.2 PREPARATION**

- A. Substrate Adequacy: Prepare the structure to insure proper and adequate structural support of the materials specified.
- B. Substrate Surface: Prepare substrate surfaces to insure proper and adequate installation, in accordance with the Contract Documents and approved Shop Drawings or manufacturer's requirement.
- C. Field Measurement/Verifications: General Contractor to field measure and verify dimensions as requested.
- D. Protection of Adjacent Areas or Surfaces: Owner/General Contractor shall be responsible for protecting adjacent areas or surfaces from damage as a result of the Work in this section.

### **3.3 ERECTION**

- A. Erect in accordance with manufacturer's latest published requirements, instructions, specifications, details, and approved Shop Drawings.
- B. Helistop members shall be set, leveled, aligned, and anchored in method approved by the Helistop manufacturer.
- C. Helistop manufacturer shall provide full-time non-union installation crew to coordinate installation with the general contractor and GC shall certify in writing at completion that Helistop is installed in accordance with manufacturer's recommendations.
- D. Helistop manufacturer shall coordinate requirements for on-site support required for erection of items supplied and is responsible for supplying and delivering to the site components required for complete and usable installation whether or not shown or specified by these documents.
- E. Field drill holes in Helistop purlins to align with holes provided in steel column studs. Bolt field connections. HP0552 clamping hardware to be used to connect deck to steel structure as needed. Provide temporary shoring and bracing members as required.
- F. Set deck members to proper slope as shown such that entire deck surface drains to perimeter gutter system. Provide elevations and alignment as required.

- G. Install isolation material between dissimilar metals to prevent galvanic action furnished by Helistop supplier.

### **3.4 PAINTING**

- A. Complete painted markings following erection. Markings shall be in colors as indicated on plan and as dictated by FAA guideline 150/5390-2D. Paint shall be manufacturers' standard non-skid deck paint. Application shall be according to manufacturer's written directions. Provide abrasive additive to maintain the Helistop deck's non-skid surface.

### **3.5 WORK NOT IN CONTRACT**

- A. Helistop supplier shall not be responsible for taxes, bonding, permitting, hoisting, offloading, electrical, or mechanical work as described, wall penetrations, any roof work or any items not specifically listed in the final contract.

## **PART 4 - APPROVED SOURCES OF SUPPLY**

"Approved Sources" must show evidence that their materials and products meet the requirements of the Contract Documents.

### **4.1 HELISTOP AND ASSOCIATED EQUIPMENT**

FEC Heliports  
**Helislat™** System  
5228 River Rd.  
Cincinnati, Ohio 45233  
877-HELIPAD

**END OF SECTION**

