MISCELLANEOUS PLANNING ITEM PLANNING AND DEVELOPMENT REPORT TO COUNCIL DEVELOPMENT PERMIT APPLICATION June 11, 2025

APPLICATION INFORMATION

FILE NO. 25D 083



DATE APPLICATION DEEMED COMPLETE: April 30, 2025

LEGAL DESCRIPTION: SW 19-18-28 W4; Plan 8011027 Block

Airport

LANDOWNER: Foothills County

APPLICANT: Vincent Riendeau – MPE on behalf of the Foothills

Regional Airport

PROPOSAL: A +/- 164.15 sq. ft. Sea Can to house the upgraded electrical equipment and

lighting upgrades at The Foothills Regional Airport.

FILE MANAGER: Brittany Smith

EXECUTIVE SUMMARY:

Location of Subject Lands:

The subject 157.01 acre parcel is located approximately 2.5 kilometers south of the Town of High River, adjacent to the east side of 104 Street E, and approximately 700m west of Highway #2.

Summary of Proposal:

This application requests approval for the placement of a new +/- 164.15 sq. ft. Sea Can to be used to house the new upgraded electrical equipment and lighting facilities for the Foothills Regional Airport.

Background:

November 16, 2023 – The High River Regional Airport Board (now Foothills Regional Airport Board) passed a resolution that the Board authorize administration to request that the STIP Grant Application – 2024 Projects – Runway Lighting Project be placed on the Foothills County Council Meeting Agenda.

November 22, 2023 – Council approved the High River Regional Airport Board's recommendation to proceed with the STIP/CAP grant application for the HRRA Runway Lighting Project.

Policy Evaluation

The property is within the Foothills Regional Airport Area Structure Plan. The subject parcel is zoned as Direct Control District #5 (DC#5) under the County's current Land Use Bylaw 60/2014. A copy of DC#5 is included under Appendix B of this report.

PURPOSE OF APPLICATION:

As Council is the Development Approving Authority for Direct Control District lands, they may decide on a Development Permit application or may delegate the Authority with directions that Council considers appropriate.

Council may also require a Public Meeting prior to deciding on any application within the Direct Control District.

Proposal

The application requests Council's review and approval of a new +/- 164.15 sq. ft. Sea Can to house the upgraded electrical equipment responsible for powering and controlling the new lighting systems at the Foothills Regional Airport.

The electrical building will receive power from an overhead utility transformer located on the utility pole to the Southwest of the building and will be powering the runway lights, taxiway lights, apron lights, PAPI system, and beacon.

This sea can is proposed to be painted tan with black doors and trim (as shown below) and will replace the existing building that currently houses the electrical equipment and lighting facilities. No screening is proposed.

The locations of the proposed new facility and the existing facility are shown on the Ortho Map, which is included in Appendix A.







Access, Site Circulation and Parking:

Existing access to the site is from 104 St E, onto Gordon Jones Way.

Setbacks:

The proposed building is identified to comply with the required setbacks as per Direct Control District #5.

Grading and Drainage:

The area for the proposed building will not have any changes to existing drainage and grading.

Note: The detailed plans as submitted by the applicant have been included under Appendix C of this staff report.

POLICY EVALUATION:

Land Use Bylaw 60/2014 (LUB)

Direct Control District #5 (DC#5)

The purpose and intent of this district is to allow for appropriate, aviation related development on lands at the Foothills Regional Airport, as have been registered in accordance with the Canadian Aviation Regulations, and to allow for the Direct Control by Council over development on the following lands: SW ¼ SEC. 19, TWP. 18, RGE. 28, W4M; PLAN 8011027

The proposed new +/- 164.15 sq. ft. Sea Can would be considered an Accessory Building, accessory to the Airport

18.5.3 PERMITTED USES

Accessory Buildings, accessory to the Airport

2.5 DEFINITIONS

<u>ACCESSORY BUILDING, DETACHED</u> means a detached building naturally or normally incidental, subordinate and exclusively devoted to the principal building on the lot, and located on the same lot as the principal building.

<u>ACCESSORY USE</u> means a use that is naturally or normally incidental, subordinate and exclusively devoted to the uses approved on the land located on the same lot as the principal use.

| CIRCULATI | CIRCULATION REFERRALS | | | |
|------------------|--|--|--|--|
| REFEREE COMMENTS | | | | |
| INTERNAL | | | | |
| Public Works | Public Works has no comments or concerns. | | | |
| EXTERNAL | | | | |
| Fortis & ATCO | No responses received | | | |
| PUBLIC | Public notification/referral does not occur with respect to Development Permits on Direct Control District lands unless Council's review of the application involves a Public Meeting. | | | |

SUMMARY

The application before Council is for a development permit to allow for the construction of a +/- 164.15 sq. ft. Sea Can to house the upgraded electrical equipment responsible for powering and controlling the new lighting systems at the Foothills Regional Airport.

OPTIONS FOR COUNCIL CONSIDERATION:

OPTION #1 – APPROVAL

The suggested motion for Option #1 is as follows:

Moved that Development Permit 25D 083 to allow for the placement of a +/- 164.15 sq. ft. Sea Can to house the upgraded electrical equipment responsible for powering and controlling the new lighting systems at the Foothills Regional Airport on a portion of SW 19-18-28 W4M; Plan 8011027 be approved as follows:

Council is requested to provide direction as to if they wish to delegate authority to the Development Officer to review and accept completion of conditions for this permit.

APPROVAL DESCRIPTION

This approval allows for the placement of +/- 164.15 sq. ft. Sea Can to house the upgraded electrical equipment responsible for powering and controlling the new lighting systems at the Foothills Regional Airport on a portion of SW 19-18-28 W4M; Plan 8011027, in accordance with the application for Development Permit and the plans as accepted by the Development Authority to be appropriate, subject to the following conditions:

SUGGESTED CONDITIONS OF APPROVAL FOR COUNCIL'S CONSIDERATION

Council may wish to impose any of the following conditions or any additional or revised conditions.

CONDITIONS OF APPROVAL

The following requirements must be completed within the twenty-four (24) month completion period for this Development Permit unless a time extension is issued under agreement between the Development Authority and the Applicant(s). Failure to complete the conditions of approval will see the Development Permit deemed null and void.

- 1. The development shall be executed in accordance with all conditions of approval and plans that have been acknowledged by the County to be appropriate;
- 2. All necessary building permits, safety code permits and inspections shall be obtained from Foothills County;
- 3. The Sea Can shall be painted and maintained in accordance with the plans as submitted to and acknowledged or approved by Council.
- 4. The applicant shall contact the County's Fire Inspector and obtain all necessary approvals and inspections; and
- 5. The applicant shall provide written notification to the File Manager upon completion of the development as approved herein.

ADVISORY CONDITIONS

The following requirements are provided by Foothills County to inform the applicant(s) and landowner(s) of their necessity and do not form part of the approval description or conditions of approval. It is the sole responsibility and liability of the applicant(s)/landowner(s) to ensure adherence with these requirements.

- 1. The development shall be maintained in accordance with all conditions of approval and plans as submitted to and acknowledged or approved by Council.
- 2. Development shall comply with the requirements of the applicable Building, Safety, and Fire Codes at all times;
- 3. The issuance of a development permit by Foothills County does not relieve the applicants of the responsibility of complying with all other applicable municipal bylaws and requirements, the requirements of all applicable Federal and/or Provincial acts regulations and/or guidelines;
- 4. The applicant indemnifies and hold harmless the County against the cost of any claims or actions, or awards for loss or damage to the Owner(s) arising from the development of and use of the subject property; and
- 5. The applicant shall be responsible for payment of any professional costs including legal fees that may be incurred by the County with respect to this permit.

OPTION #2 POSTPONE A DECISION ON THE APPLICATION

Should Council have concerns regarding certain aspects of the application or feel that they require additional information in order to render a decision, Council may choose to postpone a decision on the application in order to obtain additional information from the applicant.

The suggested motion for Option #2 is as follows:

Moved that Council postpone making a decision on Development Permit application 25D 083 until such time as the applicant has provided (the requested information) for Council's consideration.

APPENDICES

APPENDIX A: MAP SET

LOCATION & ORTHO MAP ORTHO MAP LAND USES MAP

APPENDIX B:

DIRECT CONTROL DISTRICT #28

APPENDIX C:

SUBMITTED PLANS

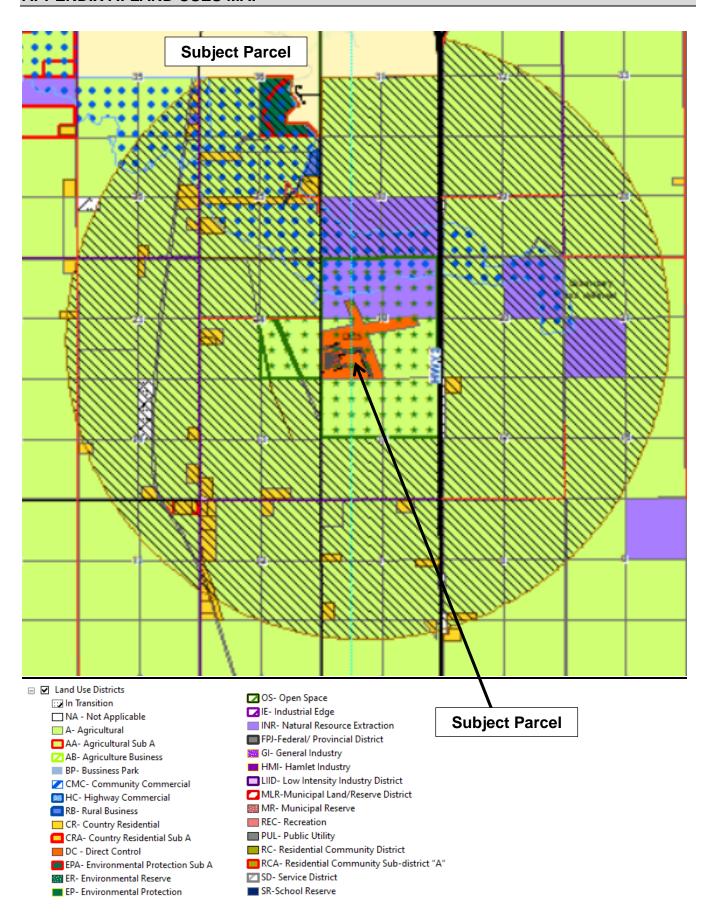


Location Map and Ortho Image





Existing and Proposed Site



18.5 DIRECT CONTROL DISTRICT #5 (DC5) FOOTHILLS REGIONAL AIRPORT DISTRICT

DC#5

18.5.1 PURPOSE AND INTENT

The purpose of this land use district is to allow for appropriate, aviation related development on lands at the Foothills Regional Airport, as have been registered in accordance with the Canadian Aviation Regulations, and to allow for the Direct Control by Council over development on the following lands:

SW 1/4 SEC. 19, TWP. 18, RGE. 28, W4M; PLAN 8011027

18.5.2 GENERAL REQUIREMENTS

All development on lands in the Airport District shall require a development permit with the following exceptions:

Airport Operations, other than a terminal building

18.5.3 PERMITTED USES

Airside or Groundside

Accessory Buildings, accessory to the Airport Administration Office, accessory to the Airport or other approved use

Agricultural, General

Aircraft Parts Sales

Meteorological Installations

Military Operations - including cadets and

search and rescue

Navigational Aid Facilities

Protective and Emergency Services

Public Works

Signs, not requiring a development permit

Utility Services, Minor

Airside Only

Aerodrome/ Airstrip

Aerial Application and Spraying Operations

Aerial Photography Services

Air Ambulance

Air Cargo Facilities

Aircraft Service and Repair

Aircraft Charter Operations

Airport Operations

Aviation Fuel Dispensing Facility

Hangars or Aircraft Storage Facilities

Helicopter Operations

Terminal Building

18.5.4 DISCRETIONARY USES

Airside or Groundside:

Aircraft Sales, Leasing, and Rentals Club House, accessory to the airport

Flight Training School

Hangar, Semi-Detached

Logistics and Distribution

Personal Storage, accessory to principal

aviation use

Restaurant, within Terminal Building

Sea-Can (on commercial lots only)

Signs requiring a development permit

Solar Power Equipment

Solar Power Facility

Special Events

Groundside Only:

Administration Office, aviation related

Agricultural, Intensive

Aviation Museum

Campground, Minor, accessory to the

airport

Commercial School, College or Training

Facility

Commercial Storage

Community Buildings and Facilities

Convenience Store

Education Centre

Food Service, accessory to the airport

Food Truck

Garage, Private

Industrial Manufacturing/ Processing

Industry, Light, aviation related

Outdoor Display Area, accessory to

approved business

Outdoor Storage

Private Amenity Space

Recreation, Indoor

Recreation Vehicle Storage

Restaurant

Retail Store (aviation related or accessory to the airport)

Service Station

18.5.5 LOT DESIGNATIONS

- 18.5.5.1 Lots with assigned 'P' (Private) designation are intended for the purpose of supporting and conducting personal aviation activities and storage of personal aircrafts.
- 18.5.5.2 Lots with assigned 'C' (Commercial) and 'N' (North) designations are intended for the purpose of supporting and conducting Airside Development, such as aviation related commercial businesses which require direct access to airside facilities.
- 18.5.5.3 Lots with assigned 'G' (Groundside) designation are intended for the purpose of conducting Groundside Development and are encouraged to support businesses related to aviation or uses complementary to the airport. These lots do not have direct access to airside facilities; uses which require airside access should not be located on these lots.

18.5.6 **DEVELOPMENT REQUIREMENTS**

- 18.5.6.1 Development on all lots:
 - shall be contained within the boundary of the lot, including all structures, propane tanks, septic tanks, and holding tanks.
 - shall comply with fire separation distances in accordance with the applicable Building Code
 - C. shall not include overnight accommodations and/or any dwelling unit; and
 - d. shall adhere to the Airport's stormwater technical memo.
- 18.5.6.2 Development on Private (P) and Commercial (C and N) lots:

- a. shall not contain a development which does not require access to airside facilities, unless appropriate approval is first obtained.
- 18.5.6.3 Development on Private (P) lots:
 - shall not accommodate a commercial business, including the storage of business materials, unless appropriate approval is first obtained.
 - shall be used for the purpose of conducting and supporting aviation related activities, including but not limited to private hangars, and storage of aircraft(s) and flight related equipment.
 - c. shall not be used for personal storage of non-aviation related items, materials, equipment, or vehicles, unless an active and airworthy aircraft or aircraft actively being built, re-built, or maintained is stowed within the hangar, or appropriate approval for personal storage is first obtained. Personal storage includes but is not limited to keeping of RVs, boats, motorcycles, hobby or inoperable vehicles, off-road vehicles, or any other personal items. This does not include incidental temporary uses, such as temporary parking of a personal vehicle while attending the hangar or during active flight. Storage of non-aviation related items shall be accessory to and subordinate to the principal aviation use of the subject lot.
- 18.5.6.4 Minimum Yard Setback Requirements applicable to the boundaries of the airport lands. These setbacks do not apply to individual lots on the airport lands:
 - a. Front Yard Setback:
 - 15m (49.21 ft.) from the right of way of an internal subdivision road.
 - ii. 64m (209.97 ft.) from the centreline of a Municipal Road, Major.
 - iii. 48m (157.48 ft.) from the centre line of a Municipal Road.
 - iv. 40m (131.23 ft.) from the ultimate right-of-way of a Provincial Highway; or
 - v. As determined by Council.
 - b. Side Yard Setback:
 - 15m (49.21 ft.) from the boundary of airport lands; or
 - ii. As determined by Council.
 - c. Rear Yard Setback
 - i. 15m (49.21 ft.) from the boundary of airport lands; or
 - ii. As determined by Council.
- 18.5.6.5 Minimum Individual Lot Setback Requirements:
 - a. Minimum lot setback requirements apply to the individual lots on the airport and shall comply with fire separation distances in accordance with the applicable Building Code.
 - The Approving Authority may consider a semi-detached building on two adjacent lots provided that the entire structure adheres to all applicable Building, Safety, and Fire Codes standards, including appropriate fire separation at the common wall (party wall);

- 18.5.6.6 Other Minimum Setback Requirements:
 - See Section 9.27 "Special Setback Requirements" of this Land Use Bylaw for additional setback requirements that may apply.
- 18.5.6.7 The Approving Authority may require a greater yard setback for any use which, in the opinion of the Approving Authority, may interfere with uses of adjacent lands.
- 18.5.6.8 Maximum Height of Structures shall be:
 - a. 12m (39.37 ft.); or
 - as determined by the Obstacle Limitation Surfaces (see Section 11.2 Airport Protection Overlay and 18.5.8 Obstacle Limitation Surfaces), whichever is less.

18.5.7 SPECIAL PROVISIONS

- 18.5.7.1 Uses on the Airport shall not obstruct visibility by the emission of dust, smoke, water vapour, blowing garbage or debris, or glare.
- 18.5.7.2 Garbage and waste must be stored in weatherproof and animal/bird proof containers properly screened and located so they are easily accessible for containerized garbage pickup.
- 18.5.7.3 Uses on the Airport shall not create a fire, explosive, or a radioactive hazard.
- 18.5.7.4 Until such time as piped water and sewer services are available at the airport, no overnight accommodations will be contemplated, and development will be restricted to uses with low water use requirements.
- 18.5.7.5 In determining whether a proposed development meets all the provisions of this district, the Development Authority may consult Transport Canada, NavCanada, Alberta Infrastructure, and other competent authorities, and shall be guided by any comments provided.

18.5.8 OBSTACLE LIMITATION SURFACES

18.5.8.1 No person shall place, erect or construct, or permit the placement, erection or construction of any building, development, structure, or object that exceeds the height limitations of the Obstacle Limitation Surfaces, as defined within Section 11.2: Airport Protection Overlay, unless appropriate municipal, provincial, and/or federal approval(s) are first obtained.

18.5.9 **DEFINITIONS**

AERIAL APPLICATION AND SPRAYING OPERATIONS means a business which involves spraying crops from an aircraft.

AERIAL PHOTOGRAPHY SERVICES means a business which collects imagery using an aircraft.

AIR AMBULANCE means an aircraft equipped to transport sick or injured people to a hospital during an emergency.

AIR CARGO FACILITIES means a service designed to load and unload air cargo.

AIRCRAFT means a manned vehicle deriving lift from either wings or rotors, including airplanes, helicopters, ultralights (both basic and advanced), gyrocopters, gliders (including those capable of self-launch). For the purpose of this section, "Aircraft" excludes hot air balloons and unmanned units such as drones and model aircrafts.

AIRCRAFT SERVICE AND REPAIR means a business which services or repairs aircraft.

AIRCRAFT CHARTER OPERATIONS means a business which transports cargo or people who have contracted to have exclusive use of the entire aircraft.

AIRCRAFT SALES, LEASING AND RENTALS means a business which sells, leases, or rents aircraft.

AIRSIDE DEVELOPMENT means development located with direct access to the taxiways and runways, including hangars, tie-down areas, aprons, and fueling operations.

AIRPORT OPERATIONS means the necessary infrastructure for the operation of the airport including runways, taxiways, aprons, navigational aids, weather stations, equipment and salt sheds, terminal buildings and other similar uses.

AIRPORT REFERENCE POINT ELEVATION means the lowest threshold elevation point of the runway.

APRON means the area where aircraft are parked, unloaded, refueled and boarded.

AVIATION MUSEUM means a Museum dedicated to aviation and the aviation industry.

BASIC STRIP means the portion of each airport runway designated for landing and take-off under non-emergency conditions.

FLIGHT TRAINING SCHOOL means a training facility dedicated to learning to pilot an aircraft.

GROUNDSIDE DEVELOPMENT means development on the Airport that does not have direct access to the runways and taxiways.

HANGAR means a building which is used for storage of aircraft.

HANGAR, PRIVATE means a building which is used for storage of personal aircraft and related materials. Private hangars are not to house a commercial business and are not to be used for commercial storage.

HELICOPTER OPERATIONS means an area designated for the operation of a helicopter.

LOGISTICS AND DISTRIBUTION means a service provided for incoming and outgoing cargo.

METEOROLOGICAL AIR INSTALLATIONS means weather forecasting systems.

MILITARY OPERATIONS means use by the Canadian Armed Forces.

MODEL AIRCRAFT means an aircraft, including an unmanned aircraft commonly known as a drone, the total weight of which does not exceed 35 kg (77.2 pounds), that is mechanically driven or launched into flight for recreational purposes and that is not designed to carry persons or other living creatures.

OBJECT OF NATURAL GROWTH means natural vegetation including trees and shrubs.

OBSTACLE LIMITATION SURFACES means a series of surfaces that set the height limits for structures or objects around an aerodrome. In Canada these surfaces include the Outer Surface, the Take-off / Approach Surfaces, and the Transitional Surfaces.

OUTER SURFACE means an imaginary circular-shaped surface, with a radius of 4000m (4km) measured from the designated aerodrome reference point(s), which is located 45m above the assigned reference point elevation of the airport.

RUNWAY means the strip which aircraft take-off and land.

TAKE-OFF / APPROACH SURFACES means the inclined plane abutting the end of each runway which is the width of the runway at its beginning and angles out at 10 degrees from the lateral extension of the basic strip. It ends at its intersection with the Outer Surface.

TAXIWAY means the surface which aircraft use to get to the runway from the apron.

TERMINAL BUILDING means a building located at an airport where passengers can transfer between ground transportation and air transportation.

TRANSITIONAL SURFACES means the complex surface along the sides of the runway strip that runs parallel to the approach surface that slopes up to the outer surface.

18.5.10 APPENDIX A - FOOTHILLS REGIONAL AIRPORT LOT DESIGNATION MAP

Lot Designations





Legend

P - Private

C - Commercial

N - North (Commercial)

Airport Property Line

1:7.788

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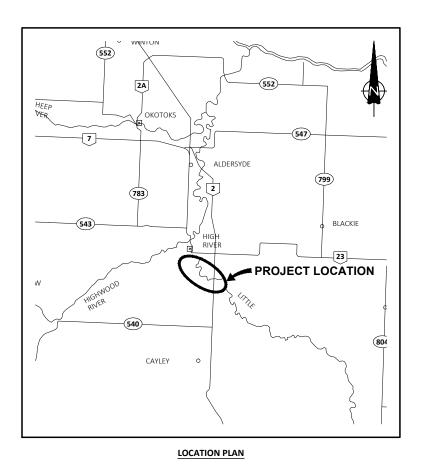
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APPENDIX B - AIRPORT PROTECTION OVERLAY AREA & OBSTACLE LIMITATION SURFACES

(Map Disclaimer: This Map illustrates the approximate Obstacle Limitation Surfaces and is not an exact representation of the Surfaces or the Airport Protection Overlay area)



APPENDIX C: SUBMITTED PLANS



2210-069-00



SITE PLAN

DRAWING LIST:

| ELECTRICA | L |
|-----------|----------------------------------|
| E1.0E | SITE PLAN EXISTING |
| E1.1E | SITE PLAN EXISTING APRON SECTION |
| E1.2E | ELECTRICAL BUILDING DEMOLITION |
| E1.1 | SITE PLAN |
| E1.2 | SITE PLAN SECTION 1 |
| E1.3 | SITE PLAN SECTION 2 |
| E1.4 | SITE PLAN SECTION 3 |
| E1.5 | SITE PLAN SECTION 4 |
| E1.6 | SITE PLAN SECTION 5 |
| E1.7 | SITE PLAN SECTION 6 |
| E1.8 | ELECTRICAL BUILDING LAYOUT |
| E1.9 | PANEL MOUNTING LAYOUT |
| E1.10 | PAPI SYSTEM LAYOUT |
| E1.11 | RUNWAY MARKINGS DETAILS 1 OF 2 |
| E1.12 | RUNWAY MARKING DETAILS 2 OF 2 |
| E2.0 | SINGLE LINE DIAGRAM |

PANEL AND LIGHTING SCHEDULES

MISCELLANEOUS DETAILS

E3.1 **CONTROL WIRING**

E3.2 **BILL OF MATERIALS AND SPECIFICATIONS**

PAPI SYSTEM DETAIL 3 OF 3

WIND CONE PILE DETAIL PAPI SYSTEM DETAIL 1 OF 3 **PAPI SYSTEM DETAIL 2 OF 3**

FOOTHILLS COUNTY FOOTHILLS REGIONAL AIRPORT LIGHTING REPLACEMENT **FOR REVEIW**



- ALL EXISTING EQUIPMENT TO BE REMOVED. THIS
 INCLUDES WIND CONE, RUNWAY/TAXIWAY/APRON
 LIGHTS, LIGHT SUPPORTS POWER SUPPLIES, CONTROLS,
 CABLE PULL PITS.
- 2. EACH EXISTING LIGHT HAS AN ELECTRICAL BOX (PULL PIT).
 CABLE APPARATUS WITHIN PULL PIT IS TO BE REMOVED
 AND UNDERGROUND CABLES TO BE CUTOFF AND
 ABANDONED PRIOR TO REMOVAL OF PULL PIT. VOID
 REMAINING FROM REMOVAL OF PULL PIT TO BE FILLED
 WITH TOP SOIL.
- 3. POWER CONTROL IS LOCATED IN ELECTRICAL BUILDING AT SOUTH-WEST CORNER OF APRON.
- 4. ALL EXISTING RUNWAY MARKINGS SHOW IN BOLD TO BE REMOVED. EXISTING RUNWAY MARKINGS SHOWN IN LIGHT TO BE PRESERVED.

LE = LIGHT EXISTING

EXECUTE:

1. NO PULL PIT FOR EXISTING WIND CONE LIGHT.

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

| | | <u> </u> |
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| 1 | 24-12-18 | FOR REVIEW |
| ISSUE | YY-MM-DD | REVISION |
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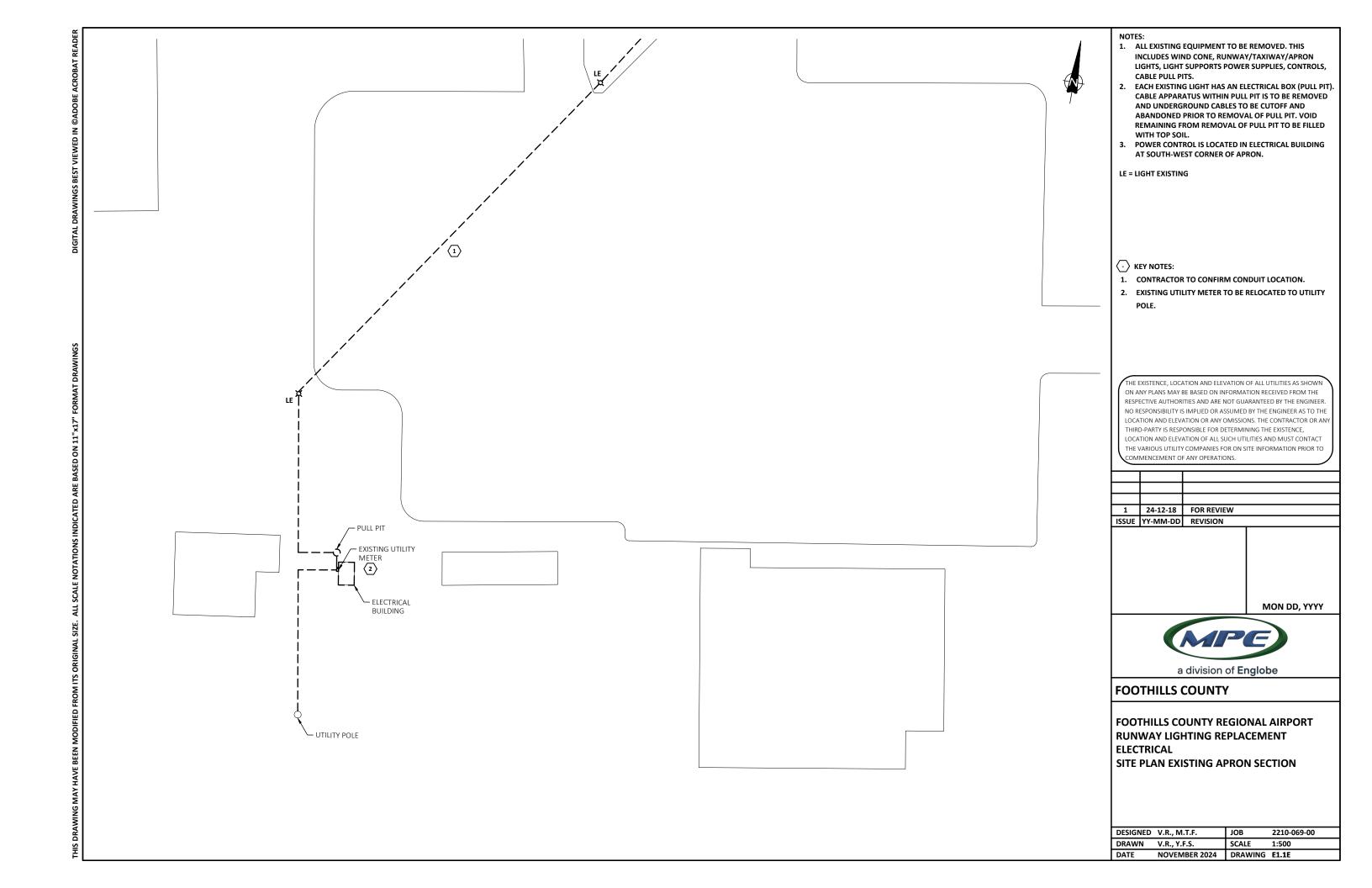
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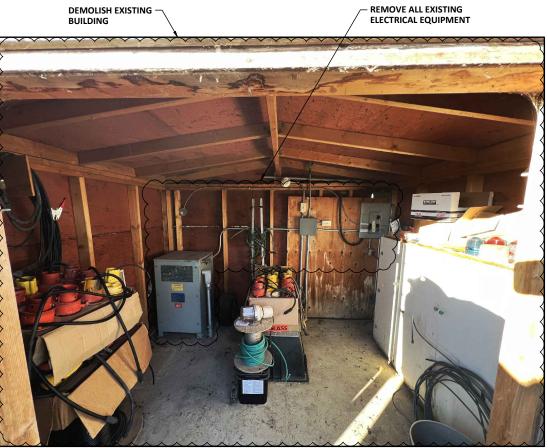
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FOOTHILLS COUNTY

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:5000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.0E |
| | | | |



DEMOLISH EXISTING



METER TO BE RELOCATED TO — UTILITY TRANSFORMER POLE



ELECTRICAL BUILDING INTERIOR ELECTRICAL BUILDING EXTERIOR

NOTES:

- 1. DEMOLISH EXISTING BUILDING.
- 2. UTILITY METER TO BE RELOCATED TO NEARBY UTILITY
- 3. NEW SEA CAN TO SERVE AS ELECTRICAL BUILDING TO BE FED BY NEARBY POLE MOUNTED TRANSFORMER.

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

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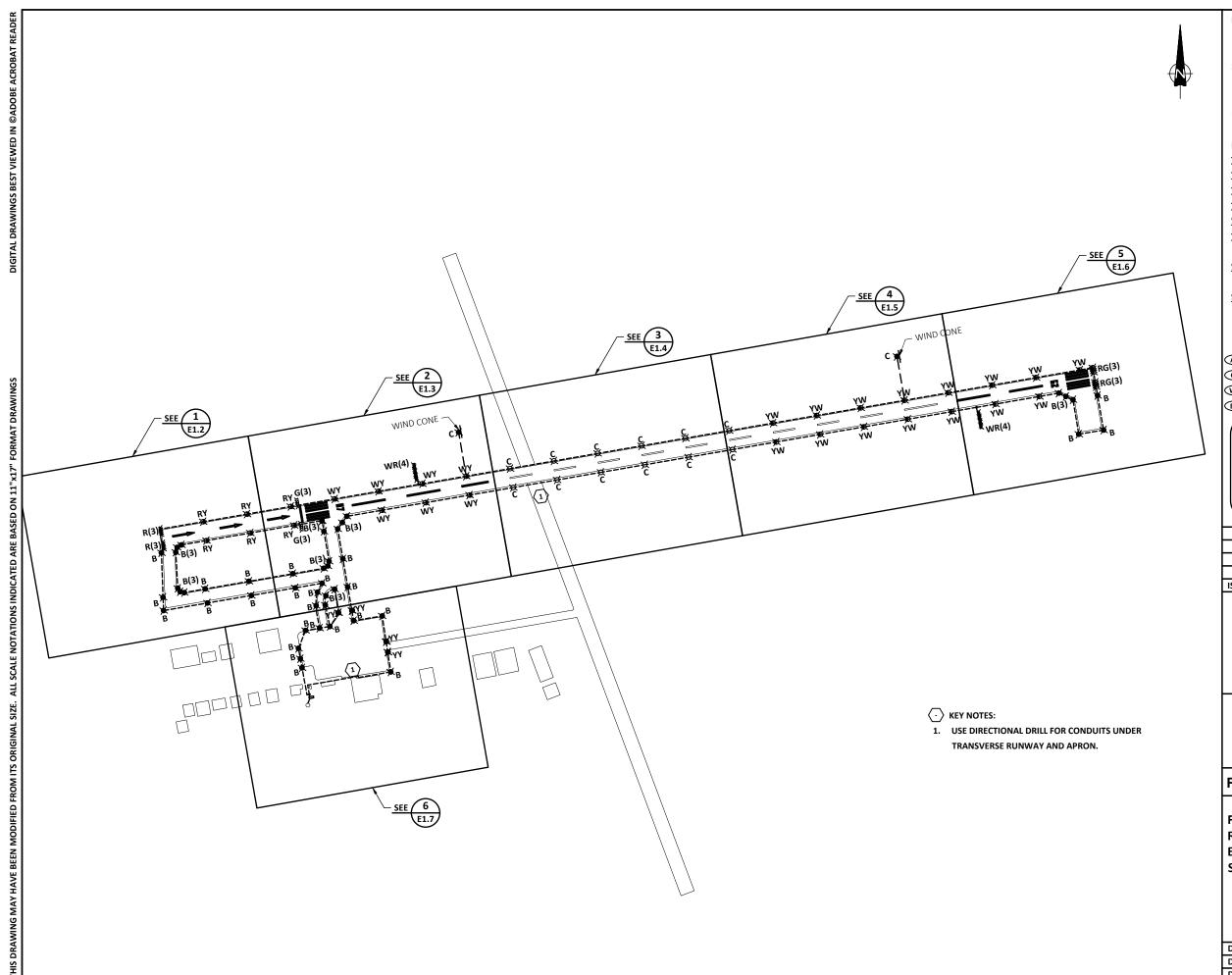
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FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT **RUNWAY LIGHTING REPLACEMENT** ELECTRICAL ELECTRICAL BUILDING DEMOLITION

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E1.2E |



- NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL STATE.
- 3. OWNER WILL PROVIDE SURVEY FOR LOCATIONS OF NEW LIGHTS
- 4. ALL RUNWAY MARKING SHOWN IN BOLD TO BE PAINTED ACCORDING TO MARKING SPECIFICATIONS. ALL EXISTING RUNWAY MARKING TO BE PRESERVED SHOWN IN LIGHT.
- **■** B TAXIWAY CD EDGE LIGHT (BLUE) C/W PULL PIT
- **★** C APRON CD EXIT LIGHT (YELLOW) C/W PULL PIT
- **★** c WIND CONE LIGHT (CLEAR)
- IX RG THRESHOLD CD LIGHT (RED/GREEN) C/W PULL PIT
- 3 G DISPLACED CD THRESHOLD LIGHT (GREEN/BLANK) C/W
-)X(RY DISPLACEMENT CD EDGE LIGHT (RED/YELLOW) C/W PULL
 PIT
- X(WY RUNWAY CD EDGE LIGHT (WHITE/YELLOW) C/W PULL
 PIT
- **★** R RUNWAY CD END LIGHT (BLANK/RED) C/W PULL PIT
- **★**WR PAPI LIGHT (WHITE/RED)
- AR ARCAL UNIT
- CC CONSTANT CURRENT REGULATOR
- WC WIND CONE
- BN BEACON

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

| 24-12-18 | FOR REVIEW | |
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| YY-MM-DD | REVISION | |
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MON DD, YYYY



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FOOTHILLS COUNTY

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:5000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.1 |

- NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL STATE
- 3. OWNER WILL PROVIDE SURVEY FOR LOCATIONS OF NEW LIGHTS
- 4. ALL RUNWAY MARKING SHOWN IN BOLD TO BE PAINTED ACCORDING TO MARKING SPECIFICATIONS. ALL EXISTING RUNWAY MARKING TO BE PRESERVED SHOWN IN LIGHT.

- ★ B TAXIWAY CD EDGE LIGHT (BLUE) C/W PULL PIT

 ★ C APRON CD EXIT LIGHT (YELLOW) C/W PULL PIT
- **★** c WIND CONE LIGHT (CLEAR)
- X RG THRESHOLD CD LIGHT (RED/GREEN) C/W PULL PIT
- 3 G DISPLACED CD THRESHOLD LIGHT (GREEN/BLANK) C/W
-)X(RY DISPLACEMENT CD EDGE LIGHT (RED/YELLOW) C/W PULL
 PIT
-)X(WY RUNWAY CD EDGE LIGHT (WHITE/YELLOW) C/W PULL
- **其** R RUNWAY CD END LIGHT (BLANK/RED) C/W PULL PIT
- **★**WR PAPI LIGHT (WHITE/RED)
- AR ARCAL UNIT
- CC CONSTANT CURRENT REGULATOR
- WC WIND CONE
- BN BEACON

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

| 1 | 24-12-18 | FOR REVIEW | |
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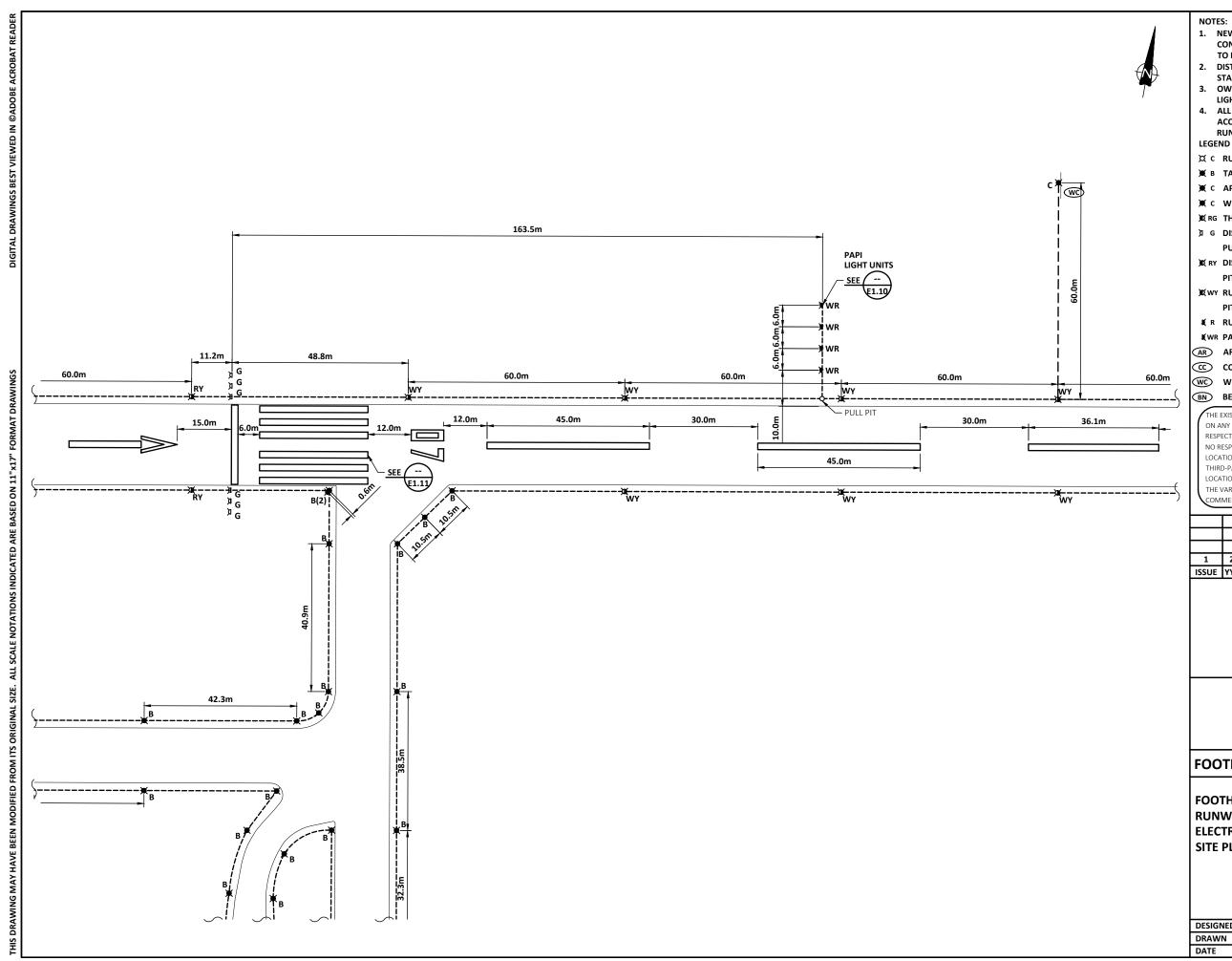
MON DD, YYYY



a division of **Englobe**

FOOTHILLS COUNTY

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
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| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.2 |
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- 1. NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL
- 3. OWNER WILL PROVIDE SURVEY FOR LOCATIONS OF NEW
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- XX RY DISPLACEMENT CD EDGE LIGHT (RED/YELLOW) C/W PULL
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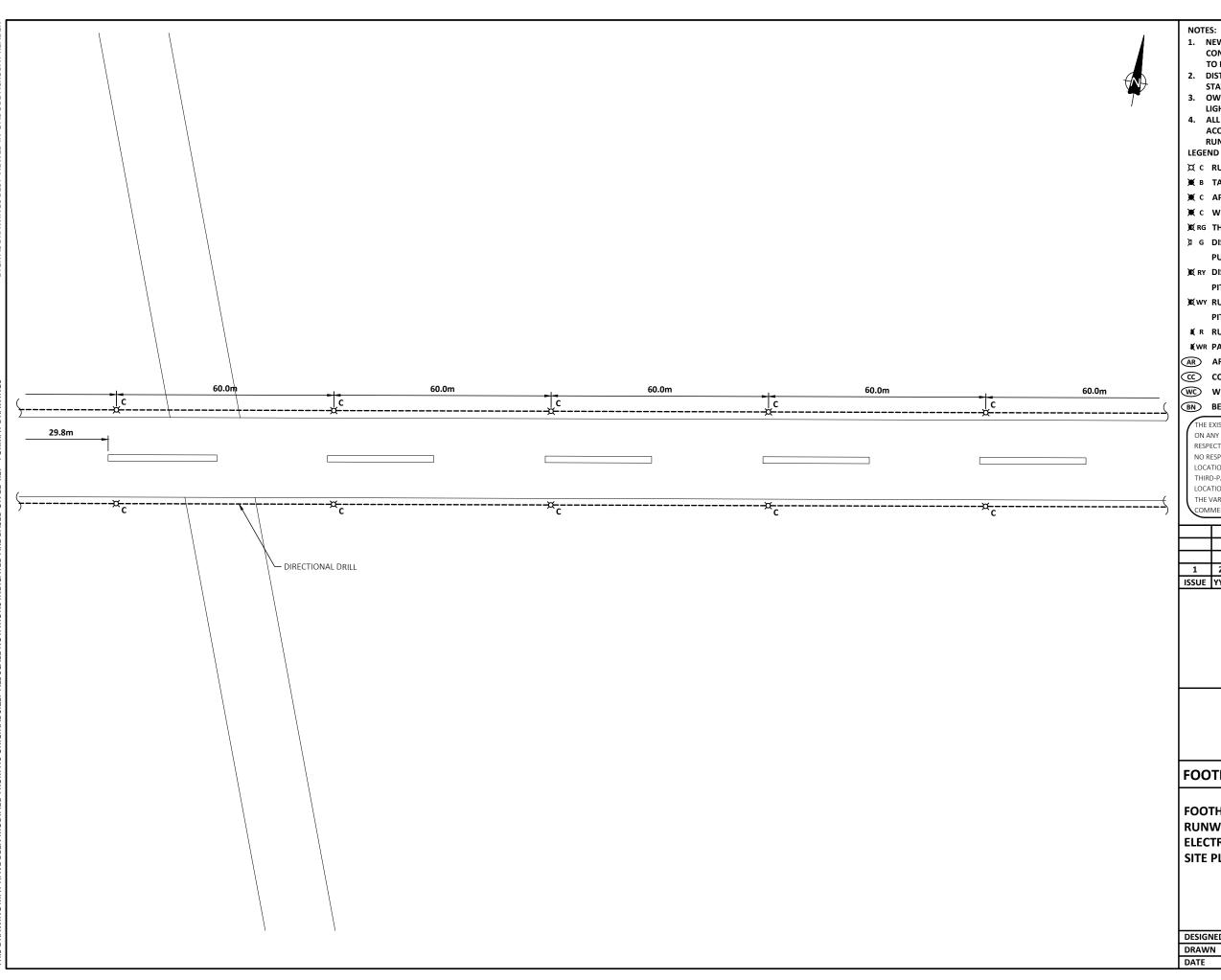
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FOOTHILLS COUNTY

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| DATE | NOVEMBER 2024 | DRAWING | E1.3 |



- 1. NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
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- 4. ALL RUNWAY MARKING SHOWN IN BOLD TO BE PAINTED ACCORDING TO MARKING SPECIFICATIONS. ALL EXISTING RUNWAY MARKING TO BE PRESERVED SHOWN IN LIGHT.

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FOOTHILLS COUNTY

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
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| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.4 |

NOTES: 60.0m

- 1. NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL
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- 4. ALL RUNWAY MARKING SHOWN IN BOLD TO BE PAINTED ACCORDING TO MARKING SPECIFICATIONS. ALL EXISTING RUNWAY MARKING TO BE PRESERVED SHOWN IN LIGHT.

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FOOTHILLS COUNTY

| DRAWN V.R., Y.F.S. SCALE 1:1000 DATE NOVEMBER 2024 DRAWING E1.5 | DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|---|----------|---------------|---------|-------------|
| DATE NOVEMBER 2024 DRAWING E1.5 | DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| | DATE | NOVEMBER 2024 | DRAWING | E1.5 |

YW 27.0m 45.0m LIGHT UNITS



- NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL STATE
- 3. OWNER WILL PROVIDE SURVEY FOR LOCATIONS OF NEW LIGHTS.
- ALL RUNWAY MARKING SHOWN IN BOLD TO BE PAINTED ACCORDING TO MARKING SPECIFICATIONS. ALL EXISTING RUNWAY MARKING TO BE PRESERVED SHOWN IN LIGHT.
- □ C RUNWAY CD EDGE LIGHT (CLEAR) C/W PULL PIT
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 PIT
-)X(WY RUNWAY CD EDGE LIGHT (WHITE/YELLOW) C/W PULL
 PIT
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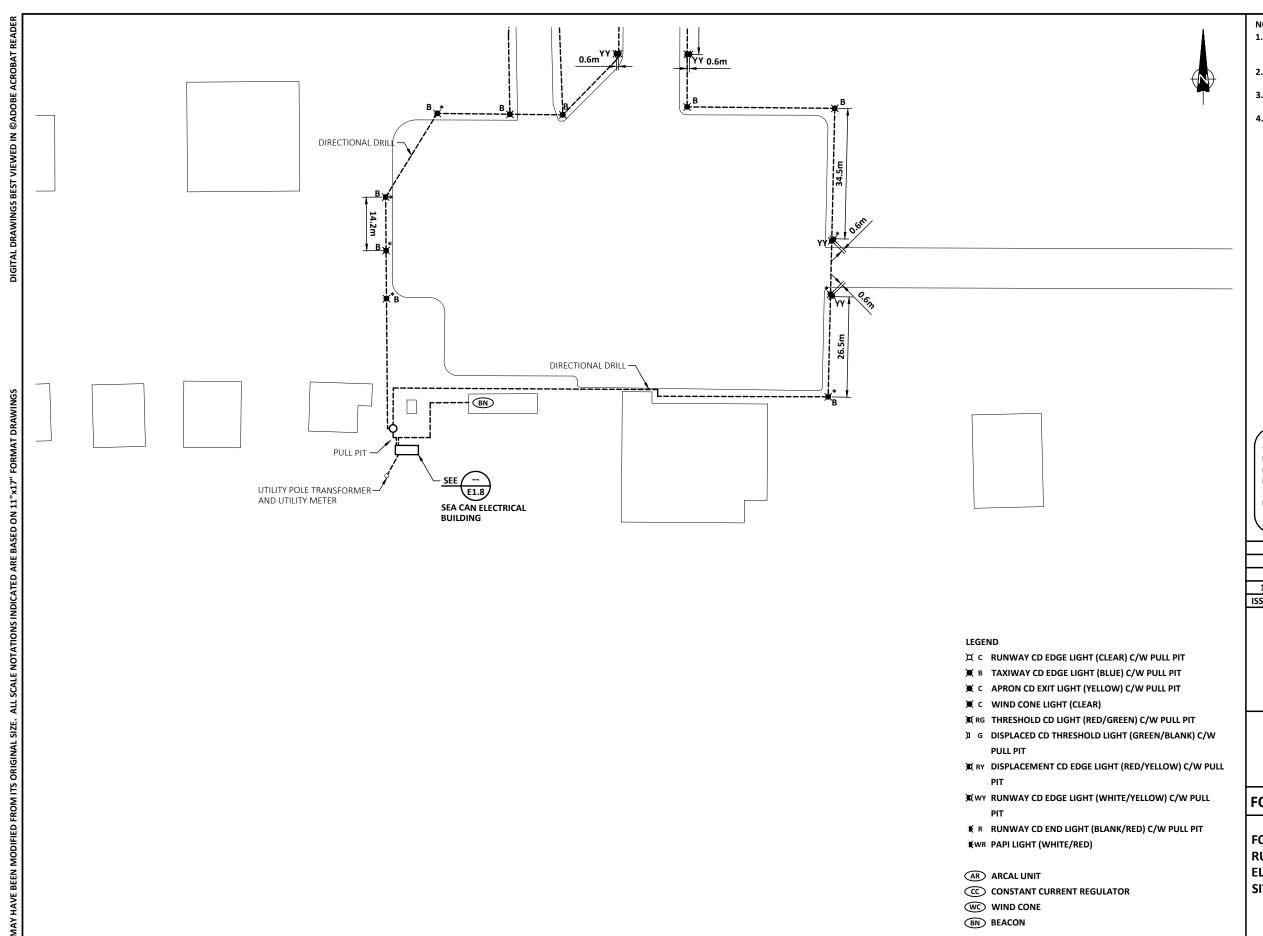
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FOOTHILLS COUNTY

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| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.6 |



- NEW LIGHTS, WIND CONE C/W LIGHTING AND LIGHTING CONTROL TO BE INSTALLED. NEW CONDUIT AND WIRING TO BE INSTALLED FOR ALL LIGHTS.
- 2. DISTURBED GROUND TO BE RESTORED TO ORIGINAL STATE
- 3. OWNER WILL PROVIDE SURVEY FOR LOCATIONS OF NEW LIGHTS.
- LIGHTS WITH ASTERISK (*) ARE APPROXIMATE LOCATION. CONTRACTOR TO DETERMINE LOCATION FOLLOWING SPECIFICATIONS.

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

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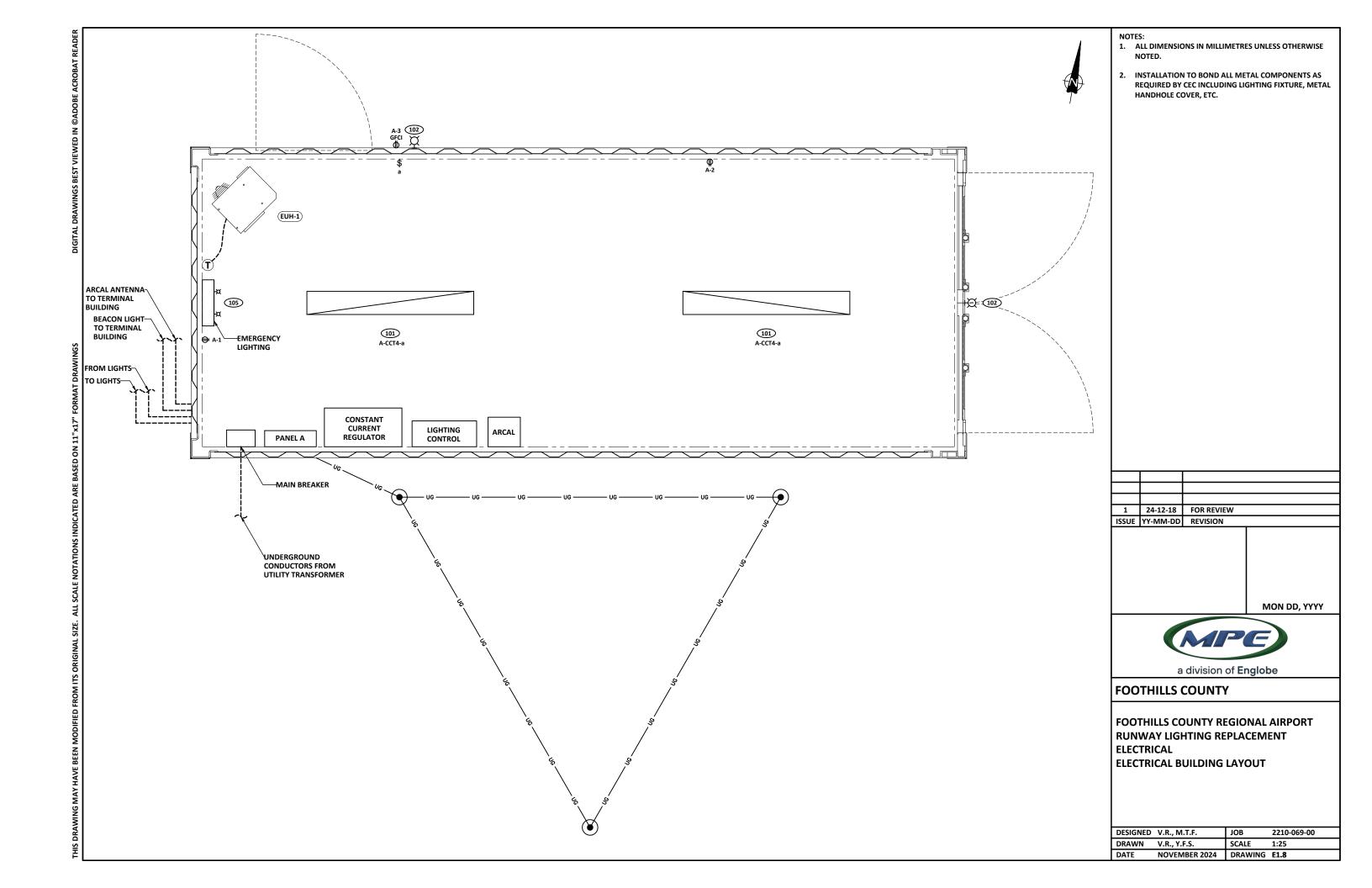
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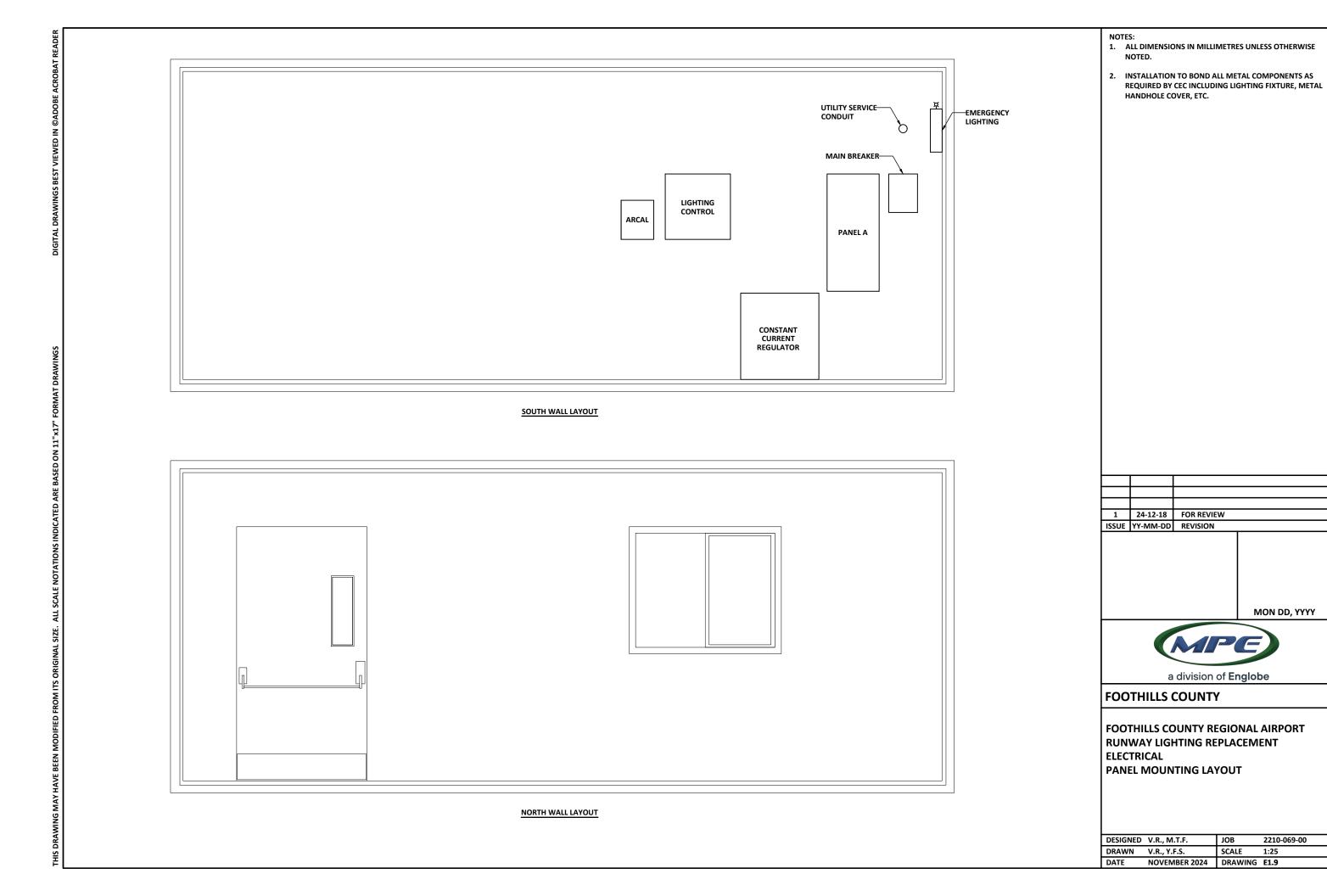


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FOOTHILLS COUNTY

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
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| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.7 |





UNIT A 🔀 191.2m UNIT D 🗪 **RUNWAY END LIGHTS** 163.6m RUNWAY DISPLACED < UNIT D PAPI SYSTEM UNIT LIGHTS LAYOUT

NOTES:

RUNWAY ———
THRESHOLD/END

 DRAWING PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY AND IS NOT TO SCALE.

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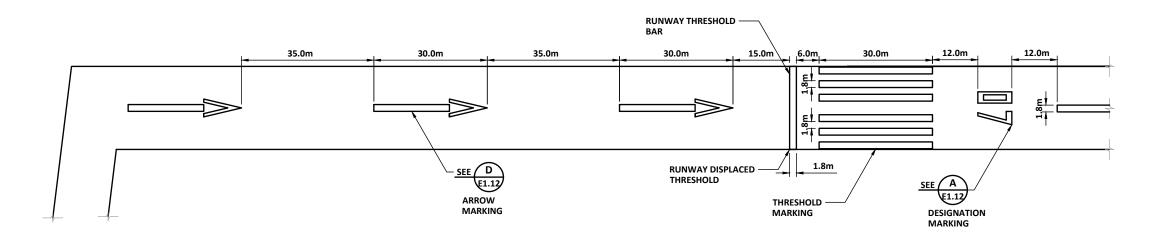


FOOTHILLS COUNTY

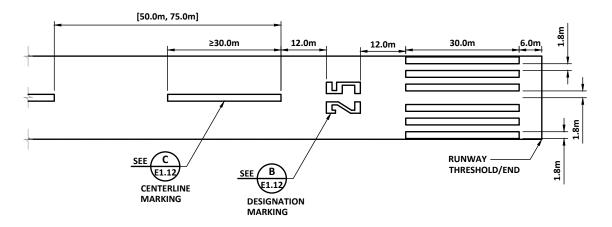
FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL PAPI SYSTEM LAYOUT

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
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| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.10 |

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RUNWAY MARKINGS - WEST



RUNWAY MARKINGS - EAST

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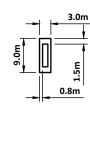
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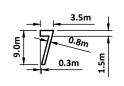


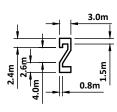
FOOTHILLS COUNTY

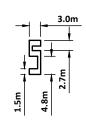
FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL RUNWAY MARKINGS DETAILS 1 OF 2

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.11 |











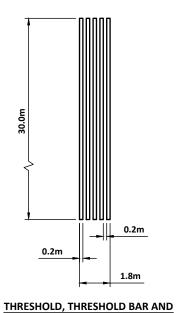


RUNWAY DESIGNATION MARKING DIMENSIONS

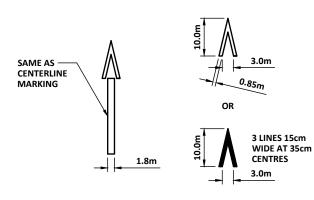


RUNWAY DESIGNATION MARKING DETAIL

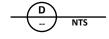




CENTERLINE MARKING DETAIL



ARROW MARKING DETAIL



RUNWAY DESIGNATION MARKING SPECIFICATIONS:

- 1. STROKE WIDTH FOR VERTICAL AND INCLINED COMPONENTS ARE 0.8 METERS.
- 2. STROKE WIDTH FOR HORIZONTAL COMPONENTS ARE 1.5 METERS.
- 3. DUAL NUMERALS ARE SPACED 2.2 METERS APART.
- 4. HEIGHT OF DESIGNATION MARKING IS 9.0 METERS
- 5. WIDTH OF DESIGNATION MARKING IS 3.0 METERS.
- 6. LOWER EDGE OF RUNWAY DESIGNATION MARKING TO BE 12 METERS +- 0.3 METER FROM THE TOP EDGE OF THE THRESHOLD MARKING OR FROM THRESHOLD WHERE NO THRESHOLD MARKING IS PROVIDED.
- 7. RUNWAY DESIGNATION MARKING IS CENTERED ON THE RUNWAY CENTERLINE USING THE OVERALL WIDTH OF THE DESIGNATION.

THRESHOLD, THRESHOLD BAR AND RUNWAY CENTERLINE MARKINGS SPECIFICATIONS:

- 1. THRESHOLD MARKING COMMENCES 6 METERS +-0.3 METER FROM THE THRESHOLD.
- 2. THRESHOLD MARKING IS SEPARATED INTO TWO SYMMETRICAL GROUPS OF LONGITUDINAL STRIPES, SEPARATED BY A 3.6 METERS +-0.2 METER GAP CENTERED ON THE CENTERLINE OF THE RUNWAY.
- 3. EACH STRIP WITHIN A GROUP IS 30 METERS +-0.3 METER LONG, 1.8 METERS +-0.1 METER WIDE AND SPACED 1.8 METERS +-0.1 METER FROM THE NEXT STRIPE.
- 4. THE STRIP IS STRIATED WITH A SERIES OF UNIFORMLY SPACED LONGITUDINAL PAINTED LINES AND GAPS WITH WIDTHS OF 15cm +-5cm PROVIDING A MINIMUM OF 50% PAINT COVERAGE OF THE STRIPE.
- 5. THE LOWER END OF THE RUNWAY THRESHOLD BAR IS LOCATED AT THE DESIGNATED THRESHOLD POSITION
- THE THRESHOLD BAR EXTENDS PERPENDICULAR AND OUTWARDS FROM THE RUNWAY CENTERLINE, TO BOTH SIDES OF THE RUNWAY.
- THE THRESHOLD BAR IS A SOLID LINE 1.8 METERS +-0.1 METER IN WIDTH AND WHITE IN COLOUR.
- 8. THE RUNWAY CENTERLINE MARKING IS LOCATED ALONG THE CENTERLINE OF THE RUNWAY BETWEEN THE RUNWAY DESIGNATION MARKINGS.
- 9. THE RUNWAY CENTERLINE MARKING COMMENCES 12 METERS +-0.3 METER BEYOND THE RUNWAY DESIGNATION MARKING AND ENDS 12 METERS +-0.3 METER FROM THE DESIGNATION MARKING AT THE OPPOSITE END.
- 10. THE CENTERLINE MARKING STRIP IS STRIATED WITH A SERIES OF UNIFORMLY SPACES LONGITUDINAL LINES AND GAPS WITH WIDTHS OF 15cm +-5cm YIELDING A MINIMUM OF 50% PAINT COVERAGE OF THE STRIPE.
- 11. THE LENGTH OF A STRIP PLUS A GAP IS NOT LESS THAN 50 METERS OR MORE THAN 75 METERS.
- 12. THE LENGTH OF EACH STRIPE IS AT LEAST EQUAL TO THE LENGTH OF THE GAP OR 30 METERS +-0.3 METER, WHICHEVER IS GREATER.
- 13. THE WIDTH OF THE RUNWAY CENTERLINE MARKING IS BETWEEN 1.05 METERS AND 2.25 METERS.

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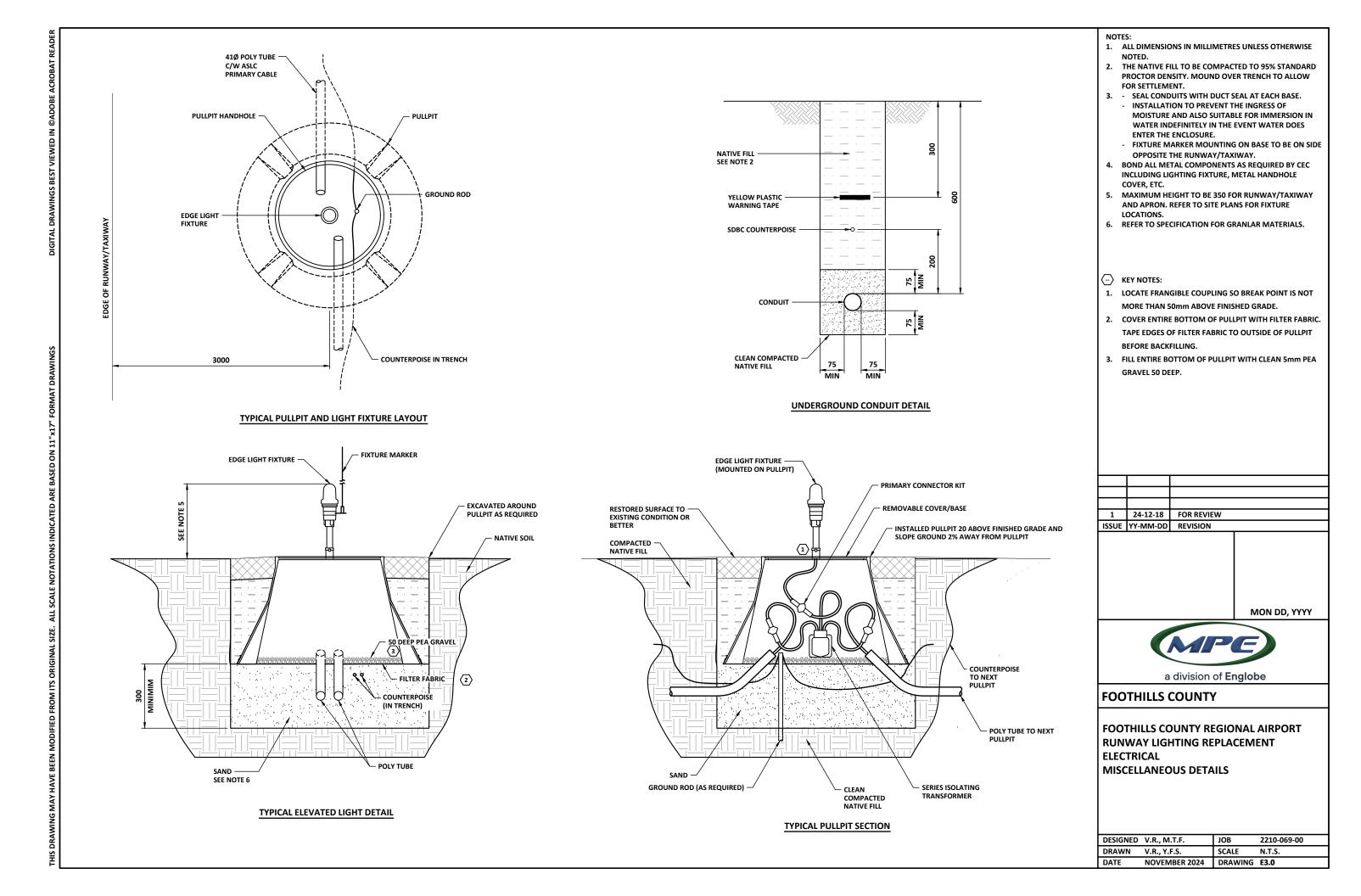
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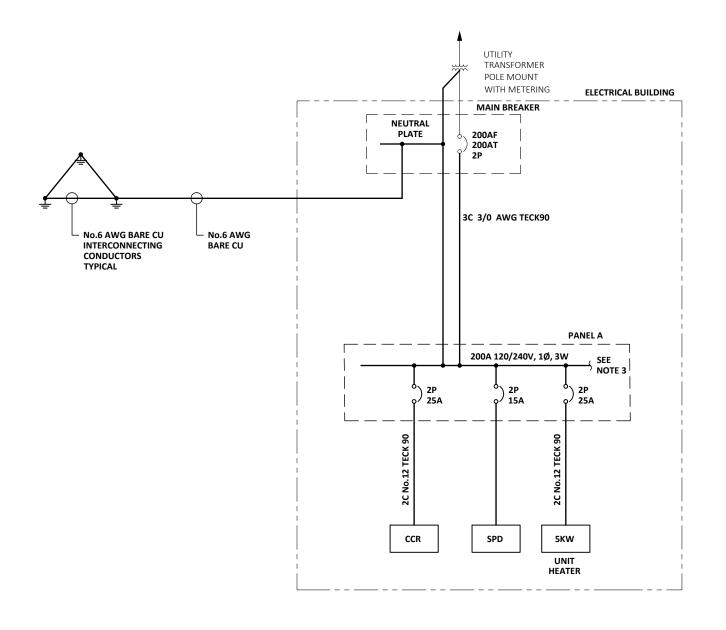


FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL RUNWAY MARKING DETAILS 2 OF 2

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:1000 |
| DATE | NOVEMBER 2024 | DRAWING | E1.12 |





- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS AND SYMBOLS REFER TO THE LEGEND DRAWINGS.
- ALL PROPOSED ITEMS ARE SHOWN IN DARK BOLD WITH ALL EXISTING IN LIGHT.
- 3. FOR OTHER LOADS REFER TO PANEL SCHEDULES.
- SURGE PROTECTION DEVICE TO BE SURGEPURE/M1 1120-3.

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FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL SINGLE LINE DIAGRAM

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E2.0 |

| | | PAN | PANEL A SCHEDULE | | | |
|-------------|--------------|-------------|--|-------------|--------------|------------------------------------|
| | LOC | ATION: | ELECTRICA | SEAC | AN | |
| | 120, | /240VA | , 3W, 200A | LUGS ON | | |
| DESCRIPTION | TRIP AMPS | BRK. No. | PHASE A B | BRK. No. | TRIP AMPS | DESCRIPTION |
| SPD | 15 | 1 | \vdash | 2 | 15 | SEACAN EXTERIOR/EMERGENCY LIGHTING |
| | – 15 | 3 | - - | 4 | 15 | SEACAN INTERIOR LIGHTING |
| CCR | 25 | 5 | | 6 | 15 | SEACAN INTERIOR RECEPTACLES |
| | L 25 | 7 | } - - ∳ | 8 | 15 | SEACAN EXTERIOR RECEPTACLES |
| UNIT HEATER | 25 | 9 | - - - | 10 | 15 | BEACON |
| | └ 25 | 11 | - - | 12 | 15 | VENTILATION |
| | 15 | 13 | ├ | 14 | 15 | |
| | 15 | 15 | - | 16 | 15 | |
| | 15 | 17 | - - - - - - - - - | 18 | 15 | |
| | 15 | 19 | }– – | 20 | 15 | |
| | 15 | 21 | | 22 | 15 | |
| | 15 | 23 | }_ | 24 | 15 | |
| | 15 | 25 | ├-∳- | 26 | 15 | |
| | 15 | 27 | } — — | 28 | 15 | |
| | 15 | 29 | → | 30 | 15 | |

| | LUMINAIRE SCHEDULE | | | | | | |
|------|---|------------------------------------|---------|---------|------------------|----------|--|
| TYPE | DESCRIPTION | MAKE/MODEL | LAMPING | VOLTAGE | MOUNTING/BALLAST | QUANTITY | |
| 101 | INTERIOR LIGHT | HUBBEL TRP2-24L-30-4K7-3-UNV-DB-PC | LED | 120V | | 2 | |
| 102 | EXTERIOR LIGHT | HUBBEL TRP2-24L-30-4K7-3-UNV-DB-PC | LED | 120V | | 2 | |
| | | | | | | | |
| 105 | EMERGENCY LIGHTING CENTRAL BATTERY WITH HEADS | LUMACELL RG24S-144-2-LD13 | | 120V | | 1 | |

- FOR INFORMATION REGARDING GENERAL NOTES, ABBREVIATIONS AND SYMBOLS REFER TO THE LEGEND DRAWINGS.
- ALL PROPOSED ITEMS ARE SHOWN IN DARK BOLD WITH ALL EXISTING IN LIGHT.

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| 1 | 24-12-18 | FOR REVIEW | |
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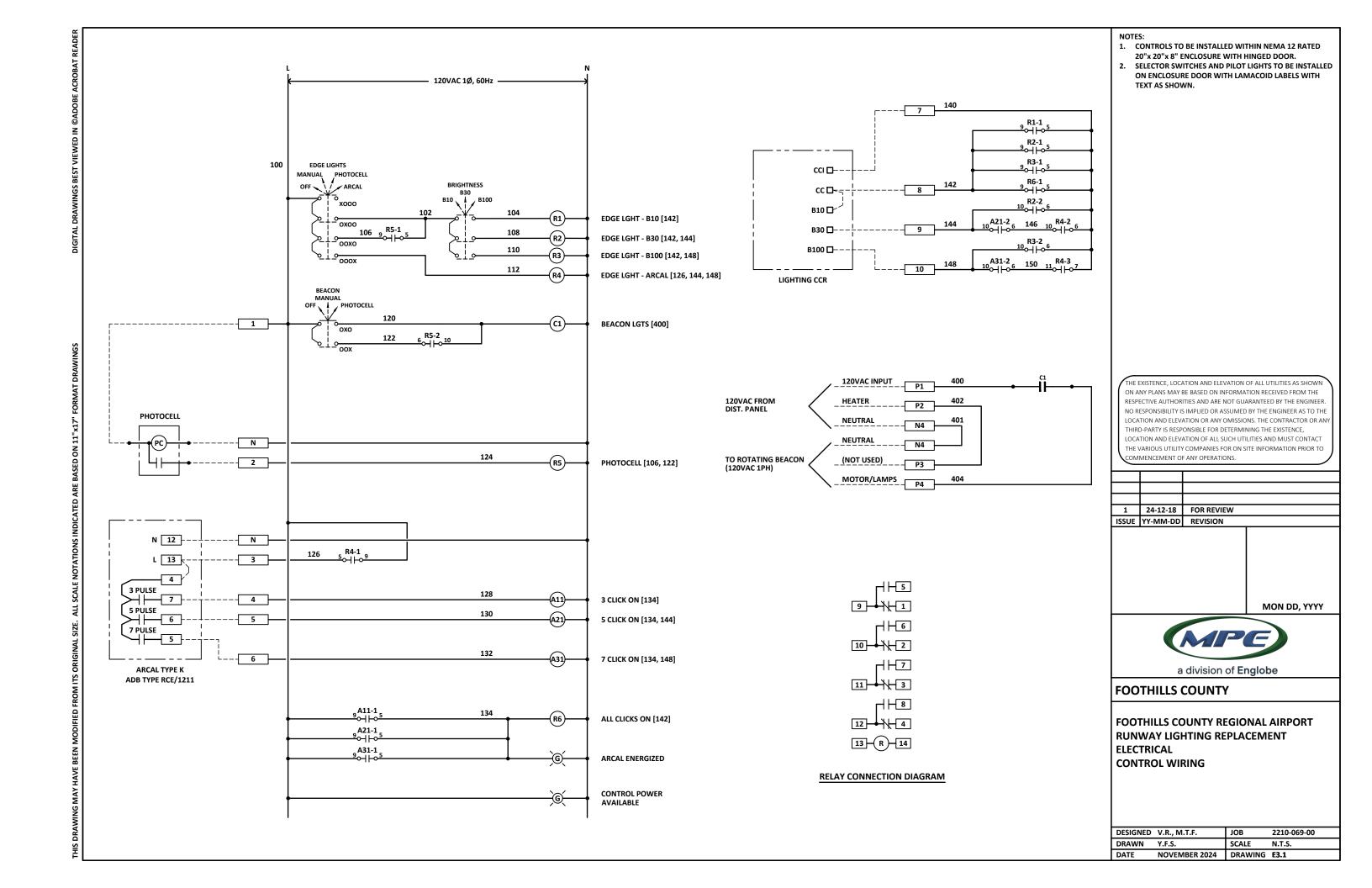
MON DD, YYYY



FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL PANEL AND LIGHTING SCHEDULES

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E2.1 |



| | LIGHTING | | | |
|------------------------|--|--|-------|-------------|
| SYMBOL | ITEM | QTY | SPARE | TOTAL |
| α^{c} | RUNWAY LED EDGE LIGHT WHITE HEIGHT 350 ADB SAFEGATE EMIS2WW05SC0000 OR EQUIV. | 12 | 2 | 14 |
| ₩ _B | TAXIWAY EDGE LIGHT BLUE HEIGHT 350 ADB SAFEGATE ETES-1410 OR EQUIV. | 47 | 4 | 51 |
| ≡R | WIND CONE LIGHT ADB SAFEGATE L807-S1-IN-120 OR EQUIV. | 2 | 1 | 3 |
| Жγ | APRON EXIT LIGHT YELLOW HEIGHT 350 ADB SAFEGATE ETES-5410 OR EQUIV. | 8 | 2 | 10 |
| ∭ _{RG} | RUNWAY THRESHOLD/END LIGHT RED/GREEN HEIGHT 350 ADB SAFEGATE EMIS2RG05SC0000 OR EQUIV. | 6 | 1 | 7 |
| α _G | RUNWAY DISPLACED THRESHOLD GREEN/BLANK HEIGHT 350 ADB SAFEGATE EMIS2GN05SC0000 OR EQUIV. | 6 | 1 | 7 |
| ∭Z _{RY} | RUNWAY DISPLACEMENT EDGE LIGHT RED/YELLOW HEIGHT 350 ADB SAFEGATE EMIS2RY05SC0000 OR EQUIV. | 6 | 1 | 7 |
| ∭w _w | RUNWAY EDGE LIGHT WHITE/YELLOW HEIGHT 350 ADB SAFEGATE EMIS2WY05SC0000 OR EQUIV. | 22 | 3 | 25 |
| ≰ _R | RUNWAY END LIGHT RED/BLANK HEIGHT 350 ADB SAFEGATE EMIS2RN05SC0000 OR EQUIV. | 6 | 1 | 7 |
| € _{WR} | PAPI SYSTEM LIGHT WHITE/RED, ADB SAFEGATE RPB431S14SN111 OR EQUIV. | 8 | 0 | 8 |
| N/A | PULL PIT/BASE MOLDED POLYETHYLENE CONICAL PULL PIT 508 DIAMETER TOP, 450 HEIGHT, CENTURY PLASTICS CPL-400 OR EQUIV. | 114 | 4 | 118 |
| N/A | BASE PLATE 508Ø, 53Ø NPT TAP, GALVANIZED STEEL, LOCKING COVER, CENTURY PLASTICS CPL-401H OR EQUIV. | 110 | 4 | 114 |
| N/A | BLANK COVER 508Ø GALVANIZED STEEL, LOCKING COVER, CENTURY PLASTICS CPL-403 COVER OR EQUIV. | 4 | 1 | 5 |
| N/A | FIXTURE MARKER: HIGH GRADE POLYURETHANE TUBE, 36" LENGTH, SPRING BASE, RUST RESISTANT MOUNTING BRACKET ATTACHED TO LIGHT FIXTURE, REPLACEABLE REFLECTIVE SLEEVE. EATON CROUSE HINDS RELM MODEL 1200-36 OR EQUIV. | 110 | 4 | 114 |
| N/A | BASE CAN FOR RELIANCE PAPI LIGHT ADB SAFEGATE L-867B BASE CAN OR EQUIV. | 8 | 2 | 10 |
| N/A | AIRPORT SERIES LIGHTING CABLE- (ASLC) 1C, COPPER, 8 AWG, 5KV | AS REQUIRED- USE FOR ALL NEW EDGE LIGHTING | | NEW EDGE |
| N/A | COUNTERPOISE- SOFT-DRAWN BARE COPPER, 8 AWG | AS REQUIRED- USE ABOVE ALL NEW ASLC | | LL NEW ASLC |
| N/A | CONDUIT FOR ASLC - 41Ø (1.5") POLY TUBE (HDPE) | AS REQUIRED- USE WITH ALL NEW UNDERGROUND ASLC | | |
| N/A | GROUND ROD- 19Ø X 3000, COPPER CLAD, FULLY DRIVEN C/W THERMITE WELD OR CRIMP TYPE CONNECTOR TO COUNTERPOISE | AS REQUIRED- SPACING BETWEEN GROUND RODS MEASURED ALONG COUNTERPOISE DID NOT EXCEED 150M | | |

| OTHER | | | | |
|-------|--|-----|--|--|
| | ITEM | QTY | | |
| AR | ARCAL CONTROL UNIT, TYPE K, C/W REMOTE HEAVY DUTY ANTENNA AND ANTENNA MOUNTING HARDWARE, ADB SAFEGATE RCE SERIES OR EQUIV. | 1 | | |
| (3) | CONSTANT CURRENT REGULATOR 7.5KW, 240VAC INPUT | 1 | | |
| (WC) | WIND CONE: SIZE 1 INTERNALLY LIT, MOUNT ON TIP DOWN POLE TO ALLOW SERVICE FROM GROUND SUPPORT TO BE FRANGIBLE | 2 | | |

BILL OF MATERIALS

SPECIFICATIONS:

- 1. LIGHT SYSTEM TO BE IN ACCORDANCE WITH THE LATEST EDITION OF TRANSPORT CANADA STANDARD TP312.
- 2. RUNWAY EDGE LIGHTS AND TAXIWAY EDGE LIGHTS TO HAVE A MAXIMUM SEPARATION OF 60 METERS +/- 1 METER.
- RUNWAY EDGE LIGHTS TO BE PLACED ALONG THE FULL LENGTH OF THE RUNWAY, IN TWO
 PARALLEL ROWS EQUIDISTANT FROM THE CENTERLINE. THE LIGHTS ON OPPOSITE
 SIDES OF THE RUNWAY AXIS ARE TO BE ON LINES AT RIGHT ANGLES TO THAT AXIS.
- RUNWAY END LIGHTS TO BE PLACED ON A LINE AT RIGHT ANGLES TO THE RUNWAY AXIS
 AS NEAR TO THE END OF THE RUNWAY AS POSSIBLE.
- THE GROUPS OF RUNWAY END LIGHTING TO BE SYMMETRICALLY DISPOSED ABOUT THE RUNWAY CENTERLINE WITH THE OUTERMOST RUNWAY END LIGHTS POSITIONED TO ALIGN WITH THE RUNWAY EDGE LIGHTS AND THE REMAINDER SPACED AT INTERVALS OF 3 METERS +/- 0.1 METER.
- LIGHTS TO BE ELEVATED MEDIUM INTENSITY LED. LIGHTING SYSTEM TO HAVE INTENSITY VARIABILITY WITH A MINIMUM OF THREE STEPS (10%, 30%, 100%).
- 7. ALL LIGHTING FIXTURES TO BE PROVIDED WITH INDIVIDUAL SERIES ISOLATING TRANSFORMER C/W PRIMARY AND SECONDARY EXTENSION CABLES, CONNECTOR KITS, ETC AS REQUIRED. SUPPLY AND INSTALL NEW 5kV 8 AWG ASLC CABLE IN CONDUIT AND 8 AWG COUNTERPOISE FOR COMPLETE MEDIUM INTENSITY LIGHTING SYSTEM.
- 8. LIGHT BODY AND SUPPORT TO BE CORROSION RESISTANT.
- LIGHT INSTALLATION TO HAVE NO EXPOSED WIRING ABOVE OR BELOW GRADE. BELOW
 GRADE WIRING TO BE IN CONDUIT. CONDUIT TO BE HDPE. ABOVE GRADE CONDUIT TO
 TRANSITION TO SCH40 PVC. CONDUIT SYSTEM TO PROHIBIT THE INGRESS OF MOISTURE
 AND DEBRIS.
- 10. UNDERGROUND CONDUIT RUNS GREATER THAN 100 METERS IN LENGTH ARE TO HAVE UNDERGROUND PULLBOX NEAR MIDDLE OF RUN. PULLBOX TO BE SUITABLE FOR VEHICLE TRAFFIC. CONTRACTOR TO PROVIDE SHOP DRAWING FOR APPROVAL.
- 11. LIGHT SYSTEM CONTROL FOR RUNWAY, TAXIWAY, APRON, WIND CONE TO INCLUDE ARCAL, PHOTOCELL, AND MANUAL. TYPE OF CONTROL SELECTABLE VIA FOUR POSITION SELECTOR SWITCH. SWITCH TO INCLUDE AN OFF POSITION. LIGHT SYSTEM CONTROL FOR BEACON TO INCLUDE PHOTOCELL AND MANUAL. TYPE OF CONTROL SELECTABLE VIA THREE POSITION SELECTOR SWITCH. SWITCH TO INCLUDE AN OFF POSITION.
- 12. SITE POWER SUPPLY AVAILABLE IS 120/240VAC SINGLE PHASE 60HZ.
- 13. NEW POWER AND CONTROLS TO BE INSTALLED IN ELECTRICAL SEACAN.
- 14. QUANTITY OF MATERIAL/EQUIPMENT TO INCLUDE SPARES OF EACH TYPE OF LIGHT AND MOUNTING HARDWARE AS INDICATED IN THE BILL OF MATERIALS. SPARE EQUIPMENT TO BE TURNED OVER TO OWNER.
- 15. ARCAL SYSTEM TO BE COMMISSIONED BY A CERTIFIED TECHNICIAN WITH A MINIMUM OF 5 YEARS AERONAUTICAL RADIO COMMUNICATIONS EXPERIENCE.
- 16. MINOR OR INCIDENTAL ITEMS NOT SHOWN IN BILL OF MATERIALS. PROVIDE ALL MATERIALS AND LABOUR FOR A COMPLETE AND OPERATIONAL SYSTEM.
- 17. TEST SYSTEM IN PRESENCE OF OWNER'S REPRESENTATIVE. REPAIR AND/OR REMEDY ALL DEFICIENCIES AND OBTAIN ACCEPTANCE OF AIRPORT MANAGER PRIOR TO USE BY AIRCRAFT.
- 18. CONTRACTOR IS RESPONSIBLE TO PROVIDE TRAINING TO OPERATORS ON ALL NEW EQUIPMENT.
- 19. EXISTING LIGHTS ARE TO BE DECOMISSIONED PRIOR TO INSTALLATION OF NEW LIGHTS.

 CONTRACTOR IS TO MINIMIZE UNAVAILABILITY OF A FUNCTIONAL LIGHTING SYSTEM.
- 20. CONTRACTOR IS TO COORDINATE WITH AIRPORT OPERATOR TO MINIMIZE DOWNTIME OF AIRPORT FUNCTIONALITY DURING DAYLIGHT.

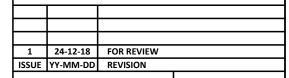
NOTES:

 WIND CONE INSTALLED ON NEW BASE AS SHOWN ON WIND CONE PILE DETAILS DRAWING.

KEY NOTES:

install antenna for arcal control unit on terminal building.

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MON DD, YYYY



FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL BILL OF MATERIALS AND SPECIFICATIONS

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E3.2 |

POLE BASE
ASSUMING UNDISTURBED NATIVE SOIL FOR FULL DEPTH

- SONO TUBE FORM AND SAND BACKFILL REQUIRED TO RESIST FROST JACKING.
- 2. CONCRETE 35MPa SULFATE RESISTANT, 4-7% AIR, 20-5 AGGREGATE.
- 3. TREMIE CONCRETE IF PILE EXCAVATION CONTAINS WATER

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

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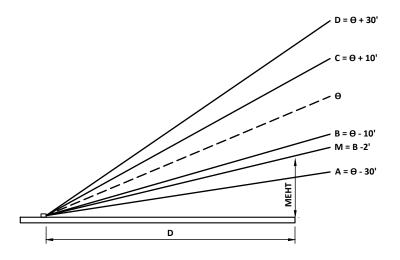
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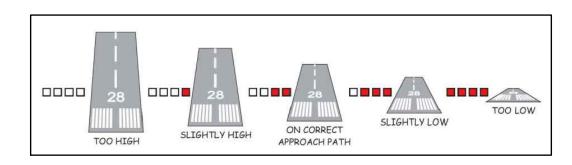
FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL WIND CONE PILE DETAIL

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:20 |
| DATE | NOVEMBER 2024 | DRAWING | E3.3 |



PAPI PROFILE



PAPI APPROACH SLOPE REPRESENTATION

SPECIFICATIONS:

- PAPI LIGHT SYSTEM TO BE IN ACCORDANCE WITH THE LATEST EDITION OF TRANSPORT CANADA STANDARD TP312.
- 2. PAPI SYSTEMS TO BE LOCATED ON THE LEFT SIDE OF THE RUNWAY.
- 3. PAPI LIGHT UNITS TO BE PLACED AT A DISTANCE OF 163.6m FROM THE THRESHOLD TOWARDS LANDING AREA. DISTANCE FROM THRESHOLD TO BE CONFIRMED BY CONTRACTOR UPON COMMISSIONING DEPENDING ON PAPI LIGHT UNIT ELEVATION THROUGH ITERATIVE PROCESS WITH FOLLOWING FORMULA:

$\Delta d = \Delta h/tan M$

- 4. PAPI LIGHT UNITS TO BE PLACED ON A LINE AT RIGHT ANGLE TO THE RUNWAY AXIS.
- 5. FRONT FACE OF EACH LIGHT UNIT IN A BAR TO BE PLACED WITHIN +/- 15 CENTIMETERS FROM LINE PERPENDICULAR TO RUNWAY AXIS.
- 6. INNERMOST PAPI LIGHT UNIT (UNIT D) TO BE PLACED 10 METERS +/- 1 METER FROM
 PLINWAY FDGE
- 7. PAPI LIGHT UNITS TO BE SPACED 6 METERS +/- 1 METER FROM EACH OTHER.
- PAPI LIGHT UNITS LENS CENTRE TO BE PLACED BETWEEN 0.6 METER AND 1.2 METER ABOVE GRADE.
- BEAM CENTRES OF ALL PAPI LIGHT UNITS TO BE WITHIN +/- 3 CENTIMETERS OF A HORIZONTAL PLANE DEFINED BY HEIGHT OF BEAM CENTRE OF UNIT B.
- 10. PAPI LIGHT UNITS TO BE AIMED OUTWARD INTO THE APPROACH ZONE ON A LINE PARALLEL TO RUNWAY CENTERLINE WITHIN A TOLERANCE OF +/- 0.5°.
- 11. PILOT MAKING APPROACH WILL SEE:
- 11.1. WHEN ON OR CLOSE TO APPROACH SLOPE, THE TWO LIGHT UNITS NEAREST THE RUNWAY EDGE AS RED AND THE TWO LIGHT UNITS FARTHEST FROM RUNWAY EDGE AS WHITE-
- 11.2. WHEN ABOVE THE APPROACH, THE ONE LIGHT UNIT NEAREST THE RUNWAY EDGE AS RED AND THE THREE LIGHT UNITS FARTHEST FROM RUNWAY EDGE AS WHITE; AND WHEN FURTHER ABOVE APPROACH SLOPE, ALL LIGHT UNITS AS WHITE;
- 11.3. WHEN BELOW THE APPROACH SLOPE, THE THREE LIGHT UNITS NEAREST RUNWAY
 EDGE AS RED AND THE LIGHT UNIT FARTHEST AWAY FROM RUNWAY EDGE AS WHITE;
 AND WHEN FURTHER BELOW THE APPROACH SLOPE, ALL LIGHT UNITS AS RED.
- 12. PAPI LIGHTS TO BE MEDIUM INTENSITY LED. LIGHTING SYSTEM TO HAVE INTENSITY VARIABILITY WITH A MINIMUM OF THREE STEPS (10%, 30%, 100%).
- 13. LIGHT BODY AND SUPPORT TO BE CORROSION RESISTANT.
- 14. LIGHT INSTALLATION TO HAVE NO EXPOSED WIRING ABOVE OR BELOW GRADE. BELOW GRADE WIRING TO BE IN CONDUIT. CONDUIT TO BE HDPE. ABOVE GRADE CONDUIT TO TRANSITION TO SCH40 PVC. CONDUIT SYSTEM TO PROHIBIT THE INGRESS OF MOISTURE AND DEBRIS.
- 15. TEST SYSTEM IN PRESENCE OF OWNER'S REPRESENTATIVE. REPAIR AND/OR REMEDY ALL DEFICIENCIES AND OBTAIN ACCEPTANCE OF AIRPORT MANAGER PRIOR TO USE BY AIRCRAFT
- CONTRACTOR IS RESPONSIBLE TO PROVIDE TRAINING TO OPERATORS ON ALL NEW EQUIPMENT.

DRAWING PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY
 AND IS NOT TO SCALE.

LEGEN

- O: APPROACH SLOPE ANGLE
- D: DISTANCE OF PAPI FROM THRESHOLD
- M: ANGLE DETERMINING MEHT
- MEHT: MINIMUM EYE HEIGHT OVER THRESHOLD
- EWH: EYE TO WHEEL HEIGHT
- WTH: WHEEL TO THRESHOLD HEIGHT
- Δd: DISTANCE OF MOVEMENT TOWARDS THRESHOLD
- Δh: DIFFERENCE IN ELEVATION BETWEEN PAPI LENS CENTRE AND RUNWAY THRESHOLD CROWN.

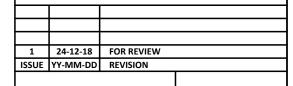
SETTINGS FOR 3° APPROACH SLOPE:

- UNIT D: 3°30'
- UNIT C: 3°10'
- UNIT B: 2°50'
 UNIT A: 2°30'
- UNIT A: 2°.
- 21 0.020
- 2' = 0.03°

FORMULA TO FIND D1 FOR PAPI:

D = (EWH+WTH)/tan M = MEHT/tan M

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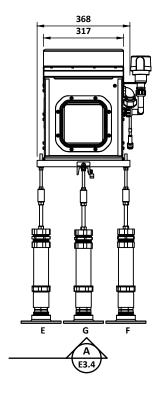
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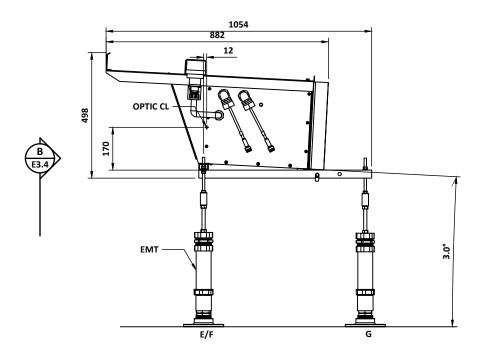


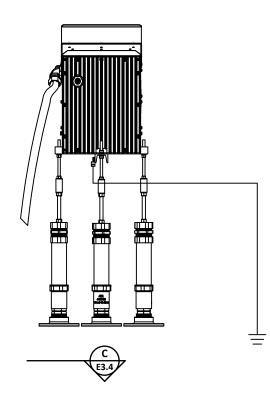
FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL PAPI SYSTEM DETAIL 1 OF 3

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E3.4 |







PAPI LIGHT UNIT

NOTES:

- SONO TUBE FORM AND SAND BACKFILL REQUIRED TO RESIST FROST JACKING.
- 2. CONCRETE 35MPa SULFATE RESISTANT, 4-7% AIR, 20-5 AGGREGATE.
- 3. TREMIE CONCRETE IF PILE EXCAVATION CONTAINS WATER

THE EXISTENCE, LOCATION AND ELEVATION OF ALL UTILITIES AS SHOWN ON ANY PLANS MAY BE BASED ON INFORMATION RECEIVED FROM THE RESPECTIVE AUTHORITIES AND ARE NOT GUARANTEED BY THE ENGINEER. NO RESPONSIBILITY IS IMPLIED OR ASSUMED BY THE ENGINEER AS TO THE LOCATION AND ELEVATION OR ANY OMISSIONS. THE CONTRACTOR OR ANY THIRD-PARTY IS RESPONSIBLE FOR DETERMINING THE EXISTENCE, LOCATION AND ELEVATION OF ALL SUCH UTILITIES AND MUST CONTACT THE VARIOUS UTILITY COMPANIES FOR ON SITE INFORMATION PRIOR TO COMMENCEMENT OF ANY OPERATIONS.

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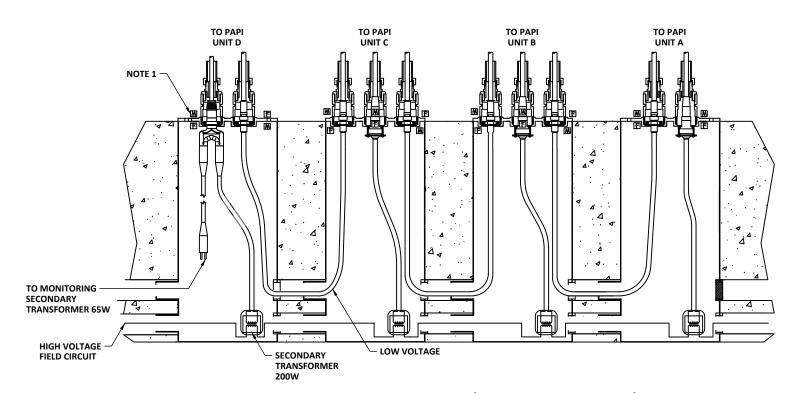
FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL PAPI SYSTEM DETAIL 2 OF 3

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | 1:15 |
| DATE | NOVEMBER 2024 | DRAWING | E3.5 |

PAPI LIGHT UNIT A AND D INSTALLATION

PAPI LIGHT UNIT B AND C INSTALLATION



4 BOX PAPI B CURRENT DRIVEN INSTALLATION (MONITORED, NON-REDUNDANT)

NOTES:

 M/F INDICATED POLARITY OF FRANGIBLE CORD ABOVE AND BELOW BASE PLATE.

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FOOTHILLS COUNTY

FOOTHILLS COUNTY REGIONAL AIRPORT RUNWAY LIGHTING REPLACEMENT ELECTRICAL PAPI SYSTEM DETAIL 3 OF 3

| DESIGNED | V.R., M.T.F. | JOB | 2210-069-00 |
|----------|---------------|---------|-------------|
| DRAWN | V.R., Y.F.S. | SCALE | N.T.S. |
| DATE | NOVEMBER 2024 | DRAWING | E3.6 |
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