

PART 1 – GENERAL

1.1 SUMMARY

- A. This Section shall govern the field location of all underground existing Utilities and sub-drains in construction areas of the Project. It shall include, but not be limited to, the location of electrical and communication ducts, airfield lighting and control cables, fiber optic and Federal Aviation Administration (FAA) Navigational Aid (NAVAID) cables. It is the intent of this Section to provide for the location of existing Utilities by hand digging, particularly underground cables and NAVAIDs.

NOTE: The significance of protecting and maintaining all Utilities cannot be overstated. Direct-buried fuel, gas and water pipes, and electric, fiber-optic, navigational aid, security and telephone cables are found both inside and outside the Air Operations Area (AOA), and are very susceptible to damage during trenching and earthmoving operations. Any cut NAVAID cable could have disastrous consequences.

1.2 RELATED REQUIREMENTS

- A. Section 01 18 16.13, Utility Location Sign-Off Sheet
- B. Section 01 18 16.14, Underground Utilities Damage Report

1.3 CONSTRUCTION METHODS

- A. It is the sole responsibility of the Contractor to locate all Utilities on the construction site except for FAA lines. It is the Contractor's responsibility to coordinate with the FAA the location of the FAA lines.
- B. Utilities, utility appurtenances, and cables encountered by the Contractor during the construction of this Project shall be protected by the Contractor as needed for construction and to conform to the finished grades on the Project. Use of mechanical equipment of any kind to verify Utility locations are expressly prohibited. The Contractor shall immediately repair any damaged Utilities at his own expense to the satisfaction of the respective Airport department and/or the FAA.
- C. The Contractor shall coordinate with all Utility Owners maintaining facilities at the Airport as well as Utilities owned by the Owner through the Owner's Authorized Representative (OAR) prior to any excavation/digging and ensure all available as-built information has been provided, and provide the OAR with written documentation of how the Utility location was verified.
- D. The Contractor shall continuously maintain Utilities for facilities and/or systems, which are or may be affected by the Work of the Project. Refer to the Utility Location Sign-Off Sheet included in Section 01 18 16.13. The Contractor shall prepare and maintain a contingency plan, approved by the OAR, to restore to service all Utilities and/or control/signal cables which may be placed out of service or damaged during performance of the Work. The Contractor shall provide immediate notification to the Airfield Operations Department and Airport Maintenance through the OAR on all damage to underground Utilities, and follow up with written reports. Refer to the Underground Utilities Damage Report included in Section 01 18 16.14.
- E. Accurately locate all the routing of underground cable and Utilities within the Project areas to be excavated, trenched, or drilled. The location shall be accomplished by hand digging and once located, placing highly visible and durable markers along all such cable and Utility routes at intervals of not greater than 25 feet. Obtain the OAR

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- approval of proposed marking devices. Use semi-permanent markers that are low profile, frangible and non-metallic within the Runway and Taxiway Safety Areas, and navigational and restricted zones. The Contractor shall maintain these markers in their original locations throughout the Project, and shall also be responsible for providing and maintaining a field survey and plan of the marker locations replacing any disturbed markers at its own expense.
- F. Do not use power equipment with teeth when excavating within five (5) feet of an area of marked cables unless the cables or other Utilities are completely visible and the Contractor can guarantee that they will not be nicked, severed, or damaged in any way.
- G. The Contractor will be responsible for the completion of all forms required by the Owner and the assemblage of all the executed forms into a meeting binder (commonly called a "Dig Book") which will require signatures and formal approval by the Owner. The Dig Book must also be kept onsite by the Contractor until the Work is complete. It is suggested that the Contractor allow at least one (1) month for the assemblage and approval of all requirements.
- H. Contents of the Dig Book:
1. Develop an overall utility and cable chart/map that shall be maintained throughout the construction. This chart/map shall have all underground utilities and cables shown, including the field survey information and other Utility information provided by the FAA, telephone, electrical and other Utility Owners, and shall reside in the Contractor's office. This chart/map shall be furnished to the Owner at the completion of the Project.
 2. At the beginning of each work period check the utility and cable chart/map for cables and utilities in the areas of work. If any of the Contractor's personnel removes the chart/map from the office, then that person will initial a sign-out sheet for the chart/map.
 3. Develop and provide a comprehensive plan and procedures for controlling vehicle travel to and/or within AOA work areas that avoids underground cables to the extent possible. Obtain the OAR approval of the plan prior to commencing work operations within the AOA. Strictly adhere to the approved plan and procedures throughout the duration of the Project.
 4. The cable or Utility shall be exposed by hand (pot-holed) after the Contractor performs a circuit lock out. The cable or Utility must be visibly exposed. The Contractor shall verify adjacent width of five (5) feet parallel to each side of the exposed cable for any other existing cables.
 5. Both the OAR and the Contractor's Authorized Representative (CAR) must sign off that the cable or Utility has been located before any work is started. Coordinates of the cable or Utility shall be recorded at this time and placed on the As-Built Drawings and the cable chart/map.
 6. Operators or any other Contractor's personnel who observe sand or bedding material in trenches or excavations shall cease operations and notify their supervisor immediately.
- I. If the Contractor does damage a NAVAID cable that has been previously located, the Contractor shall be required to repair the cable and install either a pull box or manhole and/or complete cable replacement depending on the type and or size of

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the NAVAID cable. Whether a pull box, manhole, or complete cable replacement is required, it shall be totally the decision of the FAA. All cost related to the said damaged NAVAID shall be the sole responsibility of the Contractor.

- J. Any irrigation lines that are damaged must be repaired by a licensed irrigation company.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

Not Used.

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