CONSTRUCTION SAFETY PHASING PLAN (CSPP)

DVT TAXIWAY CONNECTORS C4-C10 GMP 1 JUNE 14, 2024

ADOT Grant No's: E2S4V 01C & E3S3K 01C **COP Project No.:** AV31000096 ADOT

PREPARED FOR:

THE CITY OF PHOENIX AVIATION DEPARTMENT PHOENIX-DEER VALLEY AIRPORT



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1. COORDINATION

Aviation safety is the primary consideration at airports, especially during construction. This Construction Safety and Phasing Plan (CSPP) will serve as a companion document to the project plans and specifications for the Taxiway Connectors C4-C10 GMP1 project (Project), at Phoenix-Deer Valley Airport (DVT) and is intended to comply with FAA AC 150/5370-2G, Operational Safety on Airports During Construction, dated December 13, 2017. The phasing developed for this project is intended to minimize the impact the project with have on the airport while providing a logical sequence of construction activities. The subsequent sections of this document will address scheduling, coordination, and airfield safety precautions as they relate to the project.

DVT, by authority from the Federal Aviation Administration (FAA) is tasked with ensuring federal regulations and standards are enforced and complied with. In addition to these federal requirements, DVT has established rules and regulations backed by Civil Code which are enforced to ensure safe and secure operations at DVT. Airside Operations staff authorized with enforcement of these rules and regulations must be strictly obeyed at all times while working at DVT. All contractors operating on the airfield must recognize and abide by this authority.

Scope of Work

The major items associated with the scope for this project are as follows:

- Construct new right-angle taxiway connectors C7 and C10 (ADG II).
- Remove existing acute-angle taxiway connector C10.
- Obliterate taxiway pavement markings and remove airfield signage and lighting to decommission existing acute-angle taxiway connector C7.
- Infield grading to meet grading requirements per current FAA Standards as set forth in FAA AC 150/5300-13B, dated March 31, 2022.
- Install airfield electrical infrastructure required for the taxiway construction and adjust existing airfield electrical utility structures to remain to be consistent with the new grading and paving.
- Install storm drain system modifications to be consistent with the new grading and paving and to improve infield transverse slopes according to FAA AC 150/5300-13B.

Prior to the start of any construction operations on the airfield, a pre-construction meeting will be scheduled in order to discuss operational safety, phasing, quality control/quality acceptance, labor requirements, and potential issues that could arise during construction. A general outline of topics that will be discussed at the meeting include, but are not limited to the items listed below:

- 1. Project Overview and Safety Items
- 2. Construction Items
- 3. Labor Requirements

4. Civil Rights Requirements

1.a Contractor Progress Meetings

Progress meeting will be held on a weekly basis and will be conducted by the Resident Project Representative (RPR) and monitored by the City of Phoenix Project Manager of this project. These meetings will be attended by the Contractor, the RPR, and City staff to discuss operational safety, scheduling, testing, quality control, quality acceptance, security, safety, labor requirements, and environmental factors

1.b Scope or Schedule Changes

Scope and schedule changes will be discussed as needed during Weekly Construction Progress Meetings. Changes to the project scope or schedule that necessitate revisions to the CSPP shall require review and approval by the City of Phoenix and the FAA.

1.c FAA ATO Coordination

FAA ATO coordination will be performed by the City of Phoenix for this project.

2. SCHEDULING OF CONSTRUCTION PHASING

2.a GMP1 Phasing Elements

2.a.1. Phase 1 Activities

Phase 1 activities generally consist of removal of aggregate slope protection, airfield electrical demolition, pavement sawcut, pavement removal, grading and earthwork, subgrade compaction, lime stabilization, pavement section construction, pavement marking placement, airfield electrical infrastructure construction, and excavation for and installation of a storm drain structure.

Phase 1 activities will be performed within the Runway 7R-25L Runway Safety Area (RSA), between Taxiway C6 and C8, and at Taxiway C9.

Phase 1 will be constructed with nighttime work only and will require nightly Runway 7R-25L closures. The closures shall be coordinated between the Contractor and DVT Airport Operations Staff. Work completed within the RSA limits of Runway 7R-25L during the closure will need to be completed to a level such that Runway 7L-25R may be reopened to full operation upon completion of the night shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

Construction duration is shown on the Phasing Plans.

2.a.2. Phase 2 Activities

Phase 2 activities will begin after the completion of Phase 1. Phase 2 activities generally consist of pavement sawcut, pavement removal, grading and earthwork, subgrade

compaction, lime stabilization, pavement section construction, pavement marking placement, and airfield electrical infrastructure construction within Phase 2's work area.

Phase 2 activities are generally limited to the shoulder area of Taxiway C and tie-in interface with Taxiway C.

Phase 2 will be constructed with nighttime work only and will require nightly Runway 7R-25L closures. The closures shall be coordinated between the Contractor and DVT Airport Operations Staff. Work completed within the RSA limits of Runway 7R-25L during the closure will need to be completed to a level such that Runway 7L-25R may be reopened to full operation upon completion of the night shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basin.

Construction duration is shown on the Phasing Plans.

2.a.3. Phase 3 Activities

Phase 3 activities will begin after the completion of Phase 2. Phase 3 activities generally consist of airfield sign removal, taxiway edge light removal, pavement marking obliteration, and pavement marking application in the vicinity of Taxiway C6.

Phase 3 will be constructed with nighttime work only and will require nightly Runway 7R-25L closures. The closures shall be coordinated between the Contractor and DVT Airport Operations Staff. Work completed within the RSA limits of Runway 7R-25L during the closure will need to be completed to a level such that Runway 7L-25R may be reopened to full operation upon completion of the night shift and still maintain compliance with FAA AC 150/5370-2G requirements.

The Contractor will implement the Storm Water Pollution Prevention Plan (SWPPP) during this phase by installing the required inlet protection for the existing catch basins.

During this phase, a majority of Taxiway C remains operational. The Contractor will be required to be escorted by DVT Airport Operations Staff along the designated haul route.

Construction duration is shown on the Phasing Plans.

2.b Construction Safety Drawings

Initial project construction phasing drawings describing the phases and activities in paragraphs above are included as Appendix A of this CSPP.

The contractor shall provide a detailed schedule of work for each phase and the overall project.

3. AREAS OF OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

3.a Identification of Affected Areas

This project involves the demolition, grading, and construction of new taxiway connectors C7 and C10 at DVT, along with modifications to the storm drain network and installation of airfield signage and lighting infrastructure. Construction activities will occur in these infields which are shown in initial phasing drawings in Appendix A. Nighttime shifts will be primarily used for all work except for paving operations which will occur during daytime shifts to provide higher quality pavement. Runway closures will be required to accommodate work within the Runway Safety Area (RSA). Aircraft operations will be restricted for all phases during construction activities but will be restored to full operational condition at the end of each shift when indicated by the phasing plans.

Construction will occur within the restricted Runway Object Free Area (ROFA) limits and will comply with the requirements described in Section 18.b of this report and in accordance with FAA AC 150/5370-2G standards.

Construction will occur within the restricted Taxiway Object Free Area (TOFA) limits during this project. Section 18.d details the additional restrictions that will be put in place in order to complete the construction activities within the TOFA.

Construction activities are prohibited in the runway safety area, and may be restricted in the taxiway safety area, and taxiway object free area while the associated runway or taxiway is open to aircraft operations. In addition, personnel, material, and/or equipment may not penetrate the obstacle free zone while the runway is open for aircraft operations.

See Section 2 and the phasing plans in Appendix A for limits of these closures.

3.b Mitigation of Effects

Mitigating the effects on the portions of the airfield can be assisted by adhering to the items within this CSPP; compliance with DVT Airport Operations instructions and policies regarding airfield safety and maneuvering about the airfield; and enforcement of the Contractor's Safety Plan Compliance Document (SPCD).

Taxiway and runway operations may be temporarily changed based on the construction phasing of the project. Appropriate notification measures should be taken according to Section 9 of this CSPP.

DVT does not have a dedicated ARFF station; however, emergency vehicles and other airport vehicles should be able to conduct their business using designated haul routes and perimeter service roads as shown in the initial phasing drawings in Appendix A.

The maintenance of essential utilities shall be conducted by the Contractor. Improvements to electrical utilities and storm drain utilities will be incorporated into the project construction as indicated in the initial phasing drawings in Appendix A. Any temporary changes to air traffic control procedures will need to be coordinated between the tower and DVT Operations through the issuance of NOTAMs as discussed in Section 9 of this CSPP.

All parties involved during the construction process should be aware of coordination protocol as provided in Section 1 of this CSPP; Phasing, closures, and areas affected by this project as provided in Sections 2 and 3 of this CSPP; Rules regarding Contractor site access as provided in Section 5 of this CSPP; and notification procedures and emergency contact information as provided in Section 9 of this CSPP.

4. PROTECTION OF NAVIGATIONAL AIDS (NAVAIDS)

No work under this project is anticipated to be in immediate proximity of operational NAVAID critical areas.

5. CONTRACTOR ACCESS

5.a Location of Stockpiled Construction Materials

The Contractor Staging Area and Stockpile Area are depicted in the initial phasing drawings in Appendix A. Upon project completion, the Contractor shall restore storage and staging areas to pre-project conditions.

Stockpiles shall not exceed a height of 3 feet above adjacent grade.

The Contractor may also request specific equipment and materials to be left within the confines of the work area boundaries provided that:

- The requirements of AC 150/5370-2G Sections 2.9 and 2.22 are met, and;
- Approval is obtained by DVT Airport Operations Staff.

5.b Vehicle and Pedestrian Operations

5.b.1. Construction Site Parking

The Contractor employee parking area is depicted in the initial phasing drawings in Appendix A. Any additional parking areas required by the Contractor shall be coordinated with DVT Operations Staff prior to beginning any construction activities. Any employee parking area will be located outside the Airport Operations Area (AOA). The parking areas should provide reasonable Contractor employee access to the job site.

5.b.2. Construction Equipment Parking

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under

air traffic control nor obstruct any runway visual aids, signs, or navigation aids. Parking for construction equipment shall be at the Contractor Staging Area; however, the Contractor shall coordinate the location of construction equipment parking with DVT Operations Staff prior to beginning any construction activities.

5.b.3. Access and Haul Routes

The haul route from the AOA fence to the Contractor Staging Area for all phases of this project begin at Gate 7 on North 7th Street. The route enters the AOA from the east side of the airport and proceeds south along the vehicle service road and follows the vehicle service road turning west to the Contractor Staging Area, south of the east runup area as shown in Appendix A. This haul route and other haul routes are subject to approval by DVT Operations Staff and are subject to change based on airport operational needs. Contractor site access and haul routes are depicted in the initial phasing drawings in Appendix A.

The haul routes and contractor site access to the project area for Phases 1 and 2 begin at the Contractor Staging Area and go north onto Taxiway D12, then continues west via Taxiway C to the project area. Taxiway C is closed nightly between C7 and C13 during Phases 1 and 2.

Newly constructed corporate hangars may require access to Runway 7L-25R during construction of Phase 1 and 2. If this access is required, Contractor vehicles will be escorted by DVT Operations Staff west, across the taxilane, then north onto Taxiway C and west towards the project site. Taxiway C is closed nightly between C7 and the corporate hangar taxilane if Runway 7L-25R access is required.

Haul routes and contractor site access to the project area for Phase 3 begin at the Contractor Staging Area and go north onto Taxiway D12, then continues west via Taxiway C to the project area. Contractor use of this haul route is restricted and will require escort from DVT Operations Staff as Taxiway C will only be closed between C6 and C8.

All existing airfield pavement (runways, taxiways) to be used by contractor shall be protected in place and all pavements, including service roads, shall be restored to preconstruction condition at no additional cost to the City.

The Contractor shall include any additional routes required for specific construction activities (i.e. paving activities) to DVT Operations Staff for evaluation and approval as part of the SPCD before beginning construction activities.

All access into movement areas will be coordinated by the Contractor with escort provided by Airport Operations, as indicated in AC 150/5370-2G.

In all cases the Contractor shall adhere to the following requirements:

- Haul routes shall include provisions to prevent inadvertent entry to movement areas.
- Fire Fighting, Police, and Airport Operations equipment and personnel shall not be impeded at any time.
- Haul route activity shall not interfere with NAVAIDs or approach surfaces of operational taxiways or runways.
- The Contractor shall protect the haul routes from damage. Any damage occurring shall be repaired by the contractor at no cost to the City of Phoenix.
- The contractor shall maintain a dedicated full-time power-vacuum on the haul route at all times. Two manned power-vacuums shall be required when Bituminous Pavement is being hauled.
- Workers must remain in the work areas during work hours. If more than one work area is active at the same time, there shall be no movement between areas unless they are adjacent and Airport Operations has given prior approval. Personnel will only be allowed to enter and leave the work areas in vehicles with proper warning lights/flagging per FAA and DVT requirements.

The Contractor is cautioned that portions of the haul route are adjacent to active taxiways within active aprons that will include propeller and jet aircraft. The Contractor shall assume responsibility for any damage caused by Foreign Object Debris (FOD) created by their operations.

5.b.4. Contractor Vehicles

All Contractor vehicles operating within the Airport Operations Area (AOA) shall adhere to the following:

- Insurance coverage per the Project Documents.
- The Company name and/or logo on each side of the vehicle (no paper signs).
- During day light hours, vehicles must be provided with a 3-foot by 3-foot square flag with a checkered pattern of international orange and white squares at least 1-foot on each side; or a yellow flashing light that is mounted on the uppermost part of the vehicle. The light must be visible from any direction, day and night, including from the air.
- During nighttime hours from dusk to dawn, and during periods of limited visibility, all vehicles shall be equipped with a flashing yellow light.

• All vehicles entering the work area may be searched by the owner on a random basis. The Contractor shall allow additional time to accommodate searches.

5.b.5. Vehicle Operator Requirements and Training

Any individual with unescorted access and required to operate a vehicle in the restricted areas of the airport, but exclusive of the airport movement areas must have an Airfield Driver's Permit (ADP) icon affixed on their airport issued SIDA identification media. To obtain the ADP icon, the individual will be required to:

- 1. Read the "Airfield Driver Permit Study Guide" prior to taking the test. (Material obtained at the Security Badging Office)
- 2. Possess a valid unexpired state issued driver's license
- 3. Successfully pass the ADP test administered by the Security Badging Office.

Individuals who do not pass the test will be instructed to review the study guide and will then be allowed to test again on another day.

The City of Phoenix Aviation Department Operations Division will provide training for all individuals requiring an ADP. This training is provided through a self-paced interactive computer program. Information presented in the Airfield Driver Permit Study Guide or other media (e.g. videos) is tested through a series of multiple choice and true/false questions.

5.b.6. Situational Awareness

Vehicle drivers must confirm by personal observation that aircraft is approaching their position (either in the air or on the ground) when given clearance to cross runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of escort vehicle driver to verify the movement/position of all escorted vehicles at any given time.

5.c Two-Way Radio Communication

The Contractor will not be allowed to communicate by radio on DVT or FAA frequencies. All communication will be directly with the Construction Manager or Airport Operations Staff. The Contractor shall not utilize any equipment that interferes with DVT or FAA radio frequencies.

5.d Airport Security

The Contractor shall, at a minimum, have his/her Superintendent and Foreman obtain site specific training and direction from DVT Operations Staff for driving within the AOA. This training shall be relayed to each worker as part of the daily Contractor Safety Meeting. The Contractor shall maintain a full-time gate guard on any access gate controlled by the Contractor. Gate security shall be maintained as indicated in AC 150/5370-2G Section 2.9. Access gates shall be locked when not manned by a gate guard.

5.d.1. Work Area

The work areas shall be as indicated in the Project Layout Plan in **Appendix A** of this CSPP. The Contractor shall adhere to the requirements on these sheets and as follows:

- The Work Area is that area under construction, flagged, barricaded, closed to aircraft and separated from other areas of active aircraft movements. Work Area boundaries shall be as shown on the drawings and shall be suitably marked by the Contractor with a barricade line spaced according to Section 16.b.1 of this CSPP. At a minimum, each barricade shall have one steady burn red light attached. Each barricade shall be anchored and/or filled satisfactorily to prevent overturning and movement from wind or jet blast.
- In locations where it is deemed that additional protection is required to protect ground personnel and vehicles from construction activities, concrete barriers with solid burn red lights may also delineate construction activities.
- The type of construction delineators and other barriers to be used shall be submitted for advanced approval by the Construction Manager and shall remain the property of the Contractor at the completion of construction.
- The Contractor shall have sanitary facilities, adequate water supply, tools, equipment, and supplies to support work needs and requirements when in the work zones. Inadequate preparation will not be allowed as a basis for extra or additional time.
- The Contractor shall take all necessary items to control the work zone, all cleanup equipment necessary to clean the work zone, and return all equipment supplies and incidentals to the staging areas at the end of shifts unless otherwise allowed by DVT Operations Staff whereby an additional work shift is replacing the current shift. No equipment, materials, or incidentals may be left in the work zone at any time without personnel working in the work zone.
- The Contractor shall be equipped with the necessary communication equipment to control the work zone activities and to communicate with DVT Operation Staff.

6. WILDLIFE MANAGEMENT

6.a Trash

The Contractor shall carefully control and continuously remove waste or loose material that might attract wildlife or otherwise become foreign object debris (FOD).

6.b Standing Water

The Contractor shall not allow water to pool or otherwise remain standing that might attract wildlife.

6.c Tall Grass and Seeds

Not applicable to this project.

6.d Poorly Maintained Fencing and Gates

The Contractor shall maintain all fencing and gates under their control to prevent wildlife from gaining access to the AOA.

6.e Disruption of Existing Wildlife Habitat

Not applicable to this project.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT

Waste and loose materials, referred to as FOD, can cause damage to aircraft landing gear, propellers, and jet engines. The contractor shall not leave or place FOD on or near active aircraft movement areas. Materials tracked onto those areas must be continuously removed during the project. Additionally, smaller items such as paper, plastics, cans, bottles, and the like shall never be allowed to be deposited anywhere in the airfield perimeter. The Contractor shall immediately remove or secure waste and loose materials from the work site and haul routes.

The Contractor shall maintain full time vacuum equipment in accordance with the project specifications.

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT

All construction activities with the potential to generate or require the use of hazardous materials shall be performed in accordance with all local, state, and federal regulatory requirements. All project personnel shall be trained to recognize hazardous wastes on the project and to respond appropriately to ensure safety and protect the environment. In the event of a hazardous material spill, the procedures provided in the emergency response section pertaining to notification and response responsibilities shall apply.

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES

9.a List of Responsible Representatives

The Contractor shall provide the phone numbers for five (5) of its responsible personnel, including the project superintendent and, the responsible personnel from each of the key subcontractor firms, each of whom may be contacted in case of an emergency. Personnel shall be on-call 24 hours per day for maintaining construction hazard lighting and barricades. The Contractor will designate a person responsible to maintain and service all traffic control equipment. This contact list must be determined once the job

has been bid and a Contractor has been selected. This list will be provided by the Contractor for distribution at the preconstruction meeting.

City of Phoenix Project Manager Contact Information

Scott Clark, PE Design & Construction Services Division City of Phoenix – Aviation Department Mobile: (623) 298-9392 Office: (602) 681-5349 Email: Scott.Clark@phoenix.gov

9.b NOTAMs

NOTAM issuance will occur when construction activity areas are adjacent to or directly impact aircraft operations. Airport Operations personnel shall issue all NOTAM's. It is incumbent on the Contractor to notify Airport Operations, through the Construction Manager, of any activities that may require a NOTAM a minimum of 72 hours in advance of starting such activities.

9.c Emergency Notification Procedures

For all emergencies involving life safety (injuries, fires, security breaches, etc.) the Contractor will immediately call 911, the DVT Emergency number as soon as possible by contacting the Airport's Emergency number. The typical "911" call will connect to the emergency dispatcher outside of the airport and will have to be re-routed to this number. Please remind all your project team members of this procedure.

EMERGENCY TELEPHONE NUMBER – 911 NON-EMERGENCY TELEPHONE NUMBER 623-869-0977 FOR

POLICE FIRE RESCUE

9.d Coordination with ARFF Personnel

There is no Aircraft Rescue and Fire Fighting (ARFF) at DVT. All communications relating to typical ARFF operations will be made through Airport Operations Staff.

9.e Notification to the FAA

FAA Form 7460-1 will be necessary for this project. It will be filed by the City of Phoenix prior to construction. It is incumbent on the Contractor to notify the City of Phoenix,

through the Construction Manager, of any additional activity that may require an additional Form 7460-1 a minimum of forty-five (45) calendar days in advance of starting such activities.

10. INSPECTION REQUIREMENTS

10.a Daily (Or More Frequent) Inspections

Airport Operations personnel along with the Construction Manager will conduct inspections of the work area at least twice daily to ensure that the Contractor is complying with the safety plan and that altered construction activities do not create potential safety hazards. These inspections will include when closing runways/taxiways and reopening runways/taxiways to airport operations.

10.b Final Inspections

Airport Operations personnel along with the Construction Manager will conduct an inspection at the completion of each area of work and project and prior to opening to traffic to ensure no safety hazards exist.

11. UNDERGROUND UTILITIES

The safety plan must provide procedures for notifying the City of Phoenix if construction requires shutting off or otherwise disrupting any water line or fire hydrant on the airport or adjoining areas, or if required, the blocking and/or rerouting of emergency access drive lanes or building entrances/exits. This notification shall be provided with as much advance notice as possible (48 hours at a minimum) and shall be coordinated through the Construction Manager, then directly to Airport Operations. Airport Operations will then be responsible to make the appropriate notifications.

Any trenches or excavations must be in compliance with the safety standards and guidelines set forth in AC 150/5370-2G Chapter 3. Airport Operations will have final authority for inspection and approval of all trenches, excavations, and cover requirements.

12. PENALTIES

Penalties for non-compliance offenses vary on the severity and can result in the removal of the violator from the airport. The table below lists the Safety and Security Non-Conformance Contract Adjustment (deduction) schedule as used at Phoenix Deer Valley Airport.

Runway Incursion	\$15,000.00	
Active Taxiway Incursion	\$10,000.00	
Runway/Taxiway Safety Area	\$1,000.00	
Security or Badging/Licensing Non-Compliance		
First Offense	\$1,000.00	
Second Offense	\$5,000.00	
Each Additional Offense	\$15,000.00	
Aviation Department has the option to issue warnings on first offense, <i>if</i> the incident is justified.		
Individuals involved in a non-compliance vid required to surrender their security badge and license pending investigation of the matter.	•	

13. SPECIAL CONDITIONS

Airport emergencies and closures (i.e. presidential visits) take precedent over all other activities. If an emergency or closure occurs on Airport property that requires evacuation, stoppage of work, or clearing of work area and returning that area to service, the contractor(s) shall follow the directions of Airport Operations, City of Phoenix Fire, or City of Phoenix Police to ensure safety and protection of all affected by the emergency.

The Contractor shall be aware that tall equipment (i.e. concrete pumps and cranes) will require a Form 7460-1 issued for specific equipment. The Form will be submitted to the FAA as indicated in Section 9 of this document. Tall equipment shall have checkered flags and or flashing lights attached at the top of the boom.

14. RUNWAY AND TAXIWAY VISUAL AIDS

The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs remain in place and operational. The CSPP must address the following, as appropriate:

14.a General

Airport markings, lighting, signs and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of material that would minimize damage to an aircraft in the event of inadvertent contact. Markings, lighting, signs and visual NAVAIDs are frangible structures as required by the Advisory Circulars.

14.b Markings

There will be low profile and vertical panel barricades that will be used to delineate the construction site. The barricades shall be checked daily to be sure they are properly positioned and that the lights are functioning properly.

This project will require the closure of existing connector taxiways. Barricades and an "X" will be placed at the entrance to the closed taxiways from the runways in accordance with AC 150/5370-2G.

Runway closures will be marked by lighted "X" light plants. DVT Operations staff will provide the fuel and light plant and will place the light plants for each closure.

14.c Lighting and Visual NAVAIDs

Placement of construction area lighting for nighttime construction must be coordinated with Airport Operations to ensure no adverse impacts to ATCT or pilot visibility. All Temporary Airfield lighting must be approved by Airport Operations Staff. Airport Operations Staff will be responsible for ensuring that any temporary lighting is compliant with AC 150/5340-30J, AC 150/5345-50B, and AC 150/5345-53D.

14.d Signs

There will be closed taxiways during construction that will require the existing runway and taxiway signs to be covered to prevent misdirecting pilots. These sign coverings shall be secured to prevent the material from blowing away during normal airport operations and/or weather events.

All plans for temporary airfield signage must be approved by Airport Operations, and any temporary signage must comply with AC 150/5345-44K, AC 150/5340-18G, AC 150/5345-53D, and Engineering Brief 93. Airport Operations will be responsible for forwarding the airport's approved sign plan to the FAA for approval. Details regarding any temporary airfield signage or lighting needed for this project are included in Appendix A of this CSPP.

15. MARKING AND SIGNS FOR ACCESS ROUTES

Pavement markings and signs for construction personnel shall conform to AC 150/5340-18G and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23A, Frangible Connections, which may require modification to size and height guidance in the MUTCD.

16. HAZARD MARKING, LIGHTING AND SIGNING

The Contractor shall adhere to the requirements of AC 150/5370-2G Section 2.20. Low level barricades equipped with solid red lights must be placed to properly delineate the work areas from the remainder of the airport.

16.a Purpose

Hazard marking, lighting, and signing prevents pilots from entering areas closed to aircraft and construction personnel from entering areas open to aircraft, and they serve as comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting shall also be used to identify open manholes, open trenches, small areas under repair, stockpiled materials, waste locations and any other potentially hazardous site conditions during construction. Other construction-related hazards may include disruption to the instrument landing system (ILS) and underground power lines along with construction activity adjacent to various safety areas. These hazards will be identified and marked in accordance with AC 150/5370-2G to ensure contractor personnel interact with these hazards appropriately.

16.b Equipment

16.b.1. Barricades

Low profile barricades with the MUTCD standard reflective orange and white marking with flashing red lights mounted on the ends of the barricade and vertical panel barricades with the MUTCD standard reflective orange and white marking with flashing red light mounted on the top of the barricade will be used to delineate the construction site. See Appendix B for sample barricades for use on this project. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. The barricades shall be spaced no more than 40 feet apart where shown on the safety plan in order to prevent aircraft breaches into the work area. The barricades shall be weighed against prop wash and capable of withstanding up to 100 MPH wind forces. The Contractor shall identify the person responsible for the maintenance and the marking and lighting in Section 9. Provision must be made for ARFF access if necessary.

16.b.2. Lights

Flashing red caution lights shall be battery or solar operated and shall maintain such intensity so as to be readily identified in accordance with the 2009 edition of the Manual on Uniform Traffic Control Devices (MUTCD) and the 2021 Arizona Department of Transportation (ADOT) Standard Specifications for Road and Bridge Construction.

16.b.3. AOA – General

Barricades are not permitted in an active safety area. Within a runway or taxiway object free area, and on aprons, use barricades as noted above to separate all construction areas from the movement area. The proper barricade type shall be used when delineating construction activities. All barricades, temporary markers, and other objects left in areas adjacent to any open runway or taxiway/taxilane safety area or apron must be as low as possible to the ground and no more than 18 inches high, exclusive of supplementary lights and flags. Barricade placement shall be in

accordance with AC 150/5370-2G, this CSPP, and the initial phasing drawings included in Appendix A of this CSPP.

16.b.4. Maintenance

The Contractor shall be responsible for the maintenance and the markings, lighting and barricades and is required to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The Contractor shall file the contact person's information with DVT Operations Staff that checks for proper operation at least once per day, in accordance to Section 9 of this CSPP.

17. WORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION

This project includes nighttime construction activities for the majority of the project duration and lighting equipment will be required to adequately illuminate the work area. All support equipment, except haul trucks, are recommended to be equipped with artificial illumination to safely illuminate the area immediately surrounding their work areas. Light towers will be positioned to aim away from the ATCT cabs and the active Runway and will be removed from the work area following the end of each shift. Standards and recommendations for the lighting of support equipment and the use of light towers will be in accordance with AC 150/5370-2G.

18. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS

The Contractor shall adhere to the requirements of AC 150/5370-2G Section 2.22. Runway and Taxiway Safety Areas shall be preserved to all extents practical. Open trenches, equipment storage, and stockpiles within any of these safety areas will not be permitted unless the pavement is closed to aircraft. Coordination with DVT Operations Staff is necessary to properly delineate the closed, active and restricted portions of the Runway and Taxiway Safety Areas.

18.a Runway Safety Area (RSA)

Access into movement area or Safety Areas without an Airport Operations escort is prohibited. The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Safety Areas without appropriate Airport Operations escort. All access into movement areas must be coordinated and approved by the on-duty Airside Operations Supervisor. All communications with the Air Traffic Control Tower (DVT ATCT) will be the responsibility of Airport Operations.

1. No Construction within the RSA.

No construction may take place within the Runway Safety Area of an open Runway.

2. Airport Operator Coordination.

Runway closures shall be coordinated with and approved by DVT Operations staff prior to any construction activities within the RSA.

3. Blasting.

Excavation via blasting is not permitted for this project.

4. Excavations.

- a) No open trenches are permitted in the safety areas while the runway is open. In the event that excavations are located within the RSA and cannot be backfilled before the associated runway is to be opened to its full unrestricted operation, the Contractor shall immediately place a cover to allow for the safe operation of the heaviest aircraft operating on the runway without damage to the aircraft.
- b) Marking and lighting methods shall be used to delineate excavations in the construction areas in accordance with AC 150/5370-2G. Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by Airport Operations Staff and light them with red lights during hours of restricted visibility or darkness. The closure of taxiways will require that Section 9 and Section 14 be referenced for proper methods of NOTAMs issuance and visual aids to delineate the construction area. Coordination with the FAA will be discussed to determine the appropriate airspace evaluation requirements.

5. Erosion Control.

The Contractor is responsible for maintaining the RSA standards for soil erosion including ensuring that the RSA is cleared and graded and has no potentially hazardous ruts, humps, depressions, or other surface variations. They will also be responsible for ensuring that, at the end of each shift, the unrestricted RSA is capable of supporting all vehicles and equipment that may traverse these areas along with the supporting the occasional passage of aircraft without causing structural damage to the aircraft. Silt screens shall be placed inside the grates of airfield catch basins in order to prevent construction debris from infiltrating the storm drain network.

18.b Runway Object Free Area (ROFA)

Construction may be permitted in the ROFA provided that all equipment be removed from the ROFA when not in use, and materials will not be stockpiled in the ROFA. All project phases have construction in the ROFA. Normal operations shall not be affected to complete construction within the ROFA.

18.c Taxiway Safety Area (TSA)

The Contractor shall ensure that no personnel or equipment enters into the active movement areas or their associated Safety Areas without appropriate Airport Operations escort. Access into movement area or Safety Areas without an Airport Operations escort is prohibited. All access into movement areas must be coordinated and approved by the on duty Airside Operations Supervisor. All communications with the Air Traffic Control Tower (DVT ATCT) will be the responsibility of Airport Operations.

1. No Construction within the TSA.

Typically no construction will take place within the Taxiway Safety Area of an open taxiway. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the restrictions outlined in Section 2.22.3.4.2 of FAA Advisory Circular 150/5370-2G. Portions of the Taxiway network are anticipated to be closed throughout the project. Phasing and construction limits have been established so that much of the work is outside any open, active taxiway safety areas. Connector taxiways will be closed at different times to enable construction and to prevent aircraft from entering any active TSA.

2. Airport Operator Coordination.

Taxiway Safety Area dimension adjustments are the responsibility of the airport operator, ATCT and the proper FAA representative. A NOTAM must be issued in accordance with Section 9 of this CSPP as part of the TSA adjustment process.

3. Blasting.

Excavation via blasting is not permitted for this project.

4. Excavations.

- a) No open trenches are permitted in the safety areas while the taxiway is open. In the event that excavations are located within the TSA and cannot be backfilled before the associated taxiway is open to unrestricted operations, the Contractor shall immediately place a cover to allow for the safe operation of the heaviest aircraft operating on the taxiway without damage to the aircraft.
- b) Marking and lighting methods shall be used to delineate excavations in the construction areas. The closure of both runways and various taxiways will require that Section 9 and Section 14 be referenced for proper methods of NOTAMs issuance and visual aids to delineate the construction area. Coordination with the FAA will be discussed to determine the appropriate airspace evaluation requirements.

5. Erosion Control.

The Contractor is responsible for maintaining the TSA standards for soil erosion including ensuring that the TSA is cleared and graded and has no potentially hazardous ruts, humps, depressions, or other surface variations. They will also be responsible for ensuring that, at the end of each shift, the unrestricted TSA is capable of supporting all vehicles and equipment that may traverse these areas along with the supporting the occasional passage of aircraft without causing

structural damage to the aircraft. Silt screens shall be placed inside the grates of airfield catch basins in order to prevent construction debris from infiltrating the storm drain network.

18.d Taxiway Object Free Area (TOFA)

No construction may occur within the taxiway object free area while the taxiway is open for aircraft operations except as provided in Section 2.22.4 of FAA Advisory Circular 150/5370-2G. A portion of the construction activities in the AN8 infield will occur in Taxiway A's TOFA which is permitted subject to the following conditions:

- Taxiing speed is limited to 10 MPH.
- NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.
- Marking and lighting meeting the provisions of AC 150/5370-2G and as described in Section 14 and Section 16 of this CSPP.
- Appropriate orange construction signs installed at the request of Airport Operations in accordance with AC 150/5370-2G and as described in Section 14.d of this CSPP.
- Five-foot clearance is maintained between equipment/materials and any part of an aircraft, including wingtip overhang. It will be necessary to move personnel and equipment for the passage an aircraft that cannot maintain such clearance.
- Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft or airport personnel. Flaggers will also be used to direct taxiing aircraft.

Taxiways associated with this project have a restricted TOFA width of 89 feet. It is anticipated that a small portion of the construction activities to take place in the AN8 infield will need to occur within an active TOFA. Before this work takes place, the contractor shall notify the appointed DVT Operations Staff so that a NOTAM can be issued as described in Section 9.b of this CSPP. Refer to Section 5 on proper vehicle and personnel movement within safety areas. Any stockpiling of materials shall refer to Section 5.a for information on stockpiling of materials.

18.e Obstacle Free Zone (OFZ)

In general, personnel, material and equipment may not penetrate the OFZ while the runway is open for aircraft operations. The Runway Obstacle Free Zone (ROFZ) has a width of 400 feet. During all phases of work, all construction activity is completed during nightly runway closures. The timing and duration of closures is shown on the Phasing Plans in Appendix A.

18.f Runway Approach/Departure Surfaces

The Contractor shall take precautions to protect the runway approach/departure areas and clearway areas during construction and be sure that equipment is removed from the areas when not in use. No construction will take place within the Runway Protection Zone of an open runway. The project phasing and construction limits have been established so that all work is outside any open, active RPZs. No Construction activities are anticipated to occur in these areas.

19. OTHER LIMITATIONS ON CONSTRUCTION

19.a Prohibitions

Construction activities shall not interfere with any NAVAIDS, safety areas, obstacle-free zones, object free areas, approach and departure surfaces, and any threshold citing criteria. This includes limitations on equipment height and stockpiled material.

Contractors shall not use open flame welding or torches unless adequate fire safety precautions are provided, and the Construction Manager has approved their use. Under no circumstances should flare pots be used within the AOA at any time. The use of electrical blasting caps is not permitted on, or within 1,000 feet of, the airport property (see AC 150/5370-10, Standards for Specifying Construction on Airports).

19.b Restrictions

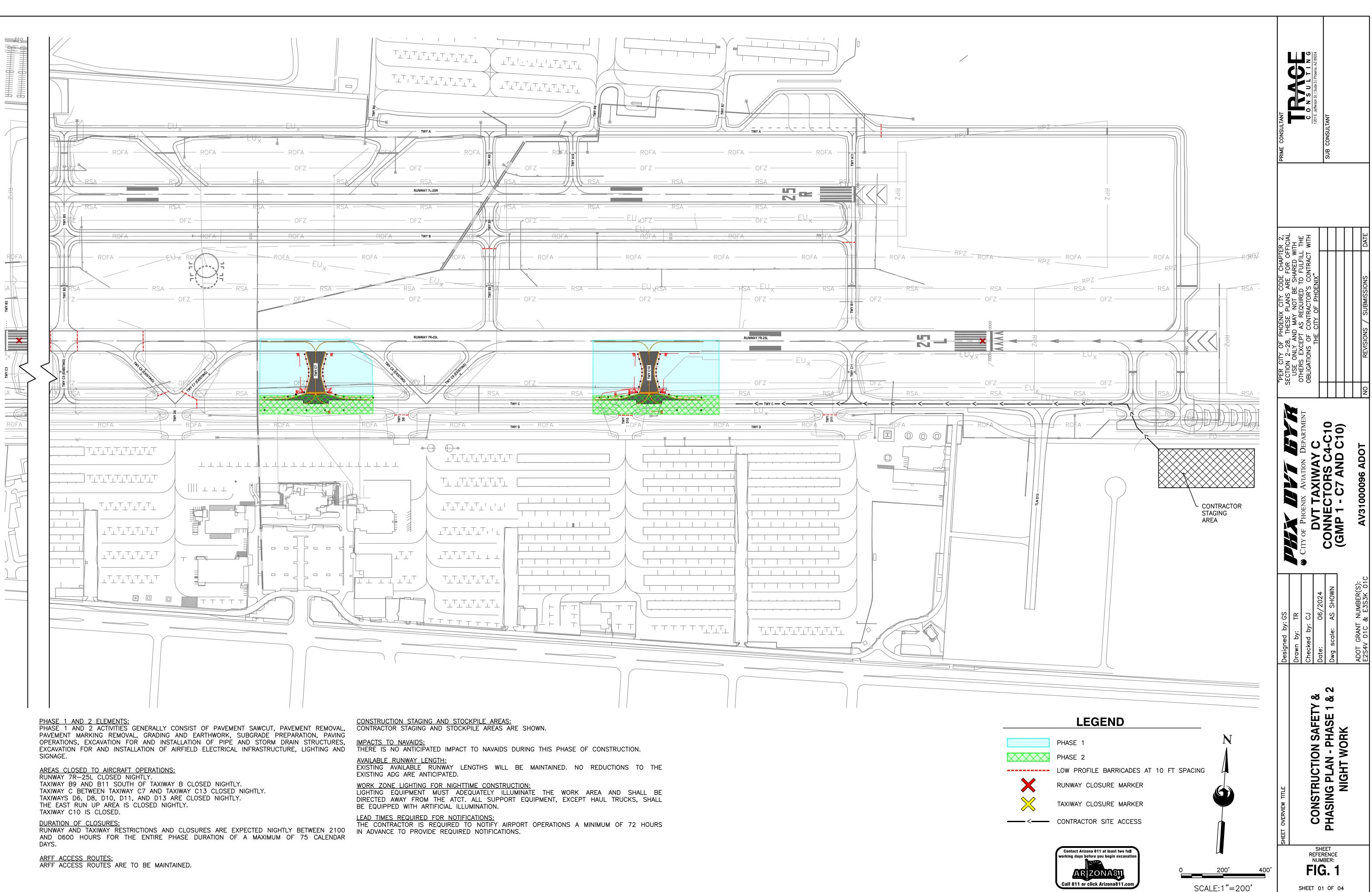
During Phase 1 and 2 Runway 7R-25L is closed nightly. Taxiway C is closed nightly between C7 and C13. Taxiways D6, D8, D10, D11, D12, and D13 are closed nightly. Taxiway A is closed nightly between Taxiway A11 and Taxiway A13. Taxiway A13 is closed nightly. Taxiways C7, C8, C9, and C11 are closed nightly. Taxiways B9 and B11 south of Taxiway B are closed nightly. The east run up area is closed nightly. Taxiway C10 is being demolished during this phase and is closed daily. All closures are lifted daily with the exception of Taxiway C10, and the airfield can continue operations without restrictions during the day.

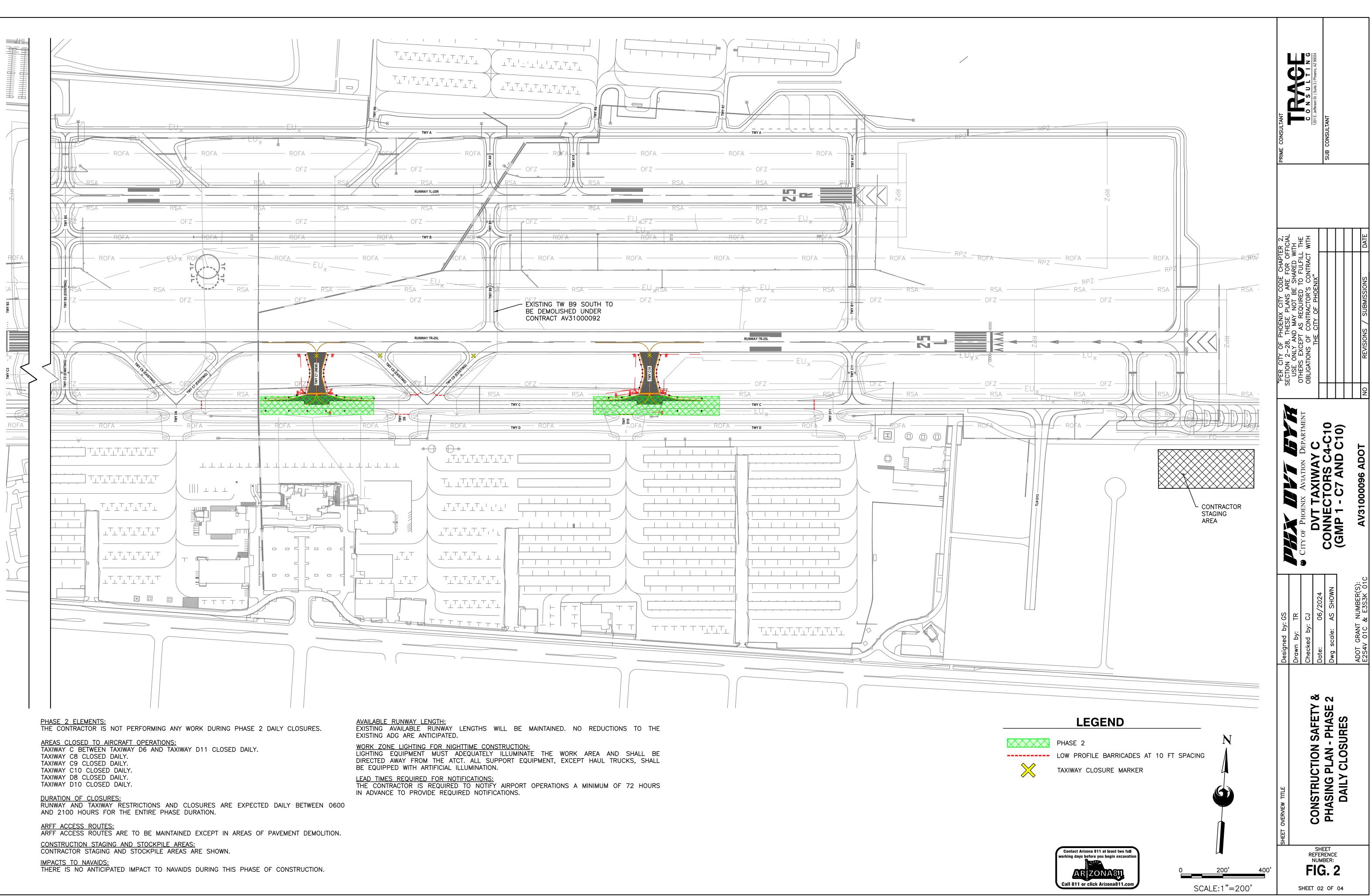
During Phase 2, work will be completed at the edge of Taxiway C and will encroach into the Taxiway pavement. As a result, portions of Taxiway C will be closed 24 hours a day. During Phase 2, Taxiway C will be closed between Taxiway C7 and C11 daily. Taxiways D8 and D10 are closed daily. Taxiways C8 and C9 are closed daily. Taxiway C10 is demolished during Phase 1. Once Phase 2 is complete, the listed taxiways above will reopen.

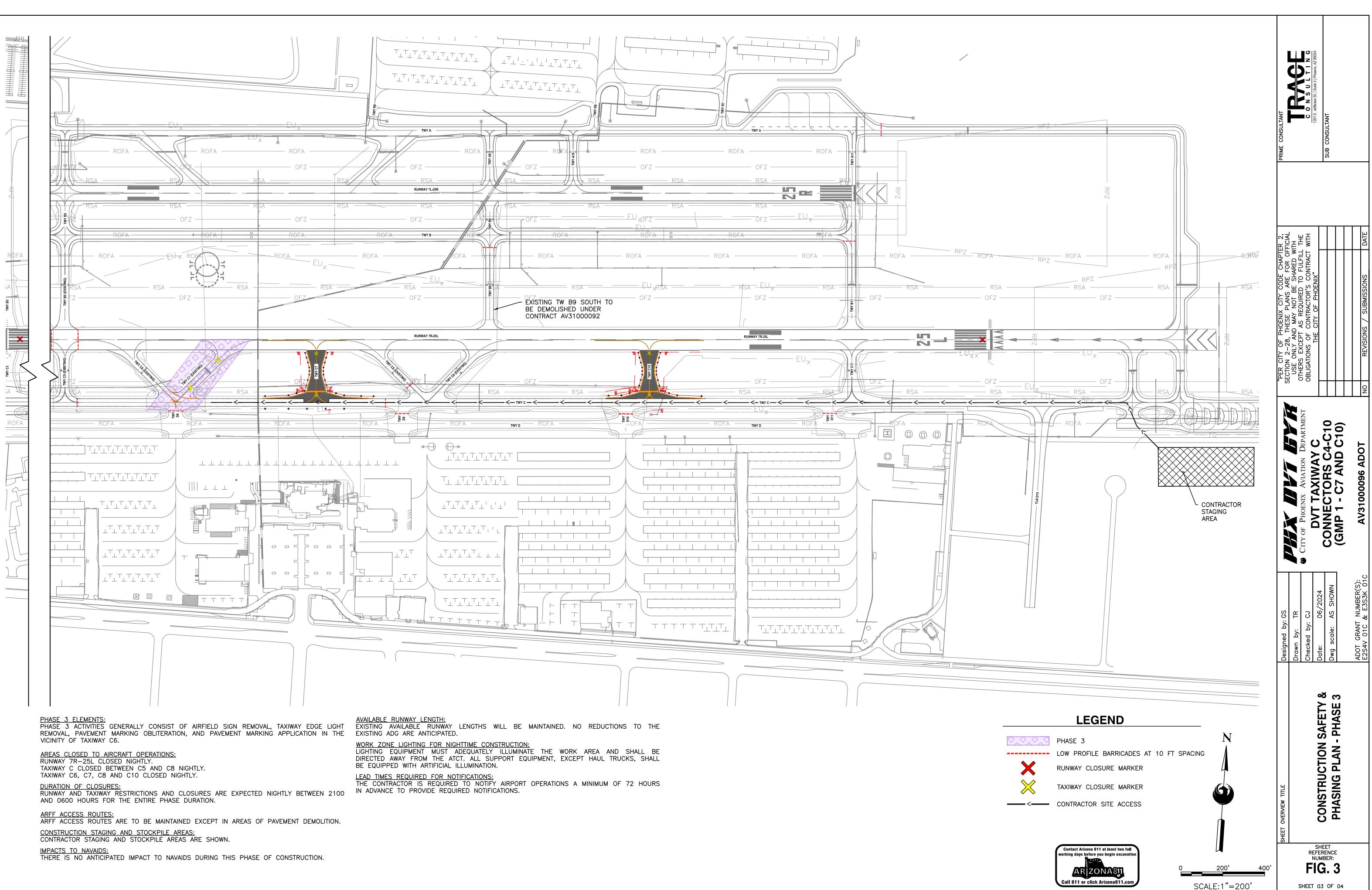
During Phase 3 work will be completed to remove airfield lighting and signage and pavement markings associated with the old Taxiway C7. Work will occur at night and will involve the nightly closure of Runway 7R-25L. Taxiway C is closed nightly between C5 and C8. Taxiway C6, C7, C8, and C10 are closed nightly. Contractor site access will require DVT Operations Staff escort of all Contractor vehicles to the work site because the site access route is along portions of active Taxiway C. All

closures are lifted daily, and the airfield can continue operations without restrictions during the day.

APPENDIX A PHASING PLANS







APPENDIX B BARRICADE EXAMPLES

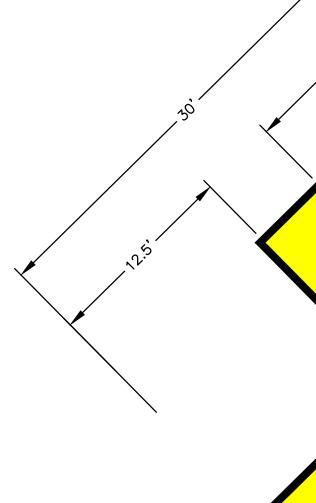


NOTE: BARRICADES AND THEIR PLACEMENT SHALL MEET THE REQUIREMENTS OF FAA AC 150/5370-2G OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.



LOW PROFILE BARRICADE - TYPE 1 (TWO FLASHING RED LIGHTS) N.T.S.





TAXIWAY 🤤

NOTE: BARRICADES AND THEIR PLACEMENT SHALL MEET THE REQUIREMENTS OF FAA AC 150/5370-2G OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.



VERTICAL PANEL BARRICADE (FLASHING RED LIGHT) N.T.S.

NOTES:

1. CLOSED TAXIWAY MARKINGS SHALL BE YELLOW PAINT. YELLOW MARKINGS SHALL HAVE RETROREFLECTIVE MEDIA.

2. PLACE 50' FROM RUNWAY EDGE WHERE APPLICABLE.



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