DRAFT

CONSTRUCTION SAFETY PHASING PLAN (CSPP)

RELOCATE TAXIWAY B AND CONSTRUCT CONNECTORS B6 AND B9 GMP 2

FEBRUARY 28, 2025

AIP No.: 3-04-0028-XXX-20XX **COP Project No.:** AV31000092 FAA

PREPARED FOR:

THE CITY OF PHOENIX AVIATION DEPARTMENT PHOENIX-DEER VALLEY AIRPORT



702 W. DEER VALLEY ROAD PHOENIX, AZ 85027

PREPARED BY:



1201 E. JEFFERSON ST, STE 3 PHOENIX, AZ 85034

TABLE OF CONTENTS

1. CO	ORDINATION	1
1.a	CONTRACTOR PROGRESS MEETINGS	2
1.b	SCOPE OR SCHEDULE CHANGES	2
1.c	FAA ATO COORDINATION	2
2. SCH	HEDULING OF CONSTRUCTION PHASING	2
2.a	GMP 2 Phasing Elements	2
2.a.1.	Phase 1 Activities	2
2.a.2.	Phase 2 Activities	3
2.b	Construction Safety Drawings	3
3. ARE	EAS OF OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY	3
3.a	Identification of Affected Areas	3
3.b	Mitigation of Effects	4
4. PR	OTECTION OF NAVIGATIONAL AIDS (NAVAIDS)	5
5. COI	NTRACTOR ACCESS	5
5.a	Location of Stockpiled Construction Materials	5
5.b	Vehicle and Pedestrian Operations	5
5.b.1.	Construction Site Parking	5
5.b.2.	Construction Equipment Parking	5
5.b.3.	Access and Haul Routes	6
5.b.4.	Contractor Vehicles	7
5.b.5.	Vehicle Operator Requirements and Training	7
5.b.6.	Situational Awareness	7
5.c	Two-Way Radio Communication	8
5.d	Airport Security	٤
5.d.1.	Work Area	٤
6. WIL	DLIFE MANAGEMENT	9
6.a	Trash	g
6.b	Standing Water	9
6.c	Tall Grass and Seeds	9
6.d	Poorly Maintained Fencing and Gates	g
6.e	Disruption of Existing Wildlife Habitat	g
7. FOF	REIGN OBJECT DEBRIS (FOD) MANAGEMENT	g
AV3100	0092 FAA i DVT Relocate Taxiway B and Cons	struc

8. HA	ZARDOUS MATERIAL (HAZMAT) MANAGEMENT	<u></u>
9. NO	TIFICATION OF CONSTRUCTION ACTIVITIES	10
9.a	List of Responsible Representatives	10
9.b	NOTAMs	10
9.c	Emergency Notification Procedures	11
9.d	Coordination with ARFF Personnel	11
9.e	Notification to the FAA	11
10. INS	SPECTION REQUIREMENTS	11
10.a	Daily (Or More Frequent) Inspections	11
10.b	Final Inspections.	11
11. UN	DERGROUND UTILITIES	12
12. PE	NALTIES	12
13. SP	ECIAL CONDITIONS	12
14. RU	NWAY AND TAXIWAY VISUAL AIDS	13
14.a	General	13
14.b	Markings	13
14.c	Lighting and Visual NAVAIDs	13
14.d	Signs	13
15. MA	RKING AND SIGNS FOR ACCESS ROUTES	13
16. HA	ZARD MARKING, LIGHTING AND SIGNING	14
16.a	Purpose	14
16.b	Equipment	14
16.b.	1.Barricades	14
16.b.2	2.Lights	14
	3.AOA – General	
16.b.4	1.Maintenance	15
17. WC	ORK ZONE LIGHTING FOR NIGHTTIME CONSTRUCTION	15
18. PR	OTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS	15
18.a	Runway Safety Area (RSA)	15
18.b	Runway Object Free Area (ROFA)	16
18.c	Taxiway Safety Area (TSA)	17
18.d	Taxiway Object Free Area (TOFA)	18
18.e	Obstacle Free Zone (OFZ)	18

18.f	Runway Approach/Departure Surfaces	18
19. OT	HER LIMITATIONS ON CONSTRUCTION	18
19.a	Prohibitions	18
19.b	Restrictions	19

APPENDICES

Appendix A: Phasing Exhibits

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 GMP 2 of the Relocate Taxiway B and Construct Connectors B6 and B9 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 will have on the airport while providing a logical sequence of construction activities. The subsequent sections of the 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 GMP 2 are as follows:

- Demolition of existing Taxiway B east of Taxiway B9
- Full length demolition of existing connector Taxiway B11
- Removal, hauling, and stockpiling of crushed aggregate slope protection to enable proposed taxiway construction and infield grading
- · Removal of existing electrical infrastructure
- Obliteration of existing pavement markings
- Sawcut of existing runway pavement (Runways 7L-25R and 7R-25L)
- Full length reconstruction of Taxiway B11 including fillet pavement at future Taxiway
 B intersection
- Infield grading
- Hauling and placement of crushed aggregate slope protection
- Application of new airfield markings including taxiway centerlines, enhanced taxiway centerlines, taxiway edge markings, runway edge markings, runway holding position markings, and surface painted holding position signs
- Construction of new electrical infrastructure including taxiway edge lights, runway guard lights, duct bank, guidance signs, and handholes

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 meetings will be held on a weekly basis and will be conducted by the City of Phoenix Project Manager of this project. These meetings will be attended by the Contractor, the Construction Manager, 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 GMP 2 Phasing Elements

2.a.1. Phase 1 Activities

Phase 1 activities generally consist of crushed aggregate slope protection removal, unclassified excavation, sawcut and removal of existing asphalt concrete pavement, pavement marking obliteration, excavation and installation of electrical infrastructure, grading, construction of new asphalt concrete pavement, aggregate slope protection placement, and pavement marking application.

Phase 1 activities will be performed in the general area of the Taxiway B11 connector, south of Runway 7R-25L's Runway Safety Area (RSA), and north of Runway 7R-25L's south edge.

Phase 1 will be constructed with nighttime work only and will require restrictions to aircraft operations associated with 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 7R-25L 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 exhibits in Appendix A.

2.a.2. Phase 2 Activities

Phase 2 activities will begin after the completion of Phase 1. Phase 2 activities generally consist of crushed aggregate slope protection removal, unclassified excavation, sawcut and removal of existing asphalt concrete pavement, pavement marking obliteration, excavation and installation of electrical infrastructure, grading, construction of new asphalt concrete pavement, aggregate slope protection placement, and pavement marking application.

Phase 2 activities will be performed in the general areas south of Runway 7L-25R's southern edge, north of Runway 7R-25L's RSA, from the east side of the Taxiway B9 connector to east of the Taxiway B11 connector at the Taxiway Object Free Area (TOFA).

Phase 2 will be constructed with nighttime work only and will require restrictions to aircraft operations associated with nightly Runway 7L-25R closures. The closures shall be coordinated between the Contractor and DVT Airport Operations Staff. Work completed within the RSA limits of Runway 7L-25R 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 exhibits in Appendix A.

2.b Construction Safety Drawings

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

3. AREAS OF OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY

3.a Identification of Affected Areas

GMP 2 of this project involves the demolition of a portion of the existing Taxiway B, and the reconstruction of the Taxiway B11 connector. Construction activities will occur between Taxiway B9 and east of Taxiway B11 and between the south edge of Runway 7L-25R and the north edge of Runway 7R-25L. The construction area is shown in the initial phasing drawings in Appendix A. Construction will occur within the Runway Safety Area (RSA) and Runway Obstacle Free Zone (ROFZ) of both Runway 7L-25R and Runway 7R-25L during

this project. Construction activities occurring within these areas will be completed during nighttime runway closures. No daytime or extended runway closures are anticipated for the duration of this project. Portions of Taxiway A, B, C, and D will be closed during construction activities. Various connector taxiways will be closed during construction activities. Nighttime shifts may be used for all work. Runway and Taxiway restrictions and closures are expected nightly between 2100 and 0600 hours for the entirety of the phase durations. Areas of operations affected by the construction activity are detailed below.

Phase 1 will require the following nightly closures:

- Runway 7R-25L
- Taxiways C (east of the Sky Harbour Taxilane), D (east of the Sky Harbour Taxilane), A13, B11, C10, C11, C12, C13, D12, and D13

Phase 2 will require the following nightly closures:

- Runway 7L-25R
- Taxiways A (east of Ramp 7), A6, A8, A10, A13, and B11

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 FAAAC 150/5370-2G standards.

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 exhibits 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 phasing exhibits in Appendix A.

The maintenance of essential utilities shall be conducted by the Contractor. Improvements to electrical utilities will be incorporated into the project construction as indicated in the phasing exhibits 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 phasing exhibits 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 phasing exhibits 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 primary haul route for Phase 1 of this project begins at Gate 7 on North 7th Street. The route enters the AOA from the east side of the airport and proceeds south, then west along the vehicle service road and adjacent to the AOA fence until reaching the south Contractor Staging and Stockpile Area as shown in Appendix A. The haul route to the Phase 1 project area goes north from the Contractor Staging and Stockpile Area along the Taxiway C13 connector, turns west and continues along the closed Runway 7R-25L until reaching the project area. The primary haul route for Phase 2 of this project begins at Gate 7 on North 7th Street. The route enters the AOA from the east side of the airport and proceeds north, then west along the vehicle service road and adjacent to the AOA fence until reaching the north Contractor Staging and Stockpile Area as shown in Appendix A. The haul route to the Phase 2 project area goes south from the Contractor Staging and Stockpile Area, crosses Taxiway A and continues south along the Taxiway A11 connector until reaching the project area. 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 phasing exhibits in Appendix A.

All existing airfield pavement, 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. Only personnel
 will be allowed to enter and leave the work areas in vehicles with proper warning
 lights/flagging per FAA and DVT requirements.

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 Airport Security Personnel on a random basis.

5.b.5. Vehicle Operator Requirements and Training

Anyone operating a motor vehicle within the AOA, unless properly escorted, must attend the Airfield Driver's Training Program and successfully complete the testing process. A prerequisite for obtaining an airfield driver's permit is a current and valid driver's license.

5.b.6. Situational Awareness

Vehicle drivers must confirm by personal observation that aircraft are not 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 Operations 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

Kurt Krause, PMP
Design & Construction Services (DCS)
Phoenix Sky Harbor International Airport

Phone: (602) 683-3612 Cell: (480) 313-0244

Email: kurt.krause@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, for non-emergency needs the Contractor shall use the provided non-emergency telephone number.

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 a minimum of 45 days prior to construction or the date an application for a construction permit is filed, whichever is earliest. 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 filing a minimum of 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.

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. Construction activity will be stopped should interference to existing utilities be caused by the Contractor activities. In case of emergency, when the Contractor's personnel believe they may be in an area of existing utilities, the Construction Manager shall be notified immediately.

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 2. 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, if the incident is justified.				
Individuals involved in a non-compliance violation may be required to surrender their security badge and airfield driver's 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.

An "X" will be placed at the entrance to the closed taxiways from the runways in accordance with AC 150/5340-1M, Change 1.

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, which will not be removed, 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 150/5345-44L, AC 150/5340-18H, 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 150/5340-18H 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. 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 10 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 emergency vehicle 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 from distances of at least 200 feet during darkness 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 phasing exhibits 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. During construction activities, Runway 7L-25R or Runway 7R-25L will be closed and will not conflict with any portion of the work area.

2. Airport Operator Coordination.

Runway Safety Area dimension adjustments will not be utilized for GMP 2 construction activities.

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.

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 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 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.

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 250 feet for Runway 7L-25R and 400 feet for Runway 7R-25L during construction activities. The majority of the construction activities will occur in areas outside of the OFZ. A portion of the work will occur within the limits of the OFZ. In these instances, the respective runway will be closed. The timing and duration of closures is shown on the phasing exhibits in Appendix A. The City of Phoenix Aviation Department and DVT Operations shall coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

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

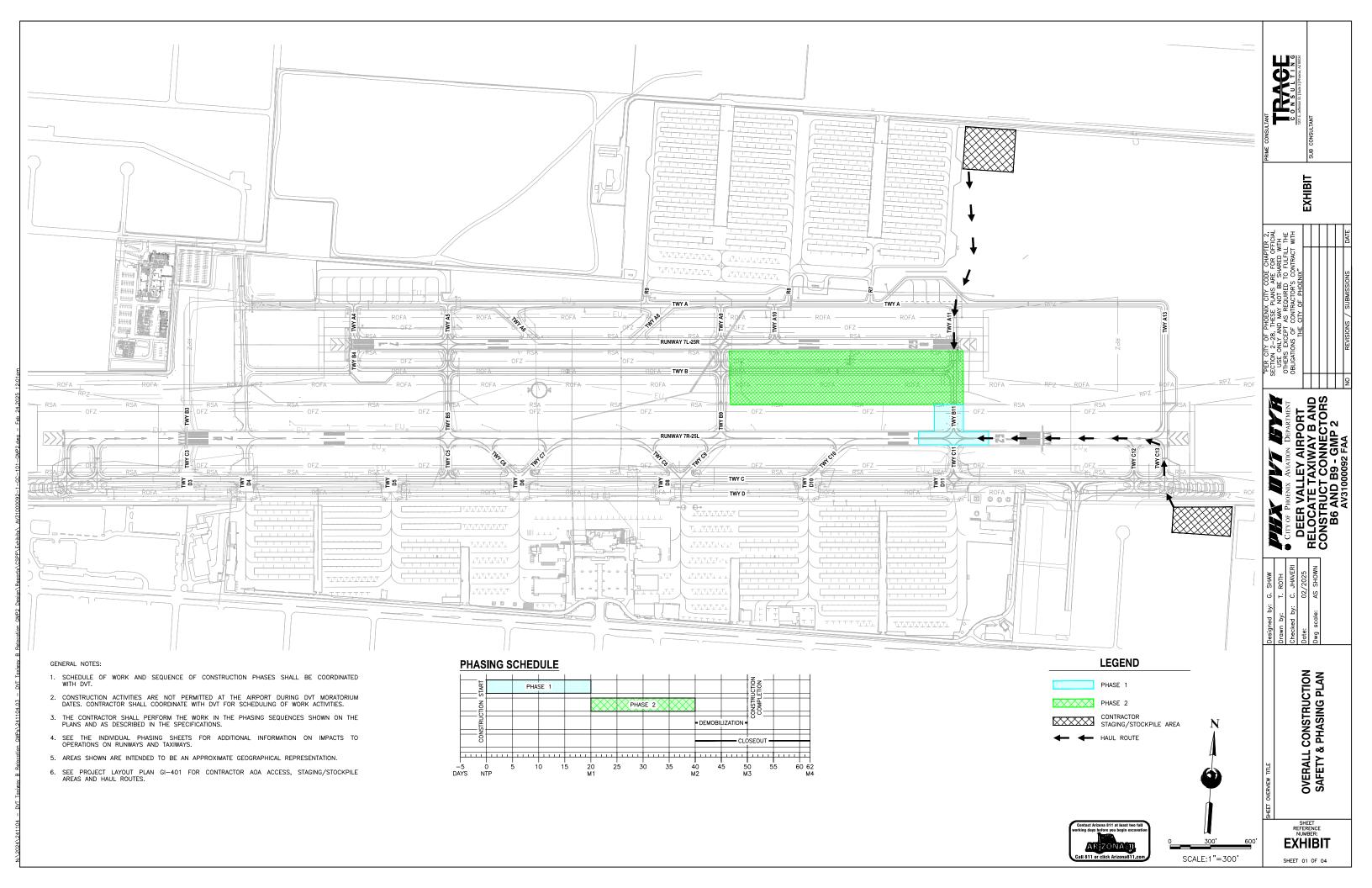
Construction activities shall not interfere with any NAVAIDS, safety areas, obstacle-free zones, object free areas, approach and departure surfaces, and any threshold citing criteria. This includes limitations on equipment height and stockpiled material.

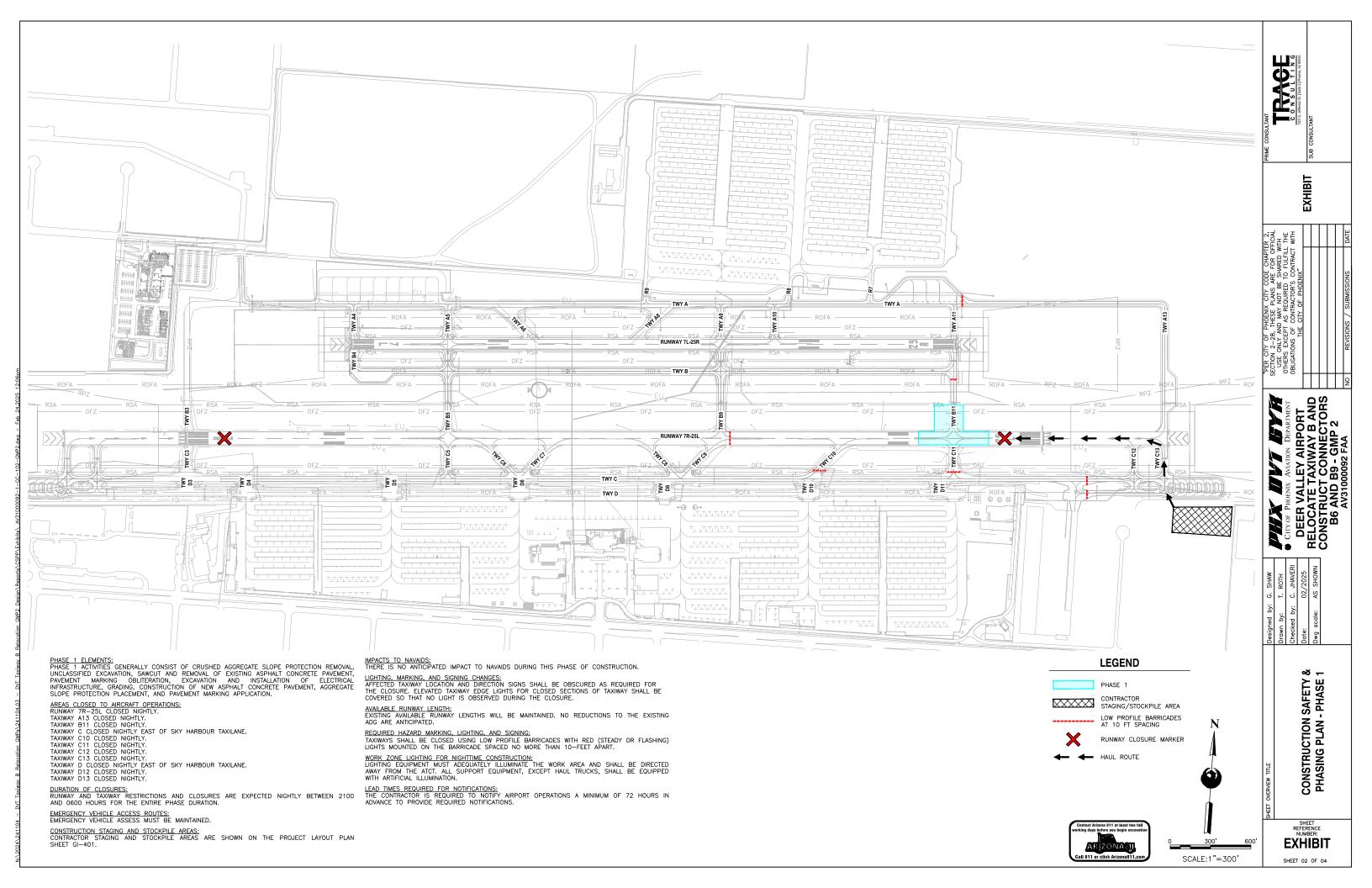
Contractors shall not use open flame welding or torches unless adequate fire safety precautions are provided, and the Construction Manager has approved their use. Under no circumstances should flare pots be used within the AOA at any time. The use of electrical blasting caps is not permitted on, or within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

19.b Restrictions

Work within the ROFZ, RSA, and RPZ may only be completed during nighttime closures of Runways 7L-25R and 7R-25L. It is anticipated that a full runway closure will be required for Phase 1 and Phase 2. All construction activities will occur during nighttime shifts. Specific construction timing constraints must be discussed and approved with airport operations a minimum of 48 hours in advance of construction activities.

APPENDIX A PHASING EXHIBITS





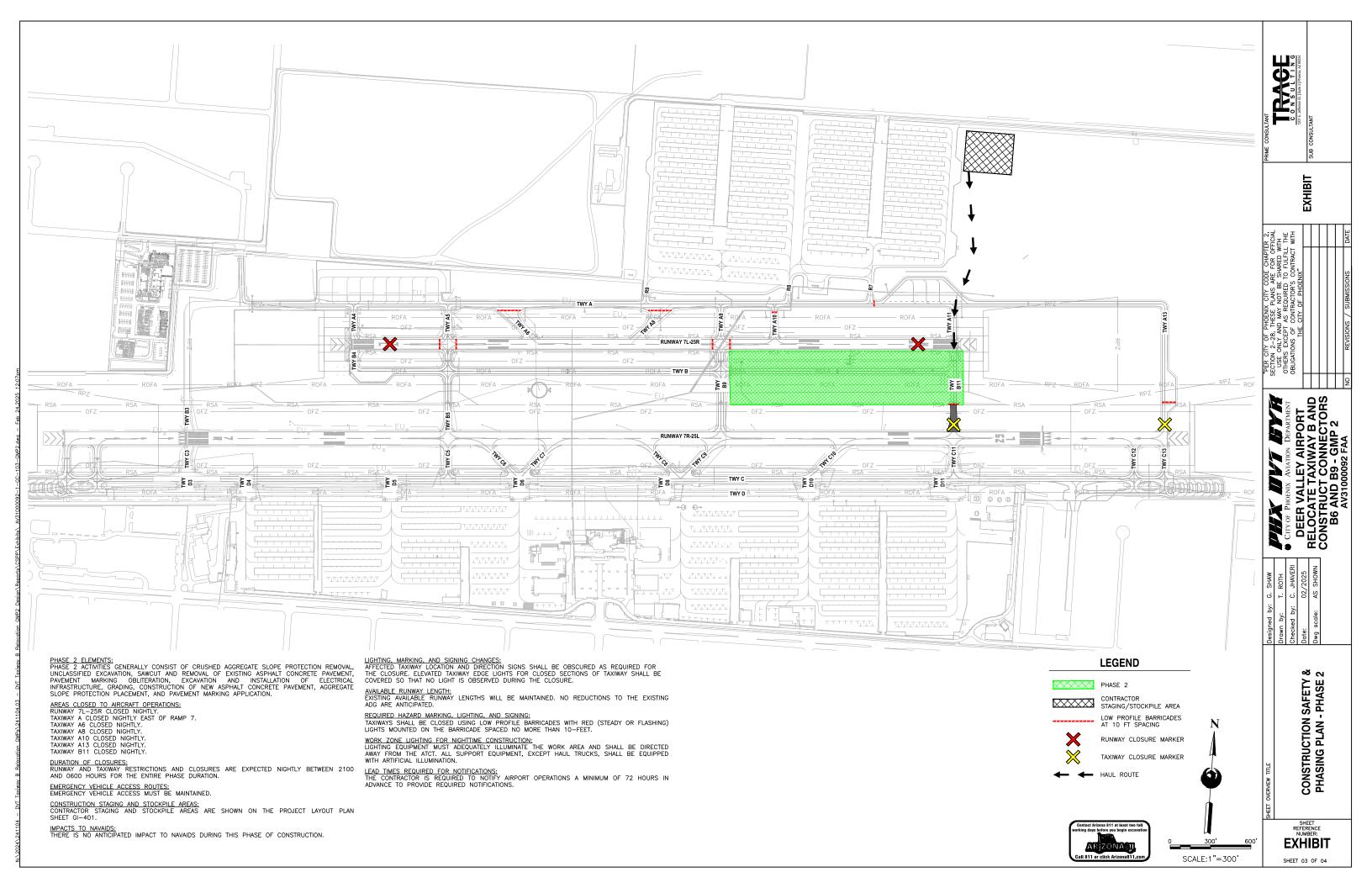


EXHIBIT SHEET 04 OF 04

BARRICADES AND THEIR PLACEMENT SHALL MEET THE REQUIREMENTS OF FAA AC 150/5370-26 OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION.

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



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

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