

GALLUP MUNICIPAL AIRPORT

Gallup, New Mexico

CONTRACT DOCUMENTS INCLUDING DETAILED SPECIFICATIONS

SCHEDULE I
AVIATION FUEL SYSTEM MODIFICATIONS

City Bid No. 1620

ACI No. 146223

September 2016



ARMSTRONG

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GALLUP MUNICIPAL AIRPORT

GALLUP, NEW MEXICO

Contract Documents
including
Detailed Specifications

A.C.I. No. 146223
City Bid No. 1620

CERTIFICATION

I hereby certify that these plans and specifications for Gallup Municipal Airport Improvements were prepared under my direct supervision for the Owners thereof.

Designed by:

 9/6/16
Engineer Date

Reviewed by and prepared under my direct supervision:

 217/16
Registered Professional Engineer Date



ARMSTRONG CONSULTANTS, INC.

Airport Engineering, Planning & Environmental Studies
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**INVITATION FOR BIDS
FOR IMPROVEMENTS TO
GALLUP MUNICIPAL AIRPORT
CITY OF GALLUP, NEW MEXICO**

City Bid No. 1620
ACI No. 146223

Sealed bids for improvements to the Gallup Municipal Airport will be received by the City of Gallup at the Purchasing Department Conference room in City Hall at 110 West Aztec Avenue, Gallup, New Mexico 87301 until September 28, 2016 at 2:00 p.m. MDT and then opened and read aloud.

The work involved includes the following:

SCHEDULE I
Aviation Fuel System Modifications

For a complete set of Plans, Specifications and Contract Documents all purchases must be made through our website at www.armstrongconsultants.com. A digital copy may be downloaded for \$25.00. A hardcopy may be purchased for \$50.00 for each set. There will be no refunds.

Each bid must be accompanied by a Certified Check or Cashier's Check in an amount not less than five percent of the total bid made payable to City of Gallup, or by a Bid Bond in like amount executed by a Surety Company.

The Bidder must supply all the information required by the proposal forms and specifications and he/she must bid on all items of every schedule. The City of Gallup reserves the right to waive any informality in or to reject any or all portions of the various bid items. No proposal may be withdrawn for a period of sixty (60) days from the opening thereof.

No Pre-Bid meeting will be held. Contact airport management at (505) 863-5501 to schedule site visit as needed. All bidders are advised to examine the site to become familiar with all site conditions.

Minimum wage rates as established by the Secretary of Labor and State of New Mexico are applicable to all schedules awarded for this project.

Any questions regarding this project are to be directed to the office of Armstrong Consultants, Inc., Albuquerque, New Mexico, (505) 508-2192 for interpretation.

CITY OF GALLUP, NEW MEXICO

Published:
September 3, 2016
September 4, 2016
September 11, 2016

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INSTRUCTIONS TO BIDDERS

1. Defined Terms

Terms used in these Instructions to Bidders, which are defined in the General Provisions of the Construction Contract, have the meanings assigned to them in the General Provisions. The term "Successful Bidder" means the lowest, qualified, responsible Bidder to whom the Owner (on the basis of Owner's evaluation as hereinafter provided) makes an award.

2. Copies of Bidding Documents

- 2.1 Complete sets of the Bidding Documents in the number and for the deposit sum stated in the Advertisement or Invitation to Bid may be obtained from Engineer (unless another issuing office is designated in the Advertisement or Invitation to Bid). The deposit will not be refunded. Partial sets of Bidding Documents shall not be issued. Portions of the Contract Documents not produced by the Owner or Engineer will not be furnished.
- 2.2 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.
- 2.3 Owner and Engineer in making copies of Bidding Documents available on the above terms do so only for the purpose of obtaining Bids on the Work and do not confer a license or grant for any other use.

3. Qualifications of Bidders

- 3.1 Each bidder may be required to submit written evidence of its qualifications to perform the Work, including but not limited to; financial data, a narrative of previous experience and evidence of authority to conduct business in the jurisdiction where the Project is located.

Evidence of appropriate licensing under the New Mexico Construction Industries Division (current edition) for the construction shall be submitted to the Sponsor with each bid for the appropriate classification of work. Evidence of Registration with the Labor Enforcement Fund of the New Mexico Department of Workforce Solutions shall be submitted to the Sponsor with each bid.

4. Examination of Contract Documents and Site

- 4.1 Before submitting a Bid, each Bidder must (a) examine the Contract Documents thoroughly, (b) visit the site to familiarize himself with local conditions that may in any manner affect cost, progress or performance of the Work, (c) familiarize himself with federal, state and local laws, ordinances, rules and regulations that may in any manner affect cost, progress, or performance of the Work; and (d) study and carefully correlate Bidder's observations with the Contract Document.

- 4.2 Where any soils investigation or report of subsurface and latent physical conditions at the site or otherwise affecting cost, progress, or performance of the Work which have been relied upon by Engineer in preparing the Drawings and Specifications, for the convenience of the Bidder, the Engineer will make copies of such reports available to any Bidder requesting them. These reports are not guaranteed as to accuracy or completeness, nor are they part of the Contract Documents. Before submitting his Bid, each Bidder will, at his own expense, make such additional investigations and tests as the Bidder may deem necessary to determine his Bid for performance of the Work in accordance with the time, price and other terms and conditions of the Contract Documents.
- 4.3 On request, Owner will provide each Bidder access to the site to conduct such investigations and tests as each Bidder deems necessary for submission of his Bid.
- 4.4 The lands upon which the Work is to be performed, rights-of-way for access thereto and other lands designated for use by Contractor in performing the Work are identified in the Special Provisions, General Provisions, or Drawings.
- 4.5 Drawings and Specifications were prepared on the basis of interpretation, judgment and discretion of Engineer. Accuracy of the Drawings and Specifications cannot be guaranteed. Questions about perceived inconsistencies, ambiguities or errors should be directed to the Engineer. By submitting its Bid, Bidder waives the right to assert that inconsistencies, ambiguities or errors impacted its Bid, Bidder assumes the risk attendance to successful performance of the work, waives all claims for additional compensation or time extensions on the grounds that the nature or amount of work to be done was not understood at the time of Bidding and waives all claims of any nature against the Owner and the Engineer arising out of or related to submission of its bid. The submission of a Bid will constitute an incontrovertible representation by the Bidder that he has complied with every requirement of this Article 4 and that the Contract Documents are sufficient in scope and detail to indicate and convey understanding of all terms and conditions for performance of the Work.
- 4.6 The Bid Set of Drawings and Specifications may have been obtained through a plan room, either physically or through Internet access. Bidder acknowledges that the Engineer has no control over the operation of the plan room. Bidder acknowledges and accepts sole responsibility for obtaining all Bid information, including but not limited to, Addenda which may be issued subsequent to the Original Bid Set.

5. Interpretations

- 5.1 All questions about Contract Documents including Detailed Specifications and/or Construction Plans shall be submitted to Engineer in writing. Questions will be accumulated and a reply will be issued by an Addendum that will then be emailed to all parties recorded by Engineer as having received the Bidding Documents by no later than two (2) days before the scheduled Bid Opening. Questions received less than forty-eight (48) hours prior to the time and date for opening Bids will not be answered. Only questions answered by formal written Addenda will be binding

and receipt of all addenda must be properly acknowledged on the appropriate proposal page. If acknowledgement for receiving any of the issued addenda is missing, then your bid will not be accepted. Oral and other interpretations or clarifications will be without legal effect.

6. Bid Security

- 6.1 Bid Security shall be made payable to Owner, in an amount of five percent of the Bidder's total Bid price and in the form of a certified or bank check or a Bid Bond issued by a Surety as assurance that the Bidder will, upon acceptance of his Bid, execute such contractual documents as may be required within the time specified.
- 6.2 The Bid Security of the successful Bidder will be retained until such Bidder has executed the Agreement and furnished the required Contract Security; whereupon, it will be returned; if the successful Bidder fails to execute and deliver the Agreement and furnish the required Contract Security within 10 days of the Notice of Award, Owner may annul the Notice of Award and the Bid Security of that Bidder will be forfeited. The Bid Security of any Bidder whom the Owner believes to have a reasonable chance of receiving the award may be retained by the Owner until the earlier of the seventh day after the "effective date of the Agreement" or the one-hundred and twenty-first day after the Bid opening. Bid Security of other Bidders will be returned within seven days of the Bid opening.

7. Contract Time

- 7.1 The number of days within which, or the date by which the Work is to be completed, (the Contract Time) is set forth in Article 3 of the Agreement and Article 5 of the Special Provisions.

8. Liquidated Damages

- 8.1 Provisions for liquidated damages, if any, are set forth in the Agreement.

9. Substitute Material and Equipment

- 9.1 The Contract, if awarded, will be on the basis of material and equipment described in the Drawings or specified in the Specifications without consideration of possible substitute or "or-equal" items. Whenever it is indicated in the Drawings or specified in the Specifications that a substitute or "or-equal" item of material or equipment may be furnished or used by Contractor if acceptable to Engineer, application for such acceptance will not be considered by Engineer until after the "effective date of the Agreement." The procedure for submittal of any such application by Contractor and consideration by Engineer is set forth in Section 60, paragraph 3 of the General Provisions that may be supplemented in the Special Provisions.

10. Subcontractors

- 10.1 Proposal requires that the identity of Subcontractors be submitted to Owner. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, other person or organization, either may, before giving

the Notice of Award, request the apparent Successful Bidder to submit an acceptable substitute without an increase in Bid price. If the apparent Successful Bidder declines to make any such substitution, the Contract shall not be awarded to such Bidder, but his declining to make any such substitution will not constitute grounds for sacrificing his Bid Security. Any Subcontractor, other person or organization so listed and to whom Owner or Engineer does not make written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer.

- 10.2 In contracts where the Contract Price is on the Basis of Cost-of-the-Work Plus a Fee, the apparent Successful Bidder, prior to the Notice of Award, shall identify, in writing to Owner, those portions of the Work that such Bidder proposes to subcontract and after the Notice of Award may only subcontract other portions of the Work with Owner's written consent.
- 10.3 No Contractor shall be required to employ any Subcontractor, other person or organization against which he has reasonable objection.

11. Bid Proposal Form

- 11.1 The Bid Proposal Form is attached hereto; additional copies may be obtained from Engineer.
- 11.2 Bid Proposal Forms must be completed in ink or by typewriter. The Bid price of each item on the form must be stated in words and numerals; in case of a conflict, words will take precedence.
- 11.3 Bids by corporations must be executed in the corporate name by the president or a vice-president (or other corporate officer accompanied by evidence of authority to sign) and the corporate seal must be affixed and attested by the secretary or an assistant secretary. The corporate address and state of incorporation shall be shown below the signature.
- 11.4 Bids by partnerships must be executed in the partnership name and signed by a partner, whose title must appear under the signature and the official address of the partnership must be shown below the signature.
- 11.5 All names must be typed or printed below the signature.
- 11.6 The Bid shall contain an acknowledgment of receipt of all Addenda (the numbers of which shall be filled in on the Bid Form).
- 11.7 The address to which communications regarding the Bid are to be directed must be shown.

12. Submission of Bids

- 12.1 Bidders must submit proposals for all of the work entailed by all of the schedules. A bidder may not submit a proposal for some, but not all, of the schedules.
- 12.2 Bids shall be submitted at the time and place indicated in the Advertisement or Invitation to Bid and shall be included in an opaque sealed envelope, marked with

the project title and name and address of the Bidder and accompanied by the Bid Security and other required documents. If the Bid is sent through the mail or other delivery system, the sealed envelope shall be enclosed in a separate envelope with the notation "BID ENCLOSED" on the face thereof. Each Bidder shall prepare his Proposal, including supporting data, in duplicate.

Each Bidder will submit the following in a sealed opaque envelope:

- A. The Owner's copy of the Proposal and such other items as may be required to accompany the Proposal. The entire contract documents book is not required to be submitted.
- B. Bid Security.

The outside of the sealed envelope must be clearly marked with Bidder's name and address, the Owner's name and address and the name of the project for which the Proposal is being submitted. The Bidder shall retain a duplicate copy of Proposal for Bidder's records.

13. Modification and Withdrawal of Bids

- 13.1 Bids may be modified or withdrawn by an appropriate document duly executed (in the manner that a Bid must be executed) and delivered to the place where Bids are to be submitted at any time prior to the opening of Bids.

14. Opening of Bids

- 14.1 When Bids are opened publicly, they will be read aloud and an abstract of the amounts of the base Bids and major alternates (if any) will be made available within seven (7) days after the opening of Bids.

15. Bids to Remain Open

- 15.1 All Bids shall remain open for the period specified in General Provision 30-02, but Owner may, at his sole discretion, release any Bid and return the Bid Security prior to that date.

16. Award of Contract

- 16.1 Owner reserves the right to reject any and all Bids, to waive any and all informalities and to negotiate contract terms with the Successful Bidder. The Owner further reserves the right to disregard all nonconforming, nonresponsive, or conditional Bids. Discrepancies between words and figures will be resolved in favor of words. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum.
- 16.2 In evaluating Bids, Owner shall consider the qualifications of the Bidders, whether or not the Bids comply with the prescribed requirements and alternates and unit prices, if requested in the Bid forms. It is Owner's intent to accept alternates (if any

are accepted) in the order in which they are listed in the Bid form, but Owner may accept them in any order or combination.

- 16.3 Owner may consider the qualifications and experience of Subcontractors and other persons and organizations (including those who are to furnish the principal items of material or equipment) proposed for those portions of the Work as to which the identity of Subcontractors and other persons and organizations must be submitted as provided in the Proposal. Operating costs, maintenance considerations, performance data and guarantees of materials and equipment may also be considered by Owner. A Certification of Inclusion of Labor and EEO Requirements in Subcontracts shall be submitted to the Owner for each subcontract.
- 16.4 Owner may conduct such investigations as he deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of the Bidders, proposed Subcontractors and other persons and organizations to do the Work in accordance with the Contract Documents to Owner's satisfaction within the prescribed time.
- 16.5 Owner reserves the right to reject the Bid of any Bidder who does not pass any such evaluation to Owner's satisfaction.
- 16.6 The scope of the project may be revised prior to award depending on the availability of funds. If the Contract is to be awarded, it will be awarded based on the lowest responsive Bid total of the awarded items.
- 16.7 If the Contract is to be awarded, Owner will give the Successful Bidder a Notice of Award within the period specified in General Provision 30-02.

17. Performance and Other Bonds

- 17.1 Article 6 of the Agreement sets forth Owner's requirements as to performance and other Bonds. When the Successful Bidder delivers the executed Agreement to Owner, it shall be accompanied by the required Contract Security.

18. Agreement

- 18.1 The successful Bidder shall, within 15 days after Notification of the Award:
 - A. Enter into an Agreement, in writing, with Owner covering all matters detailed in these Specifications and his Proposal.
 - B. Execute the necessary Bonds with Surety acceptable to the Owner as indicated in the Agreement.
 - C. Show evidence of adequate insurance acceptable to the Owner as defined by the General Provisions and Special Provisions.
 - D. If requested by the Owner, provide a fully detailed financial statement.

- 18.2 The aforesaid Agreement and Bonds shall be subject to approval by the Owner's Attorney. All Bonds are to be furnished at the sole cost of the successful Bidder. Surety therein provided for shall be a Corporate Surety authorized to do business in the State of New Mexico.
- 18.3 The Agreement, when executed, shall be deemed to include the entire Agreement between the parties hereto and the Contractor shall not claim any modification thereof resulting from any representation of the Owner or any other person.

19. State and Federal Regulations

- 19.1 The successful Contractor must fully comply with all applicable Federal and State requirements pertaining to the work, employees used on the job and any special requirements pertaining to work procedures.

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**PROPOSAL
FOR
IMPROVEMENTS TO
GALLUP MUNICIPAL AIRPORT
CITY OF GALLUP, NEW MEXICO
City Bid No. 1620
ACI No. 146223**

****BIDDERS TO SUBMIT PAGES P-1 THROUGH P-6 WITH BID****

TO: City of Gallup
110 West Aztec Avenue
Gallup, New Mexico 87301

The undersigned Bidder, having examined the Plans, Specifications and other Contract Documents as designated and all Addenda thereto; having investigated the location of and conditions affecting the Proposed Work; and being acquainted with and fully understanding the extent and character of the Work covered by this Proposal and all factors and conditions affecting or which may be affected by the Work;

HEREBY PROPOSES, pursuant to the Invitation for Bids published September 3, 4 and 11, 2016, to furnish all required materials, tools, equipment and plant; to perform all necessary labor and superintendence; and to undertake and complete the Work required for Gallup Municipal Airport, in Gallup, New Mexico, in full accordance with Plans, Specifications and Contract Documents hereto attached or by reference made a part thereof, at and for the following prices:

BID SCHEDULE

"Unit Prices" are to be handwritten or typed in both words and figures. In case of discrepancy, the amount shown in words will govern.

New Mexico: Use the following as well:

"Unit-Prices" bid shall not include 8.3125% New Mexico Gross Receipts Tax. This tax will be included in each payment to the Contractor. The Contractor is responsible for paying this Gross Receipts Tax to the State of New Mexico.

GALLUP MUNICIPAL AIRPORT

SCHEDULE I - AVIATION FUEL SYSTEM MODIFICATIONS						
SCHEDULE I						
Item No.	Spec. No.	Description	Est. Qty.	Unit	Unit Price in Figures/Writing	Total Price
1	S-1	Mobilization	1	LS	\$	\$
2	S-19a	Jet A Bulk Fuel Dispensing System	1	LS	\$	\$
3	S-19b	Avgas Fuel Dispenser Dead-man System	1	LS	\$	\$
SCHEDULE I TOTAL					\$	
ADDITIVE ALTERNATIVE I						
Item No.	Spec. No.	Description	Est. Qty.	Unit	Unit Price in Figures/Writing	Total Price
4	S-19c	Jet A Self Serve Fuel Dispenser	1	LS	\$	\$
ADDITIVE ALTERNATIVE I TOTAL					\$	
ADDITIVE ALTERNATIVE II						
Item No.	Spec. No.	Description	Est. Qty.	Unit	Unit Price in Figures/Writing	Total Price
5	S-19d	Avgas Self Serve Fuel Dispenser	1	LS	\$	\$
ADDITIVE ALTERNATIVE II TOTAL					\$	
ADDITIVE ALTERNATIVE III						
Item No.	Spec. No.	Description	Est. Qty.	Unit	Unit Price in Figures/Writing	Total Price
6	S-19e	Remove and Replace Jet A Dispenser Hose	1	LS	\$	\$
ADDITIVE ALTERNATIVE III TOTAL					\$	

GALLUP MUNICIPAL AIRPORT

SUMMARY	
TOTAL OF SCHEDULE I	
TOTAL OF ADDITIVE ALTERNATE I	
TOTAL OF ADDITIVE ALTERNATE II	
TOTAL OF ADDITIVE ALTERNATE III	
GRAND TOTAL	

BIDDER acknowledges receipt of the following ADDENDUM:

The submission of a BID will constitute an incontrovertible representation by the BIDDER that he is familiar with conditions of the site as well as with the work required.

BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for unit prices or lump sum as shown on the BID SCHEDULE. The Bidder further agrees that no Bid may either be changed or withdrawn without consent of the Owner for a period of sixty (60) days after the scheduled time for opening the Bids.

The undersigned Bidder hereby agrees to be ready and to appear at the office of the Mayor to execute the attached Agreement in conformity with this Bid and also to have ready and furnish the required Proofs of Insurance and Bonds, executed by a Surety Company acceptable to the Owner's Attorney at any time within fifteen (15) days from the date of a Notice of Award, mailed to the address hereinafter given.

Enclosed herewith is a Bid Security as defined in the attached Instructions to Bidders in the amount of _____, which Bid Security the undersigned Bidder agrees is to be paid to and become the property of the Owner as liquidated damages and not as a penalty, for the delay and extra work caused hereby, should the Bidder prevent an award as defined in the Instructions to Bidders, or should the Proposal be accepted and Contract awarded him and he fails to enter into Agreement in the form prescribed and to furnish the required proofs of insurance and bonds within fifteen (15) days as stipulated.

BIDDER MUST FILL IN THE FOLLOWING (if none, write none)

NM License Number _____ License Classification: _____
Public Works Minimum Wage Act Registration Number _____
Department of Work Force Solutions Labor Relations Division # _____

Attach copy of labor Relations Division Department of Workforce Solutions Public Works Bureau Registration as per 8.1 and 13-4-13-1 NMSA 1978 for Contractor and Subcontractor required to register.

SIGNATURE OF BIDDER

Dated at _____ this _____ day of _____, 2016.

IF AN INDIVIDUAL:

Name: _____

By: _____
(Signature of Individual)

Doing Business as: _____

Business Address: _____

Telephone Number: _____

(If Bidder is a Corporation or Joint Venture, sign on next page)

IF A CORPORATION:

Corporation Name: _____

By: _____
(Authorized Signature)

Name and Title: _____

Business Address: _____ (CORPORATE SEAL)

Telephone Number: _____

ATTEST:

By: _____
(Authorized Signature)

Name and Title: _____

IF A JOINT VENTURE:

Joint Venture Name: _____

By: _____
(Authorized Signature)

Name and Title: _____

Business Address: _____

Telephone Number: _____

Joint Venture Name: _____

By: _____
(Authorized Signature)

Name and Title: _____

Business Address: _____

Telephone Number: _____

**CITY OF GALLUP
SUBCONTRACTOR LISTING
Formal Bid No. 1620**

The Subcontractor Listing Threshold For This Project Is \$5,000, And Attached To The Bid In Compliance With 13-4-32 Thru 13-4-43 NMSA 1978, Together With The City Or County Location Of Their Place Of Business Listed. The Following Subcontractors Will Work On The Construction Of The Project If My Proposal Is Accepted. List only one Entry for each category of work as defined by Contractor.

Bidder Represents That He Is Licensed And Qualified To Perform 100% Of The Category Of Work For Which No Subcontractor Is Listed. D.W.S. Registration Number Required If Amount Of Work Exceeds \$60,000.

Company Name: _____	Company Name: _____
Address: _____	Address: _____
City/County: _____ State: _____	City/County: _____ State: _____
Work to be Performed: _____	Work to be Performed: _____
Amount (\$): _____	Amount (\$): _____
License No.: _____	License No.: _____
DWS Registration No. _____	DWS Registration No. _____

Company Name: _____	Company Name: _____
Address: _____	Address: _____
City/County: _____ State: _____	City/County: _____ State: _____
Work to be Performed: _____	Work to be Performed: _____
Amount (\$): _____	Amount (\$): _____
License No.: _____	License No.: _____
DWS Registration No. _____	DWS Registration No. _____

Company Name: _____	Company Name: _____
Address: _____	Address: _____
City/County: _____ State: _____	City/County: _____ State: _____
Work to be Performed: _____	Work to be Performed: _____
Amount (\$): _____	Amount (\$): _____
License No.: _____	License No.: _____
DWS Registration No. _____	DWS Registration No. _____

Company Name: _____	Company Name: _____
Address: _____	Address: _____
City/County: _____ State: _____	City/County: _____ State: _____
Work to be Performed: _____	Work to be Performed: _____
Amount (\$): _____	Amount (\$): _____
License No.: _____	License No.: _____
DWS Registration No. _____	DWS Registration No. _____

-No Contractor whose Proposal is accepted shall permit any subcontract to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original subcontractor listed in the original Proposal without the consent of the using agency.

-No Contractor whose Proposal is accepted, other than in the performance of change orders causing changes or deviations from the original contract, shall sublet or subcontract any portion of the work in excess of the listing threshold as to which his original Proposal did not designate a Subcontractor unless:

- (1) the Contractor fails to receive a Proposal from a category of work. Under such circumstances, the contractor may subcontract. The Contractor shall designate on the listing form that **no Proposal was received** or;
- (2) the Contractor fails to receive more than one Proposal for a category of work. Under such circumstances, the Contractor may subcontract. The Contractor shall state on the listing form that **only one Subcontractor's Proposal was received**, together with the name of the Subcontractor. This designation shall not occur more than one time on the Subcontractor list.

ADDITIONAL COPIES MAY BE MADE IF NECESSARY

**NOTICE OF AWARD
FOR
GALLUP MUNICIPAL AIRPORT**

TO: _____

The OWNER has considered the Bid submitted by you for the above described Work in response to its Invitation for Bids and Instructions to Bidders.

You are hereby notified that your Bid has been accepted in the amount of _____ Dollars (\$_____). (Bid amount does not include NMGRT)

You are required by the Instructions to Bidders to execute the Agreement and furnish the required Contractor's Performance, Payment and Maintenance Bonds and Proofs of Insurance within fifteen (15) calendar days from the date of this Notice to you.

If you fail to execute said Agreement and to furnish said Bonds and Proofs of Insurance within fifteen (15) days from the date of this Notice, said Owner will be entitled to consider your Bid abandoned, to annul this Notice of Award and to declare your Bid Security forfeited.

You are required to return an acknowledged copy of this NOTICE OF AWARD to the Owner.

Dated this _____ day of _____, 2016.

CITY OF GALLUP, NEW MEXICO
(Owner)

By _____, Mayor
110 West Aztec Avenue
Gallup, New Mexico 87301
Telephone: (505) 863-1220

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE OF AWARD is hereby acknowledged by:

_____, Contractor

By: _____ Date: _____

Title: _____ Telephone: _____

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AGREEMENT

This Agreement made and entered into this _____ day of _____, 2016, by and between CITY OF GALLUP, NEW MEXICO, party of the first part, hereinafter in the Contract Documents referred to as the "Sponsor," and _____ hereinafter in the Contract Documents called the "Contractor," party of the second part.

WITNESSETH, that the Sponsor advertised that sealed proposals would be received for furnishing all labor, tools, supplies, equipment, materials and everything necessary and required for Gallup Municipal Airport Improvements.

WHEREAS, City Bid No. 1620, ACI No. 146223, has been awarded to the above-named Contractor by the Sponsor and said Contractor is now willing and able to perform all of said work in accordance with said advertisement and his proposal.

NOW, THEREFORE, in consideration of the compensation to be paid the Contractor, the mutual covenants hereinafter set forth and subject to the terms hereinafter stated, it is mutually covenanted and agreed as follows:

ARTICLE 1

Contract Documents

It is agreed by the parties hereto that the following list of instruments, drawings and documents which are attached hereto, bound herewith, or incorporated herein by reference constitute and shall be referred to either as the Contract Documents or the Agreement and all of said instruments, drawings and documents taken together as a whole constitute the Agreement between the parties hereto and they are as fully a part of this Agreement as if they were set out verbatim and in full herein:

- Invitation for Bids
- Instructions to Bidders
- Proposal
- Bid Bond
- Notice of Award
- Agreement
- Performance, Payment and Maintenance Bonds
- Certificate of Inclusion of Labor & EEO Requirements in Subcontracts
- Notice to Proceed
- Change Orders
- Applications for Payment
- Wage Rates
- General Provisions
- Technical Specifications
- Special Provisions
- Construction Safety and Phasing Plan
- Construction Management Plan
- Addenda (If any)

ARTICLE 2

Statement of Work

The Contractor agrees to and shall furnish all labor, tools, supplies, equipment, materials and everything necessary for and required to do, perform and complete all of the work described, drawn, set forth, shown and included in said Contract Documents.

ARTICLE 3

Contract Time

The Contractor agrees to undertake the performance of the Work under the Agreement on the date stated on the Notice to Proceed and agrees to fully complete said Work within **fourteen (14)** consecutive calendar days unless an extension of time is granted by the Sponsor in accordance with the provisions of Section 80, paragraph 7, General Provisions.

ARTICLE 4

Liquidated Damages

It is understood and agreed by and between the Sponsor and the Contractor that should the completion of the entire project be delayed beyond the stipulated day herein specified, the Sponsor will suffer substantial damages, which damages it would be difficult to accurately determine. The parties hereto have considered the possible limit of damages and have agreed that a delay in completion of this project will cost the Sponsor not less than One Thousand Dollars (\$1,000) for each calendar day. In view of these facts and in accordance with the General and Special Provisions, the Contractor agrees to pay the Sponsor as liquidated damages and not as a penalty, the sum of One Thousand Dollars (\$1,000) for each calendar day, if any, which exceeds the total project time limit stated in Article 3 above with allowances for any extensions of time which the Sponsor may properly grant. If the Contractor shall fail to pay such liquidated damages promptly upon demand therefore, the Surety on the Performance Bond shall pay such damages. Also, the Sponsor may hold all or part of such liquidated damages from payments due the Contractor.

ARTICLE 5

Terms of Payment

The Contractor agrees to accept as his full and only compensation for the performance of all the work required under this Agreement, the sum or sums of money as may be proper in accordance with the price or prices set forth in the Contractor's Proposal, attached hereto and made a part hereof for the total estimated cost thereof to be _____ Dollars (\$_____). Partial payments will be made for Work completed during the previous month as well as for materials (invoice cost only) delivered to the Project site and suitably stored.

Application for partial payments for stored materials must be accompanied by certified invoices showing all pertinent data that may be required by the Engineer to verify the accuracy of the invoices and their relation to the stored materials. Failure to provide certified invoices will disqualify the materials in question from consideration for partial payment. Partial payments for Work completed during the previous month will be made based on the Contractor's Application for Payment and the Engineer's Recommendation of Payment.

The Sponsor will retain, from partial payments, ten percent (10%) of the total amount due the Contractor based on the Contractor's Application for Payment and the Engineer's Recommendation of Payment.

Nothing contained herein shall be construed as relieving the Contractor and the Sureties on the Contractor's Bond from any claim or claims for work or labor done or materials or supplies furnished in the execution of the Agreement.

It is the intent of Sponsor, to make payment for partial payments in a timely manner as follows:

- A. The Contractor shall submit to the Engineer his Application for Payment not later than the next to last Friday of the month.
- B. The Engineer will, within 7 days after receipt, submit the Application for Payment to the Sponsor for payment along with his Recommendation of Payment, noting any changes. The Sponsor will make payment to the Contractor when funds are received from the State of New Mexico.

ARTICLE 6

Bonds and Insurance

The party of the second part furnishes concurrently herewith the bonds and insurance required by the Contract Documents, said bonds and insurance having been approved by the Sponsor and attached hereto. The Performance Bond will be in an amount not less than one hundred percent (100%) of the Contract Price but, in any event, shall provide for the completion of the project in accordance with the Contract Documents, without additional cost to the Sponsor. The Payment Bond will be in an amount not less than one hundred percent (100%) of the Contract Price but, in any event, shall provide for the payment of all project costs in accordance with the Contract Documents, without additional cost to the Sponsor. The Maintenance Bond will be so conditioned as to provide for the correction or replacement of any portion of the Work that proves defective in materials or workmanship for a period of one year following final acceptance of the project and shall cover not only the material but also the costs of removal, correction, re-construction and any other costs incurred in the repair of defective portions of the Work.

ARTICLE 7

Inspection Of Records – 49 CFR Part 18

(Version 1, 1/5/90)

The Contractor shall maintain an acceptable cost accounting system. The Sponsor, the FAA, the Comptroller General of the United States shall have access to any books, documents, paper and records of the Contractor which are directly pertinent to the specific Contract for the purposes of making an audit, examination, excerpts and transcriptions. The Contractor shall maintain all required records for three years after the Sponsor makes final payment and all other pending matters are closed.

ARTICLE 8

Breach Of Contract Terms, Sanctions – 49 CFR Part 18

(Version 1, 1/5/90)

Any Violation or breach of the terms of this Contract on the part of the Contractor or Subcontractor may result in the suspension or termination of this Contract or such other action which may be necessary to enforce the rights of the parties of this agreement. The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

ARTICLE 9

Termination Of Contract – 49 CFR Part 18

(Version 1, 1/5/90)

1. The Sponsor may, by written notice, terminate this Contract in whole or in part at any time, either for the Sponsor's convenience or because of failure to fulfill the Contract obligations. Upon receipt of such notice services shall be immediately discontinued (unless the notice directs otherwise) and all materials as may have been accumulated in performing this Contract, whether completed or in progress, delivered to the Sponsor.
2. If the termination is for the convenience of the Sponsor, an equitable adjustment in the Contract Price shall be made, but no amount shall be allowed for anticipated profit on unperformed services.
3. If the termination is due to failure to fulfill the Contractor's obligations, the Sponsor may take over the work and prosecute the same to completion by Contract or otherwise. In such case, the Contractor shall be liable to the Sponsor for any additional cost occasioned to the Sponsor thereby.
4. If, after notice of termination for failure to fulfill Contract obligations, it is determined that the Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the Sponsor. In such event, adjustment in the Contract Price shall be made as provided in paragraph 2 of this clause.
5. The rights and remedies of the Sponsor provided in this clause are in addition to any other rights and remedies provided by law or under this Contract.

ARTICLE 10

Clean Air And Water Pollution Control Requirements

(Version 1, 1/5/90)

Contractors and Subcontractors agree:

1. That any facility to be used in the performance of the Contract or Subcontract or to benefit from the Contract is not listed on the Environmental Protection Agency (EPA) List of Violating Facilities.
2. To comply with all the requirements of Section 114 of the Clean Air Act, as amended, 42

ARTICLE 11

Bonding Clauses for Construction Contracts and Subcontracts.

1. The Contractor agrees to furnish a performance bond for 100 percent of the Contract Price. This Bond is one that is executed in connection with a Contract to secure fulfillment of all the Contractor's obligations under such Contract.
2. The Contractor agrees to furnish a Payment Bond for 100 percent of the Contract Price. This Bond is one that is executed in connection with a Contract to assure payment of all monies owing by the Contractor under the Agreement and other Contract Documents.

ARTICLE 12

Hold Harmless

All Contractors or Subcontractors performing work under this Agreement agree to hold harmless, indemnify and defend, the City of Gallup and the Engineer, their consultants and each of their officers, agents and employees from any and all liability claims, losses or damage arising out of or alleged to arise from the Contractor's (or Subcontractor's) negligence in the performance of the Work described in the Construction Contract Documents, but not including liability that may be due to the sole negligence of the City of Gallup, the Engineer, their consultants or their officers, agents and employees.

ARTICLE 13

Agreement Binding

The Sponsor and the Contractor each binds himself, his partners, successors, assigns and legal representatives to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents. The Contract Documents constitute the entire agreement between the Sponsor and the Contractor and may only be altered, amended or repealed by a duly executed written instrument. Neither the Sponsor nor the Contractor shall, without the prior written consent of the other, assign or sublet in whole or in part his interest under any of the Contract Documents and specifically, the Contractor shall not assign any moneys due or to become due without the prior written consent of the Sponsor.

IN WITNESS WHEREOF, the City of Gallup has caused this Agreement to be subscribed by its Chair and sealed and attested by its Clerk in its behalf; and the Contractor, Second Party, has signed this Contract the day and the year first mentioned herein.

This Agreement is executed in five counterparts, each deemed to be an original.

SPONSOR, First Party

City of Gallup, New Mexico

By _____, Mayor

ATTEST:

_____, Clerk

CONTRACTOR, Second Party

By _____, _____
(Title)

WITNESS:

_____, _____
(Title)

CONSTRUCTION PERFORMANCE & MAINTENANCE BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business)

OWNER (Name and Address):

City of Gallup, New Mexico
110 West Aztec Avenue
Gallup, New Mexico 87301

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

Gallup Municipal Airport
Gallup, New Mexico
City Bid No. 1620

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company:
(Corp. Seal)

SURETY

Company:
(Corp. Seal)

Signature: _____
Name and Title:

Signature: _____
Name and Title:

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for the performance of the Construction Contract, including all related Construction Documents and modifications thereto, which is incorporated herein by reference.
2. If the Contractor completes the Contract and corrects all defects that appear within one year after final acceptance of all the work required under the Contract Documents, the Surety and the Contractor shall have no obligation under this bond, except to participate in conferences as provided in Subparagraph 3.1.
3. The Surety's obligations under this Bond shall arise after:
 - 3.1 The Owner has notified the Contractor and the Surety at its address described in Paragraph 10 below, that the Owner is considering declaring a Contractor Default and has requested and attempted to arrange a conference with the Contractor and the Surety to be held not later than fifteen days after receipt of such notice to discuss methods of performing the Contract, or for correcting defects in workmanship or material that have appeared within one year after final acceptance of the work. If the Owner, the Contractor and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Contract, or to correct said defects in workmanship or material, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default; and
 - 3.2 The Owner has declared a Contractor Default and formally terminated the Contractor's right to complete the Contract or to correct said defects. Such Contractor Default shall not be declared earlier than twenty days after the Contractor and the Surety have received notice as provided in Subparagraph 3.1; and
 - 3.3 The Owner has agreed to pay the Balance of the Contract Price to the Surety in accordance with the terms of the Contract or to a contractor selected to perform the Contract, or to correct said defects in accordance with the terms of the Contract with the Owner.
4. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 4.1 Arrange for the Contractor, with consent of the Owner to perform and complete the Contract, or to correct said defects in workmanship or material; or
 - 4.2 Undertake to perform and complete the Contract, or to correct said defects in workmanship or material itself, through its agents or through independent contractors; or
 - 4.3 Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract to (a) perform and complete the Contract or correct said defects in workmanship or materials; (b) arrange for a Contract to be prepared for execution by the Owner and the Contractor selected with the Owner's concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Contract and (c) pay to the Owner the amount of damages as described in Paragraph 6 in excess of the Balance of the Contract Price incurred by the Owner resulting from the Contractor's default; or
 - 4.4 Waive its right to perform and complete, arrange for completion or obtain a new contractor and with reasonable promptness under the circumstances:
 1. After investigation, determine the amount for which it may be liable to the Owner and as soon as practicable after the amount is determined, tender payment therefore to the Owner; or
 2. Deny liability in whole or in part and notify the Owner citing reasons therefore.
5. If the Surety does not proceed as provided in Paragraph 4 with reasonable promptness, the Surety shall be deemed to be in default on this Bond fifteen days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond and the Owner shall be entitled to enforce any remedy available to the Owner if the Surety proceeds as provided in Subparagraph 4.4 and the Owner refuses the payment tendered or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
6. After the Owner has terminated the Contractor's right to complete the Contract, or to correct said defects in workmanship or materials and if the Surety elects to act under Subparagraphs 4.1, 4.2 or 4.3 above, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Contract and related Construction Documents and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Contract and Construction Documents. To the limit of the amount of this Bond, but subject to commitment by the Owner to pay the Balance of the Contract Price to mitigation of costs and damages of the Contract, the Surety is obligated without duplication for:
 - 6.1 The responsibilities of the Contractor for completion of the Contract and correction of any defects that appear within one year following final acceptance of all the work required under the Construction Contract and related Documents;
 - 6.2 Additional legal, design professional and delay costs resulting from the Contractor's Default, or resulting from the actions or failure to act of the Surety under Paragraph 4; and
 - 6.3 Liquidated damages, or if no liquidated damages are specified in the Contract, actual damages caused by delayed performance or nonperformance of the Contractor.
7. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Contract and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this bond to any person or entity other than the Owner or its heirs, executors, administrators, or successors.
8. The Surety hereby waives notice of any change, including changes of time and changes in the work required under the Contract or related subcontracts, purchase orders and other obligations.
9. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after Owner became aware, or reasonably should have become aware of Contractor Default or within two years after the Surety refuses or fails to perform its obligations under this Bond; whichever occurs first. If the provisions of this Paragraph are void or prohibited by law, the minimum period for limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
10. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page.
11. When this bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted hereon and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. The intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
12. Definitions:
 - 12.1 Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Contract after all proper adjustments have been made, including allowance to the Contractor of any amount received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Contract.
 - 12.2 Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes thereto.
 - 12.3 Contractor Default: Failure of the Contractor, which has neither been remedied nor waived, to perform or otherwise to comply with the terms of the Contract.
 - 12.4 Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

CONSTRUCTION PAYMENT BOND

Any singular reference to Contractor, Surety, Owner or other party shall be considered plural where applicable.

CONTRACTOR (Name and Address):

SURETY (Name and Principal Place of Business)

OWNER (Name and Address):

City of Gallup, New Mexico
110 West Aztec Avenue
Gallup, New Mexico 87301

CONSTRUCTION CONTRACT

Date:

Amount:

Description (Name and Location):

Gallup Municipal Airport
Gallup, New Mexico
City Bid No. 1620

BOND

Date (Not earlier than Construction Contract Date):

Amount:

Modifications to this Bond Form:

CONTRACTOR AS PRINCIPAL

Company:
(Corp. Seal)

SURETY

Company:
(Corp. Seal)

Signature: _____
Name and Title:

Signature: _____
Name and Title:

1. The Contractor and the Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors and assigns to the Owner for labor, materials and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference.
2. With respect to the Owner, this obligation shall be null and void if the Contractor:
 - 2.1. Promptly makes payment, directly or indirectly, for all sums due Claimants and
 - 2.2. Defends, indemnifies and holds harmless the Owner from all claims, demands, liens or suits by any person or entity who furnished labor, materials or equipment for use in the performance of the Construction Contract, provided the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 12) of any claims, demands, liens or suits and tendered defense of such claims, demands, liens or suits to the Contractor and the Surety and provided there is no Owner Default.
3. With respect to Claimant's this obligation shall be null and void if the Contractor promptly makes payment, directly or indirectly, for all sums due.
4. The Surety shall have no obligation to Claimants under this Bond until:
 - 4.1. Claimants who are employed by or have a direct contract with the Contractor have given notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and, with substantial accuracy, the amount of the claim.
 - 4.2. Claimants who do not have a direct contract with the Contractor:
 1. Have furnished written notice to the Contractor and sent a copy, or notice thereof, to the Owner, within 90 days after having last performed labor or last furnished materials or equipment included in the claim stating, with substantial accuracy, the amount of the claim and the name of the party to whom the materials were furnished or supplied or for whom the labor was done or performed; and
 2. Have either received a rejection in whole or in part from the Contractor, or not received within 30 days of furnishing the above notice any communication from the Contractor by which the Contractor has indicated the claim will be paid directly or indirectly; and
 3. Not having been paid within the above 30 days, have sent a written notice to the Surety (at the address described in Paragraph 12) and sent a copy, or notice thereof, to the Owner, stating that a claim is being made under this Bond and enclosing a copy of the previous written notice furnished to the Contractor.
5. If a notice required by Paragraph 4 is given by the Owner to the Contractor or to the Surety, that is sufficient compliance.
6. When the Claimant has satisfied the conditions of Paragraph 4, the Surety shall promptly and at the Surety's expense take the following actions:
 - 6.1. Send an answer to the Claimant, with a copy to the Owner, within 45 days after receipt of the claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed.
 - 6.2. Pay or arrange for payment any undisputed amounts.
7. The Surety's total obligation shall not exceed the amount of this Bond and the amount of this Bond shall be credited for any payments made in good faith by the Surety.
8. Amounts owed by the Owner to the Contractor under the Construction Contract shall be used for the performance of the Construction Contract and to satisfy claims, if any, under any Construction Performance Bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfy obligations of the Contractor and the Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.
9. The Surety shall not be liable to the Owner, Claimants or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for payment of any costs or expenses of any Claimant under this Bond and shall have under this Bond no obligations to make payments to, give notices on behalf of, or otherwise have obligations to Claimants under this Bond.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders and other obligations.
11. No suit or action shall be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the location in which the work or part of the work is located or after the expiration of one year from the date (1) on which the Claimant gave the notice required by Subparagraph 4.1 or Clause 4.2 (3) , or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this Paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner or the Contractor shall be mailed or delivered to the address shown on the signature page. Actual receipt of notice by Surety, the Owner or the Contractor, however accomplished, shall be sufficient compliance as of the date received at the address shown on the signature page.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or legal requirement shall be deemed incorporated herein. The intent is, that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Upon request by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor shall promptly furnish a copy of this Bond or shall permit a copy to be made.
15. DEFINITIONS
 - 15.1. Claimant: An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials or equipment for use in the performance of the Contract. The intent of this Bond shall be to include without limitation in the terms "labor, materials or equipment" that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment used in the Construction Contract, architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials or equipment were furnished.
 - 15.2. Construction Contract: The agreement between the Owner and the Contractor identified on the signature page, including all Contract Documents and changes hereto.
 - 15.3. Owner Default: Failure of the Owner, which has neither been remedied nor waived, to pay the Contractor as required by the Construction Contract or to perform and complete or comply with the other terms thereof.

NOTICE TO PROCEED

TO:

DATE:

City Bid No. 1620
Schedule I: Aviation Fuel System Modifications

You are notified that the Contract Time under the above Contract will commence to run on _____
_____. By that date, you are to start performing your obligations under
the Contract Documents and you are to complete the Work within fourteen (14) consecutive
calendar days thereafter. The date of completion of all Work is therefore _____
_____, 2016.

CITY OF GALLUP, NEW MEXICO

By _____, Mayor
110 West Aztec Avenue
Gallup, New Mexico 87301
(505) 863-1220

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by:

_____, Contractor

this the _____ day of _____, 2016

By _____
(Title)

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CONTRACT CHANGE ORDER NO. _____
or
SUPPLEMENTAL AGREEMENT NO. _____

AIRPORT: Gallup Municipal Airport

DATE:

LOCATION: Gallup, New Mexico

CONTRACTOR:

You are requested to perform the following described Work upon receipt of an approved copy of this document or as directed by the Engineer:

ITEM NO.	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	AMOUNT
This Change Order Total					
Previous Change Order(s) Total					
Original Contract Price					
Revised Contract Total					

The time provided for completion in the Contract is (unchanged) (decreased) (increased) by _____ calendar days. This document shall become an Amendment to the Contract and all provisions of the Contract will apply. Changes are shown on the attached Quantities Tabulation.

Recommended by: _____
 Engineer Date

Approved by: _____
 Owner Date

Accepted by: _____
 Contractor Date

Concurred by: _____
 State Aeronautics Date

NOTE: Change Orders and Supplemental Agreements require State Aeronautics approval prior to construction. Otherwise, no Federal participation can be granted. State Aeronautics concurrence is required when State participation is anticipated.

CITY BID NO.: 1620

CHANGE ORDER NO.

AIRPORT: Gallup Municipal Airport

LOCATION: Gallup, New Mexico

JUSTIFICATION FOR CHANGE

1. Brief description of the proposed Contract change(s) and location(s).

2. Reason(s) for the change(s). (Continue on reverse if necessary.)

3. Justifications for Unit Prices or Total Cost.

4. The Sponsor's share of this cost is available from:

5. If this is Supplemental Agreement involving more than \$2,000, is the Cost Estimate based on the latest wage rate decision? Yes ___ No ___ Not Applicable ___

6. Has Consent of Surety been obtained? Yes ___ No ___ Not Applicable ___

7. Will this change affect the insurance coverage? Yes ___ No ___

8. If yes, will the policies be extended? Yes ___ No ___

9. Has this Change Order been discussed with State Aeronautics officials?
Yes ___ No ___ When _____ With Whom _____

Comment _____
Submit four executed copies to the State Aviation Division.

APPLICATION FOR PAYMENT NO. _____

To City of Gallup (OWNER). Contract for Gallup Municipal Airport Improvements dated _____
_____. Owner's City Bid No. 1620, ENGINEER'S Project No. 146223.
For Work accomplished through the date of _____.

ATTACH ITEMIZED LIST

Accompanying Documentation:	GROSS AMOUNT DUE	\$ _____
	NMGRT <u>8.3125%</u>	\$ _____
_____	LESS ___% RETAINAGE	\$ _____
_____	AMOUNT DUE TO DATE	\$ _____
_____	LESS PREVIOUS PAYMENTS	\$ _____
_____	AMOUNT DUE THIS APPLICATION	\$ _____

CONTRACTOR'S Certification:

The undersigned CONTRACTOR certifies that (1) all previous Progress Payments received from OWNER on account of Work done under the Contract referred to above have been applied to discharge in full all obligations of CONTRACTOR incurred in connection with Work covered by prior Applications for Payment numbered 1 through _____ inclusive; and (2) title to all materials and equipment incorporated in said Work or otherwise listed in or covered by this Application for Payment will pass to OWNER at time of final acceptance of Project free and clear of all liens, claims, security interests and encumbrances.

Dated _____, 2016

CONTRACTOR

By _____

ENGINEER'S Recommendation:

This Application (with accompanying documentation) meets the requirements of the Contract Documents and payment of the above AMOUNT DUE THIS APPLICATION is recommended.

Dated _____, 2016 Armstrong Consultants, Inc.
ENGINEER

By _____

OWNER'S Approval:

This Application is approved.
Dated _____, 2016

City of Gallup, New Mexico
SPONSOR
By _____

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Wage Decision Approval Summary

1) Project Title: Aviation Fuel System Modifications
 Requested Date: 06/09/2016
 Approved Date: 06/10/2016
 Approved Wage Decision Number: MC-16-1137-A

Wage Decision Expiration Date for Bids: 10/08/2016

2) Physical Location of Jobsite for Project:
 Job Site Address: 2111 W Historic Hwy 66
 Job Site City: Gallup
 Job Site County: McKinley

3) Contracting Agency Name (Department or Bureau): City of Gallup
 Contracting Agency Contact's Name: Frances Rodriguez
 Contracting Agency Contact's Phone: (505) 863-1334 Ext.

4) Estimated Contract Award Date: 08/01/2016

5) Estimated total project cost: \$65,000.00
 a. Are any federal funds involved?: No
 b. Does this project involve a building?: No
 c. Is this part of a larger plan for construction on or appurtenant to the property that is subject to this project?: No
 d. Are there any other Public Works Wage Decisions related to this project?: No
 e. What is the ultimate purpose or functional use of the construction once it is completed?: The project consists of modifying the existing components to a self-serve aviation fuel system.

6) Classifications of Construction:

Classification Type and Cost Total	Description
Highway/Utilities (A) Cost: \$65,000.00	Welding, pipe fitting, and electrical work

TYPE "A" - STREET, HIGHWAY, UTILITY & LIGHT ENGINEERING

Effective January 1, 2016

Trade Classification	Base Rate	Fringe Rate
Bricklayer/Blocklayer/Stonemason	23.32	8.04
Carpenter/Lather	23.40	9.02
Cement Mason	17.11	6.32
Ironworker	26.50	14.32
Painter (Brush/Roller/Spray)	16.00	5.58
Electricians (outside)		
Groundman	21.28	10.53
Equipment Operator	30.54	12.94
Lineman/Wireman or Tech	35.94	14.34
Cable Splicer	39.52	15.28
Plumber/Pipefitter	28.30	4.07
Laborers		
Group I	12.20	5.30
Group II	12.50	5.30
Group III	12.90	5.30
Operators		
Group I	16.69	6.16
Group II	17.44	6.16
Group III	17.55	6.16
Group IV	17.63	6.16
Group V	17.75	6.16
Group VI	17.89	6.16
Group VII	18.27	6.16
Group VIII	18.50	6.16
Group IX	25.45	6.16
Group X	28.35	6.16
Truck Drivers		
Group I	13.32	0.26
Group II	13.52	0.26
Group III	13.72	0.26
Group IV	13.92	0.26

NOTE: SUBSISTENCE, ZONE AND INCENTIVE PAY APPLY ACCORDING TO THE PARTICULAR TRADES COLLECTIVE BARGAINING AGREEMENT. DETAILS ARE LOCATED AT WWW.DWS.STATE.NM.US.

SUSANA MARTINEZ
GOVERNOR



CELINA BUSSEY
SECRETARY

JOHN SANCHEZ
LT. GOVERNOR

STATE OF NEW MEXICO
DEPARTMENT OF WORKFORCE SOLUTIONS
Public Works Bureau
625 Silver Ave SW, Suite 410
Albuquerque, NM 87102
(505) 841-4400 / FAX (505) 841-4423

NOTICE TO ALL PUBLIC WORKS CONTRACTORS
PERTINENT INFORMATION IN ACCORDANCE WITH THE NM PUBLIC WORKS
MINIMUM WAGE ACT

The Public Works Bureau insures compliance of the Public Works Minimum Wage Act (13-4-11 through 13-4-17, NMSA 78). This office issues prevailing wage rates for each project for inclusion in the bid documents. After a project contract is signed, the **Notification of Award (NOA)** and **Subcontractor List** must be completed and sent to the Public Works Bureau by the Contracting Agency or it's agent. The **Statement of Intent to Pay Prevailing Wages** must be completed by the contractors performing work on the project and sent through the General Contractor to the Public Works Bureau. A Statement of Intent to Pay Prevailing Wages is required from each construction contractor before they start work on a state or locally funded construction project costing a total of \$60,000 or more. Every contractor (general, sub, second tier, etc.) must pay those rates through weekly payment and payroll.

Wage rates include a base rate and a fringe rate of pay. In many cases, an additional cost to the contractor is an apprenticeship contribution rate per hour for both journeyman and apprentices. A **monthly apprenticeship contribution compliance form and check for payment** (when applicable) is required and should be sent to NMDWS, Public Works Bureau, PO Box 27428, Albuquerque, NM 87125-7428. After a contractor completes work on a project, but before his final payment, an **Affidavit of Wages Paid** must be completed and sent to the Public Works Bureau – through the General Contractor.

Each employee must receive the full base and fringe rate per hour for all hours worked in their job classification, regardless of the qualifications or license held. The only exception is for workers with a current certification in approved apprenticeship programs. The apprentice must also receive the full benefit of the fringe rate. Fringe benefits may also be paid into approved health benefit programs, pension programs, life insurance programs, company holiday and vacation programs and/or training programs that are not apprenticeship programs (*i.e.*: an OSHA 10 safety program). If fringe benefits are paid to a third-party account, the employee must have quarterly statements provided to them. The third way of paying fringe benefits, is to pay as a combination of cash and into approved programs. This office will sometimes ask for complete breakdowns of all payment to insure total compliance.

The minimum wage, or greater, as shown on individual wage decisions must be paid. "In addition, the contractor, subcontractor employer or any person acting as a contractor shall be liable to any affected employee for liquidated damages in the sum of one hundred dollars (\$100.00) for each calendar day on which a contractor, subcontractor, employer or any person acting as a contractor has willfully required or permitted an individual laborer or mechanic to work in violation of the provisions of the Public Works Minimum Wage Act" (13-4-14.C, NMSA 78). When questions arise about the requirements of the Act or the Public Works Minimum Wage Act Policy Manual they must be resolved as soon as possible. If you have questions, please call (505) 841-4405.

"AN EQUAL OPPORTUNITY EMPLOYER"

LABOR ENFORCEMENT FUND

NEW MEXICO DEPARTMENT OF WORKFORCE SOLUTIONS

LABOR RELATIONS DIVISION

APPLICATION FOR PUBLIC WORKS

CONTRACTOR REGISTRATION

All applications must be accompanied by \$400 payable to the "LABOR ENFORCEMENT FUND"

Do Not Send Cash

Send to: **Labor Enforcement Fund**

PO Box 27679

Albuquerque, NM 87125-7679

1.

Contractor/Subcontractor – Company Trade Name

Mailing Address

City

State

Zip Code

Area Code / Telephone Number

E-Mail Address or Fax Number

2.

Printed Name of First Qualifying Party (Owner of Company)

3.

Type of Business

Individual/Sole Proprietor

Partnership

Corporation

Other _____

4.

INCOMPLETE APPLICATIONS WILL BE RETURNED TO SENDER

APPLICANT STATEMENT

As the responsible applicant-contractor, I understand:

- the application is subject to verification and that I agree to provide any additional documentation as requested by the Labor Relations Division director.
- failure to provide full and timely disclosure of any required information or documentation may result in the denial of this application for registration.
- **that payment in the exact amount of Four Hundred Dollars USD (\$400.00) is due with this application.**
- that registration is for two years from the date notice of registration is posted on the Department of Workforce Solutions website (www.dws.state.nm.us).
- that I am submitting this application for the purpose of a legal transaction with the State of New Mexico Department of Workforce Solutions.
- that failure to send this application and payment to the address shown above will result in delayed or denied registration.
- that it is my (the contractor's) responsibility to ensure that my registration is current.

I certify, under penalty of perjury, that the information contained in this application for registration is accurate, true, and complete to the best of my knowledge.

Signature

Date

Print Name and Title

INSTRUCTIONS FOR COMPLETING STATEMENT OF INTENT TO PAY PREVAILING WAGES

GENERAL CONTRACTOR

1. Enter general contractor information and provide signature.
2. Enter State Wage Decision Number as listed in bid documents. (Example: BE-13-0123 B)
3. Enter project title - listed in bid documents.
4. Enter project physical address - exact location of project (job site).
5. Enter estimated start & completion dates of project.
6. Enter general contractor's contract amount.
7. All Statements must be sent to the Contracting Agency.

SUB CONTRACTOR

1. Enter general contractor information, but general contractor signature is not needed.
2. Enter sub contractor information as indicated and provide signature.
3. Enter sub contractor contract amount.

NOTE: A separate signed form is needed for each contractor.

2ND TIER SUB CONTRACTOR

1. Enter general contractor information, but general contractor signature is not needed.
2. Enter sub contractor information; subcontractor signature not needed.
3. Enter 2nd tier sub information and provide signature.
4. Enter 2nd tier contractors contract amount.

3RD TIER AND HIGHER CONTRACTOR

1. Attach a copy of this completed form & list the 3rd tier contractor information under the 2nd tier

(Payment is not required for Type “A” Projects – Street, Highway, Utility & Light Engineering)

Apprenticeship & Training Contribution Compliance Statement

For the Month of: _____, 20____

(Circle One)

Contractor / Sub / 2nd. Tier Sub: _____

Address: _____ City: _____ State: _____ Zip: _____ Phone: _____

Project Name: _____ State Wage Dec.No. _____

(DO NOT submit payments on 100% federally-funded projects)

(SAMPLE ENTRY) Classification(s)	Week Ending	Total Hours	Appr. Rate per Hour	Total Classif. Contr.Amt				
	8/4	8/11	8/18	8/25	8/31			
LABORER	4	7	0	0	30	41	.27	11.07
Classification(s)	Week Ending	Total Hours	Appr. Rate per Hour	Total Classif. Contr.Amt				

PLEASE CHECK APPROPRIATE BLANK:

Paid to: PUBLIC WORKS APPRENTICESHIP & TRAINING FUND (Mail to **P.O. BOX**)

Check No. _____ Check Amt: _____

Payroll Clerk's (PRINT)

Name: _____ Signature: _____ Phone: _____

Forms due **by 15th of each month** on every public works project that has apprenticeship contribution on the wage decision. In accordance with the NM Apprenticeship & Training Act, **payment is due for each journey person**, even if your company has no apprentices.

(WE WILL NOT ACCEPT CREDITS WHEN PAYMENT IS OVER PAID)

Each wage decision needs a separate compliance statement, but only one check is needed for all statements.

(When paying to an approved program, complete section below & mail this form along with a copy of the check to the following address: Apprenticeship Section, 625 Silver Avenue SW, Suite 410, Albuquerque, NM 87102)

Paid to: Name of Approved NM Apprenticeship Program
 Address: _____ Phone: _____

Apprenticeship Program No.: _____
 (If in doubt, call 841-4403)

Print Name of Certifying Official: _____ Phone: _____

Signature of Certifying Official: _____ Date: _____

INSTRUCTIONS FOR COMPLETING AFFIDAVIT OF WAGES PAID

GENERAL CONTRACTOR

1. Enter general contractor information and provide signature.
2. Enter State Wage Decision Number as listed in bid documents. (Example: BE 13-0123 B)
3. Enter project title - listed in bid documents.
4. Enter project physical address - exact location of project (job site).
5. Enter completion date of project.
6. All Affidavits' must be sent to the Contracting Agency.

SUB CONTRACTOR

1. Enter general contractor information, but general contractor signature is not needed.
2. Enter sub contractor information as indicated and provide signature.
3. Enter sub contractor completion date.

NOTE: A separate signed form is needed for each contractor.

2ND, 3RD, etc TIER SUB CONTRACTOR

1. Enter sub contractor information, subcontractor signature is not needed.
2. Enter 2nd tier sub contractor information and provide signature.
3. Enter 2nd tier contract completion date.

(Revised 8/23/13)

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PART I – GENERAL PROVISIONS

SECTION 10 DEFINITION OF TERMS

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 ACCESS ROAD. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 ADVERTISEMENT. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 AIP. The Airport Improvement Program, a grant-in-aid program, administered by the Federal Aviation Administration.

10-05 AIR OPERATIONS AREA. For the purpose of these specifications, the term air operations area shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 AIRPORT. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM. The American Society for Testing and Materials.

10-08 AWARD. The acceptance, by the Owner, of the successful bidder's proposal.

10-09 BIDDER. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 BUILDING AREA. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 CALENDAR DAY. Every day shown on the calendar.

10-12 CHANGE ORDER. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, shall be within the scope of the contract.

10-13 CONTRACT. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: The Advertisement; The Contract Form; The

Proposal; The Performance Bond; The Payment Bond; any required insurance certificates; The Specifications; The Plans, and any addenda issued to bidders.

10-14 CONTRACT ITEM (PAY ITEM). A specific unit of work for which a price is provided in the contract.

10-15 CONTRACT TIME. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 CONTRACTOR. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 DRAINAGE SYSTEM. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-18 ENGINEER. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering inspection of the contract work and acting directly or through an authorized representative.

10-19 EQUIPMENT. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-20 EXTRA WORK. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-21 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his/her duly authorized representative.

10-22 FEDERAL SPECIFICATIONS. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-23 FORCE ACCOUNT. Force account construction work is construction that is accomplished through the use of material, equipment, labor, and supervision provided by the Owner or by another public agency pursuant to an agreement with the Owner.

10-24 INSPECTOR. An authorized representative of the Engineer assigned to make all necessary inspections and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-25 INTENTION OF TERMS. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable,"

“satisfactory,” or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-26 LABORATORY. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer.

10-27 LIGHTING. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-28 MAJOR AND MINOR CONTRACT ITEMS. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20 percent of the total amount of the award contract. All other items shall be considered minor contract items.

10-29 MATERIALS. Any substance specified for use in the construction of the contract work.

10-30 NOTICE TO PROCEED. A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-31 OWNER. The term “Owner” shall mean the party of the first part or the contracting agency signatory to the contract. For AIP contracts, the term “sponsor” shall have the same meaning as the term “Owner.” Where the term “Owner” is capitalized in this document, it shall mean airport owner or sponsor only.

10-32 PAVEMENT. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-33 PAYMENT BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that he will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-34 PERFORMANCE BOND. The approved form of security furnished by the Contractor and his/her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-35 PLANS. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-36 PROJECT. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-37 PROPOSAL. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-38 PROPOSAL GUARANTY. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his/her proposal is accepted by the Owner.

10-39 RUNWAY. The area on the airport prepared for the landing and takeoff of aircraft.

10-40 SPECIFICATIONS. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-41 SPONSOR. See definition above of "Owner."

10-42 STRUCTURES. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-43 SUBGRADE. The soil that forms the pavement foundation.

10-44 SUPERINTENDENT. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-45 SUPPLEMENTAL AGREEMENT. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25 percent, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-46 SURETY. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-47 TAXIWAY. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways or aircraft parking areas.

10-48 WORK. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-49 WORKING DAY. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least 6 hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work, requiring the presence of an inspector, will be considered as working days.

END OF SECTION 10

**SECTION 20
PROPOSAL REQUIREMENTS AND CONDITIONS**

20-01 ADVERTISEMENT (Notice to Bidders).

This Project has been advertised on September 3, 4 and 11, 2016.

20-02 PREQUALIFICATION OF BIDDERS. Each bidder shall furnish the owner satisfactory evidence of his/her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the owner satisfactory evidence of his/her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the Contractor's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his/her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect his/her (bidder's) true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that he is prequalified with the State Highway Division and is on the current "bidder's list" of the state in which the proposed work is located. Such evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports hereinbefore specified.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 CONTENTS OF PROPOSAL FORMS. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 ISSUANCE OF PROPOSAL FORMS. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

- a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.
- b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force (with the Owner) at the time the Owner issues the proposal to a prospective bidder.
- c. Contractor default under previous contracts with the Owner.
- d. Unsatisfactory work on previous contracts with the Owner.

20-05 INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly or by implication agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

20-06 EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans specifications, and contract forms. He shall satisfy himself as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which he may make or obtain from his/her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 PREPARATION OF PROPOSAL. The bidder shall submit his/her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which he proposes to do each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign his/her proposal correctly and in ink. If the proposal is made by an individual, his/her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his/her authority to do so and that the signature is binding upon the firm or corporation.

20-08 IRREGULAR PROPOSALS. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

- c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.
- d. If the proposal contains unit prices that are obviously unbalanced.
- e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-09 BID GUARANTEE. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner.

20-10 DELIVERY OF PROPOSAL. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-11 WITHDRAWAL OR REVISION OF PROPOSALS. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by telegram before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-12 PUBLIC OPENING OF PROPOSALS. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-13 DISQUALIFICATION OF BIDDERS. A bidder shall be considered disqualified for any of the following reasons:

- a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.
- b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.
- c. If the bidder is considered to be in "default" for any reason specified in the subsection titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

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SECTION 30 AWARD AND EXECUTION OF CONTRACT

30-01 CONSIDERATION OF PROPOSALS. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

- a. If the proposal is irregular as specified in the subsection titled **IRREGULAR PROPOSALS** of Section 20.
- b. If the bidder is disqualified for any of the reasons specified in the subsection titled **DISQUALIFICATION OF BIDDERS** of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 AWARD OF CONTRACT. The award of a contract, if it is to be awarded, shall be made within ninety (90) calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

30-03 CANCELLATION OF AWARD. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection titled **APPROVAL OF CONTRACT** of this section.

30-04 RETURN OF PROPOSAL GUARANTY. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as hereinbefore specified in the subsection titled **CONSIDERATION OF PROPOSALS** of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contracts bonds as specified in the subsection titled **REQUIREMENTS OF CONTRACT BONDS** of this section.

30-05 REQUIREMENTS OF CONTRACT BONDS. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless

otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 EXECUTION OF CONTRACT. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return such signed contract to the owner, along with the fully executed surety bond or bonds specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder. If the contract is mailed, special handling is recommended.

30-07 APPROVAL OF CONTRACT. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 FAILURE TO EXECUTE CONTRACT. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection titled REQUIREMENTS OF CONTRACT BONDS of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

SECTION 40 SCOPE OF WORK

40-01 INTENT OF CONTRACT. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 ALTERATION OF WORK AND QUANTITIES. The owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25 percent (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25 percent limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by "Change Orders" issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer's opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25 percent limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

All supplemental agreements shall require consent of the Contractor's surety and separate performance and payment bonds.

40-03 OMITTED ITEMS. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be nonperformed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 EXTRA WORK. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, he may order the Contractor to proceed with Extra Work by force account as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of Section 90.

Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as hereinbefore defined in the subsection titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 MAINTENANCE OF TRAFFIC. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas of the airport with respect to his/her own operations and the operations of all his/her subcontractors as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

With respect to his/her own operations and the operations of all his/her subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying: personnel; equipment; vehicles; storage areas; and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall furnish erect, and maintain barricades, warning signs, flagperson, and other traffic control devices in reasonable conformity with the manual of Uniform Traffic Control Devices for Streets and Highways (published by the United States Government Printing Office), unless otherwise specified herein. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-06 REMOVAL OF EXISTING STRUCTURES. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such

existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be utilized in the work as otherwise provided for in the contract and shall remain the property of the Owner when so utilized in the work.

40-07 RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, he may at his/her option either:

- a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,
- b. Remove such material from the site, upon written approval of the Engineer; or
- c. Use such material for his/her own temporary construction on site; or,
- d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., he shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his/her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for his/her use of such material so used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his/her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-09 FINAL CLEANING UP. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. He shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property owner.

END OF SECTION 40

SECTION 50 CONTROL OF WORK

50-01 AUTHORITY OF THE ENGINEER. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-02 CONFORMITY WITH PLANS AND SPECIFICATIONS. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his/her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, he will advise the Owner of his/her determination that the affected work be accepted and remain in place. In this event, the Engineer will document his/her determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on good engineering judgment and such tests or retests of the affected work as are, in his/her opinion, needed. Changes in the contract price shall be covered by contract modifications (change order or supplemental agreement) as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's prosecution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the FAA, to use good engineering judgment in his/her determinations as to acceptance of work that is not in strict conformity but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 COORDINATION OF CONTRACT, PLANS, AND SPECIFICATIONS. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited FAA advisory circulars; contract general provisions shall govern over plans, cited standards for materials or testing, and cited FAA advisory circulars; plans shall govern over cited standards for materials or testing and cited FAA advisory circulars. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited standards for testing occur due to the timing of changing, editing, and replacing of standards. In the event the Contractor discovers any apparent discrepancy within standard test methods, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, he shall immediately call upon the Engineer for his/her interpretation and decision, and such decision shall be final.

The Special Provisions can be found following the Technical Specifications of this Specification book.

50-04 COOPERATION OF CONTRACTOR. The Contractor will be supplied with five copies each of the plans and specifications. He shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and he shall cooperate with the Engineer and his/her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his/her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his/her authorized representative.

50-05 COOPERATION BETWEEN CONTRACTORS. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct his/her work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his/her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced by him because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his/her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. He shall join his/her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 CONSTRUCTION LAYOUT AND STAKES. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either his/her own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or his/her employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper prosecution and control of the work contracted for under these specifications.

The Contractor must give weekly copies of the survey notes to the Engineer so that the Engineer may check them as to accuracy and method of staking. All areas that are staked by the Contractor must be checked by the Engineer prior to beginning any work in the area. The Engineer will make periodic checks of the grades and alignment set by the Contractor. In case of error on the part of the Contractor, or his/her employees, resulting in establishing grades and/or alignment that are not in accordance with the plans or established by the Engineer, all construction not in accordance with the established grades and/or alignment shall be replaced without additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses therewith. The cost thereof shall be included in the price of the bid for the various items of the Contract.

Construction Staking and Layout includes but is not limited to:

Clearing and Grubbing perimeter staking.

Rough Grade slope stakes at 100-foot stations.

Drainage Swales slope stakes and flow line blue tops at 50-foot stations.

Subgrade blue tops at 25 foot stations and 25 foot offset distance (max.) for the following section locations:

- a. Runway – minimum 5 per station
- b. Taxiways – minimum 3 per station
- c. Holding apron areas – minimum 3 per station
- d. Roadways – minimum 3 per station

Base Course blue tops at 25 foot stations and 25 foot offset distance (max.) for the following section locations:

- a. Runway – minimum 5 per station
- b. Taxiways – minimum 3 per station
- c. Holding apron areas – minimum 3 per station

Pavement areas:

- a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100 foot stations
- b. Between Lifts at 25 foot stations for the following section locations:
 - (1). Runways – each paving lane width
 - (2). Taxiways – each paving lane width
 - (3). Holding areas – each paving lane width
- c. After finish paving operations at 50 foot stations
 - (1). All paved areas – Edge of each paving lane prior to next paving lot
- d. Shoulder and safety area blue tops at 50 foot stations and at all break points with maximum of 50 foot offsets

Fence lines at 100 foot stations

Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, VASI's, PAPI's, REIL's, Wind Cones, Distance Markers (signs), pull boxes and manholes.

Drain lines, cut stakes and alignment on 25-foot stations, inlet and manholes.

Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor.
(All nails shall be removed after painting)

Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet per pass (i.e. paving lane).

NOTE: Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 AUTOMATICALLY CONTROLLED EQUIPMENT. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 AUTHORITY AND DUTIES OF INSPECTORS. Inspectors employed by the Owner shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors employed by the Owner are authorized to notify the Contractor or his/her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for his/her decision.

50-09 INSPECTION OF THE WORK. All materials and each part or detail of the work shall be subject to inspection by the Engineer. The Engineer shall be allowed access to all parts of the

work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

The Engineer or Inspectors employed by the Owner are not responsible as a result of site visits and/or inspections of the Contractor's work in progress for supervising, directing or having control over the Contractor's Work nor are the Engineer or Inspectors employed by the Owner responsible for the means, methods, techniques, sequences or procedures of construction selected by the Contractor.

50-10 REMOVAL OF UNACCEPTABLE AND UNAUTHORIZED WORK. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection titled CONTRACTOR'S RESPONSIBILITY FOR WORK OF Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been given by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as given, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply forthwith with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be

removed and to deduct the costs (incurred by the Owner) from any monies due or to become due the Contractor.

50-11 LOAD RESTRICTIONS. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his/her hauling equipment and shall correct such damage at his/her own expense.

50-12 MAINTENANCE DURING CONSTRUCTION. The Contractor shall maintain the work during construction and until the work is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 FAILURE TO MAINTAIN THE WORK. Should the Contractor at any time fail to maintain the work as provided in the subsection titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 PARTIAL ACCEPTANCE. If at any time during the prosecution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, he may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, he may accept it as being completed, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 FINAL ACCEPTANCE. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be completed in accordance with the

contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 CLAIMS FOR ADJUSTMENT AND DISPUTES. If for any reason the Contractor deems that additional compensation is due him for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, he shall notify the Engineer in writing of his/her intention to claim such additional compensation before he begins the work on which he bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit his/her written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

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SECTION 60 CONTROL OF MATERIALS

60-01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. The materials used on the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

- a. Listed in FAA Advisory Circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program and Addendum, that is in effect on the date of advertisement; and,
- b. Produced by the manufacturer as listed in the Addendum cited above certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection:

NONE

60-02 SAMPLES, TESTS, AND CITED SPECIFICATIONS. Unless otherwise designated, all materials used in the work shall be inspected and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense. Unless otherwise designated, tests in accordance with the cited standard methods of ASTM, AASHTO, Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer. The testing organizations performing on site field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his/her request. Unless otherwise designated, samples will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at his/her request.

The Contractor shall employ a testing organization to perform all Contractor required tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual

persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

60-03 CERTIFICATION OF COMPLIANCE. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

- a. Conformance to the specified performance, testing, quality or dimensional requirements; and,
- b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, he shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 PLANT INSPECTION. The Engineer or his/her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for his/her acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

- a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom he has contracted for materials.

b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 ENGINEER'S FIELD OFFICE. The Contractor shall furnish for the duration of the project one building for the use of the field engineers and inspectors, as a field office. This facility shall be an approved weatherproof building meeting the current State Highway Specifications (for example, Class I Field Office or Type C Structure). This building shall be located conveniently near to the construction and shall be separate from any building used by the Contractor. A land line telephone and answering machine shall be provided. The Contractor shall be responsible for payment of the basic monthly charge and local calls only. Any Long Distance Tolls shall be the responsibility of the caller. The Contractor shall furnish [FAX machine, photocopy machine, water, sanitary facilities, heat, air conditioning, electricity, a cell phone with 600 long distance minutes per month and voice mail]. No direct payment will be made for this building or labor, materials, ground rental, or other expense in connection therewith. The cost hereof shall be included in the price bid for the various items of the contract. The Contractor and his/her superintendent shall provide all reasonable facilities to enable to the Engineer to inspect the workmanship and materials entering into the work.

60-06 STORAGE OF MATERIALS. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located so as to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his/her entire expense, except as otherwise agreed to (in writing) by the owner or lessee of the property.

60-07 UNACCEPTABLE MATERIALS. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 OWNER FURNISHED MATERIALS. The Contractor shall furnish all materials required to complete the work, except those specified herein (if any) to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified herein.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

**SECTION 70
LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC**

70-01 LAWS TO BE OBSERVED. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his/her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by himself or his/her employees.

70-02 PERMITS, LICENSES, AND TAXES. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the work.

70-03 PATENTED DEVICES, MATERIALS, AND PROCESSES. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, he shall provide for such use by suitable legal agreement with the patentee or owner. The Contractor and the surety shall indemnify and save harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the prosecution or after the completion of the work.

70-04 RESTORATION OF SURFACES DISTURBED BY OTHERS. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

No work outside this contract is anticipated during construction.

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such owners by arranging and performing the work in this contract so as to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 FEDERAL AID PARTICIPATION. (DELETED)

70-06 SANITARY, HEALTH, AND SAFETY PROVISIONS. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his/her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his/her health or safety.

Representatives of the Owner or the Engineer are not responsible during site visits or as a result of observations or inspections of the Contractor's work in progress for any safety precautions or programs incident to the Work of the Contractor or for any failure of the Contractor to comply with laws, rules, regulations, ordinances, codes or orders applicable to safety precautions or programs.

70-07 PUBLIC CONVENIENCE AND SAFETY. The Contractor shall control his/her operations and those of his/her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his/her own operations and those of his/her subcontractors and all suppliers in accordance with the subsection titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area shall be a maximum of 18 inches high. Unless otherwise specified, barricades shall be spaced not more than 25 feet apart. Barricades, warning signs, and markings shall be paid for under Section 40-05.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual of Uniform Traffic Control Devices for Streets and Highways (latest edition) (published by the United States Government Printing Office).

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of AC 150/5340-1, Standards for Airport Markings (latest edition).

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and his/her parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2, Operational Safety on Airports During Construction (latest edition).

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2 (latest edition).

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their dismantling is directed by the Engineer.

Open-flame type lights shall not be permitted within the air operations areas of the airport.

70-09 USE OF EXPLOSIVES. When the use of explosives is necessary for the prosecution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property owner and public utility company having structures or facilities in proximity to the site of the work of his/her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPE. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his/her manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the nonexecution thereof by the Contractor, he shall restore, at his/her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or he shall make good such damage or injury in an acceptable manner.

70-11 RESPONSIBILITY FOR DAMAGE CLAIMS. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits actions, or claims of any character brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of

said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his/her contract as may be considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his/her surety may be held until such suit(s), action(s), or claim(s) for injuries or damages as aforesaid shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he is adequately protected by public liability and property damage insurance.

70-12 THIRD PARTY BENEFICIARY CLAUSE. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 OPENING SECTIONS OF THE WORK TO TRAFFIC. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his/her own estimate of the difficulties involved in arranging his/her work to permit such beneficial occupancy by the Owner as described below:

NONE

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his/her expense.

The Contractor shall make his/her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2, Operational Safety on Airports During Construction (See Special Provisions.)

Contractor shall refer to the approved safety plan to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 CONTRACTOR'S RESPONSIBILITY FOR WORK. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his/her expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seedings, and soddings furnished under his/her contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS. As provided in the subsection titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control his/her operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the owners are indicated as follows:

New Mexico One Call, Inc.
(800) 321-2537
FAA Airways Facilities
Pat Morton
575-347-5500

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of his/her responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the owners of all utility services or other facilities of his/her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided hereinbefore in this subsection and the subsection titled RESTORATION OF SURFACES

DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification hereinbefore provided, it shall be the responsibility of the Contractor to keep such individual owners advised of changes in his/her plan of operations that would affect such owners.

Prior to commencing the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such owner of his/her plan of operation. If, in the Contractor's opinion, the owner's assistance is needed to locate the utility service or facility or the presence of a representative of the owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two day's notice hereinabove provided shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use excavation methods acceptable to the Engineer within 3 feet (90 cm) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, he shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to his/her operations whether or not due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his/her surety.

70-15.1 FAA FACILITIES AND CABLE RUNS. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the prosecution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall notify the above named FAA Airway Facilities Point-of-Contact seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If prosecution of the project work requires a facility outage, the Contractor shall contact the above named FAA Point-of-Contact a minimum of 48 hours prior to the time of the required outage.

d. If prosecution of the project work results in damages to existing FAA equipment or cables, the Contractor shall repair the damaged item in conformance with FAA Airway Facilities' standards to the satisfaction of the above named FAA Point-of-Contact.

e. If the project work requires the cutting or splicing of FAA owned cables, the above named FAA Point-of-Contact shall be contacted a minimum of 48 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA Airway Facilities representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA Airway Facilities' specifications and require approval by the above named FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA Airway Facilities restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA Airway Facilities, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

70-16 FURNISHING RIGHTS-OF-WAY. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 PERSONAL LIABILITY OF PUBLIC OFFICIALS. In carrying out any of the contract provisions or in exercising any power or authority granted to him by this contract, there shall be no liability upon the Engineer, his/her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 NO WAIVER OF LEGAL RIGHTS. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his/her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his/her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the owner's rights under any warranty or guaranty.

70-19 ENVIRONMENTAL PROTECTION. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. He shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 ARCHAEOLOGICAL AND HISTORICAL FINDINGS. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his/her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, he shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume his/her operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract modification (change order or supplemental agreement) as provided in the subsection titled EXTRA WORK of Section 40 and the subsection titled PAYMENT FOR EXTRA WORK AND FORCE ACCOUNT WORK of Section 90. If appropriate, the contract modification shall include an extension of contract time in accordance with the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

SECTION 80 PROSECUTION AND PROGRESS

80-01 SUBLETTING OF CONTRACT. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

Should the Contractor elect to assign his/her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner. In case of approval, the Contractor shall file copies of all subcontracts with the Engineer.

The Contractor shall perform, with his organization, an amount of work equal to at least 25 percent of the total contract cost.

80-02 NOTICE TO PROCEED. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin.

80-03 PROSECUTION AND PROGRESS. Unless otherwise specified, the Contractor shall submit his/her progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify his/her operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the prosecution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 LIMITATION OF OPERATIONS. The Contractor shall control his/her operations and the operations of his/her subcontractors and all suppliers so as to provide for the free and unobstructed movement of aircraft in the AIR OPERATIONS AREAS of the airport.

When the work requires the Contractor to conduct his/her operations within an AIR OPERATIONS AREA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AIR OPERATIONS AREA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AIR OPERATIONS AREA (AOA) of the airport on an intermittent basis (intermittent opening and closing of the AIR OPERATIONS AREA), the Contractor shall maintain constant communications as hereinafter specified; immediately obey all instructions to vacate the AIR OPERATIONS AREA; immediately obey all instructions to resume work in such AIR OPERATIONS AREA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AIR OPERATIONS AREA until the satisfactory conditions are provided. The following AIR OPERATIONS AREA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

See Construction Safety and Phasing Plan

Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction (See Special Provisions).

80-04.1 OPERATIONAL SAFETY ON AIRPORT DURING CONSTRUCTION. All Contractors' operations shall be conducted in accordance with the project safety plan and the provisions set forth within the current version of Advisory Circular 150/5370-2. The safety plan included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a plan that details how it proposes to comply with the requirements presented within the safety plan.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks of the safety plan measures to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the safety plan and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved safety plan unless approved in writing by the Owner or Engineer.

80-05 CHARACTER OF WORKERS, METHODS, AND EQUIPMENT. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper prosecution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, he may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 TEMPORARY SUSPENSION OF THE WORK. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as he may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the prosecution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer's order to suspend work to the effective date of the Engineer's order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer's order to resume work. The Contractor shall submit with his/her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather, for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. He shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 DETERMINATION AND EXTENSION OF CONTRACT TIME. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

a. CONTRACT TIME based on WORKING DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his/her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his/her weekly statement of contract time charged on the following considerations:

(1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least 6 hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection titled FINAL ACCEPTANCE of Section 50.

(5) The Contractor will be allowed 1 week in which to file a written protest setting forth his/her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

b. CONTRACT TIME based on CALENDAR DAYS shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and nonwork days. All calendar days elapsing

between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially completed.

If the Contractor finds it impossible for reasons beyond his/her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, he may, at any time prior to the expiration of the contract time as extended, make a written request to the Engineer for an extension of time setting forth the reasons which he believes will justify the granting of his/her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded which could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the Engineer finds that the work was delayed because of conditions beyond the control and without the fault of the Contractor, he may extend the time for completion in such amount as the conditions justify. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 FAILURE TO COMPLETE ON TIME. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his/her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in his/her contract.

SCHEDULE	LIQUIDATED DAMAGES COST	ALLOWED CONSTRUCTION TIME
I	\$1,000 per Calendar Day	14 Calendar Days

The maximum construction time allowed for Schedule I, including additive alternates, will be not more than 14 calendar days.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a waiver on the part of the Owner of any of its rights under the contract.

80-09 DEFAULT AND TERMINATION OF CONTRACT. The Contractor shall be considered in default of his/her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

- a. Fails to begin the work under the contract within the time specified in the "Notice to Proceed," or
- b. Fails to perform the work or fails to provide sufficient workers, equipment or materials to assure completion of work in accordance with the terms of the contract, or
- c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or
- d. Discontinues the prosecution of the work, or
- e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or
- f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or
- g. Allows any final judgment to stand against him unsatisfied for a period of 10 days, or
- h. Makes an assignment for the benefit of creditors, or
- i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason hereinbefore, he shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the prosecution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 TERMINATION FOR NATIONAL EMERGENCIES. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the prosecution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at

the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his/her responsibilities for the completed work nor shall it relieve his/her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 WORK AREA, STORAGE AREA AND SEQUENCE OF OPERATIONS. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or Air Operations Area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his/her work in such a manner as to insure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored a minimum of **500** feet from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within **200** feet of an active runway at any time.

END OF SECTION 80

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SECTION 90 MEASUREMENT AND PAYMENT

90-01 MEASUREMENT OF QUANTITIES. All work completed under the contract will be measured by the Engineer, or his/her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meter) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inches.

The term "ton" will mean the short ton consisting of 2,000 pounds (907 kilograms) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable to the Engineer, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from

weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kilogram). When measured by volume, such volumes will be measured at 60 F (15 C) or will be corrected to the volume at 60 F (15 C) using ASTM D 1250 for asphalts or ASTM D 633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kilogram) or hundredweight (kilogram).

Timber will be measured by the thousand feet board measure (M.F.B.M.) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term "lump sum" when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection titled PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gage, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within one-half percent of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1 percent of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 kilogram) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales "overweighing" (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1 percent.

In the event inspection reveals the scales have been "underweighing" (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 SCOPE OF PAYMENT. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the prosecution thereof, subject to the provisions of the subsection titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 COMPENSATION FOR ALTERED QUANTITIES. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his/her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 PAYMENT FOR OMITTED ITEMS. As specified in the subsection titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or nonperform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 PAYMENT FOR EXTRA AND FORCE ACCOUNT WORK. Extra work, performed in accordance with the subsection titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit.

a. Miscellaneous. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

b. Comparison of Record. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.

c. Statement. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:

(1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.

(2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.

(3) Quantities of materials, prices, and extensions.

(4) Transportation of materials.

(5) Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

90-06 PARTIAL PAYMENTS. Partial payments will be made at least once each month as the work progresses. Said payments will be based upon estimates prepared by the Engineer of the value of the work performed and materials complete in place in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection titled PAYMENT FOR MATERIALS ON HAND of this section. No partial payment will be made when the amount due the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. The Owner must ensure prompt and full payment of retainage from the prime contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

From the total of the amount determined to be payable on a partial payment, **10** percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section. The balance of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his/her option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such percent retainage shall be deducted.

When at least 95 percent of the work has been completed, the Engineer shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done.

The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final retained percentage or final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 PAYMENT FOR MATERIALS ON HAND. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at anytime prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his/her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 PAYMENT OF WITHHELD FUNDS. (DELETED)

90-09 ACCEPTANCE AND FINAL PAYMENT. When the contract work has been accepted in accordance with the requirements of the subsection titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of his/her objections to the final estimate which are based on disputes in measurements or computations

of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

END OF SECTION 90

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S - 1
MOBILIZATION

DESCRIPTION

S-1-1.1

This Work consists of the mobilization of personnel, equipment and supplies to the Project site in preparation for Work on the Project. This item shall also include the establishment of the Contractor's offices, buildings and other necessary facilities and all other costs incurred for labor and operation which must be performed prior to beginning the other items under the Contract.

BASIS OF PAYMENT

S-1-2.1

Partial payments for mobilization will be made once each month as the Work progresses. These partial payments will be made as follows:

- A. When 5 percent of the Original Contract Amount is earned, 25 percent of the amount bid for mobilization, or 2 ½ percent of the original contract amount, whichever is less, will be paid.
- B. When 10 percent of the Original Contract Amount is earned, 50 percent of the amount bid for mobilization, or 5 percent of the original contract amount, whichever is less, will be paid.
- C. When 25 percent of the Original Contract Amount is earned, 60 percent of the amount bid for mobilization, or 6 percent of the original contract amount, whichever is less, will be paid.
- D. When 50 percent of the Original Contract Amount is earned, 100 percent of the amount bid for mobilization, or 10 percent of the original contract amount, whichever is less, will be paid.
- E. Upon completion of all work on the project, payment on any amount bid for mobilization in excess of 10 percent of the original contract amount will be paid.
- F. The total sum of all payments shall not exceed the Original Contract Amount bid for the item, regardless of the fact that the Contractor may have, for any reason, shut down the Work on the Project or moved equipment away from the Project and then back again.

Payments for materials on hand will not be included as a percent of Original Contract Amount earned until said materials in hand have been incorporated into the Work and accepted and paid for as contract items.

Payment will be full compensation for all Work necessary to complete the item.

Payment will be made under:

Item S - 1 Mobilization - Per lump sum

END OF ITEM S - 1

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ITEM S - 19
AVIATION FUEL STORAGE AND DISPENSING SYSTEM

DESCRIPTION

S-19-1.1

This work shall consist of modifying/retrofitting an existing 12,000 gallon above ground Jet A Fuel Storage and dispensing system and an existing Avgas dispensing system in conformance with these specifications. Work shall include modifying the existing Jet A fuel dispensing system to include a high volume bulk loading system with dead-man control. Work shall also include modifying the existing Avgas dispensing system to include a dead-man system for bulk loading. As an additive bid alternative, work shall include the replacement of existing self serve fuel dispensers that have spring hose rewind reels with electric hose rewind dispenser units. The fueling system modifications shall include all the necessary pumps, piping, fittings, electrical, and components to provide an operational system in accordance with industry standards for aviation fueling and comply with federal, state, and local codes. These specifications are minimum standards and the engineer may consider approved equals. Price shall include all fees, permits and inspections required for the fueling systems to be operational. All equipment provided for these systems shall be new. No used or refurbished equipment shall be permitted. System shall be approved by the New Mexico Environmental Department upon completion.

PROJECT SCOPE

S-19-2.1 JET A BULK FUEL DISPENSING SYSTEM

- § Retrofit existing Jet fuel system to include bulk loading and unloading capabilities that will allow jet fuel to be loaded/off-loaded at an approximate flow rate of 200 gallons per minute.
- § Existing submersible pump shall be replaced with a 3" positive displacement pump with a 10hp motor (3 phase) and 200 GPM gear reducer.
- § The bulk loading shall be controlled with a dead-man system as required by NFPA 407.
- § Pumping system shall be set up for operating modes including tank filling, recirculation, self serve dispenser use, and bulk loading.
- § All installed piping shall be stainless steel schedule 40.
- § Existing pipes, fittings, valves, pumps, and hardware shall be preserved where possible but may be removed, replaced, and/or modified as needed to complete system modifications.
- § Existing hardware that is required to be removed and replaced for the installation of the Jet A bulk loading system shall become the property of Gallup Municipal Airport and shall be returned in good working condition.
- § All fuel in the piping and storage tanks shall remain property of the fixed base operator (FBO) and shall be preserved and returned accordingly.
- § All electrical work required shall be considered incidental to the system modifications as well as all required permits.

- § All installed fittings shall be welded flange type.
- § Existing pressure vacuum vent shall be changed to a 3" Morrison Bros. Co., Model 748A Pressure Vacuum Vent or approved equal.
- § The bulk system shall dispense jet fuel through a minimum 2" x 15' certified aviation hose with single point nozzle. The hose shall be connected to the fixed piping with a swivel joint.
- § The existing self-serve dispensing system shall be compatible with the bulk loading system modifications and be able to operate with the proper line pressure and flow rates recommended by the manufacturer.
- § All modifications and construction procedures shall be done in accordance modern industry standards as well as applicable codes and regulations.

S-19-2.2 AVGAS FUEL DISPENSER DEAD-MAN SYSTEM

- § Retrofit existing Avgas dispensing system to include a dead-man system to be used during bulk loading operations. The Avgas system shall dispense fuel through existing aviation hose and single point nozzle.
- § Existing ¾ HP submersible pump shall be removed and replaced with a 1.5 HP submersible pump. Existing piping shall be modified as necessary.
- § The existing self-serve dispensing system shall be compatible with the system dead-man modifications and be able to operate with the proper line pressure and flow rates recommended by the manufacturer.
- § Avgas dispensing system shall remain controlled and monitored by the existing card reader system.
- § Dead-man system shall meet the requirements of NFPA 407.
- § All installed piping shall be stainless steel schedule 40.
- § Existing pipes, fittings, valves, pumps, electrical, and hardware shall be preserved where possible but may be removed, replaced, and/or modified as needed to complete system modifications.
- § Existing hardware that is required to be removed and replaced for the installation of the Avgas dead-man system shall become the property of Gallup Municipal Airport and shall be returned in good working condition.
- § All fuel in the piping and storage tanks shall remain property of the fixed base operator (FBO) and shall be preserved and returned accordingly.
- § The existing self-serve Avgas dispensing system shall be compatible with the installed dead-man system and shall operate with the existing card reader, with proper line pressure and flow rates, as recommended by the manufacturer.
- § All electrical work required, any required permits, as well as any necessary coordination with the electrical/utility providers shall be considered incidental to the system modifications.

- § All installed fittings shall be welded flange type.
- § All modifications and construction procedures shall be done in accordance modern industry standards as well as applicable codes and regulations.

S-19-2.3 SELF-SERVE FUEL DISPENSER

- § Jet A self serve dispenser shall be a Pump Measure Control, Inc. model FH-515-AV-4A or approved equal with 1.5" x 50' certified aviation hose and OPW 295SAJ-0200 or approved equal, overwing jet fuel fueling nozzle with oval spout tip. Dispenser shall include filtration system, electronic register with LCD display, electric rewind hose reel, pulse delay, Av fuels rated positive displacement meter, and stainless steel enclosure. Existing dispenser that is removed shall become the property of the Contractor.
- § Avgas self serve dispenser shall be a Pump Measure Control, Inc. model FH-510-AV-2A or approved equal with 1" x 85' certified aviation hose and OPW 295SAC-0158 or approved equal, overwing Avgas fueling nozzle. Dispenser shall include filtration system, electronic register with LCD display, electric rewind hose reel, pulse delay, Av fuels rated positive displacement meter, and stainless steel enclosure. Existing dispenser that is removed shall become the property of the Contractor.

EQUIPMENT AND MATERIALS

S-19-3.1

All site-specific requirements will be determined based on the installation criteria of the fuel storage dispensing system selected.

- A. All equipment shall conform to American Petroleum Institute / Energy Institute (API / IP) Recommended Practice 1540, Design, Construction, Operation and Maintenance of Aviation Fuelling Facilities, Latest Edition; PEI/RP 1300, Latest Edition, and the New Mexico Environmental Department.
- B. All products for use, including those specified by required attributes and performance shall require submittal to and approval by the Engineer and/or Owner of shop drawings / catalog data before being incorporated into the work.
- C. Contractor shall provide to the Engineer the Name of the Manufacturer, Manufacture Date, and UL Numbers of all parts installed and in order to assist with the Spill Prevention Control and Countermeasure (SPCC) Plan with this project prior to final payment.
- D. All equipment shall be the capacity and types specified and all system components shall be compatible.
- E. Substitutions of materials, equipment, or methods shall not be allowed unless such substitution has been approved, in writing, in advance by the Engineer and/or Owner.
- F. Request for substitution will only be considered when complete submission of product data shows equal or superior features as compared with specified units. The Engineer and/or Owner will consider proposals for substitution of materials, equipment, and methods provided they are cost effective and exemplify the original

project scope and cause no delays in construction. Proposals for substitution or alternate methods must be accompanied by full and complete technical engineered data, appropriate drawings, and other information required by the Engineer and/or Owner to evaluate the proposed substitution.

- G. The Engineer and/or Owner will be the authority in determining product acceptability and their decision shall be final.
- H. All structural concrete shall be a commercially available mix meeting 3,000 psi compressive strength at 28 days.
- I. Operation and Maintenance Plan per 20.5.5.9 NMAC for aboveground storage tank (AST) systems and operational manuals for all system components and a schematic piping diagram identifying tanks, valves, pumps, pipelines, etc. shall be furnished to the Owner (3 copies).
- J. Submit to the engineer three copies of catalog cuts and dimensional drawings for wiring devices and circuit breakers.

CONSTRUCTION METHODS

S-19-4.1

Installation and construction shall conform to American Petroleum Institute / Energy Institute (API / IP) Recommended Practice 1540, Design, Construction, Operation and Maintenance of Aviation Fuelling Facilities, latest edition, manufacturer's recommendations and specifications and the New Mexico Environmental Department. Installation and construction shall conform to local fire codes and meet fire marshal inspection if applicable.

ELECTRICAL MATERIALS AND CONSTRUCTION

S-19-5.1 CODES AND PERMITS

Perform work in accordance with the latest edition of the national electrical code and all federal, state, and local codes and ordinances. Obtain and pay for all permits, inspections and certificates that may be necessary for completion of the work.

S-19-5.2 GUARANTEE

All materials shall be new and free of defect at the time of installation. Repair or replace any defective material or work for a period of one year from the date of written acceptance by the owner.

S-19-5.3 TRENCHING AND BACKFILLING

Perform all trenching and backfilling required for the electrical work. Backfilling shall be supervised by the general contractor, and shall be accomplished in 6" lifts, each compacted in accordance with 95% of ASTM D698 or as otherwise shown on plans.

S-19-5.4 PROTECTION

All work, material, and equipment shall be protected from damage or loss due to theft, weather, etc., until final written acceptance by the owner. Post danger signs and physical barriers to protect people against hazards created by the work.

S-19-5.5 IDENTIFICATION

Retype all panel directories for panels where branch circuit wiring is modified under this contract.

S-19-5.6 EQUIPMENT INSTALLATION

All equipment shall be installed as recommended by the manufacturer unless specifically indicated otherwise. The electrical contractor shall provide all supports, foundations, pads, etc., as required. This work shall be performed in accordance with the requirements of other applicable divisions of the specifications.

S-19-5.7 ELECTRICAL

All electrical materials and equipment shall be of the type and quality specified, new, and, when listed by underwriter's laboratories, shall meet their requirements and bear their label wherever standards have been established and label service regularly furnished.

S-19-5.8 RACEWAY INSTALLATION

Conduits installed underground or in concrete slabs shall be a minimum of 1-inch rigid schedule 40 PVC, with a ground wire sized per the NEC and bonded to the fuel system ground system. Make conduit bends with standard conduit elbows or conduit bent to not less than the same radius. All bends shall be free from dents or flattening. All fittings in wet places, locations exposed to weather, or buried in masonry, concrete, or fill shall be watertight. Conduits installed above grade shall be vapor proof.

S-19-5.9 WIRE AND CABLE

Unless indicated otherwise, all electrical conductors shall be high-conductivity copper, #12 or larger, with 600 volt insulation, sized as indicated. Acceptable manufacturers shall be G. E., Rome, Anaconda Wire & Cable, Triangle Conduit & Cable, Okonite, or approved equal. Control and communication wire shall be stranded copper and of a size and insulation in accordance with the equipment manufacturer's recommendation, or as shown on the drawings. Unless otherwise designated, wire and cable for various applications shall be as follows:

#12 through #6, dry locations: type THHN, 90 degree c.

#12 through #6, in slabs or wet locations: type THWN, 75 degree c.

#4 and larger: type THW 75 degree c.

Wire #10 and smaller: solid.

Wire #8 and larger: stranded.

S-19-5.10 GROUNDING

Ground all electrical systems in accordance with the requirements of the National Electrical Code, local codes, and as specified herein. Make all joints and connections of the conduit system tight to maintain continuity of mechanical and electrical ground throughout the entire system. Effectively ground all electrical equipment including metallic raceways, splice boxes, lighting fixtures, and fixture boxes. Provide a separate grounding conductor for all flexible metallic conduit runs, for all surface metal raceways and wiring gutters, and for all exterior poles, posts, lighting fixtures, etc., and where PVC or other nonconductive material is used for conduit raceways. Sizes of these grounding conductors shall be in accordance with applicable Tables in the National Electrical Code. Provide separate grounding conductor for all non-metallic distribution feeders. Do not use the neutral conductor as a grounding conductor.

SYSTEM OPERATION TEST

S-19-6.1

Operations tests of all system components shall conform to American Petroleum Institute / Energy Institute (API/IP) Recommended Practice 1540, Design, Construction, Operation and Maintenance of Aviation Fuelling Facilities, latest edition, and manufacturer's recommendations and specifications.

METHOD OF MEASUREMENT

S-19-7.1 JET A BULK FUEL DISPENSING SYSTEM

The quantity of Jet A bulk fuel dispensing systems to be paid for shall be measured as the number of systems installed as complete units in place, accepted and ready for operation.

S-19-7.2 AVGAS FUEL DISPENSER DEAD-MAN SYSTEM

The quantity of Avgas fuel dispenser dead-man systems to be paid for shall be measured as the number of systems installed as complete units in place, accepted and ready for operation.

S-19-7.3 ADDITIVE ALTERNATIVE - JET A SELF-SERVE FUEL DISPENSER

An additive bid alternative shall be the replacement of the existing spring rewind Jet A self-serve fuel dispenser with an electric rewind dispenser. The quantity of fuel dispensers to be paid for shall be measured as the number of systems installed as complete units in place, accepted and ready for operation.

S-19-7.4 ADDITIVE ALTERNATIVE – AVGAS SELF-SERVE FUEL DISPENSER

An additive bid alternative shall be the replacement of the existing spring rewind Avgas self-serve fuel dispenser with an electric rewind dispenser. The quantity of fuel dispensers to be paid for shall be measured as the number of systems installed as complete units in place, accepted and ready for operation.

S-19-7.5 ADDITIVE ALTERNATIVE – 1 ¼” LOW TEMPERATURE JET A HOSE

An additive bid alternative shall be the replacement of the existing Jet A dispenser fuel hose with a 1 ¼” diameter low temperature aviation grade fuel hose of the same or greater length. The quantity of fuel hoses to be paid for shall be measured as the number of systems installed as complete units in place, accepted and ready for operation.

BASIS OF PAYMENT

S-19-8.1 JET A BULK FUEL DISPENSING SYSTEM

Payment will be made at the contract lump sum price for the completed and accepted Jet A bulk fuel dispensing system installation. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item including but not limited to, design, all electrical and communications work, permits, system testing, and all utility company charges.

S-19-8.2 AVGAS FUEL DISPENSER DEAD-MAN SYSTEM

Payment will be made at the contract lump sum price for the completed and accepted Avgas dead-man system installation. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item including but not limited to, design, all electrical and communications work, permits, system testing, and all utility company charges.

S-19-8.3 ADDITIVE ALTERNATIVE - JET A SELF-SERVE FUEL DISPENSER

Payment will be made at the contract lump sum price for the installed, completed, and accepted Jet A self-serve fuel dispenser. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item including but not limited to, all electrical, and communications work, system testing, and all utility company charges.

S-19-8.4 ADDITIVE ALTERNATIVE - AVGAS SELF-SERVE FUEL DISPENSER

Payment will be made at the contract lump sum price for each installed, completed, and accepted Avgas self serve fuel dispenser. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item including but not limited to, all electrical and communications work, system testing, and all utility company charges.

S-19-8.5 ADDITIVE ALTERNATIVE – 1 ¼” LOW TEMPERATURE JET A HOSE

Payment will be made at the contract lump sum price for each installed, completed, and accepted aviation fuel hose. This price shall be full compensation for furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item including but not limited to, all electrical and communications work, system testing, and all utility company charges.”

Payment will be made under:

- Item S-19a Jet A Bulk Fuel Dispensing System – per lump sum
- Item S-19b Avgas Fuel Dispenser Dead-man System – per lump sum
- Item S-19c Jet A Self Serve Fuel Dispenser – per lump sum
- Item S-19d Avgas Self Serve Fuel Dispenser – per lump sum
- Item S-19e Remove and Replace Jet A Dispenser Hose – per lump sum

END OF ITEM SPECIAL-19

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SPECIAL PROVISIONS

1. GENERAL.

Work to be done under this Agreement consists of furnishing all labor, materials, equipment and accessories and performing all operations necessary to complete the Work in accordance with the Drawings and Specifications.

The following "Special Provisions" shall govern in case of any discrepancies in any or all of the following Specifications, and the intent, either expressed or implied in these "Special Provisions", shall govern in the interpretation of the Plans and Specifications.

The Bidder is required to examine carefully the site of the Proposed Work, the Proposal, Plans and Specifications. He shall satisfy himself as to the character, quality and quantities of Work to be performed, materials to be furnished, and as to the requirements of these Specifications. The submission of a Proposal shall be evidence that the Bidder has made such an examination.

2. PLANS.

The Plans governing and controlling the Work and to which reference is made throughout the Technical Specifications and other Contract Documents are those plans prepared by Armstrong Consultants, Inc. entitled Gallup Municipal Airport – Gallup, New Mexico.

3. LOCATION.

Gallup Municipal Airport is located in the City of Gallup, New Mexico.

4. INSURANCE.

The Contractor shall pay for and maintain during the life of this Contract adequate Worker's Compensation Public Liability and Property Damage Insurance. The Contractor is charged with the responsibility for adequate and proper coverage for all his Subcontract operations. Contractor shall furnish to the Sponsor satisfactory proof of carriage of the insurance required. Public Liability Insurance shall in the amount of not less than \$2,000,000.00 for injuries, including accidental death, to any one person, nor less than \$2,000,000.00 on account of any one accident. Property Damage Insurance shall be carried in an amount not less than \$2,000,000.00. Such Liability Insurance shall include completed operation coverage. The Sponsor and the Engineer shall both be named as additional insured on these policies.

5. CONTRACT PERIOD.

The Contractor understands and agrees that it must commence the Work required hereunder on the date stated on the Notice to Proceed as issued by the Sponsor, and that the Contractor must complete the entirety of the Work under all schedules within the Contract Time specified in the Agreement.

6. WORK SCHEDULE AND PROJECT PHASING.

After the Award of Contract and prior to receiving the Notice to Proceed, the Contractor shall submit to the Engineer a Safety Plan Compliance Document (located in Special Provisions 21). The Sponsor reserves the right to request changes in the sequence of Project schedules if such change is required in the interest of safety or airport operation.

Construction shall be phased in a manner to minimize disruption to air traffic operations. Access shall be maintained from the aircraft parking area and the hangars to the runway at all times.

7. PRE-CONSTRUCTION CONFERENCE.

After the Notice to Proceed has been issued and prior to commencement of any Work, the Airport Manager as the Sponsor's Representative will meet with the Engineer and the Contractor to discuss the Work in general, including administrative matters, the Contractor's Quality Control Program, accident prevention, and safety; to answer any questions of the Engineer or Contractor; and to resolve any potential problems before the Work commences.

8. UNDERGROUND UTILITIES.

All known existing utilities have been depicted on the Plans as accurately as possible. In many cases exact location, depth, and pipe size and type are not known. The Contractor is responsible for contacting appropriate utility locator services prior to construction.

In the State of New Mexico call: New Mexico One-Call, Inc. (800) 321-2537, www.nmonecall.org please notify 2 working days in advance. Where the Plans call for the Contractor to relocate an existing utility and the affected utility material composition differs from that shown on the Plans, the Contractor shall immediately notify the Engineer.

9. PERMITS, TAXES & COMPLIANCE WITH LAWS.

The Contractor shall procure and pay for all permits, taxes, licenses, and bonds necessary for the prosecution of his Work, and/or required by local, State, and Federal regulations, and laws, as pertains particularly to permits and transportation of materials and equipment, or other operations which are not a specific requirement of these Specifications. The Contractor shall give all notices, pay all fees and taxes, and comply with all Federal, State and local laws, ordinances, rules, and regulations, and building and construction codes bearing on the conduct of the Work. Costs of compliance and/or all taxes shall be included in the Unit Prices Bid for each Contract Item.

10. FIELD OFFICE.

The Contractor will not be required to provide a field office and furnishings as noted in Section 60, Paragraph 5 of the General Provisions.

11. HAUL ROADS.

The Contractor shall obtain approval from the Engineer prior to establishing haul roads within the airport property. Once established, the haul roads shall be utilized for all equipment traffic, and the equipment shall not be allowed to stray or wander away from the established routes. The haul roads shall be the responsibility of the Contractor and shall be maintained and kept in good order at all times. Water when required, shall be applied at the locations and in the amounts necessary to minimize dust and dirt in the air operations area. Haul roads across any active runway or taxiway shall be kept clean and in good order at all times. The Contractor shall repair any damage caused by the movement of equipment on any of the haul roads, whether in designated or undesignated areas. After completion of the Project, the Contractor shall be required to regrade any unpaved portions of the haul road and to reseed the area with local native grasses to match the existing conditions of the area. The performance of any Work as specified by this provision, including watering, maintenance, and repair of the haul roads, shall not be

measured and paid for directly, but shall be considered as necessary and incidental to the Work.

12. TESTING & STAKING.

The Contractor is responsible for conducting and payment for all quality control and acceptance testing, survey and staking noted in these Specifications. The person responsible for conducting the testing/staking shall be approved by the Engineer. Field test results shall be furnished daily by the testing laboratory in written form to the Engineer's Representative on the Project site and shall be submitted weekly by the testing laboratory to the Engineer typed on the forms supplied by the Engineer. Failure to submit written test results daily or typed test results weekly shall be grounds for suspension of Work (but not Contract Time) until the test results are submitted to the Engineer. Any requested testing data and/or surveying notes shall be supplied to the Engineer by the Contractor at no cost.

13. AIRPORT SECURITY.

During the course of the construction operations, the Contractor will be allowed to utilize an agreed upon number of airport accesses as entrances to the construction site. These gates and the associated haul roads shall be designated by the Engineer. The Contractor shall be required to keep these gates and all other temporary gaps in fencing closed during non-construction hours and guarded as necessary during construction hours to protect the runway from stray livestock. Occupants of any vehicles allowed on the airport shall be the responsibility of the Contractor and the Contractor shall control which vehicles are allowed to enter the airport property during construction except for normal airport operations uses.

14. CLOSURE OF AIR OPERATIONS AREAS.

Barricades are considered a necessary and incidental part of the work and no separate measurement or payment will be made therefore. The Contractor shall consider the costs and distribute them to the various bid items.

15. ACCIDENT PREVENTION.

Precautions shall be exercised at all times for the protection of persons (including employees) and property, and that the safety provisions of applicable laws and of applicable building construction codes shall be observed, and that machinery, equipment, and explosives shall be guarded and all hazards shall be eliminated in accordance with the safety provisions of the Manual of Accident Prevention in Construction published by the Associated General Contractors of America, to the extent that such provisions are not in contravention of applicable law.

16. EXISTING UNDERGROUND CABLES.

The Contractor shall attempt to locate the Sponsor's and/or FAA's underground cables prior to construction. Damage to the underground cables by the Contractor will require replacement by the Contractor at no cost to the Sponsor. Any splicing or replacing of damaged cable shall meet current FAA specifications.

17. UTILITIES.

Any utilities required by the Contractor for the prosecution of the Work shall be paid for by the Contractor.

18. STANDARD OF CARE/WARRANTY.

The Contractor shall perform all of the work required under the Contract Documents, in accordance with the expertise and skill that would be expected of a Contractor, expert in airport construction projects in general, and the Work required under the Contract Documents, in particular. In addition, the Contractor warrants that materials and equipment furnished under the Contract Documents will be of good quality and new, unless otherwise required by the Contract Documents, that the Work will be free from defects not inherent in the Work involved, and that the Work will conform, in all respects, to the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, shall be considered defective. The Contractor's warranty excludes defects due to abuse not caused by the Contractor, Subcontractors, or other third parties operating under the direction or control of the Contractor, modifications not executed or approved by the Contractor, improper or insufficient maintenance, by the Sponsor, improper operation by the Sponsor, or normal wear and tear under normal usage.

19. ATTORNEY'S FEES.

Should either party breach its obligations under the Agreement to be executed between the Contractor and Sponsor, or under any of the other Contract Documents, the breaching party shall be responsible for reimbursing the non-breaching party for all reasonable Attorney's fees and court costs incurred by the non-breaching party in enforcing its rights under the Contractor's agreement or the other Contract Documents.

20. CONSTRUCTION SAFETY AND PHASING PLAN WITH CONSTRUCTION SAFETY DRAWINGS.

To follow on next page.

GALLUP MUNICIPAL AIRPORT

Gallup, New Mexico

CONSTRUCTION SAFETY & PHASING PLAN

SCHEDULE I
AVIATION FUEL SYSTEM MODIFICATIONS

ACI No. 146223

September 2015



ARMSTRONG

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GALLUP MUNICIPAL AIRPORT

The Contractor's Safety Plan Compliance Document (SPCD) shall be in accordance with the FAA AC 150/5370-2F which is enclosed in the Contract Documents. The Engineer for this project is Armstrong Consultants, Inc. The Project Manager is Eric Rivera, (505) 508-2192.

1. COORDINATION.

- a. Contractor is to conduct weekly progress meetings to update Sponsor on construction progress and/or delays in construction.
- b. Weekly meeting shall update construction schedule and identify any scope changes necessary. The Contractor shall identify the areas where the work will be done during the current week.
- c. Any changes to the Construction Safety and Phasing Plan (CSPP) shall be coordinated with the FAA Airports Regional or District Office and Sponsor. Coordination with appropriate local and other Federal Government Agencies (i.e.: EPS, OSHA, TSA and State EPA) may be required.

2. PHASING.

- a. The project scope consists of the following:

SCHEDULE I: Aviation Fuel System Modifications

Schedule I consists of installing modifying the existing Jet-A and Avgas fuel dispensing systems.

The proposed duration for Schedule I is 14 calendar days.

The intent of the construction is to close the immediate area for the contract time of 14 calendar days per the Agreement. No phasing will be required for this project. The Construction Safety Drawings are located in APPENDIX A of this document.

- b. The Construction Safety Drawings show the closure area, haul routes, and access points.

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY.

Project	Aviation Fuel System Modifications	
Phase	Phase I	
Scope of Work	Modify Existing Jet-A and Avgas fuel system	
Operational Requirements	Normal (Existing)	Phase I (Anticipated)
Runway 6/24 Average Aircraft Operations	Carrier: 0/day GA: 10/day Military: 0/day	Carrier: 0/day GA: 10/day Military: 0/day
Runway 6/24 RDC	B-II	B-II
Runway 6 Approach Visibility Minimums	1-mile	1-mile
Runway 24 Approach Visibility Minimums	1-mile	1-mile
Runway 6 Approach Procedures	RNAV GPS, LOC, VOR	RNAV GPS, LOC, VOR
Runway 24 Approach Procedures	RNAV GPS	RNAV GPS
Taxiway A TDG	2	2
ARFF Index	None	None
ATCT (Hours Open)	None	None

RUNWAY	AIRCRAFT APPROACH CATEGORY A, B, C OR D	AIRPLANE DESIGN GROUP I, II, III OR IV	RSA WIDTH IN FEET DIVIDED BY 2
6	B	II	75 Feet
24	B	II	75 Feet

RUNWAY END NUMBER	AIRPLANE DESIGN GROUP I, II, III OR IV	AIRCRAFT APPROACH CATEGORY A, B, C OR D	MINIMUM SAFETY AREA PRIOR TO THE THRESHOLD	Minimum Distance to Threshold Based on Required Approach Slope	
6	II	B	300 Feet	200 Feet	20:1
24	II	B	300 Feet	200 Feet	20:1

- a. Runway 6/24 has a Runway Design Code (RDC) of B-II and will remain open and operational.
- b. The aircraft that utilize(s) Runway 6/24 will be able to access all taxiways. Only a portion of the apron will be closed.

4. NAVIGATION AIDS (NAVAIDS) PROTECTION.

- a. This project will not affect the NAVAIDS on the airport.

5. CONTRACTOR ACCESS

- a. **Location of Stock Piled Construction Materials.** Stock piles for the project will be located within the construction area or the contractor's staging area. See Construction Safety Plan for location. See Section 16 for discussion on hazard marking and lighting devices requirements. See Section 6 Wildlife Management for discussion on wildlife issues. See Section 7 Foreign Object Debris (FOD) Management for discussion on FOD control.
- b. **Vehicle and Pedestrian Operations.** The Contractor will be required to gain access to the airfield for this project. The project will require a haul route to cross the apron to bring in materials and remove waste. This area is located inside the movement area and communication with aircraft should be monitored by the Contractor. The haul route utilizes the apron and caution to aircraft will be required. Pedestrians and vehicles will not be allowed to leave the staging area. The Contractor vehicles will be required to follow AC 150/5210-5. Section 3(f) of the AC states that the Contractor's vehicles can be painted any color or combination of colors other than solid black or white. Also, Section 4(d)(1) requires vehicles other than those that routinely traverse any portion of the AOA, which are not escorted by a vehicle be in constant two-way radio communication with aircraft and properly equipped and authorized to operate in the AOA, must provide a flag on a staff attached to the vehicle so that the flag will be readily visible. Section 4(d)(2) At airports without air traffic control facilities, flags must be provided on all vehicles. Section 4(d)(3) The flag must be at least a 3-foot by 3-foot square having a checkered pattern of international orange and white squares at least 1 foot on each side. The contractor can also use Vehicle Lighting per Section 5(a)(1). The standard for identification lighting is a yellow flashing light that is mounted

on the uppermost part of the vehicle structure. A steady yellow light designates vehicles limited to non-movement areas; (2) the light must be visible from any direction, day and night, including from the air. Appendix B of the AC B-1 addresses the Color Specifications for Vehicle Identification Lights. The Society of Automotive Engineers (SAE) Standard J578 Revised December 2006, Color Specifications, defines the acceptable color boundary limits and measurement of emitted red, white, signal blue and yellow light for vehicle lights. This standard applies to the overall emitted color of light from the device in lieu of emitted light from any small area of the lens. The color of emitted light must fall within the color boundaries per SAE J578 Revised December 2006 (color boundary equations are in the standard) using color measurement methods detailed in the standard. See FAA Engineering Brief #67, Light Sources Other than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures, for additional information and Alternative Lighting Devices. Vehicle operation requirements are found in AC 150/5210-20. Section 5 of the AC states that any person driving on an airport must have an appropriate level of knowledge of airport rules and regulations. Airport operators should require vehicle operators to maintain a current driver's license and have a means to identification that would permit the operation of a vehicle on the airside of an airport. Any person expected to operate on the movement area should demonstrate a functional knowledge of the English language. The Contractor shall remind the construction operators that as stated in Section 7 - Aircraft ALWAYS have the right-of-way over vehicles when maneuvering on non-movement areas. Aircraft also have the right-of-way on the movement areas, except when the Airport Traffic Control Tower has specifically instructed an aircraft to hold or give way to vehicles on a runway or taxiway. Vehicles that are equipped with marking and lighting devices should escort vehicles that are not marked and lighted.

- c. **Two Way Radio Communication.** The Contractor's construction superintendent shall be required to monitor transceiver radios tuned to the frequency of 122.95 MHZ at all times when on the airfield. If the Contractor is not familiar with communication with an aircraft, he shall request assistance from the Sponsor for a class on proper FAA communications. Radios shall be supplied by the Contractor and incidental to the cost of the project. Such radios shall be used to obtain proper clearance in regard to the movement of equipment, trucks, etc. on the airport. Further, any unusual occurrences in the flight pattern of approaching or departing aircraft shall be acknowledged by all concerned so that operations of the airport and the construction work can be safely carried on at all times. If the Contractor's radio fails, a cell phone number with 24-hour availability will be provided to the Sponsor at the preconstruction meeting.
- d. **Airport Security.** Gallup Municipal Airport is not a Certificated Part 139 airport. Access to the airfield will be strictly limited and controlled and shall be strictly on an as-needed basis. The Gallup Municipal Airport has a perimeter

fence around the entire airport. The Contractor will use the main access off Highway 66, or as directed by the Sponsor, to access the airport.

6. WILDLIFE MANAGEMENT.

There currently exists a perimeter fence encompassing the airport. The fence provides a physical barrier that keeps out the game and wildlife that could walk onto the airfield. The Contractor will be accountable for wildlife entering the airport. Section 5(d) requirements shall be taken into consideration to maintain proper airport security. To minimize the presence of birds or flying wildlife, the Contractor shall keep a clean work area, bag all trash, and keep it in a sealed container. Should the Contractor encounter any wildlife on the airfield, he should notify the Sponsor immediately so that appropriate actions to mitigate the problem can be implemented. A wildlife hazard assessment study has not been conducted at the airport but should the Contractor have any issues or questions regarding wildlife on the airport, he should contact the Sponsor for further guidance.

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT.

All excavated material, debris, etc. shall be cleaned from the site at least on a daily basis and more often if required by the Sponsor or Engineer. To control dust and/or blowing debris, any soil, debris or loose material shall immediately be swept up and removed. The Contractor shall follow Section 10 to ensure that the construction site is clean and FOD is not an issue for safe usage of the airport.

8. HAZARDOUS MATERIALS (HAZMAT) MANAGEMENT.

At the preconstruction meeting, the Contractor shall discuss the fueling operation for all equipment on site. Any spills that occur on site shall be brought to the attention of the Sponsor immediately. The Contractor shall also notify the Sponsor of any and all required remedial work required and follow appropriate methods for cleaning up the contaminate site. The Contractor shall also make sure the Sponsor is in attendance to witness the clean up and provide written documentation to the Sponsor stating the remedial work is complete per EPA regulations, and the Sponsor's SWPPP. The Contractor should provide the Sponsor of all materials being delivered to the construction area and maintain MSDS sheets for such materials on the airport site. HAZMAT vehicles that respond to this airport would typically be the local firefighting units. The City of Gallup has emergency response that can contact the necessary authorities. The Contractor will also be required to verify that NPDES permit requirements are met as stated in AC 150/5320-15(12.13.2):

"Unauthorized dry weather discharges, such as discharges resulting from runway maintenance, aircraft deicing/anti-icing operations, or vehicle and aircraft washes, require a separate NPDES permit based either on application Form 2C, *Wastewater Discharge Information*, for process water, or Form 2E, *Facilities Which Do Not Discharge Process Wastewater*, for non-process water."

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES.

The Contractor shall list the names of individuals that will be responsible for specific items on the construction site. The names that are listed shall be given to the Sponsor, as well as posted on a bulletin board on the project. There is 911 emergency service at the Airport which shall be posted on the bulletin board. The following are contacts and names that need to be identified:

Office/Testing Address and Phone Numbers:

Company Name
Company Address
City, State Zip
Ph.: 000-000-0000
Fax:000-000-0000

- Project Superintendent: _____ Cell Phone: _____
- Superintendent: _____ Cell Phone: _____
- 24-Hour Contact: _____ Cell Phone: _____
- Gate Guard: _____ Cell Phone: _____
- Lab/Field Supervisor: _____ Cell Phone: _____
- Paving Supervisor: _____ Cell Phone: _____
- Safety Officer: _____ Cell Phone: _____
- Quality Control Officer: _____ Cell Phone: _____
- Job Site Environmental Officer: _____ Cell Phone: _____
- City/Town Official (Name): Aaron Leslie Cell Phone: 505-870-2788

Subcontractor information shall be available to the Engineer as well.

The Airport Superintendent (Aaron Leslie) shall issue or cancel all required NOTAM's. There is 911 response to the Airport for police, fire fighting, and medical emergencies. The Contractor shall identify the following and post on the project bulletin board:

- *Rehoboth McKinley Christian Health Care Services,*
1901 Red Rock Drive
Gallup, NM 87301
(505) 863-7000
- *Poison Control (800) 222-1222*

10. INSPECTION REQUIREMENTS.

The Contractor will identify, per Section 9, a Safety Officer that will be required to inspect on a daily basis, all barricades and flashers prior to work commencing and prior to leaving the work site. The Contractor will notify the Resident Inspector that all inspections have been completed. The Contractor shall determine if there is a need to increase the inspections based on the project and site conditions. There

will be no decrease in the amount of required inspections. At the project final inspection, the project site shall be clean and free of all debris related to the project construction.

11. UNDERGROUND UTILITIES.

The Contractor shall be responsible for contacting appropriate utility locator services prior to construction. The Contractor shall attempt to locate the Sponsor's and/or FAA's underground cables prior to construction. Damage to underground cables by the Contractor will require replacement by the Contractor at no cost to the Sponsor and/or FAA. Any splicing or replacing of damaged cable shall meet current FAA specifications. Should damage be caused to any underground utility, the Contractor shall follow Section 9 for contacting appropriate personnel. Should there be any issues with FAA owned and maintained equipment for the airport due to construction activity, the FAA Facilities shall be notified immediately at 1-866-835-5322.

12. PENALTIES.

If at any point a safety violation is noted, all construction activities in the area of the violation will be immediately terminated. Before construction can begin, the Contractor will provide a written statement demonstrating to the Owner that the construction can once again occur without violations to the Safety procedures. The Contractor is not eligible for additional compensation for the down time or any other claim when construction is terminated due to safety violations.

The City Manager or Airport Manager can suspend construction activities at any time during which they note safety violations. The duty of the Engineer or Owner to conduct construction review of the Contractor's performance is not intended to include review of adequacy of the Contractor's safety measures, in, or near the construction site. In accordance with generally accepted construction practices, the Contractor shall be solely and completely responsible for conditions on the job site including safety of all persons and property during performance of the work. This requirement shall apply continuously and will not be limited to working hours.

13. SPECIAL CONDITIONS.

The Contractor shall monitor any weather conditions, aircraft emergencies, unexpected emergencies and other elements that may cause safety on the project to be jeopardized. If there is an emergency, the contractor shall notify City of Gallup Emergency Response as referenced in Section 9. Section 5 shall be followed for any radio issues that may arise. Section 14 shall be followed for any runway or taxiway visual aids that are changed should emergency vehicle need assistance with airport locations.

14. RUNWAY AND TAXIWAY VISUAL AIDS.

This project does not require any temporary runway and taxiway markings, lights, or signs. The Airport Manager, Airport Superintendent, and the Contractor's Superintendent shall develop and oversee the lock-out/tag-out plan per 29 CFR

Part 1910 Occupational Safety and Health Standards. There will be low profile barricades that will be used to delineate the construction site. The existing NAVAIDS will not be altered, obliterated, or shut down for this project. Approaches to Runway 6/24 will not be affected by this project. Should there be any issues with the NAVAIDS for the airport due to construction activity, the FAA Facilities shall be notified immediately at 817-222-4523.

15. MARKING AND SIGNS FOR ACCESS ROUTES.

Haul routes and other activities on the airport by the Contractor, subcontractors, and Engineer shall be coordinated with and approved in advance by the Airport Manager or his authorized agent. Any traffic signs to delineate the haul route shall meet the Manual on Uniform Traffic Control Devices (MUTCD) standards, including but not limited to the frangible and height requirements.

16. HAZARD MARKING AND LIGHTING.

Low profile barricades with the MUTCD standard reflective orange and white marking with the 20"min x 20"min flags mounted on the center of the barricade will be used to delineate the construction site. The barricades shall also be required to have the flashing red caution lights. The barricades shall be spaced no more than 20 feet apart where shown on the safety plan. The barricades shall be weighed against propwash and capable of withstanding up to 100 MPH wind forces. Flashing red caution lights shall be battery operated and shall maintain such intensity so as to be readily identified from distances of at least 200 feet during darkness. The Contractor shall identify the person responsible for the maintenance and the marking and lighting in Section 9.

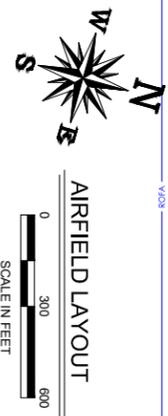
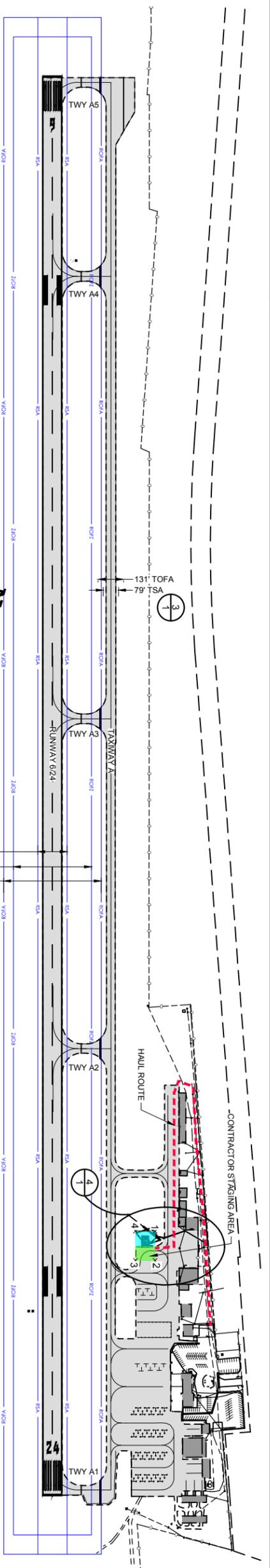
17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS.

There are two runways at the Gallup Municipal Airport. Runways 6/24 will not be affected by this construction project. Construction will not encroach into Taxiway A safety area, OFA or OFZ. The Taxiway A safety area is 79' wide; the TOFA is 131' wide. A localized portion on the apron will be closed to aircraft traffic during Schedule I. The Contractor shall be required to keep all men, materials, and equipment out of the Runway 6/24 safety areas, OFAs, and OFZs. These runways shall remain open during the project. Please refer to Section 5 on proper vehicle and personnel movement within safety areas. Any stockpiling of materials shall refer to Section 5 for information on stockpiling of materials. This project is for Apron construction and will require proper edge drops. Should the contractor disturb any of the safety areas (TOFA or ROFA) beyond the scope of the construction area, they shall be repaired at no cost to the Owner. SECTION 16 methods shall be used to delineate such areas in the construction areas. The localized apron closure will require that Section 9 and Section 14 be referenced for proper methods of NOTAMs issuance visual aids to delineate the construction area. Coordination with the FAA will be discussed to determine the appropriate airspace evaluation requirements.

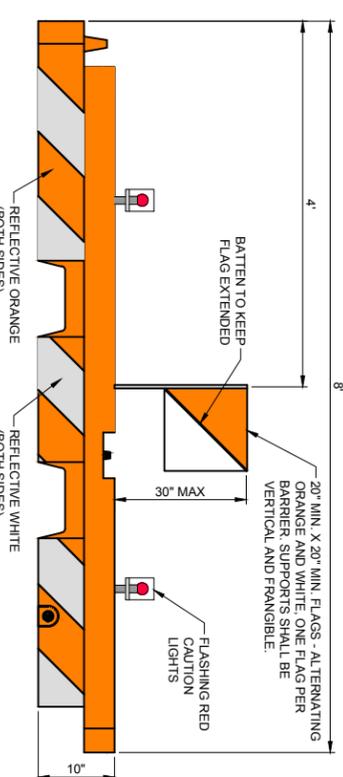
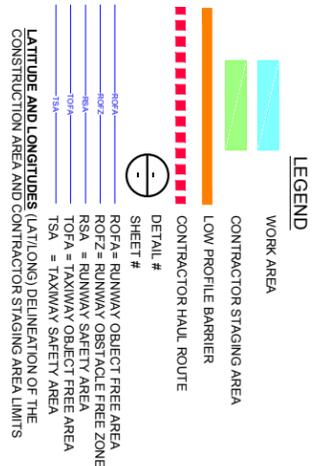
18. OTHER LIMITATIONS ON CONSTRUCTION.

The Contractor shall provide the Sponsor the normal hours of construction. Any construction activity that needs to go on at night shall get permission from the Sponsor. Section 2 has no provisions for work outside of these hours; therefore, permission from the FAA, Sponsor, and Engineer is required. Should the Contractor need to utilize a crane or special equipment that is not included in the preliminary equipment list, a 7460-1 will be required.

APPENDIX

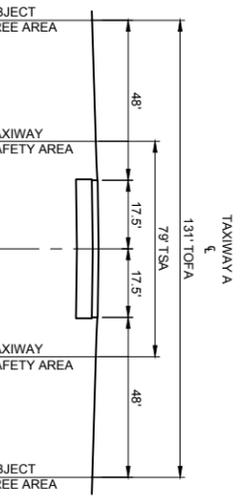
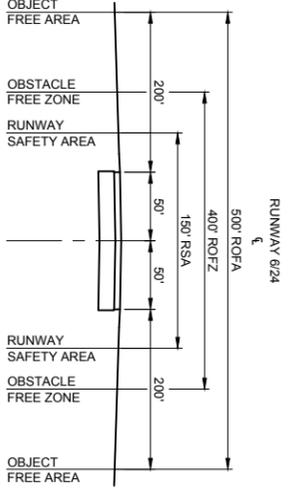


WORK AREAS COORDINATES			
POINT #	ELEVATION	LATITUDE	LONGITUDE
1	6467'	N035°30'51.11"	W108°46'56.62"
2	6468'	N035°30'51.53"	W108°46'54.87"
3	6468'	N035°30'50.57"	W108°46'54.53"
4	6466'	N035°30'50.15"	W108°46'56.29"



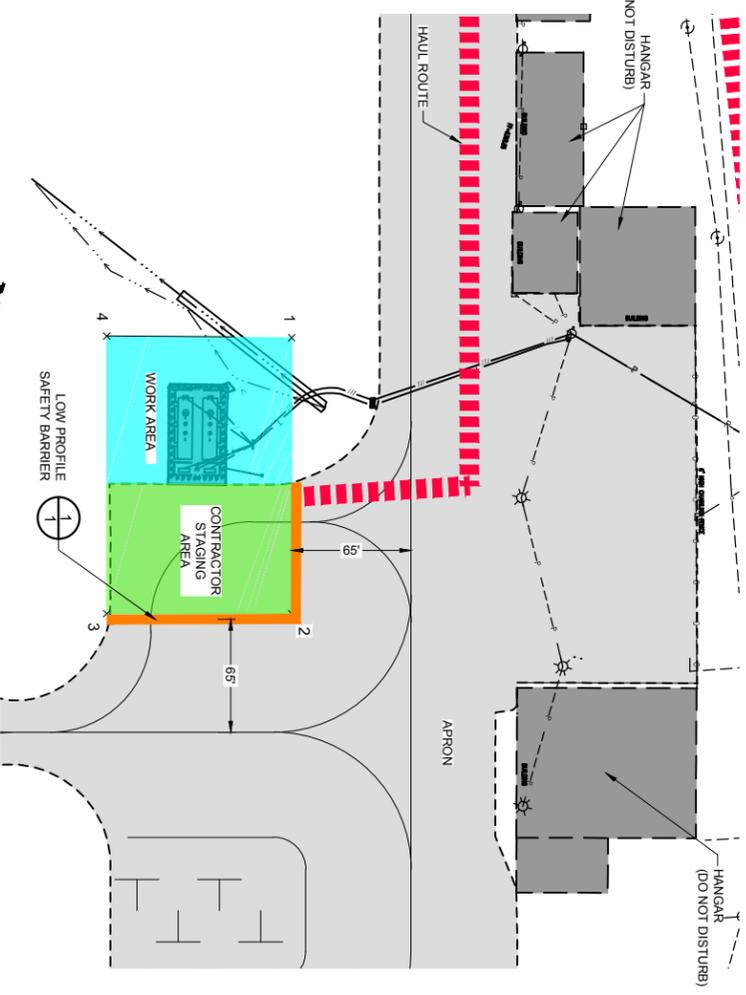
1 LOW PROFILE SAFETY BARRIER
1 NOT TO SCALE

- NOTES:
1. BARRIER SHALL BE SHERWIN INDUSTRIES, 10" X .96" LOW PROFILE AIRPORT BARRIER, AS SHOWN, OR APPROVED EQUAL.
 2. THE ENTIRE AREA OF ORANGE AND WHITE STRIPES SHALL BE REFLECTORIZED WITH SMOOTH SURFACE TYPE REFLECTIVE SHEETING.
 3. LIGHTS MUST BE MOUNTED ON BARRIERS AND SPACED AT NO MORE THAN 10 FT.
 4. THE BARRIERS SHALL BE WEIGHTED AGAINST PROPWASH AND CAPABLE OF WITHSTANDING UP TO 100 M.P.H. WIND FORCES.
 5. FLASHING RED CAUTION LIGHTS SHALL BE BATTERY OPERATED AND SHALL MAINTAIN SUFFICIENT VOLTAGES TO BE READILY IDENTIFIED FROM DISTANCES OF AT LEAST 200 FEET DURING DARKNESS.
 6. THE CONTRACTOR SHALL CHECK ALL BARRIERS AND LIGHTS EACH DAY BEFORE LEAVING THE AIRPORT TO ENSURE LIGHTS ARE WORKING PROPERLY AND MAY NOT LEAVE WITHOUT ALL BARRIERS AND LIGHTS BEING IN PROPER WORKING ORDER.



2 SAFETY AREAS
1 NOT TO SCALE

3 SAFETY AREAS
1 NOT TO SCALE



4 CONTRACTOR STAGING AREA
SCALE IN FEET

GALLUP MUNICIPAL AIRPORT
GALLUP, NEW MEXICO
2015 IMPROVEMENTS
AVIATION FUEL SYSTEM MODIFICATIONS

No.	Revision	Date	By

Project No: 146223
Date: 09/20/15
File Name: 6223 CSPP

Drawn: SAT
Checked: ERR
Approved: DJH

CONSTRUCTION SAFETY & PHASING PLAN

21. SAFETY PLAN COMPLIANCE DOCUMENT

I, _____(Name), (CONTRACTOR), have read the Gallup Municipal Airport Construction Safety and Phasing Plan (CSPP), approved on _____, 2016, and will abide by it as written and with the following additions as noted:

Notes:

- 1. *If no supplemental information is necessary for any specific section, write "NO SUPPLEMENTAL INFORMATION"*
- 2. *Do not duplicate information in the CSPP.*

1. COORDINATION – Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors

2. PHASING – Discuss proposed construction schedule elements including:

- a. Duration of each phase
- b. Daily start and finish of construction, including "night only" operation
- c. Duration of construction activities during:
 - i. Normal runway operations
 - ii. Closed runway operations
 - iii. Modified runway "Aircraft Reference Code" usage

3. AREAS AND OPERATIONS AFFECTED BY THE CONSTRUCTION ACTIVITY – Areas and operations are identified in the CSPP

NO SUPPLEMENTAL INFORMATION

4. PROTECTION OF NAVAIDS – Discuss specific methods proposed to protect operating NAVAIDs

5. CONTRACTOR ACCESS – Provide the following:

- a. Details on how the integrity of the airport security fence will be maintained (gate guards, daily log of construction personnel, or other
- b. List individuals required for driver training (as required)
- c. Radio communications
 - i. Types of radios and backup capabilities
 - ii. Who will be monitoring radios
 - iii. Whom to contact if ATCT cannot reach the contractor's designated person by radio
- d. Details on how material delivery vehicles will be escorted on site

6. WILDLIFE MANAGEMENT – Discuss the following:

- a. Methods and procedures to prevent wildlife attraction
- b. Wildlife reporting procedures

7. FOREIGN OBJECT DEBRIS (FOD) MANAGEMENT – Discuss equipment and methods for controlling FOD, including construction debris and dust

8. HAZARDOUS MATERIAL (HAZMAT) MANAGEMENT – Discuss equipment and methods for responding to hazardous spills

9. NOTIFICATION OF CONSTRUCTION ACTIVITIES – Provide the following:

- a. Contractor points of contact
- b. Contractor emergency contact
- c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe
- d. Batch plant details

10. INSPECTION REQUIREMENTS – Discuss daily (or more frequent) inspections and special inspection procedures

11. UNDERGROUND UTILITIES – Discuss proposed methods of identifying and protecting underground utilities

12. PENALTIES – Penalties are identified in the CSPP

NO SUPPLEMENTAL INFORMATION

13. SPECIAL CONDITIONS – Discuss proposed actions for each special condition identified in the CSPP

14. RUNWAY AND TAXIWAY VISUAL AIDS – Discuss proposed visual aids (marking, lighting, signs, and visual NAVAIDs) including the following:

- a. Equipment and methods for covering signage and airfield lights
 - b. Equipment and methods for temporary closure markings (paint, fabric, other)
 - c. Types of temporary Visual Guidance Slope Indicators (VGSI)
-
-
-

15. MARKING AND SIGNS FOR ACCESS ROUTES – Discuss proposed methods of demarcating access routes for vehicle drivers

16. HAZARD MARKING AND LIGHTING – Discuss proposed equipment and methods for identifying excavation areas

- 17. PROTECTION OF RUNWAY AND TAXIWAY SAFETY AREAS** – Discuss proposed methods of identifying, demarcating, and protecting airport surfaces (safety areas, object free areas, obstacle free zones, and approach/departure zones) including:
- a. Equipment and method for maintaining Runway or Taxiway Safety Area standards
 - b. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
-
-
-

18. OTHER LIMITATIONS ON CONSTRUCTION – Other limitations (if any) shall be identified in the CSPP

NO SUPPLEMENTAL INFORMATION

This Safety Plan Compliance Document (SPCD) must be submitted and approved by the Sponsor prior to issuing the Notice to Proceed for Construction. The contractor should allow at least two weeks for review by the Sponsor.

(CONTRACTOR) certifies that it understands the operational safety requirements of the CSPP and will not deviate from the approved CSPP and this SPCD unless written approval is granted by the Sponsor. It is our understanding that upon review and approval of this SPCD, we may request issuance of Notice to Proceed.

By _____, _____, _____
Title Date

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U.S. Department
of Transportation

Federal Aviation
Administration

Advisory Circular

Subject: Painting, Marking, and Lighting of
Vehicles Used on an Airport

Date: April 1, 2010

AC No: AC 150/5210-5D

Initiated by: AAS-100

Change:

1. PURPOSE. This advisory circular (AC) provides guidance, specifications, and standards for painting, marking, and lighting of vehicles operating in the airport air operations area (AOA). The approved lights, colors, and markings herein assure the conspicuity of vehicles operating in the AOA from both the ground and the air.

2. CANCELLATION. This AC cancels AC 150/5210-5C, Painting, Marking, and Lighting of Vehicles Used on an Airport, dated August 31, 2007.

3. APPLICATION. The Federal Aviation Administration (FAA) recommends the guidelines and standards in this Advisory Circular for vehicles operating in the airport AOA. In general, use of this AC is not mandatory. *However*, use of this AC is mandatory for vehicles funded with federal grant monies through the Airport Improvement Program (AIP) and/or with revenue from the Passenger Facility Charges (PFC) Program. See Grant Assurance No. 34, "Policies, Standards, and Specifications," and PFC Assurance No. 9, "Standard and Specifications."

Vehicles covered by this AC that do not meet this standard may be used until the vehicle is repainted or replaced, but no later than **December 31, 2010**.

4. PRINCIPAL CHANGES. This AC contains new specifications and recommendations for the painting, marking, and lighting of Towbarless Tow Vehicles (TLTVs).

5. METRIC UNITS. To promote an orderly transition to metric units, this AC includes both English and metric dimensions. The metric conversions may not be exact equivalents, and until there is an official changeover to the metric system, the English dimensions will govern.

6. COMMENTS OR SUGGESTIONS for improvements to this AC should be sent to:

Manager, Airport Engineering Division
Federal Aviation Administration
ATTN: AAS-100
800 Independence Avenue, S.W.
Washington, DC 20591

Michael J. O'Donnell
Director of Airport Safety and Standards

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PAINTING, MARKING, AND LIGHTING OF VEHICLES USED ON AN AIRPORT

1. SOURCES OF APPLICABLE DOCUMENTS.

- a.** American National Standards Institute, Inc. (ANSI), 25 West 43rd St. 4th Floor, New York, NY 10036. Website: www.ansi.org
- b.** American Society for Testing & Materials (ASTM), ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959. Website: www.astm.org
- c.** The National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169-7471. Website: www.nfpa.org
- d.** The U. S. General Services Administration (GSA), Centralized Mailing List Services, 501 West Felix Street, Whse 9, South End P.O. Box 6477, Fort Worth, Texas 76115-6477. Website: www.gsa.gov
- e.** The Superintendent of Documents, U.S. Government Printing Office, 732 North Capitol St. NW, Washington, DC 20401.
- f.** Society of Automotive Engineers, Inc. (SAE), 400 Commonwealth Drive, Warrendale, PA 15096-0001. Website: www.sae.org
- g.** FAA Advisory Circulars: U.S. Department of Transportation, Subsequent Distribution Office, Ardmore East Business Center, 3341 Q 75th Ave., Landover, MD 20785. Website: www.faa.gov
- h.** FAA Engineering Briefs: www.faa.gov/airports/engineering/engineering_briefs/

2. DEFINITIONS. The following definitions apply in this AC:

- a. Vehicle** – All conveyances, except aircraft, used on the ground to transport persons, cargo, equipment or those required to perform maintenance, construction, service, and security duties.
- b. Air Operations Area (AOA)** – The portion of airport that encompasses the landing, take off, taxiing, and parking areas for aircraft.
- c. Airport Emergency Vehicles** – Vehicles that are authorized in the AOA for emergency purposes (e.g., ambulances, aircraft rescue and fire fighting (ARFF) vehicles and emergency response vehicles) as authorized by the airport traffic control tower (ATCT) or an authorized on-site accident/incident commander.
- d. Airport Operations Vehicles** – Vehicles routinely used by airport operations personnel for airport inspection and duties associated with airfield operations (such as airfield condition reporting and Incident Command) on the AOA and Movement Area.
- e. Airport Security Vehicles** – Vehicles that are authorized in the AOA for security purposes, as needed (e.g. police cars).

- f. Airfield Service Vehicles** – Vehicles that are routinely used in the AOA for airfield service, maintenance, or construction (e.g. snow blowers, snowplows, maintenance trucks, and tractors).
- g. Aircraft Support Vehicles** – Vehicles that are routinely used in the AOA to support aircraft operations (e.g. aircraft pushback tractors, baggage/cargo tractors or trucks, air conditioning and aviation fuel trucks). These vehicles are typically owned by airlines, vendors, or contractors and are not eligible for Federal funding.
- h. Reduced Visibility** – Prevailing visibility is less than one statute mile (1609 meters) and/or the runway visual range (RVR) is less than 6,000 feet (1830 meters).
- i. Movement Area** – The runways, taxiways, and other areas of an airport/heliport that are used for taxiing/hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading ramps and parking areas. At those airports/heliports with an operating airport traffic control tower (ATCT), specific approval for entry onto the movement area must be obtained from air traffic control (ATC).
- j. Other Vehicles** – Vehicles that are not routinely authorized in the AOA (e.g. construction vehicles). These vehicles are typically owned by airlines, vendors, or contractors and are not eligible for Federal funding.
- k. Peak Intensity** – Peak intensity, for purposes of this document, means the maximum magnitude of luminescence as measured in candela.
- l. Towbarless Tow Vehicle (TLTV)** – a type of aircraft support vehicle whose main purpose is to tow aircraft in the AOA by way of nose gear capture.

3. VEHICLE PAINTING.

NOTE: *Airport vehicle paint and markings are a safety of flight requirement. The approved colors/markings herein assure conspicuity of vehicles operating in the AOA from both the ground and air.*

a. Airport Emergency Vehicles.

(1) Ambulances. Ambulance vehicles are painted per the most current version of Federal Specification KKK-A-1822, *Federal Specification for the Star-of-Life Ambulance*. Ambulances are not considered vehicles routinely operating on the AOA.

(2) Aircraft Rescue and Fire Fighting (ARFF) Vehicles. Yellowish-green is the vehicle color standard. Color specifications are per Appendix A.

NOTE: *A yellowish-green color provides optimum visibility during all light levels encountered during a 24-hour day and under variations of light that result from weather and seasonal changes.*

b. Airport Operations Vehicles. Airport operations vehicles may be painted in colors designated by the airport operator. The characteristics must be coordinated with the respective ATCT and identified in the tower letter of agreement.

c. Airport Security Vehicles. Comply with specific state or local requirements.

d. Airfield Service Vehicles. Chrome yellow is the vehicle color standard. Color specifications are per Appendix A. When vehicles are equipped with bumper bars 8 inches (200 mm) or more in depth, the bars must be painted in alternate stripes 4 inches (100 mm) in width of chrome yellow and black inclined 45° to the vertical.

e. Aircraft Support Vehicles.

(1) Any color or combination of colors other than yellowish-green or chrome yellow. The bumper bar paint scheme in paragraph 3.d (of alternating chrome yellow and black stripe) is recommended.

(2) **TLTVs.** International orange is the vehicle color standard. Retroreflective tape covering more than 25 percent of the vehicle's vertical surfaces may be used as a temporary measure to meet this standard prior to scheduled vehicle painting.

f. Other Vehicles. Any color or combination of colors other than solid black or white.

4. VEHICLE MARKING.

a. Airport Emergency Vehicles.

(1) **Ambulances.** Ambulances are marked per the most current version of Federal Specification KKK-A-1822.

(2) **ARFF Vehicles.** Emergency rescue and fire fighting vehicles are marked with the letters "ARFF," "Fire," or "Rescue" and in accordance with 4.c.(1)-(5) of this AC.

b. Airport Operations Vehicles. Airport operations vehicles may be marked as designated by the airport operator. Marking must be coordinated with the respective ATCT and identified in the tower letter of agreement.

c. Airfield Service Vehicles and Aircraft Support Vehicles.

(1) Airport operator owned vehicles must display an identification number on each side and on the roof (the hood should be used if the vehicle has no roof).

(2) Side numbers will be a minimum of 16 inches (410 mm) in height and conspicuously located.

(3) Roof numbers will be a minimum of 24 inches (610 mm) in height and affixed with their bases toward the front of the vehicle. The identification numbers should provide sharp color contrast to the vehicle color.

(4) In addition to the identification numbers, airport operator-owned vehicles must display either the name of the airport and/or the airport insignia.

(5) To further improve night-time recognition of vehicles, a minimum 8 inch (200 mm) wide horizontal band of high gloss white paint or white reflective tape (Retroreflective, ASTM-D 4956-09, *Standard Specification for Retroreflective Sheeting for Traffic Control*, Type III & above) must be used around the vehicle's surface. Figures 1, 2, and 3 show suggested locations for the horizontal reflective band.

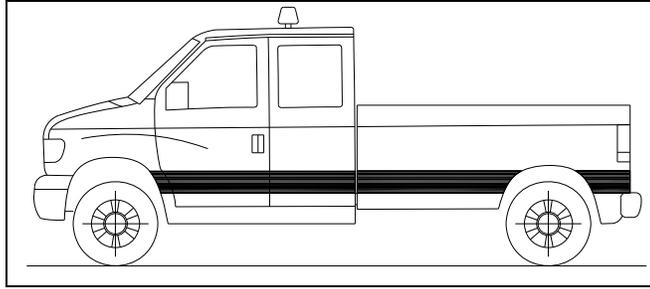


Figure 1: Suggested location for the horizontal reflective band, Option 1

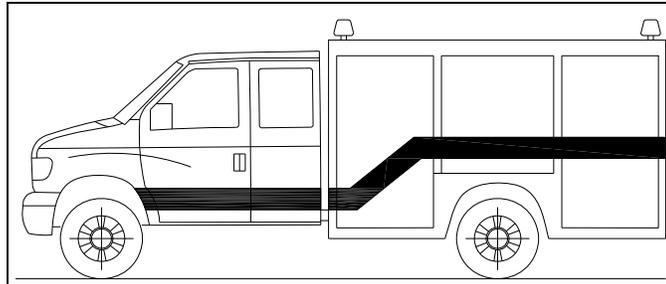


Figure 2: Suggested location for the horizontal reflective band, Option 2

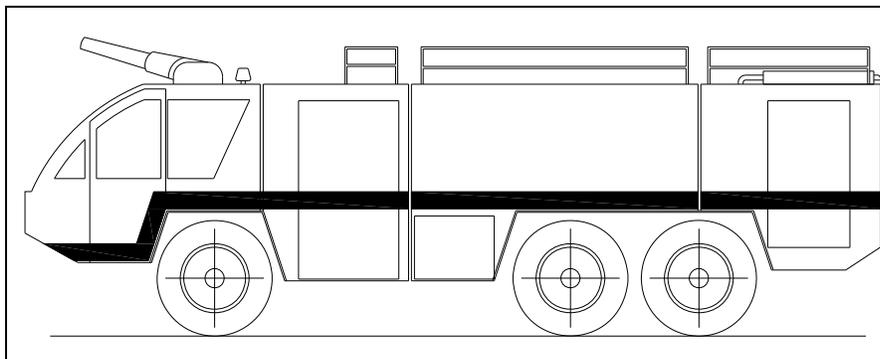


Figure 3: Suggested location for the horizontal reflective band, Option 3

(6) **TLTVs.** Retroreflective tape is used to outline the shape of a TLTV. If the vertical edge of the vehicle is rounded, the tape should be placed on the rounded portion to reflect light in both the horizontal and vertical planes. Where the placement of the tape may interfere with, or may be worn down by, maintenance or operational activities, tape is not required. Suggested locations for the retroreflective bands are shown in Figure 4.

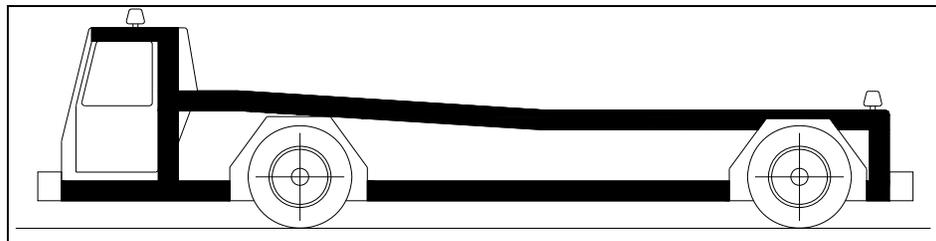


Figure 4: Suggested placement of retroreflective tape on a TLTV

d. Airport Security and Other Vehicles.

- (1) Vehicles other than those that routinely traverse any portion of the AOA under the control of ATC, which are not escorted by a vehicle in constant two-way radio communication with ATC and properly equipped and authorized to operate in the AOA, must be provided with a flag on a staff attached to the vehicle so that the flag will be readily visible.
- (2) At airports without air traffic control facilities, flags must be provided on all vehicles.
- (3) The flag must be at least a 3-foot by 3-foot (0.9 meter by 0.9 meter) square having a checkered pattern of international orange and white squares at least 1 foot (300 mm) on each side (see Appendix A for the fabric color specification).

5. VEHICLE LIGHTING.

a. Airfield Service, Aircraft Support, and Airport Operations Vehicles.

- (1) The standard for identification lighting is a yellow flashing light that is mounted on the uppermost part of the vehicle structure. A steady yellow light designates vehicles limited to non-movement areas.
- (2) The light must be visible from any direction, day and night, including from the air.
- (3) Color specifications for vehicle identification lights are per Appendix B.
- (4) **TLTVs.** An LED light bar placed above the operator's cab may be used in place of the rotating yellow flashing light. In addition, a yellow flashing light (of any type) must be installed on the upper left-rear and right-rear corners of the TLTV, and must be activated when an aircraft is in tow. The size of the rear flashing lights must be large enough to meet the requirements of Section 5.c, but not so large as to interfere with the normal or towing operations of the TLTV.

b. Airport Emergency, Security, and Other Vehicles, which are not escorted by a properly lighted vehicle, must be identified during periods of low visibility by a light.

c. Characteristics of Flashing Lights:

- (1) Ambulance lights must meet the specifications in the most current version of Federal Specification KKK-A-1822, and ARFF vehicles must meet NFPA, state, and local requirements.
- (2) Lights must have peak intensity within the range of 40 to 400 candelas (effective) from 0° (horizontal) up to 10° above the horizontal and for 360° horizontally. The upper limit of 400 candelas (effective) is necessary to avoid damage to night vision.
- (3) From 10° to 15° above the horizontal plane, the light output must be 1/10th of peak intensity or between 4 and 40 candelas (effective).

- (4) Lights must flash at 75 ± 15 flashes per minute.

NOTES:

1. *The effective intensity of a flashing light is equal to the intensity of a steady-burning (fixed) light of the same color that produces the same visual range under identical conditions of observation.*

2. *If xenon flashtubes are used, refer to AC 150/5345-43, Specification for Obstruction Lighting Equipment, for guidance concerning methods of calculating effective intensity.*

d. Light Colors.

(1) Airport Emergency Vehicles.

(a) **Ambulances.** Per the most current version of Federal Specification KKK-A-1822.

(b) **ARFF Vehicles.** Red or a combination of red-and-white flashing lights per the chromaticity requirements in Appendix B.

(2) Airport Security Vehicles. Signal blue or a combination of red and signal blue flashing light per the chromaticity requirements in Appendix B.

(3) Airfield Service, Aircraft Support, Airport Operations, and Other Vehicles. Yellow flashing light per the chromaticity requirements in Appendix B.

APPENDIX A. COLOR SPECIFICATIONS

A-1. SPECIFICATIONS. Colors specified in Table A-1 are per the Commission Internationale de l'Eclairage (CIE) L*a*b* system of color specification. For a description of this system, refer to American Society for Testing & Materials (ASTM) D 2244, *Standard Practice for Calculation of Color Tolerances and Color Differences from Instrumentally Measured Color Coordinates*.

Table A-1. Specification for vehicle and flag colors

Standard Illuminant D65 Usage	Chrome Yellow			Yellowish-Green			International Orange		
	Vehicle Paint			Vehicle Paint			Vehicle Paint / Flag Fabric		
CIELAB DATA	L*	a*	b*	L*	a*	b*	L*	a*	b*
Centroid Color	72.8	24.4	77.6	78.3	-10.2	80.4	45.0	53.5	52.0
Point 1	72.8	31.8	82.9	78.3	-9.0	92.0	45.0	61.4	47.8
Point 2	72.8	25.5	66.7	78.3	-7.6	73.2	45.0	53.9	41.4
Point 3	72.8	18.0	69.3	78.3	-11.0	69.3	45.0	53.5	53.4
Point 4	72.8	22.4	86.0	78.3	-13.4	86.2	45.0	49.7	60.4
Light Limit	77.8			83.3			49.9		
Dark Limit	67.8			73.3			41.6		
Max ΔE	11.1			11.7			10.7		

A-2. COLOR TESTS. Acceptable colors are those that meet the gloss rating test and either a visual or an instrumental color test as follows:

NOTE: *Flag fabric colors must meet either the instrumental tests in Table A-1 or the visual method described in paragraph A-2b(1).*

a. Gloss Rating Test. This test is performed per ASTM D 523, *Standard Test Method for Specular Gloss*, on a paint sample of the color to be applied on the vehicle. An acceptable color sample is high gloss with a minimum gloss rating of 70 units, for 60° geometry.

b. Color Test Methods:

(1) Visual. Prepare a master specimen of the color (per Table A-1) and gloss (per paragraph A-2a). This specimen will be the master color and be used as the basis of comparison per ASTM D 5531-05, *Standard Guide for the Preparation, Maintenance, and Distribution of Physical Product Standards for Color and Geometric Appearance of Coatings*. To verify the paint color of a vehicle visually, vehicle paint samples must be

prepared and viewed per ASTM D 1729-96 (Reapproved 2009), *Standard Practice for Visual Appraisal of Colors and Color Differences of Diffusely-Illuminated Opaque Materials*.

(2) Instrumental. This test requires a test specimen sample and reference to Table A-1. All test specimen measurements should be conducted per ASTM E 1164-09a *Standard Practice for Obtaining Spectrometric Data for Object-Color Evaluation*. Test specimen tolerances must be per Table A-1 per the following:

(a) Plot the centroid color using the a* and b* CIELAB coordinate data from Table A-1 on graph paper or by entry of the coordinate data into a computer program. Plot and connect points 1 through 4 from the same table to form a quadrilateral; noting that the centroid color is within this figure. See Figure A-1 for plots of all three color specifications in Table A-1.

(b) Perform color sample measurements per ASTM E 1164-09a. If necessary, convert measurements to CIELAB L*, a*, and b* color space. See ASTM E 308-08, *Standard Practice for Computing the Colors of Objects by Using the CIE System*, for color space conversion formulae.

(c) An acceptable color is one that meets:

(i) the chromaticity requirements of the color samples a* and b* CIELAB coordinate data by falling within the quadrilateral;

(ii) the L* data lightness requirement by falling within the range defined by the light and dark data of Table A-1;

(iii) the total color difference (ΔE) by not exceeding the limits in Table A-1 when the CIELAB data are computed in the following formula:

$$\Delta E = (\Delta L^{*2} + \Delta a^{*2} + \Delta b^{*2})^{\frac{1}{2}}$$

where ΔL^* , Δa^* , and Δb^* values are the differences between those values for the centroid color in Table A-1 and those of the color sample measurements.

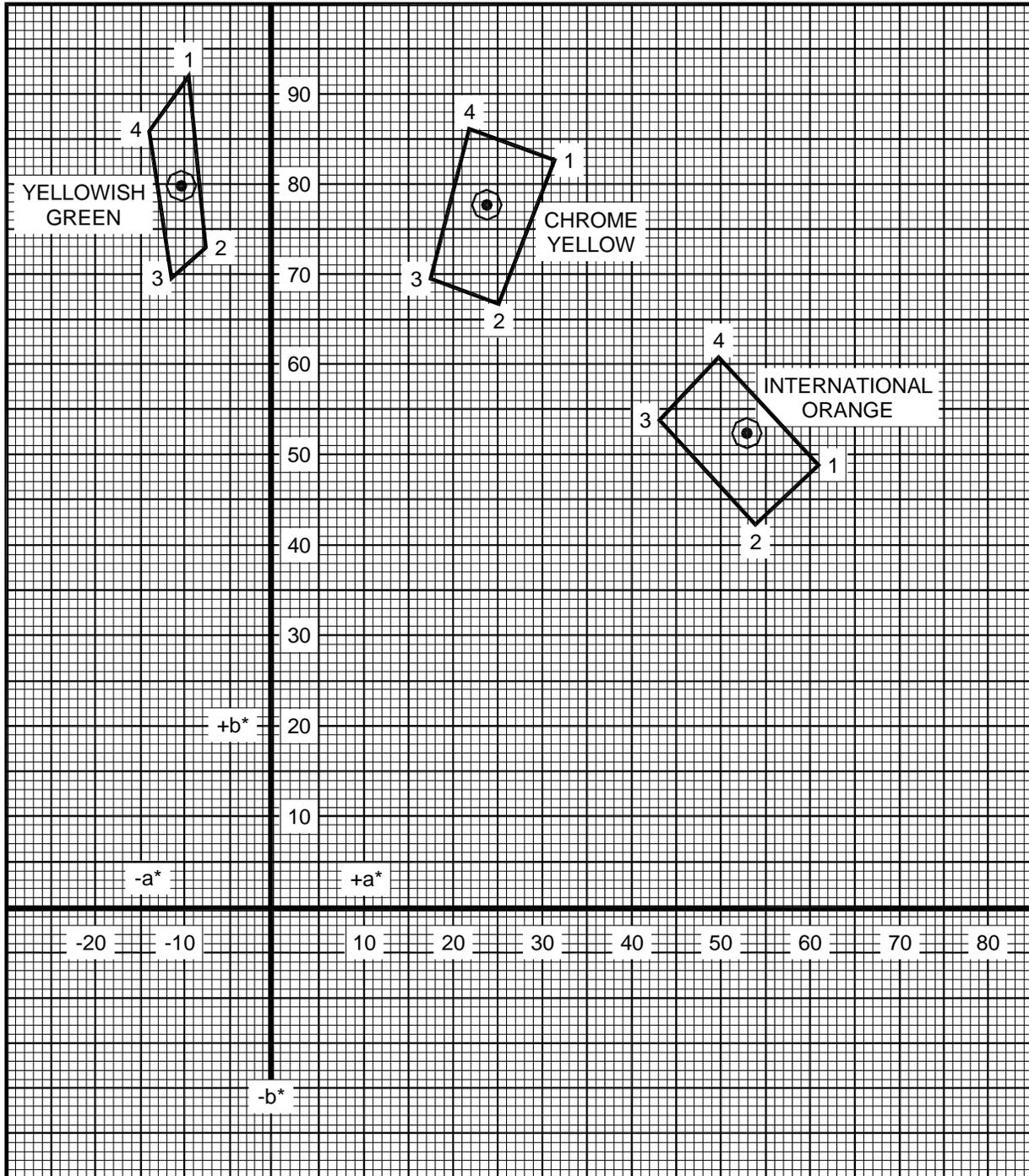


Figure A-1. Plot of selected color paint specifications

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APPENDIX B. COLOR SPECIFICATIONS FOR VEHICLE IDENTIFICATION LIGHTS

B-1. SPECIFICATIONS. The Society of Automotive Engineers (SAE) Standard J578 Revised December 2006, *Color Specification*, defines the acceptable color boundary limits and measurement of emitted red, white, signal blue, and yellow light for vehicle lights. This standard applies to the overall emitted color of light from the device in lieu of emitted light from any small area of the lens. The color of emitted light must fall within the color boundaries per SAE J578 Revised December 2006 (color boundary equations are in the standard) using color measurement methods detailed in the standard. See FAA Engineering Brief #67, *Light Sources Other Than Incandescent and Xenon for Airport and Obstruction Lighting Fixtures*, for additional information and *Alternative Lighting Devices*.

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Advisory Circular

Subject: GROUND VEHICLE OPERATIONS ON AIRPORTS

Date: March 31, 2008

AC No: 150/5210-20

Initiated by: AAS-300

Change: 1

1. PURPOSE. This Advisory Circular (AC) and the attached appendices provide guidance to airport operators in developing training programs for safe ground vehicle operations and pedestrian control on the airside of an airport. This includes both movement and non-movement areas, ramps, and aprons. Not all the items addressed in this document will be applicable at every airport. The Federal Aviation Administration (FAA) recommends that each item be evaluated in terms of how it may apply to the size, complexity, and scope of operation of the airport. This AC contains recommended operating procedures, a sample training curriculum (Appendix A), and a sample training manual (Appendix B).

2. BACKGROUND. Every year there are accidents and incidents involving aircraft, pedestrians, and ground vehicles at airports that lead to property damage and injury, which may be fatal. Many of these events result from inadequate security measures, a failure to maintain visual aids, a lack of such aids, and inadequate vehicle operator training. Ground vehicle operation plans promote the safety of airport users by helping identify authorized areas of vehicle operation, outlining vehicle identification systems, addressing vehicle and operator requirements, and coordinating construction, maintenance, and emergency activities.

3. APPLICABILITY. The overall responsibility for the operation of vehicles on an airport rests with the airport operator. The airport operator is also responsible for compliance with the requirements of part 139 at certificated airports and with the provisions of any applicable Federal grant agreements. Adherence to the provisions contained in this AC may materially assist the airport operator in complying with these requirements.

a. All airport operators should establish procedures and policies concerning vehicle access and vehicle operations on the airside of the airport, including ramp and apron areas. These procedures and policies should address such matters as access, vehicle operator requirements, vehicle requirements, operations, and enforcement and should be incorporated into tenant leases and agreements.

b. Establishment of procedures for the safe and orderly access to the movement area and operation in that area is required at certificated airports, under 14 C.F.R. § 139.329(b). Initial and recurrent training in procedures for access to the movement area is required for airport personnel under § 139.303(c). Only initial training is required for tenant and contractor employees, under § 139.329(e). However, regular recurrent training is strongly recommended for all persons with access to the movement area.

c. Each bidding document (construction plans and/or specifications) for development work on an airport or for installation of an air navigation facility (NAVAID) should incorporate a section on ground vehicle operations on airports during construction activity. The airport operator should provide a copy of this plan to the local FAA Airways Facilities office for review. The construction plans and/or specifications should contain the appropriate provisions, as specified in Appendix 1 of AC 150/5370-2, *Operational Safety on Airports During Construction*.

4. RELATED READING MATERIAL. You will find additional information in the following publications:

- a. 14 CFR part 139, Certification of Airports
- b. Current editions of the following advisory circulars:
 - (1) AC 90-67, Light Signals from the Control Tower for Ground Vehicles, Equipment, and Personnel
 - (2) AC 120-57, Surface Movement Guidance and Control System
 - (3) AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport
 - (4) AC 150/5340-1, Standards for Airport Markings
 - (5) AC 150/5340-18, Standards for Airport Sign Systems
 - (6) AC 150/5370-2, Operational Safety on Airports During Construction
 - (7) AC 150/5210-18, Systems for Interactive Training of Airport Personnel
 - (8) AC 150/5200-30, Airport Winter Safety and Operations
- c. To view or download an electronic copy of this AC, visit the FAA website at <http://www.faa.gov>.

5. VEHICLE OPERATOR REQUIREMENTS. Vehicle operators on airports face conditions that are not normally encountered during highway driving. Therefore, those persons who have vehicular access to the movement area of the airport must have an appropriate level of knowledge of airport rules and regulations. Airport operators should require vehicle operators to maintain a current driver's license and should establish a means of identification that would permit the operation of a vehicle on the airside of an airport. Any person expected to operate on the movement area should demonstrate a functional knowledge of the English language.

6. TRAINING. Appendix A includes a sample training curriculum. This curriculum should include initial and/or remedial instruction of all personnel who have access to the airside of the airport. The curriculum should also include annual recurrent instruction for all personnel who have access to the movement area. The airport operator should retain records of this training as long as this person is authorized to operate on the airport. Escorted access

does not normally require training. Airport operators may modify these documents to meet their individual needs. It may also be advantageous to develop customized programs for vehicles operators who only access ramp areas and those who operate on the movement area.

Initial training is the training provided to a new employee or airport user that would enable that person to demonstrate the ability to operate a vehicle safely and in accordance with established procedures while functioning independently on the airside. Recurrent training is the training provided to an employee or airport user as often as necessary to enable that person to maintain a satisfactory level of proficiency. Appropriate schedules for recurrent training will vary widely from airport to airport and from one employee to another, however, under no circumstances should recurrent training intervals for personnel authorized to drive on the movement area extend beyond one year. Airport operators might consider requiring annual recurrent training when a vehicle operator renews an expired airport ID badge or when a tenant renews a lease agreement. A sample Ground Vehicle Operating Familiarization Program Training Record is included in Appendix B.

Airports use a variety of methods for training ground vehicle operators. In some cases, airport operators delegate the requirement of employee training to airport tenants or a contractor. Some airport operators choose to include training manuals or vehicle-operating requirements as part of tenant lease or use agreements. An airport operator may choose to distribute training manual information via a Web page, videos, or booklets. Formal classroom instruction provided by the airport operator or tenant can include either personal instruction or a computer-based interactive training system. (See AC 150/5210-18.)

Airport operators should provide a means of testing trainees on the information presented. In addition to standard question and answer classroom testing methods, the airport operators should have potential ground vehicle operators demonstrate their proficiency in operating a vehicle on the airside before authorizing driving privileges. The FAA also recommends on-the-job training before personnel have unescorted access to the airside of the airport.

7. VEHICLES ON AIRPORTS. Airport operators should keep vehicular and pedestrian activity on the airside of the airport to a minimum. Vehicles on the airside of the airport should be limited to those vehicles necessary to support the operation of aircraft services, cargo and passenger services, emergency

services, and maintenance of the airport. Vehicles on the movement area should be limited to those necessary for the inspection and maintenance of the movement areas and emergency vehicles responding to an aircraft emergency on the movement area. Vehicles should use service roads or public roads in lieu of crossing movement areas whenever possible. Where vehicular traffic on airport operation areas cannot be avoided, it should be carefully controlled.

When necessary, runway crossing should occur at the departure runway end rather than the midpoint. In the event of a runway incursion, an aircraft would have more time and runway length to react if the vehicle incursion is at the end of the runway.

Some aspects of vehicle control and identification are discussed below; however, every airport presents different vehicle requirements and problems. Every airport will require individualized solutions to prevent vehicle or pedestrian traffic from endangering aircraft operations. It should be stressed that aircraft ALWAYS have the right-of-way over vehicles when maneuvering on non-movement areas. Aircraft also have the right-of-way on the movement areas, except when the Airport Traffic Control Tower (ATCT) has specifically instructed an aircraft to hold or give way to vehicle(s) on a runway or taxiway.

Vehicles that routinely operate on the airside should be marked/flagged for high daytime visibility and, if appropriate, lighted for nighttime operations. Vehicles that are equipped with marking and lighting devices should escort vehicles that are not marked and lighted. (See AC 150/5210-5.) Vehicles needing intermittent identification should be marked with magnetically attached markers, which are commercially available.

8. VEHICULAR ACCESS CONTROL. The control of vehicular activity on the airside of an airport is of the highest importance. The airport operator is responsible for developing procedures, procuring equipment, and providing training regarding vehicle operations to ensure aircraft and personnel safety. At airports with an operating ATCT, controllers and vehicle operators should use two-way radios to control vehicles when on the movement area. To accomplish this task, the airport operator and the ATCT should develop a letter of agreement outlining standard operating procedures. When there is construction on an airport, whether federally funded or not, the airport operator should follow the ground vehicle practices contained in AC 150/5370-2.

At airports without an operating ATCT, two-way radio control between vehicles and fixed-based operators or other airport users should avoid frequencies used by aircraft. Even with the most sophisticated procedures and equipment, vehicle operators need training to achieve the proficiency to operate safely. The airport operator should give special consideration to training temporary operators, such as construction workers, even if escort service is being provided.

Inadvertent entry by vehicles onto movement and non-movement areas of an airport poses a danger to both the vehicle operator and aircraft that are attempting to land or take off or that are maneuvering on the airport. Methods for controlling access to the airside will vary depending on the type and location of the airport. The Airport Layout Plan is a useful tool for accomplishing this. Airports may erect a fence or provide for other natural or physical barriers around the entire airport in addition to providing control measures at each access gate, such as guards, magnetic card activated locks, or remotely controlled locks. Gates may either be opened/closed electronically or secured by lock and chain. Physical barriers might include natural objects, such as earthen berms, large boulders, tree trunks, and manmade culverts that could help control remote vehicle access points.

9. VEHICLE REQUIREMENTS. Requirements for vehicles will vary depending on the airport, the type of vehicle, and where the vehicle will be operated on the airport. An airport operator should limit vehicle operations on the movement areas of the airport to only those vehicles necessary to support the operational activity of the airport. Airport operators might find it beneficial to have separate requirements for vehicles operated solely on a ramp area as opposed to those vehicles that operate on movement areas.

Some airports have benefited from establishing their own vehicle inspection program to assure that all vehicles are maintained in a safe operating condition. In establishing vehicle requirements, some items to consider include—

- a. Marking and identification of vehicles
- b. Minimum equipment requirements
- c. Inclusion in all vehicles of a placard

diagram depicting the airport's movement area. The diagram should display prominent landmarks and/or perimeter roads. Vehicles intended to operate within the movement area should also include a placard

showing the meaning of ATCT light gun signals and airfield sign and marking information.

d. Vehicle condition requirements and inspection

e. Insurance coverage

10. VEHICLE OPERATIONS. The rules and regulations pertaining to vehicle operations should provide adequate procedures for the safe and orderly operation of vehicles on the airside of the airport. In developing such procedures, airport operators should consider—

a. Requirements that vehicles operating on movement areas be radio equipped or escorted by a radio-equipped vehicle

b. Specific procedural requirements for vehicle operations on airports without an operating ATCT

c. Advance notice/approval for operating a non-airport owned vehicle on the movement area

d. Speed limits

e. Prohibitions on—

(1) Passing other vehicles and taxiing aircraft

(2) Leaving a vehicle unattended and running

(3) Driving under an aircraft except when servicing the aircraft

(4) Driving under passenger bridges

f. Requirements stipulating when vehicle lights must be operated

g. Requirements for the use of dedicated vehicle lanes and perimeter roads whenever possible

h. Locations where vehicles may and may not park

i. Rules of right-of-way (e.g. for aircraft, emergency vehicles, other vehicles)

j. Areas where vehicles may be serviced

k. Procedures for inoperative radios while on a movement area

l. Requirements to report all accidents involving ground vehicles on the airside

m. Requirements making the vehicle operator responsible for passengers in the vehicle

11. EMERGENCY OPERATIONS AND OTHER NON-ROUTINE OPERATIONS. Airport operators allow a number of non-routine operations to occur on the airside of the airport. Such non-routine activities include airfield construction, airshows, aircraft static displays, VIP arrivals/departures, commercial photo shoots, or a host of other activities. In addition to security requirements, airport operators should recognize and prepare for the unique challenges that arise during non-routine operations as they relate to vehicle operations.

Airport operators should review non-routine operations that involve ground vehicles and develop vehicle operation procedures to accommodate these special operations. Planning meetings associated with such activities offer an opportunity to review driving rules and regulations, communications and procedures, and air traffic control procedures as well as other important operational issues.

These meetings should pay special attention to the following activities:

a. **Airside Construction.** The airport operator should develop procedures, procure equipment, and provide training on vehicle operations to ensure aircraft safety during construction as specified in AC 150/5340-2.

b. **Emergency Response/Mutual Aid.** Many airports rely on local emergency services to provide aircraft rescue and firefighting or emergency medical services. Airport operators should ensure that such emergency service providers receive initial and recurrent training in the subject areas identified in paragraph 10, Vehicle Operations, and maintain records of such training. In addition, any mutual aid agreement between the local emergency service providers and the airport operator should specify vehicle operations training requirements.

c. **Snow and Ice Removal.** Airport Operators who use contractors for snow and ice control operations should ensure agreements with such contractors include vehicle operations procedures, including training requirements, consequences of non-compliance, and vehicle communications requirements. The FAA recommends that, when possible, airport operators limit contractors to non-movement areas. When an ATCT is not in operation, or there is no ATCT, procedures should be developed to advise air traffic on the Common Traffic Advisory Frequency (CTAF) of any intentions to remove snow and ice in the movement area.

d. **Low-Visibility Operations.** Additional consideration should be given to vehicle operations

during low visibility. Poor weather conditions (snow, fog, rain, etc.) may obscure visual cues, roadway markings, and airport signs.

Some airports have a Surface Movement Guidance and Control System (SMGCS), which provides guidance to, and control or regulation of, all aircraft and ground vehicles on the movement area of an airport. Guidance relates to facilities, information, and advice necessary to enable pilots of aircraft, or drivers of ground vehicles, to find their way on the airport and keep the aircraft or vehicles on the surfaces and areas intended for their use. Control or regulation means the measures necessary to prevent collisions and to ensure that the traffic flows safely. For additional information on the SMGCS and the SMGCS Plan, refer to AC 120-57.

12. SITUATIONAL AWARENESS. There are a number of factors that hamper vehicle operator situational awareness. Situational awareness declines as a driver's attention is drawn into the vehicle or is focused on any one thing to the exclusion of everything else. Other such factors include vague or incomplete communications or a vehicle operator's personal conflicts, which may involve fatigue and stress. Running behind schedule or being over-tasked also contributes to a reduction in situational awareness. Certainly, degraded operating conditions, such as equipment malfunctions, rain, fog, or snow, may also diminish a vehicle operator's situational awareness.

There are ways to enhance situational awareness. As part of a ground vehicle operator's training program, airport operators may concentrate on having vehicle operators visually scan fixed and moving objects that may be converging into the vehicle's path. Airport operators should also promote the use of clear and concise communications by vehicle operators. Most important, airport operators should alert vehicle operators to distractions caused by social interactions while operating a vehicle on the airside.



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Acting Director of Airport Safety and Standards

Airport operators may also be able to increase situational awareness for vehicle operators with enhancements on the airside. Such enhancements may include establishing dedicated marked routes for vehicles that avoid high activity, congested areas, or blind spots. The elimination or relocation of fixed objects that hinder a vehicle operator's line of sight or block radio transmissions may also enhance safety.

13. ENFORCEMENT AND CONTROL. Airport operators should establish procedures for enforcing the consequences of non-compliance, including penalties for violations. Tenant lease or use agreements may include these enforcement provisions. Listed below are control issues that airport operators should address as part of a ground vehicle control program:

- a. Implementation of a tiered identification badging system that permits easy recognition of a vehicle operator's permitted driving area privileges
- b. Prohibition against transfer of registration media to a vehicle other than the one for which originally issued
- c. Policies for surrendering permits to airport management when a vehicle is no longer authorized entry into a facility
- d. Periodic checks to ensure that only properly authorized persons operate vehicles on the airside.
- e. System to control the movement of commercial trucks and other goods conveyances onto and out of the airside of an airport
- f. Briefing or training for delivery drivers if they are permitted direct access to the airside
- g. Implementation of a progressive penalty policy

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APPENDIX A

GROUND VEHICLE ACCESS PROGRAM TRAINING CURRICULUM

NOTE: The purpose of the Ground Vehicle Access Program Training Curriculum is to provide airport operators with a comprehensive list of training topics for educating vehicle operators who may have access to the airside of an airport. Each individual airport has unique situations that might require site-specific training. Airport operators may use this training curriculum as a guide for developing and implementing a detailed training program tailored to the airport's individual situation.

The purpose of a training program is to provide vehicle operators with the level of training necessary for their positions so they are capable of operating safely on the airside of an airport. Specific programs may be tailored to account for the items listed below:

1. Various infield aircraft navigation aids
2. Identification of a given point on a grid map or other standard map used at the airport
3. Applicable airport rules, regulations, or procedures pertaining to vehicle operations
4. Airport layout, including designation of runways and taxiways
5. Boundaries of movement areas
6. Interpretation and color coding of airfield signs, pavement markings, and lighting
7. Location and understanding of critical areas associated with instrument landing system (ILS) and very high frequency omnidirectional ranges (VORs)
8. Proper terminology (including phonetic alphabet) and procedures for radio communications with the airport traffic control tower (ATCT)
9. ATCT light gun signals
10. Established routes for emergency response vehicles
11. Dangers associated with jet blast and prop wash
12. Traffic patterns associated with each runway (left or right) and location of each leg; i.e., downwind, base, final, and crosswind
13. Situational awareness

An airport operator may choose to develop customized training programs for vehicle operators who are restricted to operating ground vehicles only on ramps and apron areas.

AREAS OF TRAINING

All drivers should have training in the following areas:

1. Discussion of Runway Incursions, Airfield Safety, and Security

Training Outcome(s) – Trainee should be able to define a runway incursion and explain the benefits of airfield safety/security.
2. Definitions and Terms

Training Outcome(s) – Trainee should be knowledgeable of the terms used on an airport.
3. Vehicle Operating Requirements
 - a. Authorized Vehicles and Vehicle Identification
 - b. Vehicle Lighting
 - c. Vehicle Insurance
 - d. Vehicle Inspection
4. Rules and Regulations
 - a. Review
 - b. Noncompliance/Penalties

Training Outcome(s) – Trainee should be knowledgeable of ground vehicle rules and regulations.
5. Testing
 - a. Written Test
 - b. Practical Test

Training Outcome(s) – Trainee should be able to pass a written examination with a minimum score of 90 percent.
- e. Vehicle Parking
- f. Accident Reporting
- g. Perimeter Roadways
- h. Aircraft Lighting

In addition to items 1–5, instruction for drivers authorized to drive on the movement area should also include those subject areas identified under Airport Familiarization and Communications.

6. Airport Familiarization

- a. Runway Configuration/Safety Area
- b. Taxiway Configuration/Safety Area
- c. Movement Areas and Non-Movement Areas
- d. Confusing Areas
- e. Airport Lighting

(1) Runway

- Runway Edge Lights
- Touchdown Zone
- Taxiway Lead-Off Lights
- Threshold
- Runway Approach Light System

(2) Taxiway

- Taxiway Edge Lights
- Taxiway Centerline Lights
- Runway Guard Lights

f. Airfield Signage

- Runway Position Holding Sign
- Taxiway Location Sign
- ILS Critical Area Sign
- Direction Sign
- Distance Remaining Sign

g. Airfield Markings

(1) Runways

- Centerline
- Edge Markings
- Runway ID Numbers
- Threshold Markings

-Hold Short Lines

(2) Taxiways

- Hold Lines
- ILS Hold Line
- Geographic Position Markings
- Centerline
- Edge Markings

(3) ILS Critical Areas

(4) Non-Movement Area Boundary Marking

h. Airport NAVAIDS and Visual Approach Aids

- Location
- Non-interference

Training Outcome(s) – Trainee should be able to label all critical parts on the airport and explain the purpose of all marking, lighting, and signs on the airport.

7. Communications

a. Ground Vehicle Communications

- (1) Radio Frequencies**
- (2) Procedural Words and Phrases**

b. Aviation Phonetic Alphabet

c. Aviation Terminology

d. Procedures for Contacting the ATCT

e. Airfield Communications at Airports Without Operating ATCT

f. Light Gun Signals

- Description of Light Gun and How to Signal Tower

g. Lost Communications Procedures

Training Outcome(s) – Trainee should be able to adequately send and receive radio messages.

APPENDIX B

SAMPLE GROUND VEHICLE OPERATIONS TRAINING MANUAL

NOTE: This sample training manual provides airport operators with a template for developing and implementing proposed policies or procedures for controlling ground vehicles and equipment accessing the airside of an airport. Airport operators may use the format below but adapt the requirements to specific conditions found on the airport. The first part of the appendix could serve as driving rules and regulations that could be adopted by the airport operator who would fill in the appropriate blanks or blocks of text or revise the document for a specific airport. Section 2 would serve as a suggested driver training manual. In this section, the airport operator could add or delete information as it applies to the airport. For example, if the airport has no instrument approach, reference to the ILS signs and protection of critical areas could be deleted. Also, the airport operator is encouraged to replace illustrations of signs with those found on the airport.

Section 1. Airport Driving Rules and Regulations

1.1. Authority for Implementation of Rules and Regulations. The (NAME) Airport operates under the authority of (JURDISTICTION). (CITY/COUNTY ORDINANCE OR STATE STATUTE) has granted the (AIRPORT OPERATOR) the authority to make bylaws for the management and supervision of its airport affairs.

1.2. Applicability. This regulation applies to all users of, and persons on any portion of, the property owned or controlled by (AIRPORT OPERATOR). No persons are exempt from airport operating training requirements for operating a vehicle on the airside of an airport. Tenant organizations shall be responsible for the dissemination of, accessibility to, and compliance with these rules and regulations by their employees.

These Rules and Regulations may be amended, changed, or modified by (AIRPORT OPERATOR), as necessary.

1.3. Definitions. The following terms are defined as indicated in this section for the purpose of this Ground Vehicle Operation Training Manual. *(The airport operator should include only those definitions applicable to its airport and conditions.)*

- 1.3.1. Accident**—a collision between one aircraft or vehicle and another aircraft, vehicle, person, or object that results in property damage, personal injury, or death.
- 1.3.2. Air Carrier Ramp**—a ramp for air carriers. Only authorized personnel and vehicles may operate on this ramp. Private vehicles and aircraft are prohibited from operating on it.
- 1.3.3. Airside**—those areas of an airport that support aircraft activities.
- 1.3.4. Airport Traffic Control Tower (ATCT)**—a service operated by an appropriate authority to promote the safe, orderly, and expeditious flow of air traffic.
- 1.3.5. Aircraft**—a device that is used or intended to be used for flight in the air.
- 1.3.6. Airport**—(NAME) International Airport Facility, owned and operated by (AIRPORT OPERATOR), including all improvements and equipment existing or to be developed.
- 1.3.7. Apron or Ramp**—a defined area on an airport or heliport intended to accommodate aircraft for the purposes of parking, loading and unloading passengers or cargo, refueling, or maintenance.
- 1.3.8. Common Traffic Advisory Frequency (CTAF)**—radio frequency designed for the purpose of carrying out airport advisory practices while operating to or from an airport without an operating ATCT or when the tower is closed. The CTAF may be a UNICOM, MULTICOM, FSS, or tower frequency and is identified in appropriate aeronautical publications. (See below for definitions of UNICOM, MULTICOM, and FSS.)
- 1.3.9. Fixed-Based Operator (FBO)**—a person, firm, or organization engaged in a business that provides a range of basic services to general aviation. Services may include the sale and dispensing of fuel, line services, aircraft parking and tie-down, pilot and passenger facilities, airframe and power plant maintenance, aircraft sales and rental, and pilot instruction.

- 1.3.10. Flight Service Station (FSS)**—air traffic facilities that provide pilot briefings, en route communications, and visual flight rules search and rescue services; assist lost aircraft and aircraft in emergency situations; relay air traffic control clearances; originate Notices to Airmen; broadcast aviation weather and National Airspace System information; receive and process instrument flight rules flight plans; and monitor NAVAIDS. In addition, at selected locations, FSSs provide En Route Flight Advisory Service (Flight Watch), take weather observations, issue airport advisories, and advise Customs and Immigration of transborder flights.
- 1.3.11. Foreign Object Debris (FOD)**—debris that can cause damage to aircraft engines, tires, or skin from rocks, trash, or the actual debris found on runways, taxiways, and aprons.
- 1.3.12. General Aviation (GA)**—that portion of civil aviation that encompasses all facets of aviation except air carriers holding a certificate of public convenience and necessity.
- 1.3.13. Ground Vehicle**—all conveyances, except aircraft, used on the ground to transport persons, cargo, fuel, or equipment.
- 1.3.14. ILS Critical Area**—an area provided to protect the signals of the localizer and glideslope.
- 1.3.15. Incursion**—any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in loss separation with an aircraft taking off, intending to take off, landing, or intending to land.
- 1.3.16. Jet Blast**—jet engine exhaust or propeller wash (thrust stream turbulence).
- 1.3.17. Law Enforcement Officer (LEO)**—any person vested with police power of arrest under Federal, state, county, or city authority and identifiable by uniform, badge, and other indication of authority.
- 1.3.18. Light Gun**—a hand-held, directional light-signaling device that emits a bright narrow beam of white, green, or red light, as selected by the tower controller. The color and type of light transmitted can be used to approve or disapprove anticipated pilot or vehicle actions where radio communication is not available. The light gun is used for controlling traffic operating in the vicinity of the airport and on the airport movement area.
- 1.3.19. Mobile Fueler**—a vehicle owned and/or operated by authorized agents to pump and dispense Jet A and 100 LL fuel at (AIRPORT). This may include fuel tankers, in-to-plane fueling pumpers, and hydrant carts.
- 1.3.20. Movement Area**—the runways, taxiways, and other areas of an airport that aircraft use for taxiing, takeoff, and landing, exclusive of loading ramps and parking areas, and that are under the control of an air traffic control tower.
- 1.3.21. MULTICOM**—a mobile service not open to public correspondence used to provide communications essential to conduct the activities being performed or directed from private aircraft.
- 1.3.22. Non-movement Areas**—taxiways, aprons, and other areas not under the control of air traffic or at airports without an operating airport traffic control tower.
- 1.3.23. Operator**—any person who is in actual physical control of an aircraft or a motor vehicle.
- 1.3.24. Owner**—a person who holds the legal title of an aircraft or a motor vehicle.
- 1.3.25. Restricted Areas**—areas of the airport posted to prohibit or limit entry or access by the general public. All areas other than public areas.
- 1.3.26. Runway**—a defined rectangular area on a land airport prepared for the landing and takeoff run of aircraft along its length.
- 1.3.27. Runway in Use or Active Runway**—any runway or runways currently being used for takeoff or landing. When multiple runways are used, they are all considered active runways.
- 1.3.28. Runway Safety Area**—a defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway.

- 1.3.29. Surface Movement Guidance and Control System (SMGCS)**—a system comprising the provisions for guidance to, and control or regulation of all aircraft, ground vehicles, and personnel of the airport during low-visibility operations. Guidance relates to facilities and information necessary for pilots and ground vehicle operators to find their way about the airport. Control or regulation means the measures necessary to prevent collisions and to ensure that traffic flows smoothly and efficiently.
- 1.3.30. Taxiways**—those parts of the airside designated for the surface maneuvering of aircraft to and from the runways and aircraft parking areas.
- 1.3.31. Tie Down Area**—an area used for securing aircraft to the ground.
- 1.3.32. Uncontrolled Airport**—an airport without an operating airport traffic control tower or when airport traffic control tower is not operating.
- 1.3.33. UNICOM**—a non-Federal communication facility that may provide airport information at certain airports. Locations and frequencies of UNICOMs are shown on aeronautical charts and publications.
- 1.3.34. Vehicle Service Road**—a designated roadway for vehicles in a non-movement area.
- 1.3.35. Very High Frequency Omnidirectional Range (VOR)**—a ground-based electronic navigation aid transmitting very high frequency navigation signals, 360 degrees in azimuth, oriented from magnetic north. Used as the basis for navigation in the National Airspace System.
- 1.3.36. Wake Turbulence**—phenomenon resulting from the passage of an aircraft through the atmosphere. The term includes vortices, thrust stream turbulence, jet blast, jet wash, propeller wash, and rotor wash both on the ground and in the air.

1.4. Severability. If any section, subsection, subdivision, paragraph, sentence, clause, or phrase of these Rules and Regulations or any part thereof is for any reason held to be unconstitutional, invalid, or ineffective by any court of competent jurisdiction or other competent agency, such decision will not affect the validity or effectiveness of the remaining portions of these Rules and Regulations.

1.5. Violation of Rules—Penalties and Suspension of Driving Privileges. Any person who does not comply with any of the provisions of these Rules and Regulations, or any lawful order issued pursuant thereto, will be subject to progressive penalties for repeat violations. These penalties may include denied use of the Airport by (OPERATOR) in addition to the penalties described pursuant to Federal, state, or local authorities. *(The airport operator should tailor this section to discuss its enforcement policies.)*

- 1.5.1.** Penalties for failure to comply with the Airside Vehicular Traffic Regulations shall consist of written warnings, suspension of airside driving privileges, and/or revocation of airside driving privileges. Receipt of _____ written warnings by an operator of a vehicle in any 12-month period will automatically result in suspension of airside driving privileges. Receipt of _____ written warnings in any 12-month period will automatically result in revocation of airside driving privileges.
- 1.5.2.** Based on an evaluation of the circumstances or the severity of a particular incident or incidents, the (AIRPORT OPERATOR) reserves the exclusive right to assess any penalty it deems appropriate at any time to any individual authorized to operate a vehicle on the airside without regard to prior operating history.
- 1.5.3.** Suspension of airside driving privileges shall be no less than _____ calendar days and no greater than _____ calendar days.
- 1.5.4.** The (AIRPORT OPERATOR) will provide a copy of all written warnings issued to an operator to the local manager of the company owning or in possession and control of the vehicle or vehicles involved in the violation(s).

1.6. The (AIRPORT OPERATOR) shall require any individual involved in a runway incursion or other vehicle incident to complete remedial airfield driver training.

1.7. Driver Regulations on the Airside of an Airport.**1.7.1. Vehicle Operator Requirements.**

1. All applicants must satisfactorily complete the applicable driver's training class before receiving an airside driver's license.
2. All applicants must pass the written test with a grade of at least ___ percent. Applicants who do not pass the written test may retake the test after additional study and a ___ day period.
3. Applicants for movement area driving privileges shall be required to successfully complete an airside driving test by a designated representative of (AIRPORT OPERATOR).
4. No vehicle shall be operated on the airside unless—
 - a. The driver is authorized to operate the class of vehicle by an appropriate state-licensing agency or by the driver's employer through a company training/certification program.
 - b. The driver properly displays an approved, airport-issued ID card with the Authorized Driver designation (*if applicable*).
5. No person operating or driving a vehicle on any aircraft ramp shall exceed a speed greater than _____ miles per hour. Factors including, but not limited to, weather and visibility shall be taken into consideration when determining safe operating speed.
6. No vehicle shall pass another ground vehicle in a designated vehicle roadway.
7. No vehicle shall pass between an aircraft and passenger terminal or passenger lane when the aircraft is parked at a gate position except those vehicles servicing the aircraft. All other vehicles must drive to the rear of the aircraft and shall pass no closer than _____ feet (___ m) from any wing or tail section.
8. Moving aircraft and passengers enplaning or deplaning aircraft shall have the right-of-way at all times over vehicular traffic. Vehicle drivers must yield the right-of-way.
9. No vehicle operator shall enter the airside unless authorized by (AIRPORT OPERATOR) or unless the vehicle is properly escorted.
10. No vehicle operator shall enter the movement area—
 - a. Without first obtaining permission of the (AIRPORT OPERATOR) and clearance from the ATCT to enter the movement area;
 - b. Unless equipped with an operable two-way radio in communication with the ATCT; or
 - c. Unless escorted by an (AIRPORT OPERATOR) vehicle and as long as the vehicle remains under the control of the escort vehicle.
11. No person shall operate any motor vehicle that is in such physical or mechanical condition as to endanger persons or property or that the (AIRPORT OPERATOR) considers an endangerment.
12. No person shall—
 - a. Operate any vehicle that is overloaded or carrying more passengers than for which the vehicle was designed.
 - b. Ride on the running board or stand up in the body of a moving vehicle.
 - c. Ride with arms or legs protruding from the body of a vehicle except when the vehicle was designed for such use.
13. A vehicle guide person is required whenever the vision of the vehicle operator is restricted.
14. No fuel truck shall be brought into, stored, or parked within 50 feet of a building. Fuel trucks must not be parked within 10 feet from other vehicles.

15. Container carriers and tugs shall tow no more carts, pods, or containers than are practical, under control, tracking properly, and safe.
16. When not serving aircraft or undertaking their intended functions, ramp vehicles and equipment shall be parked only in approved areas.
17. Vehicle operators shall not operate or park vehicles under any passenger loading bridge.
18. No person shall park a vehicle in an aircraft parking area, safety area, or gross area or in a manner that obstructs or interferes with operations in the aircraft movement area or apron area.
19. No person shall park, or leave unattended, vehicles or other equipment that interfere with the use of a facility by others or prevent movement or passage of aircraft, emergency vehicles, or other motor vehicles or equipment.
20. No person shall park a vehicle or equipment within ____ feet (___ m) of a fire hydrant or in a manner that prohibits a vehicle from accessing the fire hydrant.
21. No person shall operate a vehicle or other equipment within the airside under the influence of alcohol or any drug that impairs, or may impair, the operator's abilities.
22. Each vehicle operator using an airport perimeter (security) gate shall ensure the gate closes behind the vehicle prior to leaving the vicinity of the gate. The vehicle operator shall also ensure no unauthorized vehicles or persons gain access to the airside while the gate is open.
23. Vehicle operators shall not operate vehicles in a reckless or careless manner. A reckless or careless manner is one that intentionally or through negligence threatens the life or safety of any person or threatens damage or destruction to property.
24. Vehicles shall not enter the movement area or cross runways unless the operator of the vehicle has received required training and authorization from the (AIRPORT OPERATOR) to operate on the movement area. Whenever possible, all airport vehicles shall utilize the airport perimeter and service roads to transition between areas on the airport.
25. Each vehicle operator is responsible for the activities of each vehicle passenger on the airside of the airport.

1.7.2. Vehicle Regulations.

1. No vehicle shall be operated on the airside unless it has proper registration in the (STATE) or is a qualified off-road vehicle that is not normally operated on public streets but has received the approval of the (AIRPORT OPERATOR).
2. All vehicles operated on the airside must have vehicle liability insurance, as required by the (AIRPORT OPERATOR).
3. The (AIRPORT OPERATOR) must approve tenant vehicles operated on the movement and non-movement areas. These vehicles must display a (AIRPORT OPERATOR) sticker or an airport-approved company logo that is at least ____ inches (___ cm) in height on the passenger and operator's doors.
4. Carts or pieces of equipment being towed or carried after darkness must have side and rear reflectors or rear lights.
5. No vehicle shall be permitted on the airside unless—
 - a. It is properly marked, as outlined in FAA Advisory Circular 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport*.
 - b. It is in sound mechanical condition with unobstructed forward and side vision from the driver's seat.

- c. It has the appropriately rated and inspected fire extinguishers (service vehicles and fuel trucks).
 - d. It has operable headlamps and brake lights.
 - 6. Vehicles operating on the movement area shall be equipped with operating amber rotating beacon or equivalent.
 - 7. All aircraft refueling vehicles and any other vehicle 8-foot or more in width shall be equipped with a flashing amber beacon and flashing front, tail, and clearance lights that are activated at all times when operating on the airside.
- 1.7.3. Vehicular Accidents.** Operators of vehicles involved in an accident on the airport that results in injury to a person or damage to an aircraft, airport property, or another vehicle shall—
- 1. Immediately stop and remain at the scene of the accident.
 - 2. Render reasonable assistance, if capable, to any person injured in the accident.
 - 3. Report the accident immediately to the (AIRPORT OPERATOR) before leaving the scene, if possible.
 - 4. Provide and surrender the following to any responding (AIRPORT OPERATOR) personnel: name and address, airport identification card, state driver's license, and any information such personnel need to complete a motor vehicle accident report.

Section 2. Driving on the Non-Movement Areas

- 2.1.** Non-movement areas include taxiways, aprons, and other areas **not** under control of the ATCT. Anyone authorized to operate a motorized vehicle on the airside may do so on the non-movement areas without being in positive radio contact with the ATCT. These areas include—
- 2.1.1. Service roads
 - 2.1.2. Cargo aprons
 - 2.1.3. General aviation apron
 - 2.1.4. Air carrier apron(s)
- 2.2. Driving.** Operating within the ramp areas requires the vehicle driver to exercise extreme caution as aircraft are always moving, aircraft passengers may be walking from an aircraft to the gate, and noise levels are high. Vehicle drivers should—
- 2.2.1. Never drive between safety cones or across delineated passenger walkways.
 - 2.2.2. Watch cockpit blind spots—pilots typically cannot see behind or below the aircraft.
 - 2.2.3. Avoid jet blast or prop wash, which can blow debris or overturn vehicles.
 - 2.2.4. Be aware and avoid moving propellers that can cause damage, injury, or death.
 - 2.2.5. Be aware of other vehicle movements—you may not hear them approaching due to aircraft engine noise.
 - 2.2.6. Yield to aircraft, passengers, and emergency vehicles, which ALWAYS have the right-of-way on any portion of the airport.

When traveling on the apron, always use designated vehicle service roads. Driving close to buildings, around vehicles, or aircraft is prohibited. This policy helps to establish a predictable order to vehicle movements in congested areas and helps to ensure their visibility to aircraft and other vehicles.

Parked aircraft may still have their engines running, so be aware of the hazards of jet blast or prop wash, which may overturn vehicles. Before an aircraft engine is started, the aircraft's red flashing beacons must be on. In some instances, propellers and engine spinners are marked to indicate when the engine is operating. A pilot's ability to maneuver quickly on the ground is limited. Propellers and jet engines can cause significant damage and injury to personnel. In addition, cockpit visibility prohibits the pilot from seeing under the nose or behind the aircraft and limits the pilot's ability to avoid ground vehicles.

2.3. Nighttime and Poor Weather Driving Conditions. Poor weather conditions (snow, fog, rain, etc.) might obscure visual cues, roadway markings, and airport signs. Vehicle operators should remain vigilant of their surroundings and operating boundaries. Watch out for snow removal equipment and aircraft operating in the vicinity under low-visibility conditions. There are additional risks present under these conditions.

Section 3. Driving on the Movement Areas

Drivers who are authorized to drive on the movement area require more training and vigilance since there are dangers associated with this area that are not present on non-movement areas. In addition to the principals for driving on the non-movement area, drivers who have access to the movement area must be cognizant of the meaning of airfield signs, markings, and lighting configurations. Additionally, they must be able to communicate with air traffic control (ATC) and be able to follow ATC directions.

3.1. ATCT Control. Movement areas are defined as the runways, taxiways, and other areas of the airport that are used for taxiing, hover taxiing, air taxiing, and takeoff and landing of aircraft, exclusive of loading ramps and aircraft parking areas. Movement areas are considered "positive control," meaning that all vehicle operators will need permission from ATC before entering the area.

3.2. Authorized Vehicles. Only those vehicles necessary for airport operations may enter a movement area. Therefore, fuel trucks, maintenance vehicles, tugs, catering trucks, and other nonessential vehicles should not be permitted to enter these areas. Exceptions may include (AIRPORT OPERATOR)-authorized vehicles with appropriately trained personnel. Airport Operations/Maintenance shall coordinate all other vehicle operations within the movement areas.

3.3. Taxiways.

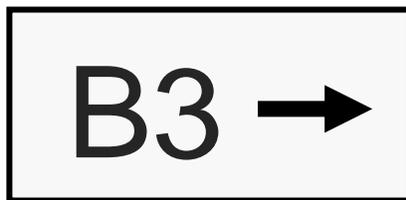
3.3.1. Designations. Aircraft use taxiways to move to and from the aprons and the runways.

Taxiways are designated by letters or by a letter/number combination such as A, B, G2, or B3. (The Airport Operator should include a diagram of the airport here with the taxiway and runway designations.)

3.3.2. Lighting. Taxiways are lighted with **blue** edge lighting and/or reflectors. Some taxiways are also lighted with **green** in-paved, centerline lighting. (*Use airport-specific example here.*)

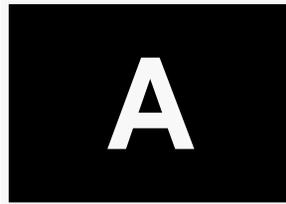
3.3.3. Signs. The signs used on taxiways are direction, destination, location, and taxiway ending marker signs.

Direction and Designation Signs have **black lettering** and a **directional arrow** or **arrows** on a **yellow background**. The arrow indicates the direction to that taxiway, runway, or destination.



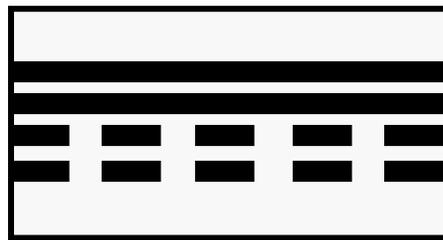
Taxiway Directional Sign

Location Signs have **yellow lettering** on a **black background**. The location sign below indicates that the operator of the vehicle/equipment is located on the named taxiway or runway.



Taxiway Location Sign

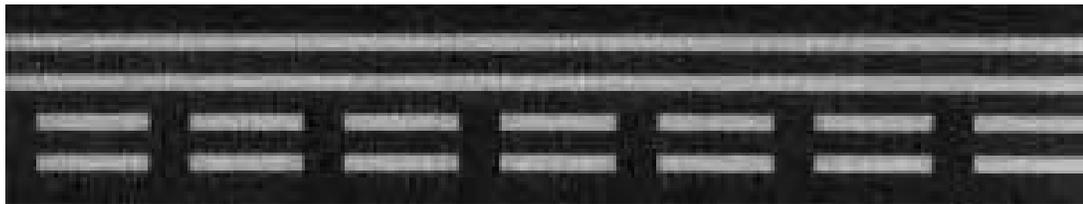
Runway Safety Area/Object Free Zone (OFZ) and Runway Approach Area Boundary Signs, when required, identify the boundary of the runway safety area/OFZ or the runway approach area to the pilot and vehicle operator. The driver can use these signs to identify when the vehicle is clear of the runway environment. It has a **black inscription** that depicts the holdline marking on a **yellow background**.



Runway Safety Area/OFZ and Runway Approach Boundary Sign

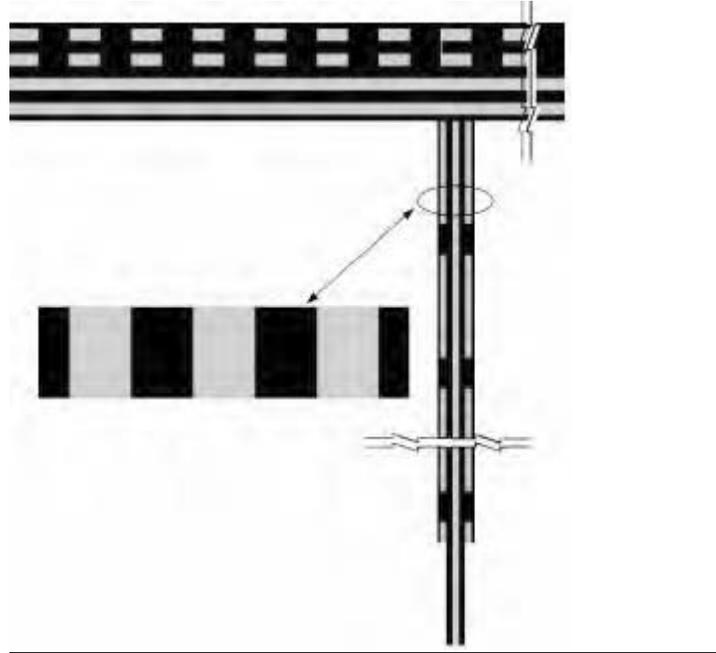
- 3.3.4. Markings.** Pavement markings on taxiways are always **yellow**. The taxiway centerline is painted on all taxiways. On the edges of some taxiways, there is a solid, double yellow line or double-dashed line. If pavements are usable on both sides of the line, the lines will be dashed; if not, the lines will be solid.

Runway Holding Position Markings are located across each taxiway that leads directly onto a runway. These markings are made up of **two solid lines** and **two broken yellow lines** and denote runway holding position markings. These markings are always co-located with a Runway Holding Position Sign. A vehicle operator must not cross from the solid-line side of the marking without first obtaining clearance.



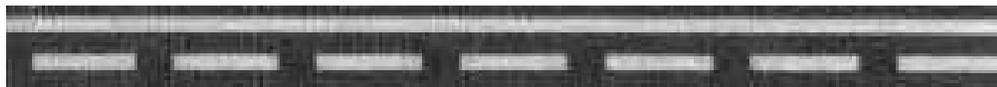
Runway Holding Position Marking

Enhanced Taxiway Centerline Markings may be present at some airports, and will appear before a runway hold line, as illustrated below. These markings are intended to serve as an additional warning to flight crews that they are approaching the runway.



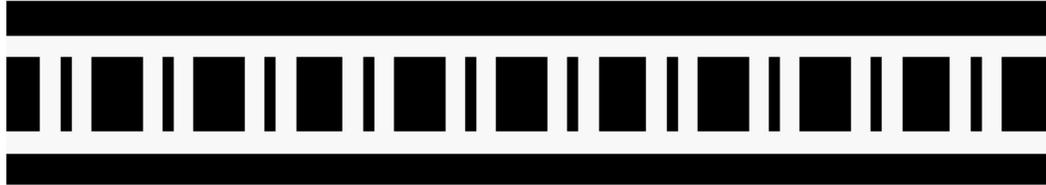
Enhanced Taxiway Centerline Markings

Non-Movement Area Boundary Markings consist of **two yellow lines** (one solid and one dashed). The solid line is located on the non-movement area side, while the dashed yellow line is located on the movement area side. A vehicle operator is not to cross from the solid-line side without first contacting the ATCT and obtaining a clearance to operate on the movement area.



Non-Movement Area Boundary Marking

Instrument Landing System (ILS) Critical Area Holding Position Markings are comprised of **two parallel yellow lines** with lines running perpendicular between the two parallel yellow lines. These markings identify the location on a taxiway where an aircraft or vehicle is to stop when it does not have clearance to enter ILS critical areas. The ILS critical area must remain clear, especially in inclement weather. If a vehicle proceeds past this ILS marking, it might cause a false signal to be transmitted to the landing aircraft.



ILS Hold Position Marking

3.4. Runways (*Use Airport Specific Examples*).

3.4.1. Designations. Runways are areas where aircraft land and take off. Runways are always designated by a number such as 1 or 19. The number indicates the compass heading of the runway. An aircraft taking off on runway 19 is headed 190 degrees. In the event of parallel runways, a letter designation is added to indicate either the right or left runway; e.g., **1L-19R, 1R-19L**.

3.4.2. Lighting. Runways are lighted with a variety of colored lights.

Runway Edge-lights are **white**. **If the runway has an instrument approach**, the last 2,000 feet of the runway will be yellow in color.

Runway Centerline Lights are **white** except for the last 3,000 feet of the runway, where they begin to alternate **red** and **white**. For the last 1,000 feet of runway the centerline lights are all **red**.

Runway Touchdown Zone Lights are **white**.

Runway End/Threshold Lights are split lenses that are **red/green**.

3.4.3. Signs.

Mandatory Holding Position Signs for Runways have **white numbering/lettering** on a **red background with a white border**. These are located at each entrance to a runway and at the edge of the runway safety area/obstacle-free zone and are co-located with runway holding position markings. **Do not proceed beyond these signs until clearance is given by the ATCT to enter onto the runway.**



Runway Hold Sign

Instrument Landing System (ILS) Holding Position Signs have **white letters** on a **red background with a white border**. These signs tell pilots and vehicle operators where to stop to avoid interrupting a type of navigational signal used by landing aircraft. This is a critical area, and a vehicle/equipment operator must remain clear of it (*use airport-specific policy*). If a vehicle proceeds past this microwave landing system/ILS marking, it may cause a false signal to be transmitted to the landing aircraft.



ILS Hold Sign

Holding Position Signs for Runway Approach Areas. The inscription on a sign for a runway approach area is the associated runway designation followed by a dash and the abbreviation APCH for approach. This sign has **white numbering** on a **red background** with a **white border**. The sign is installed on taxiways located in approach areas where an aircraft on a taxiway would either cross through the runway safety area or penetrate the airspace required for the approach or departure runway.



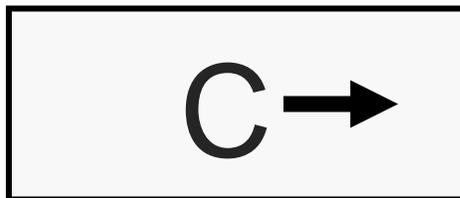
Approach Sign

Runway Distance Remaining Signs provide distance remaining information to pilots during takeoff and landing operations. They have **white numbering** on a **black background**. **The number on the sign provides the remaining runway length in 1,000-foot increments.**



Runway Distance Remaining Signs

Runway Exit Sign is a destination sign located prior to the runway/taxiway intersection on the side and in the direction of the runway where the aircraft is expected to exit. This sign has **black lettering** and a **directional arrow** on a **yellow background**.



Runway Exit Sign

3.4.4. Markings.

Pavement markings on a runway are white. Runway Threshold Markings and Runway Threshold Bars, Runway Aiming Point Markings, Runway Designation Markings, Runway Touchdown Zone Markings, Runway Centerline Markings, Runway Side Stripes, and Displaced Threshold Markings are white. The only nonwhite lines on a runway are yellow lead-in/-off lines that extend from the runway centerline and holdlines for a specific operation known as land and hold short.

Section 4. Communications

4.1. Any vehicle driving on the **movement areas (runways and taxiways) must** be in contact with the ATCT or capable of monitoring and transmitting on the CTAF. Vehicle operators must always monitor the appropriate radio frequency when in the movement areas on controlled airports. Permission must be requested and clearance given prior to driving on a movement area. A vehicle that is equipped with a radio may escort vehicles without radios. When a movement area is closed for construction, vehicles may traverse that area without ATCT contact but must be escorted if their travels require them to cross an active movement area.

4.2. The ATCT controller may use separate or common radio frequency to control all ground traffic, vehicle and aircraft, on the movement areas. The frequency is only to be used to get clearance onto and off the movement areas. When the ATCT is closed, the CTAF should be used to announce a driver's intentions when operating within the movement area.

4.3. Phraseology. Vehicle operators must contact the ATCT ground controller each and every time they proceed onto or leave the movement area. When proceeding onto a movement area, vehicle operators must tell the controller three things: **WHO you are, WHERE you are, and WHAT your intentions are.** Vehicle operators must always acknowledge all communications so ground control and other persons know that the message was received. **Vehicle operators must always give aircraft and ground control transmissions priority unless an emergency exists.** Very high frequency frequencies are for the primary use of aircraft and ATCT personnel. Some typical transmissions are as follows:

- (AIRPORT NAME) ground control, this is Airport 21 at Charlie 6. Request permission to cross Runway 30.”
- (AIRPORT NAME) ground control, this is Airport 21 at Taxiway Alpha. Request clearance south on runway 19 right for a light inspection.”

Reply transmissions may be brief, such as—

- ATCT: “Airport 21, hold short of runway 19 right.”
- Driver: “Airport 21 holding short of runway 19 right.”
- ATCT: “Airport 21 cleared south on runway 19 right.”
“Please expedite, landing aircraft on a 10 mile final for runway 19 right.”
- Driver: “Airport 21 cleared south on runway 19 right, will expedite.”
- Driver: “Ground control, Airport 21 is clear of runway 19 right.

NOTE: If you are unsure what the controller has said, or if you don't understand an instruction, you should ask the controller to repeat it. Good communications only occur when each party knows and understands what the other is saying.

4.4. Common Use Phrases.

What Is Said:

What It Means:

Acknowledge

Let me know you have received and understand this message.

Advise Intentions

Let me know what you plan to do.

Affirmative	Yes.
Correction	An error has been made in the transmission, and the correct version follows.
Go Ahead	Proceed with your message only.
Hold/Hold Short	Phrase used during ground operations to keep a vehicle or aircraft within a specified area or at a specified point while awaiting further clearance from air traffic control.
How do you hear me?	Question relating to the quality of the transmission or to determine how well the transmission is being received.
Immediately or without delay	Phrase used by ATC when such action compliance is required to avoid an imminent situation.
Negative	"No" or "permission not granted" or "that is not correct."
Out	The radio conversation is ended, and no response is expected.
Over	My radio transmission is ended, and I expect a response.
Read Back	Repeat my message to me.
Roger	I have received all of your last transmission.
Stand By	Means the controller or pilot must pause for a few seconds, usually to attend to other duties of a higher priority. Also means to wait as in "stand by for clearance." The caller should reestablish contact if a delay is lengthy.
Unable	Indicates inability to comply with a specific instruction, request, or clearance.
Verify	Request confirmation of information.
Wilco	I have received your message, understand it, and will comply with it.

4.5. Phonetic Aviation Alphabet. Because some letters have similar sounds, like B and P, the international aviation industry uses the following words to reduce confusion. For example; Taxiway B would be referred to as Taxiway Bravo on the radio.

A	ALFA	N	NOVEMBER
B	BRAVO	O	OSCAR
C	CHARLIE	P	PAPA
D	DELTA	Q	QUEBEC
E	ECHO	R	ROMEO

F	FOX-TROT	S	SIERRA
G	GOLF	T	TANGO
H	HOTEL	U	UNIFORM
I	INDIA	V	VICTOR
J	JULIET	W	WHISKEY
K	KILO	X	X-RAY
L	LIMA	Y	YANKEE
M	MIKE	Z	ZULU

4.6. ATCT Light Gun Signals. Air traffic controllers have a backup system for communicating with aircraft or ground vehicles if their radios stop working. The controller has a light gun in the tower that can send out different colored lights to tell the pilot or driver what to do. If a vehicle operator experiences a radio failure on a runway or taxiway, the operator should vacate the runway as quickly and safely as possible and contact the ATCT by other means, such as a cellular telephone, and advise the ATCT of the situation. If this is not practical, then the driver, after vacating the runway, should turn the vehicle toward the tower and start flashing the vehicle headlights and wait for the controller to signal with the light gun.

Light gun signals, and their meaning, are as follows:

Steady Green	OK to cross runway or taxiway.
Steady Red	STOP!
Flashing Red	Move off the runway or taxiway.
Flashing White	Go back to where you started.
Alternating Red and Green	Use extreme caution.

4.7. Safety. The FAA defines runway incursion as “**Any occurrence at an airport involving the incorrect presence of an aircraft, vehicle or person on the protected area of a surface designated for the landing and take off of aircraft.**”

Runway incursions are primarily caused by error in one or more of the following areas:

- Pilot/ground vehicle/controller communications
- Airport familiarity
- Loss of situational awareness

An example of an incursion is a vehicle at an airport with an operating ATCT straying onto a runway in front of an aircraft causing the pilot to take an action to avoid a collision.

When driving on the airfield, vehicle operators need to always be aware of their location and the meaning of all pavement markings, lights, and signs. When on the aprons and taxiways, stay away and steer clear of aircraft. **Aircraft always have the right-of-way.**

NOTE: Any individual involved in a runway incursion should receive remedial airfield driver’s training given by the (AIRPORT OPERATOR).

This is an appropriate place to describe an individual airport's runway and taxiway identification system. In addition to the system description, the FAA recommends that the airport operator provide a runway (RY) and taxiway (TWY) diagram, especially if the airport's identification system varies from the norm or is otherwise complicated.

SAMPLE

GROUND VEHICLE OPERATING FAMILIARIZATION PROGRAM TRAINING RECORD

Employee's Name: _____

Employee's Position: _____

Company Name: _____

Social Security Number: _____

Driver's License State and Number: _____

Driver's License Expiration Date: _____

I agree to abide by all rules and regulations prescribed for the operations of a vehicle within the airport operations area.

As of this time, I certify that I hold a current and valid driver's license. If for any reason my license becomes invalid, I will notify the (AIRPORT OPERATOR) immediately.

Sign your name and indicate today's date below:

(NAME)

(DATE)

●.....●
PERMITTED VEHICLE OPERATING AREAS

Location

- General Aviation Ramp
- Air Carrier/Terminal Ramp
- Firehouse
- Air Cargo
- Tie-downs
- General Aviation Hangars
- All Areas

I certify that the above named individual has satisfactorily completed the Driver Training Program.

Instructor's Signature: _____

22. CONSTRUCTION MANAGEMENT PLAN.

At the Pre-construction Conference, the Contractor will be given copies of the Construction Management Plan for this Project which will identify the various individuals along with their authority and responsibilities for quality control. That document will detail the measures and procedures to be followed to comply with the Quality Control Provision of the Construction Contract, including, but not limited to the quality control and acceptance tests required by the Project Specifications. The following pages include the Acceptance Testing Checklist and the forms which shall be used by the Contractor and the Independent Testing Laboratory to report test results to the Engineer. The checklist and forms will also be included in the Construction Management Plan when it is prepared for this Project.

23. STORMWATER DISCHARGE PERMIT.

The Contractor shall secure and maintain a General Permit for Storm Water Discharges from Construction Sites for this project in accordance with Section 402(p) of the Federal Clean Water Act and Section 405 of the Federal Water Quality Act of 1987. A Notice of Intent shall be filed by the Contractor.

EPA Stormwater Notice Processing Center
Mail Code 4203M
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

Information concerning the EPA Region 9 Stormwater Program may be obtained by calling (415) 972-3510.

Electronic Filing is available through the EPA website at:
<http://cfpub1.epa.gov/npdes/stormwater/cgp.cfm>

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NORMAL OPERATION:

- 1 - Closed
- 2 - Open
- 3 - Open
- 4 - Closed
- 5 - Open
- 6 - Closed

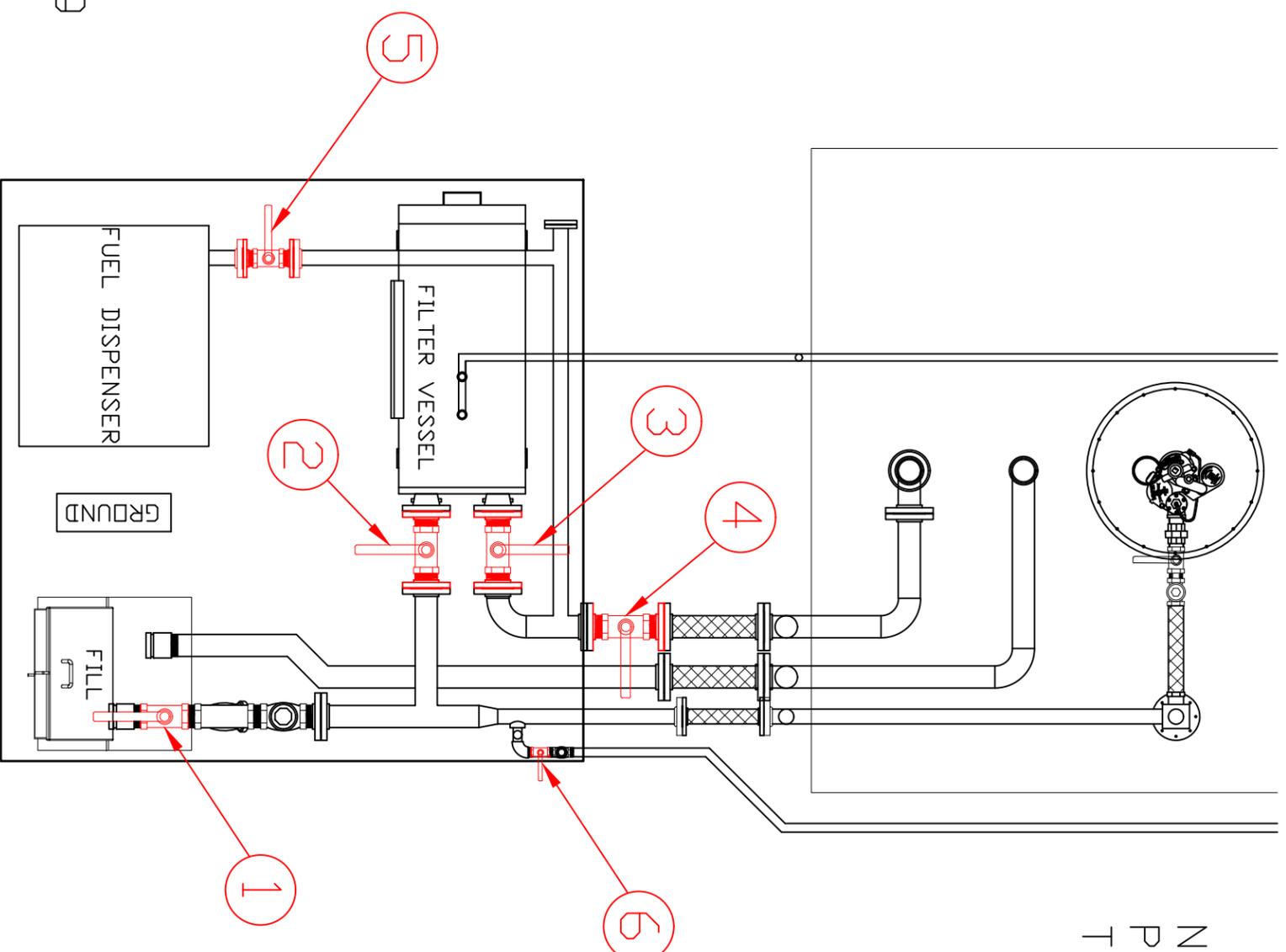
OFFLOAD TRANSPORT:

- 1 - Open
- 2 - Open
- 3 - Open
- 4 - Open
- 5 - Closed
- 6 - Closed

RECIRCULATE:

- 1 - Closed
- 2 - Open
- 3 - Open
- 4 - Open
- 5 - Closed
- 6 - Closed *

* Open # 6 Only During Recirculate And Only While Returning Fuel From Sump Separator



No Serviceable Parts on Tank Top

WARNING!
NEVER CLIMB ON TO TOP OF TANK

SHUT DOWN / OUT OF SERVICE:

- 1 - Closed
- 2 - Open
- 3 - Open
- 4 - Closed
- 5 - Closed
- 6 - Closed

FOR SERVICE CALL D&H PUMP
800-351-2228

