

INTERGOVERNMENTAL SUPPORT AGREEMENT (IGSA)
BETWEEN THE
UNITED STATES
AND CITY OF KILLEEN, TEXAS

This is an Intergovernmental Support Agreement (hereafter referred to as the IGSA or Agreement) between the United States and the City of Killeen (hereafter referred to as the CITY) is entered into pursuant to federal law codified at 10 USC 2679. The statute authorizes the Secretary of the Army to enter into an IGSA on a sole source basis with a state or local government to receive installation support and services. The Secretary of the Army has delegated authority to the Garrison Commander, US Army Garrison-Ft. Hood (hereafter GC), to execute agreements on behalf of the United States.

The purpose of this IGSA is to outline the roles and responsibilities of the parties, identify the services to be furnished by the City, the prices to be paid by the United States, and the appropriate reimbursement and quality control procedures. The parties undertake this Agreement in order to provide services, supplies or construction to the United States, to achieve cost savings for the Department of the Army, and to provide additional revenues to local governments and their work forces.

RESPONSIBILITIES OF THE PARTIES:

The CITY shall perform the installation support services as stated in this IGSA. The term “installation support services” only includes services, supplies, resources and support typically provided by a local government for its own needs and without regard to whether such services, supplies resources, and support are provided to its residents generally, except that the term does not include security guard or firefighting services.

This is a non-personal services agreement. Each party is responsible for all costs of its personnel including pay, benefits, support and travel. Each party is responsible for supervision or management of its personnel.

The tasks, duties and responsibilities set forth in this IGSA may not be interpreted or implemented in any manner that results in CITY personnel creating or modifying federal policy, obligating appropriated funds of the United States, or overseeing the work of federal employees. Under no circumstances, shall CITY employees or contractors be deemed federal employees. If the CITY shall provide services through a contract, the contract must be awarded through competitive procedures. (This requirement does not apply to collective bargaining agreements between the CITY and its employees.) Employees of the United States may not perform services for or on behalf of the CITY without the approval of the GC.

SUMMARY OF SERVICES AND PRICE:

Year	Price
Base Period – First five years of execution	
Year 1	\$517,752
Year 2	\$528,107
Year 3	\$538,669
Year 4	\$549,443
Year 5	\$560,432
Option Years – Five years following conclusion of Base	
Option Year 6	\$571,641
Option Year 7	\$583,073
Option Year 8	\$594,735
Option Year 9	\$606,629
Option Year 10	\$618,762

Services and schedule are detailed in Attachment 1, Scope of Work. Additional task-order work may be contracted with the City at rates listed in Attachment 2, “Additional Work Task Order Matrix,” and paid for as discussed in paragraph “PAYMENT,” below.

TERM OF AGREEMENT: The term of this agreement shall be for five years from the execution of the Agreement by the GC, and renewable for successive one-year periods for five additional years, contingent on the appropriation of adequate funds by act of Congress. The United States shall only be obligated for an additional year of performance upon receipt of such funds, and only upon written notice by the GC of an intent to award the option for an additional year of performance. The GC shall provide notice of the renewal of the IGSA at least 10 days prior to the expiration of then current performance period. The GC may condition the renewal upon availability of funds, and may suspend performance of the renewed period at no additional cost to the United States, until adequate funds have been received. If funds are not received, the parties agree that the Agreement can be unilaterally terminated by the GC without further liability to the United States. In the absence of funding, the United States shall have no obligation to request services and the City shall have no obligation to incur new services or costs.

PAYMENT: The United States shall pay the CITY for services as described in Attachments 1, 2, and 3, on a quarterly basis or as invoiced on a task-order basis. Payment shall be based for services provided as set forth in this Agreement and associated Attachments. The CITY shall not include any State or Local taxes in the prices it charges the United States unless approved by the GC in advance. The City shall electronically submit invoices or payment requests to the Government’s Coordination Representative (CR) and the GC. Payment for quarterly services shall be on at the rates specified in SUMMARY OF SERVICES AND PRICE, above, in four quarterly payments based on work performed as described in electronic invoice. The GC will not authorize payment for task-order work unless all billed services have been satisfactorily completed, and may reduce the amount(s) billed for unsatisfactory or partial performance, or for other reasons specified in this Agreement. The Government will make payment in accordance with the Prompt Payment Act (31 USC 3903) and implementing regulations Interest shall be paid for late payments as required by the Act, and shall be paid at the rate established by the Secretary of the Treasury for disputes under the Contract Disputes Act of 1978.

The payment method for IGSA’s will be made via Miscellaneous Payment transactions processed through the General Fund Enterprise Business System (GFEB’S). All IGSA’s will be manually entered

into GFEBS to commit and obligate funds. Payments will be processed within GFEBS by the garrison Resource Management office, who will submit payment documents to DFAS who will issue payment via electronic fund transfer (EFT) or check to the Service Provider.

OPEN COMMUNICATIONS AND QUALITY CONTROL: The Parties shall identify and present any issues and concerns that could potentially impede successful performance of the IGSA in a timely and professional manner. The CITY shall maintain a quality control plan to ensure all work is completed within the specified timelines and quality standards specified in the Agreement. After its execution, an initial joint meeting of the Parties will be conducted to discuss the terms of the IGSA. The initial meeting shall also discuss orientation of the CITY and its employees to work areas on the installation as well a phase-in plan to permit the orderly transition of responsibilities for performance of the services by the CITY.

INSPECTION OF SERVICES: The CITY will only tender services and goods in conformance with the IGSA. The Directorate of Public Works (DPW), with the approval of the Agreement Officer, shall appoint a CR who will be responsible for inspecting all services performed. The CITY will be notified of the identity of the CR and his alternate, and of any changes. If services are performed outside the installation, the CR shall be granted access to areas where services are performed. The CR shall have the right to inspect and test all services; inspections and tests to be conducted in a manner that will not unduly delay the performance of work.

If the CR determines that services do not conform to the requirements in Agreement, the CR can require the CITY to perform the services again, in whole or in part, at no additional cost to the government. Alternately, the CR can reduce the price to be paid for services to reflect the reduced value of the services to be performed. If the services cannot be corrected by re-performance, the CR can reduce the billed price to reflect the reduced value of the services to be performed. The CR may alternately, in his sole discretion, waive price reductions or re-performance of services. Such waivers shall not constitute a waiver of requirements in the IGSA unless approved in writing by the GC.

If the CITY is unable to perform any of the services due to an occurrence beyond the reasonable control of the parties, such as Acts of God, unusually severe weather, or government activities on the installation which impede the CITY's performance, the City shall promptly notify the CR. In those rare instances in which the CITY fails to re-perform services or abandons performance, the United States may perform or contract for performance of the services and charge those costs to the CITY. Except in an emergency, the United States will not exercise this authority without providing prior notice to the POC designated by the CITY to allow for amicable resolution of issues between the parties. If services are deemed to be deficient and cannot be corrected to the satisfaction of the CR, the GC may terminate the IGSA immediately. Such termination shall not become effective without prior notice and consultation with the CITY POC identified in this agreement.

TERMINATION: The IGSA may be terminated by mutual written agreement at any time. Except as otherwise specified in this agreement, either party can unilaterally terminate this IGSA upon 30 days written notice to the POCs designated in this Agreement.

The United States reserves the right to terminate this agreement for its convenience at any time. When notified by the GC of the termination, the CITY shall immediately stop all work. The government will pay the CITY a percentage of the agreed price reflecting the percentage of work performed to the notice. The CITY shall not be paid for any work performed or costs incurred which reasonably could have been avoided.

SUSPENSION OF AGREEMENT: The United States reserves the right to suspend performance of the agreement or access to the installation in event of emergencies, mobilizations, national security reasons, or for other reasons outside the control of the United States.

APPLICABLE LAW: The IGSA is subject to the law and regulations of the United States. If any federal statute expressly prescribes policies or requirements that differ from the terms and conditions of this IGSA, the provisions of the statute shall govern.

CLAIMS AND DISPUTES: The parties shall use their best efforts to resolve any disagreement or disputes they may have regarding this Agreement. To minimize disputes, the parties will meet periodically, preferably on a monthly basis, to discuss performance and any other issues they may have. The CR shall represent the Government in such meetings. Both United States and City representatives shall at a minimum maintain electronic records of all disputes and their resolutions.

If the parties are unable to resolve an issue, the CR or the CITY may submit a claim arising out of the Agreement to the GC or designated representative for a final decision. The written submission must specify the nature and basis for the relief requested and include all data that supports the claim, and should designate a CITY representative to discuss the claim and its resolution. The GC shall issue a final decision within 90 days of receipt of any claim.

If the CITY is dissatisfied with the GC's decision, it may appeal the matter to the Commanding General, III Corps and Fort Hood, and must specify the basis of its disagreement. The Commanding General or designated representative shall issue a final written determination on the matter within 60 days of receipt of the appeal to all POCs specified in this agreement. All final determinations resulting in financial disbursement shall be coordinated with the GC or designee on the part of the United States, and the designated POC for the CITY.

If the above process proves insufficient for resolving a dispute, the dispute may be submitted to a court of competent jurisdiction.

NOTICES, POINTS OF CONTACT (POCs):

The POCs for issues pertaining to this IGSA are as follows:

For the United States, the CR or his designated representative.

For the City: Matthew Van Valkenburgh, AAE, Executive Director of Aviation or his designated representative

QUARTERLY REVIEW AND PLANNING BOARDS:

The POCs specified above, with additional representatives as indicated by the GC and the CITY, shall meet no less frequently than once every quarter to discuss upcoming work plans for site access issue, mission compliance, and associated issues, review work completed in the past quarter for satisfactory quality control and completion, and resolve issues or disputes regarding the Agreement at the lowest level possible prior to elevation as described in CLAIMS AND DISPUTES, above. Records of these quarterly review and planning boards shall be maintained electronically by both United States and City representatives.

ANNUAL REVIEWS AND AMENDMENTS TO THE IGSA:

Unless otherwise specified, all notices under this Agreement shall be provided to the POCs specified above. The POCs and a management official at least one level above the POCs as well as the IGSA GC shall meet annually to discuss the IGSA, and consider any amendments to the Agreement. Any party can propose amendments at any time. All amendments must be reduced to writing and incorporated by amendment to Agreement by the GC in order to be effective.

DUTY TO PROTECT GOVERNMENT PROPERTY ON THE INSTALLATION: The CITY shall conduct a visit of the installation with the CR prior to performance to satisfy itself of the general and local conditions existing on the installation to include sites where services will be performed. The CITY shall prepare an accident avoidance plan and plan to protect Government property on the installation. The City shall take measures to protect and not damage any property of the United States during performance of services. Should the CITY damage such property, the CITY may replace the item or restore it to its prior condition at its own cost or reimburse the United States for such costs. If the City does not take measures to replace or restore, the United States reserves the right to deduct replacement or restoration costs from amounts billed by the CITY each month. The CR shall provide written notice of the Government's intent to offset costs against billings to allow the parties to resolve the matter amicably. Such resolution can include a schedule for payments to cover the loss or restoration of Government property over the term of the current period of performance.

CONTINUITY OF SERVICES: The City recognizes that the services under this Agreement are vital to the United States and must be continued without interruption, and performed even in event of a dispute between the parties. Should the United States terminate this Agreement for any reason, the City agrees to furnish phase-in training to any successor contractor and exercise its best efforts and cooperation to effect an orderly and efficient transition of services.

HOLD HARMLESS: Except as otherwise provided in this Agreement, the CITY shall indemnify and hold the United States harmless against any and all judgments, expenses, liabilities, claims and charges of whatever kind or nature that may arise as a result of the activities of the CITY or its employees in performance of this Agreement.

WAGES AND LABOR LAW PROVISIONS: These provisions apply to the CITY and any contractor performing services under this IGSA on behalf of the CITY. The CITY shall be exempt from federal labor statutes, provided it pays its employees at wage grades or rates normally paid by the CITY, and complies with all applicable CITY labor laws and standards. In no event, however, shall any employee be paid at wage rate below the minimum wage established in the Fair Labor Standards Act. The CITY shall comply with all applicable federal, state and local occupational safety and health requirements and standards. If the CITY has knowledge that any actual or potential labor dispute by its employees may delay or threaten to delay performance of the contract, the CITY shall immediately notify the CR and the GC. The CITY shall provide timely updates until the dispute is resolved.

NON-DISCRIMINATION AND SEXUAL ASSAULT/HARASSMENT: This provision applies to CITY and its contractors. The CITY agrees not to discriminate against any employee based upon race, color, religion, sex, national origin, or sexual orientation, or to allow any employee to engage in discriminatory practices or conduct while performing work under this IGSA. The CITY shall not permit employees which engage in sexual assault, sexual harassment or trafficking to perform services under this IGSA. The CITY shall not engage in age discrimination, and shall comply with

the Americans with Disabilities Act with respect to the hiring and accommodation of employees performing services under this IGSA.

TRANSFERABILITY: This Agreement is not transferable except with the written authorization of the GC.

ACTIONS OF DESIGNEES: Any act described in the IGSA to be performed by an individual or official can be performed of the designee of such individual or official, with the exception of the GC.

Signatures and dates of signatures of the parties:

FOR THE UNITED STATES:

FOR THE CITY OF KILLEEN:

Henry C. Perry, COL, AV
Garrison Commander
US Army Garrison Ft. Hood

Ronald L. Olson
City Manager
City of Killeen

Date

Date

List all Attachments/Annexes:

Attachment 1 – Scope of Work

Attachment 2 – Additional Task Order Work Price Matrix

Attachment 3 – Technical Specifications

Figure 1 – Airfield Maintenance Areas

Scope of Work
Airfield Marking and Pavement Maintenance
Robert Gray Army Airfield

PROJECT DESCRIPTION

Purpose. The City of Killeen, represented by the Department of Aviation (KDOA), will provide professional maintenance service for Robert Gray Army Airfield (RGAAF) as defined in this agreement. These services will include pavement marking and maintenance of the runway and taxiways to provide painting of all airfield markings on a rotational schedule and routine or preventative pavement maintenance of the movement areas annually. Routine pavement maintenance will include runway rubber removal; preventative maintenance will include crack sealing of movement areas and minor asphalt and concrete repairs (e.g., repair of lightning strikes, routing of cracks on concrete surfaces and fill, and spall repair).

Existing Condition. The KDOA currently maintains the markings and pavement on the east side of RGAAF, generally considered to be primarily used by commercial air carriers, to Federal Aviation Administration (FAA) standards and requirements.

Proposed Approach. The KDOA will provide sufficient personnel and equipment suitable to ensure the marking and pavement maintenance of the RGAAF is maintained.

1.0 SCOPE OF WORK

1.1 The scope of this work will include the Aircraft Operations Areas (AOA) of RGAAF as shown in figure 1.

1.2 Marking of AOA.

1.2.1 Runway. Those segments of the runway centerline that are obscured by rubber accumulation or degraded during the rubber removal process will be painted annually following the completion of rubber removal. Those centerline segments not painted during the rubber removal process will be painted per the schedule in Table 1. All other runway markings will be painted per the schedule in Table 1.

1.2.2 Taxiways. All taxiways are included in the Scope of Work (SOW) of this agreement. Taxiway markings, to include runway lead-in lines, will be painted according to the schedule in Table 1. All markings will be reviewed daily during inspections by RGAAF and KDOA operations personnel and discrepancies reported to KDOA for maintenance action.

1.2.3 Aviation Ramps. Aviation ramps included in this SOW include the North, South, Hazardous Cargo, Northeast, Southeast, and UAS ramps. Other areas on the airfield not identified in this agreement will be painted per the Task Order Matrix in attachment 2.

1.2.4 Marking Removal. In time, paint will accumulate on various markings to form layers which will easily chip and mar the marking appearance. To ensure markings are kept in the best condition, removal of those markings which have accumulated excess paint over time will be completed prior to applying new paint to those areas. These areas will be concurred upon by KDOA and RGAAF staff prior to any marking removal. Any markings removed will be done via non-scarifying equipment.

1.2.5 Compliance with Regulations. All marking will comply with either Department of the Army or FAA requirements per the latest Department of the Army engineering technical letter (ETL) or FAA Advisory Circulars (AC) standards as depicted by Figure 1.

1.3 Pavement Maintenance of AOA

1.3.1 Crack Sealing of airfield pavements. Bituminous asphalt crack sealant will be applied to airfield pavements with visible cracking as identified via airfield inspections or as required to ensure regulatory compliance.

1.3.2 Rubber Removal Runway 15/33. Accumulations of rubber will be removed from Runway 15/33 via the most effective means and methods available to limit surface damage at least annually. The scope and necessity of the work to be performed will be mutually agreed upon by RGAAF and KDOA operations management. If conditions require additional rubber removal during the annual time frame, this will be authorized upon agreement of both RGAAF and KFHRA.

1.3.3 Minor Asphalt or concrete repair. Minor repairs (3' x 3' or less) to various pavements will be made as identified through daily inspections. This may include repair of concrete spalls, cracks in concrete, asphalt patches to various surfaces, damage to surfaces due to lightning strikes, etc.

1.3.4. Major Pavement Repair. Pavement surfaces requiring a major repair (e.g., in excess of 3' x 3' area, pavement replacement, mill / overlay, seal coat, etc.) are not in the scope of this agreement. Repairs of this magnitude will be discussed and agreed upon by RGAAF and KDOA management prior to any action being taken.

2.0 PROJECT METHODS

2.1 Project Coordination.

2.1.1 Prior to the commencement of any work on the airfield, the specific scope of work will be discussed and agreed upon by both parties. Areas will be delineated, appropriate runway and taxiway closures will be coordinated, and NOTAMs will be issued for flight and airfield safety.

2.1.2 The work will be considered complete upon inspection of the work area and agreement by both parties the work has been satisfactorily completed.

2.2 Airfield markings will be painted on surfaces of the AOA using approved FAA materials, methods, and accordance with product/manufacturer's specifications.

2.2.1 Airfield markings will be painted per the schedule in Table 1.

2.2.2 The KDOA will utilize various types of equipment and industry-standard techniques and materials to maintain markings.

2.2.3 KDOA and RGAAF operations personnel will inspect markings daily and provide reports to KDOA operations. Deficiencies or issues noted on these reports will be given to the KDOA maintenance division; for those items outside the schedule of Table 1, the KDOA will schedule repair of the items as soon as practicable.

2.3 Routine and preventative pavement maintenance is an annual upkeep function determined by the pavement condition as per Table 2.

2.3.1 The KDOA will utilize various types of equipment and industry-standard techniques and materials to maintain the pavements in a safe, operable condition.

2.3.2 KDOA and RGAAF operations personnel will inspect pavement daily and provide reports to KDOA operations. Deficiencies or issues noted on these reports will be given to the KDOA maintenance division which will schedule repair of the items.

2.3.3 Pavement repairs will be completed as soon as practicable dependent upon scheduled airfield operations.

2.3.4 Routine crack-sealing of the AOA will be a continuous annual preventative maintenance process.

2.4 Areas requiring marking or pavement repair / upkeep not included in this agreement and outside of the AOA identified in figure 1 may be scheduled as task orders and priced per the line items in attachment 2. Repair / rehabilitation of these tasks will be scheduled to be completed as soon as practicable dependent upon scheduled airfield operations.

3.0 PROJECT SCHEDULE

The AOA, depicted in Figure 1 will be maintained according to either Department of the Army or FAA requirements and regulations. The recommended maintenance schedules are provided in Table 1 and Table 2. However, these are only recommended frequencies; in no case shall markings or pavements be permitted to become unsafe or unusable. Table 1 schedules may be flexed to meet maintenance requirements based on operational needs, weather, or other conditions.

Table 1. Marking Maintenance Schedule

AREA	DESCRIPTION*	FREQUENCY (YEAR)
1	Taxiway A	1, 3, 5
2	Taxiway C (west), E (west), and F	1, 3, 5
3	Taxiway B, B1, B2, and B3	2,4
4	Taxiway C (east), C1, D, E (east), and G	2,4
5	Runway – All runway and blast pad markings	1, 3, 5
6	Runway – Primarily centerline	1-5
7	Ramps – North, South, and Hazardous Cargo	1, 3, 5
8	Ramps – Northeast, Southeast, and UAS	2, 4

*Painting of taxiways includes surface painted hold position signs

Table 2. Maintenance Schedule

MAINTENANCE	FREQUENCY
Rubber Removal	Annually
Crack Sealing	Continuous
Asphalt /Concrete Repair	Continuous

4.0 PERSONNEL

The KDOA is fully staffed and trained to provide the scope of work. For this task the KDOA will have:

4.1 Supervisor. The supervisor will be a competent and experienced individual who is familiar with RGAAF, the scope of work required to maintain each project area, and is qualified to operate on RGAAF.

4.2 Crew. Crews will be fully qualified on all equipment required for the project.

4.3 Training. Personnel performing airfield inspections, maintenance, and repair on the airfield will have passed the RGAAF Movement Area Driver Training Course and possess a blue Airfield Access Badge.

5.0 EQUIPMENT

The KDOA shall provide equipment to perform the required maintenance functions, including all safety equipment, e.g., runway closure markers and low-profile lighted barricades, to adequately delineate the work areas.

6.0 COMMUNICATIONS

6.1 Personnel. Personnel will have communications equipment and be able to communicate with air traffic control (ATC) while working on the AOA.

7.0 TASK ORDER SERVICES

7.1 Fees. KDOA will provide airfield marking and pavement maintenance services for areas of RGAAF within this scope, per the Task Order Matrix in attachment 2.

7.2 Task Orders. KDOA will provide additional airfield markings or pavement maintenance services for those areas of RGAAF beyond this scope. These additional services will be charged at a rate per the Task Order Matrix in attachment 2.

8.0 SPECIFICATIONS

Specifications for the materials and work repairs are in attachment 3.

9.0 QUALITY CONTROL / QUALITY ASSURANCE

To ensure work outlined in this Agreement is performed and completed per the standards in Attachment 3, quality control and quality assurance personnel and procedures will be implemented.

9.1 Quality Control / Quality Assurance (QC / QA) Representatives

9.1.1 Fort Hood will designate a QA representative for IGSA pavement maintenance and/or repair tasks.

9.1.2 The City of Killeen will designate a QC representative for IGSA pavement maintenance and/or repair tasks.

9.2 QC and QA procedures

9.2.1 QC and QA representatives serve as the single points of contact for Fort Hood and the City Killeen during the repair task.

9.2.2 QC and QA representatives will provide oversight of site conditions and workmanship at all times during the repair task.

9.2.3 QC and QA representatives will provide final inspection of the task and provide a consensus that the repair task has been satisfactorily accomplished

9.2.4 All repair tasks will comply with the specifications outlined in Attachment 3.

Killeen Fort Hood Regional Airport - Fort Hood
Inter-Governmental Service Agreement
Task Order Cost Matrix

Task Order Item	Unit	Totals				
			2% increase per annum			
<u>Asphalt</u>						
Routed Crack Sealing	Lineal Foot	\$1.40	\$1.43	\$1.46	\$1.49	\$1.52
Crack sealing	Lineal Foot	\$1.00	\$1.02	\$1.04	\$1.06	\$1.08
Asphalt Repair (up to 8" deep)	Square Foot	\$8.00	\$8.16	\$8.32	\$8.49	\$8.66
<u>Concrete</u>						
Concrete Spalling / minor repair (saw cut, removal, install elastomeric concrete patch)	Cubic Foot	\$300	\$306.00	\$312.12	\$318.36	\$324.73
(saw cut, removal, install standard high-strength concrete patch)	Cubic Foot	\$102	\$104.04	\$106.12	\$108.24	\$110.41
<u>Markings</u>						
Yellow reflective	Square Foot	\$0.65	\$0.66	\$0.68	\$0.69	\$0.70
Red reflective	Square Foot	\$0.65	\$0.66	\$0.68	\$0.69	\$0.70
White reflective	Square Foot	\$0.65	\$0.66	\$0.68	\$0.69	\$0.70
Black non-reflective	Square Foot	\$0.50	\$0.51	\$0.52	\$0.53	\$0.54
Helipad		\$4,500	\$4,590	\$4,682	\$4,775	\$4,871
Compass Rose		\$7,000	\$7,140	\$7,283	\$7,428	\$7,577
<u>Rubber Removal</u>						
Chemical / water combination	Square Foot	\$0.16	\$0.17	\$0.18	\$0.19	\$0.20

RGAAF IGSA Airfield Marking and Pavement Maintenance Specification

1. Applicability.

All pavement maintenance and repairs associated with this agreement will adhere to the following specifications. Herein, “City” refers to the City of Killeen Airport Authority, “Army” to the United States Army Garrison Fort Hood, “DAO” to the garrison’s Directorate of Aviation Operations, and “DPW” to the Garrison’s Directorate of Public Works.

2. References.

All references listed below will be included as references to this specification. This is not intended to be a complete list of references for this specification and additional references may be required for completion of work.

FAA Advisory Circulars (ACs)	
AC 150/5340-1	Standards for Airport Markings
AC 150/5370-2	Operational Safety on Airports During Construction
AC 150/5370-10	Standard Specifications for Airport Construction
AC 150/5380-6	Procedures for Maintenance of Airport Pavements
Unified Facilities Criteria (UFCs)	
UFC 3-250-03	Standard Practice Manual for Flexible Pavements
UFC 3-250-04	Standard Practice for Concrete Pavements
UFC 3-250-06	Repair of Rigid Pavements Using Epoxy Resin Grouts, Mortars, and Concretes
UFC 3-250-08FA	Standard Practice for Sealing Joints and Cracks in Rigid and Flexible Pavements
ETL 1110-3-1512	Army Airfield and Heliport Markings
UFC 3-260-02	Pavement Design for Airfields
UFC 3-270-01	Asphalt Maintenance and Repair
UFC 3-270-02	Asphalt Crack Repair
UFC 3-270-03	Concrete Crack and Partial-Depth Spall Repair
UFC 3-270-04	Concrete Repair
State of Texas Standards	
SHSDB	State Highway Standard Design Book
TMUTCD	Manual of Uniform Traffic Control Devices, Texas-Specific Edition

RGAAF IGSA Airfield Marking and Pavement Maintenance Specification

3. Work Planning

3.1 Work Planning

Except in those cases which require immediate action or repair, the City shall submit a work plan to the DAO for review and approval no later than 14 days prior to work start. The work plan will present the scope of work, contacts, timelines, staging areas, haul routes, locations of traffic control measures (barricades, et cetera) to be placed.

3.2 Publication of Notices To Airmen (NOTAMs)

The DAO assumes responsibility for the publication of NOTAMs when required for any affected work areas.

3.3 Barricades.

Low profile barricades will be used/installed to control traffic flow during repair/restriping projects. Frangible lighting will be installed on barricades which will remain in-place during hours of darkness. Barricades will conform to FAA Advisory Circular 150-5370-10G, paragraph 70-08, "Barricades, Warning Signs, and Hazard Markings."

3.4 Dig Permits

The City is required to request and receive an approved Dig Permit issued by the Fort Hood Dig Permit office prior to any excavations in excess of six (6) inches.

4. FOD Control

Areas of pavement maintenance and repair will be swept and inspected for FOD prior to the area being released for aircraft operations. Sweeping may be performed by Army or City personnel with prior coordination with the relevant agency.

5. Surface Repairs

5.1 Asphalt

5.1.1 Asphalt Repairs

5.1.1.1 Materials

All repairs to asphalt pavement shall comply with criteria specified in Figure 1 and applicable regulatory guidance.

RGAAF IGSA Airfield Marking and Pavement Maintenance Specification

5.1.1.2 Procedure

Prior to applying any new asphalt patch, the area shall be cut square to a minimum of three inches from the edge of the damaged pavement. Existing material shall be removed to a minimum depth of two inches and a maximum depth of eight inches. At the time of repair, the base course shall be visually inspected to determine its suitability for re-use. If the base course is found to be contaminated with fines or other deleterious material, it shall be removed and replaced in kind. The patch area shall be lined with a tack coat at an application rate of between 0.10 and 0.15 gallons per square yard of surface coverage. Asphalt shall be placed per criteria specified at Figure 1.

5.1.1.3 Exclusions

Geotechnical investigation, full reconstruction, major asphalt repairs in excess of three feet by three feet in dimension, and full-scale mill and overlay of a section of pavement, are not covered by this specification or the intent of this IGSA. They shall be evaluated jointly by the City, DAO, and DPW, on a case by case basis.

5.1.2 Asphalt Crack Repairs

5.1.2.1 Materials.

All crack sealant shall be suited for use in the Central Texas climate.

5.1.2.2 Asphalt Crack Seal Procedures.

All vegetation will be removed from crack prior to application of sealant. If extensive vegetation is present, treat the specific area with a concentrated solution of a water-based herbicide approved by DPW.

Hairline cracks less than $\frac{1}{4}$ " (0.25") shall not be sealed.

Cracks between $\frac{1}{4}$ " (0.25) and $\frac{1}{2}$ " (0.50) in width will be blown out with compressed air to remove any loose debris and crack sealant hot-applied to fill voids. Sealant material will not protrude over the crack surface and will be no more than $\frac{1}{8}$ " (0.125") below the asphalt surface.

Cracks over $\frac{1}{2}$ " (0.50) will receive the same preparatory steps as above, except that cracks will be routed to smooth sides and a uniform width as required by crack size. Crack shall be blown with high-pressure air to ensure all loose debris is removed from the crack. Water may be used, but if water is used, crack must be allowed to dry completely before sealant material is applied. Hot-applied crack sealant material will be injected into cleaned and dried cracks to form a slight convex surface to aid the sealant material to expand and contract with the underlying asphalt material. Sealant material will not protrude more than 3" horizontally and $\frac{1}{4}$ " (0.25) vertically past the crack surface and will be no more than $\frac{1}{8}$ " (0.125") below the asphalt surface.

RGAAF IGSA Airfield Marking and Pavement Maintenance Specification

5.1.2.3 Exclusions

Cracks over one inch (1") in width shall not be considered as part of this agreement except by arrangement as cost matrix task order work (attachment 2). Where such work is performed, the methods used for repairs over 1/2" (0.50) shall be applied.

5.2 Concrete

5.2.1 Concrete Repairs

5.2.1.1 Materials

Small, localized repairs of less than 1' x 1' and less than 6" in-depth (total volume less than 0.5 cubic feet) may be repaired using an epoxy resin elastomeric concrete repair kit (Delpatch or equivalent).

Repairs of greater than 1' in any direction or 0.5' in-depth will be performed with concrete with a maximum slump of 1.5" and a minimum 28-day compressive strength of 4500 psi.

5.2.1.2 Concrete Repair Procedures

The damaged area will be isolated from the surrounding pavement by saw cutting. If depth of damage is known, saw cuts will extend to a minimum of one inch below damage and will be no closer than one inch to damaged concrete. If depth is unknown, initial saw cut shall be to a minimum of 2" deep. Saw cuts will be straight and form rectangular areas. Repair material will be determined by Paragraph 5.2.1.1, "Materials," above, or by agreement between City, DAO, and DPW prior to start of repair. Material to be removed, if full thickness, shall be removed by lifting and direct removal. If partial depth, material shall be chipped out and bottom made level.

Prior to concrete placement, the concrete surface shall be moistened with water, as by spraying or other means. Existing joints shall be maintained throughout placement. Concrete placement shall take place as soon as practical after mixing, no more than 60 minutes after adding water. Concrete placement shall only happen when temperatures are above 0° F and below 90° F unless otherwise approved by DPW. All exposed concrete surfaces shall be floated, vibrated, and finished to match surrounding finish. Surface shall deviate no more than 1/8" (0.125) vertically from surrounding surfaces. Curing for all materials shall be as per manufacturer instructions.

5.2.1.3 Exclusions

Whole slab replacement or repairs of greater than 3' x 3' are not considered to be part of this agreement, and shall be negotiated as separate task orders or repaired via alternate means.

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5.2.2 Concrete Crack Seal/Repairs

5.2.2.1 Materials

All crack sealant shall be suited for use in the Central Texas climate. Crack sealants used on areas subject to fuel spill shall be fuel-resistant. Hot-applied joint material shall not be used on concrete pavements.

5.2.2.2 Concrete Crack Seal/Repair Procedures

All vegetation will be removed from crack prior to application of sealant. If extensive vegetation is present, treat the specific area with a concentrated solution of a water-based herbicide approved by DPW.

Hairline cracks of less than ¼" (0.25) shall not be sealed.

Cracks between ¼" (0.25) and ½" (0.5) in width will be blown out with compressed air to remove any loose debris and crack sealant applied to fill voids. Sealant material will not protrude over the crack surface and will be no more than 1/8" (0.125") below the concrete surface.

Cracks over ½" (0.5) will receive the same preparatory steps as above, except that the crack will be routed to smooth sides and a uniform width dictated by crack size. Crack shall be blown with high-pressure air to ensure all loose debris is removed from the crack. Water may be used, but if water is used, crack must be allowed to dry completely before sealant material is applied. Sealant material will be placed in void in accordance with manufacturer recommendations. Sealant material will be no more than 1/8" (0.125) below the adjacent concrete surface.

5.2.2.3 Exclusions

Concrete cracks in excess of 1" are considered major repairs and are not covered under this agreement.

6. Surface Marking

6.1 Materials

6.1.1 Paints

Paint shall meet FAA TT-P-1952E Type I or II Waterborne Paint. Colors shall be white, yellow, black, red, and orange as defined in FAA TT-P-1952E and used as appropriate for each individual marking location.

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6.1.2 Retroreflective Beads

Retroreflective beads, when used, shall be reflective media to meet FAA TT-B-1325D Type I or III.

6.2 Surface Marking Procedures

Marking may only be performed with the surface clean, dry and surface temperatures of a least 55° F and rising. Painting operations shall be discontinued when the surface temperature exceeds paint manufacturers recommendations. Marking will not be performed with winds in excess of 10 Knots unless windscreens are used to shroud paint guns. Edges of non-radius markings shall not vary from a straight line more than 1/2" in 50 ft.

Marking dimensions and spacing shall adhere to the following tolerances:

Dimensions and Spacing	Tolerance
36" or less	+ - 1/2"
Greater than 36" to 6'	+ - 1"
Greater than 6' to 60'	+ - 2"
Greater than 60'	+ - 3"

6.3 Exclusions

The required survey and marking of the compass rose are not included in this agreement. Marking of airfield helipads are also excluded from this agreement but may be marked as per the task order cost matrix at Attachment 2.

Figure 1
RGAAF / KFHRA IGSA Criteria Diagram

