A G R E E M E N T

THIS AGREEMENT is made and entered as of the date set forth on the signature page below, by and between the **CITY AND COUNTY OF DENVER,** a municipal corporation of the State of Colorado (the "**City**"), through and on behalf of its Department of Aviation ("**DEN**"), and **HARRIS CORPORATION,** a Delaware corporation authorized to do business in Colorado ("**Consultant**").

W I T N E S S E T H:

WHEREAS, the City owns, operates, and maintains Denver International Airport ("**DEN" or the "Airport**"); and

WHEREAS, DEN desires to obtain access to certain data and other services in support of its Noise Office; and

WHEREAS, the Consultant was selected on the basis of its experience and demonstrated ability to perform the services contemplated herein; and

WHEREAS, the City believes the Consultant to be well able to undertake and perform such services for the City and County of Denver, and desires to contract with the Consultant for the performing of such services, and the Consultant is ready, willing and able to undertake such services as an independent contractor;

NOW THEREFORE, in consideration of the mutual agreements herein contained, and subject to the terms and conditions herein stated, the parties agree as follows:

1. LINE OF AUTHORITY: The City's Chief Executive Officer of Denver International Airport, Her designee or successor in function ("**CEO**") authorizes all work performed under this Agreement. The CEO herby designates the City's "**Noise Officer**" as the authorized representative of the CEO through whom services performed under this Agreement shall be directed and coordinated. The Noise Officer is designated as the Noise Officer under this Agreement. Administrative reports, memoranda, correspondence and other submittals required of the Consultant shall be processed in accordance with the Noise Officer's directions.

2. PROFESSIONAL SERVICES:

A. <u>General</u>: Consultant shall provide data access and professional services as more fully set forth on the attached DEN NMS Harris Proposal, **<u>Exhibit A</u>** ("**Scope of Work**").

B. All derivative works, data, specifications and documentation prepared by the Consultant under this Agreement, when delivered to and accepted by the Noise Officer shall become the property of the City. All right, title, and interest, including, without limitation to all Intellectual Property Rights in NextGen Data, and related documents and materials is owned by Consultant and/or its licensors and is protected by intellectual property laws and the City shall have no title of ownership to the raw NextGen Data. However, the City shall own all the data

generated and stored under this Agreement (other than the raw data), including flight, noise, weather mapping, and reference information. The Consultant agrees to allow the City to review any of the procedures used by it in performing the services hereunder. The Consultant shall make available for inspection by the City notes and other documents used in the preparation of any of the services required hereunder.

   B. Professional Responsibility: The Consultant shall faithfully perform the work required under this Agreement in accordance with the standard of care, skill, training, diligence and judgment provided by competent professionals who perform work of a similar nature to the work described in this Agreement. Consultant hereby represents and warrants to the City that it will perform its services in a professional and workmanlike manner.

   C. NextGen Data Usage: The City shall comply with FAA required contract language regarding usage restrictions for NextGen data feeds, as set forth in **Exhibit C**.

  3. **COMPENSATION AND PAYMENT; MAXIMUM CONTRACT LIABILITY:**

   A. Notwithstanding any other provision of the Agreement, the City's maximum payment obligation will not exceed **One Million Seventy Eight Thousand One Hundred Eighty Dollars ($1,078,180.00)** (the "**Maximum Contract Liability**"). The City is not obligated to execute an Agreement or any amendments for any further services, including any services performed by Consultant beyond that specifically described in Exhibit A. Any services performed beyond those in Exhibit A, without an amendment executed by both Parties, is performed at Consultant's risk and without authorization under the Agreement.

   B. Source of Funds; Appropriation: All payments under this Agreement shall be paid from the City and County of Denver Airport Revenue Fund and from no other fund or source. The City is under no obligation to make payments to or to make any future appropriations or allocations to said fund. The City's payment obligation, whether direct or contingent, extends only to funds appropriated annually by the Denver City Council, paid into the Treasury of the City, and encumbered for the purpose of the Agreement. The City does not by the Agreement irrevocably pledge present cash reserves for payment or performance in future fiscal years. The Agreement does not and is not intended to create a multiple-fiscal year direct or indirect debt or financial obligation of the City.

   C. Payment Schedule: Subject to the Maximum Contract Liability set forth at section 3.A. of this Agreement, the City agrees to pay to the Consultant, and the Consultant agrees to accept as its sole compensation for the basic scope of work, the flat-fee monthly amount of $16,666.00. Consultant must submit an invoice for payment on or about the first day of each month.

   D. City reserves the right to not pay any invoice or part thereof where the Noise Officer determines that the amount invoiced exceeds the amount that should be paid. City, however, shall pay any undisputed items contained in the invoice. Disputes concerning payments under the provisions of this Agreement shall be resolved by administrative hearing pursuant to the procedures of Denver Revised Municipal Code Section 5-17.

E.   Carry Over and Carry Back, and Additional Services. If Consultant's total fees for any of the services described above are less than the amount budgeted for, the amount by which the budget exceeds the fee may be used, with the written approval of the Noise Officer, to pay fees for additional and related services rendered by Consultant in any other services if in the Noise Officer's judgment, such fees are reasonable and appropriate. The Consultant may perform services, hereinafter referred to as "**Additional Services**," that relate to the subject matter of this Agreement, but which the Noise Officer determines to be not described in the Scope of Work or in excess of the requirements of the Scope of Work. The Consultant shall be compensated for such Additional Services in the amount agreed upon by Consultant and the Noise Officer, but only if the services and the amount of fees have been authorized in writing in advance by the Noise Officer. Authorizations for Additional Services shall contain a basic scope of work for each request, a not-to-exceed budget amount, hourly rate or flat fee for the project, and appropriate approval from the Consultant and the City.

F.   Prompt Payment Ordinance: The City shall process all invoices for payment received from the Consultant on a timely basis in accordance with Denver's Prompt Payment Ordinance, D.R.M.C. §§ 20-107 *et seq*.

4.   TERM: The term of this Agreement shall commence on January 1, 2017, and shall terminate on December 31, 2019, unless terminated earlier in accordance with this Agreement.

5.   DEFENSE AND INDEMNIFICATION:

A.   Consultant hereby agrees to defend, indemnify, and hold harmless City, its appointed and elected officials, agents and employees against all liabilities, claims, judgments, suits or demands for damages to persons or property arising out of, resulting from, or relating to the Consultant's negligence or willful misconduct for work performed under this Agreement ("**Claims**"), unless such Claims have been specifically determined by the trier of fact to be the negligence or willful misconduct of the City. This indemnity shall be interpreted in the broadest possible manner to indemnify City for any acts or omissions of Consultant or its subcontractors either passive or active, irrespective of fault, including City's concurrent negligence whether active or passive, except for the sole negligence or willful misconduct of City.

B.   Consultant's duty to defend and indemnify City shall arise at the time written notice of the Claim is first provided to City regardless of whether Claimant has filed suit on the Claim. Consultant's duty to defend and indemnify City shall arise even if City is the only party sued by claimant and/or claimant alleges that City's negligence or willful misconduct was the cause of claimant's damages.

C.   Consultant will defend any and all Claims which may be brought or threatened against City and will pay on behalf of City any expenses incurred by reason of such Claims including, but not limited to, court costs and attorney fees incurred in defending and investigating such Claims or seeking to enforce this indemnity obligation. Such payments on behalf of City shall be in addition to any other legal remedies available to City and shall not be considered City's exclusive remedy.

D.   To the extent permitted by law, the City agrees to indemnify and hold harmless the U.S. Government, its agents, officers, employees or representatives (the "Indemnified Parties") from and against all claims, demands, damages, liabilities, losses, suits, and judgments (including the costs and expenses incident thereto) which may accrue against, be suffered by, be charged to, or recoverable from the Indemnified Parties, arising out of the FAA providing this data to the Consultant, except to the extent caused by negligence or willful misconduct of the Indemnified Parties. Nothing in this statement shall be deemed to waive the protections of the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 to 120, as reserved to the City in Section 8 below.

E.   Insurance coverage requirements specified in this Agreement shall in no way lessen or limit the liability of the Consultant under the terms of this indemnification obligation. The Consultant shall obtain, at its own expense, any additional insurance that it deems necessary for the City's protection.

F.   This defense and indemnification obligation shall survive the expiration or termination of this Agreement.

6.   **INSURANCE:**

A.   Consultant shall obtain and keep in force during the entire term of this Agreement, all of the insurance policies described in the City's form of insurance certificate which is attached to this Agreement as **Exhibit B** and incorporated herein. Such insurance coverage includes workers' compensation and employer liability, commercial general liability, business automobile liability, and professional liability. Upon execution of this Agreement, Consultant shall submit to the City a fully completed and executed original of the attached insurance certificate form, which specifies the issuing company or companies, policy numbers and policy periods for each required coverage.

B.   The City's acceptance of any submitted insurance certificate is subject to the approval of the City's Risk Management Administrator. All coverage requirements specified in the certificate shall be enforced unless waived or otherwise modified in writing by the City's Risk Management Administrator.

C.   Consultant shall comply with all conditions and requirements set forth in the insurance certificate for each required coverage during all periods in which coverage is in effect.

D.   Unless specifically excepted in writing by the City's Risk Management Administrator, Consultant shall include all subconsultants performing services hereunder as insureds under each required policy or shall furnish a separate certificate (on the form certificate provided), with authorization letter(s) for each subconsultant, or each subconsultant shall provide its own insurance coverage as required by and in accordance with the requirements of this section of the Agreement. All coverages for subconsultants shall be subject to all of the requirements set

forth in the form certificate and Consultant shall insure that each subconsultant complies with all of the coverage requirements.

7. WARRANTIES:

A. Consultant shall exert commercially reasonable efforts to deliver to the City the NextGen Data associated with this Agreement transmitted, in an accurate, complete and timely manner.

B. Consultant warrants that the NextGen Data does not infringe the Intellectual Property rights of any Third Party. Consultant warrants that at as of the inception date of this Agreement the Software does not infringe any United States patent, trademark, copyright or other intellectual property right of any third party. Should the Software become the subject of any infringement claim or suit, the City shall permit Consultant, at Consultant's option, to either replace or modify any affected Software so as to avoid infringement or to procure the right for the City to continue using such items or, if neither of such alternatives is available to Consultant on commercially reasonable terms, the infringing items shall be returned to Consultant and Consultant's sole liability shall be to refund amounts paid therefore by The City for the Software prorated on a straight-line basis over a period of five (5) years. Consultant shall have no obligation and the warranty described in this Section shall not apply with respect to any liabilities, obligations, losses, claims, damages, costs or charges that arise out of or result from any infringement claim made by any person based upon use of the Software in combination with components other than those described in the Software Manual(s) or modifications to the Software made by any person or entity other than Consultant, Consultant' employees, or Consultant' authorized agents. This warranty obligation is conditioned on prompt written notice of any claim, action, or demand related thereto; complete control of the defense and/or settlement thereof by Consultant; and cooperation of the City in such defense.

CONSULTANT, TO THE FULLEST EXTENT PERMITTED BY LAW, DISCLAIMS ALL WARRANTIES NOT EXPRESSLY GRANTED IN THE AGREEMENT, INCLUDING BUT NOT LIMITED TO WARRANTIES OF TITLE, FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY AND NON-INFRINGEMENT OF PROPRIETARY OR THIRD PARTY RIGHTS. CONSULTANT DOES NOT WARRANT THAT THE SERVICES WILL BE OR OPERATE ERROR-FREE. NEITHER CONSULTANT NOR ANY OF ITS PROVIDERS OF INFORMATION, INCLUDING BUT NOT LIMITED TO THE FEDERAL AVIATION ADMINISTRATION, SHALL HAVE ANY LIABILITY FOR THE ACCURACY OF THE DATA CONTAINED ON THE SERVICES OR FOR DELAYS OR OMISSIONS THEREIN. THE CITY ACKNOWLEDGES THAT DATA CONTAINED IN THE SERVICES SHALL BE USED FOR INFORMATIONAL PURPOSES ONLY, AND SHALL NOT BE USED FOR SAFETY PURPOSES. THE CITY FURTHER ACKNOWLEDGES THAT THE DATA DOES NOT ALTER THE CITY'S OBLIGATION TO ADHERE TO APPLICABLE FEDERAL AVIATION REGULATIONS AND AIR TRAFFIC CONTROL INSTRUCTIONS AND PROCEDURES.

THE CITY'S SOLE REMEDIES FOR CONSULTANT'S BREACH HEREUNDER WITH REGARD TO THE SOFTWARE SHALL BE (1) TO OBTAIN FROM CONSULTANT THE

REPAIR, REPLACEMENT, OR CORRECTION OF THE DEFECTIVE SOFTWARE TO THE EXTENT WARRANTED UNDER THIS AGREEMENT OR, IF CONSULTANT REASONABLY DETERMINES THAT SUCH REMEDY IS NOT ECONOMICALLY OR TECHNICALLY FEASABLE, (2) TO OBTAIN A PRO RATA REFUND OF AMOUNTS PAID WITH RESPECT TO THE DEFECTIVE SOFTWARE BASED ON A FIVE-YEAR STRAIGHT LINE AMORTIZATION.

IN NO EVENT SHALL CONSULTANT OR THE FEDERAL AVIATION ADMINISTRATION, BE LIABLE TO THE CITY OR ANY THIRD PARTY FOR ANY INDIRECT DAMAGES, INCIDENTAL OR CONSEQUENTIAL DAMAGES, SPECIAL DAMAGES, EXEMPLARY DAMAGES OR LOST PROFITS RESULTING FROM THE USE OR INABILITY TO USE THE SERVICES, WHETHER THE CLAIM FOR SUCH DAMAGES IS BASED ON WARRANTY, CONTRACT, TORT, OR ANY OTHER LEGAL THEORY, AND WHETHER CONSULTANT IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

8. COLORADO GOVERNMENTAL IMMUNITY ACT: The parties hereto understand and agree that the City and County of Denver, its officers, officials and employees, are relying on, and do not waive or intend to waive by any provisions of this Agreement, the monetary limitations or any other rights, immunities and protections provided by the Colorado Governmental Immunity Act, C.R.S. §§ 24-10-101 to 120, or otherwise available to the City and County of Denver, its officers, officials and employees.

9. NO AUTHORITY TO BIND CITY TO CONTRACTS: The Consultant has no authority to bind the City on any contractual matters. Final approval of all contractual matters which obligate the City must be by the City as required by Charter and ordinance.

10. ASSIGNMENT: The Consultant covenants and agrees that it will not assign or transfer its rights hereunder without first obtaining the written consent of the CEO, which consent shall not be unreasonably withheld. Any attempt by the Consultant to assign or transfer its rights hereunder without such prior written consent of the CEO shall, at the option of the CEO, automatically terminate this Agreement and all rights of the Consultant hereunder. Such consent may be granted or denied at the sole and absolute discretion of the CEO.

11. INSPECTION OF RECORDS:

A. In connection with any consulting services performed hereunder on items of work toward which federal funds may be received under the Airport and Airway Improvement Act of 1982, as amended, the City and County of Denver, the Federal Aviation Administration, the Comptroller General of the United States and any other duly authorized representatives shall have access to any books, documents, papers and records of the Consultant which are directly pertinent to a specific grant program for the purpose of making audit, examination, excerpts and transcriptions. The Consultant further agrees that such records will contain information concerning the hours and specific tasks performed along with the applicable federal project number.

B. The Consultant agrees that until the expiration of three years after the final payment under this Agreement, any duly authorized representative of the City, including the CEO or City Auditor or their representatives, shall have access to and the right to examine any directly pertinent books, documents, papers and records of the Consultant involving transactions related to this Agreement, without regard to whether the work was paid for in whole or in part with federal funds or was otherwise related to a federal grant program. Consultant will be provided reasonable written notice by the City prior to any such audit, inspection or attestation engagement.

12.   INFORMATION FURNISHED BY CITY: The City will furnish to the Consultant available information concerning the Airport and any such other matters that may be necessary or useful in connection with the work to be performed by the Consultant under this Contract. The Consultant shall be responsible for the verification of the information provided to the Consultant.

13.   COLORADO OPEN RECORDS ACT: The Consultant acknowledges that the City is subject to the provisions of the Colorado Open Records Act, C.R.S. §§24-72-201 *et seq.*, and the Consultant agrees that it will fully cooperate with the City in the event of a request or lawsuit arising under such act for the disclosure of any materials or information which the Consultant asserts is confidential and exempt from disclosure. Any other provision of this Agreement notwithstanding, including exhibits, attachments and other documents incorporated into this Agreement by reference, all materials, records and information provided by the Consultant to the City shall be considered confidential by the City only to the extent provided in the Open Records Act, and the Consultant agrees that any disclosure of information by the City consistent with the provisions of the Open Records Act shall result in no liability of the City.

14.   STATUS OF CONSULTANT AS INDEPENDENT CONTRACTOR: It is understood and agreed by and between the parties hereto that the status of the Consultant shall be that of an independent contractor retained on a contractual basis to perform professional or technical services for limited periods of time as described in Section 9.1.1.(E)(x) of the Charter of the City, and it is not intended nor shall it be construed that the Consultant, its employees or subcontractors are employees or officers of the City under D.R.M.C. Chapter 18 or for any purpose whatsoever.

15.   TERMINATION:

A. The City has the right to terminate this Agreement with or without cause on thirty (30) days written notice to the Consultant. However, nothing herein shall be construed as giving the Consultant the right to perform services under this Agreement beyond the time when such services become unsatisfactory to the CEO.

B. The Consultant has the right to terminate this contract with or without cause by giving not less than thirty (30) days prior written notice to the City.

C. If this Agreement is terminated by the Consultant, or if this Agreement is terminated by the City for cause, the Consultant shall be compensated for, and such compensation shall be limited to, (1) the sum of the amounts contained in invoices which it has

submitted and which have been approved by the City, (2) the reasonable value to the City of the work which the Consultant performed prior to the date of the termination notice, but which had not yet been approved for payment, and (3) the cost of any work which the CEO approves in writing which he determines is needed to accomplish an orderly termination of the work.

        D. Consultant may terminate the license for the NextGen/Software if Consultant provides notice stating the basis for allegations that the City has failed to comply with the obligations and restrictions described in Paragraph 3.1 of the Symphony Master License and Service Agreement (which is incorporated herein and attached hereto as **Exhibit C**), and the City does not cure such noncompliance within five (5) days of notice from Consultant. If the City fails to cure a noncompliance, Consultant shall have the right, without affecting any other rights and remedies Consultant may have, to terminate this Contract. In the event of termination for such breach by City, City shall not be entitled to a refund of all or any of the fees paid under this Contract.

        E.   If this Agreement is terminated, the City shall take possession of all materials, equipment, tools and facilities owned by the City which the Consultant is using by whatever method it deems expedient, and the Consultant shall deliver to the City all drafts or other documents it has completed or partially completed under this Agreement, together with all other items, materials and documents which have been paid for by the City, and these documents and materials shall be the property of the City. This paragraph specifically excludes any software licenses, and the rights granted to the City there under, shall, upon termination, cease and the software programs shall be deinstalled and returned to Consultant or destroyed.

        F.   Upon termination of this Agreement by the City, the Consultant shall have no claim of any kind whatsoever against the City by reason of such termination or by reason of any act incidental thereto, except for compensation for work satisfactorily performed as described herein.

        G.   Consultant shall have the right to terminate this Contract in whole or in part if its prime contract for ADS-B is terminated by the FAA, the FAA fails to exercise an option year, or the prime contract ends. Consultant shall provide the City with as much notice as practicable of such termination.

    16.   **NOTICES:** Notices concerning termination of this Agreement, notices of alleged or actual violations of the terms or conditions of this Agreement and other notices of similar importance shall be made:

by Consultant to:	Chief Executive Officer
	Denver International Airport
	8500 Peña Boulevard
	Denver, Colorado 80249-6340
and by City to:	Harris Corporation
	2235 Monroe St
	Herndon, Virginia 20171

Contact: Sharon Goldin / Danielle Molder
Phone: 703-473-5132 / 703-668-6096
Email Address: sharon.goldin@harris.com
danielle.molder@harris.com

17. **NO WAIVER OF RIGHT:** No assent, expressed or implied, to any breach of any one or more of the covenants, terms and provisions of this Agreement shall be deemed or taken to be by the City a waiver of any succeeding or other breach.

18. **ADMINISTRATIVE HEARING:** Disputes arising under or related to this Agreement or the work which is the subject of this Agreement shall be resolved by administrative hearing which shall be conducted in accordance with the procedures set forth in D.R.M.C. § 5-17. The parties hereto agree that the CEO's determination resulting from said administrative hearing shall be final, subject only to the Consultant's right to appeal the determination under Colorado Rule of Civil Procedure 106.

19. **NO DISCRIMINATION IN EMPLOYMENT:** In connection with the performance of work under this Agreement, the Consultant agrees not to refuse to hire, discharge, promote or demote, or to discriminate in matters of compensation, terms, conditions or privileges of employment against any person otherwise qualified, solely because of race, color, religion, national origin, gender, gender variance, age, military status, sexual orientation, marital status, or physical or mental disability; and the Consultant further agrees to insert the foregoing provision in all subcontracts hereunder.

20. **CONFLICT OF INTEREST:** The Consultant agrees that it will not engage in any transaction, activity or conduct which would result in a conflict of interest under this Agreement. The Consultant represents that it has disclosed any and all current or potential conflicts of interest. A conflict of interest shall include transactions, activities or conduct that would affect the judgment, actions or work of the Consultant by placing the Consultant's own interests, or the interest of any party with whom the Consultant has a contractual arrangement, in conflict with those of the City. The City, in its sole discretion, shall determine the existence of a conflict of interest and may terminate this Agreement in the event such a conflict exists after it has given the Consultant written notice which describes the conflict. The Consultant shall have thirty (30) days after the notice is received to eliminate or cure the conflict of interest in a manner acceptable to the City.

21. **TAXES AND COSTS:** The Consultant shall promptly pay, when due, all taxes, bills, debts and obligations it incurs performing work under this Agreement and shall allow no lien, mortgage, judgment or execution to be filed against land, facilities or improvements owned by the City. The City is exempt from the payment of sales or use taxes; the City shall promptly, upon the execution of this Agreement, provide to Consultant a tax-exempt certificate.

22. **COMPLIANCE WITH ALL LAWS AND REGULATIONS:** All of the work performed under this Agreement by the Consultant shall comply with all applicable laws, rules, regulations and codes of the United States and the State of Colorado and with the charter, ordinances, and rules and regulations of the City and County of Denver.

23. **NO THIRD PARTY BENEFICIARIES:** The enforcement of the terms and conditions of this Agreement and all rights of action relating to such enforcement, shall be strictly reserved to the City and the Consultant, and nothing contained in this Agreement shall give or allow any such claim or right of action by any other or third person on such Agreement. It is the express intention of the City and the Consultant that subconsultants and any other person other than the City or the Consultant receiving any benefits from this Agreement shall be deemed to be incidental beneficiaries only.

24. **ADVERTISING AND PUBLIC DISCLOSURES:** The Consultant shall not reference this Agreement or its work hereunder in marketing or public relations materials without first obtaining the written approval of the CEO, which approval will not be unreasonably withheld. Any oral presentation or written materials related to Denver International Airport shall include only presentation materials, work product, designs, renderings and technical data which have been submitted to the Noise Officer for review and approval. The Noise Officer shall review and either reject, modify, or approve submittals in a timely manner so that the Scope of Work is not adversely affected. Nothing herein shall preclude the transmittal of by the City any information to officials of the City, including without limitation, the Mayor, the CEO, member or members of City Council, or the Auditor.

25. **OWNERSHIP OF WORK PRODUCT:** The City may, without restriction, make use materials and documents created by Consultant and/or submitted to the City by the Consultant under this Agreement. The product of any custom development work performed by the Consultant specifically for the City shall become the sole property of the City.

26. **PROHIBITION AGAINST EMPLOYMENT OF ILLEGAL ALIENS TO PERFORM WORK UNDER THIS AGREEMENT**:

A. The Agreement is subject to C.R.S. Title 8, Article 17.5, and D.R.M.C. § 20-90, and the Consultant is liable for any violations as provided in said statute and ordinance.

B. The Consultant certifies that:

(1) At the time of its execution of this Agreement, it does not knowingly employ or contract with an illegal alien who will perform work under this Agreement.

(2) It will participate in the E-Verify Program, as defined in C.R.S. § 8-17.5-101(3.7), to confirm the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement.

C. The Consultant also agrees and represents that:

(1) It shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.

(2) It shall not enter into a contract with a subcontractor or subconsultant that fails to certify to the Consultant that it shall not knowingly employ or contract with an illegal alien to perform work under the Agreement.

(3)   It has confirmed the employment eligibility of all employees who are newly hired for employment to perform work under this Agreement, through participation in the E-Verify Program.

(4)   It is prohibited from using either the E-Verify Program or the Department Program procedures to undertake pre-employment screening of job applicants while performing its obligations under the Agreement, and it has complied with all federal requirements regarding the use of the E-Verify program, including, by way of example, requirements related to employee notification and preservation of employee rights.

(5)   If it obtains actual knowledge that a subcontractor or subconsultant performing work under the Agreement knowingly employs or contracts with an illegal alien, it will notify such subcontractor and the City within three days. The Consultant will also then terminate such subcontractor or subconsultant if within three days after such notice the subcontractor or subconsultant does not stop employing or contracting with the illegal alien, unless during such three day period the subcontractor or subcontractor provides information to establish that the subcontractor or subconsultant has not knowingly employed or contracted with an illegal alien.

(6)   It will comply with any reasonable request made in the course of an investigation by the Colorado Department of Labor and Employment under authority of C.R.S. § 8-17.5-102(5), or the City Auditor under authority of D.R.M.C. § 20-90.3.

27.   FEDERAL PROVISIONS: This Agreement is subject and subordinate to the terms, reservations, restrictions and conditions of any existing or future agreements between the City and the United States, the execution of which has been or may be required as a condition precedent to the transfer of federal rights or property to the City for airport purposes, and the expenditure of federal funds for the extension, expansion or development of the Airport. The provisions of the attached Appendix 1 are incorporated herein by reference.

28.   BOND ORDINANCES; GOVERNING LAW; VENUE: This Agreement shall be deemed to have been made in, and construed in accordance with the laws of, the State of Colorado and the Charter and Ordinances of the City and County of Denver. This Agreement is in all respects subject and subordinate to the Airport's General Bond Ordinance any and all City bond ordinances applicable to the Denver Municipal Airport System and to any other bond ordinances which amend, supplement, or replace such bond ordinances. Venue for any action hereunder shall be in the City and County of Denver, State of Colorado.

29.   **USE, POSSESSION OR SALE OF ALCOHOL OR DRUGS:** The Consultant and Consultant's agents shall cooperate and comply with the provisions of the City and County of Denver Executive Order No. 94 and Attachment A thereto concerning the use, possession or sale of alcohol or drugs. Violation of these provisions or refusal to cooperate with implementation of the policy can result in the City's barring the Consultant and Consultant's agents from City facilities or participating in City operations.

30.   CITY SMOKING POLICY: Consultant acknowledges that smoking is not permitted in Airport buildings and facilities except for designated Airport Smoking Concessions, and so agrees that it will prohibit smoking by its employees and the public in indoor areas and

within 15 feet of entryways of the Airport Premises, except as may otherwise be permitted by the Colorado Clean Indoor Air Act, C.R.S. §§ 25-14-201 to 209. Consultant and its officers, agents, and employees shall cooperate and comply with the provisions of D.R.M.C. §§ 24-301 to 317 *et. seq.*, the Colorado Clean Indoor Air Act, C.R.S. §§ 25-14-201 to 209, City's Executive Order No. 99 dated December 1, 1993, and Executive Order No. 13 dated July 31, 2002.

31. **ENTIRE AGREEMENT:** The parties acknowledge and agree that the provisions contained herein constitute the entire agreement and that all representations made by any officer, agent, or employee of the respective parties unless included herein are null and void and of no effect. No alterations, amendments, changes, or modifications to this Agreement, except those expressly reserved herein to the CEO, shall be valid unless they are contained in an instrument which is agreed to by all parties with the same formality as this Agreement.

32. **SEVERABILITY:** In the event any of the provisions, or applications thereof, of this Agreement are held to be unenforceable or invalid by any court of competent jurisdiction, the validity and enforceability of the remaining provisions, or applications thereof, shall not be affected.

33. **HEADINGS:** The heading contained in this Agreement are for reference purposes only and shall not in any way affect the meaning or interpretation of this Agreement.

34. **CONTRACT DOCUMENTS; ORDER OF PRECEDENCE:** This Agreement consists of Articles 1 through 35, which precede the signature page, and the following exhibits and attachments which are incorporated herein and made a part hereof by reference:

Exhibit A	Scope of Work
Exhibit B	Certificate of Insurance
Exhibit C	NextGen Data Usage Terms
Appendix No. 1	Standard Federal Assurances and Nondiscrimination

In the event of an irreconcilable conflict (i) between a provision of Articles 1 through 35 and any of the listed exhibits or attachments or (ii) between provisions of any exhibits or attachments, such that it is impossible to give effect to both, the order of precedence to determine which document shall control to resolve such conflict, is as follows, in descending order:

Appendix No. 1
Articles 1 through 35 hereof
Exhibit A
Exhibit B
Exhibit C

35. **CITY EXECUTION OF AGREEMENT:** This Agreement is expressly subject to, and shall not become effective or binding on the City, until it is fully executed by all signatories of the City and County of Denver. This Agreement may be signed electronically by either party in the manner specified by the City.

[END OF AGREEMENT; APPENDIX, SIGNATURE PAGES, and EXHIBITS FOLLOW]

APPENDIX NO. 1

STANDARD FEDERAL ASSURANCES AND NONDISCIRIMINATION

NOTE: As used below the term "contractor" shall mean and include the Consultant, and the term "sponsor" shall mean the "City".

During the term of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1.   Compliance with Regulations. The contractor shall comply with the Regulations relative to nondiscrimination in federally assisted programs of the Department of Transportation (hereinafter "DOT") Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2.   Nondiscrimination. The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, creed, color, sex, national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3.   Solicitations for Subcontractors, Including Procurements of Materials and Equipment. In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin.

4.   Information and Reports. The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto and shall permit access to its books, records, accounts other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration (FAA) to be pertinent to ascertain compliance with such Regulations, orders, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information, the contractor shall so certify to the sponsor of the FAA, as appropriate, and shall set forth what efforts it has made to obtain the information.

5.   Sanctions for Noncompliance. In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the sponsor shall impose such contract sanctions as it or the FAA may determine to be appropriate, including, but not limited to:

a.   Withholding of payments to the contractor under the contract until the contractor complies, and/or

b.   Cancellation, termination, or suspension of the contract, in whole or in part.

6.   Incorporation of Provisions. The contractor shall include the provisions of paragraphs 1 through 5 in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the sponsor or the FAA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, however, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the sponsor to enter into such litigation to protect the interests of the sponsor and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

7. NONDISCRIMINATION IN AIRPORT EMPLOYMENT OPPORTUNITIES

The contractor assures that it will comply with pertinent statutes, Executive Orders and such rules as are promulgated to assure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or handicap be excluded from participating in any activity conducted with or benefiting from Federal assistance.

It is unlawful for airport operators and their lessees, tenants, concessionaires and contractors to discriminate against any person because of race, color, national origin, sex, creed, or handicap in public services and employment opportunities.

8. TITLE VI LIST OF PERTINENT NONDISCRIMINATION ACTS AND AUTHORITIES

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

• Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin);
• 49 CFR part 21 (Non-discrimination In Federally-Assisted Programs of The Department of Transportation—Effectuation of Title VI of The Civil Rights Act of 1964);
• The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
• Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR part 27;
• The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
• Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
• The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
• Titles II and III of the Americans with Disabilities Act of 1990, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131 – 12189) as implemented by Department of Transportation regulations at 49 CFR parts 37 and 38;
• The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
• Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
• Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
• Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681 et seq).

Federal Fair Labor Standards Act (29 U.S.C. § 201, et seq.)
All consultants, sub-consultants, contractors and subcontractors employed under this federally assisted projects must comply with the Fair Labor Standards Act ("FLSA"). However, 29 C.F.R. § 213 exempts employers from complying with FLSA for employees in a bona fide executive, administrative or professional capacity. Sponsors must include this language in all contracts whether federally funded for not.

Prohibition of Segregated Facilities (41 C.F.R. § 60)
All consultants, sub-consultants, contractors and subcontractors employed under this federally assisted projects must comply with the requirements of the Equal Employment Opportunity clause by ensuring that facilities they provide for employees are free of segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin. Sponsors must include this clause must be included in all contracts that include the equal opportunity clause (any contract or subcontract when the amount exceeds $10,000), regardless of the amount of the contract.

Contract Control Number:

IN WITNESS WHEREOF, the parties have set their hands and affixed their seals at Denver, Colorado as of

SEAL

CITY AND COUNTY OF DENVER

ATTEST:

By_____

_____

APPROVED AS TO FORM:

REGISTERED AND COUNTERSIGNED:

By_____

By_____

By_____

Contract Control Number: PLANE-201629366-00
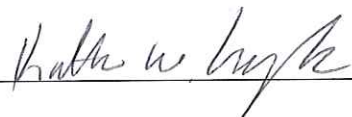
Contractor Name: HARRIS CORPORATION

By: _____

Name: GREGORY P. HUGHES
(please print)

Title: CONTRACTS MANAGER
(please print)

ATTEST: [if required]

By: _____

Name: KATHLEEN W. TAYLOR
(please print)

Title: CONTRACTS MANAGER
(please print)

EXHIBIT A

1.   Introduction

This scope of work describes the required components and capabilities of the Denver International Airport (DIA) Noise and Operations Monitoring System (NOMS) in which Harris is the replacement NOMS.   The scope of work is based on the November 23, 1993 "Performance Specifications for a Noise and Operations Monitoring System for Denver International Airport," which HMMH prepared for DIA as well as the feedback collected from DIA during 90 trial of EnvironmentalVue. While much of the original specifications are the same, and the ability to support the April 21, 1988 "Intergovernmental Agreement on a New Airport" relating to DIA (the "DIA IGA") is paramount, Denver's needs and understanding of required capabilities have evolved. The system specifications defined within this statement of work will meet the current and anticipated DIA NOMS needs.

1.1. Replacement NOMS Objectives

The replacement NOMS must meet following basic objectives:

▪ The replacement NOMS must provide DIA with the capability to comply with noise and operations monitoring conditions set forth in the "intergovernmental agreements" (the "IGAs") into which DIA entered with Adams County: the April 21, 1988 "Intergovernmental Agreement on a New Airport" relating to DIA (the "DIA IGA"). The replacement NOMS will meet or exceed the capabilities demonstrated during the 90-day evaluation of the EnvironmentalVue system, and meet or exceed all other requirements that this document defines.

▪ The requirement for discrimination of sound levels produced by aircraft operations from ambient sound levels at a number of sites with very low A-weighted signal to noise ratios.

▪ Interfacing with an existing automated aircraft noise modeling program that computes contours and NEPS point values.

▪ Interfacing with the existing noise monitors.

▪ The requirement for production, archiving, and retrieval of very large quantities of both acoustic and operational information necessary to support estimates of annual Leq(24) values at 101 grid points from measurements made at monitoring sites.

1.2. Other Major Replacement NOMS Capabilities Requirements

In addition to the capabilities related to the DIA IGA, DIA requires that the replacement NOMS provide strong capabilities related to the following five areas of primary system use: (1) public information, (2) noise abatement compliance monitoring, (3) regulatory, (4) analytical, and (5) other noise program support.

1.2.1. Public Information Uses

Public information uses include regular reports, special reports, and response to special requests for information. Section 5.4.2 of the DIA IGA identifies several reporting requirements. DIA uses the system to prepare regular reports for distribution to interested parties, such as the following:

▪ Support the ability to develop reports, perform analysis, and share information with the public and elected public officials regarding noise exposure and aircraft operations. Example of the types of analysis and reporting that must be performed include:
  o Share quarterly reports, as required in paragraph 5.4.2 of the DIA IGA.
  o Annual Ldn contours and Leq(24) grid point values, with comparisons to the NEPS limits, as required in paragraph 5.4.3 of the Intergovernmental Agreement on a New Airport.
  o Other reports on measured cumulative noise exposure levels, including hourly, daily, weekly, monthly, seasonal, and annual noise levels, compared to historic levels.
  o Contributions of DIA aircraft, other aircraft, and other sources to total exposure.
  o Comparisons of changes in noise exposure to changes in airport operation (particularly runway use, activity levels, fleet mix, and flight track use).

- Monitoring of compliance with noise abatement procedures, such as the Preferential Runway Use System addressed in paragraph 5.2 of the DIA IGA, restriction of departures to the west on Runway 26R to Stage 3 aircraft (paragraph 5.2.1), and Flight Corridors (paragraph 5.2.2).

- Examination of noise and operational data to understand the factors contributing to measured noise exposure and to explain differences between measured levels and INM estimates.

1.2.2. NEPS Regulation

In this case, DIA is effectively the regulated party. Output from the replacement NOMS provides the information required to determine if DIA is in compliance with the NEPS limits.

1.2.3. Analytical Uses

Analytical uses involve use of the system to collect, store, and examine noise and operational data to understand the factors contributing to measured noise exposure and to explain differences between measured levels and INM estimates.

1.3. Interpretation of Specifications

For purposes of this specification, the use of the word "shall" indicates required features or capabilities.

Where the specifications refer to another section in this document, the reference includes all lower level sections that further describe requirements, features, or capabilities.

1.4. System Architecture

Architecture will conform with the provisions of Section 3 of this Scope of Work.

1.4.1. Replacement NOMS Application Delivery Architecture

The replacement system must use a remotely hosted, web-based application service delivery approach. The replacement NOMS must be accessible to any DIA-authorized user from various client devices through a thin client interface over the internet via an industry-standard Web browser (or browsers). To the extent that Harris must install any local computer hardware or software at DIA, the installation shall be coordinated with and approved by the DIA Information Technologies staff.

1.4.2. External Data Acquisition Components

The replacement NOMS shall continue external data acquisition functions including noise data from permanent and portable monitors, and flight operations and identification data from *a Harris NextGen data feed, and weather data from NOAA*.

1.4.3. Audio and Radio Monitoring and Recording Components

This capability will be provided external to the replacement NOMS leveraging existing B&K 3639-C tools and DIA radio system.

1.4.4. Aircraft Operation and Identification Data Acquisition and Analysis Components

The replacement NOMS shall allow DIA to analyze, edit, sort, plot, and store aircraft identification, flight path, altitude profile, and other operational data.

1.5. Reuse of Available Components of the Existing System

The replacement NOMS solution is fully hosted by Harris, The Denver International Airport workstations will need access to the EnvironmentalVue web sites, a current version of the 64 bit Java runtime, and internet access. The City of Denver will provide the network infrastructure and telecommunications service for the gathering and transfer of unprocessed data from the NOMS system components at Denver to Harris via the

Internet. Unprocessed data is defined as data that has not been processed and imported into EnvironmentalVue.

Upon Agreement execution DEN will provide Harris access to the existing B&K 3639-C NMTs to begin the data integration process. Denver International Airport is responsible for ensuring continued access to the B&K NMTs and the data that is derived from them.

1.6. Authorized Third-Party Access to Data Generated by DIA Replacement NOMS

Harris will return all data to DIA at the termination of the contract. DIA's data will then be removed from the system by deletion and space wiping/overwriting. Harris will confirm to DIA in writing its compliance with this return and/or destruction of the data. However, the Harris NextGen Data for DIA shall remain the property of Harris and the FAA. DIA shall retain ownership of any reports generated from the *NextGen* data

The Harris NextGen Data powers both the EnvironmentalVue and PublicVue systems. It contains the fusion of all available FAA surveillance sources, thus providing greater accuracy, availability, and update rates (real-time) than any single source of data provides alone. Harris will provide DIA NextGen Data surveillance coverage of a 45 NM radius from the center of DEN to 23,000 ft. in the EnvironmentalVue and PublicVue systems.

2.   Overall Performance of the Replacement NOMS

This section describes requirements that all elements of the replacement NOMS shall satisfy.

2.1. Accommodation of Utility Service and Communication System Interruption

The replacement NOMS shall resume normal operation automatically when power returns following a utility service or communication system failure[1]. At the resumption of utility and communication system service, the replacement NOMS shall automatically perform all automatic functions that were delayed.

2.2. Accommodation of Variation in Electrical Power Supply

The NOMS shall operate within specifications when electrical power varies within:

- Voltage (steady state) 115 volts ± 10%.
- Frequency 60 Hz ± 2 Hz.

Any Harris-provided hardware elements of the replacement NOMS with adequate protection devices to prevent equipment damage in the event of any of the following:

- Loss of all line power.
- Loss of any leg of a three-phase supply circuit.
- Voltage surges, of any origin, in excess of the rated supply for any item of equipment.

Harris shall provide ground fault interruption protection for any Harris-provided external components as appropriate for shock protection.

2.3. Clock Accuracy

The replacement NOMS shall timestamp all data that is collected consistently such that no system deviates from the reference by more than exceeds two seconds. The NOMS must have a means to check and where ever possible adjust the clock settings in all noise data acquisition components if a deviation is discovered.

EnvironmentalVue shall display information in local time, converting data from other time references as needed. The system shall automatically convert between Mountain Standard Time (MST) and Mountain Daylight Time (MDT) at the appropriate times during the year.

---

[1] Utility service and communication system failure includes loss of power, telephone service, and/or other communication system (e.g., radio telemetry, radio modem, etc.) failure.

3. Hosted Server Architecture

The proposed NMFTS solution is fully hosted by Harris. Therefore, the database and service do not require direct interaction with the current Denver Airport ICT Technology/ Product Standards for server deployment. The workstations will need access to the EnvironmentalVue web sites and a current version of Java installed.

DEN_003 Rev3
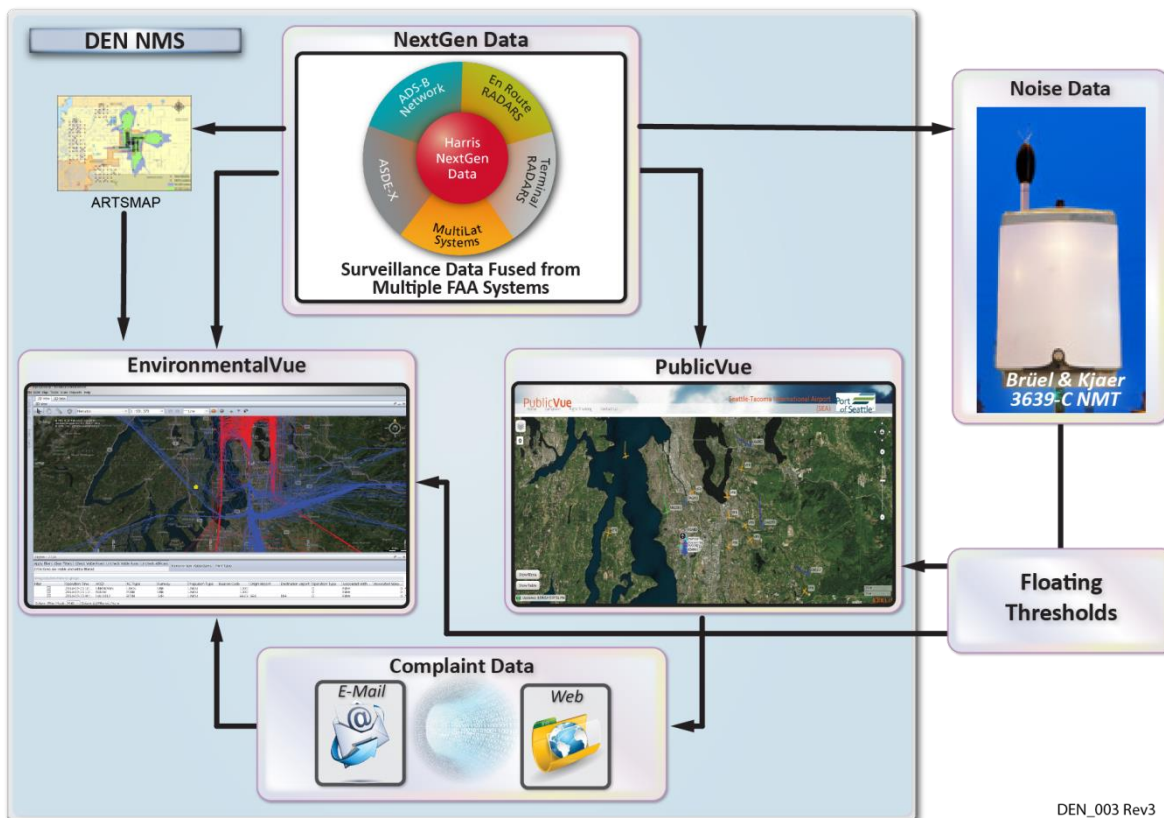
3.1. CMCS Layout

This section is not relevant to the replacement NOMS.

3.2. Utilities in the CMCS

This section is not relevant to the replacement NOMS.

3.3. Central Computer(s)

The replacement NOMS solution is fully hosted by Harris; The Denver International Airport (DIA) workstations will need access to the EnvironmentalVue web sites and a current version of Java installed. DIA will provide the network infrastructure and telecommunications service for the gathering and transfer of unprocessed data from the NOMS system components located at DIA to Harris via the Internet.

Harris has taken measures at all levels to ensure a high level of protection of the application and systems to safeguard data and business continuity

The Symphony Suite servers reside at our professionally hosted SAVVIS data center in an access-controlled building with 24x7 security and cameras. Anyone gaining entry to the computer area must be authorized and authenticated through a badge and biometric entry system. The facilities include state-of-

the-art fire suppressions, HVAC (heating, ventilation, and air conditioning controls), backup generators, UPSs, redundancies in telecommunication paths and were designed taking seismic engineering into account.

Network security includes managed firewalls and intrusion detection systems. Additionally, connections through the internet are typically are made using secure SSL connection with 128-bit encryption or better, as appropriate. Our network policies require strong passwords, which are periodically changed. Internal accounts are restricted to allow access to required areas. Operating systems are hardened in accordance with best practices and operating system vendor recommendations. Systems are also periodically patched to ensure security features are current. Similarly, the database is periodically patched and hardened in accordance to vendor recommendations and best practices. Accounts are limited in access control to only the functions performed and data required. The database is backed up, with tapes periodically rotated off site.

Finally, all aspects of the system are monitored by Harris and SAVVIS to verify the components are operating within expected norms. Exceptional events trigger alarms, automatically sending notifications to the appropriate stakeholders for review.

3.4. Modems or Other Data Transfer and Communications Devices

This section is not relevant to the replacement NOMS.

3.5. Replacement NOMS Display

3.5.1. Central Computer Monitor

This section is not relevant to the replacement NOMS

3.5.2. Default Display

This section is not relevant to the replacement NOMS.

3.5.3. Base Map

The EnvironmentalVue Suite leverages 3rd party application services for map and weather data. Map data is provided from both Microsoft Bing Map servers for standard basemap layers. Additionally custom maps are delivered through services hosted by Terrapixel. These services are delivered to the end user applications through Web Map Service (WMS) or Web Feature Service (WFS) web mapping service connections. Weather data is provided by National Oceanic and Atmospheric Administration (NOAA) to both the client through WMS and WFS connections.   Tabular data is also collected from NOAA at the Harris data centers.

3.5.4. Ability to Select Geographic Coverage

The replacement NOMS shall require no greater than 30 seconds to refresh the full area and detail of the base map.

The replacement NOMS must allow users to define any map area to be displayed that is a subset of the entire map. The screen refresh time should be reduced in proportion to the reduction in the area displayed.

The replacement NOMS shall allow system users to change the scale of the map displayed on a workstation terminal and on hard-copy plots. The map must include a graphic scale when shown on screen and in all hard-copy plots. The replacement NOMS shall allow users to change the mapping system's reference point.

3.5.5. Base Map Manipulation

The replacement NOMS shall allow system operators to zoom in and out on the base map viewed on the display monitor using either cursor keys or the mouse.

The replacement NOMS allows operators to identify specific addresses through the use of an address lookup feature.

3.6. System Security

The Harris system is 100% hosted within the U.S. and the data never leaves the U.S. Harris has taken measures at all levels to ensure a high level of protection of the application and systems to safeguard data and business continuity.

Network security includes managed firewalls and intrusion detection systems. Additionally, connections are made using secure SSL connection with 128-bit encryption. Our network policies require strong passwords, which are periodically changed. Internal accounts are restricted to allow access to required areas. Operating systems are hardened in accordance with best practices and operating system vendor recommendations. Systems are also periodically patched to ensure security features are current.

Similarly, the database is periodically patched and hardened in accordance to vendor recommendations and best practices. Accounts are limited in access control to only the functions performed and data required. The database is backed up, with tapes periodically rotated off site.

Finally, all aspects of the system are monitored by Harris and SaVVis to verify the components are operating within expected norms. Exceptional events trigger alarms, automatically sending notifications to the appropriate stakeholders for review.

3.7. Meteorological Display

NOMS will provide a near real-time weather radar for display as a layer within PublicVue. This solution includes 5 km composite radar. . EnvironmentalVue includes Meteorological Aerodrome Reports (METAR) which are automatically captured, stored, and processed into the database into hourly records. The data is parsed into discrete fields which can be used in reporting and analysis independently and with other data types. The weather records are correlated with these data types providing additional context for analysis. Data fields include, but are not limited to, Temperature, Wind Speed, Direction, Pressure, and Humidity.

3.8. Public Display Monitor

> *This section is intentionally left blank as it is not relevant to the replacement NOMS.*

3.9. Printers and Plotters

> *This section is intentionally left blank as it is not relevant to the replacement NOMS.*

3.10. RMS Audio and Tower Radio Monitoring and Recording

> *This section is intentionally left blank as it is not relevant to the replacement NOMS.*

3.11. Analysis Computers

> *This section is intentionally left blank as it is not relevant to the replacement NOMS.*

3.12. Replacement NOMS Network

The proposed replacement NOMS solution is fully hosted by Harris, The Denver International Airport workstations will need access to the EnvironmentalVue web sites and a current version of Java installed. The City of Denver will provide the network infrastructure and telecommunications service for the gathering and transfer of unprocessed data from the NOMS system components to Harris via the Internet.

3.13. *Flight Operations and Identification* Data Acquisition and Analysis Subsystem

Harris must configure the replacement NOMS to provide the same level (or greater) capabilities related to extract, sort, analyze, and present *flight operations and identification* data as the existing system, and must provide and install any new components required to accomplish these functions. Harris will provide the flight operations and identification data from a NextGen data feed.

3.13.1. Data Access Arrangements

> *This section is intentionally left blank as it is not relevant to the replacement NOMS.*

3.13.2. Operation

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.   External Data Acquisition Component Specifications

External data acquisition includes measurement of acoustical data, using permanently installed and portable equipment. It also includes METAR data and NextGen data components that Harris provides to satisfy the stated performance requirements. Harris makes every attempt to provide continuous and complete data sets, however, availability is subject to the availability of the root data sources.

4.1. Ultimate System Capacity

The replacement NOMS shall have the capacity to accommodate noise data collection from up to at least 150 permanent or portable RMS installations.

4.2. Initial System Installation

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.3. Site Selection and Installation Approvals

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4. Remote Monitoring Station (RMS) Requirements

Harris shall access and integrate the acoustic ("sound" and "noise") measurements from the existing RMS installations that are necessary to meet all requirements of these specifications.

4.4.1. RMS Installation

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.2. Acoustic Signal Processing

The replacement NOMS shall process the sound levels obtained at each RMS to determine each of the noise parameters that this document defines as a requirement.

4.4.3. Data Transfer

The replacement NOMS shall include checks for data loss and errors in transmission. It shall automatically retransfer data when errors or data loss are identified. If the NOMS cannot successfully and completely transfer data, it shall enter a message in the system log. Data transfer shall be completed in a short enough time to meet all performance requirements of these specifications.

4.4.4. Measurement of Noise Events

A critical replacement NOMS function is accurate identification and measurement of noise events caused by DIA- and non-DIA-related aircraft activity. The system's ability to discriminate and measure "aircraft noise events" is a major measure of replacement NOMS performance.

The system will allow the user to configure the noise event detection at each noise monitor. The configurable parameters will include at least the following options:

1. Minimum and maximum duration of a noise event.

2. Triggering type

    a. Single set triggering (one set of parameters for a 24hr period); or

    b. Day/Night triggering using a LDN day and LDN night period

3. Threshold type

    a. Fixed

        b.   Floating threshold

   4.   For a fixed threshold, selection of a trigger level in dB(A)

   5.   For a floating threshold, the selection of the following:

        a.   Number of seconds for computing the pre-event background

        b.   Triggering delta dB(A)

        c.   End trigger delta dB(A)

        d.   Slope of the event start

Harris will work with DIA to configure these parameters. For the purposes of the initial installation, the parameters will be set to closely approximate the existing event detection unless otherwise agreed to by Harris and DIA Project Managers in writing.

4.4.4.1. Multi Source Noise Events

EnvironmentalVue will automatically record the number of aircraft that met the correlation parameters for each recorded event at a noise monitor. The aircraft that was determined to contribute the most noise will be automatically associated with the corresponding event.   The user can manually annotate the event or change the correlated aircraft if necessary. These values can be viewed in the application and included in custom reports if needed by the user.

Harris will work with DIA when developing the verification matrix to define a test approach for the 30 day trial that is mutually agreeable by both parties.

4.4.5. Measurement Performance Requirements

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.6. Dynamic Range and Electrical Noise

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.7. Frequency Response

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.8. Linearity

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.9. Self-Calibration

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.10. Calibration

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.11. RMS/CMCS Two-Way Communication System

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.12. Enclosures

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.13. Environmental Requirements

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.13.1. Humidity

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.13.2. Vibration

This section is intentionally left blank as it is not relevant to the replacement NOMS.

4.4.13.3. Acoustic Noise

This section is not relevant to the replacement NOMS.

4.4.13.4. Lightning Strike, Magnetic, and Electrostatic Interference

This section is not relevant to the replacement NOMS.

4.4.13.5. Temperature

This section is not relevant to the replacement NOMS.

4.4.13.6. Wind

This section is not relevant to the replacement NOMS.

4.4.13.7. Materials

This section is not relevant to the replacement NOMS.

4.4.13.8. Other

This section is not relevant to the replacement NOMS.

4.4.14. Poles and Microphone Access

This section is not relevant to the replacement NOMS.

4.5. Meteorological Data Collection Requirements

This section is not relevant to the replacement NOMS.

4.5.1. Sensor Installation

This section is not relevant to the replacement NOMS.

4.5.2. Sensors

This section is not relevant to the replacement NOMS.

4.5.3. Environmental and Installation Criteria

This section is not relevant to the replacement NOMS.

4.5.4. Data Link Performance Requirements

This section is not relevant to the replacement NOMS.

4.5.5. Portable Noise Monitoring Field Kits

This section is not relevant to the replacement NOMS.

5.   Software

The replacement NOMS will meet or exceed the capabilities demonstrated during the 90-day evaluation of the EnvironmentalVue system, and meet or exceed all other requirements that this document defines.

The software shall process information within a database that includes acoustic information from the RMSs and portable noise monitors, weather data, aircraft flight operations and identification data from the NextGen data feed, and manually entered complaint data. The software shall automate the correlation of aircraft

noise data, complaint data, and aircraft operational data in a single database. It shall allow data from individual or multiple data sources to be merged and suitable reports produced. It shall produce certain reports from these data sources on an automatic basis and other reports on an on-demand basis.

5.1. General

5.1.1. Deliverable Software

At the time of the noise event's Lmax, the positions of all aircraft within a user-defined slant distance of the applicable noise monitor are examined. Aircraft in closer proximity to the noise monitor are considered more likely to be the cause of the noise event than aircraft further away. Aircraft type and performance factors are considered and then a correlation is determined. The user may change the radius around each noise monitor to affect the results of the correlation process. The user may also manually override any individual noise event to flight track correlation in favor of a different correlation or no correlation at all.

5.1.2. Software Licenses

Harris shall provide sufficient permanent software licenses for all software for simultaneous use by a minimum of four operators.

5.1.3. Computational Precision

Arithmetic to logarithmic and logarithmic to arithmetic conversions, and other computations shall not introduce errors of greater than ± 0.1 dBA.

5.1.4. Noise Data Rounding

Noise data can be printed and displayed rounded to the nearest 0.1 dBA or whole dB, at the operator's option in most cases within the application. Harris will work with DIA within the first 45-days of the notice to proceed to identify additional locations that may need this capability beyond what is currently available.

5.1.5. Operating Status

This section is covered under the hosting facility description and support.

5.1.6. Error Checking

The Harris system performs a nightly data integrity validation to identify missing or incomplete data. This section is covered under the hosting facility description and support.

5.1.7. Reports

The replacement NOMS shall support the production of all reports defined in these specifications, and all standard or custom reports produced by the existing system. Harris shall be responsible for all system configuration, script preparation, and custom report writing necessary to meet this requirement. The software shall allow system operators to preview and easily modify the format of all standard or custom reports on the computer screen prior to printing, though some modifications will be handled through the export of data to 3rd party programs like Word or Excel.

5.1.7.1. Printing Control

The replacement NOMS shall provide the means to initiate or suppress the automatic printing of all reports, individually and in total, including all reports defined in these specifications. The replacement NOMS shall allow users to print to all existing DIA noise office computers and to all other computers on the DIA network to which the Noise Office has access which meet minimal system requirements outlined in the most current Symphony Workstation Setup Guide.

5.1.7.2. Report Format

Harris shall review the report format for each report with DIA within 45 days after notice-to-proceed and, with mutual agreement by the DIA and Harris project manager identify needed changes reports to support DIA operations.

5.1.8. Database File(s)

The replacement NOMS shall create a database to contain the data compiled by the replacement NOMS. The replacement NOMS shall utilize a single integrated database. The software shall maintain a separate unedited version of the data if needed for reference. For edits related to noise source classification, the replacement NOMS shall accomplish this function by maintaining separate "flag" values with each noise event in the database that record the original and edited classification. These values will be manually entered into the flex fields. The possible flag values shall include at least those values identified in these specifications. The replacement NOMS shall allow the user to retrieve, sort, and analyze the event data based on either the original or edited flags. The replacement NOMS shall support the automatic recomputation of cumulative exposure values for DIA-aircraft-related, non-DIA-aircraft-related, non-aircraft-related, and other sources. Reprocessing can also be manually initiated and/or requested through support.

5.1.8.1. File Editing

The report software shall provide for convenient editing of data and reports. The editing shall include provisions for keyboard editing of faulty or incorrect data, either existing on the system or sorted on off-line storage media. The replacement NOMS shall provide the capability for recomputation of any computed values that are changed by the editing process and for recompiling and reprinting of the edited reports after such editing deletions or entries. The edited data shall replace original faulty or missing data in the storage maintained for preparation of other reports.

5.1.8.2. Data Editing Log

EnvironmentalVue Portal maintains a data editing log (audit trail) of all changes made to records maintained in the database. The "Maintenance–Edit Log" standard report includes the original values as well as the user responsible for the changes.

5.1.9. Security

The software shall provide security against unauthorized system operation.

5.1.10. System Log

This section is not relevant to the replacement NOMS.

5.2. Noise Monitoring Software

Harris shall supply software to acquire data from remote monitoring stations; to process the data and produce noise-related reports and databases as described in these specifications; to accept keyed input; to drive the printers and plotters available to the replacement NOMS; and to drive the replacement NOMS displays.

The software shall support all noise monitoring requirements defined by the two IGAs.

5.2.1. RMS Capacity

The replacement NOMS shall have an ultimate capacity for installation of at least 150 fixed and portable RMS. No software modifications, except for output format changes, shall be required to add RMS units.

5.2.2. RMS Calibration

The replacement NOMS software shall not include calibration signals in any noise calculations.

5.2.3. Noise Event Identification

The replacement NOMS event-discrimination capabilities and accuracy shall meet or exceed that of the existing system

The software shall identify and automatically generate database entries on all noise events, and flag the noise events according to the categories of sources identified in these specifications. It is critically important that the replacement NOMS design undertake this discrimination with a high degree of accuracy. It is a

precondition for identification of DIA and non-DIA aircraft noise events that there be flight operation and identification verification of an aircraft that could make the noise. Noise event discrimination includes identification of DIA-related aircraft noise events that occur simultaneously with non-DIA aircraft events or non-aircraft noise. The replacement NOMS also shall accumulate and report records of non-aircraft noise.

5.2.3.1. Adjustable Noise Event Thresholds and Durations

See Section 4.4.4 "Measurement of Noise Events."

5.2.3.2. Aircraft Event Identification

The replacement NOMS shall incorporate a hardware/software system for discriminating between noise events (which exceed the event thresholds) that are caused by: (1) DIA-related aircraft events, (2) non-DIA-related aircraft noise events, and (3) non-aircraft events. As the parameters will affect system performance, Harris will work with DIA to make changes to these parameters as needed and keep appropriate records.

5.2.3.3. Initial Establishment of Parameter Values

Harris shall undertake the initial establishment of all parameters for aircraft event identification for each permanent RMS initially installed, so that the system will perform in a manner that is acceptable to DIA. Care will be taken by Harris to match existing performance as deemed appropriate by DIA. Changes will be made by mutual agreement by the DIA and Harris Project Manager, documented and saved by the support team's configuration management system. Harris shall document and changes to pre-upgrade parameters and the reason for making the changes. This documentation shall also describe procedures to be used in establishing parameter values for any location of the RMS.

5.2.3.4. Adjustable High-Range Noise Event Thresholds

The replacement NOMS shall allow the system operator to establish maximum noise level ("MNL" or L_{max}) or Sound Exposure Level ("SEL") thresholds for each RMS that, when exceeded by an aircraft noise event, identify the event as a high-range noise event. The range of allowable thresholds shall be from 35 to 120 dBA in one-tenth decibel steps.

5.2.4. Noise Event Data Compilation

For each noise event measured at each RMS, the replacement NOMS shall provide for the compilation and computation of the following (minimum) data from the database:

- Date;
- RMS identification;
- MNL (Lmax)
- SEL;
- Time of MNL (Lmax);
- Start time of event (time when noise event sound level threshold exceeded);
- End time of event (time when sound level falls below threshold);
- Duration of event;

Additionally, the system will be able to correlate the following data with the events:

- Wind speed and direction (from METAR), air temperature, and relative humidity, for the observation closest in time to the time of the MNL (Lmax);
- Noise event source, including all of the event classification categories included in the existing system;
- Whether the event was a high-range event;
- For DIA-related aircraft noise events only: the runway used and the type of operation.
- For all aircraft events: the flight plan information available from the NextGen flight operation and identification data, including all available and applicable categories of data listed in these specifications;

- For all aircraft events: the distance from the RMS to the aircraft at the point of closest approach ("PCA") of the aircraft's flight track, the aircraft altitude at the time of PCA, and the distance from the RMS to the point on the ground directly under the aircraft at the PCA;
- One second Leq values collected during each noise event; and
- PCA calculations can also be initiated at RMS locations to provide additional data at the user's request.

For each noise event, these data or the data necessary to calculate the values shall be entered in the replacement NOMS database within eight hours of the end of the day (i.e., prior to 0800 local time the next day), with the exception of the NextGen flight operation and identification-derived data, which shall be entered into the database.

5.2.5. Hourly Data Compilation

For each hour period, the replacement NOMS shall provide for the compilation and computation of the following (minimum) data from the database:

- Individual one hour Leq values caused by: (1) DIA-related aircraft noise events, (2) non-DIA-related aircraft noise events, and (3) non-aircraft events (community noise)
- Total Leq from all sources
- Five operator adjustable percentile levels (Lx)
- Percent of time RMS operational during hour
- Number of noise events monitored at RMS during the hour

The replacement NOMS shall compile this information for each hour of the day, for each RMS, and enter it into the database when the flight operation and identification data for the time period are obtained and processed. Additionally, the following information can be obtained through a report or query result:

- Number of DIA-related aircraft noise events identified at the RMS during the hour
- Number of non-DIA-related aircraft noise events identified at the RMS during the hour
- Number of non-aircraft noise events identified at the RMS during the hour

5.2.6. Daily Data Compilation

For each 24-hour period, the replacement NOMS shall provide the capability to produce the following (minimum) information for each RMS:

- Individual Leq(24) values caused by: (1) DIA-related aircraft noise events, (2) non-DIA-related aircraft noise events, (3) non-aircraft events, and (4) all noise sources
- Individual Ldn values caused by: (1) DIA-related aircraft noise events, (2) non-DIA-related aircraft noise events, (3) non-aircraft events, and (4) all noise sources
- Five operator adjustable centile levels (Lx)
- Percent of time RMS operational during day
- Number of noise events monitored at RMS during the day
- Number of DIA-related aircraft noise events identified at the RMS during the day
- Number of non-DIA-related aircraft noise events identified at the RMS during the day
- Number of non-aircraft noise events identified at the RMS during the day

Downloading of any of all noise data shall not limit or prohibit any operators' ability to perform any other tasks on the system while downloading is occurring.

5.2.7. Monthly Data Compilation

The NOMS shall provide the capability to produce monthly equivalents of the data for the Daily Data compilation.

5.2.8. Quarterly Data Compilation

The NOMS shall provide the capability to produce quarterly equivalents of the data for the Daily Data compilation.

5.2.9. Annual Data Compilation

The NOMS shall provide the capability to produce yearly equivalents of the data for the Daily Data compilation.

5.2.10. Noise Reports

The replacement NOMS shall provide a standard reporting package that includes at least the following reports:

5.2.10.1. General

The report compilation shall be possible for hourly, daily, monthly, quarterly, yearly, and operator-selectable periods.

At operator selection, reports shall be automatically prepared at designated time periods; others are to be compiled and printed upon keyboard command.

5.2.10.2. Noise Event Report

This report is a printed chronological listing of all noise events. If automatic printing is selected, the entries for all noise events occurring in a given day print within eight hours of the end of that day.

5.2.10.3. Hourly Report

This report is a printed listing of hourly records. If selected for printing, hourly reports shall be printed within eight hours of the end of each day (i.e., prior to 0800 local).

5.2.10.4. Daily Report

This report is a printed listing of daily records. If selected for printing, daily reports shall print within eight hours of the end of each day (i.e., prior to 0800 local the next day).

5.2.10.5. Monthly Report

This report is a printed listing of monthly records. If selected for printing, monthly reports shall print within 24 hours of the end of each month

5.2.10.6. Quarterly Report

This report is a printed listing of quarterly records. If selected for printing, quarterly reports shall print within seven days of the date on which DIA has entered all necessary data into the replacement NOMS.

5.2.10.7. Annual Report

This report is a printed listing of annual records. If selected for printing, annual reports shall print within seven days of the date on which DIA has entered all necessary data into the replacement NOMS.

Additional reports include:

EnvironmentalVue Standard Reports	
Aircraft Noise Correlation Report	Complaint – Caller List
Complaint – Correlation List Long Form	Complaint – Correlation List Short Form
Complaint – Count By Group	Complaint – Histogram

EnvironmentalVue Standard Reports	
Complaint – List Long Form	Complaint – Nature of Disturbance
Corridor Deviation – List	Flight Event – List
Fleet Mix – Graph	Fleet Mix - List
Flight Event – Noise Summary	Gate Penetration – List
Gate Penetration – Scatter Graph	Maintenance – Edit Log
Maintenance – File Sizes	Noise Event – Distribution Graph
Noise Event – List	Noise Measure – Daily Summary
Noise Measure – Hourly Summary	Noise Measure – Statistics
Noise Measure Hourly – Graph	Noise Measure Long Term Summary
Noise Measure – Long Term Graph	PCA – List
Runway Utilization – Graph	Runway Utilization – List
SEL vs PCA – Scatter Graph	Weather - Daily List
Weather – Graphical Report	Weather - Hourly List

5.3. Meteorological Monitoring Software

This section is not relevant to the replacement NOMS.

5.4. Daily Status Report

At the end of each day, the NOMS system shall email a report showing the status of the nightly import process to the NOMS users.

5.5. Report Formats

Within 45 days of the notice to proceed, Harris will work with DIA Noise staff to review reports requested by DEN and submitted by Harris, as well as the standard reporting package. Based on this, the DIA and Harris Project Manager will agree to required changes to the reporting package which can include up to fifteen (15) additional custom reports.

5.6. Fight Operation and Identification Software

5.6.1. General

Flight operation and identification subsystem capabilities and performance shall be equal to or greater than those of the existing system.

5.6.2. Aircraft Identification Software

The flight operation and identification processing software shall track and identify aircraft with operating transponders within a vertical and horizontal space that is at least as large as the coverage of the existing

system, and in no event less than 45 nautical miles in radius around of DIA and up to at least 23,000 feet above mean sea level.

5.6.3. Flight Operation and Identification Database

The replacement NOMS shall have the capability of reading and storing flight operation and identification data in a computer database.

5.6.4. Flight Operation and Identification Processing Software

Harris shall provide software to process the NextGen data for later editing and sorting.

The software shall be capable of producing database records of aircraft flight tracks listed chronologically by time of termination at airport for arrivals or time of start of track for departures.

5.6.5. Runway Use Tabulation

The software shall identify runway end used and type of operation (departure, arrival, and overflight) for tracks extracted from the flight operation and identification data. The software shall check for inconsistencies in FAA controller designation of type of operation (i.e., the Arrival/Departure Status, ADS, code) through geometrical checks of flight paths and altitudes.

The replacement NOMS shall automatically use the flight operation and identification-derived runway end and operation type data to perform the aircraft event identification, to enter runway and operation type data into the noise event, and to develop the runway use reports and database, all as defined in these specifications.

5.6.6. Integration of Data from Other Sources

Harris shall provide and integrate TFMS, ASDE-X, en route, terminal radar and ERAM data into the replacement NOMS database through the NextGen data feed such that the specific aircraft type, flight origin for arrivals, and flight destination for departures is made available if known from any single source. This capability shall provide for correlation of information from this database with other data compiled by the replacement NOMS. The replacement NOMS shall integrate this information into all aspects of report production and database sorting, filtering, and analysis; including flight operation and identification analyses, complaint analyses, and aircraft noise event analyses, etc.

5.6.7. Integration of Aircraft Owner Database

This section is not relevant to the replacement NOMS.

5.6.8. Manual Data Entry

The replacement NOMS shall permit manual data entry from other sources into at least three additional fields.

5.6.9. Flight Operations and Identification Database Sorting Capabilities

The replacement NOMS software shall allow for selection of automatic sorts using any of the flight operation and identification fields in the database (if known from an available source or correlation algorithm), including but not limited to:

- ICAO aircraft type,
- Part 36 certification stage (if identifiable)
- date and time limits
- flights to or from a specific destination or origin
- type of operation (departure, arrival or overflight)
- runway used
- aircraft owner, and operator or airline
- aircraft registration number,

- flight number for a specific airline
- tail number for general aviation operations
- aircraft arriving or departing at another local airport
- navigational waypoint or fix
- penetration of NOMS operator-definable gates
- NOMS operator-definable route including deviation or compliance
- maximum and minimum point of closest approach (PCA) limits
- beacon code
- the fields of manually entered data defined in these specifications

5.6.10. Flight Track Selection and Processing

The replacement NOMS shall allow DIA to select a comparable number of flight tracks within the existing NOMS system.   Harris can work with DIA to suggest workstation specification for DIA to be able to select more flight tracks if needed.

5.6.11. On-Screen and Hard-Copy Plotting

The replacement NOMS shall allow DIA to select and plot aircraft ground tracks, altitude profiles, and two-dimensional "gate" penetration diagrams, with on-screen display and to make hard copy plots. The operations to be plotted shall be selected through the sorts defined in these specifications.

The altitude profiles shall be two-dimensional plots of aircraft altitude relative to the airfield elevation versus cumulative track distance approximately from brake release for departures and from touchdown for arrivals.

The replacement NOMS shall allow system operators to select map extents for display and printing. Portions of tracks outside of these limits would not show.

5.6.11.1. Plotting Features

The on-screen and hard-copy plotting software shall include a smoothing algorithm for aircraft altitude profile data and ground track data, allow changing the scale and plot window, and provide for text and legend annotation. Users shall have the option of selecting a feature that annotates the flight tracks, profiles, and gate penetration points on the on-screen and hard-copy plots with an alpha-numeric flight identifier that corresponds to a listing that the user can access on the screen and on hard copy prints. The replacement NOMS shall allow system users to annotate the plots with alphanumeric information, a title, key, etc. Each figure shall include a graphic scale.

5.6.11.2. Base Map

The software shall allow users to selectively include a base map, as defined in these specifications, in the on-screen and hard copy plots.

5.6.11.3. Zooming

The software shall include on-screen zooming capability that can be controlled through the cursor keys, or by "clicking on" the base map with the mouse.

5.6.11.4. Gate Penetration Analysis

The software shall support on-screen and hard-copy plots of penetrations of gates defined by the user. The software shall allow the user to define the baseline of vertical two-dimensional gates by using the cursor keys, or by "clicking on" the base map with the mouse. The vertical coordinate limits shall be set through keyboard entry of minimum and maximum altitudes.

5.6.11.5. Replay Capability

The flight operation and identification subsystem shall provide the user with the capability to "replay" the airport activity as though the user was viewing a radar screen. This feature shall allow the user to set the replay speed to real-time and accelerated settings.

The replay shall allow the flight track to be annotated with a code that refers to a list of operations shown elsewhere on the screen or a "data block" that moves with the end of the track. The data block or list shall provide information that includes aircraft type, aircraft identification (airline and flight number, "tail number," or other operator identification), altitude, and speed.

5.6.12. Point of Closest Approach Analysis

The software shall compute the point of closest approach (PCA) from flight tracks to user-defined ground points. The software shall allow the user to enter the coordinates of the PCA analysis locations, and to enter them using the cursor keys, or by "clicking on" the base map with the mouse. The software shall allow the user to add or delete analysis locations from a file of defined PCA locations.

The replacement NOMS shall also allow "dynamic" on-screen PCA analysis, whereby the system user can use the mouse or other tracking device to "click on" a point on a flight track and a location.

The PCA calculations shall provide the following information:

- slant distance (line-of-sight distance from RMS to aircraft) from aircraft to PCA analysis location
- ground distance from PCA analysis location to ground projection of aircraft at PCA
- aircraft altitude at PCA
- time of PCA
- elevation angle above the horizon of the line-of-sight from the observer to the PCA from with the public website.

5.6.13. Flight Operation and Identification Processing Time

The replacement NOMS flight operation and identification processing system shall require four hours or less of computer time to process data for one day of DIA operations, ready for plotting and report production. Operation of the software shall minimize requirements for operator input, to allow this processing to occur in an unattended fashion at night. This processing time requirement is in addition to other processing time requirements defined in these specifications. Flight operation and identification processing shall not limit or prohibit the operator's ability to perform other analytical functions while it is occurring.

5.6.14. Runway Use Database and Reports

The replacement NOMS shall have the capability to of producing the following information. Additionally, the user will have the option to group this data by airline/aircraft operator or aircraft type:

- number of departures on each individual runway
- number of arrivals on each individual runway
- percentage of departures on each individual runway
- percentage of arrivals on each individual runway
- total operations on each individual runway
- total number of takeoffs
- total number of arrivals

The flight operation and identification software shall provide for users to develop, preview on a screen, and print hourly, daily, monthly, quarterly, and annual runway use reports that include the above statistics. The software shall permit replacement NOMS users to access the data in a form that allows specialized analysis. For example, the system shall allow the operator to combine and tabulate the data for selected sequential

and non-sequential time periods. The system shall allow for sorts, tabulations, comparisons by time periods, type of operation, specific runway end used, aircraft type, and airline/aircraft operator.

5.7. Complaint Database Software

The replacement NOMS shall include software and hardware that allows the replacement NOMS users to enter complaint data into the database, including complainant name, address, date of complaint, time of complaint, date of noise event of interest, time of noise event of interest, aircraft type, type of operation, and other relevant information.

The replacement NOMS shall include convenient-to-use data entry techniques. The complaint software shall automatically identify the geographic location of the complainant's address on the base map defined in these specifications. The software should support the address location features defined in these specifications, for use in locating complainant locations.

The replacement NOMS database software should integrate the complaint data into the database and data analysis capabilities to the maximum extent feasible. The software shall support the operator in correlating the noise complaint with associated noise and aircraft events, in as automated a fashion as feasible.

The replacement NOMS shall allow printing of individual complaint records. It shall allow all database functions, including sorting, filtering, selecting, editing, deleting, and the like, to be performed based on individual complainant's names and/or addresses.

The replacement NOMS shall include a capability for automatic generation of complaint response letters from operator-selected prepared forms.

EnvironmentalVue offers a user friendly search function for complaint and complainant records, whether they are entered manually by EnvironmentalVue users or complainants themselves through the PublicVue portal. Users may search for records based on any of the data fields associated with complaint and complainant records, including but not limited to date and time of disturbance, nature of disturbance, offending aircraft, date and time entered into the database, and which user entered the record.

5.8. Combined Database Software

The NOMS shall allow DIA personnel to combine data from all of the databases developed by the system. A primary requirement of the replacement NOMS is to provide DIA with the capability to merge data from all data sources in as automated a fashion as possible and to permit DIA to combine and correlate data from these databases.

5.8.1. Selection and Processing

The replacement NOMS shall allow users to simultaneously analyze all on-line noise events, including related noise, complaint, flight identification, flight operation and identification, and other linked data.

The NOMS shall allow the user to use a full range of logical operators in linking data from different sources (e.g., operations, noise, complaint, etc.) and searching, filtering, sorting, correlating, and otherwise conducting analyses and preparing reports and graphics. The logical operator set shall allow at least the choice of "and," "or," "greater than," "less than", "equal to or less than", "equal to or greater than", and "not equal to."

The replacement NOMS shall allow the system operator to direct the system to perform complex database functions, such as searches, sorts, filtering, etc., in such a manner that the operator can continue to conduct other replacement NOMS operations while the database function is executing.

The replacement NOMS shall provide an operator abort feature.

5.8.2. Mathematical and Statistical Operations

The replacement NOMS shall allow the system users to perform mathematical and statistical operations (some of which can be performed within external tools like Excel) on data sets drawn from all data types collected by the system, including, but not limited to, the following:

- calculation of arithmetic averages
- calculation of logarithmic averages (e.g., energy averages of decibel quantities)
- calculation of standard deviations
- performance of logarithmic mathematical operations (e.g., energy-based calculation of sums of noise quantities)

EnvironmentalVue also will permit users to export report output and query results into Excel for further analysis and presentation.

5.8.3. Event Correlation Software

Harris shall provide custom reporting software which allows correlation of data on aircraft noise, complaints, runway use, and each of the NextGen database sorting fields listed in these specifications, to evaluate the independent and combined effects of each parameter.

The principal goals of event correlation are: (1) to assist in DIA-aircraft noise event discrimination, (2) to build operator-and aircraft type-specific records of aircraft noise levels at each RMS, and (3) to build noise and performance data for aircraft operating at DIA.

5.8.3.1. Event Correlation Records

Harris shall provide software with the replacement NOMS that will perform the following analyses and maintain records of the results: (1) identification from the aircraft operations subsystem of potential aircraft sources of noise events in the vicinity of each noise measurement location; (2) correlation of identified flight and noise events at each RMT; (3) identification of flight events which the replacement NOMS did not correlate with a noise event; and (5) identification of noise events which the NOMS did not correlate with an aircraft.

The purpose of this record keeping is to ensure that each aircraft event is fully documented and correlated to noise events to the extent that there are measured noise events for that aircraft event.

5.8.4. Event Correlation Record Access and Analysis

The replacement NOMS shall permit users to access the event correlation data in a form that allows specialized analysis. The system shall allow for sorts, tabulations, and comparisons by at least the following parameters: RMS, time periods, type of operation, aircraft type, operator identification, noise event source flag, PCA distance, runway end used, maximum noise level, and duration above threshold. For example, the system shall allow the operator to combine and tabulate data for any selected individual RMS or operator-selected group of RMSs, for any time periods, with time limits set by hour and date, for any selected aircraft type.

5.8.5. Event Correlation Report Production Software

The replacement NOMS must allow preparation of tabular and graphical summaries of all event correlation results. The database shall be structured to allow the user to export the data to any of the commercial software packages used in the DIA Noise Office. The replacement NOMS shall compile the database for a given time period when the fight track and operations data for that time period are processed.

5.9. Integrated Noise Model

This section is not relevant to the replacement NOMS.

5.10. Storage

The replacement NOMS shall provide for storage in machine-readable form of all reports, data files, and databases.

5.10.1. Data Storage

Harris must ensure that the replacement NOMS is configured so as to have sufficient capacity to store the data necessary to automatically produce the hourly through annual reports required by these specifications,

in addition to sufficient memory for storing and executing software to accomplish required functions. The replacement NOMS must provide on-line storage for at least six years of all data and reports, including single event and cumulative noise exposure, meteorological, runway use, and reduced flight track and operations data.

All critical data for the Harris CAS Data Center systems is part of a regular tape backup cycle designed to ensure data integrity and availability in the event it needs to be restored. Data is written to tape via a weekly full and daily differential backup schedule. The specifics of the CAS Data Center backup and retention schedule are defined below. As an additional safeguard, tapes are also brought offsite on a weekly basis to ensure adequate data safety.

5.10.2. Historical Data Conversion

Harris must convert all historical existing system data from March 2011 forward and import it into the replacement NOMS database, so as to provide full data retrieval, analysis, display, reporting, and other functionality defined in these specifications and as provided by the existing system.

6. Workmanship

This section is not relevant to the replacement NOMS.

7. Installation

Harris is responsible for all system installation that is not specifically identified as a DIA responsibility.

8. Acceptance Testing

Acceptance tests are a required part of this specification. Harris shall be responsible for all costs associated with system modifications and system acceptance testing until final system acceptance by DIA. The following elements shall be included in the test program:

8.1. Pre-Installation Software Description

Harris will conduct a workshop within 45 days of the notice-to-proceed to walk through the system software requirements and specifications with DIA. At this time, a requirements verification test matrix will be developed and the verification method and test procedure will be defined and mutually accepted by the DIA and Harris Project Manager. The verification matrix will be used during the on-site performance demonstration

Harris and DIA, as appropriate, will provide timely answers to questions raised in these specifications and product provided.

During the workshop, Harris will work with DIA to review the existing reporting system and if needed develop the requirements for up 15 custom reports. At the very least the following reports will be reviewed and analyzed.
- Summary of Aircraft Arrivals and Departures
- Operation Summary for Denver International Airport
- Cumulative Periodic Noise Report
- RMT Calibration Report
- Noise Monitor Download Status
- Noise Event Counts

DIA will provide a detailed description of the selection criteria and data fields used to generate these reports from the unprocesseddata. As appropriate, by mutual agreement with the DIA and Harris Project Manager, different reports from EnvironmentalVue may be substituted for the above listed reports.

8.2. Initial Replacement NOMS On-Site Performance Demonstration

Harris will notify DIA when Harris believes the upgrade is sufficiently complete to initiate operational testing, and DIA and Harris will schedule a two-day session at DIA, during which Harris will demonstrate to DIA representatives that the system is operating at a level appropriate to initiate operational testing. The demonstration will include item-by-item consideration of the performance requirements using the approach identified in the verification matrix. DIA representatives will develop a "punchlist" of out-of-specification items that Harris must address prior to initiating the operational demonstration. Harris may integrate training into this demonstration, as practical and efficient. The system will be deemed substantial complete when 95% or greater of the items within the verification matrix are complete.

8.3. Thirty-Day Side-By-Side Operational Test

The 30-day side-by-side test phase will start on a mutually acceptable date. In this test phase, the upgraded installation must operate in parallel with the existing system for a minimum of 30 days, to ensure that the replacement NOMS is performing up to specification prior to transitioning from the existing system. The replacement NOMS must meet the requirements of these specifications for a minimum of 20 consecutive days during this 30-day test period to satisfy this test phase. The 30-day test period will be extended as necessary, until this requirement is satisfied.

8.3.1. Comparison of System Responsiveness

One purpose of the side-by-side testing is to identify and investigate differences between results from the replacement NOMS and the existing system in accordance with the tests prescribed in the verification matrix. Differences of one decibel or less, in terms of any metric, will not be considered significant or worthy of investigation. Results from the existing system will provide a basis for comparison and determining the need to investigate the reason(s) for differing results, but will not necessarily be the basis for determining which results are most accurate. Where side-by-side comparisons reveal significant differences; i.e., differences greater than one decibel; Harris and DIA will work collaboratively to investigate potential contributing factors and determine whether Harris must make adjustments or corrections to the replacement NOMS.

During the side-by-side testing, DIA will perform side-by-side "speed trials" of common functions identified in the verification matrix, such as calling up a day's worth of flight tracks for screen display, to identify any significant differences in performance (e.g., responsiveness to commands or queries, screen-refresh rates, etc.) between the replacement NOMS and the existing system. Harris must correct any unsatisfactory performance differences, defined as degradation of performance compared to the existing system, for display of a day's worth of flight tracks (approximately 1,500), prior to the conclusion of the operational test.

8.3.2. Comparison of Noise Measurement Results

During the 30-day operational test phase, Harris shall arrange for a comparison of the following measurement results from the existing system and the replacement NOMS. The comparison should identify any one-decibel or greater differences.

- hourly Leq measurement results from every RMS for two consecutive days selected by DIA
- one-second Leq measurement results, for one-hour periods selected by DIA at each RMS (This second comparison will be conducted only if differences are identified in hourly measurements.)

8.3.3. Comparison of Monitoring Results

During the 30-day operational test phase, Harris shall arrange for the existing system and the replacement NOMS to provide the following reports on a daily basis, presenting the data for the preceding day, in both printed and Excel-spreadsheet formats, to permit DIA to compare the results and identify any differences.

- Operation Summary for Denver International Airport
- Summary of Aircraft Arrivals and Departures
- Cumulative Periodic Noise Report
- RMT Calibration Report

- Noise Monitor Download Status

In addition, Harris shall arrange for both the existing system and the replacement NOMS to provide the following report on a daily basis, presenting the data for the preceding day, in both printed and "CSV" formats, to permit DIA to compare the results and identify any differences.

- Noise Event Counts - This report will present counts, for each RMT, of the number of noise events identified in each of the seven event classification categories reported in columns D through G of the "Cumulative Periodic Noise Report."

DIA will review these six reports to identify any differences in monitoring results. Harris will be required to explain difference and if needed correct the factors leading to any differences prior to completion of the operational test phase.

8.3.4. Comparison of Noise Modeling Results

During the operational test period, Harris will demonstrate preparation of ARTSMAP input files for four DIA-selected days of operations using the replacement NOMS. DIA will use those files to prepare ARTSMAP runs for those days. DIA anticipates comparing the following ARTSMAP output:

- DXF files.
- Calculated values at the NEPS points.
- Calculated values at the RMT sites

Harris will work with DIA in good faith to explain and address factors leading to any differences in LT6 output prior to completion of the operational test phase. LT6 file formats may be substituted with another format by mutual agreement of DIA and Harris.

8.4. Final Acceptance Review

When DIA has determined that the operational test phase is complete, DIA representatives will conduct a final meeting with Harris staff at DIA to identify a final acceptance punch list, an acceptable schedule for addressing open items, and whether the items must be corrected prior to final acceptance or if Harris can address them during ongoing support.

8.5. Final Acceptance Certificate

When DIA has determined that Harris has satisfied all acceptance test and training requirements, it will issue Harris a final acceptance certificate.

9. Warranty and Maintenance Requirements

This section is deleted. Requirements are covered by ongoing support.

10. Maintainability Requirements

This section is not relevant to the replacement NOMS.

11. Manuals and Documentation

Harris shall provide system operating manuals sufficient for three trained replacement NOMS operators, covering system setup, operating, and trouble-shooting. The manuals may be online electronic versions.

Documentation shall include manuals for any third-party components included in the replacement NOMS.

Harris shall provide a complete inventory of all new components provided with the replacement NOMS.

12. Training and Support

Harris shall provide initial system training and continuing on-call support meeting the minimum requirements defined in these specifications.

12.1. Training

Harris shall provide comprehensive operator training for the replacement NOMS, for three DIA noise office staff. This training shall be conducted at DIA after the system is in operation but before acceptance by DIA. The training shall be sufficient to prepare DIA employees to operate the complete system subsequent to the time of acceptance.

12.2. Support

Harris provides a user hot-line support number at (877) 448-2647, answered Monday-Friday, 8:00AM to 5:00PM Mountain Time. Calls to this hot-line are entered into the Symphony Trouble Tracking System (STTS) for monitoring and reporting.

Harris also uses a web-based, STTS to monitor customer issues that is available on a 24/7/365 basis. This system is used to measure issue status, resolution and response timeliness. The system is available at https://secure.symphonycdm.com/support/ and requires airport name, user and password for authentication.

The support team can also be reached via the SymphonySupport@Harris.com e-mail address, or by a chat function during business hours which is available from application login screens and help menus.

Harris will respond either by e-mail, telephone, fax, or through the web-based STTS to any entries into the STTS by the customer. Issues reported outside of normal business hours will be considered entered at 07:00 AM Eastern Time the next business day.

Harris has standard Service Response Goals (SRGs) that range from responding to trouble tickets for critical data issues within five (5) hours to non-critical data issues within one business day. Issue resolution is dependent upon many factors including detailed nature, reproducibility, system availability and other mitigating factors.

In the event that Harris is unable to provide and recover DEN historical NextGen Data lost due to unscheduled downtime, DEN will receive a credit on their next invoice based on the total number of hours lost. The tables outlining the Service Level Goals and credit schedule for lost NextGen Data will be provided upon request.

Certificate Holder Information:

CITY AND COUNTY OF DENVER
Attn: Risk Management, Suite 8810
Manager of Aviation
Denver International Airport
8500 Peña Boulevard
Denver CO 80249

CONTRACT NAME & NUMBER TO WHICH THIS INSURANCE APPLIES: 201629366 – EnvironmentalVUE Noise Monitoring System

I. MANDATORY COVERAGE

Colorado Workers' Compensation and Employer Liability

    Minimum Limits of Liability (In Thousands) $100, $500, $100

1. Contractor expressly represents to the City, as a material representation upon which the City is relying in entering into this Agreement, that none of the Contractor's officers or employees who may be eligible under any statute or law to reject Workers' Compensation Insurance shall effect such rejection during any part of the term of this Agreement. Any such rejections previously effected, must have been revoked as of the date Contractor executes this Agreement.

2. If the contractor/consultant is a sole proprietor, Workers' Compensation is waived per State of Colorado law.

Commercial General Liability

    Minimum Limits of Liability (In Thousands):

Each Occurrence:	$1,000
General Aggregate Limit:	$2,000
Products-Completed Operations Aggregate Limit:	$2,000
Personal & Advertising Injury:	$1,000

The policy must provide the following:
1. That this Agreement is an Insured Contract under the policy.
2. Defense costs are outside the limits of liability.
3. A severability of interests or separation of insureds provision (no insured vs. insured exclusion).
4. A provision that coverage is primary and non-contributory with other coverage or self-insurance maintained by the City.
5. The full limits of coverage must be dedicated to apply to each project/location.
6. If liquor is to be sold or distributed, then Liquor Liability, ($1,000,000 per claim and $1,000,000 policy aggregate limit) with the City as an additional insured is required.

Business Automobile Liability

    Minimum Limits of Liability (In Thousands):

Combined Single Limit	$1,000

The policy must provide the following:
1. Coverage applicable to all owned, hired and non-owned vehicles used in performing services under this Agreement.
2. If transporting wastes, hazardous material, or regulated substances, Contractor shall carry a pollution coverage endorsement and an MCS 90 endorsement on their policy.

II. ADDITIONAL COVERAGE

Excess/Umbrella Liability

Minimum Limits of Liability (In Thousands):

Umbrella Liability Controlled Area   Each Occurrence and aggregate $9,000

The policy must provide the following:
1. Coverage must be written on a "follow form" or broader basis.
2. Any combination of primary and excess coverage may be used to achieve required limits.
3. If operations include unescorted airside access at DIA, then a $9 million Umbrella Limit is required.

Technology Errors & Omissions

Minimum Limits of Liability (In Thousands)

Per Occurrence $1,000
Aggregate $1,000

The policy must provide the following:

1. Liability arising from theft, dissemination and / or use of confidential information (a defined term including but not limited to bank account, credit card account, personal information such as name, address, social security numbers, etc. information) stored or transmitted in electronic form.

2. Liability arising from the introduction of a computer virus into, or otherwise causing damage to, a customer's or third person's computer, computer system, network or similar computer related property and the data, software, and programs thereon.

3. Policies written on a claims made basis must remain in full force and effect in accordance with CRS 13-80-104. The Insured warrants that any retroactive date under the policy shall precede the effective date of this Contract; and that either continuous coverage will be maintained or an extended discovery period will be exercised for a period of three (3) years beginning at the time work under the Contract is completed.

4. Coverage for advertising injury, personal injury (including invasion of privacy) and intellectual property offenses related to internet.

III. ADDITIONAL CONDITIONS

It is understood and agreed, for the benefit of the City, that the following additional conditions shall apply to all coverage specified herein:

1. For Commercial General Liability, Auto Liability and Excess Liability/Umbrella (if required), Contractor and subcontractor's insurer(s) shall include the City and County of Denver, its elected and appointed officials, employees and volunteers as additional insured.
2. All coverage provided herein shall be primary and any insurance maintained by the City shall be considered excess.
3. For all coverages required under this Agreement, Contractor's insurer shall waive subrogation rights against the City.
4. The City shall have the right to verify or confirm, at any time, all coverage, information or representations contained herein, and the insured and its undersigned agent shall promptly and fully cooperate in any such audit the City may elect to undertake.
5. The required insurance shall be underwritten by an insurer licensed or authorized to do business in Colorado and rated by A.M. Best Company as "A-"VIII or better.
6. For claims-made coverage, the retroactive date must be on or before the contract date or the first date when any goods or services were provided to the City, whichever is earlier
7. No changes, modifications or interlineations on this document shall be allowed without the review and approval of the Risk Administrator prior to contract execution.

NOTICE OF CANCELLATION
It is understood and agreed that should any Policy issued hereunder be cancelled or non-renewed before the expiration date thereof, or sustain a material change in coverage adverse to the City, the issuing company or its authorized Agent shall give

notice to the Department of Aviation in accordance with policy provisions.

Exhibit "C"

NextGen Data and Software Usage Terms

1.   LICENSE(S) GENERAL TERMS AND CONDITIONS

Consultant agrees to grant the City and County of Denver (the "City") an exclusive, (to the extent specified herein, limited, and revocable right to use the NextGen Data as specified herein.

1.1   PROPRIETARY RIGHTS AND CONFIDENTIALITY

        1.1.1 Intellectual Property. Consultant grants the City a non-exclusive, limited, and revocable right to use the NextGen Data.

All right, title and interest, including, without limitation to all Intellectual Property Rights in NextGen Data, and related documents and materials is owned by Consultant and/or its licensors and is protected by intellectual property laws and the City shall have no title of ownership to the raw NextGen Data. The City shall own all the data generated and stored under this Agreement (other than the raw data), including flight, noise, weather mapping and reference information.

1.2   GENERAL RESTRICTIONS

The City agrees to notify its employees and agents who may have access to the NextGen Data of the restrictions contained in this Agreement and ensure their compliance with these restrictions. The City shall not cause or permit unauthorized copying, reproduction or disclosure of any portion of the raw NextGen Data or any of its accompanying documentation or related materials and shall not cause or permit the delivery or distribution of any part thereof to any Third Party or entity, for any purpose whatsoever, unless the Third Party is an Authorized End User.

Authorized End Users means users who are accessing NextGen Data under an agreement with the City and employees of the City or contractors under appropriate confidentiality agreements for which the City allows access to and use of the NextGen Data. Authorized End Users include all external users such as manufacturers and end users and employees or contractors of the City who will access the NextGen Data or use the output, results or reports that incorporate the NextGen Data in any manner.

1.3   AUTHORIZED USE

Authorized use of the NextGen Data is as set forth herein and is subject to the restrictions herein.

1.4   NEXTGEN DATA RESTRICTIONS

14.1   THE NEXTGEN DATA PROVIDED UNDER THIS AGREEMENT MAY NOT BE UTILIZED TO SUPPLANT AIR TRAFFIC CONTROL OR CONTROL ADVISORY SERVICES PROVIDED BY THE FAA.

1.4.2   THE CITY IS EXPRESSLY PROHIBITED FROM RE-SELLING NEXTGEN DATA TO ANY CLIENT FOR ANY OTHER PURPOSE THAN THAT STATED AND DEFINED HEREIN

1.4.3   The City shall be responsible and liable for any and all uses of the NextGen Data by the City, regardless of whether such use is restricted or not restricted by this Agreement. The FAA shall not be held responsible or retain legal obligation as to the accuracy, validity, or continued availability of the data being shared.

1.4.4   The distribution of the live real-time NextGen Data must be strictly controlled for the reasons of safeguarding public safety, security, and privacy while protecting the applicable US Government and Consultant business interests. The live real-time NextGen Data is for City use only and shall NOT be disseminated, distributed, or made accessible by the City, in any form, either directly or indirectly, to the public or to any third party or parties, except third parties as specifically and within the very narrow parameters authorized in this Agreement.

1.4.5   The City shall not use NextGen Data in violation of any Federal Aviation Administration regulations or other regulations or laws and, without limiting the generality of the foregoing, the City shall not export, re-export or use the NextGen Data or any copy thereof in violation of the export control laws or other laws of the United States of America or any other country.   The City shall make no representation that either the United States Government or the Federal Aviation Administration endorses guarantees or makes any representation about the availability, accuracy, reliability, or any other quality of the NextGen data. The City shall NOT transmit or utilize the live real-time NextGen Data feed for any purpose or application outside of the United States of America except as provided herein or with the permission of the Consultant or FAA.

1.4.6   The recipient of National Airspace System (NAS) surveillance data (i.e. NextGen Data) under this Agreement shall not for any reason initiate contacts with the FAA for the purpose of discussing observations made from the data regarding the operation of the NAS, including but not limited to Air Traffic Control, flight routing, and flight planning. This restriction, however, shall not apply to aircraft and airport operators who have ongoing interaction with the FAA for discussions as part of their normal course of business with the FAA and may use the data to facilitate and provide better insight for such discussions; the Parties agree that the City meets this criterion and may use the data accordingly.

1.5   AUTHORIZED ACCESS
The City agrees to take sufficient precautions to protect the NextGen Data from unauthorized access, including access limitations imposed by this Agreement, applicable US export control laws and regulations, and any other applicable law, regulation, or statute. The City shall maintain the confidentiality of the Access Codes and instruct its staff to maintain the confidentiality of the Access Codes. The City agrees to promptly, but in any event within 24 hours or earlier as may be required by applicable law, notify Consultant of any unauthorized use of any Access Codes or any other breach of security of which the City becomes aware.

The City agrees and understands that Consultant, in its sole discretion, may prevent the City's access to the Services if Consultant or the US Government reasonably believes that public safety, security, or privacy are compromised or potentially compromised through the use of the Services. The US Government retains the right to direct the complete or partial cessation of NextGen Data broadcasts in the event of an emergency or security related circumstance without notice to the Consultant and/or the City.

2.   INDEMNIFICATION

Neither the US Government nor Consultant shall be held responsible or retain legal obligation as to the accuracy, validity, or continued availability of the Services provided herein.

3.   IMPORT/EXPORT CONTROLS

The NextGen Data and any related materials, including technical data, is subject to U.S. export control laws, including the U.S. Export Administration Act and its associated regulations, and may be subject to export or import regulations in other countries. The City agrees to comply strictly with all such regulations and acknowledges that it has the responsibility to obtain licenses to export, re-export, or import the Software. The Data/Software may not be downloaded, or otherwise exported or re-exported to any country to which the U.S. has embargoed goods; or to anyone on the U.S. Treasury Department's list of Specially Designated Nations or the U.S. Commerce Department's Table of Denial Orders.