

WIDE AREA NETWORK AND TOWER IMPROVEMENT CONTRACT

Wide Area Network and Tower Improvement (the “**Contract**”) is entered between the Village of Buffalo Grove (hereinafter the “**Village**” or “**Owner**”), an Illinois home-rule unit of government, and Urban Communications, Inc. (hereinafter the “**Contractor**”) on this 21st day of October, 2019 (the “**Effective Date**”). The Village and the Contractor are hereinafter sometimes collectively referred to as the “**Parties**” and individually as a “**Party**”.

RECITALS

WHEREAS, the Village has solicited bids for the Work (defined below), Contractor has submitted a bid for the Work and Village has selected Contractor for the Work based on their bid; and

WHEREAS, the Contractor wishes to enter into this Contract with the Village and the Village wishes to enter into this Contract with the Contractor for the Work;

NOW THEREFORE, for and in consideration of the mutual covenants and promises herein contained, the adequacy and sufficiency of which are hereby acknowledged by the Parties, it is agreed as follows:

ARTICLE I - WORK TO BE DONE BY THE CONTRACTOR

The Village does hereby hire and contract with the Contractor to provide all the labor, equipment, materials and/or services described more thoroughly on Contract **Exhibit A** (the “**Work**”) which is incorporated into the Contract by this reference.

ARTICLE II - CONTRACT DOCUMENTS

The following exhibits are attached hereto and incorporated herein by this reference:

- Contract Exhibit A – Description of the Work**
- Contract Exhibit B – Schedule of Prices**
- Contract Exhibit C – Performance and Payment Bond**
- Contract Exhibit D – Partial Lien Waiver**
- Contract Exhibit E – Final Lien Waiver**

If any term or provision of this Contract shall conflict with any term or provision of the exhibits referenced above, the terms and provisions of the exhibit shall control.

ARTICLE III - CONTRACT AMOUNT

The Village agrees to pay the Contractor for the proper and timely performance of the Work in strict accordance with this Contract as detailed in **Contract Exhibit B** (the “**Schedule of Prices**”) Unless explicitly provided otherwise in this Contract, the detailed sums shall be the full and exclusive compensation owed to the Contractor for the Work; and Contractor may not seek additional payments from the Village.

ARTICLE IV – APPLICATION FOR PAYMENT

The Contractor shall be paid at most once a month and only after providing the Village the following:

1. An executed and notarized Contractor's Sworn Statement in a form similar to AIA G702 or AIA G703;
2. Either a partial or final lien waiver from every subcontractor, sub-subcontractor, or materialman in substantially the same form as attached here as **Contract Exhibit D** and **Contract Exhibit E**;
3. Certified payroll necessary for the Prevailing Wage Act; and

All payments under this Contract must be approved by the Village's Board at regularly scheduled meetings. The Village reserves the right to request any receipts, invoices, proof of payments as the Village, in its sole discretion, may deem necessary to justify the payment requested *prior* to paying the requested payment. The Contractor shall furnish with his final application for payment a Final Lien Waiver from itself and, if not already provided, from every subcontractor and materialman of the Work.

The Contractor acknowledges that the Village is a unit of local government and that all payments under the Contract are subject to the Local Government Prompt Payment Act, 50 ILCS 505 et seq. To that extent, the Village shall have forty-five calendar (45) days from receipt of a bill or invoice to pay the same before it is considered late under the Contract. Interest, if any, charged for any late payments will be subject to the interest rate caps specified in the Prompt Payment Act.

ARTICLE V – CONTRACT TIME

The Contractor shall fully, and not substantially, complete all the Work and the Work shall be accepted by the Director of IT, provided that acceptance by the Director of IT shall not be unreasonably delayed, and shall proceed based on the schedule of work attached and agreed to by the parties. The schedule contemplates an end date, which shall be extended based upon timeline changes outside the control of the contractor. The contract schedule shall be attached hereto as an exhibit. Said exhibit may be modified by the parties with each party signing an approval of the modified timeline.

If the Contractor shall fail to complete the work within the Contract Time set forth in the timeline schedule which shall include any proper extension granted by the Village, the Contractor shall pay to the Village an amount equal to Five Hundred dollars (\$500) per calendar day for each day past the Contract Time until final acceptance by the Village, as liquidated damages and not as a penalty. This provision shall not apply in the event of a Force Majeure or any cause outside the control of the contractor.

ARTICLE VI – PERFORMANCE and PAYMENT BOND

The Contractor shall provide the Village with a performance and payment bond in substantially the same form as on **Contract Exhibit C** (the "**Performance and Payment Bond**") prior to Contractor beginning any Work and within 10 calendar days of the Notice of Award sent to the Contractor. The Village shall be responsible for reimbursing all costs associated with the bond.

ARTICLE VII – ACCIDENT PREVENTION

The Contractor shall exercise every precaution at all times to protect itself, the property of the Village and the property of others. The safety provision of all applicable laws and ordinances shall be strictly observed by the Contractor at all times. Any practice deemed hazardous or dangerous by the Director of IT or his authorized representatives shall be immediately discontinued by the Contractor

upon receipt of instructions from the Director of IT or his authorized representatives. To the fullest extent permitted by law, the Contractor shall be solely responsible for all safety-related matters.

ARTICLE VIII – INDEMNIFICATION

To the fullest extent permitted by law, the Contractor agrees to defend, pay on behalf of, indemnify, and hold harmless the Village, its elected and appointed officials, agents, employees and volunteers and others working on behalf of the Village against any and all claims, demands, suits or loss, including all costs connected therewith, and for any damages which may be asserted, claimed or recovered against or from the Village, its elected and appointed officials, agents, employees and volunteers and others working on behalf of the Village, by reason of personal injury, including bodily injury and death, and/or property damage, whether damage to property of the Village or of a third party, including loss of use thereof, which arises out of or is in any way connected or associated with the Contract and the Work.

For this project, the Village also hired a Consultant, Strand Associates Inc. The Contractor shall indemnify the Consultant in the same manner as the Village, as stated above.

ARTICLE IX – CONTRACTORS INSURANCE

Contractor shall procure and maintain, for the duration of the Contract and any maintenance period, insurance against claims for injuries to persons or damages to property, which may arise from or in connection with the performance of the work hereunder by the Contractor, his agents, representatives, employees or subcontractors.

A. Minimum Scope of Insurance: Coverage shall be at least as broad as:

Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village of Buffalo Grove named as additional insured on a primary and non-contributory basis. This primary, non-contributory additional insured coverage shall be confirmed through the following required policy endorsements: ISO Additional Insured Endorsement CG 20 10 or CG 20 26 and CG 20 01 04 13

1. Insurance Services Office Commercial General Liability occurrence form CG 0001 with the Village named as additional insured, on a form at least as broad as the ISO Additional Insured Endorsement CG 2010 and CG 2026
2. Insurance Service Office Business Auto Liability coverage form number CA 0001, Symbol 01 "Any Auto."
3. Workers' Compensation as required by the Labor Code of the State of Illinois and Employers' Liability insurance.
4. Owners and Contractors Protective Liability (OCP) policy with the Village of Buffalo Grove as insured.

B. Minimum Limits of Insurance: Contractor shall maintain limits no less than:

1. Commercial General Liability: \$1,000,000 combined single limit per occurrence for bodily injury, personal injury and property damage. The general aggregate shall be twice the required occurrence limit. Minimum General Aggregate shall be no less than \$2,000,000 or a project/contract specific aggregate of \$1,000,000.
2. Business Automobile Liability: \$1,000,000 combined single limit per accident for bodily injury and property damage.

3. Workers' Compensation and Employers' Liability: Workers' Compensation coverage with statutory limits and Employers' Liability limits of \$500,000 per accident.
4. Owners and Contractors Protective Liability (OCP): \$1,000,000 combined single limit per occurrence for bodily injury and property damage.

C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the Village. At the option of the Village, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as it respects the Village, its officials, agents, employees and volunteers; or the Contractor shall procure a bond guaranteeing payment of losses and related investigation, claim administration and defense expenses.

D. Other Insurance Provisions

The policies are to contain, or be endorsed to contain, the following provisions:

1. General Liability and Automobile Liability Coverages:
 - a. The Village, its officials, agents, employees and volunteers are to be covered as insureds as respects: liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor; premises owned, leased or used by the Contractor; or automobiles owned, leased, hired or borrowed by the Contractor. The coverage shall contain no special limitations on the scope of protection afforded to the Village, its officials, agents, employees and volunteers.
2. The Contractor's insurance coverage shall be primary and non-contributory as respects the Village, its officials, agents, employees and volunteers. Any insurance or self-insurance maintained by the Village, its officials, agents, employees and volunteers shall be excess of Contractor's insurance and shall not contribute with it.
3. Any failure to comply with reporting provisions of the policies shall not affect coverage provided to the Village, its officials, agents, employees and volunteers.
4. The Contractor's insurance shall contain a Severability of Interests/Cross Liability clause or language stating that Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the limits of the insurer's liability.
5. If any commercial general liability insurance is being provided under an excess or umbrella liability policy that does not "follow form," then the Contractor shall be required to name the Village, its officials, employees, agents and volunteers as additional insureds
6. All general liability coverages shall be provided on an occurrence policy form. Claims-made general liability policies will not be accepted.
7. The contractor and all subcontractors hereby agree to waive any limitation as to the amount of contribution recoverable against them by the Village. This specifically includes any limitation imposed by any state statute, regulation, or case law including any Workers' Compensation Act provision that applies a limitation to the amount recoverable in contribution such as Kotecki v. Cyclops Welding

E. All Coverages:

1. No Waiver. Under no circumstances shall the Village be deemed to have waived any of the insurance requirements of this Contract by any act or omission, including, but not limited to:

- a. Allowing work by Contractor or any subcontractor to start before receipt of Certificates of Insurance and Additional Insured Endorsements.
 - b. Failure to examine, or to demand correction of any deficiency, of any Certificate of Insurance and Additional Insured Endorsement received.
2. Each insurance policy required shall have the Village expressly endorsed onto the policy as a Cancellation Notice Recipient. Should any of the policies be cancelled before the expiration date thereof, notice will be delivered in accordance with the policy provisions.

F. Acceptability of Insurers

Insurance is to be placed with insurers with a Best's rating of no less than A-, VII and licensed to do business in the State of Illinois.

G. Verification of Coverage

Contractor shall furnish the Village with certificates of insurance naming the Village, its officials, agents, employees, and volunteers as additional insured's and with original endorsements, affecting coverage required herein. The certificates and endorsements for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The certificates and endorsements are to be received and approved by the Village before any work commences. The Village reserves the right to request full certified copies of the insurance policies and endorsements.

H. Subcontractors

Contractor shall include all subcontractors as insured's under its policies or shall furnish separate certificates and endorsements for each subcontractor. All coverage's for subcontractors shall be subject to all of the requirements stated herein.

I. Assumption of Liability

The contractor assumes liability for all injury to or death of any person or persons including employees of the contractor, any subcontractor, any supplier or any other person and assumes liability for all damage to property sustained by any person or persons occasioned by or in any way arising out of any work performed pursuant to the Contract.

J. Workers' Compensation and Employers' Liability Coverage

The insurer shall agree to waive all rights of subrogation against the Village of Buffalo Grove, its officials, employees, agents and volunteers for losses arising from work performed by Contractor for the municipality.

K. Failure to Comply

In the event the Contractor fails to obtain or maintain any insurance coverage's required under this contract, The Village may purchase such insurance coverage's and charge the expense thereof to the Contractor.

ARTICLE X – CERTIFICATE OF AUTHORITY AND SURETY CERTIFICATE

The Contractor shall furnish the Village with a current Certificate of Authority or Surety Certificate issued by the Illinois Department of Insurance for the bonding company and insurance company they are using. In lieu of a Certificate of Authority of Surety Certificate, the Contractor may provide certificate of good standing from the Illinois Department of Insurance's website.

ARTICLE XI – COPYRIGHTS AND LICENSES

The Contractor agrees that all documents of any kind whatsoever, and in whatever medium expressed, prepared by the Contractor and the Contractor's consultants in connection with the Work (collectively, the "**Documents**") or otherwise pursuant to this Contract and all rights therein (including trademarks, trade names, rights or use, copyrights and/or other proprietary rights) shall be and remain the sole property of the Village (regardless of whether the Village or the Contractor terminates this Contract for any reason whatsoever). The Contractor hereby agrees that the Documents are or shall be deemed to be "Works for Hire" within the meaning of Section 101 of the Copyright Act, and the Contractor hereby assigns to the Village all right, title and interest therein. Notwithstanding, the Contractor shall indemnify and hold harmless the Village, its appointed and elected officials, employees, agents and volunteers from and against all claims, damages, losses, and expenses (including attorneys' fees and court and arbitration costs) arising out of any infringement of patent rights or copyrights incident to the Documents and the Work.

ARTICLE XII – NOTICE

All notices, demands, requests, consents, approvals and other communications required or permitted to be given hereunder (a "**Notice**") shall be in writing and shall be deemed effective three (3) business days after mailing if mailed by certified mail with return receipt requested and immediately if served personally, and shall be addressed to the following:

IF TO THE VILLAGE:	Village of Buffalo Grove 50 Raupp Blvd Buffalo Grove, IL 60089 mskibbe@vbg.org ATTN: Director of IT
WITH COPIES TO:	Cc:pbrankin@schainbanks.com Cc:brobinson@vbg.org
IF TO THE CONTRACTOR:	Edmund G. Urban III, President Urban Communications, Inc. 5320 W 159 th Street, Suite 503 Oak Forest, IL 60452 ceo@urbancom.net

ARTICLE XIII – CHANGE ORDERS

If the Village requests any change to the Work the Village shall do so by delivering Notice of the same to the Contractor and the change requested by the Village shall be effective upon receipt of the Notice by the Contractor. The Contractor may propose a change to the Work by delivering Notice of the proposed change along with a description of the changes full effect on the Work to the Village; provided, such requested change shall not be deemed accepted until the Village has delivered to the Contractor Notice of the same. Prior to approving a proposed change to the Work by the Contractor, the Village may request such additional documentation as it deems necessary to investigate the proposed change. The Contractor shall be responsible for informing all its employees and subcontractors of any changes to the Work, whether such change is requested by the Contractor or the Village.

ARTICLE XIV – NOTICE OF STARTING WORK

The Contractor shall provide Notice to the Village prior to the Contractor, or its employees or subcontractors, starting the Work or any phase of the Work.

ARTICLE XV – SEQUENCE OF THE WORK

The Director of IT shall have the power to direct the order and sequence of the Work. On any major portion of the Work, all accessories shall be set coincident with the main construction. Payment for major portions of the Work may be withheld until proper completion of accessories.

ARTICLE XVI – SUPERVISION

The Director of IT shall have override power to superintend and direct the Work, and the Contractor shall perform all of the Work herein specified to the satisfaction, approval and acceptance of the Director of IT. The Contractor shall have at all times a competent foreman or superintendent at the Work's site, who shall have full authority to act for the Contractor and to receive and execute orders from the Director of IT, and any instructions given to such superintendant or person, executing work for the Contractor, shall be binding on the Contractor as though it was personally given to the Contractor.

ARTICLE XVII – STANDARD OF WORK AND WORKERS

The Contractor shall employ competent staff and shall discharge, at the request of the Director of IT, any incompetent, unfaithful, abusive or disorderly workers in its employ. Where experts or skilled workers must be employed, only expert or skilled workers shall be employed.

ARTICLE XVIII – CONDITIONS OF THE WORK SITE

The Contractor shall provide and maintain such sanitary accommodations for the use of its employees as may be necessary to comply with the State and local Board of Health requirements. Public nuisances will not be permitted. The Contractor shall leave said Work's site(s) in the best possible condition to the complete satisfaction of the Director of IT. No vehicles of any kind shall be placed, parked, or operated upon any grass areas at any time except as authorized by the Director of IT or his authorized representative. Further, the Contractor shall exercise every precaution for the protection of all persons and all property. The safety provisions of all-applicable laws and ordinances shall be strictly observed. Any practice hazardous in the opinion of the Director of IT or his authorized representatives shall be immediately discontinued by the Contractor upon his receipt of instructions from the Director of IT or his authorized representative. To the maximum extent permitted by law, the Contractor shall be responsible for all safety-related matters.

ARTICLE XIX – WARRANTY PERIOD

All material and workmanship shall be warranted and guaranteed according to manufacturer's recommendation after inspection and approval by the Director of IT or his designated representative. All work performed by the Contractor shall be warranted by the Contractor following completion and final acceptance of the Work for a period of twelve (12) months from the date of final, and not substantial, completion. Damage caused by lightening, storm, wind, rain, flood or other acts of god is excluded from all warranties

ARTICLE XX – ACCIDENTS

In the event of any accident of any kind that involves the general public or property of the Village or a third party, the Contractor shall immediately notify the Director of IT by phone as well as provide Notice of the same. The Notice shall include a full accounting of all details of the accident. The Contractor shall furnish the Village with copies of all reports of such accidents at the same time that the reports are forwarded to any other interested parties.

ARTICLE XXI – NO ASSIGNMENT

If the Contractor sublets or assigns any part of the Work then the Contractor shall not under any circumstances be relieved of its liabilities hereunder. All transactions of the Village shall be with the Contractor. Subcontractors shall be recognized only in the capacity of employees or workmen and shall be subject to the same requirements as to character and competence. The Contractor shall not assign, transfer, convey, sell or otherwise dispose of the whole or any part of this Contract to any person, firm or corporation without written consent of the Director of IT or his authorized representative.

ARTICLE XXII – DEFAULT

The following shall constitute a default an “**Event of Default**” by the Contractor under this Contract:

- A. If the Contractor shall fail to strictly observe or perform one or more of the terms, conditions, covenants and agreements of this Contract;
- B. If there shall be placed on any property owned by the Village any mechanics', materialmens' or suppliers' lien;
- C. If there shall be instituted any proceeding against the Contractor seeking liquidation, dissolution or similar relief and the same shall not be dismissed within forty-five (45) calendar days;
- D. If there shall be appointed any trustee, receiver or liquidator of the Contractor and such appointment shall not have been vacated within forty-five (45) calendar days; and
- E. If the Contractor fails to maintain or obtain any and all permits, licenses and the like, if any, required by the Village, State or Federal governments for the Work.

Upon any Event of Default the Village shall have the option of (i) terminating the Contract; (ii) pursuing any remedy available to it at law or in equity; or (iii) pursuing both simultaneously. In addition, upon an Event of Default, the Village may withhold payments due to the Contractor until it has hired a replacement of the Contractor and deducted all costs of hiring a replacement.

ARTICLE XXIII – DELAYS

The Contractor shall not be liable in damages for delays in performance when such delay is the result of fire, flood, strike, acts of God, or by any other circumstances which are beyond the control of the Contractor; provided, however, under such circumstances the Village may, at its option, cancel the Contract. Village must however pay for the goods and services delivered.

ARTICLE XXIV – COMPLIANCE WITH LAWS

The Contractor shall comply with all applicable laws, regulations and rules promulgated by any federal, state, local, or other governmental authority or regulatory body pertaining to all aspects of the Work, now in effect, or which may become in effect during the performance of the Work. The scope of the laws, regulations, and rules referred to in this paragraph includes, but is in no way limited to, the Illinois Human Rights Act, Illinois Equal Pay Act of 2003, Occupational Safety & Health Act along with the standards and regulations promulgated pursuant thereto (including but not limited to those safety requirements involving work on elevated platforms), all forms of traffic regulations, public utility, Interstate and Intrastate Commerce Commission regulations, Workers' Compensation Laws, Public Construction Bond Act, Public Works Preference Act, Employment of Illinois Workers on Public Works Act, USA Security Act, federal Social Security Act (and any of its titles), and any other law, rule or regulation of the Illinois Department of Labor, Department of Transportation, Illinois Environmental Protection Act, Illinois Department of Natural Resources, Illinois Department of Human Rights, Human Rights Commission, EEOC, and the Village of Buffalo Grove. Notwithstanding the following, the Contractor shall particularly note that:

A. NO DISCRIMINATION – The Contractor shall comply with the provisions of the Illinois Public Works Employment Discrimination Act and the Illinois Human Rights Act/Equal Opportunity Clause which, pursuant to Illinois law, are deemed to be part of this Contract.

B. FREEDOM OF INFORMATION - The Contractor agrees to furnish all documentation related to the Contract, the Work and any documentation related to the Village required under an Illinois Freedom of Information Act (ILCS 140/1 et. seq.) (“**FOIA**”) request within five (5) calendar days after the Village issues Notice of such request to the Contractor. The Contractor agrees to defend, indemnify and hold harmless the Village, and agrees to pay all reasonable costs connected therewith (including, but not limited to attorney’s and witness fees, filing fees and any other expenses) for the Village to defend any and all causes, actions, causes of action, disputes, prosecutions, or conflicts arising from Contractor’s actual or alleged violation of FOIA or the Contractor’s failure to furnish all documentation related to a FOIA request within five (5) calendar days after Notice from the Village for the same. Furthermore, should the Contractor request that the Village utilize a lawful exemption under FOIA in relation to any FOIA request thereby denying that request, Contractor agrees to pay all costs connected therewith (such as attorneys' and witness fees, filing fees and any other expenses) to defend the denial of the request. This defense shall include, but not be limited to, any challenged or appealed denials of FOIA requests to either the Illinois Attorney General or a court of competent jurisdiction.

C. ILLINOIS WORKERS ON PUBLIC WORKS ACT - To the extent applicable, the Contractor shall comply with the Illinois Workers on Public Works Act, 30 ILCS 570/1 et seq., and shall provide to the Village any supporting documentation necessary to show such compliance.

D. NOT A BLOCKED PERSON - The Contractor affirms and covenants that neither the Contractor nor any individual employed by the Contractor for this Work or under this Contract is a person forbidden from doing business with a unit of local government under Executive Order No. 13224

(Sept 23, 2001), 66 Fed.Reg. 49,079 (Sept 23, 2001) or is a person registered on the Specially Designated Nationals and Blocked Persons List. The Contractor shall indemnify the Village from all costs associated with failure to comply with this paragraph.

E. SUBSTANCE ABUSE PREVENTION ON PUBLIC WORKS ACT - The Contractor knows, understands and acknowledges its obligations under the Substance Abuse Prevention on Public Works Act (820 ILCS 265/1 et seq.), and shall comply and require all subcontractors and lower tiered contractors to comply with the requirements and provisions thereof.

F. PREVAILING WAGE ACT - The Village is an Illinois unit of local government and the Work hereunder is subject to the Illinois Prevailing Wage Act, 820 ILCS 130/0.01, et seq. Consequently, the Contract and each subcontractor shall submit monthly with their application for payment a certified payroll along with a signed statement attesting that: (i) such payroll is true and accurate; (ii) the hourly rate paid to each worker is at least equal to the prevailing wage for such work; and (iii) the Contractor or subcontractor is aware that filing a falsely certified payroll is a Class B Misdemeanor. Any delay in processing the payments due to a lack of certified payroll shall not be an event of default by the Village and shall not excuse any delay by the Contractor who shall proceed with the Work as if no delay in payment has occurred. The Contractor and Village shall agree to take any further steps not outlined above to ensure compliance with the Prevailing Wage Act. Upon two business day's Notice, the Contractor and each subcontractor shall make available to the Village their records to confirm compliance with the Prevailing Wage Act. Finally, to ensure compliance with Prevailing Wage Act, the Contractor and each subcontractor shall keep for a period of not less than 5 years after the Work has been completed records of all laborers, mechanics, and other workers employed by them for the Work; the records shall include each worker's name, address, telephone number, classification or classifications, the hourly wages paid in each period, the number of hours worked each day, the starting and ending times of work each day and, when available, last four digits of the social security number. The Contractor shall provide a list of every name, address, phone number and email of every sub-contractor for the Work.

Current rates can be located on the Illinois Department of Labor website.
<https://www2.illinois.gov/idol/Laws-Rules/CONMED/Pages/2019-Rates.aspx>

ARTICLE XXV – NO WAIVER OF RIGHTS

A waiver by the Village of any Event of Default or any term of provision of this Contract shall not be a waiver of the same Event of Default, another Event of Default or any other term or provision of this Contract.

ARTICLE XXVI – CONTROLLING LAW AND VENUE

This Contract is entered into in the State of Illinois, for work to be performed in the State of Illinois and shall be governed by and construed in accordance with the laws of the State of Illinois. Any legal matters or dispute shall be resolved in the Circuit Court of Cook County and the Parties hereby submit to the jurisdiction of such Circuit Court. This Contract shall be construed without regard to any presumption or other rule requiring construction against the Party causing the Contract to be drafted.

ARTICLE XXVII – MISCELLANEOUS

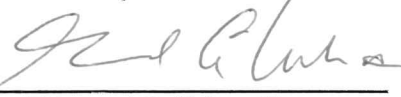
- A. **AMENDMENT** – This Contract may be amended only in writing executed by both Parties.
- B. **NO RECORDING** – This Contract, or a memorandum thereof, may not be recorded in any form by either Party. If either Party records this Contract, or a memorandum thereof, they shall immediately file a release of the same.
- C. **SECTION HEADINGS** – The headings in the Contract are intended for convenience only and shall not be taken into consideration in any construction or interpretation of the Contract.
- D. **NO THIRD PARTY BENEFICIARIES** – This Contract does not confer any rights or benefits on any third party.
- E. **BINDING EFFECT** – This Contract shall be binding and inure to the benefit of the Parties hereto, their respective legal representatives, heirs and successors-in-interest.
- F. **ENTIRE AGREEMENT** – This Contract supersedes all prior agreements and understandings and constitutes the entire understanding between the Parties relating to the subject matter hereof.
- G. **SEVERABILITY** - If any term, condition or provision of the Contract is adjudicated invalid or unenforceable, the remainder of the Contract shall not be affected and shall remain in full force and effect, to the fullest extent permitted by law.
- H. **TORT IMMUNITY DEFENSES** - Nothing contained in this Contract is intended to constitute nor shall constitute a waiver of the rights, defenses, and immunities provided or available to the Village under the Local Governmental and Governmental Employees Tort Immunity Act, 745 ILCS 10 *et seq.*
- I. **CALENDAR DAYS AND TIME.** Unless otherwise provided in this Contract, any reference in this Contract to “day” or “days” shall mean calendar days and not business days. If the date for giving of any notice required to be given, or the performance of any obligation, under this Contract falls on a Saturday, Sunday or federal holiday, then the notice or obligation may be given or performed on the next business day after that Saturday, Sunday or federal holiday.
- J. **COUNTERPARTS** – This Contract may be executed by the Parties in any number of counterparts, each of which shall be deemed an original, but all of which together shall constitute an original instrument.

IN WITNESS WHEREOF, the Parties hereto have caused the Contract to be executed as of the Effective Date.

Village of Buffalo Grove,
an Illinois home-rule unit of government

By: 
Name: Dane Bragg
Title: Village Manager

Urban Communications, Inc.
An Illinois Corporation

By: 
Name: Edmund G. Urban III
Title: President

CONTRACT EXHIBIT A- SCOPE OF WORK

PROPOSED SCOPE OF WORK

Fire Station 26 & 27 Antenna Tower Replacements

Design of Ground Mounted Antenna

- Sabre Self Supporting 3 Ft Face 100 Ft Towers (See Drawing Included and Foundation specs Included)
- We will design a ~100 foot solid welded rod tower. Tower will be manufactured by Sabre Industries or Valmont. At this time the Saber tower is preferred for 2 reasons: a) Lead time on delivery, b) The foundation design is a pad and pier design that uses less concrete and less non-peculating ground surface area.

Geotechnical Work

- Geotechnical Engineering Design Work will be done by Rash Mamtora, P.E. of Seemar Corporation
- Core and sample to determine spec for foundation

Site Design and Civil Engineering

- Site Design and Civil Engineering work will be done by Mark Landstrom, Landmark Engineering
- Plans stamped by licensed architect or civil engineer Landmark Engineering
- Tower Design, Foundation specifications, drawings and land survey to be done by civil engineer and tower manufacturer

Permitting (Village, FCC, Etc.)

- Plans stamped by licensed architect or civil engineer Landmark Engineering for Village permit
- We will prepare permitting as required by the village, FCC & FAA

Based on a preliminary FAA Notice Criteria study we have completed we will need to file for a part 77.9 FAA approval of the proposed structure as it is in proximity to a navigation facility and may impact the assurance of navigation signal reception

- Based on a preliminary FAA Notice Criteria study we have completed we will need to file for a part 77.9 FAA approval of the proposed structure as it is in proximity to a navigation facility and may impact the assurance of navigation signal reception.
- NEPA Analysis by Environmental Engineer will need to be done to determine if height may be restricted to just under 100' based on a preliminary NEPA study which will need to be conducted. A full NEPA study may be necessary. Preliminary NEPA study cost identified in quote. Cost for Full NEPA set forth in Exhibit B Addendum.

Construction of Foundations (Includes disposal of spoils)

- Construction of Foundation by Tower Works
- Spoils Removed and disposed properly

Erect Tower

- Tower erection to be done by Tower Works and Urban Communications.
- Proper Grounding to be done to specs.

Run New Cabling (Tower to Building, complete)

- Run new communication cable for new radios and splice old cable for existing communication antennas to be moved to new tower
- Work with RF Person to decide if spicing may be considered Cost of new cable will be \$5.00 per foot labor included.

Mount Antennas (Existing communication and New)

- Mount new radios and existing antennas that are not decommissioned from old towers.
- Align antennas and establish signal on new Microwave Gig connection between 26 and 27

Commission and test all antennas

- Establish Gig connection between FS 25, 26, 27 and Village Hall Towers first.
- Mount and establish connection on all unlicensed radios at all locations except Camelot and CAFT.

Decommission existing roof mounted antenna and dispose

- Once Installation is complete, remove old FS 26 and 27 Towers, remove all old cable, and remove all anchors at FS 26 and patch. Take off site and dispose. Roofing patches by Village roofing contractor.

Licensed Wide Area Network

Licensed Wide Area Network

- Load calculations and certifications for existing towers
- Specify new antennas and mounting locations (structural)
- Specify new antennas and network design (path engineering)
- Remove existing flat panel antennas and cabling
- Permitting through FCC for licensed equipment
- Mount antennas
- Run new cabling (Tower to Building, Complete Terminations)
- Commission and test all antennas
- Integrate with Village's IT Systems
- Includes Fire Station 25 Site
- Includes Fire Station 26 Site
- Includes Fire Station 27 Site
- Includes Village Hall Site
- 1000 Mbps Throughput on licensed links, (effective Ethernet throughput 920/920 Mbps 902-1000 depending on packet size)

Load calculations and certifications for existing towers

- Because of failure of many towers we will attempt to remove any masts at pump houses and use as small of antenna as possible while removing all decommissioned radios. Once we determine final design after field testing the will resubmit all pump locations for recertification of structural.

Specify new antennas and mounting locations (structural)

Fire Station 26 - 109 Deerfield Rd Buffalo Grove, IL 60089

DECOM Guyed Tower and Antennas

Remove & save (2) Dipole and 1 stick antenna to be put up on new tower

Discard old tower, guyed wires, anchors and no longer used antennas

Fire Station 27 - 100 Half Day Rd Buffalo Grove, IL 60089

DECOM 70' Tower

Remove & save (2) Dipole and 1 stick antenna to be put up on new tower

Discard old tower, anchors and any no longer used antennas

Arboretum Golf - 451 Half Day Rd

At 62' to 67', Remove 5 small antennas and 4 - 3/8" Coax runs

At 67', Add 1 small antenna and 1 CAT 5 run

Pump House 1 - 345 Arlington Heights Rd Buffalo Grove, IL 60089

At top of tower (30'), Remove 1 small antenna and Coax run
At top of tower (30'), Add 1 small antenna and 1 CAT 5 run

Pump House 2 - 511 Arlington Heights Rd Buffalo Grove, IL 60089

At 66', Remove 1 small antenna and 1 - 3/8" Coax run
At 66', Add 1 small antenna and 1 CAT 5 run

Pump House 6 - 120 Horatio Blvd Buffalo Grove, IL 60089

At top of tower (~30'), Remove 1 small antenna and Coax run
At top of tower (~30'), Add 1 small antenna and 1 CAT 5 run

Pump House 7 - 400 Lasalle Ln Buffalo Grove, IL 60089

At 66', Remove 1 small antenna and 1 - 3/8" Coax run
At 66', Add 1 small antenna and 1 CAT 5 run

Pace-Metra Station - 825 Commerce Ct Buffalo Grove, IL 60089

At 25', Remove 1 small antenna and 1 - 3/8" Coax run
At 25', Add 1 small antenna and 1 CAT 5 run [Fascia mount]

Future

CAFT Facility - 851 Krause Dr - *** SOW REQUIRED ***

At 50', Remove 2 small antenna and 1 - 3/8" Coax run
At 50', Add 1 small antennas and 1 CAT 5 runs [Wooden Pole]
2 men x 8 hours 16 Estimate \$2,700 material and labor

Option

Mobile Wifi Connectivity

Install 2 Multipoint access antennas 60 Degree sectors at each of the following locations: Village Hall, Fire Station 26 & 27 for use by the ESDA mobile command vehicle to access the Village network in the event of an emergency. The wireless technology requires line of sight or near line of sight for high speed connectivity. Full municipal coverage would require a substantial expenditure of funds. We would propose placing a two sector antennas on the towers listed above pointed at areas where good line of sight exists to the tower, where the command vehicle could be stationed to access the Village network. Direction of the Antennas are to be determined in consultation with ESDA. If customer desires to delete the option the line items for the 6 MultiPoint Sectors and Ubiquity Radios for Mobile Van and Ubiquity Mobile Radio & Cisco ASA5506-X with Firepower Appliance can be deleted from cost quote. It is also suggested that the use of 4G router can be used for fail over and coverage outside hotspot areas.

PROPOSED TIMELINE

- Oct 14th to Oct 21 Receive letter of intent to contract
Preliminary work
 - Identify and flag stake locations for towers for Station 26 & 27
 - Start Preliminary Frequency Coordination
 - Start FAA Site Registration
 - Schedule Geo Tec for site boing, Contractor to do Julie call 48 hrs in advance Oct 24th
- Award Oct 21
- Site Design and Civil Engineering Order Oct 22st
- Obtain information and forms for Zoning process from VBG
- Order GEO Tech Work Get results to send for Final tower design by 10/31
- 11/20 File FCC ASR Tower notification need NEPA response expected 1/17/20
- File FAA Site response expected 1/17/20
- 10/25 Submit NEPA information to Environmental Engineer for pre-clearance report 11/15
- FCC PCN 30 day notice for frequencies due 11/22
- File FCC License application after notice period completed 11/29 Licenses to be issued 30-60 days
- Prepare Zoning documents and file by 10/31
- Zoning Hearing Nov 6, 2019
- 10/31/19 Submit NEPA information to Environmental Engineer for Exclusion 11/15
- 10/22/19 Order Civil site plan request back by 11/13
- 11/7/19 Order Tower drawings for Permit Expected back 11/13
- 11/14/19 Submit Permit application Expect permit 12/2
- 12/9/19 Tower bolts expected to arrive for foundation to be dug (3 week window depending on weather)
- 11/25/19 Order Tower structure delivery 8-16 weeks 1/20/20 to 3/16/20
- 11/18 /19 to 12/20/20 install new antennas on VH to Pump 1 & 2 remove old antennas, 2-3 days
- Once Towers are received allow 2 weeks for construction of tower due to scheduling. Tower should take 3 days to erect each tower
- When we erect towers we will also run new cable and pre mount some antennas while tower is on ground.
- Mount new backbone antennas on existing towers and unlicensed Estimate 15 days to complete the backbone and all sites
- Fully test each link as it is brought up to verify it is in spec.
- 4/13/20 Recertification of pump house towers that previously failed 5/20/20
- 4/13/20 Removal of existing towers to be removed estimated completion date for removal 4/17/20
- 4/20/20 Survey as built by Civil Engineer estimate completed 5/20/20
- 5/31/20 Turnover complete as built documents

We are attempting to have very tight time lines at the outset in order to allow the construction of the foundations before the frost sets in. Any outside delays would cause the project to be on hold over the winter, but our construction timelines for the tower arriving can be shortened if the tower arrives earlier than the current estimated 16 weeks. We have also moved some of the make ready work to the period between the "intent to award" and the contact date to move the project at the fastest pace.

CONTRACT EXHIBIT B- SCHEDULE OF PRICES

- A. Costs for Tower Construction, Licensed Microwave & Unlicensed Microwave, are included below. Preventative Maintenance and Monitoring quote is attached.
- B. Urbancom had originally proposed the use of Valmont towers. We are now proposing the use of Sabre Industries welded rod towers. These towers are comparable in cost, construction and reliability. However, Valmont has continued to see very long delivery times, while Sabre has given an indication of shorter lead times. Neither manufacturer will commit to a firm time until we are ready to place an order. Additionally, the foundation design of the Sabre tower provides less above ground footprint. Sabre will be able to ship foundation drawings and foundation hardware in December 2019 with the tower expected to arrive in January.
- C. Urbancom has confirmed stock availability for Dragonwave Harmony MC 23 Ghz radios for delivery in our proposed timeline, so not substitution of like hardware is anticipated.
- D. In the event that the tower sites would fail the NEPA Environmental exclusion review a change order would be required to extend construction time and costs.
 - 1. NEPA Environmental Engineering. If the report determines that a Section 106 Phase I/ NEPA is required a change order would be required before the project could move forward. Estimated the costs for full study are estimated per site to be:

Phase 1- about \$1700

Full NEPA (Summary report; section 106 review, Public Notice (up to \$100, anything above will be a pass through fee), SHPO / TCNS filings) around \$2,100 +

Archaeology (required with NEPA when there is ground disturbance, includes up to 10 shovel test pits (STPs))- around \$1900+

OPTIONAL FUTURE LOCATION & PROPOSALS

CAFT Facility - 851 Krause Dr - *** SOW REQUIRED ***
At 50', Remove 2 small antenna and 1 - 3/8" Coax run
At 50', Add 2 small antennas and 2 CAT 5 runs [Wooden Pole]

Estimate material and labor \$ 2,700.00

Mobile Wifi option is included in quote below. Deduct \$11,350.00 if you desire not to install this hardware.

- E. The totals below are allocated between 2019 work which can be billed in 2019 and 2020 work to be billed in 2020. These estimates contemplate that there are no delays in zoning, permitting by the Village or any outside Authorities and that we are able to commence underground construction to put the tower foundations in before frost sets in making underground construction impossible. It is very unlikely based on the remaining time that the actual above portion of the tower will be delivered before December 31, 2019, as it is likely to ship in January. Progress billing will be submitted.

TOTALS

Estimated 2019 Budget \$ 188,100.10
Balance in 2020 Budget \$ 74,566.00
Total Cost \$ 262,666.10

	Customer Extended
Radios	\$ 76,616.10
Professional Serv	\$ 40,300.00
Towers Phase 1	\$ 58,184.00
Towers Phase 2	\$ 10,616.00
Labor Radio Deployment	\$ 44,500.00
2020 Decommission old Towers & move rf Radios	\$ 23,200.00
2020 Prof Serv Documentation	\$ 9,250.00
	\$ 262,666.10

RADIO COST SCHEDULE

\$76,616.10 (These items can be invoiced in prior to December 31, 2019)

Quantity	Description
3	Dragonwave High Radios
3	Dragonwave Low Radios
6	1' Antenna
6	Install Kit AC
3	1000 Mbps Capacity License, ACM, Dual Carrier
3	1 Year Warranty
1	Urbancom Warranty Spare Link Stocked
3	Extended Warranty to 3 years
12	Ubiquity Unlicensed Point to Point Radios
6	MultiPoint Sectors and Ubiquity Radios for Mobile Van
6	Grounding for remote location
18	Ubiquity Surge Arrestors
1	Ubiquity Mobile Radio & Cisco ASA5506-X with Firepower Appliance
1	Power Cable for Dragonwave Licensed Radios
4	Radio Grounding for Tower locations
6	Pipe to Pipe Clamps & pipe for Dishes
4000	Outdoor Shielded Gel filled Cat5e

PROFESSIONAL SERVICES & REQUIRED INSURANCE & BOND COVERAGES

\$40,650.00 (These items can be invoiced prior to December 31, 2019)

Quantity	Description	Customer	Extended
3	Prepare PCN Letter	\$ 300.00	\$ 900.00
3	Frequency Coordination per Link	\$ 600.00	\$ 1,800.00
3	Prepare FCC Application	\$ 600.00	\$ 1,800.00
2	GEO Soil Test	\$ 2,600.00	\$ 5,200.00
2	Enviornmental NEPA Exclusion Analysis	\$ 350.00	\$ 700.00
2	Zoning an Permitting Application	\$ 2,500.00	\$ 5,000.00
2	Civil Engineering & Site Plan	\$ 2,500.00	\$ 5,000.00
2	Prepare FCC & FAA Towers	\$ 600.00	\$ 1,200.00
2	Project Management for Towers	\$ 2,500.00	\$ 5,000.00
1	Bond	\$ 7,200.00	\$ 7,200.00
1	OCP Insurance	\$ 3,500.00	\$ 3,500.00
1	Railroad Protective Insurance	\$ 3,000.00	\$ 3,000.00
			\$ 40,300.00

TOWER CONSTRUTION COSTS

Total Tower Costs \$68,800.00

\$58,184.00 (can be invoiced prior to December 31, 2019)

\$10,616.00 (Invoiced in 2020)

Phase 1 Tower Construction Underground Work

Quantity	Description	Customer	Customer Extended
2	100 Ft Sabre Self Supporting Tower	\$ 18,000.00	\$ 36,000.00
2	Foundation Material Costs	\$ 4,130.00	\$ 8,260.00
2	Foundation Install Cost	\$ 6,962.00	\$ 13,924.00
	December 2019 Estimated Completion	\$ 29,092.00	\$ 58,184.00

Phase 2 Tower Construction Above Ground Set of Towers

2	Tower Crane and Install Cost with grounding	\$ 5,308.00	\$ 10,616.00
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LABOR

Configure, program, mount & align all radio equipment at all locations at Prevailing Wage as required
\$44,500.00 Total

\$13,000.00 can be invoiced in 2019 for Radio Programing & non construction labor & 2 unlicensed links.

\$ 31,500.00 (To be invoiced in 2020 for Radio deployment)

DECOMMISSION AND REMOVAL OF OLD STRUCTURES & FINAL AS BUILTS

\$32,450.00 (Billed at End of Project in 2020)

Crane for decom 26 and 27
Labor Decom 26 and 27
Cable/ Material for RF Radios
As built Network topology turnover doc
\$23,200.00

Reanalyze and Certify failed lift station towers \$5,250.00
Civil Engineering Final Asbuilts \$4,000.00
\$9,250.00



Urban Communications, Inc.
 5320 West 159th Street Suite 503
 Oak Forest, IL 60452-3335
 Phone: 708/687-2090
 Fax: 708/687-8786
<http://www.urbancom.net>

Service Agreement - Service Order

Service Activation Date: 06/01/2020
Service Term: 60 Months

Customer Name: Buffalo Grove Maintenance Contract
Install Address: 50 Raupp Blvd

Billing Address: 50 Raupp Blvd

Phone & Fax: Buffalo Grove, IL 60089
 847-459-2545
Tech Contact: Michael Skibbe
Tech E-Mail:

Billing Contact: Buffalo Grove, IL 60089
 Michael Skibbe
Phone & Fax: 847-459-2545
Billing E-Mail:

Urban Communications, Inc. Access Service:

Qty.	Service	Monthly Price	Extended Price
1	Monitoring and Phone Support - Annual (1 Hour Per Month)	\$ 208.33	\$ 2,500.00
1	1 Year Preventative Maintenance Plan (Annual)	\$ 200.00	\$ 2,400.00

Equipment and Additional Services:

Qty.	Service	Price	Extended	Tax
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Urbancom to provide annual Preventative Maintenance of links to be billed Annually for the following links:

- Licensed links:
 FS27 to FS26
 FS26 to VH
 VH to FS25
- 6 point to point unlicensed links
 6 Sector links unlicensed for mobile access vehicle

Twice Annual site visits for PM for each link which will consist of a physical inspection of the site to include:

- Clean all any fans with compressed air.
- Physical inspection of all internal and external hardware.
- Inspection of all cables between indoor location and radio on tower.
- Inspect and tighten all bolts on mounts and radio.
- Check for proper alignment of link.
- Verify Radios with within mfg. specs by our engineer to insure that all parameters are within proper specifications for the link.
- Install any necessary firmware updates that are required for proper operation of the radios. We will not install firmware updates which may have been issued that do not have bearing on the proper operation of the radios as configured. Often firmware is issued to address issues with software packages not deployed in certain radios. Upgrading those patches may cause other unintended issues.
- In the event of a firmware release that is deemed urgent Urbancom will install those releases as necessary throughout the year.
- Urbancom to provide site reports and checklist of PM items that have been reviewed and certification by the technician of measurable items and work completed. Site photos will be provided where changes are made at a site.
- On any insurance related claims Urbancom will work to provide all requested material to validate the claim, including photos of damaged equipment.
- Urbancom to provide up to 1 hour monthly phone support at no charge. Unused time can roll forward throughout the annual term.
- Manufacturer and Urbancom do not warranty damage caused by lightening or water damage to radios. This damage will require an insurance claim to be made to Customers insurance.
- Customer shall be responsible for renewing all manufacturer warranties.

In the event of a dispatch to repair a system or time is expended to address an outage or failure of hardware Urbancom will bill customer for time expended based on the schedule below, and for any necessary materials not covered by manufacturer warranty:

All scheduled Preventative Maintenance covered in Annual Charge, trouble shooting and repair outside of annual PM subject to T&M costs:

Time Charges:

Business hours (8AM-4:30PM M-F)
 \$95.00/per man hr for Tower Climber/Field Technician (minimum 2 man crew required for tower climb.)
 \$150.00/per man hr for Sr. Engineer (remote access) (Discounted rate from on site rate of \$175.00/hr)

Non-Business Hours, Weekends & Holidays

\$142.50/per man hr for Tower Climber/Field Technician (minimum 2 man crew required for tower climb.)
 \$225.00/per man hr for Sr. Engineer

Customer responsible for all actual freight costs for return of defective gear under warranty. Manufacturer covers shipment out of replacement gear under warranty.

Urbancom has included in the quote a spare link which Urbancom will inventory for Buffalo Grove. In the event of a failure the radio will be swapped out while the defective radio is being repaired.

Monitoring support which includes firmware updates referenced above, require site to site VPN to our Cisco ASA. We will monitor and graph necessary parameters helpful for support of those links. We can send monitoring alerts for down conditions. (note that false alerts may be generated due to other network issues between your site and our monitoring gear.)

Access Services \$ 4,900.00	Additional Services \$ 0.00	Total Initial Charge Due At Signing \$ 4,900.00
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MONTHLY CHARGE \$ 4,900.00 BILLING CYCLE: MONTHLY QUARTERLY ANNUAL

All prices subject to required local, state and federal taxes and mandated fees.

CUSTOMER

URBAN COMMUNICATIONS, INC.

I have read and agree to the terms of the attached Master Services Agreement. I have legal authority to enter into this Agreement, and guarantee payment for all amounts due under this Agreement and subsequent Service Orders that may be entered into.

Signature: _____

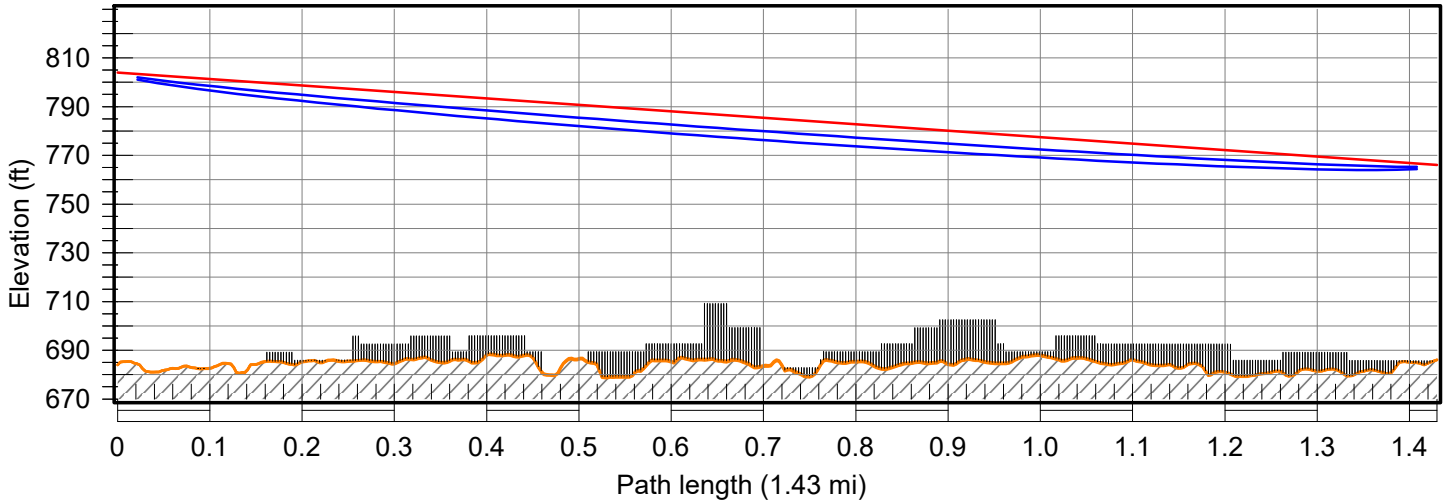
Signature: _____

Printed Name: Edmund G. Urban III
 Title: President

Printed Name: _____

Date: _____

Date: _____



BG VH	
Latitude	42 09 09.08 N
Longitude	087 58 04.85 W
Azimuth	25.33°
Elevation	684 ft ASL
Antenna CL	120.0 ft AGL

Frequency (MHz) = 22300.0 K = 1.33, 0.60 %F1 = 100.00, 60.00
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BG FS 26	
Latitude	42 10 16.47 N
Longitude	087 57 21.96 W
Azimuth	205.34°
Elevation	686 ft ASL
Antenna CL	80.0 ft AGL



Transmission details (BG VH-BG FS 26.pl5)

	BG VH	BG FS 26
Latitude	42 09 09.08 N	42 10 16.47 N
Longitude	087 58 04.85 W	087 57 21.96 W
True azimuth (°)	25.33	205.34
Vertical angle (°)	-0.30	0.28
Elevation (ft)	683.93	686.07
Tower height (ft)	120.00	80.00
Antenna model	VHLP1-23 (TR)	VHLP1-23 (TR)
Antenna file name	7014a	7014a
Antenna gain (dBi)	35.30	35.30
Antenna height (ft)	120.00	80.00
Frequency (MHz)	22300.00	
Polarization	Horizontal	
Path length (mi)	1.43	
Free space loss (dB)	126.67	
Atmospheric absorption loss (dB)	0.44	
Field margin (dB)	1.00	
Net path loss (dB)	57.51	57.51
Configuration	2 x 50 MHz	2 x 50 MHz
Radio model	23EM50SFC453v03haam	23EM50SFC453v03haam
Radio file name	23em50sfc453v03haam	23em50sfc453v03haam
Emission designator	47M3D7W	47M3D7W
Geoclimatic factor	5.229E-005	
Path inclination (mr)	5.02	
Fade occurrence factor (Po)	1.115E-005	
Polarization	Horizontal	

	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
2048QAM 901.8 Mbps	22.00	22.00	-52.90	-52.90	57.30	57.30	-35.51	-35.51	17.39	17.39	17.39	17.39
1024QAM 816 Mbps	22.00	22.00	-57.30	-57.30	57.30	57.30	-35.51	-35.51	21.79	21.79	21.79	21.79
512QAM 741.8 Mbps	22.00	22.00	-60.10	-60.10	57.30	57.30	-35.51	-35.51	24.59	24.59	24.59	24.59
256QAM 654.6 Mbps	22.00	22.00	-63.40	-63.40	57.30	57.30	-35.51	-35.51	27.89	27.89	27.89	27.89
128QAM 567.4 Mbps	22.00	22.00	-66.30	-66.30	57.30	57.30	-35.51	-35.51	30.79	30.79	30.79	30.79

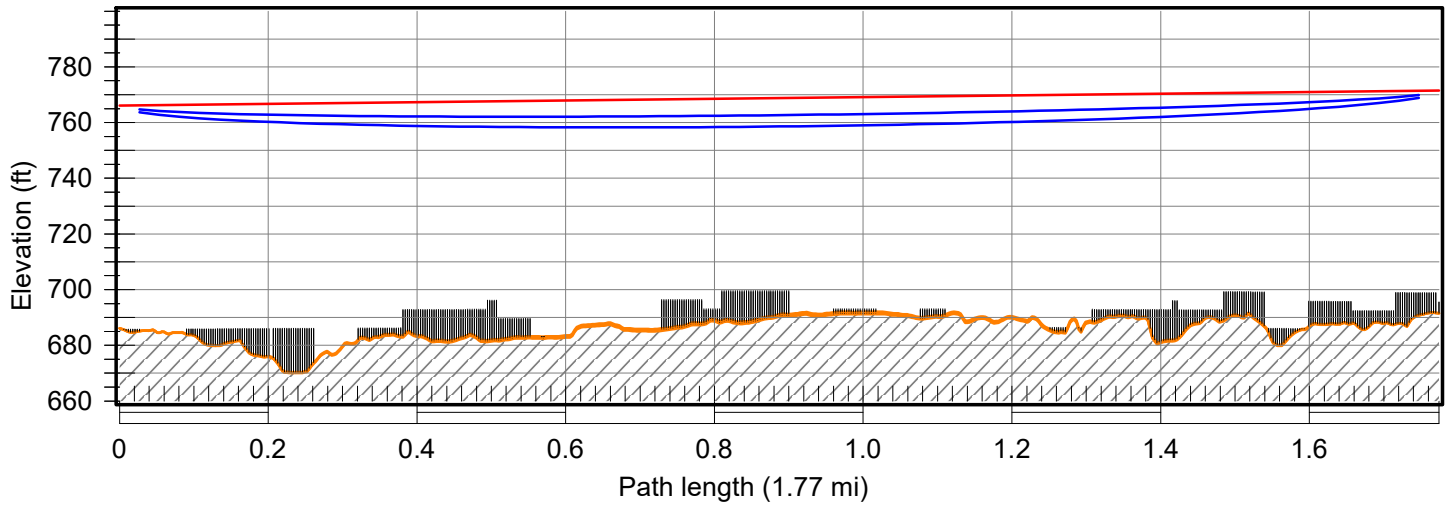
Disclaimer: Urban Communications uses industry standard modeling software to provide predictive performance and electronic line of sight results, but these do not imply any guarantee of field performance or line of sight. Actual deployed short and long-term results may vary based on external path factors, and proper line of sight should be validated prior to link install.

	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
64QAM 480 Mbps	22.00	22.00	-69.40	-69.40	57.30	57.30	-35.51	-35.51	33.89	33.89	33.89	33.89
32QAM 392.8 Mbps	22.00	22.00	-72.40	-72.40	57.30	57.30	-35.51	-35.51	36.89	36.89	36.89	36.89
16QAM 305.4 Mbps	22.00	22.00	-75.80	-75.80	57.30	57.30	-35.51	-35.51	40.29	40.29	40.29	40.29
QPSK 131 Mbps	22.00	22.00	-83.20	-83.20	57.30	57.30	-35.51	-35.51	47.69	47.69	47.69	47.69

	Worst month multipath		Annual multipath		Annual rain		Total annual (2 way)	Time in mode (2 way)
2048QAM 901.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9964	99.9964	99.9964	99.9964
1024QAM 816 Mbps	99.9999	99.9999	99.9999	99.9999	99.9985	99.9985	99.9985	0.0021
512QAM 741.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9991	99.9991	99.9991	0.0006
256QAM 654.6 Mbps	99.9999	99.9999	99.9999	99.9999	99.9996	99.9996	99.9996	0.0004
128QAM 567.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9998	99.9998	99.9998	0.0002
64QAM 480 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0002
32QAM 392.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0001
16QAM 305.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
QPSK 131 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000

Multipath fading method - Rec. ITU-R P.530-13/16

Rain fading method - Rec. ITU-R P.530-14/16 (R837-5)



BG FS 26	
Latitude	42 10 16.47 N
Longitude	087 57 21.96 W
Azimuth	351.86°
Elevation	686 ft ASL
Antenna CL	80.0 ft AGL

Frequency (MHz) = 22300.0
K = 1.33, 0.60
%F1 = 100.00, 60.00

BG FS 27	
Latitude	42 11 48.07 N
Longitude	087 57 39.58 W
Azimuth	171.86°
Elevation	691 ft ASL
Antenna CL	80.0 ft AGL



Transmission details (BG FS 26-BG FS 27.pl5)

	BG FS 26	BG FS 27
Latitude	42 10 16.47 N	42 11 48.07 N
Longitude	087 57 21.96 W	087 57 39.58 W
True azimuth (°)	351.86	171.86
Vertical angle (°)	0.02	-0.04
Elevation (ft)	686.07	691.46
Tower height (ft)	80.00	80.00
Antenna model	VHLP1-23 (TR)	VHLP1-23 (TR)
Antenna file name	7014a	7014a
Antenna gain (dBi)	35.30	35.30
Antenna height (ft)	80.00	80.00
Frequency (MHz)	22300.00	
Polarization	Horizontal	
Path length (mi)	1.77	
Free space loss (dB)	128.55	
Atmospheric absorption loss (dB)	0.54	
Field margin (dB)	1.00	
Net path loss (dB)	59.49	59.49
Configuration	2 x 50 MHz	2 x 50 MHz
Radio model	23EM50SFC453v03haam	23EM50SFC453v03haam
Radio file name	23em50sfc453v03haam	23em50sfc453v03haam
Emission designator	47M3D7W	47M3D7W
Geoclimatic factor	5.214E-005	
Path inclination (mr)	0.58	
Fade occurrence factor (Po)	9.207E-005	
Polarization	Horizontal	

	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
2048QAM 901.8 Mbps	22.00	22.00	-52.90	-52.90	57.30	57.30	-37.49	-37.49	15.41	15.41	15.41	15.41
1024QAM 816 Mbps	22.00	22.00	-57.30	-57.30	57.30	57.30	-37.49	-37.49	19.81	19.81	19.81	19.81
512QAM 741.8 Mbps	22.00	22.00	-60.10	-60.10	57.30	57.30	-37.49	-37.49	22.61	22.61	22.61	22.61
256QAM 654.6 Mbps	22.00	22.00	-63.40	-63.40	57.30	57.30	-37.49	-37.49	25.91	25.91	25.91	25.91
128QAM 567.4 Mbps	22.00	22.00	-66.30	-66.30	57.30	57.30	-37.49	-37.49	28.81	28.81	28.81	28.81

Disclaimer: Urban Communications uses industry standard modeling software to provide predictive performance and electronic line of sight results, but these do not imply any guarantee of field performance or line of sight. Actual deployed short and long-term results may vary based on external path factors, and proper line of sight should be validated prior to link install.

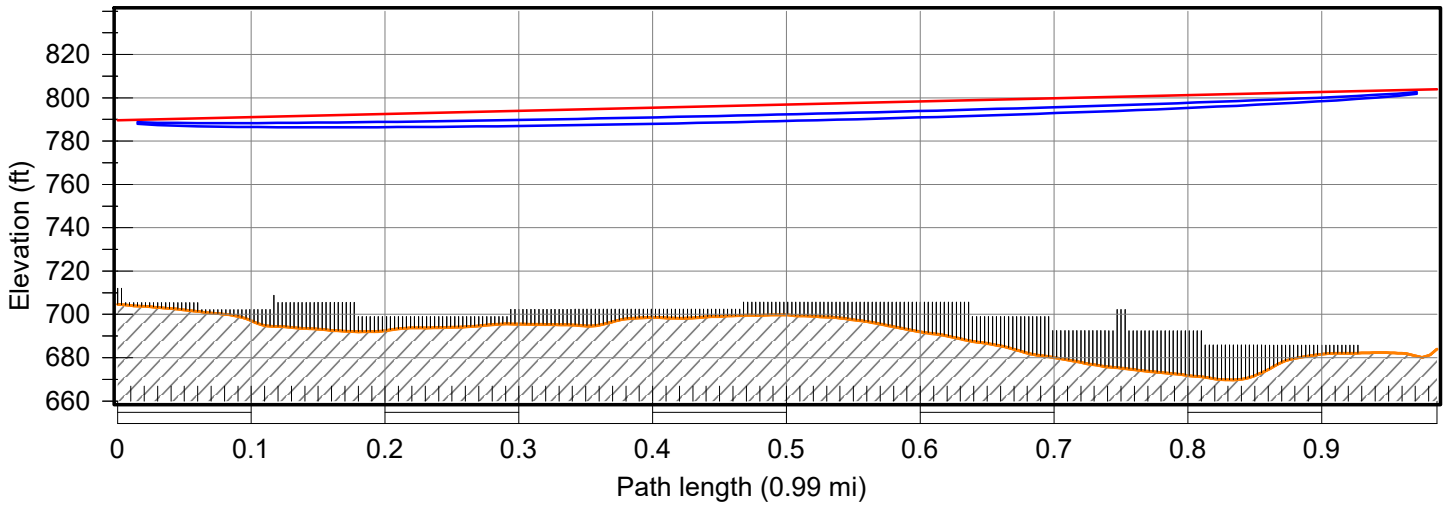


	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
64QAM 480 Mbps	22.00	22.00	-69.40	-69.40	57.30	57.30	-37.49	-37.49	31.91	31.91	31.91	31.91
32QAM 392.8 Mbps	22.00	22.00	-72.40	-72.40	57.30	57.30	-37.49	-37.49	34.91	34.91	34.91	34.91
16QAM 305.4 Mbps	22.00	22.00	-75.80	-75.80	57.30	57.30	-37.49	-37.49	38.31	38.31	38.31	38.31
QPSK 131 Mbps	22.00	22.00	-83.20	-83.20	57.30	57.30	-37.49	-37.49	45.71	45.71	45.71	45.71

	Worst month multipath		Annual multipath		Annual rain		Total annual (2 way)	Time in mode (2 way)
2048QAM 901.8 Mbps	99.9997	99.9997	99.9999	99.9999	99.9922	99.9922	99.9921	99.9921
1024QAM 816 Mbps	99.9999	99.9999	99.9999	99.9999	99.9965	99.9965	99.9965	0.0044
512QAM 741.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9979	99.9979	99.9978	0.0014
256QAM 654.6 Mbps	99.9999	99.9999	99.9999	99.9999	99.9988	99.9988	99.9988	0.0009
128QAM 567.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9993	99.9993	99.9993	0.0005
64QAM 480 Mbps	99.9999	99.9999	99.9999	99.9999	99.9996	99.9996	99.9996	0.0003
32QAM 392.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9998	99.9998	99.9998	0.0002
16QAM 305.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0001
QPSK 131 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0001

Multipath fading method - Rec. ITU-R P.530-13/16

Rain fading method - Rec. ITU-R P.530-14/16 (R837-5)



BG FS 25	
Latitude	42 08 17.76 N
Longitude	087 58 09.55 W
Azimuth	3.90°
Elevation	705 ft ASL
Antenna CL	85.0 ft AGL

Frequency (MHz) = 22300.0
K = 1.33, 0.60
%F1 = 100.00, 60.00

BG VH	
Latitude	42 09 09.08 N
Longitude	087 58 04.85 W
Azimuth	183.90°
Elevation	684 ft ASL
Antenna CL	120.0 ft AGL



Transmission details (BG FS 25-BG VH.pl5)

	BG FS 25	BG VH
Latitude	42 08 17.76 N	42 09 09.08 N
Longitude	087 58 09.55 W	087 58 04.85 W
True azimuth (°)	3.90	183.90
Vertical angle (°)	0.15	-0.16
Elevation (ft)	704.61	683.93
Tower height (ft)	80.00	120.00
Antenna model	VHLP1-23 (TR)	VHLP1-23 (TR)
Antenna file name	7014a	7014a
Antenna gain (dBi)	35.30	35.30
Antenna height (ft)	85.00	120.00
Frequency (MHz)	22300.00	
Polarization	Horizontal	
Path length (mi)	0.99	
Free space loss (dB)	123.44	
Atmospheric absorption loss (dB)	0.30	
Field margin (dB)	1.00	
Net path loss (dB)	54.15	54.15
Configuration	2 x 50 MHz	2 x 50 MHz
Radio model	23EM50SFC453v03haam	23EM50SFC453v03haam
Radio file name	23em50sfc453v03haam	23em50sfc453v03haam
Emission designator	47M3D7W	47M3D7W
Geoclimatic factor	5.229E-005	
Path inclination (mr)	2.75	
Fade occurrence factor (Po)	5.068E-006	
Polarization	Horizontal	

	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
2048QAM 901.8 Mbps	22.00	22.00	-52.90	-52.90	57.30	57.30	-32.15	-32.15	20.75	20.75	20.75	20.75
1024QAM 816 Mbps	22.00	22.00	-57.30	-57.30	57.30	57.30	-32.15	-32.15	25.15	25.15	25.15	25.15
512QAM 741.8 Mbps	22.00	22.00	-60.10	-60.10	57.30	57.30	-32.15	-32.15	27.95	27.95	27.95	27.95
256QAM 654.6 Mbps	22.00	22.00	-63.40	-63.40	57.30	57.30	-32.15	-32.15	31.25	31.25	31.25	31.25
128QAM 567.4 Mbps	22.00	22.00	-66.30	-66.30	57.30	57.30	-32.15	-32.15	34.15	34.15	34.15	34.15

Disclaimer: Urban Communications uses industry standard modeling software to provide predictive performance and electronic line of sight results, but these do not imply any guarantee of field performance or line of sight. Actual deployed short and long-term results may vary based on external path factors, and proper line of sight should be validated prior to link install.

	TX power (dBm)		RX threshold level (dBm)		EIRP (dBm)		Receive signal (dBm)		Thermal fade margin (dB)		Flat fade margin - multipath (dB)	
64QAM 480 Mbps	22.00	22.00	-69.40	-69.40	57.30	57.30	-32.15	-32.15	37.25	37.25	37.25	37.25
32QAM 392.8 Mbps	22.00	22.00	-72.40	-72.40	57.30	57.30	-32.15	-32.15	40.25	40.25	40.25	40.25
16QAM 305.4 Mbps	22.00	22.00	-75.80	-75.80	57.30	57.30	-32.15	-32.15	43.65	43.65	43.65	43.65
QPSK 131 Mbps	22.00	22.00	-83.20	-83.20	57.30	57.30	-32.15	-32.15	51.05	51.05	51.05	51.05

	Worst month multipath		Annual multipath		Annual rain		Total annual (2 way)	Time in mode (2 way)
2048QAM 901.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9993	99.9993	99.9993	99.9993
1024QAM 816 Mbps	99.9999	99.9999	99.9999	99.9999	99.9998	99.9998	99.9998	0.0005
512QAM 741.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0002
256QAM 654.6 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
128QAM 567.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
64QAM 480 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
32QAM 392.8 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
16QAM 305.4 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000
QPSK 131 Mbps	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	99.9999	0.0000

Multipath fading method - Rec. ITU-R P.530-13/16

Rain fading method - Rec. ITU-R P.530-14/16 (R837-5)

CONTRACT EXHIBIT C - FORM OF PERFORMANCE AND PAYMENT BOND

Bond Number: _____

KNOW ALL MEN BY THESE PRESENTS, That _____ (the "**Principal**") and _____ (the "**Surety**"), are held and firmly bound unto the Village of Buffalo Grove, an Illinois home-rule unit of government (the "**Village**"), the full and just sum of _____ Dollars (\$_____) in lawful money of the UNITED STATES OF AMERICA as herein provided.

THE CONDITION OF THIS OBLIGATION is such that the Principal and Surety agree to bind themselves, their successors, assigns, executors, heirs and administrators, jointly and severally, for the full and faithful performance of the Work as defined in that particular Wide Area Network and Tower Improvement contract between Principal and the Village dated __ day of _____, 20__, (hereinafter referred to as the "**Contract**"), a copy of which is attached and incorporated by reference as though fully set forth herein.

NOW THE CONDITIONS OF THIS OBLIGATION ARE SUCH that if the said Principal (i) shall in all respects keep and perform all the undertakings, covenants, terms, conditions and agreements of the Contract; (ii) shall pay all sums of money due or to become due, for any labor, materials, apparatus, fixtures or equipment furnished for the Work provided in said Contract; and (iii) shall remove and replace any defects in workmanship or materials which may be apparent or may develop within the ARTICLE XIX – WARRANTY PERIOD of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or the Work thereunder shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the Work.

IN WITNESS WHEREOF, we have hereunto set our hands and sea __ day of _____, 20__.

SURETY

PRINCIPAL

By: _____
Name: _____
Title: _____

By: _____
Name: _____
Title: _____

ATTEST

ATTEST

By: _____

By: _____

NOTE: Date of Bond must not be prior to date of Contract.
If Contractor is Partnership, all partners should execute Bond.
IMPORTANT: Surety companies executing Bonds must appear on the Treasury Departments most current list (Circular 570 as amended) and be authorized to transact business in the state where the Work is located.

CONTRACT EXHIBIT D – PARTIAL LIEN WAIVER

PARTIAL LIEN WAIVER

STATE OF ILLINOIS

COUNTY OF _____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by _____
 to furnish _____
 for the premises known as _____
 of which _____ is the owner.
 THE undersigned, for and in consideration of _____
 (\$ _____

) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged, do(es) hereby waive and release any and all lien or claim of, or right to, lien, under the statutes of the State of Illinois, relating to mechanics' liens, with respect to and on said above-described premises, and the improvements thereon, and on the material, fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the owner, on account of all labor, services, material, fixtures, apparatus or machinery, furnished to this date by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____ COMPANY NAME _____
 ADDRESS _____
 SIGNATURE AND TITLE _____

***EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN, TO THE CONTRACT**

CONTRACTOR'S AFFIDAVIT

STATE OF ILLINOIS

COUNTY OF _____

TO WHOM IT MAY CONCERN:

THE UNDERSIGNED, (NAME) _____ BEING DULY SWORN, DEPOSES
 AND SAYS THAT HE OR SHE IS (POSITION) _____ OF
 (COMPANY NAME) _____ WHO IS THE
 CONTRACTOR FURNISHING _____ WORK ON THE BUILDING
 LOCATED AT _____
 OWNED BY _____

That the total amount of the contract including extras* is \$ _____ on which he or she has received payment of \$ _____ prior to this payment. That all waivers are true, correct and genuine and delivered unconditionally and that there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses of all parties who have furnished or delivered material or labor, or both, for said work and all parties having contracts or sub contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to become due to each, and that the items mentioned include all labor and material required to complete said work according to plans and specifications:

NAMES AND ADDRESSES	WHAT FOR	CONTRACT PRICE INCLUDE EXTRAS*	AMOUNT PAID	THIS PAYMENT	BALANCE DUE
TOTAL LABOR AND MATERIAL INCLUDING EXTRAS* TO COMPLETE.					

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE: _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____,

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN, TO THE CONTRACT.

 NOTARY PUBLIC

CONTRACT EXHIBIT E- FINAL LIEN WAIVER

FINAL WAIVER OF LIEN

STATE OF ILLINOIS

COUNTY OF _____

TO WHOM IT MAY CONCERN:

WHEREAS the undersigned has been employed by _____
to furnish _____
for the premises known as _____
of which _____ is the owner.

THE undersigned, for and in consideration of _____
(\$ _____) Dollars, and other good and valuable considerations, the receipt whereof is hereby acknowledged,
do(es) hereby waive and release any and all lien or claim of, or right to, lien, under the statutes of the State of Illinois, relating
to mechanics' liens, with respect to and on said above-described premises, and the improvements thereon, and on the material,
fixtures, apparatus or machinery furnished, and on the moneys, funds or other considerations due or to become due from the
owner, on account of all labor, services, material, fixtures, apparatus or machinery, heretofore furnished, or which may be
furnished at any time hereafter, by the undersigned for the above-described premises, INCLUDING EXTRAS.*

DATE _____ COMPANY NAME _____
ADDRESS _____
SIGNATURE AND TITLE _____

***EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE ORDERS, BOTH ORAL AND WRITTEN, TO THE CONTRACT**

CONTRACTOR'S AFFIDAVIT

STATE OF ILLINOIS

COUNTY OF _____

TO WHOM IT MAY CONCERN:

THE UNDERSIGNED, (NAME) _____ BEING DULY SWORN, DEPOSES
AND SAYS THAT HE OR SHE IS (POSITION) _____ OF
(COMPANY NAME) _____ WHO IS THE
CONTRACTOR FURNISHING _____ WORK ON THE BUILDING
LOCATED AT _____
OWNED BY _____

That the total amount of the contract including extras* is \$ _____ on which he or she has received payment of
\$ _____ prior to this payment. That all waivers are true, correct and genuine and delivered unconditionally and that
there is no claim either legal or equitable to defeat the validity of said waivers. That the following are the names and addresses
of all parties who have furnished or delivered material or labor, or both, for said work and all parties having contracts or sub
contracts for specific portions of said work or for material entering into the construction thereof and the amount due or to
become due to each, and that the items mentioned include all labor and material required to complete said work according to
plans and specifications:

NAMES AND ADDRESSES	WHAT FOR	CONTRACT PRICE INCLDG	AMOUNT PAID	THIS PAYMENT	BALANCE DUE
TOTAL LABOR AND MATERIAL INCLUDING EXTRAS*					

That there are no other contracts for said work outstanding, and that there is nothing due or to become due to any person for
material, labor or other work of any kind done or to be done upon or in connection with said work other than above stated.

DATE _____ SIGNATURE: _____

SUBSCRIBED AND SWORN TO BEFORE ME THIS _____ DAY OF _____

*EXTRAS INCLUDE BUT ARE NOT LIMITED TO CHANGE
ORDERS, BOTH ORAL AND WRITTEN, TO THE CONTRACT.

NOTARY PUBLIC