

**AGREEMENT FOR  
PURCHASE, INSTALLATION AND MAINTENANCE OF  
ELECTRICAL VEHICLE CHARGING STATIONS - REBID**

THIS AGREEMENT for Purchase, Installation and Maintenance of Electrical Vehicle Charging Stations - Rebid ("Agreement"), made this 7th day of February 2025, is by and between the City of Fort Lauderdale, a Florida municipality ("City"), whose address is 101 NE 3<sup>rd</sup> Avenue, Suite 2100, Fort Lauderdale, Florida 33301-1016, and G & H Electric, Inc. d/b/a Florida Supercharge ("Contractor"), whose principal address is 227 SW 2<sup>nd</sup> Avenue, Fort Lauderdale, Florida 33301, Phone: 954-836-8300, Email: [Scoloney@USSupercharge.com](mailto:Scoloney@USSupercharge.com); (collectively, "Parties").

NOW THEREFORE, for and in consideration of the mutual promises and covenants set forth herein and other good and valuable consideration, Contractor agrees to provide turnkey Electric Vehicle Charging Station (EVCS) services for both the general public use and the City of Fort Lauderdale Fleet Division at various locations within the City (the "Work"), and the City and the Contractor covenant and agree as follows:

**WITNESSETH:**

**I. DOCUMENTS**

The following documents (collectively "Contract Documents") are hereby incorporated into and made part of this Agreement:

- (1) Invitation to Bid (ITB) Event No. 387-2 - EV Charging Stations, Installation, & Maintenance - Rebid, including any and all exhibits and addenda prepared by the City of Fort Lauderdale ("ITB" or "Exhibit A").
- (2) The Contractor's response to the ITB, dated November 20, 2024 ("Exhibit B").

All Contract Documents may also be collectively referred to as the "Documents." In the event of any conflict between or among the Documents or any ambiguity or missing specifications or instruction, the following priority is established:

- A. First, this Agreement dated February 7th, 2025 and any attachments.
- B. Second, Exhibit A.
- C. Third, Exhibit B.

**II. SCOPE**

The Contractor shall perform the Work under the general direction of the City as set forth in the Contract Documents.

Unless otherwise specified herein, the Contractor shall perform all Work identified in this Agreement. The Parties agree that the scope of services is a description of

Contractor's obligations and responsibilities, and is deemed to include preliminary considerations and prerequisites, and all labor, materials, equipment, and tasks which are such an inseparable part of the work described that exclusion would render performance by Contractor impractical, illogical, or unconscionable.

Contractor acknowledges and agrees that the City's Contract Administrator has no authority to make changes that would increase, decrease, or otherwise modify the Scope of Services to be provided under this Agreement. Any change orders to the Scope of Services or amendments to the Contract Documents must be authorized by the City Manager, or his/her designee, and approved by the City Commission whenever required in compliance with the Charter and Code of Ordinances for the City of Fort Lauderdale.

By signing this Agreement, the Contractor represents that it has thoroughly reviewed the documents incorporated into this Agreement by reference and that it accepts the description of the Work and the conditions under which the Work is to be performed.

### **III. TERM OF AGREEMENT**

The initial term of this Agreement shall commence on **January 22, 2025, and shall end on January 21, 2027. The City reserves the right to extend this Agreement for three (3) additional one (1)-year terms**, provided all terms, conditions and specifications contained herein remain the same, and the extension is mutually agreed to in writing and signed by both Parties. In the event the term of this Agreement extends beyond the end of any fiscal year of City, to wit, September 30<sup>th</sup>, the continuation of this Agreement beyond the end of the City's fiscal year shall be subject to and conditioned upon both the appropriation and the availability of funds.

### **IV. COMPENSATION**

The Contractor agrees to provide the services and/or materials as specified in the Contract Documents at the cost specified in Exhibit B. It is acknowledged and agreed by Contractor that this amount is the maximum payable and constitutes a limitation upon City's obligation to compensate Contractor for Contractor's services related to this Agreement. This maximum amount, however, does not constitute a limitation of any sort upon Contractor's obligation to perform all items of work required by or which can be reasonably inferred from the Scope of Services. Except as otherwise provided in the solicitation, no amount shall be paid to Contractor to reimburse Contractor's expenses.

### **V. METHOD OF BILLING AND PAYMENT**

Contractor may submit proper invoices for compensation no more often than monthly, but only after the services for which the invoices are submitted have been completed. An original invoice plus one copy are due within fifteen (15) days of the end of the month. Invoices shall designate the nature of the services performed and/or the goods provided.

City shall pay Contractor within forty-five (45) days of receipt of Contractor's proper invoice, as provided in the Florida Local Government Prompt Payment Act, as may be amended or revised.

To be deemed proper, all invoices must comply with the requirements set forth in this Agreement and must be submitted on the form and pursuant to instructions prescribed by the City's Contract Administrator. Payment may be withheld for failure of Contractor to comply with a term, condition, or requirement of this Agreement.

Notwithstanding any provision of this Agreement to the contrary, City may withhold, in whole or in part, payment to the extent necessary to protect itself from loss on account of inadequate or defective work that has not been remedied or resolved in a manner satisfactory to the City's Contract Administrator or failure to comply with this Agreement. The amount withheld shall not be subject to payment of interest by City.

## **VI. GENERAL CONDITIONS**

### **A. Indemnification**

Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. The provisions and obligations of this section shall survive the expiration or earlier termination of this Agreement. To the extent considered necessary by the City Manager, any sums due Contractor under this Agreement may be retained by City until all of City's claims for indemnification pursuant to this Agreement have been settled or otherwise resolved, and any amount withheld shall not be subject to payment of interest by City.

### **B. Intellectual Property**

Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, royalties, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any infringement or allegation of infringement of any patent, copyright, or other intellectual property right in connection with the Contractor's or the City's use of any copyrighted, patented or un-patented invention, process, article, material, or device that is manufactured, provided, or used pursuant to this Agreement. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the

bid prices shall include all royalties or costs arising from the use of such design, device, or materials in any way involved in the Work.

**C. Termination for Cause**

The City may terminate this Agreement for cause if the Contractor has not corrected the breach within ten (10) days after written notice from the City identifying the breach. The City Manager may also terminate this Agreement upon such notice as the City Manager deems appropriate under the circumstances in the event the City Manager determines that termination is necessary to protect the public health or safety. The Parties agree that if the City erroneously, improperly, or unjustifiably terminates for cause, such termination shall be deemed a termination for convenience, which shall be effective thirty (30) days after such notice of termination for cause is provided.

This Agreement may be terminated for cause for reasons including, but not limited to, Contractor's repeated (whether negligent or intentional) submission for payment of false or incorrect bills or invoices, failure to perform the Work to the City's satisfaction; or failure to continuously perform the Work in a manner calculated to meet or accomplish the objectives as set forth in this Agreement.

**D. Termination for Convenience**

The City reserves the right, in its best interest as determined by the City, to cancel this Agreement for convenience by giving written notice to the Contractor at least thirty (30) days prior to the effective date of such cancellation. In the event this Agreement is terminated for convenience, Contractor shall be paid for any services performed to the City's satisfaction pursuant to the Agreement through the termination date specified in the written notice of termination. Contractor acknowledges and agrees that it has received good, valuable, and sufficient consideration from City, the receipt and adequacy of which are hereby acknowledged by Contractor, for City's right to terminate this Agreement for convenience.

**E. Cancellation for Unappropriated Funds**

The City reserves the right, in its best interest as determined by the City, to cancel this Agreement for unappropriated funds or unavailability of funds by giving written notice to the Contractor at least thirty (30) days prior to the effective date of such cancellation. The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the Agreement into a subsequent fiscal period is subject to appropriation of funds, unless otherwise provided by law.

**F. Insurance**

As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this

Agreement, the Contractor, at the Contractor's sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be from insurers authorized to write insurance policies in the State of Florida and that possess an A.M. Best rating of A-, VII or better. All insurance policies are subject to approval by the City's Risk Manager.

The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and endorsements may not be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposure, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

The following insurance policies and coverages are required:

**Commercial General Liability**

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$2,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$2,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipality, its officials, employees, and volunteers are to be included as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

**Business Automobile Liability**

Proof of coverage must be provided for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than the State of Florida required minimums unless a different amount is required by City Ordinance(s).

If Contractor does not own vehicles, Contractor shall maintain coverage for

Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

**Workers' Compensation and Employer's Liability**

Coverage must be afforded per Chapter 440, Florida Statutes (2024). Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statutes.

Contractor waives, and Contractor shall ensure that Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore and Harbor Workers' Compensation Act and the Jones Act, if applicable.

**Insurance Certificate Requirements**

- a. The Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than thirty (30) days prior to the start of work contemplated in this Agreement.
- b. The Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of the Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term goes beyond the expiration date of the insurance policy, the Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be named as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- g. The City shall be granted a Waiver of Subrogation on the Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Contract number, event dates, or other identifying reference must be listed on the Certificate of Insurance.

The Certificate Holder should read as follows:

City of Fort Lauderdale  
401 SE 21<sup>st</sup> Street  
Fort Lauderdale, FL 33316

The Contractor has the sole responsibility for the payment of all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the operation of such deductible, co- insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at the Contractor's expense.

If the Contractor's primary insurance policy/policies do not meet the minimum requirements, as set forth in this Agreement, the Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.

The Contractor's insurance coverage shall be primary insurance as applied to the City and the City's officers, employees, and volunteers. Any insurance or self- insurance maintained by the City covering the City, the City's officers, employees, or volunteers shall be non-contributory.

Any exclusion or provision in the insurance maintained by the Contractor that excludes coverage for work contemplated in this Agreement shall be unacceptable and shall be considered breach of contract.

All required insurance policies must be maintained until the contract work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage shall be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.

The Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement shall be provided to the Contractor's insurance company or companies and the City's Risk Management office as soon as practical.

It is the Contractor's responsibility to ensure that any and all of the Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of the Contractor.

#### **G. Environmental, Health and Safety**

Contractor shall place the highest priority on health and safety and shall maintain a safe working environment during performance of the Work. Contractor shall comply, and shall secure compliance by its employees, agents, and subcontractors, with all applicable environmental, health, safety and security laws and regulations, and performance conditions in this Agreement. Compliance with such requirements shall represent the minimum standard required of Contractor. Contractor shall be responsible for examining all requirements and determine whether additional or more stringent environmental, health, safety and security provisions are required for the Work. Contractor agrees to utilize protective devices as required by applicable laws, regulations, and any industry or Contractor's health and safety plans and regulations, and to pay the costs and expenses thereof, and warrants that all such persons shall be fit and qualified to carry out the Work.

#### **H. Standard of Care**

Contractor represents that it is qualified to perform the work, that Contractor and its subcontractors possess current, valid state of Florida and/or local licenses to perform the Work, and that their services shall be performed in a manner consistent with that level of care and skill ordinarily exercised by other qualified contractors under similar circumstances.

#### **I. Rights in Documents and Work**

Any and all reports, photographs, surveys, and other data and documents provided or created in connection with this Agreement are and shall remain the property of City; and Contractor disclaims any copyright in such materials. In the event of and upon termination of this Agreement, any reports, photographs, surveys, and other data and documents prepared by Contractor, whether finished or unfinished, shall become the property of City and shall be delivered by Contractor to the City's Contract Administrator within seven (7) days of termination of this Agreement by either Party. Any compensation due to Contractor shall be withheld until Contractor delivers all documents to the City as provided herein.

#### **J. Audit Right and Retention of Records**

City shall have the right to audit the books, records, and accounts of Contractor and Contractor's subcontractors that are related to this Agreement. Contractor shall keep, and Contractor shall cause Contractor's subcontractors to keep, such books, records, and accounts as may be necessary in order to record complete and correct entries related to this Agreement. All books, records, and accounts of Contractor and Contractor's subcontractors shall be kept in written form, or in a form capable of conversion into written form within a reasonable time, and upon request to do so, Contractor or Contractor's subcontractor, as applicable, shall make same available at no cost to City in written form.

Contractor and Contractor's subcontractors shall preserve and make available, at reasonable times for examination and audit by City in Broward County, Florida, all financial records, supporting documents, statistical records, and any other documents pertinent to this Agreement for the required retention period of the Florida public records law, Chapter 119, Florida Statutes (2024), as may be amended or revised, if applicable, or, if the Florida Public Records Act is not applicable, for a minimum period of three (3) years after termination of this Agreement. If any audit has been initiated and audit findings have not been resolved at the end of the retention period or three (3) years, whichever is longer, the books, records, and accounts shall be retained until resolution of the audit findings. If the Florida public records law is determined by City to be applicable to Contractor and Contractor's subcontractors' records, Contractor and Contractor's subcontractors shall comply with all requirements thereof; however, Contractor and Contractor's subcontractors shall violate no confidentiality or non-disclosure requirement of either federal or state law. Any incomplete or incorrect entry in such books, records, and accounts shall be a basis for City's disallowance and recovery of any payment upon such entry.

Contractor shall, by written contract, require Contractor's subcontractors to agree to the requirements and obligations of this Section.

The Contractor shall maintain during the term of the Agreement all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this Agreement.

**K. Public Entity Crime Act**

Contractor represents that the execution of this Agreement will not violate the Public Entity Crime Act, Section 287.133, Florida Statutes (2024), as may be amended or revised, which essentially provides that a person or affiliate who is a contractor, consultant, or other provider and who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to City, may not submit a bid on a contract with City for the construction or repair of a public building or public work, may not submit bids on leases of real property to City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under an Agreement with City, and may not transact any business with City in excess of the threshold amount provided in Section 287.017, Florida Statutes (2024), as may be amended or revised, for category two purchases for a period of 36 months from the date of being placed on the convicted vendor list. Violation of this Section shall result in termination of this Agreement and recovery of all monies paid by City pursuant to this Agreement and may result in debarment from City's competitive procurement activities.

**L. Independent Contractor**

Contractor is an independent contractor under this Agreement. Services provided by Contractor pursuant to this Agreement shall be subject to the supervision of the Contractor. In providing such services, neither Contractor nor Contractor's agents shall act as officers, employees, or agents of City. No partnership, joint venture, or other joint relationship is created hereby. The City does not extend to Contractor or Contractor's agents any authority of any kind to bind City in any respect whatsoever.

**M. Inspection and Non-Waiver**

Contractor shall permit the representatives of the City to inspect and observe the Work at all times.

The failure of the City to insist upon strict performance of any other terms of this Agreement or to exercise any rights conferred by this Agreement shall not be construed by Contractor as a waiver of the City's right to assert or rely on any such terms or rights on any future occasion or as a waiver of any other terms or rights.

**N. Assignment and Performance**

Neither this Agreement nor any right or interest herein shall be assigned, transferred, or encumbered without the prior written consent of the other Party. In addition, Contractor shall not subcontract any portion of the Work required by this Agreement, except as provided in the Schedule of Subcontractor Participation. City may terminate this Agreement, effective immediately, if there is any assignment, or attempted assignment, transfer, or encumbrance, by Contractor of this Agreement or any right or interest herein without City's prior written consent.

Contractor represents that each person who will render services pursuant to this Agreement is duly qualified to perform such services by all appropriate governmental authorities, where required, and that each such person is reasonably experienced and skilled in the area(s) for which he or she will render his or her services.

Contractor shall perform Contractor's duties, obligations, and services under this Agreement in a skillful and respectable manner. The quality of the Contractor's performance and all interim and final product(s) provided to or on behalf of the City shall be comparable to the best local and national standards.

In the event the Contractor engages any subcontractor in the performance of this Agreement, Contractor shall ensure that all of Contractor's subcontractors perform in accordance with the terms and conditions of this Agreement. Contractor shall be fully responsible for all of Contractor's subcontractors' performance, and liable for any of Contractor's

subcontractors' non-performance and all of Contractor's subcontractors' acts and omissions. Contractor shall defend at Contractor's expense, counsel being subject to City's approval or disapproval, and indemnify and hold City and City's officers, employees, and agents harmless from and against any claim, lawsuit, third party action, fine, penalty, settlement, or judgment, including any award of attorney fees and any award of costs, by or in favor of any of Contractor's subcontractors for payment for work performed for City by any of such subcontractors, and from and against any claim, lawsuit, third party action, fine, penalty, settlement, or judgment, including any award of attorney fees and any award of costs, occasioned by or arising out of any act or omission by any of Contractor's subcontractors or by any of Contractor's subcontractors' officers, agents, or employees. Contractor's use of subcontractors in connection with this Agreement shall be subject to City's prior written approval, which approval City may revoke at any time.

#### **O. Conflicts**

Neither Contractor nor any of Contractor's employees shall have or hold any continuing or frequently recurring employment or contractual relationship that is substantially antagonistic or incompatible with Contractor's loyal and conscientious exercise of judgment and care related to Contractor's performance under this Agreement.

Contractor further agrees that none of Contractor's officers or employees shall, during the term of this Agreement, serve as an expert witness against City in any legal or administrative proceeding in which he, she, or Contractor is not a party, unless compelled by court process. Further, Contractor agrees that such persons shall not give sworn testimony or issue a report or writing, as an expression of his or her expert opinion, which is adverse or prejudicial to the interests of City in connection with any such pending or threatened legal or administrative proceeding unless compelled by court process. The limitations of this section shall not preclude Contractor or any persons in any way from representing themselves, including giving expert testimony in support thereof, in any action or in any administrative or legal proceeding.

In the event Contractor is permitted pursuant to this Agreement to utilize subcontractors to perform any services required by this Agreement, Contractor agrees to require such subcontractors, by written contract, to comply with the provisions of this Section to the same extent as Contractor.

#### **P. Schedule and Delays**

Time is of the essence in this Agreement. By signing, Contractor affirms that it believes the schedule to be reasonable; provided, however, the Parties acknowledge that the schedule might be modified as the City directs.

#### **Q. Materiality and Waiver of Breach**

City and Contractor agree that each requirement, duty, and obligation set

forth herein was bargained for at arm's-length and is agreed to by the Parties in exchange for *quid pro quo*, that each is substantial and important to the formation of this Agreement and that each is, therefore, a material term hereof.

City's failure to enforce any provision of this Agreement shall not be deemed a waiver of such provision or modification of this Agreement. A waiver of any breach of a provision of this Agreement shall not be deemed a waiver of any subsequent breach and shall not be construed to be a modification of the terms of this Agreement.

**R. Compliance With Laws**

Contractor shall comply with all applicable federal, state, and local laws, codes, ordinances, rules, and regulations in performing Contractor's duties, responsibilities, and obligations pursuant to this Agreement.

**S. Severance**

In the event a portion of this Agreement is found by a court of competent jurisdiction to be invalid or unenforceable, the provisions not having been found by a court of competent jurisdiction to be invalid or unenforceable shall continue to be effective.

**T. Limitation of Liability**

The City desires to enter into this Agreement only if in so doing the City can place a limit on the City's liability for any cause of action for money damages due to an alleged breach by the City of this Agreement, so that its liability for any such breach never exceeds the sum of \$1,000. Contractor hereby expresses its willingness to enter into this Agreement with Contractor's recovery from the City for any damage action for breach of contract or for any action or claim arising from this Agreement to be limited to a maximum amount of \$1,000 less the amount of all funds actually paid by the City to Contractor pursuant to this Agreement.

Accordingly, and notwithstanding any other term or condition of this Agreement, Contractor hereby agrees that the City shall not be liable to Contractor for damages in an amount in excess of \$1,000 which amount shall be reduced by the amount actually paid by the City to Contractor pursuant to this Agreement, for any action for breach of contract or for any action or claim arising out of this Agreement. Nothing contained in this paragraph or elsewhere in this Agreement is in any way intended to be a waiver of the limitation placed upon City's liability as set forth in Section 768.28, Florida Statutes (2024), as may be amended or revised.

**U. Jurisdiction, Venue, Waiver, Waiver of Jury Trial**

The Agreement shall be interpreted and construed in accordance with, and

governed by, the laws of the state of Florida. The Parties agree that the exclusive venue for any lawsuit arising from, related to, or in connection with this Agreement shall be in the state courts of the Seventeenth Judicial Circuit in and for Broward County, Florida. If any claims arising from, related to, or in connection with this Agreement must be litigated in federal court, the Parties agree that the exclusive venue for any such lawsuit shall be in the United States District Court or United States Bankruptcy Court for the Southern District of Florida. **BY ENTERING INTO THIS AGREEMENT, THE PARTIES HEREBY EXPRESSLY WAIVE ANY AND ALL RIGHTS EITHER PARTY MIGHT HAVE TO A TRIAL BY JURY OF ANY ISSUES RELATED TO THIS AGREEMENT. IF A PARTY FAILS TO WITHDRAW A REQUEST FOR A JURY TRIAL IN A LAWSUIT ARISING OUT OF THIS AGREEMENT AFTER WRITTEN NOTICE BY THE OTHER PARTY OF VIOLATION OF THIS SECTION, THE PARTY MAKING THE REQUEST FOR JURY TRIAL SHALL BE LIABLE FOR THE REASONABLE ATTORNEYS' FEES AND COSTS OF THE OTHER PARTY IN CONTESTING THE REQUEST FOR JURY TRIAL, AND SUCH AMOUNTS SHALL BE AWARDED BY THE COURT IN ADJUDICATING THE MOTION.**

#### **V. Amendments**

No modification, amendment, or alteration in the terms or conditions contained herein shall be effective unless contained in a written document prepared with the same or similar formality as this Agreement and executed by the City's Mayor and/or City Manager, as determined by the City Charter and Ordinances of the City of Fort Lauderdale, Florida, and Contractor, or others delegated authority to or otherwise authorized to execute same on their behalf.

#### **W. Prior Agreements**

This document represents the final and complete understanding of the Parties and incorporates or supersedes all prior negotiations, correspondence, conversations, agreements, and understandings applicable to the matters contained herein. The Parties agree that there is no commitment, agreement, or understanding concerning the subject matter of this Agreement that is not contained in this written document. Accordingly, the Parties agree that no deviation from the terms hereof shall be predicated upon any prior representation or agreement, whether oral or written.

#### **X. Payable Interest**

Except as required and provided for by the Florida Local Government Prompt Payment Act, City shall not be liable for interest for any reason, whether as prejudgment interest or for any other purpose, and in furtherance thereof Contractor waives, rejects, disclaims and surrenders any and all entitlement it has or may have to receive interest in connection with a dispute or claim based on or related to this Agreement.

**Y. Representation of Authority**

Each individual executing this Agreement on behalf of a party hereto hereby represents and warrants that he or she is, on the date he or she signs this Agreement, duly authorized by all necessary and appropriate action to execute this Agreement on behalf of such party and does so with full legal authority.

**Z. Uncontrollable Circumstances (“Force Majeure”)**

The City and Contractor will be excused from the performance of their respective obligations under this Agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, act of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

1. The non-performing party gives the other party prompt written notice describing the particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;
2. The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure;
3. No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and
4. The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force Majeure. The term of the Agreement shall be extended by a period equal to that during which either Party’s performance is suspended under this Section.

**AA. Scrutinized Companies**

The Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2024), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City’s option if the Contractor is found to have submitted a false certification as provided under subsection (5) of Section 287.135, Florida Statutes (2024), as may be amended or revised, or been

placed on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2024), as may be amended or revised, or is engaged in a boycott of Israel.

**BB. Attorney Fees**

If City or Contractor incurs any expense in enforcing the terms of this Agreement through litigation, the prevailing Party in that litigation shall be reimbursed for all such costs and expenses, including but not limited to court costs, and reasonable attorney fees incurred during litigation.

**CC. Resolution of Disputes**

Questions, claims, difficulties and disputes of whatever nature which may arise relative to the technical interpretation of the Contract Documents and fulfillment of this Agreement as to the character, quality, amount and value of any work done and materials furnished, or proposed to be done or furnished under, or by reason of, the Contract Documents which cannot be resolved by mutual agreement of City Project Manager and Contractor shall be submitted to the City Manager or his designee and Contractor's representative for resolution. Prior to any litigation being commenced, for any disputes which remain unresolved, within sixty (60) days after final completion of the Work, the Parties shall participate in mediation to address all unresolved disputes to a mediator agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies provided under the laws of Florida. Failure by a Party to comply in strict accordance with the requirements of this Article, then said Party specifically waives all of its rights provided hereunder, including its rights and remedies under the laws of Florida.

All non-technical administrative disputes (such as billing and payment) shall be determined by Contract Administrator.

During the pendency of any dispute and after a determination thereof, Contractor and Contract Administrator shall act in good faith to mitigate any potential damages including utilization of construction schedule changes and alternate means of construction. During the pendency of any dispute arising under this Agreement, other than termination herein, Contractor shall carry on the Work and adhere to the progress schedule. The Work shall not be delayed or postponed pending resolution of any disputes or disagreements.

For any disputes which remain unsolved, within sixty (60) calendar days after Final Completion of the Work, the Parties shall participate in mediation to address all unresolved disputes. A mediator shall be mutually agreed upon by the Parties. Should any objection not be resolved in mediation, the Parties retain all their legal rights and remedies under applicable law. If a Party objecting to a determination, fails to comply in strict accordance with the requirements of this Article, said Party specifically waives all of its rights provided hereunder, including its rights and remedies under applicable law.

**DD. Public Records**

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES (2024), TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS AGREEMENT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY CLERK'S OFFICE, 1 EAST BROWARD BOULEVARD, SUITE 444, FORT LAUDERDALE, FLORIDA 33301, PHONE: 954-828-5002, EMAIL: [PRRCONTRACT@FORT LAUDERDALE. GOV](mailto:PRRCONTRACT@FORTLAUDERDALE.GOV).**

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2024), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the Agreement term and following completion of the Agreement if the Contractor does not transfer the records to the City.
4. Upon completion of the Agreement, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Agreement, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Agreement, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

**EE. Non-Discrimination**

The Contractor shall not discriminate against its employees based on the employee's race, color, religion, gender, gender identity, gender expression, marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

1. The Contractor certifies and represents that the Contractor offers the same health benefits to the domestic partners of its employees as are offered its employees' spouses or offers its employees the cash equivalent of such health benefits because it is unable to provide health benefits to its employees' domestic partners, and that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2024), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
2. The Contractor certifies and represents that it will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida ("Section 2-187").
3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in Section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.

**FF. E-Verify**

As a condition precedent to the effectiveness of this Agreement, pursuant to Section 448.095, Florida Statutes (2024), as may be amended or revised, the Contractor and its subcontractors shall register with and use the E-Verify system to electronically verify the employment eligibility of newly hired employees.

1. The Contractor shall require each of its subcontractors, if any, to provide the Contractor with an affidavit stating that the subcontractor does not employ, contract with, or subcontract with an unauthorized alien. The Contractor shall maintain a copy of the subcontractor's affidavit for the duration of this Agreement and in accordance with the public records requirements of this Agreement.
2. The City, the Contractor, or any subcontractor who has a good faith belief that a person or entity with which it is contracting has knowingly violated Subsection 448.09(1), Florida Statutes (2024), as may be amended or revised, shall terminate the Agreement with the person or entity.
3. The City, upon good faith belief that a subcontractor knowingly violated the provisions of Subsection 448.095(5), Florida Statutes (2024), as may be amended or revised, but that the Contractor otherwise complied with Subsection 448.095(5), Florida Statutes (2024), as may be amended or revised, shall promptly notify Contractor and order the Contractor to immediately terminate the contract with the subcontractor, and the

Contractor shall comply with such order.

4. An Agreement terminated under Subparagraph 448.095(5)(c)1. or 2., Florida Statutes (2024), as may be amended or revised, is not a breach of contract and may not be considered as such. If the City terminates this Agreement under Paragraph 448.095(5)(c), Florida Statutes (2024), as may be amended or revised, the Contractor may not be awarded a public contract for at least one year after the date on which the Agreement was terminated. The Contractor is liable for any additional costs incurred by the City as a result of termination of this Agreement.

5. Contractor shall include in each of its subcontracts, if any, the requirements set forth in this Section, including this subparagraph, requiring any and all subcontractors, as defined in Subsection 448.095(1)(e), Florida Statutes (2024), as may be amended or revised, to include all of the requirements of this Section in their subcontracts. Contractor shall be responsible for compliance by any and all subcontractors, as defined in Subsection 448.095(1)(e), Florida Statutes (2024), as may be amended or revised, with the requirements of Section 448.095, Florida Statutes (2024), as may be amended or revised.

**GG. Notices**

Whenever either party desires to give notice unto the other, it shall be given by written notice, sent certified by U.S. Mail, return receipt requested or via nationally recognized overnight courier addressed to the party to whom it is intended, at the places last specified, and the places for giving notice shall remain such until they are changed by written notice in compliance with this subsection. For the present, the parties designate the following as respective places for giving notice, to wit:

FOR CITY:                   City Manager  
                                  City of Fort Lauderdale  
                                  401 SE 21<sup>st</sup> Street  
                                  Fort Lauderdale, Florida 33316

WITH A COPY:           City Attorney  
                                  City of Fort Lauderdale  
                                  1 East Broward Boulevard, Suite 1320  
                                  Fort Lauderdale, Florida 33301

FOR CONTRACTOR:  
                                  Scott D. Coloney, Vice President  
                                  G & H Electric, Inc. dba Florida Supercharge  
                                  227 SW 2<sup>nd</sup> Avenue  
                                  Fort Lauderdale, Florida 33301  
                                  Phone: 954-836-8300  
                                  Email: [Scoloney@USSupercharge.com](mailto:Scoloney@USSupercharge.com)

**HH. Anti-Human Trafficking**

As a condition precedent to the effectiveness of this Agreement, the CONSULTANT shall provide the City with an affidavit signed by an officer or a representative of the CONSULTANT under penalty of perjury attesting that the CONSULTANT does not use coercion for labor or services as defined in Section 787.06, Florida Statutes (2024), as may be amended or revised.

**[THIS SPACE WAS INTENTIONALLY LEFT BLANK]**

IN WITNESS WHEREOF, the City and the Contractor execute this Agreement as follows:


CITY

ATTEST:

CITY OF FORT LAUDERDALE, a Florida municipality

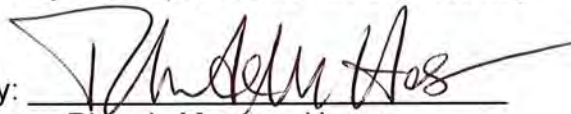
  
\_\_\_\_\_  
David R. Soloman, City Clerk



By:   
\_\_\_\_\_  
Susan Grant  
Acting City Manager

Date: 2/7/2025

Approved as to Form and Correctness:  
D'Wayne M. Spence, Interim City Attorney

By:   
\_\_\_\_\_  
Rhonda Montoya Hasan  
Senior Assistant City Attorney

**CONTRACTOR**

WITNESSES:

G & H ELECTRIC, INC. D/B/A FLORIDA  
SUPERCHARGE a Florida corporation

[Signature]  
Signature  
Scott D. Coloney  
Print Name

By: [Signature]  
Scott D. Coloney, Vice President

[Signature]  
Signature  
Jennifer Coloney  
Print Name

(CORPORATE SEAL)

STATE OF Florida  
COUNTY OF Broward



The foregoing instrument was acknowledged before me by means of ☒ physical presence or ☐ online notarization, this 23 day of January, 2025, by **Scott D. Coloney as Vice President**, for **G & H Electric, Inc. d/b/a Florida Supercharge**, a Florida corporation.

[Signature]  
(Signature of Notary Public – State of FL)

Leandria Walker  
Print, Type or Stamp Commissioned  
Name of Notary Public)

Personally Known ☒ OR Produced Identification ☐  
Type of Identification Produced \_\_\_\_\_



## Event # 387-2

**Name:** EV Charging Stations, Installation, & Maintenance - Rebid

**Description:** The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide turnkey Electric Vehicle Charging Station (EVCS) services for both the general public use and the City of Fort Lauderdale Fleet at various locations within the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

Contract Term: 2-Year initial contract with three (3) additional one-year renewal options.

All quantities are estimated and may not be indicative of future use.

**Buyer:** PLATKIN, LAURIE D.

**Status:** Open

**Event Type:** IFB

**Currency:** USD

**Sealed Bid:** Yes

**Respond To All Lines:** No

**Q & A Allowed:** Yes

**Number Of Amendments:** 2

**Display Bid Tabulation:** Display When Event Closed For Bidding Or Canceled

## Event Dates

**Preview:**

**Q & A Open:** 10/31/2024 05:30:00 PM

**Open:** 10/31/2024 05:00:00 PM

**Q & A Close:** 11/14/2024 05:00:00 PM

**Close:** 11/21/2024 02:00:00 PM

**Dispute Close:**

## Questions

Question	Response Type	Attachment
Have you attached documentation confirming that all EV charging hardware and batteries included in this bid are covered by a manufacturer's 5-year warranty?	Yes No	
Have you attached technical specification sheet(s) for all proposed hardware?	Yes No	
Regarding technical specifications, can you confirm that your charging stations have at least a 23-foot standard length of cable for each charging station?	Yes No	
Have you attached documentation listing the electrical testing laboratory for your product?	Yes No	

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

Question	Response Type	Attachment
Have you attached documentation confirming the charging station is outdoor suitable with appropriate NEMA-4 rated enclosure?	Yes No	
If you are only providing installation and maintenance services to the City (excluding providing the EV charger hardware), have you included at least 3 references, including contact information (current email and phone number), and office locations for those servicing the chargers?	Yes No	
If you are providing maintenance services to the City, have you provided documentation confirming that you can meet the maintenance service requirements outlined in Section 3.4?	Yes No	
If you are a Contractor providing the EV charging hardware and working with a subcontractor for maintenance, have you provided at least 3 references for both your services and an additional 3 for the subcontractor's services?	Yes No	
Have you downloaded, read, signed and attached all required forms?	Yes No	_Required Forms Packet - Forms 1-9.pdf
Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached - Anti-Human Trafficking Affidavit Per Florida Statute 787.06 (2024), (13).	Yes No	Anti-Human Trafficking Affidavit 8-6-2024.pdf
<p>Florida Statute 787.06 (2024), (13) When a contract is executed, renewed, or extended between a nongovernmental entity and a governmental entity, the nongovernmental entity must provide the governmental entity with an affidavit signed by an officer or a representative of the nongovernmental entity under penalty of perjury attesting that the nongovernmental entity does not use coercion for labor or services as defined in this section. For purposes of this subsection, the term "governmental entity" has the same meaning as in s. 287.138(1).</p>		
Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached Affidavit of Compliance with Foreign Entity Laws Per Florida Statute - §287.138, 692.201, 692.202, 692.203, and 692.204	Yes No	CoFL-Affidavit of Compliance with Foreign Entity Laws_EPDF11-23.pdf
Did you download, read, sign, and re-upload Addendum 1?	Yes No	Addendum 1.pdf
Did you download, read, sign, and re-upload Addendum 2?	Yes No	Addendum 2.pdf

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

### Attachments

Name	Description	Attachment
387 - Solicitation	Includes updated Section III	387 - Solicitation_V4.pdf
CoFL General Conditions		1. General Conditions - Rev 08-2023.pdf

### Contacts

Name	Phone Number	Email Address
LAURIE PLATKIN	US 954-828-5138	lplatkin@fortlauderdale.gov

### Commodity Codes

Commodity Code	Description
060-37	Electrical Parts (Not Ignition) (Not Otherwise Classified)
285-14	Circuit Breakers, Load Centers, Boxes, and Panelboards
285-19	Conduit and Fittings, Plastic/PVC
285-23	Conduit Fittings, Steel: Boxes, Bushings, Clamps, Connectors
450-07	Battery Chargers
801-30	Posts, Standards, Supports, and Expansion Plugs
910-82	Wiring and Other Electrical Maintenance and Repair Services
912-23	Construction, General (Backfill Services, Digging, Ditching,
963-55	Permits (Not Otherwise Classified)

### Line Details

#### Line 1: Wiring #8 AWG

**Description:** Wiring #8 AWG

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

Wiring #8 AWG

**Item:** WIRING #8 AWG    Wiring #8 AWG

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 650.0000                      **Unit of Measure:** LF

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 2: Wiring #6 AWG**

---

**Description:** Wiring #6 AWG

**Item:** WIRING #6 AWG    Wiring #6 AWG

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 1,750.0000                      **Unit of Measure:** LF

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 3: Wiring #4 AWG**

---

**Description:** Wiring #4 AWG

**Item:** WIRING #4 AWG    Wiring #4 AWG

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 450.0000                      **Unit of Measure:** LF

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On</b>	No				

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Charges  
Allowed:**

**Line 4: Wiring #6 THHN**

---

**Description:** Wiring #6 THHN

**Item:** WIRING #6 THHN    Wiring #6 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000                      **Unit of Measure:** LF

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 5: Wiring #8 THHN**

---

**Description:** Wiring #8 THHN

**Item:** WIRING #8 THHN    Wiring #8 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 400.0000                      **Unit of Measure:** LF

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 6: Wiring #10 THHN**

---

**Description:** Wiring #10 THHN

**Item:** WIRING #10 THHN    Wiring #10 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

<b>Quantity:</b> 200.0000	<b>Unit of Measure:</b> LF	
<b>Require Response:</b> No	<b>Price Breaks Allowed:</b> No	<b>Allow Alternate Responses:</b> No
<b>Add On Charges Allowed:</b> No		

Line 7: 3/4 Inch PVC Conduit

---

**Description:** 3/4 Inch PVC Conduit

**Item:** 3/4 INCH PVC CONDUIT    3/4 Inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

<b>Quantity:</b> 450.0000	<b>Unit of Measure:</b> LF	
<b>Require Response:</b> No	<b>Price Breaks Allowed:</b> No	<b>Allow Alternate Responses:</b> No
<b>Add On Charges Allowed:</b> No		

Line 8: 1 Inch PVC Conduit

---

**Description:** 1 Inch PVC Conduit

**Item:** 1 INCH PVC CONDUIT    1 Inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

<b>Quantity:</b> 1,000.0000	<b>Unit of Measure:</b> LF	
<b>Require Response:</b> No	<b>Price Breaks Allowed:</b> No	<b>Allow Alternate Responses:</b> No
<b>Add On Charges Allowed:</b> No		

Line 9: 1-1/14 Inch PVC Conduit

---

**Description:** 1-1/14 Inch PVC Conduit

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Item:** 1-1/14 INCH PVC CONDUIT    1-1/14 Inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 350.0000

**Unit of Measure:** LF

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 10: 1-1/2 inch PVC Conduit

---

**Description:** 1-1/2 inch PVC Conduit

**Item:** 1-1/2 INCH PVC CONDUIT    1-1/2 inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 200.0000

**Unit of Measure:** LF

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 11: 2 inch PVC Conduit

---

**Description:** 2 inch PVC Conduit

**Item:** 2 INCH PVC CONDUIT    2 inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 50.0000

**Unit of Measure:** LF

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

Line 12: 3/4 inch EMT Conduit

---

**Description:** 3/4 inch EMT Conduit

**Item:** 3/4 INCH PVC CONDUIT    3/4 inch EMT Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 350.0000                      **Unit of Measure:** LF

**Require Response:** No                      **Price Breaks Allowed:** No                      **Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Line 13: 1 inch EMT Conduit

---

**Description:** 1 inch EMT Conduit

**Item:** 1 INCH EMT CONDUIT    1 inch EMT Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 400.0000                      **Unit of Measure:** LF

**Require Response:** No                      **Price Breaks Allowed:** No                      **Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Line 14: 1-1/4 inch EMT Conduit

---

**Description:** 1-1/4 inch EMT Conduit

**Item:** 1-1/4 INCH EMT CONDUIT    1-1/4 inch EMT Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 200.0000                      **Unit of Measure:** LF

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 15: 1-1/2 inch EMT Conduit

---

**Description:** 1-1/2 inch EMT Conduit

**Item:** 1-1/2 INCH EMT CONDUIT 1-1/2 inch EMT Conduit

**Commodity** 285-19 Conduit and Fittings, Plastic/PVC  
**Code:**

**Quantity:** 200.0000

**Unit of** LF  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 16: 1 inch RIGID Conduit

---

**Description:** 1 inch RIGID Conduit

**Item:** 1 INCH RIGID CONDUIT 1 inch RIGID Conduit

**Commodity** 285-19 Conduit and Fittings, Plastic/PVC  
**Code:**

**Quantity:** 400.0000

**Unit of** LF  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 17: 3/4 INCH RIGID CONDUIT

---

**Description:** 3/4 INCH RIGID CONDUIT

**Item:** 3/4 INCH RIGID CONDUIT 3/4 INCH RIGID CONDUIT

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 50.0000

**Unit of Measure:** LF

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 18: 30 amp Electrical Breakers

---

**Description:** 30 amp Electrical Breakers

**Item:** 30 AMP ELECTRICAL BREAKERS 30 amp Electrical Breakers

**Commodity Code:** 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000

**Unit of Measure:** EA

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 19: 40 amp Electrical Breakers

---

**Description:** 40 amp Electrical Breakers

**Item:** 40 AMP ELECTRICAL BREAKERS 40 amp Electrical Breakers

**Commodity Code:** 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000

**Unit of Measure:** EA

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 20: 50 amp Electrical Breakers

---

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

---

**Description:** 50 amp Electrical Breakers

**Item:** 50 AMP ELECTRICAL BREAKERS    50 amp Electrical Breakers

**Commodity Code:** 285-14    Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000                      **Unit of Measure:** EA

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 21: 60 amp Electrical Breakers**

---

**Description:** 60 amp Electrical Breakers

**Item:** 60 AMP ELECTRICAL BREAKERS    60 amp Electrical Breakers

**Commodity Code:** 285-14    Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000                      **Unit of Measure:** EA

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

**Line 22: 80 amp Electrical Breakers**

---

**Description:** 80 amp Electrical Breakers

**Item:** 80 AMP ELECTRICAL BREAKERS    80 amp Electrical Breakers

**Commodity Code:** 285-14    Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000                      **Unit of Measure:** EA

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
--------------------------	----	------------------------------	----	-----------------------------------	----

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Add On** No  
**Charges**  
**Allowed:**

### Line 23: 100 amp Electrical Breakers

---

**Description:** 100 amp Electrical Breakers

**Item:** 100 AMP ELECTRICAL BREAKERS 100 amp Electrical Breakers

**Commodity** 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards  
**Code:**

**Quantity:** 2.0000 **Unit of** EA  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 24: 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

---

**Description:** 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Commodity** 450-07 Battery Chargers  
**Code:**

**Quantity:** 1.0000 **Unit of** UN  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 25: 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)

---

**Description:** 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)

**Commodity** 450-07 Battery Chargers  
**Code:**

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 26: 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)

---

**Description:** 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 27: 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

---

**Description:** 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 28: 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)

---

**Description:** 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 6.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 29: 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

---

**Description:** 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 6.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 30: 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

---

**Description:** 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 12.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

### Line 31: 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

---

**Description:** 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 12.0000 **Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 32: EV Pedestal/ Single Stand

---

**Description:** EV Pedestal/ Single Stand

**Item:** EV PEDESTAL/SINGLE CHARGER STAND EV Pedestal/ Single Stand

**Commodity Code:** 801-30 Posts, Standards, Supports, and Expansion Plugs

**Quantity:** 4.0000 **Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 33: EV Pedestal/ Dual Charger Stand

---

**Description:** EV Pedestal/ Dual Charger Stand

**Item:** EV PEDESTAL/ DUAL CHARGER STAND EV Pedestal/ Dual Charger Stand

**Commodity Code:** 801-30 Posts, Standards, Supports, and Expansion Plugs

**Quantity:** 36.0000 **Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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Add On No  
Charges  
Allowed:

**Line 34: 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)**

---

**Description:** 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000 **Unit of Measure:** UN

**Require Response:** No **Price Breaks Allowed:** No **Allow Alternate Responses:** No

Add On No  
Charges  
Allowed:

**Line 35: 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)**

---

**Description:** 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000 **Unit of Measure:** UN

**Require Response:** No **Price Breaks Allowed:** No **Allow Alternate Responses:** No

Add On No  
Charges  
Allowed:

**Line 36: 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)**

---

**Description:** 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 37: 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

---

**Description:** 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 38: 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

---

**Description:** 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 2.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 39: 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

---

**Description:** 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

---

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 2.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 40: 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

---

**Description:** 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 4.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 41: 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

---

**Description:** 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 4.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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Line 42: Licensed Electrian/Journeyman

---

**Description:** Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.

**Item:** STANDARD LABOR RATE      Licensed Electrian/Journeyman

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000      **Unit of Measure:** LH

**Require Response:** No      **Price Breaks Allowed:** No      **Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Line 43: Electrician/Helper Rate

---

**Description:** Provide hourly labor price to help install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.

**Item:** LABOR HELPER RATE      Electrician/Helper Rate

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000      **Unit of Measure:** LH

**Require Response:** No      **Price Breaks Allowed:** No      **Allow Alternate Responses:** No

**Add On Charges Allowed:** No

Line 44: Overtime Labor Rate

---

**Description:** Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring,

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

conduit, sub-panels but limited to these items.

**Item:** OVERTIME LABOR RATE     Overtime Labor Rate

**Commodity Code:** 910-82     Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 50.0000     **Unit of Measure:** LH

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

Line 45: Trenching/Construction Labor

**Description:** Provide hourly labor price for trenching and Construction type work.

**Item:** TRENCHING/CONSTRUCTION LABOR     Trenching/Construction Labor

**Commodity Code:** 912-23     Construction, General (Backfill Services, Digging, Ditching,

**Quantity:** 70.0000     **Unit of Measure:** LH

<b>Require Response:</b>	No	<b>Price Breaks Allowed:</b>	No	<b>Allow Alternate Responses:</b>	No
<b>Add On Charges Allowed:</b>	No				

Line 46: Service Call- Preventive Maintenance First Hour (\$/EA Visit)

**Description:**

- Vendor shall provide hourly labor fee to troubleshoot, repair and replace Electric Vehicle Charger and associated components.
- This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.
- The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.
- Any additional labor beyond the first hour will be billed separately, see line item 47.
- Hourly quantity listed is estimated and not indicative of future use.

**Item:** PREVENTIVE MAINTENANCE FIRST HR     Service Call- Preventive Maintenance First Hour (\$/EA Visit)

**Commodity Code:** 910-82     Wiring and Other Electrical Maintenance and Repair Services

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Code:**

**Quantity:** 100.0000

**Unit of Measure:** EA

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 47: Service Call- Preventive Maintenance Additional HRS (\$/HR)

---

**Description:** Provide hourly labor cost to repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 46.

**Item:** PREVENTIVE MAINTENANCE ADD HOURS      Service Call- Preventive Maintenance Additional HRS (\$/HR)

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 50.0000

**Unit of Measure:** HR

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 48: Service Call- Emergency Repairs First Hour (\$/EA Visit)

---

**Description:**

- Vendor shall provide hourly labor fee to troubleshoot, Emergency repair and replace Electric Vehicle Charger and associated components.
- This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.
- The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.
- Any additional labor beyond the first hour will be billed separately, see line item 49.
- Hourly quantity listed is estimated and not indicative of future use.

**Item:** EMERGENCY REPAIRS FIRST HOUR      Service Call- Emergency Repairs First Hour (\$/EA Visit)

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 100.0000

**Unit of Measure:** EA

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Add On** No  
**Charges**  
**Allowed:**

### Line 49: Service Call - Emergency Repairs Additional Hours (\$/hr)

---

**Description:** Provide hourly labor cost to Emergency repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 48.

**Item:** EMERGENCY REPAIRS ADDITIONAL HRS      Service Call - Emergency Repairs Additional Hours (\$/hr)

**Commodity** 910-82      Wiring and Other Electrical Maintenance and Repair Services  
**Code:**

**Quantity:** 50.0000      **Unit of** HR  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 50: % MARK-UP ON PARTS

---

**Description:** Passthrough costs for parts. Vendor to charge this additional % at time of billing.

**Item:** % MARK-UP ON PARTS      % MARK-UP ON PARTS

**Commodity** 060-37      Electrical Parts (Not Ignition) (Not Otherwise Classified)  
**Code:**

**Quantity:** 1.0000      **Unit of** PT  
**Measure:**

**Require** No  
**Response:**

**Price Breaks** No  
**Allowed:**

**Allow Alternate** No  
**Responses:**

**Add On** No  
**Charges**  
**Allowed:**

### Line 51: PERMIT ALLOWANCE

---

**Description:** Estimated Annual Amount for Permit Allowance. All Bidders to bid **\$1** so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**Item:** PERMIT ALLOWANCE    PERMIT ALLOWANCE

**Commodity Code:** 963-55    Permits (Not Otherwise Classified)

**Quantity:** 5,000.0000

**Unit of Measure:** DO

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 52: MISCELLANEOUS PARTS

---

**Description:** Estimated Annual Amount for Non-Warranty Parts. All Bidders to bid **\$1** so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.

**Item:** MISCELLANEOUS PARTS    MISCELLANEOUS PARTS

**Commodity Code:** 060-37    Electrical Parts (Not Ignition) (Not Otherwise Classified)

**Quantity:** 135,000.0000

**Unit of Measure:** DO

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

### Line 53: 6X6X4 PVC WEATHERPROOF BOX CONDUIT

---

**Description:** 6X6X4 PVC WEATHERPROOF BOX CONDUIT

**Item:** 6X6X4 PVC WEATHERPROOF BOX CONDU    6X6X4 PVC WEATHERPROOF BOX CONDUIT

**Commodity Code:** 285-23    Conduit Fittings, Steel: Boxes, Bushings, Clamps, Connectors

**Quantity:** 1.0000

**Unit of Measure:** UN

**Require Response:** No

**Price Breaks Allowed:** No

**Allow Alternate Responses:** No

**Add On Charges Allowed:** No

## SECTION I – INTRODUCTION AND INFORMATION

### 1.1 Purpose

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor, Bidder, or Proposer, to provide turnkey services including purchase, installation and maintenance of Electric Vehicle Charging Stations (EVCS), for the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

### 1.2 Point of Contact

For information concerning [procedures for responding to this solicitation](#), contact Senior Procurement Specialist, Laurie Platkin at (954) 828-5138 or email at [lplatkin@fortlauderdale.gov](mailto:lplatkin@fortlauderdale.gov). Such contact shall be for clarification purposes only.

For information concerning technical specifications, please utilize the question / answer feature provided by the [City's on-line strategic sourcing platform](#). Questions of a material nature must be received prior to the cut-off date specified in the ITB schedule. Material changes, if any, to the scope of services or bidding procedures will only be transmitted by written addendum. Bidders please note: No part of your bid can be submitted via FAX. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, and the equipment, materials, and labor required. The entire bid response must be submitted in accordance with all specifications contained in this solicitation. The questions and answers submitted in the [City's on-line strategic sourcing platform](#) shall become part of any contract that is created from this ITB.

### 1.3 Pre-bid Conference and/or Site Visit

There will not be a pre-bid conference or site visit for this ITB.

It will be the sole responsibility of the Bidder to become familiar with the scope of the City's requirements and systems prior to submitting a bid. No variation in price or conditions shall be permitted based upon a claim of ignorance. Submission of a bid will be considered evidence that the Bidder has familiarized themselves with the nature and extent of the work, equipment, materials, and labor required.

### 1.4 CITY'S ON-LINE STRATEGIC SOURCING PLATFORM

The City of Fort Lauderdale uses its own on-line strategic sourcing platform to administer the competitive solicitation process, including but not limited to soliciting bids, issuing addenda, posting results, and issuing notification of an intended decision. There is no charge to register and download the ITB from the City's on-line strategic sourcing platform. Bidders are strongly encouraged to read the supplier tutorials available in the [City's on-line strategic sourcing platform](#) well in advance of their intention of submitting a bid to ensure familiarity with the use of the City's on-line strategic sourcing platform. The City shall not be responsible for a Bidder's inability to submit a Bid by the end date and time for any reason, including issues arising from the use of the City's on-line strategic sourcing platform.

It is the sole responsibility of the Bidder to ensure that their bid is submitted electronically through the City's on-line strategic sourcing platform no later than the time and date specified in this solicitation. PAPER BID SUBMITTALS WILL NOT BE ACCEPTED. BIDS MUST BE SUBMITTED ELECTRONICALLY VIA the [City's on-line strategic sourcing platform](#).

## **1.5 Electronic Bid Openings**

Please be advised that effective immediately, and until further notice, all Invitation to Bids, Request for Proposals, Request for Qualifications, and other solicitations led by the City of Fort Lauderdale will be opened electronically via the [City's on-line strategic sourcing platform](#) at the date and time indicated on the solicitation. All openings will be held on the City's on-line strategic sourcing platform.

Anyone requesting assistance or having further inquiry in this matter must contact the Procurement Specialist indicated on the solicitation, via the Question-and-Answer forum on the City's on-line strategic sourcing platform before the Last Day for Questions indicated in the Solicitation.

## **SECTION II - SPECIAL TERMS AND CONDITIONS**

### **2.1 General Conditions**

ITB General Conditions (Form G-107, Rev. 09/22) are included and made a part of this ITB.

### **2.2 Addenda, Changes, and Interpretations**

It is the sole responsibility of each firm to notify the Procurement Specialist utilizing the question / answer feature provided by the [City's on-line strategic sourcing platform](#) and request modification or clarification of any ambiguity, conflict, discrepancy, omission, or other error discovered in this competitive solicitation. Requests for clarification, modification, interpretation, or changes must be received prior to the Question and Answer (Q & A) Deadline. Requests received after this date may not be addressed. Questions and requests for information that would not materially affect the scope of services to be performed, or the solicitation process will be answered within the question / answer feature provided by the City's on-line strategic sourcing platform and shall be for clarification purposes only. Material changes, if any, to the scope of services or the solicitation process will only be transmitted by official written addendum issued by the City and uploaded to the City's on-line strategic sourcing platform as a separate addendum to the ITB. Under no circumstances shall an oral explanation given by any City official, officer, staff, or agent be binding upon the City and should be disregarded. All addenda are a part of the competitive solicitation documents, and each firm will be bound by such addenda. It is the responsibility of each to read and comprehend all addenda issued.

### **2.3 Changes and Alterations**

Bidder may change or withdraw a Bid at any time prior to Bid submission deadline; however, no oral modifications will be allowed. Modifications shall not be allowed following the Bid deadline.

### **2.4 Bidder's Costs**

The City shall not be liable for any costs incurred by Bidders in responding to this ITB.

### **2.5 Pricing/Delivery**

All pricing should be identified on the Cost page provided in this ITB. No additional costs may be accepted, other than the costs stated on the Bid Submittal page. Failure to use the City's Bid Submittal page and provide costs as requested in this ITB may deem your bid non-responsive.

### **2.6 Price Validity**

Prices provided in this Invitation to bid (ITB) shall be valid for at least One-Hundred and Twenty (120) days from time of ITB opening unless otherwise extended and agreed upon by the City and Bidder. The City shall award contract within this time period or shall request to the recommended awarded vendor an extension to hold pricing, until products/services have been awarded.

### **2.7 Invoices/Payment**

The City will accept invoices no more frequently than once per month. Each invoice shall fully detail the related costs and shall specify the status of the particular task or project as of the date of the invoice with regard to the accepted schedule for that task or project. Payment will be made within forty-five (45) days after receipt of an invoice acceptable to the City, in accordance with the Florida Local Government Prompt Payment Act. If, at any time during the contract, the City shall not approve or accept the Contractor's work product, and agreement cannot be reached between the City and the Contractor to resolve the problem to the City's satisfaction, the City shall negotiate with the Contractor on a payment for the work completed and usable to the City.

## **2.8 Related Expenses/Travel Expenses**

All costs including travel are to be included in your bid. The City will not accept any additional costs.

## **2.9 Payment Method**

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to payment by credit card via MasterCard or Visa. This allows you as a vendor of the City of Fort Lauderdale to receive your payment fast and safely. No more waiting for checks to be printed and mailed. Payments will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, firms must presently have the ability to accept credit card payment or take whatever steps necessary to implement acceptance of a credit card before the commencement of a contract. See Contract Payment Method form attached.

## **2.10 Mistakes**

The Bidder shall examine this ITB carefully. The submission of a bid shall be prima facie evidence that the Bidder has full knowledge of the scope, nature, and quality of the work to be performed; the detailed requirements of the specifications; and the conditions under which the work is to be performed. Ignorance of the requirements will not relieve the Bidder from liability and obligations under the Contract.

## **2.11 Acceptance of Bids / Minor Irregularities**

**2.11.1** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variances to specifications contained in bids which do not make the bid conditional in nature and minor irregularities in the solicitation process. A minor irregularity shall be a variation from the solicitation that does not affect the price of the contract or does not give a bidder an advantage or benefit not enjoyed by other bidders, does not adversely impact the interests of other firms, or does not affect the fundamental fairness of the solicitation process. The City also reserves the right to reissue an ITB.

**2.11.2** The City reserves the right to disqualify Bidder during any phase of the competitive solicitation process and terminate for cause any resulting contract upon evidence of collusion with intent to defraud or other illegal practices on the part of the Bidder.

## **2.12 Modification of Services**

**2.12.1** While this contract is for services provided to the department referenced in this ITB, the City may require similar work for other City departments. Successful Bidder agrees to take on such work unless such work would not be considered reasonable or become an undue burden to the Successful Bidder.

**2.12.2** The City reserves the right to delete any portion of the work at any time without cause, and if such right is exercised by the City, the total fee shall be reduced in the same ratio as the estimated cost of the work deleted bears to the estimated cost of the work originally planned. If work has already been accomplished and approved by the City on any portion of a contract resulting from this ITB, the Successful Bidder shall be paid for the work completed on the basis of the estimated percentage of completion of such portion to the total project cost.

**2.12.3** The City may require additional items or services of a similar nature, but not specifically listed in the contract. The Successful Bidder agrees to provide such items or services and shall provide the City prices on such additional items or services. If the price(s) offered are not acceptable to the City, and the situation cannot be resolved to the

satisfaction of the City, the City reserves the right to procure those items or services from other vendors, or to cancel the contract upon giving the Successful Bidder thirty (30) days written notice.

**2.12.4** If the Successful Bidder and the City agree on modifications or revisions to the task elements, after the City has approved work to begin on a particular task or project, and a budget has been established for that task or project, the Successful Bidder will submit a revised budget to the City for approval prior to proceeding with the work.

**2.13 Non-Exclusive Contract**

Bidder agrees and understands that the contract shall not be construed as an exclusive arrangement and further agrees that the City may, at any time, secure similar or identical services from another vendor at the City's sole option.

**2.14 Sample Contract Agreement**

A [sample of the formal agreement template](#), which may be required to be executed by the awarded vendor can be found at our website.

**2.15 Responsiveness**

In order to be considered responsive to the solicitation, the firm's bid shall fully conform in all material respects to the solicitation and all of its requirements, including all form and substance.

**2.16 Responsibility**

In order to be considered as a responsible firm, firm shall be fully capable to meet all of the requirements of the solicitation and subsequent contract, must possess the full capability, including financial and technical, to perform as contractually required, and must be able to fully document the ability to provide good faith performance.

**2.17 Minimum Qualifications**

To be eligible for award of a contract in response to this solicitation, the Bidder must demonstrate that they have successfully completed services as specified in the Technical Specifications / Scope of Services section of this solicitation, are normally and routinely engaged in performing such services, and are properly and legally licensed to perform such work. In addition, the Bidder must have no conflict of interest with regard to any other work performed by the Bidder for the City of Fort Lauderdale.

**2.17.1** Firm or principals shall have no record of judgments, pending lawsuits against the City or criminal activities involving moral turpitude and not have any conflicts of interest that have not been waived by the City Commission.

**2.17.2** Neither firm nor any principal, officer, or stockholder shall be in arrears or in default of any debt or contract involving the City, (as a party to a contract, or otherwise); nor have failed to perform faithfully on any previous contract with the City.

**2.18 Lobbying Activities**

ALL CONTRACTORS PLEASE NOTE: Any contractor submitting a response to this solicitation must comply, if applicable, with [City of Fort Lauderdale Ordinance No. C-11-42](#), and [Resolution No. 07-101, Lobbying Activities](#). Copies of Ordinance No. C-11-42 and Resolution No. 07-101 may be obtained from the City Clerk's Office, located at 1 East Broward Boulevard, Suite 444, Fort Lauderdale, Florida 33301.

## **2.19 Local Business Preference**

**2.19.1** Section 2-186, Code of Ordinances of the City of Fort Lauderdale, provides for a local business preference. In order to be considered for a local business preference, a Bidder must include the Local Business Preference Certification Statement of this ITB, as applicable to the local business preference class claimed at the time of Bid submittal:

**2.19.2** Upon formal request of the City, based on the application of a Local Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Local Business Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or Broward County current year business tax receipt, and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

**2.19.3** Failure to comply at time of Bid submittal shall result in the Bidder being found ineligible for the local business preference.

**2.19.4** The complete local business preference ordinance may be found on the City's web site: [Click Here](#)

### **2.19.5 Definitions**

- a. The term "Class A business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- b. The term "Class B business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, or shall maintain a staffing level for the proposed work of at least fifty percent (50%) who are residents of the City of Fort Lauderdale.
- c. The term "Class C business" shall mean any business that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of Broward County.
- d. The term "Class D business" shall mean any business that does not qualify as a Class A, Class B, or Class C business.

## **2.20 Disadvantaged Business Enterprise Preference**

**2.20.1** Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference. In order to be considered for a disadvantaged business preference, a Bidder must include a certification from a government agency, as applicable to the disadvantaged business preference class claimed at the time of Bid/Proposal submittal:

**2.20.2** Upon formal request of the City, based on the application of a Disadvantaged Business Preference the Bidder shall within ten (10) calendar days submit the following documentation to the Disadvantaged Business Enterprise Preference Class claimed:

- a. Copy of City of Fort Lauderdale current year business tax receipt, or the Tri-County (Broward, Dade, West Palm Beach) current year business tax receipt, or proof of active Sunbiz status and
- b. List of the names of all employees of the Bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or the Tri- County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

**2.20.3** Failure to comply at time of Bid/Proposal submittal shall result in the Bidder being found ineligible for the Disadvantaged Business Enterprise Preference business preference.

**2.20.4** The complete disadvantaged business preference ordinance may be found on the City's web site: [Click Here](#)

**2.20.5 Definitions**

- a. The term "Disadvantaged Class 1 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- b. The term "Disadvantaged Class 2 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the city's Procurement Manual.
- c. The term "Disadvantaged Class 3 Enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "Disadvantaged Class 4 Enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

**2.21 Protest Procedure**

**2.21.1** Any Bidder who is not recommended for award of a contract and who alleges a failure by the City to follow the city's procurement ordinance or any applicable law, may follow the protest procedure as found in the city's procurement ordinance within five (5) days after a notice of intent to award is posted on the city's web site at the following link: [Click Here](#)

**2.21.2** The complete protest ordinance may be found on the city's web site at the following link:  
[Click Here](#)

**2.22 Public Entity Crimes**

Contractor represents that the execution of this Agreement will not violate the Public Entity Crime Act, Section 287.133, Florida Statutes (2024), as may be amended or revised, which essentially provides that a person or affiliate who is a contractor, consultant, or other provider and who has been placed on the convicted vendor list following a conviction for a public entity crime may not submit a bid on a contract to provide any goods or services to City, may not submit a bid on a contract with City for the construction or repair of a public building or public work, may not submit bids on leases of real property to City, may not be awarded or perform work as a contractor, supplier, subcontractor, or consultant under an Agreement with City, and may not transact any business with City in excess of the threshold amount provided in Section 287.017, Florida Statutes (2024), as may be amended or revised, for category two purchases for a period of 36 months from the date of being placed on the convicted vendor list. Violation of this Section shall result in termination of this Agreement and recovery of all monies paid by City pursuant to this Agreement and may result in debarment from City's competitive procurement activities.

**2.23 Subcontractors**

**2.23.1** If the Contractor proposes to use subcontractors in the course of providing these services to the City, this information shall be a part of the bid/proposal response. Such information shall be subject to review, acceptance, and approval of the City, prior to any contract award. The City reserves the right to approve or disapprove of any subcontractor candidate in its best interest and to require Contractor to replace subcontractor with one that meets City approval.

**2.23.2** Contractor shall ensure that all of Contractor's subcontractors perform in accordance with the terms and conditions of this Contract. Contractor shall be fully responsible for all of Contractor's subcontractors' performance, and liable for any of Contractor's subcontractors' non-performance and all of Contractor's subcontractors' acts and omissions. Contractor shall defend, at Contractor's expense, counsel being subject to the City's approval or disapproval, and indemnify and hold harmless the City and the City's officers, employees, and agents from and against any claim, lawsuit, third-party action, or judgment, including any award of attorney fees and any award of costs, by or in favor of any Contractor's subcontractors for payment for work performed for the City.

**2.23.3** Contractor shall require all its subcontractors to provide the required insurance coverage as well as any other coverage that the contractor may consider necessary, and any deficiency in the coverage or policy limits of said subcontractors will be the sole responsibility of the contractor.

**2.24 Bid Security – N/A**

**2.25 Payment and Performance Bond – N/A**

**2.26 Insurance Requirements**

**2.26.1** As a condition precedent to the effectiveness of this Agreement, during the term of this Agreement and during any renewal or extension term of this Agreement, the Contractor, at its sole expense, shall provide insurance of such types and with such terms and limits as noted below. Providing proof of and maintaining adequate insurance coverage are material obligations of the Contractor. The Contractor shall provide the City a certificate of insurance evidencing such coverage. The Contractor's insurance coverage shall be

primary insurance for all applicable policies. The limits of coverage under each policy maintained by the Contractor shall not be interpreted as limiting the Contractor's liability and obligations under this Agreement. All insurance policies shall be through insurers authorized or eligible to write policies in the State of Florida and possess an A.M. Best rating of A-, VII or better, subject to approval by the City's Risk Manager.

**2.26.2** The coverages, limits, and endorsements required herein protect the interests of the City, and these coverages, limits, and/or endorsements shall in no way be relied upon by the Contractor for assessing the extent or determining appropriate types and limits of coverage to protect the Contractor against any loss exposures, whether as a result of this Agreement or otherwise. The requirements contained herein, as well as the City's review or acknowledgement, are not intended to and shall not in any manner limit or qualify the liabilities and obligations assumed by the Contractor under this Agreement.

**2.26.3** The following insurance policies and coverages are required:

**Commercial General Liability**

Coverage must be afforded under a Commercial General Liability policy with limits not less than:

- \$2,000,000 each occurrence and \$2,000,000 aggregate for Bodily Injury, Property Damage, and Personal and Advertising Injury
- \$2,000,000 each occurrence and \$2,000,000 aggregate for Products and Completed Operations

Policy must include coverage for contractual liability and independent contractors.

The City, a Florida municipality, its officials, employees, and volunteers are to be included as an additional insured with a CG 20 26 04 13 Additional Insured – Designated Person or Organization Endorsement or similar endorsement providing equal or broader Additional Insured Coverage with respect to liability arising out of activities performed by or on behalf of Contractor. The coverage shall contain no special limitation on the scope of protection afforded to the City, its officials, employees, and volunteers.

**Business Automobile Liability**

Proof of coverage must be provided for all Owned, Hired, Scheduled, and Non-Owned vehicles for Bodily Injury and Property Damage in an amount not less than the State of Florida required minimums unless a different amount is required by City Ordinance(s).

If Contractor does not own vehicles, Contractor shall maintain coverage for Hired and Non-Owned Auto Liability, which may be satisfied by way of endorsement to the Commercial General Liability policy or separate Business Auto Liability policy.

**Workers' Compensation and Employer's Liability**

Coverage must be afforded per Chapter 440, Florida Statutes. Any person or entity performing work for or on behalf of the City must provide Workers' Compensation insurance. Exceptions and exemptions will be allowed by the City's Risk Manager, if they are in accordance with Florida Statute.

Contractor waives, and Contractor shall ensure that Contractor's insurance carrier waives, all subrogation rights against the City, its officials, employees, and volunteers for all losses or

damages. The City requires the policy to be endorsed with WC 00 03 13 Waiver of our Right to Recover from Others or equivalent.

Contractor must be in compliance with all applicable State and federal workers' compensation laws, including the U.S. Longshore and Harbor Workers' Compensation Act and the Jones Act, if applicable.

#### Insurance Certificate Requirements

- a. Contractor shall provide the City with valid Certificates of Insurance (binders are unacceptable) no later than ten (10) days prior to the start of work contemplated in this Agreement.
- b. Contractor shall provide to the City a Certificate of Insurance having a thirty (30) day notice of cancellation; ten (10) days' notice if cancellation is for nonpayment of premium.
- c. In the event that the insurer is unable to accommodate the cancellation notice requirement, it shall be the responsibility of Contractor to provide the proper notice. Such notification will be in writing by registered mail, return receipt requested, and addressed to the certificate holder.
- d. In the event the Agreement term or any surviving obligation of Contractor following expiration or early termination of the Agreement goes beyond the expiration date of the insurance policy, Contractor shall provide the City with an updated Certificate of Insurance no later than ten (10) days prior to the expiration of the insurance currently in effect. The City reserves the right to suspend the Agreement until this requirement is met.
- e. The Certificate of Insurance shall indicate whether coverage is provided under a claims-made or occurrence form. If any coverage is provided on a claims-made form, the Certificate of Insurance must show a retroactive date, which shall be the effective date of the initial contract or prior.
- f. The City shall be included as an Additional Insured on all liability policies, with the exception of Workers' Compensation.
- g. The City shall be granted a Waiver of Subrogation on Contractor's Workers' Compensation insurance policy.
- h. The title of the Agreement, Bid/Contract number, or other identifying reference must be listed on the Certificate of Insurance.

#### The Certificate Holder should read as follows:

City of Fort Lauderdale  
401 SE 21<sup>st</sup> Street  
Fort Lauderdale, FL 33316

- 2.26.4** Contractor has the sole responsibility for all insurance premiums and shall be fully and solely responsible for any costs or expenses as a result of a coverage deductible, co-insurance penalty, or self-insured retention; including any loss not covered because of the application of such deductible, co-insurance penalty, self-insured retention, or coverage exclusion or limitation. Any costs for adding the City as an Additional Insured shall be at Contractor's expense.

- 2.26.5** If Contractor's primary insurance policy/policies do not meet the minimum requirements as set forth in this Agreement, Contractor may provide evidence of an Umbrella/Excess insurance policy to comply with this requirement.
- 2.26.6** Contractor's insurance coverage shall be primary insurance in respect to the City's interests, a Florida municipality, its officials, employees, and volunteers. Any insurance or self-insurance maintained by the City shall be non-contributory.
- 2.26.7** Any exclusion or provision in any insurance policy maintained by Contractor that excludes coverage required in this Agreement shall be deemed unacceptable and shall be considered breach of contract.
- 2.26.8** All required insurance policies must be maintained until the Agreement work has been accepted by the City, or until this Agreement is terminated, whichever is later. Any lapse in coverage may be considered breach of contract. In addition, Contractor must provide to the City confirmation of coverage renewal via an updated certificate of insurance should any policies expire prior to the expiration of this Agreement. The City reserves the right to review, at any time, coverage forms and limits of Contractor's insurance policies.
- 2.26.9** Contractor shall provide notice of any and all claims, accidents, and any other occurrences associated with this Agreement to Contractor's insurance company or companies and the City's Risk Management office as soon as practical.
- 2.26.10** It is Contractor's responsibility to ensure that any and all of Contractor's independent contractors and subcontractors comply with these insurance requirements. All coverages for independent contractors and subcontractors shall be subject to all of the applicable requirements stated herein. Any and all deficiencies are the responsibility of Contractor. The City reserves the right to adjust insurance limits from time to time at its discretion with notice to Contractor.

**2.27 Insurance – Sub-Contractors**

Contractor shall require all its Sub-Contractors to provide the aforementioned coverage as well as any other coverage that the Contractor may consider necessary, and any deficiency in the coverage or policy limits of said Sub-Contractors will be the sole responsibility of the Contractor.

**2.28 Insurance for Collection of Credit Card Payments – N/A**

**2.29 Award of Contract**

Award may be in the aggregate, or by line item, or by group, whichever is determined to be in the best interest of the City. Award will be made to the responsive and responsible bidder, quoting the lowest price, for that product/service that will best serve the needs of the City of Fort Lauderdale.

The City also reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City.

**IN THE EVENT OF ANY CONFLICT OR DISCREPANCY BETWEEN BID/PROPOSAL PRICE(S) SUBMITTED BY BIDDER/PROPOSER ELECTRONICALLY INTO THE CITY'S ON-LINE STRATEGIC SOURCING PLATFORM UNIT PRICE FIELD(S), ANY OTHER FORMS OR ATTACHMENTS (WHETHER PART OF THE CITY'S SOLICITATION DOCUMENTS OR DOCUMENTS CREATED AND UPLOADED BY THE BIDDER/PROPOSER), OR**

ANOTHER SECTION/FIELD OF THE SYSTEM, THE ONLINE UNIT PRICE(S) INPUTTED ELECTRONICALLY INTO THE SYSTEM BY BIDDER/PROPOSER SHALL GOVERN.

**2.30 Damage to Public or Private Property**

Extreme care shall be taken to safeguard all existing facilities, site amenities, irrigation systems, vehicles, etc. on or around the job site. Damage to public and/or private property shall be the responsibility of the Contractor and shall be repaired and/or replaced at no additional cost to the City.

**2.31 Safety**

The Contractor(s) shall adhere to the Florida Department of Transportation's Uniform manual on Traffic Control for construction and maintenance work zones when working on or near a roadway. It will be the sole responsibility of the Contractor to make themselves and their employees fully aware of these provisions, especially those applicable to safety.

**2.32 Uncontrollable Circumstances ("Force Majeure")**

The City and Contractor will be excused from the performance of their respective obligations under this agreement when and to the extent that their performance is delayed or prevented by any circumstances beyond their control including, fire, flood, explosion, strikes or other labor disputes, act of God or public emergency, war, riot, civil commotion, malicious damage, act or omission of any governmental authority, delay or failure or shortage of any type of transportation, equipment, or service from a public utility needed for their performance, provided that:

**2.32.1** The non-performing party gives the other party prompt written notice describing the particulars of the Force Majeure including, but not limited to, the nature of the occurrence and its expected duration, and continues to furnish timely reports with respect thereto during the period of the Force Majeure;

**2.32.2** The excuse of performance is of no greater scope and of no longer duration than is required by the Force Majeure;

**2.32.3** No obligations of either party that arose before the Force Majeure causing the excuse of performance are excused as a result of the Force Majeure; and

**2.32.4** The non-performing party uses its best efforts to remedy its inability to perform. Notwithstanding the above, performance shall not be excused under this Section for a period in excess of two (2) months, provided that in extenuating circumstances, the City may excuse performance for a longer term. Economic hardship of the Contractor will not constitute Force Majeure. The term of the agreement shall be extended by a period equal to that during which either party's performance is suspended under this Section.

**2.33 Canadian Companies**

In the event Contractor is a corporation organized under the laws of any province of Canada or is a Canadian federal corporation, the City may enforce in the United States of America or in Canada or in both countries a judgment entered against the Contractor. The Contractor waives any and all defenses to the City's enforcement in Canada, of a judgment entered by a court in the United States of America. All monetary amounts set forth in this Contract are in United States dollars.

**2.34 News Releases/Publicity**

News releases, publicity releases, or advertisements relating to this contract, or the tasks or projects associated with the project shall not be made without prior City approval.

**2.35 Approved Equal or Alternative Product Bids**

The Technical Specifications contained in this solicitation are to be used as a reference only and are not to be considered of a proprietary nature. These specifications represent a level of quality and features that are desired by the City of Fort Lauderdale. The City is receptive to any product that would be considered by qualified City personnel as an approved equal.

The Contractor must state clearly in their bid pages any variance to the specifications. If proposing an approved equal or alternate product, it will be the Contractor's responsibility to provide adequate information in their bid to enable the City to ensure that the Contractor meets the required criteria. If adequate information is not submitted with the bid, it may be rejected.

The City of Fort Lauderdale will be the sole judge in determining if the product proposed qualifies as approved equal. The City reserves the right to award to that Contractor which will best serve the interest of the City as determined by the City. The City further reserves the right to waive minor variations to specifications and in the bidding process.

**2.36 Contract Period**

The initial contract term shall commence upon date of award by the City and shall expire two (2) years from that date. The City reserves the right to extend the contract for three (3) additional one 1-year terms, providing all terms, conditions and specifications remain the same, both parties agree to the extension, and such extension is approved by the City.

In the event services are scheduled to end because of the expiration of this contract, the Contractor shall continue the service upon the request of the City as authorized by the awarding authority. The extension period shall not extend for more than 270 days beyond the expiration date of the existing contract. The Contractor shall be compensated for the service at the rate in effect when this extension clause is invoked by the City.

**2.37 Cost Adjustments**

Prices quoted shall be firm for the initial contract term of two (2) years. No cost increases shall be accepted in this initial contract term. Please consider this when providing pricing for this Invitation to Bid.

Thereafter, any extensions which may be approved by the City shall be subject to the following: costs for any extension terms shall be subject to an adjustment only if increases or decreases occur in the industry. Such adjustment shall be based on the latest yearly percentage increase in the All Urban Consumers Price Index (CPI-U) as published by the Bureau of Labor Statistics, U.S. Department of Labor and shall not exceed five percent (5%).

The yearly increase or decrease in the CPI shall be that latest Index published and available for the calendar year ending 12/31, prior to the end of the contract year then in effect, as compared to the index for the comparable month, one-year prior.

Any requested adjustment shall be fully documented and submitted to the City at least ninety (90) days prior to the contract anniversary date. Any approved cost adjustments shall become effective on the beginning date of the approved contract extension.

The City may, after examination, refuse to accept the adjusted costs if they are not properly

documented, or considered to be excessive, or if decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs, and the matter cannot be resolved to the satisfaction of the City, the Contract will be considered cancelled on the scheduled expiration date.

### **2.38 Service Test Period**

If the Contractor has not previously performed the services to the city, the City reserves the right to require a test period to determine if the Contractor can perform in accordance with the requirements of the contract, and to the City's satisfaction. Such test period can be from thirty to ninety days, and will be conducted under all specifications, terms and conditions contained in the contract. This trial period will then become part of the initial contract period.

A performance evaluation will be conducted prior to the end of the test period and that evaluation will be the basis for the City's decision to continue with the Contractor or to select another Contractor (if applicable).

### **2.39 Contract Coordinator**

The City may designate a Contract Coordinator whose principal duties shall be:

- Liaison with Contractor.
- Coordinate and approve all work under the contract.
- Resolve any disputes.
- Assure consistency and quality of Contractor's performance.
- Schedule and conduct Contractor performance evaluations and document findings.
- Review and approve for payment all invoices for work performed or items delivered.

### **2.40 Contractor Performance Reviews and Ratings**

The City Contract Coordinator may develop a Contractor performance evaluation report. This report shall be used to periodically review and rate the Contractor's performance under the contract with performance rating as follows:

Excellent	Far exceeds requirements.
Good	Exceeds requirements
Fair	Just meets requirements.
Poor	Does not meet all requirements and contractor is subject to penalty provisions under the contract.
Non-compliance	Either continued poor performance after notice or a performance level that does not meet a significant portion of the requirements. This rating makes the Contractor subject to the default or cancellation for cause provisions of the contract.

The report shall also list all discrepancies found during the review period. The Contractor shall be provided with a copy of the report and may respond in writing if he takes exception to the report or wishes to comment on the report. Contractor performance reviews and subsequent reports will be used in determining the suitability of contract extension.

### **2.41 Substitution of Personnel**

It is the intention of the City that the Contractor's personnel proposed for the contract will be available for the contract term. In the event the Contractor wishes to substitute personnel, he shall propose personnel of equal or higher qualifications and all replacement personnel are subject to

City approval. In the event substitute personnel are not satisfactory to the City and the matter cannot be resolved to the satisfaction of the City, the City reserves the right to cancel the Contract for cause. See Section 5.09 General Conditions.

**2.42 Ownership of Work**

The City shall have full ownership and the right to copyright, otherwise limit, reproduce, modify, sell, or use all of the work or product produced under this contract without payment of any royalties or fees to the Contractor above the agreed hourly rates and related costs.

**2.43 Condition of Trade-In Equipment – N/A**

**2.44 Conditions of Trade-In Shipment and Purchase Payment – N/A**

**2.45 Verification of Employment Status**

Any Contractor/Consultant assigned to perform responsibilities under its contract with a State agency is required to utilize the US Department of Homeland Security's E-Verify system (per Executive Order Number 11-02) to verify the employment eligibility of: (a) all persons employed during the contract term by the Contractor to perform employment duties within Florida; and (b) all persons (including subcontractors) assigned by the Contractor to perform work pursuant to the contract with the State agency.

E-VERIFY Affirmation Statement must be completed and submitted with Bidder's response to this ITB.

**2.46 Service Organization Controls – N/A**

**2.47 Warranties of Usage**

Any estimated quantities listed are for information and tabulation purposes only. No warranty or guarantee of quantities needed is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.

**2.48 Rules and Submittals of Bids**

The signer of the bid must declare that the only person(s), company or parties interested in the bid as principals are named therein; that the bid is made without collusion with any other person(s), company or parties submitting a bid; that it is in all respects fair and in good faith, without collusion or fraud; and that the signer of the bid has full authority to bind the principal bidder.

**2.49 Bid Tabulations/Intent to Award**

Notice of Intent to Award Contract/Bid, resulting from the City's Formal solicitation process may be found at: [Click Here](#). Tabulations of receipt of those parties responding to a formal solicitation may be found at: [Click Here](#). Any interested party may call the Procurement Services Division at 954-828-5933, or email [ProcurementSupport@fortlauderdale.gov](mailto:ProcurementSupport@fortlauderdale.gov), for more information.

**2.50 Public Records**

All bids will become the property of the City. The Bidder's response to the ITB is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 (2024) ("Public Records Law"). The City shall permit public access to all documents, papers, letters, or other material submitted in connection with this ITB and any resulting Contract to be executed for this ITB, subject to the provisions of Chapter 119.07 of the Florida Statutes (2024). Any language contained in the Bidder's response to the ITB purporting to require confidentiality of any portion of the Bidder's response to the ITB, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to

Florida law, shall be void. If a Bidder submits any documents or other information to the City which the Bidder claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Bidder shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Bidder must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Bidder's response to the ITB constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the Bidder agrees to defend, indemnify, and hold harmless the city and the city's officers, employees, and agent, against any loss or damages incurred by any person or entity as a result of the city's treatment of records as public records. In the event of Contract award, all documentation produced as part of the Contract shall become the exclusive property of the City.

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT [PRRCONTRACT@FORTLAUDERDALE.GOV](mailto:PRRCONTRACT@FORTLAUDERDALE.GOV), 954-828-5002, CITY CLERK'S OFFICE, ONE EAST BROWARD BOULEVARD, SUITE 444, FORT LAUDERDALE, FLORIDA 33301.**

Contractor shall:

1. Keep and maintain public records required by the City in order to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2024), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of this contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of this Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of this Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

## **2.51 PCI (Payment Card Industry) Compliance – N/A**

*END OF SECTION*

## SECTION III - TECHNICAL SPECIFICATIONS/SCOPE OF SERVICES

### 3 Project Description

The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide turnkey Electric Vehicle Charging Station (EVCS) services for both the general public use and the City of Fort Lauderdale Fleet at various locations within the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB). It is the City's intent to award a contract to more than one Proposer, at the sole and absolute discretion of the City.

The City reserves the right to add or remove locations within this multi-year contract. The successful Bidder agrees to provide such items and or services as needed and shall provide the City quotes in accordance with this contract. The City may utilize the awarded Contractor for electrical goods and services awarded in this contract outside of EVCS installations.

The scope of work includes the provision of turnkey Alternating Current (AC) Level II 240/208v EVCS hardwired solutions and associated equipment, encompassing site assessments, engineering, permitting, installation services, site preparation, and maintenance services, ensuring compliance with all state and local codes. The bidder shall provide restoration of existing conditions, as well as the testing and commission of the EV charger stations, provide timely maintenance services and 24/7 customer support. For installation services, vendors must be certified licensed electrical installers for the brands they are bidding. Further installation requirements and specifications can be found in the Sub-Category: Installation.

#### 3.1 Product Specifications

- 3.1.1** All charging stations shall include all necessary cables, cords, conductors, connectors, couplers, enclosures, attachment plugs, power outlets, power electronics, transformer, switchgear, switches and controls, point of sale equipment, and associated apparatus designed and used for the purpose of transferring energy from the electric supply system to a plug-in electric vehicle.
- 3.1.2** All charging stations shall be hardwired, 240/208v single Level 2 EV charger with single or dual chargers.
- 3.1.3** The charging stations shall have the capability to be installed and used indoors or outdoors. Charging Stations must be operational in temperatures ranging from - 22° F (-30° C) to 122° F (50° C) and in relative humidity up to 85% (non-condensing).
- 3.1.4** The vehicle to charger connector for each Charging Station shall meet the SAE J1772 standard.
- 3.1.5** The charging stations shall have a cord management system or method to minimize the potential for cable entanglement, user injury, or connector damage.
- 3.1.6** Cords shall be retractable or have a place to hang the connector and cord that is a safe and sufficient distance above the ground or pavement surface.
- 3.1.7** Any cords connecting the charger to a vehicle shall be configured so that they do not cross a driveway, sidewalk, or passenger unloading area.

- 3.1.8** The charging station shall clearly indicate the toll-free number to call for technical support.
- 3.1.9** Each installed station shall have a manufacturer's 5-year hardware warranty.
- 3.1.10** No network and/or software capabilities are requested in this ITB.
- 3.1.11** All products offered must be considered new, unused, of the latest design and technology and from the most current and popular product lines available.
- 3.1.12** Prior to purchase, contractor will submit charger specifications for approval.
- 3.1.13** Security design such as tamper-resistant screws, anti-vandalism hardware, locked enclosures, retractable cables, and graffiti-resistant coating. Any and all security features should be outlined in the proposal.
- 3.1.14** Equipment must be outdoor suitable NEMA-4 rated enclosure.
- 3.1.15** At least 23-foot standard length of cable for each charging station.
  - 3.1.15.1** The City will not consider charging stations with shorter cable lengths.
- 3.1.16** Electrical Testing Laboratory (ETL) or Underwriters Laboratories (UL) certified, and Energy Star listed.

## **3.2 General Specifications**

- 3.2.1** Provide engineering services tailored to EVSE application and design plans for each site determined feasible for construction as required for permitting and compliance with state and local regulations.
- 3.2.2** The proposed EVCS's should have the ability to effectively serve the needs of both the general public and the City of Fort Lauderdale Fleet.
- 3.2.3** Each plug must be capable of providing electric power continuous with electric service rated 240V/208V to an EV. If a charger is equipped with dual plugs each plug must be capable of meeting the requirement simultaneously and continuously.
- 3.2.4** Bidders are required to install single and/or dual EV charging stations as needed. The City will not consider EV charging models that do not support both configurations. The proposed system should be able to be installed on a single or dual pedestal in a parking lot or mounted on the wall in a parking garage and be securable to prevent theft.
- 3.2.5** Complete make ready work for each site, as needed, including but not limited to installation of electrical panels and wiring to EVCS, trenching and installation of conduit, and repair of hardscape surfaces, and handling all required permitting, inspections, and final commissioning.
  - 3.2.5.1** This includes preparation and submission of permit applications, coordination of inspections during and after installation, and final system commissioning to ensure proper functionality and compliance with local regulations.

**3.2.6** Provide ongoing preventive and emergency service and maintenance of charging stations.

**3.2.6.1** Support and maintenance should continue for the duration of the contract and must provide the following types of support:

- A.** Toll free help desk support for the system during regular business hours for system administrators (7:00 AM to 4:30 PM) and optional help desk support outside of regular hours.
- B.** Provide support for issues with charging stations.
- C.** On-site vendor support as required within 24 hours from receipt of notification from City to vendor's designated contact.

**3.2.6.2** For prevention repairs, response times are as follows:

- A.** Routine Preventive Maintenance Visits: Scheduled in advance at regular intervals, such as quarterly or semi-annually, in accordance with manufacturer recommendations, as agreed upon in the contract.
- B.** Additional Preventive Maintenance Requests: Response within 3–5 business days from the time of the request to arrange a visit.

**3.2.6.3** For emergency repairs, response times are as follows

- A.** Minor Issues (e.g., software resets, basic troubleshooting): Repairs to be completed within a few hours if remote support or on-site technicians are available.
- B.** Diagnostic site visits will be made within 24 hours of receiving notification from City. Where possible, repairs will be completed during that site visit.
- C.** Hardware Repairs (e.g., replacing connectors, cables): Repairs to be completed within 1–2 days if parts are readily available.
- D.** Significant Repairs (e.g., internal component replacements, circuit board issues): Repairs to be completed within several days to a week, depending on part availability.
- E.** All application upgrades or updates will be made available to the City as part of the maintenance agreement.

**3.2.7** The contractor is responsible for obtaining any necessary licenses and permits, and for complying with all National Electrical Code and any applicable Federal, State, and municipal laws, codes, and regulations, in connection with the prosecution of the work without additional expense to the City.

**3.2.8** Assist City in identifying and obtaining any applicable incentives, refunds, and/or rebates.

### **3.3 Installation Specifications**

**3.3.1** Full turnkey electric work, including but not limited to, running electrical conduit, wiring between electrical distribution set-up and chargers, and mount charging station in desired location.

**3.3.2** The installation work shall include all labor, materials, and services required for installation. Contractor must follow manufacturer's installation procedure and provide necessary components to complete the entire charging station system.

- 3.3.3** Installation shall include a site inspection and verification. This will be an on-site assessment of the selected facilities to determine the potential location for the charging stations and the extent of construction that will be required to complete the installation.
- 3.3.4** The installation of new EV charging equipment may require removal and replacement of exiting EV charging equipment. Contractor shall be responsible for ensuring that any removed equipment is recycled or disposed of consistent with local, state, and federal regulations.
- 3.3.5** The contractor shall determine that existing electrical system has the capacity for the requested EV loads via most appropriate methodology which may include visual inspection, load study, or utility bill analysis.
- 3.3.6** Contractor shall confirm that the site complies with relevant usability standards of the ADA, including curb heights and required reach to charger. Please refer to the [U.S. Access Board document](#) for more information on accessible route design for EV charging stations and building access. If an EV charging station is requested at a location that cannot be made ADA compliant, another site will be selected.
- 3.3.7** After award, for each site requested by the City of Fort Lauderdale, the contractor shall prepare a quote per site based on the findings of the site inspection consistent with pricing provided within their line items bids. The City reserves the right to cancel any site installation after reviewing quotes.
- 3.3.8** Upon agreement from client to proceed with the installation, the contractor shall prepare any required permit applications and appropriate drawings based on the client's State and local requirements and regulations.
- 3.3.9** All installation components must follow those set by the EV Charging Station's manufacturer's requirements and specifications.
- 3.3.10** Contingent on the location, the proposed system should be able to be installed on a single or dual pedestal in a parking lot or mounted on the wall in a parking garage and be securable to prevent theft.
- 3.3.11** Concrete foundation shall be made, when needed for EVCS mounting, with the base height no less than 8 inches above grade.
- 3.3.12** Preparation of concrete foundation shall include digging the foundation hole, a form pad, installing rebar and pouring the concrete.
- 3.3.13** Contractor shall furnish and install pull boxes, hand holes, junction boxes, and any other items that are required to properly access all connections.
- 3.3.14** Contractor shall make all necessary arrangements to ensure continuous building electrical service at all times. Periods of electrical shut down shall be coordinated with owner at least 48 hours in advance and their duration will be minimized.
- 3.3.15** Contractor shall check that the AC bolts and protective ground cables of the station are correctly tightened to the charger's specified torque.

**3.3.16** Contractor shall check resistance on the Grid AC between phases and ensure that there are no dead shorts.

**3.3.17** Contractor shall be responsible for removing construction debris from premises at the end of each workday and ensuring that debris is removed and recycled or disposed of consistent with local, state, and federal regulations. Upon completion of all installation work, the vendor shall sweep the area clean. Any damaged surfaces, including walls, ceilings, and floors, shall be repaired, refinished, and painted to match adjacent surfaces at the end of the construction/installation period.

**3.3.18** Required inspections shall be coordinated with the local utility company as necessary.

**3.3.19** Contractor is responsible for commissioning installed chargers to verify performance.

### **3.4 EVCS Maintenance Service Requirements**

**3.4.1** Contractor is responsible for providing hourly maintenance rates for the two-line items related to service calls.

**3.4.2** Contractors may only bill for one service call per day.

#### **3.4.2.1 Service Call - Preventive Maintenance First Hour (\$/Each Visit):**

- A.** This line item covers pre-scheduled, routine service visits to inspect and maintain the EVCS equipment, ensuring optimal performance and addressing potential issues before they result in failures.
- B.** The first hour of service will be inclusive of travel time, travel expenses and on-site labor, billed at a flat fee.
- C.** The contractor can only bill this fee once per day, independent of whether a service was done at one or multiple sites.
- D.** Any additional labor beyond the first hour will be billed separately, as described in Section **3.4.2.2**.

#### **3.4.2.2 Service Call - Preventive Maintenance Additional Hours (\$/hr.):**

- A.** This line item covers pre-scheduled, routine service visits to inspect and maintain the EVCS equipment, ensuring optimal performance and addressing potential issues before they result in failures.
- B.** This rate applies to any labor performed beyond the first hour of service as described in Section **3.4.2.1**.

#### **3.4.2.3 Service Call - Emergency Repairs First Hour (\$/Each Visit):**

- A.** This line item includes site visits to address unexpected equipment malfunctions or breakdowns, ensuring timely response and minimizing station downtime.
- B.** The first hour of service will be inclusive of travel time, travel expenses and on-site labor, billed at a flat fee.
- C.** The contractor can only bill this fee once per day, independent of whether a service was done at one or multiple sites.
- D.** Any additional labor beyond the first hour will be billed separately, as described in Section **3.4.2.4**.

**3.4.2.4 Service Call - Emergency Repairs Additional Hours (\$/hr.):**

- A. This line item includes site visits to address unexpected equipment malfunctions or breakdowns, ensuring timely response and minimizing station downtime.
- B. This rate applies to any labor performed beyond the first hour of service as described in Section **3.4.2.3**.

**3.4.3** Contractor shall provide maintenance services in accordance with the manufacturer's recommendations to ensure all equipment is properly checked, tested, and activated for proper operation. Invoice for these services is based on the vendors quoted hourly rates listed on the line item: Preventative Maintenance.

**3.4.4** Contractor shall inspect all chargers installed under this contract at the manufacturer's recommended frequency or at least annually and perform any manufacturer recommended preventive maintenance.

**3.4.5** Contractor shall provide the City a preventive yearly maintenance schedule.

**3.4.6** Contractor shall pursue warranty replacement when appropriate.

**3.4.7** Contractor shall provide written quotes to contract administrator for service activities (including labor, parts and percentage mark-up on parts) for approval prior to proceeding with any work beyond a site visit.

**3.4.8** In the event of an equipment or hardware malfunction or failure, a maintenance crew shall respond to the site within 24 business hours, (8 AM to 5:00 PM) seven days a week, from the time the issue is reported. Invoice for these services is based on the vendors quoted hourly rates listed on the line item: Emergency Repairs.

**3.5 Supporting Documentation**

**3.5.1** Vendors are required to provide responses and documentation as needed to each of the questions under the Questions tab of the solicitation.

**3.6 Site Assessment**

**3.6.1** Contractors have the option to conduct a site assessment, with site visits for secured facilities available upon request and coordination.

**3.6.2** While most locations are expected to have adequate electrical capacity, this must be verified by the awarded contractor prior to site assignment.

**3.6.3** After contract is awarded, contractors are required to provide an itemized quote in accordance with their pricing provided for the total cost of each assigned site, including any costs associated with necessary electrical upgrades. All itemized quotes must be given written approval to proceed by contract administrator prior to commencing work.

**3.6.4** City reserves the right to decline to proceed with any installation on a given site after review of quote.

**3.7 Project Locations: Anticipated for year one of contract:**

**3.7.1** Sites listed #1-7 are for City fleet and employee use only and will be restricted from public access.

**3.7.2** Sites listed #8-16 are for general public use only.

<u>Site No.</u>	<u>Site Name</u>	<u>Address</u>
1	Development Services	700 NW 19th Ave., Fort Lauderdale, FL 33311
2	Fleet Fenceline area	220 SW 14th Ave., Fort Lauderdale, FL 33312
3	Fire Station 3	2801 SW 4th Ave., Fort Lauderdale, FL 33315
4	Fire Station 35	1969 E. Commercial Blvd., Fort Lauderdale, FL 33308
5	Fire Station 46	1515 NW 19th St., Fort Lauderdale, FL 33311
6	Fire Station 49	1015 Seabreeze Blvd., Fort Lauderdale, FL 33316
7	Fire Station 53	2200 Executive Airport Way, Fort Lauderdale, FL 33309
8	City Hall Garage	100 North Andrews Ave., Fort Lauderdale, FL 33301
9	Riverwalk Center Garage	150 SE 2nd Street, Fort Lauderdale, FL 33301
10	Las Olas Garage	200 Las Olas Circle, Fort Lauderdale, FL 33316
11	Fort Lauderdale Beach Park	700 Seabreeze Blvd, Fort Lauderdale, FL 33316
12	North Beach Parking Lot	725 North Fort Lauderdale Blvd., Fort Lauderdale, FL 33316
13	Beach Community Center	3551 NE 33rd Ave., Fort Lauderdale, FL 33308
14	Arts and Science Garage	101 SW 5th Ave., Fort Lauderdale, FL 33312
15	Galt Lot	3500 Galt Ocean Dr., Fort Lauderdale, FL 33308
16	Transportation/ Mobility	290 NE 3 <sup>rd</sup> Ave., Fort Lauderdale, FL 33334

*END OF SECTION*

**CITY OF FORT LAUDERDALE  
GENERAL CONDITIONS**

These instructions and conditions are standard for all contracts for commodities or services issued through the City of Fort Lauderdale Procurement Services Division. The City may delete, supersede, or modify any of these standard instructions for a particular contract by indicating such change in the Invitation to Bid (ITB) Special Conditions, Technical Specifications, Instructions, Proposal Pages, Addenda, and Legal Advertisement. In this general conditions document, Invitation to Bid (ITB), Request for Qualifications (RFQ), and Request for Proposal (RFP) are interchangeable.

**PART I BIDDER PROPOSAL PAGE(S) CONDITIONS:**

- 1.01 BIDDER ADDRESS:** The City maintains automated vendor address lists that have been generated for each specific Commodity Class item through our bid issuing service, BidSync. Notices of Invitations to Bid (ITB'S) are sent by e-mail to the selection of bidders who have fully registered with BidSync or faxed (if applicable) to every vendor on those lists, who may then view the bid documents online. Bidders who have been informed of a bid's availability in any other manner are responsible for registering with BidSync in order to view the bid documents. There is no fee for doing so. If you wish bid notifications be provided to another e-mail address or fax, please contact BidSync. If you wish purchase orders sent to a different address, please so indicate in your bid response. If you wish payments sent to a different address, please so indicate on your invoice.
- 1.02 DELIVERY:** Time will be of the essence for any orders placed as a result of this ITB. The City reserves the right to cancel any orders, or part thereof, without obligation if delivery is not made in accordance with the schedule specified by the Bidder and accepted by the City.
- 1.03 PACKING SLIPS:** It will be the responsibility of the awarded Contractor, to attach all packing slips to the OUTSIDE of each shipment. Packing slips must provide a detailed description of what is to be received and reference the City of Fort Lauderdale purchase order number that is associated with the shipment. Failure to provide a detailed packing slip attached to the outside of shipment may result in refusal of shipment at Contractor's expense.
- 1.04 PAYMENT TERMS AND CASH DISCOUNTS:** Payment terms, unless otherwise stated in this ITB, will be considered to be net 45 days after the date of satisfactory delivery at the place of acceptance and receipt of correct invoice at the office specified, whichever occurs last. Bidder may offer cash discounts for prompt payment but they will not be considered in determination of award. If a Bidder offers a discount, it is understood that the discount time will be computed from the date of satisfactory delivery, at the place of acceptance, and receipt of correct invoice, at the office specified, whichever occurs last.
- 1.05 TOTAL BID DISCOUNT:** If Bidder offers a discount for award of all items listed in the bid, such discount shall be deducted from the total of the firm net unit prices bid and shall be considered in tabulation and award of bid.
- 1.06 BIDS FIRM FOR ACCEPTANCE:** Bidder warrants, by virtue of bidding, that the bid and the prices quoted in the bid will be firm for acceptance by the City for a period of one hundred twenty (120) days from the date of bid opening unless otherwise stated in the ITB.
- 1.07 VARIANCES:** For purposes of bid evaluation, Bidder's must indicate any variances, no matter how slight, from ITB General Conditions, Special Conditions, Specifications or Addenda in the space provided in the ITB. No variations or exceptions by a Bidder will be considered or deemed a part of the bid submitted unless such variances or exceptions are listed in the bid and referenced in the space provided on the bidder proposal pages. If variances are not stated, or referenced as required, it will be assumed that the product or service fully complies with the City's terms, conditions, and specifications.
- By receiving a bid, City does not necessarily accept any variances contained in the bid. All variances submitted are subject to review and approval by the City. If any bid contains material variances that, in the City's sole opinion, make that bid conditional in nature, the City reserves the right to reject the bid or part of the bid that is declared by the City as conditional.
- 1.08 NO BIDS:** If you do not intend to bid please indicate the reason, such as insufficient time to respond, do not offer product or service, unable to meet specifications, schedule would not permit, or any other reason, in the space provided in this ITB. Failure to bid or return no bid comments prior to the bid due and opening date and time, indicated in this ITB, may result in your firm being deleted from our Bidder's registration list for the Commodity Class Item requested in this ITB.
- 1.09 MINORITY AND WOMEN BUSINESS ENTERPRISE PARTICIPATION AND BUSINESS DEFINITIONS:** The City of Fort Lauderdale wants to increase the participation of Minority Business Enterprises (MBE), Women Business Enterprises (WBE), and Small Business Enterprises (SBE) in its procurement activities. If your firm qualifies in accordance with the below definitions please indicate in the space provided in this ITB.

Minority Business Enterprise (MBE) "A Minority Business" is a business enterprise that is owned or controlled by one or more socially or economically disadvantaged persons. Such disadvantage may arise from cultural, racial, chronic economic circumstances or background or other similar cause. Such persons include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

The term "Minority Business Enterprise" means a business at least 51 percent of which is owned by minority group members or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by minority group members. For the purpose of the preceding sentence, minority group members are citizens of the United States who include, but are not limited to: Blacks, Hispanics, Asian Americans, and Native Americans.

Women Business Enterprise (WBE) a "Women Owned or Controlled Business" is a business enterprise at least 51 percent of which is owned by females or, in the case of a publicly owned business, at least 51 percent of the stock of which is owned by females.

Small Business Enterprise (SBE) "Small Business" means a corporation, partnership, sole proprietorship, or other legal entity formed for the purpose of making a profit, which is independently owned and operated, has either fewer than 100 employees or less than \$1,000,000 in annual gross receipts.

BLACK, which includes persons having origins in any of the Black racial groups of Africa.

WHITE, which includes persons whose origins are Anglo-Saxon and Europeans and persons of Indo-European decent including Pakistani and East Indian.

HISPANIC, which includes persons of Mexican, Puerto Rican, Cuban, Central and South American, or other Spanish culture or origin, regardless of race.

NATIVE AMERICAN, which includes persons whose origins are American Indians, Eskimos, Aleuts, or Native Hawaiians.

ASIAN AMERICAN, which includes persons having origin in any of the original peoples of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands.

**1.10 MINORITY-WOMEN BUSINESS ENTERPRISE PARTICIPATION**

It is the desire of the City of Fort Lauderdale to increase the participation of minority (MBE) and women-owned (WBE) businesses in its contracting and

procurement programs. While the City does not have any preference or set aside programs in place, it is committed to a policy of equitable participation for these firms. Proposers are requested to include in their proposals a narrative describing their past accomplishments and intended actions in this area. If proposers are considering minority or women owned enterprise participation in their proposal, those firms, and their specific duties have to be identified in the proposal. If a proposer is considered for award, he or she will be asked to meet with City staff so that the intended MBE/WBE participation can be formalized and included in the subsequent contract.

#### **1.11 SCRUTINIZED COMPANIES**

As a condition precedent to the effectiveness of this Agreement, subject to *Odebrecht Construction, Inc., v. Prasad*, 876 F.Supp.2d 1305 (S.D. Fla. 2012), *affirmed*, *Odebrecht Construction, Inc., v. Secretary, Florida Department of Transportation*, 715 F.3d 1268 (11th Cir. 2013), with regard to the "Cuba Amendment," the Contractor certifies that it is not on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List, and that it does not have business operations in Cuba or Syria, as provided in section 287.135, Florida Statutes (2023), as may be amended or revised. As a condition precedent to any contract for goods or services of any amount and as a condition precedent to the renewal of any contract for goods or services of any amount, the Contractor certifies that it is not on the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2023), and that it is not engaged in a boycott of Israel. The City may terminate this Agreement at the City's option if the Contractor is found to have submitted a false certification as provided under subsection (5) of section 287.135, Florida Statutes (2023), as may be amended or revised, or been placed on the Scrutinized Companies with Activities in Sudan List or the Scrutinized Companies with Activities in the Iran Petroleum Energy Sector List or the Scrutinized Companies that Boycott Israel List created pursuant to Section 215.4725, Florida Statutes (2023), as may be amended or revised, or is engaged in a boycott of Israel, or has been engaged in business operations in Cuba or Syria, as defined in Section 287.135, Florida Statutes (2023), as may be amended or revised.

#### **1.12 DEBARRED OR SUSPENDED BIDDERS OR PROPOSERS**

The bidder or proposer certifies, by submission of a response to this solicitation, that neither it nor its principals and subcontractors are presently debarred or suspended by any Federal department or agency.

### **Part II DEFINITIONS/ORDER OF PRECEDENCE:**

#### **2.01 BIDDING DEFINITIONS** The City will use the following definitions in its general conditions, special conditions, technical specifications, instructions to bidders, addenda and any other document used in the bidding process:

INVITATION TO BID (ITB) The solicitation document used for soliciting competitive sealed bids for goods or services.

INVITATION TO NEGOTIATE (ITN) All solicitation documents, regardless of medium, whether attached to or incorporated by reference in solicitations for responses from firms that invite proposals from interested and qualified firms so the city may enter into negotiations with the firm(s) determined most capable of providing the required goods or services.

REQUEST FOR PROPOSALS (RFP) A solicitation method used for soliciting competitive sealed proposals to determine the best value among proposals for goods or services for which price may not be the prevailing factor in award of the contract, or the scope of work, specifications or contract terms and conditions may be difficult to define. Such solicitation will consider the qualifications of the proposers along with evaluation of each proposal using identified and generally weighted evaluation criteria. RFPs may include price criteria whenever feasible, at the discretion of the city.

REQUEST FOR QUALIFICATIONS (RFQ) A solicitation method used for requesting statements of qualifications in order to determine the most qualified proposer for professional services.

BID – a price and terms quote received in response to an ITB.

PROPOSAL – a proposal received in response to an RFP.

BIDDER – Person or firm submitting a Bid.

PROPOSER – Person or firm submitting a Proposal.

RESPONSIVE BIDDER – A firm who has submitted a bid, offer, quote, or response which conforms in all material respects to the competitive solicitation document and all of its requirements.

RESPONSIBLE BIDDER – A firm who is fully capable of meeting all requirements of the solicitation and subsequent contract. The respondent must possess the full capability, including financial and technical, ability, business judgment, experience, qualifications, facilities, equipment, integrity, capability, and reliability, in all respects to perform fully the contract requirements and assure good faith performance as determined by the city.

FIRST RANKED PROPOSER – That Proposer, responding to a City RFP, whose Proposal is deemed by the City, the most advantageous to the City after applying the evaluation criteria contained in the RFP.

SELLER – Successful Bidder or Proposer who is awarded a Purchase Order or Contract to provide goods or services to the City.

CONTRACTOR – Any firm having a contract with the city. Also referred to as a "Vendor".

CONTRACT – All types of agreements, including purchase orders, for procurement of supplies, services, and construction, regardless of what these agreements may be called.

CONSULTANT – A firm providing professional services for the city.

#### **2.02 SPECIAL CONDITIONS:** Any and all Special Conditions contained in this ITB that may be in variance or conflict with these General Conditions shall have precedence over these General Conditions. If no changes or deletions to General Conditions are made in the Special Conditions, then the General Conditions shall prevail in their entirety,

### **PART III BIDDING AND AWARD PROCEDURES:**

#### **3.01 SUBMISSION AND RECEIPT OF BIDS:** To receive consideration, bids must be received prior to the bid opening date and time. Unless otherwise specified, Bidders should use the proposal forms provided by the City. These forms may be duplicated, but failure to use the forms may cause the bid to be rejected. Any erasures or corrections on the bid must be made in ink and initialed by Bidder in ink. All information submitted by the Bidder shall be printed, typewritten, or filled in with pen and ink. Bids shall be signed in ink. Separate bids must be submitted for each ITB issued by the City in separate sealed envelopes properly marked. When a particular ITB or RFP requires multiple copies of bids or proposals they may be included in a single envelope or package properly sealed and identified. Only send bids via facsimile transmission (FAX) if the ITB specifically states that bids sent via FAX will be considered. If such a statement is not included in the ITB, bids sent via FAX will be rejected. Bids will be publicly opened in the Procurement Office, or other designated area, in the presence of Bidders, the public, and City staff. Bidders and the public are invited and encouraged to attend bid openings. Bids will be tabulated and made available for review by Bidder's and the public in accordance with applicable regulations.

#### **3.02 MODEL NUMBER CORRECTIONS:** If the model number for the make specified in this ITB is incorrect, or no longer available and replaced with an updated model with new specifications, the Bidder shall enter the correct model number on the bidder proposal page. In the case of an updated model with new specifications, Bidder shall provide adequate information to allow the City to determine if the model bid meets the City's requirements.

- 3.03 PRICES QUOTED:** Deduct trade discounts and quote firm net prices. Give both unit price and extended total. In the case of a discrepancy in computing the amount of the bid, the unit price quoted will govern. All prices quoted shall be F.O.B. destination, freight prepaid (Bidder pays and bears freight charges, Bidder owns goods in transit and files any claims), unless otherwise stated in Special Conditions. Each item must be bid separately. No attempt shall be made to tie any item or items contained in the ITB with any other business with the City.
- 3.04 TAXES:** The City of Fort Lauderdale is exempt from Federal Excise and Florida Sales taxes on direct purchase of tangible property. Exemption number for EIN is 59-6000319, and State Sales tax exemption number is 85-8013875578C-1.
- 3.05 WARRANTIES OF USAGE:** Any quantities listed in this ITB as estimated or projected are provided for tabulation and information purposes only. No warranty or guarantee of quantities is given or implied. It is understood that the Contractor will furnish the City's needs as they arise.
- 3.06 APPROVED EQUAL:** When the technical specifications call for a brand name, manufacturer, make, model, or vendor catalog number with acceptance of APPROVED EQUAL, it shall be for the purpose of establishing a level of quality and features desired and acceptable to the City. In such cases, the City will be receptive to any unit that would be considered by qualified City personnel as an approved equal. In that the specified make and model represent a level of quality and features desired by the City, the Bidder must state clearly in the bid any variance from those specifications. It is the Bidder's responsibility to provide adequate information, in the bid, to enable the City to ensure that the bid meets the required criteria. If adequate information is not submitted with the bid, it may be rejected. The City will be the sole judge in determining if the item bid qualifies as an approved equal.
- 3.07 MINIMUM AND MANDATORY TECHNICAL SPECIFICATIONS:** The technical specifications may include items that are considered minimum, mandatory, or required. If any Bidder is unable to meet or exceed these items, and feels that the technical specifications are overly restrictive, the bidder must notify the Procurement Services Division immediately. Such notification must be received by the Procurement Services Division prior to the deadline contained in the ITB, for questions of a material nature, or prior to five (5) days before bid due and open date, whichever occurs first. If no such notification is received prior to that deadline, the City will consider the technical specifications to be acceptable to all bidders.
- 3.08 MISTAKES:** Bidders are cautioned to examine all terms, conditions, specifications, drawings, exhibits, addenda, delivery instructions and special conditions pertaining to the ITB. Failure of the Bidder to examine all pertinent documents shall not entitle the bidder to any relief from the conditions imposed in the contract.
- 3.09 SAMPLES AND DEMONSTRATIONS:** Samples or inspection of product may be requested to determine suitability. Unless otherwise specified in Special Conditions, samples shall be requested after the date of bid opening, and if requested should be received by the City within seven (7) working days of request. Samples, when requested, must be furnished free of expense to the City and if not used in testing or destroyed, will upon request of the Bidder, be returned within thirty (30) days of bid award at Bidder's expense. When required, the City may request full demonstrations of units prior to award. When such demonstrations are requested, the Bidder shall respond promptly and arrange a demonstration at a convenient location. Failure to provide samples or demonstrations as specified by the City may result in rejection of a bid.
- 3.10 LIFE CYCLE COSTING:** If so specified in the ITB, the City may elect to evaluate equipment proposed on the basis of total cost of ownership. In using Life Cycle Costing, factors such as the following may be considered: estimated useful life, maintenance costs, cost of supplies, labor intensity, energy usage, environmental impact, and residual value. The City reserves the right to use those or other applicable criteria, in its sole opinion that will most accurately estimate total cost of use and ownership.
- 3.11 BIDDING ITEMS WITH RECYCLED CONTENT:** In addressing environmental concerns, the City of Fort Lauderdale encourages Bidders to submit bids or alternate bids containing items with recycled content. When submitting bids containing items with recycled content, Bidder shall provide documentation adequate for the City to verify the recycled content. The City prefers packaging consisting of materials that are degradable or able to be recycled. When specifically stated in the ITB, the City may give preference to bids containing items manufactured with recycled material or packaging that is able to be recycled.
- 3.12 USE OF OTHER GOVERNMENTAL CONTRACTS:** The City reserves the right to reject any part or all of any bids received and utilize other available governmental contracts, if such action is in its best interest.
- 3.13 QUALIFICATIONS/INSPECTION:** Bids will only be considered from firms normally engaged in providing the types of commodities/services specified herein. The City reserves the right to inspect the Bidder's facilities, equipment, personnel, and organization at any time, or to take any other action necessary to determine Bidder's ability to perform. The Procurement Director reserves the right to reject bids where evidence or evaluation is determined to indicate inability to perform.
- 3.14 BID SURETY:** If Special Conditions require a bid security, it shall be submitted in the amount stated. A bid security can be in the form of a bid bond or cashier's check. Bid security will be returned to the unsuccessful bidders as soon as practicable after opening of bids. Bid security will be returned to the successful bidder after acceptance of the performance bond, if required; acceptance of insurance coverage, if required; and full execution of contract documents, if required; or conditions as stated in Special Conditions.
- 3.15 PUBLIC RECORDS/TRADE SECRETS/COPYRIGHT:** The Proposer's response to the RFP is a public record pursuant to Florida law, which is subject to disclosure by the City under the State of Florida Public Records Law, Florida Statutes Chapter 119.07 ("Public Records Law"). The City shall permit public access to all documents, papers, letters or other material submitted in connection with this RFP and the Contract to be executed for this RFP, subject to the provisions of Chapter 119.07 of the Florida Statutes.

Any language contained in the Proposer's response to the RFP purporting to require confidentiality of any portion of the Proposer's response to the RFP, except to the extent that certain information is in the City's opinion a Trade Secret pursuant to Florida law, shall be void. If a Proposer submits any documents or other information to the City which the Proposer claims is Trade Secret information and exempt from Florida Statutes Chapter 119.07 ("Public Records Laws"), the Proposer shall clearly designate that it is a Trade Secret and that it is asserting that the document or information is exempt. The Proposer must specifically identify the exemption being claimed under Florida Statutes 119.07. The City shall be the final arbiter of whether any information contained in the Proposer's response to the RFP constitutes a Trade Secret. The city's determination of whether an exemption applies shall be final, and the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as public records. In addition, the proposer agrees to defend, indemnify, and hold harmless the City and the City's officers, employees, and agents, against any loss or damages incurred by any person or entity as a result of the City's treatment of records as exempt from disclosure or confidential. Proposals bearing copyright symbols or otherwise purporting to be subject to copyright protection in full or in part may be rejected. The proposer authorizes the City to publish, copy, and reproduce any and all documents submitted to the City bearing copyright symbols or otherwise purporting to be subject to copyright protection.

EXCEPT FOR CLEARLY MARKED PORTIONS THAT ARE BONA FIDE TRADE SECRETS PURSUANT TO FLORIDA LAW, DO NOT MARK YOUR RESPONSE TO THE RFP AS PROPRIETARY OR CONFIDENTIAL. DO NOT MARK YOUR RESPONSE TO THE RFP OR ANY PART THEREOF AS COPYRIGHTED.

**3.16 PROHIBITION OF INTEREST:** No contract will be awarded to a bidding firm who has City elected officials, officers or employees affiliated with it, unless the bidding firm has fully complied with current Florida State Statutes and City Ordinances relating to this issue. Bidders must disclose any such affiliation. Failure to disclose any such affiliation will result in disqualification of the Bidder and removal of the Bidder from the City's bidder lists and prohibition from engaging in any business with the City.

**3.17 RESERVATIONS FOR AWARD AND REJECTION OF BIDS:** The City reserves the right to accept or reject any or all bids, part of bids, and to waive minor irregularities or variations to specifications contained in bids, and minor irregularities in the bidding process. The City also reserves the right to award the contract on a split order basis, lump sum basis, individual item basis, or such combination as shall best serve the interest of the City. The City reserves the right to make an award to the responsive and responsible bidder whose product or service meets the terms, conditions, and specifications of the ITB and whose bid is considered to best serve the City's interest. In determining the responsiveness of the offer and the responsibility of the Bidder, the following shall be considered when applicable: the ability, capacity and skill of the Bidder to perform as required; whether the Bidder can perform promptly, or within the time specified, without delay or interference; the character, integrity, reputation, judgment, experience and efficiency of the Bidder; the quality of past performance by the Bidder; the previous and existing compliance by the Bidder with related laws and ordinances; the sufficiency of the Bidder's financial resources; the availability, quality and adaptability of the Bidder's supplies or services to the required use; the ability of the Bidder to provide future maintenance, service or parts; the number and scope of conditions attached to the bid.

If the ITB provides for a contract trial period, the City reserves the right, in the event the selected bidder does not perform satisfactorily, to award a trial period to the next ranked bidder or to award a contract to the next ranked bidder, if that bidder has successfully provided services to the City in the past. This procedure to continue until a bidder is selected or the contract is re-bid, at the sole option of the City.

**3.18 LEGAL REQUIREMENTS:** Applicable provisions of all federal, state, county laws, and local ordinances, rules and regulations, shall govern development, submittal and evaluation of all bids received in response hereto and shall govern any and all claims and disputes which may arise between person(s) submitting a bid response hereto and the City by and through its officers, employees and authorized representatives, or any other person, natural or otherwise; and lack of knowledge by any bidder shall not constitute a cognizable defense against the legal effect thereof.

**3.19 BID PROTEST PROCEDURE:** Any proposer or bidder who is not recommended for award of a contract and who alleges a failure by the city to follow the city's procurement ordinance or any applicable law may protest to the chief procurement officer, by delivering a letter of protest to the director of finance within five (5) days after a notice of intent to award is posted on the city's web site at the following url: <https://www.fortlauderdale.gov/departments/finance/procurement-services/notices-of-intent-to-award>

The complete protest ordinance may be found on the city's web site at the following url:  
[https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeid=coor\\_ch2ad\\_artvfi\\_div2pr\\_s2-182direpr](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeid=coor_ch2ad_artvfi_div2pr_s2-182direpr)

#### **PART IV BONDS AND INSURANCE**

**4.01 PERFORMANCE BOND:** If a performance bond is required in Special Conditions, the Contractor shall within fifteen (15) working days after notification of award, furnish to the City a Performance Bond, payable to the City of Fort Lauderdale, Florida, in the face amount specified in Special Conditions as surety for faithful performance under the terms and conditions of the contract. If the bond is on an annual coverage basis, renewal for each succeeding year shall be submitted to the City thirty (30) days prior to the termination date of the existing Performance Bond. The Performance Bond must be executed by a surety company of recognized standing, authorized to do business in the State of Florida and having a resident agent.

Acknowledgement and agreement is given by both parties that the amount herein set for the Performance Bond is not intended to be nor shall be deemed to be in the nature of liquidated damages nor is it intended to limit the liability of the Contractor to the City in the event of a material breach of this Agreement by the Contractor.

**4.02 INSURANCE:** The Contractor shall assume full responsibility and expense to obtain all necessary insurance as required by City or specified in Special Conditions.

The Contractor shall provide to the Procurement Services Division original certificates of coverage and receive notification of approval of those certificates by the City's Risk Manager prior to engaging in any activities under this contract. The Contractor's insurance is subject to the approval of the City's Risk Manager. The certificates must list the City as an ADDITIONAL INSURED for General Liability Insurance and shall have no less than thirty (30) days written notice of cancellation or material change. Further modification of the insurance requirements may be made at the sole discretion of the City's Risk Manager if circumstances change or adequate protection of the City is not presented. Bidder, by submitting the bid, agrees to abide by such modifications.

#### **PART V PURCHASE ORDER AND CONTRACT TERMS:**

**5.01 COMPLIANCE WITH SPECIFICATIONS, LATE DELIVERIES/PENALTIES:** Items offered may be tested for compliance with bid specifications. Items delivered which do not conform to bid specifications may be rejected and returned at Contractor's expense. Any violation resulting in contract termination for cause or delivery of items not conforming to specifications, or late delivery may also result in:

- Bidder's name being removed from the City's bidder's mailing list for a specified period and Bidder will not be recommended for any award during that period.
- All City Departments being advised to refrain from doing business with the Bidder.
- All other remedies in law or equity.

**5.02 ACCEPTANCE, CONDITION, AND PACKAGING:** The material delivered in response to ITB award shall remain the property of the Seller until a physical inspection is made and the material accepted to the satisfaction of the City. The material must comply fully with the terms of the ITB, be of the required quality, new, and the latest model. All containers shall be suitable for storage and shipment by common carrier, and all prices shall include standard commercial packaging. The City will not accept substitutes of any kind. Any substitutes or material not meeting specifications will be returned at the Bidder's expense. Payment will be made only after City receipt and acceptance of materials or services.

**5.03 SAFETY STANDARDS:** All manufactured items and fabricated assemblies shall comply with applicable requirements of the Occupation Safety and Health Act of 1970 as amended.

- 5.04 ASBESTOS STATEMENT:** All material supplied must be 100% asbestos free. Bidder, by virtue of bidding, certifies that if awarded any portion of the ITB the bidder will supply only material or equipment that is 100% asbestos free.
- 5.05 OTHER GOVERNMENTAL ENTITIES:** If the Bidder is awarded a contract as a result of this ITB, the bidder may, if the bidder has sufficient capacity or quantities available, provide to other governmental agencies, so requesting, the products or services awarded in accordance with the terms and conditions of the ITB and resulting contract. Prices shall be F.O.B. delivered to the requesting agency.
- 5.06 VERBAL INSTRUCTIONS PROCEDURE:** No negotiations, decisions, or actions shall be initiated or executed by the Contractor as a result of any discussions with any City employee. Only those communications which are in writing from an authorized City representative may be considered. Only written communications from Contractors, which are assigned by a person designated as authorized to bind the Contractor, will be recognized by the City as duly authorized expressions on behalf of Contractors.
- 5.07 INDEPENDENT CONTRACTOR:** The Contractor is an independent contractor under this Agreement. Personal services provided by the Proposer shall be by employees of the Contractor and subject to supervision by the Contractor, and not as officers, employees, or agents of the City. Personnel policies, tax responsibilities, social security, health insurance, employee benefits, procurement policies unless otherwise stated in this ITB, and other similar administrative procedures applicable to services rendered under this contract shall be those of the Contractor.
- 5.08 INDEMNITY/HOLD HARMLESS AGREEMENT:** Contractor shall protect and defend at Contractor's expense, counsel being subject to the City's approval, and indemnify and hold harmless the City and the City's officers, employees, volunteers, and agents from and against any and all losses, penalties, fines, damages, settlements, judgments, claims, costs, charges, expenses, or liabilities, including any award of attorney fees and any award of costs, in connection with or arising directly or indirectly out of any act or omission by the Contractor or by any officer, employee, agent, invitee, subcontractor, or sublicensee of the Contractor. Without limiting the foregoing, any and all such claims, suits, or other actions relating to personal injury, death, damage to property, defects in materials or workmanship, actual or alleged violations of any applicable statute, ordinance, administrative order, rule or regulation, or decree of any court shall be included in the indemnity hereunder.
- 5.09 TERMINATION FOR CAUSE:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement, or if the Contractor shall violate any of the provisions of this Agreement, the City may upon written notice to the Contractor terminate the right of the Contractor to proceed under this Agreement, or with such part or parts of the Agreement as to which there has been default, and may hold the Contractor liable for any damages caused to the City by reason of such default and termination. In the event of such termination, any completed services performed by the Contractor under this Agreement shall, at the option of the City, become the City's property and the Contractor shall be entitled to receive equitable compensation for any work completed to the satisfaction of the City. The Contractor, however, shall not be relieved of liability to the City for damages sustained by the City by reason of any breach of the Agreement by the Contractor, and the City may withhold any payments to the Contractor for the purpose of setoff until such time as the amount of damages due to the City from the Contractor can be determined.
- 5.10 TERMINATION FOR CONVENIENCE:** The City reserves the right, in the City's best interest as determined by the City, to cancel any contract by giving written notice to the Contractor thirty (30) days prior to the effective date of such cancellation.
- 5.11 CANCELLATION FOR UNAPPROPRIATED FUNDS:** The obligation of the City for payment to a Contractor is limited to the availability of funds appropriated in a current fiscal period, and continuation of the contract into a subsequent fiscal period is subject to appropriation of funds, unless otherwise authorized by law.
- 5.12 RECORDS/AUDIT:** The Contractor shall maintain during the term of the contract all books of account, reports and records in accordance with generally accepted accounting practices and standards for records directly related to this contract. The Contractor agrees to make available to the City Auditor or the City Auditor's designee, during normal business hours and in Broward, Miami-Dade or Palm Beach Counties, all books of account, reports, and records relating to this contract. The Contractor shall retain all books of account, reports, and records relating to this contract for the duration of the contract and for three years after the final payment under this Agreement, until all pending audits, investigations or litigation matters relating to the contract are closed, or until expiration of the records retention period prescribed by Florida law or the records retention schedules adopted by the Division of Library and Information Services of the Florida Department of State, whichever is later.
- 5.13 PERMITS, TAXES, LICENSES:** The successful Contractor shall, at his/her/its own expense, obtain all necessary permits, pay all licenses, fees and taxes, required to comply with all local ordinances, state and federal laws, rules and regulations applicable to business to be carried out under this contract.
- 5.14 LAWS/ORDINANCES:** The Contractor shall observe and comply with all Federal, state, local and municipal laws, ordinances rules and regulations that would apply to this contract.
- NON-DISCRIMINATION:** The Contractor shall not, in any of its activities, including employment, discriminate against any individual on the basis of race, color, national origin, age, religion, creed, sex, disability, sexual orientation, gender, gender identity, gender expression, marital status, or any other protected classification as defined by applicable law.
1. The Contractor certifies and represents that the Contractor will comply with Section 2-187, Code of Ordinances of the City of Fort Lauderdale, Florida, (2019), as may be amended or revised, ("Section 2-187"), during the entire term of this Agreement.
  2. The failure of the Contractor to comply with Section 2-187 shall be deemed to be a material breach of this Agreement, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.
  3. The City may terminate this Agreement if the Contractor fails to comply with Section 2-187.
  4. The City may retain all monies due or to become due until the Contractor complies with Section 2-187.
  5. The Contractor may be subject to debarment or suspension proceedings. Such proceedings will be consistent with the procedures in section 2-183 of the Code of Ordinances of the City of Fort Lauderdale, Florida.
- 5.15 UNUSUAL CIRCUMSTANCES:** If during a contract term where costs to the City are to remain firm or adjustments are restricted by a percentage or CPI cap, unusual circumstances that could not have been foreseen by either party of the contract occur, and those circumstances significantly affect the Contractor's cost in providing the required prior items or services, then the Contractor may request adjustments to the costs to the City to reflect the changed circumstances. The circumstances must be beyond the control of the Contractor, and the requested adjustments must be fully documented. The City may, after examination, refuse to accept the adjusted costs if they are not properly documented, increases are considered to be excessive, or decreases are considered to be insufficient. In the event the City does not wish to accept the adjusted costs and the matter cannot be resolved to the satisfaction of the City, the City will reserve the following options:

1. The contract can be canceled by the City upon giving thirty (30) days written notice to the Contractor with no penalty to the City or Contractor. The Contractor shall fill all City requirements submitted to the Contractor until the termination date contained in the notice.
2. The City requires the Contractor to continue to provide the items and services at the firm fixed (non-adjusted) cost until the termination of the contract term then in effect.
3. If the City, in its interest and in its sole opinion, determines that the Contractor in a capricious manner attempted to use this section of the contract to relieve Contractor of a legitimate obligation under the contract, and no unusual circumstances had occurred, the City reserves the right to take any and all action under law or equity. Such action shall include, but not be limited to, declaring the Contractor in default and disqualifying Contractor from receiving any business from the City for a stated period of time.

If the City does agree to adjusted costs, these adjusted costs shall not be invoiced to the City until the Contractor receives notice in writing signed by a person authorized to bind the City in such matters.

- 5.16 ELIGIBILITY:** If applicable, the Contractor must first register with the Florida Department of State in accordance with Florida Statutes, prior to entering into a contract with the City.
- 5.17 PATENTS AND ROYALTIES:** The Contractor, without exception, shall defend, indemnify, and hold harmless the City and the City's employees, officers, employees, volunteers, and agents from and against liability of any nature and kind, including cost and expenses for or on account of any copyrighted, patented or un-patented invention, process, or article manufactured or used in the performance of the contract, including their use by the City. If the Contractor uses any design, device, or materials covered by letters, patent or copyright, it is mutually agreed and understood without exception that the bid prices shall include any and all royalties or costs arising from the use of such design, device, or materials in any way involved in the work.
- 5.18 ASSIGNMENT:** Contractor shall not transfer or assign the performance required by this ITB without the prior written consent of the City. Any award issued pursuant to this ITB, and the monies, which may become due hereunder, are not assignable except with the prior written approval of the City Commission or the City Manager or City Manager's designee, depending on original award approval.
- 5.19 GOVERNING LAW; VENUE:** The Contract shall be governed by and construed in accordance with the laws of the State of Florida. Venue for any lawsuit by either party against the other party or otherwise arising out of the Contract, and for any other legal proceeding, shall be in the courts in and for Broward County, Florida, or in the event of federal jurisdiction, in the Southern District of Florida.
- 5.20 PUBLIC RECORDS:**

**IF THE CONTRACTOR HAS QUESTIONS REGARDING THE APPLICATION OF CHAPTER 119, FLORIDA STATUTES, TO THE CONTRACTOR'S DUTY TO PROVIDE PUBLIC RECORDS RELATING TO THIS CONTRACT, CONTACT THE CUSTODIAN OF PUBLIC RECORDS AT CITY CLERK'S OFFICE, ONE EAST BROWARD BOULEVARD, SUITE 444, FORT LAUDERDALE, FLORIDA 33301, 954-828-5002, [PRRCONTRACT@FORTLAUDERDALE.GOV](mailto:PRRCONTRACT@FORTLAUDERDALE.GOV).**

Contractor shall comply with public records laws, and Contractor shall:

1. Keep and maintain public records required by the City to perform the service.
2. Upon request from the City's custodian of public records, provide the City with a copy of the requested records or allow the records to be inspected or copied within a reasonable time at a cost that does not exceed the cost provided in Chapter 119, Florida Statutes (2019), as may be amended or revised, or as otherwise provided by law.
3. Ensure that public records that are exempt or confidential and exempt from public records disclosure requirements are not disclosed except as authorized by law for the duration of the contract term and following completion of the contract if the Contractor does not transfer the records to the City.
4. Upon completion of the Contract, transfer, at no cost, to the City all public records in possession of the Contractor or keep and maintain public records required by the City to perform the service. If the Contractor transfers all public records to the City upon completion of the Contract, the Contractor shall destroy any duplicate public records that are exempt or confidential and exempt from public records disclosure requirements. If the Contractor keeps and maintains public records upon completion of the Contract, the Contractor shall meet all applicable requirements for retaining public records. All records stored electronically must be provided to the City, upon request from the City's custodian of public records, in a format that is compatible with the information technology systems of the City.

**NON-COLLUSION STATEMENT**

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g., ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents, and children) are also prohibited from contracting with the City subject to the same general rules.

**Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.**

**NAME**

**RELATIONSHIPS**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.**

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Name (Printed)

\_\_\_\_\_  
Date

**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH  
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-17(a)(i)(ii), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

- A. Contractors doing business with the City shall not discriminate against their employees based on the employee's race, color, religion, gender (including identity or expression), marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

Contracts. Every Contract exceeding \$100,000, or otherwise exempt from this section shall contain language that obligates the Contractor to comply with the applicable provisions of this section.

The Contract shall include provisions for the following:

- (i) The Contractor certifies and represents that it will comply with this section during the entire term of the contract.
- (ii) The failure of the Contractor to comply with this section shall be deemed to be a material breach of the contract, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

\_\_\_\_\_  
Authorized Signature

\_\_\_\_\_  
Print Name and Title

\_\_\_\_\_  
Date

### **CONTRACT PAYMENT METHOD**

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept the credit card or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below, you agree with these terms.

Please indicate which credit card payment you prefer:

\_\_\_\_\_ MasterCard

\_\_\_\_\_ Visa

---

Company Name

---

Name (Printed)

---

Signature

---

Title

---

Date

### **CONTRACT PAYMENT METHOD**

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

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All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below, you agree with these terms.

Please indicate which credit card payment you prefer:

\_\_\_\_\_ MasterCard

\_\_\_\_\_ Visa

\_\_\_\_\_  
Company Name

\_\_\_\_\_  
Name (Printed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Title

\_\_\_\_\_  
Date

## **LOCAL BUSINESS PREFERENCE**

Section 2-199.2, Code of Ordinances of the City of Fort Lauderdale, (Ordinance No. C-12-04), provides for a local business preference.

In order to be considered for a local business preference, a bidder must include the Local Business Preference Certification Statement of this ITB, as applicable to the local business preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a Local Business Preference the Bidder shall, within ten (10) calendar days, submit the following documentation to the Local Business Preference Class claimed:

A) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **and**

B) List of the names of all employees of the bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the local business preference.

**THE COMPLETE LOCAL BUSINESS PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK:**

**[https://library.municode.com/fl/fort\\_lauderdale/codes/code\\_of\\_ordinances?nodeId=COOR\\_CH2\\_AD\\_ARTVFI\\_DIV2PR\\_S2-186LOBUPR](https://library.municode.com/fl/fort_lauderdale/codes/code_of_ordinances?nodeId=COOR_CH2_AD_ARTVFI_DIV2PR_S2-186LOBUPR)**

**Definitions:** The term "Business" shall mean a person, firm, corporation or other business entity which is duly licensed and authorized to engage in a particular work in the State of Florida. Business shall be broken down into four (4) types of classes:

1. Class A Business – shall mean any Business that has established and agrees to maintain a permanent place of business located in a non-residential zone and staffed with full-time employees within the limits of the City **and** shall maintain a staffing level of the prime contractor for the proposed work of at least fifty percent (50%) who are residents of the City.
2. Class B Business - shall mean any Business that has established and agrees to maintain a permanent place of business located in a non-residential zone and staffed with full-time employees within the limits of the City **or** shall maintain a staffing level of the prime contractor for the proposed work of at least fifty percent (50%) who are residents of the City.
3. Class C Business - shall mean any Business that has established and agrees to maintain a permanent place of business located in a non-residential zone **and** staffed with full-time employees within the limits of Broward County.
4. Class D Business – shall mean any Business that does not qualify as either a Class A, Class B, or Class C business.

## LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local business price preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

- (1) \_\_\_\_\_ is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.

Business Name

- (2) \_\_\_\_\_ is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the Business Tax Receipt **or** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.

Business Name

- (3) \_\_\_\_\_ is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.

Business Name

- (4) \_\_\_\_\_ requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

Business Name

- (5) \_\_\_\_\_ requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.

Business Name

- (6) \_\_\_\_\_ is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186 and does not qualify for Local Preference consideration.

Business Name

BIDDER'S COMPANY: \_\_\_\_\_

AUTHORIZED COMPANY PERSON: \_\_\_\_\_

PRINT NAME

SIGNATURE

DATE

## **DISADVANTAGED BUSINESS ENTERPRISE (DBE) PREFERENCE**

Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference.

In order to be considered for a DBE Preference, a bidder must include a certification from a government agency, as applicable to the DBE Preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a DBE Preference the Bidder shall, within ten (10) calendar days, submit the following documentation to the DBE Class claimed:

A) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **or** State of Florida active registration **and/or**

B) List of the names of all employees of the bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the disadvantaged business preference.

**THE COMPLETE DBE PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK: <https://www.fortlauderdale.gov/home/showpublisheddocument?id=56883>**

### **Definitions**

- a. The term "disadvantaged class 1 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- b. The term "disadvantaged class 2 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with a full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- c. The term "disadvantaged class 3 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "disadvantaged class 4 enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

## DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the disadvantaged business enterprise price preference classification as indicated herein, and further certifies and agrees that it will re-affirm its preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this solicitation. Violation of the foregoing provision may result in contract termination.

- (1) is a disadvantaged class 1 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (2) is a disadvantaged class 2 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with a full-time employee(s) and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (3) is a disadvantaged class 3 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (4) is a disadvantaged class 4 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (5) is not considered a Disadvantaged Enterprise Business as defined in the City of Fort Lauderdale Ordinance Sec.2-185 and does not qualify for DBE Preference consideration.

\_\_\_\_\_  
Business Name

BIDDER'S COMPANY: \_\_\_\_\_

AUTHORIZED COMPANY PERSON: \_\_\_\_\_  
PRINT NAME SIGNATURE DATE

Solicitation/Bid /Contract No: \_\_\_\_\_

Project Description:

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- A. all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- B. all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: \_\_\_\_\_

Authorized Company Person's Signature: \_\_\_\_\_

Authorized Company Person's Title: \_\_\_\_\_

Date: \_\_\_\_\_

## **REFERENCES**

A minimum of three (3) references shall be provided. It is the responsibility of the Bidder/ Proposer to ensure that the information provided is accurate and current. The City may find your firm non-responsive for providing wrong and or outdated information. Additional references may be provided on a separate page.

Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_  
Contract Value: \_\_\_\_\_  
Year(s): \_\_\_\_\_  
Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_  
Contract Value: \_\_\_\_\_  
Year(s): \_\_\_\_\_  
Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Company Name: \_\_\_\_\_  
Address: \_\_\_\_\_  
Contact Person: \_\_\_\_\_  
Title: \_\_\_\_\_  
Phone #: \_\_\_\_\_  
Email: \_\_\_\_\_  
Contract Value: \_\_\_\_\_  
Year(s): \_\_\_\_\_  
Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## CITY OF FORT LAUDERDALE BID/PROPOSAL CERTIFICATION

**Please Note:** It is the sole responsibility of the bidder/proposer to ensure that their response is submitted electronically through the [City's on-line strategic sourcing platform](#) prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) \_\_\_\_\_ EIN (Optional): \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip: \_\_\_\_\_

Telephone No.: \_\_\_\_\_ FAX No.: \_\_\_\_\_ Email: \_\_\_\_\_

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**): \_\_\_\_\_

Total Bid Discount (**section 1.05 of General Conditions**): \_\_\_\_\_

Check box if your firm qualifies for DBE (**section 1.09 of General Conditions**): ☐

**ADDENDUM ACKNOWLEDGEMENT** - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**VARIANCES:** If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A.

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

\_\_\_\_\_  
Name (printed)

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Title

**ADDENDUM NO. 1**

**ITB No.: 387**

**TITLE: EV Charging Stations, Installation, & Maintenance - Re-Bid**

**ISSUED: 11/5/2024**

This addendum is being issued to make the following change(s):

The Specifications and Requirements have been revised. Words in strikethrough are deletions from the existing text and words in bold underline are additions to the existing text (strikethrough removed; underlined bolded is added).

**3.1.16** Electrical Testing Laboratory (ETL) **or Underwriters Laboratories (UL)**  
**certified**, and Energy Star listed.

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin  
Senior Procurement Specialist

Company Name: \_\_\_\_\_  
(please print)

Bidder's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

**ADDENDUM NO. 2**

**ITB No.: 387**

**TITLE: EV Charging Stations, Installation, & Maintenance - Re-Bid**

**ISSUED: 11/13/2024**

This addendum is being issued to make the following change(s):

1. Section III of the solicitation was removed, and a revised Section III was attached. The numbering was off after section 3.2.6. Starting with 3.2.7 corrections were made in **bold red type**.

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin  
Senior Procurement Specialist

Company Name: \_\_\_\_\_  
(please print)

Bidder's Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Executive Summary Report

Of

Event: 387-2 - EV Charging Stations, Installation, & Maintenance - Rebid

Buyer: LAURIE PLATKIN

Date Range: 10/31/2024 05:00:00 PM - 11/21/2024 02:00:00 PM

Suppliers Notified: 24

Notified Suppliers 4 Responding:

All Suppliers 9 Responding:

Suppliers Responding

Supplier	Contact	Phone Number	E Mail	City	State Or Province	Total Bid Amount	Total Awarded	Response Attachments Exist
Horsepower Electric Inc	Lis Mondelo	3058194060	lis@horsepowerelectric.com	Hialeah	FL	941,074.16	0.00	Yes
EvGateway	Chandu Vaddi	949-945-6300	chanduv@evgateway.com	Irvine	CA	309,766.06	0.00	No
Sustainable Energi	Bijou Lulla	8442300001	Bijou@sustainableenergy.com	San Diego	CA	142,608.00	0.00	No
PlugIn Stations Online, LLC (PISO)	Gus Kushnir	518-248-9659	gus@pisoev.com	Valatie	NY	592,476.22	0.00	No
Universal EV LLC	Nadya Shariff	(214) 842-6649	ev@universalgreengroup.com	Plano	TX	285,062.50	0.00	Yes
Wifi Data Processing	Scott Coloney	954-724-3973	cycaine@ussupercharge.com	Fort Lauderdale	FL	329,269.08	0.00	Yes
C.W. Fischer Electric, Inc.	Charles Fischer	954-566-5689	chuck@fischerelectric.com	Pompano Beach	FL	430,155.62	0.00	No
Kazars Electric, Inc.	David Kazar	8139299500	dkazar@kazarselectric.com	Land O Lakes	FL	769,076.75	0.00	Yes
Smart City Capital, LLC	Patrick Zender	7864055262	pzender@smartbigbox.com	Fort Lauderdale	FL	0.00	0.00	Yes

Event Lines And Responses

continued...

Item	Description	Unit of Measure	Quantity
WIRING #8 AWG-	Wiring #8 AWG	LF	650.0000

Responses			
Supplier	Bid Quantity	Unit of Measure	Award Amount
Horsepower Electric Inc	650.0000	LF	2.930
EvGateway	650.0000	LF	1.500
Sustainable Energi	0.0000	LF	0.000
PlugIn Stations Online, LLC (PISO)	650.0000	LF	0.930
Universal EV LLC	650.0000	LF	0.920
Wifi Data Processing	650.0000	LF	0.470
C.W. Fischer Electric, Inc.	650.0000	LF	0.700
Kazars Electric, Inc.	650.0000	LF	0.690

Item	Description	Unit of Measure	Quantity
WIRING #6 AWG-	Wiring #6 AWG	LF	1,750.0000

Responses			
Supplier	Bid Quantity	Unit of Measure	Award Amount
Horsepower Electric Inc	1,750.0000	LF	4.400
EvGateway	1,750.0000	LF	1.150
Sustainable Energi	0.0000	LF	0.000
PlugIn Stations Online, LLC (PISO)	1,750.0000	LF	1.680
Universal EV LLC	1,750.0000	LF	1.130
Wifi Data Processing	1,750.0000	LF	0.730
C.W. Fischer Electric, Inc.	1,750.0000	LF	1.080
Kazars Electric, Inc.	1,750.0000	LF	1.000

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Kazars Electric, Inc.	1,750.0000	LF	1.000	0.00	0.00
Item	Description	Unit of Measure	Quantity		
WIRING #4 AWG-	Wiring #4 AWG	LF	450.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	450.0000	LF	6.600	0.00	0.00
EvGateway	450.0000	LF	2.050	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	450.0000	LF	2.430	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	450.0000	LF	1.100	0.00	0.00
C.W. Fischer Electric, Inc.	450.0000	LF	1.660	0.00	0.00
Kazars Electric, Inc.	450.0000	LF	1.500	0.00	0.00

Item	Description	Unit of Measure	Quantity
WIRING #6 THHN-	Wiring #6 THHN	LF	200.0000

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	200.0000	LF	4.400	0.00	0.00
EvGateway	200.0000	LF	2.250	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	200.0000	LF	2.030	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	200.0000	LF	0.730	0.00	0.00

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
C.W. Fischer Electric, Inc.	200.0000 LF		1.080	0.00
Kazars Electric, Inc.	200.0000 LF		1.000	0.00
Item	Description	Unit of Measure		Quantity
WIRING #8 THHN-	Wiring #8 THHN	LF		400.0000

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	400.0000 LF		2.930	0.00
EvGateway	400.0000 LF		1.000	0.00
Sustainable Energi	0.0000 LF		0.000	0.00
PlugIn Stations Online, LLC (PISO)	400.0000 LF		1.590	0.00
Universal EV LLC	0.0000 LF		0.000	0.00
Wifi Data Processing	400.0000 LF		0.470	0.00
C.W. Fischer Electric, Inc.	400.0000 LF		0.700	0.00
Kazars Electric, Inc.	400.0000 LF		0.700	0.00

Item	Description	Unit of Measure	Quantity
WIRING #10 THHN-	Wiring #10 THHN	LF	200.0000

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	200.0000 LF		1.530	0.00
EvGateway	200.0000 LF		0.500	0.00
Sustainable Energi	0.0000 LF		0.000	0.00
PlugIn Stations Online, LLC (PISO)	200.0000 LF		1.140	0.00
Universal EV LLC	0.0000 LF		0.000	0.00

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Wifi Data Processing	200.0000	LF	0.260	0.00
C.W. Fischer Electric, Inc.	200.0000	LF	0.380	0.00
Kazars Electric, Inc.	200.0000	LF	0.400	0.00
Item	Description	Unit of Measure	Quantity	
3/4 INCH PVC CONDUIT-	3/4 Inch PVC Conduit	LF	450.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	450.0000	LF	1.610	0.00
EvGateway	450.0000	LF	1.000	0.00
Sustainable Energi	0.0000	LF	0.000	0.00
PlugIn Stations Online, LLC (PISO)	450.0000	LF	2.900	0.00
Universal EV LLC	450.0000	LF	1.200	0.00
Wifi Data Processing	450.0000	LF	0.400	0.00
C.W. Fischer Electric, Inc.	450.0000	LF	0.790	0.00
Kazars Electric, Inc.	450.0000	LF	1.300	0.00

Item	Description	Unit of Measure	Quantity
1 INCH PVC CONDUIT-	1 Inch PVC Conduit	LF	1,000.0000

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	1,000.0000	LF	2.250	0.00
EvGateway	1,000.0000	LF	2.200	0.00
Sustainable Energi	0.0000	LF	0.000	0.00
PlugIn Stations Online, LLC (PISO)	1,000.0000	LF	3.480	0.00

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	1,000.0000	LF	0.580	0.00	0.00
C.W. Fischer Electric, Inc.	1,000.0000	LF	1.200	0.00	0.00
Kazars Electric, Inc.	1,000.0000	LF	1.900	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1-1/14 INCH PVC CONDUIT-	1-1/14 Inch PVC Conduit	LF	350.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	350.0000	LF	3.320	0.00	0.00
EvGateway	350.0000	LF	3.300	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	350.0000	LF	4.060	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	350.0000	LF	0.830	0.00	0.00
C.W. Fischer Electric, Inc.	350.0000	LF	1.750	0.00	0.00
Kazars Electric, Inc.	350.0000	LF	2.700	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1-1/2 INCH PVC CONDUIT-	1-1/2 inch PVC Conduit	LF	200.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	200.0000	LF	3.860	0.00	0.00
EvGateway	200.0000	LF	3.300	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
PlugIn Stations Online, LLC (PISO)	200.0000	LF	4.060	0.00
Universal EV LLC	0.0000	LF	0.000	0.00
Wifi Data Processing	200.0000	LF	0.970	0.00
C.W. Fischer Electric, Inc.	200.0000	LF	2.030	0.00
Kazars Electric, Inc.	200.0000	LF	3.100	0.00
Item	Description	Unit of Measure	Quantity	
2 INCH PVC CONDUIT-	2 inch PVC Conduit	LF	50.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	50.0000	LF	4.780	0.00
EvGateway	50.0000	LF	7.700	0.00
Sustainable Energi	0.0000	LF	0.000	0.00
PlugIn Stations Online, LLC (PISO)	50.0000	LF	5.800	0.00
Universal EV LLC	0.0000	LF	0.000	0.00
Wifi Data Processing	50.0000	LF	1.200	0.00
C.W. Fischer Electric, Inc.	50.0000	LF	2.460	0.00
Kazars Electric, Inc.	50.0000	LF	3.800	0.00

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	350.0000	LF	2.640	0.00	
EvGateway	350.0000	LF	3.300	0.00	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	350.0000	LF	4.060	0.00	0.00
Universal EV LLC	350.0000	LF	12.000	0.00	0.00
Wifi Data Processing	350.0000	LF	0.770	0.00	0.00
C.W. Fischer Electric, Inc.	350.0000	LF	1.380	0.00	0.00
Kazars Electric, Inc.	350.0000	LF	1.750	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1 INCH EMT CONDUIT-	1 inch EMT Conduit	LF	400.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	400.0000	LF	4.470	0.00	0.00
EvGateway	400.0000	LF	4.950	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	400.0000	LF	5.220	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	400.0000	LF	1.240	0.00	0.00
C.W. Fischer Electric, Inc.	400.0000	LF	2.440	0.00	0.00
Kazars Electric, Inc.	400.0000	LF	5.700	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1-1/4 INCH EMT CONDUIT-	1-1/4 inch EMT Conduit	LF	200.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	200.0000	LF	7.260	0.00	0.00

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
EvGateway	200.0000	LF	6.600	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	200.0000	LF	5.220	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	200.0000	LF	2.020	0.00	0.00
C.W. Fischer Electric, Inc.	200.0000	LF	4.110	0.00	0.00
Kazars Electric, Inc.	200.0000	LF	8.000	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1-1/2 INCH EMT CONDUIT-	1-1/2 inch EMT Conduit	LF	200.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	200.0000	LF	8.870	0.00	0.00
EvGateway	200.0000	LF	7.150	0.00	0.00
Sustainable Energi	0.0000	LF	0.000	0.00	0.00
PlugIn Stations Online, LLC (PISO)	200.0000	LF	6.380	0.00	0.00
Universal EV LLC	0.0000	LF	0.000	0.00	0.00
Wifi Data Processing	200.0000	LF	2.470	0.00	0.00
C.W. Fischer Electric, Inc.	200.0000	LF	5.150	0.00	0.00
Kazars Electric, Inc.	200.0000	LF	8.400	0.00	0.00
Item	Description	Unit of Measure	Quantity		
1 INCH RIGID CONDUIT-	1 inch RIGID Conduit	LF	400.0000		

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	400.0000	LF	10.780	0.00
EvGateway	400.0000	LF	4.950	0.00
Sustainable Energi	0.0000	LF	0.000	0.00
PlugIn Stations Online, LLC (PISO)	400.0000	LF	6.670	0.00
Universal EV LLC	0.0000	LF	0.000	0.00
Wifi Data Processing	400.0000	LF	3.740	0.00
C.W. Fischer Electric, Inc.	400.0000	LF	4.120	0.00
Kazars Electric, Inc.	400.0000	LF	10.000	0.00
Item	Description	Unit of Measure	Quantity	
3/4 INCH RIGID CONDUIT-	3/4 INCH RIGID CONDUIT	LF	50.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	50.0000	LF	6.150	0.00
EvGateway	50.0000	LF	3.300	0.00
Sustainable Energi	0.0000	LF	0.000	0.00
PlugIn Stations Online, LLC (PISO)	50.0000	LF	6.670	0.00
Universal EV LLC	0.0000	LF	0.000	0.00
Wifi Data Processing	50.0000	LF	2.350	0.00
C.W. Fischer Electric, Inc.	50.0000	LF	2.380	0.00
Kazars Electric, Inc.	50.0000	LF	7.000	0.00
Item	Description	Unit of Measure	Quantity	
30 AMP ELECTRICAL BREAKERS-	30 amp Electrical Breakers	EA	2.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	EA	100.000	0.00
EvGateway	2.0000	EA	724.500	0.00
Sustainable Energi	0.0000	EA	0.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	EA	28.980	0.00
Universal EV LLC	0.0000	EA	0.000	0.00
Wifi Data Processing	2.0000	EA	17.710	0.00
C.W. Fischer Electric, Inc.	2.0000	EA	27.690	0.00
Kazars Electric, Inc.	2.0000	EA	45.000	0.00
Item	Description	Unit of Measure	Quantity	
40 AMP ELECTRICAL BREAKERS-	40 amp Electrical Breakers	EA	2.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	EA	107.140	0.00
EvGateway	2.0000	EA	1,078.350	0.00
Sustainable Energi	0.0000	EA	0.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	EA	34.780	0.00
Universal EV LLC	0.0000	EA	0.000	0.00
Wifi Data Processing	2.0000	EA	20.000	0.00
C.W. Fischer Electric, Inc.	2.0000	EA	27.690	0.00
Kazars Electric, Inc.	2.0000	EA	60.000	0.00
Item	Description	Unit of Measure	Quantity	
50 AMP ELECTRICAL BREAKERS-	50 amp Electrical Breakers	EA	2.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	EA	114.290	0.00
EvGateway	2.0000	EA	951.300	0.00
Sustainable Energi	0.0000	EA	0.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	EA	40.570	0.00
Universal EV LLC	2.0000	EA	36.000	0.00
Wifi Data Processing	2.0000	EA	20.000	0.00
C.W. Fischer Electric, Inc.	2.0000	EA	27.690	0.00
Kazars Electric, Inc.	2.0000	EA	65.000	0.00
Item	Description	Unit of Measure	Quantity	
60 AMP ELECTRICAL BREAKERS-	60 amp Electrical Breakers	EA	2.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	EA	121.430	0.00
EvGateway	2.0000	EA	1,066.880	0.00
Sustainable Energi	0.0000	EA	0.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	EA	46.370	0.00
Universal EV LLC	0.0000	EA	0.000	0.00
Wifi Data Processing	2.0000	EA	20.000	0.00
C.W. Fischer Electric, Inc.	2.0000	EA	27.690	0.00
Kazars Electric, Inc.	2.0000	EA	70.000	0.00
Item	Description	Unit of Measure	Quantity	
80 AMP ELECTRICAL BREAKERS-	80 amp Electrical Breakers	EA	2.0000	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	2.0000	EA	264.290	0.00	
EvGateway	2.0000	EA	735.000	0.00	
Sustainable Energi	0.0000	EA	0.000	0.00	
PlugIn Stations Online, LLC (PISO)	2.0000	EA	75.350	0.00	
Universal EV LLC	0.0000	EA	0.000	0.00	
Wifi Data Processing	2.0000	EA	20.000	0.00	
C.W. Fischer Electric, Inc.	2.0000	EA	67.830	0.00	
Kazars Electric, Inc.	2.0000	EA	115.000	0.00	
Item	Description		Unit of Measure	Quantity	
100 AMP ELECTRICAL BREAKERS-	100 amp Electrical Breakers		EA	2.0000	

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	2.0000	EA	357.140	0.00	
EvGateway	2.0000	EA	892.500	0.00	
Sustainable Energi	0.0000	EA	0.000	0.00	
PlugIn Stations Online, LLC (PISO)	2.0000	EA	110.130	0.00	
Universal EV LLC	0.0000	EA	0.000	0.00	
Wifi Data Processing	2.0000	EA	20.000	0.00	
C.W. Fischer Electric, Inc.	2.0000	EA	63.220	0.00	
Kazars Electric, Inc.	2.0000	EA	115.000	0.00	
Item	Description		Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)		UN	1.0000	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	4,563.900	0.00	
EvGateway	1.0000	UN	1,300.000	0.00	
Sustainable Energi	1.0000	UN	732.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	1,853.680	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	1,360.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00	
Item	Description		Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	40-amp EVCS /Single/1772/ Bollard Mount (Hardwired)		UN	1.0000	

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	4,563.900	0.00	
EvGateway	1.0000	UN	1,300.000	0.00	
Sustainable Energi	1.0000	UN	809.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	1,853.680	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	1,360.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00	
Item	Description		Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	50-amp EVCS/Single/1772/ Bollard Mount (Hardwired)		UN	1.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	1.0000	UN	4,563.900	0.00
EvGateway	1.0000	UN	1,425.000	0.00
Sustainable Energi	1.0000	UN	1,099.000	0.00
PlugIn Stations Online, LLC (PISO)	1.0000	UN	2,317.390	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	1.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	UN	1.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	1.0000	UN	5,285.390	0.00
EvGateway	1.0000	UN	2,040.000	0.00
Sustainable Energi	1.0000	UN	1,176.000	0.00
PlugIn Stations Online, LLC (PISO)	1.0000	UN	2,317.390	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	1.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00
Kazars Electric, Inc.	1.0000	UN	5,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)	UN	6.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	6.0000	UN	6,500.600	0.00
EvGateway	6.0000	UN	2,850.000	0.00
Sustainable Energi	6.0000	UN	1,464.000	0.00
PlugIn Stations Online, LLC (PISO)	6.0000	UN	3,707.360	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	6.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	6.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	6.0000	UN	8,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)	UN	6.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	6.0000	UN	6,500.600	0.00
EvGateway	6.0000	UN	2,150.000	0.00
Sustainable Energi	6.0000	UN	1,618.000	0.00
PlugIn Stations Online, LLC (PISO)	6.0000	UN	3,707.360	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	6.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	6.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	6.0000	UN	8,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)	UN	12.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	12.0000	UN	6,500.600	0.00
EvGateway	12.0000	UN	2,150.000	0.00
Sustainable Energi	12.0000	UN	2,198.000	0.00
PlugIn Stations Online, LLC (PISO)	12.0000	UN	4,634.780	0.00
Universal EV LLC	12.0000	UN	2,700.000	0.00
Wifi Data Processing	12.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	12.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	12.0000	UN	8,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)	UN	12.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	12.0000	UN	7,943.570	0.00
EvGateway	12.0000	UN	2,150.000	0.00
Sustainable Energi	12.0000	UN	2,352.000	0.00
PlugIn Stations Online, LLC (PISO)	12.0000	UN	4,634.780	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	12.0000	UN	1,360.000	0.00
C.W. Fischer Electric, Inc.	12.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	12.0000	UN	10,000.000	0.00
Item	Description	Unit of Measure	Quantity	
EV PEDESTAL/SINGLE CHARGER STAND-	EV Pedestal/ Single Stand	UN	4.0000	

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	4.0000	UN	1,742.470	0.00
EvGateway	4.0000	UN	350.000	0.00
Sustainable Energi	4.0000	UN	938.000	0.00
PlugIn Stations Online, LLC (PISO)	4.0000	UN	2,201.460	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	4.0000	UN	400.000	0.00
C.W. Fischer Electric, Inc.	4.0000	UN	1,475.000	0.00
Kazars Electric, Inc.	4.0000	UN	600.000	0.00
Item	Description	Unit of Measure	Quantity	
EV PEDESTAL/ DUAL CHARGER STAND-	EV Pedestal/ Dual Charger Stand	UN	36.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	36.0000	UN	2,813.900	0.00
EvGateway	36.0000	UN	425.000	0.00
Sustainable Energi	36.0000	UN	938.000	0.00
PlugIn Stations Online, LLC (PISO)	36.0000	UN	2,317.390	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	36.0000	UN	400.000	0.00
C.W. Fischer Electric, Inc.	36.0000	UN	1,482.000	0.00
Kazars Electric, Inc.	36.0000	UN	600.000	0.00
Smart City Capital, LLC	1.0000	UN	0.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)	UN	1.0000	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	3,570.330	0.00	
EvGateway	1.0000	UN	1,300.000	0.00	
Sustainable Energi	1.0000	UN	732.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	1,853.680	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	960.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00	
Item	Description	Unit of Measure		Quantity	
ENPHASE EQUIVALENT OR BETTER-	40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	UN		1.0000	

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	3,570.330	0.00	
EvGateway	1.0000	UN	1,300.000	0.00	
Sustainable Energi	1.0000	UN	809.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	1,853.680	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	960.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00	
Item	Description	Unit of Measure		Quantity	
ENPHASE EQUIVALENT OR BETTER-	50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	UN		1.0000	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	3,570.330	0.00	
EvGateway	1.0000	UN	1,425.000	0.00	
Sustainable Energi	1.0000	UN	1,099.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	2,317.390	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	960.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	4,000.000	0.00	
Item	Description	Unit of Measure	Quantity		
ENPHASE EQUIVALENT OR BETTER-	60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	UN	1.0000		

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	1.0000	UN	4,291.810	0.00	
EvGateway	1.0000	UN	2,040.000	0.00	
Sustainable Energi	1.0000	UN	1,176.000	0.00	
PlugIn Stations Online, LLC (PISO)	1.0000	UN	2,317.390	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	1.0000	UN	960.000	0.00	
C.W. Fischer Electric, Inc.	1.0000	UN	1,598.000	0.00	
Kazars Electric, Inc.	1.0000	UN	5,000.000	0.00	
Item	Description	Unit of Measure	Quantity		
ENPHASE EQUIVALENT OR BETTER-	30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)	UN	2.0000		

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	UN	6,797.140	0.00
EvGateway	2.0000	UN	2,850.000	0.00
Sustainable Energi	2.0000	UN	1,464.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	UN	3,707.360	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	2.0000	UN	1,920.000	0.00
C.W. Fischer Electric, Inc.	2.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	2.0000	UN	8,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	40-amp EVCS /Dual/J1772/ Wall Mount(Hardwired)	UN	2.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	2.0000	UN	6,797.140	0.00
EvGateway	2.0000	UN	2,150.000	0.00
Sustainable Energi	2.0000	UN	1,618.000	0.00
PlugIn Stations Online, LLC (PISO)	2.0000	UN	3,707.360	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	2.0000	UN	1,920.000	0.00
C.W. Fischer Electric, Inc.	2.0000	UN	3,196.000	0.00
Kazars Electric, Inc.	2.0000	UN	8,000.000	0.00
Item	Description	Unit of Measure	Quantity	
ENPHASE EQUIVALENT OR BETTER-	50-amp EVCS /Dual/J1772/ Wall Mount(Hardwired)	UN	4.0000	

continued...

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	4.0000	UN	6,797.140	0.00	
EvGateway	4.0000	UN	2,150.000	0.00	
Sustainable Energi	4.0000	UN	2,198.000	0.00	
PlugIn Stations Online, LLC (PISO)	4.0000	UN	4,634.780	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	4.0000	UN	1,924.000	0.00	
C.W. Fischer Electric, Inc.	4.0000	UN	3,196.000	0.00	
Kazars Electric, Inc.	4.0000	UN	8,000.000	0.00	
Item	Description	Unit of Measure		Quantity	
ENPHASE EQUIVALENT OR BETTER-	60-amp EVCS /Dual/J1772/ Wall Mount(Hardwired)	UN		4.0000	

Responses					
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount	
Horsepower Electric Inc	4.0000	UN	8,235.530	0.00	
EvGateway	4.0000	UN	2,150.000	0.00	
Sustainable Energi	4.0000	UN	2,352.000	0.00	
PlugIn Stations Online, LLC (PISO)	4.0000	UN	4,634.780	0.00	
Universal EV LLC	0.0000	UN	0.000	0.00	
Wifi Data Processing	4.0000	UN	1,924.000	0.00	
C.W. Fischer Electric, Inc.	4.0000	UN	3,196.000	0.00	
Kazars Electric, Inc.	4.0000	UN	10,000.000	0.00	

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Item	Description	Unit of Measure	Quantity
STANDARD LABOR RATE-	Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.	LH	200.0000

Responses

Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	200.0000	LH	300.000	0.00
EvGateway	200.0000	LH	78.750	0.00
Sustainable Energi	0.0000	LH	0.000	0.00
PlugIn Stations Online, LLC (PISO)	200.0000	LH	144.910	0.00
Universal EV LLC	200.0000	LH	69.500	0.00
Wifi Data Processing	200.0000	LH	98.000	0.00
C.W. Fischer Electric, Inc.	200.0000	LH	60.000	0.00
Kazars Electric, Inc.	200.0000	LH	130.000	0.00

Item	Description	Unit of Measure	Quantity
LABOR HELPER RATE-	Provide hourly labor price to help install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.	LH	200.0000

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	200.0000	LH	150.000	0.00
EvGateway	200.0000	LH	47.250	0.00
Sustainable Energi	0.0000	LH	0.000	0.00
PlugIn Stations Online, LLC (PISO)	200.0000	LH	98.540	0.00
Universal EV LLC	200.0000	LH	71.500	0.00
Wifi Data Processing	200.0000	LH	78.000	0.00
C.W. Fischer Electric, Inc.	200.0000	LH	30.000	0.00
Kazars Electric, Inc.	200.0000	LH	90.000	0.00
Item	Description	Unit of Measure	Quantity	

OVERTIME LABOR RATE-	Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.	LH	50.0000	
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Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	50.0000	LH	200.000	0.00
EvGateway	50.0000	LH	118.130	0.00
Sustainable Energi	0.0000	LH	0.000	0.00
PlugIn Stations Online, LLC (PISO)	50.0000	LH	217.360	0.00
Universal EV LLC	50.0000	LH	139.000	0.00
Wifi Data Processing	50.0000	LH	146.000	0.00
C.W. Fischer Electric, Inc.	50.0000	LH	90.000	0.00
Kazars Electric, Inc.	50.0000	LH	195.000	0.00

continued...

Item	Description	Unit of Measure	Quantity
TRENCHING/CONSTRUCTION LABOR-	Provide hourly labor price for trenching and Construction type work.	LH	70.0000

Responses			
Supplier	Bid Quantity	Unit of Measure	Award Amount
Horsepower Electric Inc	70.0000	LH	430,000 0.00
EvGateway	70.0000	LH	105,000 0.00
Sustainable Energi	0.0000	LH	0.000 0.00
PlugIn Stations Online, LLC (PISO)	70.0000	LH	144,910 0.00
Universal EV LLC	70.0000	LH	51,500 0.00
Wifi Data Processing	70.0000	LH	125,000 0.00
C.W. Fischer Electric, Inc.	70.0000	LH	25,000 0.00
Kazars Electric, Inc.	70.0000	LH	90,000 0.00

Item	Description	Unit of Measure	Quantity
PREVENTIVE MAINTENANCE FIRST HR-	<ul style="list-style-type: none"><li>• Vendor shall provide hourly labor fee to troubleshoot, repair and replace Electric Vehicle Charger and associated components.</li><li>• This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.</li><li>• The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.</li><li>• Any additional labor beyond the first hour will be billed separately, see line item 47.</li><li>• Hourly quantity listed is estimated and not indicative of future use.</li></ul>	EA	100.0000

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	100.0000	EA	434.000	0.00
EvGateway	100.0000	EA	300.000	0.00
Sustainable Energi	0.0000	EA	0.000	0.00
PlugIn Stations Online, LLC (PISO)	100.0000	EA	144.910	0.00
Universal EV LLC	100.0000	EA	200.000	0.00
Wifi Data Processing	100.0000	EA	118.000	0.00
C.W. Fischer Electric, Inc.	100.0000	EA	90.000	0.00
Kazars Electric, Inc.	100.0000	EA	225.000	0.00
Item	Description	Unit of Measure	Quantity	
PREVENTIVE MAINTENANCE ADD HOURS-	Provide hourly labor cost to repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 46.	HR	50.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	50.0000	HR	476.000	0.00
EvGateway	50.0000	HR	150.000	0.00
Sustainable Energi	0.0000	HR	0.000	0.00
PlugIn Stations Online, LLC (PISO)	50.0000	HR	144.910	0.00
Universal EV LLC	50.0000	HR	55.000	0.00
Wifi Data Processing	50.0000	HR	78.000	0.00
C.W. Fischer Electric, Inc.	50.0000	HR	60.000	0.00
Kazars Electric, Inc.	50.0000	HR	155.000	0.00

continued...

Item	Description	Unit of Measure	Quantity
EMERGENCY REPAIRS FIRST HOUR-	<ul style="list-style-type: none"><li>• Vendor shall provide hourly labor fee to troubleshoot, Emergency repair and replace Electric Vehicle Charger and associated components.</li><li>• This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.</li><li>• The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.</li><li>• Any additional labor beyond the first hour will be billed separately, see line item 49.</li><li>• Hourly quantity listed is estimated and not indicative of future use.</li></ul>	EA	100.0000

Responses			
Supplier	Bid Quantity	Unit of Measure	Award Amount
Horsepower Electric Inc	100.0000	EA	500.000
EvGateway	100.0000	EA	500.000
Sustainable Energi	0.0000	EA	0.000
PlugIn Stations Online, LLC (PISO)	100.0000	EA	144.910
Universal EV LLC	100.0000	EA	400.000
Wifi Data Processing	100.0000	EA	128.000
C.W. Fischer Electric, Inc.	100.0000	EA	120.000
Kazars Electric, Inc.	100.0000	EA	340.000

Item	Description	Unit of Measure	Quantity
EMERGENCY REPAIRS ADDITIONAL HRS-	Provide hourly labor cost to Emergency repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 48.	HR	50.0000

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	50.0000	HR	800.000	0.00
EvGateway	50.0000	HR	250.000	0.00
Sustainable Energi	0.0000	HR	0.000	0.00
PlugIn Stations Online, LLC (PISO)	50.0000	HR	144.910	0.00
Universal EV LLC	50.0000	HR	75.000	0.00
Wifi Data Processing	50.0000	HR	98.000	0.00
C.W. Fischer Electric, Inc.	50.0000	HR	90.000	0.00
Kazars Electric, Inc.	50.0000	HR	232.000	0.00
Item	Description	Unit of Measure	Quantity	
% MARK-UP ON PARTS-	Passthrough costs for parts. Vendor to charge this additional	PT	1.0000	
	% at time of billing.			

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	1.0000	PT	30.000	0.00
EvGateway	1.0000	PT	15.000	0.00
Sustainable Energi	0.0000	PT	0.000	0.00
PlugIn Stations Online, LLC (PISO)	1.0000	PT	1.000	0.00
Universal EV LLC	1.0000	PT	20.000	0.00
Wifi Data Processing	1.0000	PT	0.170	0.00
C.W. Fischer Electric, Inc.	1.0000	PT	10.000	0.00
Kazars Electric, Inc.	1.0000	PT	0.250	0.00

continued...

Item	Description	Unit of Measure	Quantity
PERMIT ALLOWANCE-	Estimated Annual Amount for Permit Allowance. All Bidders to bid <b>\$1</b> so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.	DO	5,000.0000

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	5,000.0000	DO	1.000	0.00
EvGateway	5,000.0000	DO	1.000	0.00
Sustainable Energi	0.0000	DO	0.000	0.00
PlugIn Stations Online, LLC (PISO)	5,000.0000	DO	1.000	0.00
Universal EV LLC	5,000.0000	DO	1.000	0.00
Wifi Data Processing	5,000.0000	DO	1.000	0.00
C.W. Fischer Electric, Inc.	5,000.0000	DO	1.000	0.00
Kazars Electric, Inc.	5,000.0000	DO	1.000	0.00
Item	Description	Unit of Measure	Quantity	

MISCELLANEOUS PARTS-	Estimated Annual Amount for Non-Warranty Parts. All Bidders to bid <b>\$1</b> so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.	DO	135,000.0000
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Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	135,000.0000	DO	1.000	0.00
Sustainable Energi	0.0000	DO	0.000	0.00
PlugIn Stations Online, LLC (PISO)	135,000.0000	DO	1.000	0.00
Universal EV LLC	135,000.0000	DO	1.000	0.00
Wifi Data Processing	135,000.0000	DO	1.000	0.00

continued...

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
C.W. Fischer Electric, Inc.	135,000.0000	DO	1.000	0.00
Kazars Electric, Inc.	135,000.0000	DO	1.000	0.00
Item	Description	Unit of Measure	Quantity	
6X6X4 PVC WEATHERPROOF BOX CONDU-	6X6X4 PVC WEATHERPROOF BOX CONDUIT	UN	1.0000	

Responses				
Supplier	Bid Quantity	Unit of Measure	Unit Price	Award Amount
Horsepower Electric Inc	1.0000	UN	71.430	0.00
EvGateway	1.0000	UN	27.500	0.00
Sustainable Energi	0.0000	UN	0.000	0.00
PlugIn Stations Online, LLC (PISO)	1.0000	UN	34.780	0.00
Universal EV LLC	0.0000	UN	0.000	0.00
Wifi Data Processing	1.0000	UN	25.990	0.00
C.W. Fischer Electric, Inc.	1.0000	UN	29.000	0.00
Kazars Electric, Inc.	1.0000	UN	40.500	0.00

Header Questions And Responses

QUESTION
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Have you attached documentation confirming that all EV charging hardware and batteries included in this bid are covered by a manufacturer's 5-year warranty?

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes

continued...

Question Responses		
Supplier	Response	Has Attachment
Sustainable Energi	Yes	Yes
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	Yes
QUESTION		

Have you attached technical specification sheet(s) for all proposed hardware?

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	Yes
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	Yes

QUESTION

Regarding technical specifications, can you confirm that your charging stations have at least a 23-foot standard length of cable for each charging station?

continued...

Question Responses			
Supplier	Response		Has Attachment
Horsepower Electric Inc	Yes		Yes
EvGateway	Yes		Yes
Sustainable Energi	Yes		No
PlugIn Stations Online, LLC (PISO)	Yes		Yes
Universal EV LLC	Yes		Yes
Wifi Data Processing	Yes		Yes
C.W. Fischer Electric, Inc.	Yes		Yes
Kazars Electric, Inc.	Yes		Yes
Smart City Capital, LLC	Yes		No
QUESTION			
Have you attached documentation listing the electrical testing laboratory for your product?			

Question Responses			
Supplier	Response		Has Attachment
Horsepower Electric Inc	Yes		Yes
EvGateway	Yes		Yes
Sustainable Energi	Yes		Yes
PlugIn Stations Online, LLC (PISO)	Yes		Yes
Universal EV LLC	Yes		Yes
Wifi Data Processing	Yes		Yes
C.W. Fischer Electric, Inc.	Yes		Yes
Kazars Electric, Inc.	Yes		Yes
Smart City Capital, LLC	Yes		Yes
QUESTION			
Have you attached documentation confirming the charging station is outdoor suitable with appropriate NEMA-4 rated enclosure?			

continued...

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	Yes
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	Yes
QUESTION		

If you are only providing installation and maintenance services to the City (excluding providing the EV charger hardware), have you included at least 3 references, including contact information (current email and phone number), and office locations for those servicing the chargers?

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	No	No
Sustainable Energi	No	No
PlugIn Stations Online, LLC (PISO)	Yes	No
Universal EV LLC	No	No
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	No
QUESTION		

If you are providing maintenance services to the City, have you provided documentation confirming that you can meet the maintenance service requirements outlined in Section 3.4?

continued...

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	No	No
Sustainable Energi	No	No
PlugIn Stations Online, LLC (PISO)	Yes	No
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	No
QUESTION		

If you are a Contractor providing the EV charging hardware and working with a subcontractor for maintenance, have you provided at least 3 references for both your services and an additional 3 for the subcontractor's services?

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	No	No
EvGateway	Yes	Yes
Sustainable Energi	No	No
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	No	No
Wifi Data Processing	No	Yes
C.W. Fischer Electric, Inc.	No	No
Kazars Electric, Inc.	No	No
Smart City Capital, LLC	Yes	No
QUESTION		

Have you downloaded, read, signed and attached all required forms?

continued...

### Question Responses

Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	Yes
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	Yes

#### QUESTION

Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached - Anti-Human Trafficking Affidavit Per Florida Statute 787.06 (2024), (13).

Florida Statute 787.06 (2024), (13) When a contract is executed, renewed, or extended between a nongovernmental entity and a governmental entity, the nongovernmental entity must provide the governmental entity with an affidavit signed by an officer or a representative of the nongovernmental entity under penalty of perjury attesting that the nongovernmental entity does not use coercion for labor or services as defined in this section. For purposes of this subsection, the term "governmental entity" has the same meaning as in s. 287.138(1).

### Question Responses

Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	No
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	No
Smart City Capital, LLC	Yes	No

continued...

Question Responses		
Supplier	Response	Has Attachment
Smart City Capital, LLC	Yes	No
QUESTION		

Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached Affidavit of Compliance with Foreign Entity Laws Per Florida Statute - §287.138, 692.201, 692.202, 692.203, and 692.204

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	No
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	No
Smart City Capital, LLC	Yes	No
QUESTION		

Did you download, read, sign, and re-upload Addendum 1?

Question Responses		
Supplier	Response	Has Attachment
Horsepower Electric Inc	Yes	Yes
EvGateway	Yes	Yes
Sustainable Energi	Yes	Yes
PlugIn Stations Online, LLC (PISO)	Yes	Yes
Universal EV LLC	Yes	Yes
Wifi Data Processing	Yes	Yes

continued...

Question Responses		
Supplier	Response	Has Attachment
C.W. Fischer Electric, Inc.	Yes	Yes
Kazars Electric, Inc.	Yes	Yes
Smart City Capital, LLC	Yes	Yes
QUESTION		

Did you download, read, sign, and re-upload Addendum 2?

Question Responses			
Supplier	Response	Has Attachment	
Horsepower Electric Inc	Yes	Yes	
EvGateway	Yes	Yes	
Sustainable Energi	Yes	Yes	
PlugIn Stations Online, LLC (PISO)	Yes	Yes	
Universal EV LLC	Yes	Yes	
Wifi Data Processing	Yes	Yes	
C.W. Fischer Electric, Inc.	Yes	Yes	
Kazars Electric, Inc.	Yes	Yes	
Smart City Capital, LLC	Yes	Yes	

Contacts

CAM #25-0019 Exhibit 3 Page 123 of 380		Name	Phone	Email
		LAURIE PLATKIN	US 954-828-5138	lplatkin@fortlauderdale.gov

Q And A

continued...

Supplier	Question	Answer
Add Solar & Electrical LLC	Hi... Where can I download the necessary electrical plans and BID documentation?	There are no electrical plans. Bidders are to submit their pricing in the City's sourcing platform. Open each line item individually, enter the full quantity amount, enter your price per listed UOM.
Ford Motor Company	Will you accept UL certified over ETL certified?	Yes, the City will accept ETL or UL-certified products. See Addendum 1.
	Unlike UL, ETL does not create their own standards for certification, but only makes sure that products meet the standards created by UL.	
InCharge Energy	Could you specify whether there are any power output requirements for the L2 charger?	1) The minimum charging power is 30 Amps but the City may request charging outputs up to 60 Amps if site conditions allow.
	Could you clarify the requirement for 24/7 service? Does it mean there have to be a toll-free number/customer service agents available 24/7?	2) Please see response requirements in sections 3.2.6.1.C, 3.2.6.3.B and 3.4.8. Under those sections, bidders would be required to provide onsite response within 24-hours of notification by City. How the bidder receives those notifications is not specified.
InCharge Energy	Could you please specify the requirements for payment options for chargers? Is a credit card reader necessary?	The requested chargers under this ITB will not include any payment options. Therefore, they will not require any credit card readers. Any payment system utilized by the City will be independent of the chargers installed under this ITB and is not included in the scope of work for this ITB.
Universal EV LLC	1) We would like to understand the minimum required number of Level 2 chargers per site for both public and private locations. 2) Please give us information whether the Level 2 EVSE should be BUY America compliant.	1) Exact number of stations per site will be determined after contract award and site assessments are completed. City would prefer a minimum of two charging ports per site but this number may be reduced to none or one if site conditions or costs are prohibitive. 2) This ITB does not include any Buy American requirements.
InCharge Energy	Can contractors bid only for the part of the project, for City fleet and employee use sites, excluding public use locations, or must the contractor provide equipment and services to all sites, both public and private?	This bid is not set up to differentiate between public and private installations. Bidders should be able to provide charger installations for both public and private sites.

continued...

Supplier	Question	Answer
Add Solar & Electrical LLC	Are the work hours the total hours of the project, for all installations?	1) No. Hours are estimated. 2) No. Permits pricing is estimated.
	Is the price of permits that appears in the OFFER for all projects?	3) The miscellaneous amount refers to any parts not addressed by other line items and the miscellaneous quantity is an estimate.
Add Solar & Electrical LLC	Are all installations included in the "miscellaneous" amount?	The miscellaneous amount refers to any parts not addressed by other line items and the miscellaneous quantity is an estimate.
Wifi Data Processing	Are all installations included in the "miscellaneous" amount?	The miscellaneous amount refers to any parts not addressed by other line items and the miscellaneous quantity is an estimate.
Wifi Data Processing	What is the definition of Permit allowance?	Money allocated for the anticipated City permits required to perform future site work.
Wifi Data Processing	In the bid you mentioned a Bollard mount. Do you want the pricing on the cable retractor for them?	1. Sections 3.1.6 and 3.1.7 provide requirements for cord management. Pricing for charging stations should include cord management solution.
Wifi Data Processing	What is the expected time range for FTL to do the installations?	2. Pricing for charger stands should be included in Lines 32 and 33.
Wifi Data Processing	Currently the City has ev chargers at some of its locations. Can you provide a list of sites with EV chargers?, how many at each site?, Are these chargers public or private? will we be replacing and/or servicing any of these existing chargers?	This will be awarded as a multi-year contract. Installations will be required throughout the contract. The list provided are the sites anticipated for the first year of the contract.  See attached table for the list of sites, the number of chargers at each location and if they are private or public.  At present, none of the existing chargers are scheduled for replacement. However, under the awarded contract, the City may request replacement of existing chargers.
Wifi Data Processing	Has FTL already determined preferable locations for EV Chargers at each site? Or are you open to our suggestions after we fully survey each site?	Maintenance services will only be requested for chargers installed under this ITB.  Charger locations at each site have not been determined yet.
Wifi Data Processing	In the future after, award of contract, will electric and relevant architectural plans be available to the bid winner?	City is open to suggestions on optimal charger locations.  If relevant plans are available, they will be provided to the bid winner(s).



## FINANCE DEPARTMENT CITY OF FORT LAUDERDALE BID TABUATION

Rev: 1 | Revision Date: 8/31/2015 | Print Date: 00/0000

Description: 387 - EV Charging Stations, Installation, & Maintenance - Re-Bid  
Open Date: 11/21/2024

			Vendor		G&H Electric, Inc. dba Florida Supercharge		G&H Electric, Inc. dba Florida Supercharge	
			City, State		Fort Lauderdale, FL		Fort Lauderdale, FL	
#	Line Item Description	Qty.	U/M	Unit Price	Extension	Unit Price	Extension	
1	Wiring #8 AWG	650.00	LF	\$ 0.47	\$ 305.50	0.46	\$ 299.39	
2	Wiring #6 AWG	1750.00	LF	\$ 0.73	\$ 1,277.50	0.72	\$ 1,251.95	
3	Wiring #4 AWG	450.00	LF	\$ 1.10	\$ 495.00	1.08	\$ 485.10	
4	Wiring #6 THHN	200.00	LF	\$ 0.73	\$ 146.00	0.72	\$ 143.08	
5	Wiring #8 THHN	400.00	LF	\$ 0.47	\$ 188.00	0.46	\$ 184.24	
6	Wiring #10 THHN	200.00	LF	\$ 0.26	\$ 52.00	0.25	\$ 50.96	
7	3/4 Inch PVC Conduit	450.00	LF	\$ 0.40	\$ 180.00	0.39	\$ 176.40	
8	1 Inch PVC Conduit	1000.00	LF	\$ 0.58	\$ 580.00	0.57	\$ 568.40	
9	1-1/4 Inch PVC Conduit	350.00	LF	\$ 0.83	\$ 290.50	0.81	\$ 284.69	
10	1-1/2 inch PVC Conduit	200.00	LF	\$ 0.97	\$ 194.00	0.95	\$ 190.12	
11	2 inch PVC Conduit	50.00	LF	\$ 1.20	\$ 60.00	1.18	\$ 58.80	
12	3/4 inch EMT Conduit	350.00	LF	\$ 0.77	\$ 269.50	0.75	\$ 264.11	
13	1 inch EMT Conduit	400.00	LF	\$ 1.24	\$ 496.00	1.22	\$ 486.08	
14	1-1/4 inch EMT Conduit	200.00	LF	\$ 2.02	\$ 404.00	1.98	\$ 395.92	
15	1-1/2 inch EMT Conduit	200.00	LF	\$ 2.47	\$ 494.00	2.42	\$ 484.12	
16	1 inch RIGID Conduit	400.00	LF	\$ 3.74	\$ 1,496.00	3.67	\$ 1,466.08	
17	3/4 INCH RIGID CONDUIT	50.00	LF	\$ 2.35	\$ 117.50	2.30	\$ 115.15	
18	30 amp Electrical Breakers	2.00	EA	\$ 17.71	\$ 35.42	17.36	\$ 34.71	
19	40 amp Electrical Breakers	2.00	EA	\$ 20.00	\$ 40.00	19.60	\$ 39.20	
20	50 amp Electrical Breakers	2.00	EA	\$ 20.00	\$ 40.00	19.60	\$ 39.20	
21	60 amp Electrical Breakers	2.00	EA	\$ 20.00	\$ 40.00	19.60	\$ 39.20	
22	80 amp Electrical Breakers	2.00	EA	\$ 20.00	\$ 40.00	19.60	\$ 39.20	
23	100 amp Electrical Breakers	2.00	EA	\$ 20.00	\$ 40.00	19.60	\$ 39.20	
24	30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	1.00	UN	\$ 1,360.00	\$ 1,360.00	1332.80	\$ 1,332.80	
25	40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)	1.00	UN	\$ 1,360.00	\$ 1,360.00	1332.80	\$ 1,332.80	
26	50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)	1.00	UN	\$ 1,360.00	\$ 1,360.00	1332.80	\$ 1,332.80	
27	60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	1.00	UN	\$ 1,360.00	\$ 1,360.00	1332.80	\$ 1,332.80	
28	30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)	6.00	UN	\$ 1,360.00	\$ 8,160.00	1332.80	\$ 7,996.80	
29	40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)	6.00	UN	\$ 1,360.00	\$ 8,160.00	1332.80	\$ 7,996.80	
30	50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)	12.00	UN	\$ 1,360.00	\$ 16,320.00	1332.80	\$ 15,993.60	
31	60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)	12.00	UN	\$ 1,360.00	\$ 16,320.00	1332.80	\$ 15,993.60	
32	EV Pedestal/ Single Stand	4.00	UN	\$ 400.00	\$ 1,600.00	392.00	\$ 1,568.00	
33	EV Pedestal/ Dual Charger Stand	36.00	UN	\$ 400.00	\$ 14,400.00	392.00	\$ 14,112.00	
34	30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)	1.00	UN	\$ 960.00	\$ 960.00	940.80	\$ 940.80	
35	40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	1.00	UN	\$ 960.00	\$ 960.00	940.80	\$ 940.80	
36	50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	1.00	UN	\$ 960.00	\$ 960.00	940.80	\$ 940.80	
37	60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	1.00	UN	\$ 960.00	\$ 960.00	940.80	\$ 940.80	
38	30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)	2.00	UN	\$ 1,920.00	\$ 3,840.00	1881.60	\$ 3,763.20	
39	40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)	2.00	UN	\$ 1,920.00	\$ 3,840.00	1881.60	\$ 3,763.20	
40	50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)	4.00	UN	\$ 1,924.00	\$ 7,696.00	1885.52	\$ 7,542.08	
41	60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)	4.00	UN	\$ 1,924.00	\$ 7,696.00	1885.52	\$ 7,542.08	
42	Licensed Electrician/Journeyman	200.00	LH	\$ 98.00	\$ 19,600.00	96.04	\$ 19,208.00	
43	Electrician/Helper Rate	200.00	LH	\$ 78.00	\$ 15,600.00	76.44	\$ 15,288.00	
44	Overtime Labor Rate	50.00	LH	\$ 146.00	\$ 7,300.00	143.08	\$ 7,154.00	
45	Trenching/Construction Labor	70.00	LH	\$ 125.00	\$ 8,750.00	122.50	\$ 8,575.00	
46	Service Call- Preventive Maintenance First Hour (\$/EA Visit)	100.00	EA	\$ 118.00	\$ 11,800.00	115.64	\$ 11,564.00	
47	Service Call- Preventive Maintenance Additional HRS (\$/HR)	50.00	HR	\$ 78.00	\$ 3,900.00	76.44	\$ 3,822.00	
48	Service Call- Emergency Repairs First Hour (\$/EA Visit)	100.00	EA	\$ 128.00	\$ 12,800.00	125.44	\$ 12,544.00	
49	Service Call - Emergency Repairs Additional Hours (\$/hr)	50.00	HR	\$ 98.00	\$ 4,900.00	96.04	\$ 4,802.00	
53	6X6X4 PVC WEATHERPROOF BOX CONDUIT	1.00	UN	\$ 25.99	\$ 25.99	25.47	\$ 25.47	
SUB TOTALS					\$ 189,268.91		\$ 185,483.53	
Additional Discounts Provided				2.0%	(\$3,785.38)			
Estimated Annual Total with 2% Discount					185,483.53			
51	PERMIT ALLOWANCE	5000.00	DO	\$ 1.00	\$ 5,000.00	1.00	\$ 5,000.00	
52	MISCELLANEOUS PARTS	135000.00	DO	\$ 1.00	\$ 135,000.00	1.00	\$ 135,000.00	
SUB TOTALS					\$ 325,483.53		\$ 325,483.53	
LOCAL PREFERENCE				10.0%	(24,695.18)			
GRANT TOTALS					\$ 300,788.35			
** Apparent Low Bid			Notes:		** Apparent Low Bid		Pricing with 2% Discount	

Number of bids received: 8  
Protected Class Vendors Received: 1  
No Bids: 2  
Late Bids: 0





## Response For Supplier: G & H Electric, Inc. DBA Florida Supercharge

**Event # :** 387-2

**Name:** EV Charging Stations, Installation, & Maintenance - Rebid

**Description:** The City of Fort Lauderdale, Florida (City) is seeking bids from qualified, experienced, and licensed firm(s), hereinafter referred to as the Contractor or Bidder, to provide turnkey Electric Vehicle Charging Station (EVCS) services for both the general public use and the City of Fort Lauderdale Fleet at various locations within the City, in accordance with the terms, conditions, and specifications contained in this Invitation to Bid (ITB).

Contract Term: 2-Year initial contract with three (3) additional one-year renewal options.

All quantities are estimated and may not be indicative of future use.

Date created: November 13,  
2024 3:17:48 PM EST

Preview date:

Open date: October 31, 2024  
5:00:00 PM EDT

**Close Date:** 11/21/2024 02:00:00 PM EST

Date submitted: November 21,  
2024 1:58:43 PM EST

Q & A open date: October 31,  
2024 5:30:00 PM EDT

Q & A close date: November  
14, 2024 5:00:00 PM EST

Dispute close date:

**Responded To:** 53 Out of 53 Lines

**Total Bid Amount:** 329,269.08 **Response Currency:** USD

## Question Responses

Question	Answer	Attachment
Have you attached documentation confirming that all EV charging hardware and batteries included in this bid are covered by a manufacturer's 5-year warranty?	Yes	Response.pdf
Have you attached technical specification sheet(s) for all proposed hardware?	Yes	Response.pdf
Regarding technical specifications, can you confirm that your charging stations have at least a 23-foot standard length of cable for each charging station?	Yes	Response.pdf
Have you attached documentation listing the electrical testing laboratory for your product?	Yes	Response.pdf

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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Question	Answer	Attachment
Have you attached documentation confirming the charging station is outdoor suitable with appropriate NEMA-4 rated enclosure?	Yes	Response.pdf
If you are only providing installation and maintenance services to the City (excluding providing the EV charger hardware), have you included at least 3 references, including contact information (current email and phone number), and office locations for those servicing the chargers?	Yes	Response.pdf
If you are providing maintenance services to the City, have you provided documentation confirming that you can meet the maintenance service requirements outlined in Section 3.4?	Yes	Response.pdf
If you are a Contractor providing the EV charging hardware and working with a subcontractor for maintenance, have you provided at least 3 references for both your services and an additional 3 for the subcontractor's services?	No	Response.pdf
Have you downloaded, read, signed and attached all required forms?	Yes	Response.pdf
Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached - Anti-Human Trafficking Affidavit Per Florida Statute 787.06 (2024), (13).	Yes	Response.pdf
Florida Statute 787.06 (2024), (13) When a contract is executed, renewed, or extended between a nongovernmental entity and a governmental entity, the nongovernmental entity must provide the governmental entity with an affidavit signed by an officer or a representative of the nongovernmental entity under penalty of perjury attesting that the nongovernmental entity does not use coercion for labor or services as defined in this section. For purposes of this subsection, the term "governmental entity" has the same meaning as in s. 287.138(1).		

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

Question	Answer	Attachment
Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached Affidavit of Compliance with Foreign Entity Laws Per Florida Statute - §287.138, 692.201, 692.202, 692.203, and 692.204	Yes	Response.pdf
Did you download, read, sign, and re-upload Addendum 1?	Yes	Response.pdf
Did you download, read, sign, and re-upload Addendum 2?	Yes	Response.pdf

Response Attachments

Attachment
FTL Supercharge - Submission for ITB Event ID 387-2.pdf

Line Responses

Line 1: Wiring #8 AWG

<b>Description:</b> Wiring #8 AWG
<b>Item:</b> WIRING #8 AWG    Wiring #8 AWG
<b>Commodity Code:</b> 910-82    Wiring and Other Electrical Maintenance and Repair Services
<b>Quantity:</b> 650.0000 <b>Unit of Measure:</b> LF

<b>Bid Quantity:</b> 650.0000	<b>Unit Price:</b> 0.4700	<b>Extended Amount:</b> 305.50
<b>No Charge:</b> No	<b>No Bid:</b> No	

Line 2: Wiring #6 AWG

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Description:** Wiring #6 AWG

**Item:** WIRING #6 AWG    Wiring #6 AWG

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 1,750.0000                      **Unit of Measure:** LF

**Bid Quantity:** 1,750.0000                      **Unit Price:** 0.7300                      **Extended Amount:** 1,277.50  
**No Charge:** No                      **No Bid:** No

Line 3: Wiring #4 AWG

**Description:** Wiring #4 AWG

**Item:** WIRING #4 AWG    Wiring #4 AWG

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 450.0000                      **Unit of Measure:** LF

**Bid Quantity:** 450.0000                      **Unit Price:** 1.1000                      **Extended Amount:** 495.00  
**No Charge:** No                      **No Bid:** No

Line 4: Wiring #6 THHN

**Description:** Wiring #6 THHN

**Item:** WIRING #6 THHN    Wiring #6 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000                      **Unit of Measure:** LF

**Bid Quantity:** 200.0000                      **Unit Price:** 0.7300                      **Extended Amount:** 146.00  
**No Charge:** No                      **No Bid:** No

Line 5: Wiring #8 THHN

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Description:** Wiring #8 THHN

**Item:** WIRING #8 THHN    Wiring #8 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 400.0000                      **Unit of Measure:** LF

<b>Bid Quantity:</b> 400.0000	<b>Unit Price:</b> 0.4700	<b>Extended Amount:</b> 188.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

**Line 6: Wiring #10 THHN**

**Description:** Wiring #10 THHN

**Item:** WIRING #10 THHN    Wiring #10 THHN

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000                      **Unit of Measure:** LF

<b>Bid Quantity:</b> 200.0000	<b>Unit Price:</b> 0.2600	<b>Extended Amount:</b> 52.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

**Line 7: 3/4 Inch PVC Conduit**

**Description:** 3/4 Inch PVC Conduit

**Item:** 3/4 INCH PVC CONDUIT    3/4 Inch PVC Conduit

**Commodity Code:** 285-19    Conduit and Fittings, Plastic/PVC

**Quantity:** 450.0000                      **Unit of Measure:** LF

<b>Bid Quantity:</b> 450.0000	<b>Unit Price:</b> 0.4000	<b>Extended Amount:</b> 180.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

### Line 8: 1 Inch PVC Conduit

**Description:** 1 Inch PVC Conduit

**Item:** 1 INCH PVC CONDUIT 1 Inch PVC Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 1,000.0000 **Unit of Measure:** LF

**Bid Quantity:** 1,000.0000

**Unit Price:** 0.5800

**Extended Amount:** 580.00

**No Charge:** No

**No Bid:** No

### Line 9: 1-1/4 Inch PVC Conduit

**Description:** 1-1/4 Inch PVC Conduit

**Item:** 1-1/4 INCH PVC CONDUIT 1-1/4 Inch PVC Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 350.0000 **Unit of Measure:** LF

**Bid Quantity:** 350.0000

**Unit Price:** 0.8300

**Extended Amount:** 290.50

**No Charge:** No

**No Bid:** No

### Line 10: 1-1/2 inch PVC Conduit

**Description:** 1-1/2 inch PVC Conduit

**Item:** 1-1/2 INCH PVC CONDUIT 1-1/2 inch PVC Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 200.0000 **Unit of Measure:** LF

**Bid Quantity:** 200.0000

**Unit Price:** 0.9700

**Extended Amount:** 194.00

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

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**No Charge:** No

**No Bid:** No

### Line 11: 2 inch PVC Conduit

**Description:** 2 inch PVC Conduit

**Item:** 2 INCH PVC CONDUIT 2 inch PVC Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 50.0000

**Unit of Measure:** LF

**Bid Quantity:** 50.0000

**Unit Price:** 1.2000

**Extended Amount:** 60.00

**No Charge:** No

**No Bid:** No

### Line 12: 3/4 inch EMT Conduit

**Description:** 3/4 inch EMT Conduit

**Item:** 3/4 INCH PVC CONDUIT 3/4 inch EMT Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 350.0000

**Unit of Measure:** LF

**Bid Quantity:** 350.0000

**Unit Price:** 0.7700

**Extended Amount:** 269.50

**No Charge:** No

**No Bid:** No

### Line 13: 1 inch EMT Conduit

**Description:** 1 inch EMT Conduit

**Item:** 1 INCH EMT CONDUIT 1 inch EMT Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 400.0000

**Unit of Measure:** LF

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Bid Quantity:** 400.0000

**Unit Price:** 1.2400

**Extended Amount:** 496.00

**No Charge:** No

**No Bid:** No

### Line 14: 1-1/4 inch EMT Conduit

**Description:** 1-1/4 inch EMT Conduit

**Item:** 1-1/4 INCH EMT CONDUIT 1-1/4 inch EMT Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 200.0000

**Unit of Measure:** LF

**Bid Quantity:** 200.0000

**Unit Price:** 2.0200

**Extended Amount:** 404.00

**No Charge:** No

**No Bid:** No

### Line 15: 1-1/2 inch EMT Conduit

**Description:** 1-1/2 inch EMT Conduit

**Item:** 1-1/2 INCH EMT CONDUIT 1-1/2 inch EMT Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 200.0000

**Unit of Measure:** LF

**Bid Quantity:** 200.0000

**Unit Price:** 2.4700

**Extended Amount:** 494.00

**No Charge:** No

**No Bid:** No

### Line 16: 1 inch RIGID Conduit

**Description:** 1 inch RIGID Conduit

**Item:** 1 INCH RIGID CONDUIT 1 inch RIGID Conduit

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 400.0000

**Unit of Measure:** LF

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Bid Quantity:** 400.0000

**Unit Price:** 3.7400

**Extended Amount:** 1,496.00

**No Charge:** No

**No Bid:** No

### Line 17: 3/4 INCH RIGID CONDUIT

**Description:** 3/4 INCH RIGID CONDUIT

**Item:** 3/4 INCH RIGID CONDUIT 3/4 INCH RIGID CONDUIT

**Commodity Code:** 285-19 Conduit and Fittings, Plastic/PVC

**Quantity:** 50.0000

**Unit of Measure:** LF

**Bid Quantity:** 50.0000

**Unit Price:** 2.3500

**Extended Amount:** 117.50

**No Charge:** No

**No Bid:** No

### Line 18: 30 amp Electrical Breakers

**Description:** 30 amp Electrical Breakers

**Item:** 30 AMP ELECTRICAL BREAKERS 30 amp Electrical Breakers

**Commodity Code:** 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000

**Unit of Measure:** EA

**Bid Quantity:** 2.0000

**Unit Price:** 17.7100

**Extended Amount:** 35.42

**No Charge:** No

**No Bid:** No

### Line 19: 40 amp Electrical Breakers

**Description:** 40 amp Electrical Breakers

**Item:** 40 AMP ELECTRICAL BREAKERS 40 amp Electrical Breakers

**Commodity Code:** 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

Quantity: 2.0000

Unit of Measure: EA

Bid Quantity: 2.0000

Unit Price: 20.0000

Extended Amount: 40.00

No Charge: No

No Bid: No

Line 20: 50 amp Electrical Breakers

Description: 50 amp Electrical Breakers

Item: 50 AMP ELECTRICAL BREAKERS 50 amp Electrical Breakers

Commodity Code: 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

Quantity: 2.0000

Unit of Measure: EA

Bid Quantity: 2.0000

Unit Price: 20.0000

Extended Amount: 40.00

No Charge: No

No Bid: No

Line 21: 60 amp Electrical Breakers

Description: 60 amp Electrical Breakers

Item: 60 AMP ELECTRICAL BREAKERS 60 amp Electrical Breakers

Commodity Code: 285-14 Circuit Breakers, Load Centers, Boxes, and Panelboards

Quantity: 2.0000

Unit of Measure: EA

Bid Quantity: 2.0000

Unit Price: 20.0000

Extended Amount: 40.00

No Charge: No

No Bid: No

Line 22: 80 amp Electrical Breakers

Description: 80 amp Electrical Breakers

Item: 80 AMP ELECTRICAL BREAKERS 80 amp Electrical Breakers

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Commodity Code:** 285-14    Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000

**Unit of Measure:** EA

**Bid Quantity:** 2.0000

**Unit Price:** 20.0000

**Extended Amount:** 40.00

**No Charge:** No

**No Bid:** No

### Line 23: 100 amp Electrical Breakers

**Description:** 100 amp Electrical Breakers

**Item:** 100 AMP ELECTRICAL BREAKERS    100 amp Electrical Breakers

**Commodity Code:** 285-14    Circuit Breakers, Load Centers, Boxes, and Panelboards

**Quantity:** 2.0000

**Unit of Measure:** EA

**Bid Quantity:** 2.0000

**Unit Price:** 20.0000

**Extended Amount:** 40.00

**No Charge:** No

**No Bid:** No

### Line 24: 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Description:** 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER    30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)

**Commodity Code:** 450-07    Battery Chargers

**Quantity:** 1.0000

**Unit of Measure:** UN

**Bid Quantity:** 1.0000

**Unit Price:** 1,360.0000

**Extended Amount:** 1,360.00

**No Charge:** No

**No Bid:** No

### Line 25: 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)

**Description:** 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

<b>Bid Quantity:</b> 1.0000	<b>Unit Price:</b> 1,360.0000	<b>Extended Amount:</b> 1,360.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

<b>Line 26: 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)</b>	
<b>Description:</b> 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)	
<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

<b>Bid Quantity:</b> 1.0000	<b>Unit Price:</b> 1,360.0000	<b>Extended Amount:</b> 1,360.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

<b>Line 27: 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)</b>	
<b>Description:</b> 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	
<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

<b>Bid Quantity:</b> 1.0000	<b>Unit Price:</b> 1,360.0000	<b>Extended Amount:</b> 1,360.00
<b>No Charge:</b> No	<b>No Bid:</b> No	

<b>Line 28: 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)</b>	
<b>Description:</b> 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)	

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 6.0000

**Unit of Measure:** UN

**Bid Quantity:** 6.0000

**Unit Price:** 1,360.0000

**Extended Amount:** 8,160.00

**No Charge:** No

**No Bid:** No

### Line 29: 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

**Description:** 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 6.0000

**Unit of Measure:** UN

**Bid Quantity:** 6.0000

**Unit Price:** 1,360.0000

**Extended Amount:** 8,160.00

**No Charge:** No

**No Bid:** No

### Line 30: 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Description:** 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 12.0000

**Unit of Measure:** UN

**Bid Quantity:** 12.0000

**Unit Price:** 1,360.0000

**Extended Amount:** 16,320.00

**No Charge:** No

**No Bid:** No

### Line 31: 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Description:** 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 12.0000

**Unit of Measure:** UN

**Bid Quantity:** 12.0000

**Unit Price:** 1,360.0000

**Extended Amount:** 16,320.00

**No Charge:** No

**No Bid:** No

### Line 32: EV Pedestal/ Single Stand

**Description:** EV Pedestal/ Single Stand

**Item:** EV PEDESTAL/SINGLE CHARGER STAND EV Pedestal/ Single Stand

**Commodity Code:** 801-30 Posts, Standards, Supports, and Expansion Plugs

**Quantity:** 4.0000

**Unit of Measure:** UN

**Bid Quantity:** 4.0000

**Unit Price:** 400.0000

**Extended Amount:** 1,600.00

**No Charge:** No

**No Bid:** No

### Line 33: EV Pedestal/ Dual Charger Stand

**Description:** EV Pedestal/ Dual Charger Stand

**Item:** EV PEDESTAL/ DUAL CHARGER STAND EV Pedestal/ Dual Charger Stand

**Commodity Code:** 801-30 Posts, Standards, Supports, and Expansion Plugs

**Quantity:** 36.0000

**Unit of Measure:** UN

**Bid Quantity:** 36.0000

**Unit Price:** 400.0000

**Extended Amount:** 14,400.00

**No Charge:** No

**No Bid:** No

### Line 34: 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)

**Description:** 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

**Bid Quantity:** 1.0000                      **Unit Price:** 960.0000                      **Extended Amount:** 960.00  
**No Charge:** No                                      **No Bid:** No

**Line 35: 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)**

<b>Description:</b> 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	
<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

**Bid Quantity:** 1.0000                      **Unit Price:** 960.0000                      **Extended Amount:** 960.00  
**No Charge:** No                                      **No Bid:** No

**Line 36: 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)**

<b>Description:</b> 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	
<b>Item:</b> ENPHASE EQUIVALENT OR BETTER    50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	
<b>Commodity Code:</b> 450-07    Battery Chargers	
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

**Bid Quantity:** 1.0000                      **Unit Price:** 960.0000                      **Extended Amount:** 960.00  
**No Charge:** No                                      **No Bid:** No

**Line 37: 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)**

<b>Description:</b> 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)	
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## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 1.0000

**Unit of Measure:** UN

**Bid Quantity:** 1.0000

**Unit Price:** 960.0000

**Extended Amount:** 960.00

**No Charge:** No

**No Bid:** No

### Line 38: 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Description:** 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 2.0000

**Unit of Measure:** UN

**Bid Quantity:** 2.0000

**Unit Price:** 1,920.0000

**Extended Amount:** 3,840.00

**No Charge:** No

**No Bid:** No

### Line 39: 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Description:** 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 2.0000

**Unit of Measure:** UN

**Bid Quantity:** 2.0000

**Unit Price:** 1,920.0000

**Extended Amount:** 3,840.00

**No Charge:** No

**No Bid:** No

### Line 40: 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Description:** 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Item:** ENPHASE EQUIVALENT OR BETTER 50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 4.0000

**Unit of Measure:** UN

**Bid Quantity:** 4.0000

**Unit Price:** 1,924.0000

**Extended Amount:** 7,696.00

**No Charge:** No

**No Bid:** No

### Line 41: 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Description:** 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Item:** ENPHASE EQUIVALENT OR BETTER 60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)

**Commodity Code:** 450-07 Battery Chargers

**Quantity:** 4.0000

**Unit of Measure:** UN

**Bid Quantity:** 4.0000

**Unit Price:** 1,924.0000

**Extended Amount:** 7,696.00

**No Charge:** No

**No Bid:** No

### Line 42: Licensed Electrician/Journeyman

**Description:** Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.

**Item:** STANDARD LABOR RATE Licensed Electrician/Journeyman

**Commodity Code:** 910-82 Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000

**Unit of Measure:** LH

**Bid Quantity:** 200.0000

**Unit Price:** 98.0000

**Extended Amount:** 19,600.00

**No Charge:** No

**No Bid:** No

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

### Line 43: Electrician/Helper Rate

**Description:** Provide hourly labor price to help install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.

**Item:** LABOR HELPER RATE      Electrician/Helper Rate

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 200.0000      **Unit of Measure:** LH

**Bid Quantity:** 200.0000

**Unit Price:** 78.0000

**Extended Amount:** 15,600.00

**No Charge:** No

**No Bid:** No

### Line 44: Overtime Labor Rate

**Description:** Provide hourly labor price to install Electric Vehicle charger, installation of electrical components, example: electrical wiring, conduit, sub-panels but limited to these items.

**Item:** OVERTIME LABOR RATE      Overtime Labor Rate

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 50.0000      **Unit of Measure:** LH

**Bid Quantity:** 50.0000

**Unit Price:** 146.0000

**Extended Amount:** 7,300.00

**No Charge:** No

**No Bid:** No

### Line 45: Trenching/Construction Labor

**Description:** Provide hourly labor price for trenching and Construction type work.

**Item:** TRENCHING/CONSTRUCTION LABOR      Trenching/Construction Labor

**Commodity Code:** 912-23      Construction, General (Backfill Services, Digging, Ditching,

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Quantity:** 70.0000

**Unit of Measure:** LH

**Bid Quantity:** 70.0000

**Unit Price:** 125.0000

**Extended Amount:** 8,750.00

**No Charge:** No

**No Bid:** No

### Line 46: Service Call- Preventive Maintenance First Hour (\$/EA Visit)

- Description:**
- Vendor shall provide hourly labor fee to troubleshoot, repair and replace Electric Vehicle Charger and associated components.
  - This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.
  - The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.
  - Any additional labor beyond the first hour will be billed separately, see line item 47.
  - Hourly quantity listed is estimated and not indicative of future use.

**Item:** PREVENTIVE MAINTENANCE FIRST HR    Service Call- Preventive Maintenance First Hour (\$/EA Visit)

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 100.0000

**Unit of Measure:** EA

**Bid Quantity:** 100.0000

**Unit Price:** 118.0000

**Extended Amount:** 11,800.00

**No Charge:** No

**No Bid:** No

### Line 47: Service Call- Preventive Maintenance Additional HRS (\$/HR)

- Description:**
- Provide hourly labor cost to repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 46.

**Item:** PREVENTIVE MAINTENANCE ADD HOURS    Service Call- Preventive Maintenance Additional HRS (\$/HR)

**Commodity Code:** 910-82    Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 50.0000

**Unit of Measure:** HR

**Bid Quantity:** 50.0000

**Unit Price:** 78.0000

**Extended Amount:** 3,900.00

**No Charge:** No

**No Bid:** No

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

Line 48: Service Call- Emergency Repairs First Hour (\$/EA Visit)

- Description:**
- Vendor shall provide hourly labor fee to troubleshoot, Emergency repair and replace Electric Vehicle Charger and associated components.
  - This item will be inclusive of travel time, travel expenses and on-site labor billed at a flat fee.
  - The contractor may bill this fee only once per day, independent of whether a service was done at one or multiple sites.
  - Any additional labor beyond the first hour will be billed separately, see line item 49.
  - Hourly quantity listed is estimated and not indicative of future use.

**Item:** EMERGENCY REPAIRS FIRST HOUR      Service Call- Emergency Repairs First Hour (\$/EA Visit)

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 100.0000      **Unit of Measure:** EA

**Bid Quantity:** 100.0000      **Unit Price:** 128.0000      **Extended Amount:** 12,800.00  
**No Charge:** No      **No Bid:** No

Line 49: Service Call - Emergency Repairs Additional Hours (\$/hr)

- Description:** Provide hourly labor cost to Emergency repair Electric Vehicle Charger and associated components. This rate applies to any labor performed beyond the first hour of service as described in line item 48.

**Item:** EMERGENCY REPAIRS ADDITIONAL HRS      Service Call - Emergency Repairs Additional Hours (\$/hr)

**Commodity Code:** 910-82      Wiring and Other Electrical Maintenance and Repair Services

**Quantity:** 50.0000      **Unit of Measure:** HR

**Bid Quantity:** 50.0000      **Unit Price:** 98.0000      **Extended Amount:** 4,900.00  
**No Charge:** No      **No Bid:** No

Line 50: % MARK-UP ON PARTS

- Description:** Passthrough costs for parts. Vendor to charge this additional % at time of billing.

**Item:** % MARK-UP ON PARTS      % MARK-UP ON PARTS

**Commodity Code:** 060-37      Electrical Parts (Not Ignition) (Not Otherwise Classified)

## Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

**Quantity:** 1.0000

**Unit of Measure:** PT

**Bid Quantity:** 1.0000

**Unit Price:** 0.1700

**Extended Amount:** 0.17

**No Charge:** No

**No Bid:** No

### Line 51: PERMIT ALLOWANCE

**Description:**

Estimated Annual Amount for Permit Allowance. All Bidders to bid **\$1** so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.

**Item:** PERMIT ALLOWANCE PERMIT ALLOWANCE

**Commodity Code:** 963-55 Permits (Not Otherwise Classified)

**Quantity:** 5,000.0000

**Unit of Measure:** DO

**Bid Quantity:** 5,000.0000

**Unit Price:** 1.0000

**Extended Amount:** 5,000.00

**No Charge:** No

**No Bid:** No

### Line 52: MISCELLANEOUS PARTS

**Description:**

Estimated Annual Amount for Non-Warranty Parts. All Bidders to bid **\$1** so everyone's bid will be the same. Quantity listed is estimated and not indicative of future use.

**Item:** MISCELLANEOUS PARTS MISCELLANEOUS PARTS

**Commodity Code:** 060-37 Electrical Parts (Not Ignition) (Not Otherwise Classified)

**Quantity:** 135,000.0000

**Unit of Measure:** DO

**Bid Quantity:** 135,000.0000

**Unit Price:** 1.0000

**Extended Amount:** 135,000.00

**No Charge:** No

**No Bid:** No

### Line 53: 6X6X4 PVC WEATHERPROOF BOX CONDUIT

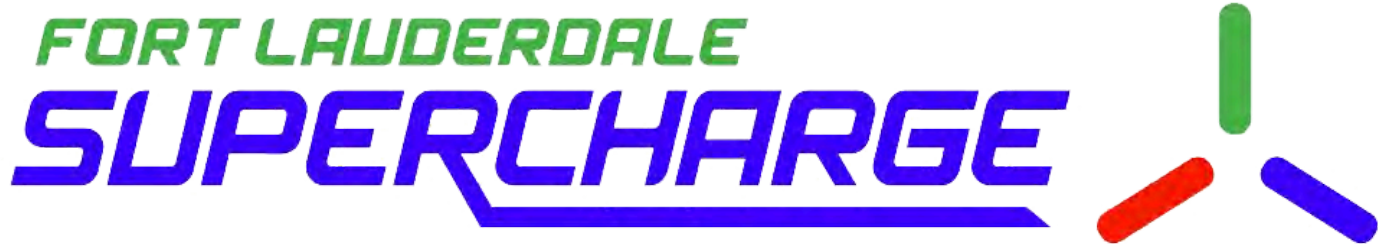
**Description:**

6X6X4 PVC WEATHERPROOF BOX CONDUIT

Event # 387-2: EV Charging Stations, Installation, & Maintenance - Rebid

<b>Item:</b> 6X6X4 PVC WEATHERPROOF BOX CONDU 6X6X4 PVC WEATHERPROOF BOX CONDUIT	
<b>Commodity Code:</b> 285-23	Conduit Fittings, Steel: Boxes, Bushings, Clamps, Connectors
<b>Quantity:</b> 1.0000	<b>Unit of Measure:</b> UN

<b>Bid Quantity:</b> 1.0000	<b>Unit Price:</b> 25.9900	<b>Extended Amount:</b> 25.99
<b>No Charge:</b> No	<b>No Bid:</b> No	
Cantex 6 in. x 6 in. x 4 in. Junction Box		
<b>Comments:</b> Designed to hold multiple conduit connections and wire splices Made of durable PVC to prevent corrosion and oxidization Meets UL safety standards for smooth use		



## ***Submission for ITB Event ID 387-2***

*City of Fort Lauderdale*

*EV Charging Stations, Installation, & Maintenance - Rebid*



November 20th, 2024  
City of Fort Lauderdale  
% Procurement Services - Laurie Platkin  
City of Fort Lauderdale  
1 E. Broward Blvd. Suite 444  
Fort Lauderdale, FL 33301

Subject: Submission for ITB Event ID 387-2: Florida Supercharge's EV Charging Solution for Fort Lauderdale

Dear Laurie,

Thank you for the opportunity to submit our proposal for the ITB. Florida Supercharge is uniquely positioned to deliver an unmatched solution that will effectively future-proof Fort Lauderdale's electric vehicle (EV) charging infrastructure, positioning the city as a leader in sustainability across the United States.

With over 35 years of experience serving the local community, combined with our authorized certifications from Autel and Tesla, we are committed to providing EV drivers with a reliable and seamless charging experience. Our solution ensures that city fleet workers, residents, and visitors will have access to a best-in-class, dependable charging network.

We are excited about the prospect of partnering with you and your team to help advance Fort Lauderdale's EV initiatives.

Thank you for your consideration, and we look forward to the opportunity to collaborate.

Sincerely,

*Scott D. Coloney*

Scott D. Coloney  
Vice President, G & H Electric Inc. d/b/a Florida Supercharge



## About Us



### *Your Partner in Powering a Sustainable Future!*

At G & H Electric, Inc. dba Florida Supercharge we're not just a licensed electrical contractor; we're a driving force behind the future of sustainable electric energy. As a long-standing licensed contractor in Broward County for over 24 years, we specialize in installing and servicing EV chargers. Our commitment lies in revolutionizing the way we consume and interact with energy, making the switch to electric charging not only practical but enjoyable. Our Vision is to empower a sustainable tomorrow for the Fort Lauderdale community.

### *What Sets Us Apart*

A Local Team: Florida Supercharge corporate office is located downtown at 227 SW 2nd Avenue, Fort Lauderdale, Florida (the Philemon Bryan House). Its team consists of Fort Lauderdale and other Broward County residents. We are at the forefront of change by providing turnkey supercharger, solar power and battery backup systems. Florida Supercharge is a certified installer for Autel Energy and Tesla Energy, two superior quality manufacturers for EV charging and solar powered battery storage. Florida Supercharge collaborates with best-in-class manufacturers to seamlessly integrate with Fort Lauderdale, to offer a valuable and convenient service for electric vehicle (EV) drivers.

### *The Florida Supercharge Experience*

Autel EV chargers are designed to provide EV drivers with the ultimate charging experience. We prioritize user functionality and satisfaction, ensuring that every aspect of our service meets the highest standards.

### *Our Diverse Team*

Behind every successful installation is a team of experts. Our diverse team brings together professionals in engineering, hardware, software, electrical, and construction. Together, we will provide cost-effective and turn-key solutions for the city of Fort Lauderdale to ensure that every installation is not just functional but an exemplary display of reliability.

### *Passion for Accessibility*

Our passion lies in making electric vehicle charging convenient and accessible for City fleet drivers as well as everyday residents and visitors. We believe that the future of sustainable energy is dependent on accessibility, so are willing to work tirelessly to install and service Florida Supercharge EV chargers, ensuring they become an integral part of daily life in the Fort Lauderdale community.

### *Committed to Fun and Sustainability*

We don't just charge vehicles; we supercharge lifestyles. Our mission is to make charging an electric vehicle easier and more enjoyable than filling up a tank of gas. Through our commitment to sustainability, we're not just providing a service; we're building a pathway to a more energy-independent future for our city. Allow us to join the City of Fort Lauderdale on this exciting journey towards a cleaner, greener, and more sustainable tomorrow.

## Our Team

### Principal Leadership



*Johnny X. Gonzalez*

President & Director

Johnny has been a Master Electrician for over 40 years and during his integral career in the payphone industry from 1983 - 1997 he personally installed over 1,500 payphone installations prior to starting G & H Electric Inc. dba Florida Supercharge. Today, 35 years later, Gonzalez is the master electrician leading the Florida Supercharge installation team. Mr. Gonzalez brings his extensive 35 years of experience to Florida Supercharge as a master electrician. His payphone business background gives Mr. Gonzalez a unique skillset with the mindset that the new payphone of today is the EV Charger.

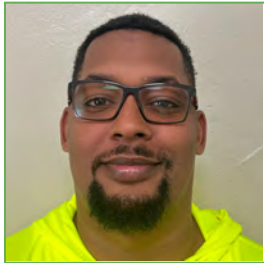


*Scott D. Coloney*

Vice President & Director

Scott demonstrates a profound dedication to transforming Florida's landscape with cutting-edge Supercharger infrastructure. His commitment lies in collaborating with manufacturers, engineers, commercial real estate owners and municipalities, to foster driver-friendly and convenient charging. Mr. Coloney is a versatile entrepreneur and industry leader with a robust background in entrepreneurship, technology, engineering, and construction. As an entrepreneur, Coloney made significant waves during the dot com boom by founding Orbitz.com in 1999. He brings a unique blend of skills after also building a national Payphone company with Mr. Gonzalez 35 years ago; plus, developing ATM routes, providing a solid foundation for navigating the intricacies of the evolving electric vehicle charging industry.

### Operational Team



*Jose Garcia*  
Electrical



*Leandria Walker*  
Permitting & Utilities



*Theodric Allen*  
Construction



*Dylan Varner*  
Accounting



*Jarad Derochey*  
Service



*Cy Caine*  
Engineering & Planning



*Douglas Clark*  
Maintenance & Parts



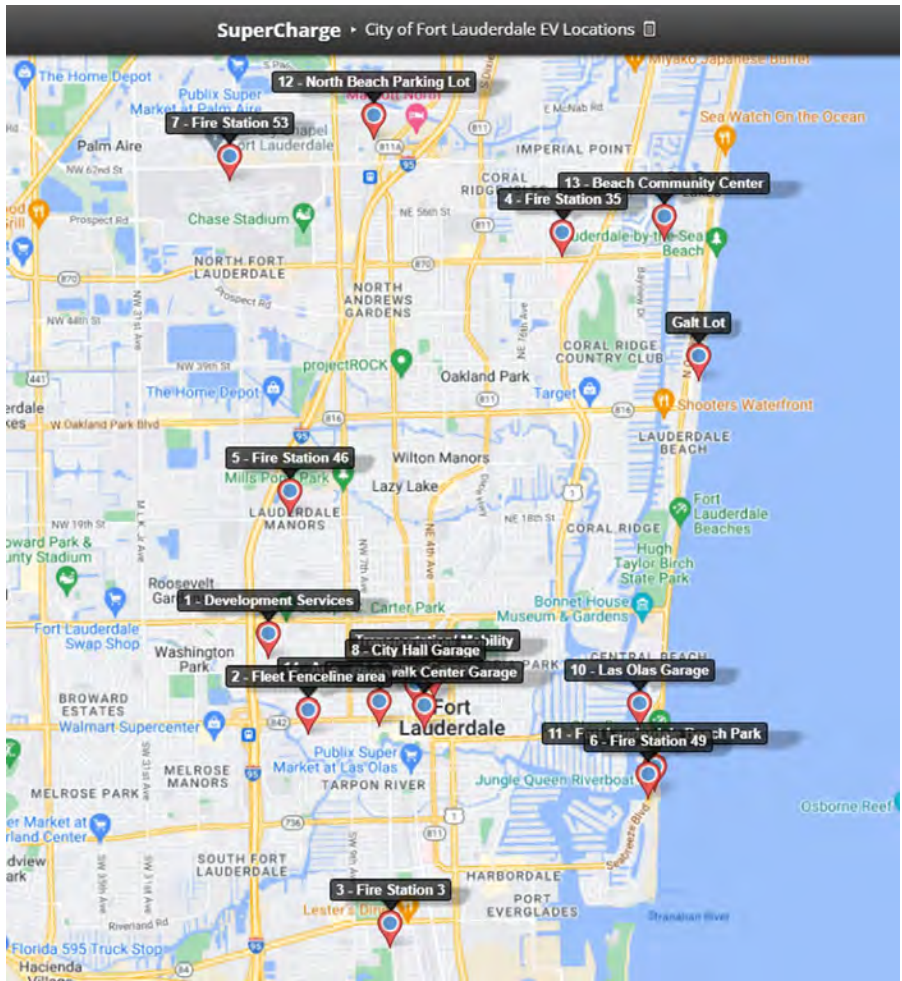
*Denise Gillyard*  
Office Admin

# ***Locations***



# Fort Lauderdale - EV Charger Locations Survey

FTL ITB Event ID 387-2 • EV Charging Stations, Installation, & Maintenance - Rebid

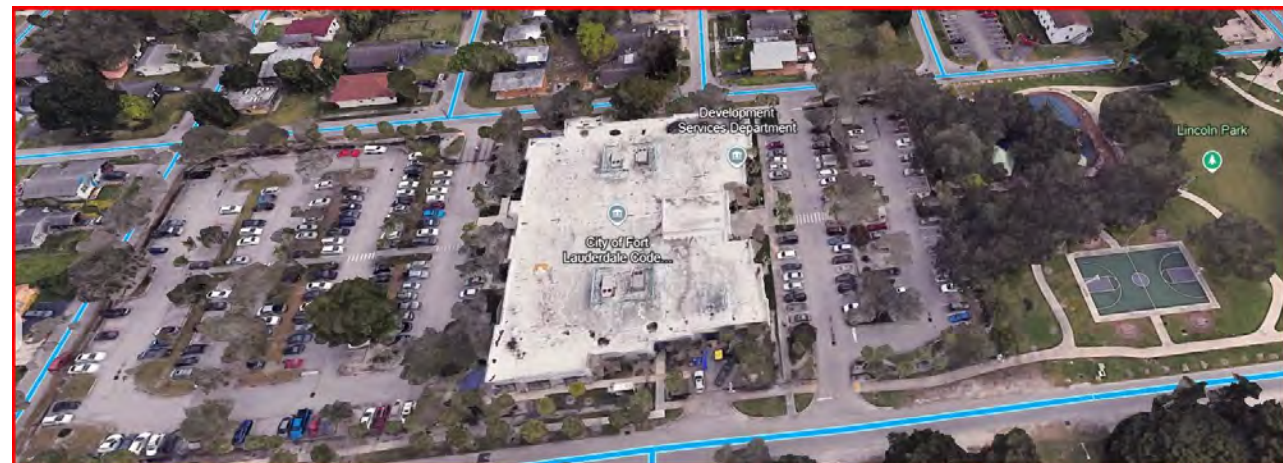
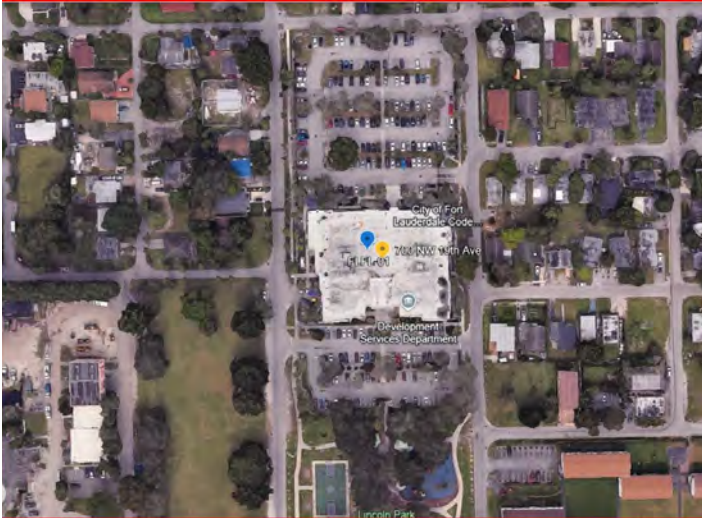


## US Supercharge Desktop Survey

	Name	Address	City	State	Zip	Name
1	FTL-- 01 - Development Services	700 NW 19th Ave., Fort Lauderdale, FL 33311	Fort Lauderdale	FL	33311	1 - Development Services
2	FTL - 02 - Fleet Fenceline area	220 SW 14th Ave., Fort Lauderdale, FL 33312	Fort Lauderdale	FL	33312	2 - Fleet Fenceline area
3	FTL - 03 - Fire Station 3	2801 SW 4th Ave., Fort Lauderdale, FL 33315	Fort Lauderdale	FL	33315	3 - Fire Station 3
4	FTL - 04 - Fire Station 35	1969 E. Commercial Blvd., Fort Lauderdale, FL 33308	Fort Lauderdale	FL	33308	4 - Fire Station 35
5	5 - Fire Station 46	1515 NW 19th St., Fort Lauderdale, FL 33311	Fort Lauderdale	FL	33311	5 - Fire Station 46
6	6 - Fire Station 49	1015 Seabreeze Blvd., Fort Lauderdale, FL 33316	Fort Lauderdale	FL	33316	6 - Fire Station 49
7	7 - Fire Station 53	2200 Executive Airport Way, Fort Lauderdale, FL 33309	Fort Lauderdale	FL	33309	7 - Fire Station 53
8	8 - City Hall Garage	100 North Andrews Ave., Fort Lauderdale, FL 33301	Fort Lauderdale	FL	33301	8 - City Hall Garage
9	9 - Rivenwalk Center Garage	150 SE 2nd Street, Fort Lauderdale, FL 33301	Fort Lauderdale	FL	33301	9 - Rivenwalk Center Garage
10	10 - Las Olas Garage	200 Las Olas Circle, Fort Lauderdale, FL 33316	Fort Lauderdale	FL	33316	10 - Las Olas Garage
11	11 - Fort Lauderdale Beach Park	700 Seabreeze Blvd, Fort Lauderdale, FL 33316	Fort Lauderdale	FL	33316	11 - Fort Lauderdale Beach Park
12	12 - North Beach Parking Lot	725 North Fort Lauderdale Blvd., Fort Lauderdale, FL 33316	Fort Lauderdale	FL	33316	12 - North Beach Parking Lot
13	13 - Beach Community Center	3551 NE 33rd Ave., Fort Lauderdale, FL 33308	Fort Lauderdale	FL	33308	13 - Beach Community Center
14	14 - Arts and Science Garage	101 SW 5th Ave., Fort Lauderdale, FL 33312	Fort Lauderdale	FL	33312	14 - Arts and Science Garage
15	15 - Galt Lot	3500 Galt Ocean Dr., Fort Lauderdale, FL 33308	Fort Lauderdale	FL	33308	Galt Lot
16	16 - Transportation/ Mobility	290 NE 3rd Ave., Fort Lauderdale, FL 33334	Fort Lauderdale	FL	33334	Transportation/ Mobility

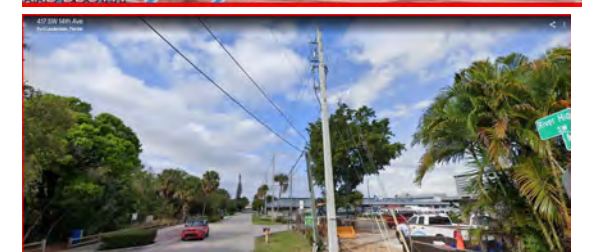
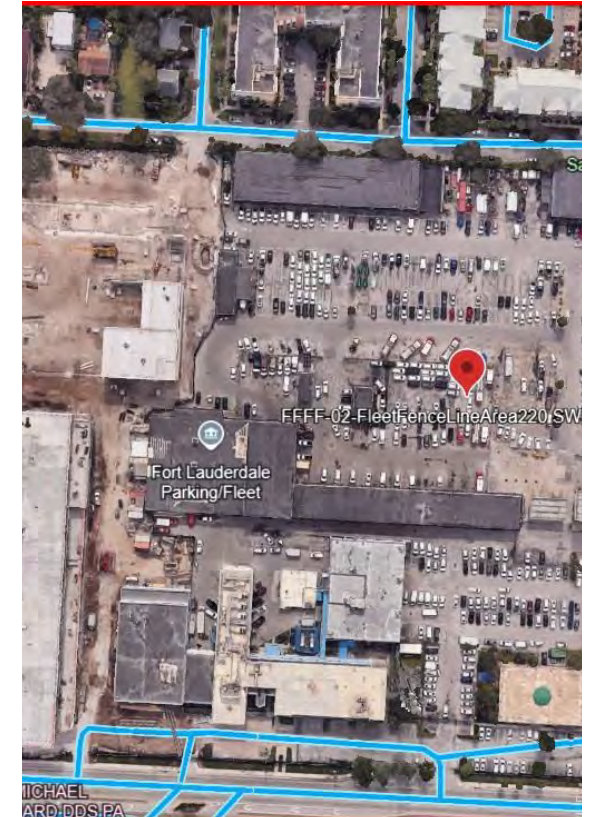
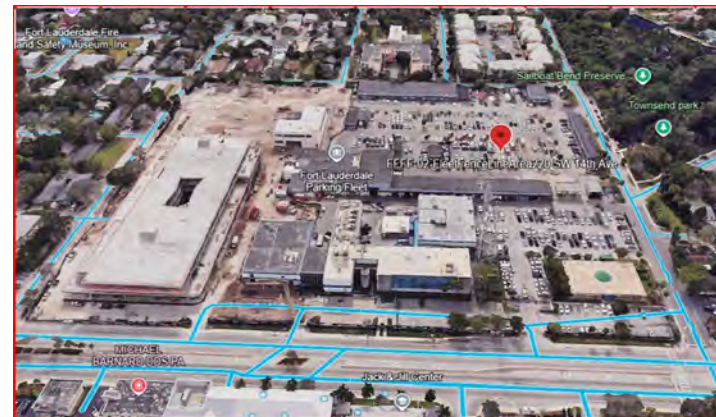
# FTL 01 - Development Services

700 NW 19th Ave., Fort Lauderdale, FL 33311



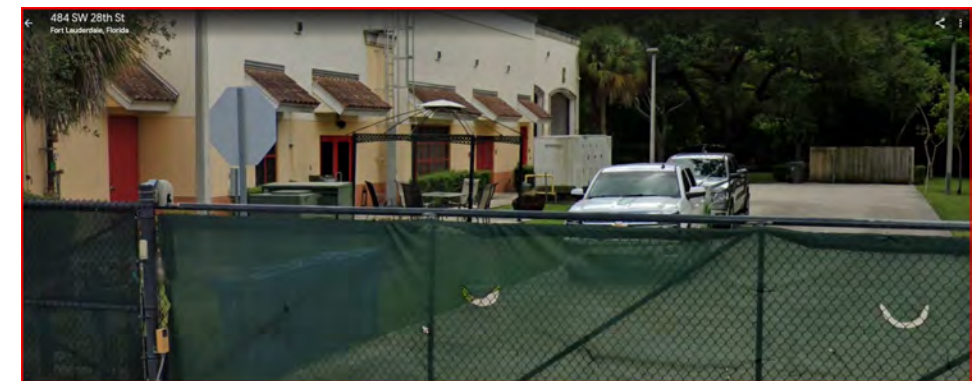
# FTL 02 - Fleet Fenceline area

220 SW 14th Ave., Fort Lauderdale, FL 33312



# FTL 03 - Fire Station 3

2801 SW 4th Ave., Fort Lauderdale, FL 33315



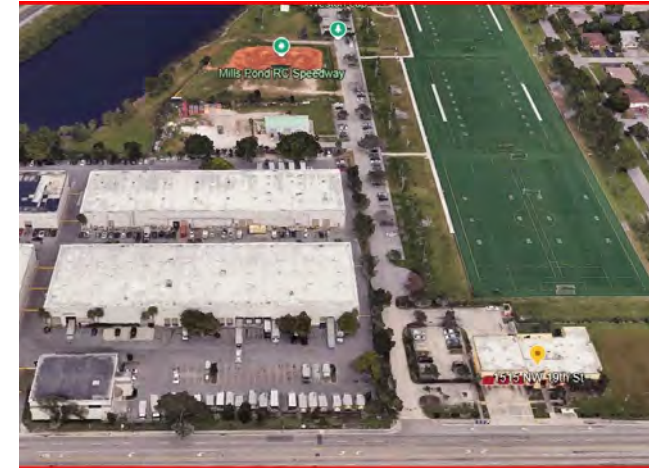
# FTL 04 - Fire Station 35

1969 E. Commercial Blvd., Fort Lauderdale, FL 33308



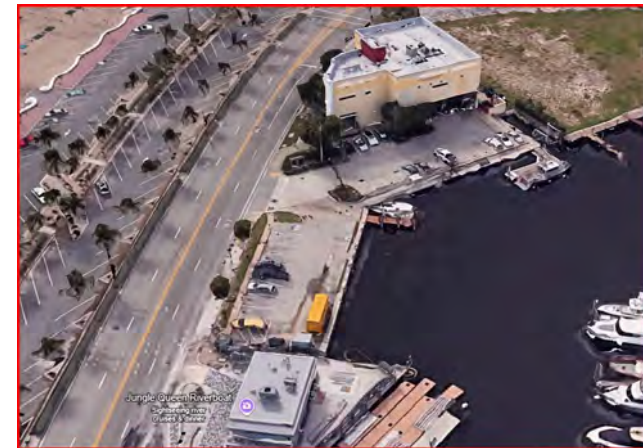
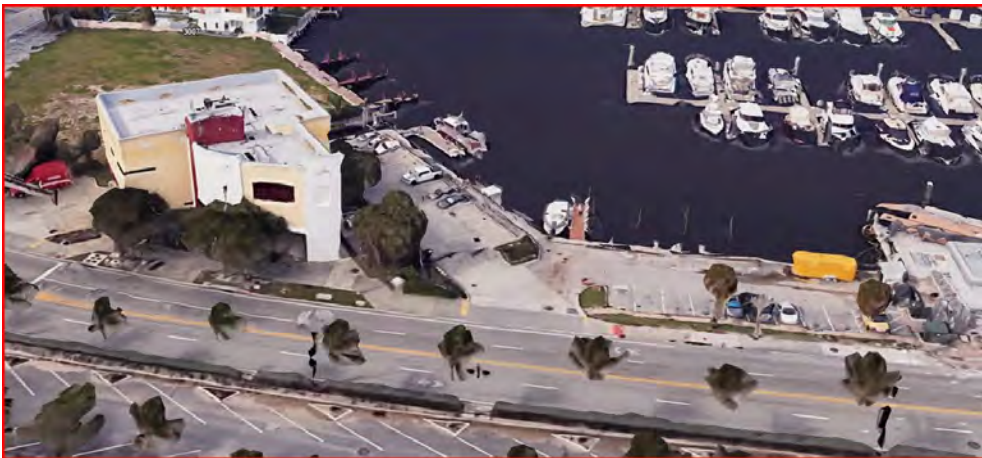
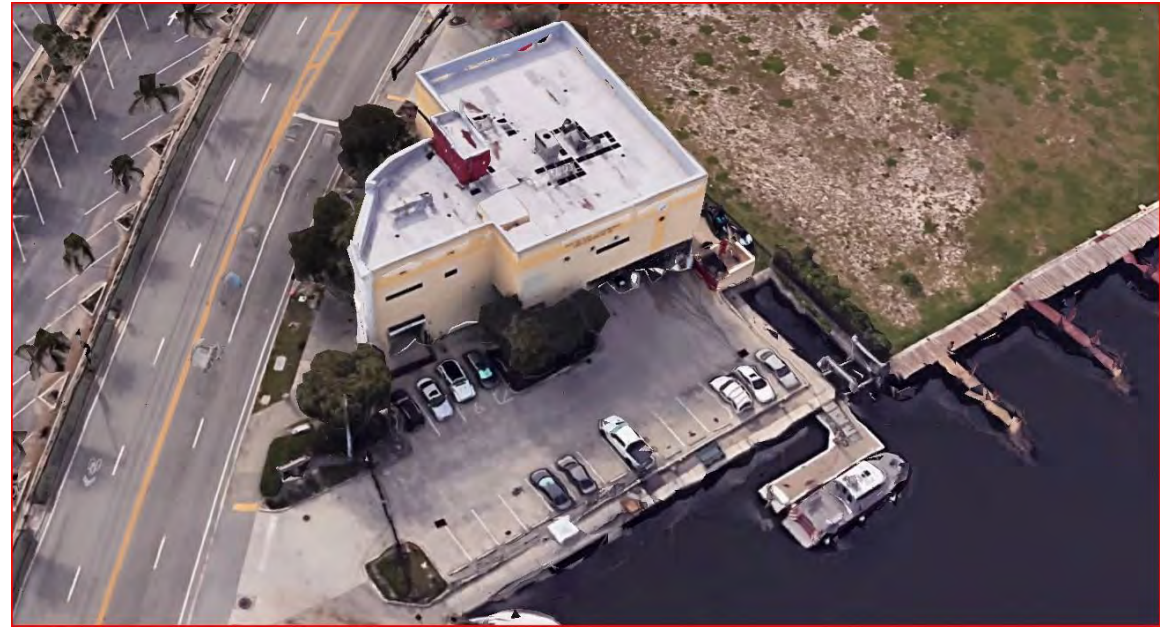
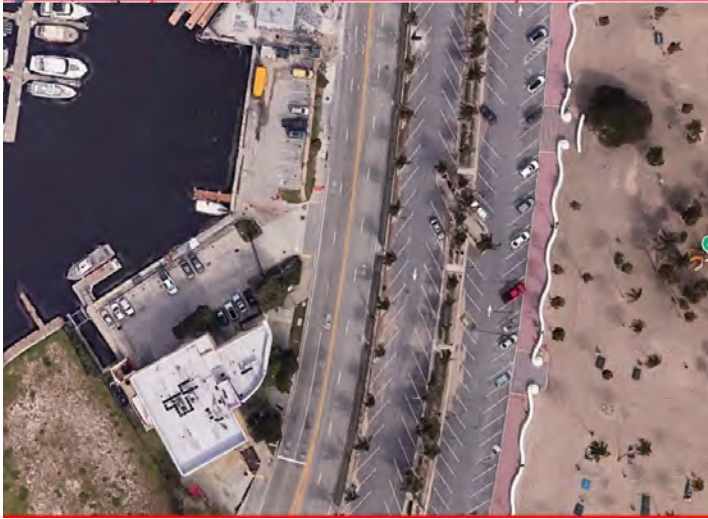
# FTL 05 - Fire Station 46

1515 NW 19th St., Fort Lauderdale, FL 33311



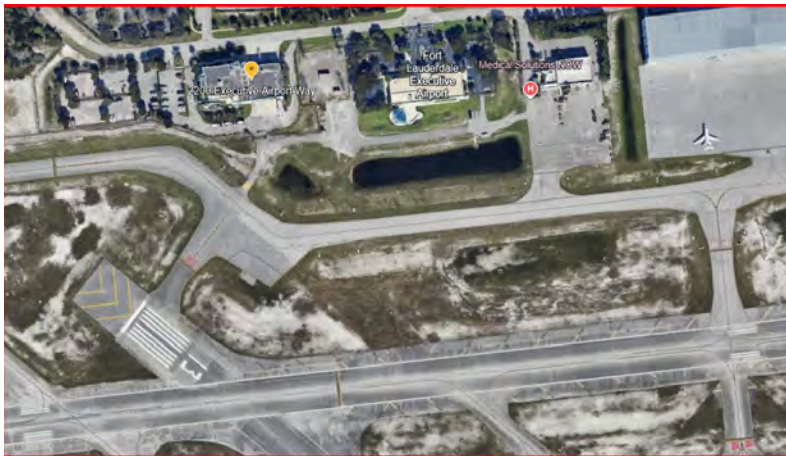
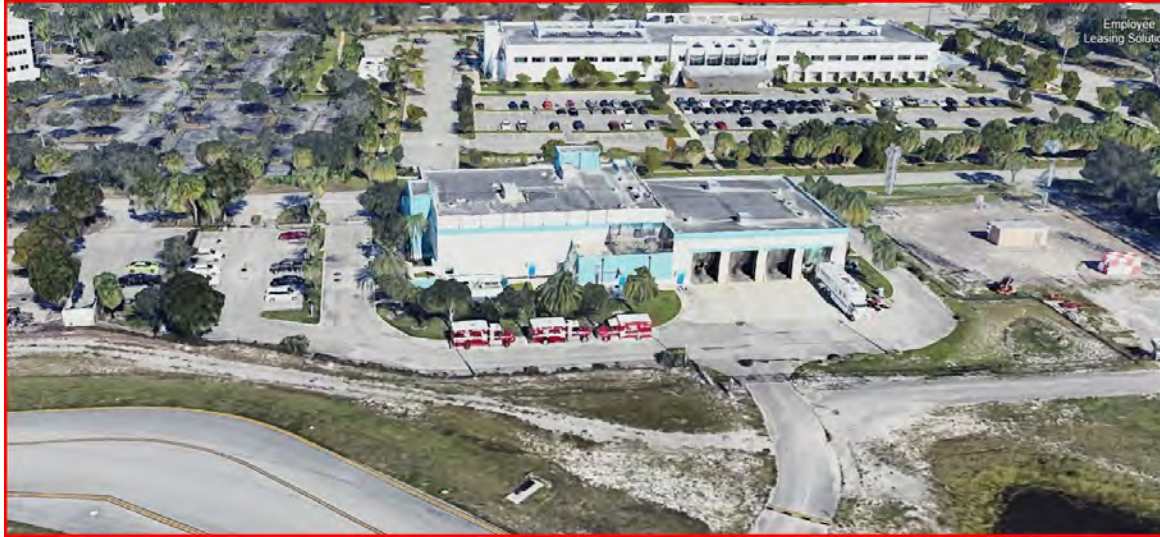
# FTL 06 – Fire Station 49

700 NW 19th Ave., Fort Lauderdale, FL 33311



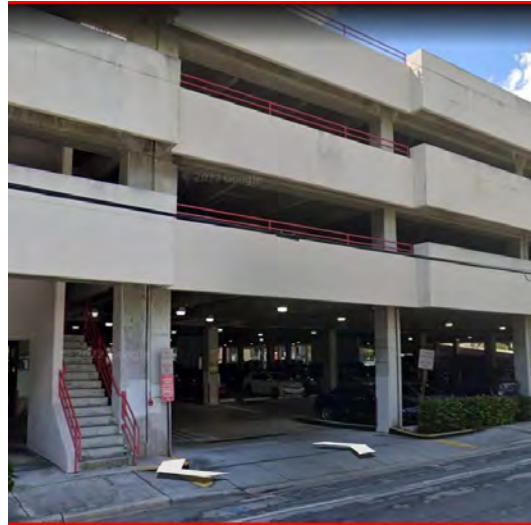
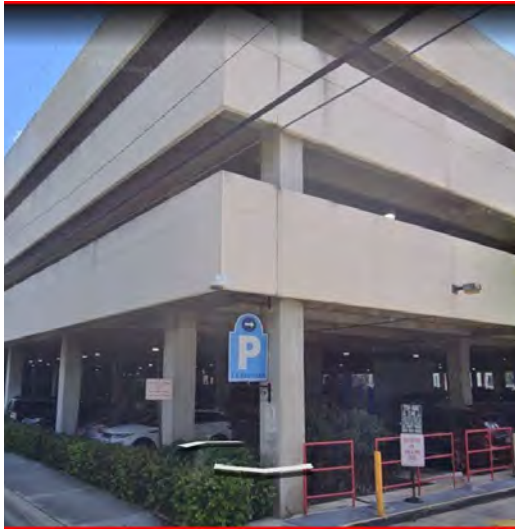
# FTL 07 – Fire Station 53

2200 Executive Airport Way, Fort Lauderdale, FL 33309



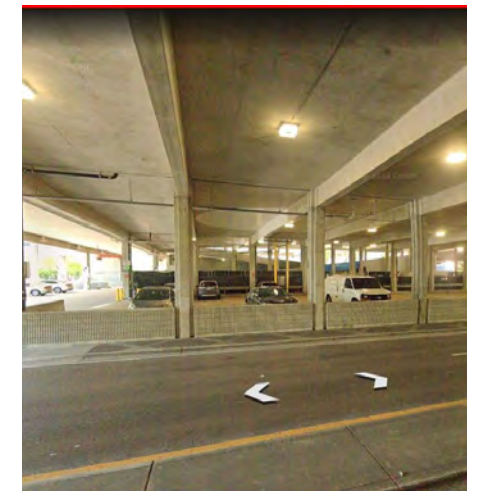
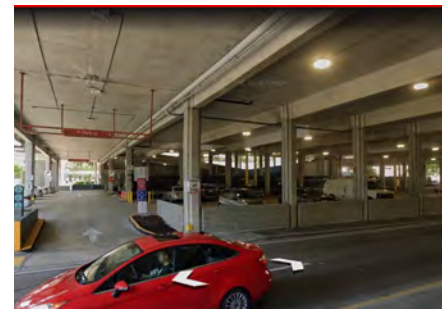
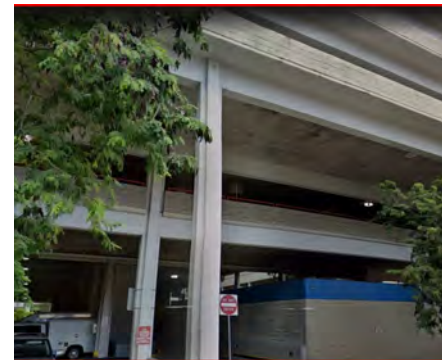
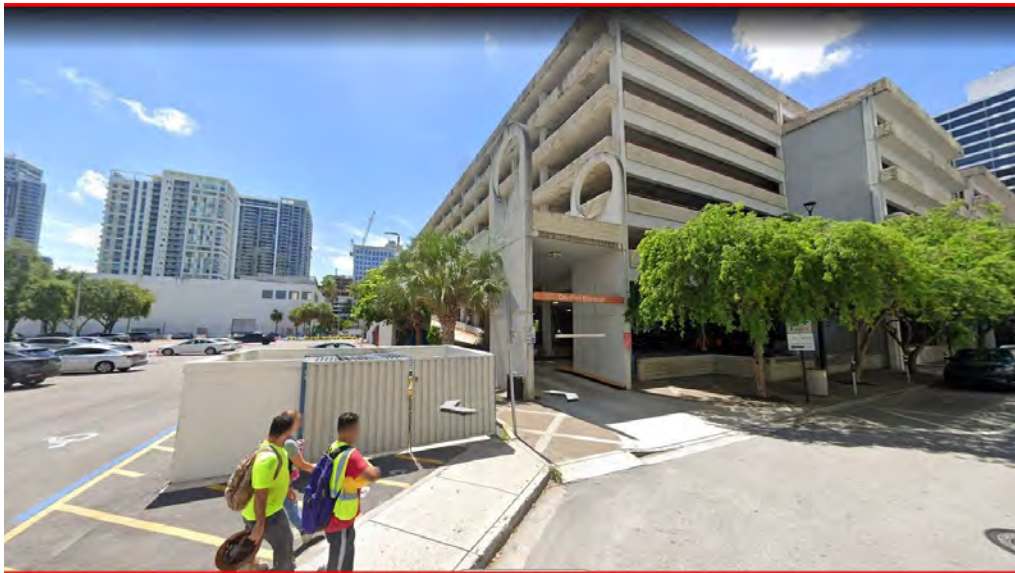
# FTL 08 – City Hall Garage

100 North Andrews Ave., Fort Lauderdale, FL 33301



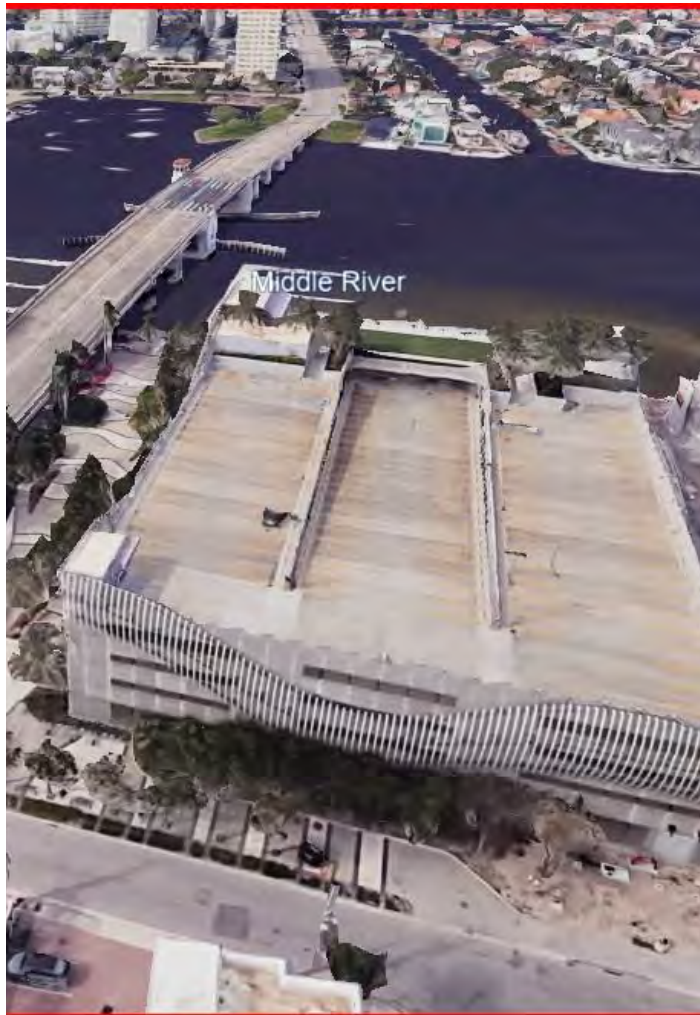
# FTL 09 – Riverwalk Center Garage

150 SE 2nd St, Fort Lauderdale, FL 33301



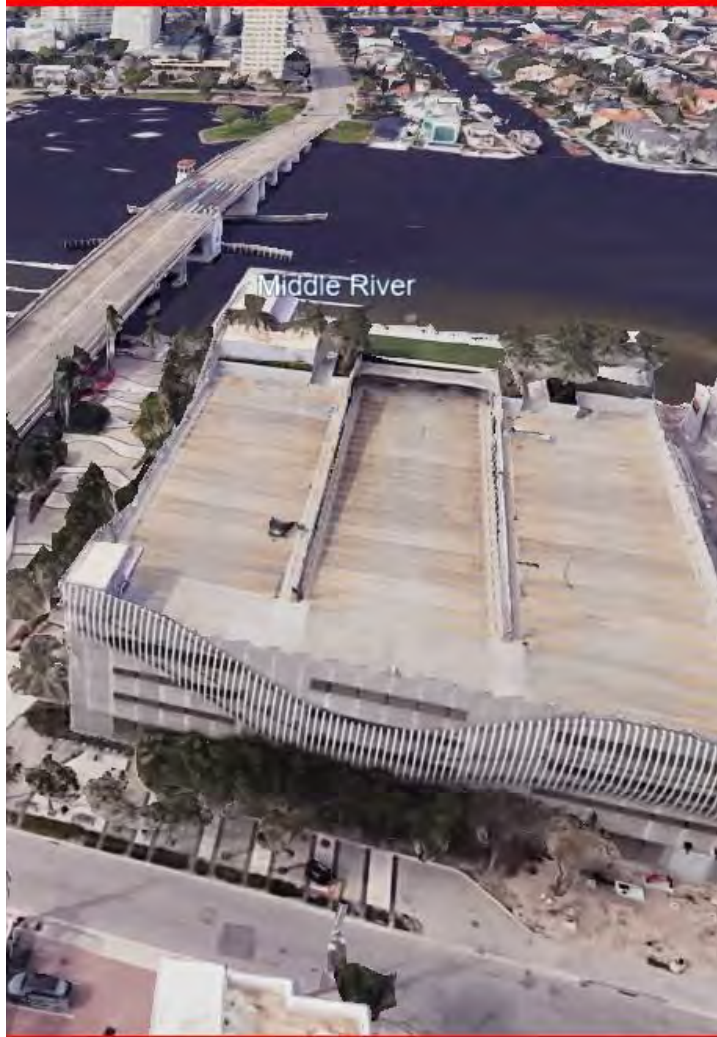
# FTL 10 – Las Olas Garage

200 Las Olas Circle, Fort Lauderdale, FL 33316



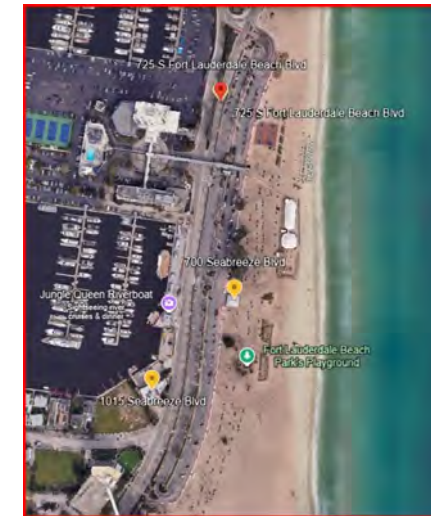
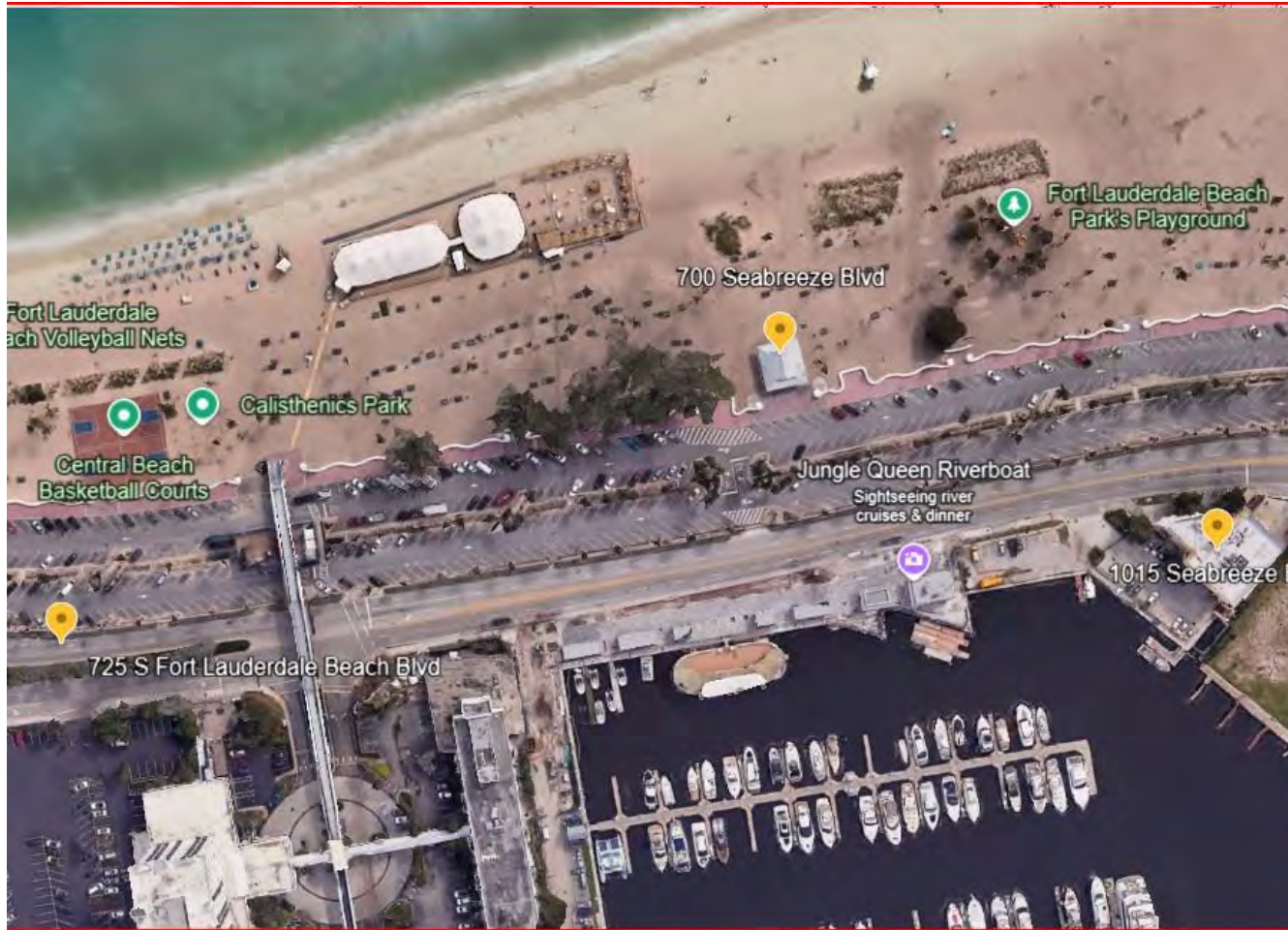
# FTL 11 – Fort Lauderdale Beach Park

725 North Fort Lauderdale Blvd., Fort Lauderdale, FL 33316



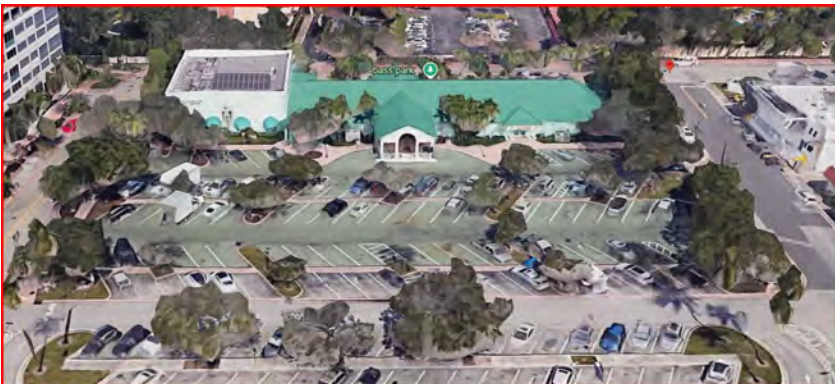
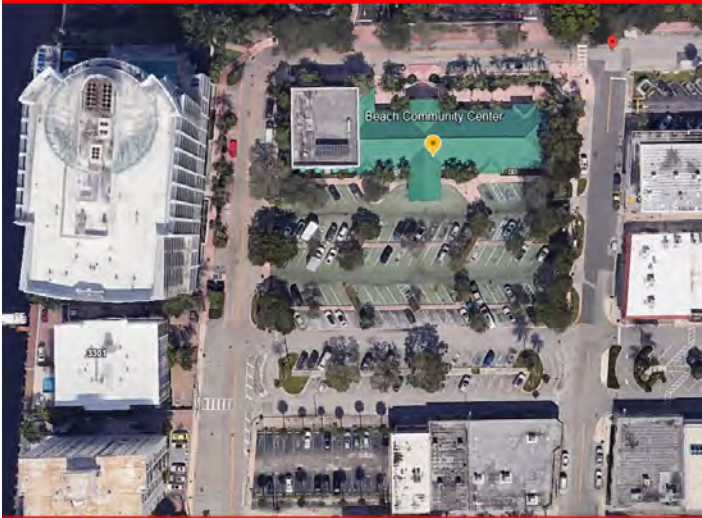
# FTL 12 - North Beach Parking Lot

725 North Fort Lauderdale Blvd., Fort Lauderdale, FL 33316



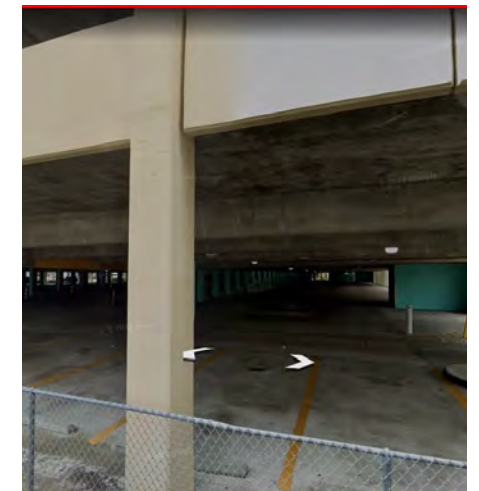
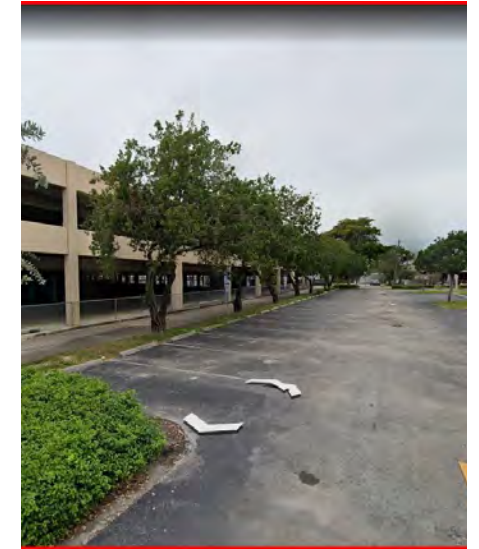
# FTL 13 - Beach Community Center

3551 NE 33rd Ave., Fort Lauderdale, FL 33308



# FTL 14 – Arts and Science Garage

101 SW 5th Ave., Fort Lauderdale, FL 33312



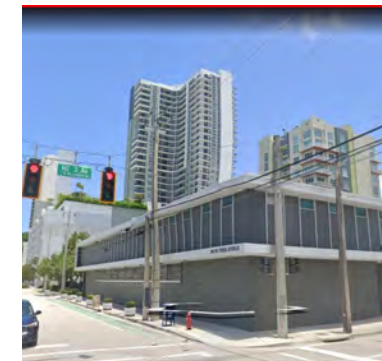
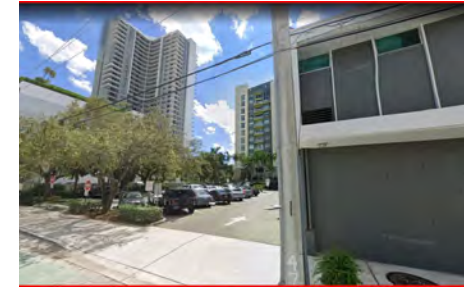
## FTL 15 – Galt Lot

3500 Galt Ocean Dr., Fort Lauderdale, FL 33308



# FTL 16 – Transportation/ Mobility

290 NE 3rd Ave., Fort Lauderdale, FL 33334



# ***Q&A Responses***



## Event ID 387-2 - Specific Q&A Responses

- a. Have you attached documentation confirming that all EV charging hardware and batteries included in this bid are covered by a manufacturer's 5-year warranty?

**Response: Yes, this has been attached in the EV Chargers section.**

- b. Have you attached technical specification sheet(s) for all proposed hardware?

**Response: Yes, this has been attached in the EV Chargers section.**

- c. Regarding technical specifications, can you confirm that your charging stations have at least a 23-foot standard length of cable for each charging station?

**Response: Yes, this is confirmed to utilize a 25-foot length of charging cable in the EV Chargers section.**

- d. Have you attached documentation listing the electrical testing laboratory for your product?

**Response: Yes, this has been attached in the EV Chargers section.**

- e. Have you attached documentation confirming the charging station is outdoor suitable with appropriate NEMA-4 rated enclosure?

**Response: Yes, this has been included in the EV Chargers section.**

- f. If you are only providing installation and maintenance services to the City (excluding providing the EV charger hardware), have you included at least 3 references, including contact information (current email and phone number), and office locations for those servicing the chargers?

**Response: We are providing materials, installation, and maintenance services. We have included our 3 references in the Supplemental Docs section.**

- g. If you are providing maintenance services to the City, have you provided documentation confirming that you can meet the maintenance service requirements outlined in Section 3.4?

**Response: Yes, this has been included in the Pricing section.**

- h. If you are a Contractor providing the EV charging hardware and working with a subcontractor for maintenance, have you provided at least 3 references for both your services and an additional 3 for the subcontractor's services?

**Response: We as Contractor are providing both the charging hardware and maintenance.**

- i. Have you downloaded, read, signed and attached all required forms?

**Response: Yes, these have been attached in the Supplemental Docs section.**



- j. Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached - Anti-Human Trafficking Affidavit Per Florida Statute 787.06 (2024), (13). Florida Statute 787.06 (2024), (13) When a contract is executed, renewed, or extended between a nongovernmental entity and a governmental entity, the nongovernmental entity must provide the governmental entity with an affidavit signed by an officer or a representative of the nongovernmental entity under penalty of perjury attesting that the nongovernmental entity does not use coercion for labor or services as defined in this section. For purposes of this subsection, the term "governmental entity" has the same meaning as in s. 287.138(1).

***Response: Acknowledged. We have included this completed form in the Supplemental Docs section.***

- k. Do you acknowledge that if your firm is awarded this contract, your firm will have to complete and submit the attached Affidavit of Compliance with Foreign Entity Laws Per Florida Statute - §287.138, 692.201, 692.202, 692.203, and 692.204

***Response: Acknowledged. We have included this completed form in the Supplemental Docs section.***

- l. Did you download, read, sign, and re-upload Addendum 1?

***Response: Acknowledged. We have included this completed form in the Supplemental Docs section.***

- m. Did you download, read, sign, and re-upload Addendum 2?

***Response: Acknowledged. We have included this completed form in the Supplemental Docs section.***



# ***EV Chargers***





## Autel Manufacturer Background

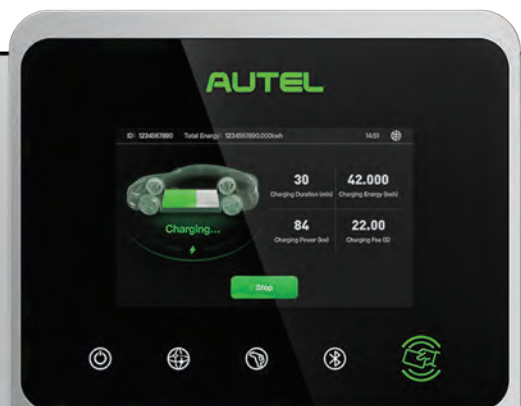
Established in 2004, Autel has become the world's leading provider of advanced automotive diagnostic products and services. By 2024, Autel has rapidly become a best-in-class EV Charging and Energy Solutions manufacturer in the USA. The company offers solutions with the latest diagnostic features, highest quality standards, and best-valued products in the industry.

Autel's diagnostics are unmatched in the industry. Autel can diagnose the draw from the electric vehicle and the electricity provided by the charger to easily determine if a fault is due to the vehicle or if it is a fault with charger. This technology is critical for fleet services to be able to have Florida Supercharge diagnose if the battery is not drawing current or if the charger needs to be replaced.

With the experience of our global brand, and an international presence in over 70 countries, Autel is committed to green energy solutions that combine hardware, software, and support for all our customers' varying needs.

- Autel is a \$1.6 billion company that is the world leader in Automotive Diagnostics
- HQ Long Island for over 20 years
- Manufacturing (NEVI) and Distribution Facility in Greensboro, NC
- Testing, R&D and Experience Center Anaheim, CA

# INTELLIGENT POWER



## MAXICHARGER™ AC WALLBOX COMMERCIAL LEVEL 2 ELECTRIC VEHICLE CHARGER

As the demand for EV charging continues to grow, Autel offers a variety of solutions for commercial applications. With Autel commercial charging, you can now appeal to a broader audience, provide convenient solutions for EV drivers, and adapt to their needs effortlessly.

### KEY FUNCTIONS & FEATURES:

- Safe & Reliable Tested to UL® Standards
- Industry Leading Environmental Resistance Against Water & Dust
- 24/7 Customer Support Line
- Connect with Bluetooth, Wi-Fi, Ethernet Cable or 4G Cellular
- Engineered with the Highest Quality Materials
- Automatic Firmware Updates
- Ergonomic Connector Design for Comfort & Ease of Use
- Flexible Power Output Up to 50A, Adjustable Through Integrated Hardware & Software
- 5-Inch LCD Touch Screen to Easily Control Charging & Monitor Usage
- Easy Installation Process with Expert Support Available
- **Includes 3 Year Warranty**



Smart Charger Capabilities with Autel Cloud Charging Portal to Monitor All Chargers & Control Access Remotely



\*Certification Pending



# AUTEL® MAXICHARGER COMMERCIAL

## PART NUMBER & MODEL

### MAXICHARGER COMMERCIAL C50

AC Wallbox EV Charger

**PART NO. MCC50AHI**

**MODEL NO: MAXI US AC W12-L-4G**

## POWER OUTPUT

ADJUSTABLE  
UP TO  
**50 AMPS**  
& **45 MILES**  
OF RANGE  
PER HOUR

## POWER SUPPLY

HARDWIRED

## SCREEN

INTERACTIVE  
5-INCH LCD  
TOUCH SCREEN

UP TO  
**9X FASTER  
CHARGE**



### REVENUE GENERATION

Smart Software that Allows Flexibility for Station Operators to Collect Fees from EV Drivers.



### CHARGING STATUS INDICATOR LIGHTS

LED Lights on Face of Charger Clearly Indicate the Status of Your Charger.



POWER



INTERNET



CHARGING



BLUETOOTH



### CONNECTIVITY

Autel MaxiCharger C50 Allows for Wi-Fi, Bluetooth, Ethernet or 4G Cellular Connection, Giving You the Flexibility to Connect the Way that Works Best for You.



### WATER & DUST RESISTANCE

Industry-Leading NEMA 4 / IP65 Protection Against Harsh Weather Conditions.



### CABLE LENGTH

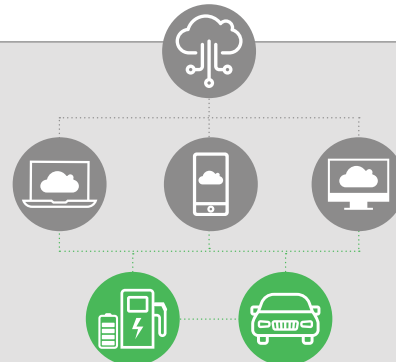
Industry Leading with a Generous 25' Cord to Maximize Reach.

\*MaxiCHARGER Commercial Electric Vehicle AC Charger is a Level 2 Charger - Need 208-240 Volt



## AUTELCLOUD CHARGINGPORTAL

Our network management software lets you track and manage EV charging from your computer or mobile device. This allows you to control station access, pricing along with hours of operation. Smart features like demand response and dynamic load balancing help with reducing operation costs.



## INSTALLATION SMART & EASY

With Autel's experienced nationwide partners, installation is a breeze. Offering personalized assessments, we tailor our process around your specific needs and unique environment.



### EXPERT CONSULTATION:

Our specialized partners will assess the power and location to fit your charging requirements.



### A TRUSTED PARTNER:

If you are working with a preferred local electrician, our experienced team will guide them through every step.



### FLEXIBILITY:

Our charging architecture is adaptable to meet your specific needs.

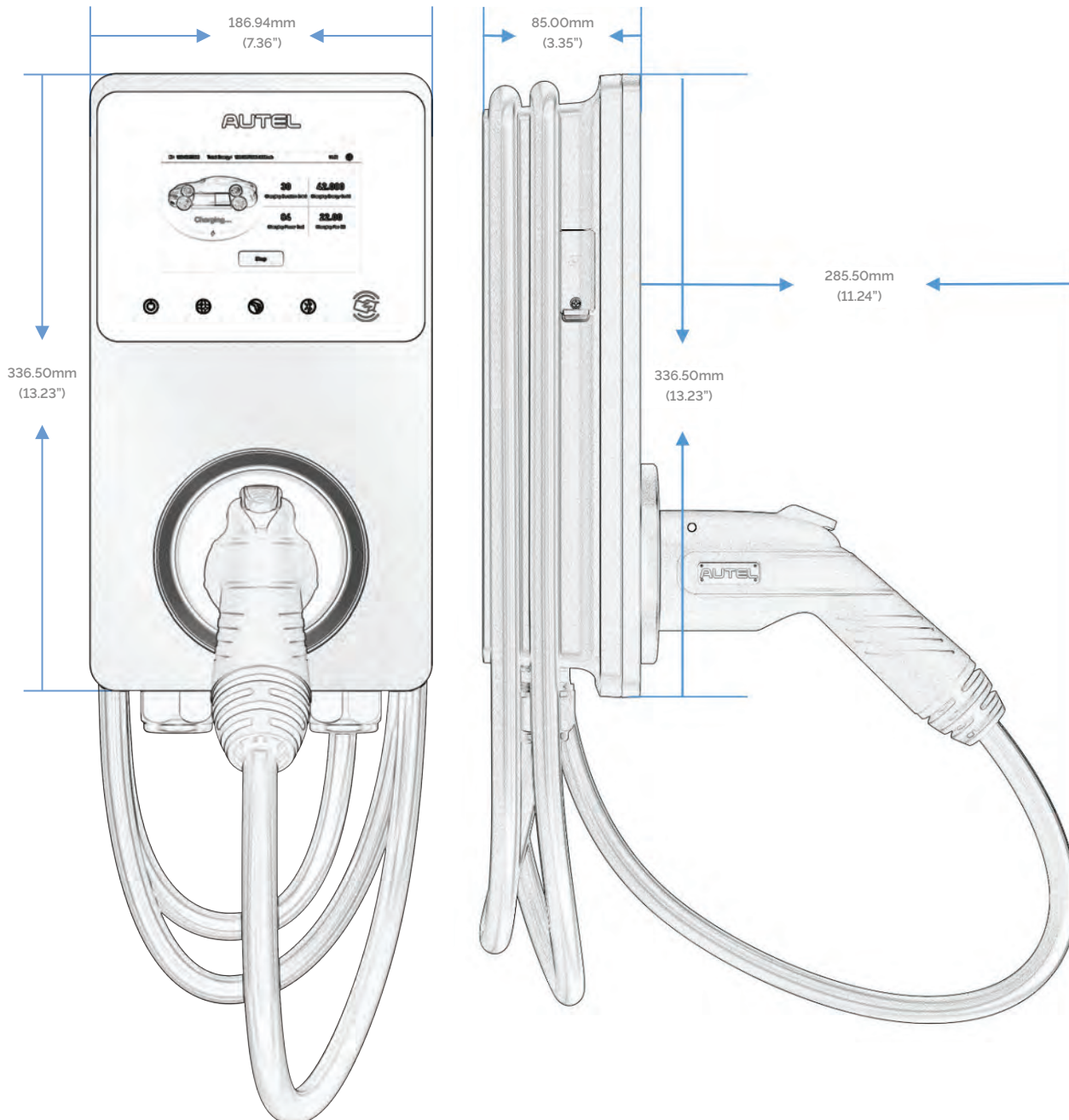


### FUTURE PROOFING:

Providing continuous software updates to meet the latest industry standards.

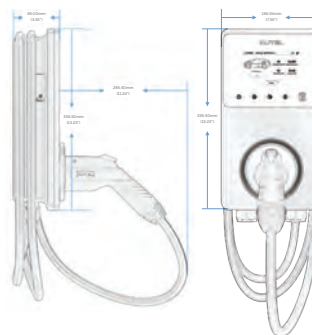
# MAXI**CHARGER**™ AC WALLBOX**COMMERCIAL**

LEVEL 2 ELECTRIC VEHICLE CHARGER  
SPECIFICATIONS



# AUTEL<sup>®</sup> MAXICHARGER™ AC WALLBOX COMMERCIAL

LEVEL 2 ELECTRIC VEHICLE CHARGER



## SPECIFICATIONS

### POWER

INPUT/OUTPUT POWER RATING & CURRENT	12kW (240V AC*50A)
INPUT/OUTPUT VOLTAGE	208V±15%; 240V±15%, 60Hz
NETWORK TYPE	L1/N+PE, L1/L2/PE
INPUT CORD	Hardwired
CONNECTOR TYPE	SAE J1772, 25ft (7.5m)
GROUND FAULT DETECTION	20mA CCID
PROTECTION	Overcurrent, Overvoltage, Undervoltage, Integrated Surge Protection
POWER MEASUREMENT ACCURACY	Full Scale

### OPERATIONAL RATINGS

ENCLOSURE RATING	NEMA 4
OPERATING TEMPERATURE RANGE	-40°F ~+131°F (-40°C ~+55°C)
STORAGE TEMPERATURE RANGE	-40°F ~+185°F (-40°C ~+85 °C)
MOUNTING	Wall Or Floor Using A Pedestal
DIMENSIONS (H×W×D)	336×187×85mm

### USER INTERFACE

STATUS INDICATION	LED/APP/Touch Screen (5 Inch LCD, 800*480)
USER INTERFACE	Autel Charge APP; Autel Charge Cloud
CONNECTIVITY	Bluetooth, Wi-Fi, Ethernet, 4G, CAN, RS485
COMMUNICATION PROTOCOLS	OCPP 1.6J (Can Be Upgraded To OCPP 2.0.1 Later)
USER AUTHENTICATION	APP, RFID Card
CARD READER	ISO 15693, ISO 14443, NFC
SOFTWARE UPDATE	OTA

### CERTIFICATION & STANDARDS

SAFETY & COMPLIANCE	UL 2231-1, UL 2231-2, UL2594, NEC Article 625, CSA C22.2, UL 916
EMC COMPLIANCE	FCC 15 Class B
CERTIFICATION	Energy Star, OpenADR 2.0b
WARRANTY	36 Months, Warranty Extension Available

DESCRIPTION	PART NO.	MODEL NO.	POWER SUPPLY
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MAXICHARGER COMMERCIAL C50

MCC50AHI

MAXI US AC W12-L-4G

HARDWIRED





## AUTEL MAXICHARGER WARRANTY SERVICE

**AUTEL**<sup>®</sup> Powering the Planet

## AUTEL MAXICHARGER WARRANTY SERVICE

Thank you for choosing Autel Energy's MaxiCharger. This Limited Warranty applies to physical goods purchased from Autel. Autel provides global support and availability giving you trouble-free charging. Please contact Autel Tech Support Email ([autelenergy@autel.com](mailto:autelenergy@autel.com)) for further problem consulting.

Please follow the process below prior to calling or emailing our Tech Support.

- Check that all cables are installed correctly and are not loose or have been damaged.
- Make sure connection between charger connector and vehicle is secure.
- Check the vehicle manufacturers charging guidelines (doors may need to be locked and the vehicle alarmed etc.)
- Make sure the vehicle software is the latest version, please refer to the vehicle manufacturer guidelines.
- Make sure the charger is online – we will not be able to remotely access the charger for faults diagnosis if it is not.
- Call Autel Energy Tech Support Hotline (1.844.765.0150)
- Email Autel Energy Tech Support Email ([autelenergy@autel.com](mailto:autelenergy@autel.com)), please take pictures or videos of your concern.
- If we cannot diagnose the fault we will aim to get an engineer to your charge point location to rectify your problem with a replacement or fix the issue

### 1. WARRANTED PRODUCTS

This limited warranty shall only apply to MaxiCharger AC and DC Chargers manufactured by Autel.

### 2. LIMITED WARRANTY

Autel warrants its EV chargers, known as "Autel MaxiCharger Products", including factory-assembled charger sockets, charger plug and cables, to be free from defect in materials and workmanship which would impact the functionality of the product under normal application, installation, use and service conditions.

The duration of this limited warranty is 36 months for AC Charger (DC Charger: 24 months) starting from the date of installation of the first customer, or no longer than 42 months for AC Charger (DC Charger: 30 months) from delivery.

If local compulsory laws and regulations have different stipulations, the provisions of local laws and regulations shall prevail.

Limited product standard warranty as below. Standard warranty is "parts only".

PRODUCT DESCRIPTION	STANDARD WARRANTY	RMA OR REPAIR	WARRANTY EXTENSION
AC Charger Residential	3 Years	RMA*	Optional to Extend to 5 Years**
AC Charger Commercial	3 Years	RMA	Optional to Extend to 5 Years
DC Charger	2 Years	Repair	Optional to Extend to 5 Years

\*The user is responsible for shipment of the charger to Autel, while Autel will cover the shipment of any replacement charger.

### 3. LIMITATIONS & EXCLUSIONS

The aforementioned "Limited Warranty" does not apply to any MaxiCharger which have been subjected to:

- Wear and tear, cosmetic changes of MaxiCharger, such as the cosmetic changes of: outer-casing, socket, scratch on screen, charger plug, connector, cables, etc.
- Not authorized resell or reinstallation by a non-approved company or person.
- Unauthorized repair or modifications.
- Service or install by unqualified technicians under the relevant law at the place of installation.
- Repair with unauthorized spare parts or components of MaxiCharger.
- The extreme-climate conditions or abnormal environmental causes that are out of Autel's control. Including but not limit to: extreme thermal environment, air pollution...etc.
- Damage by natural disasters, such as: flood, fire, lightning, or any other accidents from human causes, vandalism, misuse, normal wear and tear.
- Moving chargers to different locations performed by unauthorized/unqualified installer.
- Defective components in the construction on which the MaxiCharger are mounted.
- Damage caused by vehicle issue.
- Any subsequent costs or losses associated with the MaxiCharger charge point.
- Consumable parts.

### 4. GENERAL CONDITIONS FOR WARRANTY CLAIMS

- Any refurbishment requirement will be issued through the distributor, which the customer bought their MaxiCharger from.
- No warranty periods or terms shall be extended because of a warranty claim or remedy.

- The Limited Warranty will not cover the subsequent costs of refurbishment, except for shipment costs of refurbishment and the spare parts. Shipment costs will follow the Warranty Clause and Cost Belongings of aforementioned. Any uninstall or reinstall is not included.
- If sold through distributor, the distributor should offer the name, installation date, address and Installation address of the end customer along with the copy of purchase agreement or installation agreement.
- The purchase details, including module, and serial number of MaxiCharger, should be offered to Autel before or one-week after the installation.

## 5. DISPUTE REGARDING A MATERIAL DEFECT OR A REDUCED POWER

In case of a dispute regarding the existence of a material defect or reduced power in a warranty claim, Autel will accept the judgment of an accredited testing institute (which can be selected by Autel or the distributor in advance.) Autel will not cover the cost and expenses for the testing.

## 6. FORCE MAJEURE

Any event which is beyond the reasonable control of Autel and which impacts the execution of its obligations under the Agreement, including, but not limited to, natural disasters, extreme weather conditions, fire, riots, war and military operations, national or local emergency situations, acts or negligence of the government, import, export and/or transit prohibitions, economic disputes of any nature whatsoever, strikes or other labour actions, flooding, lightning, explosions, collapses, disruptions in traffic or power networks, the reduced or non-functioning of networks, systems or equipment of third parties as well as any act of negligence of a person or entity which is outside of the reasonable control of Autel.

## 7. VALIDITY

This Limited Warranty shall apply to Autel MaxiCharger Products (s) manufactured after 1st of Dec 2021. This Limited Warranty shall be valid until a new revision is issued by Autel and is subject to change with 3 months prior notice.

## 8. OTHERS

Service cost and other fees will be assessed through each year, which may be changed, the right of determination of the service charge will remain to Autel.

**AUTEL®** Powering the Planet

*Thank you for purchasing this Autel equipment. Our equipment is manufactured to a high standard and — when used according to these instructions and properly maintained — will provide years of trouble-free performance.*

#### **IMPORTANT:**

- Before operating or maintaining the equipment, please read these instructions carefully, and pay extra attention to the safety warnings and precautions. Failure to install or use this equipment properly may cause damage and/or personal injury and will void the product warranty.
- This guide is a supplement to the MaxiCharger AC Wallbox series manuals, and the installation instructions on location selection and wiring, etc. must be adhered to.
- This guide applies to both the single and back-to-back pedestal installation.
- The pedestal described in this guide is only applicable to rear entry wiring.

#### **WARNING**

- This equipment should only be installed by a licensed electrician and in accordance with local codes and ordinances. You may need to adjust the guidelines provided in this guide to comply with codes that apply at your installation location.
- Handle the equipment with care during transportation to prevent damage to it or any components. Do not subject the equipment to strong external forces such as: Drop, pull, twist, tangle, or step on the equipment.
- The respective national regulations must be observed with regard to the installation of the pedestal.
- When mounting the pedestal in parking spaces or parking garages, appropriate anti-collision protection must be provided by the installer.

## Preparing for Installation

#### **IMPORTANT:**

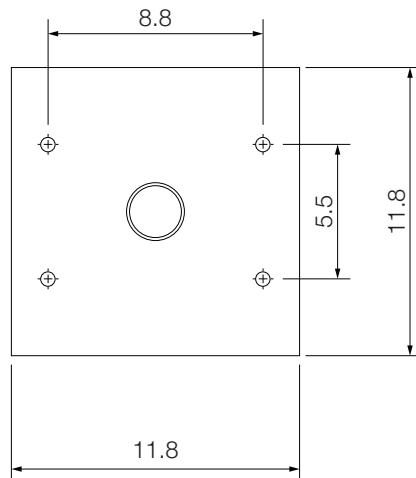
- A flat, level, and structurally sound concrete surface is required for installation. To ensure safe and permanent anchoring, the concrete strength level should be above C30.
- The surface must allow any water that has entered the base to be expelled easily.
- The outer diameter of conduit must not exceed 2.4" (60 mm).
- Conduit stub-up should not be higher than 3.9" (100 mm) above the surface.
- All cables must be laid precisely in the center of the concrete surface from the base and should have approximately 5 ft. (1.5 m) excess length for the remaining installation activities.
- Verify that the PE wires for the grounding rod and conduit are readily available.

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**NOTE:** If a foundation is needed, refer to Preparing a Foundation (Optional) on page 7 for construction instructions.

---

1. Place the pedestal on the concrete surface, aligning the central hole of the pedestal base with the conduit stub-up.
2. Mark the four mounting holes on the concrete surface using the base plate of the pedestal as a guide.
3. Drill the four mounting holes with 1/2 inch (12 mm) in diameter and 2½ inches (60 mm) in depth.

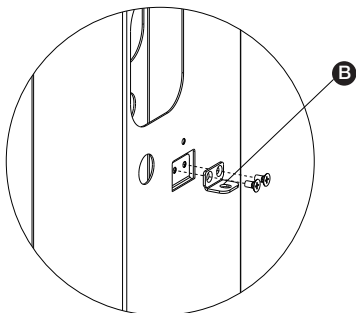


(Unit: inch)

# Installing the Pedestal

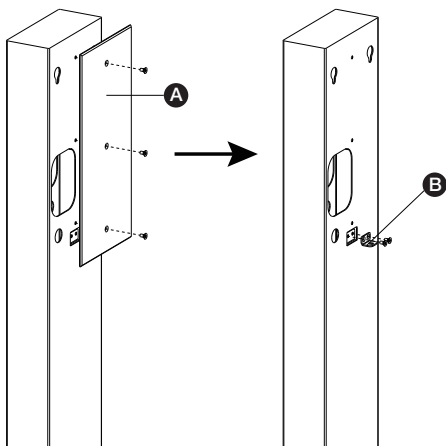
Optional

1

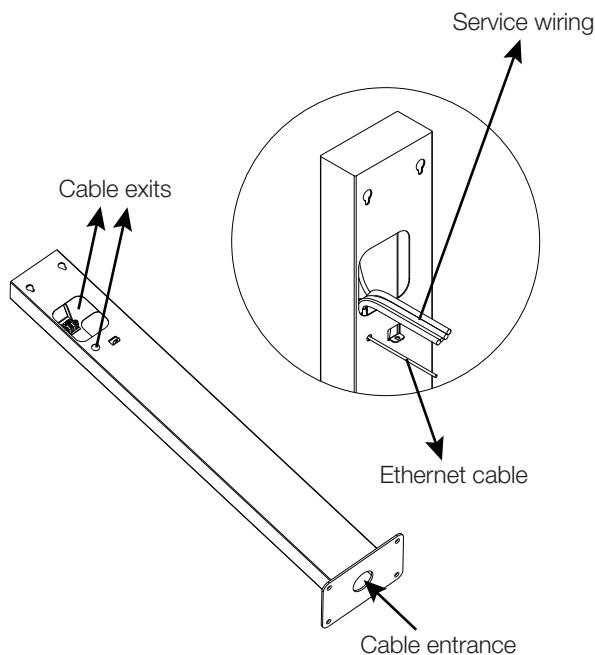


## For back-to-back installation

Remove the rear cover (A) by unscrewing the three screws, and install the fixing lug (B) by using the two M4 x 8 screws.

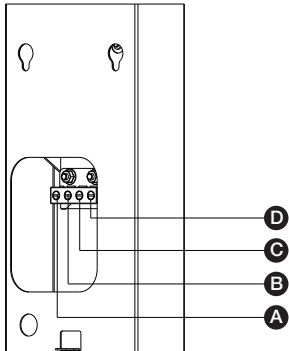


2



Lay the pedestal flat. Thread the cables through the bottom of the pedestal and out the cable exits.

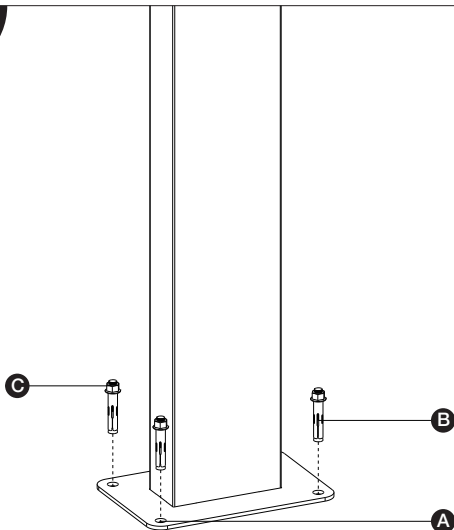
3



Loosen the set screws at the terminal block to 1/4 inch (6 mm) to connect the PE wire for the charger (A), the PE wire for the conduit (B), the PE wire for the pedestal (C), and the PE wire for the second charger (D, only applicable in the case of back-to-back installation), respectively, according to the diagram.

**NOTE:** For PE wires, we recommend you use copper conductors with the maximum wire size of 6 AWG (16 mm<sup>2</sup>).

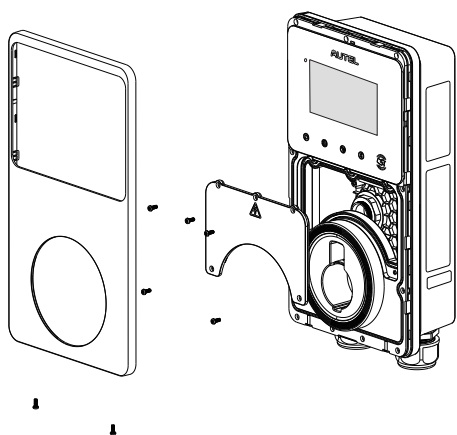
4



Align the pedestal with the four marked mounting holes (A). Install four M10 x 60 bolts (B) into the holes to anchor the pedestal and tighten the four nuts (C). Ensure the pedestal is level.

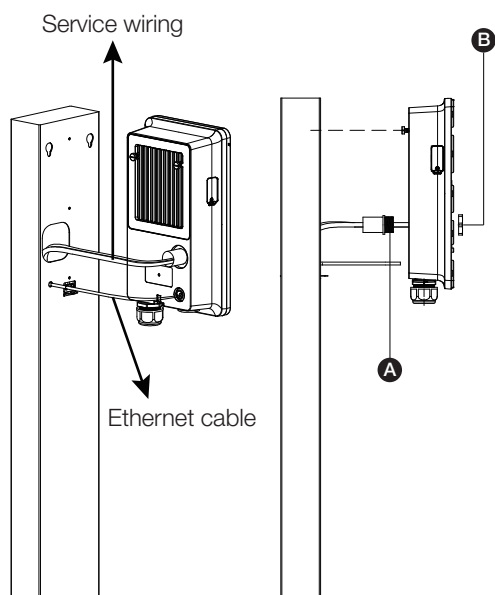
## Mounting the Charger

1

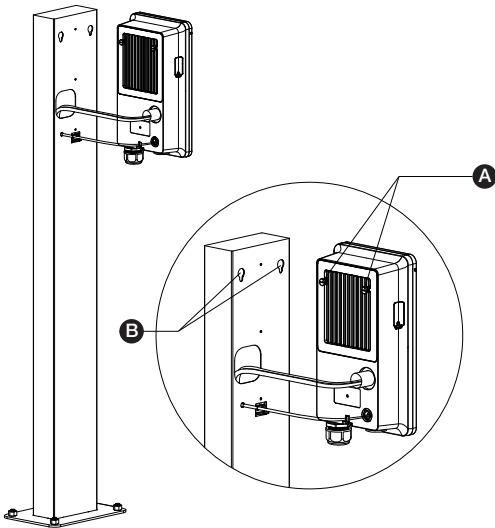


Remove the covers from the charger by removing the screws using the type T10 screwdriver.

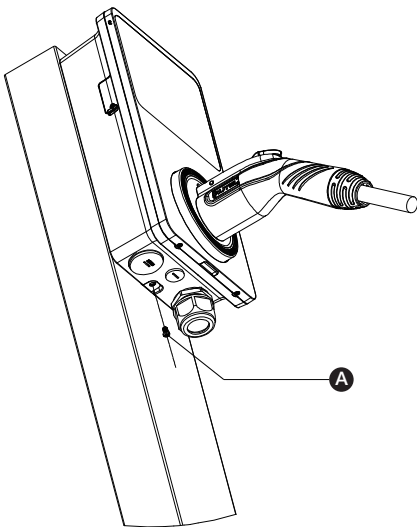
2



1. Remove the rear entry power conduit plug from the charger and replace it with the 3/4" conduit fitting (A) (not included in the package).
2. Insert the service wiring into the conduit fitting and attach the conduit fitting to the charger.
3. Screw the nut (B) into the conduit fitting.
4. Pierce the rubber grommet and push the Ethernet cable through it.
5. Remove the lower-left cable gland and connect the bottom entry power conduit plug to the charger.



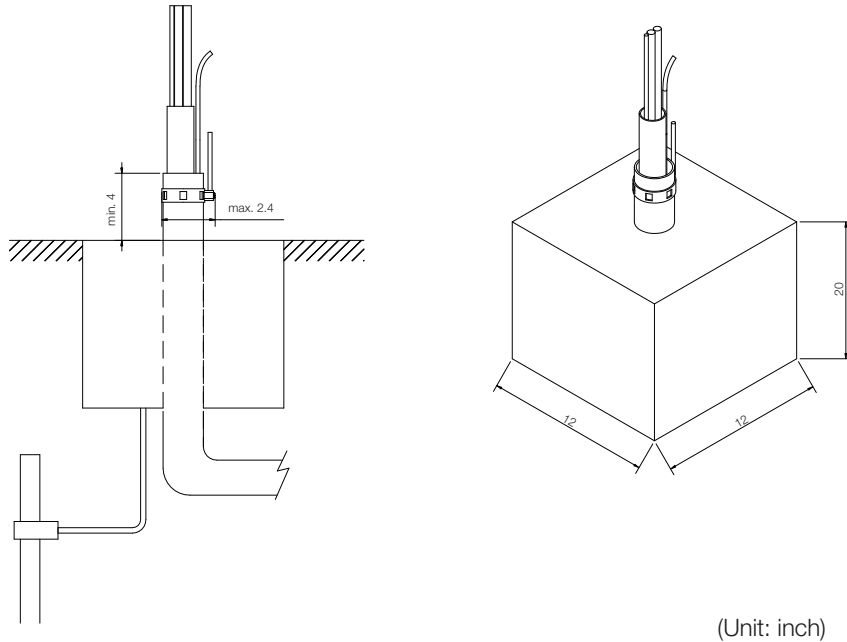
1. Mount the charger to the pedestal by inserting the mounting screws (A) on the back of the charger into the two mounting holes (B). Slide the charger downwards.



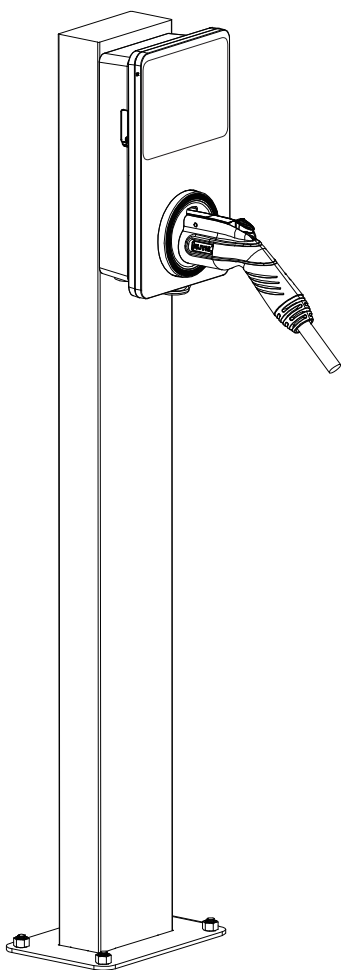
2. Refer to your charger's Quick Reference Guide or User Manual to complete the power supply wiring and the Ethernet cable connection. Reinstall the covers and tighten the screws.
3. Screw the M5 x 12 screw (A) into the hole at the bottom of the charger and tighten the screw to secure the charger using the type T25 screwdriver.

## Preparing a Foundation (Optional)

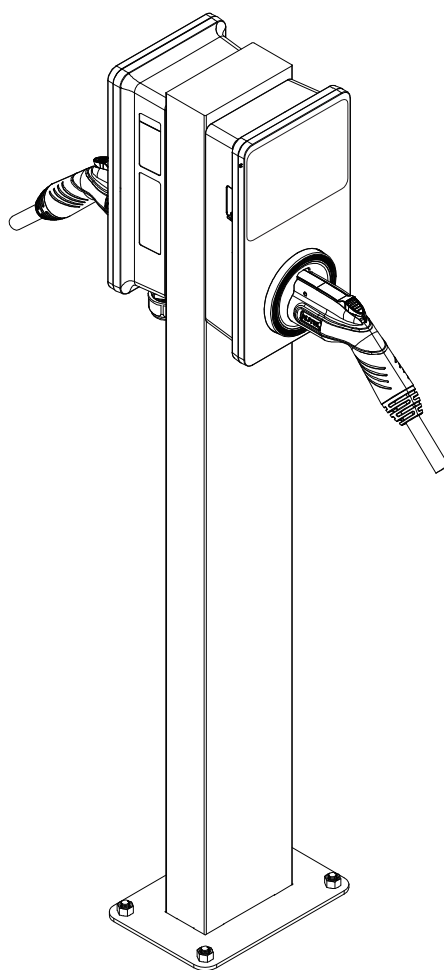
1. Dig a hole according to the foundation dimensions. The recommended dimensions of the hole are 12" x 12" x 20" (300 x 300 x 500 mm) (L x W x H).
2. Trench and excavate an opening to accommodate the wiring conduit.



3. Run the conduit to the designated location.
4. Pour the uncured concrete into the hole and wait until the concrete has hardened.
5. Pull the wiring up through the conduit, leaving approximately 5 ft. (1.5 m) excess length for the remaining installation activities.



**Single Pedestal**



**Back-to-back Pedestal**



# Certificate of Compliance

Certificate: 80108446

Master Contract: 302511


Project: 80128661

Date Issued: June 11, 2022

Issued To: Autel New Energy Co., Ltd  
Room 101, Building B2, Zhiyuan, No. 1001 Xueyuan Avenue, Changyuan Community,  
Taoyuan Roag, Nanshan District  
Shenzhen, Guangdong, 518055  
China

*The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.*



Issued by:   
Richard Li

## PRODUCTS

CLASS - C531112 - POWER SUPPLIES Systems Equipment for Electric Vehicles

CLASS - C531192 - POWER SUPPLIES Electric Vehicle Chargers/Systems - Certified to US Standards

Electric Vehicle Supply Equipment (EVSE)			
Model:	Maxi US AC W7-N14-H, Maxi US AC W7-N14, Maxi US AC W7-N6, Maxi US AC W7-N6-H	Maxi US AC W10-N14-H, Maxi US AC W10-N6-H, Maxi US AC W10-N6, Maxi US AC W10-N14	Maxi US AC W12-H, Maxi US AC W12, Maxi US AC W12-L-4G
Nominal input voltage (Vac):	208 Vac or 240 Vac	208 Vac or 240 Vac	208 Vac or 240 Vac
Nominal input frequency (Hz):	60 Hz	60 Hz	60 Hz
Nominal input current (A):	32 A	40 A	50 A
Output voltage (Vac):	208 Vac or 240 Vac	208 Vac or 240 Vac	208 Vac or 240 Vac
Max. continuous output current (A):	32 A	40 A	50 A
Max. continuous output power (kW):	7 kW	9.6 kW	12 kW



**Certificate:** 80108446  
**Project:** 80128661


**Master Contract:** 302511  
**Date Issued:** June 11, 2022

Operating ambient temperatures:	-40 °C to +55 °C (-40 °F to 131 °F)
Enclosure type:	Type 4

### **APPLICABLE REQUIREMENTS**

*UL 2594	-	Electric Vehicle Supply Equipment (Second Edition, Dated December 21, 2016)
*CSA C22.2 No. 280-16	-	Electric vehicle supply equipment
*Note:		
(1)	Conformity to UL 2594 (Second Edition, Dated December 21, 2016), includes compliance with applicable requirements of UL 2231-1 (Second Edition, Dated September 16, 2021) and UL 2231-2 (Second Edition, Dated December 15, 2020);	
(2)	Conformity to CSA C22.2 No. 280-16, includes compliance with applicable requirements of CSA C22.2 No. 281.1-12 (reaffirmed 2017) and CSA C22.2 No. 281.2-12 (reaffirmed 2017);	
(3)	The functional safety has been evaluated according to applicable requirement of UL 1998 (Edition 3), UL 991 (Edition 3) and CSA C22.2 No. 0.8:19 as required by the end product standards.	

### **Notes:**

Products certified under Class C531112 have been certified under CSA's ISO/IEC 17065 accreditation with the Standards Council of Canada (SCC). <a href="http://www.scc.ca">www.scc.ca</a>	
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ENERGY STAR CERTIFIED

# Electric Vehicle Chargers

## AUTEL - Maxi UF19L101 : Maxi UF19L101

### Specifications

Brand Name:	AUTEL
Model Name:	Maxi UF19L101
Model Number:	Maxi UF19L101
ENERGY STAR Unique ID:	2500043
ENERGY STAR Partner:	Autel Digital Power Co., Ltd.
Product Type:	Level 2
Input Voltage (V):	240
Max Nameplate Output Current (A):	80
Maximum Output Power (kW):	19.2
Number of Outputs:	1
Maximum Output Cord Length (ft.):	25
Output Cord Gauge (AWG):	6
Maximum (100%) Measured Luminance of the High Res Display (candelas per m2):	905.0
Network Protocol with Wake Capability:	Wi-Fi or Gigabit Ethernet
Automatic Brightness Control (ABC) Capable?:	No
Screen Area, if EVSE has high res display (in2):	27.2
15 A Operation Mode Test: Total Loss (watts):	30.0
30 A Operation Mode Test: Total Loss (watts):	30.0
4 A Operation Mode Test: Total Loss (watts):	10.0
Full Current Operation Mode Test: Total Loss (watts):	220.0
Idle Mode Input Power (watts):	20.1
Idle Mode Power Factor:	0.42
Idle Mode Total Allowance (watts):	39.62
No Vehicle Mode Input Power (watts):	5.9
No Vehicle Mode Power Factor:	0.27
No Vehicle Mode Total Allowance (watts):	7.62
Partial On Mode Input Power (watts):	6.84
Partial On Mode Power Factor:	0.28
Partial On Mode Total Allowance (watts):	7.62

<b>Date Certified:</b>	2023-05-25
<b>Date Available on Market:</b>	2023-05-25
<b>Markets:</b>	United States, Canada
<b>ENERGY STAR Certified:</b>	Yes

## Additional Model Information

,Maxi UF19C101,

**UPC Codes**

**Captured On:**  
05/30/2023



# TECHNICAL ACCEPTANCE CERTIFICATE



Certificate Validation

## TECHNICAL ACCEPTANCE CERTIFICATE

**28321-AUTELNEACL / 16 Jun 2022 / Rev A**

**for Innovation, Science and Economic Development (ISED) Canada**

MiCOM Labs Inc. declares, on the basis of the assessment of the tests and the technical documentation provided by the applicant that the following product complies with the requirements of the above noted regulator.

Product Marketing Names:

**MaxiCharger AC Wallbox Commercial, MaxiCharger AC Wallbox Home**

Applicant Name:

**Autel New Energy Co., Ltd.**

I hereby attest that the subject equipment was tested and found in compliance with the below noted specification.  
J'atteste, par la présente, que le matériel a fait l'objet d'essai et a été jugé conforme à la spécification ci-dessous.



  
**Gordon Hurst, Product Certifier**

This Certificate is Issued under the Authority of:

**MiCOM Labs Inc., 575 Boulder Court, Pleasanton, California 94566, USA**

FCB Number: US0159



# TECHNICAL ACCEPTANCE CERTIFICATE

28321-AUTELNEACL / 16 Jun 2022 / Rev A

for Innovation, Science and Economic Development (ISED)

Product Marketing Names:

**MaxiCharger AC Wallbox Commercial, MaxiCharger AC Wallbox Home**

Unique Product Number: **AUTELNEACL**

**Applicant:** **Autel New Energy Co., Ltd.**, Room 101, Building B2, Zhiyuan, No.1001 Xueyuan Avenue, Changyuan Community, Taoyuan Road, Nanshan District, Shenzhen, 518055, China; **CN Number: 28321**

**ISED Representative:** **STARIVER TECHNOLOGY AND CONSULTING COMPANY**, 214 KEYROCK DR., Kanata, ON K2T 0B5, Canada; **CN Number: 21480**

**Test Lab:** **Shenzhen BALUN Technology Co., Ltd.**, Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong, 518055, P.R. China

Wireless Test Site	Open Area Test Site	SAR Test Site	Terminal Test Site
11524A	--	--	--

## Technical Details

Specification	Issue	Technology	Frequency Range		Emission Designator	Power		Type	Field Strength
			From	To		Min.	Max.		
RSS-247	2	GFSK	2402MHz	2480MHz	857KF1D--	--	0.00095W	Conducted	--
RSS-247	2	pi/4-DQPSK	2402MHz	2480MHz	1M13G1D--	--	0.00095W	Conducted	--
RSS-247	2	8-DPSK	2402MHz	2480MHz	1M14G1D--	--	0.00092W	Conducted	--
RSS-210	10	ASK	13.56MHz	13.56MHz	23K6K1D--	--	--	--	59.12dBuV/m @ 3m
RSS-133	6	WCDMA B2	1852.4MHz	1907.6MHz	4M12F9W--	--	0.899W	EIRP	--
RSS-139	3	WCDMA B4	1712.4MHz	1752.6MHz	4M11F9W--	--	0.899W	EIRP	--
RSS-132	3	WCDMA B5	826.4MHz	846.6MHz	4M14F9W--	--	0.452W	ERP	--
RSS-133	6	B2 QPSK 20M	1860MHz	1900MHz	17M9G7D--	--	0.711W	EIRP	--
RSS-133	6	B2 QPSK 20M	1860MHz	1900MHz	17M9W7D--	--	0.587W	EIRP	--
RSS-133	6	B2 16QAM 3M	1851.5MHz	1908.5MHz	2M70W7D--	--	0.596W	EIRP	--
RSS-139	3	B4 QPSK 20M	1720MHz	1745MHz	17M9G7D--	--	0.624W	EIRP	--
RSS-139	3	B4 16QAM 20M	1720MHz	1745MHz	17M9W7D--	--	0.527W	EIRP	--
RSS-139	3	B4 QPSK 1.4M	1710.7MHz	1754.3MHz	1M09G7D--	--	0.638W	EIRP	--
RSS-139	3	B4 16QAM 15M	1717.5MHz	1747.5MHz	13M4W7D--	--	0.558W	EIRP	--
RSS-132	3	B5 QPSK 10M	829MHz	844MHz	8M97G7D--	--	0.455W	ERP	--
RSS-132	3	B5 16QAM 10M	829MHz	844MHz	8M97W7D--	--	0.343W	ERP	--
RSS-132	2	B5 16QAM 1.4M	824.7MHz	848.3MHz	1M09W7D--	--	0.362W	ERP	--
RSS-130	2	B12 QPSK 10M	704MHz	711MHz	8M96G7D--	--	0.39W	ERP	--
RSS-130	2	B12 16QAM 10M	704MHz	711MHz	8M95W7D--	--	0.299W	ERP	--
RSS-130	2	B12 QPSK 1.4M	699.7MHz	715.3MHz	1M09G7D--	--	0.403W	ERP	--

Certification of equipment means only that the equipment has met the requirements of the above-noted specification. Licence applications, where applicable to use certified equipment, are acted on accordingly by the ISED issuing office and will depend on the existing radio environment, service and location of operation. This certificate is issued on condition that the holder complies and will continue to comply with the requirements and procedures issued by ISED. The equipment for which this certificate is issued shall not be manufactured, imported, distributed, leased, offered for sale or sold unless the equipment complies with the applicable technical specifications and procedures issued by ISED.

La certification du matériel signifie seulement que le matériel a satisfait aux exigences de la norme indiquée ci-dessus. Les demandes de licences nécessaires pour l'utilisation du matériel certifié sont traitées en conséquence par le bureau de délivrance d'ISDE et dépendent des conditions radio ambiantes, du service et de l'emplacement d'exploitation. Le présent certificat est délivré à la condition que le titulaire satisfasse et continue de satisfaire aux exigences et aux procédures d'ISDE. Le matériel à l'égard duquel le présent certificat est délivré ne doit pas être fabriqué, importé, distribué, loué, mis en vente ou vendu à moins d'être conforme aux procédures et aux spécifications techniques applicables publiées par ISDE.



# TECHNICAL ACCEPTANCE CERTIFICATE

28321-AUTELNEACL / 16 Jun 2022 / Rev A

for Innovation, Science and Economic Development (ISED)

## Technical Details - Continued

Specification	Issue	Technology	Frequency Range		Emission Designator	Power		Field Strength
			From	To		Min.	Max.	Type
RSS-130	2	B12 16QAM 1.4M	699.7MHz	715.3MHz	1M09W7D--	--	0.335W	ERP
RSS-130	2	B13 QPSK 10M	782MHz	782MHz	8M94G7D--	--	0.366W	ERP
RSS-130	2	B13 16QAM 10M	782MHz	782MHz	8M93W7D--	--	0.29W	ERP
RSS-130	2	B13 QPSK 5M	779.5MHz	784.5MHz	4M51G7D--	--	0.377W	ERP
RSS-130	2	B13 16QAM 5M	779.5MHz	784.5MHz	4M50W7D--	--	0.295W	ERP
RSS-140	1	B14 QPSK 10M	793MHz	793MHz	8M95G7D--	--	0.385W	ERP
RSS-140	1	B14 16QAM 10M	793MHz	793MHz	8M93W7D--	--	0.3W	ERP
RSS-140	1	B14 QPSK 5M	790.5MHz	795.5MHz	4M50G7D--	--	0.386W	ERP
RSS-140	1	B14 16QAM 5M	790.5MHz	795.5MHz	4M51W7D--	--	0.303W	ERP
RSS-139	3	B66 QPSK 20M	1720MHz	1770MHz	17M9G7D--	--	0.619W	EIRP
RSS-139	3	B66 16QAM 20M	1720MHz	1770MHz	17M9W7D--	--	0.547W	EIRP
RSS-139	3	B66 QPSK 1.4M	1710.7MHz	1779.3MHz	1M09W7D--	--	0.682W	EIRP
RSS-139	3	B66 16QAM 15M	1717.5MHz	1772.5MHz	13M4W7D--	--	0.552W	EIRP
RSS-130	2	B71 QPSK 20M	673MHz	688MHz	17M9G7D--	--	0.469W	ERP
RSS-130	2	B71 16QAM 20M	673MHz	688MHz	17M9W7D--	--	0.375W	ERP
RSS-130	2	B71 16QAM 15M	670.5MHz	690.5MHz	13M4W7D--	--	0.424W	ERP
Cahiers des charges	Numéro de la version	Technologie	Gamme de fréquence		Désignatif d'émission	Puissance		Intensité de champ

### Technical Acceptance Certificate

### Certificat D'acceptabilité Technique

Company Name	Autel New Energy Co., Ltd.		Nom de l'entreprise
Certification No.	28321-AUTELNEACL		No. De certification
Issue Date / Rev	16 Jun 2022 / Rev A		Date D'émission / Rev
Equipment Description	MaxiCharger AC Wallbox Commercial, MaxiCharger AC Wallbox Home		Description de l'équipement
Type of Equipment	other		Type de matériel

Product Marketing Name (PMN) Nom du produit Marketing	Host Marketing Name (HMN) Nom de l'hôte marketing	Hardware Version Identification Number (HVIN) Version Hardware numéro d'identification	Firmware Version Identification Number (FVIN) Firmware Version numéro d'identification
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W12-L-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W12-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W10-N14-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W10-N6-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W7-N14-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W7-N6-4G	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W12-4G-H	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W10-N14-4G-H	--



# TECHNICAL ACCEPTANCE CERTIFICATE

28321-AUTELNEACL / 16 Jun 2022 / Rev A

for Innovation, Science and Economic Development (ISED)

Product Marketing Name (PMN) Nom du produit Marketing	Host Marketing Name (HMN) Nom de l'hôte marketing	Hardware Version Identification Number (HVIN) Version Hardware numéro d'identification	Firmware Version Identification Number (FVIN) Firmware Version numéro d'identification
MaxiCharger AC Wallbox Home	--	Maxi US AC W10-N6-4G-H	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W7-N14-4G-H	--
MaxiCharger AC Wallbox Home	--	Maxi US AC W7-N6-4G-H	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W10-N14-L-4G	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W10-N6-L-4G	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W7-N14-L-4G	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W7-N6-L-4G	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W12-L- 4G-H	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W10-N14-L-4G-H	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W10-N6-L-4G-H	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W7-N14-L-4G-H	--
MaxiCharger AC Wallbox Commercial	--	Maxi US AC W7-N6-L-4G-H	--

## Antennas

Antenna Type	Manufacturer	Model/Part No.	Gain (dBi)	Frequency Range (MHz)
Internal Antenna	/	/	0	13.56-13.56
Internal Antenna	/	/	3	2400-2500
Internal Antenna	/	/	5	663-1910

# TEST REPORT

**Applicant:** Autel New Energy Co., Ltd.  
**Address:** Room 101, Building B2, Zhiyuan, No.1001 Xueyuan Avenue, Changyuan Community, Taoyuan Road, Nanshan District, Shenzhen, 518055, China  
**Equipment Type:** MaxiCharger AC Wallbox Commercial  
**Model Name:** Maxi US AC W12-L-4G (refer section 2.4)  
**Brand Name:** AUTEL  
**FCC ID:** 2A5NP-AUTELNEACL  
**ISED Number:** 28321-AUTELNEACL  
**Test Standard:** 47 CFR Part 2  
RSS-Gen (Issue 5, March 2019)  
(Others refer to chapter 3.1)  
**Test Date:** Apr. 28, 2022 - May 18, 2022  
**Date of Issue:** Jun. 14, 2022

## ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.



**Tested by:** Zhong Weiqiang

**Checked by:** Wu Huihui

**Approved by:** Wei Yanquan  
(Chief Engineer)

*Zhong Weiqiang*

*Wu Huihui*

*Wei Yanquan*

### Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Jun. 08, 2022</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jun. 14, 2022</u>	<u>Corrected voltage information</u>

## TABLE OF CONTENTS

1	GENERAL INFORMATION .....	4
1.1	Identification of the Testing Laboratory .....	4
1.2	Identification of the Responsible Testing Location .....	4
2	PRODUCT INFORMATION .....	5
2.1	Applicant Information .....	5
2.2	Manufacturer Information .....	5
2.3	Factory Information .....	5
2.4	General Description for Equipment under Test (EUT) .....	6
2.5	Technical Information .....	7
3	SUMMARY OF TEST RESULTS .....	9
3.1	Test Standards .....	9
3.2	Test Verdict .....	10
4	GENERAL TEST CONFIGURATIONS .....	12
4.1	Test Environments .....	12
4.2	Test Equipment List .....	12
4.3	Test Configurations .....	14
4.4	Test Setup .....	21
5	TEST ITEMS .....	24
5.1	Transmitter Radiated Power (EIRP/ERP) .....	24
5.2	Peak to Average Ratio .....	28
5.3	Occupied Bandwidth .....	30
5.4	Frequency Stability .....	32
5.5	Spurious Emission at Antenna Terminals .....	35
5.6	Band Edge .....	40

5.7	Field Strength of Spurious Radiation .....	44
5.8	Receiver Spurious Emissions .....	50
5.9	AC Power-line Conducted Emissions .....	52
ANNEX A	TEST RESULTS.....	54
A.1	Transmitter Radiated Power (EIRP/ERP) .....	54
A.2	Peak to Average Ratio .....	97
A.3	Occupied Bandwidth .....	101
A.4	Frequency Stability.....	109
A.5	Spurious Emission at Antenna Terminals .....	120
A.6	Band Edge .....	128
A.7	Field Strength of Spurious Radiation .....	140
A.8	Receiver Spurious Emissions .....	142
A.9	AC Power-line Conducted Emissions .....	146
ANNEX B	TEST SETUP PHOTOS .....	148
ANNEX C	EUT EXTERNAL PHOTOS .....	148
ANNEX D	EUT INTERNAL PHOTOS .....	148

# 1 GENERAL INFORMATION

## 1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Phone Number	+86 755 6685 0100

## 1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A.
Description	All measurement facilities used to collect the measurement data are located at Block B, 1/F, Baisha Science and Technology Park, Shahe West Road, Nanshan District, ShenZhen, GuangDong Province, China

## 2 PRODUCT INFORMATION

### 2.1 Applicant Information

Applicant	Autel New Energy Co., Ltd.
Address	Room 101, Building B2, Zhiyuan, No.1001 Xueyuan Avenue, Changyuan Community, Taoyuan Road, Nanshan District, Shenzhen, 518055, China

### 2.2 Manufacturer Information

Manufacturer	Autel New Energy Co., Ltd.
Address	Room 101, Building B2, Zhiyuan, No.1001 Xueyuan Avenue, Changyuan Community, Taoyuan Road, Nanshan District, Shenzhen, 518055, China

### 2.3 Factory Information

Factory	Autel Intelligent Technology Co., Ltd. Guangming Brach
Address	6F, West Wing and 7F&6F, East Wing, Building 2, and 6F of Electronical Building, Yanxiang Industrial Zone, Gaoxin Rd, Dongzhou Community of Guangming New District, Shenzhen

## 2.4 General Description for Equipment under Test (EUT)

EUT Name	MaxiCharger AC Wallbox Commercial
Model Name Under Test	Maxi US AC W12-L-4G
Series Model Name	Maxi US AC W12-4G, Maxi US AC W10-N14-4G Maxi US AC W10-N6-4G, Maxi US AC W7-N14-4G Maxi US AC W7-N6-4G, Maxi US AC W12-4G-H Maxi US AC W10-N14-4G-H, Maxi US AC W10-N6-4G-H Maxi US AC W7-N14-4G-H, Maxi US AC W7-N6-4G-H Maxi US AC W10-N14-L-4G, Maxi US AC W10-N6-L-4G Maxi US AC W7-N14-L-4G, Maxi US AC W7-N6-L-4G Maxi US AC W12-L- 4G-H, Maxi US AC W10-N14-L-4G-H Maxi US AC W10-N6-L-4G-H, Maxi US AC W7-N14-L-4G-H Maxi US AC W7-N6-L-4G-H
Description of Model name differentiation	<p>W12, W10, W7 means maximum rated output power, we tested the max rated output power W12 here, N6, N14 means different power supply plug, it doesn't influent the test result. Charging cable of W7 is different from W12 and W10, we added the test for W7 model.</p> <p>-L means whether the product has LCD display. We tested the product has LCD display. The product name of the model without -L is MaxiCharger AC Wallbox Home.</p> <p>-H means the product whether attached a separate holster, The model we tested has a built-in holster on the charger; The others are the same.</p>
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

## 2.5 Technical Information

Note: The information provided by the applicant, except for The Max RF Output Power (EIRP/ERP).

All Network and Wireless connectivity for EUT	3G Network WCDMA/HSDPA/HSUPA Band 2/4/5 4G Network LTE FDD Band 2/4/5/12/13/14/66/71 Bluetooth (BR+EDR+BLE) 2.4G WIFI 802.11b, 802.11g, 802.11n(HT20/40), NFC
About the Product	The equipment is MaxiCharger AC Wallbox, intended for used with information technology equipment.

The requirement for the following technical information of the EUT was tested in this report:

Operating Bands	WCDMA/HSDPA/HSUPA Band 2/4/5 FDD Band 2/4/5/12/13/14/66/71	
Modulation Type	WCDMA	QPSK
	HSDPA	QPSK
	/HSUPA	16QAM
	LTE	QPSK 16QAM
TX Frequency Range	WCDMA/HSDPA/HSUPA Band 2: 1850 MHz ~ 1910 MHz WCDMA/HSDPA/HSUPA Band 4: 1710 MHz ~ 1755 MHz WCDMA/HSDPA/HSUPA Band 5: 824 MHz ~ 849 MHz FDD LTE Band 2: 1850 MHz ~ 1910 MHz FDD LTE Band 4: 1710 MHz ~ 1755 MHz FDD LTE Band 5: 824 MHz ~ 849 MHz FDD LTE Band 12: 699 MHz ~ 716 MHz FDD LTE Band 13: 777 MHz ~ 787 MHz FDD LTE Band 14: 788 MHz ~ 798 MHz FDD LTE Band 66: 1710 MHz ~ 1780 MHz FDD LTE Band 71: 663 MHz ~ 698 MHz	
Rx Frequency Range	WCDMA/HSDPA/HSUPA Band 2: 1930 MHz ~ 1990 MHz WCDMA/HSDPA/HSUPA Band 4: 2110 MHz ~ 2155 MHz WCDMA/HSDPA/HSUPA Band 5: 869 MHz ~ 894 MHz FDD LTE Band 2: 1930 MHz ~ 1990 MHz FDD LTE Band 4: 2110 MHz ~ 2155 MHz FDD LTE Band 5: 869 MHz ~ 894 MHz FDD LTE Band 12: 729 MHz ~ 746 MHz FDD LTE Band 13: 746 MHz ~ 756 MHz FDD LTE Band 14: 758 MHz ~ 768 MHz FDD LTE Band 66: 2110 MHz ~ 2180 MHz FDD LTE Band 71: 617 MHz ~ 652 MHz	
Power Class	WCDMA/HSDPA/HSUPA Band 2: 3 WCDMA/HSDPA/HSUPA Band 4: 3 WCDMA/HSDPA/HSUPA Band 5: 3	

	FDD LTE Band 2: 3 FDD LTE Band 4: 3 FDD LTE Band 5: 3 FDD LTE Band 12: 3 FDD LTE Band 13: 3 FDD LTE Band 14: 3 FDD LTE Band 66: 3 FDD LTE Band 71: 3
Antenna Type	Internal Antenna
Antenna Gain	WCDMA/HSDPA/HSUPA Band 2: 5.0 dBi WCDMA/HSDPA/HSUPA Band 4: 5.0 dBi WCDMA/HSDPA/HSUPA Band 5: 5.0 dBi FDD LTE Band 2: 5.0 dBi FDD LTE Band 4: 5.0 dBi FDD LTE Band 5: 5.0 dBi FDD LTE Band 12: 5.0 dBi FDD LTE Band 13: 5.0 dBi FDD LTE Band 14: 5.0 dBi FDD LTE Band 66: 5.0 dBi FDD LTE Band 71: 5.0 dBi
The Max RF Output Power (EIRP/ERP)	WCDMA/HSDPA/HSUPA Band 2: 29.54 dBm WCDMA/HSDPA/HSUPA Band 4: 29.54 dBm WCDMA/HSDPA/HSUPA Band 5: 26.55 dBm FDD LTE Band 2: 28.52 dBm FDD LTE Band 4: 28.05 dBm FDD LTE Band 5: 25.68 dBm FDD LTE Band 12: 26.05 dBm FDD LTE Band 13: 25.76 dBm FDD LTE Band 14: 25.87 dBm FDD LTE Band 66: 28.34 dBm FDD LTE Band 71: 26.71 dBm

Note 1: The EUT information are declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or user's manual.

### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 2	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 Subpart H	Cellular Radiotelephone Service
3	47 CFR Part 24 Subpart E	Broadband PCS
4	47 CFR Part 27	Miscellaneous Wireless Communications Services
5	47 CFR Part 90 Subpart R	Regulations Governing Licensing and Use of Frequencies in the 758-775 and 788-805 MHz Bands
6	RSS-Gen Issue5	General Requirements and Information for the Certification of Radio Apparatus
7	RSS-130 Issue2	Equipment Operating in the Frequency Bands 617-652 MHz, 663-698 MHz, 698-756 MHz and 777-787 MHz
8	RSS-132 Issue3	Cellular Telephone Systems Operating in the Bands 824-849 MHz and 869-894 MHz
9	RSS-133 Issue6	2 GHz Personal Communications Services
10	RSS-139 Issue3	Advanced Wireless Services (AWS) Equipment Operating in the Bands 1710-1780 MHz and 2110-2180 MHz
11	RSS-140 Issue1	Equipment Operating in the Public Safety Broadband Frequency Bands 758-768 MHz and 788-798 MHz
12	ANSI/TIA-603-E-2016	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
13	KDB 971168 D01 v03	Measurement Guidance for Certification of Licensed Digital Transmitters

### 3.2 Test Verdict

No.	Description	FCC Part No.	ISED Part No.	Test Result	Verdict
1	Conducted RF Output Power	2.1046	RSS-Gen 6.12 RSS-130 4.6 RSS-132 5.4 RSS-133 6.4 RSS-139 6.5 RSS-140 4.3	Reporting only (ANNEX A.1)	Pass
2	Effective (Isotropic) Radiated Power	2.1046 22.913 24.232 27.50 90.542(a)	RSS-Gen 6.12 RSS-130 4.6 RSS-132 5.4 RSS-133 6.4 RSS-139 6.5 RSS-140 4.3	ANNEX A.1	Pass
3	Peak to Average Ratio	2.1046 24.232(d) 27.50(d)	RSS-130 4.6 RSS-132 5.4 RSS-133 6.4 RSS-139 6.5 RSS-140 4.3	ANNEX A.2	Pass
4	Occupied Bandwidth	2.1049 22.917 24.238 27.53 90.209	RSS-Gen 6.7	ANNEX A.3	Pass
5	Frequency Stability	2.1055 22.355 24.235 27.54 90.213	RSS-Gen 6.11 RSS-130 4.5 RSS-132 5.3 RSS-133 6.3 RSS-139 6.4 RSS-140 4.2	ANNEX A.4	Pass
6	Spurious Emission at Antenna Terminals	2.1051 22.917 24.238 27.53 90.543	RSS-Gen 6.13 RSS-130 4.7 RSS-132 5.5 RSS-133 6.5 RSS-139 6.6 RSS-140 4.4	ANNEX A.5	Pass
7	Band Edge	2.1051 22.917 24.238 27.53 90.543	RSS-130 4.7 RSS-132 5.5 RSS-133 6.5 RSS-139 6.6 RSS-140 4.4	ANNEX A.6	Pass
8	Field Strength of Spurious Radiation	2.1053 22.917	RSS-Gen 6.13 RSS-130 4.7	ANNEX A.7	Pass

No.	Description	FCC Part No.	ISED Part No.	Test Result	Verdict
		24.238 27.53 90.543	RSS-132 5.5 RSS-133 6.5 RSS-139 6.6 RSS-140 4.4		
9	Receiver Spurious Emissions	N/A	RSS-Gen 7 RSS-132 5.6 RSS-133 6.6	ANNEX A.8	Pass
10	AC Power-line Conducted Emissions	N/A	RSS-Gen 8.8	ANNEX A.9	Pass

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

During the measurement, the environmental conditions were within the listed ranges:

Relative Humidity		20% to 75%
Atmospheric Pressure		98 kPa to 102 kPa
Test Voltage of the EUT	NV (Normal Voltage)	240 V
	LV (Low Voltage)	230 V
	HV (High Voltage)	250 V
Test Temperature of the EUT	NT (Normal Temperature)	15 °C to 35 °C
	LT (Low Temperature)	-40 °C
	HT (High Temperature)	+55 °C

### 4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Software /Firmware Version	Cal. Date	Cal. Due
<b>Conducted Test System</b>						
Test Software 1	R&S	CMUgo	N/A	V2.0.1	N/A	N/A
Test Software 2	R&S	CMWRun	N/A	V1.9.8	N/A	N/A
Test Software 3	BALUN	BL410R	N/A	V2.1.1.48 8	N/A	N/A
Universal Radio Communication Tester	R&S	CMU 200	119280	V5.13	2022.02.10	2023.02.09
Wideband Radio Communication Tester	R&S	CMW 500	127794	V3.5.137	2021.06.01	2022.05.31
Wideband Radio Communication Tester	R&S	CMW 500	120598	V3.5.137	2022.01.05	2023.01.04
Spectrum Analyzer	R&S	FSV-40	101544	2.30.SP4	2021.06.01	2022.05.31
Spectrum Analyzer	Agilent	E4440A	MY45304434	A.11.21	2021.09.08	2022.09.07
Spectrum Analyzer	Agilent	E4440A	MY46181663	A.11.21	2021.10.11	2022.10.10
Temperature Chamber	AHK	SP20	1412	N/A	2021.06.04	2022.06.03
DC Power Supply	ITECH	IT6863A	8000140207 57120008	N/A	2021.09.12	2022.09.11
Power Sensor	Agilent	E9304A H18	MY41497164	N/A	2021.09.08	2022.09.07

Description	Manufacturer	Model	Serial No.	Software /Firmware Version	Cal. Date	Cal. Due
Power Splitter	KMW	DCPD-LDC	1305003215	N/A	N/A	N/A
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	N/A	N/A	N/A
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	N/A	N/A	N/A
<b>Radiated Test System</b>						
Test Software	BALUN	BL410_E	N/A	V19.918	N/A	N/A
Test Antenna-Bi-Log(30 MHz-3 GHz)	Schwarzbeck	VULB 9163	9163-624	N/A	2019.07.02	2022.07.01
Test Antenna-Horn(1-18 GHz)	Schwarzbeck	BBHA 9120D	9120D-1917	N/A	2019.07.02	2022.07.01
Test Antenna-Horn(18-40 GHz)	A-INFO	LB-180400KF	J211060273	N/A	2021.01.04	2023.01.03
Anechoic Chamber	YIHENG	9m*6m*6m	#3	N/A	2018.07.18	2022.07.17
EMI Receiver	KEYSIGHT	N9038A	MY53220118	A.14.16	2021.09.13	2022.09.12
Wideband Radio Communication Tester	R&S	CMW 500	127794	V3.2.73	2021.06.01	2022.05.31

### 4.3 Test Configurations

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
Effective (Isotropic) Radiated Power	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
	HSDPA Band 2	v	v	v
	HSDPA Band 4	v	v	v
	HSDPA Band 5	v	v	v
	HSUPA Band 2	v	v	v
	HSUPA Band 4	v	v	v
	HSUPA Band 5	v	v	v
Peak to Average Ratio	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Occupied Bandwidth	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Frequency Stability	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Spurious Emission at Antenna Terminals	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Band Edge	WCDMA Band 2	v	--	v
	WCDMA Band 4	v	--	v
	WCDMA Band 5	v	--	v
Field Strength of Spurious Radiation	WCDMA Band 2	v	v	v
	WCDMA Band 4	v	v	v
	WCDMA Band 5	v	v	v
Note 1: The mark “v” means that this configuration is chosen for testing.				

Test Mode	UL Channel	UL Channel No.	UL Frequency (MHz)
WCDMA Band 2	Low Channel	9262	1852.4
	Middle Channel	9400	1880.0
	High Channel	9538	1907.6
WCDMA Band 4	Low Channel	1312	1712.4
	Middle Channel	1412	1732.4
	High Channel	1513	1752.6
WCDMA Band 5	Low Channel	4132	826.4
	Middle Channel	4182	836.4
	High Channel	4233	846.6

LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
	1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MCH	HCH
Effective (Isotropic) Radiated Power														
2	v	v	v	v	v	v	v	v	v	v	v	v	v	v
4	v	v	v	v	v	v	v	v	v	v	v	v	v	v
5	v	v	v	v	n	n	v	v	v	v	v	v	v	v
12	v	v	v	v	n	n	v	v	v	v	v	v	v	v
13	n	n	v	v	n	n	v	v	v	v	v	v	v	v
14	n	n	v	v	n	n	v	v	v	v	v	v	v	v
66	v	v	v	v	v	v	v	v	v	v	v	v	v	v
71	n	n	v	v	v	v	v	v	v	v	v	v	v	v
Peak to Average Ratio														
2	--	--	--	--	--	v	v	v	v	--	v	v	v	v
4	--	--	--	--	--	v	v	v	v	--	v	v	v	v
5	--	--	--	v	n	n	v	v	v	--	v	v	v	v
12	--	--	--	v	n	n	v	v	v	--	v	v	v	v
13	n	n	--	v	n	n	v	v	v	--	v	v	v	v
14	n	n	--	v	n	n	v	v	v	--	v	v	v	v
66	--	--	--	--	--	v	v	v	v	--	v	v	v	v
71	n	n	--	--	--	v	v	v	v	--	v	v	v	v
Occupied Bandwidth														
2	v	v	v	v	v	v	v	v	--	--	v	v	v	v
4	v	v	v	v	v	v	v	v	--	--	v	v	v	v
5	v	v	v	v	n	n	v	v	--	--	v	v	v	v
12	v	v	v	v	n	n	v	v	--	--	v	v	v	v
13	n	n	v	v	n	n	v	v	--	--	v	v	v	v
14	n	n	v	v	n	n	v	v	--	--	v	v	v	v
66	v	v	v	v	v	v	v	v	--	--	v	v	v	v
71	n	n	v	v	v	v	v	v	--	--	v	v	v	v
Frequency Stability														
2	--	--	--	v	--	--	v	v	--	--	v	--	v	--
4	--	--	--	v	--	--	v	v	--	--	v	--	v	--
5	--	--	--	v	n	n	v	v	--	--	v	--	v	--
12	--	--	--	v	n	n	v	v	--	--	v	--	v	--
13	n	n	--	v	n	n	v	v	--	--	v	--	v	--
14	n	n	--	v	n	n	v	v	--	--	v	--	v	--
66	--	--	--	v	--	--	v	v	--	--	v	--	v	--
71	n	n	--	v	--	--	v	v	--	--	v	--	v	--
Spurious Emission at Antenna Terminals														
2	v	v	v	v	v	v	v	v	v	--	--	v	v	v
4	v	v	v	v	v	v	v	v	v	--	--	v	v	v
5	v	v	v	v	n	n	v	v	v	--	--	v	v	v

LTE Band	Bandwidth (MHz)						Modulation Type		RB#			Test Channel		
	1.4	3	5	10	15	20	QPSK	16-QAM	1	Half	Full	LCH	MCH	HCH
12	v	v	v	v	n	n	v	v	v	--	--	v	v	v
13	n	n	v	v	n	n	v	v	v	--	--	v	v	v
14	n	n	v	v	n	n	v	v	v	--	--	v	v	v
66	v	v	v	v	v	v	v	v	v	--	--	v	v	v
71	n	n	v	v	v	v	v	v	v	--	--	v	v	v
Band Edge														
2	v	v	v	v	v	v	v	v	v	--	v	v	--	v
4	v	v	v	v	v	v	v	v	v	--	v	v	--	v
5	v	v	v	v	n	n	v	v	v	--	v	v	--	v
12	v	v	v	v	n	n	v	v	v	--	v	v	--	v
13	n	n	v	v	n	n	v	v	v	--	v	v	--	v
14	n	n	v	v	n	n	v	v	v	--	v	v	--	v
66	v	v	v	v	v	v	v	v	v	--	v	v	--	v
71	n	n	v	v	v	v	v	v	v	--	v	v	--	v
Field Strength of Spurious Radiation														
2	v	v	v	v	v	v	v	--	v	--	--	--	v	--
4	v	v	v	v	v	v	v	--	v	--	--	--	v	--
5	v	v	v	v	n	n	v	--	v	--	--	--	v	--
12	v	v	v	v	n	n	v	--	v	--	--	--	v	--
13	n	n	v	v	n	n	v	--	v	--	--	--	v	--
14	n	n	v	v	n	n	v	--	v	--	--	--	v	--
66	v	v	v	v	v	v	v	--	v	--	--	--	v	--
71	n	n	v	v	v	v	v	--	v	--	--	--	v	--
Note 1: The mark "v" means that this configuration is chosen for testing.														
Note 2: The mark "n" means that this bandwidth is not supported.														

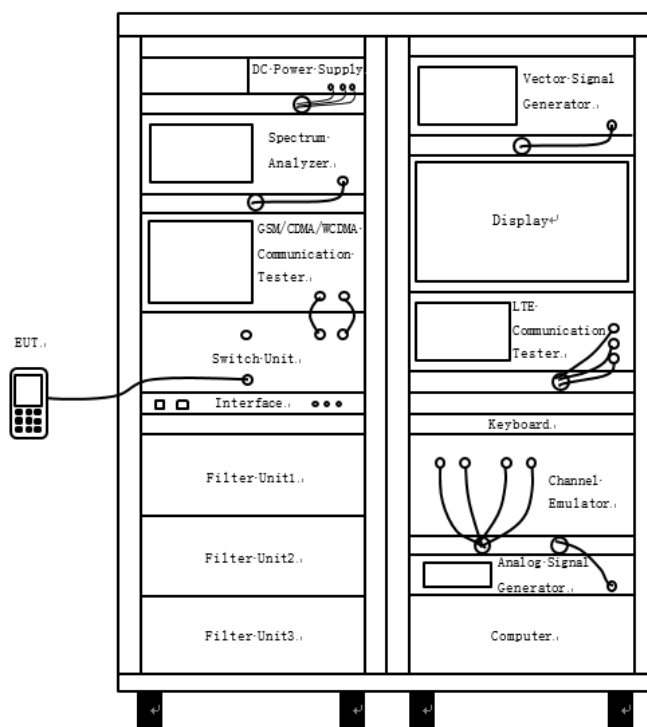
Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
LTE Band 2	Low Range	1.4	18607	1850.7
		3	18615	1851.5
		5	18625	1852.5
		10	18650	1855
		15	18675	1857.5
		20	18700	1860
	Middle Range	1.4/3/5/10/15/20	18900	1880
	High Range	1.4	19193	1909.3
		3	19185	1908.5
		5	19175	1907.5
		10	19150	1905
		15	19125	1902.5
		20	19100	1900
LTE Band 4	Low Range	1.4	19957	1710.7
		3	19965	1711.5
		5	19975	1712.5
		10	20000	1715
		15	20025	1717.5
		20	20050	1720
	Middle Range	1.4/3/5/10/15/20	20175	1732.5
	High Range	1.4	20393	1754.3
		3	20385	1753.5
		5	20375	1752.5
		10	20350	1750
		15	20325	1747.5
		20	20300	1745
LTE Band 5	Low Range	1.4	20407	824.7
		3	20415	825.5
		5	20425	826.5
		10	20450	829
	Middle Range	1.4/3/5/10	20525	836.5
	High Range	1.4	20643	848.3
		3	20635	847.5
		5	20625	846.5
		10	20600	844
LTE Band 12	Low Range	1.4	23017	699.7
		3	23025	700.5
		5	23035	701.5
		10	23060	704
	Middle Range	1.4/3/5/10	23095	707.5

Test Mode	UL Channel	Channel Bandwidth (MHz)	UL Channel No.	UL Frequency (MHz)
	High Range	1.4	23173	715.3
		3	23165	714.5
		5	23155	713.5
		10	23130	711
LTE Band 13	Low Range	5	23205	779.5
		10	23230	782
	Middle Range	5/10	23230	782
	High Range	5	23255	784.5
		10	23230	782
LTE Band 14	Low Range	5	23305	790.5
		10	23330	793
	Middle Range	5/10	23330	793
	High Range	5	23355	795.5
		10	23330	793
LTE-Band 66	Low Range	1.4	131979	1710.7
		3	131987	1711.5
		5	131997	1712.5
		10	132022	1715
		15	132047	1717.5
		20	132072	1720
	Middle Range	1.4/3/5/10/15/20	132322	1745
	High Range	1.4	132665	1779.3
		3	132657	1778.5
		5	132647	1777.5
		10	132622	1775
		15	132597	1772.5
		20	132572	1770
LTE Band 71	Low Range	5	133147	665.5
		10	133172	668
		15	133197	670.5
		20	133222	673
	Middle Range	5/10/15/20	133297	680.5
	High Range	5	133447	695.5
		10	133422	693
		15	133397	690.5
		20	133372	688

Test Items	Test Mode	Test Channel		
		LCH	MCH	HCH
Receiver Spurious Emissions	WCDMA Band2	--	v	--
AC Power-line Conducted Emissions	WCDMA Band2	--	v	--
Note 1: The mark “v” means that this configuration is the worst test mode for Receiver Spurious Emissions and AC Power-line Conducted Emissions measurement.				

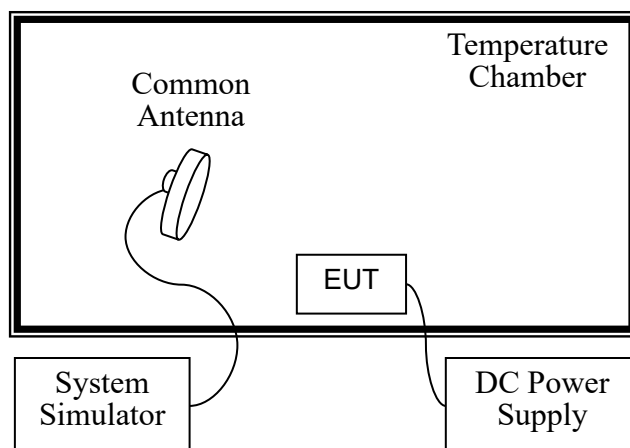
## 4.4 Test Setup

### 4.4.1 For Antenna Port Test



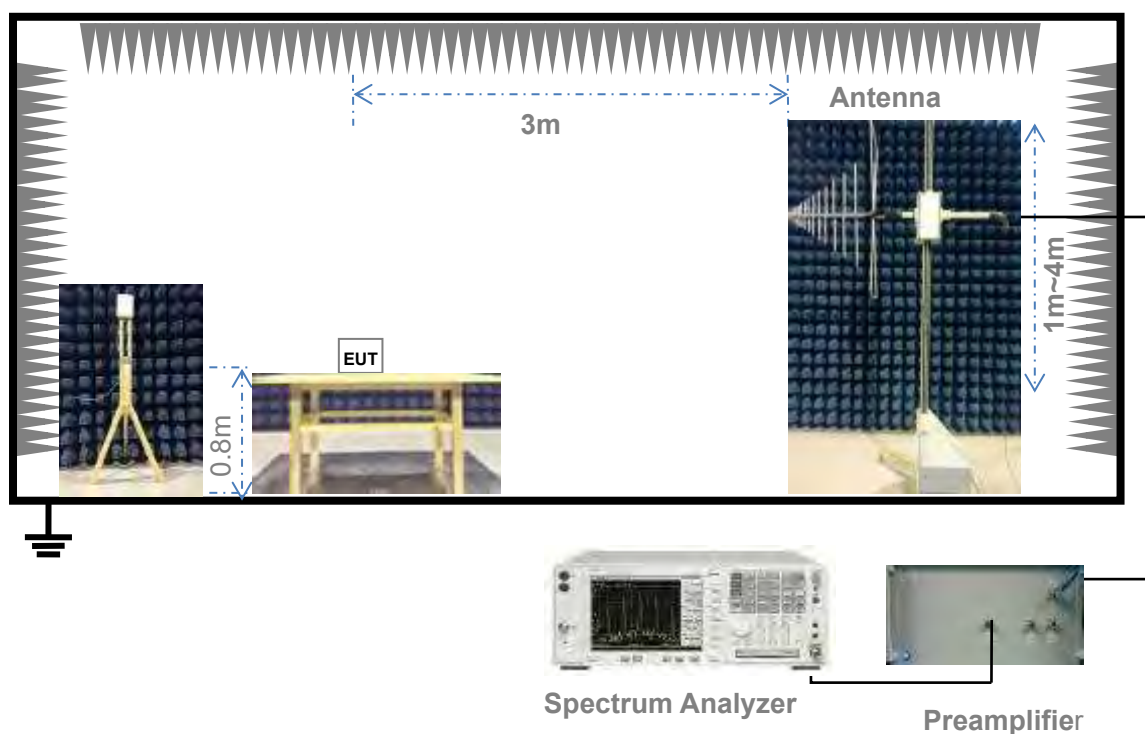
(Diagram 1)

### 4.4.2 For Frequency Stability Test



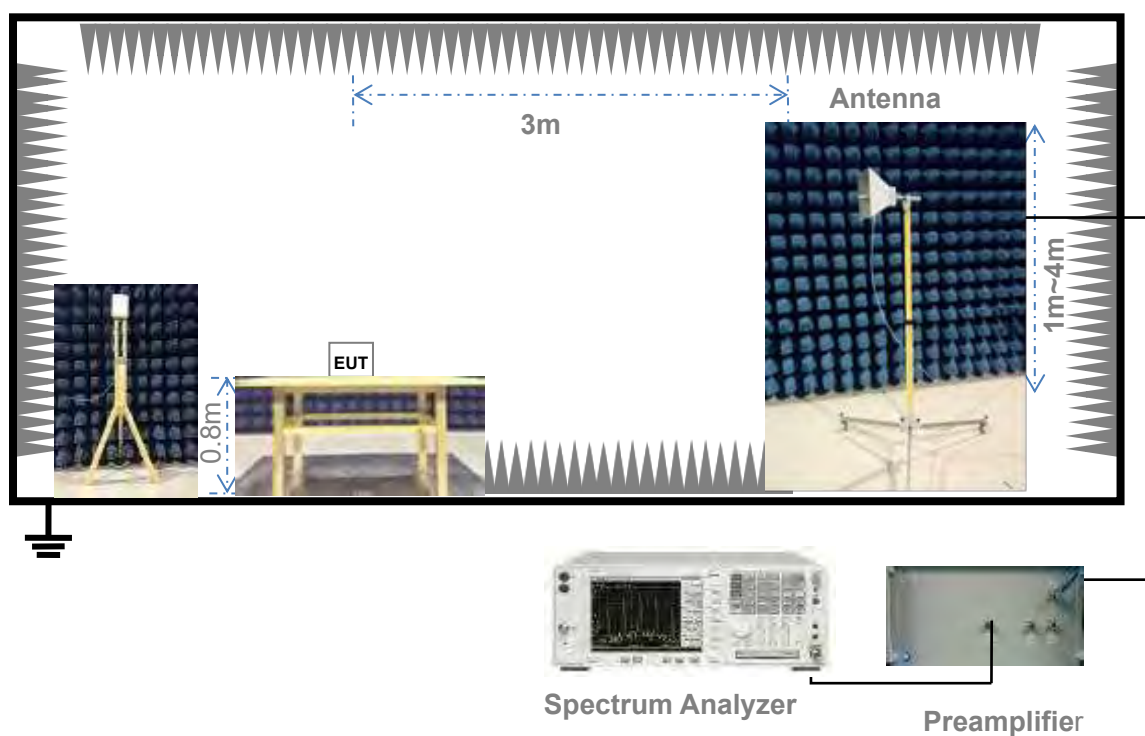
(Diagram 2)

#### 4.4.3 For Radiated Test (30 MHz ~ 1 GHz)



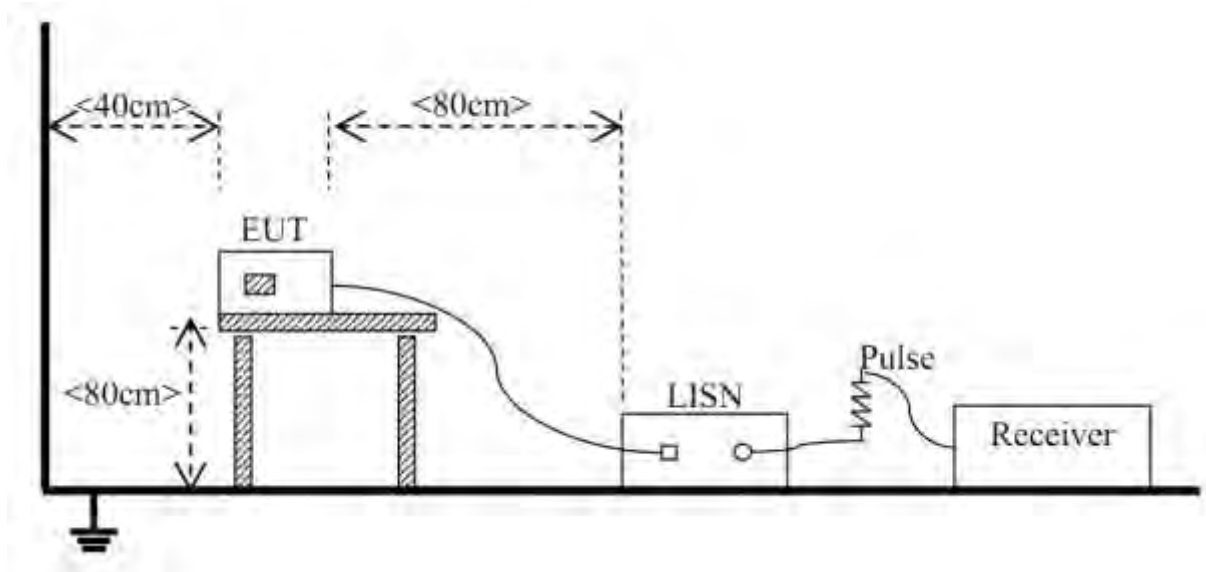
(Diagram 3)

#### 4.4.4 For Radiated Test (Above 1 GHz)



(Diagram 4)

## 4.4.5 For AC Power-line Conducted Emissions



(Diagram 5)

## 5 TEST ITEMS

### 5.1 Transmitter Radiated Power (EIRP/ERP)

#### 5.1.1 Limit

FCC § 2.1046 & 22.913(a) & 24.232(c) & 27.50(b) & 27.50(c) & 27.50(d) & 27.50(h) & 90.542(a)

According to FCC section 22.913(a) (5), the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7 watts.

According to FCC section 24.232(c), mobile and portable stations are limited to 2 watts EIRP and the equipment must employ a means for limiting power to the minimum necessary for successful communications.

According to FCC section 27.50(b) (10), portable stations (hand-held devices) transmitting in the 746-757MHz, 776-788MHz, and 805-806MHz bands are limited to 3 watts ERP.

FCC section 27.50(c) (10), portable stations (hand-held devices) in the 600MHz uplink band and the 698-746MHz band, and fixed and mobile stations in the 600MHz uplink band are limited to 3 watts ERP.

FCC section 27.50(d) (4), fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP. Fixed stations operating in the 1710-1755 MHz band are limited to a maximum antenna height of 10 meters above ground. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(7) Fixed, mobile, and portable (hand-held) stations operating in the 2000-2020 MHz band are limited to 2 watts EIRP.

And FCC section 27.50(h) (2), for mobile and other user stations, mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

According to FCC section 90.542(a) (7), portable stations (hand-held devices) transmitting in the 758-768 MHz band and the 788-798 MHz band are limited to 3 watts ERP.

RSS-Gen § 6.12 & RSS-130 § 4.6 & RSS-132 § 5.4 & RSS-133 § 6.4 & RSS-139 § 6.5 & RSS-140 § 4.3

According to RSS-130 § 4.6.3, The e.r.p. shall not exceed 30 watts for mobile equipment and outdoor fixed subscriber equipment. The e.r.p. shall not exceed 3 watts for portable equipment and indoor fixed subscriber equipment.

According to RSS-132 § 5.4, the Effective Radiated Power (ERP) for mobile equipment shall not exceed 11.5 watts.

According to RSS-133 § 6.4 (SRSP 510), mobile stations and hand-held portables are limited to 2 watts maximum EIRP.

According to RSS-139 § 6.5, the EIRP for mobile and portable transmitters shall not exceed 1 watt.

According to RSS-140 § 4.3, the equivalent radiated power (e.r.p.) for control and mobile equipment shall not exceed 30 W. The e.r.p. for portable equipment including handheld devices shall not exceed 3 W.

### 5.1.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for conducted test, and the section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description is used for radiated test. The photo of test setup please refer to ANNEX B.

### 5.1.3 Test Procedure

#### **Description of the Conducted Output Power Measurement**

The EUT is coupled to the SS with attenuator through power splitter; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. A system simulator is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

The relevant equation for determining the conducted measured value is:

$$\text{Conducted Output Power Value (dBm)} = \text{Measured Value (dBm)} + \text{Path Loss (dB)}$$

where:

Conducted Output Power Value = final conducted measured value in the conducted power test, in dBm;

Measured Value = measured conducted power received by spectrum analyzer or power meter, in dBm;

Path Loss = signal attenuation in the connecting cable between the transmitter and spectrum analyzer or power meter, including external cable loss, in dB;

During the test, the data of Path Loss (dB) is added in the spectrum analyzer or power meter, so Measured Value (dBm) is the final values which contains the data of Path Loss (dB).

For example:

In the conducted output power test, when measured value for GSM850 is 24.7 dBm, and path loss is 8.5 dB, then final conducted output power value is:

$$\text{Conducted Output Power Value (dBm)} = 24.7 \text{ dBm} + 8.5 \text{ dB} = 33.2 \text{ dBm}$$

#### **Description of the Transmitter Radiated Power Measurement**

In many cases, the RF output power limits for licensed digital transmission devices is specified in terms of

effective radiated power (ERP) or equivalent isotropic radiated power (EIRP). Typically, ERP is specified when the operating frequency is less than or equal to 1 GHz and EIRP is specified when the operating frequency is greater than 1 GHz. Both are determined by adding the transmit antenna gain to the conducted RF output power with the primary difference between the two being that when determining the ERP, the transmit antenna gain is referenced to a dipole antenna (i.e., dBd) whereas when determining the EIRP, the transmit antenna gain is referenced to an isotropic antenna (dBi).

Final measurement calculation as below:

The relevant equation for determining the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

$$\text{ERP/EIRP} = P_{\text{Meas}} + \text{GT} - \text{LC}$$

where:

ERP/EIRP = effective or equivalent radiated power, respectively (expressed in the same units as  $P_{\text{Meas}}$ , typically dBW or dBm);

$P_{\text{Meas}}$  = measured transmitter output power or PSD, in dBm or dBW;

GT = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

dBd (ERP)=dBi (EIRP) -2.15 dB

LC = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

For devices utilizing multiple antennas, KDB 662911 provides guidance for determining the effective array transmit antenna gain term to be used in the above equation.

For example:

In the EIRP test, when  $P_{\text{Meas}}$  value for GSM1900 is 30.2 dBm, LC is 0.6 dB, and GT is -3.4 dB, then final EIRP value is:

$$\text{EIRP for GSM1900} = 30.2 \text{ dBm} - 3.4 \text{ dBi} - 0.6 \text{ dB} = 26.2 \text{ dBm}$$

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

#### 5.1.4 Test Result

Please refer to ANNEX A.1.

## 5.2 Peak to Average Ratio

### 5.2.1 Limit

FCC § 2.1046 & 24.232(d) & 27.50(d)

RSS-130 § 4.6 & RSS-132 § 5.4 & RSS-133 § 6.4 & RSS-139 § 6.5 & RSS-140 § 4.3

In addition, when the transmitter power is measured in terms of average value, the peak-to-average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time using a signal corresponding to the highest PAPR during periods of continuous transmission.

According to FCC section 24.232(d), power measurements for transmissions by stations authorized under this section may be made either in accordance with a Commission-approved average power technique or in compliance with 24.232 (e) of this section. In both instances, equipment employed must be authorized in accordance with the provisions of § 24.51. In measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

FCC section 24.232(e), peak transmit power must be measured over any interval of continuous transmission using instrumentation calibrated in terms of an rms equivalent voltage. The measurement results shall be properly adjusted for any instrument limitations, such as detector response times, limited resolution bandwidth capability when compared to the emission bandwidth, sensitivity, etc., so as to obtain a true peak measurement for the emission in question over the full bandwidth of the channel.

According to FCC section 27.50(d) (5), in measuring transmissions in this band using an average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13dB.

### 5.2.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

### 5.2.3 Test Procedure

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

According to KDB 971168 D01, there is CCDF procedure for PAPR:

- a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;
- b) Set resolution/measurement bandwidth  $\geq$  signal's occupied bandwidth;
- c) Set the number of counts to a value that stabilizes the measured CCDF curve;
- d) Set the measurement interval as follows:
  - 1) for continuous transmissions, set to 1 ms,

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

Alternate procedure for PAPR:

Use one of the procedures presented in 4.1 to measure the total peak power and record as  $P_{Pk}$ . Use one of the applicable procedures presented 4.2 to measure the total average power and record as  $P_{Avg}$ . Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:

$$PAPR (dB) = P_{Pk} (dBm) - P_{Avg} (dBm).$$

#### 5.2.4 Test Result

Please refer to ANNEX A.2.

## 5.3 Occupied Bandwidth

### 5.3.1 Limit

FCC § 2.1049

RSS-Gen § 6.7

The occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Many of the individual rule parts specify a relative OBW in lieu of the 99% OBW. In such cases, the OBW is defined as the width of the signal between two points, one below the carrier center frequency and on above the carrier center frequency, outside of which all emissions are attenuated by at least X dB below the transmitter power, where the value of X is typically specified as 26.

### 5.3.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

### 5.3.3 Test Procedure

The following procedure shall be used for measuring power bandwidth.

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The frequency span for the spectrum analyzer shall be set wide enough to capture all modulation products including the emission skirts (i.e., two to five times the anticipated OBW).
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1 to 5 % of the anticipated OBW, and the VBW shall be at least 3 times the RBW.
- c) Set the reference level of the instrument as required to keep the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope must be at least 10log (OBW / RBW) below the reference level.
- d) NOTE—Steps a) through c) may require iteration to adjust within the specified tolerances.
- e) For -26 dB OBW, the dynamic range of the spectrum analyzer at the selected RBW shall be at least 10dB below the target “-X dB down” requirement, e.g. -26 dB OBW, the spectrum analyzer noise floor at the selected RBW shall be 36dB below the reference value.
- f) Set the detection mode to peak, and the trace mode to max hold.
- g) For 99% OBW, use the 99 % power bandwidth function of the spectrum analyzer (if available) and report the measured bandwidth.

If the instrument does not have a 99 % power bandwidth function, the trace data points are to be recovered and directly summed in linear power terms. The recovered amplitude data points, beginning at

the lowest frequency, are placed in a running sum until 0.5 % of the total is reached; that frequency is recorded as the lower frequency. The process is repeated until 99.5 % of the total is reached; that frequency is recorded as the upper frequency. The 99 % power bandwidth is the difference between these two frequencies.

h) For -26 dB OBW, determine the reference value: Set the EUT to transmit a modulated signal. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).

Determine the “-X dB down amplitude” as equal to (reference value -X). Alternatively, this calculation can be performed by the analyzer by using the marker-delta function.

Place two markers, one at the lowest and the other at the highest frequency of the envelope of the spectral display such that each marker is at or slightly below “-X dB down amplitude” determined in step g). If a marker is below this “-X dB down amplitude” value it shall be placed as close as possible to this value. The OBW is the positive frequency difference between the two markers.

i) The OBW shall be reported by providing plot(s) of the measuring instrument display. The frequency and amplitude axes and scale shall be clearly labeled. Tabular data may be reported in addition to the plot(s).

j) Change variable modulations, coding, or channel bandwidth settings, then repeat above test procedures.

#### 5.3.4 Test Result

Please refer to ANNEX A.3.

## 5.4 Frequency Stability

### 5.4.1 Limit

FCC § 2.1055 & 22.355 & 24.235 & 27.54 & 90.213

RSS-Gen § 6.11 & RSS-130 § 4.5 & RSS-132 § 5.3 & RSS-133 § 6.3 & RSS-139 § 6.4 & RSS-140 § 4.2

FCC § 2.1055 & RSS-Gen § 6.11

The frequency stability shall be measured with variation of ambient temperature as follows:

- (1) The temperature is varied from -30°C to +50°C.
- (2) Frequency measurements shall be made at the extremes of the specified temperature range and at intervals of not more than 10°C through the range.

The frequency stability shall be measured with variation of primary supply voltage as follows:

- (1) Vary primary supply voltage from 85 to 115 percent of the nominal value for other than carried battery equipment.
- (2) For hand carried, battery powered equipment, reduce primary supply voltage to the battery operating and point which shall be specified by the manufacture.
- (3) The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

FCC § 22.355

Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C-1 of this section.

**Table C-1—Frequency Tolerance for Transmitters in the Public Mobile Services**

Frequency range (MHz)	Base, fixed (ppm)	Mobile > 3 watts (ppm)	Mobile ≤ 3 watts (ppm)
25 to 50	20.0	20.0	50.0
50 to 450	5.0	5.0	50.0
450 to 512	2.5	5.0	5.0
821 to 896	1.5	2.5	2.5
928 to 929	5.0	n/a	n/a
929 to 960	1.5	n/a	n/a
2110 to 2220	10.0	n/a	n/a

FCC § 24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

FCC § 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

#### FCC § 90.213

The frequency stability shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations.

#### RSS-130 § 4.5

The frequency stability shall be sufficient to ensure that the occupied bandwidth remains within each frequency block range when tested at the temperature and supply voltage variations specified in RSS-Gen.

#### RSS-132 § 5.3

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.5$  ppm for base stations.

#### RSS-133 § 6.3

The carrier frequency shall not depart from the reference frequency in excess of  $\pm 2.5$  ppm for mobile stations and  $\pm 1.0$  ppm for base stations.

#### RSS-139 § 6.4

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the temperature and supply voltage variations specified in RSS-Gen.

#### RSS-140 § 4.2

The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested at the temperature and supply voltage variations specified in RSS-Gen.

### 5.4.2 Test Setup

The section 4.4.2 (Diagram 2) test setup description is used for this test. The photo of test setup please refer to ANNEX B.

### 5.4.3 Test Procedure

1. The EUT is placed in a temperature chamber.
2. The temperature is set to  $25^{\circ}\text{C}$  and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured.
3. The temperature is increased by not more than 10 degrees, allowed to stabilize and soak, and then repeat the frequency error measurement.
4. Repeat procedure 3 until  $+50^{\circ}\text{C}$  and  $-30^{\circ}\text{C}$  is reached.

5. Change supply voltage, and repeat measurement until extreme voltage is reached.

#### 5.4.4 Test Result

Please refer to ANNEX A.4.

## 5.5 Spurious Emission at Antenna Terminals

### 5.5.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(m) & 90.691 & 90.543

RSS-Gen § 6.13 & RSS-130 § 4.7 & RSS-132 § 5.5 & RSS-133 § 6.5 & RSS-139 § 6.6 & RSS-140 § 4.4

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a) & RSS-132 § 5.5 & RSS-133 § 6.5

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

#### FCC § 27.53(f)

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to - 70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

#### FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43+10\log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

#### FCC § 27.53(h) (1) & RSS-139 § 6.6

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

#### FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40+10\log P$  dB (-10 dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$  dB (-13 dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$  dB (-25 dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

## FCC § 90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log (P)$  dB in a 6.25 kHz band segment, for base and fixed stations.

(2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log (P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log (P)$  dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/ MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

## RSS-130 § 4.7

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least  $43 + 10 \log_{10}(P)$  (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

In addition to the limit outlined above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

(a) The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power, P (dBW), by at least:

(i)  $76 + 10 \log_{10} p$  (watts), dB, for base and fixed equipment and

(ii)  $65 + 10 \log_{10} p$  (watts), dB, for mobile and portable equipment

(b) The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.

## RSS-140 § 4.4

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power P in dBW as follows, where p is the transmitter output power

in watts:

For any frequency between 769-775 MHz and 799-806 MHz:

$76 + 10 \log(p)$ , dB in a 6.25 kHz band for fixed and base station equipment

$65 + 10 \log(p)$ , dB in a 6.25 kHz band for mobile and portable/hand-held equipment

For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz:  $43 + 10 \log(p)$ , dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1559-1610 MHz, shall not exceed  $-70$  dBW/MHz for wideband emissions, and  $-80$  dBW/kHz for discrete emissions of less than 700 Hz bandwidth.

### 5.5.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.5.3 Test Procedure

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic. On any frequency outside a licensee's frequency block, the power of any emission shall be attenuated below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB. Compliance with these provisions is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency blocks a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

1. The EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
2. CMW500 is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.
3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.
4. Spurious emissions are tested with 0.001MHz RBW for frequency less than 150kHz, 0.01MHz RBW for frequency less than 30MHz, 0.1MHz RBW for frequency less than 1GHz, and 1MHz RBW for frequency

above 1GHz. And sweep point number are at least 401, referring to following formula.

Sweep point number = Span/RBW

VBW=3\*RBW

Detector Mode=mean or average power

5. Record the frequencies and levels of spurious emissions.

#### 5.5.4 Test Result

Please refer to ANNEX A.5.

## 5.6 Band Edge

### 5.6.1 Limit

FCC § 2.1051 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(g) & 27.53(h) & 27.53(m) & 90.691 & 90.543

RSS-130 § 4.7 & RSS-132 § 5.5 & RSS-133 § 6.5 & RSS-139 § 6.6 & RSS-140 § 4.4

In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.

The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

FCC § 22.917(a) & 24.238(a) & RSS-132 § 5.5 & RSS-133 § 6.5

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

#### FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43+10\log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

#### FCC § 27.53(h) (1) & RSS-139 § 6.6

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

#### FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40+10\log P$  dB ( $-10$  dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$  dB ( $-13$  dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$  dB ( $-25$  dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

#### FCC § 90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations.
- (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log(P)$

dB in a 6.25 kHz band segment, for mobile and portable stations.

(3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log(P)$  dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

#### RSS-130 § 4.7

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power,  $P$  (dBW), by at least  $43 + 10\log_{10}(P)$  (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

In addition to the limit outlined above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

(a) The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power,  $P$  (dBW), by at least:

(i)  $76 + 10 \log_{10} p$  (watts), dB, for base and fixed equipment and

(ii)  $65 + 10 \log_{10} p$  (watts), dB, for mobile and portable equipment

(b) The e.i.r.p. in the band 1559-1610 MHz shall not exceed  $-70$  dBW/MHz for wideband signal and  $-80$  dBW for discrete emission with bandwidth less than 700 Hz.

#### RSS-140 § 4.4

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power  $P$  in dBW as follows, where  $p$  is the transmitter output power in watts:

For any frequency between 769-775 MHz and 799-806 MHz:

$76 + 10 \log(p)$ , dB in a 6.25 kHz band for fixed and base station equipment

$65 + 10 \log(p)$ , dB in a 6.25 kHz band for mobile and portable/hand-held equipment

For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz:  $43 + 10 \log(p)$ , dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the band 1559-1610 MHz, shall not exceed  $-70$  dBW/MHz for wideband emissions, and  $-80$  dBW/kHz for

discrete emissions of less than 700 Hz bandwidth.

### 5.6.2 Test Setup

The section 4.4.1 (Diagram 1) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.6.3 Test Procedure

The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.

1. The EUT is coupled to the system simulator and spectrum analyzer; the RF load attached to EUT antenna terminal is 50 Ohm; the path loss as the factor is calibrated to correct the reading.
2. CMW500 is used to establish communication with the EUT, and its parameters are set to force the EUT transmitting at maximum output power.
3. The RF output of the transmitter is connected to the input of the spectrum analyzer through sufficient attenuation.
4. The center of the spectrum analyzer was set to block edge frequency.
5. Band edge are tested with 1%\*cBW (RBW), and sweep point number referred to following formula.

$$\text{Sweep point number} = 2 * \text{Span} / \text{RBW}$$

$$\text{VBW} = 3 \text{RBW}$$

6. Record the frequencies and levels of spurious emissions.

For mobile and portable stations, on all frequencies between 763–775 MHz and 793–806 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment. Since it was not possible to set the resolution bandwidth to 6.25 kHz with the available equipment, a bandwidth of 10 kHz was used instead to show compliance. By using a 10 kHz bandwidth on the spectrum analyzer.

$$10 * \log(10 \text{ kHz} / 6.25 \text{ kHz}) = 2.04 \text{ dB}$$

$$\text{Limit Line} = -35 \text{ dBm} + 2.04 \text{ dB} = -32.96 \text{ dBm}$$

### 5.6.4 Test Result

Please refer to ANNEX A.6.

## 5.7 Field Strength of Spurious Radiation

### 5.7.1 Limit

FCC § 2.1053 & 22.917(a) & 24.238(a) & 27.53(c) & 27.53(f) & 27.53(g) & 27.53(h) & 27.53(m) & 90.691 & 90.543

RSS-Gen § 6.13 & RSS-130 § 4.7 & RSS-132 § 5.5 & RSS-133 § 6.5 & RSS-139 § 6.6 & RSS-140 § 4.4

FCC § 22.917(a) & 24.238(a) & RSS-132 § 5.5 & RSS-133 § 6.5

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least  $43 + 10 \log(P)$  dB. This is calculated to be -13 dBm.

FCC § 27.53(c)

For operations in the 746–758 MHz band and the 776–788 MHz band, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

(1) On any frequency outside the 746–758 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(2) On any frequency outside the 776–788 MHz band, the power of any emission shall be attenuated outside the

band below the transmitter power (P) by at least  $43 + 10 \log(P)$  dB;

(3) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations;

(4) On all frequencies between 763–775 MHz and 793–805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations;

(5) Compliance with the provisions of paragraphs (c)(1) and (c)(2) of this section is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater.

However, in the 100 kHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth

of at least 30 kHz may be employed;

(6) Compliance with the provisions of paragraphs (c)(3) and (c)(4) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

FCC § 27.53(f)

For operations in the 746–758 MHz, 775–788 MHz, and 805–806 MHz bands, emissions in the band 1559–1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative

of the type that will be used with the equipment in normal operation.

#### FCC § 27.53(g)

For operations in the 600MHz band and the 698-746MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least  $43+10\log(P)$  dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

#### FCC § 27.53(h) (1) & RSS-139 § 6.6

Except as otherwise specified below, for operations in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least  $43 + 10 \log_{10}(P)$  dB.

#### FCC § 27.53(m) (4)

For mobile digital stations (BRS and EBS stations), the attenuation factor shall be not less than:

- $40+10\log P$  dB ( $-10$  dBm, 100 nW) on all frequencies between the channel edge and 5 MHz from the channel edge.
- $43+10\log P$  dB ( $-13$  dBm, 50 nW) on all frequencies between 5 MHz and X MHz from the channel edge,
- $55+10\log P$  dB ( $-25$  dBm, 3 nW) on all frequencies more than X MHz from the channel edge, where X is the greater of 6 MHz or the actual emission bandwidth (26 dB).

In addition, the attenuation factor shall not be less than  $43 + 10 \log(P)$  dB on all frequencies between 2490.5 MHz and 2496 MHz and  $55 + 10 \log(P)$  dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

#### FCC § 90.543

(e) For operations in the 758–768 MHz and the 788–798 MHz bands, the power of any emission outside the licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, in accordance with the following:

- (1) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $76 + 10 \log(P)$  dB in a 6.25 kHz band segment, for base and fixed stations.
- (2) On all frequencies between 769–775 MHz and 799–805 MHz, by a factor not less than  $65 + 10 \log(P)$  dB in a 6.25 kHz band segment, for mobile and portable stations.
- (3) On any frequency between 775–788 MHz, above 805 MHz, and below 758 MHz, by at least  $43 + 10 \log(P)$  dB.

(4) Compliance with the provisions of paragraphs (e)(1) and (2) of this section is based on the use of measurement instrumentation such that the reading taken with any resolution bandwidth setting should be adjusted to indicate spectral energy in a 6.25 kHz segment.

(f) For operations in the 758–775 MHz and 788–805 MHz bands, all emissions including harmonics in the band 1559–1610 MHz shall be limited to -70 dBW/ MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation.

#### RSS-130 § 4.7

The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power,  $P$  (dBW), by at least  $43 + 10\log_{10}(P)$  (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

In addition to the limit outlined above, equipment operating in the frequency bands 746-756 MHz and 777-787 MHz shall also comply with the following restrictions:

(a) The power of any unwanted emissions in any 6.25 kHz bandwidth for all frequencies between 763-775 MHz and 793-806 MHz shall be attenuated below the transmitter power,  $P$  (dBW), by at least:

(i)  $76 + 10 \log_{10} p$  (watts), dB, for base and fixed equipment and

(ii)  $65 + 10 \log_{10} p$  (watts), dB, for mobile and portable equipment

(b) The e.i.r.p. in the band 1559-1610 MHz shall not exceed -70 dBW/MHz for wideband signal and -80 dBW for discrete emission with bandwidth less than 700 Hz.

#### RSS-140 § 4.4

The power of any unwanted emission outside the bands 758-768 MHz and 788-798 MHz shall be attenuated below the transmitter output power  $P$  in dBW as follows, where  $p$  is the transmitter output power in watts:

For any frequency between 769-775 MHz and 799-806 MHz:

$76 + 10 \log(p)$ , dB in a 6.25 kHz band for fixed and base station equipment

$65 + 10 \log(p)$ , dB in a 6.25 kHz band for mobile and portable/hand-held equipment

For any frequency between 775-788 MHz, above 806 MHz, and below 758 MHz:  $43 + 10 \log(p)$ , dB in a bandwidth of 100 kHz or greater. However, in the 100 kHz bands immediately outside and adjacent to the frequency bands 758-768 MHz and 788-798 MHz, a resolution bandwidth of 30 kHz may be employed.

In addition, the equivalent isotropically radiated power (e.i.r.p.) of all emissions, including harmonics in the

band 1559-1610 MHz, shall not exceed -70 dBW/MHz for wideband emissions, and -80 dBW/kHz for discrete emissions of less than 700 Hz bandwidth.

### 5.7.2 Test Setup

The section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.7.3 Test Procedure

1. On a test site, the EUT shall be placed at 80cm height on a turn table, and in the position close to normal use as declared by the applicant.
2. The test antenna shall be oriented initially for vertical polarization located 3 m from EUT to correspond to the fundamental frequency of the transmitter.
3. The output of the test antenna shall be connected to the measuring receiver and the peak detector is used for the measurement.
4. During the measurement of the EUT, the resolution bandwidth was to 1 MHz and the average bandwidth was set to 1 MHz.
5. The transmitter shall be switched on; the measuring receiver shall be tuned to the frequency of the transmitter under test.
6. The test antenna shall be raised and lowered through the specified range of height until the maximum signal level is detected by the measuring receiver.
7. The transmitter shall be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.
8. The test antenna shall be raised and lowered again through the specified range of height until the maximum signal level is detected by the measuring receiver.
9. The maximum signal level detected by the measuring receiver shall be noted.
10. The EUT was replaced by half-wave dipole (824 ~ 849 MHz) or horn antenna (1 850 ~ 1 910 MHz) connected to a signal generator.
11. In necessary, the input attenuator setting on the measuring receiver shall be adjusted in order to increase

the sensitivity of the measuring receiver.

12. The test antenna shall be raised and lowered through the specified range of height to ensure that the maximum signal is received.

13. The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, which is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuator setting of the measuring receiver.

14. The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

15. The measurement shall be repeated with the test antenna and the substitution antenna orientated for horizontal polarization.

Final measurement calculation as below:

The relevant equation for determining the ERP/EIRP from the radiated RF output power is:

$$\text{ERP/EIRP (dBm)} = \text{SA Read Value (dBm)} + \text{Correction Factor (dB)}$$

where:

ERP/EIRP = effective or equivalent radiated power, in dBm;

SA Read Value = measured transmitter power received by EMI receiver or spectrum analyzer, in dBm;

Correction Factor = total correction factor including cable loss, in dB;

During the test, the data of Correction Factor (dB) is added in the EMI receiver or spectrum analyzer, so SA Read Value (dBm) is the final values which contains the data of Correction Factor (dB).

For example:

In the ERP test, when SA read value for GSM850 is 21dBm, and correction factor is 8dB, then final ERP value for GSM850 is:

$$\text{ERP (dBm)} = 21\text{dBm} + 8\text{dB} = 29\text{dBm}$$

#### 5.7.4 Test Result

Please refer to ANNEX A.7.

## 5.8 Receiver Spurious Emissions

### 5.8.1 Limit

RSS-Gen § 7.3/4 & RSS-132 § 5.6 & RSS-133 § 6.6

For emissions at frequencies below 1 GHz, measurements shall be performed using a CISPR quasi-peak detector and the related measurement bandwidth. At frequencies above 1 GHz, measurements shall be performed using a linear average detector with a minimum resolution bandwidth of 1 MHz.

As an alternative to CISPR quasi-peak or average measurements, compliance with the emission limit can be demonstrated using measuring equipment employing a peak detector function properly adjusted for factors such as pulse desensitization, as required, with a measurement bandwidth equal to, or greater than, the applicable CISPR quasi-peak bandwidth or 1 MHz bandwidth, respectively.

### Receiver Radiated Limits

Radiated emission measurements shall be performed with the receiver antenna connected to the receiver antenna ports. The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (e.g. local oscillator, intermediate or carrier frequency), or 30 MHz, whichever is higher, to at least five times the highest tunable or local oscillator frequency, whichever is higher, without exceeding 40 GHz.

Spurious emissions from receivers shall not exceed the radiated emissions limits shown in Table 2 below.

**Table 2 –Receiver radiated emissions limits**

Frequency (MHz)	Field Strength (µV/m at 3 metres)
30 - 88	100
88 - 216	150
216 - 960	200
Above 960	500

### Receiver Conducted Limits

If the receiver has a detachable antenna of known impedance, an antenna-conducted spurious emissions measurement is permitted as an alternative to radiated measurement. However, the radiated method is preferred.

The antenna-conducted test shall be performed with the antenna disconnected and with the receiver antenna port connected to a measuring instrument having equal input impedance to that specified for the antenna. The RF cable connecting the receiver under test to the measuring instrument shall also have the same impedance to that specified for the receiver's antenna.

The spurious emissions from the receiver at any discrete frequency, measured at the antenna port by the antenna-conducted method, shall not exceed 2 nW in the frequency range 30-1000 MHz and 5 nW above

1 GHz.

### 5.8.2 Test Setup

The section 4.4.3 and 4.4.4 (Diagram 3, 4) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.8.3 Test Procedure

The test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

An initial pre-scan was performed in the chamber using the EMI Receiver in peak detection mode. Quasi-peak measurements were conducted based on the peak sweep graph. The EUT was measured by Bi-Log antenna with 2 orthogonal polarities.

### 5.8.4 Test Result

Please refer to ANNEX A.8.

## 5.9 AC Power-line Conducted Emissions

### 5.9.1 Limit

#### RSS-Gen § 8.8

For AC power-line conducted emissions, both quasi-peak and average detectors having the characteristics specified in CAN/CSA-CISPR 16-1-1:15 for the 150 kHz to 30 MHz frequency range shall be employed.

Unless stated otherwise in the applicable RSS, for radio apparatus that are designed to be connected to the public utility AC power network, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the range 150 kHz to 30 MHz shall not exceed the limits in table 3, as measured using a 50  $\mu$ H / 50  $\Omega$  line impedance stabilization network. This requirement applies for the radio frequency voltage measured between each power line and the ground terminal of each AC power-line mains cable of the EUT.

For an EUT that connects to the AC power lines indirectly, through another device, the requirement for compliance with the limits in table 3 shall apply at the terminals of the AC power-line mains cable of a representative support device, while it provides power to the EUT. The lower limit applies at the boundary between the frequency ranges. The device used to power the EUT shall be representative of typical applications.

**Table 3 –AC power-line conducted emissions limits**

Frequency (MHz)	Conducted limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15 - 0.5	66 to 56 <sup>Note1</sup>	56 to 46 <sup>Note1</sup>
0.5 - 5	56	46
5 - 30	60	50

Note 1: The level decreases linearly with the logarithm of the frequency.

### 5.9.2 Test Setup

The section 4.4.5 (Diagram 5) test setup description was used for this test. The photo of test setup please refer to ANNEX B.

### 5.9.3 Test Procedure

The test employing the methods of measurement described in the publication referenced in Section 3(b) (ANSI C63.4);

The EUT is connected to the power mains through a LISN which provides 50  $\Omega$ /50  $\mu$ H of coupling impedance for the measuring instrument. The test frequency range is from 150 kHz to 30 MHz. The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels that are more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

### 5.9.4 Test Result

Please refer to ANNEX A.9.

## ANNEX A TEST RESULTS

### A.1 Transmitter Radiated Power (EIRP/ERP)

#### WCDMA Mode Test Data

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 2	LCH	24.48	5	29.48	0.887	2.00	Pass
	MCH	24.54	5	29.54	0.899	2.00	Pass
	HCH	24.49	5	29.49	0.889	2.00	Pass
HSDPA Band 2	LCH	23.72	5	28.72	0.745	2.00	Pass
	MCH	23.60	5	28.60	0.724	2.00	Pass
	HCH	23.58	5	28.58	0.721	2.00	Pass
HSUPA Band 2	LCH	23.36	5	28.36	0.685	2.00	Pass
	MCH	23.58	5	28.58	0.721	2.00	Pass
	HCH	23.45	5	28.45	0.700	2.00	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
WCDMA Band 4	LCH	24.54	5	29.54	0.899	1.00	Pass
	MCH	24.53	5	29.53	0.897	1.00	Pass
	HCH	24.16	5	29.16	0.824	1.00	Pass
HSDPA Band 4	LCH	23.66	5	28.66	0.735	1.00	Pass
	MCH	23.70	5	28.70	0.741	1.00	Pass
	HCH	23.21	5	28.21	0.662	1.00	Pass
HSUPA Band 4	LCH	23.55	5	28.55	0.716	1.00	Pass
	MCH	23.45	5	28.45	0.700	1.00	Pass
	HCH	23.12	5	28.12	0.649	1.00	Pass

Test Band	Test Channel	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
WCDMA Band 5	LCH	23.59	5	2.85	26.44	0.441	7.00	Pass
	MCH	23.70	5	2.85	26.55	0.452	7.00	Pass
	HCH	23.70	5	2.85	26.55	0.452	7.00	Pass
HSDPA Band 5	LCH	22.61	5	2.85	25.46	0.352	7.00	Pass
	MCH	22.69	5	2.85	25.54	0.358	7.00	Pass
	HCH	22.75	5	2.85	25.60	0.363	7.00	Pass
HSUPA Band 5	LCH	22.39	5	2.85	25.24	0.334	7.00	Pass
	MCH	22.53	5	2.85	25.38	0.345	7.00	Pass
	HCH	22.67	5	2.85	25.52	0.356	7.00	Pass

Note 1: For the HSDPA and HSUPA mode, all subtests were tested and just the worst data were recorded in this table.

Note 2:  $ERP/EIRP = P_{Meas} + GT - LC$

$ERP/EIRP$  = effective or equivalent radiated power, respectively (expressed in the same units as  $P_{Meas}$ , typically dBW or dBm);

$P_{Meas}$  = measured transmitter output power or PSD, in dBm or dBW;

$GT$  = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

$LC$  = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

$ERP = EIRP - 2.15$ ; where ERP and EIRP are expressed in consistent units.

#### HSDPA Conducted Output Power

Band	Channel	Conducted Output Average Power							
		Subtest1		Subtest2		Subtest3		Subtest4	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
HSDPA Band 2	LCH	23.48	0.223	23.72	0.236	23.14	0.206	23.14	0.206
	MCH	23.56	0.227	23.60	0.229	23.06	0.202	23.03	0.201
	HCH	23.51	0.224	23.58	0.228	23.13	0.206	23.13	0.206
HSDPA Band 4	LCH	23.53	0.225	23.66	0.232	23.16	0.207	23.16	0.207
	MCH	23.57	0.228	23.70	0.234	23.20	0.209	23.22	0.210
	HCH	23.13	0.206	23.21	0.209	22.72	0.187	22.73	0.187
HSDPA Band 5	LCH	22.53	0.179	22.61	0.182	22.15	0.164	22.20	0.166
	MCH	22.69	0.186	22.68	0.185	22.23	0.167	22.22	0.167
	HCH	22.75	0.188	22.72	0.187	22.24	0.167	22.22	0.167

#### HSUPA Conducted Output Power

Band	Channel	Conducted Output Average Power									
		Subtest1		Subtest2		Subtest3		Subtest4		Subtest5	
		(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)	(dBm)	(W)
HSUPA Band 2	LCH	23.36	0.217	22.03	0.160	22.24	0.167	23.06	0.202	23.34	0.216
	MCH	23.42	0.220	22.11	0.163	22.30	0.170	22.37	0.173	23.58	0.228
	HCH	23.12	0.205	21.95	0.157	22.44	0.175	22.82	0.191	23.45	0.221
HSUPA Band 4	LCH	22.98	0.199	22.40	0.174	22.19	0.166	22.77	0.189	23.55	0.226
	MCH	23.23	0.210	22.26	0.168	21.78	0.151	22.39	0.173	23.45	0.221
	HCH	23.12	0.205	21.74	0.149	21.96	0.157	22.03	0.160	23.00	0.200
HSUPA Band 5	LCH	22.38	0.173	21.16	0.131	20.81	0.121	22.13	0.163	22.39	0.173
	MCH	22.53	0.179	21.25	0.133	20.95	0.124	21.61	0.145	22.51	0.178
	HCH	22.66	0.185	21.42	0.139	21.02	0.126	21.61	0.145	22.67	0.185

## LTE Mode Test Data

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
1.4 MHz	LCH	QPSK	RB1#0	23.24	5	28.24	0.667	2.00	Pass
			RB1#3	23.26	5	28.26	0.670	2.00	Pass
			RB1#5	23.11	5	28.11	0.647	2.00	Pass
			RB3#0	23.29	5	28.29	0.675	2.00	Pass
			RB3#2	23.32	5	28.32	0.679	2.00	Pass
			RB3#3	23.28	5	28.28	0.673	2.00	Pass
			RB6#0	22.36	5	27.36	0.545	2.00	Pass
		16-QAM	RB1#0	22.48	5	27.48	0.560	2.00	Pass
			RB1#3	22.64	5	27.64	0.581	2.00	Pass
			RB1#5	22.48	5	27.48	0.560	2.00	Pass
			RB3#0	22.5	5	27.50	0.562	2.00	Pass
			RB3#2	22.53	5	27.53	0.566	2.00	Pass
			RB3#3	22.5	5	27.50	0.562	2.00	Pass
			RB6#0	21.55	5	26.55	0.452	2.00	Pass
	MCH	QPSK	RB1#0	23.06	5	28.06	0.640	2.00	Pass
			RB1#3	23.28	5	28.28	0.673	2.00	Pass
			RB1#5	23.14	5	28.14	0.652	2.00	Pass
			RB3#0	23.22	5	28.22	0.664	2.00	Pass
			RB3#2	23.36	5	28.36	0.685	2.00	Pass
			RB3#3	23.31	5	28.31	0.678	2.00	Pass
			RB6#0	22.26	5	27.26	0.532	2.00	Pass
		16-QAM	RB1#0	22.2	5	27.20	0.525	2.00	Pass
			RB1#3	22.17	5	27.17	0.521	2.00	Pass
			RB1#5	22.13	5	27.13	0.516	2.00	Pass
			RB3#0	21.99	5	26.99	0.500	2.00	Pass
			RB3#2	21.92	5	26.92	0.492	2.00	Pass
			RB3#3	21.95	5	26.95	0.495	2.00	Pass
			RB6#0	21.02	5	26.02	0.400	2.00	Pass
	HCH	QPSK	RB1#0	23.12	5	28.12	0.649	2.00	Pass
			RB1#3	23.22	5	28.22	0.664	2.00	Pass
			RB1#5	23.16	5	28.16	0.655	2.00	Pass
			RB3#0	23.24	5	28.24	0.667	2.00	Pass
			RB3#2	23.3	5	28.30	0.676	2.00	Pass
			RB3#3	23.3	5	28.30	0.676	2.00	Pass
			RB6#0	22.3	5	27.30	0.537	2.00	Pass
		16-QAM	RB1#0	22.29	5	27.29	0.536	2.00	Pass
			RB1#3	22.32	5	27.32	0.540	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
3 MHz			RB1#5	22.21	5	27.21	0.526	2.00	Pass
			RB3#0	22.47	5	27.47	0.558	2.00	Pass
			RB3#2	22.54	5	27.54	0.568	2.00	Pass
			RB3#3	22.35	5	27.35	0.543	2.00	Pass
			RB6#0	21.18	5	26.18	0.415	2.00	Pass
	LCH	QPSK	RB1#0	23.3	5	28.30	0.676	2.00	Pass
			RB1#7	23.2	5	28.20	0.661	2.00	Pass
			RB1#14	23.32	5	28.32	0.679	2.00	Pass
			RB8#0	22.28	5	27.28	0.535	2.00	Pass
			RB8#4	22.22	5	27.22	0.527	2.00	Pass
			RB8#7	22.18	5	27.18	0.522	2.00	Pass
			RB15#0	22.18	5	27.18	0.522	2.00	Pass
		16-QAM	RB1#0	22.16	5	27.16	0.520	2.00	Pass
			RB1#7	22.11	5	27.11	0.514	2.00	Pass
			RB1#14	22.12	5	27.12	0.515	2.00	Pass
			RB8#0	21.26	5	26.26	0.423	2.00	Pass
			RB8#4	21.28	5	26.28	0.425	2.00	Pass
			RB8#7	21.24	5	26.24	0.421	2.00	Pass
			RB15#0	21.18	5	26.18	0.415	2.00	Pass
	MCH	QPSK	RB1#0	23.24	5	28.24	0.667	2.00	Pass
			RB1#7	23.22	5	28.22	0.664	2.00	Pass
			RB1#14	23.49	5	28.49	0.706	2.00	Pass
			RB8#0	22.33	5	27.33	0.541	2.00	Pass
			RB8#4	22.25	5	27.25	0.531	2.00	Pass
			RB8#7	22.23	5	27.23	0.528	2.00	Pass
			RB15#0	22.23	5	27.23	0.528	2.00	Pass
		16-QAM	RB1#0	22.75	5	27.75	0.596	2.00	Pass
			RB1#7	21.89	5	26.89	0.489	2.00	Pass
			RB1#14	22.02	5	27.02	0.504	2.00	Pass
			RB8#0	21.37	5	26.37	0.434	2.00	Pass
			RB8#4	21.39	5	26.39	0.436	2.00	Pass
			RB8#7	21.35	5	26.35	0.432	2.00	Pass
			RB15#0	21.13	5	26.13	0.410	2.00	Pass
	HCH	QPSK	RB1#0	23.44	5	28.44	0.698	2.00	Pass
			RB1#7	23.4	5	28.40	0.692	2.00	Pass
			RB1#14	23.51	5	28.51	0.710	2.00	Pass
			RB8#0	22.37	5	27.37	0.546	2.00	Pass
			RB8#4	22.27	5	27.27	0.533	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
		16-QAM	RB8#7	22.21	5	27.21	0.526	2.00	Pass
			RB15#0	22.25	5	27.25	0.531	2.00	Pass
			RB1#0	22.38	5	27.38	0.547	2.00	Pass
			RB1#7	22.25	5	27.25	0.531	2.00	Pass
			RB1#14	22.27	5	27.27	0.533	2.00	Pass
			RB8#0	20.92	5	25.92	0.391	2.00	Pass
			RB8#4	20.9	5	25.90	0.389	2.00	Pass
			RB8#7	20.95	5	25.95	0.394	2.00	Pass
			RB15#0	21.09	5	26.09	0.406	2.00	Pass
5 MHz	LCH	QPSK	RB1#0	23.15	5	28.15	0.653	2.00	Pass
			RB1#13	23.15	5	28.15	0.653	2.00	Pass
			RB1#24	23.05	5	28.05	0.638	2.00	Pass
			RB12#0	22.19	5	27.19	0.524	2.00	Pass
			RB12#6	22.17	5	27.17	0.521	2.00	Pass
			RB12#13	22.17	5	27.17	0.521	2.00	Pass
			RB25#0	22.27	5	27.27	0.533	2.00	Pass
		16-QAM	RB1#0	21.85	5	26.85	0.484	2.00	Pass
			RB1#13	21.85	5	26.85	0.484	2.00	Pass
			RB1#24	21.77	5	26.77	0.475	2.00	Pass
			RB12#0	21.03	5	26.03	0.401	2.00	Pass
			RB12#6	20.93	5	25.93	0.392	2.00	Pass
			RB12#13	20.91	5	25.91	0.390	2.00	Pass
			RB25#0	21.26	5	26.26	0.423	2.00	Pass
	MCH	QPSK	RB1#0	23	5	28.00	0.631	2.00	Pass
			RB1#13	22.95	5	27.95	0.624	2.00	Pass
			RB1#24	23.23	5	28.23	0.665	2.00	Pass
			RB12#0	22.21	5	27.21	0.526	2.00	Pass
			RB12#6	22.32	5	27.32	0.540	2.00	Pass
			RB12#13	22.19	5	27.19	0.524	2.00	Pass
			RB25#0	22.2	5	27.20	0.525	2.00	Pass
		16-QAM	RB1#0	22.22	5	27.22	0.527	2.00	Pass
			RB1#13	22.32	5	27.32	0.540	2.00	Pass
			RB1#24	22.37	5	27.37	0.546	2.00	Pass
			RB12#0	21.01	5	26.01	0.399	2.00	Pass
			RB12#6	21.05	5	26.05	0.403	2.00	Pass
			RB12#13	21.09	5	26.09	0.406	2.00	Pass
			RB25#0	21.12	5	26.12	0.409	2.00	Pass
	HCH	QPSK	RB1#0	23.24	5	28.24	0.667	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
			RB1#13	23.15	5	28.15	0.653	2.00	Pass
			RB1#24	23.32	5	28.32	0.679	2.00	Pass
			RB12#0	22.36	5	27.36	0.545	2.00	Pass
			RB12#6	22.33	5	27.33	0.541	2.00	Pass
			RB12#13	22.31	5	27.31	0.538	2.00	Pass
			RB25#0	22.32	5	27.32	0.540	2.00	Pass
		16-QAM	RB1#0	22.21	5	27.21	0.526	2.00	Pass
			RB1#13	21.96	5	26.96	0.497	2.00	Pass
			RB1#24	21.72	5	26.72	0.470	2.00	Pass
			RB12#0	21.3	5	26.30	0.427	2.00	Pass
			RB12#6	21.3	5	26.30	0.427	2.00	Pass
			RB12#13	21.18	5	26.18	0.415	2.00	Pass
			RB25#0	21.29	5	26.29	0.426	2.00	Pass
10 MHz	LCH	QPSK	RB1#0	23.28	5	28.28	0.673	2.00	Pass
			RB1#25	23.34	5	28.34	0.682	2.00	Pass
			RB1#49	23.03	5	28.03	0.635	2.00	Pass
			RB25#0	22.29	5	27.29	0.536	2.00	Pass
			RB25#13	22.19	5	27.19	0.524	2.00	Pass
			RB25#25	22.22	5	27.22	0.527	2.00	Pass
			RB50#0	22.22	5	27.22	0.527	2.00	Pass
		16-QAM	RB1#0	22.17	5	27.17	0.521	2.00	Pass
			RB1#25	22.29	5	27.29	0.536	2.00	Pass
			RB1#49	22.03	5	27.03	0.505	2.00	Pass
			RB25#0	21.07	5	26.07	0.405	2.00	Pass
			RB25#13	21.06	5	26.06	0.404	2.00	Pass
			RB25#25	21	5	26.00	0.398	2.00	Pass
			RB50#0	20.97	5	25.97	0.395	2.00	Pass
	MCH	QPSK	RB1#0	23.12	5	28.12	0.649	2.00	Pass
			RB1#25	23.25	5	28.25	0.668	2.00	Pass
			RB1#49	23.07	5	28.07	0.641	2.00	Pass
			RB25#0	22.2	5	27.20	0.525	2.00	Pass
			RB25#13	22.23	5	27.23	0.528	2.00	Pass
			RB25#25	22.15	5	27.15	0.519	2.00	Pass
			RB50#0	22.17	5	27.17	0.521	2.00	Pass
		16-QAM	RB1#0	22.22	5	27.22	0.527	2.00	Pass
			RB1#25	22	5	27.00	0.501	2.00	Pass
			RB1#49	22.01	5	27.01	0.502	2.00	Pass
			RB25#0	21.31	5	26.31	0.428	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
15 MHz	HCH		RB25#13	21.33	5	26.33	0.430	2.00	Pass
			RB25#25	21.24	5	26.24	0.421	2.00	Pass
			RB50#0	21.16	5	26.16	0.413	2.00	Pass
		QPSK	RB1#0	23.3	5	28.30	0.676	2.00	Pass
			RB1#25	23.48	5	28.48	0.705	2.00	Pass
			RB1#49	23.4	5	28.40	0.692	2.00	Pass
			RB25#0	22.42	5	27.42	0.552	2.00	Pass
			RB25#13	22.44	5	27.44	0.555	2.00	Pass
			RB25#25	22.38	5	27.38	0.547	2.00	Pass
			RB50#0	22.22	5	27.22	0.527	2.00	Pass
		16-QAM	RB1#0	22.1	5	27.10	0.513	2.00	Pass
			RB1#25	22.39	5	27.39	0.548	2.00	Pass
			RB1#49	22.24	5	27.24	0.530	2.00	Pass
			RB25#0	21.57	5	26.57	0.454	2.00	Pass
			RB25#13	21.4	5	26.40	0.437	2.00	Pass
			RB25#25	21.28	5	26.28	0.425	2.00	Pass
			RB50#0	21.12	5	26.12	0.409	2.00	Pass
15 MHz	LCH	QPSK	RB1#0	23.23	5	28.23	0.665	2.00	Pass
			RB1#38	23.22	5	28.22	0.664	2.00	Pass
			RB1#74	23.12	5	28.12	0.649	2.00	Pass
			RB36#0	22.16	5	27.16	0.520	2.00	Pass
			RB36#19	22.19	5	27.19	0.524	2.00	Pass
			RB36#39	22.17	5	27.17	0.521	2.00	Pass
			RB75#0	22.25	5	27.25	0.531	2.00	Pass
		16-QAM	RB1#0	22.32	5	27.32	0.540	2.00	Pass
			RB1#38	22.53	5	27.53	0.566	2.00	Pass
			RB1#74	22.26	5	27.26	0.532	2.00	Pass
			RB36#0	21.2	5	26.20	0.417	2.00	Pass
			RB36#19	21.05	5	26.05	0.403	2.00	Pass
			RB36#39	21.04	5	26.04	0.402	2.00	Pass
			RB75#0	21.14	5	26.14	0.411	2.00	Pass
	MCH	QPSK	RB1#0	23.12	5	28.12	0.649	2.00	Pass
			RB1#38	23.28	5	28.28	0.673	2.00	Pass
			RB1#74	23.12	5	28.12	0.649	2.00	Pass
			RB36#0	22.18	5	27.18	0.522	2.00	Pass
			RB36#19	22.23	5	27.23	0.528	2.00	Pass
			RB36#39	22.2	5	27.20	0.525	2.00	Pass
			RB75#0	22.14	5	27.14	0.518	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
20 MHz	HCH	16-QAM	RB1#0	22.29	5	27.29	0.536	2.00	Pass
			RB1#38	22.14	5	27.14	0.518	2.00	Pass
			RB1#74	22.06	5	27.06	0.508	2.00	Pass
			RB36#0	21.3	5	26.30	0.427	2.00	Pass
			RB36#19	21.34	5	26.34	0.431	2.00	Pass
			RB36#39	21.19	5	26.19	0.416	2.00	Pass
			RB75#0	21.22	5	26.22	0.419	2.00	Pass
		QPSK	RB1#0	23.19	5	28.19	0.659	2.00	Pass
			RB1#38	23.34	5	28.34	0.682	2.00	Pass
			RB1#74	23.07	5	28.07	0.641	2.00	Pass
			RB36#0	22.3	5	27.30	0.537	2.00	Pass
			RB36#19	22.32	5	27.32	0.540	2.00	Pass
			RB36#39	22.34	5	27.34	0.542	2.00	Pass
			RB75#0	22.31	5	27.31	0.538	2.00	Pass
		16-QAM	RB1#0	22.55	5	27.55	0.569	2.00	Pass
			RB1#38	22.39	5	27.39	0.548	2.00	Pass
			RB1#74	22.5	5	27.50	0.562	2.00	Pass
			RB36#0	21.14	5	26.14	0.411	2.00	Pass
			RB36#19	21.19	5	26.19	0.416	2.00	Pass
			RB36#39	21.11	5	26.11	0.408	2.00	Pass
			RB75#0	21.16	5	26.16	0.413	2.00	Pass
20 MHz	LCH	QPSK	RB1#0	23.04	5	28.04	0.637	2.00	Pass
			RB1#50	23.52	5	28.52	0.711	2.00	Pass
			RB1#99	23.25	5	28.25	0.668	2.00	Pass
			RB50#0	22.19	5	27.19	0.524	2.00	Pass
			RB50#25	22.22	5	27.22	0.527	2.00	Pass
			RB50#50	22.17	5	27.17	0.521	2.00	Pass
			RB100#0	22.23	5	27.23	0.528	2.00	Pass
		16-QAM	RB1#0	22.57	5	27.57	0.571	2.00	Pass
			RB1#50	22.48	5	27.48	0.560	2.00	Pass
			RB1#99	22.21	5	27.21	0.526	2.00	Pass
			RB50#0	21.16	5	26.16	0.413	2.00	Pass
			RB50#25	21.3	5	26.30	0.427	2.00	Pass
			RB50#50	21.05	5	26.05	0.403	2.00	Pass
			RB100#0	21.13	5	26.13	0.410	2.00	Pass
	MCH	QPSK	RB1#0	23.27	5	28.27	0.671	2.00	Pass
			RB1#50	23.46	5	28.46	0.701	2.00	Pass
			RB1#99	23.08	5	28.08	0.643	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND2</b>									
			RB50#0	22.19	5	27.19	0.524	2.00	Pass
			RB50#25	22.26	5	27.26	0.532	2.00	Pass
			RB50#50	22.11	5	27.11	0.514	2.00	Pass
			RB100#0	22.15	5	27.15	0.519	2.00	Pass
		16-QAM	RB1#0	22.52	5	27.52	0.565	2.00	Pass
			RB1#50	22.69	5	27.69	0.587	2.00	Pass
			RB1#99	22.32	5	27.32	0.540	2.00	Pass
			RB50#0	21.08	5	26.08	0.406	2.00	Pass
			RB50#25	21.14	5	26.14	0.411	2.00	Pass
			RB50#50	21.07	5	26.07	0.405	2.00	Pass
			RB100#0	21.11	5	26.11	0.408	2.00	Pass
	HCH	QPSK	RB1#0	23.15	5	28.15	0.653	2.00	Pass
			RB1#50	23.38	5	28.38	0.689	2.00	Pass
			RB1#99	23.17	5	28.17	0.656	2.00	Pass
			RB50#0	22.3	5	27.30	0.537	2.00	Pass
			RB50#25	22.33	5	27.33	0.541	2.00	Pass
			RB50#50	22.26	5	27.26	0.532	2.00	Pass
			RB100#0	22.24	5	27.24	0.530	2.00	Pass
		16-QAM	RB1#0	22.22	5	27.22	0.527	2.00	Pass
			RB1#50	22.15	5	27.15	0.519	2.00	Pass
			RB1#99	21.94	5	26.94	0.494	2.00	Pass
			RB50#0	21.14	5	26.14	0.411	2.00	Pass
			RB50#25	21.19	5	26.19	0.416	2.00	Pass
			RB50#50	21.22	5	26.22	0.419	2.00	Pass
			RB100#0	21.22	5	26.22	0.419	2.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
1.4 MHz	LCH	QPSK	RB1#0	22.41	5	27.41	0.551	1.000	Pass
			RB1#3	22.44	5	27.44	0.555	1.000	Pass
			RB1#5	22.35	5	27.35	0.543	1.000	Pass
			RB3#0	22.43	5	27.43	0.553	1.000	Pass
			RB3#2	22.44	5	27.44	0.555	1.000	Pass
			RB3#3	22.43	5	27.43	0.553	1.000	Pass
			RB6#0	21.58	5	26.58	0.455	1.000	Pass
		16-QAM	RB1#0	21.2	5	26.20	0.417	1.000	Pass
			RB1#3	21.34	5	26.34	0.431	1.000	Pass
			RB1#5	21.24	5	26.24	0.421	1.000	Pass
			RB3#0	21.44	5	26.44	0.441	1.000	Pass
			RB3#2	21.44	5	26.44	0.441	1.000	Pass
			RB3#3	21.44	5	26.44	0.441	1.000	Pass
			RB6#0	20.78	5	25.78	0.378	1.000	Pass
	MCH	QPSK	RB1#0	22.85	5	27.85	0.610	1.000	Pass
			RB1#3	22.79	5	27.79	0.601	1.000	Pass
			RB1#5	22.64	5	27.64	0.581	1.000	Pass
			RB3#0	22.82	5	27.82	0.605	1.000	Pass
			RB3#2	22.87	5	27.87	0.612	1.000	Pass
			RB3#3	22.72	5	27.72	0.592	1.000	Pass
			RB6#0	21.92	5	26.92	0.492	1.000	Pass
		16-QAM	RB1#0	21.77	5	26.77	0.475	1.000	Pass
			RB1#3	21.62	5	26.62	0.459	1.000	Pass
			RB1#5	21.47	5	26.47	0.444	1.000	Pass
			RB3#0	21.49	5	26.49	0.446	1.000	Pass
			RB3#2	21.61	5	26.61	0.458	1.000	Pass
			RB3#3	21.66	5	26.66	0.463	1.000	Pass
			RB6#0	20.58	5	25.58	0.361	1.000	Pass
	HCH	QPSK	RB1#0	22.7	5	27.70	0.589	1.000	Pass
			RB1#3	22.85	5	27.85	0.610	1.000	Pass
			RB1#5	22.86	5	27.86	0.611	1.000	Pass
			RB3#0	22.8	5	27.80	0.603	1.000	Pass
			RB3#2	22.85	5	27.85	0.610	1.000	Pass
			RB3#3	23.05	5	28.05	0.638	1.000	Pass
			RB6#0	22.02	5	27.02	0.504	1.000	Pass
		16-QAM	RB1#0	21.8	5	26.80	0.479	1.000	Pass
			RB1#3	21.94	5	26.94	0.494	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
3 MHz			RB1#5	21.92	5	26.92	0.492	1.000	Pass
			RB3#0	22.03	5	27.03	0.505	1.000	Pass
			RB3#2	22.07	5	27.07	0.509	1.000	Pass
			RB3#3	22.02	5	27.02	0.504	1.000	Pass
			RB6#0	20.91	5	25.91	0.390	1.000	Pass
	LCH	QPSK	RB1#0	22.31	5	27.31	0.538	1.000	Pass
			RB1#7	22.47	5	27.47	0.558	1.000	Pass
			RB1#14	22.49	5	27.49	0.561	1.000	Pass
			RB8#0	21.45	5	26.45	0.442	1.000	Pass
			RB8#4	21.5	5	26.50	0.447	1.000	Pass
			RB8#7	21.72	5	26.72	0.470	1.000	Pass
			RB15#0	21.53	5	26.53	0.450	1.000	Pass
		16-QAM	RB1#0	21.29	5	26.29	0.426	1.000	Pass
			RB1#7	21.36	5	26.36	0.433	1.000	Pass
			RB1#14	21.38	5	26.38	0.435	1.000	Pass
			RB8#0	20.4	5	25.40	0.347	1.000	Pass
			RB8#4	20.45	5	25.45	0.351	1.000	Pass
			RB8#7	20.48	5	25.48	0.353	1.000	Pass
			RB15#0	20.54	5	25.54	0.358	1.000	Pass
	MCH	QPSK	RB1#0	22.75	5	27.75	0.596	1.000	Pass
			RB1#7	22.69	5	27.69	0.587	1.000	Pass
			RB1#14	22.84	5	27.84	0.608	1.000	Pass
			RB8#0	21.93	5	26.93	0.493	1.000	Pass
			RB8#4	21.96	5	26.96	0.497	1.000	Pass
			RB8#7	21.84	5	26.84	0.483	1.000	Pass
			RB15#0	21.93	5	26.93	0.493	1.000	Pass
		16-QAM	RB1#0	21.65	5	26.65	0.462	1.000	Pass
			RB1#7	21.62	5	26.62	0.459	1.000	Pass
			RB1#14	21.57	5	26.57	0.454	1.000	Pass
			RB8#0	20.76	5	25.76	0.377	1.000	Pass
			RB8#4	20.89	5	25.89	0.388	1.000	Pass
			RB8#7	20.86	5	25.86	0.385	1.000	Pass
			RB15#0	20.91	5	25.91	0.390	1.000	Pass
			RB1#0	22.67	5	27.67	0.585	1.000	Pass
	HCH	QPSK	RB1#7	22.76	5	27.76	0.597	1.000	Pass
			RB1#14	22.87	5	27.87	0.612	1.000	Pass
			RB8#0	21.87	5	26.87	0.486	1.000	Pass
			RB8#4	21.89	5	26.89	0.489	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
			RB8#7	21.84	5	26.84	0.483	1.000	Pass
			RB15#0	21.87	5	26.87	0.486	1.000	Pass
		16-QAM	RB1#0	21.78	5	26.78	0.476	1.000	Pass
			RB1#7	21.85	5	26.85	0.484	1.000	Pass
			RB1#14	21.98	5	26.98	0.499	1.000	Pass
			RB8#0	20.98	5	25.98	0.396	1.000	Pass
			RB8#4	21.1	5	26.10	0.407	1.000	Pass
			RB8#7	21.06	5	26.06	0.404	1.000	Pass
			RB15#0	21	5	26.00	0.398	1.000	Pass
5 MHz	LCH	QPSK	RB1#0	22.31	5	27.31	0.538	1.000	Pass
			RB1#13	22.41	5	27.41	0.551	1.000	Pass
			RB1#24	22.39	5	27.39	0.548	1.000	Pass
			RB12#0	21.42	5	26.42	0.439	1.000	Pass
			RB12#6	21.49	5	26.49	0.446	1.000	Pass
			RB12#13	21.55	5	26.55	0.452	1.000	Pass
			RB25#0	21.44	5	26.44	0.441	1.000	Pass
		16-QAM	RB1#0	21.23	5	26.23	0.420	1.000	Pass
			RB1#13	21.33	5	26.33	0.430	1.000	Pass
			RB1#24	21.16	5	26.16	0.413	1.000	Pass
			RB12#0	20.46	5	25.46	0.352	1.000	Pass
			RB12#6	20.54	5	25.54	0.358	1.000	Pass
			RB12#13	20.58	5	25.58	0.361	1.000	Pass
			RB25#0	20.52	5	25.52	0.356	1.000	Pass
	MCH	QPSK	RB1#0	22.66	5	27.66	0.583	1.000	Pass
			RB1#13	22.56	5	27.56	0.570	1.000	Pass
			RB1#24	22.54	5	27.54	0.568	1.000	Pass
			RB12#0	21.95	5	26.95	0.495	1.000	Pass
			RB12#6	21.86	5	26.86	0.485	1.000	Pass
			RB12#13	21.76	5	26.76	0.474	1.000	Pass
			RB25#0	21.86	5	26.86	0.485	1.000	Pass
		16-QAM	RB1#0	22.06	5	27.06	0.508	1.000	Pass
			RB1#13	21.9	5	26.90	0.490	1.000	Pass
			RB1#24	21.97	5	26.97	0.498	1.000	Pass
			RB12#0	20.75	5	25.75	0.376	1.000	Pass
			RB12#6	20.77	5	25.77	0.378	1.000	Pass
			RB12#13	20.76	5	25.76	0.377	1.000	Pass
			RB25#0	20.77	5	25.77	0.378	1.000	Pass
	HCH	QPSK	RB1#0	22.67	5	27.67	0.585	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
			RB1#13	22.7	5	27.70	0.589	1.000	Pass
			RB1#24	22.95	5	27.95	0.624	1.000	Pass
			RB12#0	21.9	5	26.90	0.490	1.000	Pass
			RB12#6	21.91	5	26.91	0.491	1.000	Pass
			RB12#13	21.95	5	26.95	0.495	1.000	Pass
			RB25#0	21.79	5	26.79	0.478	1.000	Pass
		16-QAM	RB1#0	22.13	5	27.13	0.516	1.000	Pass
			RB1#13	21.69	5	26.69	0.467	1.000	Pass
			RB1#24	21.58	5	26.58	0.455	1.000	Pass
			RB12#0	20.73	5	25.73	0.374	1.000	Pass
			RB12#6	20.85	5	25.85	0.385	1.000	Pass
			RB12#13	20.9	5	25.90	0.389	1.000	Pass
			RB25#0	20.82	5	25.82	0.382	1.000	Pass
10 MHz	LCH	QPSK	RB1#0	22.44	5	27.44	0.555	1.000	Pass
			RB1#25	22.51	5	27.51	0.564	1.000	Pass
			RB1#49	22.37	5	27.37	0.546	1.000	Pass
			RB25#0	21.43	5	26.43	0.440	1.000	Pass
			RB25#13	21.55	5	26.55	0.452	1.000	Pass
			RB25#25	21.4	5	26.40	0.437	1.000	Pass
			RB50#0	21.45	5	26.45	0.442	1.000	Pass
		16-QAM	RB1#0	21.42	5	26.42	0.439	1.000	Pass
			RB1#25	21.95	5	26.95	0.495	1.000	Pass
			RB1#49	21.53	5	26.53	0.450	1.000	Pass
			RB25#0	20.5	5	25.50	0.355	1.000	Pass
			RB25#13	20.62	5	25.62	0.365	1.000	Pass
			RB25#25	20.52	5	25.52	0.356	1.000	Pass
			RB50#0	20.41	5	25.41	0.348	1.000	Pass
	MCH	QPSK	RB1#0	22.52	5	27.52	0.565	1.000	Pass
			RB1#25	22.86	5	27.86	0.611	1.000	Pass
			RB1#49	22.56	5	27.56	0.570	1.000	Pass
			RB25#0	21.88	5	26.88	0.488	1.000	Pass
			RB25#13	21.87	5	26.87	0.486	1.000	Pass
			RB25#25	21.8	5	26.80	0.479	1.000	Pass
			RB50#0	21.89	5	26.89	0.489	1.000	Pass
		16-QAM	RB1#0	21.53	5	26.53	0.450	1.000	Pass
			RB1#25	21.69	5	26.69	0.467	1.000	Pass
			RB1#49	21.39	5	26.39	0.436	1.000	Pass
			RB25#0	20.87	5	25.87	0.386	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
15 MHz	HCH		RB25#13	20.87	5	25.87	0.386	1.000	Pass
			RB25#25	20.88	5	25.88	0.387	1.000	Pass
			RB50#0	20.76	5	25.76	0.377	1.000	Pass
		QPSK	RB1#0	22.65	5	27.65	0.582	1.000	Pass
			RB1#25	22.95	5	27.95	0.624	1.000	Pass
			RB1#49	22.72	5	27.72	0.592	1.000	Pass
			RB25#0	21.9	5	26.90	0.490	1.000	Pass
			RB25#13	21.91	5	26.91	0.491	1.000	Pass
			RB25#25	21.78	5	26.78	0.476	1.000	Pass
			RB50#0	21.85	5	26.85	0.484	1.000	Pass
		16-QAM	RB1#0	21.51	5	26.51	0.448	1.000	Pass
			RB1#25	21.77	5	26.77	0.475	1.000	Pass
			RB1#49	21.89	5	26.89	0.489	1.000	Pass
			RB25#0	21.16	5	26.16	0.413	1.000	Pass
			RB25#13	21	5	26.00	0.398	1.000	Pass
			RB25#25	20.83	5	25.83	0.383	1.000	Pass
			RB50#0	20.83	5	25.83	0.383	1.000	Pass
15 MHz	LCH	QPSK	RB1#0	22.53	5	27.53	0.566	1.000	Pass
			RB1#38	22.42	5	27.42	0.552	1.000	Pass
			RB1#74	22.48	5	27.48	0.560	1.000	Pass
			RB36#0	21.57	5	26.57	0.454	1.000	Pass
			RB36#19	21.53	5	26.53	0.450	1.000	Pass
			RB36#39	21.64	5	26.64	0.461	1.000	Pass
			RB75#0	21.58	5	26.58	0.455	1.000	Pass
		16-QAM	RB1#0	21.61	5	26.61	0.458	1.000	Pass
			RB1#38	22.13	5	27.13	0.516	1.000	Pass
			RB1#74	21.69	5	26.69	0.467	1.000	Pass
			RB36#0	20.52	5	25.52	0.356	1.000	Pass
			RB36#19	20.58	5	25.58	0.361	1.000	Pass
			RB36#39	20.58	5	25.58	0.361	1.000	Pass
			RB75#0	20.56	5	25.56	0.360	1.000	Pass
	MCH	QPSK	RB1#0	22.68	5	27.68	0.586	1.000	Pass
			RB1#38	22.8	5	27.80	0.603	1.000	Pass
			RB1#74	22.45	5	27.45	0.556	1.000	Pass
			RB36#0	21.86	5	26.86	0.485	1.000	Pass
			RB36#19	21.88	5	26.88	0.488	1.000	Pass
			RB36#39	21.69	5	26.69	0.467	1.000	Pass
			RB75#0	21.76	5	26.76	0.474	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
20 MHz	HCH	16-QAM	RB1#0	21.75	5	26.75	0.473	1.000	Pass
			RB1#38	21.73	5	26.73	0.471	1.000	Pass
			RB1#74	21.56	5	26.56	0.453	1.000	Pass
			RB36#0	20.87	5	25.87	0.386	1.000	Pass
			RB36#19	20.88	5	25.88	0.387	1.000	Pass
			RB36#39	20.69	5	25.69	0.371	1.000	Pass
			RB75#0	20.75	5	25.75	0.376	1.000	Pass
		QPSK	RB1#0	22.8	5	27.80	0.603	1.000	Pass
			RB1#38	22.58	5	27.58	0.573	1.000	Pass
			RB1#74	22.71	5	27.71	0.590	1.000	Pass
			RB36#0	21.75	5	26.75	0.473	1.000	Pass
			RB36#19	21.91	5	26.91	0.491	1.000	Pass
			RB36#39	21.9	5	26.90	0.490	1.000	Pass
			RB75#0	21.78	5	26.78	0.476	1.000	Pass
		16-QAM	RB1#0	22.47	5	27.47	0.558	1.000	Pass
			RB1#38	22.37	5	27.37	0.546	1.000	Pass
			RB1#74	22.09	5	27.09	0.512	1.000	Pass
			RB36#0	20.69	5	25.69	0.371	1.000	Pass
			RB36#19	20.76	5	25.76	0.377	1.000	Pass
			RB36#39	20.74	5	25.74	0.375	1.000	Pass
			RB75#0	20.84	5	25.84	0.384	1.000	Pass
	LCH	QPSK	RB1#0	22.2	5	27.20	0.525	1.000	Pass
			RB1#50	22.75	5	27.75	0.596	1.000	Pass
			RB1#99	22.26	5	27.26	0.532	1.000	Pass
			RB50#0	21.61	5	26.61	0.458	1.000	Pass
			RB50#25	21.69	5	26.69	0.467	1.000	Pass
			RB50#50	21.61	5	26.61	0.458	1.000	Pass
			RB100#0	21.66	5	26.66	0.463	1.000	Pass
		16-QAM	RB1#0	21.83	5	26.83	0.482	1.000	Pass
			RB1#50	21.93	5	26.93	0.493	1.000	Pass
			RB1#99	21.23	5	26.23	0.420	1.000	Pass
			RB50#0	20.5	5	25.50	0.355	1.000	Pass
			RB50#25	20.65	5	25.65	0.367	1.000	Pass
			RB50#50	20.6	5	25.60	0.363	1.000	Pass
			RB100#0	20.66	5	25.66	0.368	1.000	Pass
	MCH	QPSK	RB1#0	22.88	5	27.88	0.614	1.000	Pass
			RB1#50	22.95	5	27.95	0.624	1.000	Pass
			RB1#99	22.63	5	27.63	0.579	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND4</b>									
			RB50#0	21.81	5	26.81	0.480	1.000	Pass
			RB50#25	21.91	5	26.91	0.491	1.000	Pass
			RB50#50	21.75	5	26.75	0.473	1.000	Pass
			RB100#0	21.72	5	26.72	0.470	1.000	Pass
		16-QAM	RB1#0	22.22	5	27.22	0.527	1.000	Pass
			RB1#50	21.71	5	26.71	0.469	1.000	Pass
			RB1#99	21.39	5	26.39	0.436	1.000	Pass
			RB50#0	20.6	5	25.60	0.363	1.000	Pass
			RB50#25	20.81	5	25.81	0.381	1.000	Pass
			RB50#50	20.63	5	25.63	0.366	1.000	Pass
			RB100#0	20.69	5	25.69	0.371	1.000	Pass
	HCH	QPSK	RB1#0	22.68	5	27.68	0.586	1.000	Pass
			RB1#50	22.79	5	27.79	0.601	1.000	Pass
			RB1#99	22.65	5	27.65	0.582	1.000	Pass
			RB50#0	21.86	5	26.86	0.485	1.000	Pass
			RB50#25	21.9	5	26.90	0.490	1.000	Pass
			RB50#50	21.76	5	26.76	0.474	1.000	Pass
			RB100#0	21.67	5	26.67	0.465	1.000	Pass
		16-QAM	RB1#0	21.46	5	26.46	0.443	1.000	Pass
			RB1#50	21.63	5	26.63	0.460	1.000	Pass
			RB1#99	21.67	5	26.67	0.465	1.000	Pass
			RB50#0	20.69	5	25.69	0.371	1.000	Pass
			RB50#25	20.82	5	25.82	0.382	1.000	Pass
			RB50#50	20.71	5	25.71	0.372	1.000	Pass
			RB100#0	20.74	5	25.74	0.375	1.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND5</b>										
1.4 MHz	LCH	QPSK	RB1#0	23.29	5	2.85	26.14	0.411	7.00	Pass
			RB1#3	23.38	5	2.85	26.23	0.420	7.00	Pass
			RB1#5	23.31	5	2.85	26.16	0.413	7.00	Pass
			RB3#0	23.35	5	2.85	26.20	0.417	7.00	Pass
			RB3#2	23.38	5	2.85	26.23	0.420	7.00	Pass
			RB3#3	23.33	5	2.85	26.18	0.415	7.00	Pass
			RB6#0	22.35	5	2.85	25.20	0.331	7.00	Pass
		16-QAM	RB1#0	22.53	5	2.85	25.38	0.345	7.00	Pass
			RB1#3	22.74	5	2.85	25.59	0.362	7.00	Pass
			RB1#5	22.63	5	2.85	25.48	0.353	7.00	Pass
			RB3#0	22.66	5	2.85	25.51	0.356	7.00	Pass
			RB3#2	22.5	5	2.85	25.35	0.343	7.00	Pass
			RB3#3	22.46	5	2.85	25.31	0.340	7.00	Pass
			RB6#0	21.58	5	2.85	24.43	0.277	7.00	Pass
	MCH	QPSK	RB1#0	23.08	5	2.85	25.93	0.392	7.00	Pass
			RB1#3	23.22	5	2.85	26.07	0.405	7.00	Pass
			RB1#5	23.11	5	2.85	25.96	0.394	7.00	Pass
			RB3#0	23.28	5	2.85	26.13	0.410	7.00	Pass
			RB3#2	23.29	5	2.85	26.14	0.411	7.00	Pass
			RB3#3	23.27	5	2.85	26.12	0.409	7.00	Pass
			RB6#0	22.38	5	2.85	25.23	0.333	7.00	Pass
		16-QAM	RB1#0	22.3	5	2.85	25.15	0.327	7.00	Pass
			RB1#3	22.16	5	2.85	25.01	0.317	7.00	Pass
			RB1#5	22.26	5	2.85	25.11	0.324	7.00	Pass
			RB3#0	22.15	5	2.85	25.00	0.316	7.00	Pass
			RB3#2	22.16	5	2.85	25.01	0.317	7.00	Pass
			RB3#3	22.12	5	2.85	24.97	0.314	7.00	Pass
			RB6#0	21.01	5	2.85	23.86	0.243	7.00	Pass
	HCH	QPSK	RB1#0	23.22	5	2.85	26.07	0.405	7.00	Pass
			RB1#3	23.38	5	2.85	26.23	0.420	7.00	Pass
			RB1#5	23.29	5	2.85	26.14	0.411	7.00	Pass
			RB3#0	23.33	5	2.85	26.18	0.415	7.00	Pass
			RB3#2	23.49	5	2.85	26.34	0.431	7.00	Pass
			RB3#3	23.47	5	2.85	26.32	0.429	7.00	Pass
			RB6#0	22.37	5	2.85	25.22	0.333	7.00	Pass
		16-QAM	RB1#0	22.28	5	2.85	25.13	0.326	7.00	Pass
			RB1#3	22.19	5	2.85	25.04	0.319	7.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND5</b>										
3 MHz			RB1#5	21.89	5	2.85	24.74	0.298	7.00	Pass
			RB3#0	22.05	5	2.85	24.90	0.309	7.00	Pass
			RB3#2	22.14	5	2.85	24.99	0.316	7.00	Pass
			RB3#3	22.08	5	2.85	24.93	0.311	7.00	Pass
			RB6#0	21.23	5	2.85	24.08	0.256	7.00	Pass
	LCH	QPSK	RB1#0	23.23	5	2.85	26.08	0.406	7.00	Pass
			RB1#7	23.2	5	2.85	26.05	0.403	7.00	Pass
			RB1#14	23.14	5	2.85	25.99	0.397	7.00	Pass
			RB8#0	22.37	5	2.85	25.22	0.333	7.00	Pass
			RB8#4	22.33	5	2.85	25.18	0.330	7.00	Pass
			RB8#7	22.37	5	2.85	25.22	0.333	7.00	Pass
			RB15#0	22.47	5	2.85	25.32	0.340	7.00	Pass
		16-QAM	RB1#0	22.11	5	2.85	24.96	0.313	7.00	Pass
			RB1#7	21.92	5	2.85	24.77	0.300	7.00	Pass
			RB1#14	21.85	5	2.85	24.70	0.295	7.00	Pass
			RB8#0	21.33	5	2.85	24.18	0.262	7.00	Pass
			RB8#4	21.45	5	2.85	24.30	0.269	7.00	Pass
			RB8#7	21.48	5	2.85	24.33	0.271	7.00	Pass
			RB15#0	21.39	5	2.85	24.24	0.265	7.00	Pass
	MCH	QPSK	RB1#0	23.47	5	2.85	26.32	0.429	7.00	Pass
			RB1#7	23.35	5	2.85	26.20	0.417	7.00	Pass
			RB1#14	23.35	5	2.85	26.20	0.417	7.00	Pass
			RB8#0	22.55	5	2.85	25.40	0.347	7.00	Pass
			RB8#4	22.43	5	2.85	25.28	0.337	7.00	Pass
			RB8#7	22.35	5	2.85	25.20	0.331	7.00	Pass
			RB15#0	22.45	5	2.85	25.30	0.339	7.00	Pass
		16-QAM	RB1#0	22.43	5	2.85	25.28	0.337	7.00	Pass
			RB1#7	22.11	5	2.85	24.96	0.313	7.00	Pass
			RB1#14	22.22	5	2.85	25.07	0.321	7.00	Pass
			RB8#0	21.29	5	2.85	24.14	0.259	7.00	Pass
			RB8#4	21.25	5	2.85	24.10	0.257	7.00	Pass
			RB8#7	21.18	5	2.85	24.03	0.253	7.00	Pass
			RB15#0	21.34	5	2.85	24.19	0.262	7.00	Pass
	HCH	QPSK	RB1#0	23.32	5	2.85	26.17	0.414	7.00	Pass
			RB1#7	23.37	5	2.85	26.22	0.419	7.00	Pass
			RB1#14	23.21	5	2.85	26.06	0.404	7.00	Pass
			RB8#0	22.31	5	2.85	25.16	0.328	7.00	Pass
			RB8#4	22.36	5	2.85	25.21	0.332	7.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND5</b>										
		16-QAM	RB8#7	22.36	5	2.85	25.21	0.332	7.00	Pass
			RB15#0	22.31	5	2.85	25.16	0.328	7.00	Pass
			RB1#0	22.23	5	2.85	25.08	0.322	7.00	Pass
			RB1#7	22.33	5	2.85	25.18	0.330	7.00	Pass
			RB1#14	22.38	5	2.85	25.23	0.333	7.00	Pass
			RB8#0	21.09	5	2.85	23.94	0.248	7.00	Pass
			RB8#4	21.23	5	2.85	24.08	0.256	7.00	Pass
			RB8#7	21.36	5	2.85	24.21	0.264	7.00	Pass
			RB15#0	21.11	5	2.85	23.96	0.249	7.00	Pass
5 MHz	LCH	QPSK	RB1#0	23.04	5	2.85	25.89	0.388	7.00	Pass
			RB1#13	23.27	5	2.85	26.12	0.409	7.00	Pass
			RB1#24	23.19	5	2.85	26.04	0.402	7.00	Pass
			RB12#0	22.42	5	2.85	25.27	0.337	7.00	Pass
			RB12#6	22.42	5	2.85	25.27	0.337	7.00	Pass
			RB12#13	22.3	5	2.85	25.15	0.327	7.00	Pass
			RB25#0	22.4	5	2.85	25.25	0.335	7.00	Pass
		16-QAM	RB1#0	21.88	5	2.85	24.73	0.297	7.00	Pass
			RB1#13	21.69	5	2.85	24.54	0.284	7.00	Pass
			RB1#24	21.63	5	2.85	24.48	0.281	7.00	Pass
			RB12#0	21.37	5	2.85	24.22	0.264	7.00	Pass
			RB12#6	21.39	5	2.85	24.24	0.265	7.00	Pass
			RB12#13	21.34	5	2.85	24.19	0.262	7.00	Pass
			RB25#0	21.5	5	2.85	24.35	0.272	7.00	Pass
	MCH	QPSK	RB1#0	23.15	5	2.85	26.00	0.398	7.00	Pass
			RB1#13	23.21	5	2.85	26.06	0.404	7.00	Pass
			RB1#24	23.23	5	2.85	26.08	0.406	7.00	Pass
			RB12#0	22.36	5	2.85	25.21	0.332	7.00	Pass
			RB12#6	22.41	5	2.85	25.26	0.336	7.00	Pass
			RB12#13	22.37	5	2.85	25.22	0.333	7.00	Pass
			RB25#0	22.42	5	2.85	25.27	0.337	7.00	Pass
		16-QAM	RB1#0	22.45	5	2.85	25.30	0.339	7.00	Pass
			RB1#13	22.47	5	2.85	25.32	0.340	7.00	Pass
			RB1#24	22.13	5	2.85	24.98	0.315	7.00	Pass
			RB12#0	21.24	5	2.85	24.09	0.256	7.00	Pass
			RB12#6	21.29	5	2.85	24.14	0.259	7.00	Pass
			RB12#13	21.15	5	2.85	24.00	0.251	7.00	Pass
			RB25#0	21.34	5	2.85	24.19	0.262	7.00	Pass
	HCH	QPSK	RB1#0	23.31	5	2.85	26.16	0.413	7.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND5</b>										
			RB1#13	23.48	5	2.85	26.33	0.430	7.00	Pass
			RB1#24	23.34	5	2.85	26.19	0.416	7.00	Pass
			RB12#0	22.33	5	2.85	25.18	0.330	7.00	Pass
			RB12#6	22.44	5	2.85	25.29	0.338	7.00	Pass
			RB12#13	22.33	5	2.85	25.18	0.330	7.00	Pass
			RB25#0	22.29	5	2.85	25.14	0.327	7.00	Pass
		16-QAM	RB1#0	22.03	5	2.85	24.88	0.308	7.00	Pass
			RB1#13	22.06	5	2.85	24.91	0.310	7.00	Pass
			RB1#24	22	5	2.85	24.85	0.305	7.00	Pass
			RB12#0	21.17	5	2.85	24.02	0.252	7.00	Pass
			RB12#6	21.25	5	2.85	24.10	0.257	7.00	Pass
			RB12#13	21.03	5	2.85	23.88	0.244	7.00	Pass
			RB25#0	21.2	5	2.85	24.05	0.254	7.00	Pass
10 MHz	LCH	QPSK	RB1#0	23.31	5	2.85	26.16	0.413	7.00	Pass
			RB1#25	23.35	5	2.85	26.20	0.417	7.00	Pass
			RB1#49	23.08	5	2.85	25.93	0.392	7.00	Pass
			RB25#0	22.38	5	2.85	25.23	0.333	7.00	Pass
			RB25#13	22.41	5	2.85	25.26	0.336	7.00	Pass
			RB25#25	22.3	5	2.85	25.15	0.327	7.00	Pass
			RB50#0	22.4	5	2.85	25.25	0.335	7.00	Pass
		16-QAM	RB1#0	22.28	5	2.85	25.13	0.326	7.00	Pass
			RB1#25	22.33	5	2.85	25.18	0.330	7.00	Pass
			RB1#49	22.46	5	2.85	25.31	0.340	7.00	Pass
			RB25#0	21.37	5	2.85	24.22	0.264	7.00	Pass
			RB25#13	21.38	5	2.85	24.23	0.265	7.00	Pass
			RB25#25	21.26	5	2.85	24.11	0.258	7.00	Pass
			RB50#0	21.25	5	2.85	24.10	0.257	7.00	Pass
	MCH	QPSK	RB1#0	23.35	5	2.85	26.20	0.417	7.00	Pass
			RB1#25	23.73	5	2.85	26.58	0.455	7.00	Pass
			RB1#49	23.2	5	2.85	26.05	0.403	7.00	Pass
			RB25#0	22.42	5	2.85	25.27	0.337	7.00	Pass
			RB25#13	22.52	5	2.85	25.37	0.344	7.00	Pass
			RB25#25	22.37	5	2.85	25.22	0.333	7.00	Pass
			RB50#0	22.45	5	2.85	25.30	0.339	7.00	Pass
		16-QAM	RB1#0	22.18	5	2.85	25.03	0.318	7.00	Pass
			RB1#25	22.18	5	2.85	25.03	0.318	7.00	Pass
			RB1#49	21.68	5	2.85	24.53	0.284	7.00	Pass
			RB25#0	21.33	5	2.85	24.18	0.262	7.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND5</b>										
			RB25#13	21.52	5	2.85	24.37	0.274	7.00	Pass
			RB25#25	21.56	5	2.85	24.41	0.276	7.00	Pass
			RB50#0	21.42	5	2.85	24.27	0.267	7.00	Pass
	HCH	QPSK	RB1#0	23.37	5	2.85	26.22	0.419	7.00	Pass
			RB1#25	23.32	5	2.85	26.17	0.414	7.00	Pass
			RB1#49	23.59	5	2.85	26.44	0.441	7.00	Pass
			RB25#0	22.47	5	2.85	25.32	0.340	7.00	Pass
			RB25#13	22.4	5	2.85	25.25	0.335	7.00	Pass
			RB25#25	22.39	5	2.85	25.24	0.334	7.00	Pass
			RB50#0	22.44	5	2.85	25.29	0.338	7.00	Pass
		16-QAM	RB1#0	22.5	5	2.85	25.35	0.343	7.00	Pass
			RB1#25	22.37	5	2.85	25.22	0.333	7.00	Pass
			RB1#49	22.18	5	2.85	25.03	0.318	7.00	Pass
			RB25#0	21.53	5	2.85	24.38	0.274	7.00	Pass
			RB25#13	21.46	5	2.85	24.31	0.270	7.00	Pass
			RB25#25	21.41	5	2.85	24.26	0.267	7.00	Pass
			RB50#0	21.25	5	2.85	24.10	0.257	7.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND12</b>										
1.4 MHz	LCH	QPSK	RB1#0	22.82	5	2.85	25.67	0.369	3.00	Pass
			RB1#3	23.2	5	2.85	26.05	0.403	3.00	Pass
			RB1#5	23.02	5	2.85	25.87	0.386	3.00	Pass
			RB3#0	22.87	5	2.85	25.72	0.373	3.00	Pass
			RB3#2	22.94	5	2.85	25.79	0.379	3.00	Pass
			RB3#3	22.88	5	2.85	25.73	0.374	3.00	Pass
			RB6#0	21.95	5	2.85	24.80	0.302	3.00	Pass
		16-QAM	RB1#0	21.86	5	2.85	24.71	0.296	3.00	Pass
			RB1#3	22.4	5	2.85	25.25	0.335	3.00	Pass
			RB1#5	22.36	5	2.85	25.21	0.332	3.00	Pass
			RB3#0	22.3	5	2.85	25.15	0.327	3.00	Pass
			RB3#2	22.19	5	2.85	25.04	0.319	3.00	Pass
			RB3#3	22.1	5	2.85	24.95	0.313	3.00	Pass
			RB6#0	21.31	5	2.85	24.16	0.261	3.00	Pass
	MCH	QPSK	RB1#0	22.77	5	2.85	25.62	0.365	3.00	Pass
			RB1#3	22.89	5	2.85	25.74	0.375	3.00	Pass
			RB1#5	22.79	5	2.85	25.64	0.366	3.00	Pass
			RB3#0	22.94	5	2.85	25.79	0.379	3.00	Pass
			RB3#2	23.13	5	2.85	25.98	0.396	3.00	Pass
			RB3#3	23.03	5	2.85	25.88	0.387	3.00	Pass
			RB6#0	22.02	5	2.85	24.87	0.307	3.00	Pass
		16-QAM	RB1#0	21.93	5	2.85	24.78	0.301	3.00	Pass
			RB1#3	21.93	5	2.85	24.78	0.301	3.00	Pass
			RB1#5	21.89	5	2.85	24.74	0.298	3.00	Pass
			RB3#0	21.98	5	2.85	24.83	0.304	3.00	Pass
			RB3#2	22.06	5	2.85	24.91	0.310	3.00	Pass
			RB3#3	21.92	5	2.85	24.77	0.300	3.00	Pass
			RB6#0	20.92	5	2.85	23.77	0.238	3.00	Pass
	HCH	QPSK	RB1#0	22.71	5	2.85	25.56	0.360	3.00	Pass
			RB1#3	22.93	5	2.85	25.78	0.378	3.00	Pass
			RB1#5	22.98	5	2.85	25.83	0.383	3.00	Pass
			RB3#0	22.92	5	2.85	25.77	0.378	3.00	Pass
			RB3#2	23.03	5	2.85	25.88	0.387	3.00	Pass
			RB3#3	23.04	5	2.85	25.89	0.388	3.00	Pass
			RB6#0	22	5	2.85	24.85	0.305	3.00	Pass
		16-QAM	RB1#0	21.81	5	2.85	24.66	0.292	3.00	Pass
			RB1#3	21.94	5	2.85	24.79	0.301	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenn a Gain (dBi)	Antenn a Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND12</b>										
3 MHz			RB1#5	22.03	5	2.85	24.88	0.308	3.00	Pass
			RB3#0	22.09	5	2.85	24.94	0.312	3.00	Pass
			RB3#2	22.18	5	2.85	25.03	0.318	3.00	Pass
			RB3#3	22.16	5	2.85	25.01	0.317	3.00	Pass
			RB6#0	21.13	5	2.85	23.98	0.250	3.00	Pass
	LCH	QPSK	RB1#0	22.92	5	2.85	25.77	0.378	3.00	Pass
			RB1#7	23.02	5	2.85	25.87	0.386	3.00	Pass
			RB1#14	22.93	5	2.85	25.78	0.378	3.00	Pass
			RB8#0	22.01	5	2.85	24.86	0.306	3.00	Pass
			RB8#4	22	5	2.85	24.85	0.305	3.00	Pass
			RB8#7	21.95	5	2.85	24.80	0.302	3.00	Pass
			RB15#0	21.99	5	2.85	24.84	0.305	3.00	Pass
		16-QAM	RB1#0	21.87	5	2.85	24.72	0.296	3.00	Pass
			RB1#7	22.21	5	2.85	25.06	0.321	3.00	Pass
			RB1#14	22.13	5	2.85	24.98	0.315	3.00	Pass
			RB8#0	20.82	5	2.85	23.67	0.233	3.00	Pass
			RB8#4	20.81	5	2.85	23.66	0.232	3.00	Pass
			RB8#7	20.78	5	2.85	23.63	0.231	3.00	Pass
			RB15#0	20.91	5	2.85	23.76	0.238	3.00	Pass
	MCH	QPSK	RB1#0	23.04	5	2.85	25.89	0.388	3.00	Pass
			RB1#7	23	5	2.85	25.85	0.385	3.00	Pass
			RB1#14	23.03	5	2.85	25.88	0.387	3.00	Pass
			RB8#0	22.04	5	2.85	24.89	0.308	3.00	Pass
			RB8#4	22.07	5	2.85	24.92	0.310	3.00	Pass
			RB8#7	21.99	5	2.85	24.84	0.305	3.00	Pass
			RB15#0	22	5	2.85	24.85	0.305	3.00	Pass
		16-QAM	RB1#0	21.89	5	2.85	24.74	0.298	3.00	Pass
			RB1#7	21.85	5	2.85	24.70	0.295	3.00	Pass
			RB1#14	21.71	5	2.85	24.56	0.286	3.00	Pass
			RB8#0	21.03	5	2.85	23.88	0.244	3.00	Pass
			RB8#4	20.96	5	2.85	23.81	0.240	3.00	Pass
			RB8#7	21.07	5	2.85	23.92	0.247	3.00	Pass
			RB15#0	21.05	5	2.85	23.90	0.245	3.00	Pass
	HCH	QPSK	RB1#0	22.81	5	2.85	25.66	0.368	3.00	Pass
			RB1#7	22.99	5	2.85	25.84	0.384	3.00	Pass
			RB1#14	23.17	5	2.85	26.02	0.400	3.00	Pass
			RB8#0	22.07	5	2.85	24.92	0.310	3.00	Pass
			RB8#4	22.09	5	2.85	24.94	0.312	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenn a Gain (dBi)	Antenn a Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND12</b>										
			RB8#7	22.05	5	2.85	24.90	0.309	3.00	Pass
			RB15#0	22.08	5	2.85	24.93	0.311	3.00	Pass
		16-QAM	RB1#0	21.94	5	2.85	24.79	0.301	3.00	Pass
			RB1#7	21.91	5	2.85	24.76	0.299	3.00	Pass
			RB1#14	22.19	5	2.85	25.04	0.319	3.00	Pass
			RB8#0	21.02	5	2.85	23.87	0.244	3.00	Pass
			RB8#4	21.05	5	2.85	23.90	0.245	3.00	Pass
			RB8#7	21.02	5	2.85	23.87	0.244	3.00	Pass
			RB15#0	20.94	5	2.85	23.79	0.239	3.00	Pass
5 MHz	LCH	QPSK	RB1#0	22.67	5	2.85	25.52	0.356	3.00	Pass
			RB1#13	22.82	5	2.85	25.67	0.369	3.00	Pass
			RB1#24	22.79	5	2.85	25.64	0.366	3.00	Pass
			RB12#0	21.9	5	2.85	24.75	0.299	3.00	Pass
			RB12#6	22.02	5	2.85	24.87	0.307	3.00	Pass
			RB12#13	21.91	5	2.85	24.76	0.299	3.00	Pass
			RB25#0	21.9	5	2.85	24.75	0.299	3.00	Pass
		16-QAM	RB1#0	21.71	5	2.85	24.56	0.286	3.00	Pass
			RB1#13	21.77	5	2.85	24.62	0.290	3.00	Pass
			RB1#24	21.76	5	2.85	24.61	0.289	3.00	Pass
			RB12#0	20.87	5	2.85	23.72	0.236	3.00	Pass
			RB12#6	20.92	5	2.85	23.77	0.238	3.00	Pass
			RB12#13	20.81	5	2.85	23.66	0.232	3.00	Pass
			RB25#0	21.13	5	2.85	23.98	0.250	3.00	Pass
	MCH	QPSK	RB1#0	22.82	5	2.85	25.67	0.369	3.00	Pass
			RB1#13	22.77	5	2.85	25.62	0.365	3.00	Pass
			RB1#24	22.79	5	2.85	25.64	0.366	3.00	Pass
			RB12#0	21.99	5	2.85	24.84	0.305	3.00	Pass
			RB12#6	22.04	5	2.85	24.89	0.308	3.00	Pass
			RB12#13	21.92	5	2.85	24.77	0.300	3.00	Pass
			RB25#0	22	5	2.85	24.85	0.305	3.00	Pass
		16-QAM	RB1#0	22.16	5	2.85	25.01	0.317	3.00	Pass
			RB1#13	22.1	5	2.85	24.95	0.313	3.00	Pass
			RB1#24	21.99	5	2.85	24.84	0.305	3.00	Pass
			RB12#0	20.96	5	2.85	23.81	0.240	3.00	Pass
			RB12#6	21.2	5	2.85	24.05	0.254	3.00	Pass
			RB12#13	21.16	5	2.85	24.01	0.252	3.00	Pass
			RB25#0	20.98	5	2.85	23.83	0.242	3.00	Pass
	HCH	QPSK	RB1#0	22.65	5	2.85	25.50	0.355	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Off set)	Conducted Output AV Power (dBm)	Antenn a Gain (dBi)	Antenn a Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND12</b>										
			RB1#13	22.92	5	2.85	25.77	0.378	3.00	Pass
			RB1#24	23	5	2.85	25.85	0.385	3.00	Pass
			RB12#0	21.98	5	2.85	24.83	0.304	3.00	Pass
			RB12#6	22.04	5	2.85	24.89	0.308	3.00	Pass
			RB12#13	21.96	5	2.85	24.81	0.303	3.00	Pass
			RB25#0	21.96	5	2.85	24.81	0.303	3.00	Pass
		16-QAM	RB1#0	21.75	5	2.85	24.60	0.288	3.00	Pass
			RB1#13	21.86	5	2.85	24.71	0.296	3.00	Pass
			RB1#24	21.81	5	2.85	24.66	0.292	3.00	Pass
			RB12#0	20.9	5	2.85	23.75	0.237	3.00	Pass
			RB12#6	20.95	5	2.85	23.80	0.240	3.00	Pass
			RB12#13	20.92	5	2.85	23.77	0.238	3.00	Pass
			RB25#0	20.8	5	2.85	23.65	0.232	3.00	Pass
10 MHz	LCH	QPSK	RB1#0	23.06	5	2.85	25.91	0.390	3.00	Pass
			RB1#25	22.95	5	2.85	25.80	0.380	3.00	Pass
			RB1#49	22.88	5	2.85	25.73	0.374	3.00	Pass
			RB25#0	22.05	5	2.85	24.90	0.309	3.00	Pass
			RB25#13	21.98	5	2.85	24.83	0.304	3.00	Pass
			RB25#25	22.02	5	2.85	24.87	0.307	3.00	Pass
			RB50#0	22.04	5	2.85	24.89	0.308	3.00	Pass
		16-QAM	RB1#0	21.8	5	2.85	24.65	0.292	3.00	Pass
			RB1#25	21.85	5	2.85	24.70	0.295	3.00	Pass
			RB1#49	21.81	5	2.85	24.66	0.292	3.00	Pass
			RB25#0	20.82	5	2.85	23.67	0.233	3.00	Pass
			RB25#13	20.9	5	2.85	23.75	0.237	3.00	Pass
			RB25#25	20.92	5	2.85	23.77	0.238	3.00	Pass
			RB50#0	21.02	5	2.85	23.87	0.244	3.00	Pass
	MCH	QPSK	RB1#0	22.76	5	2.85	25.61	0.364	3.00	Pass
			RB1#25	23.06	5	2.85	25.91	0.390	3.00	Pass
			RB1#49	22.78	5	2.85	25.63	0.366	3.00	Pass
			RB25#0	21.97	5	2.85	24.82	0.303	3.00	Pass
			RB25#13	21.97	5	2.85	24.82	0.303	3.00	Pass
			RB25#25	21.8	5	2.85	24.65	0.292	3.00	Pass
			RB50#0	21.92	5	2.85	24.77	0.300	3.00	Pass
		16-QAM	RB1#0	21.8	5	2.85	24.65	0.292	3.00	Pass
			RB1#25	21.9	5	2.85	24.75	0.299	3.00	Pass
			RB1#49	21.65	5	2.85	24.50	0.282	3.00	Pass
			RB25#0	20.96	5	2.85	23.81	0.240	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND12</b>										
			RB25#13	20.93	5	2.85	23.78	0.239	3.00	Pass
			RB25#25	20.83	5	2.85	23.68	0.233	3.00	Pass
			RB50#0	20.85	5	2.85	23.70	0.234	3.00	Pass
	HCH	QPSK	RB1#0	22.88	5	2.85	25.73	0.374	3.00	Pass
			RB1#25	22.9	5	2.85	25.75	0.376	3.00	Pass
			RB1#49	22.81	5	2.85	25.66	0.368	3.00	Pass
			RB25#0	22.01	5	2.85	24.86	0.306	3.00	Pass
			RB25#13	22.05	5	2.85	24.90	0.309	3.00	Pass
			RB25#25	21.98	5	2.85	24.83	0.304	3.00	Pass
			RB50#0	22	5	2.85	24.85	0.305	3.00	Pass
		16-QAM	RB1#0	21.88	5	2.85	24.73	0.297	3.00	Pass
			RB1#25	21.87	5	2.85	24.72	0.296	3.00	Pass
			RB1#49	21.72	5	2.85	24.57	0.286	3.00	Pass
			RB25#0	21.11	5	2.85	23.96	0.249	3.00	Pass
			RB25#13	21.13	5	2.85	23.98	0.250	3.00	Pass
			RB25#25	20.96	5	2.85	23.81	0.240	3.00	Pass
			RB50#0	20.94	5	2.85	23.79	0.239	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND13</b>										
5 MHz	LCH	QPSK	RB1#0	22.8	5	2.85	25.65	0.367	3.000	Pass
			RB1#13	22.84	5	2.85	25.69	0.371	3.000	Pass
			RB1#24	22.79	5	2.85	25.64	0.366	3.000	Pass
			RB12#0	21.76	5	2.85	24.61	0.289	3.000	Pass
			RB12#6	21.9	5	2.85	24.75	0.299	3.000	Pass
			RB12#13	21.85	5	2.85	24.70	0.295	3.000	Pass
			RB25#0	21.86	5	2.85	24.71	0.296	3.000	Pass
		16-QAM	RB1#0	21.7	5	2.85	24.55	0.285	3.000	Pass
			RB1#13	21.66	5	2.85	24.51	0.282	3.000	Pass
			RB1#24	21.56	5	2.85	24.41	0.276	3.000	Pass
			RB12#0	20.7	5	2.85	23.55	0.226	3.000	Pass
			RB12#6	20.74	5	2.85	23.59	0.229	3.000	Pass
			RB12#13	20.71	5	2.85	23.56	0.227	3.000	Pass
			RB25#0	20.95	5	2.85	23.80	0.240	3.000	Pass
	MCH	QPSK	RB1#0	22.71	5	2.85	25.56	0.360	3.000	Pass
			RB1#13	22.64	5	2.85	25.49	0.354	3.000	Pass
			RB1#24	22.67	5	2.85	25.52	0.356	3.000	Pass
			RB12#0	21.76	5	2.85	24.61	0.289	3.000	Pass
			RB12#6	21.75	5	2.85	24.60	0.288	3.000	Pass
			RB12#13	21.77	5	2.85	24.62	0.290	3.000	Pass
			RB25#0	21.77	5	2.85	24.62	0.290	3.000	Pass
		16-QAM	RB1#0	21.85	5	2.85	24.70	0.295	3.000	Pass
			RB1#13	21.82	5	2.85	24.67	0.293	3.000	Pass
			RB1#24	21.8	5	2.85	24.65	0.292	3.000	Pass
			RB12#0	20.67	5	2.85	23.52	0.225	3.000	Pass
			RB12#6	20.78	5	2.85	23.63	0.231	3.000	Pass
			RB12#13	20.89	5	2.85	23.74	0.237	3.000	Pass
			RB25#0	20.99	5	2.85	23.84	0.242	3.000	Pass
	HCH	QPSK	RB1#0	22.47	5	2.85	25.32	0.340	3.000	Pass
			RB1#13	22.79	5	2.85	25.64	0.366	3.000	Pass
			RB1#24	22.91	5	2.85	25.76	0.377	3.000	Pass
			RB12#0	21.87	5	2.85	24.72	0.296	3.000	Pass
			RB12#6	21.88	5	2.85	24.73	0.297	3.000	Pass
			RB12#13	21.91	5	2.85	24.76	0.299	3.000	Pass
			RB25#0	21.84	5	2.85	24.69	0.294	3.000	Pass
		16-QAM	RB1#0	21.45	5	2.85	24.30	0.269	3.000	Pass
			RB1#13	21.48	5	2.85	24.33	0.271	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND13</b>										
10 MHz	LCH		RB1#24	21.58	5	2.85	24.43	0.277	3.000	Pass
			RB12#0	20.71	5	2.85	23.56	0.227	3.000	Pass
			RB12#6	20.65	5	2.85	23.50	0.224	3.000	Pass
			RB12#13	20.93	5	2.85	23.78	0.239	3.000	Pass
			RB25#0	20.78	5	2.85	23.63	0.231	3.000	Pass
		QPSK	RB1#0	22.76	5	2.85	25.61	0.364	3.000	Pass
			RB1#25	22.78	5	2.85	25.63	0.366	3.000	Pass
			RB1#49	22.79	5	2.85	25.64	0.366	3.000	Pass
			RB25#0	21.91	5	2.85	24.76	0.299	3.000	Pass
			RB25#13	21.93	5	2.85	24.78	0.301	3.000	Pass
			RB25#25	21.88	5	2.85	24.73	0.297	3.000	Pass
			RB50#0	21.85	5	2.85	24.70	0.295	3.000	Pass
		16-QAM	RB1#0	21.74	5	2.85	24.59	0.288	3.000	Pass
			RB1#25	21.78	5	2.85	24.63	0.290	3.000	Pass
			RB1#49	21.77	5	2.85	24.62	0.290	3.000	Pass
			RB25#0	20.71	5	2.85	23.56	0.227	3.000	Pass
			RB25#13	20.71	5	2.85	23.56	0.227	3.000	Pass
			RB25#25	20.67	5	2.85	23.52	0.225	3.000	Pass
			RB50#0	20.71	5	2.85	23.56	0.227	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND14</b>										
5 MHz	LCH	QPSK	RB1#0	22.67	5	2.85	25.52	0.356	3.000	Pass
			RB1#13	22.8	5	2.85	25.65	0.367	3.000	Pass
			RB1#24	22.74	5	2.85	25.59	0.362	3.000	Pass
			RB12#0	21.92	5	2.85	24.77	0.300	3.000	Pass
			RB12#6	21.98	5	2.85	24.83	0.304	3.000	Pass
			RB12#13	21.88	5	2.85	24.73	0.297	3.000	Pass
			RB25#0	21.94	5	2.85	24.79	0.301	3.000	Pass
		16-QAM	RB1#0	21.58	5	2.85	24.43	0.277	3.000	Pass
			RB1#13	21.59	5	2.85	24.44	0.278	3.000	Pass
			RB1#24	21.6	5	2.85	24.45	0.279	3.000	Pass
			RB12#0	20.86	5	2.85	23.71	0.235	3.000	Pass
			RB12#6	20.83	5	2.85	23.68	0.233	3.000	Pass
			RB12#13	20.82	5	2.85	23.67	0.233	3.000	Pass
			RB25#0	21.12	5	2.85	23.97	0.249	3.000	Pass
	MCH	QPSK	RB1#0	22.74	5	2.85	25.59	0.362	3.000	Pass
			RB1#13	22.78	5	2.85	25.63	0.366	3.000	Pass
			RB1#24	22.64	5	2.85	25.49	0.354	3.000	Pass
			RB12#0	22	5	2.85	24.85	0.305	3.000	Pass
			RB12#6	21.93	5	2.85	24.78	0.301	3.000	Pass
			RB12#13	21.9	5	2.85	24.75	0.299	3.000	Pass
			RB25#0	21.95	5	2.85	24.80	0.302	3.000	Pass
		16-QAM	RB1#0	21.97	5	2.85	24.82	0.303	3.000	Pass
			RB1#13	21.93	5	2.85	24.78	0.301	3.000	Pass
			RB1#24	21.91	5	2.85	24.76	0.299	3.000	Pass
			RB12#0	20.79	5	2.85	23.64	0.231	3.000	Pass
			RB12#6	20.79	5	2.85	23.64	0.231	3.000	Pass
			RB12#13	20.91	5	2.85	23.76	0.238	3.000	Pass
			RB25#0	20.98	5	2.85	23.83	0.242	3.000	Pass
	HCH	QPSK	RB1#0	22.66	5	2.85	25.51	0.356	3.000	Pass
			RB1#13	22.9	5	2.85	25.75	0.376	3.000	Pass
			RB1#24	23.02	5	2.85	25.87	0.386	3.000	Pass
			RB12#0	21.96	5	2.85	24.81	0.303	3.000	Pass
			RB12#6	21.87	5	2.85	24.72	0.296	3.000	Pass
			RB12#13	21.97	5	2.85	24.82	0.303	3.000	Pass
			RB25#0	22	5	2.85	24.85	0.305	3.000	Pass
		16-QAM	RB1#0	21.83	5	2.85	24.68	0.294	3.000	Pass
			RB1#13	21.17	5	2.85	24.02	0.252	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	ERP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND14</b>										
10 MHz	LCH		RB1#24	21.21	5	2.85	24.06	0.255	3.000	Pass
			RB12#0	20.81	5	2.85	23.66	0.232	3.000	Pass
			RB12#6	20.81	5	2.85	23.66	0.232	3.000	Pass
			RB12#13	21	5	2.85	23.85	0.243	3.000	Pass
			RB25#0	20.86	5	2.85	23.71	0.235	3.000	Pass
		QPSK	RB1#0	22.88	5	2.85	25.73	0.374	3.000	Pass
			RB1#25	23.01	5	2.85	25.86	0.385	3.000	Pass
			RB1#49	22.62	5	2.85	25.47	0.352	3.000	Pass
			RB25#0	21.99	5	2.85	24.84	0.305	3.000	Pass
			RB25#13	21.96	5	2.85	24.81	0.303	3.000	Pass
			RB25#25	21.91	5	2.85	24.76	0.299	3.000	Pass
			RB50#0	21.95	5	2.85	24.80	0.302	3.000	Pass
		16-QAM	RB1#0	21.77	5	2.85	24.62	0.290	3.000	Pass
			RB1#25	21.92	5	2.85	24.77	0.300	3.000	Pass
			RB1#49	21.63	5	2.85	24.48	0.281	3.000	Pass
			RB25#0	21.07	5	2.85	23.92	0.247	3.000	Pass
			RB25#13	21.05	5	2.85	23.90	0.245	3.000	Pass
			RB25#25	21.1	5	2.85	23.95	0.248	3.000	Pass
			RB50#0	21.02	5	2.85	23.87	0.244	3.000	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
1.4 MHz	LCH	QPSK	RB1#0	22.17	5	27.17	0.521	1.00	Pass
			RB1#3	22.2	5	27.20	0.525	1.00	Pass
			RB1#5	22.4	5	27.40	0.550	1.00	Pass
			RB3#0	22.2	5	27.20	0.525	1.00	Pass
			RB3#2	22.21	5	27.21	0.526	1.00	Pass
			RB3#3	22.2	5	27.20	0.525	1.00	Pass
			RB6#0	21.34	5	26.34	0.431	1.00	Pass
		16-QAM	RB1#0	21.15	5	26.15	0.412	1.00	Pass
			RB1#3	21.29	5	26.29	0.426	1.00	Pass
			RB1#5	21.07	5	26.07	0.405	1.00	Pass
			RB3#0	21.09	5	26.09	0.406	1.00	Pass
			RB3#2	21.19	5	26.19	0.416	1.00	Pass
			RB3#3	21.07	5	26.07	0.405	1.00	Pass
			RB6#0	20.47	5	25.47	0.352	1.00	Pass
	MCH	QPSK	RB1#0	22.47	5	27.47	0.558	1.00	Pass
			RB1#3	22.44	5	27.44	0.555	1.00	Pass
			RB1#5	22.42	5	27.42	0.552	1.00	Pass
			RB3#0	22.56	5	27.56	0.570	1.00	Pass
			RB3#2	22.62	5	27.62	0.578	1.00	Pass
			RB3#3	22.59	5	27.59	0.574	1.00	Pass
			RB6#0	21.72	5	26.72	0.470	1.00	Pass
		16-QAM	RB1#0	21.6	5	26.60	0.457	1.00	Pass
			RB1#3	21.63	5	26.63	0.460	1.00	Pass
			RB1#5	21.45	5	26.45	0.442	1.00	Pass
			RB3#0	21.43	5	26.43	0.440	1.00	Pass
			RB3#2	21.37	5	26.37	0.434	1.00	Pass
			RB3#3	21.33	5	26.33	0.430	1.00	Pass
			RB6#0	20.68	5	25.68	0.370	1.00	Pass
	HCH	QPSK	RB1#0	23.01	5	28.01	0.632	1.00	Pass
			RB1#3	23.17	5	28.17	0.656	1.00	Pass
			RB1#5	23.34	5	28.34	0.682	1.00	Pass
			RB3#0	23.19	5	28.19	0.659	1.00	Pass
			RB3#2	23.16	5	28.16	0.655	1.00	Pass
			RB3#3	23.2	5	28.20	0.661	1.00	Pass
			RB6#0	22.29	5	27.29	0.536	1.00	Pass
		16-QAM	RB1#0	22.1	5	27.10	0.513	1.00	Pass
			RB1#3	22.14	5	27.14	0.518	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
3 MHz			RB1#5	22.06	5	27.06	0.508	1.00	Pass
			RB3#0	22.32	5	27.32	0.540	1.00	Pass
			RB3#2	22.38	5	27.38	0.547	1.00	Pass
			RB3#3	22.22	5	27.22	0.527	1.00	Pass
			RB6#0	21.35	5	26.35	0.432	1.00	Pass
	LCH	QPSK	RB1#0	22.17	5	27.17	0.521	1.00	Pass
			RB1#7	22.22	5	27.22	0.527	1.00	Pass
			RB1#14	22.35	5	27.35	0.543	1.00	Pass
			RB8#0	21.32	5	26.32	0.429	1.00	Pass
			RB8#4	21.37	5	26.37	0.434	1.00	Pass
			RB8#7	21.39	5	26.39	0.436	1.00	Pass
			RB15#0	21.4	5	26.40	0.437	1.00	Pass
		16-QAM	RB1#0	21.15	5	26.15	0.412	1.00	Pass
			RB1#7	21.21	5	26.21	0.418	1.00	Pass
			RB1#14	21.25	5	26.25	0.422	1.00	Pass
			RB8#0	20.38	5	25.38	0.345	1.00	Pass
			RB8#4	20.31	5	25.31	0.340	1.00	Pass
			RB8#7	20.35	5	25.35	0.343	1.00	Pass
			RB15#0	20.49	5	25.49	0.354	1.00	Pass
	MCH	QPSK	RB1#0	22.53	5	27.53	0.566	1.00	Pass
			RB1#7	22.44	5	27.44	0.555	1.00	Pass
			RB1#14	22.48	5	27.48	0.560	1.00	Pass
			RB8#0	21.68	5	26.68	0.466	1.00	Pass
			RB8#4	21.65	5	26.65	0.462	1.00	Pass
			RB8#7	21.66	5	26.66	0.463	1.00	Pass
			RB15#0	21.62	5	26.62	0.459	1.00	Pass
		16-QAM	RB1#0	21.62	5	26.62	0.459	1.00	Pass
			RB1#7	21.19	5	26.19	0.416	1.00	Pass
			RB1#14	21.2	5	26.20	0.417	1.00	Pass
			RB8#0	20.61	5	25.61	0.364	1.00	Pass
			RB8#4	20.69	5	25.69	0.371	1.00	Pass
			RB8#7	20.69	5	25.69	0.371	1.00	Pass
			RB15#0	20.81	5	25.81	0.381	1.00	Pass
	HCH	QPSK	RB1#0	23.04	5	28.04	0.637	1.00	Pass
			RB1#7	22.98	5	27.98	0.628	1.00	Pass
			RB1#14	23.06	5	28.06	0.640	1.00	Pass
			RB8#0	22.19	5	27.19	0.524	1.00	Pass
			RB8#4	22.1	5	27.10	0.513	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
			RB8#7	22.07	5	27.07	0.509	1.00	Pass
			RB15#0	22.16	5	27.16	0.520	1.00	Pass
		16-QAM	RB1#0	22.23	5	27.23	0.528	1.00	Pass
			RB1#7	22.15	5	27.15	0.519	1.00	Pass
			RB1#14	22.09	5	27.09	0.512	1.00	Pass
			RB8#0	21.43	5	26.43	0.440	1.00	Pass
			RB8#4	21.42	5	26.42	0.439	1.00	Pass
			RB8#7	21.33	5	26.33	0.430	1.00	Pass
			RB15#0	21.31	5	26.31	0.428	1.00	Pass
5 MHz	LCH	QPSK	RB1#0	22.17	5	27.17	0.521	1.00	Pass
			RB1#13	22.25	5	27.25	0.531	1.00	Pass
			RB1#24	22.16	5	27.16	0.520	1.00	Pass
			RB12#0	21.29	5	26.29	0.426	1.00	Pass
			RB12#6	21.45	5	26.45	0.442	1.00	Pass
			RB12#13	21.4	5	26.40	0.437	1.00	Pass
			RB25#0	21.29	5	26.29	0.426	1.00	Pass
		16-QAM	RB1#0	21.27	5	26.27	0.424	1.00	Pass
			RB1#13	21.46	5	26.46	0.443	1.00	Pass
			RB1#24	21.4	5	26.40	0.437	1.00	Pass
			RB12#0	20.42	5	25.42	0.348	1.00	Pass
			RB12#6	20.58	5	25.58	0.361	1.00	Pass
			RB12#13	20.45	5	25.45	0.351	1.00	Pass
			RB25#0	20.48	5	25.48	0.353	1.00	Pass
	MCH	QPSK	RB1#0	22.43	5	27.43	0.553	1.00	Pass
			RB1#13	22.34	5	27.34	0.542	1.00	Pass
			RB1#24	22.31	5	27.31	0.538	1.00	Pass
			RB12#0	21.61	5	26.61	0.458	1000	Pass
			RB12#6	21.63	5	26.63	0.460	1.00	Pass
			RB12#13	21.56	5	26.56	0.453	1.00	Pass
			RB25#0	21.49	5	26.49	0.446	1.00	Pass
		16-QAM	RB1#0	21.64	5	26.64	0.461	1.00	Pass
			RB1#13	21.63	5	26.63	0.460	1.00	Pass
			RB1#24	21.54	5	26.54	0.451	1.00	Pass
			RB12#0	20.52	5	25.52	0.356	1.00	Pass
			RB12#6	20.74	5	25.74	0.375	1.00	Pass
			RB12#13	20.66	5	25.66	0.368	1.00	Pass
			RB25#0	20.8	5	25.80	0.380	1.00	Pass
	HCH	QPSK	RB1#0	22.88	5	27.88	0.614	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
			RB1#13	23	5	28.00	0.631	1.00	Pass
			RB1#24	23.17	5	28.17	0.656	1.00	Pass
			RB12#0	22.13	5	27.13	0.516	1.00	Pass
			RB12#6	22.16	5	27.16	0.520	1.00	Pass
			RB12#13	22.08	5	27.08	0.511	1.00	Pass
			RB25#0	22.1	5	27.10	0.513	1.00	Pass
		16-QAM	RB1#0	22.06	5	27.06	0.508	1.00	Pass
			RB1#13	22.03	5	27.03	0.505	1.00	Pass
			RB1#24	22.02	5	27.02	0.504	1.00	Pass
			RB12#0	21.08	5	26.08	0.406	1.00	Pass
			RB12#6	21.12	5	26.12	0.409	1.00	Pass
			RB12#13	21.06	5	26.06	0.404	1.00	Pass
			RB25#0	21.07	5	26.07	0.405	1.00	Pass
10 MHz	LCH	QPSK	RB1#0	22.53	5	27.53	0.566	1.00	Pass
			RB1#25	22.32	5	27.32	0.540	1.00	Pass
			RB1#49	22.13	5	27.13	0.516	1.00	Pass
			RB25#0	21.39	5	26.39	0.436	1.00	Pass
			RB25#13	21.5	5	26.50	0.447	1.00	Pass
			RB25#25	21.27	5	26.27	0.424	1.00	Pass
			RB50#0	21.32	5	26.32	0.429	1.00	Pass
		16-QAM	RB1#0	21.29	5	26.29	0.426	1.00	Pass
			RB1#25	21.73	5	26.73	0.471	1.00	Pass
			RB1#49	21.32	5	26.32	0.429	1.00	Pass
			RB25#0	20.57	5	25.57	0.361	1.00	Pass
			RB25#13	20.6	5	25.60	0.363	1.00	Pass
			RB25#25	20.34	5	25.34	0.342	1.00	Pass
			RB50#0	20.37	5	25.37	0.344	1.00	Pass
	MCH	QPSK	RB1#0	22.59	5	27.59	0.574	1.00	Pass
			RB1#25	22.69	5	27.69	0.587	1.00	Pass
			RB1#49	22.58	5	27.58	0.573	1.00	Pass
			RB25#0	21.67	5	26.67	0.465	1.00	Pass
			RB25#13	21.66	5	26.66	0.463	1.00	Pass
			RB25#25	21.62	5	26.62	0.459	1.00	Pass
			RB50#0	21.69	5	26.69	0.467	1.00	Pass
		16-QAM	RB1#0	21.61	5	26.61	0.458	1.00	Pass
			RB1#25	21.35	5	26.35	0.432	1.00	Pass
			RB1#49	21.26	5	26.26	0.423	1.00	Pass
			RB25#0	20.67	5	25.67	0.369	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
15 MHz	HCH		RB25#13	20.76	5	25.76	0.377	1.00	Pass
			RB25#25	20.62	5	25.62	0.365	1.00	Pass
			RB50#0	20.57	5	25.57	0.361	1.00	Pass
		QPSK	RB1#0	22.77	5	27.77	0.598	1.00	Pass
			RB1#25	23.3	5	28.30	0.676	1.00	Pass
			RB1#49	23.02	5	28.02	0.634	1.00	Pass
			RB25#0	21.93	5	26.93	0.493	1.00	Pass
			RB25#13	22.18	5	27.18	0.522	1.00	Pass
			RB25#25	22.14	5	27.14	0.518	1.00	Pass
			RB50#0	22.14	5	27.14	0.518	1.00	Pass
		16-QAM	RB1#0	21.94	5	26.94	0.494	1.00	Pass
			RB1#25	22.2	5	27.20	0.525	1.00	Pass
			RB1#49	21.98	5	26.98	0.499	1.00	Pass
			RB25#0	21.08	5	26.08	0.406	1.00	Pass
			RB25#13	21.33	5	26.33	0.430	1.00	Pass
			RB25#25	21.29	5	26.29	0.426	1.00	Pass
			RB50#0	21.14	5	26.14	0.411	1.00	Pass
15 MHz	LCH	QPSK	RB1#0	22.31	5	27.31	0.538	1.00	Pass
			RB1#38	22.24	5	27.24	0.530	1.00	Pass
			RB1#74	22.36	5	27.36	0.545	1.00	Pass
			RB36#0	21.44	5	26.44	0.441	1.00	Pass
			RB36#19	21.51	5	26.51	0.448	1.00	Pass
			RB36#39	21.49	5	26.49	0.446	1.00	Pass
			RB75#0	21.46	5	26.46	0.443	1.00	Pass
		16-QAM	RB1#0	21.46	5	26.46	0.443	1.00	Pass
			RB1#38	21.36	5	26.36	0.433	1.00	Pass
			RB1#74	21.25	5	26.25	0.422	1.00	Pass
			RB36#0	20.3	5	25.30	0.339	1.00	Pass
			RB36#19	20.55	5	25.55	0.359	1.00	Pass
			RB36#39	20.37	5	25.37	0.344	1.00	Pass
			RB75#0	20.44	5	25.44	0.350	1.00	Pass
	MCH	QPSK	RB1#0	22.75	5	27.75	0.596	1.00	Pass
			RB1#38	22.37	5	27.37	0.546	1.00	Pass
			RB1#74	22.34	5	27.34	0.542	1.00	Pass
			RB36#0	21.76	5	26.76	0.474	1.00	Pass
			RB36#19	21.66	5	26.66	0.463	1.00	Pass
			RB36#39	21.54	5	26.54	0.451	1.00	Pass
			RB75#0	21.65	5	26.65	0.462	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
20 MHz	HCH	16-QAM	RB1#0	21.8	5	26.80	0.479	1.00	Pass
			RB1#38	21.51	5	26.51	0.448	1.00	Pass
			RB1#74	21.5	5	26.50	0.447	1.00	Pass
			RB36#0	20.79	5	25.79	0.379	1.00	Pass
			RB36#19	20.67	5	25.67	0.369	1.00	Pass
			RB36#39	20.64	5	25.64	0.366	1.00	Pass
			RB75#0	20.55	5	25.55	0.359	1.00	Pass
		QPSK	RB1#0	22.52	5	27.52	0.565	1.00	Pass
			RB1#38	22.8	5	27.80	0.603	1.00	Pass
			RB1#74	22.83	5	27.83	0.607	1.00	Pass
			RB36#0	21.74	5	26.74	0.472	1.00	Pass
			RB36#19	22.01	5	27.01	0.502	1.00	Pass
			RB36#39	22.12	5	27.12	0.515	1.00	Pass
			RB75#0	21.89	5	26.89	0.489	1.00	Pass
		16-QAM	RB1#0	22.29	5	27.29	0.536	1.00	Pass
			RB1#38	22.42	5	27.42	0.552	1.00	Pass
			RB1#74	22.35	5	27.35	0.543	1.00	Pass
			RB36#0	20.88	5	25.88	0.387	1.00	Pass
			RB36#19	21.06	5	26.06	0.404	1.00	Pass
			RB36#39	21.1	5	26.10	0.407	1.00	Pass
			RB75#0	20.96	5	25.96	0.394	1.00	Pass
20 MHz	LCH	QPSK	RB1#0	22.1	5	27.10	0.513	1.00	Pass
			RB1#50	22.54	5	27.54	0.568	1.00	Pass
			RB1#99	22.15	5	27.15	0.519	1.00	Pass
			RB50#0	21.51	5	26.51	0.448	1.00	Pass
			RB50#25	21.57	5	26.57	0.454	1.00	Pass
			RB50#50	21.41	5	26.41	0.438	1.00	Pass
			RB100#0	21.56	5	26.56	0.453	1.00	Pass
		16-QAM	RB1#0	21.54	5	26.54	0.451	1.00	Pass
			RB1#50	21.9	5	26.90	0.490	1.00	Pass
			RB1#99	21.13	5	26.13	0.410	1.00	Pass
			RB50#0	20.5	5	25.50	0.355	1.00	Pass
			RB50#25	20.5	5	25.50	0.355	1.00	Pass
			RB50#50	20.39	5	25.39	0.346	1.00	Pass
			RB100#0	20.55	5	25.55	0.359	1.00	Pass
	MCH	QPSK	RB1#0	22.76	5	27.76	0.597	1.00	Pass
			RB1#50	22.77	5	27.77	0.598	1.00	Pass
			RB1#99	22.45	5	27.45	0.556	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output AV Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (W)	Verdict
<b>LTE BAND 66</b>									
			RB50#0	21.77	5	26.77	0.475	1.00	Pass
			RB50#25	21.79	5	26.79	0.478	1.00	Pass
			RB50#50	21.58	5	26.58	0.455	1.00	Pass
			RB100#0	21.58	5	26.58	0.455	1.00	Pass
		16-QAM	RB1#0	22.21	5	27.21	0.526	1.00	Pass
			RB1#50	21.6	5	26.60	0.457	1.00	Pass
			RB1#99	21.69	5	26.69	0.467	1.00	Pass
			RB50#0	20.65	5	25.65	0.367	1.00	Pass
			RB50#25	20.87	5	25.87	0.386	1.00	Pass
			RB50#50	20.67	5	25.67	0.369	1.00	Pass
			RB100#0	20.64	5	25.64	0.366	1.00	Pass
	HCH	QPSK	RB1#0	22.52	5	27.52	0.565	1.00	Pass
			RB1#50	22.92	5	27.92	0.619	1.00	Pass
			RB1#99	22.81	5	27.81	0.604	1.00	Pass
			RB50#0	21.71	5	26.71	0.469	1.00	Pass
			RB50#25	21.93	5	26.93	0.493	1.00	Pass
			RB50#50	21.95	5	26.95	0.495	1.00	Pass
			RB100#0	21.78	5	26.78	0.476	1.00	Pass
		16-QAM	RB1#0	21.67	5	26.67	0.465	1.00	Pass
			RB1#50	22.38	5	27.38	0.547	1.00	Pass
			RB1#99	21.86	5	26.86	0.485	1.00	Pass
			RB50#0	20.77	5	25.77	0.378	1.00	Pass
			RB50#25	20.88	5	25.88	0.387	1.00	Pass
			RB50#50	20.91	5	25.91	0.390	1.00	Pass
			RB100#0	20.76	5	25.76	0.377	1.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND 71</b>										
5 MHz	LCH	QPSK	RB1#0	23.37	5	2.85	26.22	0.419	3.00	Pass
			RB1#13	23.76	5	2.85	26.61	0.458	3.00	Pass
			RB1#24	23.65	5	2.85	26.50	0.447	3.00	Pass
			RB12#0	22.54	5	2.85	25.39	0.346	3.00	Pass
			RB12#6	22.66	5	2.85	25.51	0.356	3.00	Pass
			RB12#13	22.6	5	2.85	25.45	0.351	3.00	Pass
			RB25#0	22.48	5	2.85	25.33	0.341	3.00	Pass
		16-QAM	RB1#0	22.64	5	2.85	25.49	0.354	3.00	Pass
			RB1#13	22.59	5	2.85	25.44	0.350	3.00	Pass
			RB1#24	22.65	5	2.85	25.50	0.355	3.00	Pass
			RB12#0	21.38	5	2.85	24.23	0.265	3.00	Pass
			RB12#6	21.5	5	2.85	24.35	0.272	3.00	Pass
			RB12#13	21.38	5	2.85	24.23	0.265	3.00	Pass
			RB25#0	21.43	5	2.85	24.28	0.268	3.00	Pass
	MCH	QPSK	RB1#0	23.32	5	2.85	26.17	0.414	3.00	Pass
			RB1#13	23.35	5	2.85	26.20	0.417	3.00	Pass
			RB1#24	23.51	5	2.85	26.36	0.433	3.00	Pass
			RB12#0	22.4	5	2.85	25.25	0.335	3.00	Pass
			RB12#6	22.56	5	2.85	25.41	0.348	3.00	Pass
			RB12#13	22.49	5	2.85	25.34	0.342	3.00	Pass
			RB25#0	22.4	5	2.85	25.25	0.335	3.00	Pass
		16-QAM	RB1#0	22.4	5	2.85	25.25	0.335	3.00	Pass
			RB1#13	22.29	5	2.85	25.14	0.327	3.00	Pass
			RB1#24	22.27	5	2.85	25.12	0.325	3.00	Pass
			RB12#0	21.32	5	2.85	24.17	0.261	3.00	Pass
			RB12#6	21.48	5	2.85	24.33	0.271	3.00	Pass
			RB12#13	21.42	5	2.85	24.27	0.267	3.00	Pass
			RB25#0	21.42	5	2.85	24.27	0.267	3.00	Pass
	HCH	QPSK	RB1#0	23.37	5	2.85	26.22	0.419	3.00	Pass
			RB1#13	23.53	5	2.85	26.38	0.435	3.00	Pass
			RB1#24	23.31	5	2.85	26.16	0.413	3.00	Pass
			RB12#0	22.53	5	2.85	25.38	0.345	3.00	Pass
			RB12#6	22.62	5	2.85	25.47	0.352	3.00	Pass
			RB12#13	22.63	5	2.85	25.48	0.353	3.00	Pass
			RB25#0	22.62	5	2.85	25.47	0.352	3.00	Pass
		16-QAM	RB1#0	22.55	5	2.85	25.40	0.347	3.00	Pass
			RB1#13	22.75	5	2.85	25.60	0.363	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND 71</b>										
10 MHz			RB1#24	22.55	5	2.85	25.40	0.347	3.00	Pass
			RB12#0	21.56	5	2.85	24.41	0.276	3.00	Pass
			RB12#6	21.69	5	2.85	24.54	0.284	3.00	Pass
			RB12#13	21.76	5	2.85	24.61	0.289	3.00	Pass
			RB25#0	21.68	5	2.85	24.53	0.284	3.00	Pass
	LCH	QPSK	RB1#0	23.58	5	2.85	26.43	0.440	3.00	Pass
			RB1#25	23.61	5	2.85	26.46	0.443	3.00	Pass
			RB1#49	23.51	5	2.85	26.36	0.433	3.00	Pass
			RB25#0	22.64	5	2.85	25.49	0.354	3.00	Pass
			RB25#13	22.76	5	2.85	25.61	0.364	3.00	Pass
			RB25#25	22.61	5	2.85	25.46	0.352	3.00	Pass
			RB50#0	22.63	5	2.85	25.48	0.353	3.00	Pass
		16-QAM	RB1#0	22.63	5	2.85	25.48	0.353	3.00	Pass
			RB1#25	23.2	5	2.85	26.05	0.403	3.00	Pass
			RB1#49	22.58	5	2.85	25.43	0.349	3.00	Pass
			RB25#0	21.64	5	2.85	24.49	0.281	3.00	Pass
			RB25#13	21.76	5	2.85	24.61	0.289	3.00	Pass
			RB25#25	21.69	5	2.85	24.54	0.284	3.00	Pass
			RB50#0	21.69	5	2.85	24.54	0.284	3.00	Pass
	MCH	QPSK	RB1#0	23.48	5	2.85	26.33	0.430	3.00	Pass
			RB1#25	23.86	5	2.85	26.71	0.469	3.00	Pass
			RB1#49	23.41	5	2.85	26.26	0.423	3.00	Pass
			RB25#0	22.54	5	2.85	25.39	0.346	3.00	Pass
			RB25#13	22.58	5	2.85	25.43	0.349	3.00	Pass
			RB25#25	22.54	5	2.85	25.39	0.346	3.00	Pass
			RB50#0	22.5	5	2.85	25.35	0.343	3.00	Pass
		16-QAM	RB1#0	22.4	5	2.85	25.25	0.335	3.00	Pass
			RB1#25	22.4	5	2.85	25.25	0.335	3.00	Pass
			RB1#49	22.01	5	2.85	24.86	0.306	3.00	Pass
			RB25#0	21.59	5	2.85	24.44	0.278	3.00	Pass
			RB25#13	21.58	5	2.85	24.43	0.277	3.00	Pass
			RB25#25	21.52	5	2.85	24.37	0.274	3.00	Pass
			RB50#0	21.59	5	2.85	24.44	0.278	3.00	Pass
	HCH	QPSK	RB1#0	23.49	5	2.85	26.34	0.431	3.00	Pass
			RB1#25	23.86	5	2.85	26.71	0.469	3.00	Pass
			RB1#49	23.51	5	2.85	26.36	0.433	3.00	Pass
			RB25#0	22.69	5	2.85	25.54	0.358	3.00	Pass
			RB25#13	22.74	5	2.85	25.59	0.362	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND 71</b>										
		16-QAM	RB25#25	22.68	5	2.85	25.53	0.357	3.00	Pass
			RB50#0	22.74	5	2.85	25.59	0.362	3.00	Pass
			RB1#0	22.67	5	2.85	25.52	0.356	3.00	Pass
			RB1#25	22.6	5	2.85	25.45	0.351	3.00	Pass
			RB1#49	22.16	5	2.85	25.01	0.317	3.00	Pass
			RB25#0	21.68	5	2.85	24.53	0.284	3.00	Pass
			RB25#13	21.89	5	2.85	24.74	0.298	3.00	Pass
			RB25#25	21.65	5	2.85	24.50	0.282	3.00	Pass
			RB50#0	21.65	5	2.85	24.50	0.282	3.00	Pass
15 MHz	LCH	QPSK	RB1#0	23.55	5	2.85	26.40	0.437	3.00	Pass
			RB1#38	23.68	5	2.85	26.53	0.450	3.00	Pass
			RB1#74	23.45	5	2.85	26.30	0.427	3.00	Pass
			RB36#0	22.61	5	2.85	25.46	0.352	3.00	Pass
			RB36#19	22.67	5	2.85	25.52	0.356	3.00	Pass
			RB36#39	22.59	5	2.85	25.44	0.350	3.00	Pass
			RB75#0	22.6	5	2.85	25.45	0.351	3.00	Pass
		16-QAM	RB1#0	22.78	5	2.85	25.63	0.366	3.00	Pass
			RB1#38	23.27	5	2.85	26.12	0.409	3.00	Pass
			RB1#74	23.05	5	2.85	25.90	0.389	3.00	Pass
			RB36#0	21.67	5	2.85	24.52	0.283	3.00	Pass
			RB36#19	21.74	5	2.85	24.59	0.288	3.00	Pass
			RB36#39	21.58	5	2.85	24.43	0.277	3.00	Pass
			RB75#0	21.59	5	2.85	24.44	0.278	3.00	Pass
	MCH	QPSK	RB1#0	23.49	5	2.85	26.34	0.431	3.00	Pass
			RB1#38	23.65	5	2.85	26.50	0.447	3.00	Pass
			RB1#74	23.54	5	2.85	26.39	0.436	3.00	Pass
			RB36#0	22.56	5	2.85	25.41	0.348	3.00	Pass
			RB36#19	22.61	5	2.85	25.46	0.352	3.00	Pass
			RB36#39	22.61	5	2.85	25.46	0.352	3.00	Pass
			RB75#0	22.52	5	2.85	25.37	0.344	3.00	Pass
		16-QAM	RB1#0	22.83	5	2.85	25.68	0.370	3.00	Pass
			RB1#38	22.35	5	2.85	25.20	0.331	3.00	Pass
			RB1#74	22.42	5	2.85	25.27	0.337	3.00	Pass
			RB36#0	21.47	5	2.85	24.32	0.270	3.00	Pass
			RB36#19	21.55	5	2.85	24.40	0.275	3.00	Pass
			RB36#39	21.52	5	2.85	24.37	0.274	3.00	Pass
			RB75#0	21.36	5	2.85	24.21	0.264	3.00	Pass
	HCH	QPSK	RB1#0	23.46	5	2.85	26.31	0.428	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND 71</b>										
		K	RB1#38	23.56	5	2.85	26.41	0.438	3.00	Pass
			RB1#74	23.38	5	2.85	26.23	0.420	3.00	Pass
			RB36#0	22.64	5	2.85	25.49	0.354	3.00	Pass
			RB36#19	22.57	5	2.85	25.42	0.348	3.00	Pass
			RB36#39	22.56	5	2.85	25.41	0.348	3.00	Pass
			RB75#0	22.59	5	2.85	25.44	0.350	3.00	Pass
		16-QAM	RB1#0	23.04	5	2.85	25.89	0.388	3.00	Pass
			RB1#38	23.42	5	2.85	26.27	0.424	3.00	Pass
			RB1#74	22.74	5	2.85	25.59	0.362	3.00	Pass
			RB36#0	21.49	5	2.85	24.34	0.272	3.00	Pass
			RB36#19	21.5	5	2.85	24.35	0.272	3.00	Pass
			RB36#39	21.55	5	2.85	24.40	0.275	3.00	Pass
			RB75#0	21.57	5	2.85	24.42	0.277	3.00	Pass
20 MHz	LCH	QPSK	RB1#0	23.19	5	2.85	26.04	0.402	3.00	Pass
			RB1#50	23.86	5	2.85	26.71	0.469	3.00	Pass
			RB1#99	23.2	5	2.85	26.05	0.403	3.00	Pass
			RB50#0	22.55	5	2.85	25.40	0.347	3.00	Pass
			RB50#25	22.66	5	2.85	25.51	0.356	3.00	Pass
			RB50#50	22.44	5	2.85	25.29	0.338	3.00	Pass
			RB100#0	22.55	5	2.85	25.40	0.347	3.00	Pass
		16-QAM	RB1#0	22.83	5	2.85	25.68	0.370	3.00	Pass
			RB1#50	22.89	5	2.85	25.74	0.375	3.00	Pass
			RB1#99	22.03	5	2.85	24.88	0.308	3.00	Pass
			RB50#0	21.56	5	2.85	24.41	0.276	3.00	Pass
			RB50#25	21.51	5	2.85	24.36	0.273	3.00	Pass
			RB50#50	21.54	5	2.85	24.39	0.275	3.00	Pass
			RB100#0	21.58	5	2.85	24.43	0.277	3.00	Pass
	MCH	QPSK	RB1#0	23.55	5	2.85	26.40	0.437	3.00	Pass
			RB1#50	23.78	5	2.85	26.63	0.460	3.00	Pass
			RB1#99	23.47	5	2.85	26.32	0.429	3.00	Pass
			RB50#0	22.56	5	2.85	25.41	0.348	3.00	Pass
			RB50#25	22.56	5	2.85	25.41	0.348	3.00	Pass
			RB50#50	22.5	5	2.85	25.35	0.343	3.00	Pass
			RB100#0	22.54	5	2.85	25.39	0.346	3.00	Pass
		16-QAM	RB1#0	22.25	5	2.85	25.10	0.324	3.00	Pass
			RB1#50	22.86	5	2.85	25.71	0.372	3.00	Pass
			RB1#99	21.98	5	2.85	24.83	0.304	3.00	Pass
			RB50#0	21.5	5	2.85	24.35	0.272	3.00	Pass

Test BW	Test Channel	Test Mode	Test RB (Size#Offset)	Conducted Output Power (dBm)	Antenna Gain (dBi)	Antenna Gain (dBd)	EIRP (dBm)	ERP (W)	Limit (W)	Verdict
<b>LTE BAND 71</b>										
	HCH		RB50#25	21.57	5	2.85	24.42	0.277	3.00	Pass
			RB50#50	21.57	5	2.85	24.42	0.277	3.00	Pass
			RB100#0	21.63	5	2.85	24.48	0.281	3.00	Pass
		QPSK	RB1#0	23.34	5	2.85	26.19	0.416	3.00	Pass
			RB1#50	23.61	5	2.85	26.46	0.443	3.00	Pass
			RB1#99	23.24	5	2.85	26.09	0.406	3.00	Pass
			RB50#0	22.59	5	2.85	25.44	0.350	3.00	Pass
			RB50#25	22.62	5	2.85	25.47	0.352	3.00	Pass
			RB50#50	22.58	5	2.85	25.43	0.349	3.00	Pass
			RB100#0	22.59	5	2.85	25.44	0.350	3.00	Pass
		16-QAM	RB1#0	22.15	5	2.85	25.00	0.316	3.00	Pass
			RB1#50	22.55	5	2.85	25.40	0.347	3.00	Pass
			RB1#99	22.26	5	2.85	25.11	0.324	3.00	Pass
			RB50#0	21.52	5	2.85	24.37	0.274	3.00	Pass
			RB50#25	21.6	5	2.85	24.45	0.279	3.00	Pass
			RB50#50	21.55	5	2.85	24.40	0.275	3.00	Pass
			RB100#0	21.55	5	2.85	24.40	0.275	3.00	Pass

## A.2 Peak to Average Ratio

Note 1: For average power technique, the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

Note 2: Test plots please refer to the document “Annex No.:BL-SZ2250922-501 Data Part 1.pdf”.

### WCDMA Mode Test Data

Test Band	Test Channel	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot <sup>Note2</sup>	Verdict
Band 2	LCH	3.09	13	1.1	Pass
	MCH	3.05	13	1.2	Pass
	HCH	3.09	13	1.3	Pass
Band 4	LCH	2.91	13	2.1	Pass
	MCH	3.14	13	2.2	Pass
	HCH	3.09	13	2.3	Pass
Band 5	LCH	2.77	13	3.1	Pass
	MCH	2.95	13	3.2	Pass
	HCH	2.86	13	3.3	Pass

## LTE Mode Test Data

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot <sup>Note2</sup>	Verdict
LTE Band 2	20 MHz	LCH	QPSK	RB1#0	4.55	13	4.1	Pass
				RB100#0	5.25	13	4.2	Pass
			16-QAM	RB1#0	5.25	13	4.3	Pass
				RB100#0	6.09	13	4.4	Pass
		MCH	QPSK	RB1#0	4.5	13	4.5	Pass
				RB100#0	5.2	13	4.6	Pass
			16-QAM	RB1#0	5.53	13	4.7	Pass
				RB100#0	6	13	4.8	Pass
		HCH	QPSK	RB1#0	4.59	13	4.9	Pass
				RB100#0	5.11	13	4.10	Pass
			16-QAM	RB1#0	5.53	13	4.11	Pass
				RB100#0	6	13	4.12	Pass
LTE Band 4	20 MHz	LCH	QPSK	RB1#0	4.27	13	5.1	Pass
				RB100#0	5.06	13	5.2	Pass
			16-QAM	RB1#0	5.11	13	5.3	Pass
				RB100#0	5.91	13	5.4	Pass
		MCH	QPSK	RB1#0	4.45	13	5.5	Pass
				RB100#0	5.2	13	5.6	Pass
			16-QAM	RB1#0	5.2	13	5.7	Pass
				RB100#0	6.05	13	5.8	Pass
		HCH	QPSK	RB1#0	4.69	13	5.9	Pass
				RB100#0	5.16	13	5.10	Pass
			16-QAM	RB1#0	5.58	13	5.11	Pass
				RB100#0	6	13	5.12	Pass
LTE Band 5	10 MHz	LCH	QPSK	RB1#0	3.98	13	6.1	Pass
				RB50#0	5.16	13	6.2	Pass
			16-QAM	RB1#0	4.78	13	6.3	Pass
				RB50#0	5.95	13	6.4	Pass
		MCH	QPSK	RB1#0	4.45	13	6.5	Pass
				RB50#0	5.11	13	6.6	Pass
			16-QAM	RB1#0	5.39	13	6.7	Pass
				RB50#0	6	13	6.8	Pass
		HCH	QPSK	RB1#0	4.03	13	6.9	Pass
				RB50#0	4.97	13	6.10	Pass
			16-QAM	RB1#0	4.92	13	6.11	Pass
				RB50#0	5.72	13	6.12	Pass
LTE Band 12	10 MHz	LCH	QPSK	RB1#0	4.45	13	7.1	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot <sup>Note2</sup>	Verdict
			16-QAM	RB50#0	5.2	13	7.2	Pass
				RB1#0	5.39	13	7.3	Pass
				RB50#0	6.05	13	7.4	Pass
		MCH	QPSK	RB1#0	4.5	13	7.5	Pass
				RB50#0	5.2	13	7.6	Pass
			16-QAM	RB1#0	5.34	13	7.7	Pass
				RB50#0	6	13	7.8	Pass
		HCH	QPSK	RB1#0	4.5	13	7.9	Pass
				RB50#0	5.16	13	7.10	Pass
			16-QAM	RB1#0	5.39	13	7.11	Pass
				RB50#0	6	13	7.12	Pass
LTE Band 13	10 MHz	LCH	QPSK	RB1#0	4.41	13	8.1	Pass
				RB50#0	5.16	13	8.2	Pass
			16-QAM	RB1#0	5.34	13	8.3	Pass
				RB50#0	6	13	8.4	Pass
LTE Band 14	10 MHz	LCH	QPSK	RB1#0	4.41	13	9.1	Pass
				RB50#0	5.06	13	9.2	Pass
			16-QAM	RB1#0	5.3	13	9.3	Pass
				RB50#0	5.95	13	9.4	Pass
LTE Band 66	20 MHz	LCH	QPSK	RB1#0	4.36	13	10.1	Pass
				RB100#0	5.06	13	10.2	Pass
			16-QAM	RB1#0	4.97	13	10.3	Pass
				RB100#0	5.91	13	10.4	Pass
		MCH	QPSK	RB1#0	4.73	13	10.5	Pass
				RB100#0	5.2	13	10.6	Pass
			16-QAM	RB1#0	5.67	13	10.7	Pass
				RB100#0	6	13	10.8	Pass
		HCH	QPSK	RB1#0	4.5	13	10.9	Pass
				RB100#0	5.16	13	10.10	Pass
			16-QAM	RB1#0	5.48	13	10.11	Pass
				RB100#0	5.95	13	10.12	Pass
LTE Band 71	20 MHz	LCH	QPSK	RB1#0	3.61	13	11.1	Pass
				RB100#0	4.92	13	11.2	Pass
			16-QAM	RB1#0	4.27	13	11.3	Pass
				RB100#0	5.72	13	11.4	Pass
		MCH	QPSK	RB1#0	3.33	13	11.5	Pass
				RB100#0	4.78	13	11.6	Pass
			16-QAM	RB1#0	4.41	13	11.7	Pass
				RB100#0	5.62	13	11.8	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Peak to Average Ratio (dB)	Limit (dB)	Refer to Plot <sup>Note2</sup>	Verdict
		HCH	QPSK	RB1#0	4.03	13	11.9	Pass
				RB100#0	4.97	13	11.10	Pass
			16-QAM	RB1#0	4.87	13	11.11	Pass
				RB100#0	5.81	13	11.12	Pass

### A.3 Occupied Bandwidth

Note 1: All modes were tested, but only the typical data were reported in this report.

Note 2: Test plots please refer to the document “Annex No.:BL-SZ2250922-501 Data Part 2.pdf”.

#### WCDMA Mode Test Data

Test Band	Test Channel	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
WCDMA Band 2	LCH	4.119	4.715	1.1
	MCH	4.116	4.711	1.2
	HCH	4.109	4.706	1.3
WCDMA Band 4	LCH	4.114	4.712	2.1
	MCH	4.111	4.703	2.2
	HCH	4.112	4.71	2.3
WCDMA Band 5	LCH	4.142	4.756	3.1
	MCH	4.134	4.733	3.2
	HCH	4.127	4.745	3.3

## LTE Mode Test Data

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset )	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 2	1.4 MHz	LCH	QPSK	RB6#0	1.087	1.294	4.1
			16-QAM	RB6#0	1.094	1.277	4.2
		MCH	QPSK	RB6#0	1.089	1.291	4.3
			16-QAM	RB6#0	1.085	1.27	4.4
		HCH	QPSK	RB6#0	1.09	1.276	4.5
			16-QAM	RB6#0	1.089	1.283	4.6
	3 MHz	LCH	QPSK	RB15#0	2.7	2.992	4.7
			16-QAM	RB15#0	2.699	2.995	4.8
		MCH	QPSK	RB15#0	2.705	2.983	4.9
			16-QAM	RB15#0	2.696	2.984	4.10
		HCH	QPSK	RB15#0	2.699	2.985	4.11
			16-QAM	RB15#0	2.695	2.993	4.12
	5 MHz	LCH	QPSK	RB25#0	4.506	5.026	4.13
			16-QAM	RB25#0	4.5	4.993	4.14
		MCH	QPSK	RB25#0	4.501	5.003	4.15
			16-QAM	RB25#0	4.507	5.019	4.16
		HCH	QPSK	RB25#0	4.496	4.969	4.17
			16-QAM	RB25#0	4.505	5.041	4.18
	10 MHz	LCH	QPSK	RB50#0	8.95	9.929	4.19
			16-QAM	RB50#0	8.942	9.831	4.20
		MCH	QPSK	RB50#0	8.93	9.841	4.21
			16-QAM	RB50#0	8.942	9.819	4.22
		HCH	QPSK	RB50#0	8.947	9.842	4.23
			16-QAM	RB50#0	8.958	9.876	4.24
	15 MHz	LCH	QPSK	RB75#0	13.421	14.795	4.25
			16-QAM	RB75#0	13.424	14.743	4.26
		MCH	QPSK	RB75#0	13.383	14.648	4.27
			16-QAM	RB75#0	13.404	14.741	4.28
		HCH	QPSK	RB75#0	13.374	14.707	4.29
			16-QAM	RB75#0	13.397	14.591	4.30
	20 MHz	LCH	QPSK	RB100#0	17.886	19.298	4.31
			16-QAM	RB100#0	17.895	19.522	4.32
		MCH	QPSK	RB100#0	17.877	19.395	4.33
			16-QAM	RB100#0	17.85	19.324	4.34
		HCH	QPSK	RB100#0	17.863	19.48	4.35
			16-QAM	RB100#0	17.816	19.349	4.36

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset )	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 4	1.4 MHz	LCH	QPSK	RB6#0	1.087	1.285	5.1
			16-QAM	RB6#0	1.093	1.298	5.2
		MCH	QPSK	RB6#0	1.089	1.29	5.3
			16-QAM	RB6#0	1.088	1.276	5.4
		HCH	QPSK	RB6#0	1.092	1.267	5.5
			16-QAM	RB6#0	1.09	1.276	5.6
	3 MHz	LCH	QPSK	RB15#0	2.697	2.963	5.7
			16-QAM	RB15#0	2.697	2.979	5.8
		MCH	QPSK	RB15#0	2.704	2.981	5.9
			16-QAM	RB15#0	2.697	2.991	5.10
		HCH	QPSK	RB15#0	2.702	2.995	5.11
			16-QAM	RB15#0	2.695	2.996	5.12
	5 MHz	LCH	QPSK	RB25#0	4.507	5.032	5.13
			16-QAM	RB25#0	4.496	4.99	5.14
		MCH	QPSK	RB25#0	4.499	5.005	5.15
			16-QAM	RB25#0	4.507	5.027	5.16
		HCH	QPSK	RB25#0	4.493	4.985	5.17
			16-QAM	RB25#0	4.502	5.017	5.18
	10 MHz	LCH	QPSK	RB50#0	8.936	9.976	5.19
			16-QAM	RB50#0	8.929	9.83	5.20
		MCH	QPSK	RB50#0	8.949	9.848	5.21
			16-QAM	RB50#0	8.94	9.838	5.22
		HCH	QPSK	RB50#0	8.952	9.866	5.23
			16-QAM	RB50#0	8.952	9.891	5.24
	15 MHz	LCH	QPSK	RB75#0	13.394	14.81	5.25
			16-QAM	RB75#0	13.413	14.654	5.26
		MCH	QPSK	RB75#0	13.397	14.633	5.27
			16-QAM	RB75#0	13.43	14.721	5.28
		HCH	QPSK	RB75#0	13.4	14.702	5.29
			16-QAM	RB75#0	13.418	14.61	5.30
	20 MHz	LCH	QPSK	RB100#0	17.848	19.322	5.31
			16-QAM	RB100#0	17.907	19.515	5.32
		MCH	QPSK	RB100#0	17.872	19.474	5.33
			16-QAM	RB100#0	17.874	19.541	5.34
		HCH	QPSK	RB100#0	17.875	19.517	5.35
			16-QAM	RB100#0	17.86	19.394	5.36

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 5	1.4 MHz	LCH	QPSK	RB6#0	1.086	1.293	6.1
			16-QAM	RB6#0	1.094	1.283	6.2
		MCH	QPSK	RB6#0	1.088	1.292	6.3
			16-QAM	RB6#0	1.087	1.273	6.4
		HCH	QPSK	RB6#0	1.093	1.268	6.5
			16-QAM	RB6#0	1.088	1.284	6.6
	3 MHz	LCH	QPSK	RB15#0	2.7	2.988	6.7
			16-QAM	RB15#0	2.7	2.985	6.8
		MCH	QPSK	RB15#0	2.703	2.985	6.9
			16-QAM	RB15#0	2.699	2.984	6.10
		HCH	QPSK	RB15#0	2.702	2.997	6.11
			16-QAM	RB15#0	2.699	2.996	6.12
	5 MHz	LCH	QPSK	RB25#0	4.504	5.023	6.13
			16-QAM	RB25#0	4.496	4.981	6.14
		MCH	QPSK	RB25#0	4.493	5.008	6.15
			16-QAM	RB25#0	4.502	4.984	6.16
		HCH	QPSK	RB25#0	4.498	4.992	6.17
			16-QAM	RB25#0	4.504	5.028	6.18
	10 MHz	LCH	QPSK	RB50#0	8.973	9.934	6.19
			16-QAM	RB50#0	8.954	9.872	6.20
		MCH	QPSK	RB50#0	8.925	9.877	6.21
			16-QAM	RB50#0	8.933	9.807	6.22
		HCH	QPSK	RB50#0	8.962	9.878	6.23
			16-QAM	RB50#0	8.972	9.909	6.24

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 12	1.4 MHz	LCH	QPSK	RB6#0	1.087	1.294	7.1
			16-QAM	RB6#0	1.092	1.279	7.2
		MCH	QPSK	RB6#0	1.092	1.289	7.3
			16-QAM	RB6#0	1.086	1.285	7.4
		HCH	QPSK	RB6#0	1.093	1.276	7.5
			16-QAM	RB6#0	1.091	1.292	7.6
	3 MHz	LCH	QPSK	RB15#0	2.7	2.982	7.7
			16-QAM	RB15#0	2.699	2.982	7.8
		MCH	QPSK	RB15#0	2.709	2.98	7.9
			16-QAM	RB15#0	2.697	2.979	7.10
		HCH	QPSK	RB15#0	2.704	2.986	7.11
			16-QAM	RB15#0	2.696	2.981	7.12
	5 MHz	LCH	QPSK	RB25#0	4.509	5.031	7.13
			16-QAM	RB25#0	4.49	4.982	7.14
		MCH	QPSK	RB25#0	4.496	5.002	7.15
			16-QAM	RB25#0	4.515	5.005	7.16
		HCH	QPSK	RB25#0	4.495	4.97	7.17
			16-QAM	RB25#0	4.494	5.033	7.18
	10 MHz	LCH	QPSK	RB50#0	8.963	9.941	7.19
			16-QAM	RB50#0	8.949	9.861	7.20
		MCH	QPSK	RB50#0	8.946	9.864	7.21
			16-QAM	RB50#0	8.951	9.837	7.22
		HCH	QPSK	RB50#0	8.946	9.842	7.23
			16-QAM	RB50#0	8.945	9.892	7.24

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 13	5 MHz	LCH	QPSK	RB25#0	4.509	5.027	8.1
			16-QAM	RB25#0	4.5	4.931	8.2
		MCH	QPSK	RB25#0	4.499	5	8.3
			16-QAM	RB25#0	4.503	5.026	8.4
		HCH	QPSK	RB25#0	4.492	4.972	8.5
			16-QAM	RB25#0	4.496	5.014	8.6
	10 MHz	LCH	QPSK	RB50#0	8.944	9.922	8.7
			16-QAM	RB50#0	8.927	9.856	8.8

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 14	5 MHz	LCH	QPSK	RB25#0	4.503	5.026	9.1
			16-QAM	RB25#0	4.495	4.992	9.2
		MCH	QPSK	RB25#0	4.493	4.999	9.3
			16-QAM	RB25#0	4.508	4.99	9.4
		HCH	QPSK	RB25#0	4.492	4.983	9.5
			16-QAM	RB25#0	4.493	5.005	9.6
	10 MHz	LCH	QPSK	RB50#0	8.953	9.921	9.7
			16-QAM	RB50#0	8.928	9.854	9.8

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 66	1.4 MHz	LCH	QPSK	RB6#0	1.088	1.291	10.1
			16-QAM	RB6#0	1.095	1.293	10.2
		MCH	QPSK	RB6#0	1.091	1.296	10.3
			16-QAM	RB6#0	1.084	1.28	10.4
		HCH	QPSK	RB6#0	1.092	1.287	10.5
			16-QAM	RB6#0	1.092	1.308	10.6
	3 MHz	LCH	QPSK	RB15#0	2.7	2.977	10.7
			16-QAM	RB15#0	2.702	2.991	10.8
		MCH	QPSK	RB15#0	2.697	2.985	10.9
			16-QAM	RB15#0	2.698	2.992	10.10
		HCH	QPSK	RB15#0	2.703	3.011	10.11
			16-QAM	RB15#0	2.699	2.992	10.12
	5 MHz	LCH	QPSK	RB25#0	4.509	5.035	10.13
			16-QAM	RB25#0	4.498	4.977	10.14
		MCH	QPSK	RB25#0	4.502	5.013	10.15
			16-QAM	RB25#0	4.508	5.033	10.16
		HCH	QPSK	RB25#0	4.487	4.986	10.17
			16-QAM	RB25#0	4.502	5.013	10.18
	10 MHz	LCH	QPSK	RB50#0	8.949	9.943	10.19
			16-QAM	RB50#0	8.932	9.823	10.20
		MCH	QPSK	RB50#0	8.935	9.812	10.21
			16-QAM	RB50#0	8.936	9.843	10.22
		HCH	QPSK	RB50#0	8.942	9.838	10.23
			16-QAM	RB50#0	8.941	9.862	10.24
	15 MHz	LCH	QPSK	RB75#0	13.406	14.784	10.25
			16-QAM	RB75#0	13.405	14.721	10.26
		MCH	QPSK	RB75#0	13.388	14.638	10.27
			16-QAM	RB75#0	13.427	14.643	10.28
		HCH	QPSK	RB75#0	13.408	14.682	10.29
			16-QAM	RB75#0	13.421	14.712	10.30
	20 MHz	LCH	QPSK	RB100#0	17.856	19.406	10.31
			16-QAM	RB100#0	17.907	19.378	10.32
		MCH	QPSK	RB100#0	17.854	19.417	10.33
			16-QAM	RB100#0	17.855	19.499	10.34
		HCH	QPSK	RB100#0	17.937	19.612	10.35
			16-QAM	RB100#0	17.914	19.444	10.36

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Measured 99% Occupied Bandwidth (MHz)	Measured -26 dB Occupied Bandwidth (MHz)	Refer to Plot <sup>Note2</sup>
Band 71	5 MHz	LCH	QPSK	RB25#0	4.509	4.982	11.1
			16-QAM	RB25#0	4.492	4.974	11.2
		MCH	QPSK	RB25#0	4.493	4.999	11.3
			16-QAM	RB25#0	4.512	5.013	11.4
		HCH	QPSK	RB25#0	4.5	4.987	11.5
			16-QAM	RB25#0	4.505	5.035	11.6
	10 MHz	LCH	QPSK	RB50#0	8.939	9.965	11.7
			16-QAM	RB50#0	8.938	9.838	11.8
		MCH	QPSK	RB50#0	8.933	9.812	11.9
			16-QAM	RB50#0	8.934	9.827	11.10
		HCH	QPSK	RB50#0	8.961	9.886	11.11
			16-QAM	RB50#0	8.947	9.908	11.12
	15 MHz	LCH	QPSK	RB75#0	13.427	14.73	11.13
			16-QAM	RB75#0	13.425	14.709	11.14
		MCH	QPSK	RB75#0	13.378	14.647	11.15
			16-QAM	RB75#0	13.394	14.694	11.16
		HCH	QPSK	RB75#0	13.418	14.774	11.17
			16-QAM	RB75#0	13.448	14.808	11.18
	20 MHz	LCH	QPSK	RB100#0	17.863	19.475	11.19
			16-QAM	RB100#0	17.858	19.419	11.20
		MCH	QPSK	RB100#0	17.794	19.431	11.21
			16-QAM	RB100#0	17.816	19.555	11.22
		HCH	QPSK	RB100#0	17.879	19.492	11.23
			16-QAM	RB100#0	17.879	19.391	11.24

## A.4 Frequency Stability

## WCDMA Band 2

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1852.4 MHz		MCH 1880 MHz		HCH 1907.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	1.02	±4631	-2.41	±4700	-4.3	±4769	Pass
	-30	-0.51		-2.38		-3.42		
	-20	1.26		-2.17		-3.25		
	-10	-0.69		-2.19		-2.98		
	0	0.31		-2.9		-3.88		
	+10	-1.11		-2.25		-3.93		
	+20	-0.33		-1.33		-2.62		
	+25	-0.54		-2.54		-3.17		
	+30	-0.45		-2.71		-3		
	+40	-0.2		-2.5		-2.49		
	+50	0.47		-0.96		-3.91		
	+55	-0.14		-2.17		-3.12		
250	+25	1.62	-2.42	-3.6				
230	+25	0.26	-2.18	-3.24				

## WCDMA Band 4

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1712.4 MHz		MCH 1732.4 MHz		HCH 1752.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	7.35	±4281	-2.69	±4331	-8.51	±4381.5	Pass
	-30	3.84		-4.15		-4.33		
	-20	2.98		-4.02		-5.01		
	-10	2.23		-2.49		-4.82		
	0	3.08		-3.21		-3.91		
	+10	3.25		-2.78		-4.04		
	+20	3.36		-4.45		-3.11		
	+25	2.76		-3.37		-3.37		
	+30	2.12		-3.86		-4.68		
	+40	3.03		-3.5		-4.69		
	+50	1.77		-3.46		-4.05		
	+55	0.24		-2.85		-3.93		
250	+25	3.72	-3.24	-3.6				

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1712.4 MHz		MCH 1732.4 MHz		HCH 1752.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
230	+25	2.37		-3.37		-4.23		

WCDMA Band B5

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 826.4 MHz		MCH 836.4 MHz		HCH 846.6 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	0.74	±2066	-0.59	±2091	-1.45	±2116.5	Pass
	-30	-0.58		-1.01		-0.09		
	-20	-0.14		-0.86		-1.31		
	-10	0.62		-0.68		-1.14		
	0	0.38		-0.44		-1.12		
	+10	0.26		-0.41		-1.03		
	+20	0.03		-0.54		-1.3		
	+25	0.42		-0.85		-0.94		
	+30	-0.53		-0.14		-0.81		
	+40	0.23		-0.23		-0.41		
	+50	-0.17		-0.28		-0.9		
	+55	-0.11		-0.54		-0.86		
250	+25	-0.06		-0.51		-0.62		
230	+25	-0.16		-0.93		-1.37		

LTE Band 2 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1855 MHz		MCH 1880 MHz		HCH 1905 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	12.63	±4637.5	-5.69	±4700	1.53	±4762.5	Pass
	-30	-3.76		-4.53		0.73		
	-20	-2.53		-4.92		2.25		
	-10	-2.88		-3.52		0.93		
	0	-2.2		-4.16		0.53		
	+10	-3.36		-3.46		0.47		
	+20	-3.92		-3.15		1.86		

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1855 MHz		MCH 1880 MHz		HCH 1905 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
	+25	-2.09		-2.6		-0.23		
	+30	-2.1		-3.66		1.43		
	+40	-3.79		-4.16		0.59		
	+50	-1.82		-3.53		-0.2		
	+55	-3.56		-3.58		0.43		
250	+25	-3.71		-4.06		2.02		
230	+25	-1.49		-3.86		1.3		

### LTE Band 2 16QAM 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1855 MHz		MCH 1880 MHz		HCH 1905 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	13.59	±4637.5	-5.19	±4700	1.3	±4762.5	Pass
	-30	-3.27		-4.08		1.57		
	-20	-2.93		-3.13		0.07		
	-10	-2.03		-4.25		-0.09		
	0	-2.36		-4.62		0.86		
	+10	-2.55		-2.79		-0.11		
	+20	-1.93		-2.86		0.92		
	+25	-3.35		-5.11		1.2		
	+30	-3.22		-3.33		1.56		
	+40	-2.22		-2.99		1.72		
	+50	-2.3		-5.58		0.96		
	+55	-2.99		-4.36		1.02		
250	+25	-0.96		-3.93		0.69		
230	+25	-3.19		-3.28		0.21		

### LTE Band 4 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715 MHz		MCH 1732.5 MHz		HCH 1750 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-2.36	±4287.5	-1.19	±4331.25	1.22	±4375	Pass
	-30	-3.61		-0.77		1.32		

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715 MHz		MCH 1732.5 MHz		HCH 1750 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
	-20	-3.69		0.82		1.2		
	-10	-3.75		0.44		1.86		
	0	-3.75		0.44		1.86		
	+10	-3.88		-0.84		1.24		
	+20	-1.67		1.42		1.87		
	+25	-3.15		0.31		1.39		
	+30	-1.32		0.46		1.97		
	+40	-1.95		-1.65		1.3		
	+50	-2.02		-0.17		1.87		
	+55	-2.55		-0.16		2.93		
250	+25	0.47		-1.14		-0.9		
230	+25	-0.74		0.29		-1.14		

#### LTE Band 4 16QAM 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715 MHz		MCH 1732.5 MHz		HCH 1750 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-3.52	±4287.5	-0.64	±4331.25	1.42	±4375	Pass
	-30	-3.18		-0.66		1.47		
	-20	-2.49		-0.24		1.23		
	-10	-3.19		-0.11		0.07		
	0	-3.19		-0.11		0.07		
	+10	-3.09		-0.6		1.62		
	+20	-2.8		-0.21		3.48		
	+25	-4.01		0.6		1.32		
	+30	-3.29		-0.84		2.32		
	+40	-2.98		-0.33		-0.1		
	+50	-2.52		0.2		1.44		
	+55	-2.83		0.26		2.32		
250	+25	-0.77		-0.83		-2.68		
230	+25	-0.69		-1.33		-2.63		

#### LTE Band 5 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 829 MHz		MCH 836.5 MHz		HCH 844 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	0.26	±2072.5	-0.39	±2091.25	-0.62	±2110	Pass
	-30	-0.88		-1.34		-1.93		
	-20	-0.84		0.06		-0.26		
	-10	-0.39		-0.74		-0.66		
	0	-0.33		-1.8		0.82		
	+10	1.23		-1.5		-1.26		
	+20	0.07		0.11		-0.67		
	+25	-0.62		-0.09		-1.9		
	+30	-0.6		-0.13		-2.23		
	+40	-0.5		-1.54		-1.75		
	+50	-0.87		0.1		-1.16		
	+55	-0.6		-1.56		-1.62		
250	+25	-0.69	-0.47	-0.34				
230	+25	-0.26	-0.92	-0.54				

#### LTE Band 5 16QAM 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 829 MHz		MCH 836.5 MHz		HCH 844 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-0.69	±2072.5	-1.3	±2091.25	-1.29	±2110	Pass
	-30	-1.78		-0.66		-0.37		
	-20	-0.43		-0.23		-0.82		
	-10	-1.02		-1.34		-1.13		
	0	-1.99		-0.11		0.4		
	+10	0.2		-0.72		0.07		
	+20	-1.76		-1.02		-0.49		
	+25	-1.29		-1.03		-1.57		
	+30	-0.73		-0.94		-1.62		
	+40	-0.59		-1.4		0.87		
	+50	-1.52		-0.26		-1.63		
	+55	-1.2		-0.47		0.46		
250	+25	0.03	-0.97	-1.93				
230	+25	0.46	-0.94	-0.54				

LTE Band 12 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 704 MHz		MCH 707.5 MHz		HCH 711 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-0.06	±1760	-0.62	±1768.75	-0.62	±1777.5	Pass
	-30	-0.23		-1.72		-1.72		
	-20	-1.24		-1.32		-1.32		
	-10	-1.12		-0.87		-0.87		
	0	1.29		-0.16		-0.16		
	+10	-0.47		0.77		0.77		
	+20	0.14		-2.22		-2.22		
	+25	-1.3		0.44		0.44		
	+30	-0.41		-0.67		-0.67		
	+40	-0.53		-1.57		-1.57		
	+50	-0.16		-1.39		-1.39		
	+55	-1.4		-1.2		-1.2		
250	+25	0.47		-1.14		-1.14		
230	+25	-0.74		0.29		0.29		

LTE Band 12 16QAM10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 704 MHz		MCH 707.5 MHz		HCH 711 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-1.46	±1760	-0.9	±1768.75	-2.06	±1777.5	Pass
	-30	-1.84		-0.48		-1.73		
	-20	-1.13		-0.77		-2.05		
	-10	-0.57		0.19		-2.42		
	0	0.21		-0.62		-1.16		
	+10	0.39		-0.9		-0.8		
	+20	-0.17		-1.57		-1.46		
	+25	-1.09		-0.92		-2.17		
	+30	-0.44		-1.52		-2.06		
	+40	-1.07		-2.06		-2.07		
	+50	0.13		-1.44		-2.1		
	+55	-0.87		-1.42		-2.43		
250	+25	-0.77		-0.83		-2.68		
230	+25	-0.69		-1.33		-2.63		

LTE Band 13 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 782 MHz		
		Value (Hz)	Limits (Hz)	
240	-40	-1.62	±1955	Pass
	-30	-0.38		
	-20	0.16		
	-10	-0.16		
	0	-1.2		
	+10	-0.87		
	+20	0.72		
	+25	0.09		
	+30	-1.62		
	+40	-1.43		
	+50	-1.42		
	+55	-0.09		
250	+25	-0.69		
230	+25	-0.79		

LTE Band 13 16QAM10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 782 MHz		
		Value (Hz)	Limits (Hz)	
240	-40	-1.06	±1955	Pass
	-30	-1.02		
	-20	-0.27		
	-10	-0.79		
	0	-1.63		
	+10	-0.2		
	+20	-0.24		
	+25	-0.86		
	+30	-0.46		
	+40	-0.11		
	+50	0.24		
	+55	-0.56		
250	+25	-0.62		
230	+25	-1.29		

LTE Band 14 QPSK 10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 793 MHz		
		Value (Hz)	Limits (Hz)	
240	-40	1.06	±1982.5	Pass
	-30	0.77		
	-20	1.1		
	-10	0.6		
	0	0.62		
	+10	-0.07		
	+20	-1.3		
	+25	0.17		
	+30	-0.3		
	+40	-0.34		
	+50	-0.82		
	+55	-1.24		
250	+25	-0.67		
230	+25	-0.69		

LTE Band 14 16QAM10 MHz

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 793 MHz		
		Value (Hz)	Limits (Hz)	
240	-40	-0.36	±1982.5	Pass
	-30	0.81		
	-20	0.94		
	-10	-0.7		
	0	0.07		
	+10	-1.92		
	+20	-1.57		
	+25	-1.13		
	+30	-0.19		
	+40	-1.33		
	+50	0.57		
	+55	-1.09		
250	+25	-0.34		

Test Conditions		Frequency Deviation		Verdict
Power (VDC)	Temperature (°C)	MCH 793 MHz		
		Value (Hz)	Limits (Hz)	
230	+25	-0.94		

LTE Band 66 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715MHz		MCH 1745 MHz		HCH 1775 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-3.25	±4287.5	-2.12	±4362.5	-4.35	±4437.5	Pass
	-30	-2.58		-3.33		-1.42		
	-20	-1.59		-3.59		-3.29		
	-10	-2.22		-3.55		-3.98		
	0	-2.45		-2.66		-4.18		
	+10	-3.05		-3.6		-3.39		
	+20	-1.42		-1.85		-2.59		
	+25	-2.49		-2.27		-4.09		
	+30	-1.49		-3.29		-2.66		
	+40	-2.37		-2.39		-2.52		
	+50	-1.86		-2.39		-1.22		
	+55	-2.88		-2.93		-2.36		
250	+25	-1.62		-2.23		-2.99		
230	+25	-2.06		-3.42		-3.35		

LTE Band 66 16QAM10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715MHz		MCH 1745 MHz		HCH 1775 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-3.52	±4287.5	-3.12	±4362.5	-3.53	±4437.5	Pass
	-30	-1.49		-3.31		-2.56		
	-20	-2.69		-3.19		-1.82		
	-10	-2.49		-3.08		-3.75		
	0	-2.49		-3.49		-2.03		
	+10	-3.3		-1.59		-2.99		
	+20	-3.15		-3.89		-1.66		

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 1715MHz		MCH 1745 MHz		HCH 1775 MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
	+25	-2.52		-1.52		-2.9		
	+30	-1.69		-3.58		-3.18		
	+40	-1.34		-2.26		-2.73		
	+50	-4.16		-3.28		-3.16		
	+55	-3.2		-2.83		-3.02		
250	+25	-1.82		-3.16		-2.86		
230	+25	-3.06		-4.02		-2.66		

### LTE Band 71 QPSK 10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 668 MHz		MCH 680.5 MHz		HCH 693MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	-2.37	±1670	-1.77	±1701.25	-2.57	±1732.5	Pass
	-30	-0.89		-1.16		-0.04		
	-20	-0.19		-2.1		-2		
	-10	-1.8		-1.42		0.26		
	0	-0.63		-0.69		-1.82		
	+10	-1.24		-3.26		-2.22		
	+20	-1.29		-1.17		-1.26		
	+25	-1.19		-0.82		-0.24		
	+30	-0.82		-2.55		-0.64		
	+40	-3.16		-1.73		-1.77		
	+50	-0.24		-2.23		-0.77		
	+55	-2.29		-1.66		-0.73		
250	+25	-1.92	-1.34	-1.76				
230	+25	-1.23	-1.52	-0.92				

### LTE Band 71 16QAM10 MHz

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 668 MHz		MCH 680.5 MHz		HCH 693MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
240	-40	0.86	±1670	-4.65	±1701.25	-5.82	±1732.5	

Test Conditions		Frequency Deviation						Verdict
Power (VDC)	Temperature (°C)	LCH 668 MHz		MCH 680.5 MHz		HCH 693MHz		
		Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	Value (Hz)	Limits (Hz)	
	-30	-0.21		-1.53		-2.12		
	-20	-1.37		-2.57		-2.63		
	-10	-0.1		-0.97		-0.84		
	0	-0.92		-1.59		-2.83		
	+10	-2.33		-3.03		-1.7		
	+20	-0.9		-0.79		-0.11		
	+25	0.3		-2.69		-0.56		
	+30	-0.6		-2.43		-1.13		
	+40	-0.86		-1.12		-2.98		
	+50	-1.82		-1.93		-1.59		
	+55	-2.27		-1.73		-1.16		
250	+25	-1.77		-0.67		-2.65		
230	+25	-1.03		-1.86		-0.47		

## A.5 Spurious Emission at Antenna Terminals

Note 1: Only the worst data with different bandwidth for LTE are shown here.

Note 2: The frequencies of verdict which are marked by "N/A" should be ignored because they are UE carrier frequency.

Note 3: Test plots please refer to the document "Annex No.:BL-SZ2250922-501 Data Part 3.pdf".

### WCDMA Mode Test Verdict

Test Band	Test Channel	Refer to Plot <sup>Note3</sup>	Verdict
WCDMA Band 2	LCH	1.1	Pass
	MCH	1.2	Pass
	HCH	1.3	Pass
WCDMA Band 4	LCH	2.1	Pass
	MCH	2.2	Pass
	HCH	2.3	Pass
WCDMA Band 5	LCH	3.1	Pass
	MCH	3.2	Pass
	HCH	3.3	Pass

LTE Mode Test Verdict

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 2	1.4 MHz	LCH	QPSK	RB1#0	4.1	Pass
			16-QAM	RB1#0	4.2	Pass
		MCH	QPSK	RB1#0	4.3	Pass
			16-QAM	RB1#0	4.4	Pass
		HCH	QPSK	RB1#0	4.5	Pass
			16-QAM	RB1#0	4.6	Pass
	3 MHz	LCH	QPSK	RB1#0	4.7	Pass
			16-QAM	RB1#0	4.8	Pass
		MCH	QPSK	RB1#0	4.9	Pass
			16-QAM	RB1#0	4.10	Pass
		HCH	QPSK	RB1#0	4.11	Pass
			16-QAM	RB1#0	4.12	Pass
	5 MHz	LCH	QPSK	RB1#0	4.13	Pass
			16-QAM	RB1#0	4.14	Pass
		MCH	QPSK	RB1#0	4.15	Pass
			16-QAM	RB1#0	4.16	Pass
		HCH	QPSK	RB1#0	4.17	Pass
			16-QAM	RB1#0	4.18	Pass
	10 MHz	LCH	QPSK	RB1#0	4.19	Pass
			16-QAM	RB1#0	4.20	Pass
		MCH	QPSK	RB1#0	4.21	Pass
			16-QAM	RB1#0	4.22	Pass
		HCH	QPSK	RB1#0	4.23	Pass
			16-QAM	RB1#0	4.24	Pass
	15 MHz	LCH	QPSK	RB1#0	4.25	Pass
			16-QAM	RB1#0	4.26	Pass
		MCH	QPSK	RB1#0	4.27	Pass
			16-QAM	RB1#0	4.28	Pass
		HCH	QPSK	RB1#0	4.29	Pass
			16-QAM	RB1#0	4.30	Pass
	20 MHz	LCH	QPSK	RB1#0	4.31	Pass
			16-QAM	RB1#0	4.32	Pass
		MCH	QPSK	RB1#0	4.33	Pass
			16-QAM	RB1#0	4.34	Pass
		HCH	QPSK	RB1#0	4.35	Pass
			16-QAM	RB1#0	4.36	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 4	1.4 MHz	LCH	QPSK	RB1#0	5.1	Pass
			16-QAM	RB1#0	5.2	Pass
		MCH	QPSK	RB1#0	5.3	Pass
			16-QAM	RB1#0	5.4	Pass
		HCH	QPSK	RB1#0	5.5	Pass
			16-QAM	RB1#0	5.6	Pass
	3 MHz	LCH	QPSK	RB1#0	5.7	Pass
			16-QAM	RB1#0	5.8	Pass
		MCH	QPSK	RB1#0	5.9	Pass
			16-QAM	RB1#0	5.10	Pass
		HCH	QPSK	RB1#0	5.11	Pass
			16-QAM	RB1#0	5.12	Pass
	5 MHz	LCH	QPSK	RB1#0	5.13	Pass
			16-QAM	RB1#0	5.14	Pass
		MCH	QPSK	RB1#0	5.15	Pass
			16-QAM	RB1#0	5.16	Pass
		HCH	QPSK	RB1#0	5.17	Pass
			16-QAM	RB1#0	5.18	Pass
	10 MHz	LCH	QPSK	RB1#0	5.19	Pass
			16-QAM	RB1#0	5.20	Pass
		MCH	QPSK	RB1#0	5.21	Pass
			16-QAM	RB1#0	5.22	Pass
		HCH	QPSK	RB1#0	5.23	Pass
			16-QAM	RB1#0	5.24	Pass
	15 MHz	LCH	QPSK	RB1#0	5.25	Pass
			16-QAM	RB1#0	5.26	Pass
		MCH	QPSK	RB1#0	5.27	Pass
			16-QAM	RB1#0	5.28	Pass
		HCH	QPSK	RB1#0	5.29	Pass
			16-QAM	RB1#0	5.30	Pass
	20 MHz	LCH	QPSK	RB1#0	5.31	Pass
			16-QAM	RB1#0	5.32	Pass
		MCH	QPSK	RB1#0	5.33	Pass
			16-QAM	RB1#0	5.34	Pass
		HCH	QPSK	RB1#0	5.35	Pass
			16-QAM	RB1#0	5.36	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 5	1.4 MHz	LCH	QPSK	RB1#0	6.1	Pass
			16-QAM	RB1#0	6.2	Pass
		MCH	QPSK	RB1#0	6.3	Pass
			16-QAM	RB1#0	6.4	Pass
		HCH	QPSK	RB1#0	6.5	Pass
			16-QAM	RB1#0	6.6	Pass
	3 MHz	LCH	QPSK	RB1#0	6.7	Pass
			16-QAM	RB1#0	6.8	Pass
		MCH	QPSK	RB1#0	6.9	Pass
			16-QAM	RB1#0	6.10	Pass
		HCH	QPSK	RB1#0	6.11	Pass
			16-QAM	RB1#0	6.12	Pass
	5 MHz	LCH	QPSK	RB1#0	6.13	Pass
			16-QAM	RB1#0	6.14	Pass
		MCH	QPSK	RB1#0	6.15	Pass
			16-QAM	RB1#0	6.16	Pass
		HCH	QPSK	RB1#0	6.17	Pass
			16-QAM	RB1#0	6.18	Pass
	10 MHz	LCH	QPSK	RB1#0	6.19	Pass
			16-QAM	RB1#0	6.20	Pass
		MCH	QPSK	RB1#0	6.21	Pass
			16-QAM	RB1#0	6.22	Pass
		HCH	QPSK	RB1#0	6.23	Pass
			16-QAM	RB1#0	6.24	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 12	1.4 MHz	LCH	QPSK	RB1#0	7.1	Pass
			16-QAM	RB1#0	7.2	Pass
		MCH	QPSK	RB1#0	7.3	Pass
			16-QAM	RB1#0	7.4	Pass
		HCH	QPSK	RB1#0	7.5	Pass
			16-QAM	RB1#0	7.6	Pass
	3 MHz	LCH	QPSK	RB1#0	7.7	Pass
			16-QAM	RB1#0	7.8	Pass
		MCH	QPSK	RB1#0	7.9	Pass
			16-QAM	RB1#0	7.10	Pass
		HCH	QPSK	RB1#0	7.11	Pass
			16-QAM	RB1#0	7.12	Pass
	5 MHz	LCH	QPSK	RB1#0	7.13	Pass
			16-QAM	RB1#0	7.14	Pass
		MCH	QPSK	RB1#0	7.15	Pass
			16-QAM	RB1#0	7.16	Pass
		HCH	QPSK	RB1#0	7.17	Pass
			16-QAM	RB1#0	7.18	Pass
	10 MHz	LCH	QPSK	RB1#0	7.19	Pass
			16-QAM	RB1#0	7.20	Pass
		MCH	QPSK	RB1#0	7.21	Pass
			16-QAM	RB1#0	7.22	Pass
		HCH	QPSK	RB1#0	7.23	Pass
			16-QAM	RB1#0	7.24	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 13	5 MHz	LCH	QPSK	RB1#0	8.1	Pass
			16-QAM	RB1#0	8.2	Pass
		MCH	QPSK	RB1#0	8.3	Pass
			16-QAM	RB1#0	8.4	Pass
		HCH	QPSK	RB1#0	8.5	Pass
			16-QAM	RB1#0	8.6	Pass
	10 MHz	LCH	QPSK	RB1#0	8.7	Pass
			16-QAM	RB1#0	8.8	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 14	5 MHz	LCH	QPSK	RB1#0	9.1	Pass
			16-QAM	RB1#0	9.2	Pass
		MCH	QPSK	RB1#0	9.3	Pass
			16-QAM	RB1#0	9.4	Pass
		HCH	QPSK	RB1#0	9.5	Pass
			16-QAM	RB1#0	9.6	Pass
	10 MHz	LCH	QPSK	RB1#0	9.7	Pass
			16-QAM	RB1#0	9.8	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 66	1.4 MHz	LCH	QPSK	RB1#0	10.1	Pass
			16-QAM	RB1#0	10.2	Pass
		MCH	QPSK	RB1#0	10.3	Pass
			16-QAM	RB1#0	10.4	Pass
		HCH	QPSK	RB1#0	10.5	Pass
			16-QAM	RB1#0	10.6	Pass
	3 MHz	LCH	QPSK	RB1#0	10.7	Pass
			16-QAM	RB1#0	10.8	Pass
		MCH	QPSK	RB1#0	10.9	Pass
			16-QAM	RB1#0	10.10	Pass
		HCH	QPSK	RB1#0	10.11	Pass
			16-QAM	RB1#0	10.12	Pass
	5 MHz	LCH	QPSK	RB1#0	10.13	Pass
			16-QAM	RB1#0	10.14	Pass
		MCH	QPSK	RB1#0	10.15	Pass
			16-QAM	RB1#0	10.16	Pass
		HCH	QPSK	RB1#0	10.17	Pass
			16-QAM	RB1#0	10.18	Pass
	10 MHz	LCH	QPSK	RB1#0	10.19	Pass
			16-QAM	RB1#0	10.20	Pass
		MCH	QPSK	RB1#0	10.21	Pass
			16-QAM	RB1#0	10.22	Pass
		HCH	QPSK	RB1#0	10.23	Pass
			16-QAM	RB1#0	10.24	Pass
	15 MHz	LCH	QPSK	RB1#0	10.25	Pass
			16-QAM	RB1#0	10.26	Pass
		MCH	QPSK	RB1#0	10.27	Pass
			16-QAM	RB1#0	10.28	Pass
		HCH	QPSK	RB1#0	10.29	Pass
			16-QAM	RB1#0	10.30	Pass
	20 MHz	LCH	QPSK	RB1#0	10.31	Pass
			16-QAM	RB1#0	10.32	Pass
		MCH	QPSK	RB1#0	10.33	Pass
			16-QAM	RB1#0	10.34	Pass
		HCH	QPSK	RB1#0	10.35	Pass
			16-QAM	RB1#0	10.36	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 71	5 MHz	LCH	QPSK	RB1#0	11.1	Pass
			16-QAM	RB1#0	11.2	Pass
		MCH	QPSK	RB1#0	11.3	Pass
			16-QAM	RB1#0	11.4	Pass
		HCH	QPSK	RB1#0	11.5	Pass
			16-QAM	RB1#0	11.6	Pass
	10 MHz	LCH	QPSK	RB1#0	11.7	Pass
			16-QAM	RB1#0	11.8	Pass
		MCH	QPSK	RB1#0	11.9	Pass
			16-QAM	RB1#0	11.10	Pass
		HCH	QPSK	RB1#0	11.11	Pass
			16-QAM	RB1#0	11.12	Pass
	15 MHz	LCH	QPSK	RB1#0	11.13	Pass
			16-QAM	RB1#0	11.14	Pass
		MCH	QPSK	RB1#0	11.15	Pass
			16-QAM	RB1#0	11.16	Pass
		HCH	QPSK	RB1#0	11.17	Pass
			16-QAM	RB1#0	11.18	Pass
	20 MHz	LCH	QPSK	RB1#0	11.19	Pass
			16-QAM	RB1#0	11.20	Pass
		MCH	QPSK	RB1#0	11.21	Pass
			16-QAM	RB1#0	11.22	Pass
		HCH	QPSK	RB1#0	11.23	Pass
			16-QAM	RB1#0	11.24	Pass

## A.6 Band Edge

Note 1: Test plots please refer to the document “Annex No.:BL-SZ2250922-501 Data Part 4.pdf”.

### WCDMA Mode Test Verdict

Test Band	Test Channel	Refer to Plot <sup>Note1</sup>	Verdict
WCDMA Band 2	LCH	1.1	Pass
	HCH	1.2	Pass
WCDMA Band 4	LCH	2.1	Pass
	HCH	2.2	Pass
WCDMA Band 5	LCH	3.1	Pass
	HCH	3.2	Pass

LTE Mode Test Verdict

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 2	1.4 MHz	LCH	QPSK	RB1#0	4.1	Pass
				RB6#0	4.2	Pass
			16-QAM	RB1#0	4.3	Pass
				RB6#0	4.4	Pass
		HCH	QPSK	RB1#5	4.5	Pass
				RB6#0	4.6	Pass
			16-QAM	RB1#5	4.7	Pass
				RB6#0	4.8	Pass
	3 MHz	LCH	QPSK	RB1#0	4.9	Pass
				RB15#0	4.10	Pass
			16-QAM	RB1#0	4.11	Pass
				RB15#0	4.12	Pass
		HCH	QPSK	RB1#14	4.13	Pass
				RB15#0	4.14	Pass
			16-QAM	RB1#14	4.15	Pass
				RB15#0	4.16	Pass
	5 MHz	LCH	QPSK	RB1#0	4.17	Pass
				RB25#0	4.18	Pass
			16-QAM	RB1#0	4.19	Pass
				RB25#0	4.20	Pass
		HCH	QPSK	RB1#24	4.21	Pass
				RB25#0	4.22	Pass
			16-QAM	RB1#24	4.23	Pass
				RB25#0	4.24	Pass
	10 MHz	LCH	QPSK	RB1#0	4.25	Pass
				RB50#0	4.26	Pass
			16-QAM	RB1#0	4.27	Pass
				RB50#0	4.28	Pass
		HCH	QPSK	RB1#49	4.29	Pass
				RB50#0	4.30	Pass
			16-QAM	RB1#49	4.31	Pass
				RB50#0	4.32	Pass
	15 MHz	LCH	QPSK	RB1#0	4.33	Pass
				RB75#0	4.34	Pass
			16-QAM	RB1#0	4.35	Pass
				RB75#0	4.36	Pass
		HCH	QPSK	RB1#74	4.37	Pass
				RB75#0	4.38	Pass
			16-QAM	RB1#74	4.39	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
				RB75#0	4.40	Pass
	20 MHz	LCH	QPSK	RB1#0	4.41	Pass
				RB100#0	4.42	Pass
			16-QAM	RB1#0	4.43	Pass
				RB100#0	4.44	Pass
		HCH	QPSK	RB1#99	4.45	Pass
				RB100#0	4.46	Pass
			16-QAM	RB1#99	4.47	Pass
				RB100#0	4.48	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 4	1.4 MHz	LCH	QPSK	RB1#0	5.1	Pass
				RB6#0	5.2	Pass
			16-QAM	RB1#0	5.3	Pass
				RB6#0	5.4	Pass
		HCH	QPSK	RB1#5	5.5	Pass
				RB6#0	5.6	Pass
			16-QAM	RB1#5	5.7	Pass
				RB6#0	5.8	Pass
	3 MHz	LCH	QPSK	RB1#0	5.9	Pass
				RB15#0	5.10	Pass
			16-QAM	RB1#0	5.11	Pass
				RB15#0	5.12	Pass
		HCH	QPSK	RB1#14	5.13	Pass
				RB15#0	5.14	Pass
			16-QAM	RB1#14	5.15	Pass
				RB15#0	5.16	Pass
	5 MHz	LCH	QPSK	RB1#0	5.17	Pass
				RB25#0	5.18	Pass
			16-QAM	RB1#0	5.19	Pass
				RB25#0	5.20	Pass
		HCH	QPSK	RB1#24	5.21	Pass
				RB25#0	5.22	Pass
			16-QAM	RB1#24	5.23	Pass
				RB25#0	5.24	Pass
	10 MHz	LCH	QPSK	RB1#0	5.25	Pass
				RB50#0	5.26	Pass
			16-QAM	RB1#0	5.27	Pass
				RB50#0	5.28	Pass
		HCH	QPSK	RB1#49	5.29	Pass
				RB50#0	5.30	Pass
			16-QAM	RB1#49	5.31	Pass
				RB50#0	5.32	Pass
	15 MHz	LCH	QPSK	RB1#0	5.33	Pass
				RB75#0	5.34	Pass
			16-QAM	RB1#0	5.35	Pass
				RB75#0	5.36	Pass
		HCH	QPSK	RB1#74	5.37	Pass
				RB75#0	5.38	Pass
			16-QAM	RB1#74	5.39	Pass
				RB75#0	5.40	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
	20 MHz	LCH	QPSK	RB1#0	5.41	Pass
				RB100#0	5.42	Pass
			16-QAM	RB1#0	5.43	Pass
				RB100#0	5.44	Pass
		HCH	QPSK	RB1#99	5.45	Pass
				RB100#0	5.46	Pass
			16-QAM	RB1#99	5.47	Pass
				RB100#0	5.48	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 5	1.4 MHz	LCH	QPSK	RB1#0	6.1	Pass
				RB6#0	6.2	Pass
			16-QAM	RB1#0	6.3	Pass
				RB6#0	6.4	Pass
		HCH	QPSK	RB1#5	6.5	Pass
				RB6#0	6.6	Pass
			16-QAM	RB1#5	6.7	Pass
				RB6#0	6.8	Pass
	3 MHz	LCH	QPSK	RB1#0	6.9	Pass
				RB15#0	6.10	Pass
			16-QAM	RB1#0	6.11	Pass
				RB15#0	6.12	Pass
		HCH	QPSK	RB1#14	6.13	Pass
				RB15#0	6.14	Pass
			16-QAM	RB1#14	6.15	Pass
				RB15#0	6.16	Pass
	5 MHz	LCH	QPSK	RB1#0	6.17	Pass
				RB25#0	6.18	Pass
			16-QAM	RB1#0	6.19	Pass
				RB25#0	6.20	Pass
		HCH	QPSK	RB1#24	6.21	Pass
				RB25#0	6.22	Pass
			16-QAM	RB1#24	6.23	Pass
				RB25#0	6.24	Pass
	10 MHz	LCH	QPSK	RB1#0	6.25	Pass
				RB50#0	6.26	Pass
			16-QAM	RB1#0	6.27	Pass
				RB50#0	6.28	Pass
		HCH	QPSK	RB1#49	6.29	Pass
				RB50#0	6.30	Pass
			16-QAM	RB1#49	6.31	Pass
				RB50#0	6.32	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 12	1.4 MHz	LCH	QPSK	RB1#0	7.1	Pass
				RB6#0	7.2	Pass
			16-QAM	RB1#0	7.3	Pass
				RB6#0	7.4	Pass
		HCH	QPSK	RB1#5	7.5	Pass
				RB6#0	7.6	Pass
			16-QAM	RB1#5	7.7	Pass
				RB6#0	7.8	Pass
	3 MHz	LCH	QPSK	RB1#0	7.9	Pass
				RB15#0	7.10	Pass
			16-QAM	RB1#0	7.11	Pass
				RB15#0	7.12	Pass
		HCH	QPSK	RB1#14	7.13	Pass
				RB15#0	7.14	Pass
			16-QAM	RB1#14	7.15	Pass
				RB15#0	7.16	Pass
	5 MHz	LCH	QPSK	RB1#0	7.17	Pass
				RB25#0	7.18	Pass
			16-QAM	RB1#0	7.19	Pass
				RB25#0	7.20	Pass
		HCH	QPSK	RB1#24	7.21	Pass
				RB25#0	7.22	Pass
			16-QAM	RB1#24	7.23	Pass
				RB25#0	7.24	Pass
	10 MHz	LCH	QPSK	RB1#0	7.25	Pass
				RB50#0	7.26	Pass
			16-QAM	RB1#0	7.27	Pass
				RB50#0	7.28	Pass
		HCH	QPSK	RB1#49	7.29	Pass
				RB50#0	7.30	Pass
			16-QAM	RB1#49	7.31	Pass
				RB50#0	7.32	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 13	5 MHz	LCH	QPSK	RB1#0	8.1	Pass
				RB25#0	8.2	Pass
			16-QAM	RB1#0	8.3	Pass
				RB25#0	8.4	Pass
		HCH	QPSK	RB1#24	8.5	Pass
				RB25#0	8.6	Pass
			16-QAM	RB1#24	8.7	Pass
				RB25#0	8.8	Pass
	10 MHz	LCH	QPSK	RB1#0	8.9	Pass
				RB50#0	8.10	Pass
			16-QAM	RB1#0	8.11	Pass
				RB50#0	8.12	Pass
		HCH	QPSK	RB1#49	8.13	Pass
				RB50#0	8.14	Pass
			16-QAM	RB1#49	8.15	Pass
				RB50#0	8.16	Pass

Emission Mask						
Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 13	5 MHz	LCH	QPSK	RB1#0	8.17	Pass
				RB25#0	8.18	Pass
			16-QAM	RB1#0	8.19	Pass
				RB25#0	8.20	Pass
		HCH	QPSK	RB1#24	8.21	Pass
				RB25#0	8.22	Pass
			16-QAM	RB1#24	8.23	Pass
				RB25#0	8.24	Pass
	10 MHz	LCH	QPSK	RB1#0	8.25	Pass
				RB50#0	8.26	Pass
			16-QAM	RB1#0	8.27	Pass
				RB50#0	8.28	Pass
		HCH	QPSK	RB1#49	8.29	Pass
				RB50#0	8.30	Pass
			16-QAM	RB1#49	8.31	Pass
				RB50#0	8.32	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 14	5 MHz	LCH	QPSK	RB1#0	9.1	Pass
				RB25#0	9.2	Pass
			16-QAM	RB1#0	9.3	Pass
				RB25#0	9.4	Pass
		HCH	QPSK	RB1#24	9.5	Pass
				RB25#0	9.6	Pass
			16-QAM	RB1#24	9.7	Pass
				RB25#0	9.8	Pass
	10 MHz	LCH	QPSK	RB1#0	9.9	Pass
				RB50#0	9.10	Pass
			16-QAM	RB1#0	9.11	Pass
				RB50#0	9.12	Pass
		HCH	QPSK	RB1#49	9.13	Pass
				RB50#0	9.14	Pass
			16-QAM	RB1#49	9.15	Pass
				RB50#0	9.16	Pass

Emission Mask						
Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 14	5 MHz	LCH	QPSK	RB1#0	9.17	Pass
				RB25#0	9.18	Pass
			16-QAM	RB1#0	9.19	Pass
				RB25#0	9.20	Pass
		HCH	QPSK	RB1#24	9.21	Pass
				RB25#0	9.22	Pass
			16-QAM	RB1#24	9.23	Pass
				RB25#0	9.24	Pass
	10 MHz	LCH	QPSK	RB1#0	9.25	Pass
				RB50#0	9.26	Pass
			16-QAM	RB1#0	9.27	Pass
				RB50#0	9.28	Pass
		HCH	QPSK	RB1#49	9.29	Pass
				RB50#0	9.30	Pass
			16-QAM	RB1#49	9.31	Pass
				RB50#0	9.32	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 66	1.4 MHz	LCH	QPSK	RB1#0	10.1	Pass
				RB6#0	10.2	Pass
			16-QAM	RB1#0	10.3	Pass
				RB6#0	10.4	Pass
		HCH	QPSK	RB1#5	10.5	Pass
				RB6#0	10.6	Pass
			16-QAM	RB1#5	10.7	Pass
				RB6#0	10.8	Pass
	3 MHz	LCH	QPSK	RB1#0	10.9	Pass
				RB15#0	10.10	Pass
			16-QAM	RB1#0	10.11	Pass
				RB15#0	10.12	Pass
		HCH	QPSK	RB1#14	10.13	Pass
				RB15#0	10.14	Pass
			16-QAM	RB1#14	10.15	Pass
				RB15#0	10.16	Pass
	5 MHz	LCH	QPSK	RB1#0	10.17	Pass
				RB25#0	10.18	Pass
			16-QAM	RB1#0	10.19	Pass
				RB25#0	10.20	Pass
		HCH	QPSK	RB1#24	10.21	Pass
				RB25#0	10.22	Pass
			16-QAM	RB1#24	10.23	Pass
				RB25#0	10.24	Pass
	10 MHz	LCH	QPSK	RB1#0	10.25	Pass
				RB50#0	10.26	Pass
			16-QAM	RB1#0	10.27	Pass
				RB50#0	10.28	Pass
		HCH	QPSK	RB1#49	10.29	Pass
				RB50#0	10.30	Pass
			16-QAM	RB1#49	10.31	Pass
				RB50#0	10.32	Pass
	15 MHz	LCH	QPSK	RB1#0	10.33	Pass
				RB75#0	10.34	Pass
			16-QAM	RB1#0	10.35	Pass
				RB75#0	10.36	Pass
		HCH	QPSK	RB1#74	10.37	Pass
				RB75#0	10.38	Pass
			16-QAM	RB1#74	10.39	Pass
				RB75#0	10.40	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
	20 MHz	LCH	QPSK	RB1#0	10.41	Pass
				RB100#0	10.42	Pass
			16-QAM	RB1#0	10.43	Pass
				RB100#0	10.44	Pass
		HCH	QPSK	RB1#99	10.45	Pass
				RB100#0	10.46	Pass
			16-QAM	RB1#99	10.47	Pass
				RB100#0	10.48	Pass

Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note1</sup>	Verdict
Band 71	5 MHz	LCH	QPSK	RB1#0	11.1	Pass
				RB25#0	11.2	Pass
			16-QAM	RB1#0	11.3	Pass
				RB25#0	11.4	Pass
		HCH	QPSK	RB1#24	11.5	Pass
				RB25#0	11.6	Pass
			16-QAM	RB1#24	11.7	Pass
				RB25#0	11.8	Pass
	10 MHz	LCH	QPSK	RB1#0	11.9	Pass
				RB50#0	11.10	Pass
			16-QAM	RB1#0	11.11	Pass
				RB50#0	11.12	Pass
		HCH	QPSK	RB1#49	11.13	Pass
				RB50#0	11.14	Pass
			16-QAM	RB1#49	11.15	Pass
				RB50#0	11.16	Pass
	15 MHz	LCH	QPSK	RB1#0	11.17	Pass
				RB75#0	11.18	Pass
			16-QAM	RB1#0	11.19	Pass
				RB75#0	11.20	Pass
		HCH	QPSK	RB1#74	11.21	Pass
				RB75#0	11.22	Pass
			16-QAM	RB1#74	11.23	Pass
				RB75#0	11.24	Pass
	20 MHz	LCH	QPSK	RB1#0	11.25	Pass
				RB100#0	11.26	Pass
			16-QAM	RB1#0	11.27	Pass
				RB100#0	11.28	Pass
		HCH	QPSK	RB1#99	11.29	Pass
				RB100#0	11.30	Pass
			16-QAM	RB1#99	11.31	Pass
				RB100#0	11.32	Pass

## A.7 Field Strength of Spurious Radiation

Note 1: Only the worst data with different transmit bandwidth for LTE are shown here.

Note 2: The frequencies of verdict which are marked by "N/A" should be ignored because they are UE carrier frequency.

Note 3: Test plots please refer to the document "Annex No.:BL-SZ2250922-501 Data Part 5.pdf".

### WCDMA Mode Test Verdict

Test Band	Test Channel	Refer to Plot <sup>Note3</sup>	Verdict
WCDMA Band 2	LCH	1.1	Pass
	MCH	1.2	Pass
	HCH	1.3	Pass
WCDMA Band 4	LCH	2.1	Pass
	MCH	2.2	Pass
	HCH	2.3	Pass
WCDMA Band 5	LCH	3.1	Pass
	MCH	3.2	Pass
	HCH	3.3	Pass

LTE Mode Test Verdict

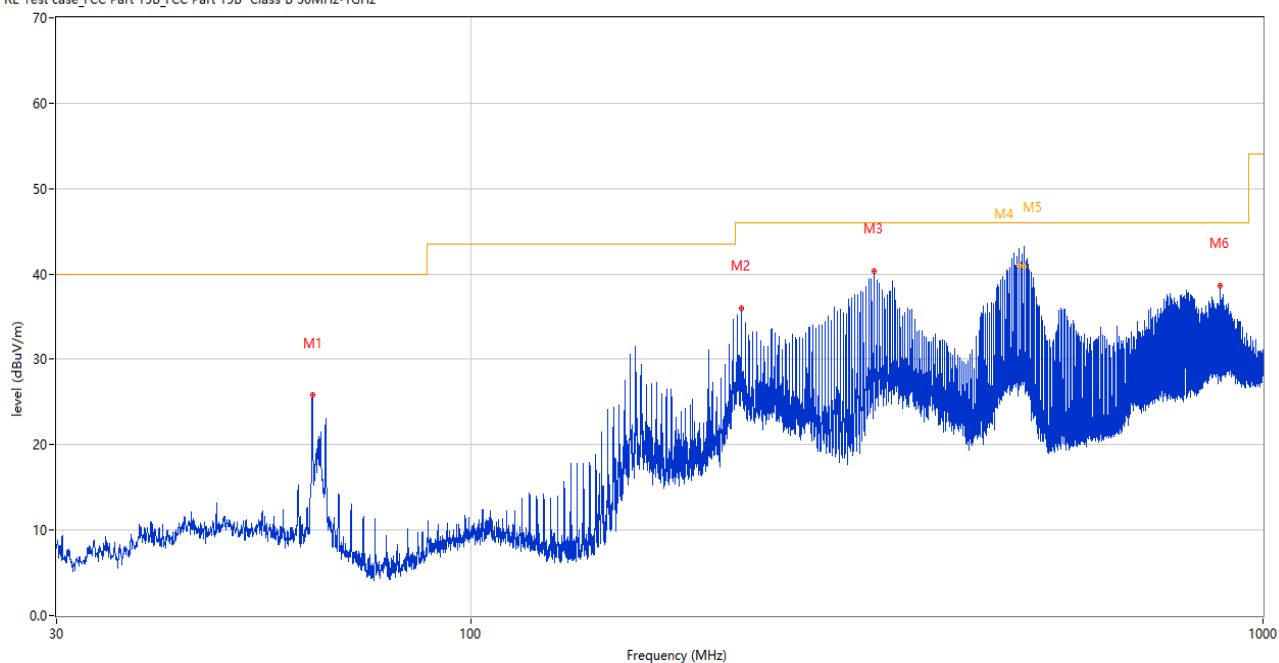
Test Band	Test Bandwidth	Test Channel	Test Mode	Test RB (Size#Offset)	Refer to Plot <sup>Note3</sup>	Verdict
Band 2	1.4 MHz	MCH	QPSK	RB1#0	4.1	Pass
	3 MHz	MCH	QPSK	RB1#0	4.2	Pass
	5 MHz	MCH	QPSK	RB1#0	4.3	Pass
	10 MHz	MCH	QPSK	RB1#0	4.4	Pass
	15 MHz	MCH	QPSK	RB1#0	4.5	Pass
	20 MHz	MCH	QPSK	RB1#0	4.6	Pass
Band 4	1.4 MHz	MCH	QPSK	RB1#0	5.1	Pass
	3 MHz	MCH	QPSK	RB1#0	5.2	Pass
	5 MHz	MCH	QPSK	RB1#0	5.3	Pass
	10 MHz	MCH	QPSK	RB1#0	5.4	Pass
	15 MHz	MCH	QPSK	RB1#0	5.5	Pass
	20 MHz	MCH	QPSK	RB1#0	5.6	Pass
Band 5	1.4 MHz	MCH	QPSK	RB1#0	6.1	Pass
	3 MHz	MCH	QPSK	RB1#0	6.2	Pass
	5 MHz	MCH	QPSK	RB1#0	6.3	Pass
	10 MHz	MCH	QPSK	RB1#0	6.4	Pass
Band 12	1.4 MHz	MCH	QPSK	RB1#0	7.1	Pass
	3 MHz	MCH	QPSK	RB1#0	7.2	Pass
	5 MHz	MCH	QPSK	RB1#0	7.3	Pass
	10 MHz	MCH	QPSK	RB1#0	7.4	Pass
Band 13	5 MHz	MCH	QPSK	RB1#0	8.1	Pass
	10 MHz	MCH	QPSK	RB1#0	8.2	Pass
Band 14	5 MHz	MCH	QPSK	RB1#0	9.1	Pass
	10 MHz	MCH	QPSK	RB1#0	9.2	Pass
Band 66	1.4 MHz	MCH	QPSK	RB1#0	10.1	Pass
	3 MHz	MCH	QPSK	RB1#0	10.2	Pass
	5 MHz	MCH	QPSK	RB1#0	10.3	Pass
	10 MHz	MCH	QPSK	RB1#0	10.4	Pass
	15 MHz	MCH	QPSK	RB1#0	10.5	Pass
	20 MHz	MCH	QPSK	RB1#0	10.6	Pass
Band 71	5 MHz	MCH	QPSK	RB1#0	11.1	Pass
	10 MHz	MCH	QPSK	RB1#0	11.2	Pass
	15 MHz	MCH	QPSK	RB1#0	11.3	Pass
	20 MHz	MCH	QPSK	RB1#0	11.4	Pass

## A.8 Receiver Spurious Emissions

Note: Only the worst test results were recorded in this report.

### 30MHz to 1GHz, ANT H

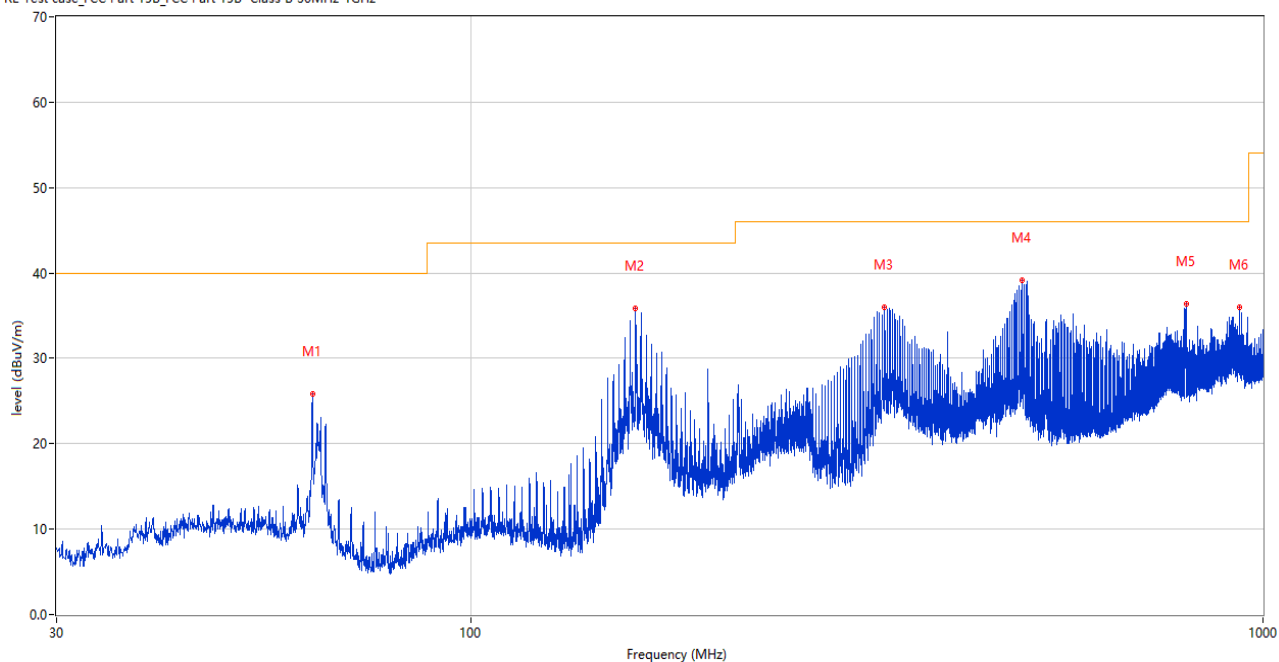
RE Test case\_FCC Part 15B\_FCC Part 15B Class B 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	63.077	25.79	-27.21	40.0	-14.21	Peak	360.00	200	Horizontal	Pass
2	219.538	35.95	-26.22	46.0	-10.05	Peak	5.00	100	Horizontal	Pass
3	322.988	40.34	-23.04	46.0	-5.66	Peak	16.00	100	Horizontal	Pass
4	492.010	45.13	-18.89	46.0	-0.87	Peak	308.00	188	Horizontal	N/A
4*	492.010	40.96	-18.89	46.0	-5.04	QP	308.00	188	Horizontal	Pass
5	499.575	46.29	-18.64	46.0	0.29	Peak	324.00	183	Horizontal	N/A
5*	499.575	40.88	-18.64	46.0	-5.12	QP	324.00	183	Horizontal	Pass
6	883.067	38.67	-10.25	46.0	-7.33	Peak	0.00	100	Horizontal	Pass

## 30MHz to 1GHz, ANT V

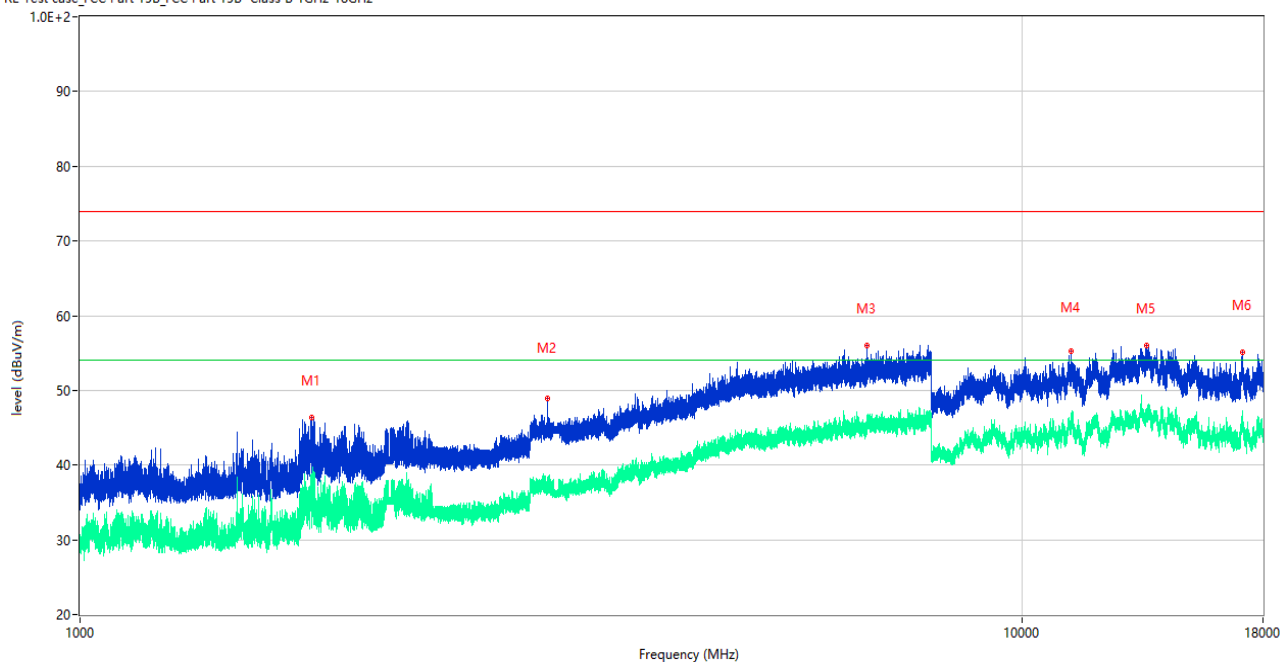
RE Test case\_FCC Part 15B\_FCC Part 15B Class B 30MHz-1GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	63.077	25.84	-27.21	40.0	-14.16	Peak	106.00	100	Vertical	Pass
2	161.484	35.90	-29.52	43.5	-7.60	Peak	360.00	100	Vertical	Pass
3	333.077	35.97	-22.62	46.0	-10.03	Peak	216.00	200	Vertical	Pass
4	497.103	39.19	-18.80	46.0	-6.81	Peak	134.00	100	Vertical	Pass
5	799.841	36.41	-11.85	46.0	-9.59	Peak	360.00	200	Vertical	Pass
6	933.264	36.04	-9.49	46.0	-9.96	Peak	0.00	200	Vertical	Pass

## 1GHz to 18GHz, ANT H

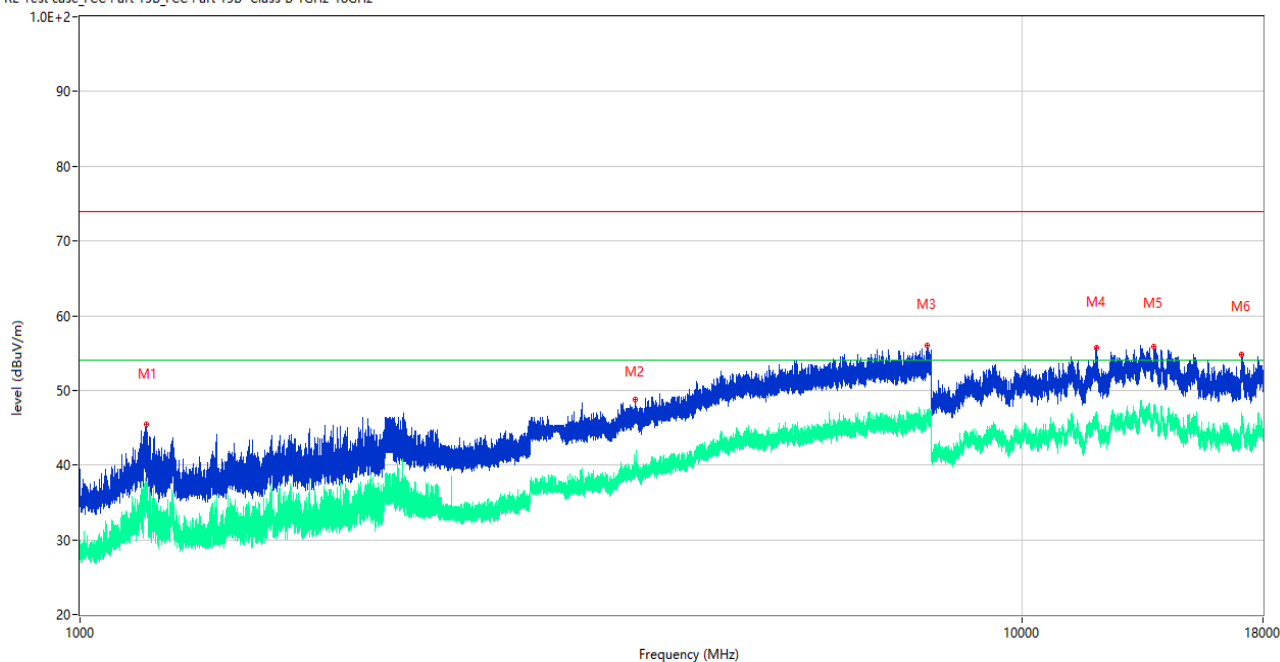
RE Test case FCC Part 15B FCC Part 15B Class B 1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1761.000	46.31	-16.15	74.0	-27.69	Peak	121.00	140	Horizontal	Pass
1**	1761.000	33.40	-16.15	54.0	-20.60	AV	121.00	140	Horizontal	Pass
2	3132.000	48.91	-5.51	74.0	-25.09	Peak	312.00	140	Horizontal	Pass
2**	3132.000	37.04	-5.51	54.0	-16.96	AV	312.00	140	Horizontal	Pass
3	6832.250	56.03	1.50	74.0	-17.97	Peak	105.00	140	Horizontal	Pass
3**	6832.250	44.43	1.50	54.0	-9.57	AV	105.00	140	Horizontal	Pass
4	11262.000	55.26	1.93	74.0	-18.74	Peak	258.00	140	Horizontal	Pass
4**	11262.000	44.84	1.93	54.0	-9.16	AV	258.00	140	Horizontal	Pass
5	13543.500	55.95	4.60	74.0	-18.05	Peak	0.00	140	Horizontal	Pass
5**	13543.500	47.50	4.60	54.0	-6.50	AV	0.00	140	Horizontal	Pass
6	17120.000	55.03	3.42	74.0	-18.97	Peak	276.00	140	Horizontal	Pass
6**	17120.000	45.47	3.42	54.0	-8.53	AV	276.00	140	Horizontal	Pass

## 1GHz to 18GHz, ANT V

RE Test case FCC Part 15B FCC Part 15B Class B 1GHz-18GHz



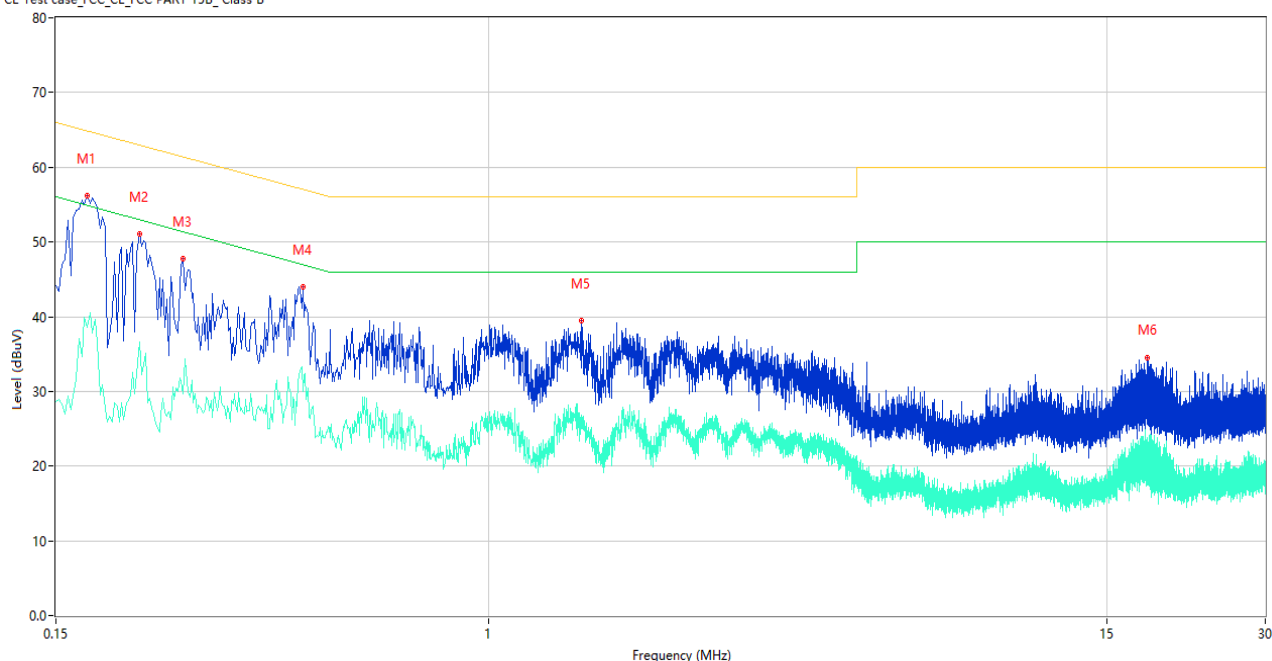
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1176.800	45.46	-17.38	74.0	-28.54	Peak	50.00	100	Vertical	Pass
1**	1176.800	36.42	-17.38	54.0	-17.58	AV	50.00	100	Vertical	Pass
2	3878.500	48.83	-3.08	74.0	-25.17	Peak	65.00	100	Vertical	Pass
2**	3878.500	39.12	-3.08	54.0	-14.88	AV	65.00	100	Vertical	Pass
3	7930.250	55.96	3.19	74.0	-18.04	Peak	219.00	100	Vertical	Pass
3**	7930.250	46.94	3.19	54.0	-7.06	AV	219.00	100	Vertical	Pass
4	11994.000	55.64	2.63	74.0	-18.36	Peak	32.00	100	Vertical	Pass
4**	11994.000	44.95	2.63	54.0	-9.05	AV	32.00	100	Vertical	Pass
5	13798.500	55.84	5.74	74.0	-18.16	Peak	175.00	100	Vertical	Pass
5**	13798.500	47.22	5.74	54.0	-6.78	AV	175.00	100	Vertical	Pass
6	17095.500	54.77	3.58	74.0	-19.23	Peak	299.00	100	Vertical	Pass
6**	17095.500	45.53	3.58	54.0	-8.47	AV	299.00	100	Vertical	Pass

## A.9 AC Power-line Conducted Emissions

Note: Only the worst test results were recorded in this report.

### L Phase

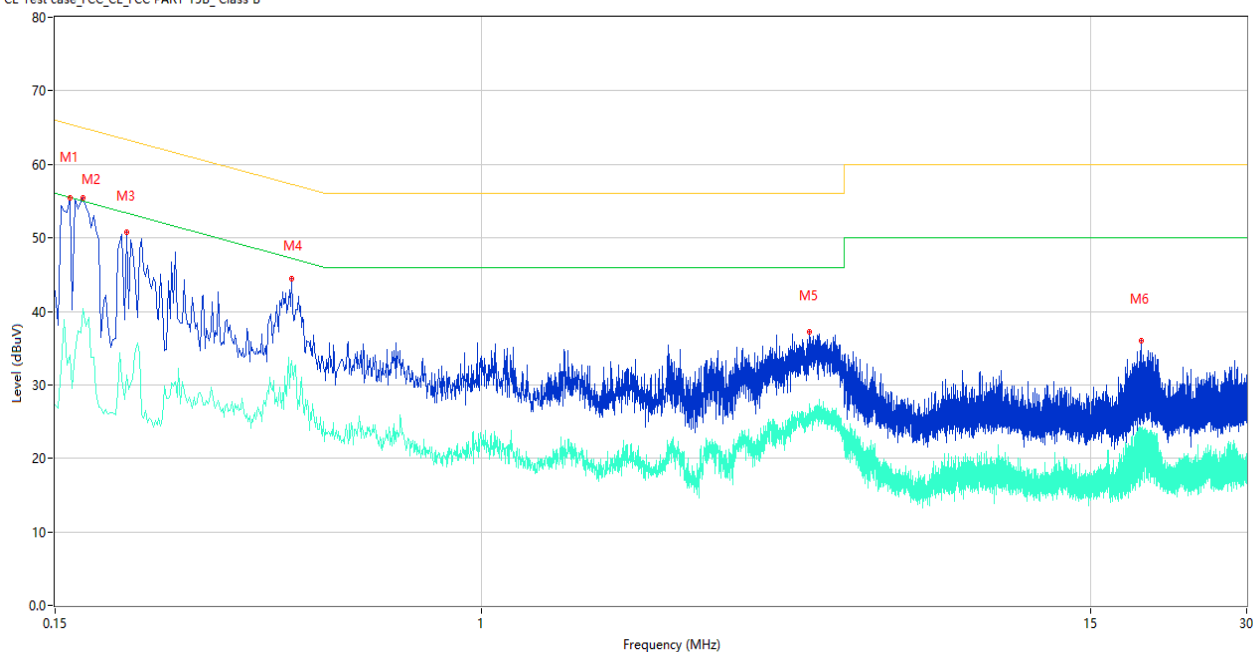
CE Test case\_FCC\_CE\_FCC PART 15B\_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.172	56.15	10.15	64.86	-8.71	Peak	L	Pass
1**	0.172	38.56	10.15	54.86	-16.30	AV	L	Pass
2	0.216	51.11	10.09	62.97	-11.86	Peak	L	Pass
2**	0.216	36.68	10.09	52.97	-16.29	AV	L	Pass
3	0.262	47.70	10.08	61.37	-13.67	Peak	L	Pass
3**	0.262	29.75	10.08	51.37	-21.62	AV	L	Pass
4	0.442	44.04	10.10	57.02	-12.98	Peak	L	Pass
4**	0.442	30.00	10.10	47.02	-17.02	AV	L	Pass
5	1.502	39.47	9.94	56.00	-16.53	Peak	L	Pass
5**	1.502	26.82	9.94	46.00	-19.18	AV	L	Pass
6	17.852	34.49	10.19	60.00	-25.51	Peak	L	Pass
6**	17.852	22.82	10.19	50.00	-27.18	AV	L	Pass

## N Phase

CE Test case\_FCC\_CE\_FCC PART 15B\_Class B



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.160	55.47	10.17	65.46	-9.99	Peak	N	Pass
1**	0.160	34.02	10.17	55.46	-21.44	AV	N	Pass
2	0.170	55.44	10.15	64.96	-9.52	Peak	N	Pass
2**	0.170	40.33	10.15	54.96	-14.63	AV	N	Pass
3	0.206	50.77	10.09	63.37	-12.60	Peak	N	Pass
3**	0.206	31.28	10.09	53.37	-22.09	AV	N	Pass
4	0.430	44.50	10.10	57.25	-12.75	Peak	N	Pass
4**	0.430	33.36	10.10	47.25	-13.89	AV	N	Pass
5	4.296	37.26	10.04	56.00	-18.74	Peak	N	Pass
5**	4.296	24.64	10.04	46.00	-21.36	AV	N	Pass
6	18.756	35.98	10.21	60.00	-24.02	Peak	N	Pass
6**	18.756	22.87	10.21	50.00	-27.13	AV	N	Pass

## **ANNEX B TEST SETUP PHOTOS**

Please refer to the document “BL-SZ2250922-AR.PDF”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer to the document “BL-SZ2250922-AW.PDF”.

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer to the document “BL-SZ2250922-AI.PDF”.

## Statement

1. The laboratory guarantees the scientificity, accuracy and impartiality of the test, and is responsible for all the information in the report, except the information provided by the customer. The customer is responsible for the impact of the information provided on the validity of the results.
2. The report without China inspection body and laboratory Mandatory Approval (CMA) mark has no effect of proving to the society.
3. For the report with CNAS mark or A2LA mark, the items marked with "☆" are not within the accredited scope.
4. This report is invalid if it is altered, without the signature of the testing and approval personnel, or without the "inspection and testing dedicated stamp" or test report stamp.
5. The test data and results are only valid for the tested samples provided by the customer.
6. This report shall not be partially reproduced without the written permission of the laboratory.
7. Any objection shall be raised to the laboratory within 30 days after receiving the report.

--END OF REPORT--

# California Type Evaluation Program

## Certificate of Approval

### Weighing and Measuring Devices

**For:**

Electric Vehicle Fueling Systems (EVFS)

AC Only

Model: Maxi US AC W12-L-4G

Software Version Number: V00.34

**Submitted By:**

Autel US Inc.

36 Harbor Park Drive

Port Washington, NY 11050

Tel: 855-288-3587

Fax: 651-357-3304

Contact: Kevin Zheng

Email: [kzheng@autel.com](mailto:kzheng@autel.com)

Web site: [www.autel.com](http://www.autel.com)

**Standard Features:**

- Alternating Current (AC) system in kilowatt-hour (kWh)
- 0.0001 kWh registration display
- Minimum Measured Quantity (MMQ): 0.2 kWh
- Voltage Rating: 208/240 VAC (Volts Alternating Current)
- Maximum Current Deliverable (MDA): 50 A (Amperes)
- Electronic receipts are acquired through mobile device App
- Activation via Radio Frequency Identification (RFID) card, mobile device App
- Cable management
- Network connection to cloud
- Continuous display for kWh consumption and price computing
- Multi-tiered pricing for energy (\$/kWh) and parking
- Non-resettable totalizer in kWh

**Options:**

- Charging cable length: 3m/5m/7.5m
- Mounting: Wall or floor using a pedestal
- Single port for charging

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

*Kristin Macey*

Kristin Macey, Director  
Effective Date: March 22, 2023

State of California, Department of Food and Agriculture, Division of Measurement Standards  
6790 Florin Perkins Road, Suite 100 / Sacramento, CA 95828

**Autel US Inc.**

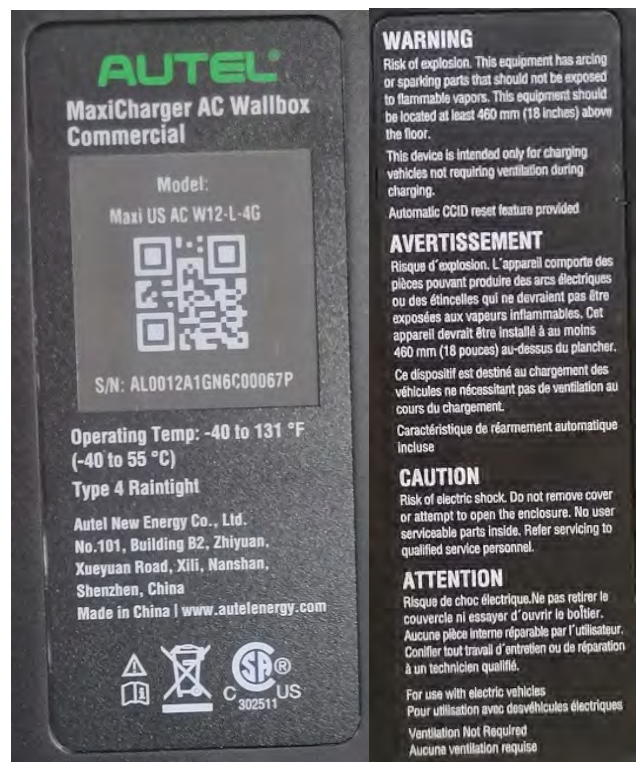
**Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G**

**Application:** For use as an Electric Vehicle Fueling System (EVFS) in commercial applications under the California Code of Regulations (CCR) National Institute Standards and Technology (NIST) Handbook 44 Section 3.40. EVFS are also known as Electric Vehicle Supply Equipment (EVSE).

**Identification:** The required EVFS identification (ID) such as the manufacturer's name, or logo is marked on the side of each unit. All ID information is additionally provided on the EVFS station's display screen. See **Figures 1 and 2** for examples of the ID badge. The software version number is also found on the display screen by tapping on the top right corner of the screen three times. (**Figure 3**).



**Figure 1.** Location of the ID badge



**Figure 2.** ID badge content example



**Figure 3.** Software version number example

# **Autel US Inc.**

## **Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G**

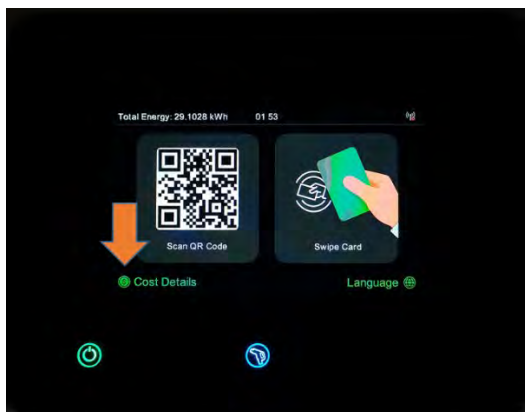
**Sealing:** The Autel Maxi US AC W12-L-4G has a Category 3 sealing provision. While in calibration/configuration mode, the device LED power indicator will flash on the screen and the device will not operate. The device totalizer information is constantly visible and can be found in the top left of the display screen (**Figure 4**).



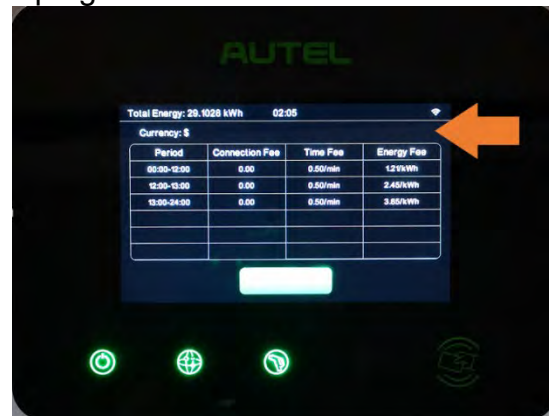
**Figure 4.** Event logger screen is shown on the EVFS. The totalizer is indicated by the red arrow

To access the meter event logger:

Step 1: Tap “Cost Details” in the left corner, indicated by the orange arrow.



Step 2: Tap three times in the blank area in the top right of the screen.



### Autel US Inc.

#### Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G

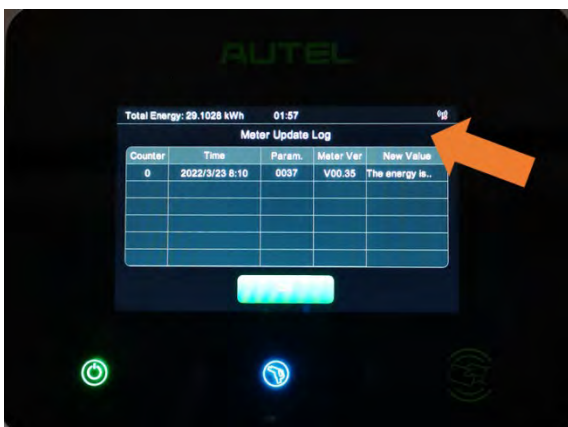
Step 3: The Device Information screen will appear, click the right arrow button, to go to the next page.



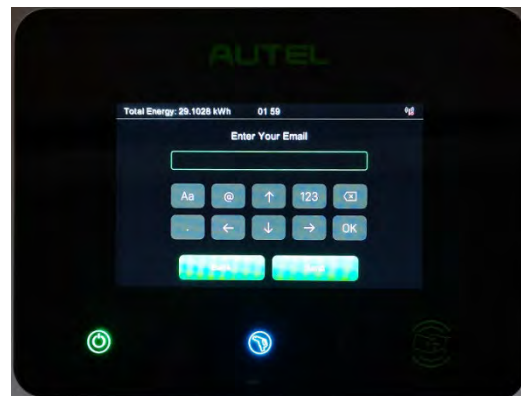
Step 4: Click the green number of the line "Meter Update Log", and the meter update will appear.



Step 5: Click three times in the blank area of the top right to enter the email address to send the event counter information.



Step 6: Enter the email address and tap the "Send" button for confirmation.



**Autel US Inc.**  
Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G

**Operation:** The station is operated by authentication of the user by means of an RFID card or the Autel Charge App. No membership or application (App) is required for use. After User authorization has been completed and the transaction initiated, the display will indicate the initial zero condition for price computing and kWh registration. The display will then indicate the accumulation of price computing and kWh for the charging session.

Charging with the Autel Maxi US AC W12-L-4G can be initiated in two ways:

1) RFID: The RFID card shall only be issued when the card is associated with an email account so a receipt can be provided if desired. Once the charger is connected to the vehicle, hold the RFID card in front of the RFID scan symbol on the charger screen. The active session information is displayed on the screen of the charger and in the Autel Charge App (**Figure 5**).



**Figure 5.** Charger screen active charge session stop button

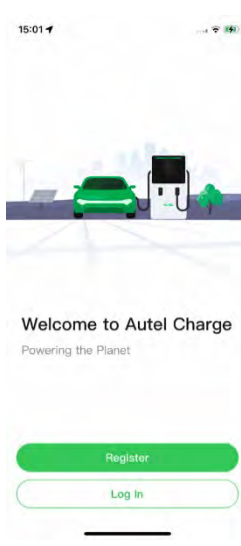
RFID-initiated session can be terminated by holding the RFID card in front of the RFID scan symbol on the charger screen or by pressing the green “Stop” button on the charger display screen (**Figure 5**).

2) QR Code: The user must have an Autel Charger App account with an associated e-mail to provide a receipt if desired. A user with a mobile will need to log in to their account (**Figure 6a**).

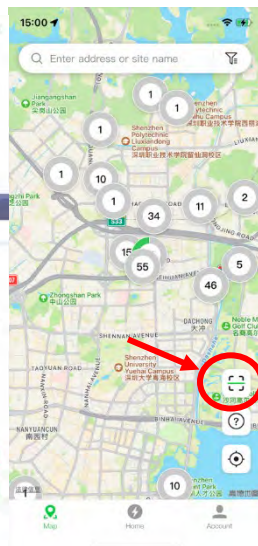
Ensure the connector is properly connected and secured to the electric vehicle. Navigate through the Autel Charge app and click on the scan symbol (**Figure 6b**) to scan the QR code on the main charger screen (**Figure 7a**). The charge session will begin after pressing the green start button (**Figure 7b**).

A QR code-initiated session can be terminated by pressing the “Stop” button in the Charge Tab, on the App (**Figure 8**). The receipt will be available in the Autel Charge App at the end of the charge session.

**Autel US Inc.**  
**Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G**



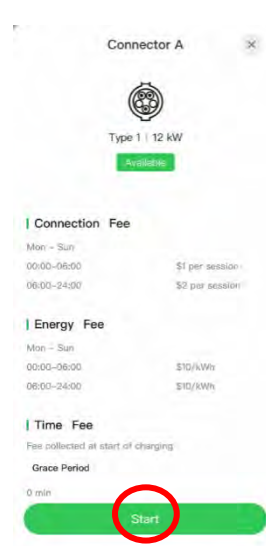
**Figure 6a.** Log in to the Autel Charger App.



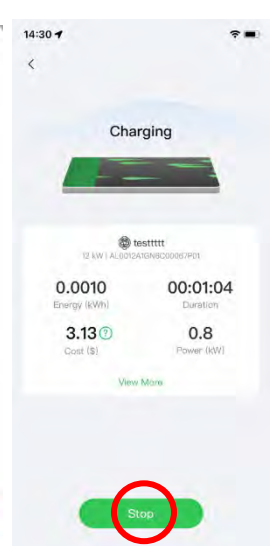
**Figure 6b.** Select to scan the QR code.



**Figure 7a.** Scan the QR code to load the charger information.

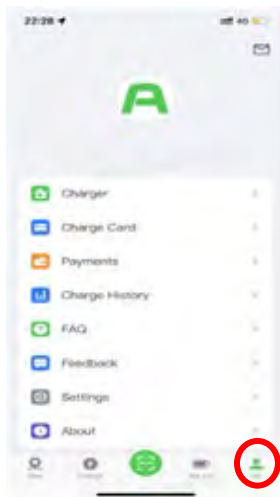


**Figure 7b.** Start charge session from the App



**Figure 8.** Stop charge session from the App

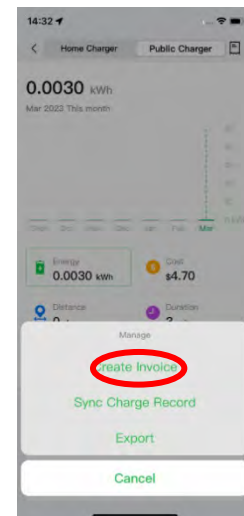
Steps to retrieve a receipt:



Step 1: Click on the "Me" tab

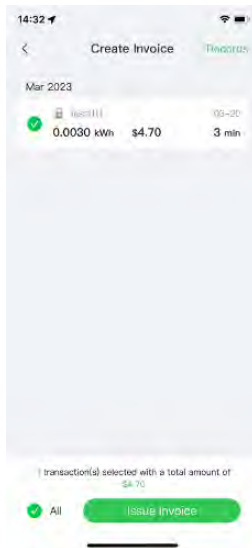


Step 2: Click on "Charge History" and switch to the "Public Charger" tab at the top

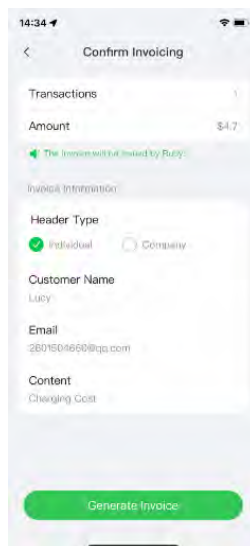


Step 3: Click the invoice icon at the top right corner then select "Create Invoice"

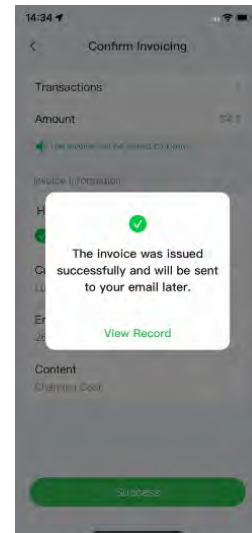
**Autel US Inc.**  
**Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G**



Step 4: Select the charging session you want to claim



Step 5: Confirm the user information



Step 6: A PDF invoice is emailed to the user

**Test Conditions:** This certificate supersedes California Type Evaluation Program (CTEP) Certificate of Approval (COA) Number 5911-22 and is issued to provide new images of the mobile app screens with correct currency and kWh information. No testing was necessary.

**Certificate of Approval Number 5911-22:** The emphasis of the evaluation for the Autel EVFS system was on device design, performance, markings, sealing, measurement accuracy at 10% and 85% power levels, repeatability, receipt requirements, parking charges, and permanence. Measurements were performed over 0.1 kWh (per the marked MMQ) at 10% and MMQ tests 0.2 kWh at 85%. Permanence testing was performed after 200 kWh of throughput usage. No-load, starting load, and parking compliance tests were also conducted.

**Evaluated By:** M. Lawrence (CA) 5911-22 and 5911(a)-23

**Type Evaluation Criteria Used:** *California Code of Regulations, Title 4, Division 9, Chapter 1, Article 1. General Code 1.10. and Section 3.40. California Electric Vehicle Fueling Systems (EVFS) 2023 Edition*

**Conclusion:** The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

**Autel US Inc.**  
Electric Vehicle Fueling Systems (EVFS) / Maxi US AC W12-L-4G

**Example(s) of the Device:**




# Test Report

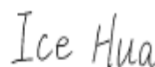
Page: 1/5

Report No.: JRQ\_940449

Date: May/07/2018

Customer:	North America
Address:	JY SINBON Electronics Co., Ltd.
Sample Description:	SAE J1772 charging cable
Test Category:	Drop Test & Low Temperature Test
Test Date:	May/07/2019
Reference Document:	According to the client's requirement
Test Result:	Refer to the following pages

Approved	<b>Terry Hu</b>
Signature	

Tested	<b>Ice Hua</b>
Signature	

# Test Report

Page: 2/5

Report No.: JRQ\_940449

Date: May/07/2018

Sample P/N	/
Description	SAE J1772 charging cable
Sample Quantity	2 pcs
Sample Test No.	1 ~ 2#
Test Category	Drop Test & Low Temperature Test
Received Date	Apr/11/2019
Test Period	May/07/2019
Reference Document	According to the client's requirement
Test Equipments	Vibration Tester (Molde: RS-320)  Due Date: 2020-02-25
Environments Condition	Temperature : 23.3°C. Humidity : 58%RH.
Test Results	Pass

## Test Report

Page: 3/5

Report No.: JRQ\_940449

Date: May/07/2018

### 1. Test Requirements:

1.1 The low temperature :-25℃ keep 16 hours

1.2 Drop Height: 0.7m

### 2. Conformity Criteria:

After the test, appearance and function is normal.

### 3. Test Results:

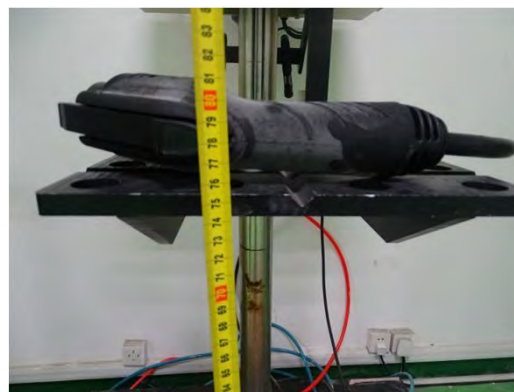
After the test, the sample is normal.

### 4. Test Picture :

4.1 The low temperature:



4.2 Sample drop height:



## Test Report

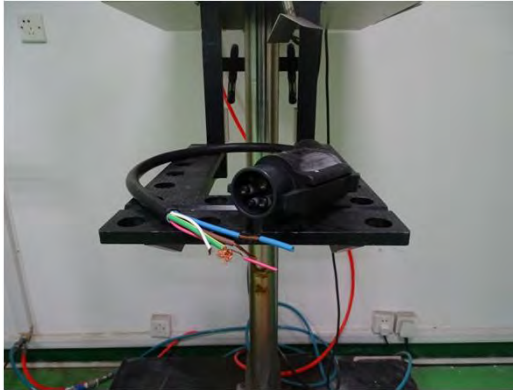
Page: 4/5

Report No.: JRQ\_940449

Date: May/07/2018

### 4. Test Picture :

#### 4.3 Drop location



## Test Report

Page: 5/5

Report No.: JRQ\_940449

Date: May/07/2018

### 4. Test Picture :

4.4 After test.



\*\*\*\*\* End of report \*\*\*\*\*

# *Pricing*



Line Responses

View Or Maintain Details

Line #	Item	Description	Vendor Item	Line Quantity	Response Quantity	Unit of Measure	Unit Price	Extended Amount
1	WIRING #8 AWG	Wiring #8 AWG		650	650	LF	\$ 0.47	\$ 305.50
2	WIRING #6 AWG	Wiring #6 AWG		1,750.00	1750	LF	\$ 0.73	\$ 1,277.50
3	WIRING #4 AWG	Wiring #4 AWG		450	450	LF	\$ 1.10	\$ 495.00
4	WIRING #6 THHN	Wiring #6 THHN		200	200	LF	\$ 0.73	\$ 146.00
5	WIRING #8 THHN	Wiring #8 THHN		400	400	LF	\$ 0.47	\$ 188.00
6	WIRING #10 THHN	Wiring #10 THHN		200	500	LF	\$ 0.26	\$ 130.00
7	3/4 INCH PVC CONDUIT	3/4 Inch PVC Conduit		450	450	LF	\$ 0.40	\$ 180.00
8	1 INCH PVC CONDUIT	1 Inch PVC Conduit		1,000.00	1000	LF	\$ 0.58	\$ 580.00
9	1-1/14 INCH PVC CONDUIT	1-1/14 Inch PVC Conduit		350	350	LF	\$ 0.83	\$ 290.50
10	1-1/2 INCH PVC CONDUIT	1-1/2 inch PVC Conduit		200	200	LF	\$ 0.97	\$ 194.00
11	2 INCH PVC CONDUIT	2 inch PVC Conduit		50	100	LF	\$ 1.20	\$ 120.00
12	3/4 INCH PVC CONDUIT	3/4 inch EMT Conduit		350	350	LF	\$ 0.77	\$ 269.50
13	1 INCH EMT CONDUIT	1 inch EMT Conduit		400	400	LF	\$ 1.24	\$ 496.00
14	1-1/4 INCH EMT CONDUIT	1-1/4 inch EMT Conduit		200	200	LF	\$ 2.02	\$ 404.00
15	1-1/2 INCH EMT CONDUIT	1-1/2 inch EMT Conduit		200	200	LF	\$ 2.47	\$ 494.00
16	1 INCH RIGID CONDUIT	1 inch RIGID Conduit		400	400	LF	\$ 3.74	\$ 1,496.00
17	3/4 INCH RIGID CONDUIT	3/4 INCH RIGID CONDUIT		50	50	LF	\$ 2.35	\$ 117.50
18	30 AMP ELECTRICAL BREAKERS	30 amp Electrical Breakers	N/A	2	0	EA	\$ 17.71	\$ -
19	40 AMP ELECTRICAL BREAKERS	40 amp Electrical Breakers		2	0	EA	\$ 20.00	\$ -
20	50 AMP ELECTRICAL BREAKERS	50 amp Electrical Breakers		2	0	EA	\$ 17.71	\$ -
21	60 AMP ELECTRICAL BREAKERS	60 amp Electrical Breakers		2	0	EA	\$ 17.93	\$ -
22	80 AMP ELECTRICAL BREAKERS	80 amp Electrical Breakers		2	0	EA	\$ 64.23	\$ -
23	100 AMP ELECTRICAL BREAKERS	100 amp Electrical Breakers		2	0	EA	\$ 64.23	\$ -
24	*AUTEL maxicharger, ac wallbox w/ pedistal	* 30-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)	N/A	1	1	UN	\$ 1,360.00	\$ 1,360.00
25	*AUTEL maxicharger, ac wallbox w/ pedistal	* 40-amp EVCS /Single/J1772/ Bollard Mount (Hardwired)		1	1	UN	\$ 1,360.00	\$ 1,360.00
26	*AUTEL maxicharger, ac wallbox w/ pedistal	* 50-amp EVCS/Single/J1772/ Bollard Mount (Hardwired)		1	1	UN	\$ 1,360.00	\$ 1,360.00
27	*AUTEL maxicharger, ac wallbox w/ pedistal	* 60-amp EVCS /Single/ J1772/ Bollard Mount(Hardwired)		1	1	UN	\$ 1,360.00	\$ 1,360.00
28	AUTEL maxicharger, ac wallbox w/ pedistal	30-amp EVCS /Dual/ J1772/Bollard Mount(Hardwired)		6	6	UN	\$ 2,200.00	\$ 13,200.00
29	AUTEL maxicharger, ac wallbox w/ pedistal	40-amp EVCS /Dual/ J1772/Bollard Mount (Hardwired)		6	6	UN	\$ 2,200.00	\$ 13,200.00
30	AUTEL maxicharger, ac wallbox w/ pedistal	50-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)		12	12	UN	\$ 2,200.00	\$ 26,400.00
31	AUTEL maxicharger, ac wallbox w/ pedistal	60-amp EVCS /Dual/ J1772/ Bollard Mount (Hardwired)		12	12	UN	\$ 2,200.00	\$ 26,400.00
32	EV PEDESTAL/SINGLE CHARGER STAND	EV Pedestal/ Single Stand		4	4	UN	\$ 400.00	\$ 1,600.00
33	EV PEDESTAL/ DUAL CHARGER STAND	EV Pedestal/ Dual Charger Stand		36	36	UN	\$ 400.00	\$ 14,400.00
34	*AUTEL maxicharger, ac wallbox	* 30-amp EVCS /single/ J1772/ Wall Mount (Hardwired)	N/A	1	1	UN	\$ 960.00	\$ 960.00
35	*AUTEL maxicharger, ac wallbox	* 40-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)		1	1	UN	\$ 960.00	\$ 960.00
36	*AUTEL maxicharger, ac wallbox	* 50-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)		1	1	UN	\$ 960.00	\$ 960.00
37	*AUTEL maxicharger, ac wallbox	* 60-amp EVCS /Single/ J1772/ Wall Mount(Hardwired)		1	1	UN	\$ 960.00	\$ 960.00
38	AUTEL maxicharger, ac wallbox	30-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)		2	2	UN	\$ 1,920.00	\$ 3,840.00
39	AUTEL maxicharger, ac wallbox	40-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)		2	2	UN	\$ 1,920.00	\$ 3,840.00
40	AUTEL maxicharger, ac wallbox	50-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)		4	4	UN	\$ 1,920.00	\$ 7,680.00
41	AUTEL maxicharger, ac wallbox	60-amp EVCS /Dual/ J1772/ Wall Mount(Hardwired)		4	4	UN	\$ 1,920.00	\$ 7,680.00
42	STANDARD LABOR RATE	Licensed Electrician/Journeyman		200	200	LH	\$ 98.00	\$ 19,600.00
43	LABOR HELPER RATE	Electrician/Helper Rate		200	200	LH	\$ 78.00	\$ 15,600.00
44	OVERTIME LABOR RATE	Overtime Labor Rate		50	50	LH	\$ 146.00	\$ 7,300.00
45	TRENCHING/CONSTRUCTION LABOR	**Trenching/Construction Labor		70	70	LH	\$ 125.00	\$ 8,750.00
46	PREVENTIVE MAINTENANCE FIRST HR	Service Call- Preventive Maintenance First Hour (\$/EA Visit)		100	100	EA	\$ 118.00	\$ 11,800.00
47	PREVENTIVE MAINTENANCE ADD HOURS	Service Call- Preventive Maintenance Additional HRS (\$/HR)		50	50	HR	\$ 78.00	\$ 3,900.00
48	EMERGENCY REPAIRS FIRST HOUR	Service Call- Emergency Repairs First Hour (\$/EA Visit)		100	100	EA	\$ 128.00	\$ 12,800.00
49	EMERGENCY REPAIRS ADDITIONAL HRS	Service Call - Emergency Repairs Additional Hours (\$/hr)		50	50	HR	\$ 98.00	\$ 4,900.00
50	% MARK-UP ON PARTS	% MARK-UP ON PARTS		1	1	PT	17%	
51	PERMIT ALLOWANCE	***PERMIT ALLOWANCE			1	DO	\$ 4,500.00	\$ 4,500.00
52	MISCELLANEOUS PARTS	MISCELLANEOUS PARTS			See Appendix A			
53	6X6X4 PVC WEATHERPROOF BOX CONDU	6X6X4 PVC WEATHERPROOF BOX CONDUIT		1	0	UN	\$ 23.94	

APPENDIX A

WALL MOUNT CMS	Wall mounted cable mangement system for single charger	1 UN	\$ 850.00	\$ 850.00
SINGLE EV PEDESTAL W/ CMS	EV Pedestal single charger stand w/ cable management system	1 UN	\$ 1,100.00	\$ 1,100.00
DUAL EV PEDESTAL W/ CMS	EV Pedestal dual charger stand w/ cable management system	1 UN	\$ 1,200.00	\$ 1,200.00
Optional sim card 4 G service	4G smart charger communication for 24/7 monitoring	per mth	\$ 4.50	
Optional monotiring software	cloud software to monitor charger otuput and vehicle draw	per mth	\$ 8.50	
Optional monioting support	Call center/text driver support	per mth	\$ 35.00	

Notes

- \* The Autel Maxicharger has a dial inside the physical charger to adjust amerage from 30, 40, 50, 60, or 70 amps.
- \*\* Trenching & construction labor rate shall include equipment, an equipment operator, and a site laborer.
- \*\*\* Permit allowance includes engineered plans, permit expediting, and city permit fees.
- 1. Florida Supercharge has secured tier 1 pricing with Autel thus enabling Florida Supercharge to offer a 20% discount on MSRP pricing for the City of Fort Lauderdale.
- 2. Autel 5 year extended warranty is included in pricing.

# ***Supplemental Docs***





### **NON-COLLUSION STATEMENT**

By signing this offer, the vendor/contractor certifies that this offer is made independently and *free* from collusion. Vendor shall disclose below any City of Fort Lauderdale, FL officer or employee, or any relative of any such officer or employee who is an officer or director of, or has a material interest in, the vendor's business, who is in a position to influence this procurement.

Any City of Fort Lauderdale, FL officer or employee who has any input into the writing of specifications or requirements, solicitation of offers, decision to award, evaluation of offers, or any other activity pertinent to this procurement is presumed, for purposes hereof, to be in a position to influence this procurement.

For purposes hereof, a person has a material interest if they directly or indirectly own more than 5 percent of the total assets or capital stock of any business entity, or if they otherwise stand to personally gain if the contract is awarded to this vendor.

In accordance with City of Fort Lauderdale, FL Policy and Standards Manual, 6.10.8.3,

3.3. City employees may not contract with the City through any corporation or business entity in which they or their immediate family members hold a controlling financial interest (e.g., ownership of five (5) percent or more).

3.4. Immediate family members (spouse, parents, and children) are also prohibited from contracting with the City subject to the same general rules.

**Failure of a vendor to disclose any relationship described herein shall be reason for debarment in accordance with the provisions of the City Procurement Code.**

#### **NAME**

#### **RELATIONSHIPS**

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**In the event the vendor does not indicate any names, the City shall interpret this to mean that the vendor has indicated that no such relationships exist.**

*Scott Coloney*

Authorized Signature

**Scott Coloney**

Name (Printed)

**VP**

Title

**11/20/2024**

Date



**CONTRACTOR'S CERTIFICATE OF COMPLIANCE WITH  
NON-DISCRIMINATION PROVISIONS OF THE CONTRACT**

The completed and signed form should be returned with the Contractor's submittal. If not provided with submittal, the Contractor must submit within three business days of City's request. Contractor may be deemed non-responsive for failure to fully comply within stated timeframes.

Pursuant to City Ordinance Sec. 2-17(a)(i)(ii), bidders must certify compliance with the Non-Discrimination provision of the ordinance.

- A. Contractors doing business with the City shall not discriminate against their employees based on the employee's race, color, religion, gender (including identity or expression), marital status, sexual orientation, national origin, age, disability, or any other protected classification as defined by applicable law.

Contracts. Every Contract exceeding \$100,000, or otherwise exempt from this section shall contain language that obligates the Contractor to comply with the applicable provisions of this section.

The Contract shall include provisions for the following:

- (i) The Contractor certifies and represents that it will comply with this section during the entire term of the contract.
- (ii) The failure of the Contractor to comply with this section shall be deemed to be a material breach of the contract, entitling the City to pursue any remedy stated below or any remedy provided under applicable law.

Scott Coloney  
Authorized Signature

Scott Coloney  
Print Name and Title

11/20/2024  
Date



### **CONTRACT PAYMENT METHOD**

The City of Fort Lauderdale has implemented a Procurement Card (P-Card) program which changes how payments are remitted to its vendors. The City has transitioned from traditional paper checks to credit card payments via MasterCard or Visa as part of this program.

This allows you as a vendor of the City of Fort Lauderdale to receive your payments fast and safely. No more waiting for checks to be printed and mailed.

In accordance with the contract, payments on this contract will be made utilizing the City's P-Card (MasterCard or Visa). Accordingly, bidders must presently have the ability to accept the credit card or take whatever steps necessary to implement acceptance of a card before the start of the contract term, or contract award by the City.

All costs associated with the Contractor's participation in this purchasing program shall be borne by the Contractor. The City reserves the right to revise this program as necessary.

By signing below, you agree with these terms.

Please indicate which credit card payment you prefer:

☐ MasterCard

☒ Visa

G & H Electric, Inc. DBA Florida Supercharge  
\_\_\_\_\_  
Company Name

Scott Coloney  
\_\_\_\_\_  
Name (Printed)

*Scott Coloney*  
\_\_\_\_\_  
Signature

VP  
\_\_\_\_\_  
Title

11/20/2024  
\_\_\_\_\_  
Date



## LOCAL BUSINESS PREFERENCE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the local business price preference classification as indicated herein, and further certifies and agrees that it will re-affirm its local preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this ITB. Violation of the foregoing provision may result in contract termination.

- (1) G & H Electric, Inc. is a **Class A** Business as defined in City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the City of Fort Lauderdale current year Business Tax Receipt **and** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.  
Business Name
- (2) \_\_\_\_\_ is a **Class B** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the Business Tax Receipt **or** a complete list of full-time employees and evidence of their addresses shall be provided within 10 calendar days of a formal request by the City.  
Business Name
- (3) \_\_\_\_\_ is a **Class C** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. A copy of the Broward County Business Tax Receipt shall be provided within 10 calendar days of a formal request by the City.  
Business Name
- (4) \_\_\_\_\_ requests a **Conditional Class A** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.  
Business Name
- (5) \_\_\_\_\_ requests a **Conditional Class B** classification as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186. Written certification of intent shall be provided within 10 calendar days of a formal request by the City.  
Business Name
- (6) \_\_\_\_\_ is considered a **Class D** Business as defined in the City of Fort Lauderdale Ordinance No. C-17-26, Sec.2-186 and does not qualify for Local Preference consideration.  
Business Name

BIDDER'S COMPANY: G & H Electric, Inc DBA Florida Supercharge

AUTHORIZED COMPANY PERSON: Scott Coloney Scott Coloney 11/20/2024  
PRINT NAME SIGNATURE DATE



## **DISADVANTAGED BUSINESS ENTERPRISE (DBE) PREFERENCE**

Section 2-185, Code of Ordinances of the City of Fort Lauderdale, provides for a disadvantaged business preference.

In order to be considered for a DBE Preference, a bidder must include a certification from a government agency, as applicable to the DBE Preference class claimed **at the time of bid submittal**.

Upon formal request of the City, based on the application of a DBE Preference the Bidder shall, within ten (10) calendar days, submit the following documentation to the DBE Class claimed:

A) Copy of City of Fort Lauderdale current year business tax receipt, **or** Broward County current year business tax receipt, **or** State of Florida active registration **and/or**

B) List of the names of all employees of the bidder and evidence of employees' residence within the geographic bounds of the City of Fort Lauderdale or Broward County, as the case may be, such as current Florida driver license, residential utility bill (water, electric, telephone, cable television), or other type of similar documentation acceptable to the City.

Failure to comply at time of bid submittal shall result in the bidder being found ineligible for the disadvantaged business preference.

**THE COMPLETE DBE PREFERENCE ORDINANCE MAY BE FOUND ON THE CITY'S WEB SITE AT THE FOLLOWING LINK: <https://www.fortlauderdale.gov/home/showpublisheddocument?id=56883>**

### **Definitions**

- a. The term "disadvantaged class 1 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- b. The term "disadvantaged class 2 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with a full-time employees and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- c. The term "disadvantaged class 3 enterprise" shall mean any disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.
- d. The term "disadvantaged class 4 enterprise" shall mean any disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.



## DISADVANTAGED BUSINESS ENTERPRISE CERTIFICATION STATEMENT

The Business identified below certifies that it qualifies for the disadvantaged business enterprise price preference classification as indicated herein, and further certifies and agrees that it will re-affirm its preference classification annually no later than thirty (30) calendar days prior to the anniversary of the date of a contract awarded pursuant to this solicitation. Violation of the foregoing provision may result in contract termination.

- (1) is a disadvantaged class 1 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the city, and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (2) is a disadvantaged class 2 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business within the limits of the city with a full-time employee(s) and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (3) is a disadvantaged class 3 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that has established and agrees to maintain a permanent place of business located in a non-residential zone, staffed with full-time employees within the limits of the Tri-County area and provides supporting documentation of its City of Fort Lauderdale business tax and disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (4) is a disadvantaged class 4 enterprise as defined in the City of Fort Lauderdale Ordinance Section 2-185 disadvantaged business enterprise that does not qualify as a Class A, Class B, or Class C business, but is located in the State of Florida and provides supporting documentation of its disadvantaged certification as established in the City's Procurement Manual.

\_\_\_\_\_  
Business Name

- (5) is not considered a Disadvantaged Enterprise Business as defined in the City of Fort Lauderdale Ordinance Sec.2-185 and does not qualify for DBE Preference consideration.

G & H Electric, Inc.

\_\_\_\_\_  
Business Name

BIDDER'S COMPANY: G & H Electric, Inc. DBA Florida Supercharge

AUTHORIZED COMPANY PERSON: Scott Coloney Scott Coloney 11/20/2024  
PRINT NAME SIGNATURE DATE



**E-VERIFY AFFIRMATION STATEMENT**

Solicitation/Bid /Contract No: 387-2

Project Description:

EV Charging Stations, Installation, & Maintenance - Rebid

Contractor/Proposer/Bidder acknowledges and agrees to utilize the U.S. Department of Homeland Security's E-Verify System to verify the employment eligibility of,

- A. all persons employed by Contractor/Proposer/Bidder to perform employment duties within Florida during the term of the Contract, and,
- B. all persons (including subcontractors/vendors) assigned by Contractor/Proposer/Bidder to perform work pursuant to the Contract.

The Contractor/Proposer/Bidder acknowledges and agrees that use of the U.S. Department of Homeland Security's E-Verify System during the term of the Contract is a condition of the Contract.

Contractor/Proposer/ Bidder Company Name: G & H Electric, Inc. DBA Florida Supercharge

Authorized Company Person's Signature: Scott Colony

Authorized Company Person's Title: VP

Date: 11/20/2024



## **REFERENCES**

A minimum of three (3) references shall be provided. It is the responsibility of the Bidder/ Proposer to ensure that the information provided is accurate and current. The City may find your firm non-responsive for providing wrong and or outdated information. Additional references may be provided on a separate page.

Company Name:	Abae Hotel
Address:	1215 W Avenue, Miami Beach, FL 33139
Contact Person:	Kristian Quintero
Title:	General Manager
Phone #:	305-400-0780
Email:	KQuintero@Abaehotel.com
Contract Value:	\$25,000
Year(s):	10
Description:	Installation and operation of ev chargers at the hotel

Company Name:	Mobil - 606 Federal Petroleum Corp
Address:	606 N Federal Hwy, Fort Lauderdale, FL 33304
Contact Person:	Rao Ramish
Title:	President
Phone #:	954-461-0475
Email:	anmera28@gmail.com
Contract Value:	\$500,000
Year(s):	10
Description:	Installation and operation of 2 Dual 240KW superchargers

Company Name:	Fort Lauderdale Historic Society
Address:	219 SW 2nd Avenue, Fort Lauderdale, FL 33301
Contact Person:	Kamal Khan
Title:	Facility Director
Phone #:	954-463-4431
Email:	KKHAN@flhc.org
Contract Value:	\$150,000
Year(s):	3
Description:	Landlord/ EV Charger Host at Historic District Parking Lot

## CITY OF FORT LAUDERDALE BID/PROPOSAL CERTIFICATION

**Please Note:** It is the sole responsibility of the bidder/proposer to ensure that their response is submitted electronically through the [City's on-line strategic sourcing platform](#) prior to the bid opening date and time listed. Paper bid submittals will not be accepted. All fields below must be completed. If the field does not apply to you, please note N/A in that field.

If you are a foreign corporation, you may be required to obtain a certificate of authority from the department of state, in accordance with Florida Statute §607.1501 (visit <http://www.dos.state.fl.us/>).

Company: (Legal Registration) G & H Electric, Inc. DBA Florida Supercharge EIN (Optional): 59-3684435

Address: 227 SW 2 Avenue

City: Fort Lauderdale State: FL Zip: 33301

Telephone No.: 954-836-8300 FAX No.: \_\_\_\_\_ Email: info@ussupercharge.com

Delivery: Calendar days after receipt of Purchase Order (**section 1.02 of General Conditions**): 90 days

Total Bid Discount (**section 1.05 of General Conditions**): 2%

Check box if your firm qualifies for DBE (**section 1.09 of General Conditions**): ☒

**ADDENDUM ACKNOWLEDGEMENT** - Proposer acknowledges that the following addenda have been received and are included in the proposal:

Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued	Addendum No.	Date Issued
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____

**VARIANCES:** If you take exception or have variances to any term, condition, specification, scope of service, or requirement in this competitive solicitation you must specify such exception or variance in the space provided below or reference in the space provided below all variances contained on other pages within your response. Additional pages may be attached if necessary. No exceptions or variances will be deemed to be part of the response submitted unless such is listed and contained in the space provided below. The City does not, by virtue of submitting a variance, necessarily accept any variances. If no statement is contained in the below space, it is hereby implied that your response is in full compliance with this competitive solicitation. If you do not have variances, simply mark N/A.

The below signatory hereby agrees to furnish the following article(s) or services at the price(s) and terms stated subject to all instructions, conditions, specifications addenda, legal advertisement, and conditions contained in the bid/proposal. I have read all attachments including the specifications and fully understand what is required. By submitting this signed proposal, I will accept a contract if approved by the City and such acceptance covers all terms, conditions, and specifications of this bid/proposal. The below signatory also hereby agrees, by virtue of submitting or attempting to submit a response, that in no event shall the City's liability for respondent's direct, indirect, incidental, consequential, special or exemplary damages, expenses, or lost profits arising out of this competitive solicitation process, including but not limited to public advertisement, bid conferences, site visits, evaluations, oral presentations, or award proceedings exceed the amount of Five Hundred Dollars (\$500.00). This limitation shall not apply to claims arising under any provision of indemnification or the City's protest ordinance contained in this competitive solicitation.

Submitted by:

Scott Coloney

Name (printed)

11/20/2024

Date

Scott Coloney

Signature

VP

Title



City of Fort Lauderdale • Procurement Services Division  
100 N. Andrews Avenue, Suite 619 • Fort Lauderdale, Florida 33301  
954-828-5933 • Fax 954-828-5576 • [purchase@fortlauderdale.gov](mailto:purchase@fortlauderdale.gov)

## ADDENDUM NO. 1

ITB No.: 387

**TITLE: EV Charging Stations, Installation, & Maintenance - Re-Bid**

**ISSUED: 11/5/2024**

This addendum is being issued to make the following change(s):

The Specifications and Requirements have been revised. Words in strikethrough are deletions from the existing text and words in bold underline are additions to the existing text (strikethrough removed; underlined bolded is added).

**3.1.16** Electrical Testing Laboratory (ETL) **or Underwriters Laboratories (UL)**  
**certified**, and Energy Star listed.

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin  
Senior Procurement Specialist

Company Name: G & H Electric, Inc. DBA Florida Supercharge

(please print)

Bidder's Signature: Scott Coloney

Date: 11/20/2024



City of Fort Lauderdale • Procurement Services Division  
100 N. Andrews Avenue, Suite 619 • Fort Lauderdale, Florida 33301  
954-828-5933 • Fax 954-828-5576 • [purchase@fortlauderdale.gov](mailto:purchase@fortlauderdale.gov)

## ADDENDUM NO. 2

ITB No.: 387

**TITLE: EV Charging Stations, Installation, & Maintenance - Re-Bid**

**ISSUED: 11/13/2024**

This addendum is being issued to make the following change(s):

1. Section III of the solicitation was removed, and a revised Section III was attached. The numbering was off after section 3.2.6. Starting with 3.2.7 corrections were made in **bold red type**.

All other terms, conditions, and specifications remain unchanged.

Laurie Platkin  
Senior Procurement Specialist

Company Name: G & H Electric, Inc. DBA Florida Supercharge

(please print)

Bidder's Signature: \_\_\_\_\_

*Scott Colony*

Date: 11/20/2024



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
10/31/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER	CONTACT NAME: Jonathan DeClue	
CF Insurance Services, Inc. DBA DeClue Brothers Insurance	PHONE (A/C No. Ext): 407-884-7843	FAX (A/C No.): 407-884-6014
218 S Lake Ave	E-MAIL ADDRESS: jond@ins4fl.com	
Apopka	INSURER(S) AFFORDING COVERAGE	NAIC #
INSURED	INSURER A : Infinity	39497K
G & H Electric, Inc. DBA Florida Supercharge	INSURER B : Ascendant Commercial Insurance	13683
227 SW 2 Avenue	INSURER C : Irvin B. Green	
Ft Lauderdale FL 33301	INSURER D :	
	INSURER E :	
	INSURER F :	

COVERAGES CERTIFICATE NUMBER: 20241031143816530 REVISION NUMBER:

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL SUBR INSD. WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
C	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY					EACH OCCURRENCE \$ 1,000,000
	<input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR					DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 100,000
						MED EXP (Any one person) \$ 5,000
						PERSONAL & ADV INJURY \$ 1,000,000
	GEN'L AGGREGATE LIMIT APPLIES PER:			11/09/2024	11/09/2025	GENERAL AGGREGATE \$ 2,000,000
	<input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC					PRODUCTS - COM/POP AGG \$ 2,000,000
	OTHER:					\$
	AUTOMOBILE LIABILITY					COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000
A	<input checked="" type="checkbox"/> ANY AUTO					BODILY INJURY (Per person) \$
	<input type="checkbox"/> OWNED AUTOS ONLY					BODILY INJURY (Per accident) \$
	<input type="checkbox"/> HIRED AUTOS ONLY					PROPERTY DAMAGE (Per accident) \$
						\$
C	<input checked="" type="checkbox"/> UMBRELLA LIAB					EACH OCCURRENCE \$ 1,000,000
	<input checked="" type="checkbox"/> EXCESS LIAB					AGGREGATE \$ 1,000,000
	DED	RETENTION \$				\$
						PER STATUTE OTH-ER
B	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY					E.L. EACH ACCIDENT \$ 1,000,000
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)	Y / N				E.L. DISEASE - EA EMPLOYEE \$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below					E.L. DISEASE - POLICY LIMIT \$ 1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER	CANCELLATION
City of Ft Lauderdale 100 N Andrews Ave Ft Lauderdale FL 33301	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE



Ron DeSantis, Governor

Melanie S. Griffin, Secretary



**STATE OF FLORIDA**  
**DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION**

**ELECTRICAL CONTRACTORS' LICENSING BOARD**

THE ELECTRICAL CONTRACTOR HEREIN IS CERTIFIED UNDER THE  
PROVISIONS OF CHAPTER 489, FLORIDA STATUTES

**GONZALEZ, JOHNNY X**

FLAGLER DUVAL ELECTRIC  
227 SW 2 AVENUE  
FORT LAUDERDALE FL 33301

**LICENSE NUMBER: EC13007350**

**EXPIRATION DATE: AUGUST 31, 2026**

Always verify licenses online at [MyFloridaLicense.com](https://MyFloridaLicense.com)

ISSUED: 11/21/2024

Do not alter this document in any form.

This is your license. It is unlawful for anyone other than the licensee to use this document.



***END***





# ANTI-HUMAN TRAFFICKING AFFIDAVIT

Rev: 1 | Date: 08/06/2024

The undersigned, on behalf of G & H Electric, Inc DBA Florida Supercharge,  
a Florida (State) Corporation (Type of Entity), ("Nongovernmental  
Entity"), under penalty of perjury, hereby deposes and says:

1. My name is Scott Coloney.
2. I am an ☒ officer or ☐ authorized representative of the Nongovernmental Entity.
3. I attest that the Nongovernmental Entity does not use coercion for labor or services as defined in Section 787.06, Florida Statutes (2024), as may be amended or revised.

Under penalties of perjury, I declare that I have read the foregoing Anti-Human Trafficking Affidavit and that the facts stated in it are true.

Signature of Officer or Representative: Scott Coloney

Name of Officer or Representative: Scott Coloney Title: VP

Office Address: 227 SW 2 Avenue, Fort Lauderdale, FL 33301

Email Address: info@ussupercharge.com

Main Phone Number: 954-836-8300 FEIN No.: 59-3684435

STATE OF Florida  
COUNTY OF Broward

Sworn to and subscribed before me by means of ☒ physical presence or ☐ online  
notarization, this 20 day of November, 2024, by Scott Coloney.



Leandria Walker  
(Signature of Notary Public – State of Florida)

Leandria Walker  
Print, Type or Stamp Commissioned Name of  
Notary Public)

Personally Known ☒ OR Produced Identification ☐

Type of Identification Produced \_\_\_\_\_

**AFFIDAVIT OF COMPLIANCE WITH FOREIGN ENTITY LAWS**  
**(Florida Statute- §287.138, 692.201, 692.202, 692.203, and 692.204)**

The undersigned, on behalf of the entity listed below ("Entity"), hereby attests under penalty of perjury as follows:

1. Entity is not owned by the government of a foreign country of concern as defined in Section 287.138, Florida Statutes. (Source:§ 287.138(2)(a), Florida Statutes)
2. The government of a foreign country of concern does not have a controlling interest in Entity. (Source:§ 287.138(2)(b), Florida Statutes)
3. Entity is not organized under the laws of, and does not have a principal place of business in, a foreign country of concern. (Source: § 287.138(2)(c), Florida Statutes)
4. Entity is not owned or controlled by the government of a foreign country of concern, as defined in Section 692.201, Florida Statutes. (Source:§ 288.007(2), Florida Statutes)
5. Entity is not a partnership, association, corporation, organization, or other combination of persons organized under the laws of or having its principal place of business in a foreign country of concern, as defined in Section 692.201, Florida Statutes, or a subsidiary of such entity. (Source: § 288.007(2), Florida Statutes)
6. Entity is not a foreign principal, as defined in Section 692.201, Florida Statutes. (Source: § 692.202(5)(a)(I), Florida Statutes)
7. Entity is in compliance with all applicable requirements of Sections 692.202, 692.203, and 692.204, Florida Statutes.
8. **(Only applicable if purchasing real property)** Entity is not a foreign principal prohibited from purchasing the subject real property. Entity is either (a) not a person or entity described in Section 692.204(1)(a), Florida Statutes, or (b) authorized under Section 692.204(2), Florida Statutes, to purchase the subject property. Entity is in compliance with the requirements of Section 692.204, Florida Statutes. (Source:§§ 692.203(6)(a), 692.204(6)(a), Florida Statutes)
9. The undersigned is authorized to execute this affidavit on behalf of Entity.

Name: Scott Coloney Title: VP Entity: G & H Electric, Inc.DBA Florida Supercharge

Signature: Scott Coloney Date: 11/20/2024

**NOTARY PUBLIC ACKNOWLEDGEMENT SECTION**

STATE OF Florida  
COUNTY OF Broward

The foregoing instrument was acknowledged before me, by means of ☒ physical presence or ☐ online notarization, this 20 day of November, 2024, by Scott Coloney, as VP for G & H Electric, Inc.DBA Florida Supercharge, who is personally known to me or who has produced \_\_\_\_\_ as identification.

Notary Public Signature: Leandria Walker

Print Name: Leandria Walker

(Notary Seal)



My commission expires: 3/23/28