

Council Meeting of
July 17, 2012

Honorable Mayor and Members
of the City Council
City Hall
Torrance, California

Members of the Council:

SUBJECT: Transit – Approve purchase order for the purchase and installation of bus radio equipment. Expenditure: Not to exceed \$246,658.77

Ref: Bid B2012-14

RECOMMENDATION:

Recommendation of the Transit Director that City Council approve a purchase order with Advanced Electronics Inc. of Redondo Beach, California for the purchase of radios to be installed on transit buses in an amount not to exceed \$246,658.77.

FUNDING

Funding is available in Federal Transit Administration (FTA) capital grant CA-90-X887 for Radio Equipment.

BACKGROUND/ANALYSIS:

In April of 2012, the City of Torrance released a formal Bid (B2012-14) for the purchase of radios and radio equipment for the Torrance Transit System. New radios were needed as part of Transit's plan to phase in an Automated Vehicle Locator and Computer Aided Dispatching (AVL/CAD) system.

On June 13, 2012, B2012-14 was opened publically. The City received five (5) bid submittals. Of the five bids received, four (4) did not meet the specifications/requirements of the bid. The bid from US Mobile Wireless Communications Inc. dba Day Wireless Systems of Burbank, Comline, Inc. of Culver City and Advanced Electronics Inc. of Redondo Beach (alternate bid) did not meet the FTA's "Buy America" requirements and were disqualified. EF Johnson Technologies of Irving, Texas bid a product that is not capable of using the microphone handset feature that is required for Transit operations and submitted a "no bid" response to bid item #4 Microphone Handset with Hang Up Box and therefore was also disqualified.

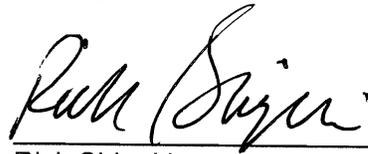
Advanced Electronics, Inc. submitted two bids. While their alternate bid did not meet "Buy America" requirements, their initial bid (for a different model radio) did meet "Buy America" compliance.

Hence, the initial bid submitted by Advanced Electronics, Inc. is the only bid that is in full compliance and therefore the lowest responsible bidder.

Respectfully submitted,



Kim Turner
Transit Director



Rick Shigaki
Information Technology Director

CONCUR:



LeRoy J. Jackson
City Manager

Attachment: A) B2012-14 Advanced Electronics, Inc. Bid Submittal #1



Notice Inviting

City of Torrance | 3031 Torrance Blvd, Torrance CA 90503 | www.TorranceCA.Gov

#1 COPY

Bid No. B2012-14

Bid to Furnish Radio Equipment for Torrance Transit

BID SUBMITTAL INFORMATION

Bids may be mailed or hand delivered. No faxed bids will be accepted.

Late bids will not be accepted.

Location: Office of the City Clerk
3031 Torrance Blvd.
Torrance, CA 90503

Date: Wednesday, June 13, 2012

Time Deadline: **2:00 P.M.**

Bids will be opened and publicly read aloud at 2:15 p.m. on the same date in the Council Chambers.

An original plus two (2) copies sealed in an envelope and marked with the bid number and title must be submitted by the deadline. Your bid submittal must include the following:

- Vendor's Response (Section III of this document including Attachments 1, 2 & 3) on the forms provided. If additional space is required, please attach additional pages.

Prior to the award of a Purchase Agreement (if applicable, see below) the following is to be submitted to the Purchasing Division:

- Proof of a City of Torrance Business License:

You are required to have a City of Torrance Business License if your company is located in the City of Torrance; will physically be working in the City of Torrance; or will be using your own vehicles to deliver to the City of Torrance. For additional information and licensing requirements, please contact the City of Torrance Business License Office at (310) 618-5923.

Questions regarding this Notice Inviting Bids should be directed to:

Felice N. Fromm
Purchasing Manager
(310) 618-5820

Bid No. B2012-14	Bid to Furnish Radio Equipment for Torrance Transit
SECTION I BID INSTRUCTIONS AND INFORMATION	

Notice is hereby given that sealed bids will be received in the office of the City Clerk, City Hall, 3031 Torrance Boulevard, Torrance, CA, until 2:00 p.m. on Wednesday, June 13, 2012, and will be opened and publicly read aloud at 2:15 p.m. on the same date in the Council Chambers, Torrance City Hall. You are invited to be present at the opening of bids. An original and two copies of the bid price proposal pages must be submitted in a sealed envelope and clearly marked: "Bid to Furnish Radio Equipment for Torrance Transit, B2012-14".

Definitions:

The following meanings are attached to the following defined words when used in these specifications and the purchase agreement. The word "City" means the City of Torrance, California. The word "Bidder", "Vendor", "Offeror" or "Contractor" means the person, firm, or corporation submitting a bid on these specifications or any part thereof.

The following meanings are attached to the following defined words when used in these specifications and purchase agreement. The word "purchase agreement", "contract", "purchase order", "blanket purchase order" means the contractual agreement between the vendor and the City of Torrance for the purchase of goods and/or services.

The words FTA recipient means the City of Torrance as the grant recipient of the Federal Transit Administration. The word "Purchaser" means the City of Torrance.

Bid Form:

The bid must be made on the form provided for that purpose, enclosed in a sealed envelope, and marked "Bid to Furnish Radio Equipment for Torrance Transit, B2012-14" and addressed to the City Clerk, City of Torrance, 3031 Torrance CA. 90503. If the bid is made by an individual, it must be signed by that individual, and an address, telephone (and fax number if available) must be given. If made by a business entity, it must be signed by the person(s) authorized to execute agreements and bind the entity to purchase orders. A full business address, telephone (and fax number if available) must be given. No telegraphic, fax or telephonic bid will be considered.

Blank spaces in the bid form must be filled in; using ink, indelible pencil, or typewriter, and the text of the bid form must not be changed. No additions to the form may be made. Any unauthorized conditions, limitations, or provisos attached to a bid will render it informal and may cause its rejection. Alterations by erasure or interlineations must be explained or noted in the bid form over the signature of the Bidder.

Reservation:

The City reserves the right to revise or amend these specifications prior to the date set for opening bids. Revisions and amendments, if any, will be announced by an addendum to this bid. If the revisions require additional time to enable bidders to respond, the City may postpone the opening

date accordingly. In such case, the addendum will include an announcement of the new opening date.

All addenda must be attached to the bid. Failure to attach any addendum may render the bid non-responsive and cause it to be rejected.

The City Council reserves the right to reject any and all bids received, to take all bids under advisement for a period not to exceed ninety (90) days after the date of the opening, to waive any informality on any bid, and to be the sole judge of the relative merits of the material and or service mentioned in the respective bids received. The City reserves the right to reject any bid not accompanied with all data or information required.

This bid does not commit the City to award a purchase order or to pay any cost incurred in the preparation of a bid. All responses to this bid become the property of the City of Torrance.

Affidavit:

An affidavit form is enclosed. It must be completed signifying that the bid is genuine and not collusive or made in the interest or on behalf of any person not named in the bid, that the Bidder has not directly or indirectly induced or solicited any other Bidder to put in a sham bid or any other person, firm, or corporation to refrain from proposing, and that the Bidder has not in any manner sought by collusion to secure for itself an advantage over any other Bidder. Any bid submitted without an affidavit or in violation of this requirement will be rejected.

Standards for Evaluation of Bids:

The City staff will use the following priorities, as well as pricing, in determining which bid best meets the needs of the City. The City will be the sole determiner of suitability to the City's needs.

Bids will be rated according to their completeness and understanding of the City's needs, conformance to the requirements of the specifications, prior experience with comparable bids, ability to meet the delivery requirement, and cost.

All bid awards shall take into consideration local Torrance vendor sales tax rebate of 1%.

Funding:

The City intends to use Federal Transit Administration (FTA) Grant Funding source; CA-90-X887 for this purchase.

Brand Names and Specification Appearance to a Certain Brand or Manufacturer:

Wherever brand, manufacturer, product name/numbers (or a specification that appear to be for a certain brand or manufacturer).are indicated in these specifications, they are included for the purpose of establishing a general type and quality of the product required, unless the description specifically says NO SUBSTITUTE. Bidder must bid a Manufacturer, manufacturer's model number and description along with a complete specification sheet for each item bid. Samples of alternative items being bid may be required. The City of Torrance will be the sole judge of the relative merits of comparative products bid.

Delivery:

Inside Delivery Required. It is the responsibility of the Bidder to provide all equipment and labor necessary to unload the shipment as directed by the City of Torrance. The City may refuse shipment if delivery does not comply with this requirement. Prices bid are to be FOB Destination.

Inside Delivery Location:

Communications and Information Technology Department/Communications Division
20500 Madrona Avenue
Torrance, CA 90503

Successful Bidder is to contact Mr. Jerry Edwards of the Communications Division at 310-781-6969 to coordinate delivery.

Partial Bid:

No partial bids will be accepted.

Equipment Guarantee:

All equipment furnished will be guaranteed by the vendor for a minimum period of one year against defects in design, material and workmanship. The warranty period will begin with acceptance of the equipment. Warranty repairs to correct discrepancies identified during this period will include labor and materials at no cost to the City. Any faulty equipment that, in the judgment of the City, is not reasonably repairable will be replaced by the vendor as a warranty action.

Errors and Omissions:

The Bidder will not be allowed to take advantage of any errors and/or omissions in these specifications or in the Bidder's specifications submitted with its bid. Full instruction will always be given when errors or omissions are discovered.

Bidders Examination of Requirements:

The bidder is required to examine carefully the site, the instructions, information and specifications of this document, investigate the conditions to be encountered, the character, quality and quantities of work to be performed as required by this document. Submission of a bid proposal will be considered prima facie evidence that the bidder has made such examination.

The Purchase Agreement:

The bidder to whom the award is made will be issued a Purchase Order from the City of Torrance. By reference, a copy of the notice inviting Bids, these specifications and the terms and conditions, will be part of the purchase agreement. All materials or services supplied by the Vendor will conform to the applicable requirements of the City Charter, City Ordinances, and State or Federal Law covering Labor and Wages, as well as conforming to the specifications contained herein. In case of default by the Vendor, the City reserves the right to procure the articles or services from other sources and to hold the Vendor responsible for any excess cost incurred by the City hereby.

Torrance Unified School District:

Bid submittals shall constitute agreement by the Vendor that all pricing terms and conditions offered to the City of Torrance will be offered to the Torrance Unified School District (TUSD). The City of Torrance does not warrant any additional use of the contract by TUSD. Should TUSD choose to utilize the contract, orders will be placed and payment made directly to the vendor by TUSD.

Payments:

Complete payment on the contract price will be made in approximately thirty (30) days from date of delivery, or completion and acceptance, unless otherwise provided for in bidder's bid proposal or in these specifications. Payments will be made upon verification and acceptance by the City of contract services performed and upon the City's receipt of a correct invoice.

Patent Rights:

The Vendor agrees to save, keep, bear harmless, defend and fully indemnify the City and any of its officers or agency from all damages, costs, or expenses in law or equity that may at any time arise or to be set up for any infringement of the patent rights of any person or persons in consequence of the use by the City, or by any of its officers or agent, or articles supplied under this contract any of which the Vendor is not the patentee or assignee, or which the Vendor is not lawfully entitled to sell.

Contract Extension to Other Cities/Agencies:

Other Cities/Agencies may be interested in purchasing against an awarded contract, subject to the same price, terms and conditions offered to the City of Torrance. The City of Torrance does not warrant any additional use of the contract by such agencies. Other agencies utilizing the contract will place orders with, and make payments directly to, the successful bidder.

Notice:

Whenever it will be necessary for either party to serve notice on the other respecting the Agreement, such notice will be served by personal delivery or by certified mail to the following addresses, unless and until different addresses may be furnished in writing by either party or the other, and such notice will be deemed to have been served within seventy-two (72) hours after the same has been deposited in a United States Post Office by certified mail or has been delivered personally, and will be valid and sufficient service of notice for all purposes:

CITY: City Clerk
 City of Torrance
 3031 Torrance Boulevard
 Torrance, CA 90503

VENDOR: Will be determined upon award of contract.

Purchase Order Terms and Conditions:

Definitions:

The following meanings are attached to the following defined words when used in these terms and conditions and the purchase order. The word "City" means the City of Torrance, California. The word "Vendor" or "Contractor" means the person, firm, or corporation providing goods or services to the City. The word "purchase order" means the contract, purchase order or blanket purchase order issued to the vendor by the City.

Goods:

The term "Goods" means the products, goods or other commodities purchased pursuant to the Purchase Order.

Description of Goods: The Vendor must produce and deliver the Goods in accordance with the specifications and the shipping and quantity schedule set forth on the first page of the Purchase Order.

Substitution: No substitution of Goods ordered will be made unless authorized by the Purchasing Division.

Delivery Date:

The Goods must be shipped and must arrive at the destination specified by the CITY in strict compliance with the shipping and quantity schedule set forth on the first page of this Purchase Order. Any failure by the Vendor to meet the Required Delivery Date (set forth on the first page of this Purchase Order) will constitute a material default. The Vendor must notify the CITY immediately if the Vendor reasonably believes that the Vendor will not be able to meet the Required Delivery Date for any reason. In addition, the Vendor must promptly provide the CITY with a schedule that the Vendor reasonable believes it will be able to meet.

Cancellation:

The CITY reserves the right to cancel any portion of this order with respect to Goods not delivered on or before the Required Delivery Date.

Delivery Risk of Loss:

All orders will be F.O.B. destination if not otherwise specified. Risk of loss or damage to the Goods must remain with the Vendor until the Goods have been delivered to and accepted by the CITY. All Goods will be received by the CITY subject to its right of inspection, rejection, and revocation of acceptance under the Uniform Commercial Code. The CITY will be allowed a reasonable period of time to inspect the Goods and to notify the Vendor of any nonconformance with the terms and conditions of this purchase order. The CITY may reject any Goods that do not conform to the terms and conditions of this purchase order; any Goods rejected may be returned to the Vendor at the Vendor's risk and expense. Further, where the CITY rightfully revokes acceptance, the CITY may, to the extent of any deficiency in its effective insurance coverage, treat the risk of loss as having rested on the Vendor from the date of the Vendor's acceptance of this purchase order.

Invoices:

Two copies of the invoice must be mailed to the City of Torrance Finance Department not later than the day after shipment is made. Individual invoices must be issued for each shipment against each purchase order. Invoices must contain the purchase order number, description of Goods, unit price, quantities billed and extended totals. Payment will be made by the CITY in accordance with the terms specified on the first page of this Purchase Order.

To expedite payment, the BPO number must appear on all invoices, shipping documents and packages.

Payment(s) will be made upon verification and acceptance by the requesting department/division of items received or services performed and receipt of correct billing(s).

Packing and Shipping:

Deliveries must be made as specified without charge for boxing, crating, or storage unless otherwise specified, and Goods must be suitably packed to secure lowest transportation costs, and in accordance with the requirements of common carriers, and in a manner to assure against damage from weather or transportation. The CITY's order numbers and symbols must be plainly marked on all invoices, packages, and shipping orders. Packing lists specifying the quantity, description and purchase order number must accompany each box or package shipment. The CITY's count or weight will be final and conclusive on shipments not accompanied by packing lists. Shipments for two or more destinations when so directed by the CITY will be shipped in separate boxes or containers for each destination, at no charge.

Acceptance of Purchase Agreement:

This purchase order constitutes the CITY's offer to the Vendor and becomes a binding contract upon acceptance by the Vendor by commencement of performance. Any terms or conditions (including price and delivery dates) proposed by the Vendor in accepting the CITY's offer, which are inconsistent with or in addition to the terms and conditions set forth in this purchase order, will be void and of no effect unless and to the extent expressly accepted by the CITY in writing.

Taxes:

The Vendor must separately state on all invoices any taxes imposed by the federal or state government applicable to furnishing of the Goods: provided, however where a tax exemption is available, the tax must be subtracted from the total price and identified. Municipalities are exempt from federal excise and transportation taxes. Total prices quoted are to exclude federal taxes. Exemption certificates will be furnished upon request. Unless otherwise indicated, prices quoted will be considered to exclude state and city sales or use tax, which is payable to the CITY.

Prices:

The Vendor represents that prices quoted to or paid by the CITY will not exceed current prices charged to any other customer or the Vendor for items that are the same or substantially similar to the Goods, taking into account the quality under consideration, and the Vendor will forthwith refund any amounts paid by the CITY in excess of the price.

Cash Discounts:

The date used as the basis for cash discounts calculation is the date the Goods are received or the date an acceptable invoice is received, whichever is later.

Warranty:

The Vendor warrants that all Goods will conform to applicable specifications, drawings, descriptions, and samples, and will be merchantable, of good workmanship in material, and free from defect. Unless manufactured pursuant to detailed design furnished by the CITY, the Vendor assumes design responsibility and warrants the Goods to be free from design defect and suitable for the purposes intended by the CITY. The Vendor's warranties, together with its service guarantees, must run to the CITY and its customers or users of the Goods and must not be deemed exclusive. The CITY's inspection, approval, acceptance, use of, or payment for all or any part of the Goods must in no way effect its warranty rights whether or not a breach of warranty had become evident at the time.

Changes:

The CITY has the right by written notice to change the quantity or specifications of the Goods ordered and the terms of, shipment or packaging of Goods. Upon receipt of any notice, the Vendor will proceed promptly to make the changes in accordance with the terms of the notice. If any change causes an increase or decrease in the cost or performance or in the time required for performance, an equitable adjustment must be negotiated promptly and the contract modified in writing accordingly. The Vendor must deliver to the CITY as promptly as possible, and in any event within 30 days after receipt of change notice, a statement showing the effect of any change in the delivery dates and prices; the statement must be supplemented within 30 days by detailed specification of the amount of the price adjustment and supporting cost figures. The Vendor's failure to submit the statements within the time limits stated will constitute its consent to perform the change without increase in price, without claim for material rendered obsolete and without change in delivery schedule.

Business License:

Prior to the award of a Purchase Order, you are required to have a City of Torrance Business License if your company is located in the City of Torrance; will physically be working in the City of Torrance; or will be using your own vehicles to deliver to the City of Torrance. For additional information and licensing requirements, please contact the City of Torrance Business License Office at (310) 618-5923.

Indemnity:

The Vendor assumes all responsibility for, and agrees to undertake, to protect, indemnify and hold the CITY, the City Council, each of its members, present and future and its officers, employees, and agents, harmless from any and all liabilities, losses, claims, suits, judgments and causes of action for damage, to property and injuries to persons, including death, and from any cost and expense, including recall expenses and attorneys fees, arising out of or related to any of the Goods resulting from the Vendors breach of the terms of the Purchase Order (including the warranties), the Vendor's negligence, or allegations that the Goods are defective in manufacture or design.

Conflict of Interest:

No officer or employee of the CITY may have any financial interest, direct or indirect, in this Purchase Order, nor may any officer or employee participate in any decision relating to the Purchase Order that effects the officer or employee's financial interest or the financial interest of any corporation,

partnership or association in which the officer or employee is, directly or indirectly interested, in violation of any law, rule or regulation.

No person may offer, give, or agree to give any officer or employee or former officer or employee, nor may any officer or employee solicit, demand, accept, or agree to accept from another person, a gratuity or an offer of employment in connection with any decision, approval, disapproval, recommendation, preparation or any part of a program requirement or a purchase request, influencing the content of any specification or procurement standard, rendering of advice, investigation, auditing, or in any other advisory capacity in any way pertaining to any program requirement, contract or subcontract, or to any solicitation or proposal.

Integration; Amendment:

This Purchase Order represents the entire understanding of the CITY and the Vendor as to those matters contained in it. No prior oral or written understanding will be of any force or effect with respect to the terms of this Purchase Order. The Purchase Order may not be modified or altered except in writing signed by both parties.

Interpretation:

The terms of this Purchase Order should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Purchase Order or any other rule of construction that might otherwise apply.

Severability:

If any part of this Purchase Order is found to be in conflict with applicable laws, that part will be inoperative, null and void insofar as it is in conflict with any applicable laws, but the remainder of the Purchase Order will remain in full force and effect.

Governing Law; Jurisdiction:

This Purchase Order will be administered and interpreted under the laws of the State of California. The parties consent to the jurisdiction of the state and federal courts located in Los Angeles County, California for the resolution of all disputes arising under this Purchase Order, and the parties agree that jurisdiction and venue for proceedings will lie exclusively with those courts. Service of process in any such proceeding (including service of process for the institution of any such proceeding) may be made by certified mail, return receipt requested, directed to the respective party.

Attorney's Fees:

In any dispute, litigation, arbitration, or other proceeding where one party either seeks to enforce its rights under this Purchase Order (whether in contract, tort or both) or seeks a declaration of any rights or obligations under this Purchase Order, the prevailing party will be awarded reasonable attorney's fees, together with any costs and expenses, to resolve the dispute and to enforce any judgment.

Bid No. B2012-14

Bid to Furnish Radio Equipment for Torrance Transit

SECTION II FEDERAL TRANSIT ADMINISTRATION (FTA) REQUIREMENTS

Buy America - The contractor agrees to comply with 49 U.S.C. 5323(j) and 49 C.F.R. Part 661, which provide that Federal funds may not be obligated unless steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 C.F.R. 661.7, and include final assembly in the United States for 15 passenger vans and 15 passenger wagons produced by Chrysler Corporation, and microcomputer equipment and software. Separate requirements for rolling stock are set out at 49 U.S.C. 5323(j)(2)(C) and 49 C.F.R. 661.11. Rolling stock must be assembled in the United States and have a 60 percent domestic content.

A bidder or offeror must submit to the FTA recipient the appropriate Buy America certification (See Attachment 2) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive. This requirement does not apply to lower tier subcontractors.

Energy Conservation - The contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

Clean Water - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. 1251 *et seq.* The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

Lobbying: - Clause and specific language therein are mandated by 49 CFR Part 19, Appendix A.

Modifications have been made to the Clause pursuant to Section 10 of the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, *et seq.*]

Lobbying Certification and Disclosure of Lobbying Activities for third party contractors are mandated by 31 U.S.C. 1352(b)(5), as amended by Section 10 of the Lobbying Disclosure Act of 1995, and DOT implementing regulation, "New Restrictions on Lobbying," at 49 CFR § 20.110(d)

Language in Lobbying Certification is mandated by 49 CFR Part 19, Appendix A, Section 7, which provides that contractors file the certification required by 49 CFR Part 20, Appendix A.

Modifications have been made to the Lobbying Certification pursuant to Section 10 of the Lobbying Disclosure Act of 1995.

Use of "Disclosure of Lobbying Activities," Standard Form-LLL set forth in Appendix B of 49 CFR Part 20, as amended by "Government wide Guidance For New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96) is mandated by 49 CFR Part 20, Appendix A.

Byrd Anti-Lobbying Amendment, 31 U.S.C. 1352, as amended by the Lobbying Disclosure Act of 1995, P.L. 104-65 [to be codified at 2 U.S.C. § 1601, et seq.] –

Contractors who apply or bid for an award of \$100,000 or more shall file the certification required by 49 CFR part 20, "New Restrictions on Lobbying." (See Attachment 3) Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier shall also disclose the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. 1352. Such disclosures are forwarded from tier to tier up to the recipient.

Access to Records: - The following access to records requirements apply to this Contract:

1. Where the Purchaser is not a State but a local government and is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C.F.R. 18.36(i), the Contractor agrees to provide the Purchaser, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C.F.R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.
2. Where any Purchaser which is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 U.S.C. 5325(a) enters into a contract for a capital project or improvement (defined at 49 U.S.C. 5302(a)1) through other than competitive bidding, the Contractor shall make available records related to the contract to the Purchaser, the Secretary of Transportation and the Comptroller General or any authorized officer or employee of any of them for the purposes of conducting an audit and inspection.
3. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
4. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the Purchaser, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).
5. FTA does not require the inclusion of these requirements in subcontracts.

Clean Air - (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. §§ 7401 et seq. The Contractor agrees to report each violation to the Purchaser and understands and agrees that the Purchaser will, in turn, report each violation as required to assure notification to FTA and the appropriate EPA Regional Office.

(2) The Contractor also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

Recovered Materials - The contractor agrees to comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. 6962), including but not limited to the regulatory provisions of 40 CFR Part 247, and Executive Order 12873, as they apply to the procurement of the items designated in Subpart B of 40 CFR Part 247.

Davis-Bacon and Copeland Anti-Kickback Acts

(1) **Minimum wages** - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

(ii)(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

(4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(v)(A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days

of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(2) **Withholding** - The City of Torrance shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, the City of Torrance may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

(3) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii)(A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the City of Torrance for transmission to the Federal Transit Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be

purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal Transit Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and trainees - (i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work

actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

(5) **Compliance with Copeland Act requirements** - The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

(6) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) **Contract termination: debarment** - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) **Compliance with Davis-Bacon and Related Act requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) **Disputes concerning labor standards** - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) **Certification of eligibility** - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

Contract Work Hours and Safety Standards

(1) **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) **Withholding for unpaid wages and liquidated damages** - The City of shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the

clause set forth in paragraph (2) of this section.

(4) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this section.

Suspension and Debarment: - This contract is a covered transaction for purposes of 49 CFR Part 29. As such, the contractor is required to verify that none of the contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.

The contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into. By signing and submitting its bid or proposal, the bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by The City of Torrance. If it is later determined that the bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to The City of Torrance the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The bidder or proposer agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the period of any contract that may arise from this offer. The bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Contracts Involving Federal Privacy Act Requirements - The following requirements apply to the Contractor and its employees that administer any system of records on behalf of the Federal Government under any contract:

(1) The Contractor agrees to comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974,

5 U.S.C. § 552a. Among other things, the Contractor agrees to obtain the express consent of the Federal Government before the Contractor or its employees operate a system of records on behalf of the Federal Government. The Contractor understands that the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying contract.

(2) The Contractor also agrees to include these requirements in each subcontract to administer any system of records on behalf of the Federal Government financed in whole or in part with Federal assistance provided by FTA.

Civil Rights - The following requirements apply to the underlying contract:

(1) Nondiscrimination - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the

Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

(2) Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying contract:

(a) Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(b) Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(c) Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

(3) The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

Disputes - Disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in writing by the authorized representative of (Recipient)'s [title of employee]. This decision shall be final and conclusive unless within [ten (10)] days from the date of receipt of its copy, the Contractor mails or otherwise furnishes a written appeal to the [title of employee]. In connection with any such appeal, the Contractor shall be afforded an opportunity to be heard and to offer evidence in support of its position. The decision of the [title of employee] shall be binding upon the Contractor and the Contractor shall abide by the decision.

Performance During Dispute - Unless otherwise directed by (Recipient), Contractor shall continue performance under this Contract while matters in dispute are being resolved.

Claims for Damages - Should either party to the Contract suffer injury or damage to person or property because of any act or omission of the party or of any of his employees, agents or others for whose acts he is legally liable, a claim for damages therefor shall be made in writing to such other party within a reasonable time after the first observance of such injury or damage.

Remedies - Unless this contract provides otherwise, all claims, counterclaims, disputes and other matters in question between the (Recipient) and the Contractor arising out of or relating to this agreement or its breach will be decided by arbitration if the parties mutually agree, or in a court of competent jurisdiction within the State in which the (Recipient) is located.

Rights and Remedies - The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law. No action or failure to act by the (Recipient), (Architect) or Contractor shall constitute a waiver of any right or duty afforded any of them under the Contract, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

Disadvantaged Business Enterprises

This contract is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, *Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs*. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The agency's overall goal for DBE participation is 2%. A separate contract goal of 2% DBE participation has been established for this procurement.

The contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the City deems appropriate. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).

Bidders must present the information required above as a matter of responsiveness with initial proposals prior to contract award] (see 49 CFR 26.53(3)).

The successful bidder/offeror will be required to report its DBE participation obtained through race-neutral means throughout the period of performance.

The contractor is required to pay its subcontractors performing work related to this contract for satisfactory performance of that work no later than 30 days after the contractor's receipt of payment for that work from the City of Torrance. In addition, the contractor may not hold retainage from its subcontractors and is required to return any retainage payments to those subcontractors within 30 days after the subcontractor's work related to this contract is satisfactorily completed. Contractor is required to return any retainage payments to those subcontractors within 30 days after incremental acceptance of the subcontractor's work by the City of Torrance and contractor's receipt of the partial retainage payment related to the subcontractor's work.

The contractor must promptly notify the City of Torrance, whenever a DBE subcontractor performing work related to this contract is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of the City of Torrance.

The contractor agrees to participate in grantee's or recipients drug and alcohol program established in compliance with 49 CFR 653 and 654.

Bid No. B2012-14	Bid to Furnish Radio Equipment for Torrance Transit
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SECTION III SPECIFICATIONS

Scope of Bid: Furnish Radio Equipment as indicated in the product specification.

Bidders are to bid on radio equipment where all accessories are manufactured by the same company and labeled with the same brand as one another. Bidders are to include a product specification sheet for each product bid.

Upon request, bidder must supply a test radio to the City to ensure compatibility with the City's communications system. Test radio must be the same make, brand and model as bid. Bidders are to include a product specification sheet for each product bid.

Product Specification:

Bid Item #	Quantity	Description
1	75	800 MHz Dash Mounted Mobile Radios
2	75	External Speakers
3	75	External Emergency Buttons
4	51	Microphone Handset with Hang up Box
5	24	Palm Style Microphones

- Frequency range must include at a minimum 806 – 869 MHz
- Radio RF output power can be no less than 35 Watts
- Radio must be analog/conventional compliant and capable of upgrading to P25 Digital
- Radios must be configured as a Dash Mounted unit.
- Radio must include a microphone handset with a hang up box to allow private conversation. When the handset is off-hook it must mute the external speaker.
- Radio must include an external speaker capable of a minimum of 7.5 watts.
- Radio control head must have display for channel information
- Radio control head must have navigation buttons to scroll through feature options
- Radio must have the ability to scan other channels within the radio. This scan feature must have a one touch button to activate this feature.
- Radio must have one touch button to allow activating a call feature; the call feature is used to send the MDC 1200 signal to a selected vehicle.
- Radio must have all mounting hardware for dash mounted installation.
- Radio must be capable of sending an MDC 1200 signaling Emergency to the dispatch console, without having any tones audible within the vehicle.
- Radio must support an external connection to activate an MDC 1200 signaling emergency.
- Radio must have emergency button on front face of control head.
- Radio must be capable of MDC 1200 signaling to allow selectively calling one vehicle without the entire fleet hearing the conversation.
- Radio must be capable of decoding an MDC 1200 signal.
- Radio must have a minimum capability of holding 50 programmed channels
- Radio must be capable of being programmed with a standard PC using Window version XP or higher.

Bid No. B2012-14	Bid to Furnish Radio Equipment for Torrance Transit
SECTION III BID PROPOSAL	

FAILURE TO COMPLETE ALL ITEMS IN THIS SECTION MAY INVALIDATE BID.

In accordance with your "Invitation to Bid", the following bid proposal is submitted to the City of Torrance.

Bid Proposal Submitted By:

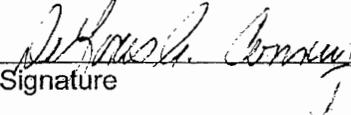
Advanced Electronics, Inc.
Name of Company

2601 Manhattan Beach Blvd.
Address

Redondo Beach, CA 90278
City/State/Zip Code

310-725-0410 310-643-8167 (fax)
Telephone Number/Fax Number

DeLores Conrey, Vice President of Sales and Marketing
Printed Name/Title


Signature

6-12-12
Date

Form of Business Organization:

Please indicate the following (check one);

Corporation Partnership Sole Proprietorship Other: _____

Business History:

How long have you been in business under your current name and form of business? 61 years.

If less than three (3) years and your company was in business under a different name, what was that name?

Vendor Name: Advanced Electronics, Inc.

Contact for Additional Information:

Please provide the name of the individual at your company to contact for any additional information

Dee Conrey
Name

Vice President of Sales and Marketing
Title

310-725-0410 x216 310-643-8167 (fax)
Telephone Number/Fax Number

Addenda Received:

Please indicate addenda information you have received regarding this bid:

Addendum No. <u> 1 </u>	Date Received: <u> 6-7-2012 </u>
Addendum No. <u> </u>	Date Received: <u> </u>
Addendum No. <u> </u>	Date Received: <u> </u>
Addendum No. <u> </u>	Date Received: <u> </u>

 1 No Addenda received regarding this bid.

Payment Terms: The City of Torrance Payment term is Net 30. The City does not make pre-payments, or pay upon receipt.

Do you offer any discounted invoice terms? Net 30

Delivery Deadline:

The City intends to purchase these products using Federal Transit Administration (FTA) funding source CA-90-X887, and as such, the City must have delivery and acceptance of products ordered, as well as invoices paid in time to submit a request for reimbursement no later than September 30, 2012

What is the lead-time for delivery from receipt of a purchase order? 20 Calendar days

Vendor Name: Advanced Electronics, Inc.

References:

Please supply the names of companies/agencies for which you recently supplied comparable goods as requested in this bid.

Name of Company/Agency Address Person to contact/Telephone No.

Name of Company/Agency Address Person to contact/Telephone No.

Name of Company/Agency Address Person to contact/Telephone No.

Contract Extension to Other Cities/Agencies:

Please state, if requested by the City, if your company would agree to extend the same price, terms and conditions to other Cities/Agencies.

Yes, we would agree to extend the same price, terms and conditions.

No, we would not agree to extend the same price, terms and conditions.

Maintenance/Warranty Service Information:

How many miles is your company's service department located from the delivery address? 6 miles.

What is the address of your company's service department?

2601 Manhattan Beach Blvd. Redondo Beach 90278
Street Address City Zip Code

What is the standard warranty time period for the radio equipment? One (1) year from shipment

When does the standard warranty go into effect?

- At the time of acceptance by the City of Torrance
- When radios are operational and in service by Torrance Transit.
- Other: please explain:

Do you offer an extended warranty beyond the standard warranty? Yes No

If yes, what is the time period of the extended warranty? 2 year or 3 year

What is the additional cost of the extended warranty? \$121.00 or \$182.00

Specification Acknowledgement and Price Proposal:Vendor Name: Advanced Electronics, Inc.**Bid Submittal Requirement and Acknowledgement**

Bidders are required to place a check mark in Column A indicating that your bid is as per the specifications of this Notice Inviting Bids.

Bidders are required to place a check mark in Column B indicating that your bid deviates from the specifications of this Notice Inviting Bids. If you are bidding anything other than what is specified, you must explain in detail how your bid differs by attaching additional pages to your bid submittal and indicating the page number in Column C.

You may attach additional sheets with page numbers indicated on each additional page to your bid submittal describing in detail what it is that you are bidding. You must indicate the page number reference for the additional sheets in Column C.

Description	Column A	Column B	Column C
Item/Service	Place a check mark in this column indicating that your bid is as per the specifications in this Notice Inviting Bids	Place a mark in this column if you are bidding something different than what is specified in this Notice Inviting Bids	You may attach additional sheets to your bid submittal describing in detail the service you are bidding. Please reference the page number of your attachment in the space below.
800 MHz Dash Mounted Mobile Radios	X		
External Speakers	X		
External Emergency Buttons	X		
Microphone Handset with Hang up Box	X		
Palm Style Microphones	X		
Federal Transit Administration (FTA) Requirements	X		

Continued on Next Page.....

Vendor Name: Advanced Electronics, Inc.

Bid Item #	Qty	Description	You Must Indicate Brand and Model and Part Number Bid	Unit Price	Extended Price
1	75	800 MHz Dash Mounted Mobile Radios	Brand: <u>Motorola</u> Model: <u>APX6500 7/800</u> Part # <u>M25URS9PW1N</u>	\$ 2,814.30	\$ 211,072.50
2	75	External Speakers	Brand: <u>Motorola</u> Model: <u>APX6500 7/800</u> Part # <u>B18CL</u>	\$ 47.09	\$ 3,531.75
3	75	External Emergency Buttons	Brand: <u>Motorola</u> Model: <u>APX6500 7/800</u> Part # <u>W688AR</u>	\$ 43.95	\$ 3,296.25
4	51	Microphone Handset with Hang up Box	Brand: <u>Motorola</u> Model: <u>APX6500 7/800</u> Part # <u>HLN1457A</u>	\$ 156.96	\$ 8,004.96
5	24	Palm Style Microphones	Brand: <u>Motorola</u> Model: <u>APX6500 7/800</u> Part # <u>HMN1089B</u>	\$ 37.80	\$ 907.20
Sub Total				\$ 226,812.66	
Sales Tax (8.75%)				\$ 19,846.11	
Total				\$ 246,658.77	

As required by this bid, we have submitted one (1) original and two (2) copies of this bid submittal to the City of Torrance	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
As required by this bid, we have included a product specification sheet for each product bid.	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No

ATTACHMENT 1

STATE OF CALIFORNIA

BIDDER'S AFFIDAVIT

COUNTY OF LOS ANGELES

DeLores Conrey being first duly sworn, deposes and says:

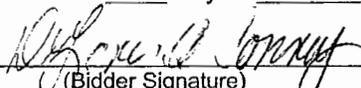
1. That he/she is the VP of Sales & Marketing of Advanced Electronics, Inc.
 (Title of Office) (Name of Company)

hereinafter called "Bidder", who has submitted to the City of Torrance a bid for

Bid to Furnish Radio Equipment for Torrance Transit
 (Title of BID)

2. That the bid is genuine; that the same is not sham; that all statements of fact in the bid are true;
3. That the bid was not made in the interest or behalf of any person, partnership, company, association, organization or corporation not named or disclosed;
4. That the Bidder did not, directly or indirectly, induce solicit or agree with anyone else to submit a false or sham bid, to refrain from proposing, or to withdraw his bid, to raise or fix the bid price of the Bidder or of anyone else, or to raise or fix any overhead, profit or cost element of the Bidder's price or the price of anyone else; and did not attempt to induce action prejudicial to the interest of the City of Torrance, or of any other Bidder, or anyone else interested in the proposed purchase order;
5. That the Bidder has not in any other manner sought by collusion to secure for itself an advantage over any other Bidder or to induce action prejudicial to the interests of the City of Torrance, or of any other Bidder or of anyone else interested in the proposed purchase order;
6. That the Bidder has not accepted any bid from any subpurchase order or materialman through any bid depository, the bylaws, rules or regulations of which prohibit or prevent the Bidder from considering any bid from any subpurchase order or materialman, which is not processed through that bid depository, or which prevent any subpurchase order or materialman from proposing to any purchase order or who does not use the facilities of or accept bids from or through such bid depository;
7. That the Bidder did not, directly or indirectly, submit the Bidder's bid price or any breakdown thereof, or the contents thereof, or divulge information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, or to any individual or group of individuals, except to the City of Torrance, or to any person or persons who have a partnership or other financial interest with said Bidder in its business.
8. That the Bidder has not been debarred from participation in any state, federal or public works project.

Dated this 12th day of June, 2012.


 (Bidder Signature)
Vice President of Sales & Marketing
 (Title)

ATTACHMENT 2

Certification requirement for procurement of steel, iron, or manufactured products.

You must indicate by filling in the forms below that you are either compliant or non-compliant with the requirements of the applicable regulations.

Yes we comply and have filled out the appropriate form below.

No, we do not comply and have filled out the appropriate form below.

Certificate of Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 U.S.C. 5323(j)(1) and the applicable regulations in 49 C.F.R. Part 661.5.

Date 6-12-12

Signature 

Company Name Advanced Electronics, Inc.

Title Vice President of Sales and Marketing

Certificate of Non-Compliance with 49 U.S.C. 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 U.S.C. 5323(j)(1) and 49 C.F.R. 661.5, but it may qualify for an exception pursuant to 49 U.S.C. 5323(j)(2)(A), 5323(j)(2)(B), or 5323(j)(2)(D), and 49 C.F.R. 661.7.

Date _____

Signature _____

Company Name _____

Title _____

ATTACHMENT 3

APPENDIX A, 49 CFR PART 20--CERTIFICATION REGARDING LOBBYING - Certification for Contracts, Grants, Loans, and Cooperative Agreements (*To be submitted with each bid or offer exceeding \$100,000*)

The undersigned [Contractor] certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for making lobbying contacts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form--LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions [as amended by "Government wide Guidance for New Restrictions on Lobbying," 61 Fed. Reg. 1413 (1/19/96). Note: Language in paragraph (2) herein has been modified in accordance with Section 10 of the Lobbying Disclosure Act of 1995 (P.L. 104-65, to be codified at 2 U.S.C. 1601, *et seq.*)]

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

[Note: Pursuant to 31 U.S.C. § 1352(c)(1)-(2)(A), any person who makes a prohibited expenditure or fails to file or amend a required certification or disclosure form shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such expenditure or failure.]

The Contractor, Advanced Electronics, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. A 3801, *et seq.*, apply to this certification and disclosure, if any.

DeLores Conrey Signature of Contractor's Authorized Official

DeLores Conrey Name of Contractor's Authorized Official

Vice President of Sales and Marketing Title of Contractor's Authorized Official

_____ Date

SPECIFICATION SHEET



APX™ 6500

PROJECT 25 MOBILE RADIO

We've put exceptional flexibility into an advanced mission critical mobile radio that's easy to operate and intuitive to use. The APX 6500 P25 mobile allows users to choose from 4 control heads, mid and high power models and multiple installation configurations in an easy to install design. Innovative safety features such as GPS location tracking, intelligent lighting and one-touch controls help to keep first responders safer than ever before.

Focus on the task not the technology, with the hardworking mission critical mobile that turns mission critical into mission complete.

FLEXIBLE PLATFORM

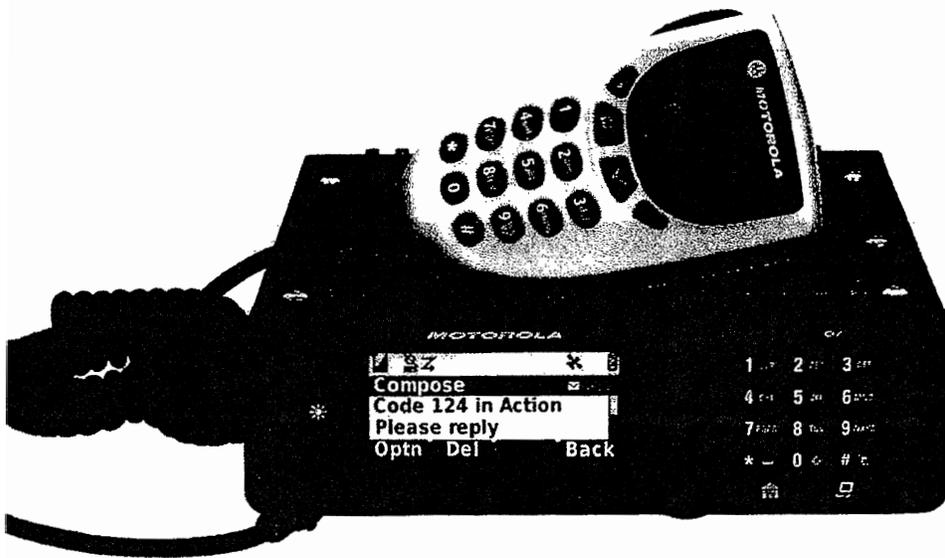
- Interchangeable control heads that best support your operational needs - 02, 03, 05, 07
- Two transceiver options - high-power and mid-power
- Dual control head support offered on the 02, 05 and 07 control heads

EASY TO INSTALL AND EFFORTLESS TO USE

- Mid-power model fits into any existing XTL footprint, so you can reuse mounting holes and cables
- High-power model trunnion design lets you remove the radio without removing the cables
- 12 character RF ID label helps you track information without uninstalling your radio

CUTTING-EDGE TECHNOLOGY AND ADVANCED FEATURES

- Project 25 Phase 2 technology provides twice the voice capacity
- Integrated GPS lets you locate and track an individual or vehicle
- Advanced features like intelligent lighting, radio profiles and text messaging improve communication and coordination





APX™ 6500 SPECIFICATIONS

FEATURES AND BENEFITS:

Available in 700/800 MHz, VHF, UHF R1 and UHF R2 bands
Channels: 870*

Trunking Standards supported:

- Clear or digital encrypted Trunked Operation
- Capable of SmartZone®, SmartZone Omnilink, SmartNet®

Analog MDC-1200 and Digital APCD P25 Conventional System

Configurations

Narrow and wide bandwidth digital receiver
(6.25kHz/12.5kHz/25kHz/30 kHz)

Embedded digital signaling (ASTRO and ASTRO 25)

Integrated GPS capable

Integrated Encryption Hardware

Intelligent lighting

Radio profiles

Unified Call List

Meets applicable MIL-STD 810C, D, E, F and G

Ships standard IP54

Utilizes Windows XP, Vista and Windows 7
Customer Programming Software (CPS)

- Supports USB Communications
 - Built in FLASHport™ support
- Re-use of most XTL™ accessories, plus new IMPRES accessories

OPTIONAL FEATURES:

Enhanced Encryption Software Options

Programming over Project 25 (POP25)

Text Messaging

Over the Air Rekeying (OTAR)

12 character RF ID asset tracking

Tactical OTAR

*Enhancement package available

TRANSMITTER - TYPICAL PERFORMANCE SPECIFICATIONS

	700 MHz		800 MHz		VHF		UHF Range 1		UHF Range 2	
Frequency Range/Bandsplits	764-776 MHz 794-806 MHz		806-824 MHz 851-870 MHz		136-174 MHz		380-470 MHz		450-520 MHz	
Channel Spacing	25/12.5 kHz		25/12.5 kHz		30/25/12.5 kHz		25/12.5 kHz		25/12.5 kHz	
Maximum Frequency Separation	Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit		Full Bandsplit	
Rated RF Output Power Adj ¹	10-30 Watts		10-35 Watts		10-50 Watts or 25-100 Watts		10-40 Watts or 25-100 Watts		10-45 Watts (450-485 MHz) 10-40 Watts (485-512 MHz) 10-25 Watts (512-520 MHz)	
Frequency Stability ² (-30°C to +60°C; +25°C Ref.)	±0.00015 %		±0.00015 %		±0.0002 %		±0.0002 %		±0.0002 %	
Modulation Limiting ³	±5 kHz / ±2.5 kHz		±5 kHz/±4 kHz (NPSPEC) /±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz		±5 kHz / ±2.5 kHz	
Modulation Fidelity (C4FM) 12.5kHz Digital Channel	±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz		±2.8 kHz	
Emissions ⁴	Conducted+ -75/-85 dBc	Radiated+ -20/-40 dBm	Conducted -75 dBc	Radiated -20 dBm	Conducted -85 dBc	Radiated -20 dBm	Conducted -85 dBc	Radiated -20 dBm	Conducted -85 dBc	Radiated -20 dBm
Audio Response ⁵	+1, -3 dB (EIA)		+1, -3 dB (EIA)		+1, -3 dB (EIA)		+1, -3 dB (EIA)		+1, -3 dB (EIA)	
FM Hum & Noise	25 kHz	-50 dB	-50 dB	-50 dB	-53 dB	-53 dB	-53 dB	-53 dB	-53 dB	-53 dB
	12.5 kHz	-48 dB	-48 dB	-48 dB	-52 dB	-52 dB	-50 dB	-50 dB	-50 dB	-50 dB
Audio Distortion ⁶	2 %		2 %		2 %		2 %		2 %	

DIMENSIONS

	Inches	Millimeters	
Mid Power Radio Transceiver	2 x 7 x 8.6	50.8 x 177.8 x 218.4	
O5 Control Head	2 x 7 x 2.5	50.8 x 180.3 x 63.5	
O2 Control Head	2.7 x 8 x 2.1	68.4 x 206 x 52.83	
O7 Control Head	2 x 7 x 1.5	50.8 x 178 x 40	
Mid Power Radio Transceiver and O5 Control Head—Dash Mount	2 x 7 x 9.6	50.8 x 180.3 x 243.8	
Mid Power Radio Transceiver and O2 Control Head - Dash Mount	2.7 x 8 x 10.5	68.4 x 206 x 268	
Mid Power Radio Transceiver and O7 Control Head - Dash Mount	2 x 7 x 10.3	50.8 x 178 x 262	
Mid Power Radio Transceiver and Remote Mount	2.0 x 7 x 9.6	50.8 x 180.3 x 243.8	
High Power Radio Transceiver	2.9 x 11.5 x 8.8	74 x 293 x 223	
High Power Radio Transceiver with Handle	3.4 x 11.5 x 8.8	87 x 293 x 223	
Mid Power Radio Transceiver and O5 Control Head Weight	6.6 lbs	3.0 kg	
Mid Power Radio Transceiver and O2 Control Head Weight	7.12 lbs	3.23 kg	
Mid Power Radio Transceiver and O7 Control Head Weight	6.74 lbs	3.06 kg	
High Power Radio Transceiver Weight	With Trunnion Without Trunnion	14.2 lbs 12 lbs	6.4 kg 5.4 kg

APX 6500 CONTROL HEAD PORTFOLIO



O2 RUGGED CONTROL HEAD

- Large color display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Built in 7.5 watt speaker
- Multiple control head configuration (up to 2)
- Multifunction volume/channel knob
- Night/day mode button



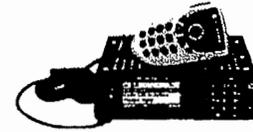
O3 HAND HELD CONTROL HEAD

- Large color display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Integrated full size DTMF keypad
- Hand-held control head with intuitive user interface
- Two quick-access side buttons
- Display contrast selector



O5 STANDARD CONTROL HEAD

- Tri-color display with intelligent lighting
- 2 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Available with Keypad/Microphone
- Multiple control head configuration (up to 2)
- Display contrast selector



O7 ENHANCED CONTROL HEAD

- Large color display with intelligent lighting
- 3 lines of text 14 characters max / 1 line of icons / 1 line of menus
- Available with Keypad & Siren Controls or DTMF Keypad
- Multiple control head configuration (up to 2)
- Multifunction volume/channel knob
- Night/day mode button

RECEIVER – TYPICAL PERFORMANCE SPECIFICATIONS

	700 MHz	800 MHz	VHF	UHF Range 1		UHF Range 2		
Frequency Range/Bandsplits	764-776 MHz	851-870 MHz	136-174 MHz	380-470 MHz		450-520 MHz		
Channel Spacing	25/12.5 kHz	25/12.5 kHz	30/25/12.5 kHz	25/12.5 kHz		25/12.5 kHz		
Maximum Frequency Separation	Full Bandsplit	Full Bandsplit	Full Bandsplit	Full Bandsplit		Full Bandsplit		
Audio Output Power at 3% distortion*	7.5 W or 15 W ++		7.5 W or 15 W ++					
Frequency Stability* (-30°C to +60°C; +25°C Ref.)	+/-0.8 PPM	+/-0.8 PPM	+/-0.8 PPM	+/-0.8 PPM		+/-0.8 PPM		
Analog Sensitivity* 12 dB SINAD	-121 dBm	-121 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm	Pre-Amp -123 dBm	Standard -119 dBm
Digital Sensitivity 5% BER	-121.5 dBm	-121.5 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm	-123 dBm	-119 dBm
Intermodulation 25 kHz	82 dB	82 dB	84 dB	86 dB	82 dB	86 dB	82 dB	86 dB
12.5 kHz	82 dB	82 dB	85 dB	86 dB	83 dB	85 dB	83 dB	85 dB
Spurious Rejection	91 dB	91 dB	95 dB		93 dB		93 dB	
Audio Distortion at rated*	1.20%	1.20%	1.20%		1.20%		1.20%	
FM Hum & Noise 25 kHz	59 dB	59 dB	59 dB		55 dB		57 dB	
12.5 kHz	50 dB	50 dB	50 dB		50 dB		50 dB	
Selectivity* 25 kHz	85 dB	85 dB	85 dB		85 dB		85 dB	
12.5 kHz	75 dB	75 dB	75 dB		75 dB		75 dB	
30 kHz	—	—	90 dB		—		—	

SIGNALING (ASTRO MODE)

Signaling Rate	9.6 kbps
Digital ID Capacity	10,000,000 Conventional / 48,000 Trunking
Digital Network Access Codes	4,096 network site addresses
ASTRO® Digital User Group Addresses	4,096 network site addresses
Project 25 – CAI Digital User Group Addresses	65,000 Conventional / 4,094 Trunking
Error Correction Techniques	Golay, BCH, Reed-Solomon codes
Data Access Control	Slotted CSMA: Utilizes infrastructure-sourced data status bits embedded in both voice and data transmissions.

GPS SPECIFICATIONS

Channels	12
Tracking Sensitivity	-153 dBm
Accuracy**	<10 meters (95%)
Cold Start	<60 seconds (95%)
Hot Start	<10 seconds (95%)
Mode of Operation	Autonomous (Non-Assisted) GPS

POWER AND BATTERY DRAIN

Model Type	136-174 MHz, 300-470 MHz, 450-520 MHz, 764-870 MHz					
Minimum RF Power Output	10-35 Watt (764-870 MHz), 10-50 Watts or 25-100 Watts (136-174 MHz), 10-40W or 25-100 Watts (380-470 MHz), 10-45Watts (450-485 MHz), 10-40Watts (485-512 MHz), 10-25Watts (512-520 MHz)					
Operation	13.8V DC ±20% Negative Ground					
Standby at 13.8V	0.85A (764-870 MHz), 0.85A (136-174 MHz), 0.85A (380-470 MHz), 0.85A (450-520 MHz)					
Receive Current at Rated Audio at 13.8V	3.2A (764-870 MHz), 3.2A (136-174 MHz), 3.2A (380-470 MHz), 3.2A (450-520 MHz)					
Transmit Current (A) at Rated Power	136-174 MHz (10-50 Watt)	13A (50W)	8A (15W)	764-870 MHz (10-35 Watt)	12A (50W)	8A (15W)
	380-470 MHz (10-40 Watt)	11A (40W)	8A (15W)	136-174 MHz (25-110 Watt)	20A (100W)	
	380-470 MHz (10-40 Watt)	11A (45W)	8A (15W)	380-470 MHz (25-110 Watt)	24A (100W)	

APX™ 6500 SPECIFICATIONS

MOBILE MILITARY STANDARDS 810 C, D, E, F & G										
	MIL-STD 810C		MIL-STD 810D		MIL-STD 810E		MIL-STD 810F		MIL-STD 810G	
	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.	Method	Proc./Cat.
Low Pressure	500.1	I	500.2	II	500.3	II	500.4	II	500.5	II
High Temperature	501.1	I, II	501.2	I/A1, II/A1	501.3	I/A1, II/A1	501.4	I/Hot, II/Hot	501.5	I-A1, II
Low Temperature	502.1	I	502.2	I/C3, II/C1	502.3	I/C3, II/C1	502.4	I/C3, II/C1	502.5	I-C3, II
Temperature Shock	503.1	1 Proc	503.2	I/A1C3	503.3	I/A1C3	503.4	I	503.5	I-C
Solar Radiation	505.1	II	505.2	I	505.3	I	505.4	I	505.5	I-A1
Rain	506.1	I, II	506.2	I, II	506.3	I, II	506.4	I, III	506.5	I, III
Humidity	507.1	II	507.2	II	507.3	II	507.4	1 Proc	507.5	II-Aggravated
Salt Fog	509.1	1 Proc	509.2	1 Proc	509.3	1 Proc	509.4	1 Proc	509.5	1 Proc
Blowing Dust	510.1	I	510.2	I, II	510.3	I, II	510.4	I, II	510.5	I, II
Vibration	514.1w	VIII/F, Curve-W	514.3	I/10, II/3	514.4	I/10, II/3	514.5	I/24	514.6	I-cat.24
Shock	516.2	I, III, V	516.3	I, V, VI	516.4	I, V, VI	516.5	I, V, VI	516.6	I, V, VI

ENCRYPTION

Supported Encryption Algorithms	ADP, AES, DES, DES-XL, DES-OFB, DVP-XL
Encryption Algorithm Capacity	8
Encryption Keys per Radio	Module capable of storing 1024 keys. Programmable for 64 Common Key Reference (CKR) or 16 Physical Identifier (PID)
Encryption Frame Re-sync Interval	P25 CAI 300 mSec
Encryption Keying	Key Loader
Synchronization	XL – Counter Addressing, OFB – Output Feedback
Vector Generator	National Institute of Standards and Technology(NIST) approved random number generator
Encryption Type	Digital
Key Storage	Tamper protected volatile or non-volatile memory
Key Erasure	Keyboard command and tamper detection
Standards	FIPS 140-2 Level 3 FIPS 197

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	-30°C / +60°C
Storage Temperature	-40°C / +85°C
Humidity	Per MIL-STD
ESD	IEC 801-2 KV
Water and Dust Intrusion	IP54, MIL-STD

FCC TYPE ACCEPTANCE ID

BAND	OUTPUT POWER	TRANSMITTER NUMBER
764-870 MHz	10-35 Watts	AZ492FT5858
136-174 MHz	25-100 Watts	AZ492FT3821
136-174 MHz	10-50 Watts	AZ492FT3824
380-470 MHz	10-40 Watts	AZ492FT4894
380-470 MHz	25-100 Watts	AZ492FT4897
450-520 MHz	10-45 Watts	AZ492FT4896

- * Measured in the analog mode per TIA/EIA 603 under nominal conditions
 - ** Accuracy specs are for long-term tracking (95th percentile values >5 satellites visible at a nominal -130 dBm signal strength)
 - + Specs includes performance for the non-GNSS/GNSS bands
 - ++ Output power in to 8 and 3.2 Ohm external speakers respectively
- Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements.

Motorola Solutions, Inc. 1301 E Algonquin Road, Schaumburg, Illinois 60196 U.S.A. www.motorolasolutions.com

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R3-1-2047D

