

**Greater Roanoke Transit Company has approved the following as an equal to
IFB # 10-GRTC-0602, Mobile Vehicle Lifting System.**

Explanations are given below where Maha mobile lifts differ from your specifications

BID SPECIFICATION	MAHA DESIGN
Item 1 - Warranty	Comply
Item 2 - Preparation	Comply – See Request for Clarification – Modifications - Item 1
Item 3 - Warranty	Comply
Item 4 – Columns A, B, C, D	Exceeds Specifications – Maha lifting systems are not composed of unique columns as required by your specifications. Instead, Maha columns are all identical allowing any Maha column to be interchanged with any other. Maha’s design provides far greater flexibility than designs that incorporate unique columns
Item 5 – Upgradeable	Comply
Item 6 – Minimum 69 inches	Comply <i>SEFAC literature indicates their Model S3 columns have a lift height of 67-1/4 inches, and therefore do not comply with your specifications.</i>
Item 7 – Maximum 95 inches OA height	Do Not Comply - Maha columns have an OA height of 97.6 inches. The 2.6 inches by which Maha columns exceed your specifications do not create interference and should not be a disqualifying factor. <i>SEFAC literature indicates their Model S3 columns have an OA height of 100-1/8 inches, and therefore do not comply with your specifications.</i>
Item 8 – Maximum 975 lbs. column weight	Comply
Item 9 – Standard Fork Adapters	Comply See Request for Clarification – Item 5
Item 10 – Touch screen pad	Exceeds Specifications – Maha MCL mobile lifts do not require mode selection at a master column and therefore have no need for a touch screen pad. Each Maha column has complete logic within its local control panel that allows mode selection to be made at the column(s) to be operated. When a Maha column(s) is selected for either Individual or Paired operation, all other columns within the set are made inactive. The Maha design saves time and assures that only the column(s) that are intended to be used are

	operable.
Item 11 – Lift Height Displayed on a Touch Screen Pad	<p>Exceeds Specifications – Maha MCL mobile lifts do not have screen displays or other devices that could become distractions while the lifts are in operation. The Number 1 common sense rule when operating a lift is to pay close attention to the vehicle. A screen display showing lift height is a gimmick that provides no useful information and could distract the operator’s attention at a critical moment.</p> <p>It is also of interest that a touch screen display is required by your specifications only on the master column. It would be out-of-sight and useless when operating the lifting system from any secondary column which is a capability required in Item 12 of your Technical Specifications.</p>

Item 12 – Operation by pendant	<p>Exceeds Specifications – Maha MCL mobile lifts are more convenient to use than mobile lifts as described in your specifications. Maha lifts have Up & Down push buttons at each column for convenient operation of the lifting system</p> <p>The lifts GRTC has specified do not have Up & Down push buttons on each column. The lifts can only be operated by a portable pendant. If an operator needs to control the lifts from Column D, and the pendant is plugged into Column A, he would need to fetch the pendant from A and plug it into D before he could begin.</p> <p>Removing the Up & Down push buttons from each column is an example of reducing manufacturing cost at the expense of operational efficiency and convenience.</p>
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Item 13 – Three operating speeds	<p>Exceeds Specifications – Maha mobile lifts require less aggregate lifting time than mobile lifts with three lifting speeds as described in your specifications. Maha lifts can raise and lower GRTC buses at 39 inches per minute. The lifts per your specifications can raise and lower GRTC buses at only 27 inches per minute due to their weight. Since buses are well over 90% of GRTC’s lifting requirements, Maha lifts would save time.</p> <p>The other two lifting speeds per your specifications are of little or no value. It is likely the intermediate speed is similar to Maha’s standard speed, and therefore would provide no advantage. The faster lifting speed of 67 inches per minute is defined as useable only when the lifts are empty making it useless.</p>
Item 14 - Faults	<p>Equivalent or Better – Maha mobile lifts provide error codes in the event of a fault. The error codes are defined in the O&M manual along with potential causes.</p> <p>Displaying faults in words on a touch screen pad as per your specifications is of little value since the types of faults that would be displayed are electrical in nature and correcting them normally requires reference to wiring diagrams in the O&M manual.</p>
Item 15 – Cables	Comply – See Request for Clarification – Item 1
Item 16 – Cable Connection	Comply
Item 17 – Operation	Comply
Item 18 – Single Mast	Comply
Item 19 – Certification to ANSI Standards	Comply – See Request for Clarification – Item 6
Item 20 – Motor Gearbox	Comply
Item 21 – Outrigger Legs	<p>Does Not Comply – The reason given in GRTC specifications for the need for maximum 5.5 inch high outrigger legs is invalid. The outrigger legs on GRTC’s present mobile lifts are 6-5/8 inches high and do not interfere with access under your buses. The height of Maha outrigger legs are approximately 6-1/2 inches.</p>
Item 22 – IP 55 Enclosure Rating	Comply
Item 23 – Plastic Rollers	<p>Exceed Specifications – Maha mobile lifts have steel lift carriage rollers that provide longer life and a considerably higher degree of safety than plastic rollers as defined in your specifications. Unless GRTC knows for a fact that the plastic</p>

Item 37 – Hanger Bracket	Comply
Item 38 – Automatic Detection	Comply
Item 39 – Automatic Leveling	Comply
Item 40 – Automatic Shut Down	Comply
Item 41 – Dead Man Push Buttons	Comply
Item 42 – Instant Trip	Comply
Item 43 – Nut Wear Sensor	<p>Not Required – Bronze load nuts that are used in lifts with self-locking mechanisms such as SEFAC wear out due to friction. It is useful to have a nut wear sensor in those types of lifts to prevent the load nut from wearing to the point of failure which could result in the collapse of the lift.</p> <p>Ball nuts that are used in Maha lifts are frictionless and do not wear away as do bronze load nuts. Nut wear sensors are not applicable to ball nuts.</p> <p><i>Field examination of SEFAC S3 lifts indicates they do not have nut wear sensors and therefore do not comply with your specifications.</i></p>
Item 44 – Emergency Stop Push Buttons	Comply
Item 45 – Motor Brake	Comply
Item 46 – Redundant to Item 21 Above	
Item 47 – Overload Protection	Comply
Item 48 – Operating Power	Comply

REQUEST FOR CLARIFICATIONS and/or MODIFICATIONS

RE: IFB #10-GRTC-0602
Mobile Vehicle Lifting Systems

ITEM 1

Section 3 of your Bid - Article B (3) requires “installation” of the lifts. No detail is given as to the scope of “installation.” GRTC’s present mobile lifts have interconnecting cables that are installed overhead. The new lifts will require new interconnecting cables. Are the new cables to be installed overhead by the vendor? If the answer is yes, will that be an exception to Item 15 in your Technical Specifications that specifies 60 foot long cables? The specified length may or may not be appropriate for overhead installation. Should there be an exception for the cables that connect the two pairs of rear columns on the set of six? Typically, an eight foot long cable is used to connect the two columns in each pair.

Are there six electrical outlets available to serve the six sets of lifts? If yes, do they provide at least 50 amp / 480 volt / 3-phase / 60 Hz power? If not, is the vendor responsible to provide additional building wiring in order to install the additional outlets that are required?

ANSWER: Required Cables and brackets:

24 60ft interconnecting cables with connectors

2 40ft interconnecting cables with connectors

4 spring loaded brackets (should be able to re-use all of existing brackets in ceiling).

Installation will be requires for four (4) sets of four (4) columns and one (1) set of six (6) columns. Five (5) outlets (50 amps, 480 volts, 3 phase) are in place for the install of five (5) sets of lifts.

ITEM 2

Attachment A – Bid Form requires unit prices for “Installation & Delivery” and for “Training”.

These are inseparable items. For these items we request that unit prices be deleted and that only total prices remain on your bid form.

ANSWER: The unit price for each tabulation needs to be separate, and accordion to bid form.

ITEM 3

Section 47 – Risk of Loss is unreasonable. Once the lifts have been delivered to GRTC they are under GRTC’s control. We request this section be deleted.

ANSWER: Denied request

ITEM 4

Attachment C – Technical Specifications do not define a minimum lifting capacity. GRTC’s present mobile lifts have a rated capacity of 16,000 pounds per column. That capacity has always proven to be more than sufficient. We recommend you require a minimum capacity of 16,000 pounds capacity for the new lifts.

ANSWER: 18,000 lb weight capacity

ITEM 5

Attachment C – Technical Specifications - Item 9 states “Adapters to accommodate tire sizes down to a 13 inches rim shall be acceptable.” This statement is not clear. GRTC does not need adapters to lift their standard buses that have 22.5 inch rim size wheels. Adapters would be required to lift vehicles with 16 inch rim size wheels. Additional adapters would be required to lift vehicles with smaller 13 inch rim sizes. If adapters are required, it is likely GRTC would need them for only a limited number of sets of mobile lifts. Therefore, if adapters are required, state the rim sizes to be accommodated and the number of sets of lifts for which they are needed.

ANSWER: Two (2) sets of adapters to accommodate rim sizes from 13” to 22.5”.

ITEM 6

Attachment C- Technical Specifications- Item 19 requires compliance with ANSI, ALI/ETL-ALCTV-2008. The correct date for the standard is 2006.

ANSWER: Yes, the correct year is 2006. The role as an accredited Standards Development Organization, the Automotive Lift Institute is charged with overseeing the Standards

Development related activities of three American National Standards. The following is a list of those standards accompanied by a current summary of their development cycle status.

ANSI/ALI ALCTV-2006 - "Standard for Automotive Lifts – Safety Requirements for Construction, Testing and Validation"

This standard covers safety requirements for the construction, testing, and validation of automotive lifts of the following types: manually driven, power driven, stationary and mobile.