

**Section**  
**4**

# ROBOT TRANSPORTATION



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## 4 ROBOT TRANSPORTATION

### 4.1. OVERVIEW

This section provides information regarding crate specifications, shipping, and associated requirements, the drayage system, and the FedEx® Freight shipping donation requirements and caveats. Please make sure those persons responsible for building and shipping your team's crate(s) understand and follow the guidelines for these processes. Adherence to these processes is key to a successful season.

***Read the sections below that describe the specific, federally regulated battery packaging method and the regulations for wood packaging coming into the U.S.***

### 4.2. BATTERY PACKAGING

When shipping the 12VDC Batteries in the crate together with the robot, Federal regulations require teams to follow the instructions below. If you do not adhere to these rules, your crate may not make it to the event(s).

Each time you ship your robot, you must:

- Ship the two (2) Kit of Parts 12VDC batteries inside their original box or carton packaging. Additional batteries can be shipped or brought with you.
- Use the Styrofoam covering with protective caps to cover the battery terminals.
- Secure the boxed batteries inside the "inner battery box" section of the robot crate in an upright position. *The photograph below shows a sample of an inner battery box built to comply with regulations.* Remember to label this box...see below.



- 1) **ABSOLUTELY NO** batteries are to remain mounted (connected or disconnected) on the robot!
- 2) Use the battery labels provided in the web site Events area, "Shipping / Drayage" section. Each crate **MUST** be marked "**NON-SPILLABLE BATTERY**" in 1" or larger letters on all four facing sides.
- 3) Mark the inner battery box with the battery labels also. It too **MUST** be marked "**NON-SPILLABLE BATTERY**" in 1" or larger letters on 2 sides of the battery box.

### 4.3. CRATE INFORMATION

Build your crate so it is sturdy and falls within height and weight specifications when packed for shipment. Be sure to adhere to crate specifications. The Drayage Company determines whether a crate meets the size and weight criteria and will pass non-conforming crate information to *FIRST*.

If a crate exceeds size specifications, or the crate is poorly constructed, *FIRST* will not guarantee its security or delivery to the site. The Drayage Company will round up to the next hundredweight if a crate exceeds 400 pounds, and will charge accordingly. For specific information, refer to the *FIRST* Web site and choose your event area, then "Shipping / Drayage" <http://www.usfirst.org/community/frc/>

#### 4.3.1. **NEW\*** Crate Construction Specifications

Build your crate(s) with more than one shipment and season in mind. Remember to consider the weight of your materials. For instance, if 3/8" or 1/2" plywood is sturdy enough, why use the much heavier, costlier 3/4" product?

All Crates must:

- 1) Comply with the "Wood Materials Regulations Across U.S. Borders" section below if the crate ships into the U.S.
- 2) Loaded crate must weigh 400 pounds or less in order to avoid drayage overage charges
- 3) Be sturdily built to prevent damage to your equipment
- 4) **\*Use** 3/8" or 1/2" plywood
- 5) **\*Use** 3/8" or 1/2" Oriented Strand Board (OSB), a solid panel product of consistent quality with no laps, gaps, or voids.
- 6) **\*Medium density fiberboard (MDF) is *Not recommended*** for crate building because the material makes crate construction too heavy, and MDF can be dangerous to use if the correct safety precautions are not taken. MDF contains a substance called urea formaldehyde, which may be released from the material through cutting and sanding and cause irritation to the eyes and lungs.
- 7) **\*Don't use** particleboard because it collects moisture that adds weight and may cause the crate to fall apart. Remember, your crate may be exposed to the elements when loading and unloading trucks.
- 8) Ensure your crate construction can withstand stacking during transport
- 9) "Sit" on 2 pieces of 4" by 4" lumber, spaced at least 28" apart so it can be moved by a forklift.
- 10) Have a footprint no greater than 4' by 4' and be no taller than 5'10" (70") high. This maximum includes the 4" by 4" lumber mentioned above.

#### 4.3.2. **Crate Limit**

*FIRST* asks that each team ship only one crate, **but mandates a maximum of two crates for any team at any competition site**. This helps keep Pit entrances, aisles, and egresses clear, safe, and less crowded. This restriction also keeps team costs down.

If you ship an extra crate, it must also meet the above specifications. *Teams pay all shipping and drayage costs for the additional crate.*

#### 4.3.3. Crate Labeling

- 1) Go to the web site <http://www.usfirst.org/community/frc/content.aspx?id=430> or to the Championship Event web area:
- 2) Obtain the printable, mandatory address label for your event's drayage terminal from the "Shipping / Drayage" area.
- 3) Fill in your team number and team information on the address label; make an additional 3 copies and attach one to each side of the 4 facing sides of the crate. Repeat this for each event you will attend. This label helps the shipper and also helps the drayage company easily locate your crate at the warehouse and competition sites.
- 4) Print the battery label, make 5 additional copies, and tape one to each facing side of the crate. Remember to label 2 sides of the battery box inside as well.
- 5) Place a clear airbill sleeve on your crate and insert the shipping label.
- 6) Bring your outbound labels to the event for the next crate shipment.
- 7) Bring extra airbill sleeves in case yours get damaged during shipment

#### 4.3.4. **NEW:** Required Crate Contents

Teams must include:

- the Robot
- the Operator Console
  - See section 8 for definition of Operator Console
  - If you use a computer as part of the Console, you do not have to ship the computer, but may not continue to program your dashboard
- the two (2) Kit of Parts 12VDC batteries

Please pack per "Battery Packaging" section above.

- 1) **Non-North American teams cannot ship batteries with their crate(s).** They must make arrangements with *FIRST* to pick up a battery for competition at their initial event.)
- 2) SAFETY NOTE: Don't pack all of your safety glasses in your crate. You will need them when uncrating!

#### 4.4. ROBOTS SHIPPING ACROSS A U.S. BORDER

The sections above apply to all crates. Crates crossing a U.S. border have additional limits, and additional information is provided below.

New Federal Rules apply to the crating and pallets you will use to ship crates across U.S. Borders to FRC events. Please read the sections below.

##### 4.4.1. Wood packaging laws/restrictions

The following regulation applies to any team planning to ship its robot into the U.S. from another country. Teams that do not comply risk having their robots detained at the U.S. border by U.S. Customs and not shipping to the event on time.

The U.S. Dept. of Agriculture has adopted new international guidelines to decrease the potential for the introduction of certain plant pests that may accompany wood materials arriving from other countries. These guidelines call for wood packing materials used in the construction of crates and pallets to be either heat treated or fumigated with methyl bromide in accordance with applicable

rules. These wood materials must be marked with an approved international mark certifying that treatment. The final rule became effective in September 2005, and affects all persons using wood packaging material in connection with importing goods into the U. S.

#### **4.4.2. Exemptions**

The following exemptions apply to the above wood packing material rules:

- Processed wood packing materials that have received more than primary processing, e.g., plywood, corrugated board, fiberboard, veneer, whiskey and wine barrels, strand board, etc.
- Pieces of wood less than 6 mm/0.24 inches in any dimension
- Loose wood packing material such as shavings, excelsior, etc.
- Wood packing material originating in Canada and made in Canada (an importer's statement may be required to document the origin of the wood packing material)

#### **4.4.3. Related Web sites**

3) Refer to [http://www.cbp.gov/xp/cgov/import/commercial\\_enforcement/](http://www.cbp.gov/xp/cgov/import/commercial_enforcement/) for specific information on the recent stages of implementation. This site has:

- \* Examples of the regulatory stamps.
- \* A Questions and Answers section for clarification.

4) Contact your local FedEx office for additional information and assistance. You can also find information at: <http://fedex.com/us/promo/woodpackaging.html>

#### **4.4.4. Rules**

FIRST recommends that all international teams, or U.S. teams shipping out of the U.S. and then back into the Country, do the following:

- Use only plywood or other exempted wood materials when constructing their shipping crates and robots.
- If using raw wood materials such as 4"x4", 2"x4"s, 1"x boards, etc., obtain the materials from a lumber dealer who sells compliant wood products.
- Be sure the wood is marked with the approved international mark.
- Make sure you use properly treated and labeled wood for the 4" x 4"s under your crate used for facilitating forklift use.
- If you must use a pallet to ship your crate, make sure the pallet is either non-wood or a compliant wood pallet. Compliant pallets are available from commercial pallet distributors.

Canadian teams should obtain an appropriate importer's statement as indicated.

### **4.5. INTERNATIONAL SHIPMENTS AND CUSTOMS**

- Teams shipping to the Canadian Regional and international teams shipping into the U.S. and back should research Customs requirements weeks in advance.
- *FIRST* strongly recommends using a Customs Broker so your team knows exactly what paperwork it needs to import and export your crate.
- Comply with the Building Restrictions/Laws Regarding Wood Materials listed in above sections.

### **4.6. SHIPPING AND DRAYAGE DEFINITIONS**

**At Drayage Deadline** Latest date and time you can have your robot delivered to drayage facility.  
Note: This deadline ensures machines arrive at drayage in time for competition site delivery.

**Bill of Lading (Material Handling Form)** This is a receipt Shepard Exposition Services (SES) requires you to fill out in order to keep track of your crate(s), whether you ship FedEx or the designated carrier, Roadway. You will receive a copy to help you track your crate.

**Drayage** In our case, drayage refers to the system of accepting the delivered crate(s) into the drayage terminal, the crate storage, crate delivery to the event site, then back to the drayage terminal.

**Drayage Companies** Temporary warehousing companies. They take in, store, deliver, and document movement of event materials. In our case, the Drayage Company receives and documents team crate weight and arrival time, then stores them until delivery to the event site Pit Stations on the day prior to the event.

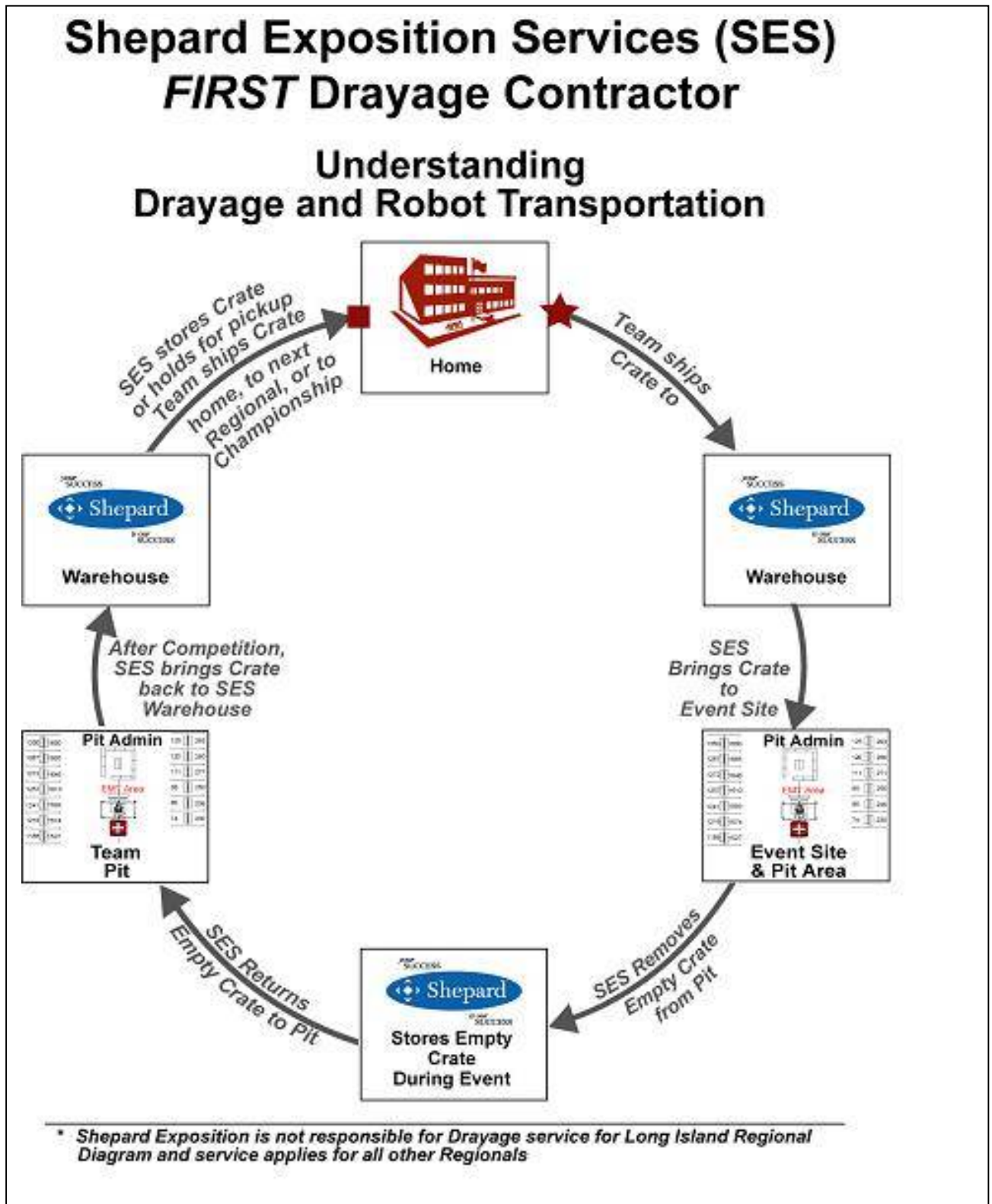
**Ship Deadline** The robot crate must leave the team's possession by delivering it or shipping it to the drayage facility. This deadline helps ensure that teams have equal robot work time.

**Shipping** In this case, the term "shipping" refers to the transportation of your crate(s):

- To the Drayage (material handling) Company
- From the Drayage facility/warehouse to the next event's Drayage facility
- Home after your last event

#### 4.7. VISUAL DEPICTION OF SHIPPING / DRAYAGE PROCESS

Please take a look at the figure below. It provides a visual of the flow of a team's crate shipment.





## 4.8. SHIPPING YOUR ROBOT

Event sites do not accept or store team robots, crates, or toolboxes. All teams must ship to a drayage warehouse facility, which stores the robots and then transports them to the event site and back to the warehouse.

If you ship two crates, both crates must adhere to specifications and deadlines. Teams are responsible for paying for ALL shipping charges at the time of shipment.

### 4.8.1. Teams have two shipping carrier options from event to event:

- 1) Refer to the FedEx® section below for specific information about free, donated shipping for ONE crate to ONE Regional and the Championship.
- 2) If you do not ship with FedEx, you must ship with the drayage carrier, Roadway, Inc. Refer to the “Roadway, Inc. Quotes” section and following sections for specifics.

### 4.8.2. Shipping to Your Initial Event

- Locate drayage information for your event(s) on the usfirst.org web site, *Event* section.
- Print, read, and save all relative sections of this manual and those relating to the FedEx shipping donation. Remember to bring the directions to your event.
- Also, read and follow directions in the “Shipping / Drayage” section for your event(s) on the *FIRST* Web site, Events area.
- Make shipping arrangements well before the ship deadline. *You may choose any carrier or drive your crate to the drayage warehouse for your initial event only.* (For subsequent events, you must use either the “house” carrier or FedEx.)
- If you decide to drive your crate(s) to the warehouse, *read the stipulations below regarding the delivery vehicle.*
- Obtain the best shipping rate to the drayage warehouse for your first event if you are not using the complimentary FedEx® ship. **NOTE:** You will need the total weight and dimensions of your crate and its contents for an accurate estimate.
- **If you don’t have a loading dock:** Be sure to tell your chosen shipper if your crate pickup area does not have a loading dock so it can send a truck with a lift gate.
- Obtain a dated Bill of Lading from your carrier. Retain all shipping documents, pro numbers, and/or airbill copies for tracking purposes and to provide the required information for the mandatory shipment verification process.

### 4.8.3. Crate Shipment Deadline and Requirement

ALL team robots/crates must leave the team's hands or be delivered to the team’s initial event’s drayage warehouse by **midnight local time February 20, 2007**. This date applies whether you ship your crate(s) or drive it to the drayage facility.

**NOTE:** Teams are responsible to work within the business hours of the shipper or drayage facility.

**Roadway hours are Monday – Friday, 8 a.m. to 4 p.m.** This includes the drayage terminal facilities.

- A. If you ship your robot, obtain written proof from your shipper that shows the date that the shipper took possession of your crate. Read below for rules about the “Mandatory Shipment Verification Process.”
- B. If you drive your robot to the drayage terminal, ask for written proof that shows the date you delivered your crate(s). Read below for rules about the “Mandatory Shipment Verification Process.”

#### 4.8.4. Delivery Stipulations for Drayage Terminal and Delivery Vehicle

If your team decides to deliver its crate(s) to your initial event's drayage warehouse, the vehicle must be tall enough for a commercial loading dock. *Drayage personnel will not unload personal vehicles.*

**YOUR DELIVERY TRUCK MUST HAVE A FORTY-EIGHT INCH (48) BED HEIGHT.**

**NO EXCEPTIONS! - You will be turned away at the warehouse if the vehicle 48" bed height requirement is not met!**

#### 4.8.5. Mandatory - Initial Crate(s) Shipment Verification Process

*FIRST* requires every team to document the shipment of its crate(s) for the initial event only. All crates must ship from event to event thereafter. Teams will disqualify themselves from competition for failure to observe and verify adherence to the rules and deadlines. *Please follow the instructions below for your chosen shipment method.*

##### 4.8.5.1. If You Use the Online FedEx Shipping Administration System

- 1) If you use the FedEx Shipping Administration System (formerly FedEx PassKey System), it is not necessary to input your tracking number into the TIMS because we will generate a report that will provide *FIRST* with tracking numbers and crate pickup dates.
- 2) Save a copy of the airbill for tracking purposes and your records.

##### 4.8.5.2. If You Drive Your Robot to the Drayage Facility

Refer above to the "Drayage Site Delivery Vehicle Stipulation" section. ***Your vehicle must have a 48" bed height, no exceptions.***

- 1) Have the drayage warehouse personnel put the time and date of drop off on an official receipt.
- 2) Write your team number on the receipt.
- 3) Make a copy and retain for your records.
- 4) Send it to *FIRST* so it arrives in 4 days. Address the envelope as below, using all capital letters.

##### 4.8.5.3. If You Use an Alternate Shipper

Ensure that your receipt clearly shows the date and time the crate(s) left your team's hands.

- 1) Write your team number on the bill of lading/receipt.
- 2) Make a copy and retain for your records.
- 3) Provide shipping verification to *FIRST*:
- 4) **Teams outside the U.S.** - You will receive e-mailed instruction for providing the shipping verification.
- 5) **U.S. teams not using the donated/free FedEx shipping for your initial event:** Mail a copy of your receipt to *FIRST* right away so it arrives within 4 days, addressing the envelope as below, using all capital letters. The properly addressed verification must arrive within 4 days.

#### 4.8.6. Verification Mailing Address – Use capitals please.

YOUR TEAM #

TEAM SUPPORT, *Name of your initial event and its date*

*FIRST* ROBOTICS

200 BEDFORD STREET

MANCHESTER, NH 03101

#### **4.8.7. Robots Must Ship from Event to Event**

Teams cannot take their robots home between events. Crates must ship directly from event to event. Teams must ship their crates either:

- A. Through Shepard Exposition Service (SES) and its designated carrier, Roadway, Inc.  
OR
- B. Through the FedEx complimentary shipping. *Bring the pre-printed airbill with you to the event on Saturday.* There will be no computer access at events.

Remember to print/ bring shipping address labels to each event in which you compete. Crates will return to the drayage terminal and ship from the drayage warehouse on Monday.

##### **4.8.7.1. Back-to-Back Events (Consecutive Weekends)**

Before choosing events on consecutive weekends, be sure to carefully consider the shipping and event deadline and expedited shipping cost aspects. *FIRST* discourages teams from competing in events on consecutive weekends if they are more than 1,000 miles apart. You must make all arrangements early to have your robot ship and arrive to the next event on time.

##### **4.8.7.2. Expensive Shipments**

The shipping costs for these back-to-back events are extremely costly. Compare shipping a small package to a location at a "ground" rate, and then compare the cost of sending it overnight. Use this same scenario to compare freight shipping rates for a 3 or 4-day freight shipment to an overnight or airfreight shipment. The difference can be staggering!

##### **4.8.7.3. Mandatory Shipment with Roadway, Inc.**

Contact your event's Drayage Company(s) well before both competitions to see if it can/will extend the crate arrival deadline for your team. You *must* use the Shepard Exposition Services' designated shipper, Roadway, Inc. You cannot use FedEx in this case, because FedEx generally does not pick up at events on Saturdays and your robot will not make the next competition on time. You must make all arrangements early to have your robot ship and arrive on time.

#### **4.8.8. Delivery Deadlines**

Each event has an "at drayage" deadline. Refer above to "Definitions." Make sure your shipper is aware of the deadline so you will meet it. Find the crate arrival deadline for each event by referring to the web site *Events* section.

### **4.9. FEDEX® EXPRESS FREIGHT SYSTEM COMPLIMENTARY SHIPPING**

FedEx has again graciously agreed to partner with *FIRST* and donate specific robot crate shipping via the FedEx Express Freight System. Remember, this is a generous donation, and **you cannot substitute your shipment "home" for a shipment to another Regional.**

#### **4.9.1. The FedEx Express Freight Donation**

FedEx Express Freight will ship your crate to the Regional of your choice. FedEx will then ship it back "home" as the second benefit. **You cannot substitute your shipment home for a second Regional shipment.**

If your team is registered to compete at the Championship, FedEx Express Freight will also ship your crate to the Championship and back home. **NO SUBSTITUTIONS.**

Please familiarize yourself with the benefit shipping options below for competition in Regionals only or for Regional(s) and the Championship too. **NO SUBSTITUTIONS.**

**Please see the table below.**

<b>Competing in: Regional Event(s) Only</b>
<i>ONE</i> crate to any <i>ONE</i> Regional <i>ONE</i> crate home

<b>Competing in: Regional Event(s) &amp; The Championship</b>
<i>ONE</i> crate to any <i>ONE</i> Regional <i>ONE</i> crate to the Championship <i>ONE</i> crate home

**NOTES:**

- 1) You cannot substitute your complimentary shipment “home” for a shipment to another Regional.
- 2) If you need your robot home soon after the Championship, you may want to use the Shepard Exposition Services (SES) shipper. Because of the crate volume of the donated shipments, it could take a month or so until you receive your crate.

**4.9.2. Teams in the 48 Contiguous U.S. States**

- 1) The teams in the U.S. contiguous states will use the on-line FedEx Express Freight Shipping Administration System to generate their complimentary airbills. Be grateful and generate them correctly and on time.
- 2) As a part of the Kit of Parts, teams will receive a Welcome Letter, which will lead them to the *2007 Robot Shipping* page of the *FIRST* Web site.
- 3) There, the Shipping Contact will receive instructions on how to proceed with printing the airbill from FedEx.com.
- 4) You can access this *2007 Robot Shipping* page and instructions at <http://www.usfirst.org/community/frc/content.aspx?id=3570> and link to a document called, *Ready to Ship –How to Ship from My Location*. This will provide your Shipping Contact with step-by-step instructions on how to proceed.

**You must generate the airbills on line through this FedEx Shipping Administration System to receive the free shipment.**

- If you use anything but FedEx Shipping Administration System airbills, you will be billed and you must pay for the shipment.
- If you use FedEx Shipping Administration System to ship to more than one Regional, you will be billed for it, and you must pay for the second shipment.

**NEW NOTES:**

- 1) **Follow the *FIRST* directions.** Please realize that FedEx does not change their system to meet our needs, so the general user directions for the FedEx Shipping Administration System may be different from ours. Follow the directions we supply.
- 2) **If you are shipping from a place without a loading dock,** when you call for pickup, make sure to tell FedEx that you need their pickup vehicle to have a lift gate.
- 3) Print out your FedEx Shipping Administration System airbill between Tuesday and Friday of the week you need to ship. Do not wait until Saturday in case you encounter problems. If you do not have a computer handy, go to a FedEx Kinko’s site to print out the airbill.
- 4) There will NOT be Internet access, computer, or a printer available at the competitions.
- 5) Remember to bring your instructions and password to the events if you need to print an airbill from your hotel computer or from a FedEx Kinko’s location.

If you are registered for the Championship, your return airbill will be in the registration envelope at that event.

#### 4.9.3. Process – Teams in HI, AK, PR

FIRST will send a FedEx envelope with two (2) pre-printed airbills to your team's Shipping Contact. This will most likely be in early February.

If you are registered for the Championship, your return airbill will be in the registration envelope at that event.

#### 4.9.4. Process – International Teams Competing in the U.S.

FIRST will send a FedEx envelope to your team's Shipping Contact, most likely in early February. It will contain the appropriate shipping airbill(s). Make sure you have all Customs papers in order for the shipment to and from the U.S.

If you are registered for the Championship, the airbill to ship your robot home will be in the registration envelope at the Championship event.

#### 4.9.5. Weigh the Donation Value

Which event will give your team the most value for this donation?

- **You have back-to-back events:** FedEx does not pick up on Saturday, so you cannot use the donation for events on consecutive weekends. There is not enough time to make it from one event to the next drayage terminal/warehouse.
- **You are registered for more than one Regional:** See if your sponsor will ship your crate to the initial event since you must use either FedEx or the designated carrier to ship from event to event. Use the FedEx donated shipment for another.
- **Your initial event is close to home:** If you have the proper vehicle/bed height (48"), you could drive your crate to the event drayage facility and save the donation for a different Regional.

Complimentary shipments *do not* get high priority, so make sure there is enough time for this method of shipping, *especially after the Championship*.

#### 4.9.6. Additional FedEx Important Notes

- FIRST cannot and will not replace lost airbills.
- **There will not be Internet access/computer/printer at the competitions to print airbills.**
- **You cannot use airbills with hand-written account numbers for these donated shipments.**
- You cannot use the FedEx Express Freight donation when shipping to back-to-back events.
- **FedEx will pay for one Regional ship only.** You cannot substitute a second Regional shipment for the Championship shipping benefit or for the ship home.
- **NEW:** When your robot ships back to the SES/Roadway drayage terminal for a FedEx shipment bear the following in mind to ensure your shipment leaves on time:

**IMPORTANT:** FedEx has/operates more than one Freight company.

FedEx **Express Freight** provides the shipping donation benefit to our teams.

If you use another FedEx service such as FedEx Freight, your team pays for the shipment.

- If you are using the donated FedEx shipments, FedEx Express Freight Services, the drayage facility will call FedEx for pickup. Put the proper paperwork/airbill on your crate.
- If you are using another FedEx Freight service, **you** must call FedEx for pickup, so FedEx sends the right truck for your shipment. Put the proper paperwork/airbill on your crate.
- **NEW: No loading dock at "home" delivery site:** On the "return home" airbill, note that the delivery truck must have a lift gate. Also note this on the SES/Roadway bill of lading.

- Refer below for instructions for International shipments and shipments from Hawaii, Alaska, Puerto Rico.

#### 4.9.7. FedEx Weight Limit

Crates *cannot* exceed 600 pounds.

**REMEMBER:** *FIRST* pays drayage costs for *one* crate up to 400 pounds *only*. Teams pay the drayage cost in excess of 400 pounds, rounded *up* to the next hundredweight.

#### 4.9.8. Shipment Insurance

FedEx does *not* insure complimentary shipments. If you want to insure your crate and its contents, obtain insurance through a third party.

#### 4.9.9. **NEW:** International / Unusual Shipments

Read Building Restrictions/Laws Regarding Wood Materials before building your crate. This deals with regulations regarding required treated wood materials. Teams in the locations listed in the table below may receive e-mails regarding their shipments as the season approaches.

**NOTE:** Remember, if you attend the Championship, you will receive the “return home” airbill in your Championship registration envelope.

You will receive an “Expanded Service International Air Waybill” from *FIRST* if you are an international team. It is your responsibility to select a broker and document that information in section 6b of the “Expanded Service International Air Waybill.” If you fail to select a broker, your shipment may be delayed/detained in Customs. **Track your crate.**

**No FedEx benefit will apply to back-to-back events.**

**Benefits for international shipments will vary.**

##### a. International Priority

Teams shipping to events occurring in the first week may receive FedEx Express International Priority airbills via FedEx package from *FIRST*.

##### b. International Economy

If time between ship and event allows, the benefit will be FedEx Express International Economy Freight. Teams competing in events later than the first week will receive FedEx Express International Economy Freight airbills.

##### c. Shipments “home”

The FedEx Express International Economy benefit will apply to the international team shipments home. Consider the 5-7 business-day transit when planning post season events/celebrations.

See table below for specific benefits/instructions.

<p><b>.Alaska, Hawaii, and Puerto Rico</b></p>	<p>FedEx Express Freight 3-day freight is not available in these areas. These shipments require 2<sup>nd</sup> Day Air. Teams will receive airbills with the "Second Day Air" box already checked.</p> <p>Use the provided airbills for shipments within the continental U.S.</p> <p>Track your shipments.</p>
<p><b>Brazil The Netherlands The United Kingdom</b></p>	<p>This FedEx donation will be International Economy Freight with a 5-7 business-day transit time to the U.S. <i>FIRST</i> will send the appropriate airbill(s) to your Shipping Contact in a FedEx packet in February.</p> <p>Teams registered for the Championship event will receive the airbill for shipment home in their registration packet at the Championship.</p>
<p><b>Canada</b></p>	<p>Because FedEx Freight service is not offered within Canada, FedEx is not able to provide the donation of shipments within Canada. FedEx</p>

	<p>does donate shipments to Canadian teams that cross the Canadian/U.S. border or those shipments within the U.S.</p> <p>Teams must use a FedEx International Airbill to ship across the Canadian border to the U.S. <i>FIRST</i> will send the appropriate airbill(s) to your Shipping Contact in a FedEx packet in February.</p> <p>Return robot shipments will use the International Priority Freight benefit.</p> <p>Remember to fill out required Customs papers.</p> <p>If you will be shipping to the Championship from a U.S. event, we will provide a domestic airbill. If shipping to the Championship from a Canadian event, we will provide an addressed International airbill.</p> <p>Track your shipments.</p>
<b>Israel</b>	<p>Teams registered for the Championship event will receive a FedEx International Priority Freight donated shipment to that event.</p> <p>The robot shipment home from the Championship will be International Economy Freight. <i>FIRST</i> will send the appropriate airbill (s) to your Shipping Contact in a FedEx packet in February.</p> <p>Teams registered for the Championship event will receive the airbill for shipment home in their registration packet at the Championship.</p>
<b>Mexico</b>	<p>Teams must use a FedEx International Airbill to ship across the Mexican border to the U.S. <i>FIRST</i> will send a FedEx Express International Expanded Air Waybill marked with the International Economy benefit. This will arrive in a FedEx packet in February.</p> <p>Teams registered for the Championship event will receive the airbill for shipment home in their registration packet at the Championship.</p>

#### **4.9.10. NEW: The FedEx Shipping Administration System (formerly Passkey)**

This is an on-line ship manager process, formerly known as Passkey, which allows registered teams in the contiguous 48 U.S. states to print their own airbills. Refer to above sections for stipulations of the benefit.

#### **4.9.11. Printing the airbill**

Find the instructions for this process at the *2007 Robot Shipping* page at <http://www.usfirst.org/community/frc/content.aspx?id=3570>

The Shipping Contact should become familiar with the instructions.

- He/she will be able to enter the system, choose the event, fill in a limited amount of information and print out an airbill with a tracking number.

#### **4.9.12. Using the airbill**

- Place the airbill in the plastic sleeve, and attach it to the side of your crate. Refer above to "Crate Labeling" section.
- Keep a copy of the airbill for tracking purposes. Put it in a safe place, and once your crate ships, track it.
- If you choose to use the one donated Regional shipment to ship from an event, bring the airbill and sleeve to the event and put it on the team's crate on the last day of that event.
- *There will be NO airbill replacements.* Airbills with a handwritten account number will not be accepted for these free shipments.

**Remote areas:** You will probably have to make arrangements in advance with your local FedEx Express Freight office. To find your local FedEx contact, do the following:

- Go to <http://www.fedex.com/us/ExpressFreight/>

- Scroll to “Use Service Area Locator” and click.
- Remote area teams should call a few days in advance to see if there are additional instructions for pickup in your area.

**Arrange for Crate Pickup:** Call 24 hours in advance to schedule pickup. If you are in a remote area, you should *make arrangements early*.

United States	Canada
Call FedEx Express Freight Services <b>800-332-0807</b>	Use the Canadian Call Center: 866 744 7493
International teams	
Go to <a href="http://fedex.com">fedex.com</a> , choose your country, and locate the appropriate phone number	

- You will need the account number from the airbill.
- You will need to provide your crate’s dimensions and total weight.
- Ask for Express Freight Services. Emphasize that it is a heavy weight shipment and provide the type of shipment for the area that you will be shipping to/from. See table below.

Area	Shipment Type
Contiguous 48 states-	<b>F3</b> Express Freight 3-day
Alaska, Hawaii, Puerto Rico	<b>F2</b> Express Freight 2-day
Canada	<b>IPF</b> International Priority Freight
Israel-	<b>IP2</b> - International Priority Freight to the U.S. <b>IEF</b> - International Economy Freight back to Israel
Brazil- United Kingdom- The Netherlands-	<b>IEF</b> International Economy Freight inbound and outbound
Mexico	<b>IEF</b> International Economy Freight inbound and outbound

- **If your pickup/return site does not have a loading dock**, be sure to tell the representative that you need a truck with a lift gate. (This may apply to your initial shipment to/from your home base)
- **Track your crate.** Allow 3-5 days for shipment movements.

#### 4.10. ROADWAY, INC. QUOTES

If you do not ship with FedEx, you *must* ship from event to event with the Shepard Exposition Services Carrier, Roadway, Inc.

**Roadway hours are Monday – Friday, 8 a.m. to 4 p.m.** This includes the drayage terminal facilities. To obtain a freight quote for shipping crates to a SES/Roadway drayage terminal, please contact SES Customer Service at (704) 394-9140.

- 1) Identify yourself as a *FIRST* Robotics team
- 2) Provide your team number



- 3) Provide your event name, city, and state

To help with this process, Nina Nemeth from Shepard Exposition Services will be contacting all participating teams registered for more than one Regional event.

**NEW: CHARGES NOTES:**

- Do not use the Rating System on the Roadway Web site. These calculations are the retail price, and do not reflect the discount provided for FRC teams robot shipments.
- Your shipment may have additional charges, such as a re-weight charge.
- If your delivery area does not have a loading dock, you will need a truck equipped with a lift gate, and there is a charge for this.
- All shipments will also have a fuel surcharge at a commodity price.

**4.11. TRACK YOUR CRATE**

Track your crate to ensure on-time crate delivery to the event.

Please do *not* call Shepard Exposition Services (SES) to track your crate if you shipped FedEx.

FedEx Shipment Tracking	SES Roadway, Inc. Shipment Tracking
Use the FedEx Customer Service Center at <a href="http://www.fedex.com/">http://www.fedex.com/</a> , or call (800) 463-3339. (800 Go FedEx) Have your twelve-digit tracking number available.	Call 800 531 3976 Follow the telephone prompts for tracking. Have your pro number available. If you need assistance, call SES or, go to <a href="http://www.roadway.com">www.roadway.com</a>

**4.12. DRAYAGE**

Every team has to ship its competition crate(s) to the designated drayage terminal/warehouse for each event it attends. *You cannot, under any circumstances, drive or ship crates to competition sites.*

Roadway, Inc., c/o Shepard Exposition Services (SES) is the designated Drayage Company for all events except the SBPLI Long Island Regional. FESTO Corporation handles drayage for that event. All instructions apply for both drayage companies.

- 1) Label your crate properly. If it doesn't meet required specifications, the SES/Roadway or FESTO terminal may refuse it.
- 2) Well ahead of shipping time, find drayage information and overweight (overage) costs for all events in which your team will compete. Go to <http://www.usfirst.org/community/frc/content.aspx?id=430> and click on your event.
- 3) Refer to all related sections below.

**4.12.1. The Drayage Companies: Functions and Services**

**FIRST** contracts with a drayage company for each event to provide the following services to:

- 1) Provide **FIRST** with a system to monitor on-time crate arrival
- 2) Provide robot storage prior to the event
- 3) Ensure on-time crate delivery to team Pit stations at the competition sites
- 4) Provide storage for empty crates at the venue
- 5) Provide a staging location for outbound shipments
- 6) Protect staff and teams from crowded load-in and load-out situations
- 7) Comply with venue contracts, which prohibit the acceptance of shipments on site.

#### 4.12.2. Drayage Company Regulations

Teams cannot take their robot/crates home from any event. They must ship through the SES designated carrier, Roadway, Inc. or use their donated FedEx Express Freight shipment when shipping between events. Drayage personnel are not allowed to, and will **not**, load your crate onto your vehicle.

- **All shipments must be prepaid:** The Drayage Warehouse will not accept Cash on Delivery (COD) shipments. Teams must take care of this with the carrier prior to sending a shipment to a drayage site.
- **Use only designated shippers:** Teams must use FedEx or the designated SES shipper (Roadway, Inc.) for crates shipping from event to event.
  - 1) **FedEx:** Consider using your final FedEx Express Freight airbill to ship home from your last event if you do not need your robot right away. Remember, these are donated shipments and the final return can take a month or more, especially after the Championship.
  - 2) **Shepard Exposition Services Carrier:** (Roadway, Inc.) When not using FedEx, teams must make on-site arrangements through the SES desk and the Roadway, Inc. representative. Teams shipping from the Long Island event must also use Roadway, Inc. Freight or FedEx.
- **Freight Bills, Weight Receipts:** Shipments received without freight bills or specified unit counts on receipts will be delivered to team Pit Stations without guarantee of piece count or condition. When receiving freight, the drayage terminal requires that drivers submit a *certified weight receipt*. The company reserves the right of refusal to unload shipments without it.
- **Bills of Lading:** All shipments must have a Bill of Lading or delivery receipt showing:
  - 1) Number of items, weight, and description of merchandise
  - 2) All Items labeled per Regional/Championship event specifications
- **Damage:** The drayage terminals will not be responsible for damage to uncrated materials, improperly packed materials, any concealed damages, loss, or theft of materials after crates have been picked up for loading out of the competition site.
- **Weigh In:** The drayage terminals will weigh team crates as they arrive at each facility. These weights will be certified, and any crates exceeding four hundred pounds will be subject to drayage overage fees. *If a team wants to dispute the weight of its crate, a scale will be on site at each event for reweigh within the specified time.*

#### 4.12.3. Freight Overage

All teams must pay for drayage overage in advance, prior to the competition. If a team refuses to pay overage charges, the drayage companies may refuse return of the team's crate until payment is reconciled at the service desk. Upon payment receipt, it will return the crate(s).

**NEW:** For SES terminals, you must fill in the *Payment Authorization Form* if you know your crate will be overweight. Download this form, which is part of your "Shipping / Drayage" information for your event(s). <http://www.usfirst.org/community/frc/regionalevents>.

Fax it to 704 398 0914.

**Accepted Payment Forms for SES:** The following are accepted credit cards for overage fees: (MasterCard, Visa, or American Express) If paying by school check, the check must arrive at SES *before* the team participates in the event. All overage payments are due at Shepard Exposition Services 15 days post event.

#### 4.12.4. Immediate On-site Crate Weight Complaint Resolution, 7:45a.m.-8:30a.m.

**NEW:** Because of safety requirements, crates are removed from the Pit as early as possible. The time set aside for weight discrepancy resolution is from 8 a.m. to 8:30 a.m.

When team members arrive at the Pit Station to uncrate the robot:

- 1) Read the label Shepard Exposition Services (SES) placed on your crate.
- 2) If your crate shows a weight over 400 pounds, and if you have any question as to the accuracy of the weight or information on the label, *immediately* find an SES representative to ask for a re-weigh. See the Pit Administration Supervisor if you cannot find a representative.
- 3) *Do not open the crate until you have received a re-weigh.* **NOTE:** If you open the crate, you relinquish any appeal rights.
- 4) Do not leave your Pit station until the re-weigh.

#### 4.12.5. Weight and Rates Structure

**Rounding Up:** Drayage Companies weigh by the hundredweight and round the weight up to the next hundred. Make a real effort to keep weight down to well below the hundred marks to allow for scale calibration differences.

**Example:** If your crate weighs 401 pounds, your charge will be based on five hundred pounds, and you will have to pay for a hundred pound overage for that crate. Refer to the Events section of the web site, click on your event and “Shipping / Drayage” for material handling rates.

<http://www.usfirst.org/community/frc/>

##### 4.12.5.1. Drayage Costs - FIRST

*FIRST* will pay for the Material Handling (drayage) cost of *ONE* crate, *within criteria limits*, for each team, for each *FIRST* competition in which it competes this season.

Refer to *Crate Information, Crate Size, and Weight Specifications* section for specifics.

##### 4.12.5.2. Drayage Costs - Teams

The following will cost teams money:

- 1) Crate exceeding measurement or weight specifications
- 2) Any additional crate. Teams pay *entire* drayage cost of additional crates

**NOTE:** Each team must pay for any additional material-handling charges by the end of each competition.

#### 4.12.6. Outbound Shipments from the Drayage Terminal

SES will bring crates back to its warehouse or a Roadway, Inc. terminal on Saturday after the competition. Crates will be available for outbound shipping from the warehouse on Monday, with the exception of shipping from the Championship.

**NOTE:** The crates from the Championship, shipping via FedEx Express Freight donated shipping, will ship at FedEx convenience.

- 1) Teams must ship their robots. Teams cannot take robots or crates with them from an event.
- 2) Be sure to:
  - Ensure your crate is still fit for travel.
  - Pre-pay for all applicable outbound shipping charges.
  - Fill out an Outbound Bill of Lading (BOL) – (Shepard Logistics Services Material Handling Authorization and Transportation Agreement) for SES events.
  - At SES handled events, a representative will pass out one of these forms to each team on the last day of the event. See example next page.
  - **NEW:** If you are shipping “home,” and the delivery site has **No loading dock**, note your request a delivery truck with a lift gate in the “Exceptions” area on

the SES form. For the Long Island Regional, as the drayage representative where to make that note.

- Remove the old shipping labels.
  - Attach the address and battery labels for the next event to all sides of the crate...at a readable level.
  - Make arrangements for the outbound shipment.
- 3) **Using Fed Ex?** Attach your airbill to your crate. Retain a copy for tracking purposes, write your tracking number above the “Exceptions” area on your Outbound BOL, and turn it in at the SES shipping desk. You will receive a copy.
- 4) **Using Roadway, Inc.?** Turn in your Outbound BOL to the SES shipping desk representative. You will receive a copy with an assigned Pro number. Retain this copy for crate tracking.

### ROADWAY TRACKING

You should see movement on your shipment beginning the Wednesday after the event.

<http://www.roadway.com> and insert your Pro # and press “Go”

For back-to-back shipments with Roadway, begin tracking on Monday. For problems, contact Customer Service at SES, (704) 394-9140, and provide your *FIRST* team number.

### FEDEX TRACKING

You should see movement on your shipment by Wednesday after the event.

<http://www.Fedex.com> and choose Freight Services, choose “Express Freight” to track.

Insert your tracking number.

Contact FedEx if you don't see movement by Wednesday. (800) 463-3339

### 4.12.7. Example of SES Outbound Bill of Lading

You will receive an outbound bill of lading from the SES/Roadway Service desk at each event. Fill out the indicated areas for your outbound shipment, whether you ship with FedEx or Roadway.

PRESS HARD YOU ARE MAKING 5 COPIES!

IF SHIPPING WITH SHEPARD LOGISTICS TO: \_\_\_\_\_

**SHEPARD LOGISTICS SERVICES**  
**MATERIAL HANDLING AUTHORIZATION AND TRANSPORTATION AGREEMENT**

**Shepard**

RATE QUOTE \_\_\_\_\_ BASED ON \_\_\_\_\_ POUNDS

EXHIBITOR: PLEASE RETURN COMPLETED AGREEMENT TO THE SHEPARD CUSTOMER SERVICE CENTER

Route Number: **TEAM # FEDEX OR ROADWAY** Carrier: **REGIONAL NAME** Exhibitor #/Location: \_\_\_\_\_

FROM: **OFFICIAL TEAM NAME** TO: **THIS SPACE SHOULD HAVE YOUR NEXT EVENT**

Facility/Show: **NAME OF THIS REGIONAL** Exhibitor/Address: **DRAWAGE ADDRESS OF THIS REG.**

City: **CITY** Home Shipping Address: **DRAWAGE ADDRESS - OR CITY**

State: **STATE** ZIP: **ZIP**

Type of service:  Ground  Next Day Air  2nd Day Air  Other \_\_\_\_\_

★ Shipments moving via air; Liability will be limited to .50¢ per pound per article. Additional insurance to cover excess declared value will be purchased at \$1.00 per \$100.00 of value at Exhibitor's expense. **\*IF SHIPPING FEDEX WRITE TRACKING # HERE**

DECLARED VALUE OF ENTIRE SHIPMENT \$ \_\_\_\_\_

No. Pcs # OF COATES	Description of articles	Weight	Exemptions
	Corrug. Exhibit Material (wooden) KD	<b>IF YOU KNOW IT</b>	<b>*IF LIFTGATE IS REQUIRED FOR SHIPMENT TO HOME BASE (NO LOADING DOCK) NOTE HERE</b>
	Cartons Exhibit Material KD		
	Cases / Trucks / Boxes		
	Slides / Plates		
	Cargo		
	<b>← TOTAL PIECES</b>		<b>← TOTAL WEIGHT SUBJECT TO VERIFICATION AND CORRECTION</b>

In the event your designated carrier fails to show by \_\_\_\_\_, please select an option:  
 Reroute via show carrier Shepard Logistics at exhibitor's expense. (credit card must be on file for this option)  
 Deliver to local warehouse at exhibitor's expense.  
 Reroute to optional carrier assigned by Shepard Logistics. (This option will be used if credit card is not on file)

Signature: \_\_\_\_\_  
Reroute via \_\_\_\_\_ by \_\_\_\_\_  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

**AUTHORIZATION FOR SERVICES**  
**IMPORTANT! PLEASE READ CAREFULLY:**  
You are entering a contract which defines the respective responsibilities and liabilities of the parties. Terms and conditions of the contract are on the reverse side of this form. Shipper's signature indicates authorization for services, correctness of above information, and agreement to terms of contract.

Shipper's name: **PRINT YOUR NAME**  
Signature: **YOUR Signature** Date: **DATE**

RCVD. **LEAVE** BY **BLANK**  
Date: \_\_\_\_\_ Time: \_\_\_\_\_

PLACE PRO # HERE

Bill To: **SHIPPING ROADWAY**

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

NOTE - ALL OTHER FEE'S CHARGES MAY APPLY DUE TO FUEL SURCHARGES AND DELIVERY EXCEPTIONS

Above listed articles received in good condition. Except as noted.

Center name (Print): \_\_\_\_\_  
Driver (Print): \_\_\_\_\_  
Center address # \_\_\_\_\_

LEAVE BLANK

## 4.13. WE JUST QUALIFIED FOR THE CHAMPIONSHIP

### 4.13.1. What do we do? Is there a Decision Deadline?

If you are unsure whether your team can go to the Championship, you have *until the Tuesday following your qualifying event* to inform *FIRST* and SES whether you will attend and register for that event. If this is your last event, you have until Tuesday to let the drayage company know whether you will be shipping home or to the Championship. Follow instructions below.

### 4.13.2. Undecided? Temporary Crate Shipment “Hold, Then Ship”

If you are not sure your team can attend the Championship (CMP), read below for the “hold” process.

- Make sure you talk with the SES / Roadway, Inc. representative at the event (or the FESTO Corporation representative if at the Long Island event). Explain your situation and make temporary arrangements per the directions below.
- Put an 8 ½” by 11” sign on your crate, near your shipping airbill. It should say:
- Consider shipping your tools also if you have room and if you can safely pack them in your crate.

**Team will call.  
Hold until Tuesday.**

- Teams that qualify for the Championship at an event can obtain a FedEx Express Freight airbill from the Event Manager. *FIRST* supplies these pre-printed, official documents prior to the events.
- Label your crate:
- Fill in your donated FedEx Express Freight airbill with the team’s “home” shipping address OR the address for the Championship drayage warehouse. You can look in the FRC Manual at the Pit Administration Station for the Championship drayage terminal address.
- Place the airbill on your crate if shipping FedEx. Keep your copy.

Create and place one address label on each facing side of the crate if you are shipping to the CMP.

- Make sure you still have the battery labels on the four sides of your crate and the inner battery box.
- Fill in a Bill of Lading and write your tracking number on it if shipping FedEx.
- **You must inform the drayage terminal of your shipping intentions by Tuesday.**
- Follow up on your shipping arrangements.
- Always Track your shipment.

Because of possible liability, the drayage company will not fill out a FedEx airbill for your team.

### 4.13.3. We Changed our Minds

- If you find that you are not shipping to the address on your airbill, you must ship through the SES carrier. Call to make the arrangements, provide the new shipping address, and prepay the shipment.
- Always track your shipments to ensure a timely delivery.