

# **Transportation Infrastructure Studies and Site Specific Planning Process**

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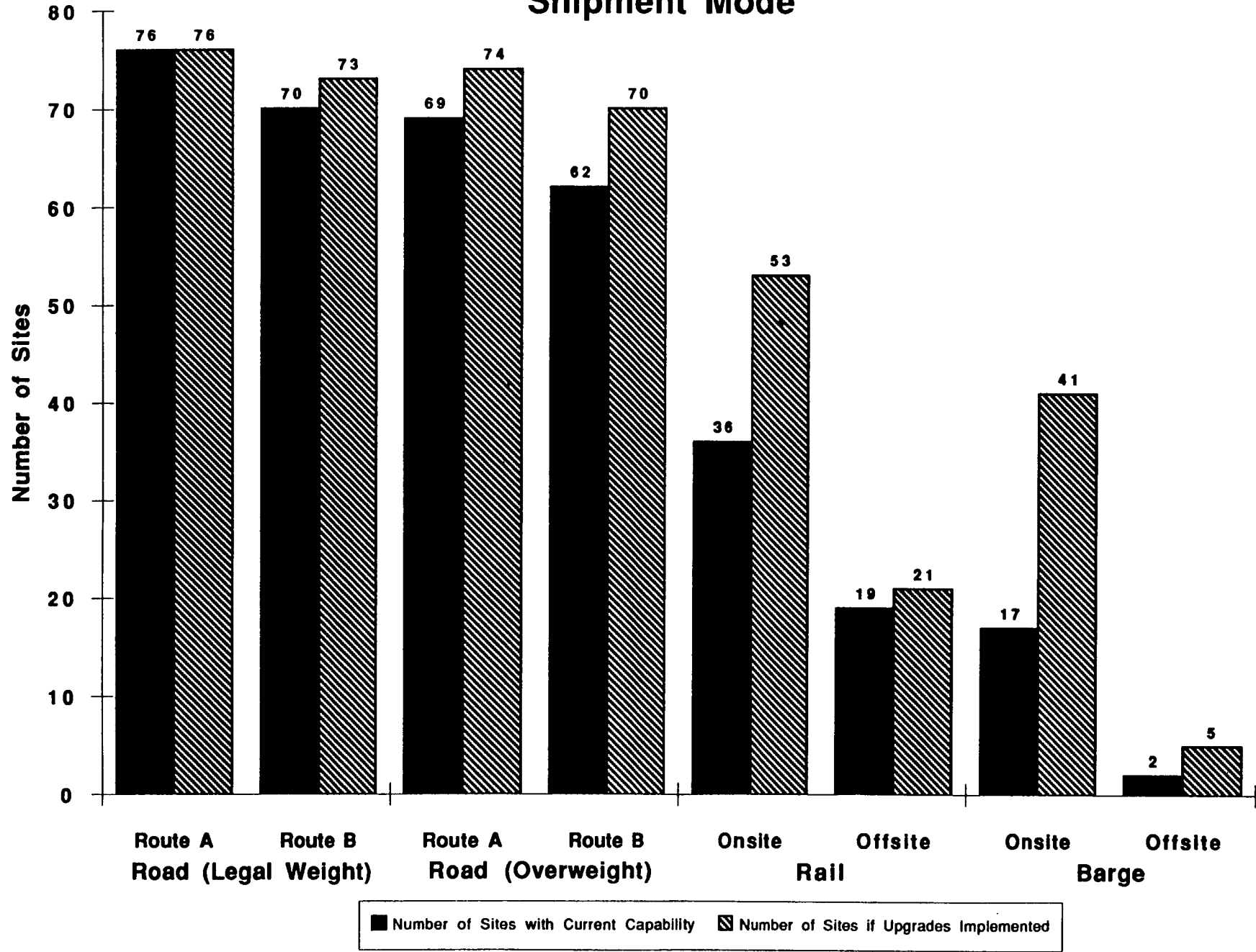
**Presented to**

**Nuclear Waste Technical Review Board  
March 11, 1992**

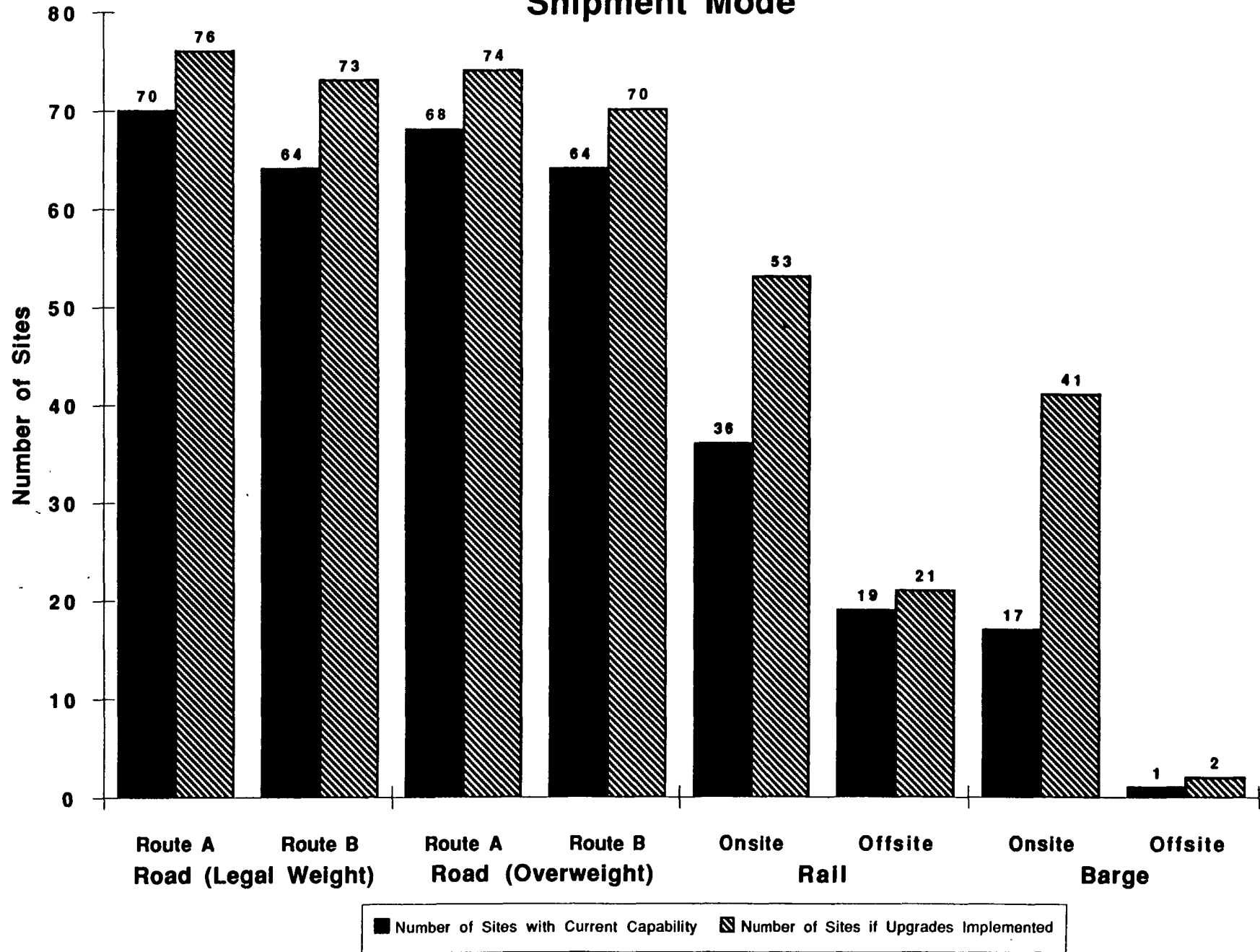
## **PURPOSE OF NSTI**

- **TO EVALUATE POTENTIAL RAIL, ROAD, AND BARGE ACCESS CORRIDORS FOR 75 REACTOR SITES AND 1 STORAGE SITE**
- **PROVIDE DATA PERTINENT TO SPENT FUEL TRANSPORTATION**
- **PROVIDE ASSESSMENT OF CURRENT CAPABILITIES OF EACH MODE AND ROUTE, AND THE POTENTIAL FOR UPGRADE**

# Preliminary NSTI Results Shipment Mode



## Final NSTI Results Shipment Mode



## **PURPOSE OF FICA**

- **DETERMINE AND DOCUMENT EXISTING AND PLANNED FACILITY CAPABILITIES TO HANDLE CASKS**
- **IDENTIFY FACILITIES WHERE POSSIBLE INTERFACE CHANGES COULD RESULT IN BENEFITS TO THE FWMS**

# Preliminary FICA Summary Results

	<b>Planning base</b>	<b>If administrative/ licensing changes are implemented</b>	<b>If administrative changes and physical modifications implemented</b>
<b>Legal-Weight Truck</b>	<b>72</b>	<b>104</b>	<b>121</b>
<b>Over-Weight Truck</b>	<b>68</b>	<b>98</b>	<b>119</b>
<b>100 Ton Rail/Barge</b>	<b>50</b>	<b>76</b>	<b>98</b>
<b>125 Ton Rail/Barge</b>	<b>24</b>	<b>52</b>	<b>78</b>

# Final FICA Summary Results

	Planning base	If administrative/ licensing changes are implemented	If administrative changes and physical modifications implemented
Legal-Weight Truck	72.73	104	121
Over-Weight Truck	69.63	98	119
100 Ton Rail/Barge	52.58	76	98
125 Ton Rail/Barge	24	52	78

# PRELIMINARY ASSESSMENT OF POTENTIAL SHIPPING MODES

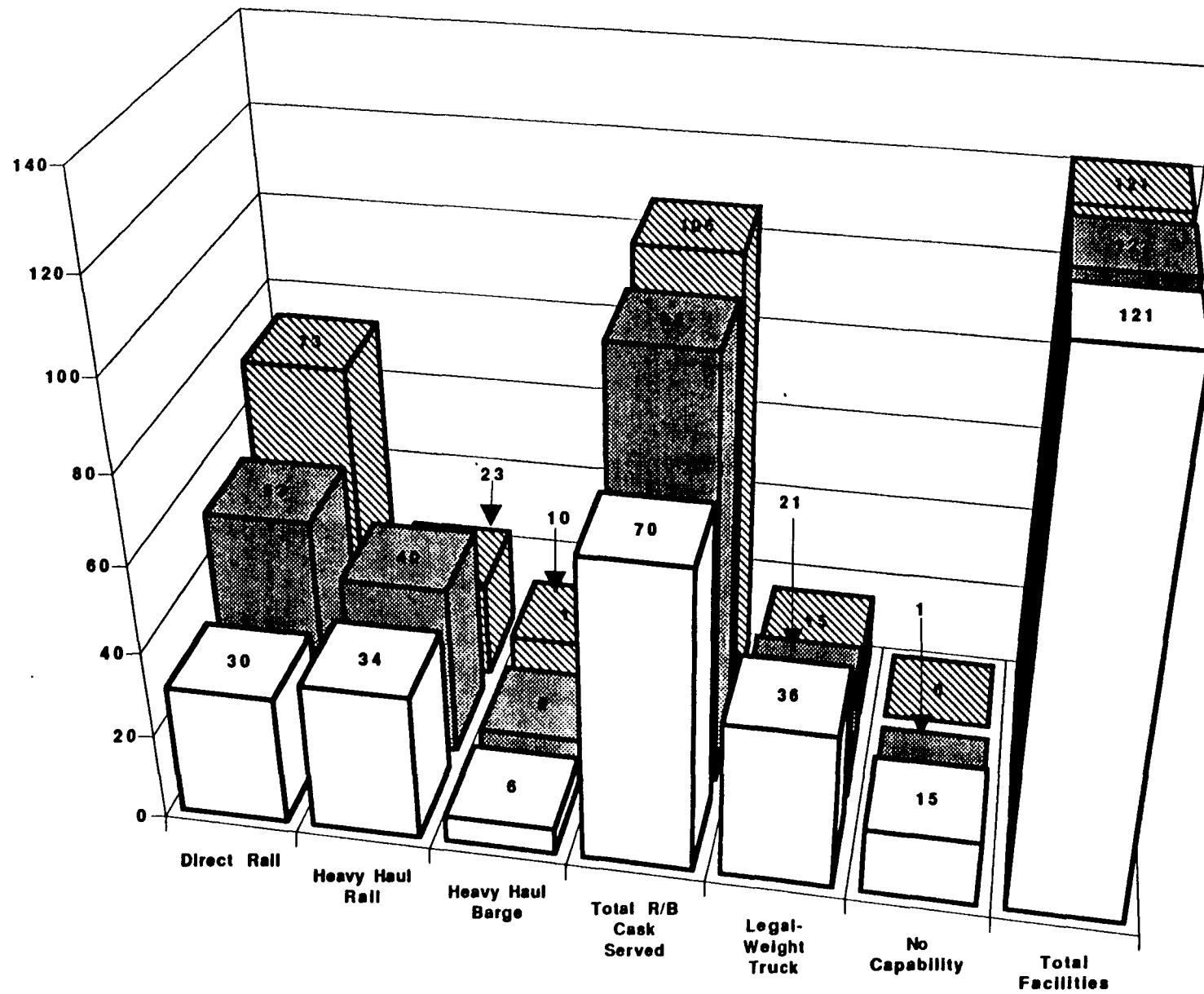
- AT THE SEPTEMBER TRB MEETING, THE PRELIMINARY ASSESSMENT OF POTENTIAL SHIPPING MODES CONSIDERED INITIATIVE 1 CASKS ONLY
- ASSUMED RAIL IS THE PREFERRED MODE OF SHIPMENT FOLLOWED BY HEAVY HAUL TO RAIL, HEAVY HAUL TO BARGE, AND LWT



## Preliminary Assessment of Potential Shipping Modes\* (On & Off-Site Heavy Haul)

	Currently	If small modifications made	If small & licensing/moderate modifications
Direct Rail	30	53	73
Heavy Haul Rail	34	40	23
Heavy Haul Barge	6	6	10
Total R/B Cask Served	<u>70</u>	<u>99</u>	<u>106</u>
Legal-Weight Truck	36	21	15
No Capability	15	1	0
Total Facilities	<u>121</u>	<u>121</u>	<u>121</u>

\*Preference given to: 1. Rail 2. Barge 3. LWT



□ Currently

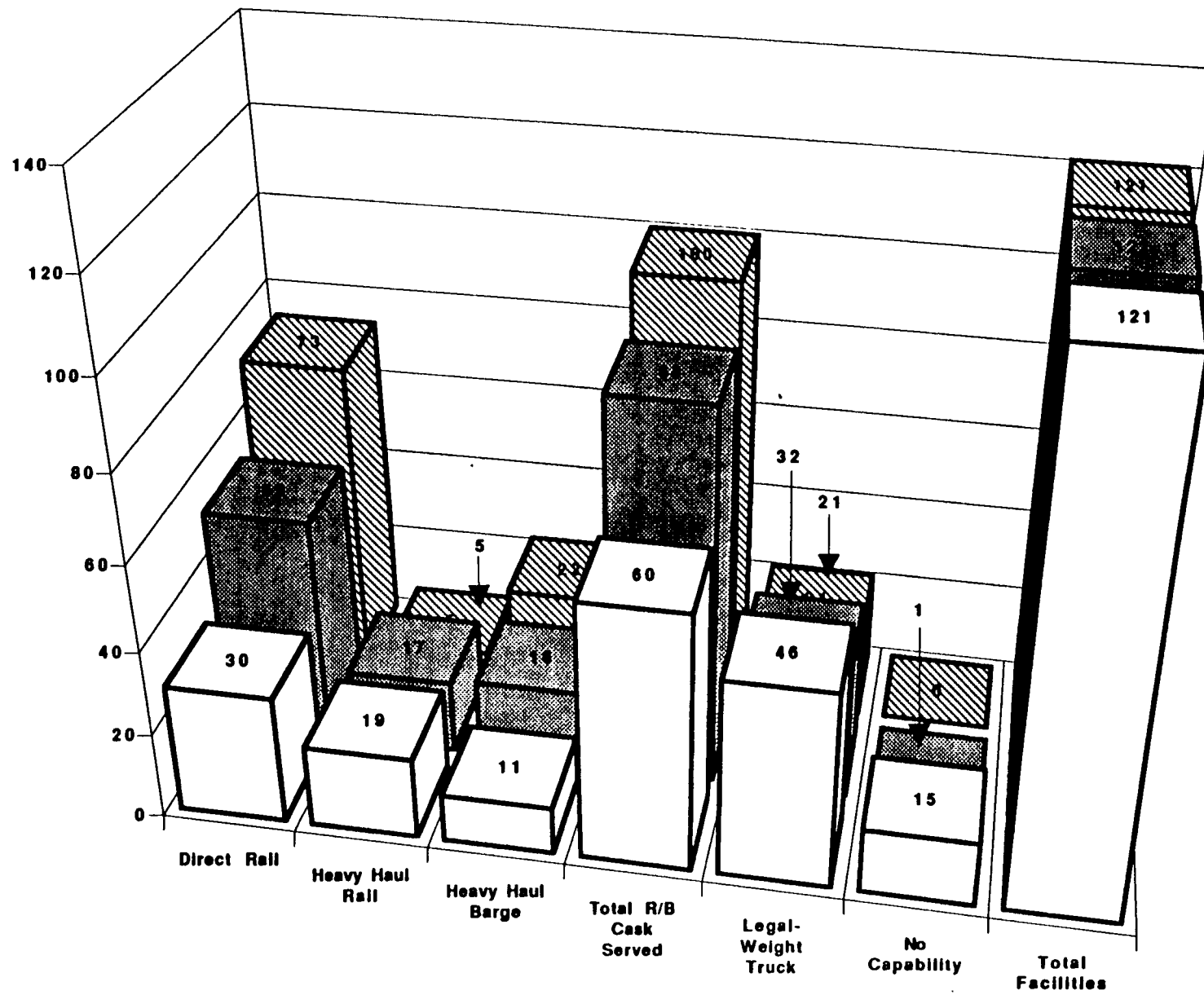
▒ If small modifications made

▨ If small licensing/moderate modifications

## Preliminary Assessment of Potential Shipping Modes\* (On-Site Heavy Haul Only)

	Currently	If small modifications made	If small & licensing/moderate modifications
<b>Direct Rail</b>	30	53	73
<b>Heavy Haul Rail</b>	19	17	5
<b>Heavy Haul Barge</b>	11	18	22
<b>Total R/B Cask Served</b>	<u>60</u>	<u>88</u>	<u>100</u>
<b>Legal-Weight Truck</b>	46	32	21
<b>No Capability</b>	15	1	0
<b>Total Facilities</b>	<u>121</u>	<u>121</u>	<u>121</u>

\*Preference given to: 1. Rail 2. Barge 3. LWT



Currently
  If small modifications made
  If small licensing/moderate modifications

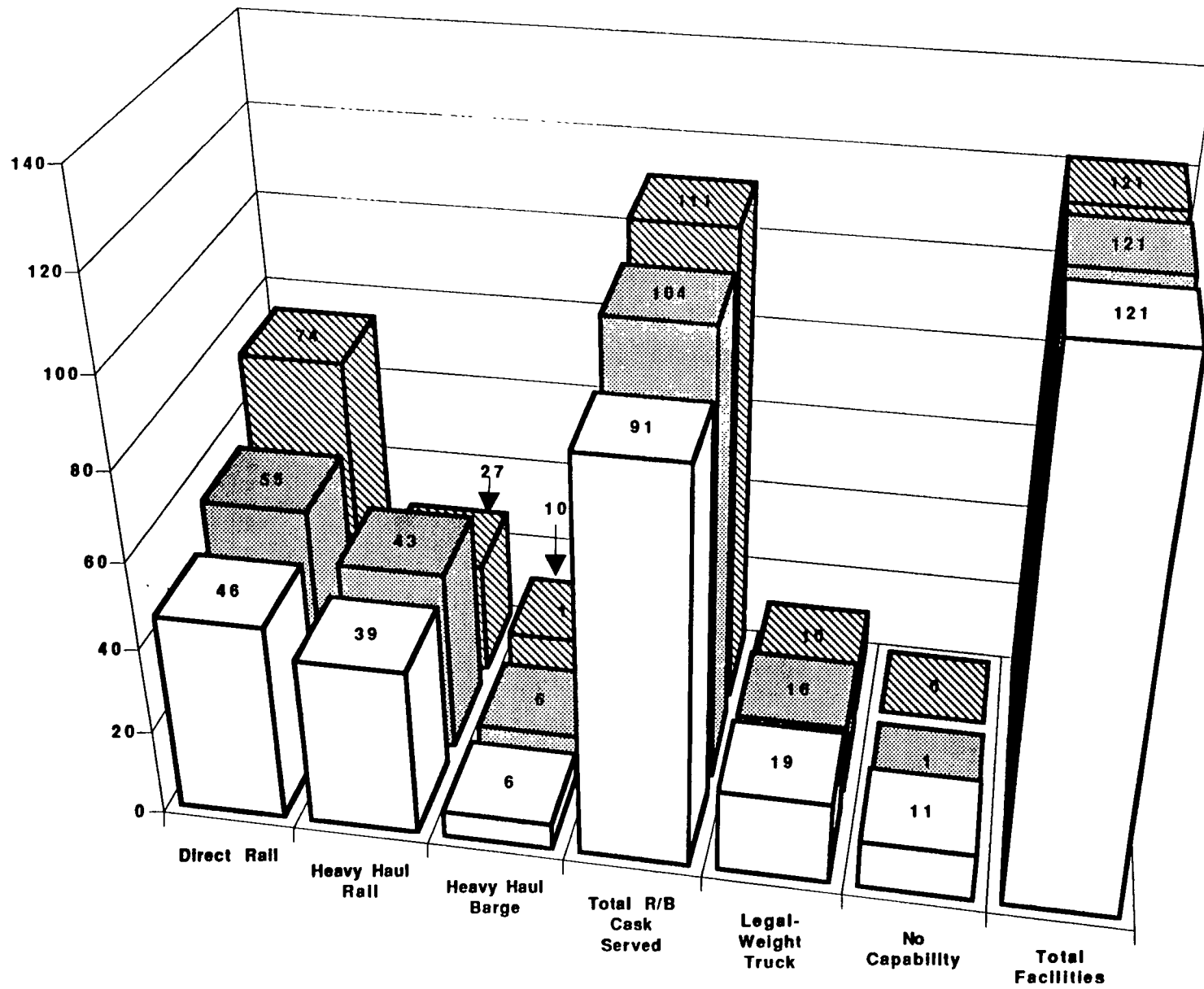
## PRELIMINARY ASSESSMENT OF POTENTIAL SHIPPING MODES (CON'T)

- DATA HAS BEEN FURTHER ANALYZED AND ASSUMES EXISTING TECHNOLOGY AND INITIATIVE 1 CASKS ARE USED
- RAIL CONTINUES TO BE THE PREFERRED MODE OF SHIPMENT, FOLLOWED BY HEAVY HAUL TO RAIL, HEAVY HAUL TO BARGE, AND LWT
- BOTH ON-SITE AND OFF-SITE HEAVY HAUL CAPABILITY CONSIDERED
- UTILITIES WILL CHOOSE SHIPPING MODE

# Preliminary Assessment of Potential Shipping Modes\* Using Existing Technology and Initiative I Casks (On & Off-Site Heavy Haul)

	Currently	If small modifications made	If small & licensing/moderate modifications
<b>Direct Rail</b>	46	55	74
<b>Heavy Haul Rail</b>	39	43	27
<b>Heavy Haul Barge</b>	6	6	10
<b>Total R/B Cask Served</b>	<u>91</u>	<u>104</u>	<u>111</u>
<b>Legal-Weight Truck</b>	19	16	10
<b>No Capability</b>	11	1	0
<b>Total Facilities</b>	<u>121</u>	<u>121</u>	<u>121</u>

\*Preference given to: 1. Rail 2. Barge 3. LWT



□ Currently

▒ If small modifications made

▨ If small licensing/moderate modifications

## PRELIMINARY ASSESSMENT OF POTENTIAL SHIPPING MODES (CON'T)

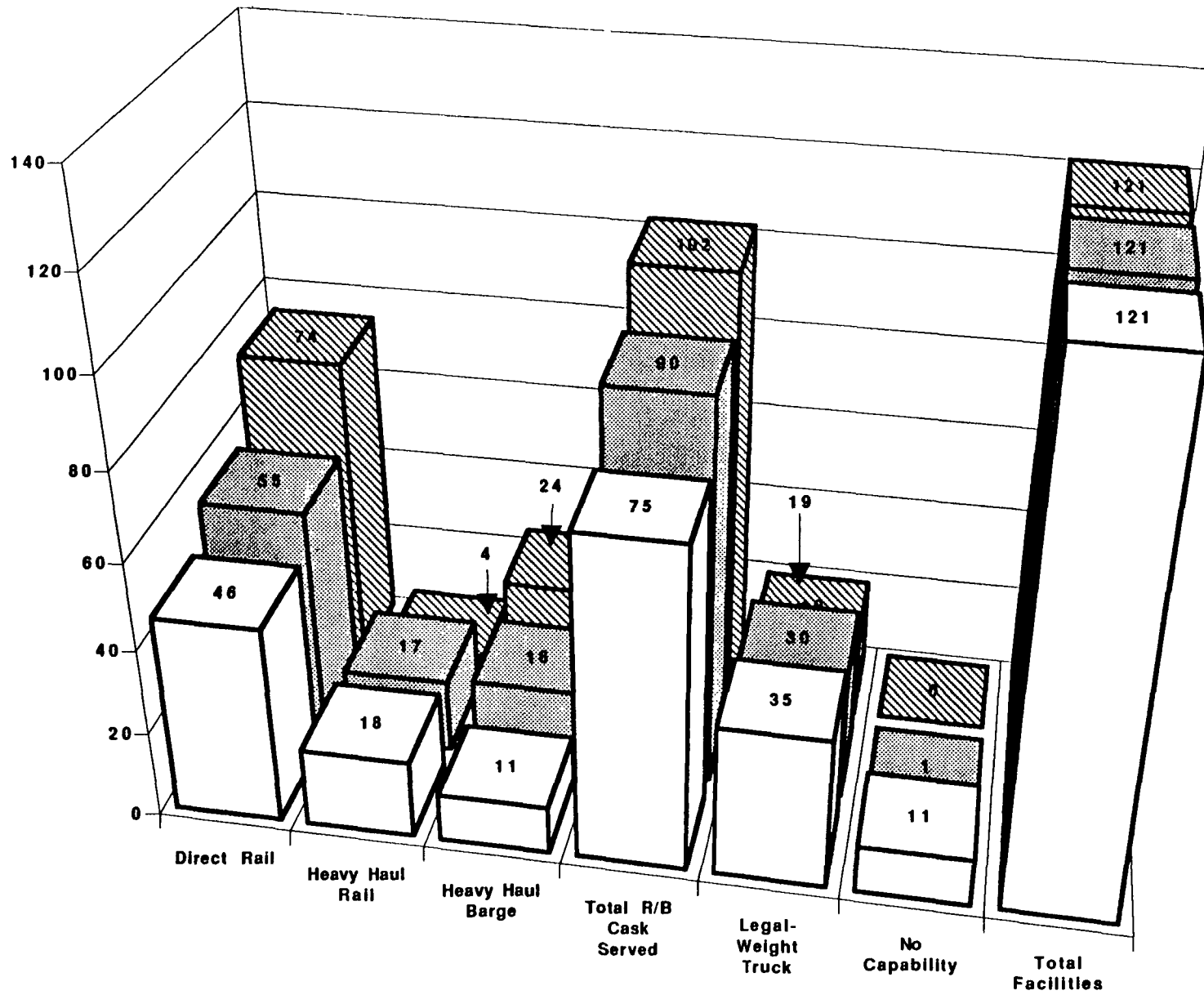
- SAME ASSUMPTIONS AS BEFORE, EXCEPT ONLY ON-SITE HEAVY HAUL CAPABILITY CONSIDERED
- EXISTING TECHNOLOGY AND INITIATIVE 1 CASKS ARE USED
- UTILITIES WILL CHOOSE SHIPPING MODE



# Preliminary Assessment of Potential Shipping Modes\* Using Existing Technology and Initiative I Casks (On-Site Heavy Haul Only)

	Currently	If small modifications made	If small & licensing/moderate modifications
<b>Direct Rail</b>	<b>46</b>	<b>55</b>	<b>74</b>
<b>Heavy Haul Rail</b>	<b>18</b>	<b>17</b>	<b>4</b>
<b>Heavy Haul Barge</b>	<b>11</b>	<b>18</b>	<b>24</b>
<b>Total R/B Cask Served</b>	<u><b>75</b></u>	<u><b>90</b></u>	<u><b>102</b></u>
<b>Legal-Weight Truck</b>	<b>35</b>	<b>30</b>	<b>19</b>
<b>No Capability</b>	<b>11</b>	<b>1</b>	<b>0</b>
<b>Total Facilities</b>	<u><b>121</b></u>	<u><b>121</b></u>	<u><b>121</b></u>

\*Preference given to: 1. Rail 2. Barge 3. LWT



□ Currently

▣ If small modifications made

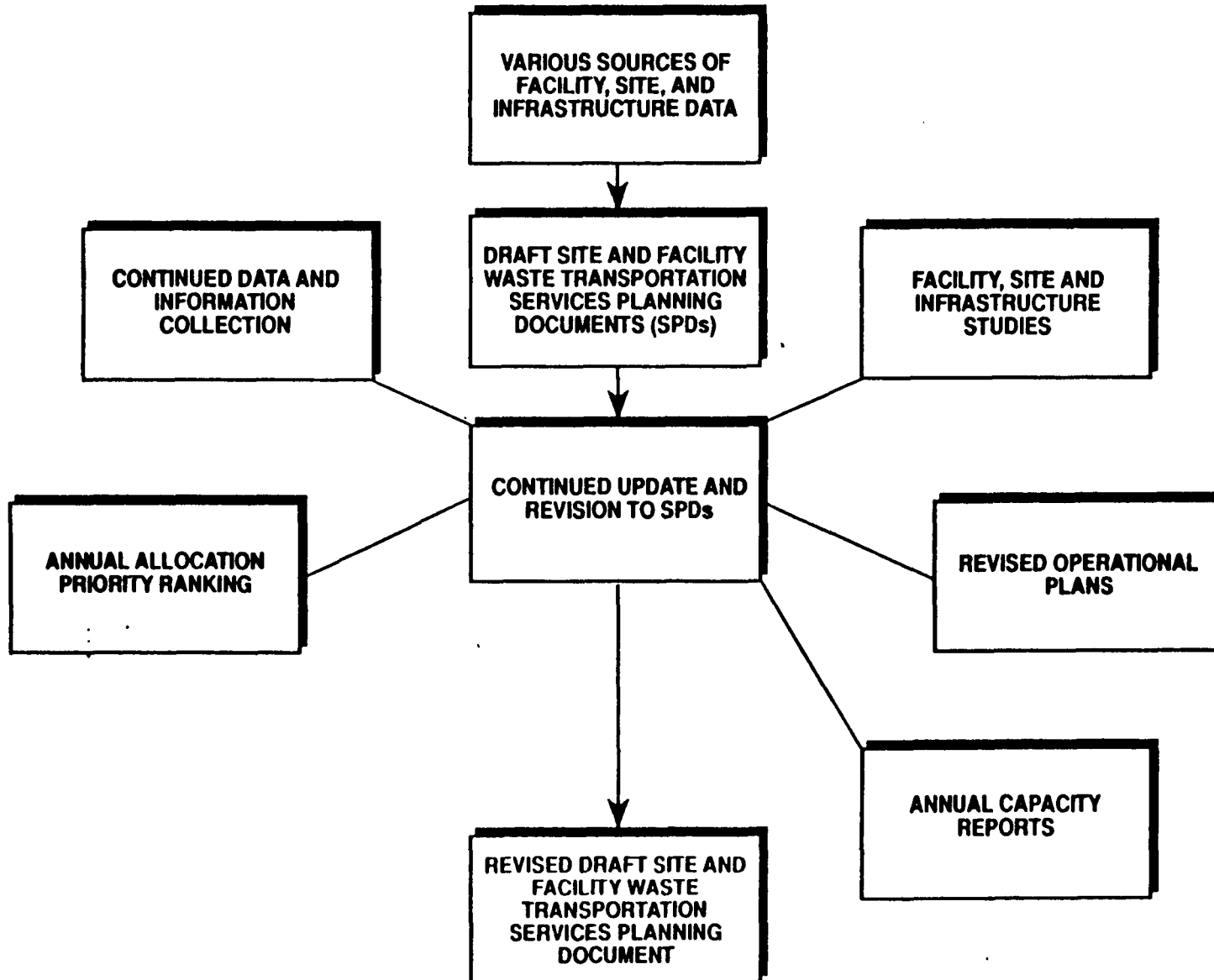
▨ If small licensing/moderate modifications

## **PRELIMINARY ASSESSMENT OF POTENTIAL SHIPPING MODES (CON'T)**

- **INDICATIONS OF SHIPPING MODES THAT WILL BE UTILIZED DURING SPENT FUEL SHIPPING CAMPAIGNS WILL BEGIN TO EMERGE ONCE UTILITIES SUBMIT DELIVERY COMMITMENT SCHEDULE (DCS) TO DOE**
  - **DCS WILL IDENTIFY ALL SPENT FUEL/HIGH LEVEL WASTE UTILITY WISHES TO DELIVER TO DOE 63 MONTHS AFTER SUBMITTAL**
  - **IN THE DCS, UTILITY PROPOSES SHIPPING MODE TO BE USED**
  - - **DOE APPROVES/DISAPPROVES DCS WITHIN 90 DAYS OF RECEIPT**
- **UTILITY SHALL SUBMIT A FINAL DELIVERY SCHEDULE (FDS) 12 MONTHS PRIOR TO ACTUAL DELIVERY SPECIFYING SHIPPING MODE**
  - **DURING TIME BETWEEN DCS AND FDS, UTILITIES AND DOE WILL COORDINATE SELECTION OF SHIPPING MODES THAT BEST SATISFIES NEEDS OF ALL**

# **SITE SPECIFIC PLANNING PROCESS**

# SPD Development Activities



# Development of the Site-Specific Service Plans

