

# Acquisition and Disposition of Property, Plant, and Equipment

## CHAPTER 10



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CHAPTER 10-1

## Property, Plant and Equipment

Property, Plant, and Equipment (Fixed Asset or Plant Asset)

- Historical cost principle
- Includes any "normal" or "routine" expenditure to get an asset in place and functioning.



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## FUNDAMENTALS:

Whether you buy it, build it, plan to keep it and operate it or plan to sell it:

- Capitalize all costs necessary to make the asset ready for its intended use
  - Anything you get back is a reduction
- Capitalize indirect costs if you can make the link to the asset
- Capitalize costs associated with owning it during the construction period= interest and property taxes
- Never on books for more than its recoverable value.
- Generally record at the fair value of what you give up. Remember that if payment occurs over time, fair value=present value!
- Subsequent costs only capitalized if they generate additional future benefit.- otherwise expense as repairs & maintenance.

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## Property, Plant and Equipment

Cost of Land:

- Again, usual and routine costs to get the land fit for use:
  - Purchase price, closing, attorney's fees.
  - Cost to demolish existing structure, cleanup.
  - Proceeds from salvage are an offset to the cost.
  - Cost to grade land.
  - Assumption of current mortgage, debts.
  - Land improvements with an indefinite life.
    - Land improvements with separate lives depreciated separately.
    - Land itself is NOT depreciable
- Special public assessments (sidewalks, etc.) included.
- Land held for speculation is classified as an investment.

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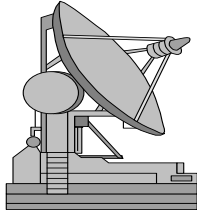
### Property, Plant and Equipment

**Cost of Buildings:**

- Outflows for cost of buildings or cost of construction.
- Same rule as before applies: anything to get an asset in place and functioning is part of the cost of the building.

**Cost of Equipment:**

- **Machinery, office equipment, furniture and fixtures.**
- **Historical cost = Purchase price + costs to put into service**



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### Balance Sheet Presentation

<b>Property, Plant, and Equipment:</b>	
Land	\$ xxx
Land improvements	xxx
Building	xxx
Machinery	xxx
Equipment	xxx
Furniture	xxx
Construction in progress	xxx
Less: Accumulated depreciation	(xxx)
Total property, plant, and equipment	<u>\$ xxx</u>

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### Acquisition Costs of Realty Example

Martin Buber Co. purchased land as a factory site for \$400,000. The process of tearing down two old buildings on the site and constructing the factory required 6 months.

The company paid \$42,000 to raze the old buildings and sold salvaged lumber and brick for \$6,300. Legal fees of \$1,850 were paid for title investigation and drawing the purchase contract. Payment to an engineering firm was made for a land survey, \$2,200, and for drawing the factory plans, \$68,000. The land survey had to be made before definitive plans could be drawn. Title insurance on the property cost \$1,500, and a liability insurance premium paid during construction was \$900. The contractor's charge for construction was \$2,740,000. The company paid the contractor in two installments: \$1,200,000 at the end of 3 months and \$1,540,000 upon completion. Interest costs of \$170,000 were incurred to finance the construction.

Required: Determine the cost of the land and building.

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### Acquisition Costs of Realty Example

	<u>Land</u>		<u>Building</u>
Land	\$400,000		
Razing	42,000		
Salvage	(6,300)		
Legal Fees	1,850		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$400,000	Survey	\$2,200
Razing	42,000		
Salvage	(6,300)		
Legal Fees	1,850		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$400,000	Survey	\$ 2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)		
Legal Fees	1,850		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$400,000	Survey	\$ 2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)		
Legal Fees	1,850		
Title Ins.	1,500		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$400,000	Survey	\$ 2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)	Liability Ins.	900
Legal Fees	1,850		
Title Ins.	1,500		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$ 400,000	Survey	\$2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)	Liability Ins.	900
Legal Fees	1,850	Construction	2,740,000
Title Ins.	1,500		

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$ 400,000	Survey	\$2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)	Liability Ins.	900
Legal Fees	1,850	Construction	2,740,000
Title Ins.	1,500	Interest	170,000

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Acquisition Costs of Realty Example			
<u>Land</u>		<u>Building</u>	
Land	\$ 400,000	Survey	\$2,200
Razing	42,000	Plans	68,000
Salvage	(6,300)	Liability Ins.	900
Legal Fees	1,850	Construction	2,740,000
Title Ins.	<u>1,500</u>	Interest	<u>170,000</u>
	<u>\$ 439,050</u>		<u>\$ 2,981,100</u>

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Self-Constructed Assets
<p>Interest and property taxes are capitalized during construction.  <b>INTEREST CAPITALIZATION DETERMINED:</b></p> <ul style="list-style-type: none"> <li>Capitalization Period: <ul style="list-style-type: none"> <li>Begins when: <ul style="list-style-type: none"> <li>Expenditures for asset are made.</li> <li>Activities for construction have ensued.</li> <li>Interest cost has been incurred.</li> </ul> </li> <li>Ends when one of the three above is not present.</li> </ul> </li> <li>Amount to capitalize: <ul style="list-style-type: none"> <li>Limited to actual amount incurred or avoidable interest whichever is less. <b>DOES NOT REQUIRE SPECIFIC BORROWINGS</b></li> <li>Avoidable interest = weighted average rate (or specific rate if present) times weighted average expenditures.</li> </ul> </li> </ul>



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### Self-Constructed Assets

The amount of interest that may be capitalized is limited to the lower of

- (a) actual interest cost incurred during the period or
- (b) the amount of interest cost incurred during the period that theoretically could have been avoided if the expenditure for the asset had not been made (avoidable interest).

The potential amount of interest that may be capitalized during an accounting period is determined by multiplying interest rate(s) by the weighted-average amount of accumulated expenditures for qualifying assets during the period.

### WHAT IS AVOIDABLE INTEREST?

Company has cash of \$1,000,000  
 Company also has debt of \$10,000,000  
 Debt rate is 10%

Company Can:  
 (A) Use the cash to build a \$1M warehouse.  
 (B) Use the cash to pay-off the debt.

What is the interest expense under (A) Vs. (B)?

	(A) Build Warehouse	(B) Pay-off Debt
Balance outstanding	\$10,000,000	\$9,000,000
Rate	10%	10%
<b>Interest expense</b>	<b>\$1,000,000</b>	<b>\$900,000</b>

If they paid debt instead of building the warehouse, they would "avoid" this much interest.

\$100,000

### IMPORTANT NOTE!!

INTEREST RATE IS ANNUAL- SO DO COMPUTATIONS USING AN ANNUAL BASIS!!!

If an expenditure was made on January 1, 2004 and it is March, then it was a qualifying expenditure for 3/12 of the YEAR NOT 3/3 of the period which has transpired.

ILLUSTRATED IN NEXT EXAMPLE

### INTEREST CAPITALIZATION EXAMPLE

- XYZ purchases land for \$1,000,000 on January 1, 2001 and immediately begins construction on that land.
- They spend \$200,000 on January 31, \$250,000 on February 28 for construction related costs.
- The building is still under construction on March 31, 2001;
- XYZ pays for this with their available cash. The Company has three loans outstanding and the weighted average interest rate on them is 10%. Total interest expense of the Company was \$2,000,000 for the three month period ended March 31, 2004.

What is the amount of interest which should be capitalized for the construction of the asset during the three month period ended March 31, 2004?

## SOLUTION

	Amount	Capitalization Period	Weighted-average Accum. Expend.
January 1 acquisition	1,000,000	3/12	250,000
January 31 costs	200,000	2/12	33,333
February 28 costs	250,000	1/12	20,833
	<u>1,450,000</u>		<u>304,167</u>
Weighted average interest rate of 10%		10.00%	
Weighted average qualifying costs		304,167	
Interest capitalizable		<u>30,417</u>	

Because the Company has \$2 million of interest expense, the capitalizable interest is less than the amount of interest incurred and consequently, all of it can be capitalized as follows (assuming the company already recorded all of the interest expense):

Building	30,417	
Interest expense		30,417

IF THE TOTAL INTEREST EXPENSE FOR THE PERIOD WAS \$25,000, THEN ALL OF IT COULD BE CAPITALIZED, BUT NOT THE FULL AMOUNT OF THE 30,417 "AVOIDABLE", IT WOULD BE:

Building	25,000	
Interest expense		25,000

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## If there is a specific borrowing:

If the Company had a different capital structure, which included a specific construction loan, then you would apply that FIRST and then the weighted average AFTER. So in the previous example, if there was a construction loan in the amount of \$250,000 at 8% and the weighted average rate on all other borrowings was still 10%, you would first compute capitalize interest on the construction loan and then use any additional qualifying expenditures at the 10% wtd average rate:

From previous example: qualifying expenditures were \$304,167. The capitalizable interest would be:

8% rate for \$250,000	\$20,000
10% rate for remaining \$54,167	
of wtd. Avg. qualifyingjng Expend.	<u>\$5,417</u>
TOTAL AVOIDABLE	<u>\$25,417</u>

NOTE THAT THIS IS \$5,000 less than before, which is the difference in the rate (2% annual diff.) times the portion impacted \$250,000=\$5k.

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## EXCHANGE OF NONMONETARY ASSETS

Accounting treatment depends on whether the exchange is with or without commercial substance :

**WITH** commercial Substance:

- There is a business rationale for the exchange which results in substantially different cash flows;
  - Record at fair value of asset given up;
  - Record gain/ loss if book value is different than fair value.

**WITHOUT** commercial Substance:

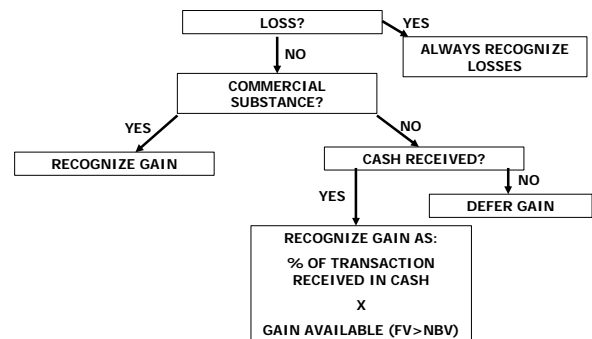
- The business rationale for the exchange does not result in substantially different cash flows;
  - Record new asset at book value;
  - If a loss record it all
  - Defer gains unless cash is **RECEIVED**. If cash received
    - % of transaction in cash is the % of the gain recorded.

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## NONMONETARY FLOWCHART



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### Nonmonetary exchange examples

**WITH COMMERCIAL SUBSTANCE- GAIN:**

Builder, Inc. exchanges a work-truck and \$5,000 cash for a power screed (equipment used in pouring cement slabs). Builder's net book value of the truck is \$10,000 (\$25,000 cost, \$15,000 accumulated depreciation). The truck has a fair value of \$12,000.

Should Builder record a gain on this transaction?  
YES

How much? \$2,000

What is the journal entry?

Accumulated depreciation	\$15,000	
Automobile (old)	\$25,000	
Cash	\$ 5,000	
Gain on exchange	\$ 2,000	
Equipment(new)	\$17,000	

NOTICE: The new equipment is recorded for the fair value of what we gave up (\$12,000 truck and \$5,000 cash= \$17,000)

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### Nonmonetary exchange examples

**WITH COMMERCIAL SUBSTANCE- LOSS:**

Builder, Inc. exchanges a work-truck and \$5,000 cash for a power screed (equipment used in pouring cement slabs). Builder's net book value of the truck is \$10,000 (\$25,000 cost, \$15,000 accumulated depreciation). The truck has a fair value of \$7,000.

Should Builder record a gain on this transaction?  
NO- IT IS A LOSS!

How much is the loss? \$3,000

What is the journal entry?

Accumulated depreciation	\$15,000	
Automobile (old)	\$25,000	
Cash	\$ 5,000	
Loss on exchange	\$ 3,000	
Equipment(new)	\$12,000	

NOTICE: The new equipment is recorded for the fair value of what we gave up (\$7,000 truck and \$5,000 cash= \$12,000)

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### Nonmonetary exchange examples

**WITHOUT COMMERCIAL SUBSTANCE- LOSS:**

RealEstate, Inc. exchanges vacant land with another real estate investor for another piece of vacant land. RealEstate agreed to the exchange as a means of deferring taxes. RealEstate Inc.'s land is worth \$1,000,000 but due to unsuccessful development efforts, their basis in the land is \$1,250,000

Do we record losses on transaction without commercial substance?  
YES

What is the journal entry?

Land (new )	\$1,000,000	
Land (old)	\$1,250,000	
Loss on disposal	\$ 250,000	

NOTICE: The basis is the fair value of the asset received and the loss is pushed through now.

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### Nonmonetary exchange examples

**WITHOUT COMMERCIAL SUBSTANCE- GAIN- and NO CASH RECEIVED:**

RealEstate, Inc. exchanges vacant land with another real estate investor for another piece of vacant land. RealEstate agreed to the exchange as a means of deferring taxes. RealEstate Inc.'s land is worth \$1,000,000 but they only paid \$25,000 for it (they have successfully had the land re-zoned thus adding tremendous value to the land).

Should RealEstate record a gain on this transaction?  
NO- the transaction lacks commercial substance and there is no cash received.

What is the journal entry?

Land (new )	\$25,000	
Land (old)	\$25,000	

NOTICE: The basis carries over. The new land must also be worth \$1 million (or the other guy is an idiot!) but is only recorded at \$25,000. This means that the \$975,000 gain is still deferred and will be recognized when RealEstate actually sells the asset.

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**WITHOUT COMMERCIAL SUBSTANCE- GAIN- and CASH RECEIVED:**  
 RealEstate, Inc. exchanges vacant land with another real estate investor for another piece of vacant land and also RECEIVES \$250,000 in cash. RealEstate agreed to the exchange as a means of deferring taxes. RealEstate Inc.'s land is worth \$1,000,000 but they only paid \$25,000 for it (they have successfully had the land re-zoned thus adding tremendous value to the land).  
 Should RealEstate record a gain on this transaction?  
 YES- the portion of the transaction in cash.  

Cash received	\$250,000	=25%
Cash received + Value of asset received	\$1,000,000	

 The gain is 975,000 and 25% of it is allowed... \$243,750 allowed  
 What is the journal entry?  

Land (new )	\$ 18,750	
Cash	\$250,000	
Land (old)		\$ 25,000
Gain		\$243,750*

 (\$731,250 of \$975,000 gain is deferred as only \$243,750 is recognized)  
 NOTICE: The basis carries over + the gain allowed. This means that \$731,250 of the gain is still deferred and will be recognized when RealEstate actually sells the asset. (New Land Fair Value \$750,000- Deferred Gain 731,250=18,750)

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**Nonreciprocal Transfers**

When an asset is received through donation, the appraisal or fair market value of the asset should be used to establish its value on the books. The credit for this transaction is made to

- (1) a Donated Capital account that would appear in stockholders' equity, or
- (2) revenue.

A recent FASB standard states that, in general, contributions received should be recorded as revenue.

If from an owner, it is definitely capital!

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**Cost Subsequent to Acquisition**

Capitalize or Expense

**For the costs to be capitalized, one of three conditions must be present:**

- (a) the useful life of the asset must be increased,
- (b) the quantity of service produced from the asset must be increased, or
- (c) the quality of the units produced must be enhanced.

Remember that changes in estimate useful life are accounted for on a current and forward basis (make it right for this period and going forward, see materials from 1<sup>st</sup> midterm for more)

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**Problem Facts**

- Keifer Company
  - Exchanges a Warehouse
  - FMV of \$1,300,000
  - Cost of \$1,800,000
  - Accumulated Depreciation of \$800,000
- Keim Corporation:
  - Exchanges a Office Building
  - FMV of \$1,224,000
  - Cost of \$2,160,000
  - Accumulated Depreciation of \$1,188,000
  - Gives Keifer cash of \$76,000