Land and Property Valuation

Prof. Dr. Fabian Thiel

Master Course "Urban Agglomerations" Winter Term 2021/22

Values!



The Berlin Hipster: The radical evil?



Photo: Jens Hohmann



Source: Berlin-Mitte Institut









Neil Smith 1979





Attributes and Importance of Land



Property Ownership, Land and Property Values, Land Use

- Who owns it?
- Who can dispose of it?
- Who can acquire it?
- Who can use it?
- Who can change it?
- Who can stop it being changed?
- Who can profit from it?
- Who have third party interests?

- Market (sales) values
- Rental values
- Construction costs
- Site potential values
- Taxable values

Land Use

Land Use is the interaction between land rights and land management. It includes the activities that human beings undertake upon the land and the rights that are associated with the land. It also includes what is physically on the land.

Land Tenure Information

There is need to determine:









"Timeline": Munich

1990



2000





International Property Valuation 11 - Thiel

Introduction

Market Value: is the most probable selling price, as of a specific date, in cash, or in terms equivalent to cash, or in other precisely revealed terms, for which the specified property rights should sell after reasonable exposure in a competitive market under all conditions requisite to a fair sale, with the buyer and seller each acting prudently, knowledgeable, and for self-interest, and assuming that neither is under undue duress.

Assessment

Assessment: The act of doing mass appraisal for systematic valuation of the totality of the immovable properties of an entire territory at a given date utilizing standardized procedures and statistical testing. Assessment is generally applied for ad valorem property taxation. Mass appraisal is using the same approaches or methods than for appraising but through coded, systematized and simplified processes.

Appraisal

Single Property Appraisal: is a formal opinion of value of a property intended for reliance by identified parties, and for which the appraiser assumes responsibility. The result is a specific valuation for a specific private purpose and used by the client.

Market Analysis

- Define the market area
- Inspect and describe the site and building
- Collect property data (sales, listings, offers, construction costs and depreciation data)
- Analyze the market
- Estimate the highest and best use
- Estimate the market value of the site
- Estimate the depreciated cost of the building
- Estimate the market value

Valuation Standards of the IVSC – "White Book"



Market Value is the estimated amount for which an asset should exchange on the date of valuation between a willing buyer and a willing seller in an arm's-length transaction after proper marketing wherein the parties had each acted knowledgeably, prudently and without compulsion.

(Standard I, Paragraph 3.1)

Section 194 Building Code: Standardised Market Values

The standardised market value is defined as the price which would be achieved in an ordinary transaction at the time when the assessment is made, taking into account the existing legal circumstances and the actual characteristics, general condition and location of the property or other object of assessment, without consideration being given to any extraordinary or personal circumstances.

Section 195 Building Code: Purchasing Price Data

In order to enable the compilation of purchasing price data, a copy of every contract by means of which a person enters into an obligation to convey property for payment or in exchange, or to establish a lease, shall be sent by the office where this is recorded to the committee of experts. This also applies to the offer and acceptance of a contract, where this has been recorded separately, and to agreements before an expropriation authority, resolutions on expropriation, resolutions on the anticipation of a decision within proceedings on land reallocation, resolutions on the preparation of reallocation plans, resolutions on boundaries, and to the surcharge in the case of compulsory auction proceedings in respect of immovable property.

Section 196 Building Code: Land Values

- An assessment shall be made on the basis of the purchasing price data of average local ground values for each section of the municipal territory, taking due account of varying degrees of development; as a minimum requirement such assessment shall be made in respect of building land which has either been exempted from recoupment charges for public infrastructure or in respect of which such charges are due (standard ground values). In areas where building has taken place, standard ground values are to be assessed as if the ground had not been built on.
- = "as though vacant..."

Land Administration System (1)

Institutional level – cooperation through integration of function Land Use **Property Units Property Rights** AGRO/FOREST/WATER/ LAND REGISTRY ENVIRONMENT ... CADASTRE Land use planning and Value development PHYSICAL PLANNING/ TAX CONSTRUCTION **Property development**

Land Administration System (2)



Land Tenure: the allocation and security of rights in lands; the legal surveys of boundaries; the transfer of property through sale or lease; and the management; adjudication of disputes regarding rights and boundaries. **Land Value:** the assessment of the value of land and properties; the gathering of revenues through taxation; and the management and adjudication of land valuation and taxation disputes.

Land-Use: the control of land-use through adoption of planning policies and land-use regulations at various levels; the enforcement of land-use regulations; and the management and adjudication of land-use conflicts. Land Development: the building of new infrastructure; the implementation of construction planning; and the change of land-use through planning permission and granting of permits; public and private (land...) law.

Valuation Guidelines (1)

- Independence: It must be ensured to be independence between valuation function and taxation function
- Uniformity: The land valuation practices must follow a unified standard from one area to another
- Fairness and Equity: The land valuation practices must follow the defined principles and procedure without discriminations

Valuation Guidelines (2)

- Professional competency must be consisted
- Accuracy and reliability of valuation is provided and valuation updating must be defined
- Transparency in valuation process must be provided through participations and disseminations to all stakeholders and ability to appeal valuation on disagreement with valuation results is provided as well, in accordance with defined legal bases and procedure.

Valuation Guidelines (3)

- **Affordability** of LV system and service
- Predictability (no surprises) of immovable property value (e.g., investors)
- Accessibility to supportive information, to self-prove accuracy and fairness
- Income or benefits received from valuation must expense or allocate to local for community development.

"Land": Components

- Comparable, standard ground value
- Circumstances that affect value
- Rights and obligations of properties
- Consideration of the local public market
- Land value, size, consideration of costs for public utilities
- Land value and local infrastructure

The Methods

- Cost Method: the value is estimated as the current cost of reproducing or replacing the improvements (including an appropriate entrepreneurial incentive or profit) minus the loss in value from depreciation plus the land value.
- Direct Comparison Method: the value is indicated by recent sales of comparable properties in the market.
- Income Method: the value is indicated by a property's earning power (cash flow), based on the capitalization of income.
- Development Method (Residual Method): the value is calculated as the site value (lat. residuum) minus redevelopment costs and the developer's profit

Cost Method





Images: Sandra Lohr




Cost Method



Cost Method: Soaked bay window and exterior wall





Cost Method: Soaked bay window and exterior wall



Cost Method: Moisture stains on the ceiling in the attic



Cost Method: Moisture stains



Cost Method: Water in the basement



Cost Method: Water in the basement



Cost Method: Mold



Cost Method: Mold





We do not need more detailed theoretical calculation methods

We need to study the market!

There is a need for research here!

Valuation 3: Replacement Cost Approach

Information you need:

- Site (land and cost of access and infrastructure)
- Preparatory work (demolition, ground stabilization)
- Building (excavation, building shell, installations)
- Equipment and services
- External works (road, green areas, squares)
- Incidental costs
- Furnishings

Cost Method (1)

- Site (land and cost of access and infrastructure)
- Preparatory work (demolition, ground stabilization)
- Building (excavation, building shell, installations)
- External works (road, green areas, squares)
- Furnishings

-	Cost Method (2)	
	Total area in local size units	1,500 m²
	Average cost per local size unit	1,750 €/m²
	Replacement cost of building	2,625,000€
	Adjustment (e.g., lift)	0€
	Depreciation (linear, 20 of 100 years)= 20 % x 2,625,000 € =	525,000€



Valuation 4: Replacement Cost Approach

Total area in local size units 1,500 m² Average cost per local size unit 1,750 €/m² 2,625,000 € Replacement cost of building 0€ Adjustment (e.g., lift) Depreciation (linear, 20 of 100 years)= 20 % x 2,625,000 € = 525,000 € Value of the building 2,100,000 € 500,000 € Value of the land 2,600,000 € = Value of the property Adjustment based on market evidence (properties are sold for 83 % of market value) 0,83

Market value based on cost

2,160,000€

Income Method



52

Income Method





Images: Gregor Hiebert

Income Method





Income Method (1)	
Annual potential gross income	150,000 €
Annual operating expenses	30,000 €
Annual potential net operating income	120,000 €
Annual return of land value	27,500 €
Net operating income	92,500 €

Income Method (2)	
Capitalization rate (multiplier) (years of payment and interest rate)	17,93
Income factor	1,658,525 €
+ Value of land	500,000€
Income value	2,158,525€
Adjustment	0
Market value on income	2,160,000 €

Investment Method also known as Income Capitalization Approach

f. Years Purchase in Perpetuity (YP)

This is the present value of the right to receive \$1 at the end of each year in perpetuity at i compound interest.

The formula is :

```
YP in perpetuity = \underline{1}
```

Example : A is the owner o a freehold interest in a shop yielding a net income of \$250 per annum. Assuming 7%compod interest, calculate the capital value of A's interest.

```
Net income per annum = $250
YP in perpetuity at 7% = <u>1</u> = <u>1</u> = 14.286
I 0.07
Capital value = $3571
```

Valuation 2: Income Approach Annual potential gross income 150,000 € 30,000 € Annual operating expenses Annual potential net operating income 120,000 € Annual return of land value 27,500 € 92,500 € Net operating income Remaining economic lifetime of bld 17,93 1,658,613 € Income factor + Value of land 500,000 € Income value 2,158,613 € Adjustment

Market value on income 2,160,000 €

"Multiplier" to capitalize

1	0,99	0,99	0,98	0,98	0,97	0,97	0,96	0,96	0,95
2	1,97	1,96	1,94	1,93	1,91	1,90	1,89	1,87	1,86
3	2,94	2,91	2,88	2,86	2,83	2,80	2,78	2,75	2,72
4	3,90	3,85	3,81	3,76	3,72	3,67	3,63	3,59	3,55
5	4,85	4,78	4,71	4,65	4,58	4,52	4,45	4,39	4,33
6	5,80	5,70	5,60	5,51	5,42	5,33	5,24	5,16	5,08
7	6,73	6,60	6,47	6,35	6,23	6,11	6,00	5,89	5,79
8	7,65	7,49	7,33	7,17	7,02	6,87	6,73	6,60	6,46
9	8,57	8,36	8,16	7,97	7,79	7,61	7,44	7,27	7,11 ()

1. determine annual gross income	28,473 €
2. minus expenses	- 4,057 €
3. annual net income	24,416 €
4. minus income of land (here: 5.5% of 217,500 €)	- 11,962 €
5. Results in income share of buildings	12,454 €
6. capitalized (remaining life 57 y. / 5.5% yield)	x 17.32
7. Income value of buildings	215,703 €
8. + Land value	217,500 €
9. capitalized earnings value (provisional, if applicable)	433,203 €

60

For the capitalized earnings value method, the respective "multiplier/yield" must be determined.

How does the market value change depending on the property interest rate (yield) and the remaining lifetime of the building (RL) if the net income remains constant?

Show this with a calculation example for a net income of € 100,000 in each case.

Fill in the table and comment the result with the essential basic statements.

	1,0 %	1,5 %	2,0 %	2,5 %	3,0 %	3,5 %	4,0 %	4,5 %	5,0 %
3	2,94	2,91	2,88	2,86	2,83	2,80	2,78	2,75	2,72
4	3,90	3,85	3,81	3,76	3,72	3,67	3,63	3,59	3,55
5	4,85	4,78	4,71	4,65	4,58	4,52	4,45	4,39	4,33
6	5,80	5,70	5,60	5,51	5,42	5,33	5,24	5,16	5,08
7	6,73	6,60	6,47	6,35	6,23	6,11	6,00	5,89	5,79
8	7,65	7,49	7,33	7,17	7,02	6,87	6,73	6,60	6,46
9	8,57	8,36	8,16	7,97	7,79	7,61	7,44	7,27	7,11

	5,5 %	6,0 %	6,5 %	7,0 %	7,5 %	8,0 %	8,5 %	9,0 %	9,5 %	10,0 %
4	3,51	3,47	3,43	3,39	3,35	3,31	3,28	3,24	3,20	3,17
5	4,27	4,21	4,16	4,10	4,05	3,99	3,94	3,89	3,84	3,79
6	5,00	4,92	4,84	4,77	4,69	4,62	4,55	4,49	4,42	4,36
7	5,68	5,58	5,48	5,39	5,30	5,21	5,12	5,03	4,95	4,87
8	6,33	6,21	6,09	5,97	5,86	5,75	5,64	5,53	5,43	5,33
9	6,95	6,80	6,66	6,52	6,38	6,25	6,12	6,00	5,88	5,76

	1,0 %	1,5 %	2,0 %	2,5 %	3,0 %	3,5 %	4,0 %	4,5 %	5,0 %
20	18,05	17,17	16,35	15,59	14,88	14,21	13,59	13,01	12,46
21	18,86	17,90	17,01	16,18	15,42	14,70	14,03	13,40	12,82
22	19,66	18,62	17,66	16,77	15,94	15,17	14,45	13,78	13,16
23	20,46	19,33	18,29	17,33	16,44	15,62	14,86	14,15	13,49
24	21,24	20,03	18,91	17,88	16,94	16,06	15,25	14,50	13,80
25	22,02	20,72	19,52	18,42	17,41	16,48	15,62	14,83	14,09
26	22,80	21,40	20,12	18,95	17,88	16,89	15,98	15,15	14,38
27	23,56	22,07	20,71	19,46	18,33	17,29	16,33	15,45	14,64

5,5% 6,0% 6,5% 7,0% 7,5% 8,0% 8,5% 9,0% 9,5% $\frac{10,0}{\%}$

20	11,95	11,47	11,02	10,59	10,19	9,82	9,46	9,13	8,81	8,51
21	12,28	11,76	11,28	10,84	10,41	10,02	9,64	9,29	8,96	8,65
22	12,58	12,04	11,54	11,06	10,62	10,20	9,81	9,44	9,10	8,77
23	12,88	12,30	11,77	11,27	10,81	10,37	9,96	9,58	9,22	8,88
24	13,15	12,55	11,99	11,47	10,98	10,53	10,10	9,71	9,33	8,98
25	13,41	12,78	12,20	11,65	11,15	10,67	10,23	9,82	9,44	9,08
26	13,66	13,00	12,39	11,83	11,30	10,81	10,35	9,93	9,53	9,16
27	13,90	13,21	12,57	11,99	11,44	10,94	10,46	10,03	9,62	9,24

	1,0 %	1,5 %	2,0 %	2,5 %	3,0 %	3,5 %	4,0 %	4,5 %	5,0 %
20	18,05	17,17	16,35	15,59	14,88	14,21	13,59	13,01	12,46
21	18,86	17,90	17,01	16,18	15,42	14,70	14,03	13,40	12,82
22	19,66	18,62	17,66	16,77	15,94	15,17	14,45	13,78	13,16
23	20,46	19,33	18,29	17,33	16,44	15,62	14,86	14,15	13,49
24	21,24	20,03	18,91	17,88	16,94	16,06	15,25	14,50	13,80
25	22,02	20,72	19,52	18,42	17,41	16,48	15,62	14,83	14,09
26	22,80	21,40	20,12	18,95	17,88	16,89	15,98	15,15	14,38
27	23,56	22,07	20,71	19,46	18,33	17,29	16,33	15,45	14,64

	1,0 %	1,5 %	2,0 %	2,5 %	3,0 %	3,5 %	4,0 %	4,5 %	5,0 %
47	37,35	33,55	30,29	27,47	25,02	22,90	21,04	19,41	17,98
48	37,97	34,04	30,67	27,77	25,27	23,09	21,20	19,54	18,08
49	38,59	34,52	31,05	28,07	25,50	23,28	21,34	19,65	18,17
50	39,20	35,00	31,42	28,36	25,73	23,46	21,48	19,76	18,26
51	39,80	35,47	31,79	28,65	25,95	23,63	21,62	19,87	18,34
52	40,39	35,93	32,14	28,92	26,17	23,80	21,75	19,97	18,42
53	40,98	36,38	32,50	29,19	26,37	23,96	21,87	20,07	18,49
54	41,57	36,83	32,84	29,46	26,58	24,11	21,99	20,16	18,57

	5,5 %	6,0 %	6,5 %	7,0 %	7,5 %	8,0 %	8,5 %	9,0 %	9,5 %	10,0 %
47	16,71	15,59	14,59	13,69	12,89	12,16	11,51	10,92	10,38	9,89
48	16,79	15,65	14,64	13,73	12,92	12,19	11,53	10,93	10,39	9,90
49	16,86	15,71	14,68	13,77	12,95	12,21	11,55	10,95	10,40	9,91
50	16,93	15,76	14,72	13,80	12,97	12,23	11,57	10,96	10,41	9,91
51	17,00	15,81	14,76	13,83	13,00	12,25	11,58	10,97	10,42	9,92
52	17,06	15,86	14,80	13,86	13,02	12,27	11,60	10,99	10,43	9,93
53	17,12	15,91	14,84	13,89	13,04	12,29	11,61	11,00	10,44	9,94

Land Development Method (Residual)







Land Development Method



Source: Derek Stout/Phnom Penh Post; A view of the former Boeung Kak lake site on which Shukaku Erdos joint venture plans to build a large commercial and housing development




Immobilienbewertung 01 - Thiel





Gross development value

Net lettable area m² (80% of 10,000 m² gross) $8,000 \text{ m}^2$

Rental value € per m² 380 €

Annual rental income

3,040,000 €

Yield (8% per year = Year's purchase) (1/0,08=) 12,5

Gross development value:

38,000,000 €

Development costs

Building costs: 10,000 m² x 1,400 €/m² 14,000,000 €

Ancillary cost (5 % of building cost): 700,000 €

Contingencies (5 % of building a. ancillary costs) 735,000 €

Professional fees (13 % of building costs) 1,820,000 €

Total development costs

18,290,300 €

 Total development costs
 18,290,300 €

Profit (20 % of development costs) 3,658,060 €

Total costs plus profit

21,948,360 €

 Residual amount for the land
 16,051,640 €

 (percentage: 3,658,060 €/18.290,300 €

+ 16,051,640 €

(= 10,65 %)

Valuation 6: Residual Approach Development costs

Building costs: 10,000 m² x 1,400 \in /m²14,000,000 \in Ancillary cost (5 % of building cost):700,000 \in Contingencies (5 % of building a. ancillary costs)735,000 \in Professional fees (13 % of building costs)1,820,000 \in Total development costs18,290,300 \in Profit (20 % of development costs)3,658,060 \in Total costs plus profit21,948,360 \in

Residual amount for the land 16,051,640 €

(percentage: 3,658,060 €/18.290,300 € + 16,051,640 € = 10,65 %

Valuation: Questions

1. Summarize the **purpose** and **context** in which the residual valuation method might be used.

2. Explain some of the limitations (and risks) associated with the residual method. Is this approach widely used and accepted in your country, and is it comparable with similar methods?

Valuation: Questions

- A 1 hectare site with planning consent for 15 bedroom houses, 20 three bedroom houses and 10 four bedroom houses is for sale at a fixed price of 2,2 million €. A developer will purchase the site if a profit margin equivalent to 15 percent of the gross development value (GDV) can be realized. New two bedroom houses will sell for 180,000 € in this location, three bedroom will sell for 250,000 € and four bedroom houses for 320,000 €. The total costs to complete the project including construction costs, fees and financing (excluding profit) will be at 7,500,000 €.
 - Calculate whether such a project would meet the developer's profit expectations.

Land Valuation Mapping

Valuation Mapping: Valuation mapping is one of the necessary steps to realize valuation of immovable properties. This step consists of building a sub-layer of the cadastral system integrating: units of neighborhood, agriculture valuation, natural resources, infrastructures etc. Then this valuation mapping is serving as an integrating data and analysis conclusions. This type of mapping is a sub-layer of the cadastral system and part of a territorial information system (Geomatics).

IMMOVABLE PROPERTY RECORD

1	ASSSESSMENT FOLIO	NUMBER									
-		NOMIDER.									
2	PROPERTY ADDRES	or DEET N	A. 4. 6								
		STREET N	AME			No.	SECTOR / SECTION / LOC	CAL REF.			
3						_	_				
	CADASTRE REF						MA.P.No				
		PROV	DISTRICT	COMMUNE	VILLAGE	PARCEL	PARCEL				
			KHAN	SANGKAT			SIZE				
4	OWNER				DEEEDEN						
1	NAME REFERENCES										
1	DISTRICT MAILING ADDRESS(If Different than Property Address)										
1	TITLE TRANSACTION REGISTRATION										
1											
1	-			D / 1			D (M	(78			
1				0 , .	/ / /K		0 / 1	1			
	DECLARED SELLING PRICE US\$ CASH US\$										
								4-1			
1	FINANCING CON	DITION				i		i			
1						OFFER	R FOR SALE				
1	RESTRICTIONS OF	ON RIGHTS					M	YR			
						LK	STED PRICE	US\$			
1								!			
						·					
-											
5				· –	1						
	OCCUPANT:	SAME AS OWN	ER	Y	N IF NO	COMPLETE NE	EXT LINE				
	NAME				REFEREN	CES					
	REASONS OF NO	OWNERSHIP:	I.NO CADASTRE		2.NO SPOR	RADIC REGISTR	ATION				
	3.NO	ESSAY ON SPO	RADIC REGISTRA	TION	4.PARCEL	BOUNDARY CO	NELICES				
	6	FEFEETRE ON		OTED IN DIOOK	24)						
		EFFECTIVE OW	NER(IF NOTAS LI	ISTED IN BLOCK	#4)						
6	EFFECTIVE PRE	DOMINAN	USE:								
	RESIDENTIAL		FOREST		MU	JLTI USES	UNIT OF	NEIGHBOURHOOD			
	COMMERCIAL		TRANSPORTA	20M			PROFILE	S:			
	INDU ST RIAL		CULTUREA	SPORT	SHO	P-HOUSE					
	SERVICES		VAC AN T D	ROR	CON	M-HOUSE					
	VARIOUS										
	AGRICOLIURE		1				REF. NO				
1				OTH	ER USES						
7	7-1 ROAD			7-2 SER VI	CES	7-3 OTHE	R CHARACTERISTICS				
	NATIONAL		NARROW	SEWER	NETWORK	s	QUARE LOT S	TEEP SLOPE			
1	BUSY		PATH	WATER	NETWORK	REC	TANGULAR MODE	RATE SLOPE			
	COMMERCIAL		PAVED	10/0	TER WELL	1		BOVE ROAD			
	SEM COMMERCINE	<u> </u>			CEDTIC						
	SEMI-COMMERCIAL	- '	AVED		SEPTIC	EXT					
	RESIDENTIAL		CORNER	EL	ECTRICITY	4	T-LOT DIFFIC	ULTACCESS			
	SECONDARY		BAD	STR	EETLIGHT	F	PRIMEMEW SU	JBDIVIDABLE			
	RURAL	DOUI	BLE FRONT		SIDEWALK		FARVIEW	DN-BUILDING			
	NO ISSUE		OTHER		OTHER	WA	TER FRONT	OTHER			
				'	L	1	L+	L			

4

IMMOVABLE PROPERTY RECORD BUILDING DESCRIPTION AND VALUATION / LAND VALUATION / TOTAL VALUE



IMMOVABLE PROPERTY CARD BUILDING-ADDITIONAL RECORD PAGES



IMMOVABLE PROPERTY RECORD LEASED PROPERTIES AND SPECIAL EQUIPMENTS

	ERTIED	NOTE. PAG	E 3 OK 3-1 - BC	JEDING DESCR	FIIONISINE	CESSART									
13-1 USE/CODE	13-2 AREA		13-3 RENT	13-4 VIEV	v	13-5 IMMEDIATIN									
REFER BLOCK 6 TOTAL BUILDI		ING	GROSS ANNUA			13-6 IMMEDIATINEIGHBOURHOO									
		A IN SO MTR	INCOME (US/S	SIDE	FAIR	NON HOMOG	DIEASANT								
	icertrebrate	or in organitie	\$	BACK	RAD	OUNET	DIRTY								
	, L	I			0.00	aron Li	Circle								
		1	3-6 SERVICES IN	CLUDED IN THE R	ENT	-									
GU	ARDIAN	DISH WASHE	R	CLIMATIZ		PAINTING									
JANITOR MAID FURNITURE COMPLETE FURNITURE PARTIAL		STOVE REFRIGERATOR CLOTH WASH.MACHINE CLOTH DRYER		HOT WATER INT.PARKING EXT.PARKING SWIMMING POOL		GARAGE COLLECT SEWER CHARGES WATCH CHARGES									
								EL	EVETOR	ELECTRICITY	r	SPORT CENTER	2	INTERCOM	
									LIFT	GAZ		STORAGE		ANTI BURGLER SYSTE	EM
								OTHER (PP	(ECISE)						
13-7 NOTES :				13-8 MAR KET/ F	EF.	13-9 G.I.M									
				SALES ON COMPARABLE		GROSS INCOME MULTIPLIE									
				PROPERTIES F	ILE NO	REF. FILE									
BLOCK 12 ON TOTA	AL PROPERTY V	ALUE WILL INTE	ERATE THE GA												
SPECIAL MANAG		ONENTS													
-PARKING PRM. : ASPHALT EARTH LIGHTING (- Fence : - SERVICE STATION		REA 2 or N 2 UMBER 2 ENGHT 2					DEPRE- CIATION								
PUMPS	N	UMBER /	^			ĕ	REF. FILE								
UNDERGR		0111145	× [
LANKS		OLOME /				[5]									
-PETROLEUM TANKS ABOVE GROUND :	No 1	VOLUME/EACH	× [
- ELEVATORS	No	FLOOR NO.	×]∙[TRANSFER BLOCK 10								
- AUT. STAIRS		FLOOR NO.	×												
- OTHERS			×												
		REF DATES	9												
INSPECTOR'S S	SIGNATURE +		5												
INSPECTOR'S															
INSPECTOR'S S															

87