
Estimate Norms for Feasibility Studies on Irrigation Projects (Survey Norms)

- 1. Feasibility Study**
 - 2. Pre- Feasibility Study**
 - 3. Identification Study**
-

**His Majesty's Government
Ministry of Water Resources
Department of Irrigation
Feasibility Study Project**

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**Estimate Norms
For
Feasibility Studies on Irrigation Projects
Detail Feasibility Study**

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Feasibility Study Project
Maharajgunj, Kathmandu

1 FIELD WORK

1.1 HEADWORK SITE

1.1.1 SITE SELECTION (FLY LEVEL SURVEY)

Manpower required

Surveyor	1
Overseer	2
Labour	19
Guide	1
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water man	2

Performance criteria

Hills	6 km/day
Terai	8 km/day

1.1.2 CONTOUR SURVEY

Manpower required:

Surveyor	1
Overseer	2
Labour	22
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Waterman	2
Peg man	4

Performance Criteria:

River Type	days
Small	1
Medium	2
Large	3

Note:

River type	Hills	Terai
1. Small	Width <5 m; Area < 3 ha	Width <10 m; Area < 5ha
2. Medium	Width <25 m; Area <5 ha	width <50 m; Area <10 ha
3. Large	Width >25 m; Area > 5 ha	Width >50 m; Area >10 ha

1.1.3 L-SECTION AND X-SECTION SURVEY

Manpower required:

Surveyor	1
Overseer	2
Labour	22
Chainmen	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water man	2
Peg man	4

Performance Criteria:

River Type	days
Small	1
Medium	1.5
Large	2

Note:

River type	Hills	Terai
1. Small	Width <5 m	width <10 m
2. Medium	Width <25 m	width <50 m
3. Large	Width >25 m	width >50 m

1.1.4 GEOLOGICAL SURVEYManpower required:

Geologist	1
Assistant	1
Labour	12

2 labours can dig 1 pit a day
pit size -1*1*1.5 meter

Performance Criteria:

River Width	Pits C/C	Days
< 20 meter	4 meter	1
< 50 meter	5 meter	2
<100 meter	7 meter	2.5
>100 meter	10 meter	3

1.1.5 HYDROLOGICAL SURVEY - (+WATER QUALITY TEST)Manpower required:

Hydrologist	1
Assistant	1
Labour	4
Guide	1
Labours	3

Performance Criteria:

Hills	3 days
Terai	3 days

1.2 CANAL ALIGNMENT**1.2.1 LAYOUT SURVEY**Manpower required

Surveyor	1
Overseer	2
Labour	9
Staff man	2
Site clearance	2
Instrument man	1
Note taker	1
Water person	2
Peg man	2

Performance criteria

Hills	3 km/day
Terai	6 km /day

1.2.2 L-SECTION SURVEY

Manpower required:

Surveyor	1
Overseer	2
Labour	26
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water man	2
Peg man	4
Ranging man	4

Performance Criteria:

Hills	3 km/day
Terai	6 km /day

1.2.3 X-SECTION SURVEY

Manpower required:

Surveyor	1
Overseer	2
Labour	22
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Waterman	2
Peg man	4

Performance Criteria:

Location	Distance c/c	Km/day
Hills	50 meter	1.5
Terai	100 meter	3.0

1.2.4 BENCH MARK SURVEY

Manpower required:

Surveyor	1
Overseer	2
Labour	26
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water man	2
Pit digger	4
Pillar Carrier	4
Pillar Size	0.15*0.15*0.50

Performance Criteria:

Location	Distance c/c	BM/day
Hills	0.5 Km	10
Terai	1.0 Km	10

1.2.5 GEOLOGICAL SURVEY

Manpower required:

Geologist 1
 Assistant 1
 Labour 12
 2 labours can dig 1 pit a day
 Pit size 1*1*1.5 meter

Performance Criteria:

Location	Distance c/c	km/day
Hills	0.25 Km	1.5
Terai	0.25 Km	1.5

1.2.6 INFILTRATION RATE SURVEY

Manpower required:

Geologist 1
 Assistant 1
 Labour 4
 Water carrier 3
 Digger 1

Performance Criteria:

Location	Distance c/c	km/day
Hills	0.5 Km	1
Terai	0.5 Km	1

1.3 CROSS DRAINAGE WORKS

1.3.1 CONTOUR, L-SECTION AND X-SECTION SURVEY

Manpower required

Surveyor 1
 Overseer 2
 Labour 22
 Chainman 4
 Staff man 4
 Site clearance 4
 Instrument man 2
 Note taker 2
 Water person 2
 Peg man 4

Performance criteria

Hills 4 CD/day
 Terai 6 CD/day

1.3.2 GEOLOGICAL SURVEY

Manpower required:

Geologist 1
 Assistant 1
 Labour 12
 2 labours can dig 1 pit a day
 Pit size 1*1*1.5 meter

Performance Criteria:

CD-Width	Centre to Centre	days
< 20 meter	4 meter	1
<50 meter	5 meter	2
<100 meter	7 meter	2.5
>100 meter	10 meter	3

1.3.3 HYDROLOGICAL SURVEY*Manpower required:*

Hydrologist	1
Assistant	1
Labour	4
Guide	1
Labourers	3

Performance Criteria:

Hills	4 CD/day
Terai	4 CD /day

1.4 COMMAND AREA- for Hills and Terai**1.4.1 TRAVERSE LINE SURVEY***Manpower required*

Surveyor	1
Overseer	2
Labour	26
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water person	2
Peg man	4
Ranging man	4

Performance criteria

Command Area	Days
<100 ha	2
<200 ha	3.5
<300 ha	4.5
<500 ha	5
<1000 ha	6
< 5000 ha	7.5
>5000 ha	10

1.4.2 TOPOGRAPHICAL SURVEY*Manpower required:*

Surveyor	1
Overseer	2
Labour	24
Chainman	4
Staff man	4
Site clearance	2
Instrument man	2
Note taker	2
Water person	2
Peg man	4
Ranging man	4

Performance Criteria:

Hills	20 ha/day
Terai	30 ha /day

1.4.3 BENCH MARK SURVEYManpower required:

Surveyor	1
Overseer	2
Labour	26
Chainman	4
Staff man	4
Site clearance	4
Instrument man	2
Note taker	2
Water person	2
Pit digger	4
Pillar Carrier	4
Pillar size	0.15*0.15*0.5

Performance Criteria:

Location	Distribution	BM/day
Command area	1 BM/50 ha	10

1.4.4 AGRICULTURAL SURVEYManpower required

Agronomist	1
Assistant	1
Labour	1
Guide	1

Performance criteria

Command Area	Days
<100 ha	2
<200 ha	3
<300 ha	4
<500 ha	5
<1000 ha	6
> 1000 ha	7

1.4.5 SOIL SURVEYManpower required

Geologist	1
Assistant	1
Labour	4
2 labourers can dig 1 pit a day	
Pit size 1*1*1.15 meter	

Performance criteria

Command Area	Distribution	Days
<100 ha	One sample /25 ha	2
<200 ha	One sample /35 ha	3
<400 ha	One sample /50 ha	4
<700 ha	One sample /70 ha	5
<1000 ha	One sample /90 ha	6
< 1500 ha	One sample /110 ha	7
<2000 ha	One sample /130 ha	8
>2000 ha	One sample /150 ha	9

1.4.6 INFILTRATION RATE SURVEYManpower required:

Geologist	1
Assistant	1

Labour	4
Water carrier	3
Digger	1

Performance Criteria:

Location	Distribution	IT/day
Command area	1 IT /50 ha	2

Note: IT= Infiltration Test

1.4.7 SOCIO-ECONOMICAL SURVEYManpower required

Geologist	1
Assistant	1
Labour	1
Guide	1

Performance criteria

Command Area	Days
<100 ha	5
<200 ha	6
<300 ha	7
<500 ha	8
<1000 ha	9
> 1000 ha	10

1.5 MISCELLANEOUS - for Hills and Terai**1.5.1 CAMP ESTABLISHMENT**Manpower required

Labour	5
Cook	1
Camp worker	4

Performance criteria

Cost will be awarded according to the total Man days required for the engineer

Equipment requirement

Item	Quantity	Amount/days
Large Tent	1	Nrs. 150/-
Small Tent	8	Nrs. 400/-
Camp Bed	15	Nrs. 300/-
Sleeping Bag	15	Nrs. 150/-
Furniture	8	Nrs. 150/-
Utensils	LS	Nrs. 100/-
Total		Nrs. 1,250/-

Compensation of NRs. 1,250/- per day will be awarded for the duration of the fieldwork period.

1.5.2 TRANSPORTATION SURVEYManpower:

Expert	7
Assistant	8

Performance Criteria:

Cost will be awarded according to the location of the project.

Manpower:

Team Leader	1 person/ day
Porter	20 person/ day

Performance Criteria:

Cost will be awarded according to the location of the project.

Equipment

Item	Quantity	Amount /day
Theodolite	1	Nrs. 150/-
Level Instr.	2	Nrs. 150/-
Others	2	Nrs. 50/-
Total		Nrs. 350/-

Compensation of Nrs. 350/- per day will be awarded for the duration of the field work period.

2 OFFICE WORK**1. DESK STUDY****2.1.1 DATA COLLECTION, COMPILATION AND REPORT PRESENTATION**Manpower required

Engineer	1
Overseer	2
Typist	1
Peon	1

Performance criteria

Minor	5 days
Major	7 days

2.2 HEADWOK SITE**2.2.1 CONTOUR, L-SECTION AND X-SECTION**Manpower required

Engineer	1
Overseer	2
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	5 days
Major	6 days

Note:

Project Type	Hills	Terai
I Minor	Width < 5 m; Area < 3 ha	Width <10 m; Area < 5 ha
II Major	Width > 5 m; Area > 3 ha	Width >10 m; Area > 5 ha

2.2.2 GEOLOGYManpower required

Geologist	1
Assistant	1
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	4 days
Major	5 days

Note:

Project Type	Hills	Terai
I Minor	Width < 10m	Width <50 m
II Major	Width > 10 m	Width >50 m

2.2.3 HYDROLOGYManpower required

Hydrologist	1
Assistant	1
Typist	1
Peon	1

Performance criteria

Minor	3 days
Major	3 days

2.2.4 DESIGN AND DRAWINGSManpower required

Engineer	1
Overseer	2
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	5 days
Major	10 days

Note:

Project Type	Hills	Terai
I Minor	Width < 10m	Width <50 m
II Major	Width > 10 m	Width >50 m

2.2.5 ESTIMATEManpower required

Engineer	1
Overseer	2
Typist	1
Peon	1

Performance criteria

Minor	4 days
Major	7 days

Note:

Project Type	Hills	Terai
I Minor	Width < 10m	Width <50 m
II Major	Width > 10 m	Width >50 m

2.3 CANAL ALIGNMENT**2.3.1 LAYOUT**Manpower required

Engineer	1
Overseer	2
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	2 km /day
Major	2 km /day

2.3.2 CONTOUR, L-SECTION AND X-SECTIONManpower required

Engineer	1
----------	---

Overseer	2
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	2 km /day
Major	2 km /day

2.3.3 GEOLOGY

Manpower required

Geologist	1
Assistant	1
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	10 pits/day	= 2km/day
Major	10 pits/day	= 2 km/day

2.3.4 DESIGN AND DRAWINGS

Manpower required

Engineer	1
Overseer	2
Draftsman	1
Typist	1
Peon	1

Performance criteria

Minor	3 days
Major	6 days

Note:

Project Type	Hills	Terai
I Minor	Q < 0.5 m ³ /s; C.L. < 5 km	Q < 1.0 m ³ /s; C.L. < 7 km
II Major	Q > 0.5 m ³ /s; C.L. > 5 km	Q > 1.0 m ³ /s; C.L. > 7 km

2.3.5 ESTIMATE

Manpower required

Engineer	1
Overseer	2
Typist	2
Peon	1

Performance criteria

Minor	4 km/day
Major	4km/day

Note:

1. Project Type	2. Hills	3. Terai
I Minor	Q < 0.5 m ³ /s; C.L. < 5 km	Q < 1.0 m ³ /s; C.L. < 7 km
II Major	Q > 0.5 m ³ /s; C.L. > 5 km	Q > 1.0 m ³ /s; C.L. > 7 km

2.4 CROSS DRAINAGE WORKS

2.4.1 CONTOUR, L-SECTION AND X-SECTION

Manpower required

Engineer	1
Overseer	2
Draftsman	1

Typist 1
Peon 1

Performance criteria

Minor 3 CD /day
Major 2 CD /day

Note:

Project Type	Hills	Terai
I Minor	Width < 5m	Width < 10m
II Major	Width > 5m	Width > 10m

2.4.2 GEOLOGYManpower required

Geologist 1
Assistant 1
Draftsman 1
Typist 1
Peon 1

Performance criteria

Minor 3 CD/day
Major 2 CD /day

Note:

Project Type	Hills	Terai
I Minor	Width < 5m	Width < 10m
II Major	Width > 5m	Width > 10m

2.4.3 HYDROLOGYManpower required

Hydrologist 1
Assistant 1
Typist 1
Peon 1

Performance criteria

Minor 3 CD/day
Major 2 CD /day

2.4.4 DESIGN AND DRAWINGSManpower required

Engineer 1
Overseer 2
Draftsman 1
Typist 1
Peon 1

Performance criteria

Minor 1 CD/2 days
Major 1 CD/4 days

Note:

Project Type	Hills	Terai
I Minor	Q < 0.5 m ³ /s Span < 10 km	Q < 1.0 m ³ /s Span < 25m
II Major	Q > 0.5 m ³ /s Span > 10 m	Q > 2.0 m ³ /s Span > 25 m

2.4.5 ESTIMATEManpower required

Engineer 1

Overseer 2
 Typist 1
 Peon 1

Performance criteria

Minor 2 CD /day
 Major 2 CD /day

Note:

Project Type	Hills	Terai
I Minor	$Q < 0.5 \text{ m}^3/\text{s}$; Span < 10 m	$Q < 1.0 \text{ m}^3/\text{s}$; Span < 25 m
II Major	$Q > 0.5 \text{ m}^3/\text{s}$; Span > 10m	$Q > 1.0 \text{ m}^3/\text{s}$; Span > 25m

2.5 COMMAND AREA- for Hills and Terai**2.5.1 TRAVERSE LINE**Manpower required

Engineer 1
 Overseer 2
 Draftsman 1
 Typist 1
 Peon 1

Performance criteria

Command Area	Days
<200 ha	2
<500 ha	3
<1000 ha	4
> 1000 ha	5

2.5.2 TOPOGRAPHYManpower required:

Engineer 1
 Overseer 2
 Draftsman 1
 Typist 1
 Peon 1

Performance Criteria:

Hills 25 ha/day
 Terai 50 ha /day

2.5.3 AGRICULTURALManpower required

Agronomist 1
 Assistant 1
 Typist 2
 Labour 1

Performance criteria

Minor 7 days
 Major 7 days

2.5.4 GEOLOGYManpower required:

Geologist 1
 Assistant 1
 Typist 2
 Peon 1

Performance Criteria:

Command Area	Days
< 500 ha	3
<1000 ha	5
<1500 ha	7
>1500 ha	10

2.5.5 SOCIO-ECONOMYManpower required

Economist	1
Assistant	1
Typist	2
Peon	1

Performance criteria

Command Area	Days
<500 ha	7
<1000 ha	8
<1500 ha	9
>1500 ha	10

2.6 Miscellaneous- for Hills and Terai**2.6.1 PLANNING AND MANAGEMENT (FOR CONSTRUCTION)**Manpower required

Expert	1
Assistant	2
Typist	1
Peon	1

Performance criteria

Minor	5 days
Major	10 days

Note:

Project Type	Hills	Terai
I Minor	C.A. < 100 ha	C.A. < 500 ha
II Major	C.A. > 100 ha	C.A. > 500 ha

2.6.2 RATE ANALYSISManpower required

Engineer	1
Overseer	2
Typist	1
Peon	1

Performance criteria

Minor	6 days
Major	6 days

2.6.3 ECONOMIC ANALYSISManpower required

Economist	1
Assistant	1
Typist	1
Peon	1

Performance criteria

Minor	5 days
Major	7 days

2.6.4 REPORT PREPARATION*Manpower required*

Expert	1
Assistant	2
Typist	2
Peon	1

Performance criteria

Minor	15 days
Major	25 days

Note:

Project Type	Hills	Terai
I Minor	C.A. < 100 ha	C.A. < 500 ha
II Major	C.A. > 100 ha	C.A. > 500 ha

2.6.5 OFFICE EQUIPMENT*Performance criteria*

Minor	Nrs. 10,000.00
Major	Nrs. 15,000.00

Note:

Project Type	Hills	Terai
I Minor	C.A. < 100 ha	C.A. < 500 ha
II Major	C.A. >100 ha	C.A. >500 ha

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ABSTRACT OF COST OF..... IRRIGATION PROJECT

District: Zone:

S.N.	Item	Quantity	Unit	Rate	Amount	Remarks
A	<u>Fieldwork</u>					
1	experts					
2	assistants					
3	labourers					
B	<u>Officework</u>					
1	experts					
2	assistants					
3	Draftsman					
4	typists					
5	peons					
C	<u>Transport</u>					
1	experts					
2	assistants					
3	porters					
4	fare					
D	<u>Equipment</u>					
1	theodolite					
2	level/other					
3	tool/plant					
E	<u>Lab. Test</u>					
1	Soil test					
2	Others					
F	<u>Bench Mark</u>					
G	<u>Miscell.</u>					
	Sub Total					
	TAX					
	Grand Total					

In Words:

His Majesty's Government
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Feasibility Study Project

QUANTITY CALCULATION..... IRRIGATION PROJECT

District: Zone:

Canal Length: km Cross-drainage no. :
 Command Area: ha Major/Minor

S. N.	Item	Mandays					Remarks
		Exp.	Ass.	Draft.	Typ.	Lab.	
I	FIELD						
A	<u>Headwork</u>						
1	Site sel.						
2	Contour						
3	L-X sect.						
4	Geology						
5	Hydrology						
B	<u>Canal</u>						
1	layout						
2	L-section						
3	X-section						
4	B.M.						
5	Geology						
6	Infilter						
C	<u>CD-works</u>						
1	Cont./L/X						
2	geology						
3	hydrology						
D	<u>C. Area</u>						
1	traverse						
2	topo						
3	B.M.						
4	agricult.						
5	soil						
6	infilter.						
7	socio-ec.						
	Sub Total						

S. N.	Item	Mandays					Remarks
		Exp.	Ass.	Draft.	Typ.	Lab.	
II	OFFICE						
A	<u>Desk</u>						
1	report						
B	<u>Headwork</u>						
1	Cont./L/X						
2	geology						
3	hydrology						
4	design						
5	estimate						
C	<u>Canal</u>						
1	layout						
2	Cont./L/X						
3	geology						
4	Design						
5	estimate						
D	<u>CD-works</u>						
1	Cont./L/X						
2	geology						
3	hydrology						
4	design						
5	estimate						
E	<u>C. Area</u>						
1	traverse						
2	topo						
3	agricult.						
4	geology						
5	socio-ec.						
F	<u>Miscell.</u>						
1	planning						
2	rates						
3	economic						
4	report						
	Sub Total						

His Majesty's Government
Ministry of Water Resources
Department of Irrigation
Feasibility Study Project

**Estimate Norms
For
Feasibility Studies on Irrigation Projects
Pre- Feasibility Study**

Feasibility Study Project
Maharajgunj, Kathmandu

1 FIELD WORK

1.1 HEADWORK SITE

1.1.1 SITE SELECTION (FLY LEVEL SURVEY)

Manpower required

Senior Engineer	1
Overseer	1
Labour	10
Guide	1
Chainman	2
Staff man	2
Site clearance	2
Instrument man	1
Note taker	1
Water person	1

Performance criteria

Hills	6 km/day
Terai	8 km/day

1.1.2 L-SECTION & X- SECTION SURVEY

Manpower required:

Senior Engineer	1
Overseer	1
Labour	11
Chainman	2
Staff man	2
Site clearance	2
Instrument man	1
Note taker	1
Water person	1
Peg man	2

Performance Criteria:

All River types	1day
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1.1.3 HYDROLOGICAL SURVEY

Manpower required:

Senior Engineer	1
Overseer	1
Labour	4
Labours	4

Performance Criteria:

All Projects	2 days
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1.2 CANAL ALIGNMENT

1.2.1 LAYOUT SURVEY

Manpower required

Senior Engineer	1
Overseer	1
Labour	9
Staff man	2
Site clearance	2
Instrument man	1

Note taker	1
Water person	1
Peg man	2
<u>Performance criteria</u>	
All projects	3 days

1.3 CROSS DRAINAGE WORKS

1.3.1 HYDROLOGICAL SURVEY

Manpower required:

Hydrologist	1
Assistant	1
Labour	4
Guide	1
Labourers	3

Performance Criteria:

All projects 3CD/day

Note: Only major cross drainage with a river width of more than 10 meter bank to bank or with a discharge of more than 200 l/s are to be assessed.

1.4 COMMAND AREA

1.4.1 AREA SURVEY

Manpower required

Senior Engineer	1
Overseer	1
Labour	9
Staff man	2
Site clearance	2
Instrument man	1
Note taker	1
Water person	1
Peg man	2

Performance criteria

Hills	1 day
Terai	2days

1.4.2 AGRICULTURAL SURVEY

Manpower required:

Agronomist	1
Assistant	1
Labour	1
Guide	1

Performance Criteria:

All projects 1 day

1.4.3 SOCIO-ECONOMICAL SURVEY

Manpower required:

Economist	1
Assistant	1
Labour	1

Performance Criteria:

All projects +2 days

1.5 MISCELLANEOUS

1.5.1 TRANSPORTATION SURVEY

Manpower:

Expert	2
Assistant	2

Performance Criteria:

Cost will be awarded according to the location of the project.

Manpower:

Porter	3 persons/day
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Performance Criteria:

Cost will be awarded according to the location of the project.

1.5.2 EQUIPMENT

Performance Criteria

Item	Quantity	Amount/day
Level instrument	1	NRs. 75
Others		NRs. 50
Total		NRs 125

A compensation of NRs. 125 per day will be awarded for the duration of the field work period.

2 OFFICE WORK

2.1 DESK STUDY

2.1.1 DATA COLLECTION, COMPILATION AND REPORT PRESENTATION

Manpower required

Senior Engineer	1
Overseer	1
Typist	1
Peon	1

Performance criteria

All projects	4 days
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2.2 Headwork Site

2.2.1 L-SECTION AND X-SECTION

Manpower required

Senior Engineer	1
Overseer	1
Draftsman	1
Typist	1
Peon	1

Performance criteria

All projects	2 days
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2.2.2 HYDROLOGY

Manpower required

Hydrologist	1
Assistant	1
Typist	1
Peon	1

Performance criteria

All projects	1 day
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2.2.3 DRAWINGS

Manpower required

Engineer	1	
Overseer		1
Draftsman		1
Typist		1

Performance criteria

All projects	2 days
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2.3 CANAL ALIGNMENT

2.3.1 LAYOUT

Manpower required

Senior Engineer	1
Overseer	1
Draftsman	1
Typist	1
Peon	1

Performance criteria

All projects	2 days
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2.4 CROSS DRAINAGE WORKS

2.4.1 HYDROLOGY

Manpower required

Hydrologist	1
Assistant	1
Typist	1
Peon	1

Performance criteria

All projects	8 CD/day
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2.5 COMMAND AREA

2.5.1 AREA

Manpower required

Engineer	1
Overseer	1
Draftsman	1
Typist	1
Peon	1

Performance criteria

All Projects	1 day
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2.5.2 AGRICULTURAL

Manpower required

Agronomist	1
Assistant	1
Typist	1
Peon	1

Performance criteria

All projects	1 day
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2.5.3 HYDROLOGY

Manpower required:

Hydrologist 1
Assistant 1
Typist 1
Peon 1

Performance Criteria:

All Projects 1 day

2.5.4 SOCIO-ECONOMY

Manpower required

Economist 1
Assistant 1
Typist 1
Peon 1

Performance criteria

All Projects 3+2 days

2.6 MISCELLANEOUS

2.6.1 REPORT PREPARATION

Manpower required

Engineer 1
Typist 1
Peon 1

Performance criteria

All Projects 2 days

2.6.2 OFFICE EQUIPMENT

Performance Criteria

All projects NRs. 2000

His Majesty's Government
 Ministry of Water Resources
 Department of Irrigation
 Feasibility Study Project

ABSTRACT OF COST OF IRRIGATION PROJECT

District: Zone:

S.N.	Item	Quantity	Unit	Rate	Amount	Remarks
A	<u>Fieldwork</u>					
1	Experts					
2	Assistants					
3	Labourers					
B	<u>Office work</u>					
1	Experts					
2	Assistants					
3	Draftsman					
4	Typists					
5	Peons					
C	<u>Transport</u>					
1	Experts					
2	Assistants					
3	Porters					
4	Fare					
D	<u>Equipment</u>					
1	Level/other					
2	Tool/plant					
	<u>Miscell.</u>					
	Sub total					
	Tax					
	Cont.					
	Grand total					

In Words:

His Majesty's Government
 Ministry of Water Resources
 Department of Irrigation
 Feasibility Study Project

QUANTITY CALCULATION IRRIGATION PROJECT
 District: Zone:

Canal Length : km Cross-drainage no. :
 Command Area: ha Major/Minor

S. N.	Item	Mandays					Remarks
		Exp.	Ass.	Draft.	Typ.	Lab.	
I	Field						
A	<u>Headwork</u>						
1	Site sel.						
2	L-x sect.						
3	Hydrology						
B	<u>Canal</u>						
1	Layout						
C	<u>Cd-works</u>						
1	Hydrology						
D	<u>C. Area</u>						
1	Area sur.						
2	Agricult.						
3	Socio-ec.						
E	Misscell.						
1	Transp.						
	Sub total						

S. N.	Item	Mandays					Remarks
		Exp.	Ass.	Draft.	Typ.	Lab.	
II	OFFICE						
A	<u>Desk</u>						
1	Report						
B	<u>Headwork</u>						
1	Cont./l/x						
2	Hydrology						
3	Drawings						
C	<u>Canal</u>						
1	Layout						
D	<u>Cd-works</u>						
	Hydrology						
	Design						
	Estimate						
E	<u>C. Area</u>						
1	Area						
2	Agricult.						
3	Hydrology						
4	Socio-ec.						
F	<u>Miscell.</u>						
1	Report						
	Sub Total						

His Majesty's Government
Ministry of Water Resources
Department of Irrigation
Feasibility Study Project

**Estimate Norms
For
Feasibility Studies on Irrigation Projects
Identification Survey**

Feasibility Study Project
Maharajgunj, Kathmandu

1 FIELD WORK

1.1 HEADWORK SITE

1.1.1 HYDROLOGICAL SURVEY

Manpower required

Overseer 1

Labour 4

Performance Criteria

All Projects: 1 day

1.2 CANAL ALIGNMENT

1.2.1 LAYOUT SURVEY

Manpower required

Overseer 1

Labour 4

Chainman 2

Note-taker 1

Waterman 1

Performance Criteria

All Projects: 1 day

1.3 COMMAND AREA

1.3.1 SOCIO-ECONOMIC SURVEY

Manpower required

Overseer 1

Labour 1

Guide 1

Performance Criteria

All Projects: 1 day

1.4 MISCELLANEOUS

1.4.1 TRANSPORTATION

Manpower required

Overseer

Performance Criteria

Cost will be awarded according to the location of the project.

Equipment

Performance Criteria

Item	Quantity	Amount/day
Various		NRs. 50
Total		NRs 50

A compensation of NRs. 50 per day will be awarded for the duration of the fieldwork period

2 OFFICE WORK

2.1 REPORT

2.1.1 DATA COLLECTION, COMPILATION AND REPORT PRESENTATION

Manpower required

Overseer	1
Typist	1
Peon	1

Performance Criteria

All Projects:	7 days
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His Majesty's Government
 Ministry of Water Resources
 Department of Irrigation
 Feasibility Study Project

ABSTRACT OF COST OF IRRIGATION PROJECT
 District: Zone:

S.N.	Item	Quantity	Unit	Rate	Amount	Remarks
A	<u>Fieldwork</u>					
1	Overseer					
2	Laborers					
B	<u>Office work</u>					
1	Overseer					
2	typists					
3	peons					
C	<u>Transport</u>					
1	Overseer					
2	Porter					
3	Fare					
D	<u>Equipment</u>					
1	Various					
	Miscell.					
	Sub Total					
	Tax					
	Grand total					

In words:

His Majesty's Government
 Ministry of Water Resources
 Department of Irrigation
 Feasibility Study Project

QUANTITY CALCULATION IRRIGATION PROJECT
 District: Zone:

Canal Length : km Cross-drainage no. :
 Command Area: ha Major/Minor

S. N.	Item	Mandays					Remarks
		Exp.	Ass.	Draft.	Typ.	Lab.	
I	FIELD						
A	<u>Headwork</u>						
1	Hydrology						
B	<u>Canal</u>						
1	layout						
C	<u>C. Area</u>						
1	socio-ec.						
D	Misscell. Transp.						
	Sub Total						
II	OFFICE						
A	<u>Desk</u>						
	Report						
	Sub Total						
	Tax:						
	Grand Total						