

ITA – AITES World Tunnel Congress

Contractual Practises Worldwide – Contractor's Views and Wishes

Agra, September 23rd 2008



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Objectives & Contract Solution

General Project Objectives

Provide the
Client or Investor
with a state-of-the-art
civil structure or
other building

Frequently:
to open the
civil structure / subway / HPP
or other to serve the public

Objectives & Contract Solution

Objectives for the Owner

Procure the (Design,) Construction (& Commissioning) of the Project

- generally within a very tight project time schedule
- complying to set quality standards (to minimize operational costs)
- within budget
- if applicable:
to the satisfaction of the general public

Objectives & Contract Solution

Objectives for the Contractor

Deliver the (Design,) Construction (& Commissioning) of the Project

- within the project's time schedule
- in compliance with ordered quality standards (to minimize costs for rectifying defects)
- within budget
- earning a reasonable margin, maintaining a reputation as a reliable partner for large scale projects

Objectives & Contract Solution

Most objectives are the same!

Differing objectives are not detrimental to,
but complement, each other.

All parties to the contract
have (primarily) the same
interests!

The contract should be worded
in the spirit of cooperation
rather than confrontation!

Objectives & Contract Solution

What should a contract provide for, in order to make the project a success for all parties involved?

- reasonable time for the preparation of the tender

- clear definition of the scopes of works

- fair risk sharing

- participation of both parties

- rules for the resolution of disputes

- well-defined rules for acceptance and takeover

Objectives & Contract Solution

Main responsibilities of the parties:

Contractor:

- design of temporary works
- (design of permanent works)
- (utility relocation)
- temporary works
- means & Methods
- construction
- commissioning
- remediation of defects
- inspections
- **handover**
- others

Owner:

- definition of scope of works
- site areas
- information
- (review of design)
- permits, Authorizations, etc.
- participation during construction
- decisions
- **acceptance / takeover**
- payment
- others

Objectives & Contract Solution

Risk Sharing

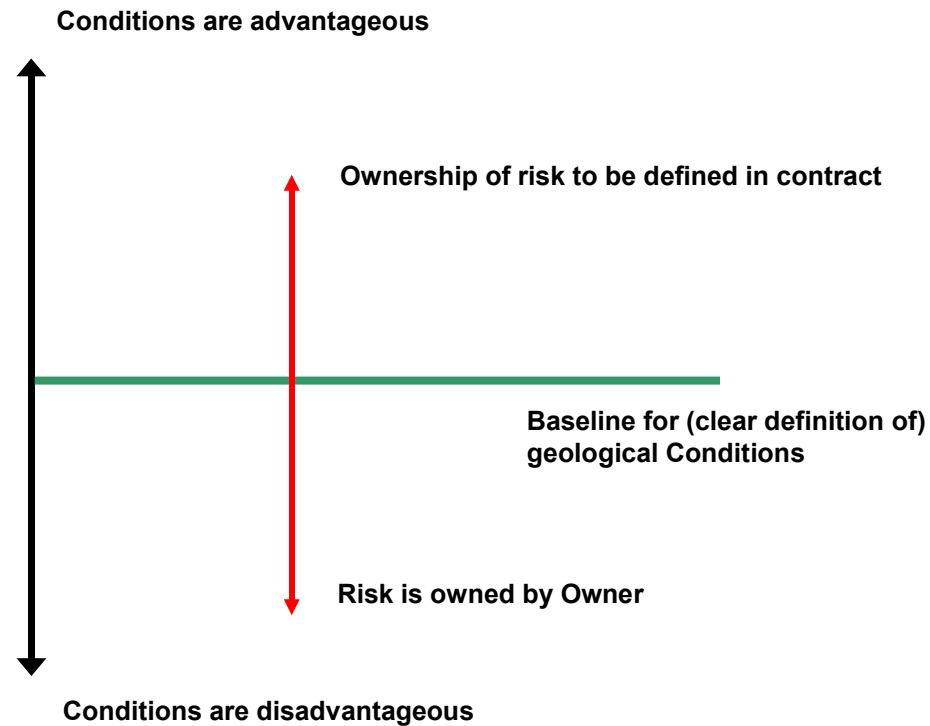
Geological conditions will be used as an example;
however, there could also be:

- time needed to obtain approvals, authorizations or permits
- number and location of utilities to be relocated
- escalation of costs or liability
- any other risk during the design, construction and commissioning of the project

An explanation will follow on the next 4 slides.

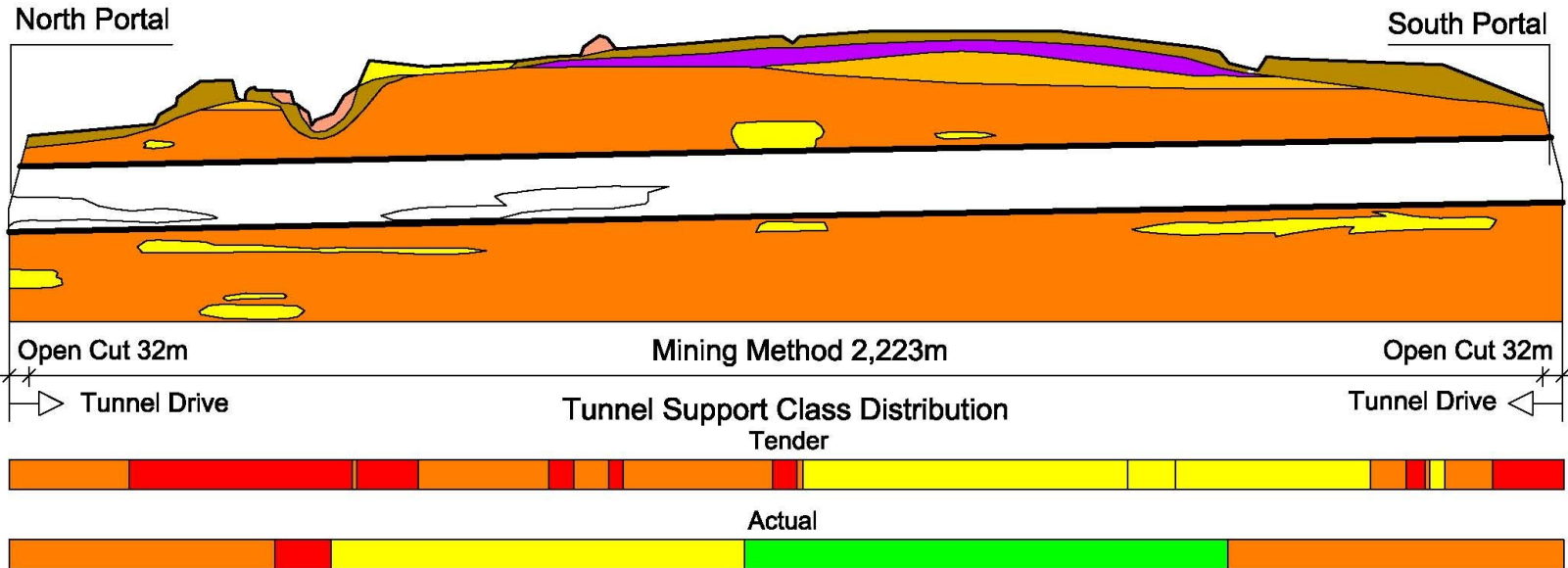
Objectives & Contract Solution

Risk Sharing means:



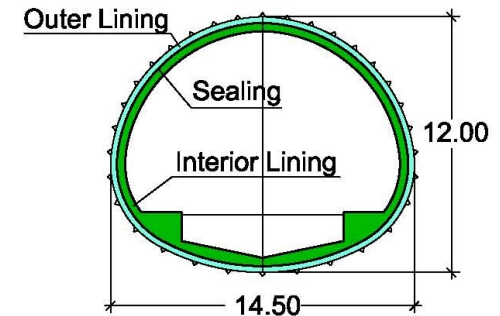
Objectives & Contract Solution

DB- New Railway Line Nuremberg - Ingolstadt Tunnel Göggelsbuch



Usage	Client	Time Frame
Railway Tunnel, 2-track	Planungsgemeinschaft Bahnbau Deutsche Einheit m.b.H.	1998 - 2003 2001 Tunnel
Construction Data		Method / Finishing
Excavated Cross-Section: 146 m² Tunnel Length: 2,223 m Cut-and-Over: 64 m		Drill&Blast and Excavator with shotcrete support and in-situ concrete lining

Tunnel Support Classes		
TSC	Tender	Actual
K 4.2-S	0m	513.50 m
K 4.3-S	834.00 m	770.00 m
K 4.4-S	761.50 m	860.00 m
K 6.2-S	80.00 m	80.00 m
Total	2,223.50 m	2,223.50 m
relative costs (time)	100.00%	88.49%



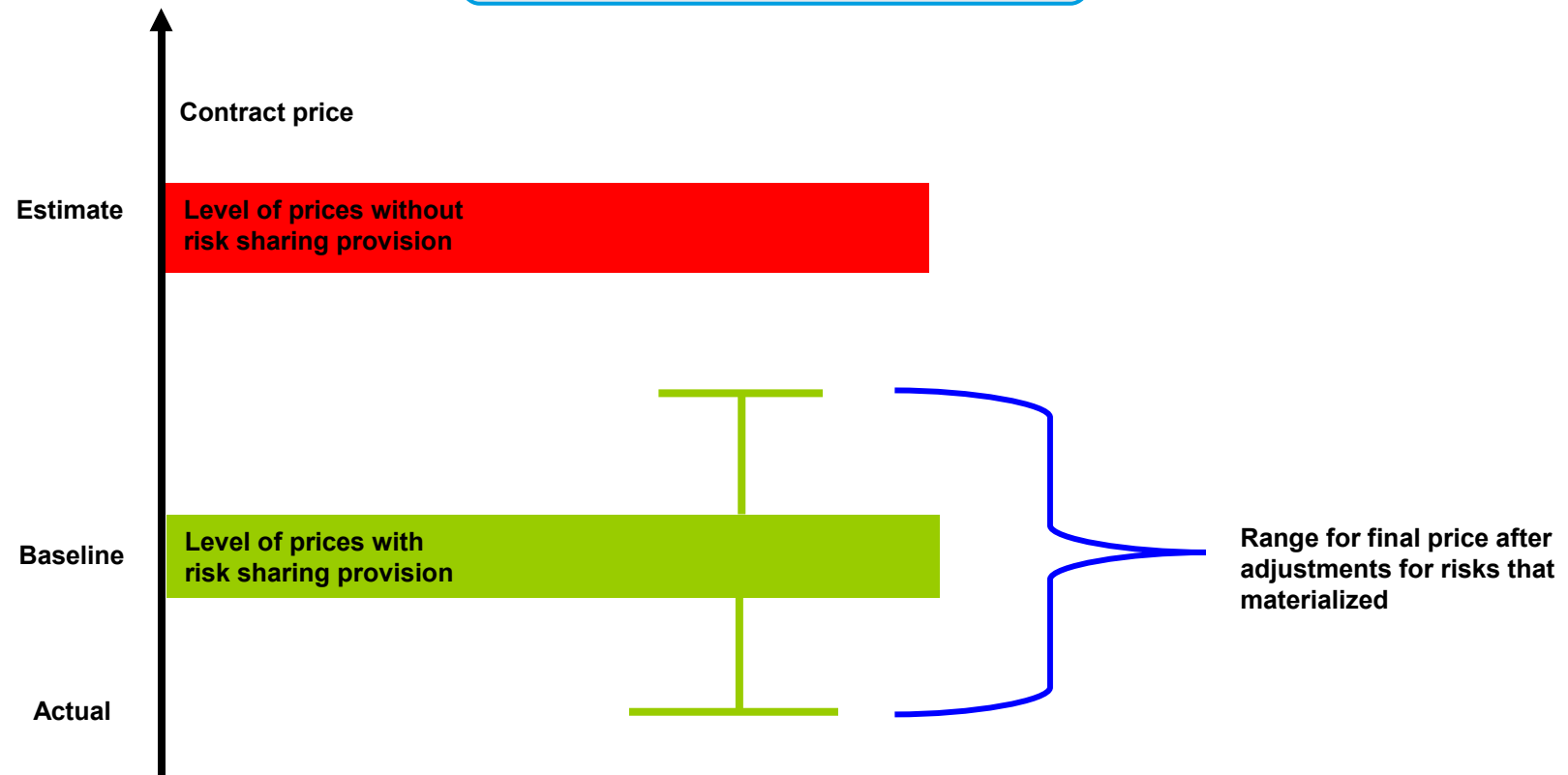
Objectives & Contract Solution Risk Sharing

Tunnel Support Classes

Tunnel Support Class	Tender		Actual		Estimate if no BL	
TSC K 4.2-S	0.00	m	513.50	m	0.00	m
TSC K 4.3-S	834.00	m	770.00	m	243.50	m
TSC K 4.4-S	761.50	m	860.00	m	980.00	m
TSC K 6.2-S	628.00	m	80.00	m	1,000.00	m
Total	2,223.50	m	2,223.50	m	2,223.50	m
Relative Costs (Time)	100.00 %		88.49 %		106.49 %	

Objectives & Contract Solution

Effect of Risk Sharing



Objectives & Contract Solution

Risks should be allocated to the party who can best control them

Contractor:

- means & Methods
- productivity
- suppliers
- subcontractors
- workforce
- materials
- equipment
- others

Owner:

- geological conditions
- permits, authorizations
- land use
- utilities
- definition of scope
- others

Objectives & Contract Solution

Liability expectations of the parties

Owner:

- the project will work/function as ordered
- no damages due to delays caused by the Contractor

Contractor:

- project has to work/function as ordered
- liability has to be “estimatable”/calculable

Objectives & Contract Solution

Contractor's basic ideas regarding LIABILITY

Satisfactory operation / function of the Project:

The contractor is **fully responsible** for
“making all systems work”
as ordered!

Objectives & Contract Solution Liability Expectations

Delays:

- The contractor **accepts the liability** for late completion due to own shortcomings.
- Daily Liquidated Damages (LDs) should be agreed upon for late completion.
- LDs have to cover Employer's additional costs for the delay such as salaries, wages, office space, consultants, etc. necessary for this project.
- LDs will be applied for days of delay
- The parties waive the right to sue each other for consequential damages!

Objectives & Contract Solution Dispute Resolution

- Disputes between the Owner and the Contractor can / will arise in the course of the project.
 - The work needs to go on; cooperation amongst the teams on site should not suffer.
 - Disputes should be resolved quickly, without incurring huge costs on either side.
- ➔ The parties should agree on a dispute resolution process!

METRO WARSAW LINE II: Objectives & Contract Solution Dispute Resolution

Proposal:

- ✂ Resolution on Project Level, failing agreement →
- ✂ Resolution on Senior (Executive) Management Level, failing agreement →
- ✂ Disputes Resolution Board or similar
- ✂ Court only as a last resort!!!!

Final Idea:

3. Both parties should enter the contractual relation with the intention of making the contract a success.
 4. All party's on-site personnel (mainly) have an engineering background.
- ➔ The contract should be structured and worded in such a way that it can be
- understood,
 - worked with and
 - complied with by engineers.

Thank you
for your
kind attention !