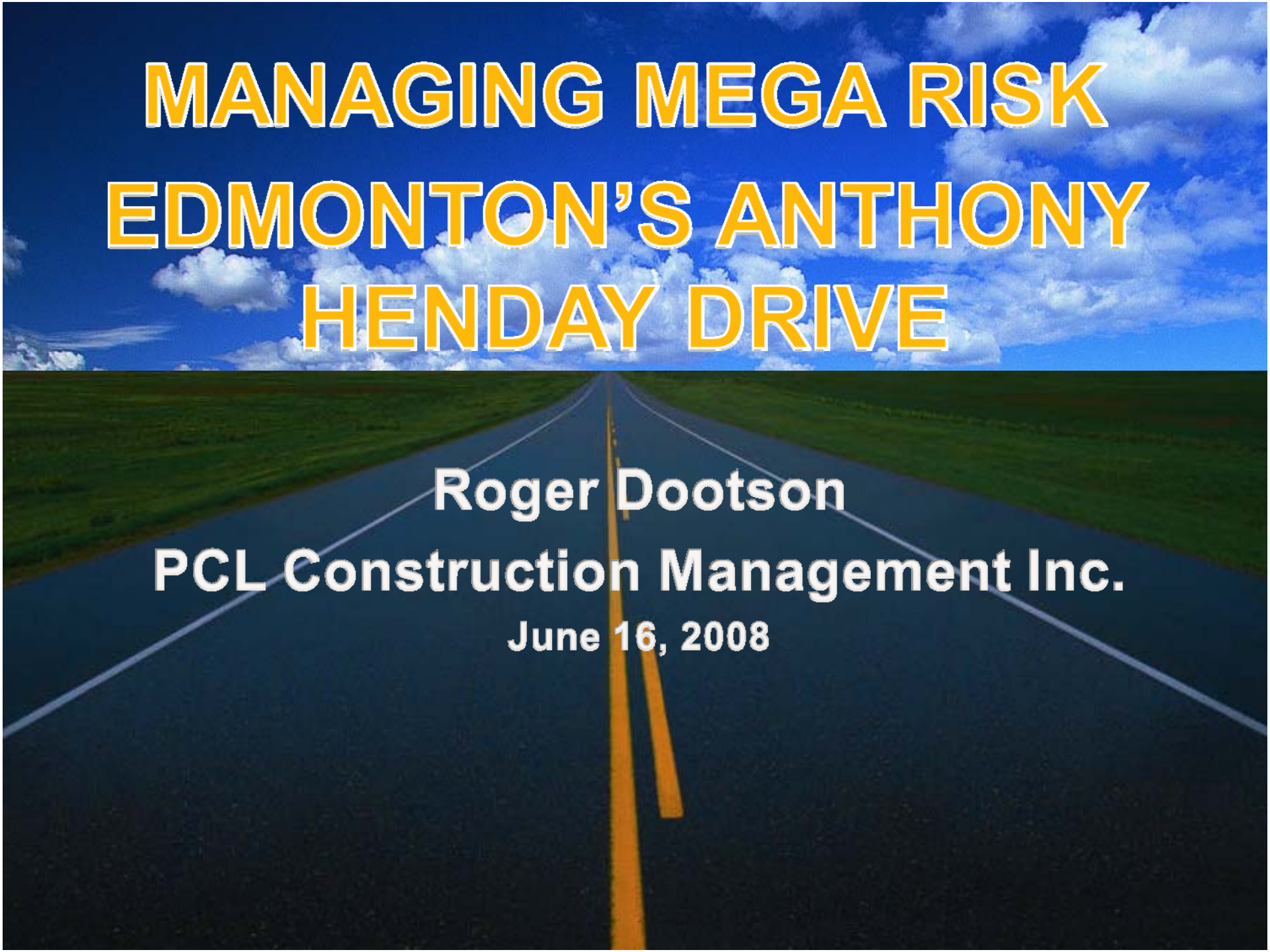

MANAGING MEGA RISK
EDMONTON'S ANTHONY HENDAY DRIVE
Roger Dootson
PCL Construction Management Inc.
June 16, 2008

Overview

- PCL Construction Leaders
- Northern Alberta Marketplace
- P3 Process
- AHDSEL RR (Pursuit to Competition)
- Summary
- Q & A

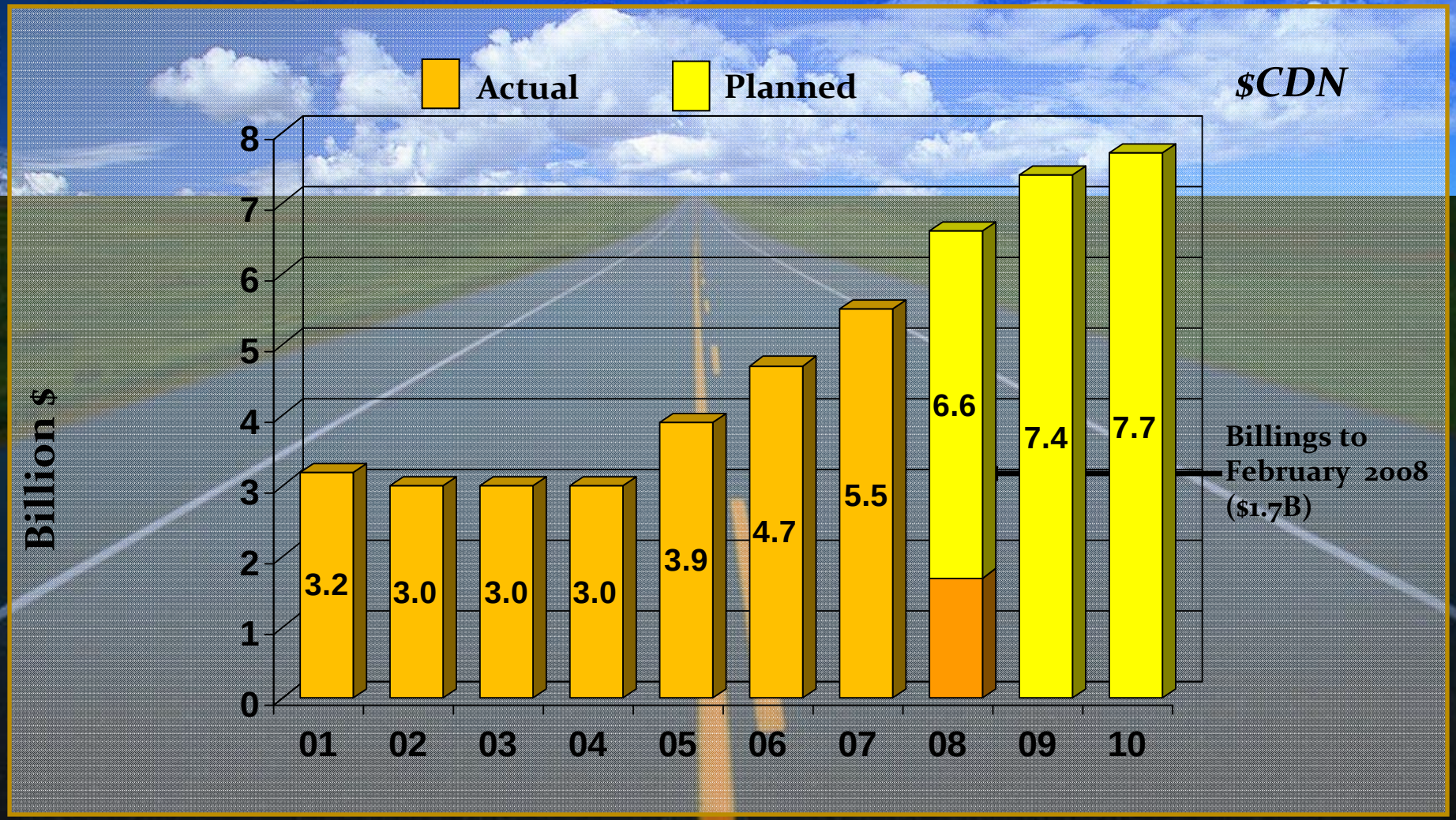
PCL North America


PCL Core Business Units
Buildings
Civil
Industrial

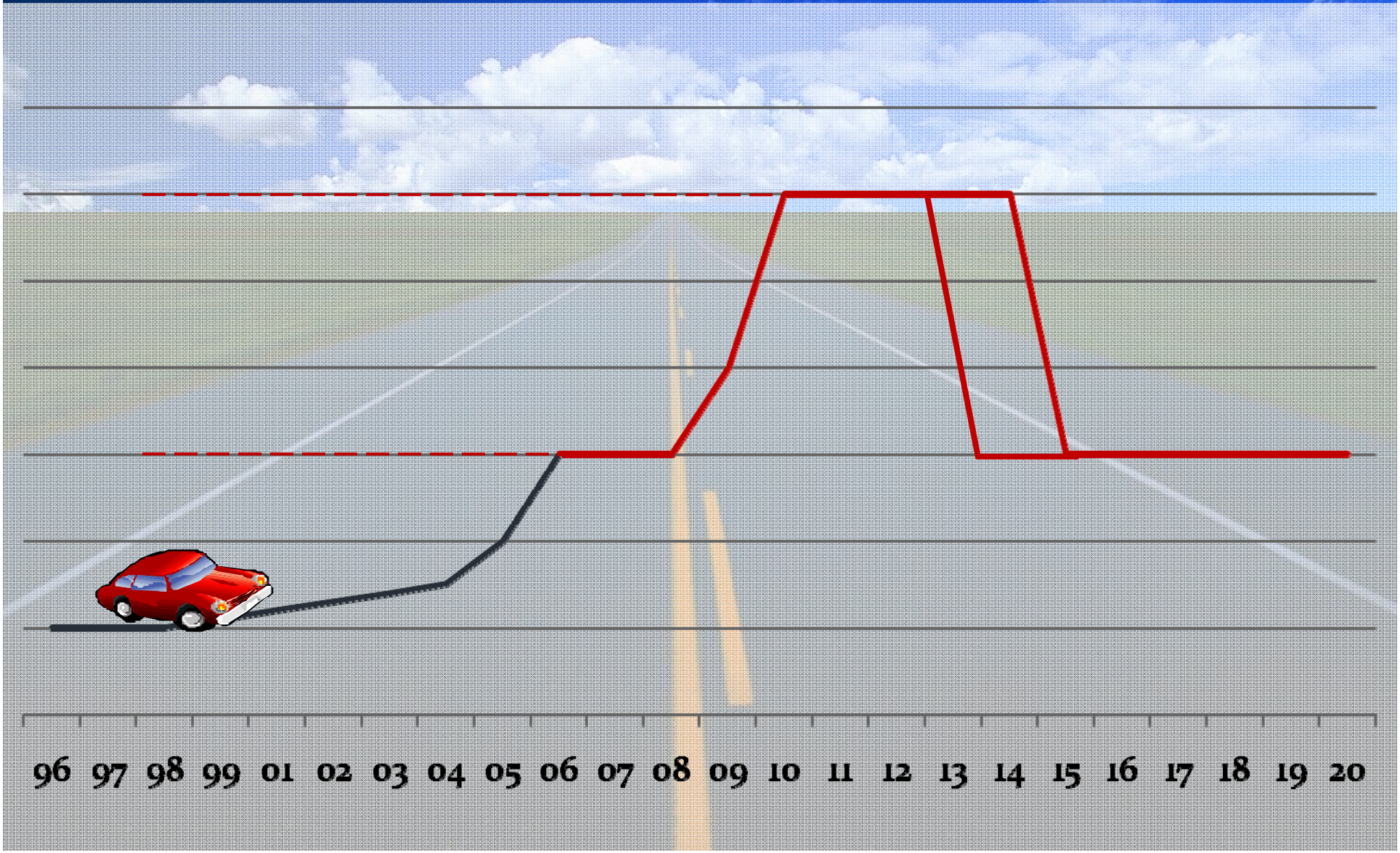

Striving for Excellence
50 BEST EMPLOYERS IN CANADA 2008
Orlando Sentinel's TOP 100 COMPANIES FOR WORKING FAMILIES
2004 BEST SAFETY PERFORMER
WORK SAFE ALBERTA
ALBERTA'S best WORKPLACES 2008
2003 Canada's Most Respected Corporations
HUMAN RESOURCES MANAGEMENT
Hawaii Business MAGAZINE
Best Places to Work 2007
MRC MOST RESPECTED CORPORATIONS
ALBERTA VENTURE | 2007
FORTUNE 100 BEST COMPANIES TO WORK FOR 2007
Canada's TOP Contractors
CHAMPION of HOPE
MILE HIGH UNITED WAY
Canada's Top 100 Employers
CANADA'S BEST MANAGED COMPANIES
PLATINUM MEMBER

Community Service

Our Growth Overall Billings



Northern Alberta Marketplace



Northern America Marketplace

What's driving us?

- Oil (World Thirst)
- Infrastructure catch up
- 25 years of low tide
- Shortages of everything
  - i.e. Labour, Housing,
- Influx of people

Northern America Marketplace

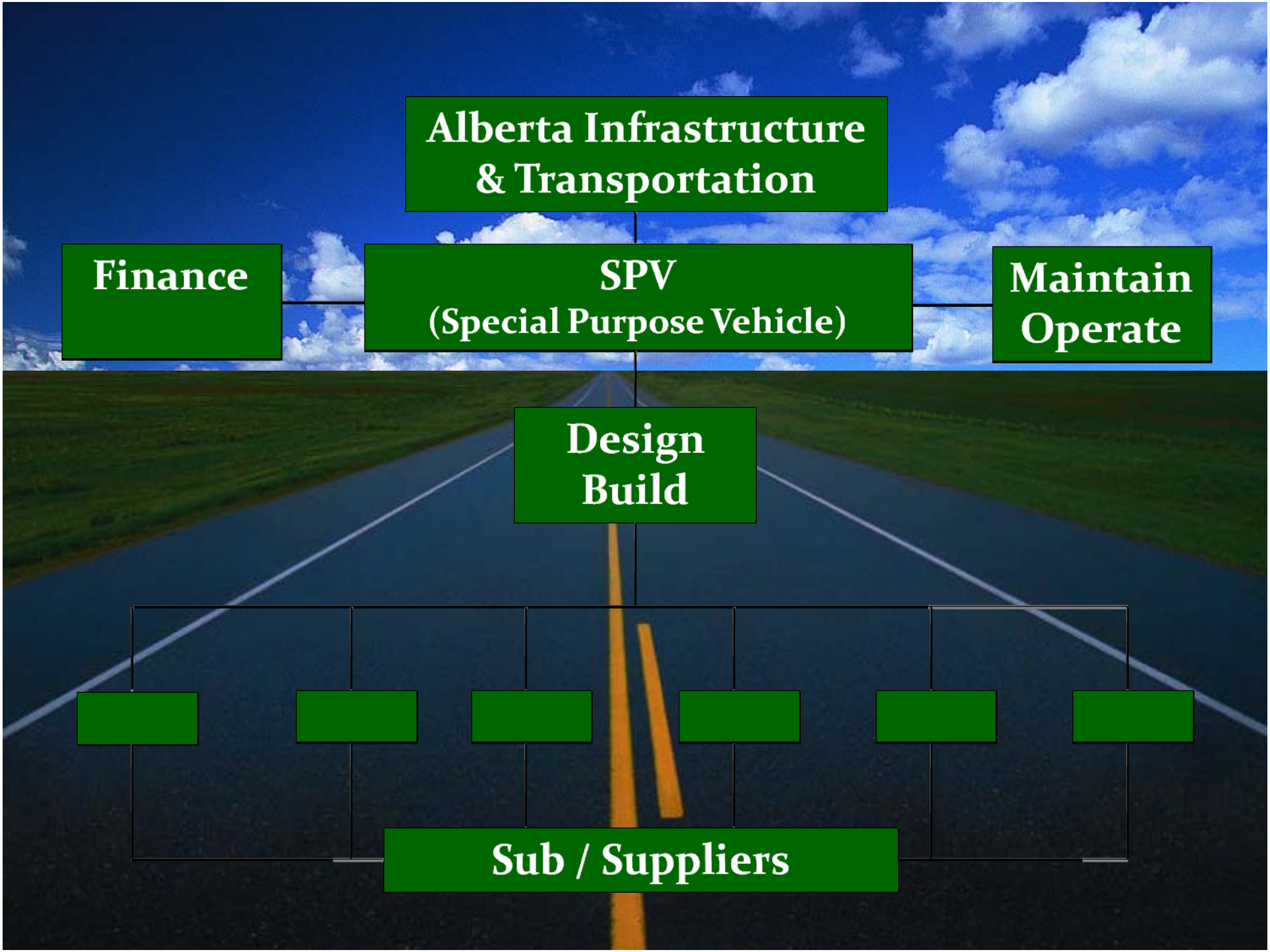
What's driving us?

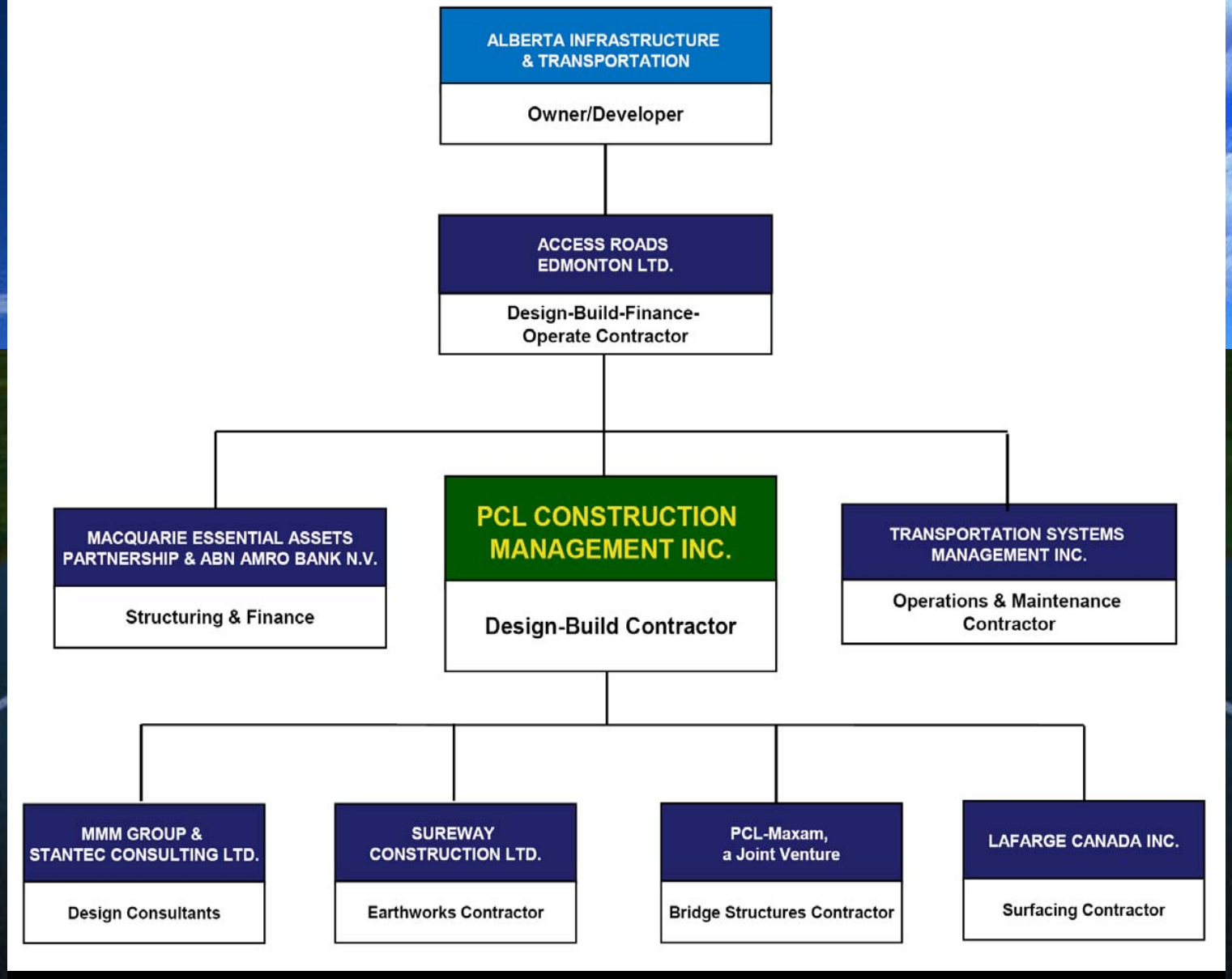
- No Government Debt
- Low interest rates
- Everyone wanting the same resources
- Developers want more product

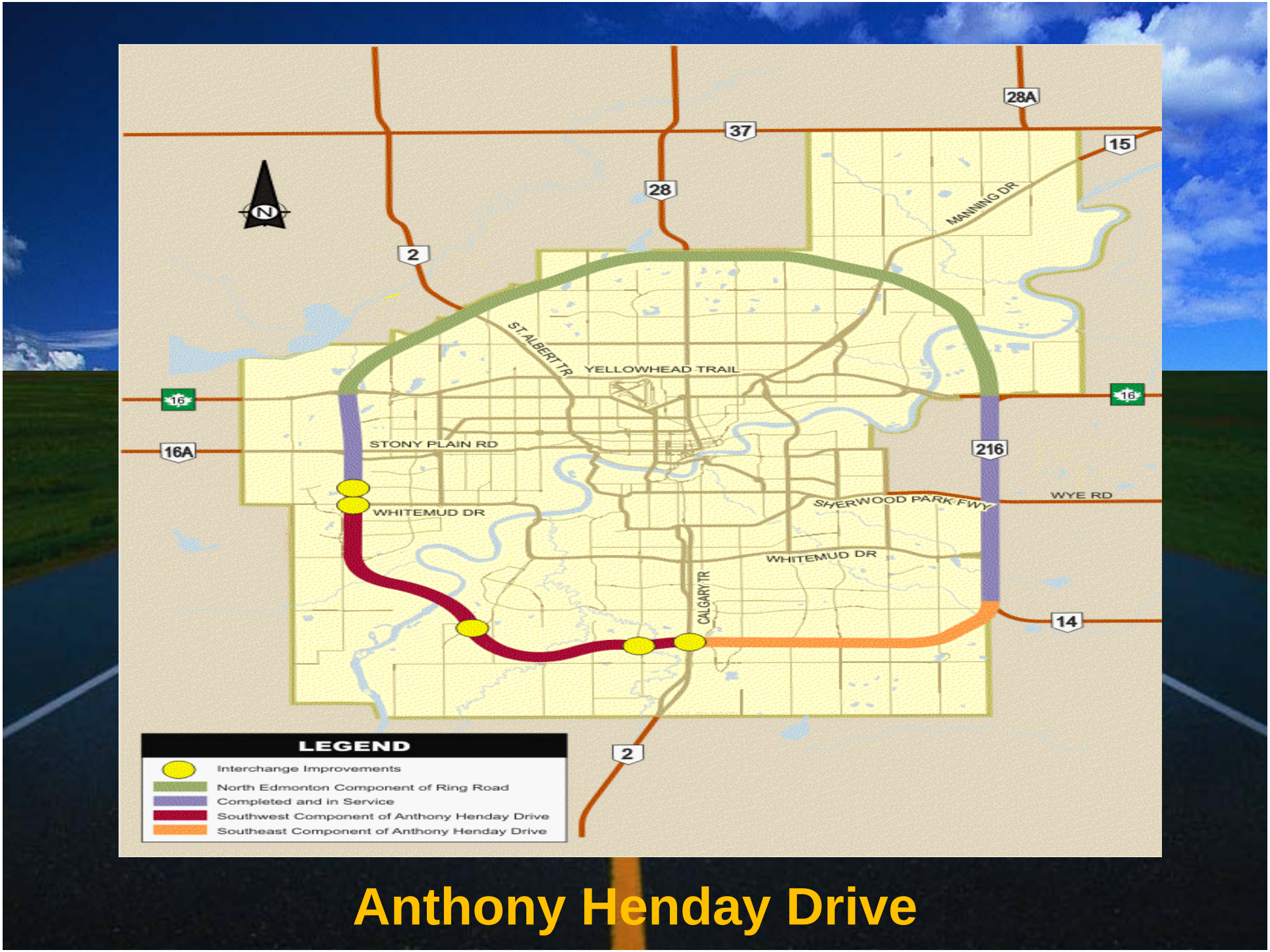

P3's
Public
Private
Partnerships

P3's

- Many variations
  - DBFOM (Design Build Finance Operate Maintain)
  - Design Build (Private)
  - Finance Operate Maintain (Public)


Alberta Infrastructure & Transportation
Finance
SPV (Special Purpose Vehicle)
Maintain Operate
Design Build
Sub / Suppliers


ALBERTA INFRASTRUCTURE & TRANSPORTATION
Owner/Developer
ACCESS ROADS EDMONTON LTD.
Design-Build-Finance-Operate Contractor
MACQUARIE ESSENTIAL ASSETS PARTNERSHIP & ABN AMRO BANK N.V.
Structuring & Finance
PCL CONSTRUCTION MANAGEMENT INC.
Design-Build Contractor
TRANSPORTATION SYSTEMS MANAGEMENT INC.
Operations & Maintenance Contractor
MMM GROUP & STANTEC CONSULTING LTD.
Design Consultants
SUREWAY CONSTRUCTION LTD.
Earthworks Contractor
PCL-Maxam, a Joint Venture
Bridge Structures Contractor
LAFARGE CANADA INC.
Surfacing Contractor



Anthony Henday Drive

Project Type, Scope & Goals
Project Specifics

- 11 kilometers total length from Calgary Trail/Gateway Blvd east to Highway 14/216
- Six lanes divided freeway between Calgary Trail/Gateway Blvd and 50th Street & four lanes divided freeway between 50th Street and Highway 216/14 (with grading for two more future lanes along the entire length.
- 20 separate bridge structures

Project Type, Scope & Goals
Project Specifics

- Four fly-overs (bridge structures with no freeway access) at Parsons Road, 66th Street, 34th Street and 34th Avenue.
- Alberta's first third level fly-over structure and,
- Seven rail grade separation structures and a signalized rail level crossing.
- 124 lane kilometers of road

AnthonyHenday Drive Challenges

- Escalating Market Place
- Major Risks – Schedule, Environmental Weather, Labour, Many Stakeholders, Utilities


CAT

Anthony Henday Drive Southeast Leg Ring Road

Project Type, Scope & Goals
Project Specifics

- **# of Tonnes of Gravel**
  - 1,653,435
- **Amount of Asphalt**
  - 347,221 short tons of Asphalt
- **Volume of Excavation**
  - 9,155,650 cubic yards of excavation –
- **Amount of Concrete**
  - total bridge work concrete volume will be 44,470.3 cubic yards.


The Process
SR 1
(Submission Requirements)
SR 2
SR 3

Charting the Course for Success On P3's

- Pick the Right Partners
  - Marshall Macklin Monaghan / Stantec
  - PCL
  - Sureway Construction
  - Lafarge
  - TSMI (Transportation System Management Inc.)

Consortium Becomes One!
Project Team

In Partnership With

Alberta
INFRASTRUCTURE AND TRANSPORTATION

accessroads edmonton

Canada

Project Team

ABN·AMRO

PCL
CONSTRUCTION LEADERS

MACQUARIE

Marshall Macklin Monaghan
PROJECT MANAGERS · ENGINEERS · SURVEYORS · PLANNERS

LAFARGE
NORTH AMERICA
AGGREGATES, CONCRETE & ASPHALT

Sureway
CONSTRUCTION

Stantec

PCL MAXAM
A JOINT VENTURE

TSM
Transportation Systems Management Inc.


Planning is EVERYTHING
Share your risks, knowledge and meet often
$$$


Risk Rewards
Contingencies
Design/ Build/ Other
Risk Matrix (Individual)
Risk Matrix (Consortium)
Meet Often
Collaborate on Everything

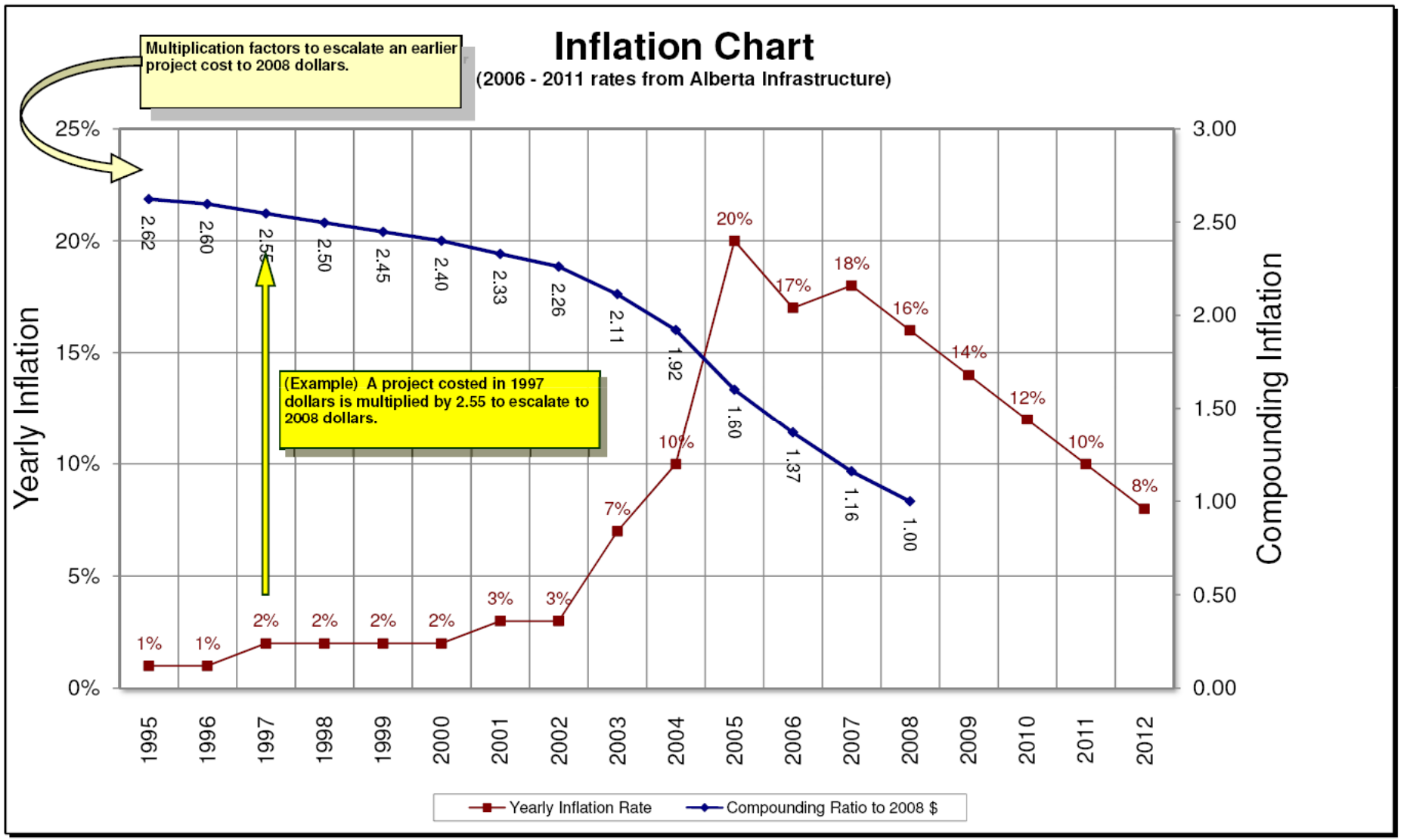
YOU DON’T KNOW WHAT YOU DON’T KNOW

Managing Mega Risk on a Mega Project

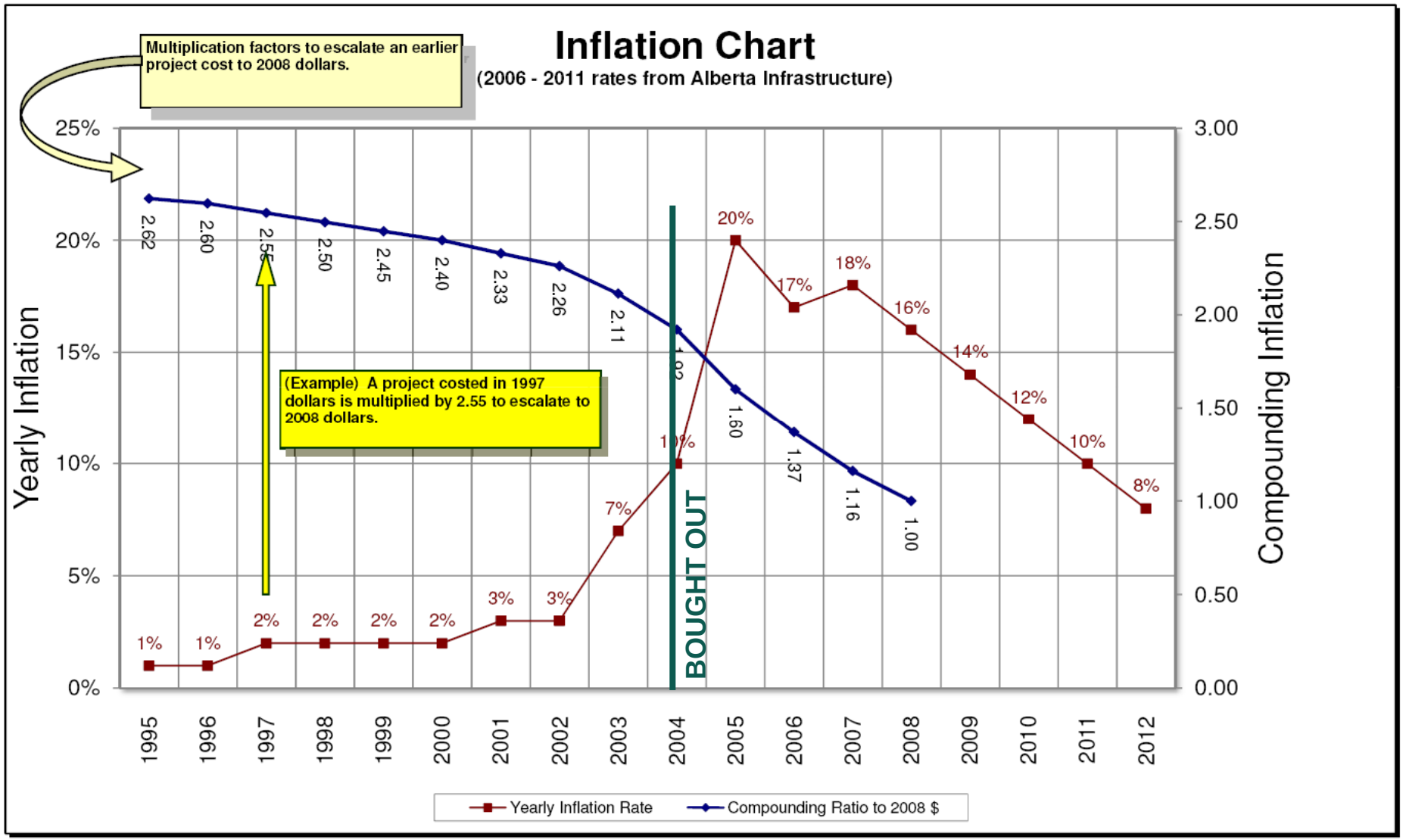
INFLATIONARY MATRIX

Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Inflation	1%	1%	2%	2%	2%	2%	3%	3%	7%	10%	20%	17%	23%	18%	15%	10%	10%	7%
Compounding Inflation	1.01	1.02	1.04	1.06	1.08	1.10	1.14	1.17	1.25	1.38	1.65	1.94	2.38	2.81	3.23	3.55	3.91	4.18
	1.00	1.01	1.03	1.05	1.07	1.09	1.13	1.16	1.24	1.37	1.64	1.92	2.36	2.78	3.20	3.52	3.87	4.14
		1.00	1.02	1.04	1.06	1.08	1.11	1.15	1.23	1.35	1.62	1.90	2.33	2.75	3.17	3.48	3.83	4.10
			1.00	1.02	1.04	1.06	1.09	1.13	1.20	1.33	1.59	1.86	2.29	2.70	3.11	3.42	3.76	4.02
				1.00	1.02	1.04	1.07	1.10	1.18	1.30	1.56	1.82	2.24	2.65	3.04	3.35	3.68	3.94
					1.00	1.02	1.05	1.08	1.16	1.27	1.53	1.79	2.20	2.60	2.98	3.28	3.61	3.86
						1.00	1.03	1.06	1.14	1.25	1.50	1.75	2.16	2.54	2.93	3.22	3.54	3.79
							1.00	1.03	1.10	1.21	1.45	1.70	2.09	2.47	2.84	3.13	3.44	3.68
								1.00	1.07	1.18	1.41	1.65	2.03	2.40	2.76	3.03	3.34	3.57
									1.00	1.10	1.32	1.54	1.90	2.24	2.58	2.84	3.12	3.34
										1.00	1.20	1.40	1.73	2.04	2.34	2.58	2.84	3.03
											1.00	1.17	1.44	1.70	1.95	2.15	2.36	2.53
												1.00	1.23	1.45	1.67	1.84	2.02	2.16
													1.00	1.18	1.36	1.49	1.64	1.76

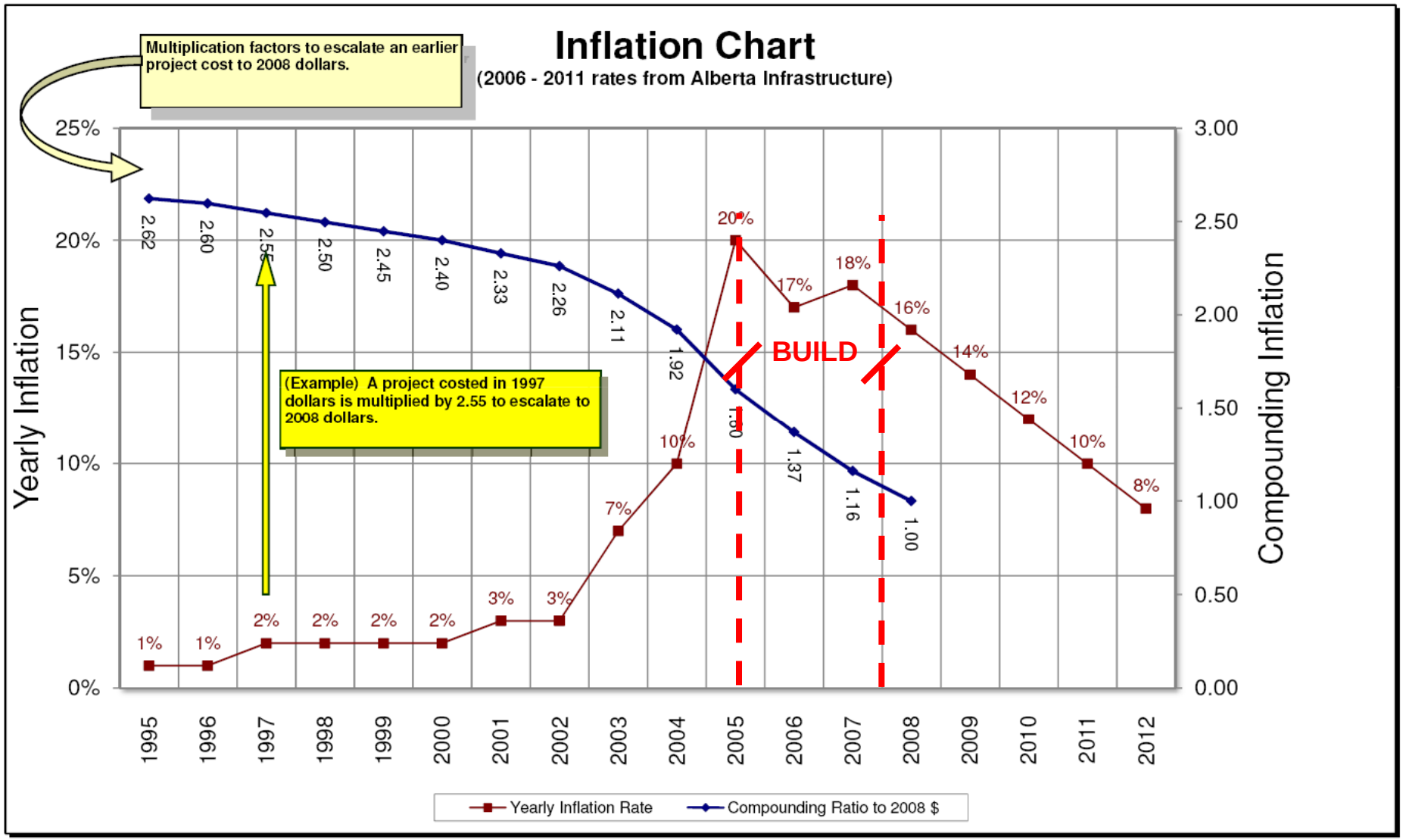
Inflation Summary



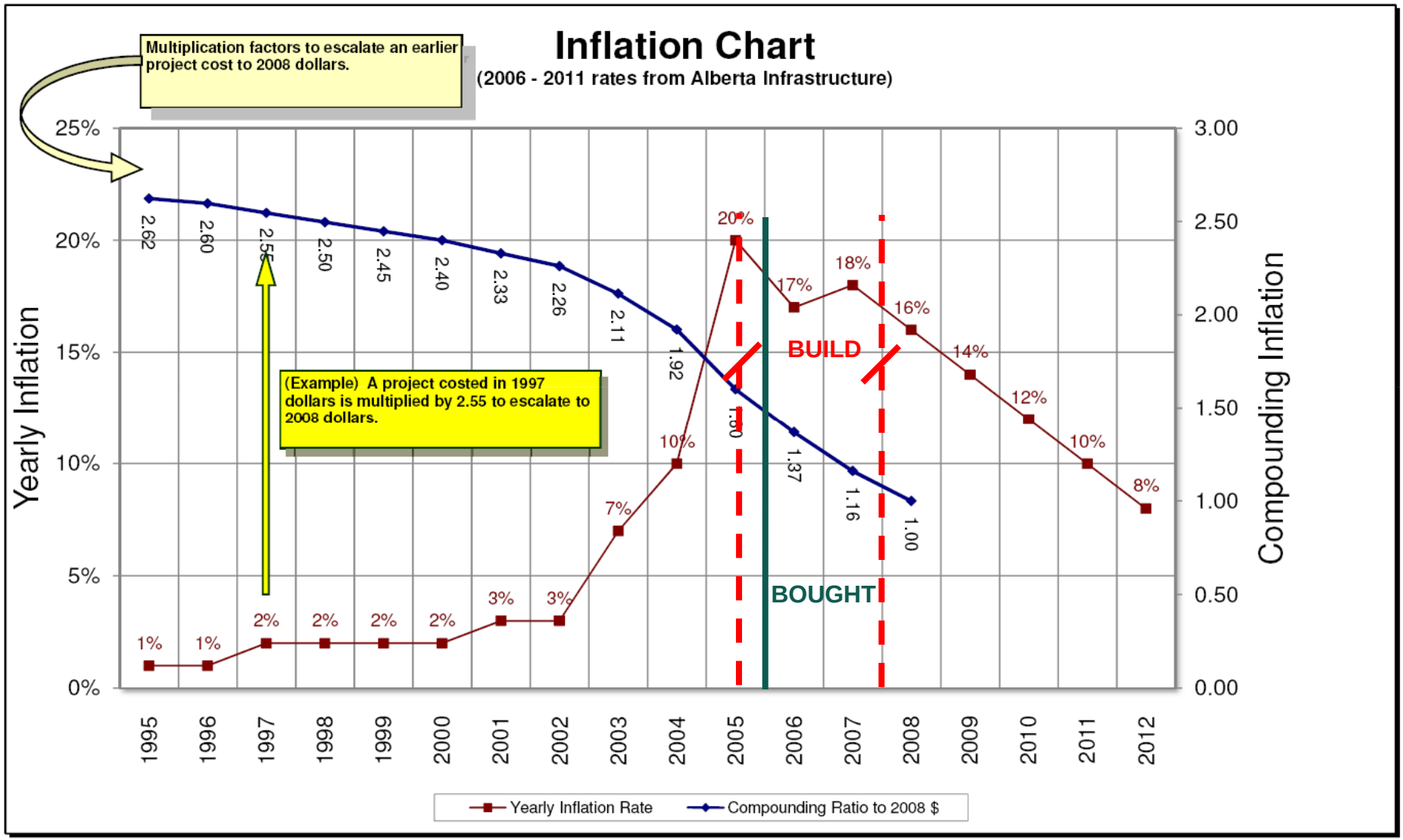
Inflation Summary

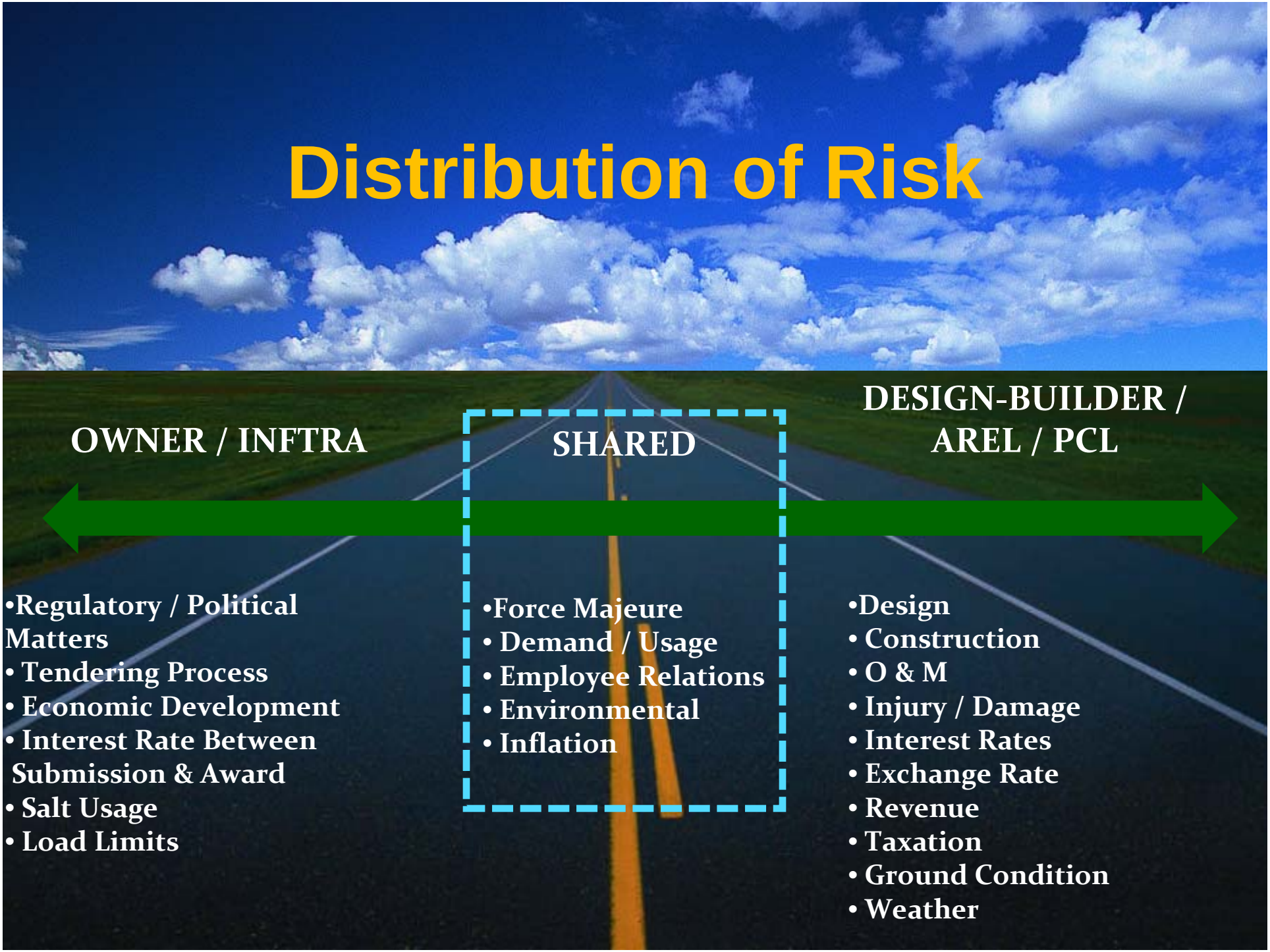


Inflation Summary



Inflation Summary




Distribution of Risk
OWNER / INFTRA
SHARED
DESIGN-BUILDER / AREL / PCL
•Regulatory / Political Matters
• Tendering Process
• Economic Development
• Interest Rate Between Submission & Award
• Salt Usage
• Load Limits
•Force Majeure
• Demand / Usage
• Employee Relations
• Environmental
• Inflation
•Design
• Construction
• O & M
• Injury / Damage
• Interest Rates
• Exchange Rate
• Revenue
• Taxation
• Ground Condition
• Weather

Risk Matrix Checklist

RISK	PUBLIC	PRIVATE	SHARED
Financing		✓	
Design (Clinical Functionality)	✓		
Design (Fit for Purpose)		✓	
Construction (Schedule / Cost)		✓	
Equipment Procurement & Installation			✓
Facilities Management Services (Standards & Costs)		✓	
Maintenance / Latent Defects		✓	
Relief Events (i.e. Earthquake / Flood)			✓

Managing Mega Risk on a Major Project

Risk Matrix

Risk Item	Potential 100% Value	Probability of Occurrence in %	Risk Dollars Carried by Consortium	Party Responsible for Risk	Comments
Contractual P/A & DBA Flow Down Risks					
Force Majeure Events	5,000,000	0.25%	1250000		
Delay in Access to Lands	2,000,000	0.25%	500000		
EnviroLaws after award changing	5,000,000	0.00%	0		

Managing Mega Risk on a Major Project

Risk Matrix

Risk Item	Potential 100% Value	Probability of Occurrence in %	Risk Dollars Carried by Consortium	Party Responsible for Risk	Comments
Design / Build Execution Risks					
Delay in Utility Agreements or Relocations	12,000,000	50.00%	6000000		
Delay in AIT Design and Management Plan Approval Process	6,000,000	10.00%	600000		
Staff Relocation Allowances	1,000,000	100.00%	1000000		
Delay by relief events		0.00%	0		

Managing Mega Risk on a Major Project

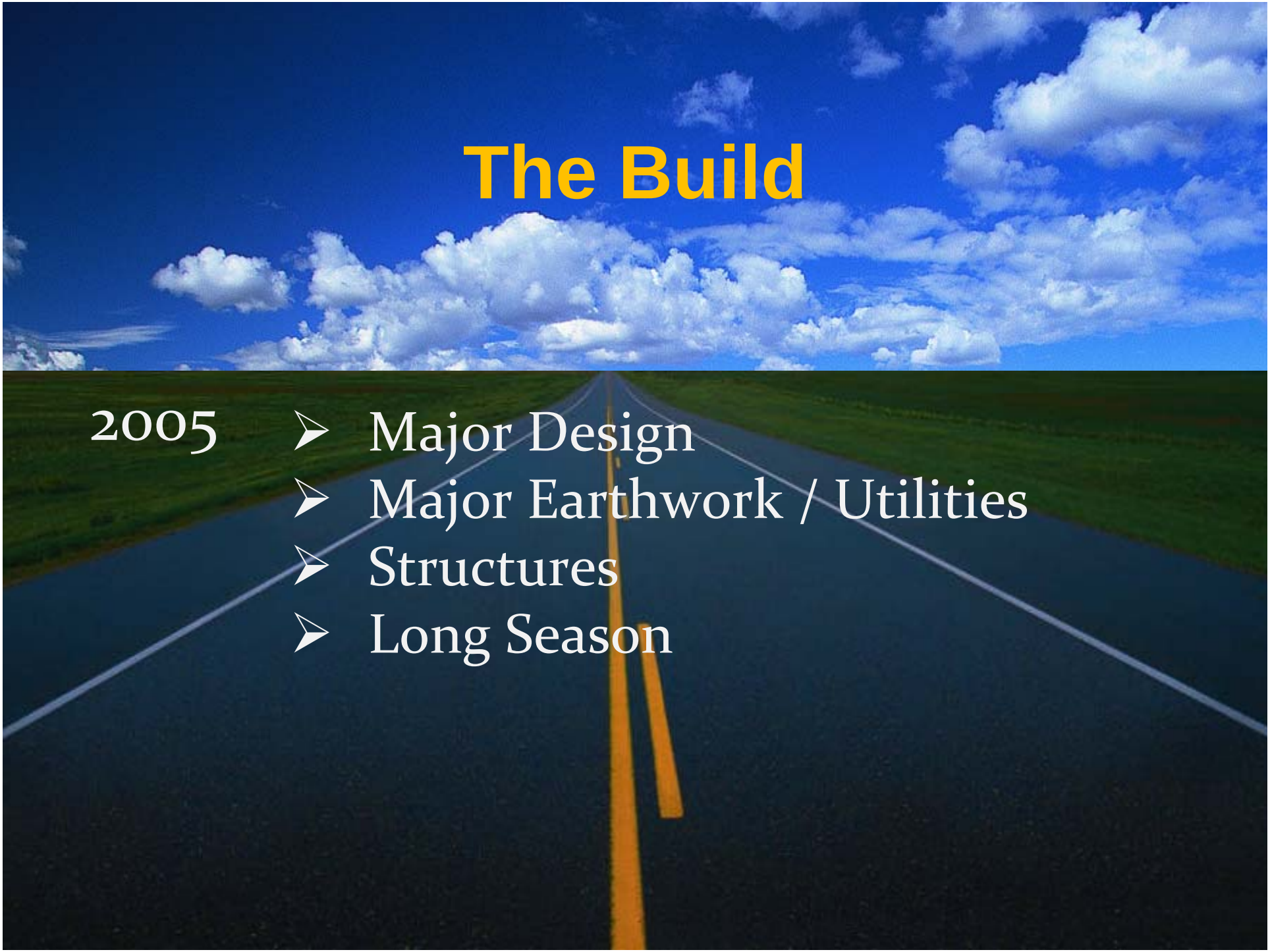
Risk Matrix

Risk Item	Potential 100% Value	Probability of Occurrence in %	Risk Dollars Carried by Consortium	Party Responsible for Risk	Comments
Design / Build Execution Risks					
Risks due to additional lands required outside of TUC.		0.00%	0		
Review Engineer or others PCL is responsible for delaying project	10,000,000	20.00%	2000000		
Designer Additional Services Growth	1,000,000	75.00%	750000		

Managing Mega Risk on a Major Project

Risk Matrix

Risk Item	Potential 100% Value	Probability of Occurrence in %	Risk Dollars Carried by Consortium	Party Responsible for Risk	Comments
Design / Build Execution Risks					
Diesel Fuel Escalation	10,000,000	50.00%	5000000		
Asphalt Escalation	15,000,000	50.00%	7500000		
Steel Escalation	5,000,000	25.00%	1250000		
Cement Escalation	8,000,000	20.00%	1600000		
Other					



The Build

2005

- Major Design
- Major Earthwork / Utilities
- Structures
- Long Season

Improvise

- Asphalt Plant on Site
- Winter Gravel Haul
- Steel or Precast
- Forming Systems

The Build

Design Completion

2006

- Structures
- Gravel/Asphalt
- Short Season

The Build

2007

- Asphalt
- Structures Left
- Finishes


Result
Complete and Open Four Days Early!!
NO CHANGE ORDERS!!


Result
Saving $100 Million + to Alberta Government


Result
Designed and Built Years Quicker Than Conventional Tendering

Result

P3's are here to stay!

For:

- Transportation
- Infrastructure
- Institutional

RED FLAGS!!!
Be real on liquidated damages risk

Comparison

The No Name Project

$$$ Lost

OUR GOAL!!

Spent Government $$$ wisely

Fair return to industry!!


Mix and Mash
For P3's or Conventional
Key Takeaways
For
A Hot Marketplace

For Tendering Authorities

- Pick your partners early
- You can be transparent
- Involve all stakeholders early
- Sub CM's
- Buyout ASAP
- Share Risk/Rewards
- Insist on Knowing Design/Build Capacity

For Tendering Authorities

- Erroneous contract language
- Keep it simple
- Coordinate bid closing for large projects
- Stay with Industry Standards (CCDC)
- Reward Innovation
- Stagger delivery of projects
- Limited consultant capacity

For Industry

- Don't outsell production
- Foreign workers
- Apprenticeship
- Train, Train, Train
- Know your limits (P3's)
- Safety


For Industry
Quality
Productivity – Schedules will lag
Be a good contractor
And a good community company


Questions and Answers