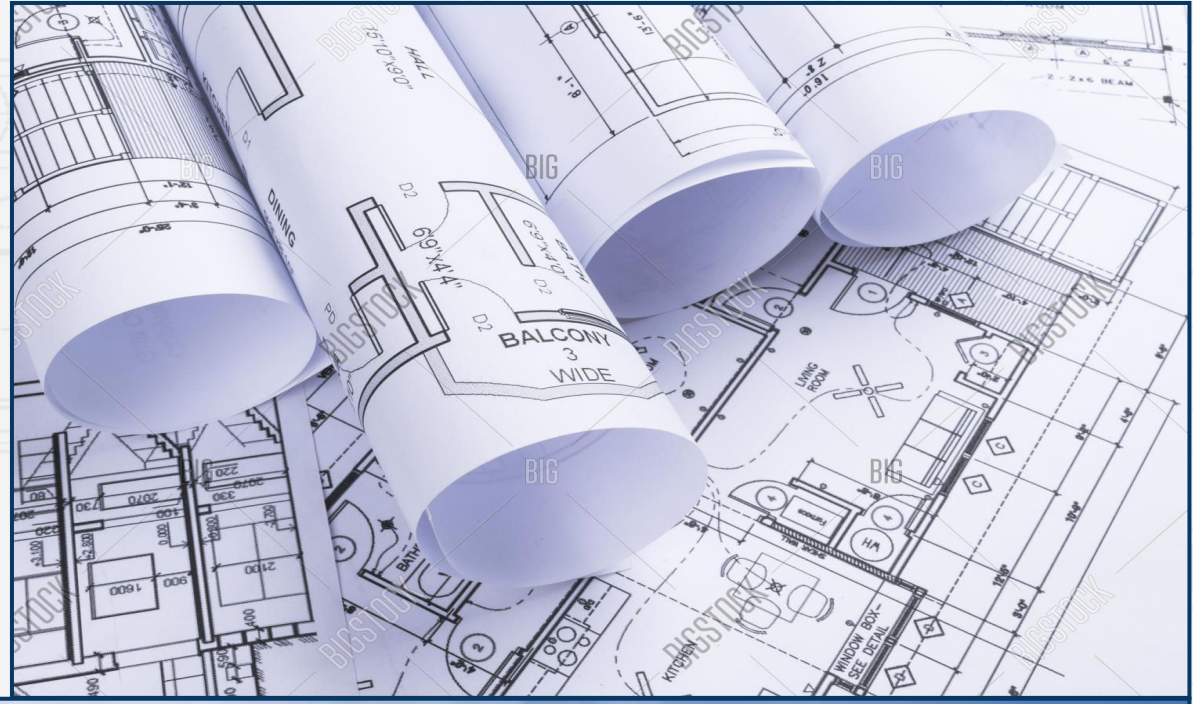
Construction Quality: Challenges and Solutions



Presenters

Brandon Raines, P.E.

- WVDOH – District 7 Construction Engineer
- BS Civil Engineering, WV Tech
- WVDOH 10 Years
- 10 Years Total Experience

Jason Tharp, P.E.

- WVDOH – Regional Construction Engineer
- BS Civil Engineering, WV Tech
- WVDOH 26 Years
- 28 Years Total Experience

In Memory of

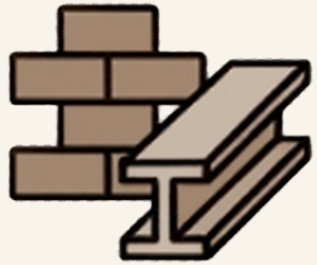
Tyrone Lamyaithong

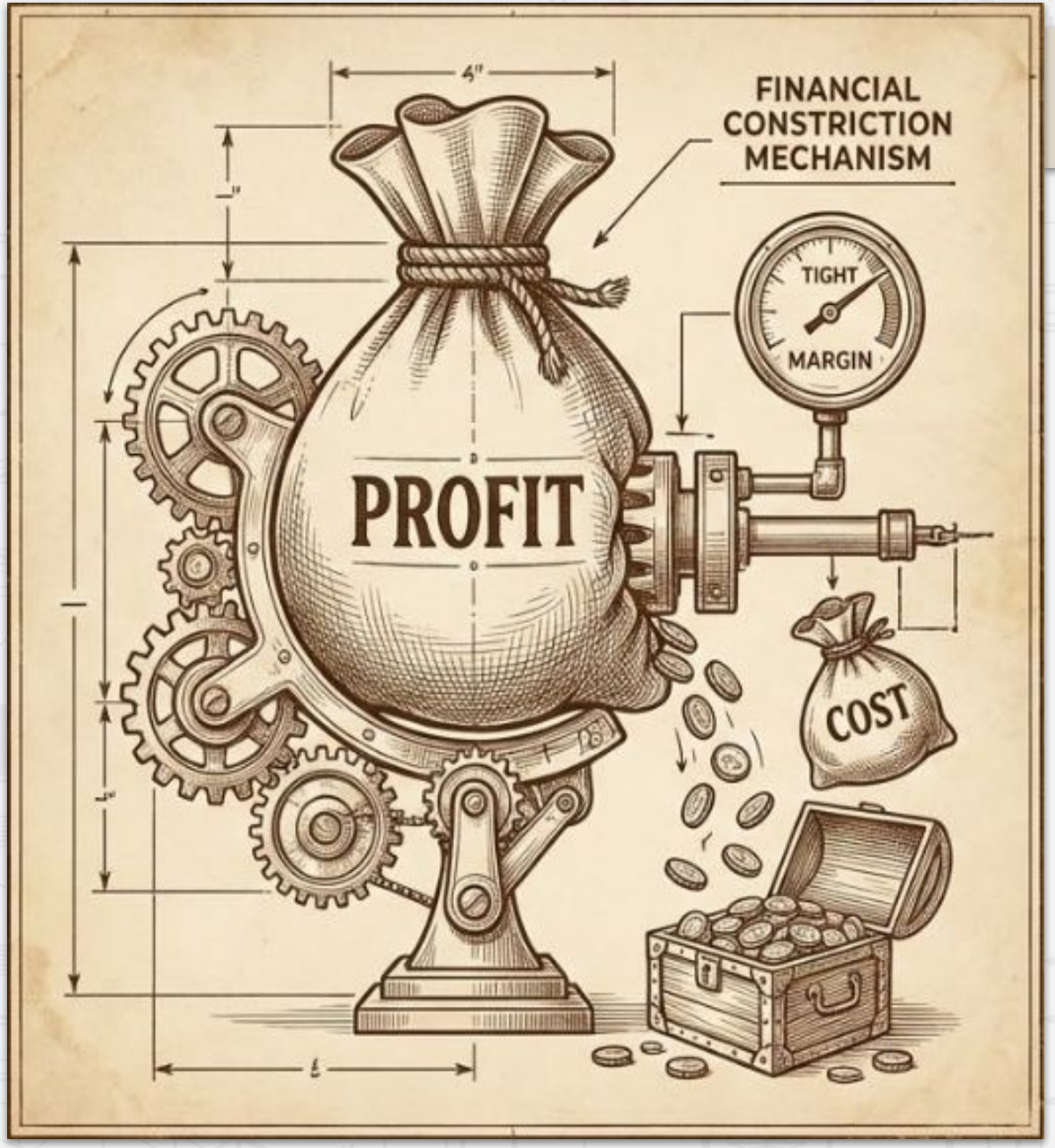
Agenda

1	Introduction
2	Reasons for Poor Quality
3	Getting the Best Possible Product
4	Conclusion

INTRODUCTION

Reasons for Poor Quality

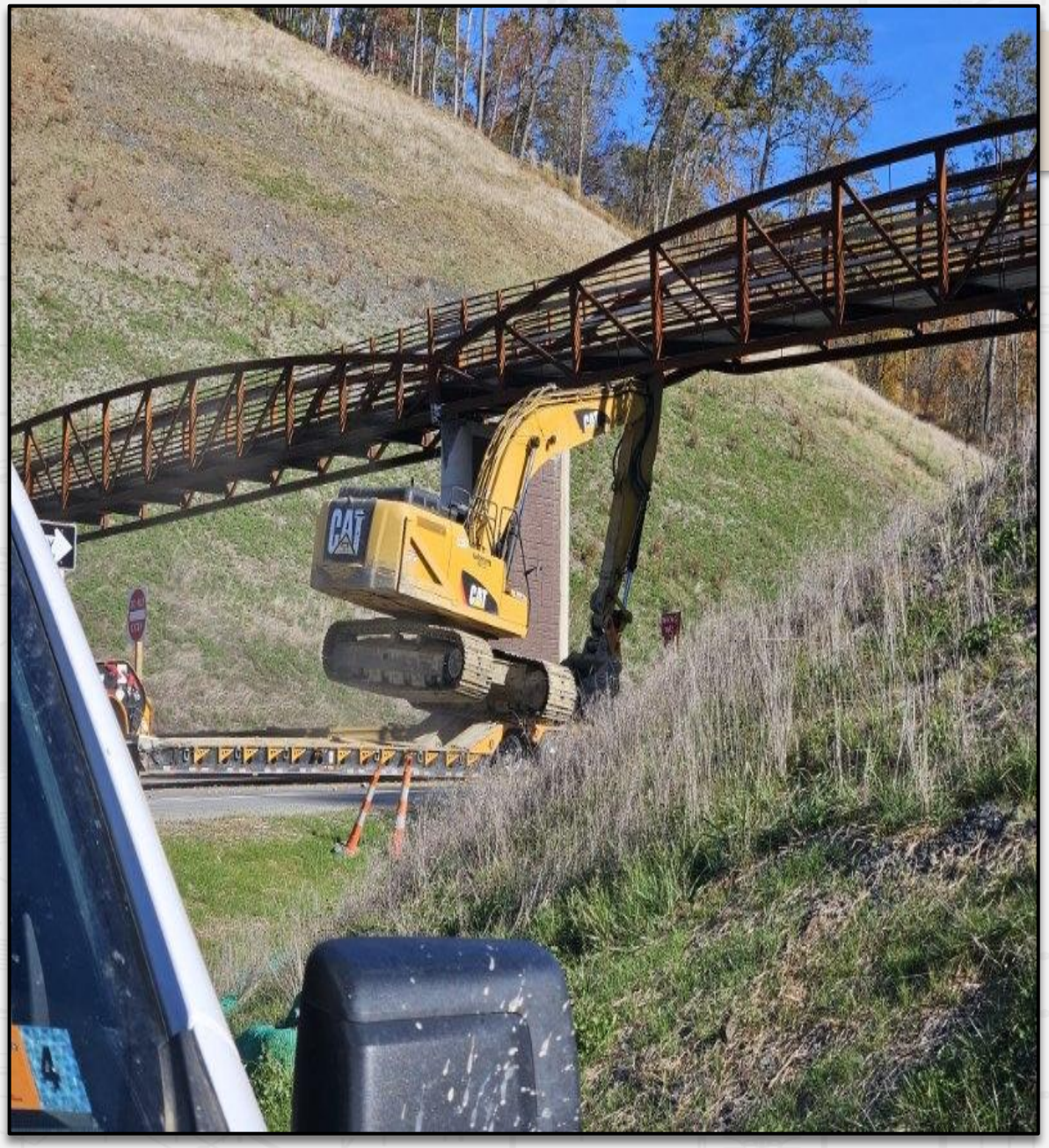
				
Cost	**Time**	**Labor**	**Materials**	**QA/QC**
Tight profit margin	Hurried work and insufficient deadlines	Deficient know-how	Cheapest product to meet budget	Lack of experience, interest, & communication



Reasons for Poor Quality

Cost

- Low-bid wins
- Tight Profit Margin
- Increasing cost = shrinking profit
- Cost factors into Time, Labor, Materials, & QA/QC



Reasons for Poor Quality

Time

- lack of time = hurried work

Reasons for Poor Quality

Labor

- Explicit vs Tacit
- Inexperience is Expensive

Reasons for Poor Quality

Materials

- Lower cost = Higher Defects
- Cheaper supplies often lead to rejection and replacement

Reasons for Poor Quality

QA/QC

- QA vs. QC

Getting the Best Possible Product

Getting the Best Possible Product

What is Good Quality?

Getting the Best Possible Product

Why Do We Want it?

Maintenance- lower future costs

Aesthetics- Looks good

Duty- It's our job

Inspectors employed by the Division will be authorized to inspect all work done and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication or manufacture of the materials to be used. The Inspector is not authorized to alter or waive the provisions of the Contract. The Inspector is authorized to call the attention of the Contractor to any failure of the work or materials to conform to the Specifications and Contract. The Inspector is authorized to reject materials which do not meet specification requirements or suspend the portion of the work involved until any question at issue can be referred to the Project Engineer or Project Supervisor. The Inspector is not authorized to issue instructions contrary to the Plans and Specifications. The Inspector shall not act as foreman or perform other duties for the Contractor, nor interfere with the management of the work by the latter.

105.10 Authority and Duties of the Inspector

The project Engineer or Supervisor has immediate charge of the engineering details of each construction project. The Engineer or Supervisor are responsible for the administration and satisfactory completion of the project.

The Project Engineer or Supervisor has the authority to reject defective material and to suspend any work that is being improperly performed.

The Project Engineer or Supervisor will have the authority to suspend the work wholly or in part due to the failure of the Contractor to correct conditions unsafe for the employees or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for such periods as they may deem necessary due to unsuitable weather. All such suspension orders will be directed to the Contractor in writing. The suspension of the work for the above reasons does no relieve the Contractor of their responsibility according to 107.16.

105.9 Authority and Duties of the Project Engineer or Project Supervisor

Getting the Best Possible Product

How Do We Get it?

Engagement

Communication

Investment

Engagement

- Be involved
- Understand Plans/Specs.
- Actively Participate
- Be Proactive not Reactive
- Communicate

Communication

Communication is a Two-Way street

TALK to your contractor

Working Together Curbs Problems

Investment

Take Ownership

Take Pride in your work

Conclusion

Engagement

Communication

Investment

ACCOUNTABILITY

Questions?