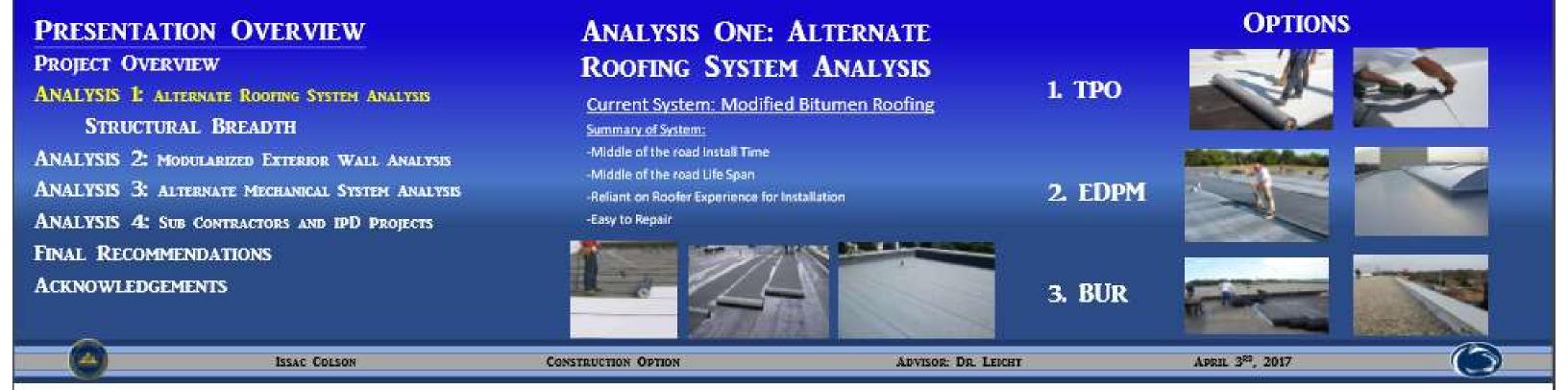


PENN STATE UNIVERSITY INTRAMURAL BUILDING: PHASE 3



Issac Colson
Construction Option
Advisor: Dr. Robert Leicht





PRESENTATION OVERVIEW

PROJECT OVERVIEW

ANALYSIS & ALTERNATE ROOFING SYSTEM ANALYSIS
STRUCTURAL BREADTH

ANALYSIS 2: MODULARIZED EXTERIOR WALL ANALYSIS

ANALYSIS 3: ALTERNATE MECHANICAL SYSTEM ANALYSIS

ISSAC COLSON

ANALYSIS 4: SUB CONTRACTORS AND IPD PROJECTS

FINAL RECOMMENDATIONS

ACKNOWLEDGEMENTS

COST EVALUATION

PSU IM Phase III Roof Cost Comparison				
Roof Type	Cost		Difference	Percentage
Modified Bitumen	5	263,098.17	0	0%
EDPM	3	166,413.14	\$95,683.03	37%
TPO	- 5	177,327.56	\$85,770.61	-33%
Built-Up Routing	5	304,001.90	4012-00177	1967

CONSTRUCTION OPTION

COST SUMMARY

EDPM roofing saves a total of \$96,000 (37% savings)

TPO roofing saves a total of \$85,000 (33% savings)

Built Up roofing did not save any money

Both TPO and EDPM are potential roofing systems that will have monetary savings



ADVISOR: DR. LEICHT APRIL 3RD, 2017



PRESENTATION OVERVIEW

PROJECT OVERVIEW

ANALYSIS 1: ALTERNATE ROOFING SYSTEM ANALYSIS

STRUCTURAL BREADTH

ANALYSIS 2: MODULARIZED EXTERIOR WALL ANALYSIS

ANALYSIS 3: ALTERNATE MECHANICAL SYSTEM ANALYSIS

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STRUCTURAL BREADTH

FUTURE REPOOFING OPTION STRUCTURAL ANALYSIS

Reroofing is a common practice and installs new roofing system over existing system

Reasoning:

- -Often less expensive then complete replacement
- -Protects valuable building Assets by not exposing building
- -No delay to day to day operations
- -Less future problems

THINGS TO CONSIDER

- -Weight of new system on existing structure
- -Current status of Existing roof
- -Cost Considerations
- -Surrounding Area



