

Evolution of Roofing Technologies



The Beginnings

- Roofing in US was adapted from European known materials
- Thatch, wood shake, slate and tile popular at the time



Evolution of Roofing Technologies



Roofing:
The
Beginning

Steep
Roofing

Steep
to
Flat

Next
Generation
Technologies

Resaturants
and
Restoration

Fluid
Applied
Membranes

Single Ply
Membranes

Modified
Bitumen
Membranes

Steep Roofing

- Concerns over fire and collapse drove roofing to slate and tiles
- 1910 was the first year for asphalt shingles providing lighter weight, fire resistant alternative



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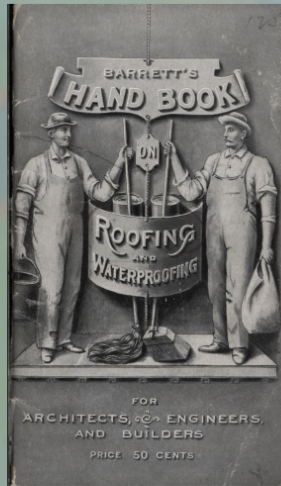
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Steep to Flat

- 1896 first BUR roofing consisting of Coal Tar Pitch and tarred felts
- Paved way for expansive, flat roofing



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Resaturants and Restoration

- While BUR is shaping the architecture of building design, restoration products are helping to "keep good roofs good"
- Predominantly asphalt or coal tar pitch
 - Asphalt Emulsions



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Modified Bitumen Membranes

- Modified Bitumen membranes (MB's) originated in the late 1960's
- Polymer blending key to asphalt blend
 - Concerns over asphalt quality and life expectancy led to development



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Single Ply Membranes

- Introduced in the 1960's
- Gained market share in the 1970's during oil embargo
- Less labor because it is a "single" ply rather than redundant
- Susceptible to punctures and seam failure



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Fluid Applied Membranes

- Minimal disruption
- Lower cost than tear-off / replacement
- Monolithic membranes
- Reduced waste to landfill



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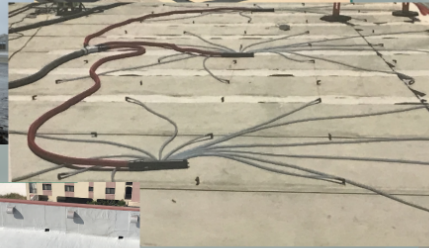
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Next Generation Technologies



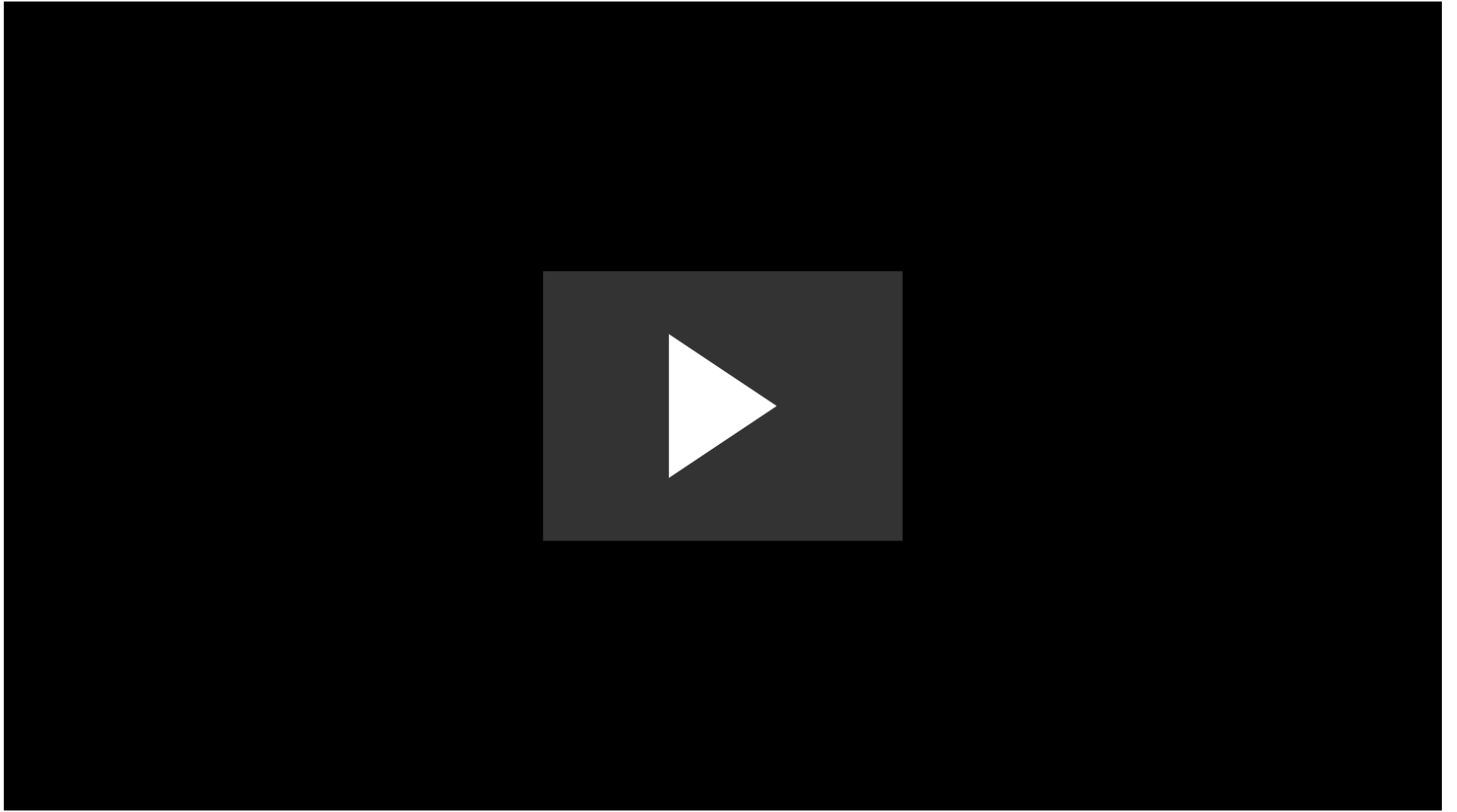
RoofTec
2.0

Alphagrade

Guardian

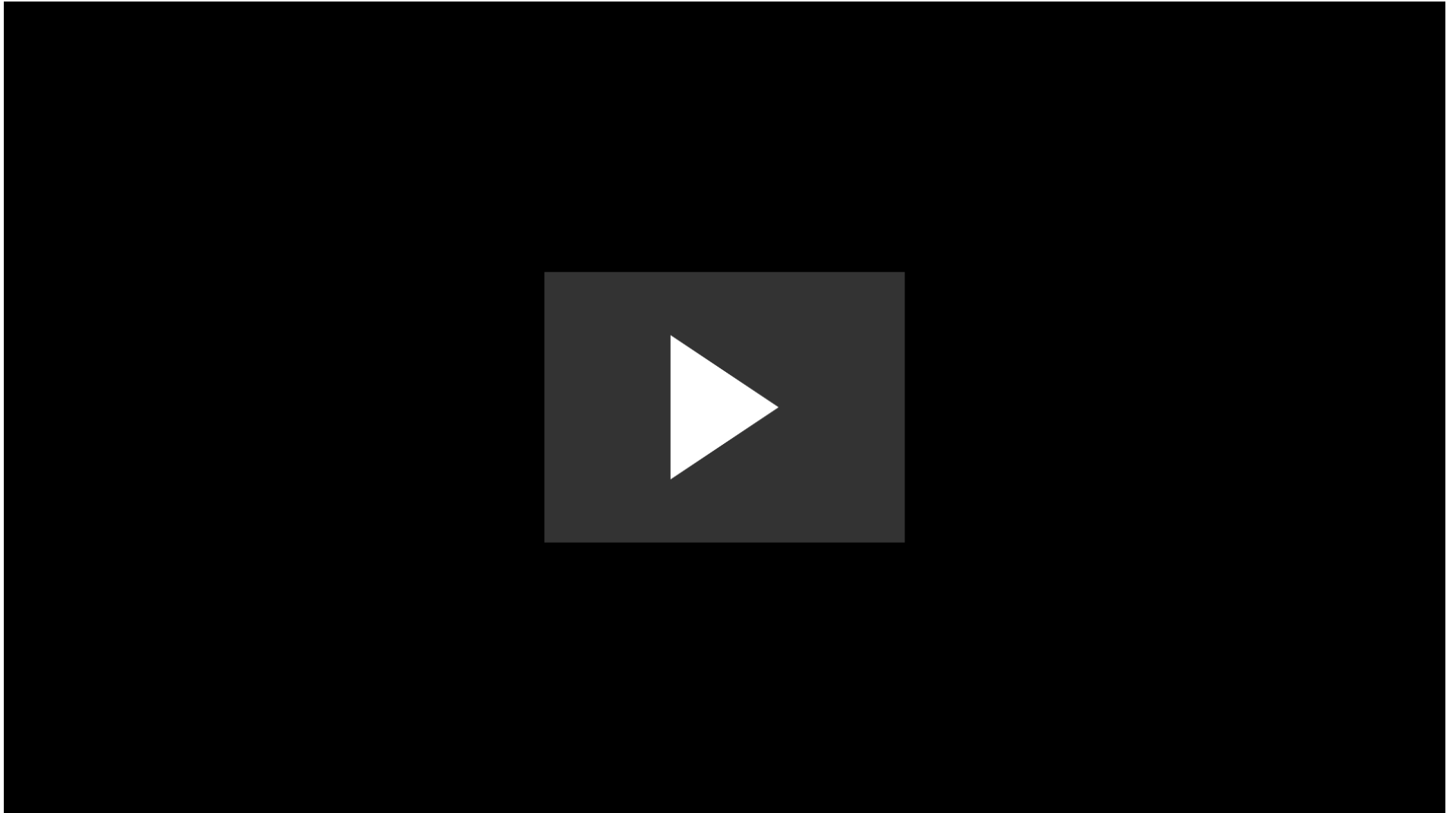
RoofTec 2.0





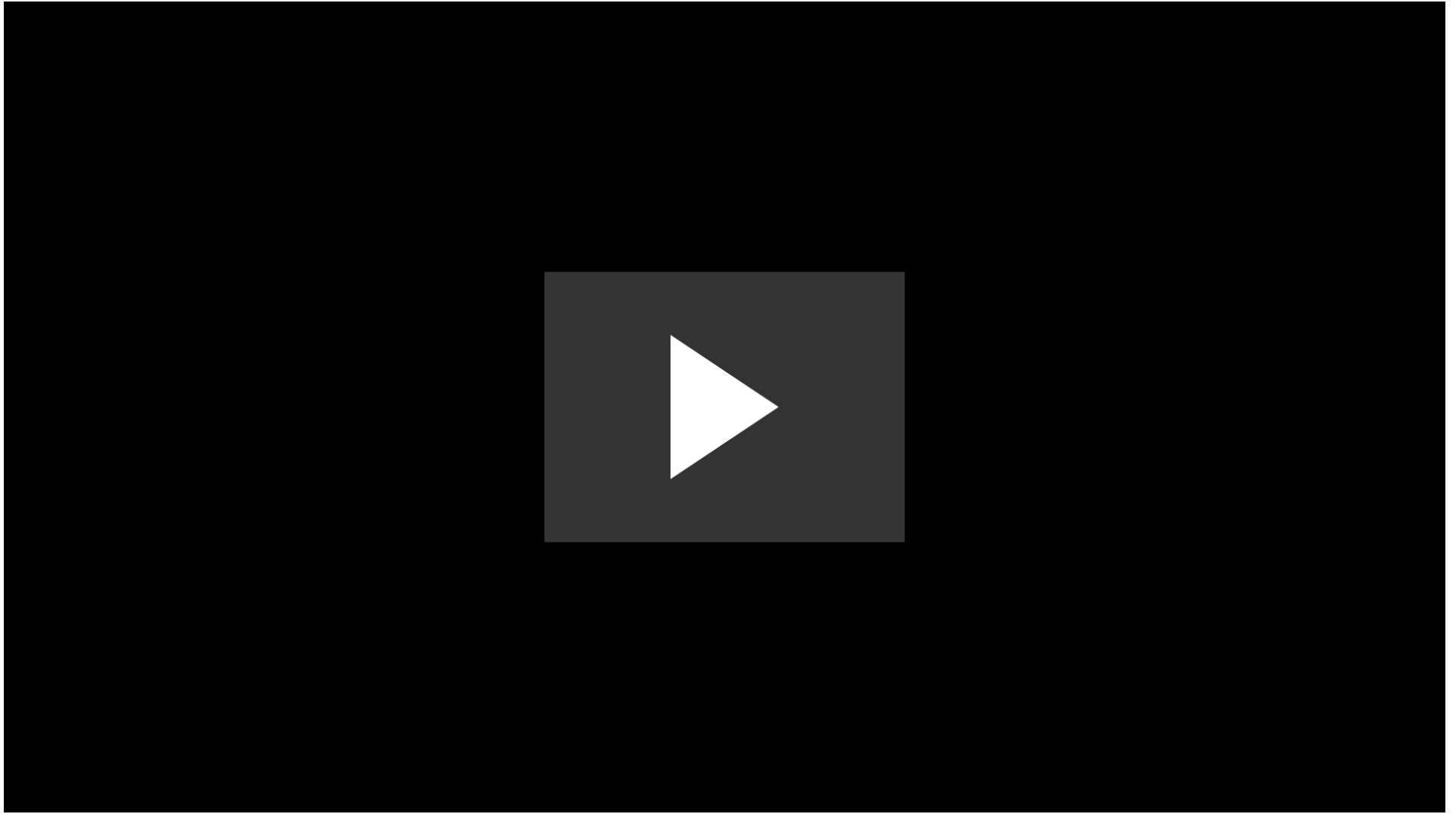
Alphagrade





Guardian Sensors





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