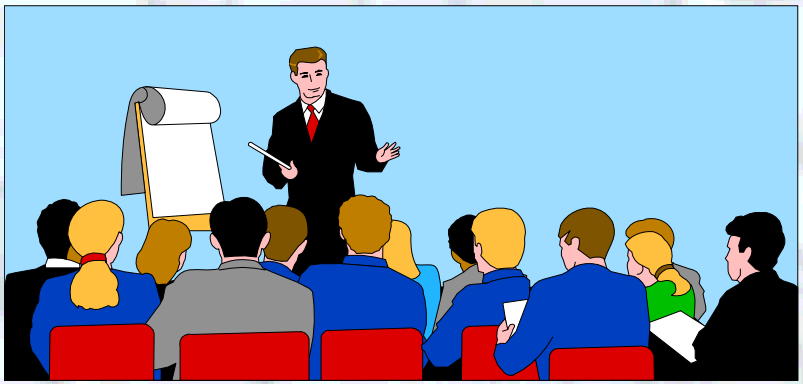
The Uses of Aggregate

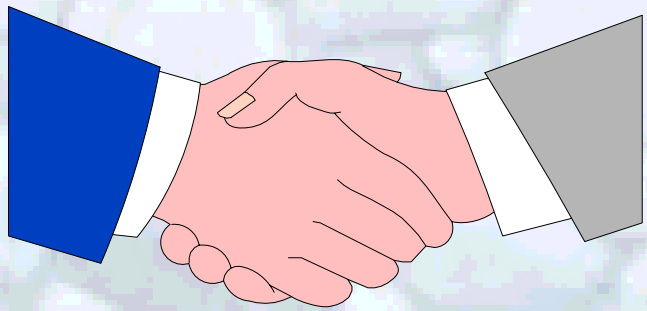
in

Our Everyday Lives

OAIMA - 2010

OAIMA Represents 95% of Aggregate and Industrial Minerals Suppliers in Ohio



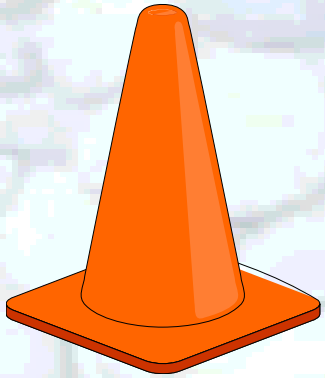


•OAIMA Works Closely With Regulatory Agencies to Insure Safe, Efficient, Environmentally Friendly Operations that Produce Quality Products and Are "Good Neighbors"

What Is Aggregate & Industrial Minerals?

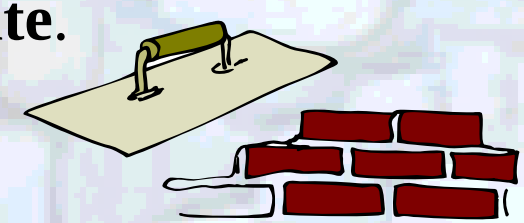
• Aggregate - Any combination of sand, gravel and crushed stone in their natural or processed state used in construction and building activities.

• Industrial Minerals- geological materials which are mined for their commercial value. They are used in their natural state or after processing either as raw materials or as additives in a wide range of applications.



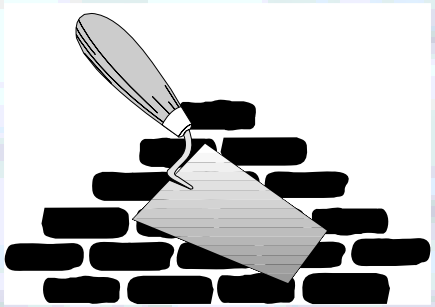
Aggregate Quick Facts

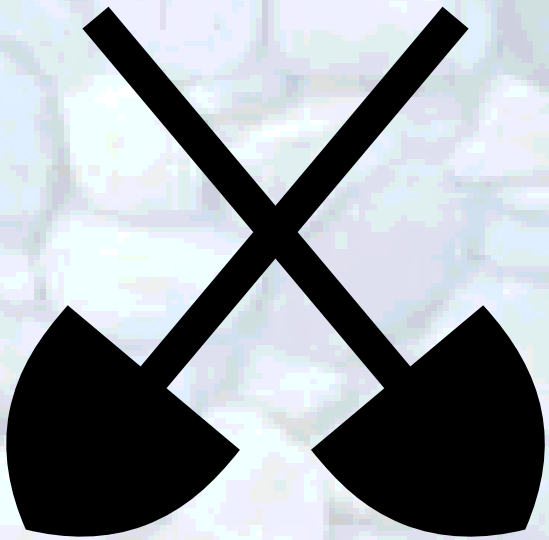
- **85,000 Tons of Aggregate Per 1 Mile of a Four Lane Highway.**
- **11 tons of Aggregate & Industrial Minerals for each Ohio Resident.**
- **The Average Home Requires 106 Tons of Aggregate.**
- **The Average Size School or Hospital Requires 15,000 Tons of Aggregate.**

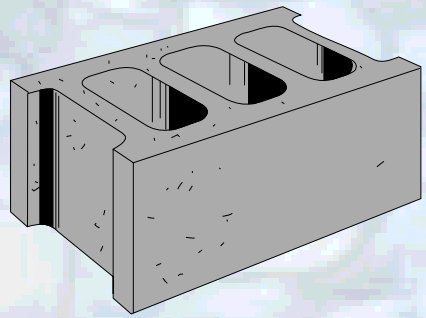


Ohio's Construction Aggregates

- Natural Aggregate - 4th Nationally
- Limestone - 4th Nationally
- Slag - Top 4 (2nd in Steel Manufacturing)





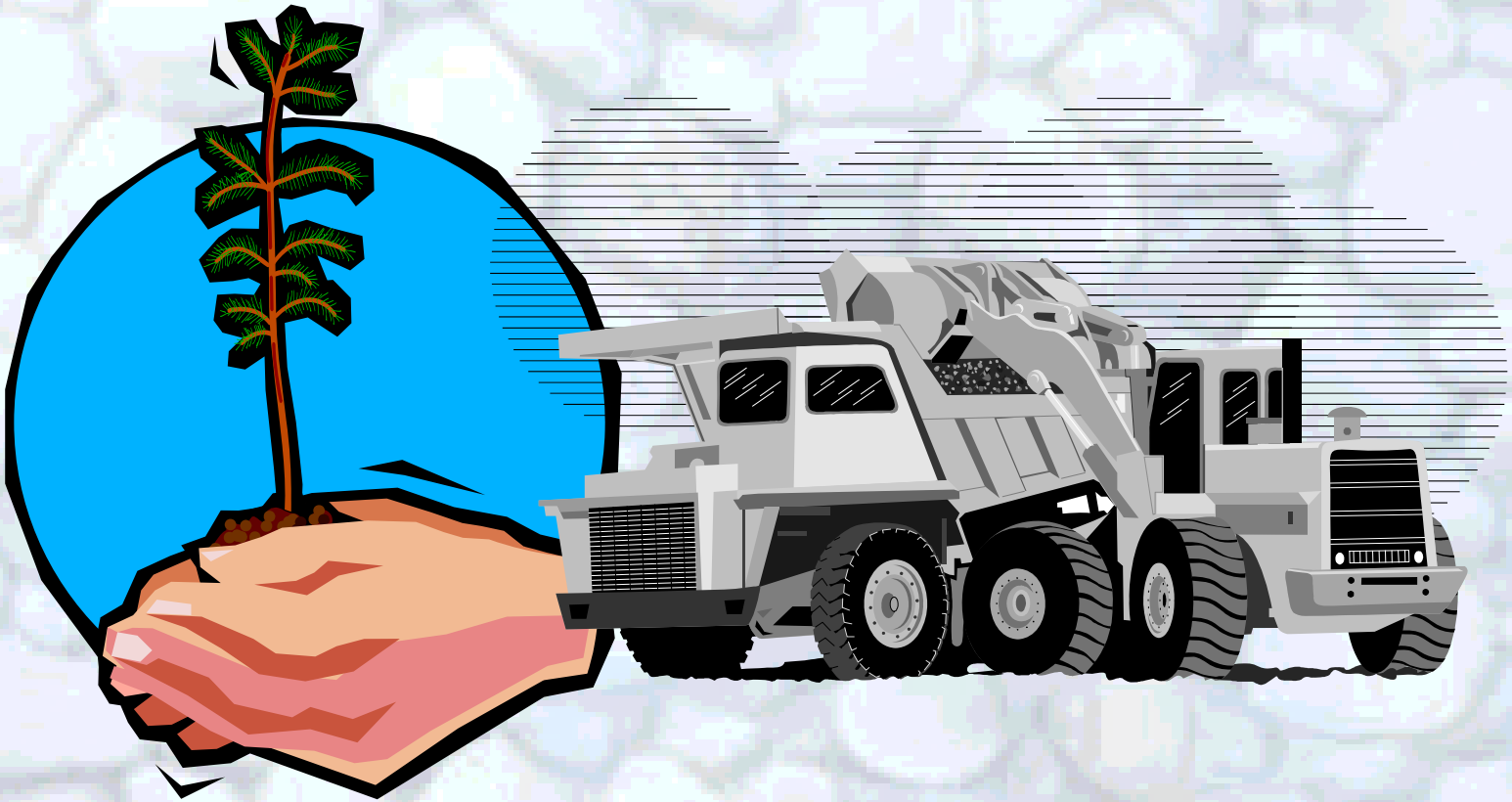


Ohio's Industrial Minerals

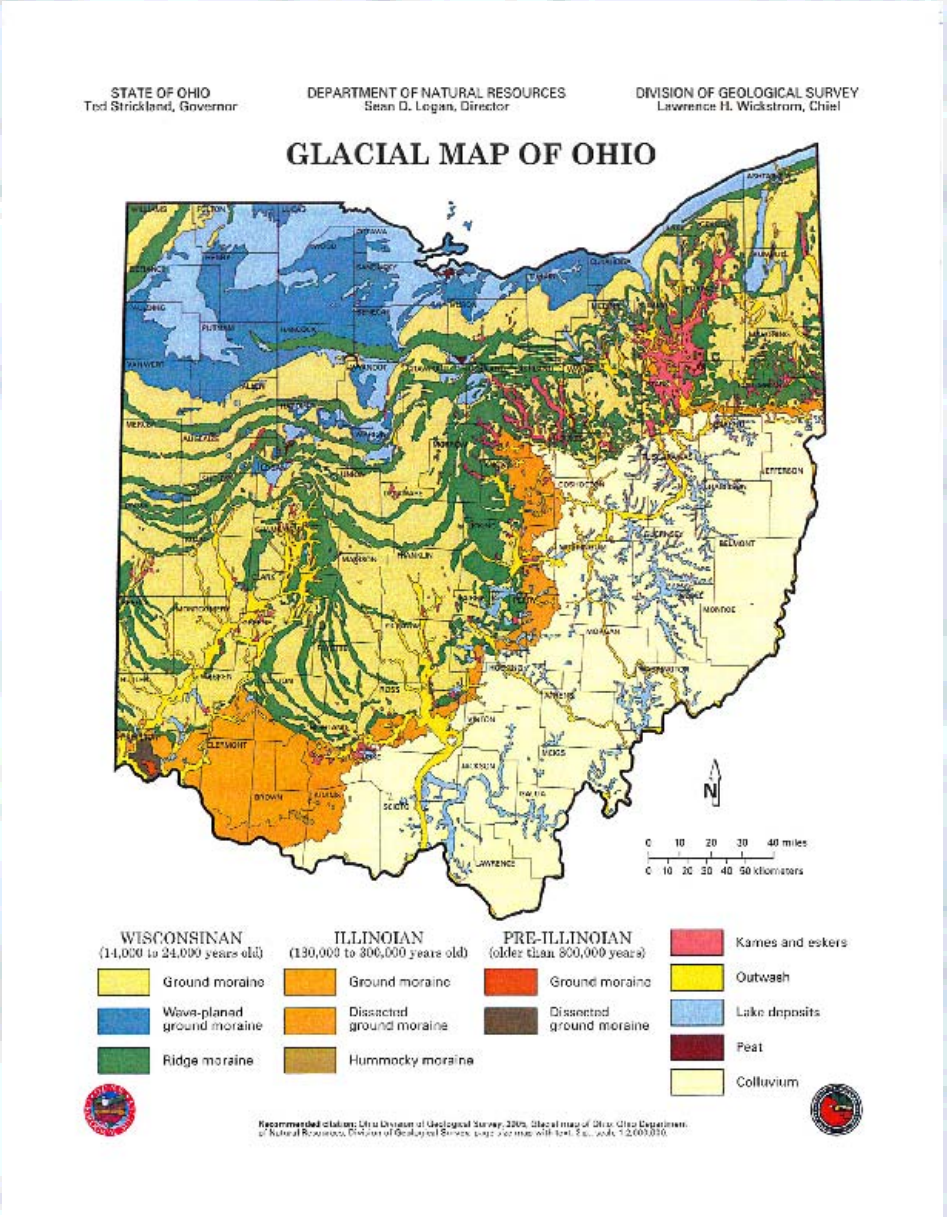
- Clay & Shale - 5th Nationally
- Sandstone & Industrial Sands - 2nd Nationally
- Salt - 5th Nationally
- Gypsum - 14th Nationally
- Cement - 10th

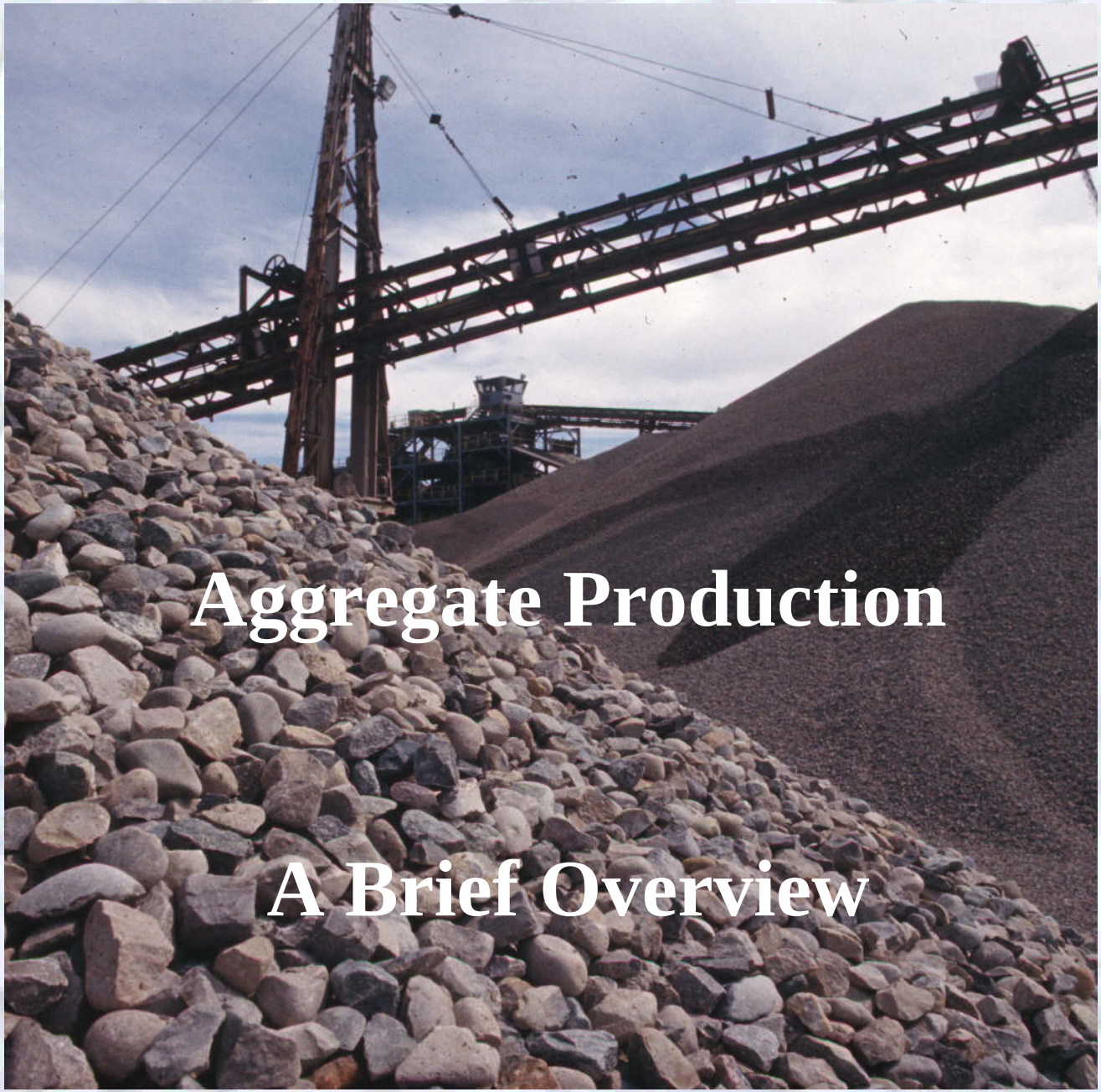
Overall Ohio is 10th nationally in Aggregate and Mineral Production

“If it can’t be grown, it has to be mined”



Resources Are “Where they Are”





Aggregate Production

A Brief Overview

Our Process.....

BLASTING

Bore holes are loaded in the pit area of the blast site.

Underground Mining

We Also Dredge the Rock….

DREDGING: Sand and Gravel deposited from glaciers many, many years ago..

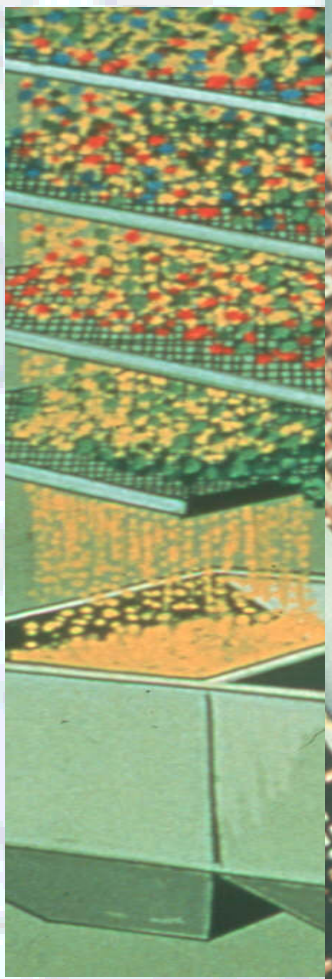
Our Process……

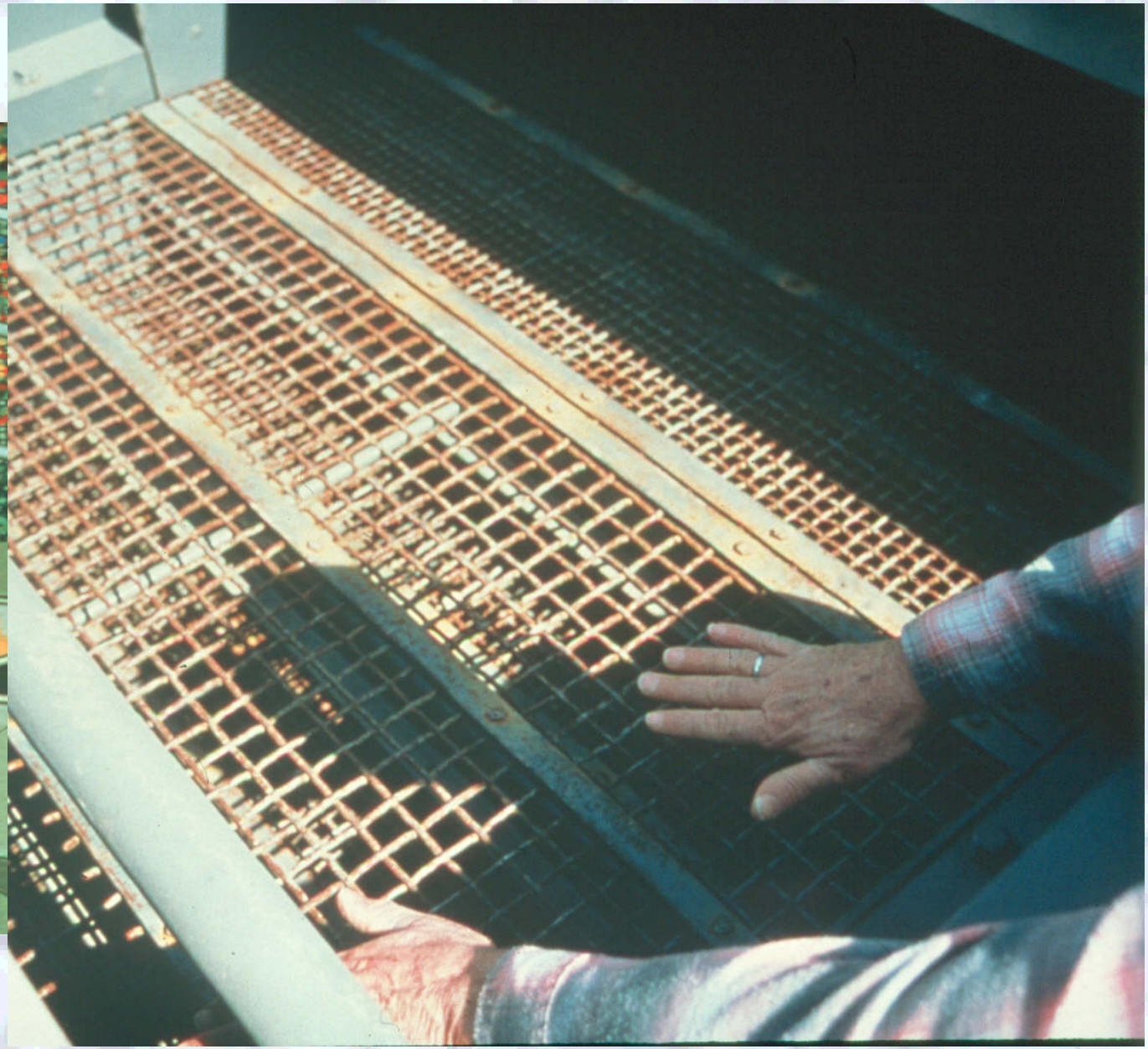
HAULING

Wheel loaders haul the broken rock and load it into haul trucks. Then the rock is transported to the processing plant.

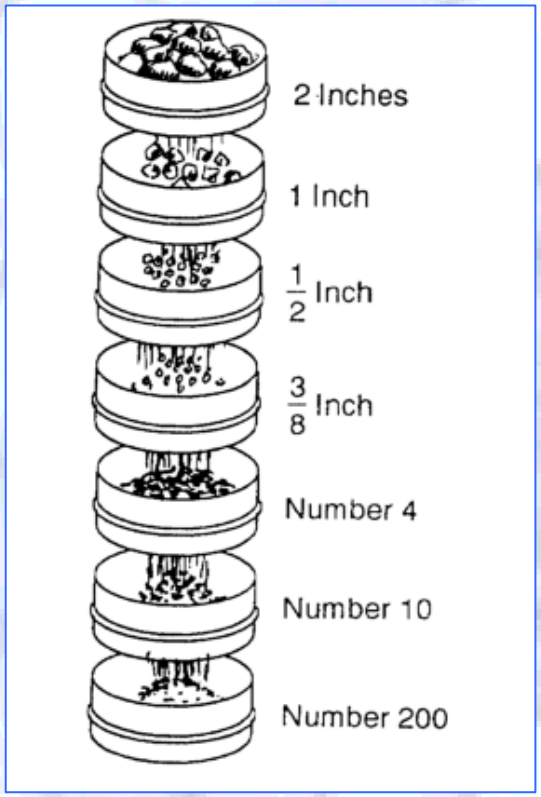
Haul trucks carry from 75-90 tons – do you know what that is in pounds?

Crushing





Aggregate Gradation



Specifications

ODOT No. 57's

Sieve Size	Percent Passing
1-1/2"	100
1"	95-100
¾"	----
½"	25-60
3/8"	----
#4	0-10
#8	0-5

Our Process.....

STOCKPILING

After the crushing station, the rock is stored in a variety of stockpiles.

Our Process.....

DISTRIBUTION

The rock is transported by truck, rail or waterway to the customer.


Cost Doubles for Every 10 Miles of Transport -(over the road)

Aggregate Base Construction

- Usually 100% Aggregate
- Sometimes Stabilized with Portland Cement, Lime or Asphalt Cement


Aggregate Base

Portland Cement Concrete

- About 85% Aggregate per Cubic Yard

- May contain miscellaneous fillers or reinforcement

Ready-Mixed Concrete

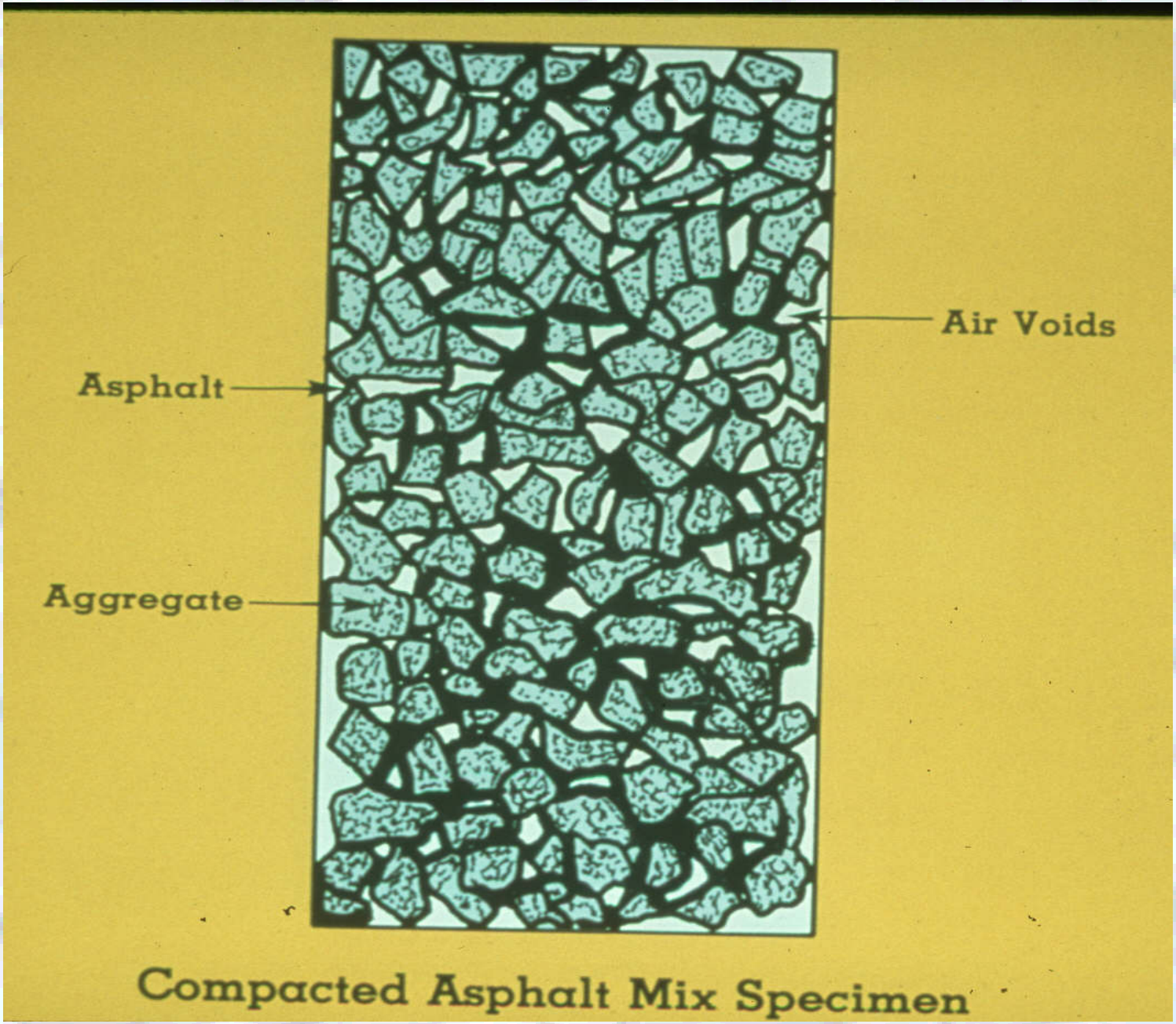
PCC Paving On Aggregate Base

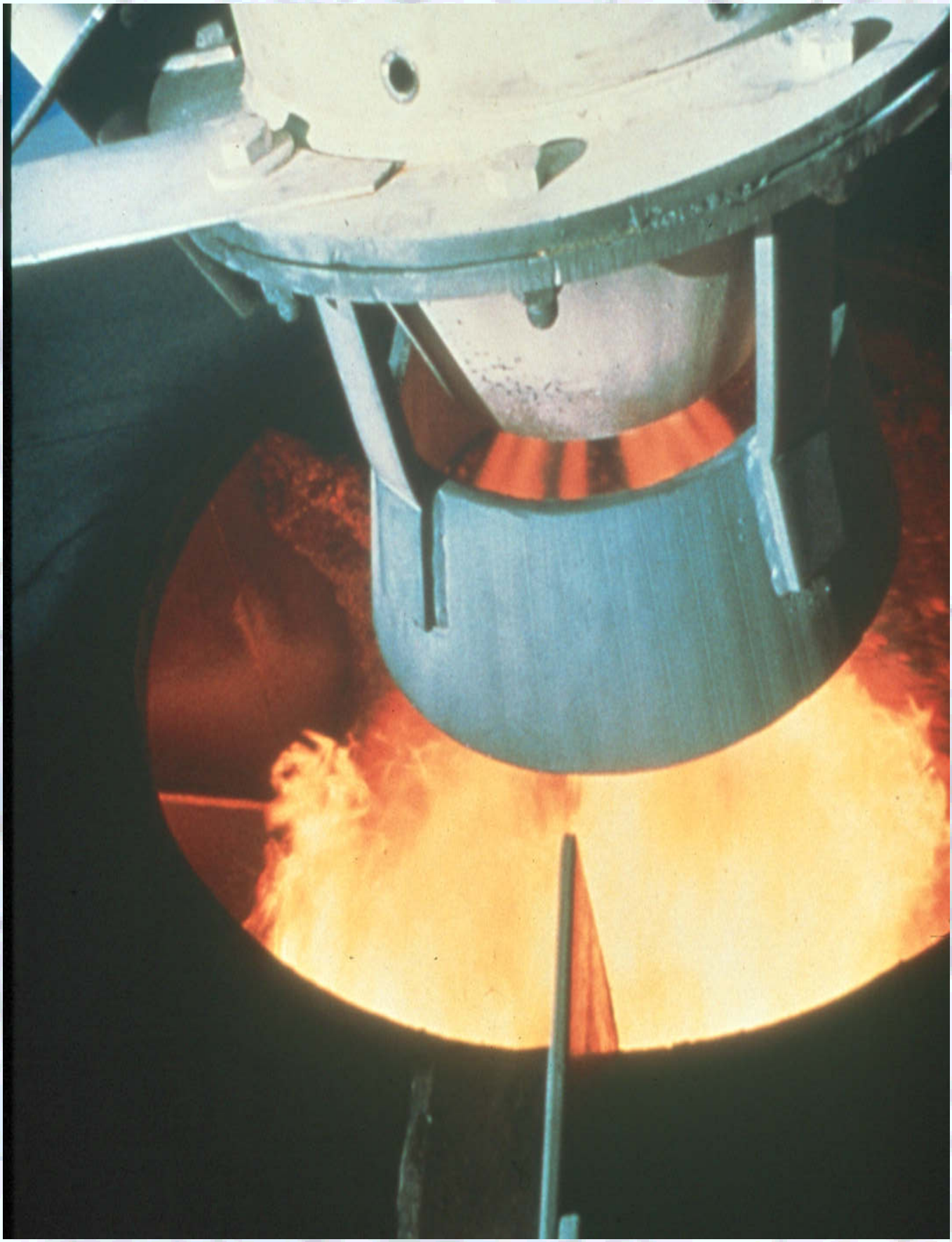
Road Construction

FINISHED PRODUCT

Asphalt Concrete

- About 95% Aggregate per Ton

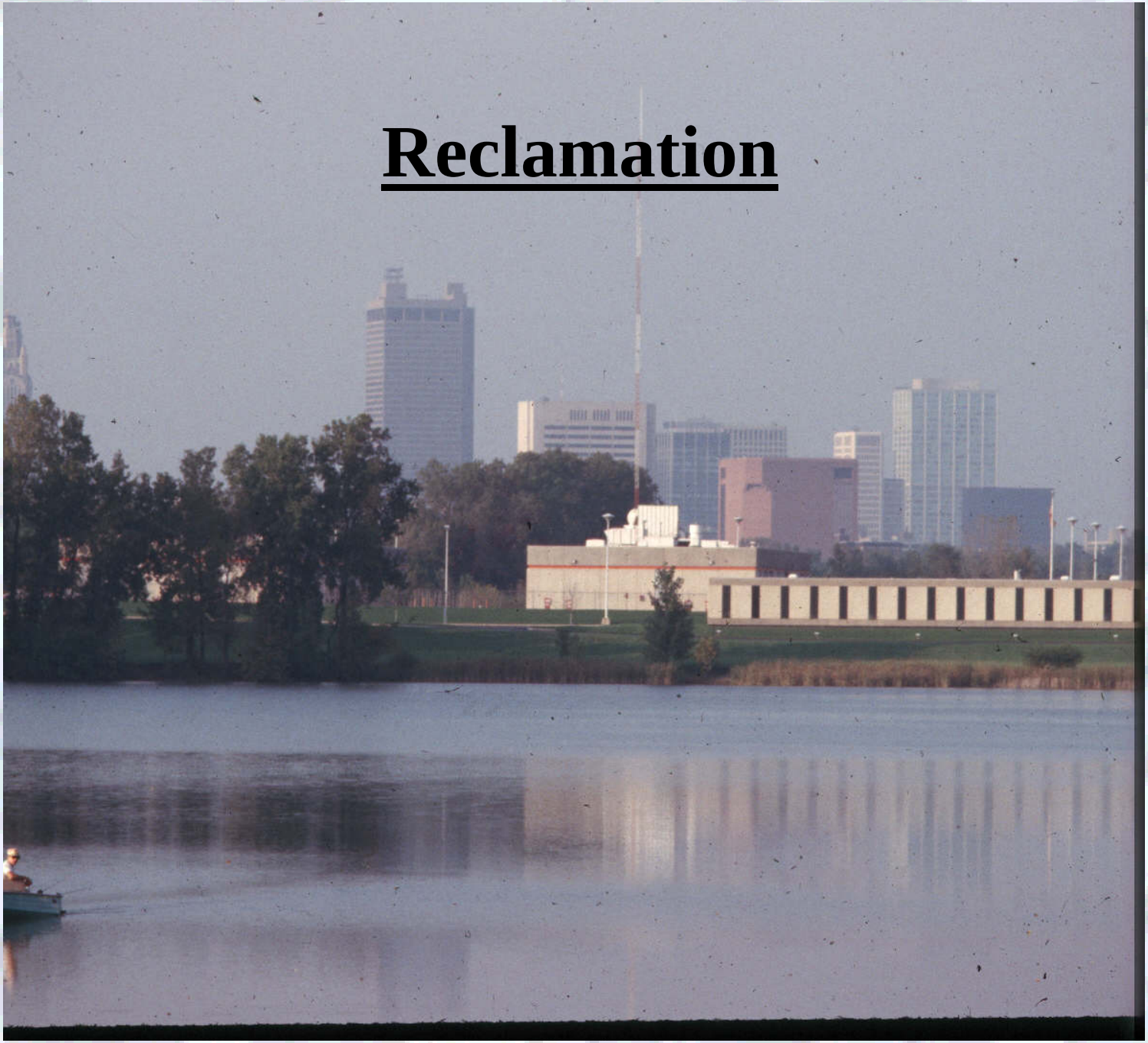

Air Voids
Asphalt
Aggregate
Compacted Asphalt Mix Specimen



Asphalt with Paver


NEWTON
NO
PARKING
ANY
TIME

Reclamation

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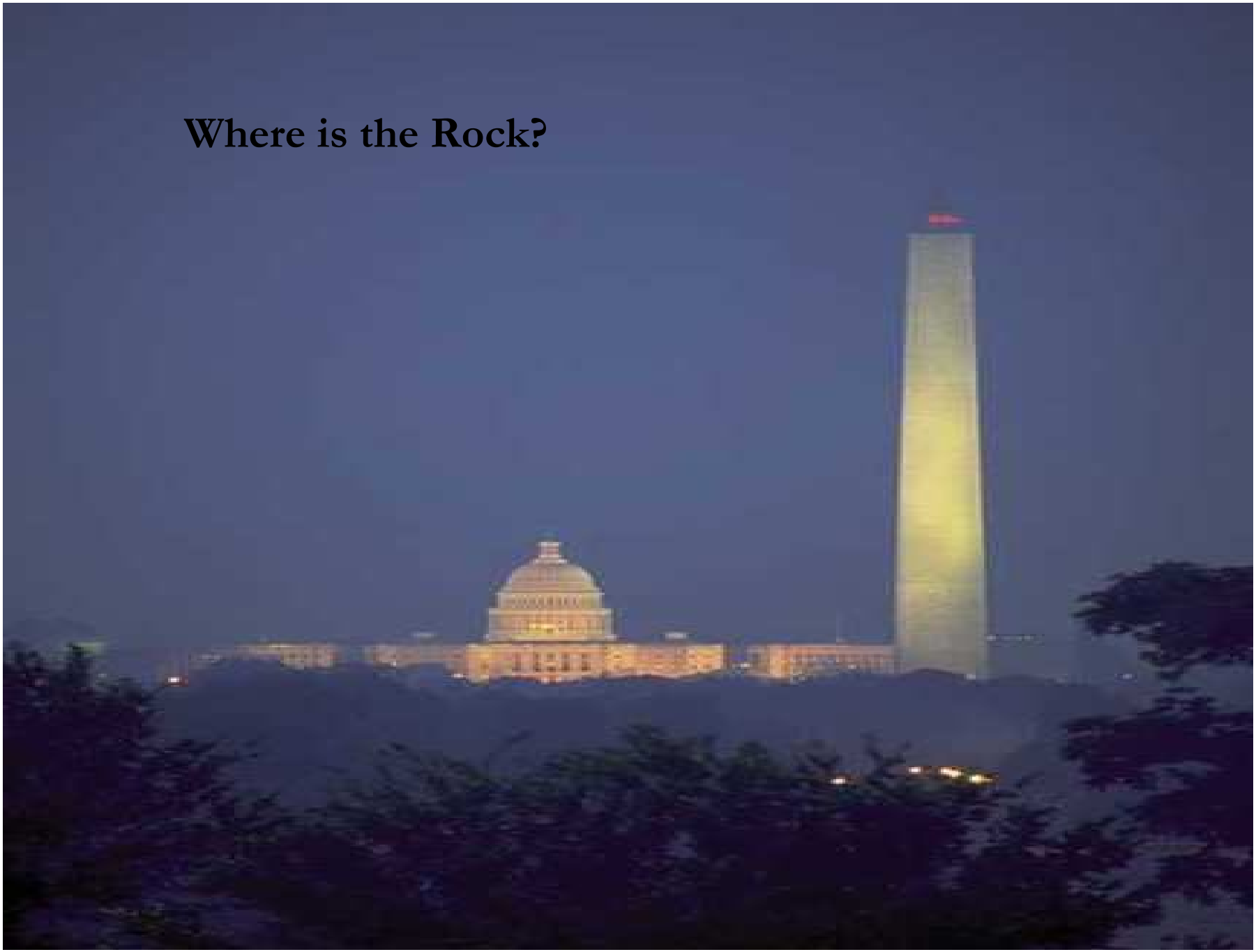
Where is the Rock?


STOP

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Ohio Rocks!://www.cetconnect.org/ohiorocks/