Welcome & Introductions

Chris West – NB West Contracting

Brandon Atchison - MAPA

MAPA
EMERGING LEADERS

Why Parking Lots Matter!

Dan Staebell
Regional Director
National Asphalt Pavement Assoc.
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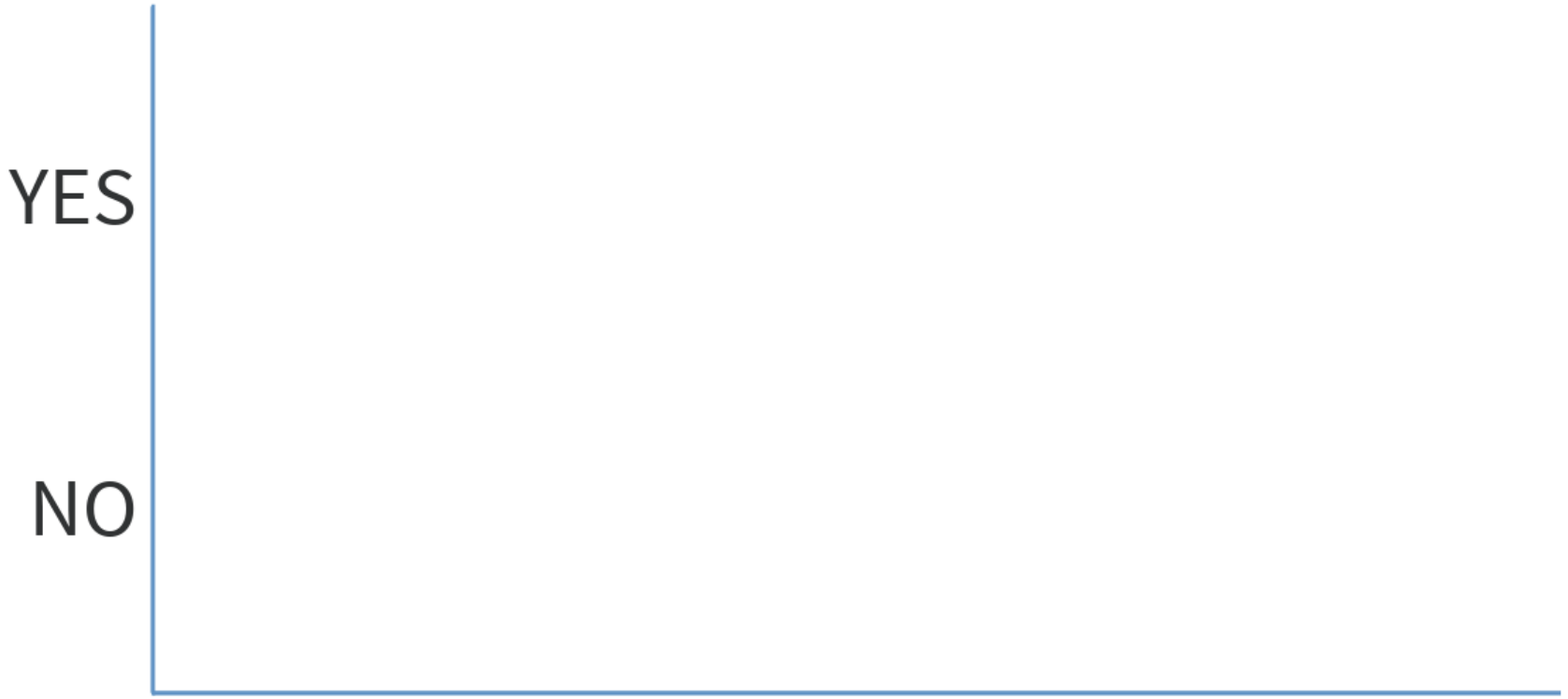
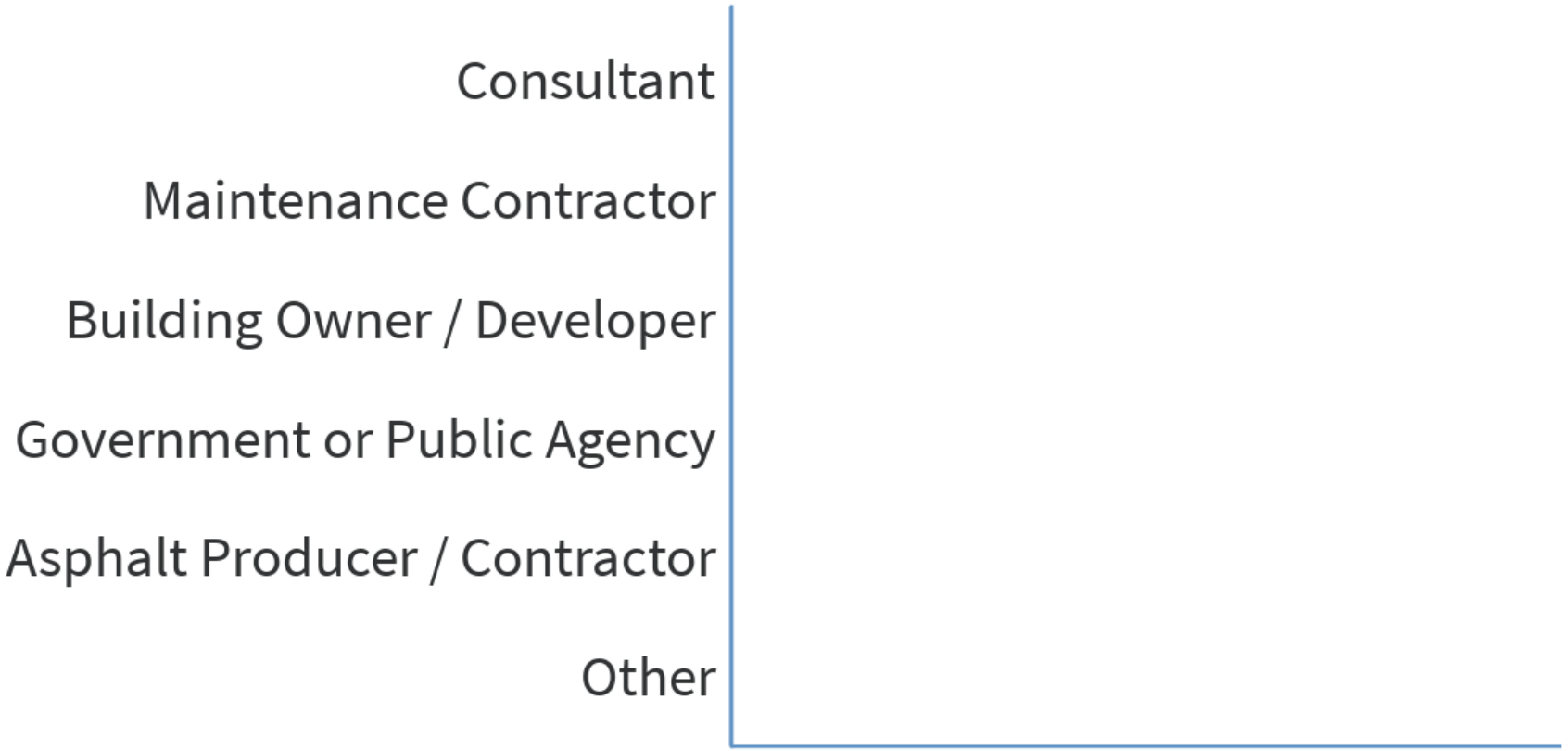
Crowd Participation with Smartphone

Presenter session:
Audience texts
dans018 to **22333** to join the session, you will receive notice "You've Joined"
Poll Everywhere

Have you ever built, maintained, resurfaced, designed, inspected a parking lot?



What best describes your companies business?



Research & Technology

Market Research & Communications

Deployment Activities

Pavement Economics Committee
- 4 Task Groups

Other Research
- Asphalt Institute
- NCAT

Future Research

Go-To-Market Task Group

SAFE, QUIET, RELIABLE ASPHALT ... THAT'S DRIVABILITY

Deployment Task Group

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NAPA NATIONAL ASPHALT PAVEMENT ASSOCIATION

SAPA State Asphalt Pavement Associations

ASPHALT INSTITUTE

ASPHALT PAVEMENT ALLIANCE

Total Tons

Table 3: Summary of 2017 Estimated and Rej

State	Tons, Millions Estimated	Reporte
Alabama	7.0	4.9
Alaska	5.1	*
American Samoa	0.03	*
Arizona	6.5	1.2
Arkansas	6.0	1.9
California	26.0	5.9
Colorado	5.3	2.0
Connecticut	4.9	2.8
Delaware	1.5	*
District of Columbia	1.4	*
Florida	16.5	4.6
Georgia	14.6	2.2
Hawaii	1.1	0.8
Idaho	2.8	1.7
Illinois	13.0	2.1
Indiana	11.8	6.6
Iowa	3.9	1.6
Kansas	2.0	1.1
Kentucky	4.4	4.4
Louisiana	7.8	1.2
Maine	1.7	2.0
Maryland	7.8	2.4
Massachusetts	6.5	5.0
Michigan	13.7	9.0
Minnesota	6.9	6.0
Mississippi	4.8	2.8
Missouri	6.5	3.9

NCR No Companies Responding
* Fewer than 3 Companies Reporting
† Total Reported Tons includes values fr
SAPA Estimated Tons
Numbers do not add up exactly due to rounding

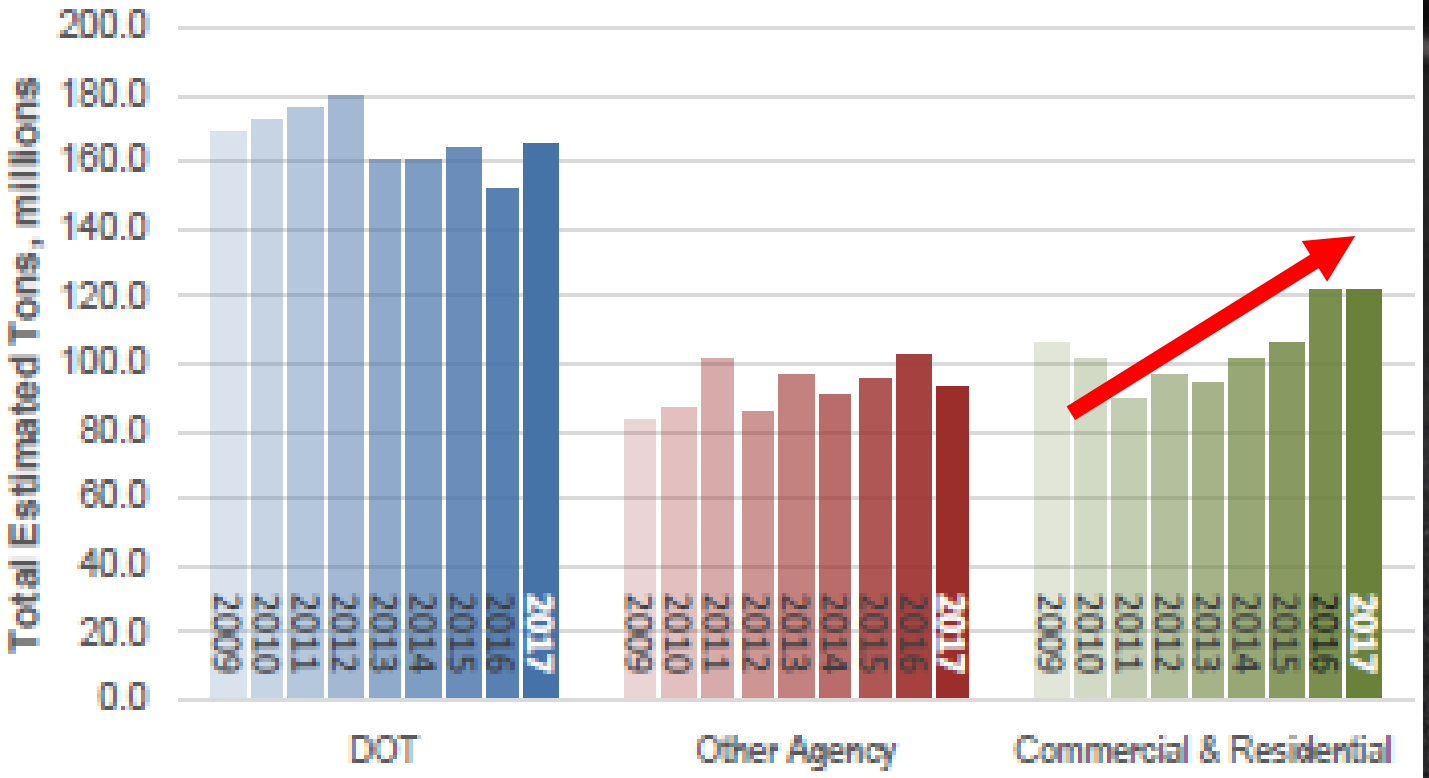

Figure 2: Estimated Total HMA/WMA Asphalt Mixture Production by Sector, 2009–2017

How many Walmart Retail units are located in Missouri?

https://corporate.walmart.com/our-story/locations/united-states/missouri

105 **A**

202 **B**

156 **C**

236 **D**

Have you ever heard this?

It's just a parking lot!

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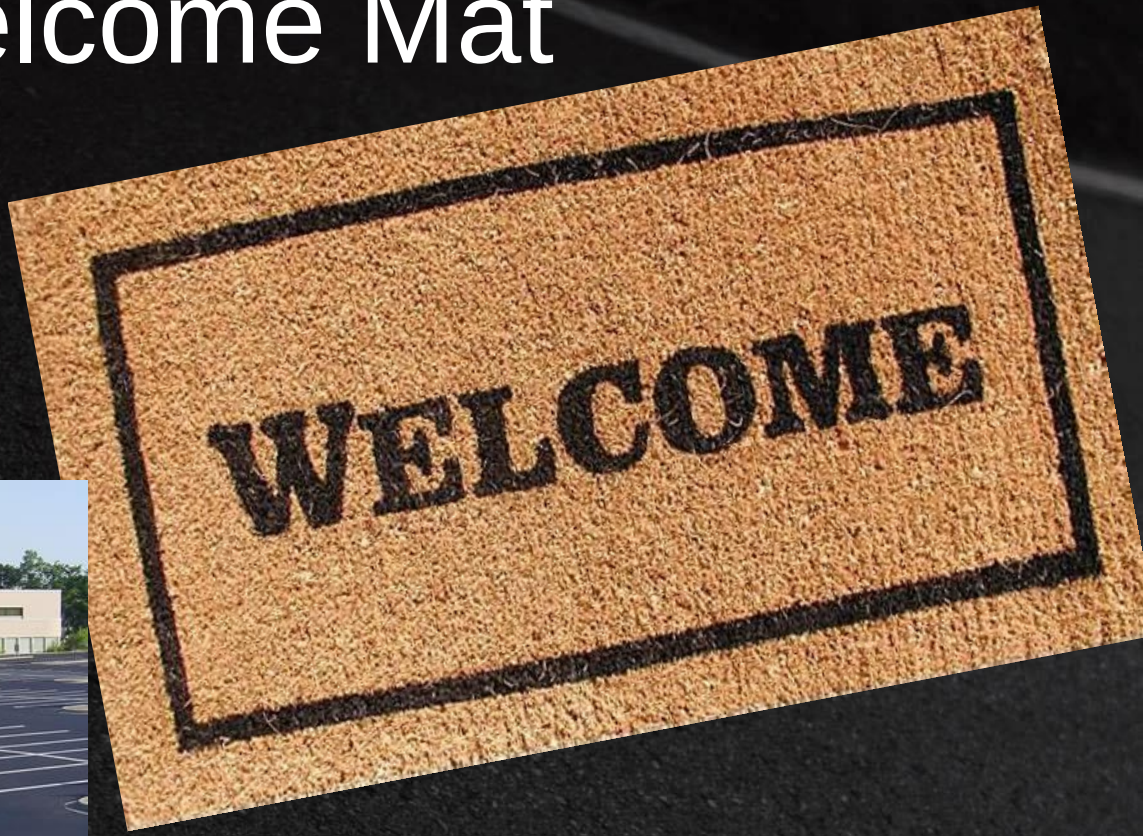
Facilities Welcome Mat



7 Keys

Handout

- Pick your Mix
- Dig Deep
- Drain the Rain
- Build a Base
- Trucking Along
- The Green Scene
- Pave and Save

Pay attention to details

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6 Steps

6 Steps to Highly Successful Parking Lots

Information courtesy Plantmix Asphalt Industry of Kentucky | www.paiky.org

1 Plan Before You Pave

Passenger cars, pickup trucks, and sport utility vehicles are relativley lightweight, and have little influence in pavement thickness. The anticipated size, weight, and frequency of commercial trucks are sensitive parameters in this analysis and will have a big influence on pavement thicknesses and mixes within the same parking lot. The cumulative effect to traffic may be expressed as Equivalent Single Axle Loads (ESALs) for the purpose of pavement design.

2 Dig Deep

The quality and strength of exhisting subgrade soil is a significant factor in the design and performance of your parking lot. Perform a geotechnical analysis and testing to establish current site conditions, which will guide site grading activities in terms of moisture content and compaction. The pavement thickness will be heavily influenced by the strength of the onsite soil.

3 Drain the Rain

Water can be detrimental to a soil subgrade and paving materials, so drainage should be a strong consideration in the design and construction of any parking lot. The pavement surface must be sloped to provide adequate drainage, and to avoid low areas that could lead to ponding water. A minimum combined slope of 2 percent is recommended. In contrast, porous pavements are different and are designed so water drains though the surface pavement layers, and is slowly released to the underlying ground. For more information on porous ashpalt pavements, visit www.porouspavement.net .

4 Build A Base

All structures need a solid foundation, and a well-prepared base will pay dividends in building a long lasting pavement structure. Quality materials and good compaction are essential to establish a strong working platform. Most projects will use a 4-8 inch layer of compacted dense-graded aggregate (DGA), which serves as an important foundation for the pavement system.

5 Pick Your Mix

Asphalt mixtures can be manufactured with different combinations of aggregates, liquid asphalt, and additives designed specifically for the desired application. The combination of materials that perform well in a parking lot typically are different from those used on high-traffic roadways. Long-lasting parking lot mixtures should be fine graded to prevent moisture intrusion, and should have a high liquid asphalt content for durability. Asphalt is the most recycled product in America and experts recognize that mixtures using Reclaimed Asphalt Pavement (RAP) result in quality pavements.

6 Pave & Save

With proper base preparation and DGA placement, the asphalt mixture can be evenly placed & well compacted for optimal performance. Quality paving contractors are capable of building parkinglots to meet compressed building schedules to better serve their customers. Asphalt pavements remain the most versatile and economic pavement product with decades of performance.

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1221 Jefferson Street | PO Box 104855 | Jefferson City, MO 65110
(573) 635-6071 | moasphalt.org

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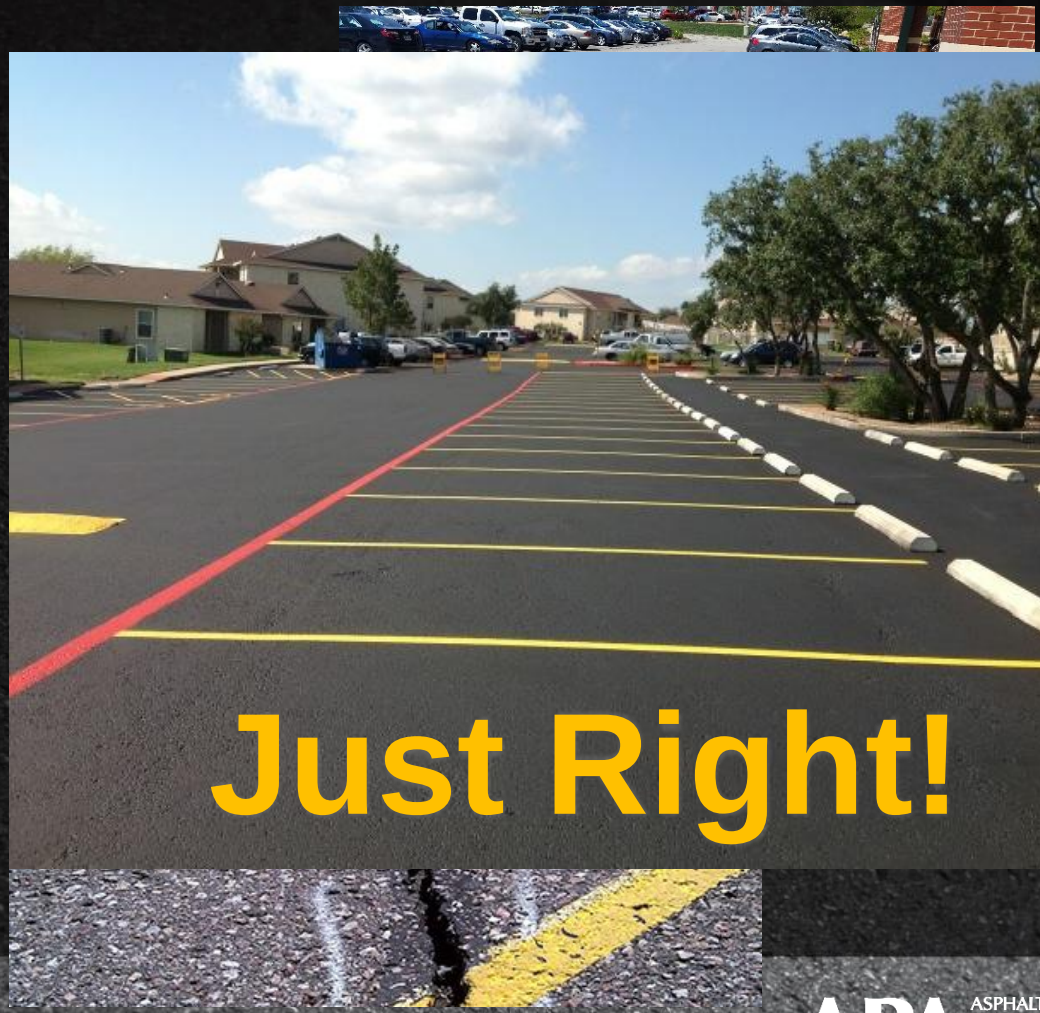
Pick your Mix

- Parking vs. Highway
  - Static
  - Rolling

Pick your Mix

- Understand Asphalt Cement – Binder
  - Proper % Binder
  - Performance Grade (PG)
  - Ask for guidance!
    - Physical Location of Use
    - Base or Surface
    - Polymer additives
- ***Warning:*** Improper Selection can result in:



Rap Percent Use

- Manage Percentage
- Liquid Binder
- Mix Design = Performance

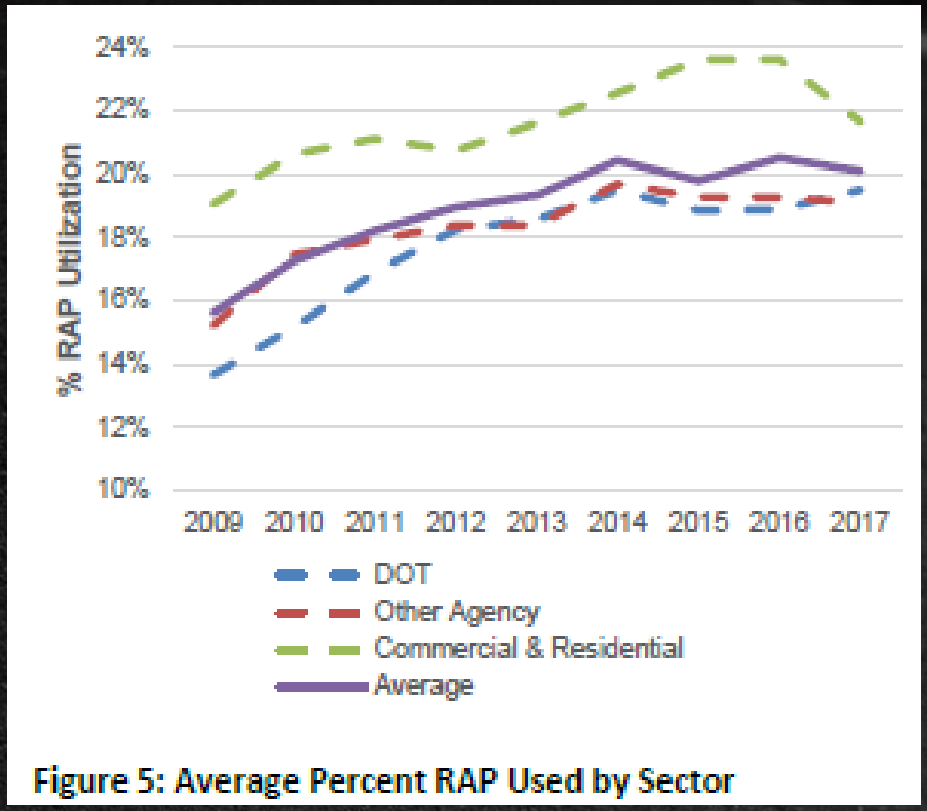
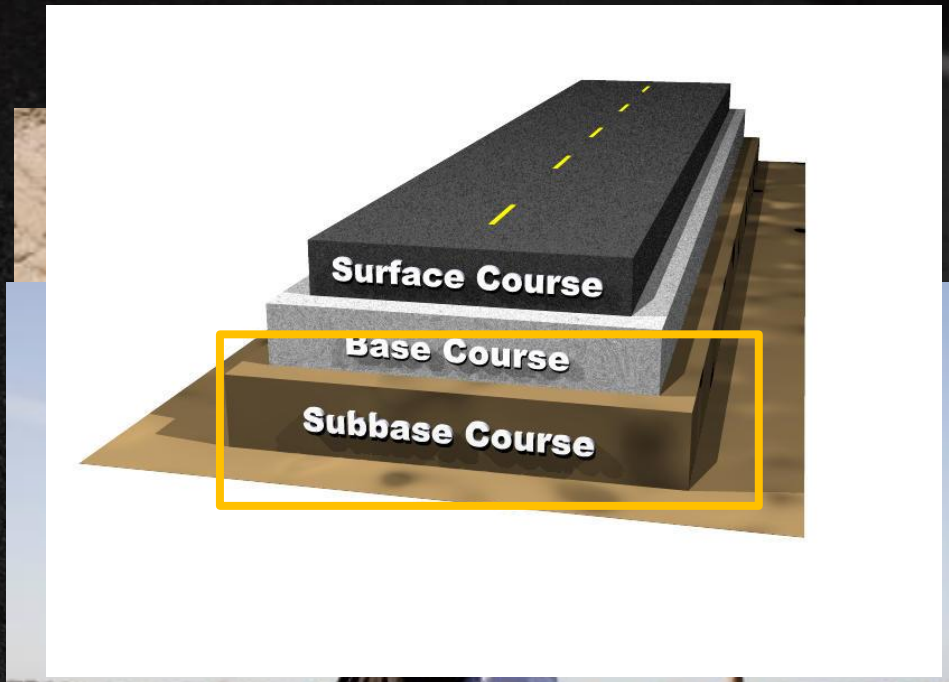


Figure 5: Average Percent RAP Used by Sector

Dig Deep

- Subbase Platform
  - Understanding Support = Critical Part of Design



Plan & Trucking Along

- Nothing Temporary-Plan and design for the long term…
- 1 Loaded Semi = 3000 Cars
  - ESAL Calculation Pavement Interactive
- Cars Minimal Impact –
  - Design Minimum (See SAPA)

Thickness Design Guides

PaveXpress

A Simplified Pavement Design Tool

PaveXpressdesign.com

PaveXpres

Home Getting Started M

Resources

The following resources accompany the

State DOTs

State Asphalt Pavement Associ

Parking Lot Design Guides

Colorado Asphalt Pavement Association

The Plantmix Asphalt Industry of Kentuc

Minnesota Asphalt Pavement Associatio

Flexible Pavements of Ohio

Pennsylvania Asphalt Pavement Associa

Washington Asphalt Pavement Associati

Wisconsin Asphalt Pavement Associatio

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Join us for a free webinar

PAVEXpress

A Free, Simplified Pavement Design Tool

An Overview of Major Enhancements

An in-depth look at:

- New life cycle cost analysis module
- New mechanistic-empirical pavement design module based on PerRoad
- The ability to perform designs in both English and Metric units

Go to **asphaltroads.org** to sign up

May 27, 2020

1:00 - 2:30 EDT

APA Asphalt Pavement Alliance

Pave and Save

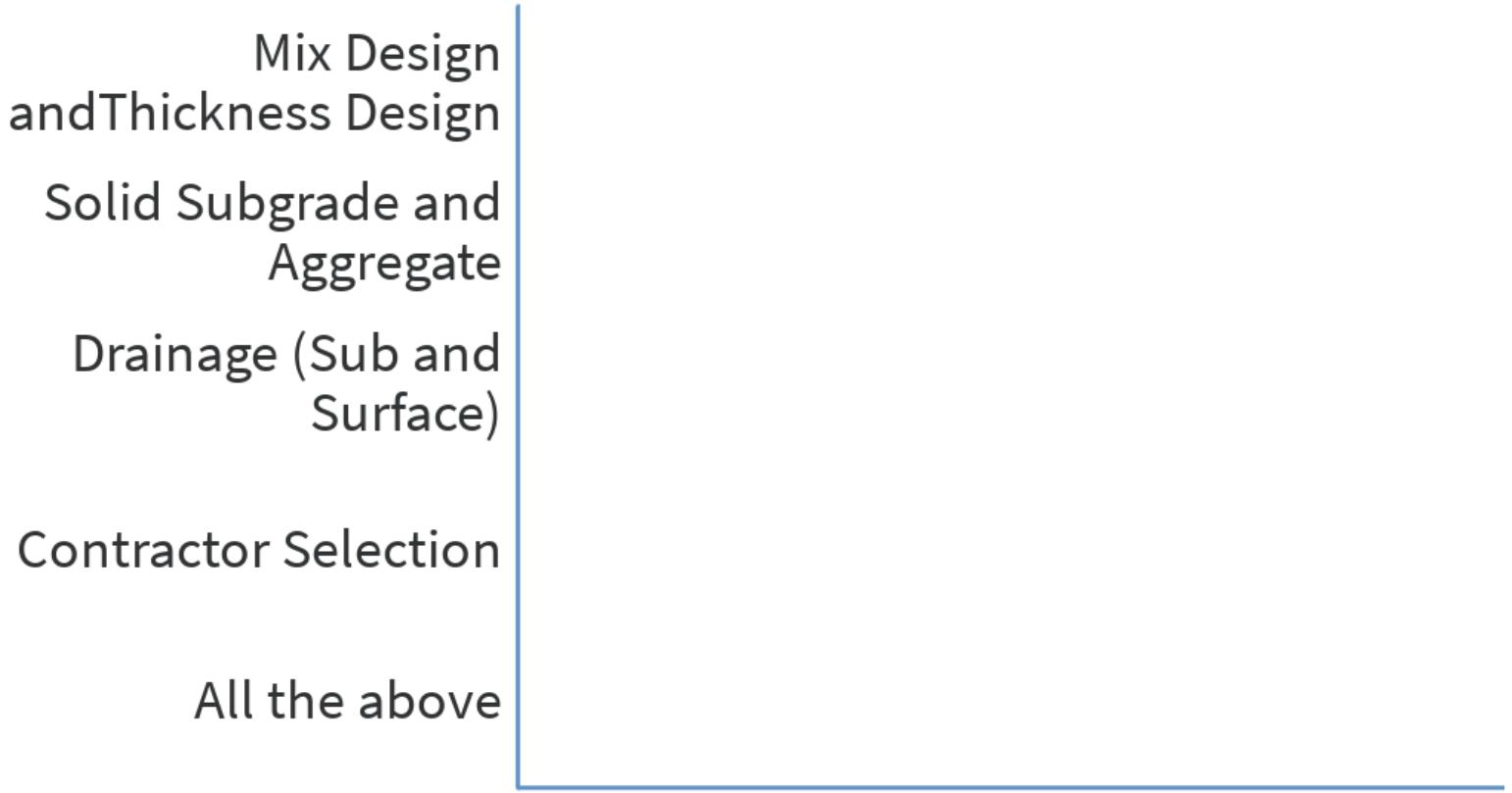
- Select Qualified Contractor
  - SAPA List
- Inspect – Inspect – Inspect
  - Oversight = Sleep like a baby!
- Ask Questions

Recap

- Pick your Mix
- Dig Deep
- Drain the Rain
- Build a Base
- Trucking Along
- The Green Scene
- Pave and Save

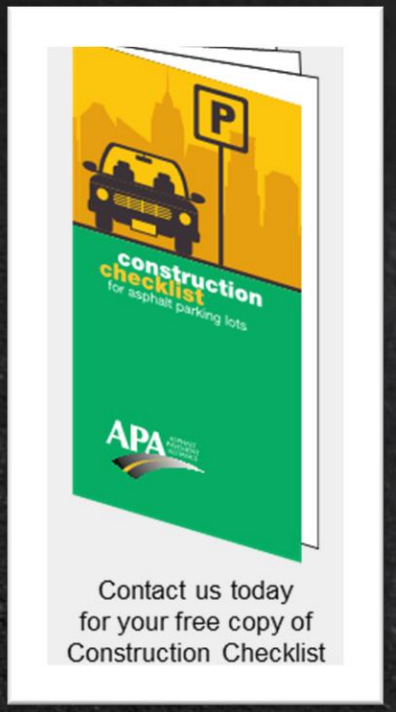
Pay attention to details

Which "Key" would you consider most important?



Handy Checklist

Contact dstaebell@asphaltpavement.org



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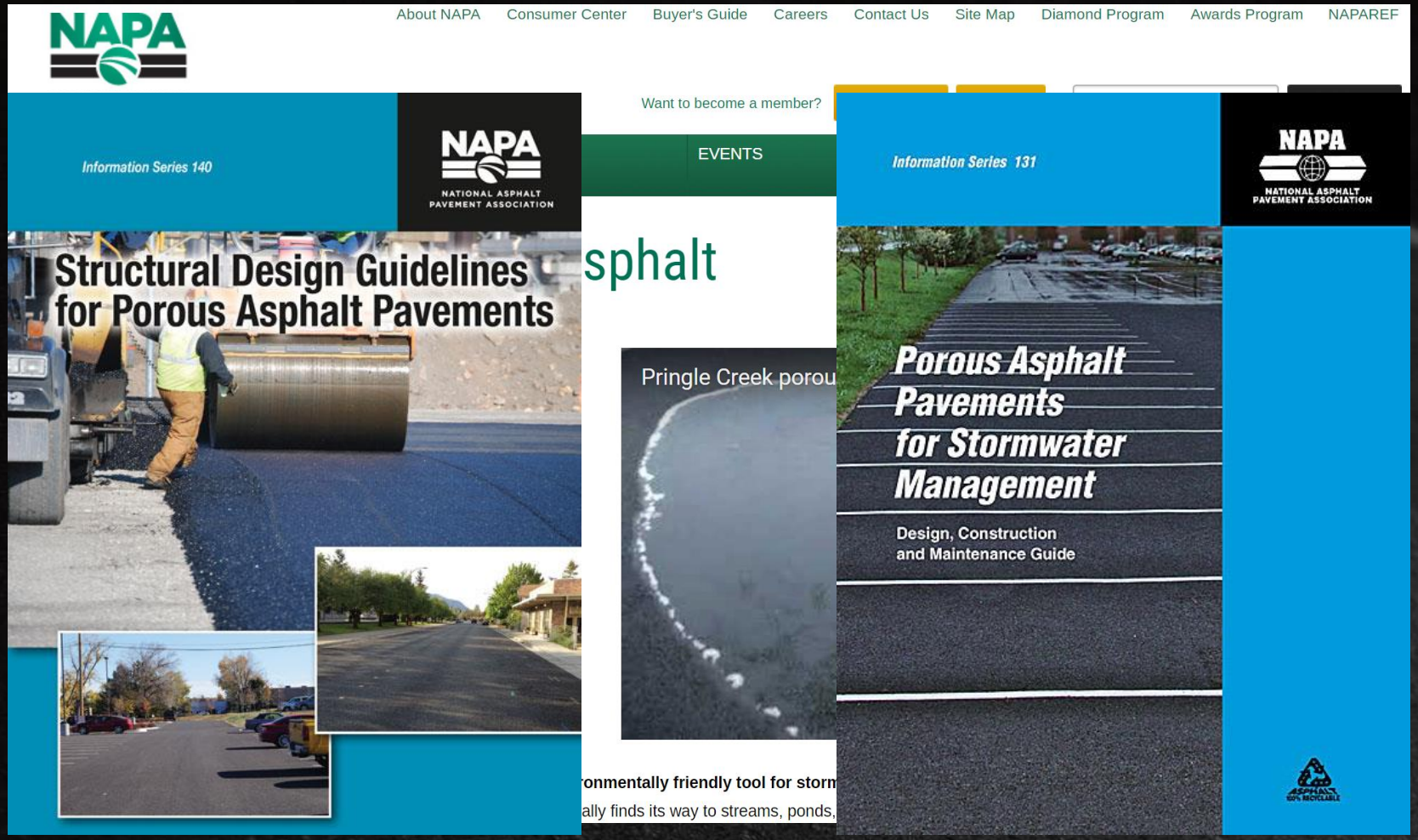

Resource
asphaltpavement.org

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Which of the following companies do you believe to be the most cost conscious?

A

B

C

D

What percentage of Walmarts have Concrete Parking Lots?

0%

<5%

5-10%

>10

Walmart

Used Google Earth

Sample Info = Largest Metro in Each State

Most appear to be built in last 15-20 Years. Many Super Walmarts!

Less than 5% total Parking lots were PCC.

Average SY @ 45K SY

Site Average HMA tons 15 M Tons (6")

Walmart sees value in ASPHALT!

Total ACC	Total PCC	Average Total	Average Size SY
260.07	12.93	273	43,795
	Percent PCC 4.7%		

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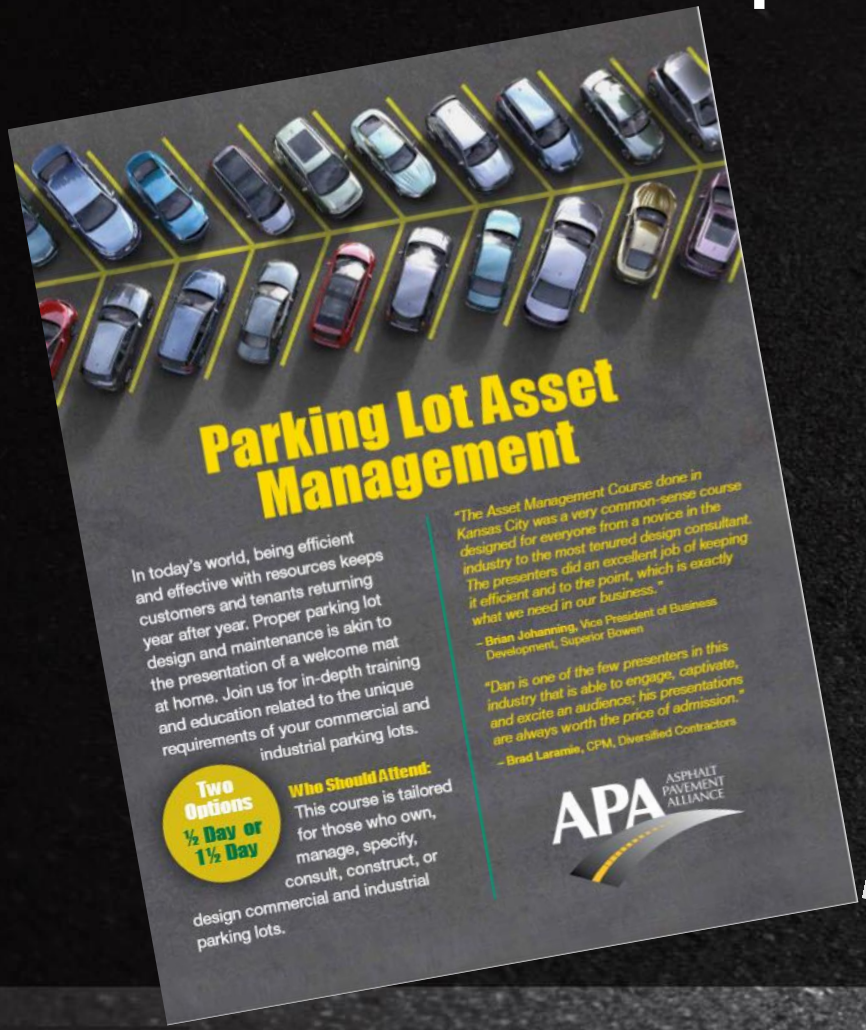
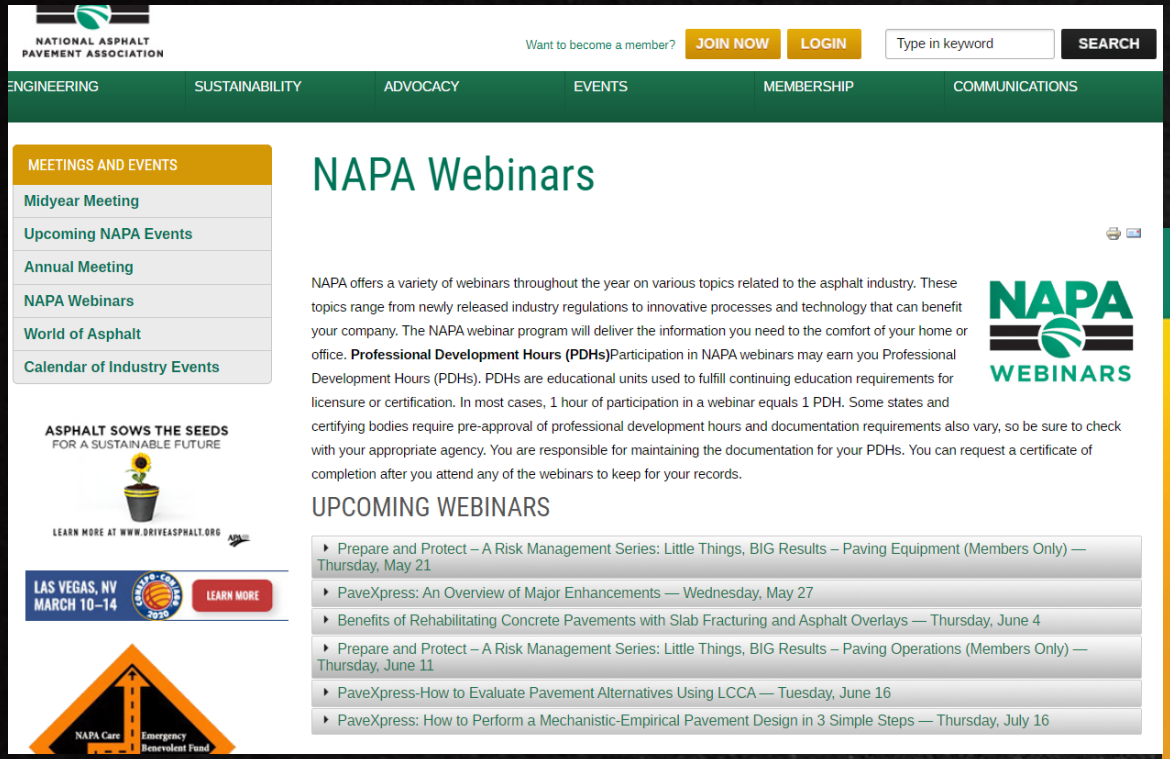
Which One?

In Depth Training



Additional Training



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EMERGING LEADERS

Why Parking Lots Matter

Rick Biermann
Business Development Director – St. Louis

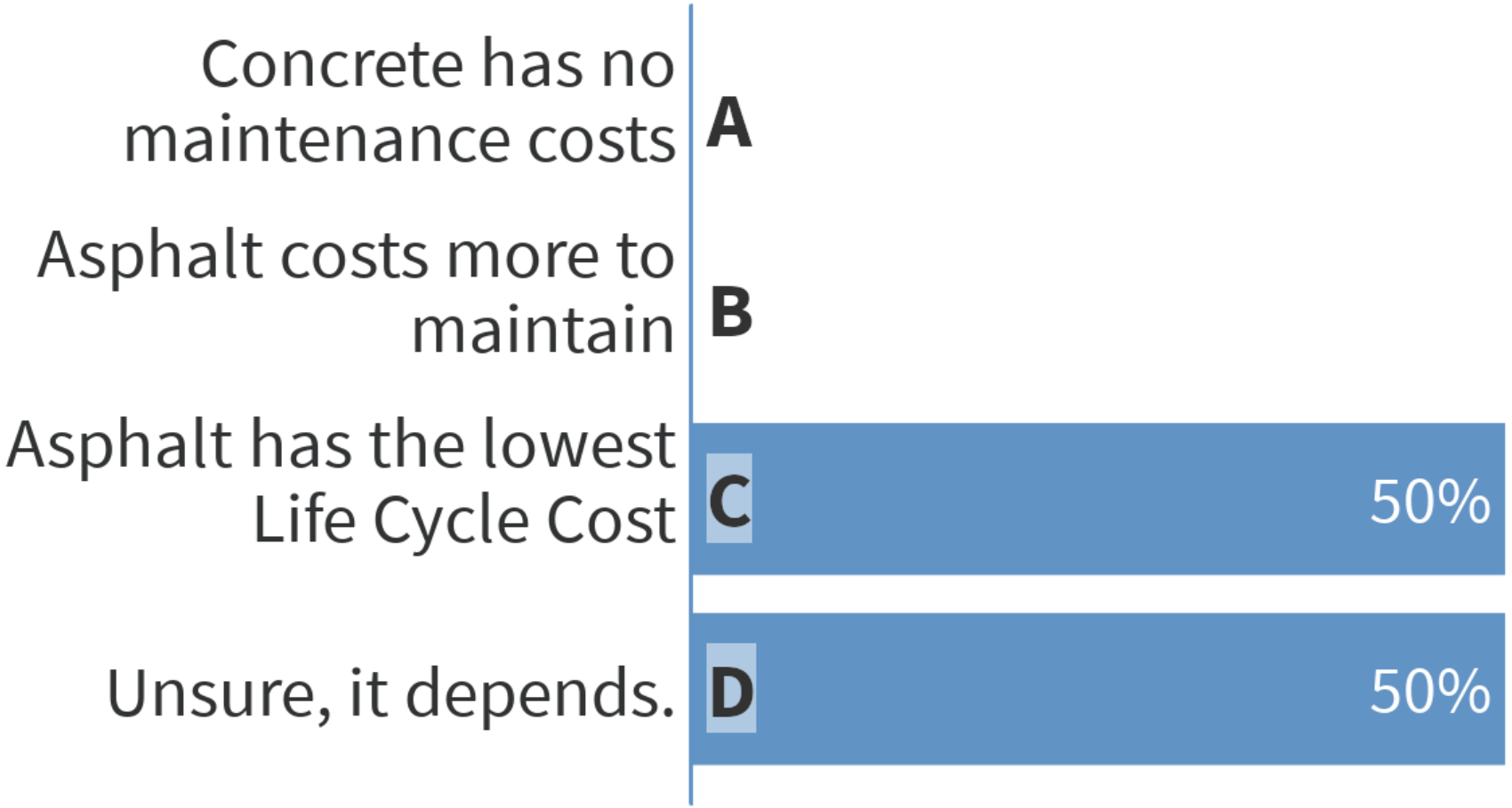
Why Parking Lots Matter

- Parking lots and pavements make up about 10% of initial structural construction costs.
- Parking lots will be responsible for up to 25% of the future maintenance cost

What Do Owners Care About

- Cost
- Speed
- Reliability
- Aesthetics
- Sustainability

Which following statement do you percieve to be most accurate?



Cost Effective

ASPHALT

TOTAL 30 YEAR COST: $82,960

Installation Cost $27,160

Maintenance Cost

- First 5 Years $10,000
- Years 5-10 . . . . . $8,800
- Years 10-15 . . . . . $14,000
- Years 15-20 . . . . . $23,000
- Years 20-30 . . . . . $10,000

AVERAGE ANNUAL MAINTENANCE: $1.70/sq. yd.
Based on a 1,000 square yard lot

CONCRETE

TOTAL 30 YEAR COST: $106,290

Installation Cost $31,802

Maintenance Cost

- First 5 Years $9,906
- Years 5-10 . . . . . $18,712
- Years 10-15 . . . . . $20,520
- Years 15-20 . . . . . $25,350
- Years 20-30. . . . . $30,750

AVERAGE ANNUAL MAINTENANCE: $3.80/sq. yd.
Based on a 1,000 square yard lot

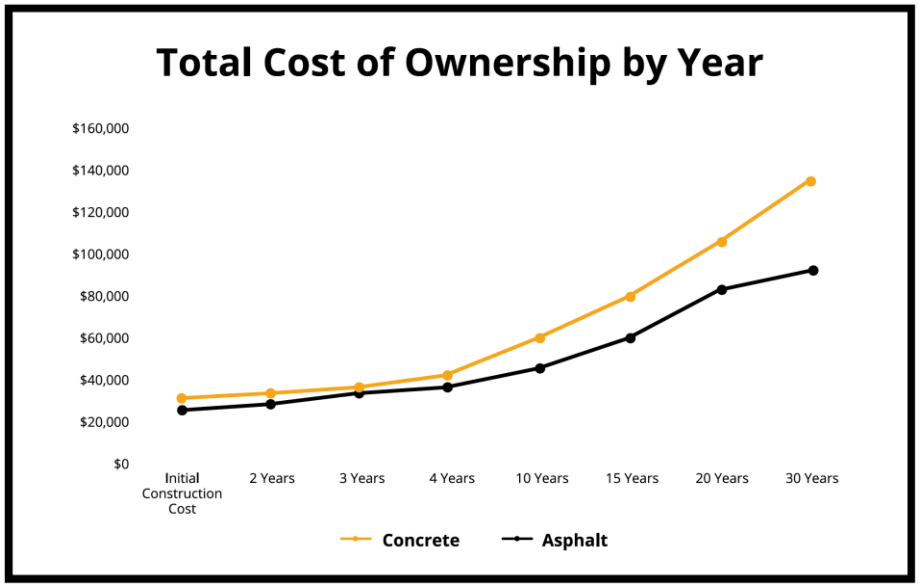
Original construction is at least 15% less than concrete.

Maintenance Schedule

Nothing is Maintenance Free!

YEAR	ASPHALT	CONCRETE
1 - 3	Crack Fill, Sealcoat, Restripe	Joint Seal
3 - 5	Crack Fill, Sealcoat, Restripe	1% Slab Repair / Replace , Restripe
5 - 10	Crack Fill, Sealcoat, Restripe	1-3% Slab Repair / Replace
10 -15	Asphalt Patching, Restripe	3% Slab Repair / Replace Restripe
15 - 20	Mill, Fill / Repair Base	Joint Reseal / 3% Slab Repair / Replace
20 - 25	Crack Fill, Sealcoat, Restripe	3% Slab Repair / Replace
25 - 30	Crack Fill, Sealcoat, Restripe	3% Slab Repair / Replace

Cost Effective



A 1,000 sqyd asphalt parking lot cost **17% less** to construct & up to **75% less** to maintain over the life, compared to concrete

Speed of Construction

In Construction Time is MONEY!

Asphalt Pavements are Constructed up to **70% faster** than other pavements.

Newly constructed or repaired asphalt can be driven on **almost immediately upon completion.**

Speed of Construction

Routine maintenance can be performed overnight. Giving asphalt pavements a fresh appearance and smoothness with little to no impact on normal traffic and/or business operations.

Proven Performance

Properly designed and constructed asphalt pavements are perpetual and may never need complete full depth reconstruction.

93% of pavement surfaces in America are asphalt pavements.

Aesthetics

The Parking Lot is Often the first Impression a customer has of a Business.

Which parking lot below do find most appealing?

A

B

Aesthetics

8 out of 10 people **prefer** the look of **asphalt pavements**

Aesthetics

How many car commercials have you seen showing the vehicle driving on a pavement other than asphalt?

Which pavement type do you believe to be more sustainable?

Sustainable & Eco-Friendly

Asphalt is 100% recyclable & the world #1 recycled product.

The use of recycled asphalt
in the production of
new asphalt
saves almost
$3 Billion annually

Sustainable & Eco-Friendly

Bloomberg

Cement Produces More Pollution Than All the Trucks in the World

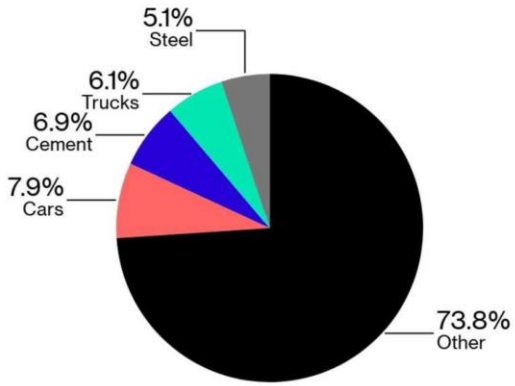
Vanessa Dezem 6/23/2019

(Bloomberg) -- The most astonishing thing about cement is how much air pollution it produces.

Manufacturing the stone-like building material is

Significant Share

The cement industry's CO2 emissions were more than all the trucks on the road in 2017



Bloomberg Significant Share

The production of asphalt pavements produces up to **30% less CO_2** than the production of Portland cement *

* CARBON FOOTPRINT: HOW DOES ASPHALT STACK UP? - http://www.asphaltroads.org/assets/_control/content/files/carbon_footprint_web.pdf

Sustainable & Eco-Friendly

Reflective pavements, like concrete, increase surrounding building's cooling load to up to **11%** and increase surrounding air temps by 5 - 10°

http://www.asphaltroads.org/news/post/asu-sights-unintended-consequences-reflective-pavements/

It's **NOT** just a parking lot!

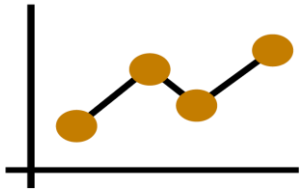
Why should an Owner care about the Parking Lot?

- ➔ It will be responsible for up to 25% of their future maintenance cost
- ➔ It is the first and last thing everyone sees

Materials Matter

Why should Asphalt be everyone's first choice in pavements?

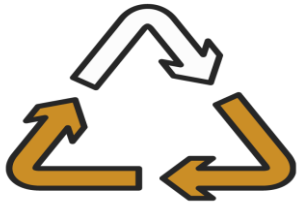
Cheaper



Looks Better

Faster

Greener



Asphalt outperforms every other pavement!

Questions?

Resources & Contacts

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