The background of the slide is a light gray gradient with several realistic water droplets of various sizes scattered across it. The droplets have highlights and shadows, giving them a three-dimensional appearance. They are located in the top-left, top-center, and bottom-right areas of the slide.

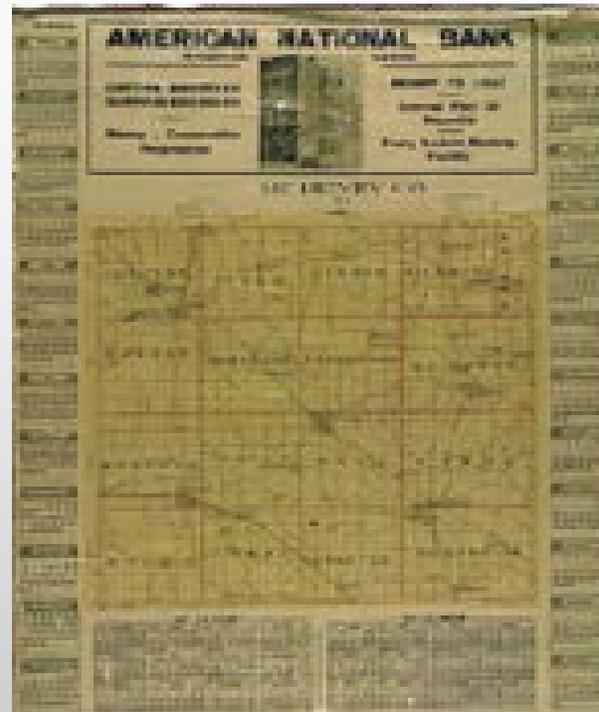
MCDOT INFRASTRUCTURE

ATTEMPTING TO BLEND THE 19TH CENTURY MENTALITY WITH 21ST
CENTURY TECHNOLOGY

PRESENTED BY: SCOTT HENNINGS AND ERNEST J. VARGA

WHAT THE MCDOT INHERITED...

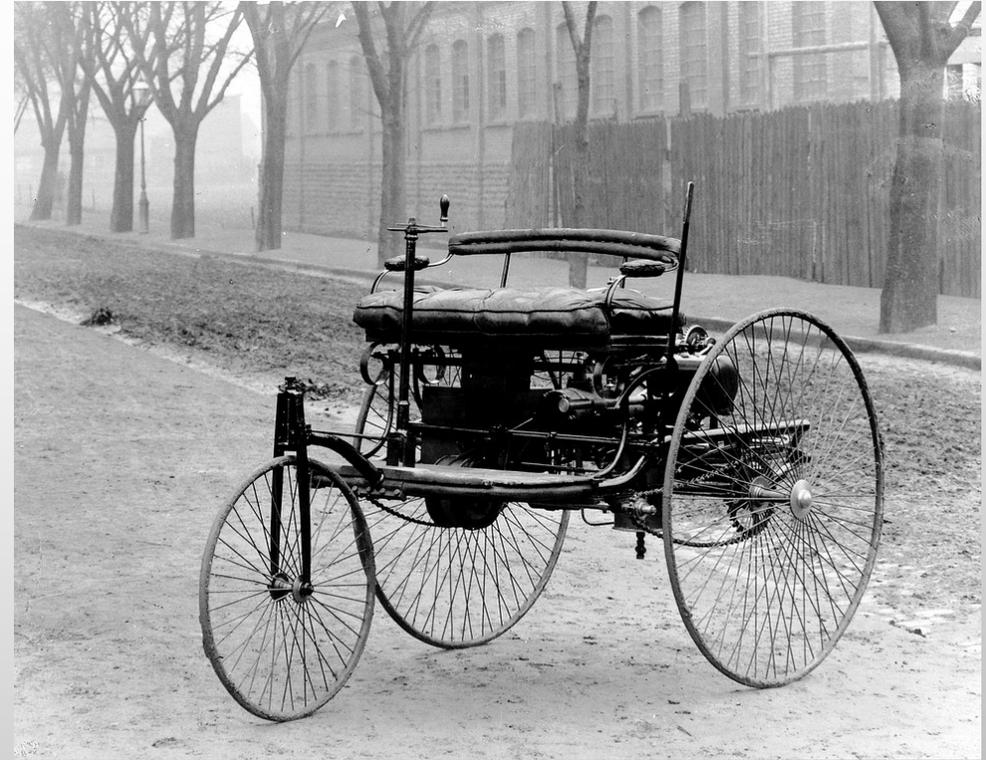
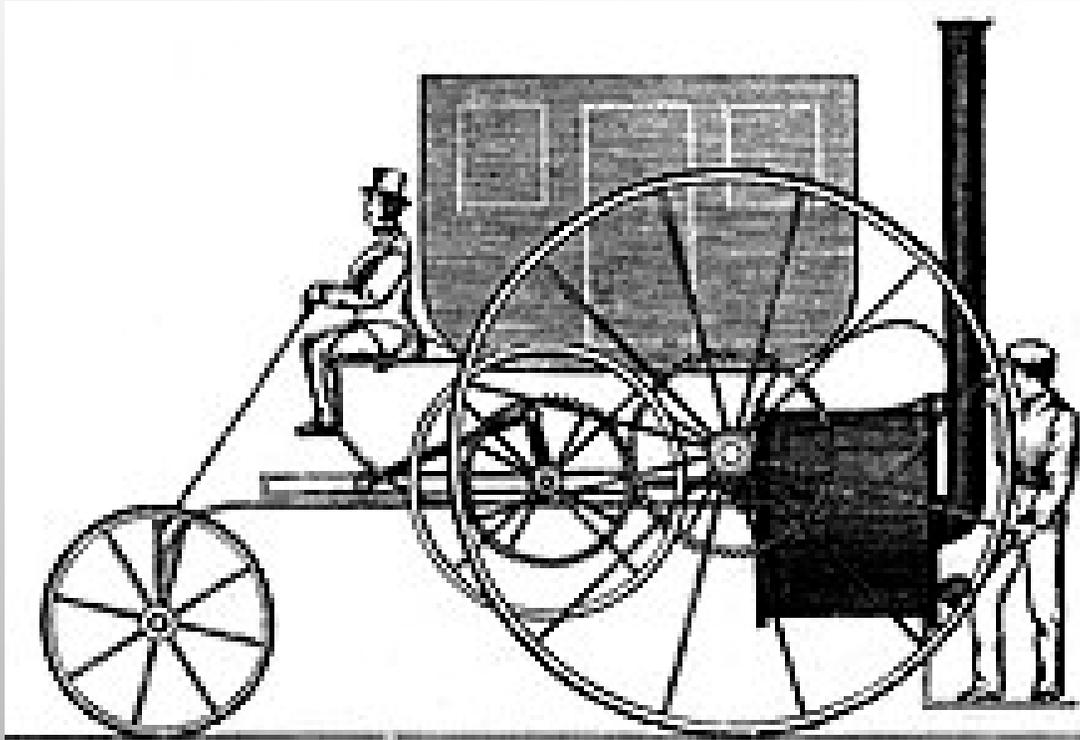
1914



TO GIVE SOME PERSPECTIVE, A BRIEF TIMELINE...

- COUNTY IS CREATED IN 1836 (LAKE COUNTY BREAKS AWAY IN 1839)
- COUNTY BOARD STARTS ACKNOWLEDGING AND AUTHORIZING ROADS AS EARLY AS THE 1840'S
- MCDOT (THEN THE COUNTY HIGHWAY DEPARTMENT) STATE STATUTE CREATED IN 1913
- 70 YEARS OF ROAD HISTORY ("LUGGAGE") WAS INHERITED
- MAJORITY OF THOSE SAME ROADS STILL THE MCDOT'S TO DEAL WITH TODAY, 106 YEARS LATER, FOR A TOTAL OF OVER 175 YEARS

TO MAKE THIS MORE RELATIVE, LET US USE THE
AUTOMOBILE AS AN EXAMPLE...



AND AT THIS POINT, THE AUTOMOBILE BECOMES LIMITED AS TO HOW IT CAN BE CHANGED.



THIS IS NOT DISSIMILAR TO THE ROAD SYSTEM OF
THE COUNTY...



HOWEVER, OUR SYSTEM IS STILL CHANGING...

MCHENRY COUNTY 2040 LONG RANGE Transportation Plan

Adopted by:
MCHENRY COUNTY BOARD
March 2014

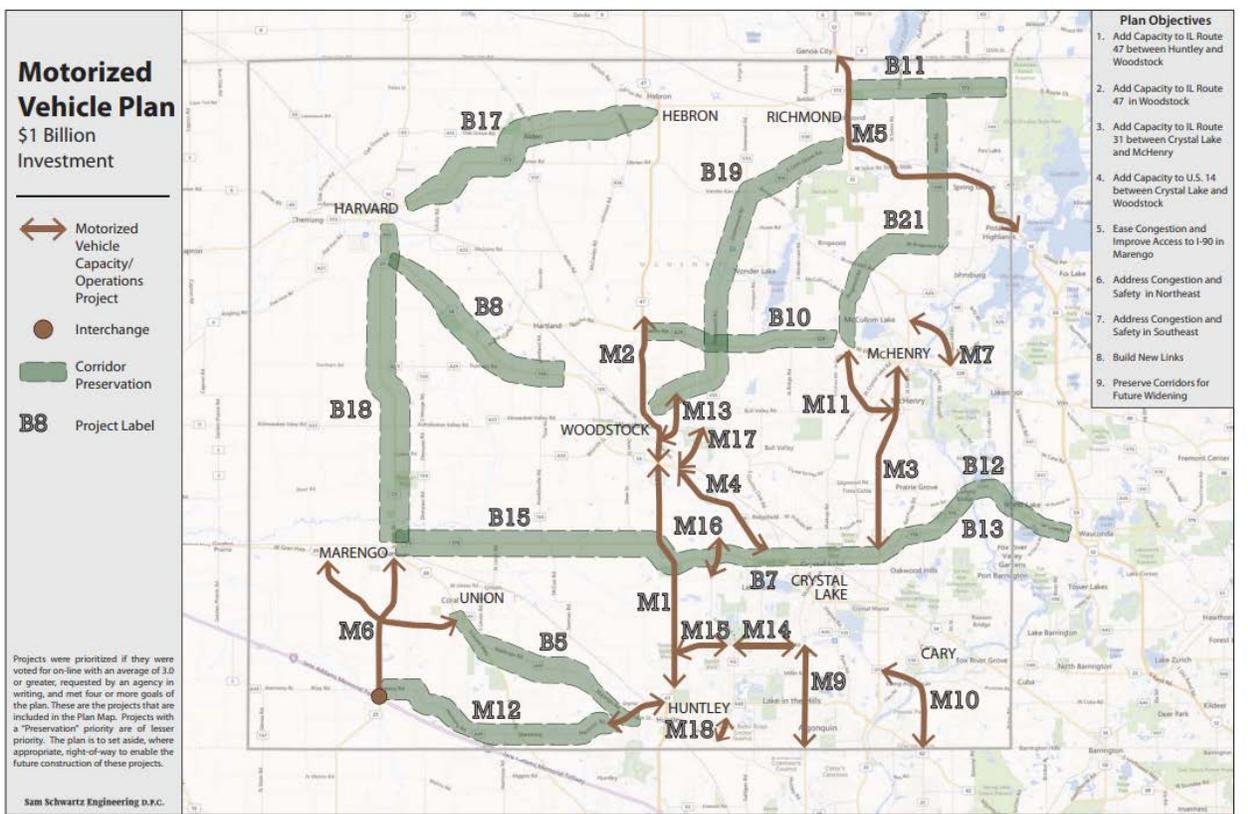


Figure 94: Motorized Vehicles Plan

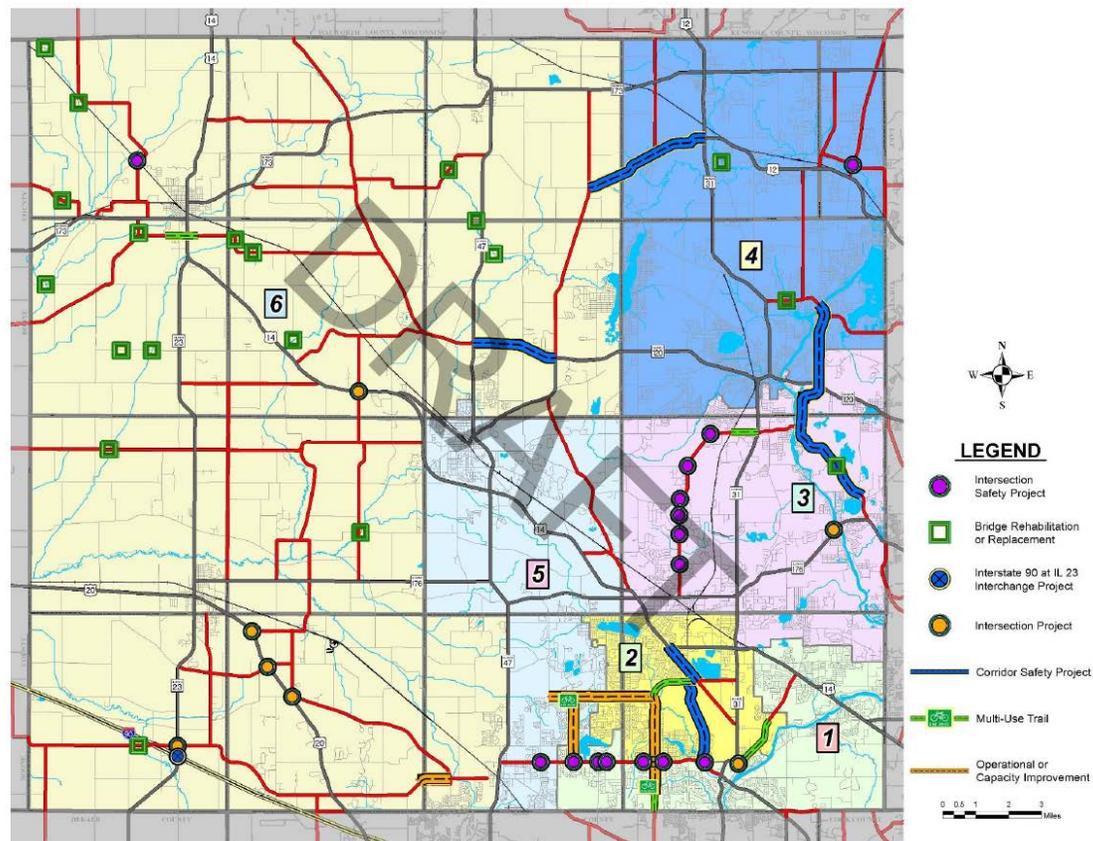
FROM PLAN TO PROJECTS



2020 – 2024 TRANSPORTATION PROGRAM



Figure 13: McHenry County 2020-2024 Programmed Projects - Locations Map



MANY PROJECTS IMPACT OUR WATER RESOURCES

4. County and Township Bridge Program

In conjunction with biennial bridge inspections, the Division of Transportation applies a preemptive approach to identify bridge structures, drainage ways, and storm sewer systems requiring reconstruction and/or having the ability to be rehabilitated before further deterioration can occur. This approach allows for more cost-effective measures to protect the County's investment in bridge structures. Between 2020 and 2024, \$32.1 million in bridge work – \$19.3 million for County bridges, and \$12.8 million for Township bridges – is programmed to replace, rehabilitate, and repair 21 bridges and culverts. Of that amount, approximately \$12.6 million will come from County funding sources.

In general, bridge replacement projects are eligible for federal bridge funds when the structure sufficiency rating is under 50 on a 100 point scale. Funding is available for rehabilitation if the structure has a sufficiency rating under 80. The federal funds will pay for up to 80% of the project cost and requires a minimum 20% local match. Township bridge work is eligible for limited State Township Bridge Program (TBP) funds, which is currently \$162,000 per year. The County typically funds the local share of engineering and construction work for bridges with the County Bridge and Matching funds. Since many bridges were built between 1930 and 1970 across the region, there is increasing competition for limited federal bridge and TBP funds to rehabilitate or replace deteriorating bridge infrastructure to prevent their potential closure.

County Bridge Program Summary	Estimated Construction Year	Daily Traffic	2020-2024 Programmed Costs
Bridge Inspections	N/A	N/A	\$ 1,050,000
Design Upon Request Bridge Program	N/A	N/A	\$ 250,000
Flat Iron Road Bridge	2024	1,500	\$ 1,750,000
Harmony Road Bridge	2024	1,200	\$ 2,750,000
Hunter Road Bridge	2023	1,350	\$ 1,220,000
Johnsburg Road Bridge	2024	11,000	\$ 2,450,000
Johnson Road Bridge	2023	325	\$ 1,700,000
Kishwaukee Valley Road Culvert	2020	3,300	\$ 1,050,000
McGuire Road Bridge	2026	2,500	\$ 225,000
McGuire Road Culvert	2026	2,500	\$ 190,000
Millstream Road Bridges	2023	1,600	\$ 2,800,000
River Road Culvert	2020	8,550	\$ 3,885,000
TOTAL			\$ 19,320,000
Annual Average			\$ 3,864,000

Township Bridge Program Summary	Estimated Construction Year	Daily Traffic	2020-2024 Programmed Costs
Allendale Road Township Bridge	2024	425	\$ 2,250,000
Bunker Hill Road Township Bridge	2024	100	\$ 1,550,000
Bunker Hill Road Township Bridge	2025	100	\$ 475,000
Paulson Road Township Bridge	2024	225	\$ 1,950,000
Perkins Road (Seneca) Township Culvert	2028	625	\$ 225,000
Perkins Road (Chemung) Township Culvert	2025	125	\$ 475,000
Streit Road Township Culvert	2028	300	\$ 225,000
Thayer Road Township Bridge	2023	575	\$ 1,750,000
Township Bridge Rehabilitation Assistance	N/A	N/A	\$ 810,000
West Solon Road Township Bridge	2023	700	\$ 1,850,000
White Oaks Road Township Bridge	2023	50	\$ 1,250,000
TOTAL			\$ 12,810,000
Annual Average			\$ 2,562,000

Paulson Road Township Bridge

Title	Paulson Road Township Bridge		Municipality	Unincorporated Hartland Township							
Scope of Work	Bridge Replacement		Board District	District 6							
Category	Preservation		Total Cost	\$1,950,000							
Lead Agency	McHenry County DOT		https://www.mchenrycountyl.gov/county-government/departments-l-z/transportation/future-construction/paulson								
Project ID	SN 056-3071		Website	https://www.mchenrycountyl.gov/county-government/departments-l-z/transportation/future-construction/paulson							
Location	0.6 miles north of U.S. 14, 1.7 miles south of Streit Road		Daily Traffic	225 (2017)							
Description	This funding is for the replacement of an existing Township bridge over the North Branch of the Kishwaukee River in Hartland Township. The existing bridge was built in 1959. It has a sufficiency rating of 28.5/100 in 2018. Construction is anticipated in 2024.										
Segment	Phase	Fund Source	Prior FY	2020	2021	2022	2023	2024	Future FY	Total	
Paulson Road Bridge	ENGR1	County Bridge Fund		\$40,000						\$40,000	
	ENGR1	Federal STP Bridge		\$160,000						\$160,000	
		Total Engineering 1		\$200,000						\$200,000	
	ENGR2	County Matching				\$30,000				\$30,000	
	ENGR2	Federal STP Bridge				\$120,000				\$120,000	
		Total Engineering 2				\$150,000				\$150,000	
	ROW	County Bridge Fund				\$100,000				\$100,000	
		Total Right of Way				\$100,000				\$100,000	
	CONST	County Matching						\$300,000		\$300,000	
	CONST	Federal STP Bridge						\$1,200,000		\$1,200,000	
		Total Construction						\$1,500,000		\$1,500,000	
		Total Programmed		\$200,000	\$0	\$250,000	\$0	\$1,500,000		\$1,950,000	

Total County Cost: \$470,000

Total Federal Share: \$1,480,000





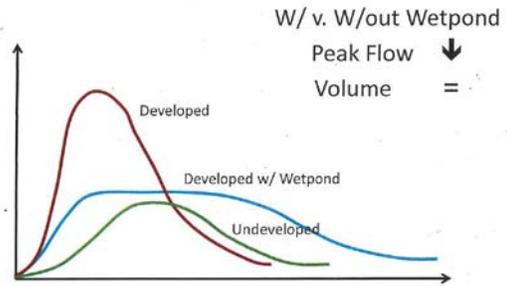
BEST MANAGEMENT PRACTICE - BMP

- WETPOND
 - BIOSWALES
 - POROUS PAVEMENT
- 

WETPONDS

Wetponds

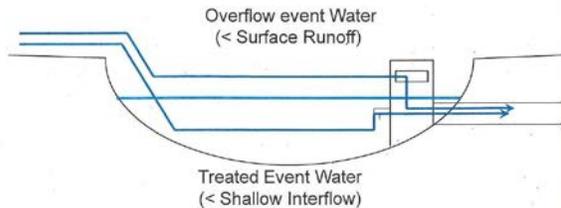
Flood Control



High potential for downstream flooding if all upstream watersheds use wetponds

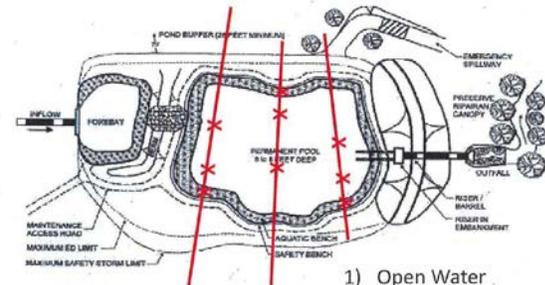
Wetponds

Flood Control



Wetponds

Carbon Sequestration (Moore and Hunt, 2012)

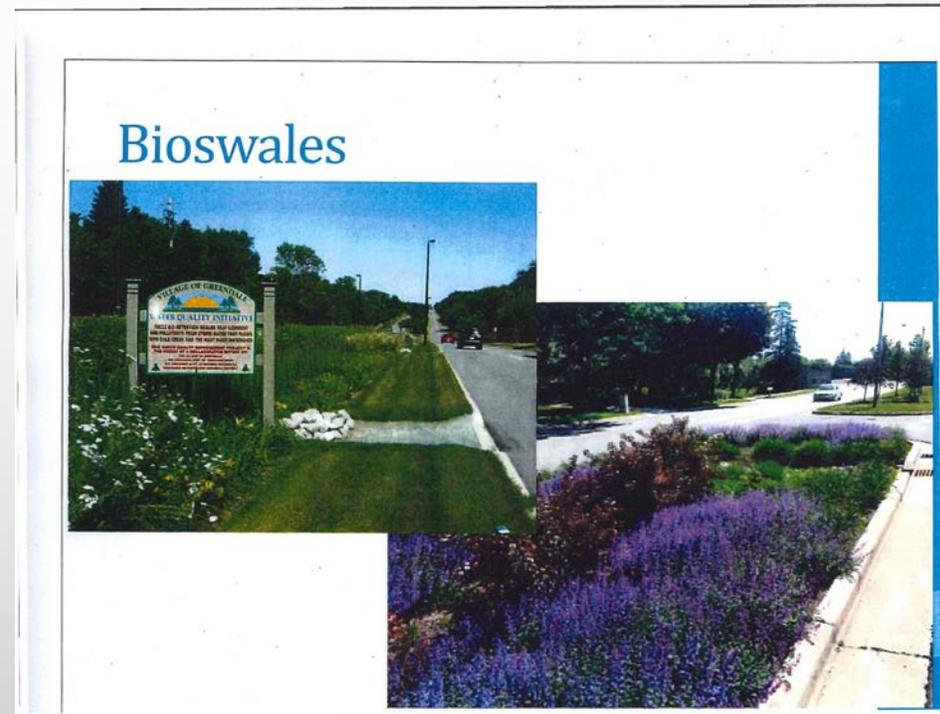
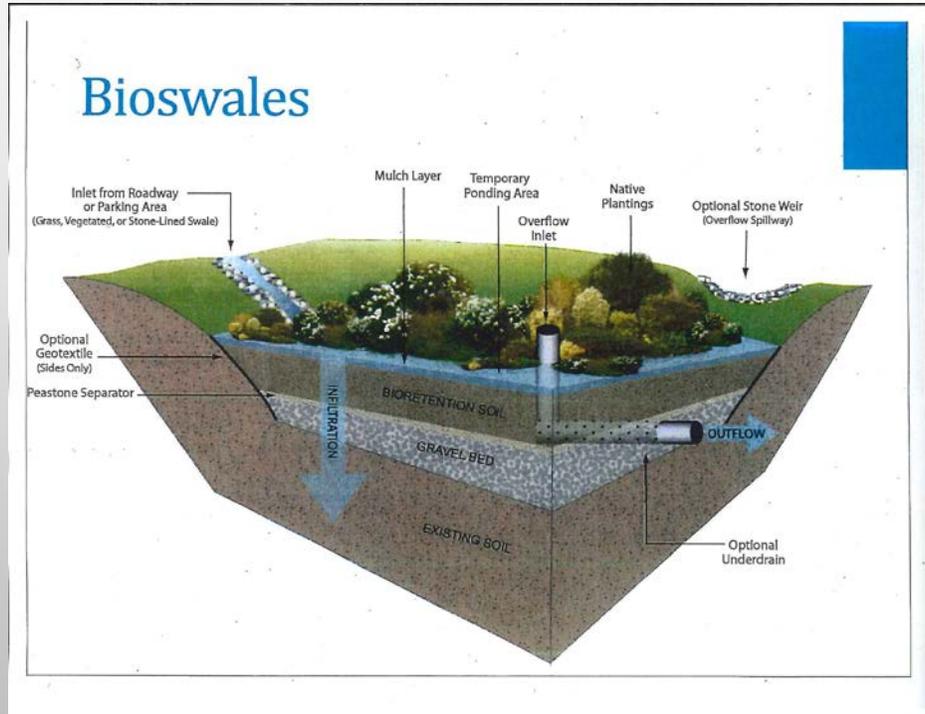


- 1) Open Water
- 2) Shallow Water
- 3) Temporary Inundation

Wetponds

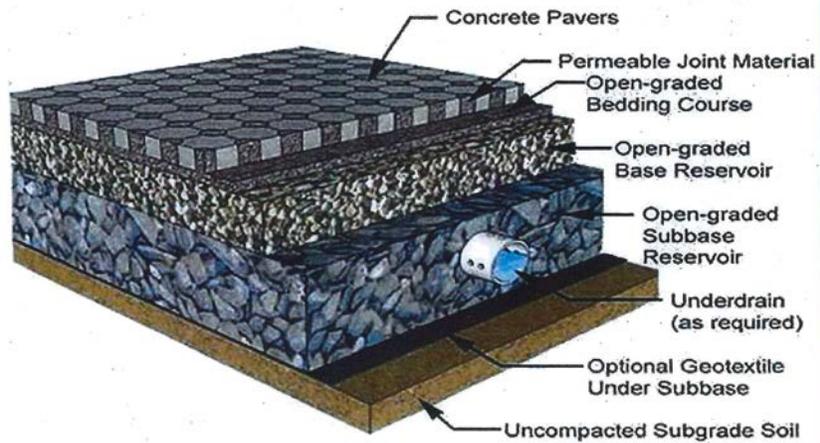


BIOSWALES



POROUS PAVEMENT

Porous Pavement



Porous Pavement



REALITY OF ECONOMY

- THE GOAL IS TO WORK BMP'S INTO THE DESIGN OF RETROFIT AND NEW PROJECTS
- WITH THE GOAL OF ADDITIONAL BMP'S ARE TWO ECONOMIC DRIVEN NEEDS:
 - 1) ADDITIONAL ROW AT ADDITIONAL COST
 - A) LAND OWNERS WANT MORE DOLLARS THAN OFFERED
 - B) WITHOUT A MEETING OF THE MINDS, EMINENT DOMAIN OR QUICK TAKE NEED TO BE EXERCISED
 - 2) FUTURE PERPETUAL MAINTENANCE
 - A) THROUGH ADDITIONAL EMPLOYEES
 - B) THROUGH SUBCONTRACT LABOR

REALITY OF SPECIAL PHYSICS

- THE EXISTING ROADS AND BRIDGES ARE WHERE THEY ARE
- PLANNING OF NEW ROADS REQUIRE MANY YEARS TO ACCOMPLISH DUE TO CONSTRAINTS
 - 1) FUNDING SOURCES
 - 2) ENVIRONMENTAL ISSUES
 - 3) TRAFFIC NEEDS
 - A) PRESENT
 - B) ANTICIPATED FUTURE
 - 4) PERCEPTION
 - A) PUBLIC
 - B) OTHER ENTITIES

The image features a light gray background with a subtle gradient. In the top-left and bottom-right corners, there are several realistic water droplets of various sizes, rendered with soft shadows and highlights to give them a three-dimensional appearance. The word "QUESTIONS" is centered in a bold, black, sans-serif font, followed by three dots "..." to its right.

QUESTIONS . . .