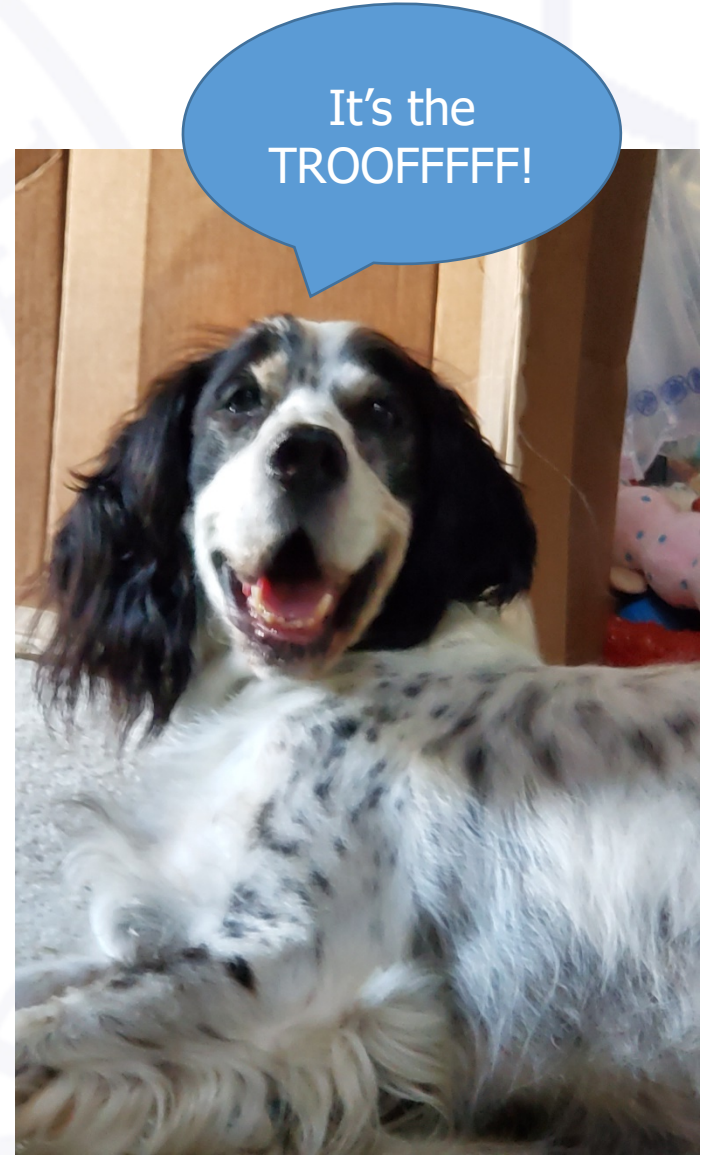
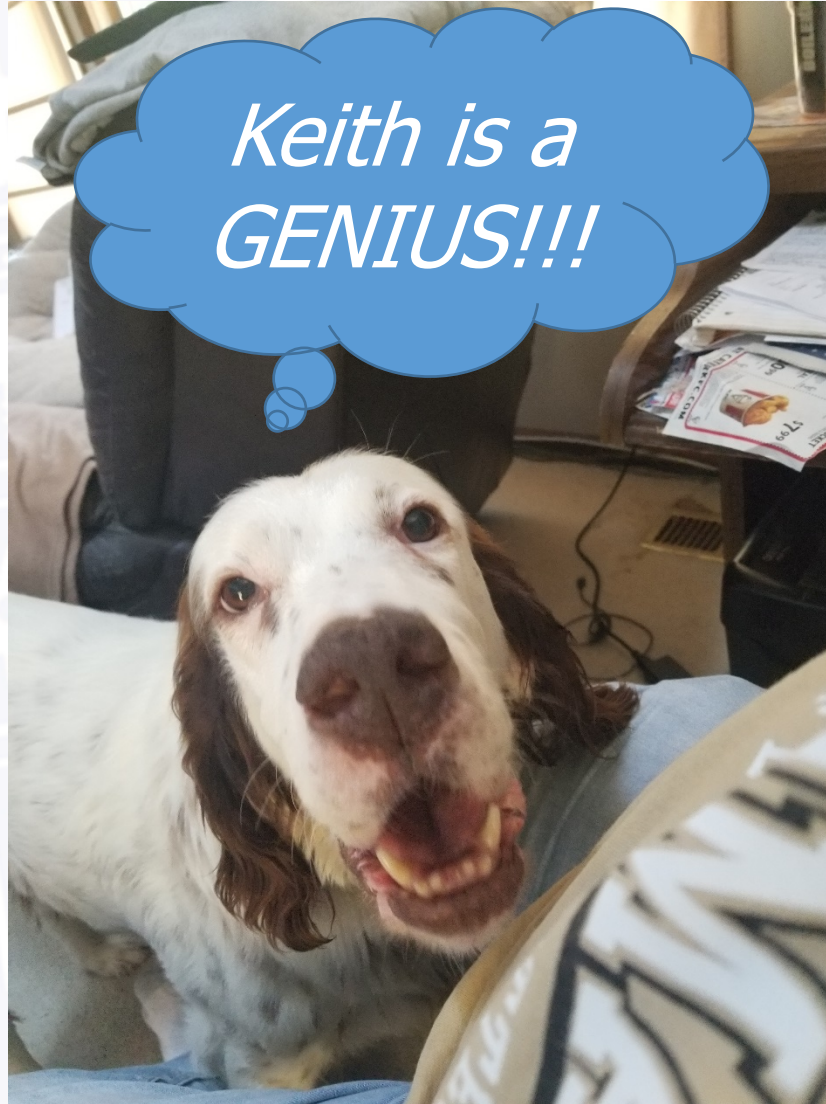


Waterproofing Membrane for Concrete Boxes and Culverts

OR....How to Control Your Leaking



Issues? What Issues?

2015



024-002-129.75



2015



024-002-129.75



024-002-129.75

2015



CV 024-009-056.50

2019



CV 024-009-056.50

2019



Existing Specification for Sealing Joints
on Box Culverts

714.10 – Precast Reinforced-Concrete
Box Structure Section Joints

907.07 – Joint Membrane System for
Precast Reinforced Concrete Box
Structure Sections

918.06 – Fabric for Waterproofing

***WHAT
YEAR
IS
IT!!!!***



CV 022-027-47.40



1947



2000

CV 009-035-134.43



CV 421-66-07541

1993



CV I69-326-08372



CV I69-326-08372

2000

CV 001-76-09783



2014

***Contractors informed me as to
The issues with our
specification and
the new Ohio specification***

***Changing a
specification?***

....Easy!

....Right?

USP #28, Waterproofing Membrane

<https://www.in.gov/dot/div/contracts/standards/usp/USPINDEX.pdf>

Procedures



Procedures (2)



Procedures (3)



Procedures (4)



Procedures (5)



Procedures (6)



Procedures (7)



***So Where Are We
Now?***

CV 019-052-61.94



CV 224-001-31.70



CV 116-090-09.21



Costs

<u>Structure Number</u>	<u>Material Placed</u>	<u>Amount Placed (SFT)</u>	<u>Manhours to Place</u>	<u>Cost / Structure</u>	<u>Cost of Structure</u>	<u>% Project Increase</u>	<u>Leaking/No Leaks</u>
019-43-09014	Right Roll	3314	64	\$7,474	\$717,654.50	1.052409	No Leaks
CV 014-043-97.86		1936	28.0831	\$3,761	\$584,396.00	0.647809	No Leaks
CV 014-043-98.03		1496	20.2511	\$2,812	\$451,767.00	0.626415	No Leaks
CV 015-085-30.01	WR Meadows, Mel Rol	1392	18.3999	\$2,588	\$208,696.00	1.255649	No Leaks
CV 015-085-30.36	WR Meadows, Mel Rol	3042	47.7699	\$6,147	\$456,075.00	1.366228	No Leaks
CV 016-052-72.10	Right Roll	1216	15.2671	\$2,208	\$194,064.00	1.151054	No Leaks
CV 016-052-75.35	Right Roll	1224	15.4095	\$2,226	\$195,341.00	1.152481	No Leaks
CV 016-052-79.35	WR Meadows, Mel Rol	1267	16.1749	\$2,318	\$189,956.00	1.235556	No Leaks
CV 018-005-126.60	WR Meadows, Mel Rol	2240	33.4943	\$4,417	\$334,537.00	1.338038	One Small Leak
CV 019-052-61.94	Right Roll	1792	25.5199	\$3,451	\$397,790.00	0.875083	No Leaks
CV 027-001-81.45	Sikabit S-60	1920	28	\$3,740	\$521,474.00	0.722379	No Leaks
CV 027-001-81.58	Sikabit S-60	2352	81	\$7,617	\$638,803.00	1.206776	No Leaks
CV 101-017-75.59	ConSeal CS-102	2250	12	\$3,030	\$857,757.00	0.354499	Boxes Shifted, Leaking in 2 Areas
CV 114-092-68.79	WR Meadows, Mel Rol	2380	35.9863	\$4,719	\$572,158.00	0.831651	No Leaks
CV 114-092-71.32	WR Meadows, Mel Rol	1188	14.7687	\$2,148	\$285,598.00	0.757793	No Leaks
CV 116-090-9.21	Polygard NW-75	2508	31	\$4,523	\$252,528.00	1.823754	No Leaks
CV 205-092-6.18	WR Meadows, Mel Rol	1980	8	\$2,500	\$247,216.00	1.021592	Two Leaks Noted in Roof
CV 218-052-36.22	Right Roll	2046	30.0411	\$3,999	\$228,369.00	1.782175	No Leaks
CV 218-052-37.49	Right Roll	1848	26.5167	\$3,572	\$206,269.00	1.762028	No Leaks
CV 218-090-71.30	WR Meadows, Mel Rol	1848	16	\$2,888	\$287,687.00	1.014049	No Leaks
CV 224-001-31.70	Polygard NW-75	1672	23.3839	\$3,192	\$425,654.00	0.755560	No Leaks
CV 224-090-21.81	Polygard NW-75	1134	13.8075	\$2,031	\$288,691.00	0.708676	No Leaks
CV 224-090-22.53	Polygard NW-75	1600	22.1023	\$3,037	\$407,325.00	0.751110	No Leaks
						1.05%	

Still Work To Do

CV 224-090-22.53



CV 218-052-37.49



CV 001-076-194.26



Champhered Areas



Coverage Of Prime



Correct Placement



Questions?

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