

Regional Procedures for Planned Closures at River Crossings

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Presented to: TTAC

November 6, 2013



Reason for the Document

- Sept. '12:
 - closure of HRBT and James River Bridge
- Oct. '09:
 - closure of Downtown Tunnel and Gilmerton Bridge

The Virginian-Pilot
Monday | Oct 30th 2012 | 09:38:32 | PILOTONLINE.COM | 82 in Hampton Roads

TRANSPORTATION NEWS



Weekend jam

As the new sheriff in town, I'm going to focus on the future and what we can do to rectify the situation.
Christopher Whitehead/Staff PILOT on the job, a problem of weekend jam



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Second-in-command steps up as sheriff prepares to retire

By Veronica Gonzalez
The Virginian-Pilot

Those who came to see the grand, to those who have an overworked factory, he left the business. The man had decided to retire. I don't call any driver.

IT'S really important what we've learned to do last 12 weeks," he said.
See LAWMAN, PAGE 8

With closures, backup at Monitor-Merrimac stretches nine miles

road work
Starting at 7 a.m. Friday, construction led shut down the Hampton Road, Bridge Road, and the old and the new River Bridge to facilitate and those. Both sides of lanes will remain at 2.5 m. Monday but closures begin again at 7 p.m. this Friday.

BY NOON SATURDAY, gridlock was in full swing in the Monitor-Merrimac Memorial Bridge-Tunnel's southeast lanes. A line of vehicles stretched six miles to the north in Newport News. As traffic cleared and go, drivers rolled down windows and turned up radios. Some passengers car-jumped looking for quieter highways, others closed seats and closed their feet against dashboard. It was that a weekday traffic jam but with a weekend vibe, and it's a scene that's likely to be repeated for at least three weeks.

By 4 p.m., the backup had reached five miles, as a disabled vehicle temporarily shut down all lanes. Motorists abandoned to layed work schedules, worked

See TRAFFIC, PAGE 7
By GABRIELLA SOUZA
The Virginian-Pilot

ROCKET JOCKEYS

PART 2 OF 14

By Dawn Tomasi
The Virginian-Pilot

Early each morning, Nancy Lowe would make the commute of ordinary for America's astronaut. Many days, she would bring doughnuts.

As she sat at her desk at Langley, the secretary to America's golden boys could identify each of them by their rankings on the roster. Gus Grissom, Scott Carpenter, Gordon Cooper, Deke Slayton, Wally Pfleger and, for those who were new to the program, the newly designated by the words of his Cosmic Flight. "This Chris Shepard," Lowe told a reporter for the magazine.

"He's really a genius. In fact, they all like to trade me. My boss — I hate me something awful."

Lowe, at the age of 19, was the envy of women everywhere. She had easily access to some of the most desirable men in America — and, they, did they enjoy it.

As offices went, the astronaut's space at Langley Research Center wasn't much — seven desks arranged in a U-shape. With a blackboard, map and a few clock on the wall.

There were five very pretty people, too. All were married, with children. Two of the astronauts lived in Hampton, three in Newport News. Shepard commuted daily from the Colley in Virginia Beach. Clem, the only daughter of the bunch, chose to live as a "geographic bachelor" on base, while the wife and children stayed in the family home in Northport, Virginia.

The astronauts trained hard and
See THE BRIGHT STUFF, PAGE 10

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NEWSPAPER

Partly sunny

High in the upper 70s.
Details on the back page of page

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A CLOSE GAME
 NFL falls to Hawaii.

NOT EVEN CLOSE
 ODU triumphs in football.

OFFICIALS ponder
 full operation of AHE for baseball.

SPRINKLE
 Not enough rainfall after backup.

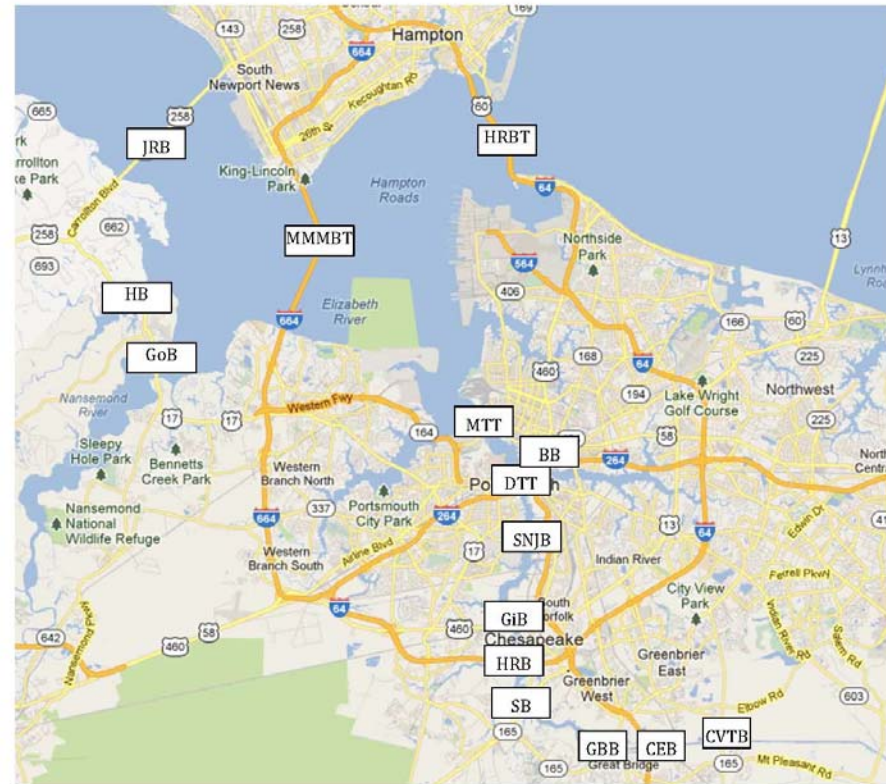
BUSINESS
 OVA COVIDS LIVING

SPRINKLE
 Not enough rainfall after backup.

BUSINESS
 OVA COVIDS LIVING

- Now five (5) operators of major crossings:
 - VDOT
 - Suffolk
 - ERC
 - SNJB
 - Chesapeake

<u>Subject River Crossings</u>	<u>Operator</u>	<u>Crossing Group</u>
1. Hampton Roads Bridge Tunnel (HRBT)	VDOT	Intracoastal, Harbor
2. Monitor-Merrimac Mem. BT (MMMBT)	VDOT	Harbor
3. Godwin Bridge (GoB)	Suffolk	Harbor
4. Hazelwood Bridge (HB)	VDOT	Harbor
5. James River Bridge (JRB)	VDOT	Harbor
6. Midtown Tunnel (MTT)	ERC	Intracoastal
7. Downtown Tunnel (DTT)	ERC	Intracoastal
8. Berkley Bridge (BB)	VDOT	Intracoastal
9. South Norfolk Jordan Bridge (SNJB)	SNJB	Intracoastal
10. Gilmerton Bridge (GiB)	Chesapeake	Intracoastal
11. High-Rise Bridge (HRB)	VDOT	Intracoastal
12. Steel Bridge (SB)	Chesapeake	Intracoastal
13. Great Bridge Bridge (GBB)	Chesapeake	Intracoastal
14. Chesapeake Expressway Bridge (CEB)	Chesapeake	Intracoastal
15. Centerville Turnpike Bridge (CVTB)	Chesapeake	Intracoastal



Purpose of the Document

- To enable Operators to periodically close river crossings **without causing major disruptions**

Scope of This Document

- **Communication** between:
 - The subject Operator, and
 - Other Operators, localities, and the public

Note: The heart of the process is the posting of planned closures on other operators' **Outlook calendars** via “meeting” invitations.

Responsible Persons

- VDOT
 - District Traffic Engineer (Mike Corwin)
- Suffolk
 - City Traffic Engineer (Robert Lewis)
- ERC
 - Operations Manager (Ryan McLane)
- SNJB
 - General Manager (Kevin Crum)
- Chesapeake
 - Traffic Engineer III (Steve Froncillo)

Subject Closings

- Closures that meet all three criteria:
 1. **Full closures** of at least one direction
 2. **Planned** in advance
 3. Expected to last **15+ minutes** during day
(30+ minutes during night)

Organization of the Document

1. Identifying a *desired* closure time/date
2. Setting a *planned* closure time/date
3. Between setting...and the closure event
4. During the closure event

Summary of Key Actions

1. Identifying a *Desired Closure Time and Date*

a) inspect his/her Outlook calendar to see if a closure of another crossing—in the subject Crossing Group—is planned at the subject time

b) estimate the impact which the subject closure would have on the other crossings.

2. Setting a *Planned Closure Time and Date*

add the subject closure to the personal Outlook calendars of the other Responsible Persons (and HRTO members) via a “New Meeting” invitation.

3. After Setting a *Planned Closure Time and Date* and Before the *Closure Event*

alert the public of the planned closure time and date.

4. During the *Closure Event*

The Responsible Person of the subject closure will:

a) alert the public of the current closure,

b) identify any pertinent alternate routes for the public, and

c) alert the public of any current unusual congestion at the other crossings caused by the subject closure.

The Responsible Person of a crossing congested by the subject closure will:

inform the closed crossing’s Responsible Person of congestion at other crossing.

Method Doc for Estimating the Impact of Desired Closure

- Contents
 1. Average traffic **volumes**
 2. Diversion **percentages**
 3. Crossing **capacities**

A Method of Estimating the Impact of
Crossing Closures in Hampton Roads

With Volumes, Diversion Rates, and Capacities to Aid Estimation

August 2013



1. Average Traffic Volumes

- 15 facilities
 - 7 facilities with 2-day counts
 - 8 facilities with continuous counts
 - 2 directions
 - 2 seasons
 - 7 days of the week
 - 24 hours a day
- > over **5,000** average hourly volumes

Example Volumes Sheet

James River Bridge - Northbound							
Time Start	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0:00	69	74	81	84	100	126	126
1:00	44	72	93	102	100	110	86
2:00	38	64	72	71	73	89	61
3:00	66	73	80	87	82	79	48
4:00	272	294	301	308	290	168	84
5:00	905	1,018	1,029	1,039	982	345	186
6:00	1,448	1,650	1,697	1,658	1,504	396	203
7:00	1,686	1,890	1,906	1,845	1,702	493	303
8:00	990	1,135	1,147	1,092	1,032	605	432
9:00	721	793	829	796	844	730	598
10:00	667	706	696	738	794	775	682
11:00	665	666	660	691	821	846	659
12:00	649	659	678	682	852	972	733
13:00	688	694	665	704	826	841	812
14:00	723	740	732	771	912	788	792
15:00	669	669	688	721	829	735	752
16:00	724	755	783	808	876	748	701
17:00	782	835	917	900	1,049	729	671
18:00	606	658	743	706	844	648	570
19:00	419	430	460	480	567	532	495
20:00	319	343	353	388	443	448	425
21:00	286	294	324	333	396	389	340
22:00	221	226	239	256	295	286	281
23:00	112	113	124	134	207	206	145

Time Start	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0:00	69	68	68	72	79	131	122
1:00	45	75	89	97	97	121	92
2:00	43	66	75	76	82	97	72
3:00	65	70	70	75	76	73	49
4:00	253	263	263	250	245	172	101
5:00	919	973	980	957	895	396	208
6:00	1,612	1,770	1,770	1,743	1,566	408	223
7:00	1,806	1,981	1,986	1,921	1,761	545	323
8:00	1,033	1,118	1,207	1,096	1,072	680	460
9:00	747	778	804	781	804	824	654
10:00	678	682	682	690	753	885	752
11:00	631	618	620	649	713	954	701
12:00	635	607	609	632	709	940	779
13:00	661	644	632	658	744	934	845
14:00	707	728	700	739	834	898	795
15:00	659	659	668	700	843	855	781
16:00	717	743	761	781	930	881	760
17:00	770	811	856	854	967	820	707
18:00	601	659	666	688	839	735	591
19:00	376	399	399	436	568	559	481
20:00	272	278	290	315	409	420	385
21:00	230	224	261	269	362	360	295
22:00	189	195	203	221	295	284	249
23:00	103	101	108	126	206	200	131

James River Bridge - Southbound							
Time Start	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0:00	114	207	229	220	240	300	208
1:00	62	73	78	90	102	151	132
2:00	44	47	55	66	71	100	103
3:00	35	33	36	39	49	69	55
4:00	79	92	90	99	94	75	47
5:00	260	298	306	315	281	133	70
6:00	387	423	436	447	413	212	118
7:00	472	559	514	540	509	323	181
8:00	445	466	494	485	508	431	285
9:00	436	448	449	484	533	501	398
10:00	480	472	498	500	593	594	499
11:00	550	562	563	600	705	711	575
12:00	651	638	671	681	867	775	727
13:00	677	699	712	752	935	800	794
14:00	948	1,044	1,032	1,059	1,266	977	895
15:00	1,400	1,618	1,597	1,643	1,825	956	834
16:00	1,740	1,855	1,899	1,887	1,900	871	790
17:00	1,758	1,804	1,872	1,774	1,643	841	778
18:00	1,012	1,135	1,185	1,224	1,096	765	675
19:00	685	737	754	817	807	663	601
20:00	539	619	668	681	652	631	533
21:00	445	495	577	555	600	568	384
22:00	300	327	356	371	481	445	290
23:00	235	263	255	286	386	354	225

Time Start	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
0:00	106	205	216	210	229	318	226
1:00	51	61	67	79	83	146	135
2:00	39	43	47	58	62	102	117
3:00	31	31	35	39	44	67	65
4:00	86	91	88	94	91	89	47
5:00	263	300	301	299	276	182	82
6:00	412	457	454	455	429	267	128
7:00	489	547	514	529	501	341	207
8:00	463	494	488	504	517	453	291
9:00	427	442	440	453	479	534	418
10:00	474	469	459	484	552	646	525
11:00	547	549	554	576	662	754	609
12:00	627	612	639	664	780	853	807
13:00	682	675	690	722	854	902	889
14:00	876	906	946	946	1,126	1,120	974
15:00	1,565	1,643	1,641	1,644	1,756	1,132	927
16:00	1,830	1,990	1,964	1,921	1,963	1,024	872
17:00	1,687	1,879	1,788	1,839	1,696	951	839
18:00	1,050	1,129	1,121	1,127	1,101	847	714
19:00	656	689	720	749	787	710	605
20:00	521	556	609	608	671	632	490
21:00	418	435	505	492	641	580	333
22:00	249	281	280	309	504	463	257
23:00	198	216	222	243	382	377	195

2. Diversion Percentages

- Source: Regional 4-step model

Affect of Closings on Volume of Remaining Crossings

Closings in the direction *toward Va. Beach*

Crossing to Be Closed																
Remaining Crossings	Close HRBT	Close MMBT	Close Godwin Bridge	Close Hazelwood Bridge	Close James River Bridge (JRB)	Close Midtown Tunnel (MTT)	Close Downtown Tunnel (DTT)	Close Berkeley Bridge	Close South Norfolk Jordan Bridge (SNJB)	Close Gilmerton Bridge (GB)	Close High-Rise Bridge to VaB	Close Steel Bridge NB	Close Great Bridge (GBB) NB	Close Chesapeake Expressway Bridge (CEB) NB	Close Centerville Turnpike Bridge (CVTB) NB	
	EB	SB	SB	SB	SB	EB	EB	EB	EB	EB	to VaB	NB	NB	NB	NB	
	portion of volume of closed crossing (%) to be added to / subtracted from volume of given direction of remaining crossings															
HRBT	closed	+50% to EB	+20% to EB	+16% to EB	+11% to EB	+10% to EB	+9% to EB	negl. n.a.	negl. n.a.	+6% to EB	+10% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
MMBT	+73% to SB	closed	+41% to SB	+31% to SB	+78% to SB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	-5% to SB	-8% to SB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
Godwin Bridge	+10% to SB	+22% to SB	closed	-40% to SB	+50% to NB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
Hazelwood Bridge	+11% to SB	+24% to SB	-60% to SB	closed	+39% to NB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
James River Bridge (JRB)	+22% to SB	+46% to SB	+50% to NB	+25% to NB	closed	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
Midtown Tunnel (MTT)	+19% to EB	+4% to WB	negl. n.a.	negl. n.a.	negl. n.a.	closed	+18% to EB	+11% to EB	negl. n.a.	+7% to EB	+8% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
Downtown Tunnel (DTT)	+26% to EB	+4% to WB	negl. n.a.	negl. n.a.	negl. n.a.	closed	+37% to EB	closed	-42% to EB	+40% to EB	+17% to EB	+19% to EB	negl. n.a.	negl. n.a.	negl. n.a.	
Berkeley Bridge	+21% to EB	+11% to WB	negl. n.a.	negl. n.a.	negl. n.a.	+36% to EB	-50% to EB	closed	+40% to EB	+3% to EB	+12% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
South Norfolk Jordan Bridge (SNJB)	+4% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	+3% to EB	+9% to EB	+1% to EB	closed	+4% to EB	+5% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	
Gilmerton Bridge (GB)	+16% to EB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	+17% to EB	+20% to EB	+7% to EB	+40% to EB	closed	+38% to EB	+14% to EB	negl. n.a.	negl. n.a.	negl. n.a.	
High-Rise Bridge	+27% to VaB	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	+26% to VaB	+36% to VaB	+18% to VaB	+20% to VaB	+55% to VaB	closed	+27% to VaB	negl. n.a.	-13% to Suf	negl. n.a.	
Steel Bridge	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	+4% to NB	closed	+11% to NB	+11% to NB	negl. n.a.	
Great Bridge Bridge (GBB)	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. negl.	+23% to NB	closed	+39% to NB	+19% to NB	
Chesapeake Expressway Bridge (CEB)	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. negl.	+23% to NB	+56% to NB	closed	+46% to NB	
Centerville Turnpike Bridge (CVTB)	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. n.a.	negl. negl.	+5% to NB	+13% to NB	+19% to NB	closed	

3. Crossing Capacities

JRB	NB	2,500	vehicles per hour
JRB	SB	2,300	vehicles per hour
Hazelwood	EB or WB	2,000	vehicles per hour
Godwin	EB or WB	2,000	vehicles per hour
MMMBT	NB or SB	3,500	vehicles per hour
HRBT	EB or WB	3,250	vehicles per hour
MTT	EB or WB	1,500	vehicles per hour
DTT	EB or WB	3,300	vehicles per hour
Berkley	EB or WB	5,600	vehicles per hour
Gilmerton (now)	EB or WB	1,200	vehicles per hour
Gilmerton (4 In's)	EB or WB	2,200	vehicles per hour
High Rise	EB or WB	4,000	vehicles per hour
Steel	NB	1,500	vehicles per hour
Steel	SB	1,300	vehicles per hour
Great Bridge Br	NB or SB	2,400	vehicles per hour
Ches Exp Br	NB or SB	4,400	vehicles per hour
Centerville Tnpk Br	NB or SB	1,400	vehicles per hour
SNJB	EB or WB	1,400	vehicles per hour

Next Steps

- Comments to Rob Case by November 20th
- TTAC approval in December
- HRTPO Board approval in January