

Transportation Department Routing proposal/analysis

Staff felt it was time to review our 3 tier busing system. The 3 tier system has been in operation since 1994. The many changes and addition of schools warrant a review of this system. While conducting the review we had 3 major goals in mind:

- 1) Improved efficiency. Our current efficiency rating with the DPI is 99.49%. Per discussion with DPI, our efficiency rating next year would be 93.43% if everything remained the same. The rate would continue to decrease below the 93.43% if we add additional buses and our riders remained relatively the same.
- 2) Improved customer service. Buses are on a very tight schedule between tiers today and we arrive late to some schools on a consistent basis in the afternoon. Over the years the increased traffic and number of motorists in Wake County has made it more difficult to transport students timely with the limited time between tiers. We are confident buses would be on campus when the bell rings in the afternoon with the new tier system.
- 3) Support of the new choice assignment plan. We feel the additional time between tiers will allow buses to extend runs slightly to absorb new stops without the need to add buses to cover those stops. Student ride times should not be adversely impacted to any significant extent.

The analysis was based on the 2011-12 student assignments. The current board policy for student ride times was used for the analysis.

We conducted meetings with each Operations Manager across our 15 transportation districts. The purpose of these meetings was to review the district's current routing and bell schedule coordination for maximum efficiency and customer service.

The changing or tweaking of bell schedules across the district netted a 112 bus savings projection.

Transportation Routing Analysis

Plan benefits

- 1) Increased Efficiency
- 2) Improved Customer Service
- 3) Flexibility to accommodate choices

Assumptions:

- 1) based on current assignments
- 2) current policy on student ride times

Transportation Routing Analysis-Cost Savings

	<u>2011-12</u>	<u>Without New Routing 2012-13</u>	<u>With New Routing 2012-13</u>	<u>2012-13 Comparison Increase/(Decrease)</u>
Number of buses	933	985	873	-112
Efficiency Rating	99.49%	91.00%	99.00%	8.00%
State Revenue (estimated)	\$50,000,205	\$45,954,741	\$49,994,718	\$4,039,977
REVENUE LOSS PREVENTION				\$4,039,977
OPERATING COST AVOIDANCE		add 52 drivers/buses	reduce 60 drivers/buses	
Driver costs		\$1,208,896	-\$1,394,880	-\$2,603,776
Fuel costs		\$472,680	-\$545,400	-\$1,018,080
Maintenance costs		\$121,784	-\$140,520	-\$262,304
CAPTIAL COST AVOIDANCE				
Capital costs (52 buses minus 25 DPI loaner buses)		\$2,430,000	\$0	-\$2,430,000
TOTAL COST AVOIDANCE				-\$6,314,160
SERVICE IMPACTS				
afternoon 30 minute on-time window	Yes	Yes	No	Service Improvement
Ride Times		Remain the same	Structure may result in shorter ride times	Hopeful for improvement
Accommodate Choice Plan		up to 25 additional buses	Possibly less than 25 additional buses	Less Buses

Transportation Routing Analysis

MINUTES BELL SCHEDULE CHANGED	NUMBER OF SCHOOLS	TOTAL NUMBER OF WAKE COUNTY SCHOOLS	PERCENTAGE
0-10	127	169	75%
11-20	3	169	2%
21-30	3	169	2%
31-40	7	169	4%
41-50	11	169	7%
Over 50	18	169	11%
	169		100%

Blue names= magnet

DRAFT 2012-13 Bell Schedule Proposal

Red names= year round

School	School Code	Current start time	Current End Time	Proposed Start Time	Proposed End Time	Minutes Changed	School	School Code	Current start time	Current End Time	Proposed Start Time	Proposed End Time	Minutes Changed	School	School Code	Current start time	Current End Time	Proposed Start Time	Proposed End Time	Minutes Changed
Abotts Crk Elem E20	303	N/A	N/A	9:25	3:55	N/A	Green Elem	440	7:45	2:15	9:25	3:55	> 50	Panther Crk High	526	7:25	2:18	7:25	2:18	0-10
Adams Elem	304	8:30	3:00	9:25	3:55	> 50	Green Hope Elem	439	9:15	3:45	9:25	3:55	0-10	Partnership Elem	525	8:30	3:00	8:40	3:10	0-10
Alston Ridge	307	9:15	3:45	9:25	3:55	0-10	Green Hope High	441	8:05	3:00	7:25	2:18	31-40	Penny Road El	530	9:15	3:45	9:25	3:55	0-10
Apex El	308	8:30	3:00	9:05	3:35	31-40	Harris Crk Elem	451	9:15	3:45	9:25	3:55	0-10	Phillips High	528	7:25	2:18	7:25	2:18	0-10
Apex High	316	7:25	2:18	7:25	2:18	0-10	Hbt Aikens Elem	306	9:15	3:45	9:25	3:55	0-10	Pleasant Un El	531	9:15	3:45	9:25	3:55	0-10
Apex Midd	312	8:15	3:00	8:30	3:15	11-20	Heritage Elem	454	8:10	2:40	8:20	3:00	0-10	Poe Elem	532	9:05	3:35	9:25	3:55	11-20
Athens Dr. High	318	7:25	2:18	7:25	2:18	0-10	Heritage Midd	444	8:20	3:05	8:30	3:15	0-10	Powell Elem	536	9:15	3:45	9:25	3:55	0-10
Aversboro Elem	320	8:30	3:00	9:25	3:55	> 50	Heritage High	445	7:25	2:18	7:25	2:18	0-10	Rand Road Elem	540	8:30	3:00	9:25	3:55	> 50
Baileywick El	326	9:15	3:45	9:25	3:55	0-10	Highcroft Elem	443	9:15	3:45	9:25	3:55	0-10	Reedy Crk El	542	9:15	3:45	9:25	3:55	0-10
Ballentine Elem	327	9:15	3:45	9:25	3:55	0-10	Hilburn Acad	442	N/A	N/A	8:15	3:00	0-10	Reedy Crk Midd	400	7:30	2:15	8:15	3:00	41-50
Banks Road El	325	9:15	3:45	9:25	3:55	0-10	Hodge Rd Elem	446	8:30	3:00	8:40	3:10	0-10	River Bend El	302	9:15	3:45	9:25	3:55	0-10
Barwell Elem	329	9:15	3:45	9:25	3:55	0-10	Holly Grove El	457	9:15	3:45	9:25	3:55	0-10	River Oaks	438	7:30	1:50	7:30	1:50	0-10
Baucom Elem	328	8:30	3:00	9:05	3:35	31-40	Holly Grove M	458	8:15	3:00	8:25	3:10	0-10	Rolesville El	544	9:15	3:45	9:25	3:55	0-10
Brassfield El	334	9:15	3:45	9:25	3:55	0-10	Holly Ridge El	449	9:15	3:45	9:25	3:55	0-10	Rolesville Midd	545	N/A	N/A	8:25	3:10	N/A
Brentwood El	336	8:30	3:00	8:40	3:10	0-10	Holly Ridge M	450	7:30	2:15	8:25	3:10	> 50	Root Elem	548	9:15	3:45	9:25	3:55	0-10
Briarcliff Elem	340	8:30	3:00	9:25	3:55	> 50	Holly Spg El	447	8:30	3:00	9:25	3:55	> 50	Salem El	550	9:15	3:45	9:25	3:55	0-10
Brier Creek El	342	9:15	3:45	9:25	3:55	0-10	Holly Spg High	455	7:25	2:18	7:25	2:18	0-10	Salem Midd	551	7:30	2:15	8:15	3:00	41-50
Bridges Elem	508	8:30	2:45	8:30	2:45	0-10	Hunter Elem	448	9:15	3:45	9:25	3:55	0-10	Sanderson H	552	8:05	3:00	7:25	2:18	41-50
Brooks Elem	344	9:15	3:45	9:25	3:55	0-10	Jeffreys Grve E	452	9:15	3:45	9:25	3:55	0-10	Sanford Crk El	554	9:15	3:45	9:25	3:55	0-10
Broughton High	348	8:05	3:00	7:25	2:18	31-40	Jones Dairy El	453	9:15	3:45	9:25	3:55	0-10	Smith Elem	560	9:15	3:45	9:25	3:55	0-10
Bugg Elem	352	9:10	3:40	9:25	3:55	11-20	Joyner Elem	456	8:30	3:00	8:40	3:10	0-10	Southeast H	562	7:45	2:50	7:35	2:40	0-10
Carnage Midd	356	7:30	2:15	7:35	2:20	0-10	Kingswood Elem	460	9:15	3:45	8:40	3:10	31-40	Stough Elem	564	9:15	3:45	9:25	3:55	0-10
Carpenter Elem	358	9:15	3:45	9:25	3:55	0-10	Knightdale El	464	9:15	3:45	9:25	3:55	0-10	Swift Creek El	568	9:15	3:45	9:25	3:55	0-10
Carroll Midd	360	7:30	2:15	7:30	2:15	0-10	Knightdale High	466	8:05	3:00	8:15	3:10	0-10	Sycamore Cr. E	569	8:30	3:00	9:25	3:55	> 50
Carver Elem	362	9:15	3:45	9:25	3:55	0-10	Lacy Elem	468	8:30	3:00	8:40	3:10	0-10	Timber Dr El	570	9:15	3:45	9:25	3:55	0-10
Cary Elem	364	8:30	3:00	8:30	3:00	0-10	Lake Myra Elem	474	9:15	3:45	9:25	3:55	0-10	Turner Creek El	571	9:15	3:45	9:25	3:55	0-10
Cary High	368	7:25	2:18	7:25	2:18	0-10	Laurel Park El	467	9:15	3:45	9:25	3:55	0-10	Underwood El	572	9:15	3:45	9:25	3:55	0-10
Cedar Fork Elem	369	9:15	3:45	9:25	3:55	0-10	Leadership (Gov M)	585	N/A	N/A	7:40	2:10	N/A	Vance Elem	576	9:15	3:45	9:25	3:55	0-10
Centennial M	370	7:45	2:30	7:35	2:20	0-10	Leadership (Peace)	586	N/A	N/A	7:40	2:10	N/A	Vandora Spg El	580	9:15	3:45	9:25	3:55	0-10
Combs Elem	376	8:30	3:00	8:40	3:10	0-10	Leadmine El	470	8:30	3:00	9:25	3:55	> 50	W Millbrook M	608	8:15	3:00	8:25	3:10	0-10
Conn Elem	380	9:15	3:45	9:25	3:55	0-10	Leesville Elem	469	9:15	3:45	9:25	3:55	0-10	W. Cary Midd	604	7:30	2:15	7:30	2:15	0-10
Creech Rd El	384	9:15	3:45	9:25	3:55	0-10	Leesville High	473	7:25	2:18	7:25	2:18	0-10	Wake Early Coll	583	7:25	2:30	7:25	2:30	0-10
Daniels Midd	388	7:30	2:15	8:25	3:10	41-50	Leesville Midd	471	8:15	3:00	8:25	3:10	0-10	Wake Forest El	584	9:15	3:45	9:25	3:55	0-10
Davis Dr Elem	390	7:45	2:15	9:25	3:55	> 50	Ligon Midd	472	7:30	2:15	7:35	2:20	0-10	Wakefield 9th	595	7:36	2:06	7:36	2:06	0-10
Davis Dr Midd	391	8:15	3:00	7:30	2:15	41-50	Lincoln Hts Elem	476	8:30	3:00	9:25	3:55	> 50	Wakefield El	593	9:15	3:45	9:25	3:55	0-10
Dillard Dr El	393	9:15	3:45	9:25	3:55	0-10	Lockhart Elem	480	8:30	3:00	8:40	3:10	0-10	Wakefield High	595	7:25	2:18	7:25	2:18	0-10
Dillard Dr Midd	394	8:15	3:00	8:25	3:10	0-10	Longview	324	7:25	2:18	7:25	2:18	0-10	Wakefield M	594	8:15	3:00	8:30	3:15	11-20
Douglas Elem	396	9:15	3:45	9:25	3:55	0-10	Lufkin Midd	484	7:30	2:15	8:15	3:00	41-50	Wakelon Elem	597	9:15	3:45	9:25	3:55	0-10
Durant Road El	398	8:00	2:30	8:45	3:15	41-50	Lynn Road El	488	9:15	3:45	8:30	3:00	41-50	Walnut Crk Elem	599	8:30	3:45	8:40	3:55	0-10
Durant Road M	399	7:45	2:30	8:30	3:15	41-50	Martin Midd	492	7:30	2:15	7:30	2:15	0-10	Washington El	596	9:15	3:45	9:25	3:55	0-10
E. Cary Midd	402	7:30	2:15	7:30	2:15	0-10	Middle Crk Elem	494	8:30	3:00	9:25	3:55	> 50	Weatherstone El	598	9:15	3:45	9:25	3:55	0-10
E. Garner Midd	404	8:15	3:00	8:40	3:25	21-30	Middle Crk High	495	7:25	2:18	7:25	2:18	0-10	Wendell Elem	600	7:45	2:15	9:25	3:55	> 50
E. Millbrook Midd	408	7:30	2:15	7:30	2:15	0-10	Millbrook Elem	496	7:45	2:15	7:45	2:15	0-10	Wendell Midd	601	7:30	2:15	7:30	2:15	0-10
E-25 (Richland Creek)	543	N/A	N/A	9:25	3:55	N/A	Millbrook High	500	7:25	2:18	7:25	2:18	0-10	West Lake Midd	607	8:15	3:00	7:40	2:25	31-40
East Garner El	403	9:15	3:45	9:25	3:55	0-10	Mills Park Elem	501	9:15	3:45	9:25	3:55	0-10	West Lake Elem	606	8:20	2:50	7:45	2:20	31-40
East Wake High	700	8:05	3:00	7:25	2:18	31-40	Mills Park Midd	502	8:15	3:00	8:25	3:10	0-10	WF Rlesville H	588	8:05	3:00	7:25	2:18	31-40
East Wake Midd	410	7:30	2:15	7:30	2:15	0-10	Moore Sq M	506	7:45	2:30	7:35	2:20	0-10	WF Rlesville Midd	592	7:30	2:15	7:30	2:15	0-10
Enloe High	412	7:25	2:35	7:20	2:30	0-10	Morrisville Elem	504	9:15	3:45	9:25	3:55	0-10	Wilburn Elem	616	9:15	3:45	9:25	3:55	0-10
Farmington W El	414	8:30	3:00	9:25	3:55	> 50	Mt. Vernon	508	8:30	2:50	8:30	2:50	0-10	Wildwood El	618	8:30	3:00	9:25	3:55	> 50
Forest Pines El	417	9:15	3:45	9:25	3:55	0-10	NC STEM	582	7:35	2:30	7:25	2:20	0-10	Wiley Elem	620	9:15	3:45	9:25	3:55	0-10
Forestville El	413	9:15	3:45	9:25	3:55	0-10	N Garner Midd	512	7:30	2:15	8:40	3:25	> 50	Willow Sprgs El	624	9:15	3:45	9:25	3:55	0-10
Fox Rd Elem	415	9:15	3:45	9:25	3:55	0-10	N. Frst Pines El	514	8:30	3:00	7:45	2:15	41-50	Yates Mill El	626	9:15	3:45	9:25	3:55	0-10
Fuller Elem	416	9:15	3:45	9:25	3:55	0-10	North Ridge El	516	9:15	3:45	8:30	3:00	41-50	York Elem	628	9:15	3:45	9:25	3:55	0-10
Fuquay Elem	420	9:15	3:45	9:25	3:55	0-10	Northwoods El	520	9:15	3:45	9:25	3:55	0-10	Zebulon Elem	632	7:45	2:15	9:25	3:55	> 50
Fuquay Midd	424	7:30	2:15	8:25	3:10	> 50	Oak Grove El	522	9:15	3:45	9:25	3:55	0-10	Zebulon Midd	636	7:30	2:15	8:25	3:10	> 50
Fuquay High	428	7:25	2:18	7:25	2:18	0-10	Olds Elem	524	8:30	3:00	8:40	3:10	0-10							
Garner High	436	7:25	2:18	7:25	2:18	0-10	Olive Chapel El	523	9:15	3:45	9:25	3:55	0-10							