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TRANSPORTATION CONSIDERATIONS



6/8/2010

Transportation Considerations

June 8, 2010

- Current Practices
- Fleet Data
- Referendum Considerations
 - Growth Buses
 - Replacement Buses
 - South Transportation
- Other Topics
 - Alternative Fuels
 - Seat Belts

Current Practices

- Buses provide regular transportation service in almost all residential areas
- Most buses have two runs-
 - HS or JH run combined with an Elem run; together, a route
- Average bus ridership district wide is 50%
 - Nearly 30,000 students ride the bus twice daily
 - Student ridership- HS 33%, JH 65%, Elem 50%
 - Target student load per seat
 - HS 2.25, JH 2.5, Elem 3
 - Bus runs per school (HS- 7-24, JH 8-18, Elem 4-12)
- Daily, over 12,000 regular ed bus stops in am, pm combined, another 2,400 for special needs
- Last year, over 3.7 million fleet miles driven

Fleet Data

- Current fleet totals nearly 470 buses
 - Includes nearly 355 regular ed buses/115 special needs buses
 - Approx 375 bus runs necessary to cover the entire district at any one time
 - Includes 275 regular ed runs/100 special needs runs
 - Reserve fleet needs
 - Activity trips to date this year totaled nearly 5,400 trips and involved over 7,300 buses
 - Though May of the current school year, there were
 - » 19 days in which 50-59 reserve buses were used during route times for coach needs or route bus replacement
 - » 10 days in which 60+ reserve buses were used during route times for coach needs or route bus replacement
 - » 50+ reserve buses used during route times 17% of the school days

Fleet Data

- Bus details
 - Types – conventional (71-pass), transit (83-pass), special needs
 - Replacement cost, current
 - Conventional- \$74k, transit- \$96k, special needs-\$90k
 - Above costs exclude seat belts

Referendum Considerations

- Growth Buses
- Replacement Buses
- South Transportation

Growth Buses

- Over the 2-year bond planning period
 - To accommodate student growth, expect to add 11 regular ed and 13 special needs routes annually, regardless if new schools built
 - Equates to 48 buses
 - However, 17 of the special needs buses are expected to be purchased with previously approved grant stimulus funds
 - Leaves 31 buses to be purchased (to meet student growth needs)
 - In addition
 - For special needs routes- new schools generally require the addition of more special needs routes (1/Elem or 2/JH)
 - Estimated at 4 buses
 - New schools alone typically do not result in increased regular ed bus routes; however, expect to add regular ed buses for increased activity trip needs related to 2 new JH schools
 - Estimated at 6 buses
 - Requires a total of 58 buses to accommodate student growth and new schools using current practices (minimal distance standards for bus service eligibility, activity trip practices, two-bell schedule)
 - Of these 58 buses, 41 expected to be funded from bond funds at a cost of \$4.15M

Replacement Buses

- Targeted replacement cycle
 - Began with 2002 bond authorization, continued with 2006 authorization
 - Intent, over time, that no bus be older than 16 years
 - Actual replacement number reduced for
 - Greater than anticipated bus cost, largely due to engine cost increase related to more stringent emissions standards
 - Increased bus route needs, especially special needs
 - Delayed bond authorization
- Of the current fleet of nearly 470 buses
 - 34 buses are 20 years or older (27 regular ed and 7 special needs)
 - Regular ed average mileage is 164k; special needs is 234k
 - 35 are 16-19 years old (all regular ed)
 - Average mileage is 144k
 - 57 are 12-14 years old (48 regular ed and 9 special needs)
 - 68 buses are 10-11 years old (59 regular ed and 9 special needs)
- Recommendation is to replace all buses 16 years or more old (given large number of buses 12-14 years old and 9-10 years old,
 - Represents a total of 69 buses at a cost of \$6.68M
- Possibility of reducing reserve bus fleet slightly (based on current reserve fleet size and usage)

South Transportation

- In 2006, two transportation centers served the District
 - East center (north of Mayde Creek High School) and west center (west of Katy Junior High)
 - Approaching capacity
 - Time and distance concerns of serving the southwest sector
- South Transportation facility withdrawn from 2006 Bond Planning Committee recommendation at the 11th hour
- From savings in other construction projects , construction approved in 2010 for a satellite facility at the South Transportation site
 - To house approx 65 buses
 - Establishes a presence
 - Provides some route efficiencies for the southwest sector
 - Creates more time for coach/teachers (less time spent traveling to pick up/return an activity trip bus)
 - Targeted for beginning use in 2010/11 school year

South Transportation

- Need continues to exist for South Transportation Center Phase 2 build-out
 - For capacity needs and efficiency purposes
 - Preliminary Phase 2 build-out estimate of \$11.5-14.5M
 - With Phase 1 construction, Phase 2 build-out can be delayed some
- If site build-out not funded, will need some monies for additional bus parking (\$472k)
- South Transportation staffing model
 - Growth positions needed, regardless if South Transportation built- includes drivers, lead drivers, mechanics, etc.
 - Site-dependent supervisory positions and support staff (Ass't Director/Driver Manager, administrative clerk, Shop Foreman, parts inventory technician, etc.)
- Thursday tour of West Transportation
 - Will resemble similar service functionality as South Transportation design when built out
 - Parking, fueling, mechanical repairs & maintenance, supervisory, nursery

Other Topics

- Alternative Fuels
 - Other alternative fuels
 - CNG, LNG, LPG
 - Fueling infrastructure not readily available
 - Can prohibit travel outside the District and limit travel within the District
 - Additional training requirements for engine maintenance and fueling
 - Grants typically fund the incremental cost increase only
 - Ultra-low sulfur diesel
 - Used by Katy ISD currently
 - Cleaner burning fuel/produces less particulate emissions-over 90% reduction in sulfur content compared to low sulfur diesel
 - Required by Texas Commission for Environmental Quality
 - Other green efforts
 - No idle policy
 - Closed crankcase filtration system
 - In 2009, nearly 80 buses retrofitted
 - Eliminates crankcase emissions (the combustion gases that blow by the piston rings and which pick up oil mist when vented from the crankcase) by nearly 90%
 - Funded from TCEQ grant monies

Other Topics

- Seat Belts
 - Recent legislation
 - Three-point (shoulder) seat belts required for buses purchased after Sept 1, 2010
 - Subject to state study, state funding and grant application
 - Cost is approx \$500/per bench seat or \$12-14k/bus
 - Included in cost of new buses for cost estimation purposes only
 - Dependent on such factors as grant approval, retrofit ramifications, district direction
 - Safety of school bus transport compared to all other forms
 - Unintended consequences