

# Facilities and Technology Bond Task Force

*Curriculum and Technology  
Initiatives Presentation  
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# Bond Considerations for Spring 2008

Since the beginning of the 2006-07 school year, staff members from schools, the academic and technology services division, the technology steering committee and other support services departments have been studying and identifying possible curriculum and technology needs to be addressed in an upcoming bond initiative. This document is designed to provide you an overview of the initiatives that have been recommended for inclusion in the 2008 bond package.

There is a critical and essential need to protect and maintain the investment made by previous technology bond funds (1990, 1996, 1999, 2000, 2003 and 2004). In particular, those bonds have enabled Plano ISD to create initial local and wide area networks (1990) and begin the replacement of that network with more capacity and capability (1999). A second round of increased capacity was needed to support additional network use by students and staff (2004). Our elementary classrooms have a standard technology configuration throughout the entire district to integrate closely with our curriculum (1996). All of our secondary classrooms received significant technology implementations via a curriculum-requested process on a content-specific basis (1996, 2000 and 2004). The data networks within each campus have been and will continue to be upgraded to take advantage of Internet access and our new wide area network (1996, 1999 and 2004). We've installed over 30,000 computers, 4,000 printers, 2,000 projection systems and 1,000s of TV/monitors, VCRs and video image display cameras as a result of the 1996, 2000 and 2004 bond initiatives to help increase student achievement through technological improvements in the classroom. We believe that appropriately replacing and upgrading this equipment should be a high priority in the upcoming bond issue.

In addition, there is a need to continue the improvement in the PISD classroom environments in terms of technology access that our students use regularly in their learning activities. The districtwide technology initiatives and curriculum specific technology initiatives support and improve on those additions made as part of our previous technology bond investments. In addition, improvements to our communications, transportation, food and nutrition services (FANS) and wireless network systems have been identified as priorities in providing needed services to students, parents and staff.

This document is organized in the following fashion to assist with the discussion of the various initiatives to be presented for consideration:

- Summary of Technology Bond Initiatives Costs
- Replacement Program
- Classroom Technology Initiatives
  - Districtwide
  - Curriculum Specific
- Central/Auxiliary Services Initiatives



# Cost Summary of Technology Bond Initiatives

Item	Cost	Page #
<b>Replacement Program</b>	<b>\$33,816,398</b>	4
<b>Classroom Technology Initiatives</b>	<b>\$25,782,914</b>	
<i>Districtwide</i>	<i>\$12,414,000</i>	
Digital Visual Presenters (K-12)	\$3,486,000	5
PC operating and productivity systems upgrade (K-12)	\$4,960,000	5
Digital Cameras (K-12)	\$468,000	5
Web-based enterprise applications	\$3,500,000	5
<i>Curriculum Specific</i>	<i>\$13,368,914</i>	
Art (K-5)	\$261,562	6
Career and Technology Education (6-12)	\$738,040	6
Elementary (K-5)	\$3,602,780	6
Foreign Language (6-12)	\$1,350,000	7
Health and PE (K-12)	\$2,903,410	7
Learning Media Services (K-12)	\$1,616,686	8
Mathematics (6-12)	\$1,032,240	8
Science (6-12)	\$665,000	8
Special Education (K-12)	\$669,696	9
Speech (9-12)	\$405,500	9
Theater Arts (6-12)	\$124,000	9
<b>Central/Auxiliary Services Initiatives</b>	<b>\$6,491,684</b>	
Communications	\$31,584	10
Food and Nutritional Services (FANS)	\$672,100	10
Technology – upgrade campus wireless infrastructure	\$5,500,000	10
Transportation	\$288,000	10
<b>Total of all curriculum and technology initiatives</b>	<b>\$66,090,996</b>	



# Replacement Program

Plano ISD and its community commit a significant portion of budget dollars to support and improve the use of technology in the district. In 1996, 1999, 2000, 2003 and 2004, the community approved technology bond packages totaling \$161 million that provided the needed funding to enable the strategic technology plan to be put into place and maintained. A combination of operating funds and 5-year equipment bonds will be needed to insure the plan can be implemented and maintained in an appropriate fashion. Due to legislative mandates that restrict the amount of dollars available through local operational taxes, the district must fund replacement costs in bond packages while the operating budget funds ongoing support of technology. A determination was made in the spring of 1999 by district administration and the Board of Trustees that a replacement fund for technology would become part of an ongoing bond program. The chart below gives the current recommendation as to those replacements that should be provided as part of the Spring 2008 bond initiative.

Item	Current # to Replace Inventory	# to Replace	Unit Cost	Total Cost	Year(s) to implement
Desktop PCs	27,987	17,058	772	\$13,168,776	2008-12
Upgrade Memory to 1 GB (Vista)	26,000	26,000	61	\$1,586,000	2008-12
Laptop Computers	5,611	3,582	1,534	\$5,494,788	2008-12
Macintosh Computers	300	175	1,500	\$262,500	2008-12
Network Servers	230	167	8,000	\$1,336,000	2008-12
Network Switches Managed	508	508	1,000	\$508,000	2008-12
Network Switches/Hubs Unmanaged	2,053	1,186	500	\$593,000	2008-12
Network Firewall	2	2	35,000	\$70,000	2008-12
Calculators	4,900	1,500	101	\$151,500	2008-12
Camcorders	267	100	700	\$70,000	2008-12
Data Processing Equip (AS400,etc)	1	1	250,000	\$250,000	2008-12
Data Processing Equip (printers, etc.)	6	6	7,835	\$47,010	2008-12
Digital Cameras	754	754	600	\$452,400	2008-12
Digital Video Cameras	112	112	500	\$56,000	2008-12
DVD Players	86	13	85	\$1,097	2008-12
Flatbed Scanners	393	59	405	\$23,875	2008-12
Graphic Art Tablets	448	125	170	\$21,250	2008-12
Headphones	50,000	7,500	13	\$97,500	2008-12
Heart Rate Monitors	565	325	270	\$87,750	2008-12
Mobile Broadcast Carts	75	11	7,000	\$78,750	2008-12
Opscan Scanners	118	113	7,222	\$816,086	2008-12
Printers	3,790	2,000	800	\$1,600,000	2008-12
Probeware/Microscopes/Lab	8,835	4,418	300	\$1,325,250	2008-12
Projection Systems/Light Sources	1,773	887	1,900	\$1,684,350	2008-12
Scan Converters	2,943	800	169	\$135,200	2008-12
Touch Screens and POS System	125	125	1,500	\$187,500	2008-12
TV/Monitors	2,943	147	395	\$58,124	2008-12
UPS Systems	369	369	750	\$276,750	2008-12
VCRs	4,675	2,338	199	\$465,163	2008-12
Video Amplifiers	4,699	705	99	\$69,780	2008-12
Video Switch (Pelican) Boxes	4,699	3,000	14	\$42,000	2008-12
VIDs/Flexcams	1,037	800	1,000	\$800,000	2008-12
Voice Network	10	10	150,400	\$1,504,000	2008-12
Wireless Access Points	222	222	500	\$111,000	2008-12
Wireless Keyboard/Mouse	3,500	3,500	110	\$385,000	2008-12
<b>Total Replacement Costs</b>				<b>\$33,816,398</b>	



# Districtwide Classroom Technology Initiatives

## Digital Visual Presenter

Many of our classroom initiatives from the 2004 bond called for video image display devices to provide for a realistic representation not only of transparencies, but also of printed copies and three-dimensional objects – something an overhead projector cannot display. Our students and teachers have identified this tool as necessary for access within every classroom, not just those few hundred identified in past bonds.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Digital Visual Presenters	3,486	1,000	\$3,486,000	2009-11
Total bond funding request			\$3,486,000	

## PC operating and productivity systems upgrades

We anticipate a need to upgrade our operating systems on our complete inventory of PCs. At the same time, we will provide an update to our productivity software suite as well as curriculum systems that would be incompatible with a new operating system.

Item	Current Inventory	# to Upgrade	Unit Cost	Total Cost	Year(s) to implement
Windows Vista	32,000	32,000	70	\$2,240,000	2008-12
Office 2007	32,000	32,000	85	\$2,720,000	2008-12
Total bond funding request				\$4,960,000	

## Digital cameras

As more learning activities require students to include images as part of their projects, the need to provide additional cameras districtwide is realized.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Digital cameras	1,560	300	\$468,000	2009-10
Total bond funding request			\$468,000	

## Web-based enterprise applications

A goal provided as part of the 2007-2010 district technology plan calls for the migration from proprietary client software to web-based versions over the next three years. Large systems such as Destination Success provided in the 2004 bond package are capitalized and used for periods of five years and longer.

Item	Total Cost	Year(s) to implement
Web-based enterprise software	\$3,500,000	2008-12
Total bond funding request		\$3,500,000



# Curriculum Specific Classroom Technology Initiatives

## Art (K-5)

The new Art TEKS require students to be taught photography starting in the 4th grade. Four computers and four art tablets will be added to each elementary school art classroom to enable students to create, download and edit digital images in support of the required TEKS.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Student computers	196	772	151,312	2009-10
Electrical, cabling, etc.	196	300	58,800	2009-10
Graphic art tablets	245	170	41,650	2009-10
Computer tables	196	50	9,800	2009-10
Total bond funding request			\$261,562	

## Career and Technology Education (9-12)

Commercial Photography courses are being added at the three senior high schools. Equipment and materials are necessary to support this course. A 30-station wireless laptop lab will be added for marketing classes at the three senior high schools to support computer simulations used in Marketing Dynamics and in Sports & Entertainment Marketing classes. These simulations require approximately six weeks of computer time for each student. Forensics and DNA lab equipment will be added to Criminal Investigations classrooms to enable students to perform hands-on activities that are critical elements of the course. Hardware will be purchased to expand the existing Video Technology course (currently in its 3rd year at PWSH only) to PESH and PSHS. All technology application classroom computers will be upgraded to enable effective operation of the adopted software applications.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Commercial photography course equipment	3	28,000	84,000	2009-11
Wireless laptops labs for Marketing course	3	40,000	120,000	2009-10
Forensics and DNA lab equipment	3	44,000	132,000	2009-10
Video technology labs	2	51,020	102,040	2009-10
Tech Apps enhanced computer labs	750	400	300,000	2009-10
Total bond funding request			\$738,040	

## Elementary (K-5)

All elementary classrooms will have their 27" TVs upgraded to DLP projection systems for large group viewing. This will provide consistent student viewing options in all K-12 classrooms. All secondary classrooms were completed as part of the 2000 and 2004 bond programs.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Classroom projectors	1,528	2,358	3,602,780	2008-12
Total bond funding request			\$3,602,780	



**Foreign Language (6-12)**

Classroom ceiling-mounted language labs and teacher console desks will be added to foreign language classrooms. Classroom labs are designed to enhance student contact and engagement with the target language being learned by providing the students and teacher with a system for more effective and efficient use of instructional time.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Classroom ceiling mounted language labs	50	27,000	1,350,000	2009-11
Total bond funding request			\$1,350,000	

**Health and PE (K-12)**

Equipment needs to be updated and replaced to provide all campuses with equitable and necessary equipment to meet the new curriculum standards. Climbing walls will enable all middle schools to meet the new curriculum standards and will provide opportunities for our students to develop upper body strength, coordination, and aerobic capacity. Safety mats for elementary climbing walls are necessary to replace exiting mats. Projectors will be provided for every gymnasium to use for video streaming, displaying curriculum, demonstrating fitness testing protocols, use of Coordinated School Health curriculum mandated by the state, and large group instruction. Sound systems will be provided to assist with audible instruction with large groups. Fitnessgram testing equipment is necessary to satisfy recent legislation. Additional fitness testing will occur across our district with each student enrolled in grades 3-12 performing the required physical fitness assessment. We currently have a limited number of testing resources available on each campus to perform this task. Handheld wireless mobile devices will be provided for additional access for teachers in the gymnasium as well as outside the facility to record fitness information. Additional heart rate monitors and pedometers are needed for all campuses to provide students with additional access to this technology. Game systems and CatEye game bikes will be added to all campuses. This new technology will help meet the new curriculum standards as well as provide new teaching strategies and increase fitness levels of students. Additional TargitFit Trainers are necessary for all campuses. These are mobile health and fitness systems that provide both cardio and resistance training that individualizes instruction.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Health education equipment	21	8,000	168,000	2008-12
Fitness equipment (K-5)	44	10,000	440,000	2008-12
Fitness equipment (6-12)	21	7,000	147,000	2008-12
Traverse climbing walls – middle school	12	19,000	228,000	2008-12
Mobile fitness recording device (handheld)	149	650	96,850	2008-12
Heart rate monitors	65	8,500	552,500	2008-12
Pedometers	65	1,749	113,685	2008-12
Game systems	65	3,795	246,675	2008-12
CatEye game bikes	109	1,500	163,500	2008-12
Mobile DLP projectors	65	1,834	119,210	2008-12
Mobile sound systems	65	2,146	139,490	2008-12
TargetFit trainer	420	375	157,500	2008-12
Fitnessgram testing equipment (K-5)	44	350	15,400	2008-12
Fitnessgram testing equipment (6-12)	21	9,500	199,500	2008-12
Mat systems for K-5 climbing walls	43	2,700	116,100	2008-12
Total bond funding request			\$2,903,410	



**Learning Media Services (K-12)**

Five wireless laptops and a mounted projector will be added to secondary libraries. This will extend the number of available computers in each library and provide students the freedom to work anywhere in the library. The added projectors will enhance the quality and visibility of presentations to large groups. Pathways Digital Delivery will be added to provide teachers with the ability to access all curriculum specific video content digitally through their computer rather than rely on the analog system. Digitized video content needs to be added and refreshed to enhance student learning and enable teachers to have access to quality video at any time. The districtwide library circulation system will be replaced and all data migrated to the new system.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Wireless laptops (6-12)	100	2,000	200,000	2009-11
Automation system upgrade	1	250,000	250,000	2009-11
Projection systems	53	2,107	111,571	2009-11
Pathways digital delivery	65	8,231	535,015	2009-11
Digital content	65	8,000	520,000	2009-12
Total bond funding request			\$1,616,686	

**Mathematics (6-8)**

Eight classroom computers will be added to all middle school math classrooms to provide the same technology access as in all other middle school classrooms. Students will utilize identified mathematics software programs that support improved achievement.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Student computers	920	772	710,240	2009-10
Electrical, cabling, etc.	920	300	276,000	2009-10
Computer tables	920	50	46,000	2009-10
Total bond funding request			\$1,032,240	

**Science (11-12)**

Additional science labs will be added to the senior high schools in order to meet the new state requirement for four years of lab-based science in high school.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Additional labs (4X4 curriculum)	19	35,000	665,000	2008-10
Total bond funding request			\$665,000	



**Special Education (K-12)**

In order to provide a Free Appropriate Public Education in the Least Restrictive Environment, classroom projectors will be added to special education classrooms to assist students in gaining access to the general education curriculum. Projectors will be added to conference rooms so that schools will be able to allow committee members to view all information and work collaboratively to develop an effective IEP. In order to provide a Free Appropriate Public Education in the Least Restrictive Environment, students must have access to appropriate assistive devices based on their individual needs. These assistive devices will be purchased for all subject areas and benefit students who have difficulty expressing their knowledge on a particular subject matter.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Assistive devices	400	1,000	400,000	2008-12
Classroom projectors	60	2,107	126,420	2009-11
Projectors for ARD meeting rooms	68	2,107	143,276	2009-11
Total bond funding request			\$669,696	

**Speech (9-12)**

One 30-station laptop cart will be added to each 9-12 campus so that students will be able to complete curriculum requirements for the various speech classes. Remote Digital Video Cameras are necessary for secondary speech classrooms to record all speeches and debates in classrooms. This enables students to critique themselves and compile a catalogue of their performances.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Remote digital video cameras	5	1,000	5,000	2009-11
Carts	8	1,050	8,400	2009-11
Laptop computers	240	1,600	384,000	2009-11
Access point	8	300	2,400	2009-11
Electrical, cabling, etc.	19	300	5,700	2009-11
Total bond funding request			\$405,500	

**Theater Arts (9-12)**

Lighting and sound boards will be replaced and are required in order to meet the needs placed on performance spaces. Electric batten systems are needed to replace current systems for safety reasons.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Lighting boards	4	10,000	40,000	2009-10
Sound boards	4	9,000	36,000	2009-10
Electric battens	2	24,000	48,000	2009-10
Total bond funding request			\$124,000	



# Central/Auxiliary Services Initiatives

## Communications

Digital editing system and TV studio monitors will be replaced. Conversion equipment is necessary for transferring signals to and from editor with the studio system. A video production camera (high-definition quality) with reusable disks, DVD duplicator, uninterrupted power source (UPS), and a portable, tapeless recorder for recording multi-camera, hour-long (or more) district events for editing, will also be added to the television studio at Plano East Senior High School.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Digital editing system	1	7,744	7,744	2009-10
Editing workstation	1	3,390	3,390	2009-10
Conversion equipment	1	1,600	1,600	2009-10
HD video production camera	1	9,000	9,000	2009-10
DVD duplicator	1	3,300	3,300	2009-10
Control room and studio monitor	1	4,400	4,400	2009-10
Portable recording hard drive	1	1,400	1,400	2009-10
UPS	1	750	750	2009-10
Total bond funding request			\$31,584	

## Food and Nutritional Services (FANS)

Point of Sale (POS) hardware and software will be upgraded at all campuses. Rapid Eye security cameras will be upgraded/added at cafeterias in secondary campuses. New Rapid Eye security cameras will be added to Kimbrough Stadium for the concession area.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Upgrade point of sale systems	117	3,500	409,500	2009-11
Add/upgrade Rapid Eye systems	91	2,600	236,600	2009-11
Rapid Eye systems at Kimbrough Stadium	10	2,600	26,000	2009-11
Total bond funding request			\$672,100	

## Technology

Wireless network routers and access points will be upgraded and added to all district facilities. This will provide high speed, ubiquitous wireless network access for mobile devices used by our staff and students. The wireless initiative is a key component for appropriate online assessment capabilities in addition to full, simultaneous support of all wireless devices available at campuses.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
Upgrade campus wireless infrastructure	1	5,500,000	5,500,000	2008-12
Total bond funding request			\$5,500,000	

## Transportation

All buses in the district will be equipped with GPS tracking technology to provide additional safety and security of all students.

Item	Number to add	Unit Cost	Total Cost	Year(s) to implement
GPS tracking systems	1	288,000	288,000	2009-11
Total bond funding request			\$288,000	



