REQUEST FOR PROPOSAL

INFORMATION TECHNOLOGY ARCHITECT

TROY SCHOOL DISTRICT

2013 Pre-Bond Services

March 20, 2013

REQUEST FOR PROPOSAL
RFP 9756
INFORMATION TECHNOLOGY ARCHITECT SERVICES
TROY PUBLIC SCHOOLS

Troy Schools is accepting firm, sealed proposals for Information Technology Architect Services in the anticipation of a successful November, 2013 General Election Bond passage for the Troy School District.

Your proposal and four copies marked "**Information Technology Architect Services**" must be delivered no later than 3 p.m., Wednesday, April 3, 2013 to: Purchasing Department, Troy School District, 1140 Rankin, Troy, Michigan 48083, at which time all bids will be publicly opened and read aloud immediately thereafter. Bid proposals received after this time will not be considered or accepted.

All questions regarding the services specified, or the RFP terms and conditions will be accepted in writing ONLY and subsequently answered through an addendum to all interested parties. Any questions must be received no later than noon, Wednesday, March 27, 2013, at no other time prior to the RFP opening will questions/concerns be addressed or accepted and may be faxed to: 248.823.4077, or emailed as a Word document to: PurchasingOffice@troy.k12.mi.us.

All consultants submitting proposals must provide familial disclosure and attach this information to the proposal. The proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or any employee of the consultant submitting a proposal and any member of the Troy Schools Board or the Troy Schools Superintendent. The District will not accept a proposal that does not include this sworn and notarized disclosure statement.

The Troy Board of Education reserves the right to accept or reject any or all bids, either in whole or in part; to award contract to other than the low bidder; to waive any irregularities and/or informalities; and in general to make awards in any manner deemed to be in the best interest of the owner.

Purchasing Department
Troy School District
1140 Rankin
Troy, MI 48083

1.0 OVERVIEW

Troy Schools is accepting firm, sealed proposals for Information Technology Architect Services in the anticipation of a successful November, 2013 General Election Bond passage for the Troy School District.

2.0 SCOPE OF SERVICES

The Proposal is to identify in detail the proposed services for the planning, design and selection activities for the technology included in the 2013 Bond Issue.

A. Facilitate discussions and lead the District in developing a technology plan and developing a detailed budget (Program of Service). The Technology Designer will work with a Planning Committee to develop the plan and program of services. The program of service must include both capital and operating expenses.

B. The Designer will develop a design for each project in the budget and develop a set of bid specifications and assist the District in selecting vendors. The Designer will draft an RFP for all technologies, distribute the RFPs, manage the bid process, evaluate the proposals with the Owner, and secure contracts with the successful Vendors.

C. The Designer will be responsible for overseeing the implementation of technology including, but not limited to: detailed design meetings, kick off meetings, regular on-site reviews, coordination with construction trades, timeline management, review of applications for payment, change order review, acceptance testing, punch lists and project close-out.

The Designer will be ineligible to bid on any equipment needed to implement the approved design. The Designer represents and warrants that it is an entity independent from any and all Vendor/Contractor(s) eligible to bid on any of the Request for Proposals prepared by the Designer in connection with the Project(s) herein. The Designer further represents and warrants that it will receive no consideration, commission or remuneration of any kind from any Vendor/Contractor bidding on any contract herein.

3.0 GENERAL TERMS AND CONDITIONS

Firm, sealed proposals, one original and four copies, will be received by the Purchasing Department, Troy Schools, Information Technology Architect Services, for Troy Public School District, in accordance with the attached specifications.

3.1 RECEIPT OF PROPOSALS

Proposals will be submitted only on the forms provided and/or under separate cover as specified, and will be enclosed in a sealed envelope marked with the name of the Consultant, the title of the work, the time, place and date due and must be delivered to: Purchasing Department, Troy School District, 1140 Rankin, Troy, Michigan 48083, no later than 3 p.m., Wednesday, April 3, 2013, at which time all proposals will be publicly opened and read aloud immediately thereafter. Proposals received after this time will not be considered or accepted. Oral, telephone, fax or electronic mail proposals are invalid and will not receive consideration.

Proposals will be made in full conformity with all the conditions set forth in the specifications. Proposals will remain firm for a minimum period of 180 days following the date on which the proposals are opened.

Any Consultant may withdraw their proposal at any time prior to the scheduled time for receipt of proposals.

After proposals are opened, evaluated, and approved, a letter of award confirming acceptance will be sent to the selected Consultant. It is the intent to review this proposal at the April 23, 2013, Board of Education study session.

3.2 PRE-PROPOSAL QUESTIONS

All questions regarding the services specified, or the RFP terms and conditions will be accepted in writing ONLY and subsequently answered through an addendum to all interested parties. Any questions must be received no later than noon, Wednesday, March 27, 2013, at no other time prior to the RFP will questions/concerns be addressed or accepted and may be faxed to: 248.823.4077, or emailed as a Word document to: PurchasingOffice@troy.k12.mi.us.

3.3 TIMELINE

The District anticipates the following timeline and is prepared to exercise flexibility for the purpose of finding the right fit with a qualified Consultant or for other purposes deemed to result in added value to the Information Technology Architect Services:

RFP released	Wednesday, March 20, 2013
Pre-proposal questions	Wednesday, March 27, 2013 @ Noon
Proposals due	Wednesday, April 3, 2013 @ 3:00 PM
Interviews	Week of April 8, 2013 - April 12, 2013
Board Presentation & Review	Tuesday, April 23, 2013
Recommendation & Award	Tuesday, May 7, 2013

3.4 FAMILIAL RELATIONSHIP

All Consultants submitting proposals must provide familial disclosure and attach this information to the proposal. The proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or key employee of the Consultant submitting a proposal and any member of the Troy Schools Board of Education or the Troy Schools Superintendent. The District will not accept a proposal that does not include this sworn and notarized disclosure statement.

3.5 OWNER EXPECTATIONS

The Owner is seeking a Designer with experience in providing similar consulting services to other educational institutions. It is anticipated that the selected Designer will have extensive experience.

A. Worked with at least ten school districts on similarly scoped bond issues in the past five years.

B. Have at least five years of experience in designing all of the following:

- Wide area networks
- Local area networks
- Video distribution over IP
- Video production carts

- Classroom technology including presentation systems, interactive white boards, student response technology
- Security systems including card access and video surveillance
- Telecommunication Systems including VoIP
- Structured cabling systems
- Server farms / storage area networks
- Workstations including tablet PCs, desktops and laptops on carts
- Wireless technology

C. The Designer must be able to communicate and work effectively with non-engineering staff. The Designer will also be expected to effectively utilize appropriate equipment that may exist within the District.

3.6 PROPOSALS

All blank portions of the proposal must be filled in. Each submitted proposal must include the legal name of the Consultant and will be signed by the person(s) legally authorized to bind the Consultant to a contract. If proposals are submitted by an agent, satisfactory evidence of agency authority is required.

3.7 ORAL PRESENTATIONS

Certain selected Designers who submit proposals may be required to make an oral presentation of their proposal to the Owner. These presentations provide an opportunity for the selected Consultants to clarify their written proposals and for the Owner to obtain additional information. It is expected that Consultants will bring key staff who will work on the project to the presentations.

3.8 CONFIDENTIAL INFORMATION

As a public entity, the District is subject to the Michigan Freedom of Information Act (FOIA). Information contained in proposals may be subject to FOIA requests.

3.9 COMPLIANCE OF AWARDED VENDOR

Consultant agrees to comply with all federal, state, and local laws, rules, regulations, executive orders, and ordinances that may be applicable to the Consultant's performance of its obligations under this contract. Prior to the issuance of a purchase order authorizing commencement of this project, and in all cases before beginning work under the contract, the awarded Vendor will provide to Troy Schools adequate insurance per the requirements stated under Item 3.23.

3.10 RIGHT TO REQUEST ADDITIONAL INFORMATION

The Owner reserves the right to request any additional information that might be deemed necessary after the completion of this document.

3.11 RIGHT OF REFUSAL

The Board of Education reserves the right to accept or reject any or all proposals, in whole or in part; to award to other than the low Consultant; to waive any irregularities and/or informalities; and, in general, to make awards in any manner deemed to be in the best interests of the owner.

3.12 COSTS

The Consultant is responsible for any and all costs incurred by the Consultant or his/her subcontractors in responding to this request for proposal. Fees quoted must remain firm throughout this project except for changes in scope. All scope changes must be approved in writing in advance of the Consultant performing the work. Fees quoted must include all expenses for this project.

3.13 FEDERAL OR STATE SALES, EXCISE, OR USE TAXES

Troy School District is a tax-exempt entity for all purposes except if the project makes enhancements, and/or additions to real property.

3.14 CONTRACT REQUIREMENTS

The Owner considers this RFP legally binding and will require that this Request for Proposal and the resulting Consultant proposal be included as addenda to any subsequent contracts between the Consultant(s) and the Owner. It should be understood by the Consultant(s) that this means that the Owner expects the Consultant(s) to satisfy substantially all requirements and reports listed herein. Exceptions should be explicitly noted in the Consultant proposals. Lack of exceptions listed on the "Exceptions to Specifications" form will be considered acceptance of all of the specifications as presented in this RFP.

3.15 SURVIVAL CLAUSE

All duties and responsibilities of any party that, either expressly or by their nature, extend into the future, shall extend beyond and survive the end of the contract term or cancellation of this Agreement.

3.16 INCORPORATION BY REFERENCE

Parties agree that where there is a conflict between terms of this Agreement and the information presented in the referenced documents, this Agreement shall take precedence. The parties also agree that where there is not a conflict between this Agreement and the information presented in the referenced documents, that all terms, conditions and offers presented in the Consultant's proposal shall herein be referenced to the Agreement and shall be binding upon all parties to the Agreement.

3.17 NON-WAIVER OF AGREEMENT RIGHTS

It is the option of any party to the Agreement to grant extensions or provide flexibilities to the other party in meeting scheduled tasks or responsibilities defined in the Agreement. Under no circumstances, however, shall any parties to the Agreement forfeit or cancel any right presented in the Agreement by delaying or failing to exercise the right or by not immediately and promptly notifying the other party in the event of a default. In the event that a party to the Agreement waives a right, this does not indicate a waiver of the ability of the party to, at a subsequent time, enforce the right. The payment of funds to the Consultant by Owner should in no way be interpreted as acceptance of the system or the waiver of performance requirements.

3.18 NONDISCRIMINATION BY CONSULTANTS OR AGENTS OF CONSULTANT

Neither the Consultant nor anyone with whom the Consultant shall contract shall discriminate against any person employed or applying for employment concerning the performance of the Consultant responsibilities under this Agreement. This discrimination prohibition shall apply to all matters of initial

employment, tenure and terms of employment, or otherwise with respect to any matter directly or indirectly relating to employment concerning race, color, sex, religion, age, national origin, or ancestry. A breach of this covenant may be regarded as a default by the Consultant of this Agreement.

3.19 SUBCONTRACTORS

Consultants may use subcontractors in connection with the work performed under this Agreement. When using subcontractors, however, the Consultant must obtain written prior approval from the Owner for activities or duties to take place at the Owner site. In using subcontractors, the Consultant agrees to be responsible for all their acts and omissions to the same extent as if the subcontractors were employees of the Consultant.

3.20 EFFECT OF REGULATION

Should any local, state, or national regulatory authority having jurisdiction over the Owner enter a valid and enforceable order upon the Owner which has the effect of changing or superseding any term or condition of this Agreement, such order shall be complied with, but only so long as such order remains in effect and only to the extent actually necessary under the law. In such event, this Agreement shall remain in effect, unless the effect of the order is to deprive the Owner of a material part of its Agreement with the Consultant. In the event this order results in depriving the Owner of materials or raising their costs beyond that defined in this Agreement, the Owner shall have the right to rescind all or part of this Agreement (if such a rescission is practical) or to end the Agreement term upon thirty (30) days written prior notice to the Consultant. Should the Agreement be terminated under such circumstances, the Owner shall be absolved of all penalties and financial assessments related to cancellation of the Agreement.

3.21 ASSIGNMENTS

Owner and the Consultant each binds themselves, their partners, successors, and other legal representatives to all covenants, agreements, and obligations contained in this Agreement.

3.22 CONSULTANT AS INDEPENDENT CONTRACTOR

It is expressly agreed that the Consultant is not an agent of Owner but an independent contractor. The Consultant shall not pledge or attempt to pledge the credit of Owner or in any other way attempt to bind the Owner.

3.23 INSURANCE

The Consultant agrees to hold harmless and defend the Owner and its agents, officials and employees from any liability, claim or injury, related to or caused by fault or negligence of Consultant employees or subcontractors. In order to demonstrate this responsibility, the Consultant must have adequate insurance throughout this project as follows:

- A minimum Commercial General Liability limit of $3,000,000;
- A minimum Umbrella Liability limit of $3,000,000; and
- Professional Liability insurance coverage with minimum limits of $3,000,000
- Statutory workers Compensation insurance

3.24 STANDARD FORMS AND CONTRACTS

Any forms and contracts the Consultant(s) proposes to include, as part of any agreement resulting from this RFP between the Consultant(s) and the Owner must be submitted as part of the proposal. Any forms and contracts not submitted as part of the RFP and subsequently presented for inclusion may be rejected. This requirement includes, but is not limited to, the following types of forms: subcontractor, franchise, warranty agreements, maintenance contracts, and support agreements.

3.25 NON-COLLUSION COVENANT

The Consultant hereby represents and agrees that it has in no way entered into any contingent fee arrangement with any firm or person concerning the obtaining of this Agreement. In addition, the Consultant agrees that a duly authorized Consultant representative will sign a non-collusion affidavit, in a form acceptable to the Owner that the Consultant firm has received from Owner no incentive or special payments, or considerations not related to the provision of automation systems and services described in this Agreement.

3.26 ADVERTISEMENT

The laws of the State of Michigan, Owner purchasing policies and the legal advertisement for contractors and purchases, are made a part of any agreement entered into the same respect as if specifically set forth in that agreement.

3.27 SPECIAL NOTES

Failure to include in the proposal all information outlined above may be cause for rejection of the proposal. The Owner reserves the right to accept the Consultant's replacement of any component if it is considered equal or superior to the specifications. Such acceptance will be in writing.

3.28 PAYMENT TERMS

Owner shall pay Consultant progress payments no more than once per month, and only after receiving an invoice.

4.0 SCOPE - TECHNOLOGY DESIGNER RESPONSIBILITIES

The responsibilities of the Technology Designer shall be as follows:

A. The Designer shall review and analyze the needs of the District to ascertain the requirements of the Project and shall arrive at a mutual understanding of such requirements with the Owner and shall commit its understanding of the requirements to writing and shall submit a copy to the Owner for approval before proceeding with drafting the preliminary designs. Once this writing is approved by the Owner, it shall become the "program of services." Based upon this program of services, the Designer shall provide to the Owner a preliminary design and a Project schedule. Additionally, the Designer shall review with the Owner alternative approaches to design and implementation of the Project as per the agreed upon program of services. Finally, based on the mutually agreed upon program of services, schedule, budget requirements, and preliminary design, the Designer shall prepare, for approval by the Owner, detailed design documents consisting of drawings and specifications setting forth in detail the requirements for the Project. These documents shall include

a detailed description of the proper operating environment (i.e., required electrical, air conditioning, lighting, furniture, etc.) for all equipment which is to be installed as part of the Project.

B. The Designer shall provide the services of professionals qualified by training and experience in their respective fields as needed to address the requirements of the Project. The design documents shall comply with all applicable laws, statutes, ordinances, codes, rules and regulations. The Designer shall warrant that all such documents shall, when properly implemented, yield a completed Project which conforms to the program of services and the expectations of the Owner. Following the approval of the detailed design documents by the Owner, the Designer shall assist the Owner in obtaining bids or negotiated proposals for the various Projects and assist Owner in awarding and preparing contracts for construction and/or implementation.

C. The Designer shall be required to administer all contracts with contractors/vendors on behalf of the Owner. This responsibility shall commence with the award of each contractor/vendor contract and shall terminate when all systems are installed, integrated, and operating properly to the satisfaction of the Owner. To this end, the Designer shall monitor all work in progress by contractors/vendors and keep the Owner informed of the progress and the quality of the work and shall guard the Owner against defects and deficiencies in the work and the contractors/vendors failure to carry out the work in accordance with the design documents prepared by the Designer and approved by the Owner. The Designer shall develop an acceptance testing procedure which integrates all work being performed by all contractors/vendors, to the satisfaction of the Owner, which shall insure that all work which is properly implemented shall be in accordance with the design documents and the Owner's expectations of the solution to be delivered by the design documents.

   The implementation services should include, by way of example, the following services:

   i. Work with the District liaison, Technology Committee, and construction manager to develop a comprehensive implementation schedule for the technology project
   ii. Conduct final acceptance testing of the technology projects awarded
   iii. Serve as the project manager for awarded technology projects during the remainder of the bond issue technology implementation.

D. Based upon the Designers inspections of the work and the evaluations of the contractors/vendors applications for payment, the Designer shall review and certify the amounts due to the various contractors/vendors to the Owner. All said certifications for payment shall constitute a representation to the Owner that the work has progressed to the point indicated, that the quality of the work is in accordance with the design documents and the acceptance testing procedure and that the work has been performed in a good and workmanlike fashion. This issuance of a certificate for payment shall further constitute a representation that the contractor/vendor is entitled to payment in the amount certified.

E. In order to complete the foregoing, the Owner prefers that the Designer work on-site as necessary and be accessible to District staff.

F. The Designer shall be required to develop and manage a structured technical training program, including a master schedule for training which will coordinate technical support consultants, who shall provide on-site technical support services.

5.0 DELIVERABLES

The following is a preliminary listing of the major deliverables.

A. Program of Service.

B. Monthly status reports; bi-weekly during implementation.

C. Detailed Requests for Proposals for each technology
D. Advertisements for same

E. Analyses of proposals and recommendation letters

F. Vendor Contracts including all supporting documentation.

G. Meeting minutes

H. Minutes from site visits

I. Recommendations for vendor payments

J. Vendor change orders where appropriate

K. Acceptance testing / punch lists

L. Project sign offs

M. Any other documentation necessary for a complete solution.

DUE: 3:00 p.m., Wednesday, April 3, 2013
PROPOSAL: RFP 9756 Information Technology Architect Services

PROPOSAL FORM

We propose to provide Troy Public School District Information Technology Architect Services in accordance with the specifications:

Estimated Value	Percentage Fee
$1,000,000 to $5,000,000	_____%
$5,000,000 to $10,000,000	_____%
$15,000,000 to $20,000,000	_____%
$20,000,000 to $25,000,000	_____%
Greater than $25,000,000	_____%

*Please provide supporting documentation.

BIDDER'S FIRM NAME _____

ADDRESS _____

CITY/STATE _____ ZIP _____

TELEPHONE NUMBER _____ FAX # _____

SIGNED BY _____ TITLE _____

TYPED NAME _____ DATE _____

E-MAIL ADDRESS _____

SWORN AND NOTARIZED FAMILIAL DISCLOSURE STATEMENT

All Vendor/Contractor(s) submitting proposals must provide familial disclosure and attach this information to the proposal. The proposal will be accompanied by a sworn and notarized statement disclosing any familial relationship that exists between the owner or key employee of the vendor submitting a proposal and any member of the Troy School Board or the Troy School Superintendent. The District will not accept a proposal that does not include this sworn and notarized disclosure statement.

The members of Troy School Board are: Nancy Philippart, Todd Miletti, Paula Fleming, Ida Edumunds, Wendy Underwood, Gary Hauff and Karl Schmidt. The Troy Schools Superintendent is Barbara A. Fowler.

☐ **The following are the familial relationship(s):**

Owner/Employee Name	Related to:	Relationship
1. _____	_____	_____
2. _____	_____	_____
3. _____	_____	_____

Attach additional pages if necessary to disclose familial relationships.

☐ **There is no familial relationship that exists** between the owner or key employee of the Vendor/Contractor(s) submitting a proposal and any member of the Troy School Board, or the Troy Schools Superintendent.

INDIVIDUAL/FIRM NAME _____

BY (SIGNATURE) _____

PRINTED NAME AND TITLE _____

Subscribed and sworn before me, this _____ Seal:

day of _____, 20 ____, a Notary Public

in and for _____ County, _____

_____
(Signature)
NOTARY PUBLIC

My Commission expires _____

Acceptance of Proposal

The undersigned agrees to execute a Contract for work covered by this Proposal provided that he is notified of its acceptance within thirty days after the opening of the Proposal.

It is agreed that this bid will not be withdrawn until after forty-five (45) days after receipt of bids.

The undersigned affirms that the bid was developed without any collusion, undertaking, or agreement, either directly or indirectly, with any other bidder(s) to maintain the prices of indicated work or prevent any other bidder(s) from bidding the work.

BIDDER'S FIRM NAME _____

BUSINESS ADDRESS _____

_____

TELEPHONE NUMBER _____

FAX NUMBER _____

BY (SIGNATURE) _____

PRINTED NAME _____

TITLE _____

SIGNED THIS _____ DAY OF _____, 20 _____

E-MAIL ADDRESS _____

Purchasing Department
Facility Operations

RFP 9756

RE: Information Technology Architect Services

ADDENDUM #1 – March 26, 2013

The Bidding Documents are modified, supplemented or augmented as follows, and this Addendum is hereby made a part of the proposed Contract Documents.

3.5 OWNER EXPECTATIONS

Second area, listed under letter B, page 5, delete the following bullet point:

- Local and Network Print Services Management

4.0 SCOPE – TECHNOLOGY DESIGNER RESPONSIBILITIES

Third area, listed under letter C i, page 9, delete 'Project Architect'.

This information has been changed to read as follows:

i. Work with the District liaison, Technology Committee, and construction manager to develop a comprehensive implementation schedule for the technology project

Purchasing Department
Facility Operations

RFP 9756

RE: Information Technology Architect Services

ADDENDUM #2 – March 27, 2013

The Bidding Documents are modified, supplemented or augmented as follows, and this Addendum is hereby made a part of the proposed Contract Documents.

Question # 1

To properly form our proposal, an understanding of additional technology vision and project duration will be useful. Does this detail exist in the form of a technology plan or report with accompanying timeline?

Answer # 1

The scope is specifically related to projects being completed for a potential bond proposal later this year. Please see Technology Plan 2011-2014 below.

Question # 2

Are these details available prior to proposal submittal?

Answer # 2

Please see Technology Plan 2011-2014 below.

Question # 3

Will industry technical certifications held by design firm team be requested as part of the post bid analysis of design firms?

Addendum 2 (Con't)

Answer # 3

Any credentials that you offer to represent the experience and the abilities of your team are your choice to submit. Any information submitted as part of your response will be included in our evaluation. Troy School District reserves the right to make inquiry regarding the credentials of anyone of your group being recommended to provide services for this project.

Question # 4

Has the district identified any prioritized projects for the bond? For example, has a one-to-one initiative been planned?

Answer # 4

Please see the Potential Bond Project below.

Question # 5

Is this project focus limited to certain buildings or grade levels?

Answer # 5

No, this project focus limited to certain buildings or grade levels?

Question # 6

Should the Information Technology Architect assume each district building will be included in their scope?

Answer # 6

Yes, the scope of the projects will involve all buildings for technology enhancements.

Question # 7

Has the district established a planning committee as of this date to work on the details for this bond proposal? If so, are minutes from these meetings available prior to our proposal submission?

Answer # 7

No, the district established a planning committee as of this date to work on the details for this bond proposal?

Question # 8

Has Information Technology Architect selection criteria been established? If so, is this information available prior to proposal submittal?

Answer # 8

Yes, the Information Technology Architect selection criteria been established. Troy Public Schools will form an evaluation team to initially review and evaluate the submitted responses. The RFP responses will first be evaluated as either "responsive" or "non-responsive". Troy Public Schools reserved rights described below; RFP responses determined to be non-responsive will be eliminated from further consideration. The remaining responses will then be evaluated for content, and ranked in accordance with their merits.

The following factors will, at a minimum, be considered during the evaluation process:

(a) the qualifications, track record, relevant experience, and cost proposal of the respondent and its team;

(b) quality and completeness of plan for delivering of all necessary and appropriate services; and

(c) Respondent's ability to provide assistance to Troy Public Schools and its consultant's in executing the determined program.

The evaluation team may recommend interviews with selected finalists. The responses will be ranked according to the above relevant criteria and other factors detailed in this RFP. Troy Public Schools will be solely responsible for the final selection of the successful respondent. Troy Public Schools reserves the right to conduct post-closing discussions with any respondent who has a realistic possibility of contract award, including, but not limited to, request for additional information, competitive negotiations, review of firms financial statement, and best and final offers.

Troy Public Schools reserves the right to award the contract to the respondent that Troy Public Schools deems to offer the best overall response. In addition, Troy Public Schools at its sole discretion reserves the right to cancel this RFP, to reject any and all responses, to waive any and all informalities and/or irregularities, or to re-advertise with either the identical or revised specifications if it is deemed to be in the best interested of the Troy Public School District to do so.

Addendum 2 (Con't)

Question # 9

Over what period of time is this plan to be developed?

Answer # 9

Please see Technology Plan 2011-2014 below.

Question # 10

What is the definition of technical support consultants and are they district staff or contracted services?

Answer # 10

Please see Technology Plan 2011-2014 and the Potential Bond Project below.

Question # 11

What kind of training (size/scope) would you like?

Answer # 11

Please see Technology Plan 2011-2014 and the Potential Bond Project below.

***REVISED* PROPOSAL FORM**

Please replace your current proposal form, page 11, with the *Revised* Proposal Form below.

DUE: 3:00 p.m., Wednesday, April 3, 2013
PROPOSAL: RFP 9756 Information Technology Architect Services

***REVISED* PROPOSAL FORM**

We propose to provide Troy Public School District Information Technology Architect Services in accordance with the specifications:

Estimated Value	Percentage Fee
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$10,000,000 to $15,000,000	_____%
$15,000,000 to $20,000,000	_____%
$20,000,000 to $25,000,000	_____%
Greater than $25,000,000	_____%

*Please provide supporting documentation.

BIDDER'S FIRM NAME _____

ADDRESS _____

CITY/STATE _____ ZIP _____

TELEPHONE NUMBER _____ FAX # _____

SIGNED BY _____ TITLE _____

TYPED NAME _____ DATE _____

E-MAIL ADDRESS _____

TROY
SCHOOL DISTRICT

Technology Plan
2011 – 2014

School District:	Troy School District
Address:	4400 Livernois Troy, Michigan 48098
Phone:	248.823.4000
District Code Number:	63150
Tech Plan Creation Date:	October 28, 2010
E-Rate Form 470 posting:	November 24. 2010
Plan submitted for State Review:	May 4, 2011
Tech Plan Start Date:	July 1, 2011
Tech Plan End Date:	June 30, 2014
Tech Plan Contact Person:	Scott Bryan
Tech Plan Contact Person Phone:	248.823.5060
Tech Plan Contact Person Fax:	248.823.5050
Tech Plan Contact Person E-mail:	sbryan2@troy.k12.mi.us
Intermediate School District:	Oakland Intermediate Schools
Tech Plan URL:	http://www.troy.k12.mi.us/technology/techplan.pdf

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Introductory Material
District Mission & Vision Statements

Mission

The purpose of the Troy School District is to ensure learning for all members of the school community.

Vision

The Troy School District will become an exemplary learning community that supports innovation and is committed to continuous improvement. The Troy School District will be a place where a collaborative community develops curriculum, instructional strategies, and assessment to ensure all students learn.

Our exemplary learning community will:

- *Create a collaborative culture that ensures all students learn.*
  • A climate that fosters instructional collaboration
  • A community of trust, mutual respect, empathy.
  • An appreciation for diversity
  • A physically safe and well-maintained learning environment
- *Implement a relevant and rigorous curriculum.*
  • Lessons aligned to the current curriculum benchmarks, grade level content expectations (GLCE) or high school content expectations (HSCE)
  • A comprehensive curriculum designed to ensure that all students have opportunities to exceed local, state, and national standards
  • Innovative programs developed from current research and instructional trends.
- *Continuously research, create, evaluate, and adapt best practice instructional strategies to ensure learning for all students.*
  • Purposeful use of instructional time
  • Instructional strategies that meet the needs of all learners
- *Use ongoing assessments as instruments to design and adapt instruction that ensures quality learning.*
  • Design formative and summative assessments based on current research.
  • Assessments that measure the curriculum
  • Assessments that consider all learning styles
  • Assessment that include multiple levels of thinking.

Introductory Material
Superintendent's District Overview

The Troy School District is committed to providing the best resources available to prepare our students for their future. Technology has definitely played a vital role in the learning process for our students. Troy School District has been a leader in instructional technologies. This technology plan represents the District's commitment to continue in that leadership role.

Superintendent
Dr. Barbara A. Fowler

Our community is described as an upper-middle class community in Oakland County. The quality of the school district is complemented by a vibrant business community and our proximity to recreational and cultural opportunities.

Our staff has a strong commitment to student achievement, excellence in academics and excellent skills in using technology. Rigorous, highly comprehensive curricular offerings throughout a student's elementary, middle and high school years enables our students to prepare for future success.

Troy's reputation as an outstanding school district is well established: We have six national and 15 Michigan exemplary schools; both of our high schools are ranked among 98 national Outstanding American High Schools by *U.S. News and World Report*; and our graduates earn additional consideration from Michigan State University and the University of Michigan because of their Troy School District background.

- Troy School District supports over 12,000 students among our 12 elementary schools, 4 middle schools, 2 high schools, alternative high school, and International Baccalaureate high school
- Troy Schools has 1,558 employees, including 767 teachers and 36 administrators, along with 533 contracted staff
- Troy School District has achieved and maintains District-wide NCA accreditation
- Students and staff are honored for excellence at both national and state levels.
- Both Athens and Troy High Schools are two of five schools statewide to have exemplary athletic programs.
- The Troy Board of Education is one of 16 Honor Boards in the State of Michigan and has been recognized as an NSBA Top Ten Technology Board

Technology Resource Center Vision and Goals

Technology Mission Statement

The Technology Resource Center is committed to providing exemplary leadership, training and support to all involved in the teaching and learning process, enabling individuals to solve problems through the effective application of technological tools.

Shared Beliefs

- Technology enhances the teaching and learning process.
- Technology allows the user to focus on the analysis of data versus the mechanics of gathering it.
- Understanding and applying technology is important to all involved in the teaching and learning process.

- Students should understand the role and impact of technology upon society, and related issues such as information access and manipulation.
- In order to be productive citizens in an ever-changing society, students must be adept users of technological tools.
- Students should be able to identify when technological tools can solve a problem or accomplish a task, and be able to select the appropriate tool to meet that need.
- Students should be able to utilize technology to obtain, organize, manipulate, and share information.
- All district employees should be aware of technology and how it can be applied to their job responsibilities.
- All district employees should have adequate access to comprehensive staff development programs to provide skills in the effective use of technology.
- All district employees should have adequate access to current, reliable technological tools to utilize in the performance of their duties.
- TRC has the leadership role in exploring new technologies and their potential application in the district.
- TRC has the responsibility to plan for the application and effective implementation of technology.

- TRC is a provider of information on technology and related resources.
- TRC is responsible to provide timely and effective support to the hardware, software, and training needs of all district employees.

Troy School District Technology Standards

Troy School District utilizes state and national standards as a guidepost for the development of instructional activities. The use of technology is integrated within our District goals and objectives. Each instructional activity is carefully designed to utilize technology in an appropriate, effective manner. The 2006 update of our entire middle school technology curriculum was aligned with the state's ***Michigan Education Technology Standards (METS)*** and to provide coursework-based compliance and evaluation of federal ***No Child Left Behind (NCLB)*** requirements was our initial effort under this focus and curriculum reviews for elementary in 2011-12 and secondary in 2012-13 will continue to be guided by this thinking. Troy Schools also supports the national technology standards published by ***ISTE, the NETS guidelines for Students, Teachers, and Administrators***. Finally, the District has been reviewing the work of the ***Partnership for 21st Century Skills*** and is exploring the integration of the ***Framework for 21st Century Learning*** and the Michigan-based ***21 Things*** with overall District curriculum and technology standards.

The technology foundation standards for students are divided into six broad categories. Standards within each category are to be introduced, reinforced, and mastered by students. These categories provide a framework for linking performance indicators within ISTE's Profiles for Technology Literate Students to the standards. Teachers can use these standards and profiles as guidelines for planning technology-based activities in which students achieve success in learning, communication, and life skills.

The following criteria determine successful implementation of technology-rich instructional activities:

- 100% of elementary students receive introductory technology instruction on login, keyboarding, word processing, spreadsheet, and presentation applications, introduction to Internet safety, beginning instruction on effective online research and media literacy
- 100% of middle school students receive formal keyboarding instruction partnered with in-depth productivity application lessons, further instruction in effective research and media literacy, including introduction to electronic database searching, and enhanced Internet safety instruction
- The State of Michigan adopted new high school graduation requirements in 2006, including at least 20 hours of an "online learning experience" for all students. Troy School District is meeting this requirement through purposeful development of meaningful lessons delivered in curriculum areas via Moodle, an online Learning Management System. All 8th grade students participate in at least one online instructional unit in language arts, science, social studies and math every year.
- In high school, students have many technology course offerings from which to choose, and also receive enhanced instruction in being effective media consumers and online researchers

Across all grade levels, this instruction is delivered in multiple ways:

- The District was successful in executing a goal of increasing access to laptops for students in our last technology plan. As a result of more devices and sustained professional development, teachers in all grades have begun delivering 1:1 & 2:1 instruction across the curriculum. Artifacts of technology rich learning created by District teachers are captured

electronically within an internal Teacher Resource Bank; to date over 950 items are available for sharing
- Classroom teachers regularly schedule dedicated computer lab time
- Media center teachers deliver literacy instruction as components of their overall media curriculum
- Within technology-specific courses such as the required half-year *Introduction to Computers/Keyboarding* in 7th grade or the half-year elective *Business Computer Applications* in High School

This instruction is critical to student success in core academic areas, as curricular instruction is increasingly using technology to deliver, illustrate, and reinforce key concepts, and student assignments are including ever more requirements that are best met using technology skills. See specific grade level examples later in this document.

ISTE NETS Technology Foundation Standards for Students

1. Creativity and Innovation
Students demonstrate creative thinking, construct knowledge, and develop innovative products and processes
using technology. Students:

a. apply existing knowledge to generate new ideas, products, or processes.
b. create original works as a means of personal or group expression.
c. use models and simulations to explore complex systems and issues.
d. identify trends and forecast possibilities.

2. Communication and Collaboration
Students use digital media and environments to communicate and work collaboratively, including at a distance,
to support individual learning and contribute to the learning of others. Students:

a. interact, collaborate, and publish with peers, experts, or others employing a variety of digital environments
and media.
b. communicate information and ideas effectively to multiple audiences using a variety of media and formats.
c. develop cultural understanding and global awareness by engaging with learners of other cultures.
d. contribute to project teams to produce original works or solve problems.

3. Research and Information Fluency
Students apply digital tools to gather, evaluate, and use information. Students:

a. plan strategies to guide inquiry.
b. locate, organize, analyze, evaluate, synthesize, and ethically use information from a variety of sources and
media.
c. evaluate and select information sources and digital tools based on the appropriateness to specific tasks.
d. process data and report results.

4. Critical Thinking, Problem Solving, and Decision Making
Students use critical thinking skills to plan and conduct research, manage projects, solve problems, and make

informed decisions using appropriate digital tools and resources. Students:

a. identify and define authentic problems and significant questions for investigation.
b. plan and manage activities to develop a solution or complete a project.
c. collect and analyze data to identify solutions and/or make informed decisions.
d. use multiple processes and diverse perspectives to explore alternative solutions.

5. Digital Citizenship

Students understand human, cultural, and societal issues related to technology and practice legal and ethical
behavior. Students:

a. advocate and practice safe, legal, and responsible use of information and technology.
b. exhibit a positive attitude toward using technology that supports collaboration, learning, and productivity.
c. demonstrate personal responsibility for lifelong learning.
d. exhibit leadership for digital citizenship.

6. Technology Operations and Concepts

Students demonstrate a sound understanding of technology concepts, systems, and operations. Students:

a. understand and use technology systems.
b. select and use applications effectively and productively.
c. troubleshoot systems and applications.
d. transfer current knowledge to learning of new technologies.

The overall goals of the 2011-2014 Technology Plan include:

- Update curriculum at Elementary, Middle School and High School levels to assure alignment with current, relevant METS and ISTE standards
- Ensure that every 8th Grade student is technologically proficient
- Ensure that all students exceed online learning experience requirements through quality, meaningful instruction
- Continue and expand E-Rate funded web hosting offerings to support improved communication with parents
- Implement updated end user experience through a virtual desktop initiative (VDI)
- Provide support & training for all end users impacted by VDI

Student Tech Literacy and Curriculum Integration

The Troy School District continues to offer a wide variety of options for its students to be involved with technology-centered curriculum. Numerous courses are offered which center on using the computer as a focus for teaching and learning. The district will continue to revise and update offerings to remain on the forefront of current trends in computer related activities in personal and workforce environments. All Troy students should have access to current software, training, and equipment that will allow them to graduate with the skills necessary to be productive citizens in the continually evolving technological workforce.

Curriculum Integration

Schools across the country are examining ways to integrate technology and their classroom curricula. The job market demands that students have Information Age skills along with their traditional course content. Technology offers teachers an opportunity to create an interactive and rich learning environment for their students. Integration of these tools requires student and teacher skills with a variety of technologies. The elements outlined below define both the current state of technology integration in Troy School District, as well as additional steps to be taken to remain on the cutting edge of technology.

Online Learning Experience

The Michigan Merit Curriculum includes a minimum of 20 hours of an "online learning experience." Troy School District has developed lessons across curriculum areas that incorporate online learning using an electronic Learning Management System (LMS), in partnership with Oakland Schools. We have explored the pedagogy of online learning, gained understanding into effective practices for teaching and student engagement, and created online lessons tied to classroom activities. Our students now enjoy a rich, meaningful experience that provides hands-on learning using 21st Century skills. Lessons have been developed for all 8th grade students in language arts, social studies, science, and math, and we have provided professional development support to the Special Education department on this new learning environment as well. Teaching staff across the curriculum received professional development that included participating in online learning as a student, then in actively developing online instruction based around a selected instructional unit within their curriculum area. District media specialists were included in professional development activities thanks to federal Title IID/Enhancing Education Through Technology grant funding. Loss of this valuable resource from the federal budget will necessitate new strategies for funding ongoing professional development.

Student E-Mail

The District will be exploring the educational benefits, costs, and administrative overhead required to provide students with e-mail from a hosted 3rd party. Internal review has determined that providing several thousand students with e-mail accounts on district equipment is not feasible at this time, but we are interested in exploring 3rd party services, especially if E-Rate discounts make it financially attractive.

Refresh technology integration efforts with the Director of Instruction and Assessment

Technology coordinators and curriculum content area coordinators will collaborate closely on ensuring that appropriate technology skills are integrated into instruction, and that established instructional methods have the necessary technology available, in light of 8th grade technology literacy and Michigan Merit Curriculum graduation requirements. As each of the content areas evaluate textbook adoptions, technology components (CDs, websites, online review activities, etc.) shall be reviewed and purchased where appropriate.

Project Based and 1:1/2:1 technology integrated lessons

Project-based learning offers a wonderful opportunity to create a learning environment for students to develop and use a wide range of skills. A thematic unit of study on a high-interest topic will allow students to use their skills to develop a wide range of products that demonstrate their learning. A group of teachers, principals and Curriculum staff representing

a grade level or content area has developed and will continue to develop model project units that incorporate core curriculum skills and technology skills. These project units have been and will continue to be shared with the appropriate K-12 staff members in a workshop, allowing the project lessons to be replicated throughout the district.

Share model classroom activities developed by TSD staff

Several teachers have developed lessons that incorporate core curriculum and technology. These model lessons have been incorporated in technology lessons and are available via various District online environments. This process will afford teachers an opportunity to access exemplary lessons as well as the opportunity to share their instructional practices with other staff members. To date, approximately 950 activities have been published for sharing.

Video Resources

Technology resources such as satellite programming, distance learning tools such as Skype and collaboration/screen sharing software, and the ONE Project countywide network and streaming video library are available to teachers and students in the District. These resources present many opportunities for classrooms to share information and projects on a regular basis. Collaboration between students and teachers in other schools will make technology an important communication tool in these classrooms. Students will have a peer audience to present classroom work. Teachers will be able to share and co-develop lessons that address curricular skills while using technology. Programming such as Colonial Williamsburg will provide students an interactive learning environment that will lead to further research and study. Students also create their own curricular video resources using tools such as Flip cameras.

Distance Learning Initiatives

Each school in Troy School District participates in a distance learning sharing environment by broadcasting daily announcements across the District's video WAN. Students may select and view the announcements from any of our 20 schools. The District provides IP and ISDN video connections to outside learning institutions to support these activities. The District also utilizes videoconferencing in the Read Across the World program, a district authored Jeopardy contest based on curriculum content a Winter Olympics review, and the Census 2010 project.

Technology Components of International Baccalaureate Program

Troy School District has implemented a K-12 International Baccalaureate (IB) curriculum. Morse Elementary and Baker Middle School are recognized as IB World School Programmes and the International Academy East high school will admit its fourth class in the 2011-12 school year, making it a full four year IB high school. All school buildings are equipped with district standard technologies including classroom and office computers and multifunction printer/copier/scanners, networked printers, wireless networking and carts with laptops, TV and Integrated Communication Systems for video/dvd/broadcasts, digital projectors and/or Smart Boards in selected classrooms and video conferencing capability. The heavy technology focus required by the IB curriculum is offering opportunities to review technology course offerings and to enhance them as necessary.

Streaming Video Initiatives

Troy School District is pleased to continue its partnership with Oakland Schools and the statewide REMC Association in providing streaming video to each classroom via Discovery Education Streaming. This system also allows teachers to present clips, which target State of

Michigan content standards. Funding for the project is provided through economy of scale savings through the District's participation in the REMC program, a cost subsidy as part of membership in Oakland Schools' ONE Network consortium, and the district's operating budget.

8th Grade Technology Literacy Assessment

The district complies with the NCLB requirement of every student being technology proficient through successful completion of required tech instruction in the middle school years. The curriculum for the district required Introduction to Computers course in middle school is fully aligned with Michigan's METS and ISTE's NETS-S, and successful completion of the course, including formative and summative assessments within the class are our determination of student success.

Elementary Technology Curriculum

The Troy School District began publishing elementary technology lessons in 1981. As technology tools and software have evolved, so has the elementary technology curriculum. Troy staff members have authored these lessons and have focused the curriculum on what we teach about technology and how we teach with technology. ISTE and NETS standards have served as a guidepost in the development of these lessons for students in kindergarten through fifth grade. Technology-based instructional activities that directly correlate with grade-level curriculum have been developed for each of these grade levels. A brief description of the activities for each grade level is provided below. **These lessons are scheduled for curriculum review and professional development during the 2011-12 school year, following the district's curriculum review cycle.**

Digital Storytelling

This is an ongoing initiative for grades 3-5 that consists of two half-day sessions that will focus on the production of digital stories. While developing digital stories, students combine their writing skills and visual literacy skills to produce powerful stories. This workshop will include an overview of the seven elements of a digital story, the types of digital stories that can be written, and the steps necessary to build a digital story using tools such as Flip cameras and basic video editing software.

Kindergarten

Kindergarten lessons focus on the development of basic technology skills and the development of counting and letter-sound skills. Students learn a simplified log on and log off, use a mouse, launch a software program, and select various tools using productivity software such as Kid Pix. Troy staff members have developed interactive computer activities that allow students to practice a variety of curriculum skills such as counting up to 20, adding with objects, matching letter sounds, matching upper and lower case letters, and counting coins. A variety of Internet websites that teach patterns, symmetry, alphabet, and other kindergarten skills are provided as part of this curriculum.

First Grade

First grade lessons continue the development of basic technology skills through numerous curricular lessons for grade one students. Social studies activities such as All About Me, and Needs and Wants use computer software to develop these concepts with students. Language arts skills such as alphabetical order, phonemic awareness, word chunk sorting, and sequencing are developed through the use of computer activities developed by Troy staff members. Math skills such as Base Ten Blocks, patterns, and telling time are also developed using interactive computer activities designed by Troy teachers. First graders learn to draw and paint with a mouse, select commands in a software program, print a document, and use curriculum related software as part of these lessons.

Elementary Technology Curriculum (continued)

Second Grade

Second grade students further enhance their technology skills by learning to minimize and maximize windows, use cut, copy, and paste, retrieve and save documents, and work with laptop computers. These computer skills are developed as students work on a wide variety of curriculum related activities designed by Troy teachers. Math activities on counting money and making change, graphing, number grids, and fractions allow students to develop these important math skills while learning more about technology. Students learn to use clip art while doing a language arts activity on alliteration. Social studies activities such as creating a classroom map or differentiating between urban, suburban, and rural communities are also included in the grade two lessons. Students use the Foss website and go on an insect scavenger hunt to develop science skills while using the Internet. A hotlist of grade two Internet activities is included in the grade two lessons.

Third Grade

Third grade students learn a variety of new technology skills. Third graders learn a traditional log on and log off with individual user names and passwords. These students also begin the development of keyboarding skills with touch-typing techniques. Several integrated technology lessons have been developed to help students learn math, science, and social studies skills. Software such as Photostory is used to allow students options to traditional written reports or to express themselves in new ways. Other math activities include telling time, using base ten blocks to subtract with regrouping, and missing number grids. Third graders also participate in three webquest activities, including a webquest on regions of the United States, owls and owl pellets, and a webquest on various disasters.

Fourth Grade

Fourth graders continue the development of touch-typing skills while learning other technology and curriculum related skills. Writing a friendly letter, a letter of complaint, and story writing are some of the activities that fourth graders use their newly developed word processing skills to complete. Students also use presentation software to create presentations on geometric shapes or to compare Michigan to another state. Fourth graders use websites to learn about electromagnets, aquatic environments, and the Mackinac Bridge. These students use interactive software to learn about reading information from a graph or creating their own graphs. An interactive website on core democratic values is also included in the grade four technology curriculum.

Fifth Grade

The fifth grade lessons extend the development of keyboarding, word processing, and presentation software skills through a variety of lesson activities. Fifth graders continue to learn about core democratic values using the scenarios described in a website as a basis for discussion and problem solving. As part of a science unit on nutrition, a webquest challenges students to select menu items from popular restaurants and determine the number of calories contained in the meal selected by students. The student then visits an exercise website to determine what type and how much exercise is required to burn off that number of calories. To reinforce social studies skills on explorers and the new world, students create a greeting card that describes early American life to a friend, or congratulates an explorer for his successes. Fifth graders are introduced to spreadsheets via an activity with M&Ms. Prior to being provided a small bag of M&Ms; students predict the number of candies of various colors that will be contained in the bag. The students create a spreadsheet that contains the predicted number of candies as well as the actual number of candies. Fifth graders then create a graph showing the number of M&Ms of each color. As a follow up, students visit the M&Ms website to compare their color distribution to the actual M&M statistics available on the site. Fifth graders will visit a variety of websites while working on the activities in the grade 5 lessons.

Secondary Technology Curriculum Courses

The Troy School District continues to offer a wide variety of options for its secondary students to be involved with technology-centered curriculum. Numerous courses are offered which center on using the computer as a focus for teaching and learning. The district should continue to revise and update offerings in order to be on the forefront of current trends in computer related activities in personal and workforce environments. Troy students should have access to current software, training, and equipment that will allow them to graduate with the skills necessary to be productive citizens in the continually evolving technological workforce. Troy excels in the integration of technology tools into the content areas – examples include use of calculators and software applications in math, science, careers, etc.

Technology teachers and coordinators completely redesigned the middle school technology curriculum in response to No Child Left Behind requirements. This curriculum was delivered starting in the 2007-08 school year to include purposeful instruction on the Michigan Educational Technology Standards (METS) as well as ISTE's NETS. By the end of 8th grade, all district students will have completed this required instruction and, with a passing grade in the course, can be declared technology proficient as required by NCLB. **The District's curriculum review process calls for secondary course technology curriculum to be reviewed and updated in the 2012-13 school year.**

An evaluation of Troy School District curriculum shows the breadth of choices available to the students of Troy:

Middle School

- **Introduction to Computers/Keyboarding (Half year)**
  - This required 7th grade course (8th grade for transfer students) is designed to increase students' keyboarding skills through drill practice and reinforcement of correct techniques. Students will also be introduced to the Microsoft Office productivity suite where they will cover basic applications such as Word (word processing), Excel (spreadsheets), PowerPoint (presentations) and database principles. Introductory principles of computer technology, ethics, and use of the Internet for research and evaluation will also be a focus. Students will produce a variety of projects using computers. This course establishes a good background from which to choose future computer related courses both in 8th grade and at the high school level.

- **Applied Engineering**
  - Building a roller coaster, programming a robot, testing a CO2 car, designing a windmill or constructing a catapult are a few of the various possibilities in this introductory course of engineering concepts. This is a unique computer-based approach to learning which uses interactive multimedia lesson modules with hands-on applications and the technology model of problem solving from the Inventions and Innovations program developed by Lab-Volt Tech Design. This is an elective, one-semester class and is open to 7th or 8th grade students and may be taken twice.

- **Integrated Computer Technology**
  - The curriculum for this 8th grade one semester elective course is focused on using computer technology to create various presentations with ties to curricular content areas. Students will utilize programs such as Microsoft PowerPoint (presentations), Macromedia Flash (animation), Macromedia Dreamweaver (web design) and Macromedia Fireworks (drawing) to create projects and presentations, desktop publications and web pages. Students will also be introduced to Digital Storytelling using a variety of multimedia applications (photo/audio editing) including Adobe Photoshop Elements. The proper use of digital cameras in the story building process will also be an integral aspect of this course.

- **Video Technology**
  - Students will learn to use digital video cameras and edit video using Windows Movie Maker and Apple iMovie non-linear editing software. Students will have the opportunity to produce video segments that include such themes as public service announcements (PSA), commercials, and music videos. Students will also have the opportunity to rotate through the various television studio positions of anchors, technical managers, editors, reporters, camera operators, program directors and special features. Students will learn the fundamentals of broadcasting. The students will run professional live morning news broadcasts for the school building each day. The course will also teach skills related to media literacy and ethics (copyright) of using video materials.

It may also be appropriate to investigate opportunities for 6th graders in Troy School District. At this time, 6th graders are limited in their computer exposure, except at Baker Middle School where IB guidelines have facilitated creative scheduling options to provide technology instruction at all grade levels. We recommend that all middle schools review Baker's solution and consider offering technology instruction in Grade 6.

High School

- **Computer Explorations**
  - This course explores the use of computers in everyday applications such as word processing, database, spreadsheet, PowerPoint and desktop publishing. Students will integrate these applications to prepare presentations, resumes, reports, and to solve problems. Students who have difficulty with mathematics may elect this course. Keyboarding is beneficial but not required.

- **Computer Science**
  - This track of up to three courses is designed for college-prep students interested in studying computer programming techniques. In order to maintain the effectiveness of the course, staff will need training on a regular basis and software will need to be continually monitored for changes in industry standards. The District

currently uses Java Programming Software, which aligns with Advanced Placement testing objectives.

- **Accounting**
  - Troy Schools currently offers an extensive program in accounting that utilizes computers effectively. Currently, both high schools use Automated Accounting and Peachtree Accounting software. This course should be maintained and continue to be updated as accounting packages grow to include new features.

- **Computer Graphics**
  - This course is an introduction to using the computer to create works of art. Troy Schools has become a leader in offering professional level training in graphics and should continue to do so. Students in high school have the opportunity to work with the highest-level software available in the industry including: Photoshop, Painter, and Illustrator. These software packages are updated on a bi-annual basis and should be purchased as needed. District should also investigate increased use of high-resolution scanners and cameras to enhance student opportunity.

- **CAD Drawing**
  - Several different drawing courses are designed to provide experiences necessary for employment in the drafting industry. Students use the most current versions of industry standard software such as AutoCAD 2011. The course has continued to evolve and now includes 3D computer animation and modeling. TSD should continue to ensure that students have access to latest AutoCAD versions to maintain its leadership status in CAD training. High school staff should strive to maintain similar curriculum and enhance teacher training in summer workshops.

- **Business Marketing Management Technology**
  - Both level 1 and level 2 of this course provide students the opportunity to master techniques of word processing, spreadsheets, presentations, and databases. Students use Microsoft Office to perform activities that would be essential in a business environment. Upon completion of these courses, students are able to get certified from Microsoft as a Microsoft Office User Specialist. It is essential that the district maintain the most current version of Office at all times in the computer lab where these courses are taught. Currently we use Microsoft Office 2007.

- **Web Page Design**
  - Students enrolled in Web Page Design courses are exposed to the latest software technology in creating web pages. Adobe PhotoShop, Macromedia Dreamweaver and Flash are the cornerstones of successful design in the professional industry. Troy students currently have the opportunity to design and post their work on the Internet. It may be appropriate to investigate further opportunities in this environment to allow students access to back-end database

design and maintenance. This could be accomplished through a new advanced course.

- **A+ Certification**
  - Students who wish to pursue job opportunities immediately after high school in computer hardware repair have the ability to obtain certification through A+ courses available at Oakland Schools O-Tech campuses. Troy students will have hands-on laboratory practice on skills necessary to repair and maintain computer and other technology peripherals in this course.

- **Cisco Networking Academy**
  - In 2001, the Troy School District implemented a program designed to train students on the design and build-out of technology infrastructure and upgraded equipment and technology in 2010. Students have hands-on opportunities to configure routers, create and install network cables, and troubleshoot networks through the use of a working "mini" network. Troy Schools should ensure that the curriculum of the course is updated regularly to reflect ongoing advancements in the industry. With the success of the course directly related to the effectiveness of the instructor, teachers should continue to be provided with annual training options.

Curriculum Integration Timetable	2011-12	2012-13	2013-14	Notes
Elementary integrated tech curriculum review & implementation	X	X		
MS tech curriculum review & implementation		X	X	Refreshed 2007-08, new alignment with district map 12-13
HS tech curriculum review & implementation		X	X	
Online Learning Experience (wide adoption)	X	X	X	Content reviews/update begins in 12-13 ELA, 13-14 Science
IB Technology	X	X	X	
Online Learning experience/Moodle beyond middle school core	X	X	X	PROPOSED, PD requests to begin in 11-12

Parental Involvement

Parental involvement and support has always been a key component to the overall strength of the Troy School District. Parents have regularly been a component of technology planning initiatives, and parental input is included through multiple venues including Parent Teacher Organization (PTO) Council meetings, web content, email access to teachers, principals, administrators and the Board of Education, public forums and meetings where appropriate, and inclusion on planning committees and through awareness campaigns. Individual building Parent Teacher Organizations (PTOs) are updated regularly on ongoing technology initiatives and frequently choose to support, enhance, or extend available resources through supplemental funding at an individual building level.

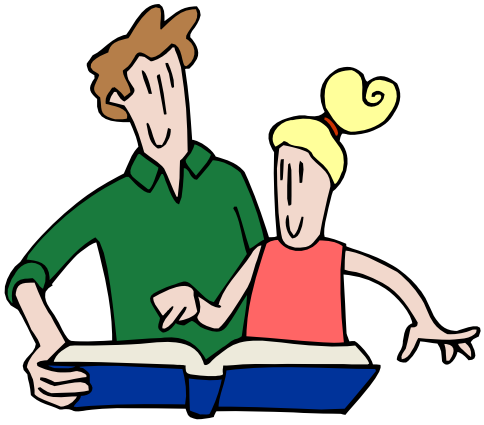
The District has enhanced its Web exposure by designating regular site content updates and training opportunities through the Community Relations department. The District has also initiated a regular presence in appropriate social media venues. In doing so, we maintain a fresh, positive image of the District and provide real time information to parents, friends and relatives of TSD students. The District has also designated a Webmaster position for each school building to ensure that content is updated and current.

The District utilizes digital technologies to contact parents regarding school closings, emergencies, and (in high school) attendance issues in real time. This system is closely integrated with our student management system and allows parents to manage contact preferences including phone, email and text messaging. Future uses under consideration for this system include notification of overdue library or textbooks, lunch account balance notifications, and other timely communication items.

The District also utilizes an enhanced voicemail system that encourages staff members to maintain better communications with parents. Staff members may leave classroom assignments on the voicemail system as well as retrieve messages from parents.

Troy School District has implemented enhanced parental communications initiatives using web hosting services to provide district-posted grade, attendance, classroom websites and other important classroom and school activity information. Federal E-Rate funding has been instrumental in covering the cost of this exciting initiative.

Parents who are interested in viewing the District's technology plan may find a link to the plan on the District's website. The plan is highlighted in District authored brochures and handouts.



Collaboration with Adult Literacy Service Providers, Community Services and Home Learners

All technology enhancements to the District are currently and actively made in close cooperation with the many adult and community organizations within our District, including:

Troy Continuing Education Center

Niles Community High School

Troy Youth Assistance

Troy Community Coalition

Troy Career Center

Each of these organizations has full access to the network resources and support from the Technology Resource Center. As new purchases are made and updates are performed, these departments are appraised and coordinated. The District has established technology standards for all organizations that have direct connectivity with our data, video and telephone networks. All of these providers received operating system and office suite updates as part of that standardization.

The District also provides VLANs with Troy Continuing Education where isolated access to resources is required in their facility.

Troy Schools leverages our strong fiber WAN to support basic communications needs for the City of Troy. This is an excellent demonstration where the taxpayer benefits in Troy.

Technology staff are active participants in several county and state organizations, including the Oakland Schools Education Technology Council, Media Leadership Council, and Technology Directors Referent Group, as well as MACUL and ISTE.

Timeline

Troy School District and the listed partners currently enjoy a rich, active, and regular communication and collaboration, and all listed activities are current, ongoing, and planned to continue for the future.

Professional Development Planning Process

Professional development plays a crucial role in the technology implementation process. ISTE standards for teachers and administrators and emerging 21 Things tools and resources are used as guideposts for professional development activities. Technology will not be used unless staff members have had appropriate training on the use of these tools. The Technology Resource Center provides training opportunities in the summer as well as during the school year, the facilitation and creation of how-to handouts, videos, and instruction guides, and is investigating self-directed, online training in-house and through various online providers. Training sessions have shifted focus from the use of hardware and software to the integration of these tools into the curricular areas; the Technology Resource Center's professional development calendar is primarily comprised of technology-enhanced curricular lessons instead of technology training activities. Professional development will continue to be offered to all employee groups – teachers, administrators and support personnel. Special efforts have been made to address the cross-curricular effectiveness of technology in the classroom – workshops will continue to be offered that include heterogeneous staff members: media specialists, varied subject matter teachers and technology staff working directly together. Future efforts will focus on integration of technology with the curriculum, implementation of new technology tools, and basic skills with technology tools as necessary. The elements outlined below identify staff development opportunities and goals.

Integration of technology with the curriculum

- Provide workshops run by technology coordinators to demonstrate integration
- Provide workshops on project-based lesson plans that integrate technology (see curriculum integration)
- Develop and deliver 1:1 & 2:1 professional development in district-identified curricular areas
- Develop and deliver online learning content in multiple curricular areas
- Develop web-based professional library of projects, lesson plans, and workshop handouts
- Grade level and content area workshops to design and implement integrated technology lessons

Implementation of new technology tools

- Model use of interactive video capabilities between schools and from Services Building to schools
- Use online and distance learning capabilities to provide technology training and model use of these tools
- Provide workshops on web publishing to improve communication among parents and staff
- Pilot projects with iPads and Web 2.0 tools

Basic skills with technology

- Develop self-guided online instruction and support materials
- Evaluate the need for after school and evening technology workshops
- On-site workshops with floating subs (Project HELP) to address identified needs of staff members
- Offer workshops during August teacher Professional Development week

- Summer technology workshops are becoming increasing limited in availability due to decreased funding

Encourage TSD administrators to improve technology skills

- Provide workshops on being an effective promoter of technological tools
- Provide methods to evaluate effective use of technology in the classroom
- Improve the personal technology skills of TSD administrators

Technical training

- Provide regular in-house workshops and meetings for TSD technical staff
- Support staff's efforts to receive training from outside training institutes
- Promote certification of staff in technical areas

Online learning resources for staff

The Technology Resource Center is guiding the development of online resources for staff using our district Moodle site. Resources available include: Training materials from past workshops, technology FAQs, news on pilot projects, library of model integration lessons, links to curricular websites and many other teacher resources. Teachers are becoming increasingly aware of the content available at the Moodle and are contributing significant content for the benefit of their peers

Professional Development Timetable	2011-12	2012-13	2013-14
Basic Skills with Technology	Yes[2]	Yes[2]	Yes[2]
Integration of technology with the curriculum	Yes[1]	Yes[1]	Yes[1]
Implementation of new technology tools	Yes[1]	Yes[1]	Yes[1]
Encourage TSD administrators to improve technology skills	Yes[2]	Yes[2]	Yes[2]
Technical training	Yes[2]	Yes[2]	Yes[2]
Moodle Site For Staff	Yes[1]	Yes[2]	Yes[2]

[1] New Content
[2] On-going Support

Basic skills PD is offered during the end of August teacher work week

Integration of technology with curriculum and New technology tools PD events are based on allocation of subs and must be integrated into each year's academic calendar (subject to negotiation for the 2011-12 school year)

Administrator skills training takes place one-on-one and is regular and ongoing

Technical training for tech staff is ongoing

Moodle Site content is updated periodically as teachers make it available

Professional Development Evaluation

The planning and evaluation process is a responsibility of Director of Technology and Technology Coordinators. Periodic presentation on the technology goals for the District will be delivered to district Administration and the Board of Education. The process will involve an evaluation of the effectiveness of the previously implemented technologies and a review of the proposed enhancements. All district professional development is tracked online through KALPA, which includes short surveys on the value of each PD session offered. Technology Staff will review survey results for technology based offerings and use that feedback to enhance future offerings.

The District was fortunate to partner with a local business and a university to conduct thorough research on past professional development effectiveness and future needs for its significant Smart Board project. Through a series of planning meetings and administration of an online survey of nearly 200 teachers, the District has gained valuable insight into wants, needs, and preferred delivery mechanisms for future trainings. Those findings, an estimated $35,000 value that was provided to the district at no cost through effective partnerships and relationship building, will guide the development of future resources and professional development offerings.

Project HELP – on-demand technology skills and integration training

Floating subs will be obtained and curriculum support personnel will go to each building and offer a series of short training sessions that are designed to address the technology skill needs of staff members in that school. Teachers will sign up for a mini-workshop that meets their needs, and their classrooms will be covered by the floating subs.

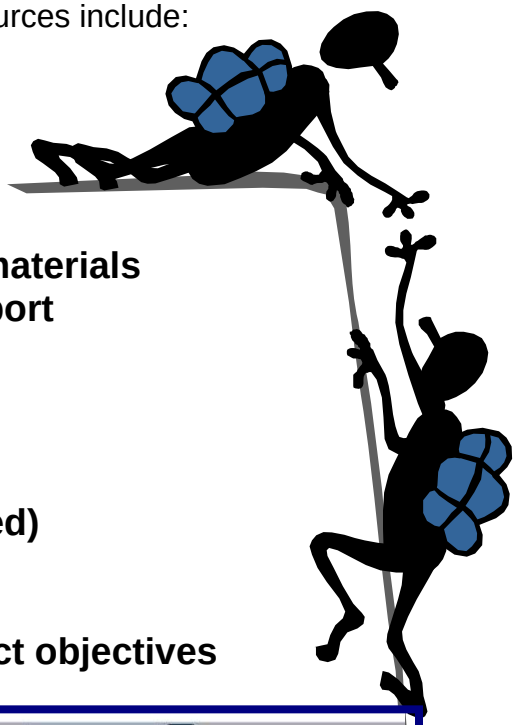
Depending on the needs identified, and the size of the building, multiple days of mini-workshops may be required at a given building.

A list of requested sessions will be maintained and reviewed for common needs. These will advise future professional development plans, including the need to develop new workshops and online training opportunities.

Survey instruments to measure the effectiveness of all delivered workshops will be reviewed, updated, or created. These will be distributed after every offered training session, and reviewed bi-monthly at a meeting of the Director of Technology and the Technology Coordinators.

Staff Support Resources

Troy School District is very fortunate to have a wide variety of resources to assist with the support of our entire technology program. Our resources include:



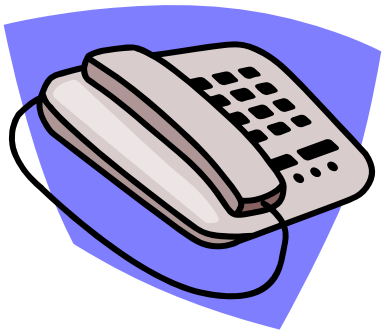
Defined curriculum materials
ISD
REMC
MACUL professional organization
Robust Professional Development materials
District website for community support
Intranet site for employee support
Business partners
Skilled consultants
ISTE standards
Outside training services (specialized)
Vendors
Contracted services
Streaming video correlated to District objectives

Troy Schools Current Technology Assessment

The District has been very fortunate to provide a wide variety of technological tools to support the instructional process. Technology initiatives have been very successful in Troy Schools. This success can easily be attributed to detailed planning, strong support from our School Board and Administration, excellent human resources, a highly defined professional development program and a commitment to standardization. These standards have created an environment where teachers and students can rely on excellent tools that are dependable and reliable. Our current inventory of technology tools includes:

Districtwide Technology Services – Video, Voice and Data

- 23 miles of private fiber optic cable
- Gigabit Ethernet backbone for data and voice communications
- Burstable 100 Mbps Internet connection (thru ISD)
  - Fully content filtered
  - Anti-virus tools in place
- Microsoft Exchange e-mail (1,500 employees)
  - Comprehensive SPAM filtering
- System-wide Firewall security
- Centralized phone system (3000 phones district-wide)
  - 2,500 district owned DIDs
  - Local and long distance services
  - Consolidated phone accounts
  - Voicemail
  - Four-digit dialing district-wide
  - T1 emulation and IP electronics level redundancy
- Video distribution system
  - 105 channel mapping
  - Centralized services – satellite, cable, broadcast
  - Individual building and global channels
- Student information system
  - Scheduling
  - Grades
  - Attendance
  - Demographics



- Online media center circulation system
- Web services
  - District Web pages
  - School Web pages
  - Club Web pages
  - Teacher Web pages
  - Classroom Web pages
- SAN redundancy & backup services
- Fiber connectivity with Oakland Intermediate Schools
- Unified time of day
- Video conferencing capability

Troy Schools Current Technology Assessment (cont)

School Technology Services – Video, Voice and Data

Digital phone switch
Centralized media distribution system
PA system
Video broadcast facilities
Clock system to support hearing impaired
Fire, weather and bell systems
Camera security systems (secondary)
Parental notification system via text, email, & phone

Classroom Technology Services – Video, Voice and Data

Computer(s) to support curriculum and management needs
Classroom printer(s)
Smart Board, data projector and document camera in 60% of classrooms
Document camera in every Elementary classroom
Ethernet data ports
Extra data ports
Television
Digital clock/emergency display
Communications panel
- Telephone
- Classroom amplifier
- Audio inputs
- Video inputs (composite & S-Video)
- Classroom speakerphone
- Free-field audio enhancement system (K-2), portable audio for checkout (3-5)

School Shared Technology Services – Video, Voice and Data

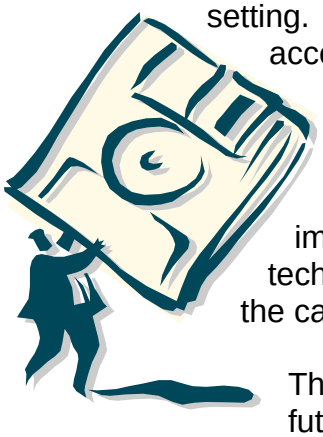
Gigabit Ethernet connectivity to all stations
Wireless network connectivity throughout building
Open computer labs (31 stations – number of labs varies by building)
Laptop mobile carts (multiple per building)
Digital projectors (multiple per building)
Document cameras (multiple per building)
Digital Cameras (multiple per building)
Student response systems (multiple per building)

Cell Phone Usage

Cell phones have been purchased for key support personnel
Cell phones are used for emergency communications and to reach mobile staff members
The District is continually looking for improved cell phone services

Software Selection and Evaluation

Software evaluation and current versions is presently a financial challenge for the District. As improved versions of application and utility software become available on the market, we evaluate and test such programs to determine their potential effectiveness in our school setting. The district has a critical responsibility to ensure that students and staff have access to software that is relevant and conducive to instruction. Software should also conform to industry standards whenever possible to allow students to be effective in higher education and the workplace.



In order to maintain the current inventory of technology hardware, it is also important to acquire software that increases the productivity of teaching and technology department personnel. These types of applications would fall under the category of Utility, Productivity, Security and Management software.

The District's Desktop Virtualization Initiative will have a significant impact on future operating system and application software projects.

Priorities for TSD software maintenance:

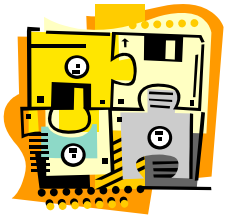
- ***Develop evaluation model departmental software***
  - Subject area (secondary) and grade level (elementary) software needs to be continuously evaluated for relevance and compatibility with new hardware and operating systems
  - Purchase of updates and/or revisions should take place when new editions offer features that enhance the learning process. Emphasis must also be placed on updating software before existing versions become obsolete due to technology advances.

- ***Update Utility software***
  - Critical need to maintain virus protection on all computers – a five year agreement with our current provider was executed in 2010. District needs to ensure that virus definitions are continually updated and that program updates are reviewed to prevent catastrophic failure of multiple PC's.
  - Need to maintain current versions of utilities for tech personnel. This software allows for quick detection of computer hardware and software failures that should decrease repair time.

- ***Review and update Operating System software***
  - Troy Schools need to continually evaluate the status of Microsoft operating systems to ensure compatibility with emerging application software.
  - The district is currently standardized on the Windows XP operating system, with plans to upgrade to Windows 7 in the works. This standardization has allowed us to monitor and control our environment through group and individual policies.

Software Selection and Evaluation (continued)

- ***Review and update Productivity software***
  - Troy Schools currently use a wide variety of software classified as productivity in nature. This type of software is used to enhance productivity and communication for students and staff.
  - The following programs would be considered critical to the operation of the district technology program:



    - Microsoft Office – The most widely used application in the district to perform word processing, spreadsheet and presentation work, presently running Office 2007.
    - Microsoft Exchange email – The District currently utilizes Exchange 2003. We will ensure that employees can effectively communicate using email within the district using global groups and individual addresses.
    - Pentamation – Software application used to maintain district business and student records. Pentamation is a critical piece of software to Troy Schools and must be continually monitored and updated as needed.
    - Troy Schools uses many other types of productivity software. These include (but are not limited to): Print Shop, Adobe PageMaker, Adobe Photoshop and KidPix. New versions of this software are released often to coincide with changes in operating systems and to fix problems with previous versions. TSD will continue to monitor these events for its use in our environment.

- ***Review and Update Security software***
  - Troy Schools currently uses software to maintain control over student and teacher computer desktops. This is necessary to maintain a consistent and reliable computer environment for the many users that will interact with a typical workstation in a building.
  - Troy Schools should continue to monitor changes in server security software and update as required. This process insures that inappropriate use of the Internet as defined by CIPA will be restricted.

Software Selection and Evaluation (continued)

- ***Review and Update Management software***
  - The district currently uses an enterprise level desktop management platform to push out computer images, install software, provide remote support, inventory, and otherwise manage a significant fleet of computers.
  - We are evaluating products that allow staff to view students' computers, take control of computers, and lock out students from using computers as a classroom management tool.
  - These tools must be reviewed as part of the district's Virtual Desktop Initiative

New Technology Strategies

This technology plan completes a cycle of computer and hardware refreshes made possible by generous taxpayer support with the 2004 bond issue. The final funds available from this source will be spent to extend the life of existing systems while simultaneously updating end user experiences for faster access, newer, more secure operating systems, and possibly newer applications.

New frontiers within this technology plan include:

- **Virtual Desktop Initiative**
- **Updated portable computing devices/laptops**
- **Network attached node evaluation/remediation**
- **Accepting student/ staff-owned wireless devices on network (channeled for security)**

Virtual Desktop Initiative

The District is investigating a significant and fundamental change to the process of providing technology for student, faculty and staff use. Due to limited funding sources and the current age of significant portions of the computing infrastructure, a shift from replacing an end user computer with a full featured computer to a less expensive device connected to a private internal cloud is underway. This project uses "virtual desktop" technology modeled after well-implemented virtual server solutions. This shifts costs from a distributed desktop model to a centralized solution that places most of the computing power in the core data center and relies on a combination of existing legacy hardware and new, lower cost thin client. Each device accesses special virtualization software to run the newest operating systems and updated versions of software, independent of endpoint hardware. This is not a direct cost savings initially, but instead a shift of investment from the edge to the core of the network. Over time, significant cost savings are expected through longer hardware refresh cycles with less costly equipment, significantly reduced management and troubleshooting costs and most importantly, improved end user productivity and uptime. The proposed budget and timeline reflect this strategy going forward.

Troy School District Technical Support Resources

Troy Schools recognizes that a strong technology program requires more than hardware and software. The District has learned that technology also requires professional development specialists, curriculum leaders and a support team to address the day-to-day technical issues that arise.

Title	***FTE***	***Role ****
Director of Technology	1.0	Administers all technology programs
Technology Secretary	0.5	Clerical services to all department members
Technology Coordinator	0.6	Technology curriculum and PD
Network Engineer	1.0	Network core, routing, switching issues
Systems Analyst	1.0	Application integration & support AV, filtering, Spam issues
Systems Analyst	1.0	Application integration & support, troubleshooting
Help Desk Specialist (contract)	1.0	Accepts calls, assigns techs, tracks tickets
Telecomm Specialist (contract)	1.0	ICS, UPS, phone & fiber issues
Computer Specialist (contract)	1.0	Desktop/laptop/printer issues
System Technician (contract)	1.0	Warehouse/inventory, desktop/laptop/printer
Audio Visual Technician (contract)	1.0	Audio Visual, ICS and Equipment Issues
Technology Parapro	.4	Barnard Elementary tech support
Technology Parapro	.4	Bemis Elementary tech support
Technology Parapro	.4	Costello Elementary tech support
Technology Parapro	.4	Hamilton Elementary tech support
Technology Parapro	.4	Hill Elementary tech support
Technology Parapro	.4	Leonard Elementary tech support
Technology Parapro	.4	Martell Elementary tech support
Technology Parapro	.4	Morse Elementary tech support
Technology Parapro	.4	Schroeder Elementary tech support
Technology Parapro	.4	Troy Union Elementary tech support
Technology Parapro	.4	Wass Elementary tech support
Technology Parapro	.4	Wattles Elementary tech support
Technology Parapro	.4	Baker Middle School tech support
Technology Parapro	.4	Boulan Park Middle School tech support
Technology Parapro	.4	Larson Middle School tech support
Technology Parapro	.4	Smith Middle School tech support
Technology Parapro	.8	Athens High School tech support
Technology Parapro	.8	Troy High School tech support
Technology Parapro	.8	International Academy East tech support
Technology Parapro	1.0	Niles Community High School tech support

* Note – Role is generalized here for this report. Job responsibilities include a wider variety of assignments than what can be shown here.

Increasing Access to Technology

The Troy School District has enjoyed overwhelming support from the community for its ongoing technology efforts, evidenced by successful passage of bonds that included substantial technology funds in 1997 and 2004. This technology plan includes the last of the 2004 bond funds and the district's efforts to strengthen the integration of technology into the curriculum.

A new initiative covered in this technology plan is an updated process for providing a computing experience for end users. In the past, we have purchased new desktop computers every seven years, and laptops every four years, relying on bond initiatives for funding. While our community has been very generous in supporting the district's technology initiatives, economic conditions throughout the state have caused us to rethink the way we provide technology within the district. Our current plan, instead of budgeting the wholesale purchase of new computers, is to aggressively pursue desktop virtualization using the last of the 2004 bond funds to construct a significant private cloud computing infrastructure that will deliver an updated end user computing experience without requiring new endpoint hardware at every location. This will allow us to centralize technology resources while simultaneously offering updated software and applications to users. This plan allows us to significantly reduce the cost of adding a computer by locating the primary processing power at the data center level which will address funding shortfalls while also making it much more affordable to increase access to technology where needed. It also allows the district to migrate from fewer, large capital expenditures every several years to sustained operational expenses on an annual basis. We expect this initiative to help provide access to more current applications in the long run as well.

Federal, State, Local, Professional and Private Grants

Troy School District will continue to review supplemental funding resources such as state, local, professional organization and private grants. The District has participated in numerous funding projects in the past to promote technologies within the District as well as share technology with other districts. Each year, the district's E-Rate application offsets nearly $40,000 of the cost of phone, Internet and Web Hosting services that would otherwise come from operating budgets, and we are pursuing ways to increase our cost offsets within program rules. A second opportunity for exploration for use of E-Rate funds is for hosted student e-mail service. We have relied on federal Title IID/Enhancing Education Through Technology funding in the past to support professional development activities such as increased participation of media specialists in district Online Learning initiatives. Due to loss of this federal funding source, the District will be forced to rethink and possibly reduce this offering.

The Troy Foundation for Educational Excellence is a source of funding for classroom teachers' projects that often include a technology component, and Foundation staff are kept apprised of upcoming technology initiatives that might be appropriate for their funding priorities.

Troy School District's ongoing membership in the Oakland Network for Education (ONE) consortium includes discounted costs for Internet access, Discovery Streaming video subscriptions, and other cost saving opportunities. The Director of Technology attends monthly ONE Consortium meetings to discuss cost saving measures and technology initiatives. Our participation in the Consortium has also facilitated participation in the state's Regional Data Initiative.

As mentioned previously, local building Parent Teacher Organizations have been extremely generous in funding additional building initiatives in partnership with the Technology Resource Center to ensure compatibility, standards, and interoperability with District systems.

TRC will review grant opportunities and make application for appropriate grants as they become available.

Technology Funding and Budget – Next Three Years

This plan will identify, qualify and define how technology will be enhanced in Troy Schools over the next three years. Some funding was approved by Troy voters through the June 2004 Bond Issue. Voters approved approximately $23,000,000 for technology enhancements over the life of the bond. The remaining funding is from operational budgets.

Year 1 Technology Plan – 2011-12

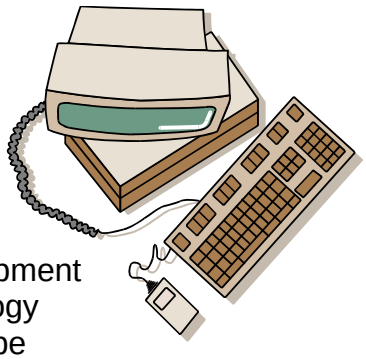
Project	Description	Computers	Budget	Fund Category*
A	Finalize internal cloud (bond)		**1,500,000**	Hardware
B	Implement new laptops (bond)	1500	**1,125,000**	Hardware
C	Thin client desktop replacement (bond)	600	**360,000**	Hardware
D	Finalize server virtualization	80	**75,000**	Hardware
E	Desktop power management software		**30,000**	Software
n/a	Annual maintenance		**175,000**	Contracts

* "Hardware" is listed here to align with the budget format as defined by the State for this plan. This same category (Hardware), aligns with "Equipment" as defined by the State in amortization tables (i.e. Hardware = Equipment). "Equipment" expenditures in this plan conform to the maximum allowable annual expenditures over the life of the Bond based on the amortization of a two-series bond.

Overview

Year 1 of this technology plan implements a new solution for end user computing in the district. Instead of budgeting for a new computer every seven years, the District will now be able to deliver updated operating systems and applications to instructional computers virtually. This allows legacy hardware to continue to be used, for as long as the mechanical parts keep working. A limited number of new thin client devices in place of selected computers provide a large pool of spares to keep older computers working, while the internal cloud provides the computing power to deliver new applications and services for end users. Due to the daily rugged use of laptops, new equipment will be required for these devices on a more consistent basis. **This requires careful budget planning to create operational funds sufficient to replace the laptops on an ongoing basis** even though the hardware is less costly than previous projects due to virtualization.

Year 1 Curriculum and Professional Development Impact



A new operating system and new way of receiving applications will require instruction for end users on how the new system works, and what new features, functionality, and capabilities are available. Orientation on the new laptop devices will also be necessary. Implementation of the new VDI initiative will be carefully correlated to elementary technology integrated curriculum review professional development to ensure interoperability with updated instructional goals. The Technology Coordinator, Director of Technology, and building tech support staff will be responsible for this instruction.

Project	Description	Computers	Budget	Fund Category*
A	Finalize internal cloud		**1,500,000**	Hardware

This project uses bond funds to build the server and storage infrastructure required to deliver desktop virtualization to up 1500 laptops and 2500 instructional desktop systems

Project	Description	Computers	Budget	Fund Category*
B	Implement new laptops	1500	**1,125,000**	Hardware

This project uses bond funds to purchase and deploy new laptops. There will be more than one form factor – minimally a lower cost device for student laptop carts and a traditional laptop for traveling staff. Alternative devices such as tablet or slate devices (such as Apple's iPad or similar products) might also play a role.

Project	Description	Computers	Budget	Fund Category*
C	Thin client desktop replacement	600	**360,000**	Hardware

This project uses bond funds to purchase new thin client devices for selected instructional computers.

Project	Description	Computers	Budget	Fund Category*
D	Finalize server virtualization	80	**75,000**	Hardware

A project funded from operational dollars utilizing expected cost savings from utility cost reductions by consolidating servers. The project should have a very short payback and will generate ongoing savings.

Project	Description	Computers	Budget	Fund Category*
E	Desktop power management software		**30,000**	Software

Possible project to actively monitor and shut down non-used computers to recover both utility rebate credit AND reduce overall electrical costs. Requires cost-benefit analysis and confirmation of rebate eligibility.

Project	Description	Computers	Budget	Fund Category*
n/a	Annual maintenance		**$175,000**	Contracts

Annual support contracts for hardware, software, etc, general equipment operations

Year 2 Technology Plan – 2012-2013

Project	Description	Computers	Budget	Fund Category*
F	Second phase VDI rollout	TBD	**50,000**	Software
n/a	Annual maintenance		**$175,000**	Contracts

Overview
Year 2 of this technology plan extends virtual desktops into selected labs and classrooms using technology purchased in the previous year.

Year 2 Curriculum and Professional Development Impact
Teachers, students and staff who will be interfacing with the new VDI solution will receive support on what the new environment looks like, and how to most effectively interact with new hardware. Again, this instruction will be correlated with this year's secondary instructional curriculum reviews to ensure compatibility. The Technology Coordinator, Director of Technology, and building tech staff will be responsible for the new professional development activities.

Project	Description	Computers	Budget	Fund Category*
F	Second phase VDI rollout	TBD	**50,000**	Software

Implementing new VDI in classrooms

Project	Description	Computers	Budget	Fund Category*
n/a	Annual maintenance		**$175,000**	Contracts

Annual support contracts for hardware, software, etc, general equipment operations

Project	Description	Computers	Budget	Fund Category*
G	Third phase VDI rollout	TBD	**50,000**	Software
n/a	Annual maintenance		**$175,000**	Contracts

Overview
Year 2 of this technology plan extends virtual desktops into selected labs and classrooms using technology purchased in the previous year.

Year 2 Curriculum and Professional Development Impact
Teachers, students and staff who will be interfacing with the new VDI solution will receive support on what the new environment looks like, and how to most effectively interact with new hardware. The Technology Coordinator, Director of Technology, and building tech staff will be responsible for the new professional development activities.

Project	Description	Computers	Budget	Fund Category*
G	Third phase VDI rollout	TBD	**50,000**	Software

Implementing new VDI in classrooms

Project	Description	Computers	Budget	Fund Category*
n/a	Annual maintenance		**$175,000**	Contracts

Annual support contracts for hardware, software, etc, general equipment operations

Budget Summary

The chart below represents a summary of the projected expenditures for technology from years 2011 – 2014. Hardware budgets are based on projects outlined within the Troy School District 2004 Bond Issue. The Internet Service(1) category includes operational costs for Internet access, while Internet Service(2) includes various web hosting expenses. Included are projected E-Rate discounts for phone, Internet Services(2), and Web Hosting.

Troy School District
Education Technology Plan Budget

Function Titles	2011-12	2012-13	2013-14
Personnel	$570,119	$581,521	$593,152
Hardware	$3,060,000	$0	$0
Software	$30,000	$30,000	$30,000
Networking	$67,565	$67,565	$67,565
Internet Services(1)	$11,262	$11,456	$12,075
Internet Services(2)	$47,965	$49,404	$50,886
Phone/Voice Mail	$76,232	$77,375	$78,536
Supplies	$70,385	$66,866	$66,866
Replacement	$0	$50,000	$50,000
Maintenance	$59,470	$59,470	$59,470
Prof. Development	$3,400	$2,100	$2,100
Contracted Services	$306,696	$313,976	$321,256
Projected E-Rate Disc.	-$74,518	-$76,068	-$77,653
Total	$4,228,576	$1,233,666	$1,254,252

Monitoring and Evaluation

Along with the various evaluations listed previously in this document (Professional Development p.23 and Software pp. 27-29), the following measures of success are planned for the duration of this technology plan:

Strategy 1 - Technology to support evaluation of student achievement

Description: This is not a measure of technology instruction success, but rather the use of tools such as Mastery Manager and Pearson Inform to score and analyze common assessments and performance on various standardized tests in all classrooms. These tools allow GLCE/HSCE level analysis of student performance for individual students, student subgroups, classes, grades, buildings, and whole district levels. Data driven decisions can then be made regarding the content of a specific lesson or instructional unit, as well as helping to identify areas in need of targeted intervention. Technology is simply a tool to help mine the wealth of data that exists for each student, to tease out information to advise instruction.

Frequency: These tools will be used many times throughout each school year – upon receipt of MEAP/MME or other test data and after administration of common assessments. The tools are available and accessible via the Internet at any time for teachers and administrators

Responsibility: Individual classroom teachers and building principals will use the tools to guide their daily instructional strategies as well as to identify areas of need. Staff from the Department of Instruction and Assessment will provide support and perform district-level analysis, reporting findings to teachers, building, and district administration. The Technology department will support the Instruction and Assessment department regarding connectivity.

Unmet goals: Access to the applications will be addressed immediately through the Technology department and vendor support centers. Student achievement gaps identified though use of the tools will be identified for targeted instruction and/or specific interventions as determined by building staff, the Department of Instruction and Assessment, and the corresponding Assistant Superintendent for Instruction.

Strategy 2 – 8th Grade Technology Literacy

Description: All students attending Troy School District through 8th grade will have completed a required technology course that is tightly aligned to Michigan's METS standards. The course includes various technology skills assessments designed to ensure successful mastery of those skills deemed essential for 21st Century success.

Frequency: This course is offered each semester in middle school.

Responsibility: The course has classroom teachers determined by each building's teaching assignments for the year. Teachers and curriculum needs are supported by the Technology Coordinator. Student success in the course will be monitored each semester, and the curriculum will be monitored and compared against METS and ISTE standards at least once every three years.

Unmet goals: Students who struggle in the required course will be guided toward supplemental instruction as appropriate. We continue to discuss various options for successful completion of technology literacy standards with the Special Education department. Any student who transfers in to the district after 8th grade will be provided with self-paced instruction to support their technology skills.

Strategy 3 – Online learning requirement

Description: The District has completed professional development with teachers for the delivery of online instruction using Moodle in 8th grade language arts, social studies, science, and math, far surpassing the state's basic graduation requirement for 20 hours of online learning experience. Students transferring to the district after 8th grade and not having reached the OLE requirement at their previous district have a plan for supplemental online instruction that they complete to meet the requirement. Teacher professional development is planned to continue in other content areas and at other grade levels in subsequent years, and we are confident that students will enjoy far more than the minimum requirement throughout their secondary school career in Troy. Student qualitative data will be collected through interest and satisfaction surveys as part of each activity.

Frequency: At least one lesson in the four core curriculum areas is currently delivered online in a required course for 8th grade students each school year.

Responsibility: Teachers will deliver the content, developed in conjunction with their building media specialist, curriculum coordinator, and technology coordinator. All involved will review student feedback and performance on lesson assessments to adjust instruction as required.

Unmet goals: Students who struggle with the online instruction will be counseled to determine the cause of the difficulty and supported with tools and strategies for online success. Conversation is ongoing with the Special Education department to ensure that quality, meaningful online instruction will be provided for ALL students, per the District mission. Students who transfer into the district after 8th grade will be offered online learning experiences through media instruction, Career Cruising, and online options through the REMC/GenNet online learning repository.

Strategy 4 – Workshop evaluation

Description: All professional development sessions within the district now include an online survey to be completed by each participant in order to receive PD credit.

Frequency: Forms are collected after every session and reviewed at monthly departmental meetings.

Responsibility: Department of Instruction and Assessment administers the electronic system for disseminating surveys. Technology Coordinator, Director of Technology and Instructional and Assessment staff review feedback on an ongoing basis.

Unmet goals: Sessions deemed not valuable by attendees will be re-designed or replaced. User input will include requests for other training topics.

Strategy 5 - Work ticket response time

Description: A careful review process of time to completion on work tickets, measured from Help Desk entry to successful notification of end user and closing of tickets is under development. Metrics will include average time to complete tickets – ordered by issue type, technician, building, and other values; number of tickets processed by the department per week, per month, and per technician; recurrence of issues on same equipment; completeness and accuracy of resolution information; growth of internal knowledgebase; and collection of qualitative response time data from end users.

Frequency: Data will be analyzed monthly

Responsibility: Help Desk analyst records calls and manages ticketing application, desktop and application analysts perform work and enter resolutions, all technicians and Director of Technology review reports monthly.

Unmet goals: Reasons for long time to complete, few tickets addressed, frequent issue recurrence, poor resolution documentation and knowledgebase, and concerns from qualitative data will guide appropriate response – including supplemental training or materials, setting

correct expectations with end users, and redesigning processes to realize increased efficiencies.

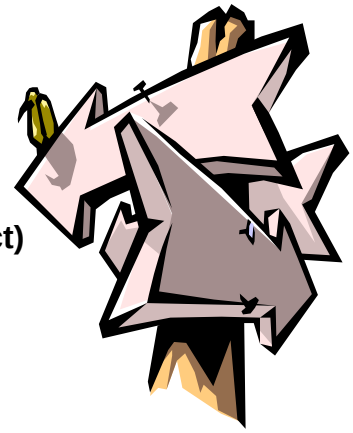
Strategy 6 – System uptime logs
Description: Periodic review of server and network operational logs to determine uptime and identify potential sources of concern.
Frequency: Bi-monthly review
Responsibility: Network engineers monitor logs daily, provide reports to Director of Technology.
Unmet goals: Once baseline expectations are established, root cause of failing to meet specific guidelines will be analyzed and remediated.

Critical Planning Team, Issues & Interoperability

The key component for all of the updated and/or new technologies is the ability for these devices to interoperate effectively. The team that is assigned to the implementation of these new technologies has taken this into consideration first.

The current implementation team includes key personnel to ensure that these systems will work effectively together. The team includes:

- **TSD Technology administrator (1)**
- **TSD Technology coordinator (1)**
- **TSD Network engineer (1)**
- **TSD Technology Specialists (5, contract)**
- **TSD System Analysts (2)**
- **Vendors (on an invitation basis)**



The background of the various personnel on the team creates a very progressive atmosphere for discussions on basic operability, technology viability and human resources to make the systems work together. The team has been very effective in coordinating installation schedules to meet the needs of the District. This technology plan represents the cumulative efforts of the implementation team.

Statement of CIPA and Content Filtering Compliance

The Troy School District certifies that it has both an Internet safety policy (see pages below) and has implemented technology protection measures to block or filter Internet access to pictures that: “(a) are obscene, (b) are child pornography, or (c) are harmful to minors, for computers that are accessed by minors.” District Policy and the Student Code of Conduct both require that student online activity be monitored, and the Internet Acceptable Use Policy addresses “(a) access by minors to inappropriate matter on the Internet; (b) the safety and security of minors when using electronic mail, chat rooms, and other forms of direct electronic communications; (c) unauthorized access, including so-called “hacking,” and other unlawful activities by minors online; (d) unauthorized disclosure, use, and dissemination of personal information regarding minors; and (e) restricting minors’ access to materials harmful to them.”

The District owns, manages, and operates its own content filtering system, comprised of servers, software, and network configuration. The District acknowledges that, although required to be eligible to receive E-Rate funding, none of this equipment is eligible for E-Rate discount and is not included in any E-Rate reimbursement activities. Because this technology plan is available on the public Internet and brand name disclosure constitutes a potential security risk, specific product information is not disclosed here. Technical information regarding the District’s content filtering solution is available upon request and proof of validity of the request using the contact information available on the cover of this plan.

CODE OF STUDENT CONDUCT
Issues that Relate to Technology Use

Philosophical Basis: The Troy School District provides a wide variety of technological resources for students and staff to utilize in the instructional process. These resources include, but are not limited to: desktop, laptop and handheld computers, software, printers, Internet and District Intranet access, video/voice/data networks, audio and video equipment, and copy machines. The district's goal is to promote educational excellence by facilitating resource sharing, innovation, and communication by providing these resources in the best possible working order.

A user's access to technology resources shall be considered a *privilege* with no entitlement or guarantee, and access may be revoked at any time at the discretion of the Superintendent or designee.

Obligations: students have the responsibility to use these resources appropriately by:

1. Using resources only for educational purposes during class time
2. Respecting copyright laws
3. Not removing, modifying, or destroying technology resources
4. Maintaining personal security by protecting passwords
5. Not attempting to gain unauthorized access to systems or trespassing in other users' data files, or directories
6. Complying with all the terms and conditions of the District's Acceptable Use Policy.

Level I Violations	Level II Violations	Level III Violations
Unauthorized use of electronic communication devices during school day	Academic Misconduct	
Use of personal electronic communication devices during school day	Electronic Access Codes	
	Harassment	
	Inappropriate Use of Technology Resources	Inappropriate Use of Technology Resources (aggravated)
	Stealing, Possession or Transfer of Property of Others (Value Under $100)	Stealing, Possession or Transfer of Property of Others (Value $100 or More)
	Vandalism (Value Under $100)	Vandalism (Value Over $100)

CHILDREN'S ONLINE PRIVACY PROTECTION ACT

In April 2000, the Children's Online Privacy Protection Act (COPPA) went into effect. COPPA requires that web site operators obtain verified parental consent before collecting, using, or storing "personally identifiable information" (PII) about children less than 13 years of age.

PII includes data such as first and last name, street address, telephone number or e-mail address. Troy School District does not collect this type of information via the internet. However, under COPPA, "collecting" includes not only a direct request, such as a registration form, but also enabling children to make PII available online. Examples of how a child could make PII available online include message boards, e-mail, or chat rooms.

Internet safety lessons in our schools remind students that they should never reveal personal information online. E-mail projects between schools are closely monitored by teachers, and students use only first names. Nonetheless, COPPA requires that web sites and services directed to children disclose their information collection, use and storage practices.

In order to honor our commitment to providing the best education possible, the Troy School District will provide Internet access to high-quality learning sites. These sites provide a wide variety of activities that are rich in academic value.

TROY SCHOOL DISTRICT

Student Technology Acceptable Use Policy

Student Name (Please Print) _____

Student ID # _____ Grad Year _____

Philosophy

Technology users of the Troy School District (the "District"), at the discretion of the Superintendent or his/her designee, may be granted a password allowing access the District's technology resources in order to promote personal academic growth, information gathering, and communication. Technology resources include but are not limited to computing devices, servers, networking equipment & cabling, telecommunications & audio/video systems, software, and access to the Internet and on-line services.

A user's access to technology resources shall be considered a *privilege* with no entitlement or guarantee, and access may be revoked at any time at the discretion of the Superintendent or designee.

Student Obligations

All users who access District technology resources are required to protect and care for any systems they are using, accept full responsibility for all actions performed under their user login, and know and obey District regulations and federal, state, and local laws and ordinances governing the use of technology.

Copyright laws will be strictly adhered to when using all technology systems. All violations of copyright laws (copying programs & downloading music or movies without written permission from the copyright holder, as well as plagiarism or other forms of electronic cheating or violations of academic integrity) will be addressed under the Code of Student Conduct and local, state and federal laws.

Users are expected to exercise good judgment and discretion in using technology systems, and limit use to educational purposes.

Students are responsible for adhering to the *Troy School District Code of Student Conduct*, including the provisions herein.

The following behaviors are prohibited:

Use of technology resources to send, receive, or display text, messages, or images that could violate the District's non-discrimination policies, could be considered obscene, pornographic, or offensive to others, that are potentially dangerous to District resources, or materials otherwise deemed to be inappropriate by District administration.

Using another person's password, sharing one's password with another person, modifying another user's account or invading, trespassing, or otherwise gaining access to accounts, servers, folders, files or other resources to which the user has not been granted specific rights.

Harassing, insulting, bullying, stalking, intimidating, disrupting access, remotely controlling or shutting down systems, or other abusive or disruptive behavior.

Student Obligations/Prohibited Behaviors (cont.)

Disclosing personal information about yourself or others, including addresses, telephone numbers, credit card information, passwords, or other confidential information via e-mail or the Internet.

Students will not install, delete, relocate, rename, hide, or modify any hardware, software, games, applications, files, or network connections, enter system folders or the control panel, or engage in any activities intended to circumvent, avoid, or hide from district security measures.

Use of technology resources for commercial or for-profit purposes, fund-raising, distributing or forwarding chain letters, junk e-mail, or advertising.

District Obligations

In compliance with the Children's Internet Protection Act (CIPA), Troy School District has installed filtering software to restrict access to Internet sites containing material harmful to minors. The software evaluates web sites based on criteria determined by Troy School District. No software can keep up with the constant changes on the Internet. A user who accidentally connects to an inappropriate site must immediately disconnect from the site and notify a teacher or supervisor. Upon request, authorized staff may re-evaluate and unblock blocked sites to allow access.

It is understood that there is no expectation of privacy on the District's network and computers, and the District has the right to review any material stored in files to which users have access, to edit or remove any material which the district, in its sole discretion, believes is unlawful, obscene, abusive or objectionable, and to take appropriate legal action.

Troy School District makes no warranties of any kind, whether expressed or implied, for the service it is providing. The district will not be responsible for loss of data, service interruptions, or for the accuracy or quality of information obtained through Internet services. The District prohibits unlawful use of technology resources, and in no way assumes responsibility for actions of users that could result in criminal or civil legal recourse.

Disciplinary Action

Use of the Internet and district hardware and software is subject to all rules and regulations set forth in the Code of Student Conduct. Enforcement is the responsibility of the staff. Administration will review all cases referred for disciplinary action. In addition to disciplinary actions listed in the Code of Student Conduct, the administrator may implement the following:

1. The student may be excluded from access to the Internet.
2. The student may be excluded from using any and all computer equipment throughout the district.

The Student and his/her Parent(s) or Guardian(s) understand and agree to all of the above Obligations, and further agree to indemnify and hold harmless Troy School District, its Board members, officers, and employees, and all organizations affiliated with Troy School District's Internet connection, for any and all claims of any nature arising from the Student's use of the Troy School District's computer hardware, software, and/or Internet connection.

_____ _____ _____ _____

Student Signature Date Parent Signature Date

BOND SCOPE INFORMATION

Presented by

Mark S. Rajter

November 13, 2012

Bond Scope Information

1. Facility Assessment
2. Technology Report
3. Buses
4. Instructional Equipment

Revised TMP Facility Assessment

Cost Estimates: Summary

BUILDING NO.	BUILDING NAME	TOTAL ESTIMATED COST	2014	2017	2020
1	Barnard Elementary School	$ 2,356,791	$ 1,863,124	$ 430,000	$ 63,667
2	Bemis Elementary School	$ 2,555,399	$ 1,748,864	$ 554,413	$ 252,122
3	Costello Elementary School	$ 2,049,024	$ 1,610,579	$ 385,000	$ 53,445
4	Hamilton Elementary School	$ 2,191,770	$ 1,383,120	$ 648,650	$ 160,000
5	Hill Elementary School	$ 2,079,779	$ 1,679,776	$ 85,000	$ 315,003
6	Leonard Elementary School	$ 1,782,448	$ 1,190,680	$ 393,268	$ 198,500
7	Martell Elementary School	$ 2,155,950	$ 1,627,118	$ 501,832	$ 27,000
8	Morse Elementary School	$ 1,810,165	$ 1,115,424	$ 436,000	$ 258,741
9	Schroeder Elementary School	$ 1,742,946	$ 1,480,436	$ 70,000	$ 192,510
10	Troy Union Elementary School	$ 1,766,136	$ 1,573,316	$ 65,000	$ 127,820
11	Wass Elementary School	$ 2,336,520	$ 1,758,320	$ 522,100	$ 56,100
12	Wattles Elementary School	$ 1,939,373	$ 1,560,440	$ 162,533	$ 216,400
13	Baker Middle School	$ 293,847	$ 65,000	$ -	$ 228,847
14	Boulan Park Middle School	$ 3,616,959	$ 3,232,200	$ 156,908	$ 227,851
15	Larson Middle School	$ 3,805,971	$ 3,232,200	$ 399,771	$ 174,000
16	Smith Middle School	$ 2,024,669	$ 1,327,000	$ 91,063	$ 606,606
17	Athens High School	$ 10,671,505	$ 7,006,905	$ 2,695,700	$ 968,900
18	Troy High School	$ 6,421,324	$ 4,895,250	$ 296,500	$ 1,229,574
19	International Academy East	$ 2,114,183	$ 1,996,458	$ 45,000	$ 72,725
20	Niles Center	$ 1,817,275	$ 1,347,250	$ 357,900	$ 112,125
21	Service Center	$ 388,800	$ 76,500	$ 312,300	$ -
22	Administrative Building (Board Office)	$ 1,145,244	$ 560,500	$ 447,294	$ 137,450
23	Transportation	$ 374,721	$ 90,650	$ 49,200	$ 234,871
24	Facility Operations / Purchasing	$ 156,650	$ 21,600	$ 103,000	$ 32,050
	TOTAL ESTIMATED COST	$ 57,597,449	$ 42,442,710	$ 9,208,432	$ 5,946,307
	ADDITIONAL PROJECT-RELATED COSTS *	$ 14,975,337	$ 11,035,105	$ 2,394,192	$ 1,546,040
	GRAND TOTAL ESTIMATED COST	$ 72,572,786	$ 53,477,815	$ 11,602,624	$ 7,492,347

* ADDITIONAL PROJECT-RELATED COSTS INCLUDE CONTINGENCY, GENERAL CONDITIONS, CONTRACTOR'S OH&P, FEES, PERMITS, OWNER EXPENSES

NOTE: ESTIMATES DO NOT INCLUDE ESCALATION

Technology Forecast

TSD Technology Forecast - v22.xlsx

TSD Budget Forecast - Projects Organized by TMP Index

Fund Source: Bond

Sum of Budget with Inflation	TMP Index Factor				
Project Categories	1	2	3	4	Grand Total
Data Backup System			$ 160,000		$ 160,000
Desktops - Counselors, PAC		$ 90,000			$ 90,000
Desktops - Instructional	$ 259,000		$ 1,153,500		$ 1,412,500
Flooring		$ 5,125			$ 5,125
High School Auditoriums				$ 92,885	$ 92,885
High School TV Studios				$ 408,330	$ 408,330
Instructional Projectors	$ 126,000	$ 897,000		$ 2,764,125	$ 3,787,125
Internet Content Filter	$ 50,000		$ 50,000		$ 100,000
Laptops - Admin/Itinerant			$ 116,600	$ 116,600	$ 233,200
Laptops - Instructional			$ 1,474,000	$ 1,474,000	$ 2,948,000
Middle School Video Tech Labs		$ 104,200			$ 104,200
Mobile Devices - Admin			$ 35,750	$ 35,750	$ 71,500
Mobile Devices - Instructional	$ 471,250			$ 471,250	$ 942,500
Mobile Devices and Carts - Instructional		$ 1,256,020		$ 471,250	$ 1,727,270
Network Cabling	$ 40,000	$ 41,000	$ 129,000		$ 210,000
Network Copiers	$ 398,000		$ 560,000		$ 958,000
Network Core	$ 778,300				$ 778,300
Network Edge	$ 800,000				$ 800,000
Network Printers - New Centralized	$ 220,000				$ 220,000
Network Printers - Replacement	$ 71,500	$ 71,500	$ 214,500	$ 149,500	$ 507,000
Phone System Replacement			$ 1,057,000		$ 1,057,000
Phone Upgrade - E911		$ 100,000			$ 100,000
Projector & Audio Update	$ 64,000				$ 64,000
Security Camera Update			$ 345,000		$ 345,000
Server Replacement	$ 70,000	$ 17,500	$ 1,520,000		$ 1,607,500
Server Virtualization	$ 66,500				$ 66,500
Services Building Board Room Video, Audio, Lighting				$ 156,611	$ 156,611
Sound Field	$ 124,000	$ 165,600	$ 221,600		$ 511,200
Specialized Lab Replacement	$ 384,000		$ 104,000	$ 384,000	$ 872,000
TS-TV Cable/Webcast				$ 223,145	$ 223,145
UPS Replacement	$ 640,000				$ 640,000
UPS Replacement		$ 348,500			$ 348,500
Video Distribution System		$ 2,460,000			$ 2,460,000
Video Distribution System - Pre-replacement	$ 29,000				$ 29,000
Wireless Network	$ 733,500	$ 521,000		$ 583,500	$ 1,838,000
Zero Client - Clerical				$ 70,000	$ 70,000
Zero Client - Instructional				$ 283,000	$ 283,000
ZZ-Contingency	$ 426,004	$ 486,196	$ 571,276	$ 614,716	$ 2,098,191
Grand Total	**$ 5,751,054**	**$ 6,563,641**	**$ 7,712,226**	**$ 8,298,662**	**$ 28,325,582**

Projects Organized by TMP Index

Buses Estimated Costs

Fiscal year Impact	Buses to be replaced	Estimated Cost Replacement timeline 9 years
Series 1		
13-14	13	$1,167,403
14-15	5	$449,001
15-16	1	$88,849
	19	$1,705,253
Series 2		
16-17	10	$920,808
17-18	8	$739,886
18-19	8	$688,334
	26	$2,349,028
Series 3		
19-20	7	$613,668
20-21	8	$745,769
21-22	15	$1,412,163
	30	$2,771,600
TOTAL Estimated replacement cost	75	$6,825,881

Instructional Equipment

- Building Specific

I. **General Classroom:**
   - Student:
     - Student instructional seating
   - Teacher:
     - Instructional tools
       - i.e. furniture type – desks, storage units, organizational items

II. **Specialty Rooms:** (i.e. Art, Music, P.E., LGI)

III. **Library/Media Centers:**

Instructional Equipment

- Building Specific:

IV. **Main Office/Administrative Spaces:**

V. **Cafeteria:**

District Wide:

A. Athletics
B. Fine Arts
C. Science (secondary)
D. Building Environmental Issues:
    - Lighting
    - Windows
    - Carpeting/flooring
    - Electronic access

Potential Projected Costs
TMP rating scale (2014= 1 &2)(2017=3)

		2014 Ratings of 1 &2	2017 Ratings of 3	2020 Ratings of 4 &5
	Total	Series 1	Series 2	Series 3
1. Facility Assessment	$ 65,080,439	$ 53,477,815	$ 11,602,624	n/a
2. Technology	$ 20,026,921	$ 12,314,695	$ 7,712,226	n/a
3. Instructional Equipment	TBD	TBD	TBD	n/a
4. Buses	$ 6,825,881	$ 1,705,253	$ 2,349,028	$ 2,771,600
Total Bond Request	$ 91,933,241	$ 67,497,763	$ 21,663,878	$ 2,771,600

Potential Projected Costs
TMP rating scale (2014= 1 &2)(2017=3)(2020=4&5)

		2014 Ratings of 1 &2	2017 Ratings of 3	2020 Ratings of 4 &5
	Total	Series 1	Series 2	Series 3
1. Facility Assessment	$ 72,572,786	$ 53,477,815	$ 11,602,624	$ 7,492,347
2. Technology	$ 28,325,582	$ 12,314,695	$ 7,712,226	$ 8,298,662
3. Instructional Equipment	TBD	TBD	TBD	TBD
4. Buses	$ 6,825,881	$ 1,705,253	$ 2,349,028	$ 2,771,600
Total Bond Request	$ 107,724,249	$ 67,497,763	$ 21,663,878	$ 18,562,609

Schedule of Estimated Millage Needed to Retire Bonded Debt

		Mills Needed	
Tax Year	Fiscal Year End	$75 M Issue	$95 M Issue
2012	6/30/2013	4.95	4.95
2013	6/30/2014	4.50	4.50
2014	6/30/2015	3.96	4.00
2015	6/30/2016	3.96	4.00
2016	6/30/2017	3.93	4.00
2017	6/30/2018	3.97	4.00
2018	6/30/2019	3.97	4.00
2019	6/30/2020	3.91	4.00
2020	6/30/2021	3.92	4.00
2021	6/30/2022	3.85	3.94
2022	6/30/2023	3.79	3.85
2023	6/30/2024	3.71	3.75
2024	6/30/2025	3.05	3.63
2025	6/30/2026	2.99	3.54
2026	6/30/2027	2.09	3.11
2027	6/30/2028	2.04	3.03
2028	6/30/2029	1.08	1.83
2029	6/30/2030	1.05	1.77
2030	6/30/2031	1.02	1.70
2031	6/30/2032	0.98	1.62
2032	6/30/2033	0.35	0.61
2033	6/30/2034	0.34	0.58
2034	6/30/2035	0.32	0.56
2035	6/30/2036	0.00	0.00
2036	6/30/2037	0.00	0.00

NEXT STEPS

Purchasing Department
Facility Operations

RFP 9756

RE: Information Technology Architect Services

ADDENDUM # 3 – April 1, 2013

The Bidding Documents are modified, supplemented or augmented as follows, and this Addendum is hereby made a part of the proposed Contract Documents.

Question # 1

Will the Technology Designer (TD) be responsible for preparing the bond forms and submitting them to the State?

Answer # 1

No, the Technology Designer will not be responsible for preparing the bond forms.

Question # 2

Is the TD responsible for attending the meetings with bond counsel and at the State?

Answer # 2

No, the Technology Designer will not be responsible for attending the meetings with bond counsel and at the State.

Question # 3

If the project bids exceed the detailed design cost estimate, will the TD be responsible to redesign and rebid at their cost?

Answer # 3

Yes, if the project bids exceed the detailed design cost estimate it will be the responsibility of the Technology Designer to redesign and rebid at their cost.

Question # 4

Item B of the deliverables indicates monthly and bi-weekly status reports are required during implementation. Are we to assume that attendance to the bi-weekly meetings is the maximum level of on-site attendance requested of the Technology Designer? If not, what level of on-site attendance will be required?

Answer # 4

Attendance will be necessary as required to fulfill the obligation as stated in the RFP specifications.

Question # 5

Which of the following type of contracts is the District going to mandate that the vendor of the different technology systems sign:
A. AIA contract
B. TSD P.O.
C. Vendor's own contract

Answer # 5

At this time, the District would mandate an AIA Contract.

Question # 6

If AIA is selected, is the Technology Designer responsible for writing the AIA contract?

Answer # 6

At this time, if the District does mandate an AIA Contract it would be the responsibility of the Technology Designer to prepare the contract.

Question # 7

If the vendor's own contract is selected, is the Technology Designer responsible for reviewing the contract and obtaining legal counsel to review it?

Answer # 7

Yes, if the Technology Designer finds it necessary as required to fulfill the obligation as stated in the RFP specifications.

Question # 8

If our insurance coverage does not meet the District's requirements, will the cost to secure the requested levels be a reimbursable cost?

Answer # 8

No, the cost to secure the insurance requirement as specified in the RFP is not a reimbursable cost.

Tabulation - RFP 9756
Information Technology Architect Services

Barton Malow Company

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		4.75 - 5.85%
$5,000,000 to $10,000,000		4.75 - 5.85%
$10,000,000 to $15,000,000		4.75 - 5.85%
$15,000,000 to $20,000,000		4.75 - 5.85%
$20,000,000 to $25,000,000		4.75 - 5.85%
Greater than $25,000,000		4.75 - 5.85%

** Note: If awarded both the CM and Technology portions, our Technology Design Cost is reduced to 2.5%.

Communications by Design, Inc.

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		9% - 7.5%
$5,000,000 to $10,000,000		7.49% - 6.5%
$10,000,000 to $15,000,000		6.49% - 5.5%
$15,000,000 to $20,000,000		5.49% - 4.5%
$20,000,000 to $25,000,000		4.49% - 4.0%
Greater than $25,000,000		4.49% - 4.0%

Fanning/Howey Associates, Inc.

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		7.8% - 6.4%
$5,000,000 to $10,000,000		6.5% - 5.8%
$10,000,000 to $15,000,000		5.8% - 5.2%
$15,000,000 to $20,000,000		5.2% - 4.6%
$20,000,000 to $25,000,000		4.6% - 4.2%
Greater than $25,000,000		3.95%

Tabulation - RFP 9756
Information Technology Architect Services

Integrated Design Solutions, LLC

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		4.54%
$5,000,000 to $10,000,000		4.54%
$10,000,000 to $15,000,000		4.54%
$15,000,000 to $20,000,000		4.54%
$20,000,000 to $25,000,000		4.54%
Greater than $25,000,000		4.54%

Plante & Moran, PLLC

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		4.75 - 4.9%
$5,000,000 to $10,000,000		4.45 - 4.6%
$10,000,000 to $15,000,000		4.1 - 4.3%
$15,000,000 to $20,000,000		3.9 - 4.1%
$20,000,000 to $25,000,000		3.5 - 3.7%
Greater than $25,000,000		2.8 - 3.5%

Mix of technoogies and phasing will determine the actual percentage within the range.

Secant Technologies

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		5.00%
$5,000,000 to $10,000,000		4.75%
$10,000,000 to $15,000,000		4.50%
$15,000,000 to $20,000,000		4.25%
$20,000,000 to $25,000,000		4.00%
Greater than $25,000,000		3.75%

Tabulation - RFP 9756
Information Technology Architect Services

SHW Group, LLC

Estimated Value		Percentage Fee
$1,000,000 to $5,000,000		5% - 4%
$5,000,000 to $10,000,000		4% - 3.75%
$10,000,000 to $15,000,000		3.75%
$15,000,000 to $20,000,000		3.50%
$20,000,000 to $25,000,000		3.50%
Greater than $25,000,000		3.50%