# **Smart Schools Investment Plan -**

SSIP Overview

1.	Plea	ase enter the name of the person to contact regarding this submission.
	Doug	glas Dailey
	1a.	Please enter their phone number for follow up questions.
		716-542-5055
	1b.	Please enter their e-mail address for follow up contact.
		dadailey@akronschools.org
2.		ase indicate below whether this is the first submission, a new submission or an amended submission of a art Schools Investment Plan.
		First submission
3.	Plar per wire Plar Edu By (	New York State public school districts are required to complete and submit a District Instructional Technology in survey to the New York State Education Department in compliance with Section 753 of the Education Law and Part 100.12 of the Commissioner's Regulations. Districts that include investments in high-speed broadband or eless connectivity and/or learning technology equipment or facilities as part of their Smart Schools Investment in must have a submitted and approved Instructional Technology Plan survey on file with the New York State cation Department.  Schecking this box, you certify that the school district has an approved District Instructional Technology Plan vey on file with the New York State Education Department.
	<b>2</b>	District Educational Technology Plan Submitted to SED and Approved
4.	pare dist By € box	suant to the requirements of the Smart Schools Bond Act, the planning process must include consultation with ents, teachers, students, community members, other stakeholders and any nonpublic schools located in the rict.  Checking the boxes below, you are certifying that you have engaged with those required stakeholders. Each must be checked prior to submitting your Smart Schools Investment Plan.  Parents
		Teachers Students
	₩.	Community members
	4a.	If your district contains non-public schools, have you provided a timely opportunity for consultation with these stakeholders?
		<ul> <li>□ Yes</li> <li>□ No</li> <li>☑ N/A</li> </ul>
5.		tify that the following required steps have taken place by checking the boxes below: Each box must be checked r to submitting your Smart Schools Investment Plan.
	¥ .	The district developed and the school board approved a preliminary Smart Schools Investment Plan.  The preliminary plan was posted on the district website for at least 30 days. The district included an address to which any written comments on the plan should be sent.  The school board conducted a hearing that enabled stakeholders to respond to the preliminary plan. This hearing may have occured as part of a normal Board meeting, but adequate notice of the event must have been provided through local media and the district website for at least two weeks prior to the meeting.  The district prepared a final plan for school board approval and such plan has been approved by the school board.
		The final proposed plan that has been submitted has been posted on the district's website.

04/25/2016 01:30 PM Page 1 of 12

#### **Smart Schools Investment Plan -**

SSIP Overview

5a. Please upload the proposed Smart Schools Investment Plan (SSIP) that was posted on the district's website. Note that this should be different than your recently submitted Educational Technology Survey. The Final SSIP, as approved by the School Board, should also be posted on the website and remain there during the course of the projects contained therein.

Final Smart Schools Investment Plan - wireless infrastructure.pdf

6. Please enter an estimate of the total number of students and staff that will benefit from this Smart Schools Investment Plan based on the cumulative projects submitted to date.

1,600

- 7. An LEA/School District may partner with one or more other LEA/School Districts to form a consortium to pool Smart Schools Bond Act funds for a project that meets all other Smart School Bond Act requirements. Each school district participating in the consortium will need to file an approved Smart Schools Investment Plan for the project and submit a signed Memorandum of Understanding that sets forth the details of the consortium including the roles of each respective district.
  - ☐ The district plans to participate in a consortium to partner with other school district(s) to implement a Smart Schools project.
- 8. Please enter the name and 6-digit SED Code for each LEA/School District participating in the Consortium.

Partner LEA/District	SED BEDS Code
(No Response)	(No Response)

9. Please upload a signed Memorandum of Understanding with all of the participating Consortium partners.

(No Response)

10. Your district's Smart Schools Bond Act Allocation is:

\$1,255,318

11. Enter the budget sub-allocations by category that you are submitting for approval at this time. If you are not budgeting SSBA funds for a category, please enter 0 (zero.) If the value entered is \$0, you will not be required to complete that survey question.

	Sub- Allocations
School Connectivity	144,018
Connectivity Projects for Communities	0
Classroom Technology	0
Pre-Kindergarten Classrooms	0
Replace Transportable Classrooms	0
High-Tech Security Features	0
Totals:	144,018.00

04/25/2016 01:30 PM Page 2 of 12

#### **Smart Schools Investment Plan -**

School Connectivity

 In order for students and faculty to receive the maximum benefit from the technology made available under the Smart Schools Bond Act, their school buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day. Smart Schools Investment Plans must demonstrate that:

- sufficient infrastructure that meets the Federal Communications Commission's 100 Mbps per 1,000 students standard currently exists in the buildings where new devices will be deployed, or
- is a planned use of a portion of Smart Schools Bond Act funds, or
- is under development through another funding source.

Smart Schools Bond Act funds used for technology infrastructure or classroom technology investments must increase the number of school buildings that meet or exceed the minimum speed standard of 100 Mbps per 1,000 students and staff within 12 months. This standard may be met on either a contracted 24/7 firm service or a "burstable" capability. If the standard is met under the burstable criteria, it must be:

- 1. Specifically codified in a service contract with a provider, and
- 2. Guaranteed to be available to all students and devices as needed, particularly during periods of high demand, such as computer-based testing (CBT) periods.

Please describe how your district already meets or is planning to meet this standard within 12 months of plan submission.

This upgrade to our wireless infrastructure will replace outdated access points (802.11n) allowing for more connections at a higher speed. The devices will be able to connect to our fiber backbone with increased reliability. Our total student enrollment is 1,400. It is the district's intention to use SSBA money for a district wide (K-12) 1:1 intiative. Our current access points are located in the hallways approximately three classrooms apart. This SSIP is designed to put an access point in every instructional room and multiple access points in larger areas to handle the increased number of devices. The district currently has a 1Gb connection to the internet through Erie 1 BOCES and 1Gb connections to the desktop and access points. New switches are being purhased through e-rate funding which will continue the 1Gb connections meeting the required standards.

- 1a. If a district believes that it will be impossible to meet this standard within 12 months, it may apply for a waiver of this requirement, as described on the Smart Schools website. The waiver must be filed and approved by SED prior to submitting this survey.
  - □ By checking this box, you are certifying that the school district has an approved waiver of this requirement on file with the New York State Education Department.
- 2. Connectivity Speed Calculator (Required)

		100 Kbps	Divide by 1000 to Convert to Required Speed in Mb	Current Speed in Mb	Speed to be Attained Within 12 Months	Expected Date When Required Speed Will be Met
Calculated Speed	1,400	140,000	140	1000	1000	now

3. Briefly describe how you intend to use Smart Schools Bond Act funds for high-speed broadband and/or wireless connectivity projects in school buildings.

This SSIP is designed to purchase the necessary equipment for a robust wireless infrastructure including internal access points, external access points, and hardware controllers. These new devices will be replacing older model access points enabling more reliable connections at higher speeds. Installation will be handled by district staff. Our district is one large campus with all grade levels existing at one site (K-12). The external access points will allow us to push our wireless signal into a larger area surrounding the campus allowing students to stay connected to our network while they are outside the physical walls. Wireless access availability at the athletic fields will allow our physical education teachers the ability to take attendance, stay connected via email, and utilize fitness software while outside with the students. Our transportation garage is located near our football field where students are frequently taken during physical education classes. An external access point at the transportation garage is meant to insure a strong wireless signal in those areas.

04/25/2016 01:30 PM Page 3 of 12

#### **Smart Schools Investment Plan -**

School Connectivity

4. Briefly describe the linkage between the district's District Instructional Technology Plan and the proposed projects. (There should be a link between your response to this question and your response to Question 1 in Part E. Curriculum and Instruction "What are the district's plans to use digital connectivity and technology to improve teaching and learning?)

The primary goal of our technology plan is the implementation of a 1:1 intiative. In order for this intiative to be successful a consistently reliable infrastructure is necessary. Our goal is to allow students access to our web-based learning management system from anywhere in the district, anytime, from any device. This increased access to educational resources will create greater student success.

5. If the district wishes to have students and staff access the Internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust Wi-Fi network in place that has sufficient bandwidth to meet user demand.

Please describe how you have quantified this demand and how you plan to meet this demand.

This SSIP will purchase 190 802.11ac internal access points which will put one access point in every instructional room and multiple access points in larger areas (auditorium, gyms, cafeterias, etc...). Also included in this project are 4 external access points pushing network accessibility out from the physical building to include athletic fields, broadcaster booth, and trasportation garage. This increased Wi-Fi area of coverage will connect to the district backbone at 1000Mbs.

6. As indicated on Page 5 of the guidance, the Office of Facilities Planning will have to conduct a preliminary review of all capital projects, including connectivity projects.

Project Number			
14-21-01-04-7-999-BA1			

7. Certain high-tech security and connectivity infrastructure projects may be eligible for an expedited review process as determined by the Office of Facilities Planning.

Was your project deemed eligible for streamlined review?

Yes

7a. Districts that choose the Streamlined Review Process will be required to certify that they have reviewed all installations with their licensed architect or engineer of record and provide that person's name and license number.

The licensed professional must review the products and proposed method of installation prior to implementation and review the work during and after completion in order to affirm that the work was code-compliant, if requested.

- ☑ I certify that I have reviewed all installations with a licensed architect or engineer of record.
- 8. Include the name and license number of the architect or engineer of record.

Name	License Number
Tom McElheny	59176

9. If you are submitting an allocation for School Connectivity complete this table.
Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

04/25/2016 01:30 PM Page 4 of 12

# **Smart Schools Investment Plan -**

**School Connectivity** 

	Sub- Allocation
Network/Access Costs	144,018
Outside Plant Costs	(No Response)
School Internal Connections and Components	(No Response)
Professional Services	(No Response)
Testing	(No Response)
Other Upfront Costs	(No Response)
Other Costs	(No Response)
Totals:	144,018.00

10. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
type.				
Repeat to add another item under				
each type.				
Network/Access Costs	WLAN 9100 indoor access points	190	732	139,080
Network/Access Costs	WLAN 9100 outdorr access points	4	995	3,980
Network/Access Costs	WLAN 9100 antennas 30 degree	1	646	646
Network/Access Costs	WLAN 9100 antennas 90 degree	3	104	312

04/25/2016 01:30 PM Page 5 of 12

Briefly describe how you intend to use Smart Schools Bond Act funds for high-speed broadband and/or wireless

### **Smart Schools Investment Plan -**

Customer Premises Equipment

**Professional Services** 

Other Upfront Costs

Testing

Totals:

Other Costs

1.

Community Connectivity (Broadband and Wireless)

	connectivity projects in the community.			
	(No Response)			
2.	Please describe how the proposed project(s) will promot access to the Internet in a manner that enhances student and/or school building.			
	(No Response)			
3.	Community connectivity projects must comply with all the (building and related permits are not required prior to play	-		
	☐ I certify that we will comply with all the necessary local building cod	les and regulatio	ns.	
4.	Please describe the physical location of the proposed in	vestment.		
	(No Response)			
5.	Please provide the initial list of partners participating in twith their Federal Tax Identification (Employer Identification)	the Commun tion) number	ity Connectivity Broadband Project, along	
	Project Partners	Federal ID #		
	(No Response)	(No Respon	se)	
6.	If you are submitting an allocation for Community Conne	ectivity, com	plete this table	
	Note that the calculated Total at the bottom of the table n	•		
	entered in the SSIP Overview overall budget.	•		
			Sub-Allocation	
	Network/Access Costs		(No Response)	
	Outside Plant Costs		(No Response)	
	Tower Costs		(No Response)	

7. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
type.				
Repeat to add another item under				
each type.				
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

(No Response)

(No Response)

(No Response)

(No Response)

(No Response)

04/25/2016 01:30 PM Page 6 of 12

### **Smart Schools Investment Plan -**

Classroom Learning Technology

In order for students and faculty to receive the maximum benefit from the technology made available under the Smart Schools Bond Act, their school buildings must possess sufficient connectivity infrastructure to ensure that devices can be used during the school day. Smart Schools Investment Plans must demonstrate that sufficient infrastructure that meets the Federal Communications Commission's 100 Mbps per 1,000 students standard currently exists in the buildings where new devices will be deployed, or is a planned use of a portion of Smart Schools Bond Act funds, or is under development through another funding source.

Smart Schools Bond Act funds used for technology infrastructure or classroom technology investments must increase the number of school buildings that meet or exceed the minimum speed standard of 100 Mbps per 1,000 students and staff within 12 months. This standard may be met on either a contracted 24/7 firm service or a "burstable" capability. If the standard is met under the burstable criteria, it must be:

- 1. Specifically codified in a service contract with a provider, and
- 2. Guaranteed to be available to all students and devices as needed, particularly during periods of high demand, such as computer-based testing (CBT) periods.

Please describe how your district already meets or is planning to meet this standard within 12 months of plan submission.

(No Response)

- 1a. If a district believes that it will be impossible to meet this standard within 12 months, it may apply for a waiver of this requirement, as described on the Smart Schools website. The waiver must be filed and approved by SED prior to submitting this survey.
  - ☐ By checking this box, you are certifying that the school district has an approved waiver of this requirement on file with the New York State Education Department.
- 2. Connectivity Speed Calculator (Required)

	Number of Students	Multiply by 100 Kbps	Divide by 1000 to Convert to Required Speed in Mb	Current Speed in Mb	Expected Speed to be Attained Within 12 Months	Expected Date When Required Speed Will be Met
Calculated Speed	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

3. If the district wishes to have students and staff access the Internet from wireless devices within the school building, or in close proximity to it, it must first ensure that it has a robust Wi-Fi network in place that has sufficient bandwidth to meet user demand.

Please describe how you have quantified this demand and how you plan to meet this demand.

(No Response)

4. All New York State public school districts are required to complete and submit an Instructional Technology Plan survey to the New York State Education Department in compliance with Section 753 of the Education Law and per Part 100.12 of the Commissioner's Regulations.

Districts that include educational technology purchases as part of their Smart Schools Investment Plan must have a submitted and approved Instructional Technology Plan survey on file with the New York State Education Department.

□ By checking this box, you are certifying that the school district has an approved Instructional Technology Plan survey on file with the New York State Education Department.

04/25/2016 01:30 PM Page 7 of 12

### **Smart Schools Investment Plan -**

Classroom Learning Technology

Describe the devices you intend to purchase and their compatibility with existing or planned platforms or systems.
 Specifically address the adequacy of each facility's electrical, HVAC and other infrastructure necessary to install and support the operation of the planned technology.

(No Response)

- 6. Describe how the proposed technology purchases will:
  - > enhance differentiated instruction;
  - > expand student learning inside and outside the classroom;
  - > benefit students with disabilities and English language learners; and
  - > contribute to the reduction of other learning gaps that have been identified within the district.

The expectation is that districts will place a priority on addressing the needs of students who struggle to succeed in a rigorous curriculum. Responses in this section should specifically address this concern and align with the district's Instructional Technology Plan (in particular Question 2 of E. Curriculum and Instruction: "Does the district's instructional technology plan address the needs of students with disabilities to ensure equitable access to instruction, materials and assessments?" and Question 3 of the same section: "Does the district's instructional technology plan address the provision of assistive technology specifically for students with disabilities to ensure access to and participation in the general curriculum?"

(No Response)

7. Where appropriate, briefly describe how the proposed technology purchases will enhance ongoing communication with parents and other stakeholders and help the district facilitate technology-based regional partnerships, including distance learning and other efforts.

(No Response)

8. Describe the district's plan to provide professional development to ensure that administrators, teachers and staff can employ the technology purchased to enhance instruction successfully.

Note: This response should be aligned and expanded upon in accordance with your district's response to Question 1 of F. Professional Development of your Instructional Technology Plan: "Please provide a summary of professional development offered to teachers and staff, for the time period covered by this plan, to support technology to enhance teaching and learning. Please include topics, audience and method of delivery within your summary."

(No Response)

- Districts must contact the SUNY/CUNY teacher preparation program that supplies the largest number of the district's new teachers to request advice on innovative uses and best practices at the intersection of pedagogy and educational technology.
  - □ By checking this box, you certify that you have contacted the SUNY/CUNY teacher preparation program that supplies the largest number of your new teachers to request advice on these issues.
- 10. A district whose Smart Schools Investment Plan proposes the purchase of technology devices and other hardware must account for nonpublic schools in the district.

Are there nonpublic schools within your school district?

$\Delta$	e there horipublic schools within your school district:
	Yes
	No

Nonpublic Classroom Technology Loan Calculator
The Smart Schools Bond Act provides that any Classroom Learning Technology purchases made using Smart

04/25/2016 01:30 PM Page 8 of 12

### **Smart Schools Investment Plan -**

Classroom Learning Technology

Schools funds shall be lent, upon request, to nonpublic schools in the district. However, no school district shall be required to loan technology in amounts greater than the total obtained and spent on technology pursuant to the Smart Schools Bond Act and the value of such loan may not exceed the total of \$250 multiplied by the nonpublic school enrollment in the base year at the time of enactment.

See:

http://www.p12.nysed.gov/mgtserv/smart\_schools/docs/Smart\_Schools\_Bond\_Act\_Guidance\_04.27.15\_Final.pdf.

	Classroom     Technology     Sub-allocation	Enrollment		Public and	Pupil Sub-	6. Total Nonpublic Loan Amount
Calculated Nonpublic Loan Amount	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

- 12. To ensure the sustainability of technology purchases made with Smart Schools funds, districts must demonstrate a long-term plan to maintain and replace technology purchases supported by Smart Schools Bond Act funds. This sustainability plan shall demonstrate a district's capacity to support recurring costs of use that are ineligible for Smart Schools Bond Act funding such as device maintenance, technical support, Internet and wireless fees, maintenance of hotspots, staff professional development, building maintenance and the replacement of incidental items. Further, such a sustainability plan shall include a long-term plan for the replacement of purchased devices and equipment at the end of their useful life with other funding sources.
  - ☐ By checking this box, you certify that the district has a sustainability plan as described above.
- 13. Districts must ensure that devices purchased with Smart Schools Bond funds will be distributed, prepared for use, maintained and supported appropriately. Districts must maintain detailed device inventories in accordance with generally accepted accounting principles.
  - □ By checking this box, you certify that the district has a distribution and inventory management plan and system in place.
- 14. If you are submitting an allocation for Classroom Learning Technology complete this table.
  Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Interactive Whiteboards	(No Response)
Computer Servers	(No Response)
Desktop Computers	(No Response)
Laptop Computers	(No Response)
Tablet Computers	(No Response)
Other Costs	(No Response)
Totals:	

15. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure type.	Item to be Purchased	Quantity	Cost per Item	Total Cost
Repeat to add another item under each type.				
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

04/25/2016 01:30 PM Page 9 of 12

### **Smart Schools Investment Plan -**

Pre-Kindergarten Classrooms

1.	Provide information regarding how and where the district is currently serving pre-kindergarten students and justify
	the need for additional space with enrollment projections over 3 years.

(No Response)

- 2. Describe the district's plan to construct, enhance or modernize education facilities to accommodate prekindergarten programs. Such plans must include:
  - Specific descriptions of what the district intends to do to each space;
  - An affirmation that pre-kindergarten classrooms will contain a minimum of 900 square feet per classroom;
  - The number of classrooms involved;
  - The approximate construction costs per classroom; and
  - Confirmation that the space is district-owned or has a long-term lease that exceeds the probable useful life of the improvements.

(No Response)

Smart Schools Bond Act funds may only be used for capital construction costs. Describe the type and amount of
additional funds that will be required to support ineligible ongoing costs (e.g. instruction, supplies) associated with
any additional pre-kindergarten classrooms that the district plans to add.

(No Response)

5.

4. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

Project Number	
(No Response)	

If you have made an allocation for Pre-Kindergarten Classrooms, complete this table.

Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Construct Pre-K Classrooms	(No Response)
Enhance/Modernize Educational Facilities	(No Response)
Other Costs	(No Response)
Totals:	

6. To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
type.				
Repeat to add another item under				
each type.				
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

04/25/2016 01:30 PM Page 10 of 12

### **Smart Schools Investment Plan -**

Replace Transportable Classrooms

 Describe the district's plan to construct, enhance or modernize education facilities to provide high-quality instructional space by replacing transportable classrooms.

(No Response)

2. All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.

Project Number
(No Response)

 For large projects that seek to blend Smart Schools Bond Act dollars with other funds, please note that Smart Schools Bond Act funds can be allocated on a pro rata basis depending on the number of new classrooms built that directly replace transportable classroom units.

If a district seeks to blend Smart Schools Bond Act dollars with other funds describe below what other funds are being used and what portion of the money will be Smart Schools Bond Act funds.

(No Response)

4. If you have made an allocation for Replace Transportable Classrooms, complete this table.
Note that the calculated Total at the bottom of the table must equal the Total allocation for this category that you entered in the SSIP Overview overall budget.

	Sub-Allocation
Construct New Instructional Space	(No Response)
Enhance/Modernize Existing Instructional Space	(No Response)
Other Costs	(No Response)
Totals:	

To the extent possible, please detail the type, quantity, per unit cost and total cost of the eligible items under each sub-category.

Select the allowable expenditure	Item to be purchased	Quantity	Cost per Item	Total Cost
type.				
Repeat to add another item under				
each type.				
(No Response)	(No Response)	(No Response)	(No Response)	(No Response)

04/25/2016 01:30 PM Page 11 of 12

## **Smart Schools Investment Plan -**

High-Tech Security Features

1.	Describe how you intend to use Smart Schools Bond Act funds to install high-tech security features in school buildings and on school campuses.								
	(No Response)								
2.	All plans and specifications for the erection, repair, enlargement or remodeling of school buildings in any public school district in the State must be reviewed and approved by the Commissioner. Districts that plan capital projects using their Smart Schools Bond Act funds will undergo a Preliminary Review Process by the Office of Facilities Planning.								
	Project Number								
	(No Response)								
3.	Was your project deemed eligib	ale for streamlined Review	?						
<b>.</b>	☐ Yes ☐ No								
4.	Include the name and license no	umber of the architect or e	engineer o	of record.					
	Name			License Number					
	(No Response)		(No Resp	onse)					
	Note that the calculated Total at entered in the SSIP Overview or		ust equal	the Total alloca	tion for this cate	gory that you			
	Ossitel leteraine Ossovite Businet (O	(and and Davidson)		Sub-Allocation					
	Capital-Intensive Security Project (St	tandard Review)		(No Response)					
	Electronic Security System				(No Response)				
	Entry Control System			(No Response)					
	Approved Door Hardening Project			(No Response)					
	Other Costs			(No Response)					
	Totals:								
6.	To the extent possible, please of sub-category.	letail the type, quantity, pe	er unit cos	t and total cost	of the eligible it	ems under each			
	Select the allowable expenditure type. Repeat to add another item under each type.	Item to be purchased		Quantity	Cost per Item	Total Cost			
	(No Response)	(No Response)		(No Response)	(No Response)	(No Response)			

04/25/2016 01:30 PM Page 12 of 12