2010

Pre-Design Scoping Study

Data

Needs

Analysis

Pike County U.S. 460 Curve Revision

Near Millard Middle School

M.P. 7.10 to M.P. 7.75

Item Number 12-8631.00

Prepared by:

Kentucky Transportation Cabinet

Department of Highways District 12

Division of Planning

12/6/2010

Table of Contents

PRELIMINARY SCOPING STUDY

Pike County
U.S. 460 Curve Revision Near Millard Middle School
M.P. 7.100 to M.P. 7.750
Item No. 12-8631.00

I. INTRODUCTION

A. Study Purpose

The purpose of this Preliminary Scoping Study is to provide support early in the Project Development phase in order to help keep the project on schedule while defining all concerns for the project. This report will provide this support by the following:

(1) Better define the intent of the project before the design process actually begins.
(2) Initiate many project requests for information needed to begin the actual design.
(3) Develop preliminary environmental overview in order to begin the environmental process.
(4) Document any early public and agency recommendations or commitments if they exist.
(5) Discuss possible alternatives for the design of the project as suggested by District Project Team.

B. Location

Subject curve revision project is located on U.S. 460 (See Exhibits 1 and 2) near the Millard Middle School, between M.P. 7.100 and M.P. 7.750. It (See Exhibits 3 - 6) is located in the Millard 058 USGS Quadrant (See Exhibit 7) in mountainous terrain (See Exhibit 8).

II. PROJECT PURPOSE AND NEED

A. Problem Statement

1. Capacity

Adequacy Rating (VSF 2009 = 0.71)

2010 ADT = 10000

A 14 hour (6:00 a.m. to 8:00 p.m.) specific vehicle count at the project site was conducted on November 5, 2010 with the following results –

Total vehicles - 8623
All Trucks (non-passenger) - 449 (5% of total)
Coal Trucks - 329
Left turns from U.S. 460 into Millard Middle School - 258
Right turns from U.S. 460 into Millard Middle School - 462

Forecasted ADT to be determined

2. System Linkage

   State System = State Primary

   Functional Classification = Rural Principal Arterial

3. Transportation Demand

   a. Long Range Plan

      The U.S. 460 corridor is currently being relocated. The new route will bypass this project. However, the entire corridor relocation is not scheduled to be open to traffic until approximately 2020. Even with the relocation, the current U.S. 460 route will still be heavily traveled due to mining operations, commuters, and school traffic.

   b. UPL

      This is a high priority project on UPL.

4. Social Demands (or Economic Development)

   Schools = School buses make a total of 80 turns into and out of the school daily.

5. Safety

   a. Crash Analysis (See Appendix 1)

      A Crash Analysis from December 1, 2005 to December 1, 2010 resulted in 33 crashes. Of these 33 crashes there were 2 fatalities, 66 injuries, and 18 property damage accidents. The types of crashes can be broken down as follows:

      19 Lost Control
      1 Angle
      3 Head –On
      7 Rear – End
      3 Sideswipe

      This 0.65 mile section of US 460 has a critical rate factor of 0.852. After reviewing the accident reports, there were only 3 accidents that directly involved school traffic; however, 2 of the 3 involved school buses (Exhibit 22). Adding a left turn lane for school traffic could have potentially kept one of the accidents from happening, but not the other two. A left turn lane would reduce congestion, especially in the mornings, around the curve. It would also reduce left turn conflicts. With improvements to the curve, the 19 accidents that were caused by vehicles losing control could possibly be reduced by a great amount. Also, a high number of accidents were on wet pavement, so it may be beneficial to consider a high friction surface when calculating the pavement design.

b. Adequacy Rating

CRF 2010 = 0.852
Adequacy Rating 2009 = 77.9

6. Roadway Deficiencies

a. Original Plans (See Exhibits 15 - 18)

b. Roadway Characteristics (HIS and Actual)

Existing Geometrics

U.S. 460	HIS	Observation
Lane Width	12 ft.	12 ft.
Shoulder Width	1 ft.	1 ft.
Avg. ROW Width	60 ft.	60 ft.
Median Width	N/A	N/A
Lanes	2	2

Posted Speed Limit – 45 M.P.H.
Coal Haul – Over 664,112 tons annually

Curve Data
Δ = 91d 19m LT
R = 287.9'
L = 486.6'

Adequacy Rating IRI Pavement Roughness 2009 = 99

B. Project Description

1. Project Status

a. Available History

Subject project has been a high priority project for 10 years on UPL.

b. Programming Schedule

Subject project is currently scheduled in Kentucky's 2010 – 2012 Biennial Highway Plan for Pike County as Item No. 12-8631.00.

Phase	**Fiscal Year**	**Estimate**
Design	2011	$600,000
ROW	2011	$900,000
Utilities	2011	$500,000
Construction	2011	$5,000,000
		$7,000,000

c. Public Involvement

As of the writing of this study, public involvement has not been performed. The project team will schedule a public meeting once the preliminary plans are developed for each alternative during Phase I Design.

d. Agency Coordination

A Project Identification Form for this project was first prepared by the Big Sandy Area Development District in 2004.

Contact has been made with the Pike County Board of Education to make them aware of the project's development and how it may impact school facilities.

e. Project Sponsor

The community has been very vocal in seeking improvement for the curve, especially due to the accidents near the school. Representative Leslie Combs (House District 94) and other elected officials were successful in obtaining funding for this project in the 2010 Biennial Highway Plan.

2. Purpose and Need

a. Executive Summary

Due to the accident history and traffic volumes at this location, improvements are to be made that will enhance sight distance, more satisfactorily accommodate traffic volumes, and address access to residential, commercial, and educational facilities within the project limits.

b. Background Information

The purpose of this project is to improve safety and correct geometric deficiencies on U.S. 460 at Goff Curve (approximate milepoint 7.4) near Millard Middle School. Over the last 5 years, there have been 33 crashes and two fatalities at or near this curve. In addition, two crashes have occurred in the last year involving school buses, one of which led to serious injuries to the bus driver (Exhibit 22). U.S. 460 at the project site is a Rural Principal Arterial roadway with a current ADT of 10000. A significant percentage of this ADT is truck traffic, with numerous coal and gravel trucks passing through this section of U.S. 460. The existing roadway has two 12' lanes with 1' shoulders. The existing curve has a very sharp radius, about 288', which has led to the placement of 20 mph curve warning signs, chevrons, and other warning signs. Millard Middle School and the Millard Area Vocational School are also located within the project limits. The safe passage of traffic into and out of the school area is an important consideration in the improvement of this section of roadway.

This project was established in the Kentucky 2010-2012 Biennial Highway Plan. The project will utilize state funds and has been deemed a High Priority Project due especially to the safety needs of the roadway. The project may be required to progress on an accelerated schedule due to its High Priority status. Some important issues that must be addressed are: geotechnical issues for both a potential cut into the mountain and potential fill into the floodplain areas; potential excess material sites; floodplain issues along the Russell Fork of the Big Sandy River; possible turn lane into the school facilities; addressing of access to residences and a business that are located within the project limits; constructability and maintenance of traffic; and other right of way, utility relocation, and environmental impacts.

III. Preliminary Environmental Overview

A. Ecological Overview

The overview process consisted of a windshield survey of the entire length of the project. Some file research was also conducted as part of the District's overview.

B. Socioeconomic / Environmental Justice

There should be no major socioeconomic concerns on this project. However, some residences could potentially be affected by some alignments. Relocations may become an issue as a result of this. However, the entire community will benefit in the resulting safety improvements of a reconstructed roadway. Therefore, the construction of this project would not result in a disproportionate negative impact to low-income or minority populations of the area.

C. Cultural / Historic Resources

No Section 106 notifications have been generated from the District at this point. If the historical survey indicates that there may be an impact to historical sites, then the 106 process will be started.

D. Potential UST/HazMat

At the time of this overview, no UST/HazMat issues were noted in the project area.

E. Air

Pike County is in attainment for all transportation-related air pollutants. Therefore, the project is not expected to adversely affect the air quality of the region.

This project will generate minimal air quality impacts and has not been linked with any special MSAT concerns.

F. Noise

This project is a realignment of an existing roadway that will correct geometric deficiencies. No traffic is expected to be added and capacity of the existing facility would only have minor changes. Therefore noise impacts are not anticipated.

G. Aquatic Ecosystems

A 401 permit should be anticipated. An excess material site will be needed which will likely result in having an impact to a jurisdictional water. In-lieu fees are also possible as a result from this.

H. Threatened and Endangered Species

The Indiana Bat (Myotis Sodalis) is the only species listed as threatened or endangered in the project area. Tree Cutting Restrictions can be implemented or the Indiana Bat Conservation Fund (IBCF) can be utilized to compensate for any potential habitat loss that may occur as a result of this project.

I. Section 4(F)

If this project remains state-funded, 4(f) will not be applicable.

IV. Preliminary Project Information

A. Possible Alternatives

1. No Build

The No-Build Alternative is simply to leave the existing curve as it is. No improvements would be constructed, no money would be spent, and crashes would not be expected to decrease.

2. 45 MPH Curve Redesign Only

The Curve Redesign Only Alternative would result in removing some of the hillside on the inside of the curve along the westbound edge line (Exhibit 19). The roadway features would be chosen using the criteria for a Rural Arterial Road and Mountainous Terrain with an ADT of over 2000 and design speed limit of 45 MPH, which would match the posted speed limit of this section of U.S. 460. This would require the construction of a minimum of two 12 foot lanes with an 8 foot shoulder and 6 foot ditch on a 5:1 slope. The radius of the curve will be

lengthened to 600 feet and reconstructed to an 8% super-elevation to allow for a design speed of 45 MPH. This alternative will relocate the current alignment of the highway within the curve to the inside of the curve and 180 feet into the hillside. The project length would be approximately 2600 feet (M.P. 7.15 to M.P. 7.7).

The advantages of this alternative would be that sight distance for both eastbound and westbound traffic would be greatly improved when compared to the existing situation. By reworking the super-elevation and lengthening the curve radius, the number of crashes involving losing control in the curve should be decreased dramatically. This alternative would not affect the school, nor should it affect utilities along the eastbound lane.

Even though this alternative would provide much improved sight distance, the lack of left and right turn lanes would still result in the potential for collisions. This alternative would require significant excavation of the hillside, which in turn would require a larger waste area. It may be difficult to find a feasible waste area of that capacity near the project limits. This alternative has the potential to affect 7 to 8 parcels with 4 relocations possible. A cemetery would also have to be relocated.

3. 45 MPH Curve Redesign with Left and Right Turn Lanes

The Curve Redesign with Left and Right Turn Lanes Alternative would result in removing some of the hillside on the inside of the curve along the westbound edge line (Exhibit 19). The roadway features would be chosen using the criteria for a Rural Arterial Road and Mountainous Terrain with an ADT of over 2000 and design speed limit of 45 MPH, which would match the posted speed limit of this section of U.S. 460. This would require the construction of a minimum of two 12 foot lanes with an 8 foot shoulder and 6 foot ditch on a 5:1 slope. The radius of the curve will be lengthened to 600 feet and reconstructed to an 8% super-elevation to allow for a design speed of 45 MPH. This alternative will relocate the current alignment of the highway within the curve to the inside of the curve and 180 feet into the hillside. The project length would be approximately 2600 feet (M.P. 7.15 to M.P. 7.7). The left turn lane should be constructed with at least 340 feet for deceleration to stop from 45 MPH. Using a 100 foot taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the lane length of 440 feet. If left turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. The right turn lane should be constructed with at least 340 feet for deceleration to stop from 45 MPH. Using a 100 foot taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the overall lane length of 440 feet. If right turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. Alternative designs should attempt to reduce overall right of way and construction costs while improving safety and operations at the project site.

The advantages of this alternative would be that sight distance for both eastbound and westbound traffic would be greatly improved and the potential for rear-end collisions caused by left-turning vehicles should be significantly reduced. By reworking the super-elevation and lengthening the curve radius, the number of crashes involving losing control in the curve should be decreased dramatically. With the addition of left and right turn lanes, traffic congestion should decrease around the school. This alternative has a greater potential to reduce crashes than the Curve Redesign Only alternative.

This alternative would require significant excavation of the hillside, which in turn would require a larger waste area. It may be difficult to find a feasible waste area of that capacity near the project limits. More parcels will be affected in order to gain roadway width for the turn lanes. This alternative has the potential to affect 9 to 10 parcels with 4 to 6 relocations possible. A cemetery would also have to be relocated.

Alternative 3

Phase	**Estimate**
Design	$1,100,000
ROW	$1,770,000
Utilities	$745,000
Construction	$3,900,000
	$7,515,000

4. 45 MPH Curve Redesign With Alignment Shift Toward School and Constructing Left and Right Turn Lanes

This alternative would result in removing some of the hillside on the inside of the curve along the westbound edge line. The current alignment of the roadway will be shifted east toward the school property 30 feet and a 550 foot long retaining wall would be erected to allow construction of the new lanes (Exhibit 19). The roadway features would be chosen using the criteria for a Rural Arterial Road and Mountainous Terrain with an ADT of over 2000 and design speed limit of 45 MPH, which would match the posted speed limit of this section of U.S. 460. This would require the construction of a minimum of two 12 foot lanes with an 8 foot shoulder and 6 foot ditch on a 5:1 slope. The radius of the curve will be lengthened to 600 feet and reconstructed to an 8% super-elevation to allow for a design speed of 45 MPH. This alternative will relocate the current alignment of the highway within the curve to the inside of the curve and 150 feet into the hillside. The project length would be approximately 3000 feet (M.P. 7.1 to M.P. 7.7). The left turn lane should be constructed with at least 340 feet for deceleration to stop from 45 MPH. Using a 100 foot taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the lane length of 440 feet. If left turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. The right turn lane should be constructed with at least 340 feet for deceleration to stop from 45 MPH. Using a 100 foot

taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the overall lane length of 440 feet. If right turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. Alternative designs should attempt to reduce overall right of way and construction costs while improving safety and operations at the project site.

The advantages of this alternative would be that sight distance for both eastbound and westbound traffic would be greatly improved and the potential for rear-end collisions caused by left-turning vehicles should be significantly reduced. By reworking the super-elevation and lengthening the curve radius, the number of crashes involving losing control in the curve should be decreased dramatically. With the addition of left and right turn lanes, traffic congestion should decrease around the school. Due to the proposed alignment shift, this alternative has a lesser impact on traffic during construction. A reconstructed school entrance would allow better access to the school and allow vehicles exiting the school more sight distance and easier access to U.S. 460. This alternative would more closely achieve the goal of a balanced project than some of the other alternatives, especially due to the alignment shift, though an excess material site will still be needed. By constructing the retaining wall, less right-of-way will need to be acquired from the school.

This alternative would require significant excavation of the hillside. It also has the potential to affect 5 to 6 parcels with 1 to 2 relocations possible. A cemetery would also have to be relocated. Though use of a retaining wall near the school helps to minimize excavation, there will be an additional construction cost for the wall.

Alternative 4

Phase	**Estimate**
Design	$1,100,000
ROW	$865,000
Utilities	$755,000
Construction	$3,900,000
	$6,620,000

5. 35 MPH Curve Redesign With Alignment Shift Toward School and Constructing Left and Right Turn Lanes

This alternative would result in removing very little of the hillside on the inside of the curve along the westbound edge line. The current alignment of the roadway will be shifted east toward the school property 30 feet and a 550 foot long retaining wall would be erected to allow construction of the new lanes (Exhibit 19). The roadway features would be chosen using the criteria for a Rural Arterial Road and Mountainous Terrain with an ADT of over 2000 and design speed limit of 35 MPH. This would require the construction of a minimum of two 12 foot lanes with an 8 foot shoulder and 6 foot ditch on a 5:1 slope. The radius of the

curve will be lengthened to 350 feet and reconstructed to an 8% super-elevation to allow for a design speed of 35 MPH. This alternative will relocate the current alignment of the highway within the curve to the inside of the curve and 20 feet into the hillside. The project length would be approximately 3000 feet (M.P. 7.1 to M.P. 7.7). The left turn lane should be constructed with at least 340 feet for deceleration to stop from 35 MPH. Using a 100 foot taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the lane length of 440 feet. If left turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. The right turn lane should be constructed with at least 340 feet for deceleration to stop from 35 MPH. Using a 100 foot taper and the 340 foot deceleration length, the turn lane should be a minimum of 440 feet in order to allow for all deceleration to be in the turn lane, not within the taper. A minimum storage length of 75 feet will be added to the overall lane length of 440 feet. If right turn volume exceeds 200 vehicles per hour, detailed storage length analysis should be conducted. Alternative designs should attempt to reduce overall right of way and construction costs while improving safety and operations at the project site.

The advantages of this alternative would be that sight distance for both eastbound and westbound traffic would be greatly improved and the potential for rear-end collisions caused by left-turning vehicles should be significantly reduced. By reworking the super-elevation and lengthening the curve radius, the number of crashes involving losing control in the curve should be decreased dramatically. With the addition of left and right turn lanes, traffic congestion should decrease around the school. Due to the proposed alignment shift, this alternative has a lesser impact on traffic during construction. A reconstructed school entrance would allow better access to the school and allow vehicles exiting the school more sight distance and easier access to U.S. 460. Excavation of the hillside is minimal due to the alignment shift. By constructing the retaining wall, less right-of-way will need to be acquired from the school. Only 3 to 4 parcels with 1 to 2 relocations possible are needed with this alternative. The construction limits for this alternative may avoid impact to the cemetery.

A disadvantage of this alternative is the 35 MPH design speed. Though use of a retaining wall near the school helps to minimize excavation, there will be an additional construction cost for the wall.

Alternative 5

Phase	**Estimate**
Design	$1,100,000
ROW	$535,000
Utilities	$685,000
Construction	$3,000,000
	$5,320,000

6. Cut-through Mountain With No Turn Lanes

The Cut-through Mountain With No Turn Lanes Alternative would result in constructing a cut-through with vertical curve. The roadway features would be chosen using the criteria for a Rural Arterial Road and Mountainous Terrain with an ADT of over 2000 and design speed limit of 55 MPH. This would require the construction of a minimum of two 12 foot lanes with an 8 foot shoulder and 6 foot ditch on a 5:1 slope. A curve will be constructed with a 965' radius and 8% super-elevation to allow for a design speed of 55 MPH. This alternative will relocate the current alignment of the highway to 900 feet into the hillside. The project length would be approximately 4000 feet (M.P. 7.0 to M.P. 7.8). The vertical curve within the cut-through would allow less excavation to occur.

The advantages of this alternative would be that sight distance for both eastbound and westbound traffic would be greatly improved. By constructing the new alignment, the number of crashes involving losing control should be decreased dramatically. A higher design speed of 55 MPH can be achieved with the alternative. This alternative has the least impact on developed properties and no relocations are expected. The impact to traffic during construction is minimal. There are a number of potential locations for constructing an approach road to the residences and school facilities.

This alternative would require significant excavation of the hillside, which in turn would require a larger waste area. It may be difficult to find a feasible waste area of that capacity near the project limits. It has the potential to affect 4 to 5 parcels. The cost associated with such a large amount of excavation makes this alternative the most expensive among all the alternatives reviewed in this study.

Alternative 6

Phase	**Estimate**
Design	$1,100,000
ROW	$146,000
Utilities	$185,000
Construction	$20,900,000
	$22,331,000

B. Right of Way Issues

Seven (7) to ten (10) parcels could be affected according to the alternative chosen.

With all alternatives, the exception being the Cut-through option, it appears that impact to the residence owned by Juanita Blevins (age 90) is unavoidable.

Project is located along a floodplain (Exhibit 21).

C. Utility Issues

A 10 inch water main maintained by Mountain Water District and a 6 inch steel gas line (Exhibit 20) maintained by EQT Gathering LLC are located within the project limits.

Electric: ***Kentucky Power Company***
Bill Johnson (wmjohnson@aep.com)
3249 North Mayo Trail
Pikeville, KY 41501
(606) 437-3823 Office
(606) 794-7381 Mobile

Gas: ***EQT Gathering LLC***
Jeff Burke (www.jburke@eqt.com)
PO Box 158
Pikeville, KY 41502
(606) 437-2255 Office
(606) 793-2458 Mobile

Water: ***Mountain Water District***
Grondal Potter (gpotter@umgllc.net)
P.O. Box 3157
Pikeville, KY 41502
(606) 631-6165 Office
(606) 422-7740 Mobile

Telephone: ***AT&T***
Earl Thacker (earl.thacker@bellsouth.com)
102 Walters Lane
Pikeville, KY 41501
(606) 437-9072 Office
(606) 454-1460 Mobile

Cable: ***Sudden Link Cable***
Joe Austin (Joseph.Austin@suddenlink.com)
P.O. Box 1339
Mount Gay, West Virginia 25367
(304) 687-4707 Mobile

V. Estimate

UPL Estimate

Phase	Fiscal Year	Estimate
Design	2010	$750,000
ROW	2010	$900,000
Utilities	2010	$550,000
Construction	2010	$5,750,000
		$7,950,000

VI. Conclusion

A Project Team meeting was held to review this study.

- The team established that the project is needed. The No-Build Alternative (Alt.1) is not feasible due to traffic volumes and safety concerns.
- Based on safety concerns, the team agreed that any alternative must include turn lanes into the school.
- The team determined that a 55 MPH design speed, while having some benefits, would not be a necessity for this project. This is due to the short project length, existing roadway characteristics, and budget restrictions.
- The team decided that the alternatives which will be developed for the project should have design speeds in the 35 to 45 MPH range. The final design speed selected for the project will likely depend on proposed ROW, utility, and construction costs.
- Of the alternatives presented in this study, the team agreed that Alternatives 1, 2, and 6 did not warrant further consideration.
- The team agreed that Alternatives 3, 4, and 5 should be used as guidelines in the development of the preliminary line and grade meeting during the design process.

VII. Exhibits and Appendix

Vicinity Map (Exhibit 1)
Location Map (Exhibit 2)
Aerial Map (Exhibits 3 – 6)
Topographical Map (Exhibit 7)
Three-dimensional Map (Exhibit 8)
Photographs of Project (Exhibits 9 – 14)
Original Plansheets of U.S. 460 (Exhibits 15 – 18)
Proposed Alignment (Exhibit 19)
EQT Gas Line Location (Exhibit 20)
FIRM Map (Exhibit 21)
Newspaper Article (Exhibit 22)
Collision Data (Appendix 1)

Vicinity Map

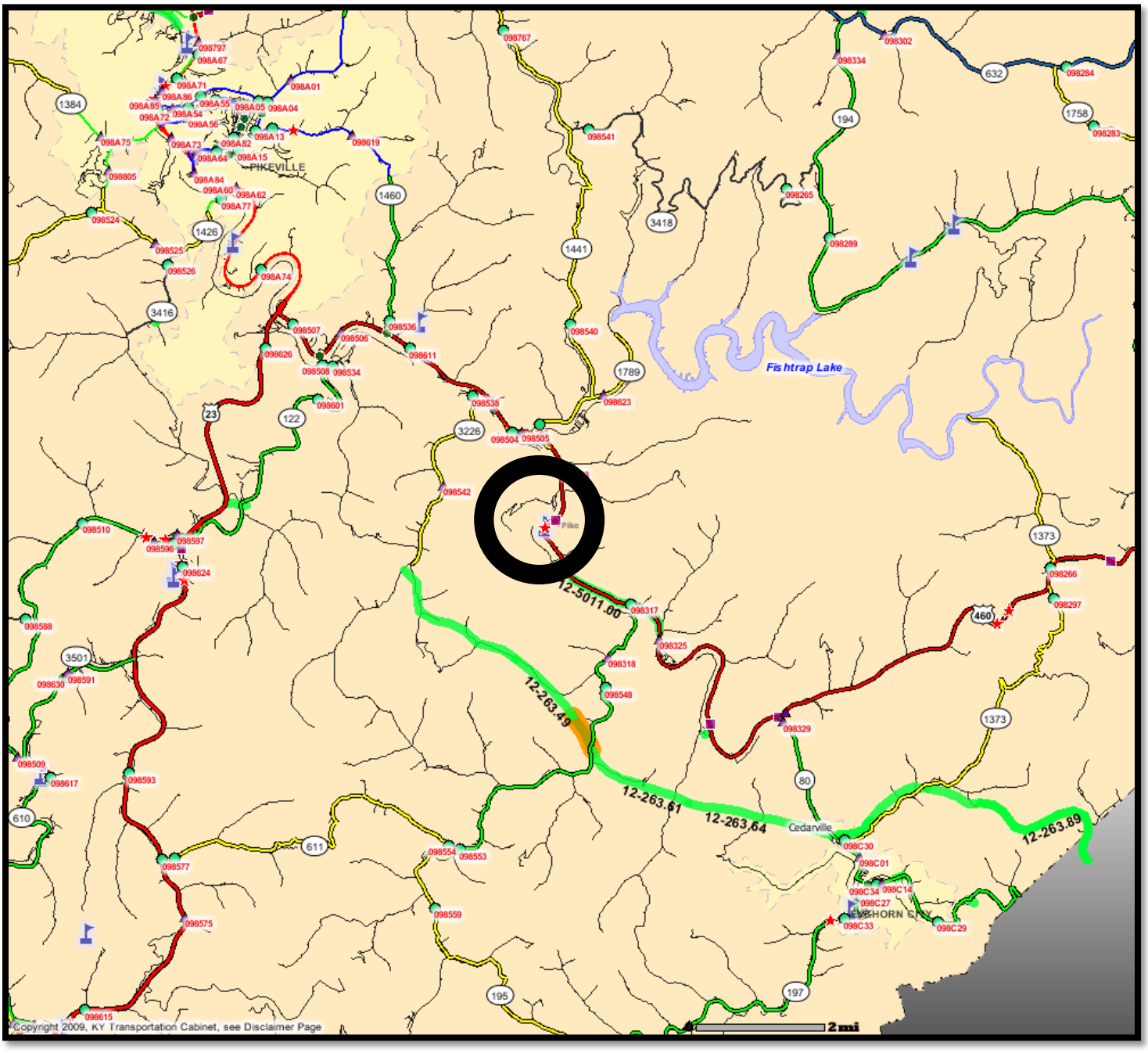


Exhibit 1

Location Map

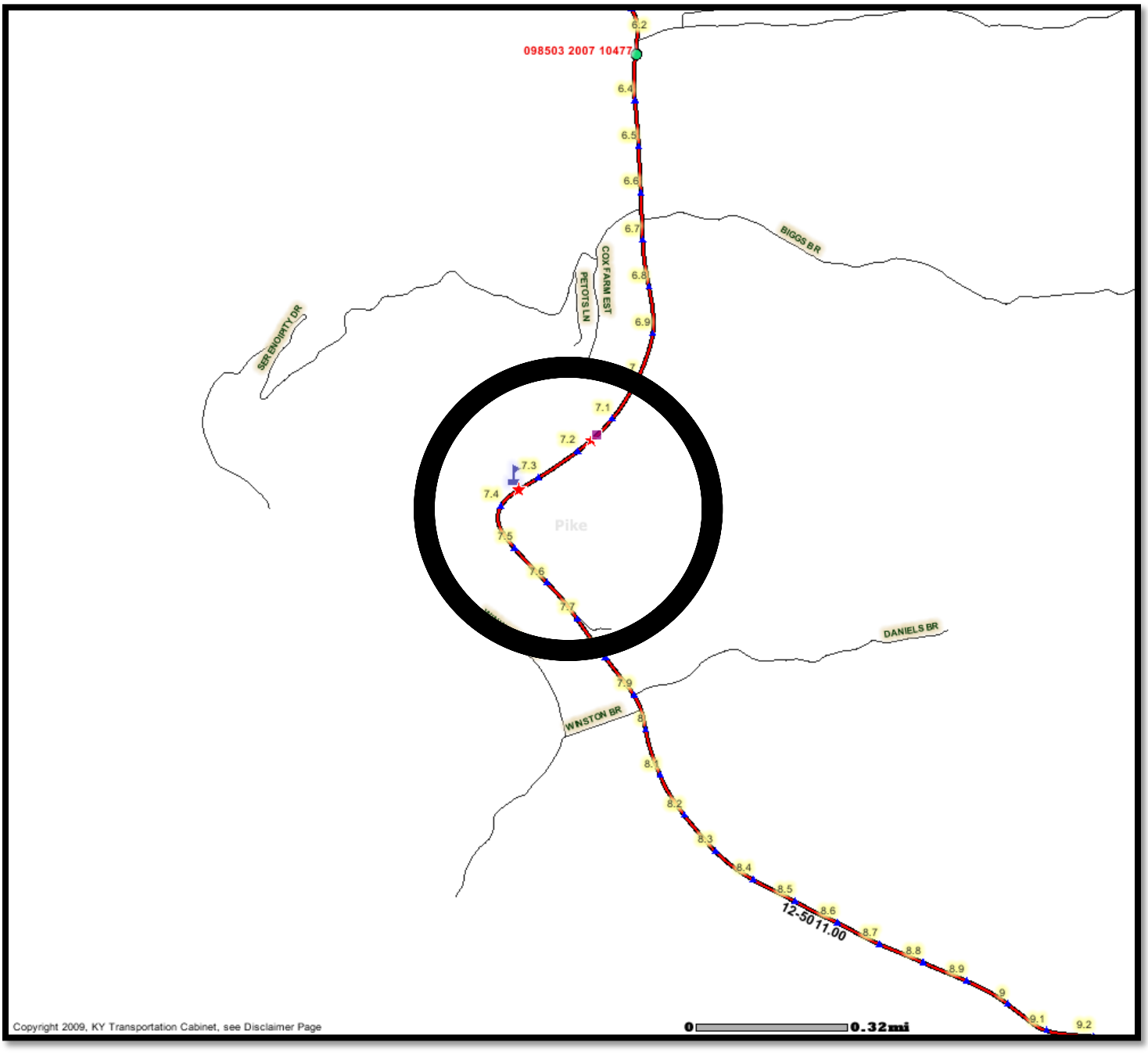


Exhibit 2

Aerial Map

Exhibits 3 & 4

Aerial Map

Exhibits 5 & 6

Topography Map

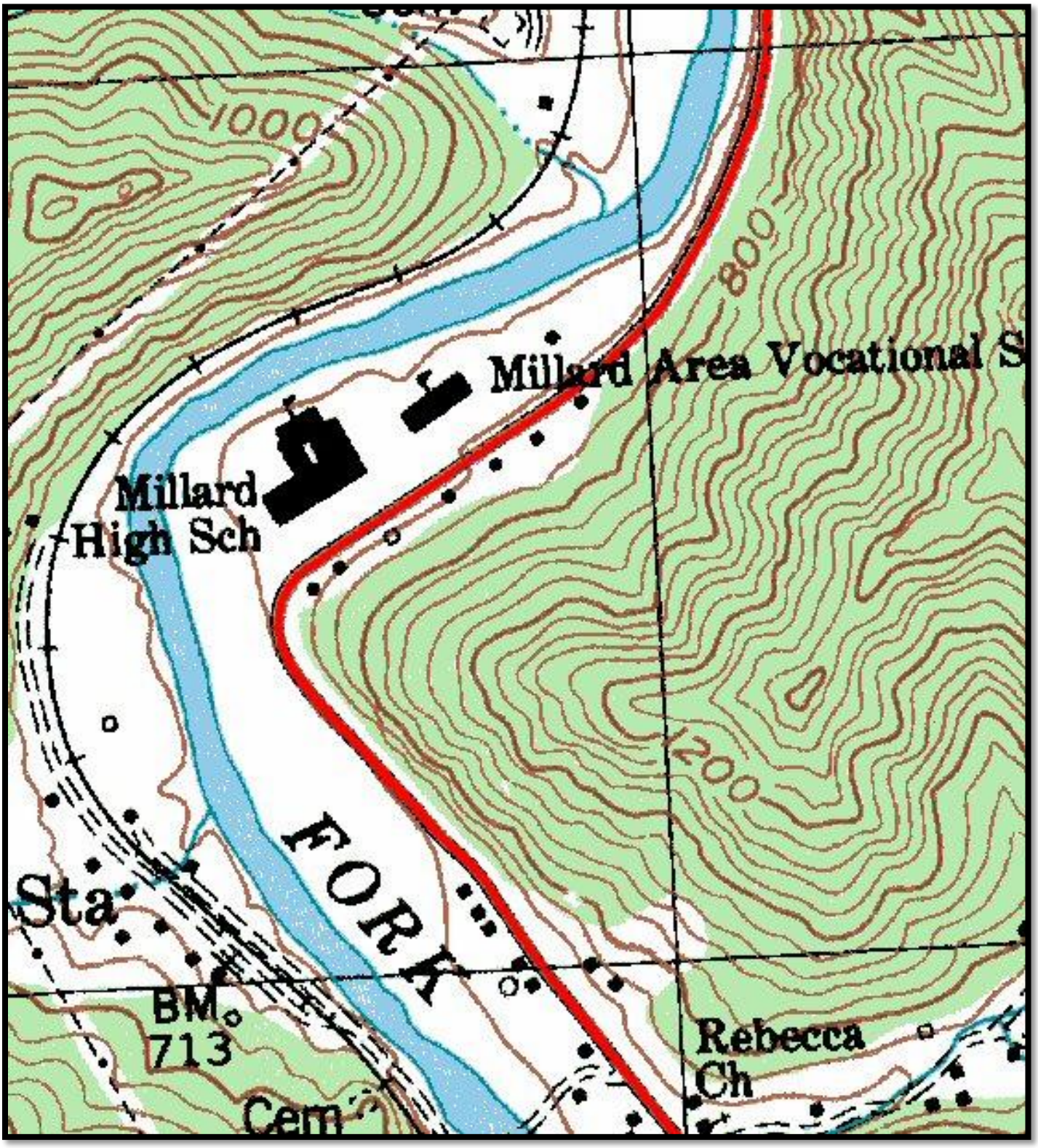


Exhibit 7

Three-dimensional Map

Arrow indicates Millard Middle School

Exhibit 8

Photographs of Project

Exhibit 9

Exhibit 10

Exhibit 11

Exhibit 12

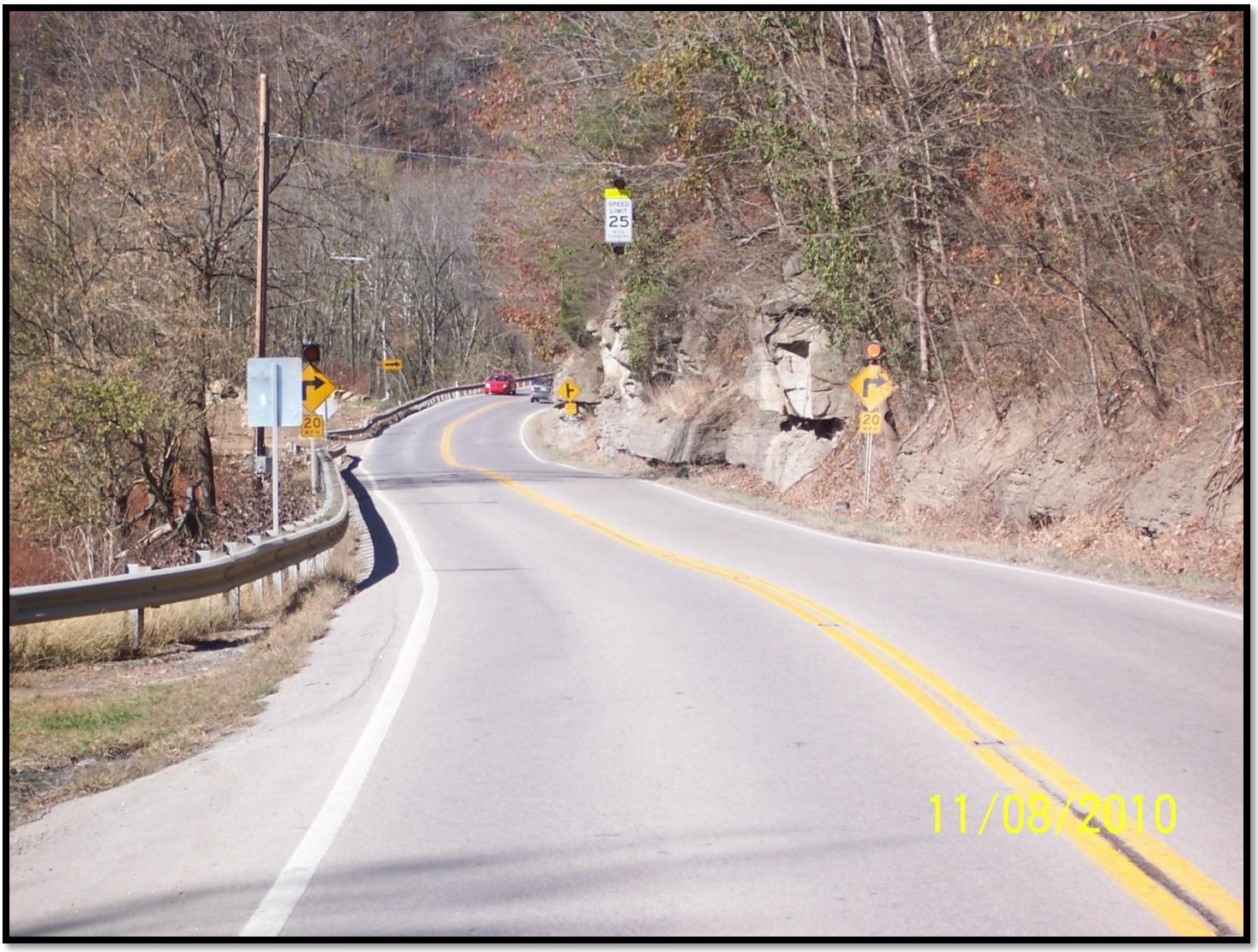


Exhibit 13

Exhibit 14

COMMONWEALTH OF KENTUCKY
STATE HIGHWAY DEPARTMENT
PLAN AND PROFILE OF PROPOSED
STATE HIGHWAY
FLOOD RELIEF PROJECT NO. 67 SEC. A-G
PIKE COUNTY
STA. 0+00 BEGIN SEC. A-G FLOOD RELIEF PROJ. NO. 67
STA. 209+77.8 END SEC. A-G FLOOD RELIEF PROJ. NO. 67.
LEVISA FORK
RUSSELL FORK
RECORD PLANS
MICROFILMED-67
MICROFILMED-62
KENTUCKY HIGHWAY DEPARTMENT
COUNTY OF PIKE
THE FORKS-MARROWBONE ROAD
STATE PROJECT No. 67
SECTION A-G
DATE 1929
LAYOUT MAP
CONVENTIONAL SIGNS
NO. SECT'N.

Exhibit 15

Exhibit 16

TYPICAL SECTION AND SUMMARY SHEET

TYPICAL SECTION

GENERAL SUMMARY

BRIDGE AND CULVERT SUMMARY

PIPE SUMMARY

Exhibit 17

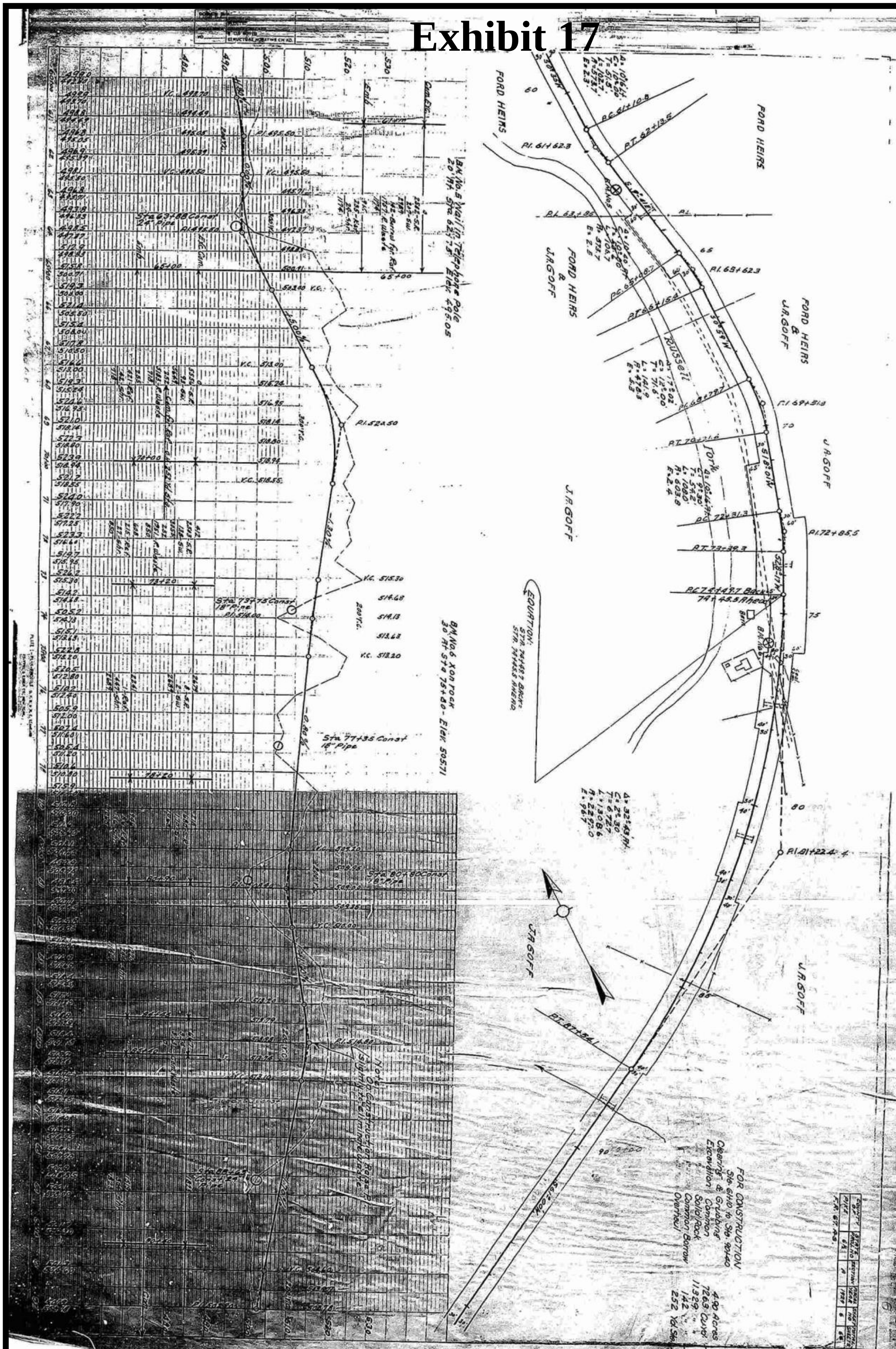
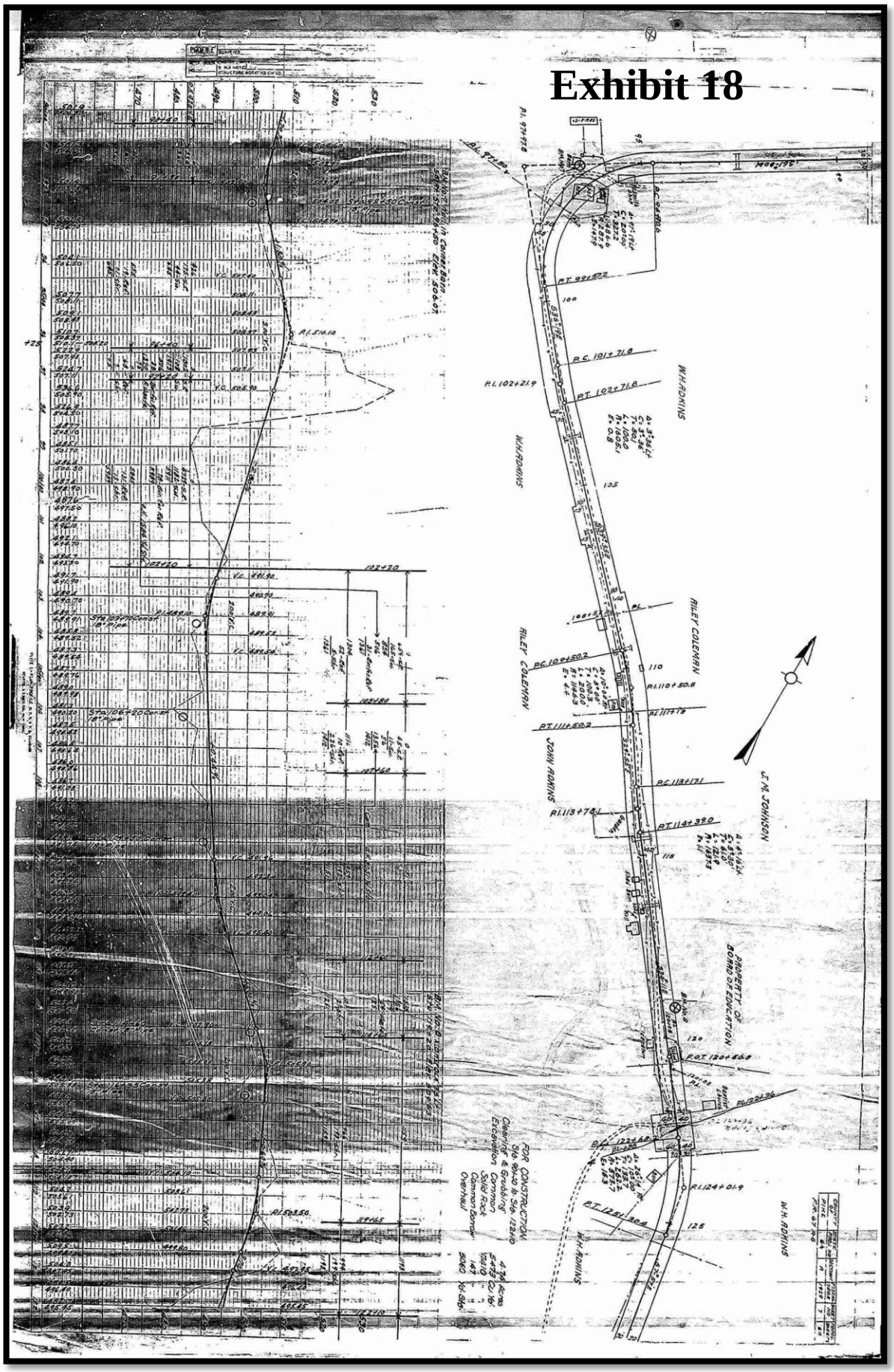


Exhibit 18


W.H. ROMINS
RILEY COLEMAN
JOHN ROMINS
J.M. JOHNSON
PROPERTY OF BOARD OF EDUCATION
FOR CONSTRUCTION
Clearing & Grubbing
Excavation
Common
Solid Rock
Common Borrow
Overhaul

Proposed Alignments

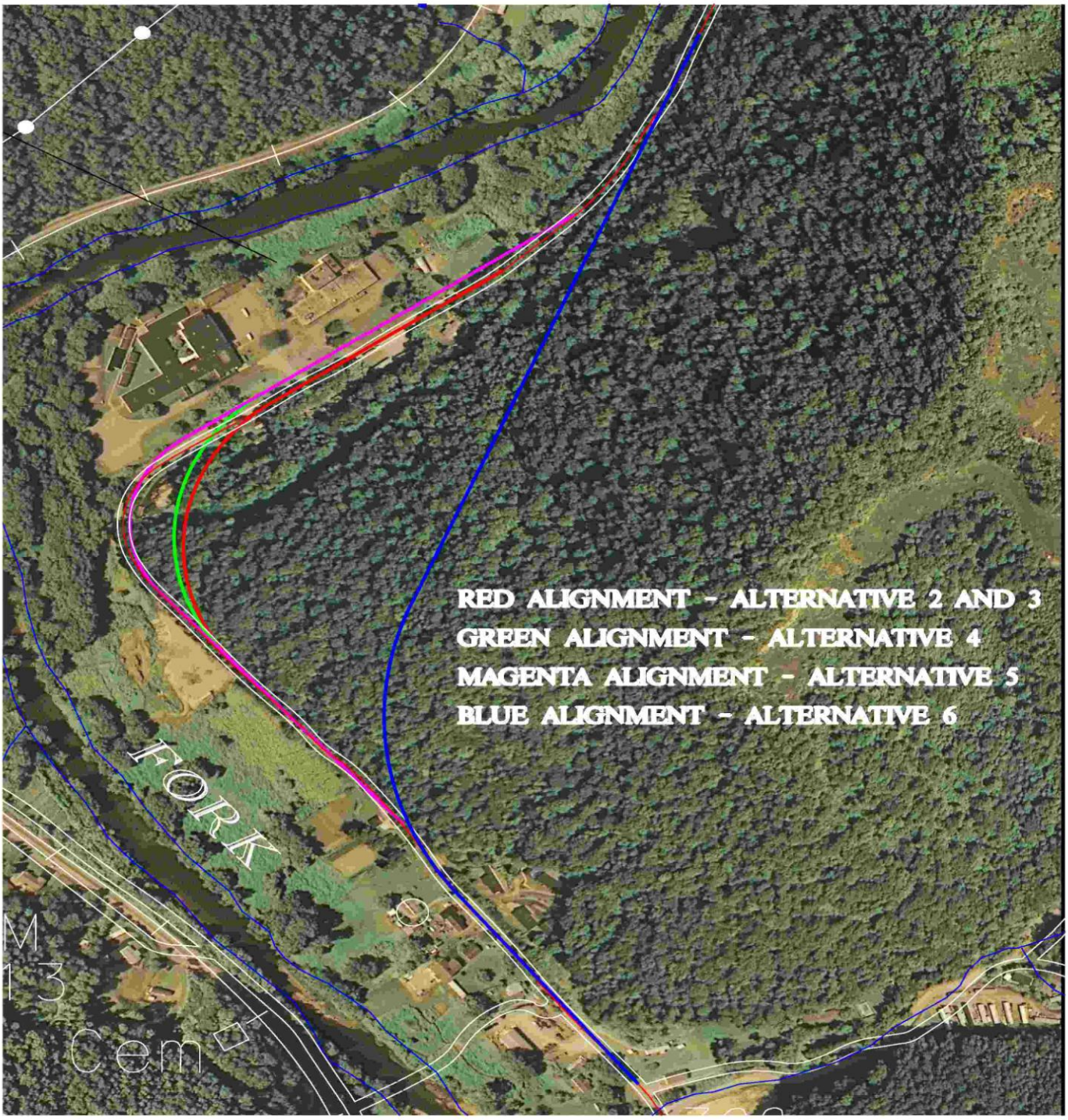


Exhibit 19

EQT Gas Line Location

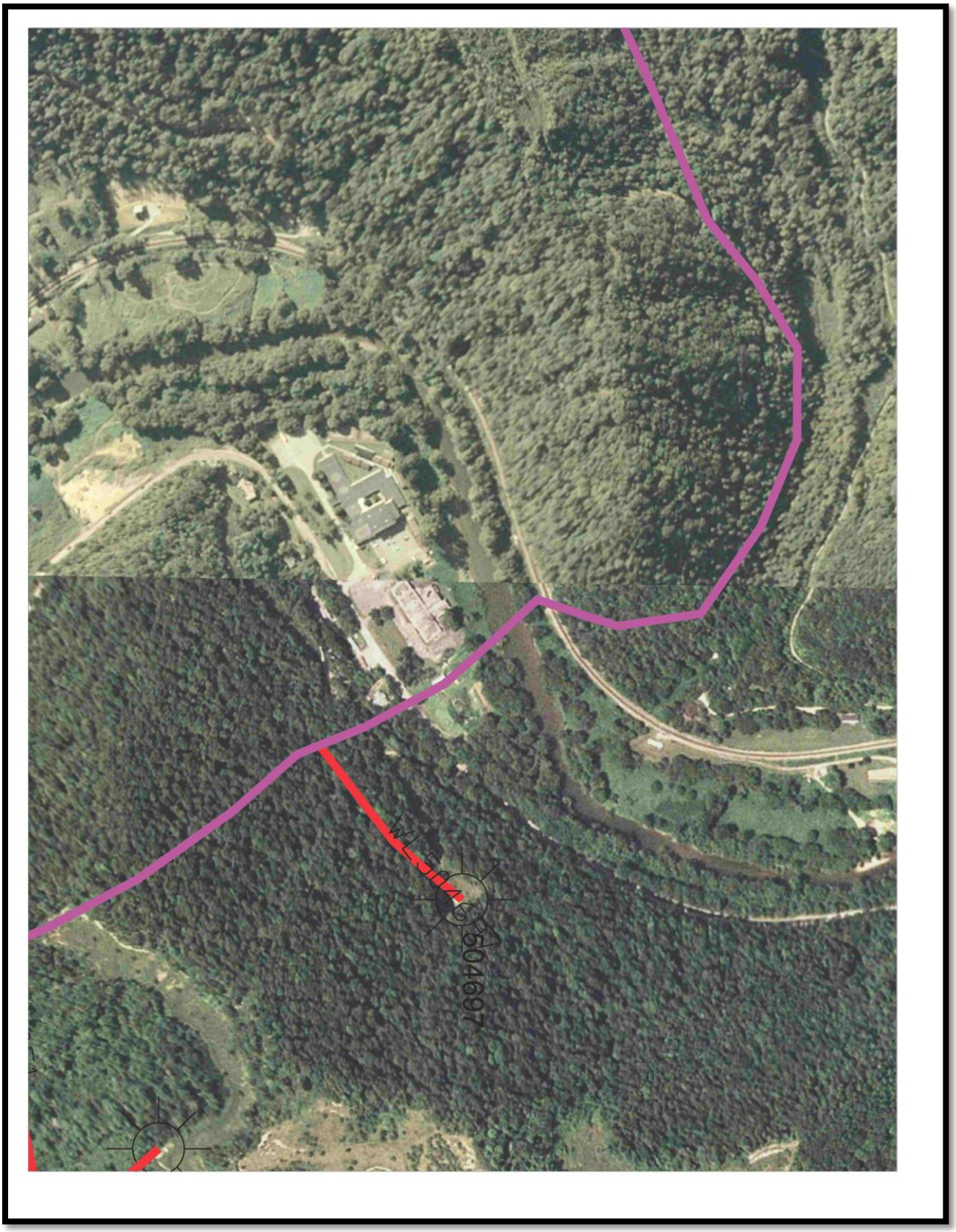


Exhibit 20

FIRM Map

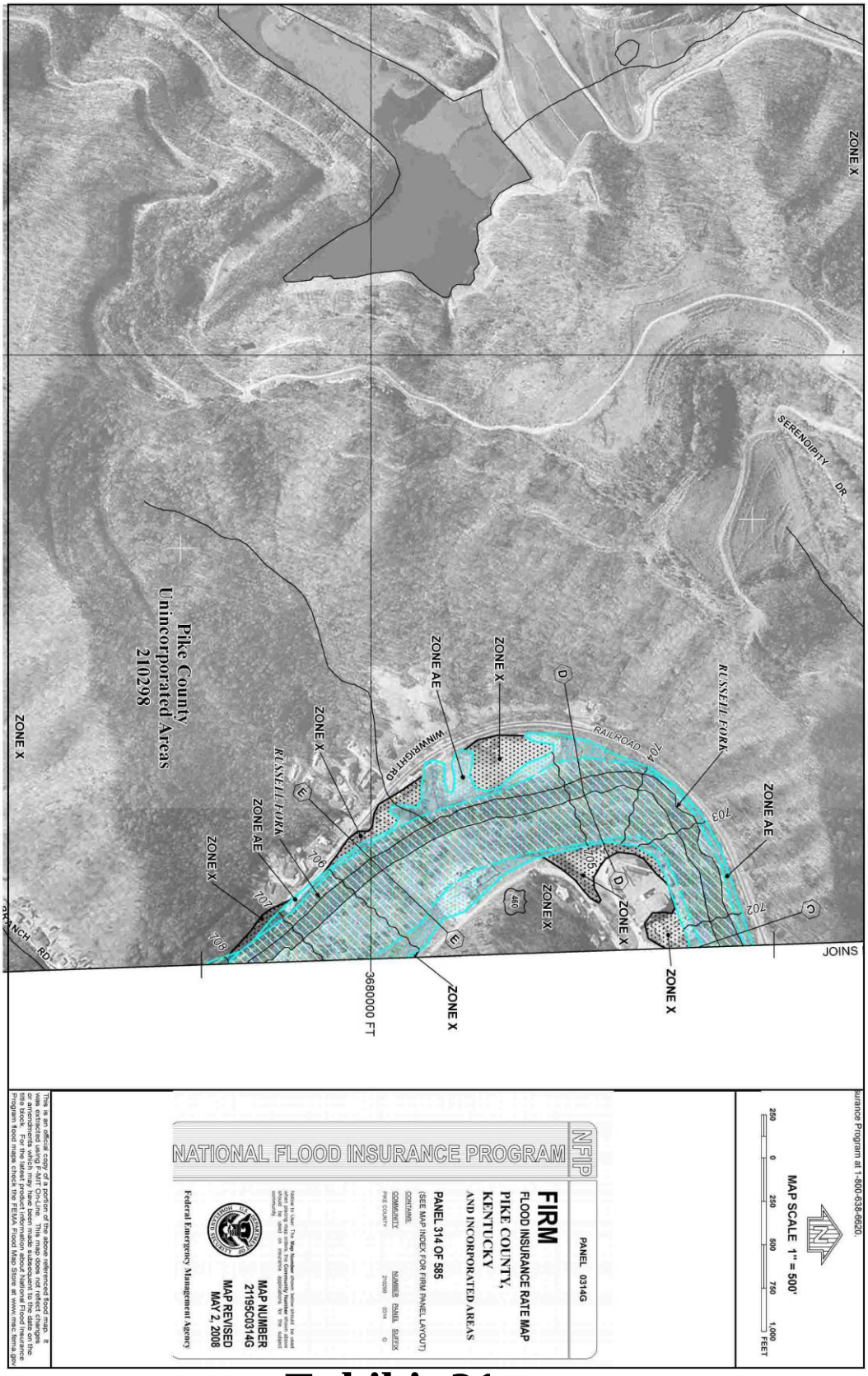


Exhibit 21

Exhibit 22

APPALACHIAN NEWS-EXPRESS

Wednesday, March 24, 2010

"Peggy started screaming, 'No, no, please, God, no.'"

Truck slams into bus

News-Express photo by Russ Cassady

The damage to the front driver's side of Pike County Schools bus No. 0257 was visible following a wreck Monday afternoon on U.S. 460 near the entrance to Millard Middle School. Kentucky State Police say an unloaded gravel truck slid out of control while traveling too fast on rain-slicked roads. The rear of the truck slammed into the front of the school bus.

1 of 5

Appalachian News-Express • Wednesday, March 24, 2010

KSP: Truck traveling too fast when bus hit

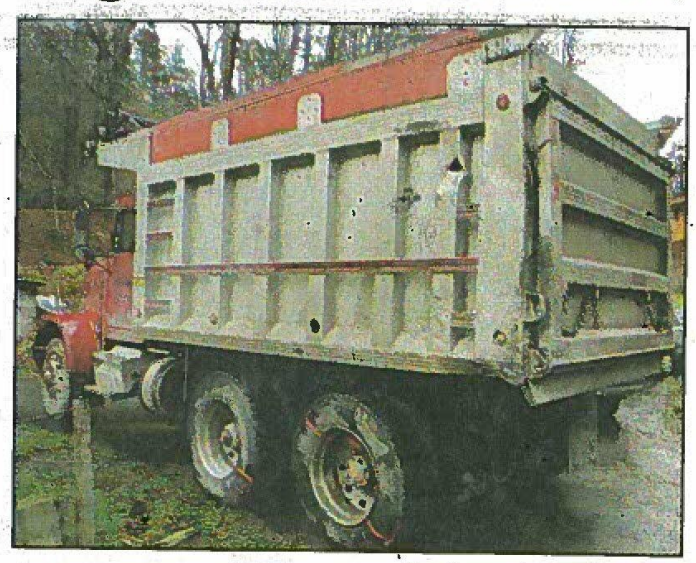
By Russ Cassady
Staff Writer

MILLARD — Kentucky State Police said Tuesday that an unloaded gravel truck was traveling too fast for the road conditions and may have had an unspecified brake issue when the driver lost control in a hairpin curve and the bed of his truck slammed into a loaded school bus.

Kentucky State Police Trooper Eddie Crum, an accident reconstructionist, said Tuesday that his preliminary investigation found that the driver, Kendall Slusher, of Salyersville, was driving too fast on the rain-slickened roadway as he rounded the severe curve on U.S. 460, just east of the entrance to Millard Middle School at about 3:30 p.m. Monday.

Slusher's truck, a 1985, 10-wheel gravel truck, slid sideways. Unable to stop, Crum said, the driver's side rear corner of Slusher's truck slammed into the front-end of the school bus, which was traveling east on the highway, loaded with children.

See TRUCK, Page 2A



News-Express photo by Russ Cassady

Damage is visible on the rear bed of the 10-wheel gravel truck, the driver of which police said was responsible for the bus wreck near Millard Middle School on Monday afternoon. KSP say the truck was traveling too fast for the road conditions when the wreck occurred.

2 of 5

TRUCK

Continued From Page 1A

While the mechanical problem, a possible brake issue, was only one of only several mechanical problems found on the truck, Crum said, it was the only one which could have contributed to the crash, which sent more than 30 children and their bus driver, Peggy Childers, to the hospital for medical attention.

The brake problem, coupled with the human factor of Slusher's reckless driving, caused the wreck, Crum said.

"He was just operating the truck too fast for the road conditions," he said. "And he was driving faster than he should be through a school zone."

Millard Middle School Principal Robert Kiser said that what occurred following the wreck was what amazed him.

Kiser said he heard the sound of the crash and responded immediately.

"You knew what had happened," he said.

He went to the front of the bus, and said he was flooded with emotions as he began to try to do a fast check of the children and get them off the bus. At the same time, Kiser said, he saw Kentucky State Police Officer Keith Justice, who was sitting in the line of traffic ahead of bus when the collision occurred, come in through the side door to assist.

"Then I looked up and see this guy here," Kiser said. "That's when I said, 'I can do this.'"

The school personnel, Kiser said, responded immediately as well. As children were moved into the school, the adults still there, including those at the nearby vocational school, rushed to respond.

"Pretty much every student had an adult right there with them," Kiser said.

The school's nurse, who is trained in emergency medicine, began checking the children, Kiser said.

Within minutes, the Millard Volunteer Fire Department, which has a station less than three miles from the school, had arrived on scene, and ambulances and state police began arriving, Kiser said.

Childers and a small child were trapped inside the vehicle and the Millard firefighters and emergency medical personnel had to extricate them.

Kiser said that, to his understanding, the child who was trapped did not suffer any apparently serious injuries.

"That little girl was barely pinned," he said. "Thank God that was all it was."

Kiser said he can only

News-Express photo

The entire front driver's side of Pike County Schools bus No. 0257 was demolished Monday afternoon struck by an out-of-control gravel truck. Police said the driver of the gravel truck was apparently driving

3 of 5

Students left bloodied, battered by crash

News-Express photo by Chris Anderson

Onlookers watch as medical personnel load Pike County Schools bus driver Peggy Childers onto a waiting ambulance at Pikeville Medical Center. Childers was transported from the hospital to the University of Kentucky Chandler Medical Center where she was listed in serious condition Tuesday.

By Chris Anderson
Staff Writer

With classmates and friends from Bus No. 0257 still arriving at the Pikeville Medical Center Emergency Room, 16-year-old Jeana Allen was being helped down the hallway after receiving treatment following Wednesday's crash.

Allen was counting the students on board when she heard the driver begin to scream, seconds before an unloaded gravel truck slammed into the front of the bus.

"Peggy started screaming, 'No, no, please, God, no,'" she said. "And I looked up to see what she was screaming about and then I saw the truck."

Bus driver Peggy Childress suffered the most serious injuries in the crash, but many of the approximately 45 passengers, including Allen were left bloodied and bruised.

See STUDENTS, Page 3A

STUDENTS

Continued From Page 1A

Wattonna Moreno, a fifth grade student on the bus, pulled pieces of shattered glass from her jacket pockets, as she talked about friends who were still being treated in the Emergency Room.

"All I remember was I was sitting there talking to my friends and I heard Peggy scream, 'no, no,'" she said. "Then I just remember getting off the bus and being off the bus."

The emergency room waiting area was filled with concerned family members and friends as they anxiously awaited word from hospital staff on the condition of loved ones involved in the crash.

The crowd was quiet — stunned, and with looks of disbelief of their faces, at the thought of such an event occurring in the Millard community — and wondering exactly what happened, and why.

Some of the students from the bus were at the hospital immediately following the wreck seeking treatment for injuries, while others continued to limp into the Emergency Room as the evening progressed.

Allen, a bus monitor, said she looked up in time so see "the back of the truck coming at us really fast," but had no time to react before she was thrown from where she was standing.

Kindergarten student Alivia Ratliff held tightly to her mother's arm in the Emergency Room waiting area, but said she was not scared during the wreck.

Ratliff said when the truck hit the bus, she was thrown from her seat into the floor of the bus, landing on her backpack. She said she also heard Childers screaming but never saw what was about to happen.

"It threw me in the floor on my bookbag," she said. "It was my first wreck."

Ratliff and Moreno had minor cuts and bruises but escaped serious injury. Allen was helped from the hospital by her parents and had cuts on her face and chest.

The most severe injuries from the wreck appear to have been suffered by Childers, who has worked for Pike County Schools for about 15 years, according to Pike County Schools Superintendent Roger Wagner.

Childers was transported from Pikeville Medical Center to the University of Kentucky Chandler Medical Center, where she was listed in serious condition at presstime Tuesday. Wagner said Childers had exploratory surgery Tuesday morning.

Moreno said she was concerned about her friends, but her main concern following the accident was for her bus driver.

"We're here to see how Peggy is doing, too," she said.

Millard Middle School principal Robert Kiser said Childers has worked at the school for several years and the students who ride her bus everyday are her life.

"She mommies the kids," he said. "She's strict and by the book, but it's all in the name of safety."

Kiser said Childers has a reputation for helping the children at Millard Middle School, which is her "base school," to get what they need, such as jackets and coats during cold weather.

Kiser described Childers as being "an excellent driver" and said he believes that whatever actions she took before the collision helped to make the wreck less severe than it could have been. He also said students have been asking about Childers' condition since the crash.

According to a statement from Pikeville Medical Center, the hospital treated 32 students following the crash. Wagner said to his knowledge, all of the students were treated and released.

Appalachian News Express
3/24/10
5 of 5

Millard Curve Collision Data											
Master File Number	Milepoint Derived	Collision Date	Collision Time	Vehicles Involved	Killed	Injured	Weather	Roadway Condition	Manner of Collision	Roadway Character	Light Condition
70496436	7.103	10/31/07	1100	2	0	0	Clear	Dry	Rear End	Straight & Level	Daylight
70661833	7.117	01/22/09	2000	2	0	2	Clear	Dry	Rear End	Straight & Level	Dark-Hwy Not Lighted
7064568	7.123	12/17/08	2210	1	0	1	Raining	Wet	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70334319	7.157	06/26/06	1435	1	0	0	Raining	Wet	Single Vehicle	Curve & Level	Daylight
70486227	7.207	10/02/07	1635	2	0	0	Clear	Dry	Sideswipe	Straight & Level	Daylight
70538200	7.221	02/23/08	2315	1	0	0	Clear	Dry	Single Vehicle	Straight & Level	Dark-Hwy Not Lighted
70280475	7.271	12/22/05	1413	1	0	4	Clear	Other	Single Vehicle	Curve & Level	Daylight
7065310	7.290	08/06/07	1805	1	0	0	Clear	Wet	Single Vehicle	Straight & Level	Daylight
70866770	7.309	06/22/10	2000	2	0	1	Raining	Wet	Sideswipe	Curve & Level	Daylight
70619727	7.312	10/07/08	0706	2	0	1	Clear	Dry	Sideswipe	Straight & Level	Daylight
70572095	7.334	05/24/08	2300	1	0	0	Raining	Wet	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70835973	7.340	04/05/10	1535	2	0	0	Clear	Dry	Angle	Curve & Level	Daylight
70891845	7.346	08/24/10	0330	1	0	1	Raining	Wet	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70835184	7.352	03/22/10	1530	2	0	43	Raining	Wet	Sideswipe	Curve & Level	Daylight
70704845	7.353	05/20/09	1515	3	0	0	Clear	Dry	Rear End	Straight & Level	Daylight
70740922	7.359	08/18/09	0156	1	0	1	Cloudy	Dry	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70750879	7.360	09/07/09	0815	1	0	0	Raining	Wet	Single Vehicle	Curve & Level	Daylight
70731580	7.361	07/18/09	1830	1	0	1	Clear	Dry	Single Vehicle	Curve & Level	Daylight
70846596	7.362	04/26/10	1255	2	0	0	Raining	Wet	Angle	Curve & Level	Daylight
70829499	7.367	03/12/10	1305	1	0	0	Cloudy	Dry	Single Vehicle	Curve & Level	Daylight
70616485	7.380	10/10/08	0151	1	0	0	Fog w/ Rain	Wet	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70319789	7.389	05/07/06	1845	1	0	0	Raining	Wet	Single Vehicle	Curve & Grade	Daylight
70477095	7.390	09/04/07	2057	1	0	1	Clear	Dry	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70603071	7.394	08/19/08	1408	2	2	1	Clear	Dry	Head On	Straight & Level	Daylight
70572068	7.404	05/15/08	1240	1	0	0	Raining	Wet	Single Vehicle	Straight & Level	Daylight
70668142	7.410	01/27/09	1420	1	0	0	Raining	Ice	Single Vehicle	Curve & Level	Daylight
70353911	7.435	09/02/06	0715	2	0	2	Cloudy	Wet	Head On	Curve & Level	Daylight
70897236	7.481	09/05/10	1400	2	0	0	Clear	Dry	Rear End	Straight & Grade	Daylight
70285759	7.490	01/12/06	1400	2	0	1	Clear	Dry	Rear End	Straight & Level	Daylight
70350595	7.600	08/18/06	2125	3	0	4	Raining	Wet	Head On	Curve & Level	Dark-Hwy Not Lighted
70420325	7.657	03/10/07	1530	1	0	0	Raining	Wet	Single Vehicle	Curve & Level	Dark-Hwy Not Lighted
70922353	7.480	01/05/10	1801	2	0	2	Raining	Wet	Rear End	Straight & Level	Dusk

Appendix 1