

Appendix B

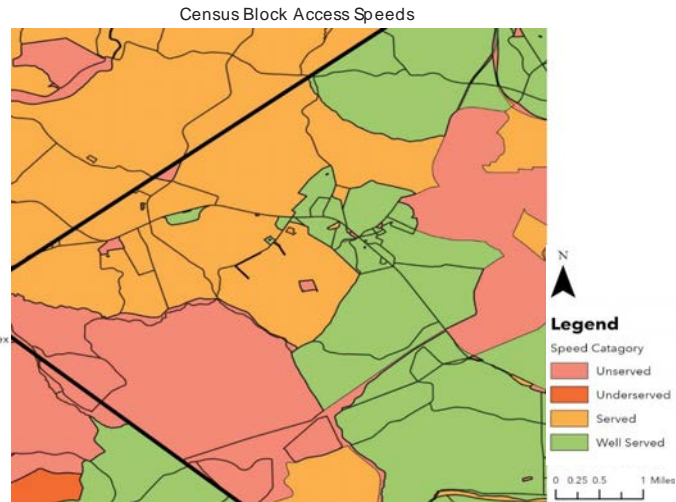
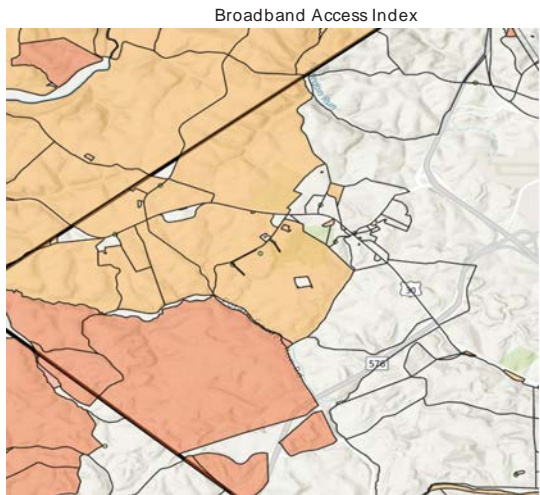
Project Sheets

DISCLAIMER:

New funding opportunities and legislative changes indicate that future new projects may be required to meet a minimum of speed threshold of 100/211 (100 Mbps download/100 Mbps upload.) Although the Connectivity Roadmap recommends a minimum threshold of 100/20, project evaluation tools used the higher capacity number of 100/100 in anticipation of grant requirements.

Project: Frankfort Springs - I-376 (A)
 County: Allegheny

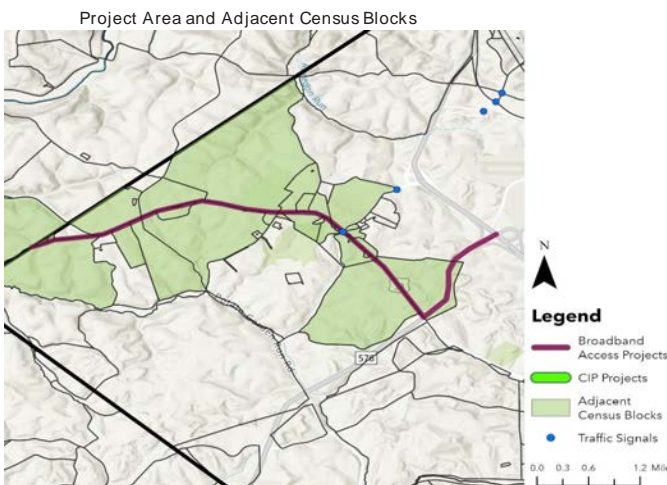
Avg. Project Score: 163



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
5.5	163	29	354	5	6%	2%	11%	24%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	Well Served ($\geq 100/100$ Mbps) / Served ($< 100/100$ Mbps)	9
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is $< 25\%$	9
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicate remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	≤ 50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband	1
Provider Competition	Avg. 3 providers per block	13
Traffic Signals Along Corridor	0-10 Signals	13
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project overlaps $\geq 50\%$ of project (DQE)	25
Impacts of Telecommuting	$\geq 25/50\%$ of working population has ability to telework	30

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 data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband from the Beaver County line to I-376 via US 30 and State Route 576. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "well served" access in the east to enhance options of "served" and "unserved" communities within Allegheny and Beaver Counties.

Project enhancements:

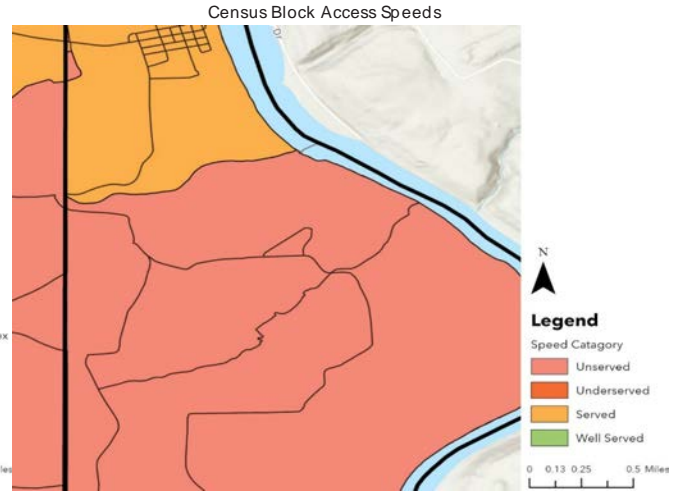
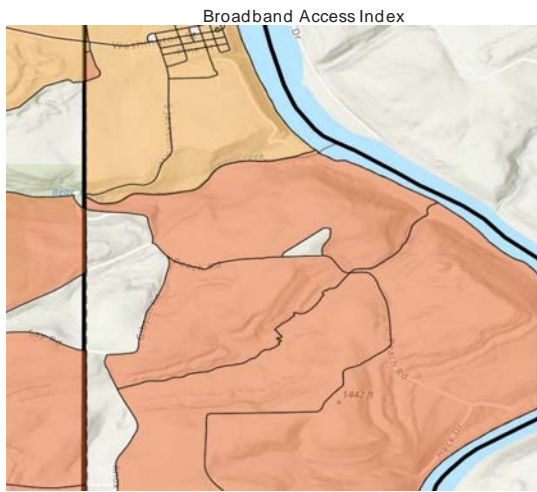
- Connect with Project Segment B (Beaver County) to expand improvement.
- Leverage existing fiber along US 30 near east end of project.

High Level Cost Estimate				
Project: Frankfort Springs - I-376				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	5.5	\$ 250,000	\$ 1,375,000
Provider Connection Points	ea	3	\$ 2,000	\$ 6,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	354	\$ 4,000	\$ 1,416,000
SUBTOTAL			\$	2,797,000
PE (12-20%)			\$	335,640
CEI (20%)			\$	559,400
20% Contingency			\$	559,400
TOTAL			\$	4,251,440

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Project: Perry Twp 1
 County: Armstrong

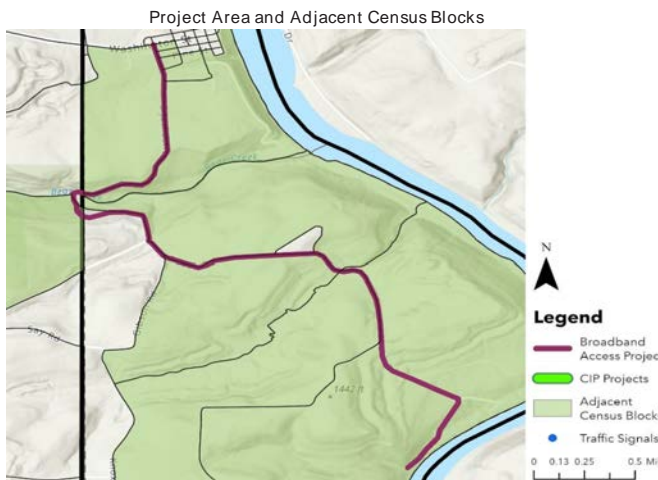
Avg. Project Score: 158



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIS	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
3.7	158	12	111	0	22%	2%	14%	20%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	unserved (<25/3 Mbps)	32
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25%	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband	11
Provider Competition	Avg. 1-2 providers per block	32
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impact on Ability to Telework	<25% of working population has ability to telework	20

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Image Service Layer Credits:

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PROJECT DESCRIPTION:

Install fixed broadband along Jackson Ave/Knox Rd/Peach Rd from central Parker to the Allegheny River. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "served" speeds in Parker to currently "unserved" communities.

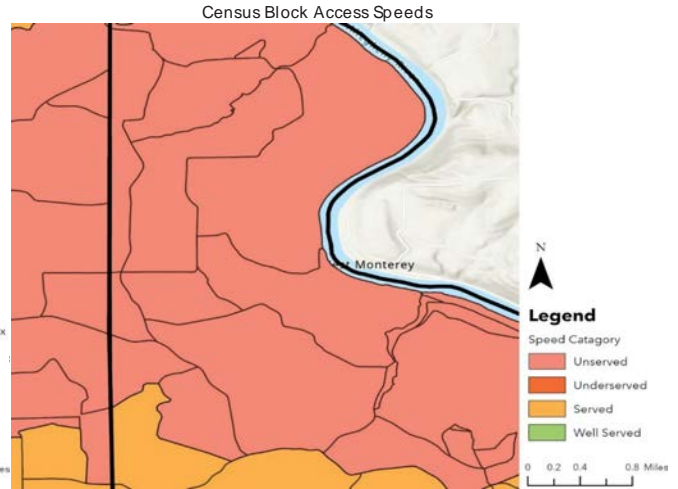
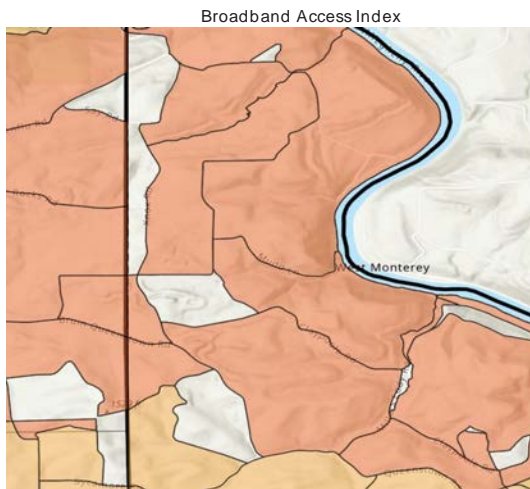
Project enhancements:

-Continue installation to the south/west to additional "unserved" communities (refer to Armstrong County Project #2).

High Level Cost Estimate Project: Perry Twp 1				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	3.7	\$ 250,000	\$ 925,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	111	\$ 4,000	\$ 444,000
SUBTOTAL				\$ 1,371,000
PE (12-20%)				\$ 164,520
CEI (20%)				\$ 274,200
20% Contingency				\$ 274,200
TOTAL				\$ 2,083,920

Project: Perry Twp 2
 County: Armstrong

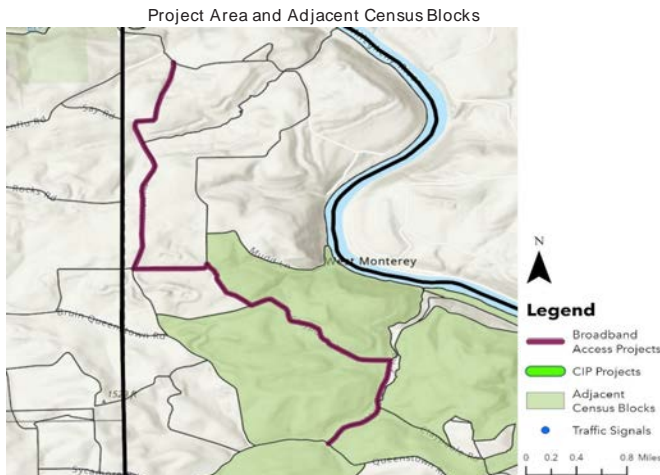
Avg. Project Score: 190



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
5.0	190	6	34	0	23%	2%	18%	17%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	unserved (<25/3 Mbps)	43
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25%	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband	20
Provider Competition	Avg. 1-2 providers per block	38
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impact on Ability to Telework	>=25/50% of working population has ability to telework	26

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Image Service Layer Credits:

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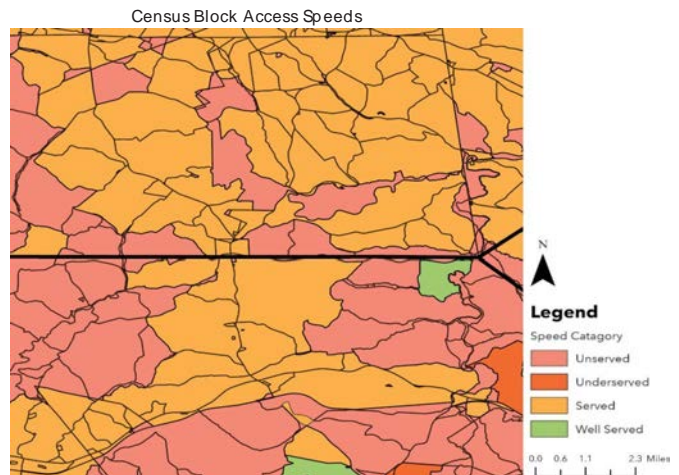
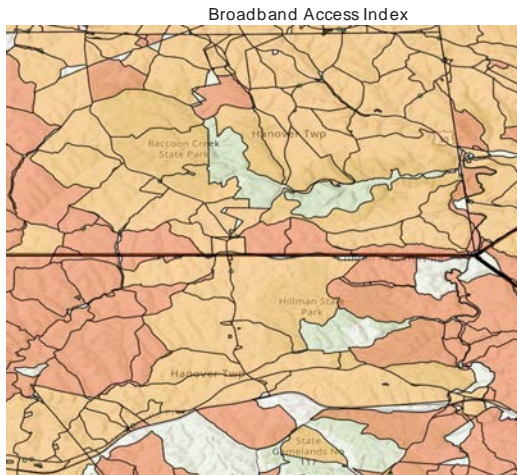
PROJECT DESCRIPTION:

Continue fixed broadband along Knox Rd/Gibson Rd and Route 4002 to the Perry Township Municipal Building to provide internet access to currently "unserved" communities and redundant service to the Township building. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities.

High Level Cost Estimate Project: Perry Twp 2				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	5.0	\$ 250,000	\$ 1,250,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	34	\$ 4,000	\$ 136,000
SUBTOTAL				\$ 1,388,000
PE (12-20%)				\$ 166,560
CEI (20%)				\$ 277,600
20% Contingency				\$ 277,600
TOTAL				\$ 2,109,760

Project: Frankfort Springs - I-376 (B)
 County: Beaver

Avg. Project Score: 170

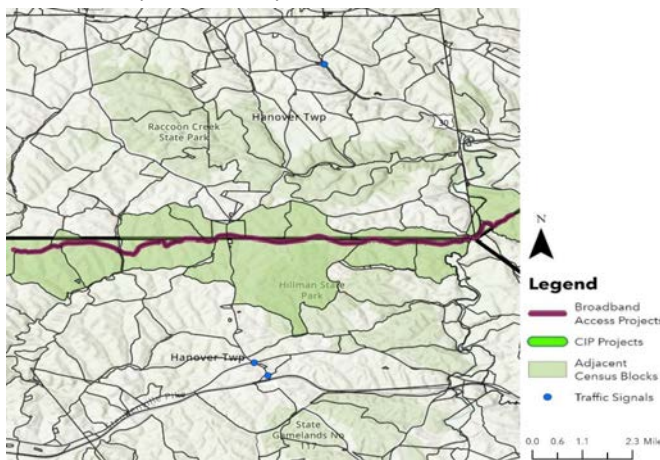


* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
10.0	170	32	337	2	13%	1%	9%	18%

Project Area and Adjacent Census Blocks



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	underserved (<50/10 Mbps) / underserved (<25/3 Mbps)	39
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results indicated remote learning is a concern	1
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	14
Technology Access	Primary access to Fixed Broadband or Mobile	17
Provider Competition	Avg. 2 providers per block	26
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impact on Ability to Telework	>=25/50% of working population has ability to telework	23

Total Score: 170

Image Service Layer Credits:

data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband along Purdy Rd/County Line/Clinton-Frankfort Rd from the west county border, through Frankfort Springs, to the east county border. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Provide internet access to currently "unserved" communities.

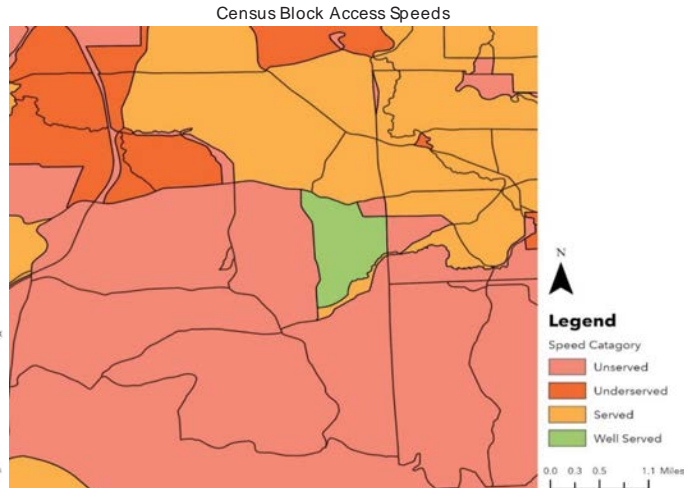
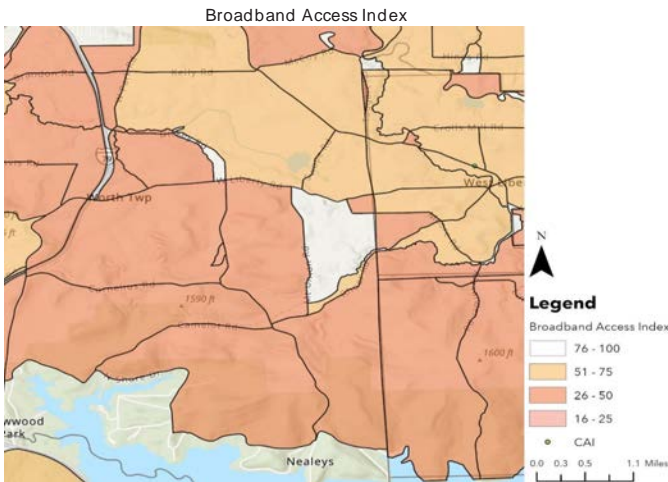
Project enhancements:

-Connect to resources available in Allegheny County via Project Segment A in the east to connect to "well served" speeds and enhance options of "unserved" and "served" communities.

High Level Cost Estimate Project: Frankfort Springs - I-376 (B)				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	10.0	\$ 250,000	\$ 2,500,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	337	\$ 4,000	\$ 1,348,000
SUBTOTAL				\$ 3,850,000
PE (12-20%)				\$ 462,000
CEI (20%)				\$ 770,000
20% Contingency				\$ 770,000
TOTAL				\$ 5,852,000

Project: Worth Twp - West Liberty
 County: Butler

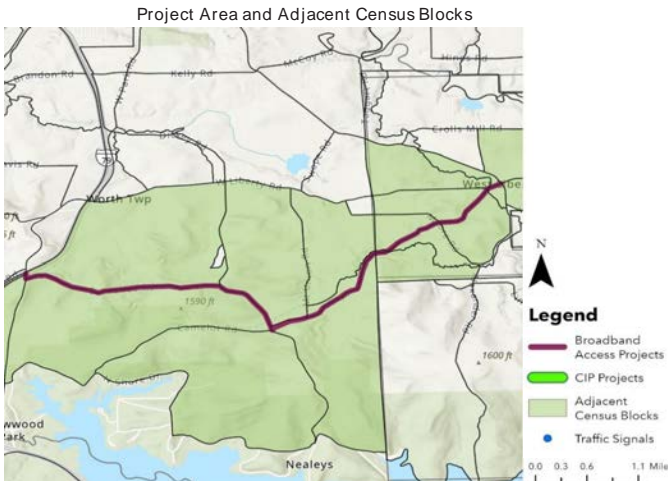
Avg. Project Score: 160



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
5.2	160	19	191	1	8%	3%	15%	13%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	served (<100/100 Mbps) / underserved (<50/10 Mbps)	31
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25%	0
Educational Institution Prox.	At least one facility within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	1
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband	11
Provider Competition	Avg. 2 providers per block	32
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impact on Ability to Telework	<25% of working population has ability to telework	22

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160

PROJECT DESCRIPTION:

Install fixed broadband along Cornelius Rd from I-776 to Mt Union Rd, then along Mt Union Rd/Roher Rd to West Liberty. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "served" speeds in West Liberty to currently "unserved" communities.

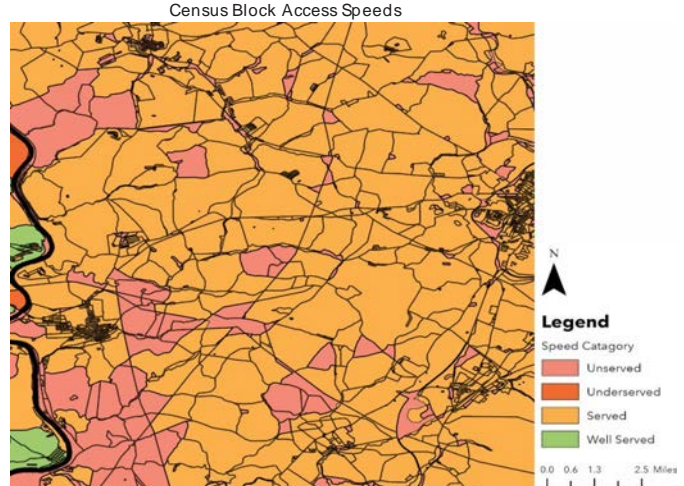
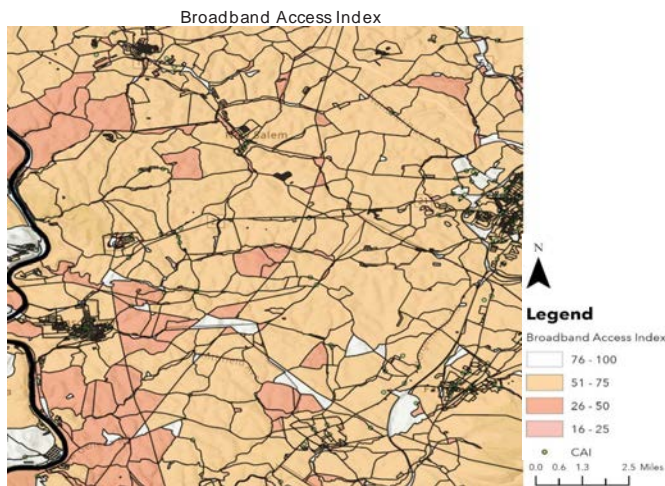
Project enhancement:

-Connect to "well served" resources in the north to improve speeds for entire community.

Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	5.2	\$ 250,000	\$ 1,300,000
Provider Connection Points	ea	2	\$ 2,000	\$ 4,000
Communications Access Points (Urban)	ea	116	\$ 1,500	\$ 174,000
Communications Access Point (Rural)	ea	141	\$ 4,000	\$ 564,000
SUBTOTAL				\$ 2,042,000
PE (12-20%)				\$ 245,040
CEI (20%)				\$ 408,400
20% Contingency				\$ 408,400
TOTAL				\$ 3,103,840

Project: Masontown - Uniontown
 County: Fayette

Avg. Project Score: 222



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
11.6	222	62	467	9	27%	6%	23%	21%

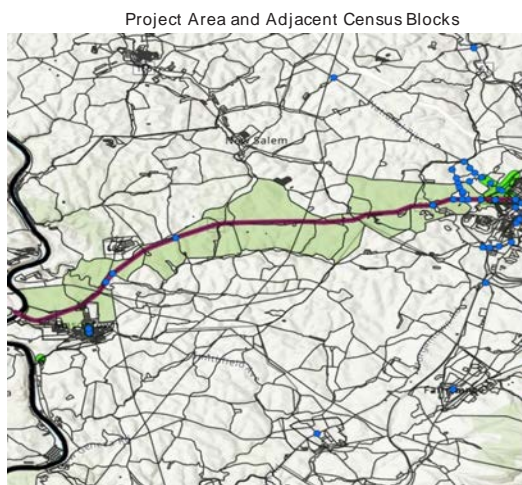


Image Service Layer Credits:
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PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	Underserved (<50/10 Mbps)	29
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is >=25-75%	12
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband or Mobile	9
Provider Competition	Avg. 0-1 providers per block	31
Traffic Signals Along Corridor	1-10 Signals	13
Adjacent TIP/CIP Project?	Project is adjacent	25
Overlaps Known Broadband Route?	Project overlaps <50% of project (multiple)	13
Impacts of Telecommuting	>=25/50% of working population has ability to telework	27

222

PROJECT DESCRIPTION:

Install fixed broadband along State Route 21 through Masontown and to Uniontown. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "well served" speeds in Carmichaels in the west to enhance options of "served" and "unserved" communities.

Project enhancements:

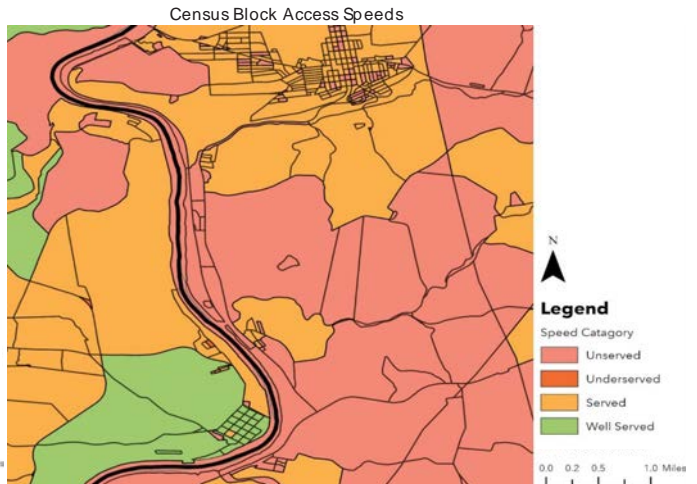
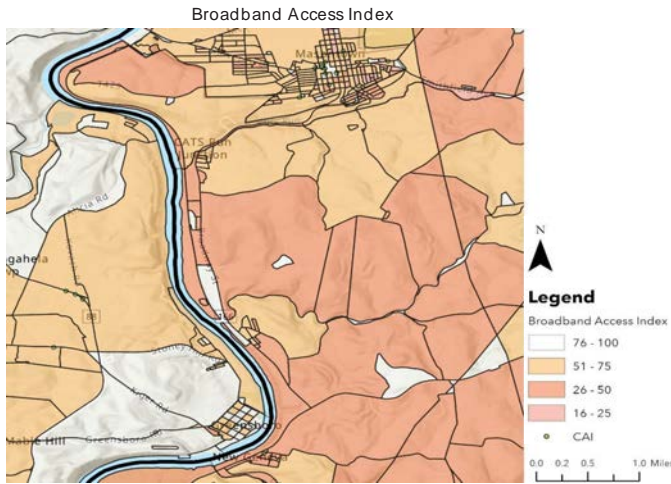
- Leverage existing fiber near Uniontown.
- Coordinate construction with planned CIP Project near east end of project for cost-reduction opportunities through concurrent construction and potential funds-sharing.
- Continue installation to the south to New Geneva (refer to Fayette County Project #2).

High Level Cost Estimate Project: Masontown - Uniontown				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	10.6	\$ 250,000	\$ 2,650,000
Provider Connection Points	ea	2	\$ 2,000	\$ 4,000
Communications Access Points (Urban)	ea	263	\$ 1,500	\$ 394,500
Communications Access Point (Rural)	ea	204	\$ 4,000	\$ 816,000
SUBTOTAL				\$ 3,864,500
PE (12-20%)				\$ 463,740
CEI (20%)				\$ 772,900
20% Contingency				\$ 772,900
TOTAL				\$ 5,874,040

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Project: Masontown - New Geneva
 County: Fayette

Avg. Project Score: 198



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIS	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
6.5	198	72	1,223	13	23%	5%	23%	26%

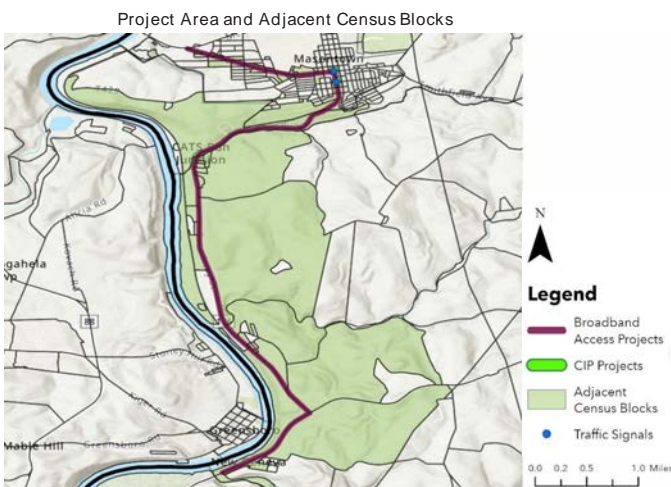


Image Service Layer Credits:
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PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	Served (<100/100Mbps) / Underserved (<50/10 Mbps)	22
Healthcare Facility Prox.	At least one facility within the block	24
% of Pop. 65 or Older	Avg. % of population is >=25-75%	15
Educational Institution Prox.	At least one facility within the block	24
Impacts of Remote Learning	Survey results do not indicate remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	15
Technology Access	Primary access to Fixed Broadband or Mobile	4
Provider Competition	Avg. 2 providers per block	28
Traffic Signals Along Corridor	1-10 Signals	13
Adjacent TIP/CIP Project?	Not adjacent	0
Overlaps Known Broadband Route?	Project overlaps >=50% of project (multiple)	25
Impact on Ability to Telework	>=25/50% of working population has ability to telework	28

198

PROJECT DESCRIPTION:

Continue fixed broadband south to New Geneva through Masontown and along State Route 166. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Enhance options of "served" and "unserved" communities.

Project enhancements:

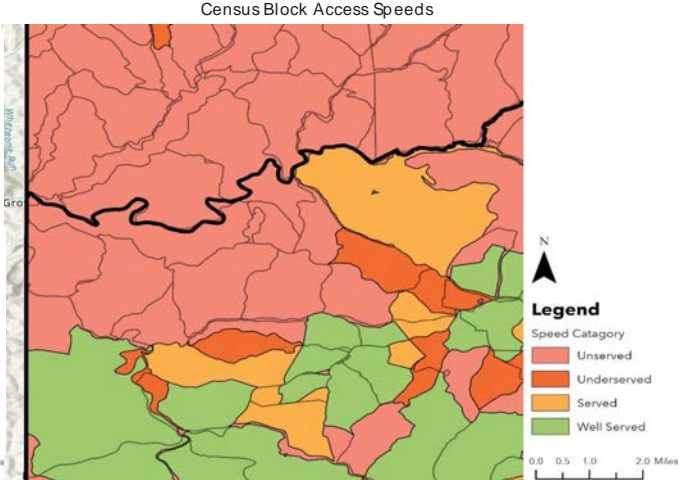
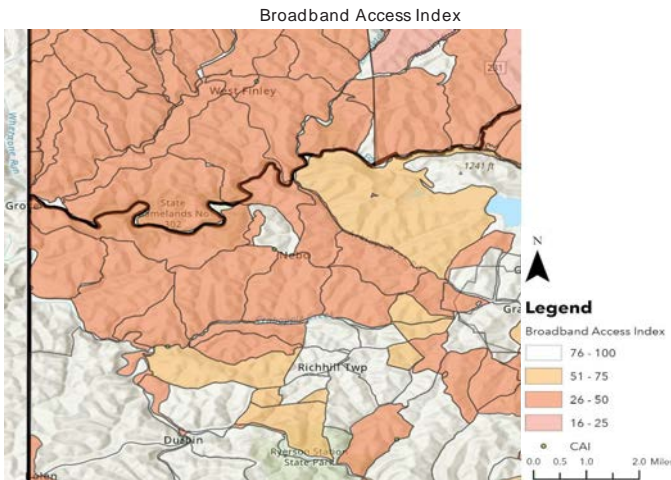
- Improve existing backbone capacity into West Pittsburg to increase connection speeds for entire region.
- Leverage existing fiber along Route 166.

Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	1.0	\$ 250,000	\$ 250,000
Provider Connection Points	ea	2	\$ 2,000	\$ 4,000
Capacity Upgrade	ls	1.0	\$ 250,000	\$ 250,000
Communications Access Points (Urban)	ea	778	\$ 1,500	\$ 1,167,000
Communications Access Point (Rural)	ea	445	\$ 4,000	\$ 1,780,000
SUBTOTAL				\$ 3,451,000
PE (12-20%)				\$ 414,120
CEI (20%)				\$ 690,200
20% Contingency				\$ 690,200
TOTAL				\$ 5,245,520

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Project: Gray Twp - Richhill Twp - West Finley Twp
 County: Greene

Avg. Project Score: 178

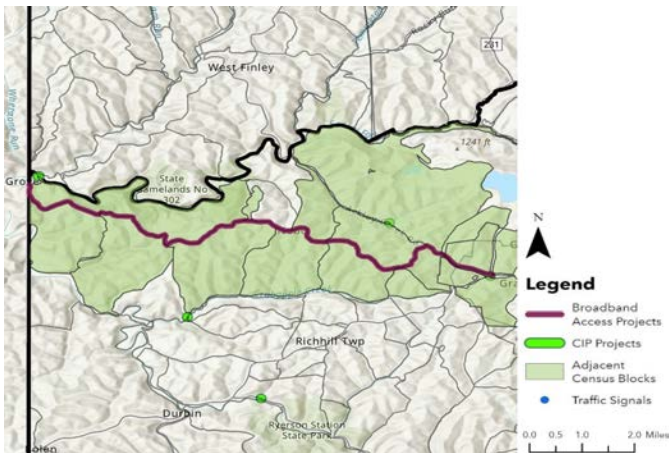


* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIS	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
10.0	178	17	76	0	19%	1%	15%	15%

Project Area and Adjacent Census Blocks



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	Unserved (<25/3 Mbps) / Underserved (<50/10 Mbps)	40
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Mobile	16
Provider Competition	Avg. 1 provider per block	40
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impacts of Telecommuting	<25% of working population has ability to telework	19

Total Score: 178

Image Service Layer Credits:

data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband along the following routes from Graysville to the West Virginia State Line:

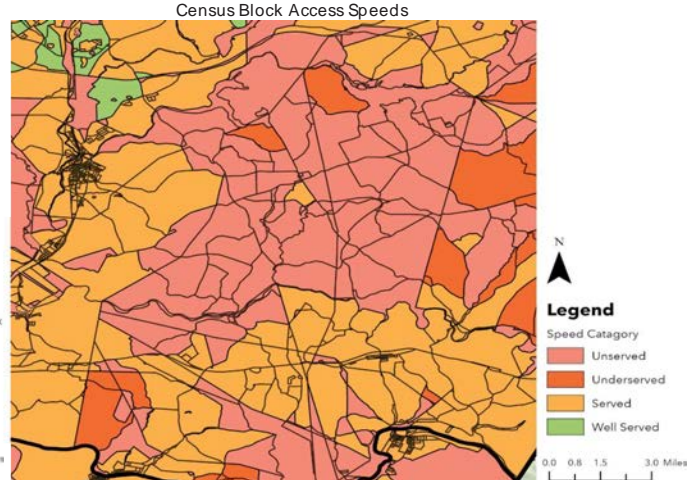
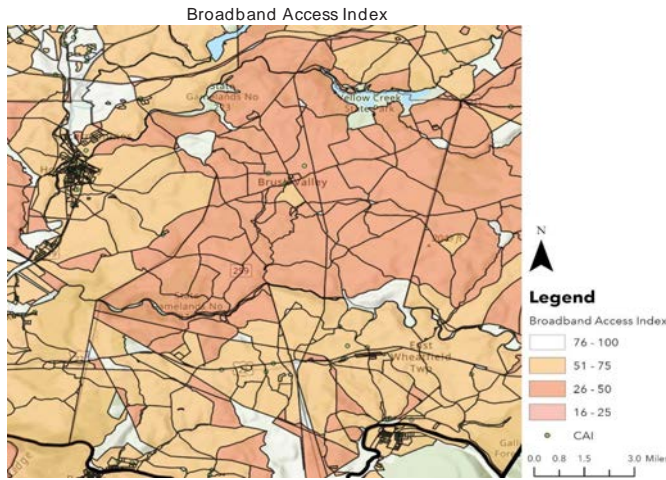
- Ackley Creek Rd
- Sawmille Rd
- Nebo Ridge Rd
- Day Road

Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "well served" speeds in Graysville to provide internet access to primarily "unserved" communities.

High Level Cost Estimate				
Project: Gray Twp - Richhill Twp - West Finley Twp				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	10.0	\$ 250,000	\$ 2,500,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	76	\$ 4,000	\$ 304,000
SUBTOTAL				\$ 2,806,000
PE (12-20%)				\$ 336,720
CEI (20%)				\$ 561,200
20% Contingency				\$ 561,200
TOTAL				\$ 4,265,120

Project: Indiana - Bolivar
County: Indiana

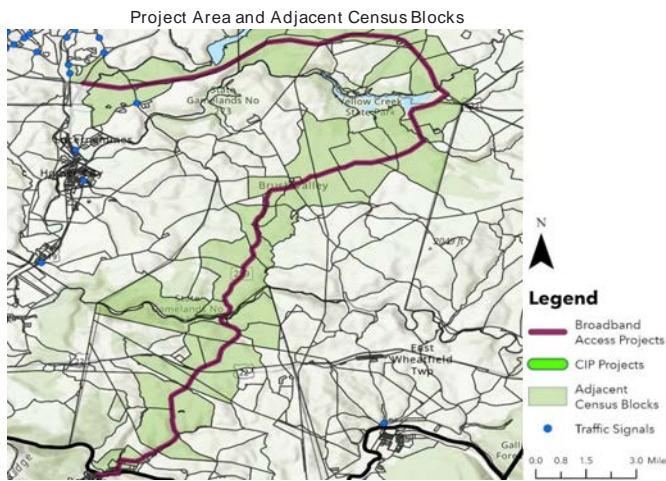
Avg. Project Score: 180



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
28.1	180	91	1,178	15	26%	3%	10%	19%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	underserved (<50/10 Mbps)	34
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25	0
Educational Institution Prox.	At least one facility within the block	25
Impacts of Remote Learning	Survey results indicate remote learning is a concern	1
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	14
Technology Access	Primary access to Fixed Broadband or Mobile	13
Provider Competition	Avg. 1-2 providers per block	31
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project overlaps <50% of project (multiple)	13
Impact on Ability to Telework	<25% of working population has ability to telework	24
		180

Image Service Layer Credits:
data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband along US 422 from US 119 near Indiana east to State Route 259, then south along State Route 259 to Bolivar. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "well served" speeds near Indiana to enhance options of "served" and "unserved" communities. Project enhancements:

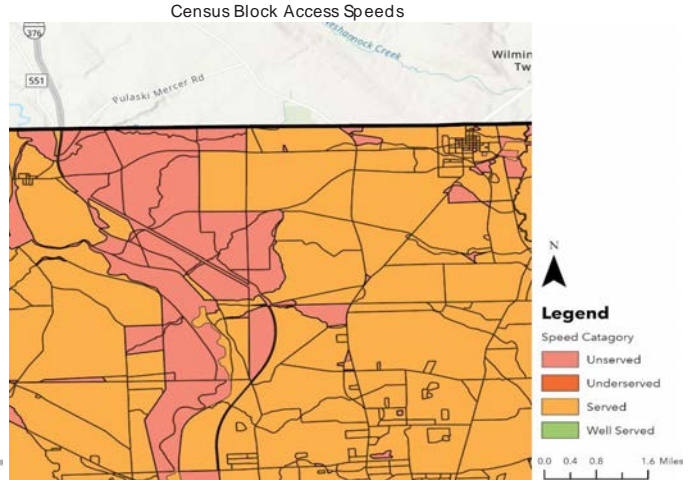
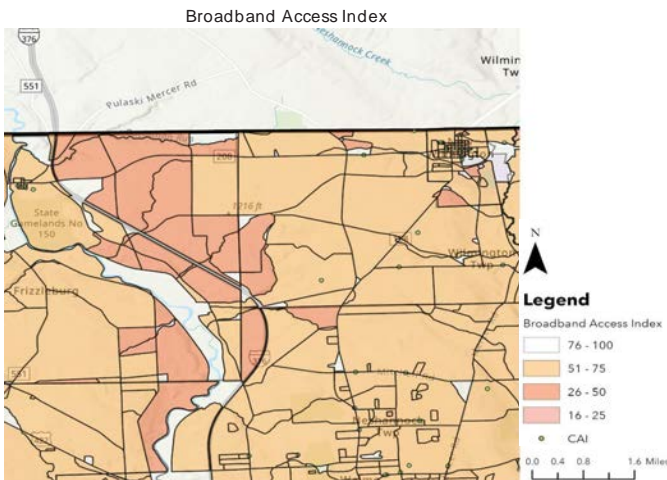
- Improve backbone capacity into West Pittsburg to increase connection speeds for entire region.
- Leverage existing fiber along US 422.

Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	18.1	\$ 250,000	\$ 4,525,000
Provider Connection Points	ea	2	\$ 2,000	\$ 4,000
Capacity Upgrade	ls	1.0	\$ 250,000	\$ 250,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	1,178	\$ 4,000	\$ 4,712,000
SUBTOTAL				\$ 9,491,000
PE (12-20%)				\$ 1,138,920
CEI (20%)				\$ 1,898,200
20% Contingency				\$ 1,898,200
TOTAL				\$ 14,426,320

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Project: New Castle - Pulaski - New Wilmington
 County: Lawrence

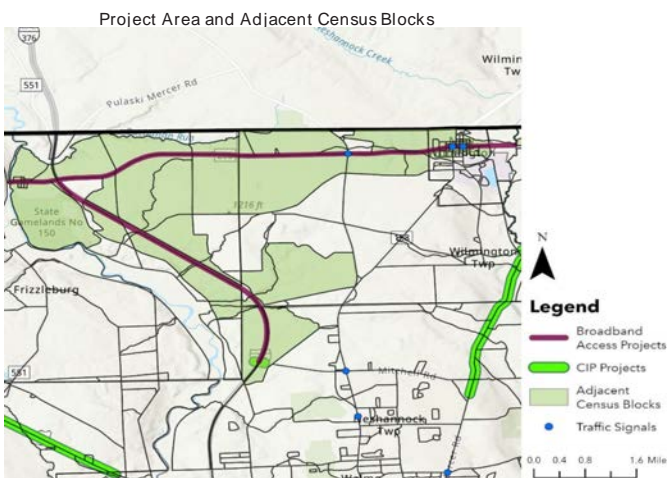
Avg. Project Score: 206



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
10.7	206	87	738	17	15%	6%	10%	17%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	served (<100/100 Mbps)	25
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25%	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicate remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Fixed Broadband	6
Provider Competition	Avg. 1-2 providers per block	28
Traffic Signals Along Corridor	1-10 Signals	13
Adjacent TIP/CIP Project?	Project is adjacent	25
Overlaps Known Broadband Route?	Project overlaps >=50% of project (DQE)	25
Impact on Ability to Telework	<25% of working population has ability to telework	21

Image Service Layer Credits:
 data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

206

PROJECT DESCRIPTION:

Propose installing fixed broadband along I-376 from Exit 9 near New Castle to Exit 5 near Pulaski, and along Route 208 from Pulaski to New Wilmington. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "served" speeds in the south, west, and east to provide internet access to mostly "unserved" communities.

Project enhancement:

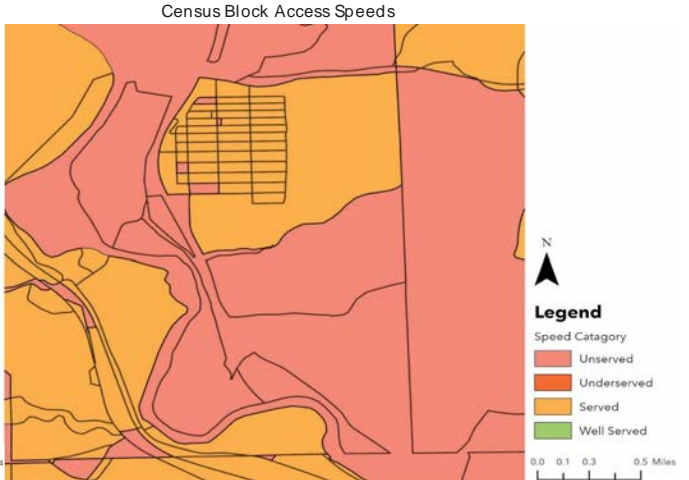
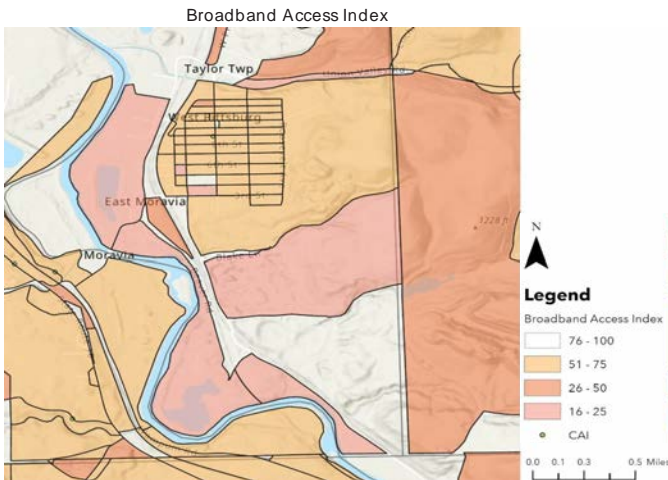
- Leverage existing DQE fiber along Route 208.
- Potential need to improve backbone capacity into West Pittsburg to increase connection speeds for entire region.
- Coordinate construction with planned CIP Project near south end of project for cost-reduction opportunities through concurrent construction and potential funds-sharing.

High Level Cost Estimate				
Project: New Castle - Pulaski - New Wilmington				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	5.4	\$ 250,000	\$ 1,350,000
Provider Connection Points	ea	3	\$ 2,000	\$ 6,000
Capacity Upgrade	ls	1.0	\$ 250,000	\$ 250,000
Communications Access Points (Urban)	ea	393	\$ 1,500	\$ 589,500
Communications Access Point (Rural)	ea	345	\$ 4,000	\$ 1,380,000
SUBTOTAL				\$ 3,575,500
PE (12-20%)				\$ 429,060
CEI (20%)				\$ 715,100
20% Contingency				\$ 715,100
TOTAL				\$ 5,434,760

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Project: West Pittsburg - East Moravia
 County: Lawrence

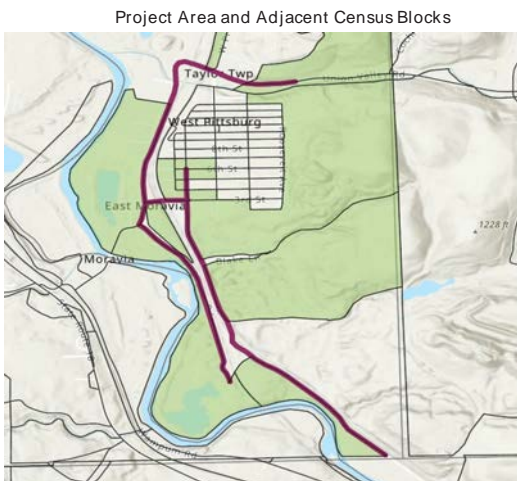
Avg. Project Score: 217



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
4.2	217	17	137	0	19%	1%	19%	29%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	underserved (<50/10 Mbps)	38
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is >=25-75%	25
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicate remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	14
Technology Access	Primary access to Fixed Broadband or Mobile	16
Provider Competition	Avg. 0-1 providers per block	42
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not adjacent	0
Overlaps Known Broadband Route?	Project overlaps <50% of project (multiple)	13
Impact on Ability to Telework	<25% of working population has ability to telework	19

Image Service Layer Credits: data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband along the following corridors:

- Union Valley Rd
- Galileo Rd
- Beaver Rd
- River Rd

Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources providing "served" speeds in central West Pittsburg via 3rd St to enhance options of "unserved" and "underserved" communities.

Project enhancements:

- Improve backbone capacity into West Pittsburg to increase connection speeds for entire region.
- Leverage existing fiber.

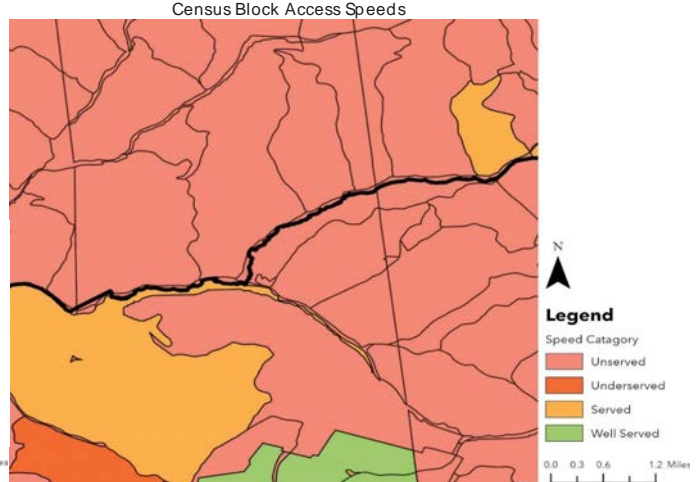
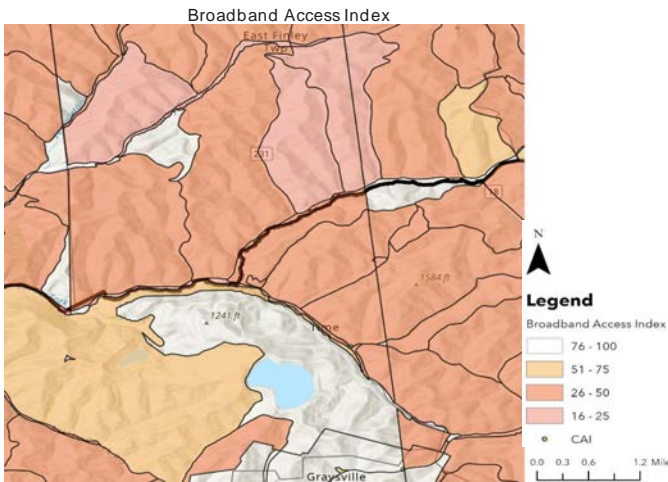
High Level Cost Estimate Project: West Pittsburg - East Moravia				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	2.2	\$ 250,000	\$ 550,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Capacity Upgrade	ls	1.0	\$ 250,000	\$ 250,000
Communications Access Points (Urban)	ea	52	\$ 1,500	\$ 78,000
Communications Access Point (Rural)	ea	85	\$ 4,000	\$ 340,000
SUBTOTAL				\$ 1,220,000
PE (12-20%)				\$ 146,400
CEI (20%)				\$ 244,000
20% Contingency				\$ 244,000
TOTAL				\$ 1,854,400

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

217

Project: Gray Twp - East Finley Twp
 County: Washington

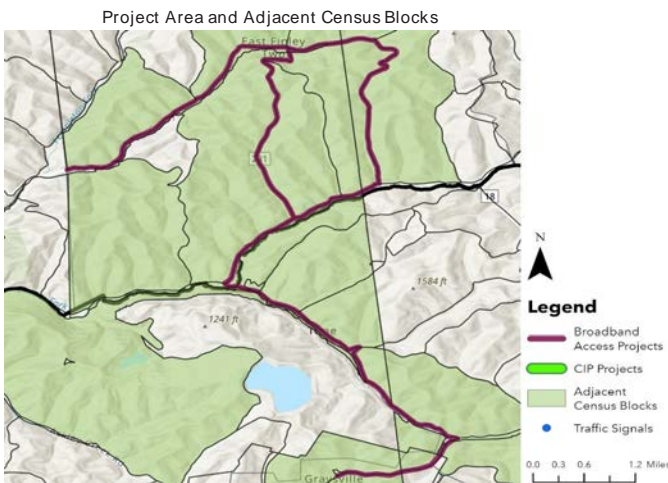
Avg. Project Score: 200



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
15.9	200	31	190	4	17%	1%	12%	14%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	Unserved (<25/3 Mbps)	46
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is >=25-75%	0
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicate remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Mobile	23
Provider Competition	Avg. 0 providers per block	42
Traffic Signals Along Corridor	0 Signals	0
Adjacent TIP/CIP Project?	Not Adjacent	0
Overlaps Known Broadband Route?	Project does not overlap	0
Impacts of Telecommuting	<25% of working population has ability to telework	26

200

Image Service Layer Credits:

data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install fixed broadband along the following routes from Graysville to the north/west through East Finley Township:

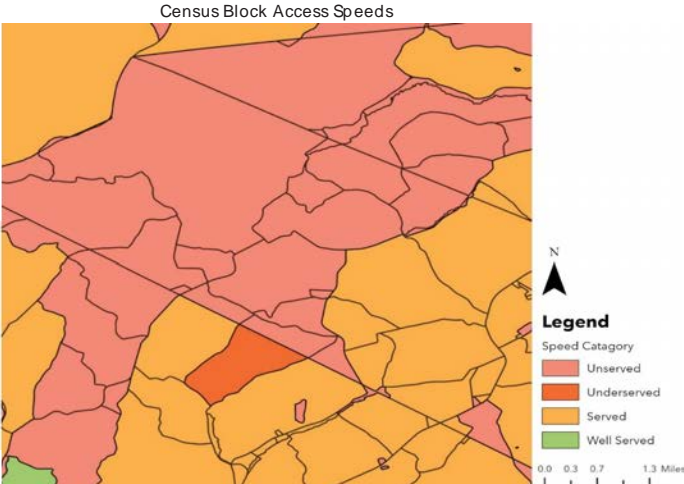
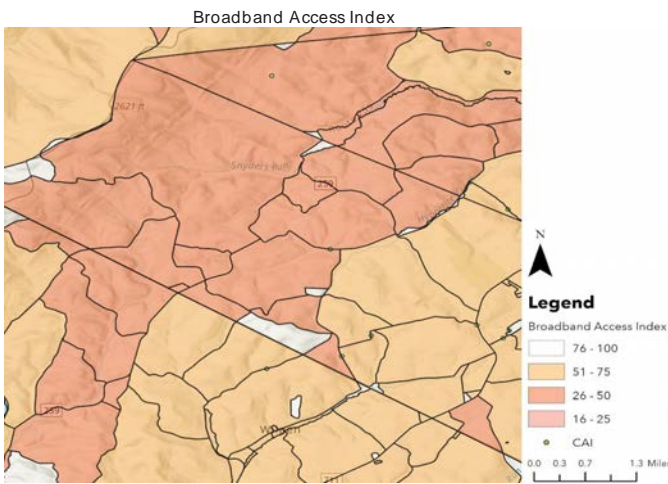
- Stringtown Rd
- Route 3026 (Crouse Rd/Martin Rd/Valley Chapel Rd)
- Enon Church Rd/E Finley Dr
- High Point Rd
- Route 3035

Additionally, install fixed broadband along E Finley Dr as a redundant communication path between Enon Church Rd to central E Finley and extend access to additional communities. Build fiber spurs off of main corridors to adjacent roads and properties to serve adjacent homes and communities. Connect to resources available providing "well served" speeds in Graysville to provide internet access to primarily "unserved" communities.

High Level Cost Estimate				
Project: Gray Twp - East Finley Twp				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	15.9	\$ 250,000	\$ 3,975,000
Provider Connection Points	ea	1	\$ 2,000	\$ 2,000
Communications Access Points (Urban)	ea	0	\$ 1,500	\$ -
Communications Access Point (Rural)	ea	194	\$ 4,000	\$ 776,000
SUBTOTAL				\$ 4,753,000
PE (12-20%)				\$ 570,360
CEI (20%)				\$ 950,600
20% Contingency				\$ 950,600
TOTAL				\$ 7,224,560

Project: Fairfield Twp
 County: Westmoreland

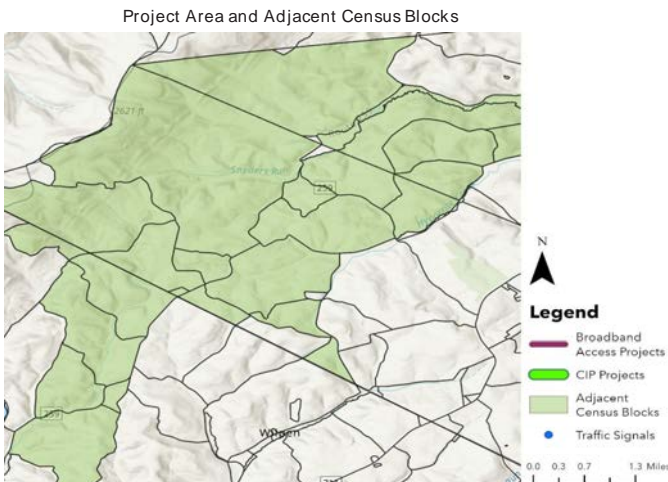
Avg. Project Score: 238



* Note: Census blocks with a population of 0 are not included in this analysis

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65 OR OLDER
N.A.	238	26	224	2	21%	2%	9%	23%



PROJECT PRIORITIZATION SCORING:

CRITERIA	AVG. RESULT FOR PROJECT	AVG. SCORE
Access Related to Speed	unserved (<25/3 Mbps)	50
Healthcare Facility Prox.	No facilities within the block	25
% of Pop. 65 or Older	Avg. % of population is <25	6
Educational Institution Prox.	No facilities within the block	25
Impacts of Remote Learning	Survey results do not indicated remote learning is a concern	0
Federal Opp. Zone	Project is outside of Federal Opp. Zone	0
Impacted Households, Businesses, CAIs	<=50 Households, Businesses and CAIs	13
Technology Access	Primary access to Mobile	25
Provider Competition	Avg. 0 providers per block	44
Traffic Signals Along Corridor	N.A.	0
Adjacent TIP/CIP Project?	Project is adjacent	25
Overlaps Known Broadband Route?	N.A.	0
Impact on Ability to Telework	<25% of working population has ability to telework	25

Image Service Layer Credits:
 data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS

PROJECT DESCRIPTION:

Install wireless communication towers in the vicinity of Fairfield Township to provide internet access to the valley that is currently "unserved." Connect to existing wireless resources to the west and east.

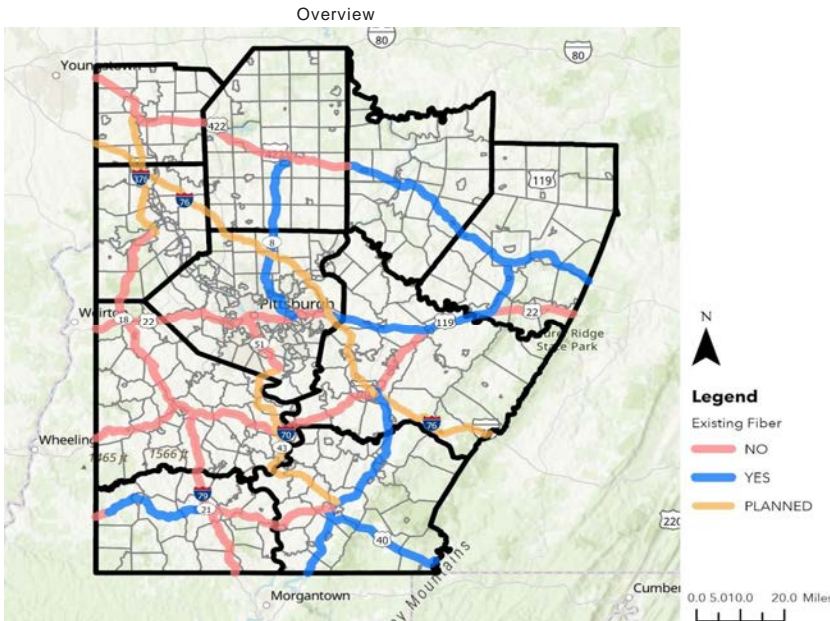
Project enhancements:

- Install access points at homes for direct-connection to new communication.
- Coordinate construction with adjacent bridge repair/replacement CIP projects for cost-reduction opportunities through concurrent construction and potential funds-sharing.

High Level Cost Estimate Project: Fairfield Twp				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Wireless Communication Tower (long-range)	ea	2	\$ 800,000	\$ 1,600,000
Wireless Communication Tower (short-range)	ea	1	\$ 400,000	\$ 400,000
Home Access Points	ea	244	\$ 1,500	\$ 366,000
SUBTOTAL				\$ 2,366,000
PE (12-20%)				\$ 283,920
CEI (20%)				\$ 473,200
20% Contingency				\$ 473,200
TOTAL				\$ 3,596,320

Project: Regional Ring
 County: Various

Avg. Project Score: 219



SUMMARY OF ROUTES:

ROUTE	TOTAL LENGTH (miles)	LENGTH NEW FIBER (miles)
I-376	50	25
I-70	60	60
I-76	105	0
I-79	35	35
State Route 8	40	0
State Route 18	45	45
State Route 21	55	30
State Route 43	52	0
State Route 51	15	15
US 119	70	15
US 22	55	35
US 40	25	0
US 422	105	45
TOTAL	712	305

* Note: Census blocks with a population of 0 are not included in this analysis

PROJECT DESCRIPTION:

Install fixed broadband along primary corridors across the Region to establish a Regional communication backbone.

Project enhancement:

Establish local communication hubs near urban areas to allow for network connections and cybersecurity controls.

Alternative Route Options to leverage existing fiber:

- Replace I-79 with US 19
- Replace I-70 from State Line to Washington with US 40

ATTRIBUTES:

DISTANCE (miles)	AVG. SCORE	NO. CENSUS BLOCKS	APPROX. NO. HOMES	APPROX. NO. CAIs	AVG. % HOMES WITH NO INTERNET ACCESS	AVG. % MINORITIES	AVG. % LOW INCOME	% OF POP. 65+ OR OLDER
712.0	219	14,757	307,459	2,771	18%	14%	15%	19%

Special Project Notes:

- The Regional Ring will likely have to be completed in several sub-projects by county and/or based on funding availability each year.
- Attributes and scoring information provided represent the project in its entirety and data for census blocks immediately adjacent to the Regional Ring segments. Sub-project scoring and attributes will differ.
- The Regional Ring has the potential to serve over 300k homes and over 2,700 CAIs along the various routes. Those connections can be prioritized as separate extension projects once segments of the Regional Ring are completed.
- The I-76 segment is identified as having existing fiber. This represents future planned fiber.

High Level Cost Estimate Project: Regional Ring				
Description	Unit	Quantity	Unit Cost	Item Subtotal
Fiber Optic Cable	mi	305.0	\$ 250,000	\$ 76,250,000
Provider Connection Points	ea	19	\$ 2,000	\$ 38,000
Urban Area Network Hubs	ea	18	\$ 150,000	\$ 2,700,000
SUBTOTAL				\$ 78,988,000
PE (12-20%)				\$ 9,478,560
CEI (20%)				\$ 15,797,600
20% Contingency				\$ 15,797,600
TOTAL				\$ 120,061,760

NOTE: Length of proposed fiber is approximate based on total project length, excluding the approximate length of existing fiber available to use.

Image Service Layer Credits:

data.pa.gov, Esri, HERE, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, Esri, NASA, NGA, USGS