July 21, 2025

Indiana Finance Authority
State Revolving Fund Loan Program
Drinking Water and Wastewater Program
100 N. Senate Avenue, Suite 1275
Indianapolis, IN 46204

Attn: Jenn Pence - SRF Clean Water Program Manager

RE: TOWN OF BRISTOL WATER NETWORK, PRODUCTION, & STORAGE IMPROVEMENTS PER ADDENDUM NO. 1 (SRF Project No. DW22282001)

Dear Jenn:

This PER Addendum will address water main replacement and valve relocation beyond the scope of the original PER as previously accepted by SRF.

A. Introduction

This PER Addendum covers two changes. The first is the replacement of 8 blocks of water main on Elkhart and St Joseph Streets and the second is the replacement of the water main under the state highway intersection of Vistula (SR 120) & Division (SR 15).

The Town has been carefully considering the contingency funds that are part of this loan. Instead of waiting until the very end and applying for the use of remaining funds, they are planning to expand the overall scope of the project while taking advantage of paving projects from separate funding sources. The primary scope from the PER remains the priority for this project, and if any changes exceed the loan amount provided by SRF they will pay for the remainder out of their local funds. This was discussed briefly with Camille Meiners and given Bristol's good financial standing, she agreed.

Alternative 1 started as a locally funded project and then it was decided to use SRF funds, therefore the design is complete, the permit is submitted, and work is scheduled to begin in last summer of 2025. The Change Order will be sent to the IFA for review soon after the submittal of this PER Addendum. Alternate 2 is in the early design phase and is anticipated to be completed within the next few months.

In addition, the upcoming Change Order will extend this contract into 2026. The reason for this is twofold, first Contract A is required to re-mobilize after the water tower is complete, the end date of both Contracts will be September of 2026. The re-mobilization will include final paving and finalizing controls and start-up. And secondly, the additional time will allow the contractor enough time to mobilize and complete the new work in conjunction with the timeline of the other funds. The modification of the timeline will not impact the Town or any current services.

Details of each new Alternatives are below:

1. A Community Crossing Matching Grant (CCMG) has been awarded to the Town for road surface, curb, and sidewalk replacement for both Elkhart St. and St. Joseph St. This PER addendum includes additional water main replacement work not in the original PER. The scope includes the abandonment of existing asbestos concrete pipe along these same downtown blocks. The existing pipe is brittle and poses a risk of cracking from the road construction activities. These pipes will be replaced with modern materials and updated sizing to match current standards. The infrastructure will include the following:

    a) 2500 LFT of PVC Water Main
    b) 42 Water Main Fittings and Appurtenances
    c) 28 Service Connections
    d) 11 New Replacement Fire Hydrants
    e) Tie-ins to existing mains on both sides

2. The INDOT paving project includes the intersection of Vistula and Division. This intersection has a cluster of three valves that are in the middle. The traffic at the intersection is continuous during all hours making the cluster of valves inaccessible without closing the intersection or risking the safety of the workers. This PER addendum will extend the original scope to include the adjacent sides of the intersection. The proposed work will replace the existing water main in the area and move the valves away from the intersection. The infrastructure will include the following:

    a) 470 LFT of 16” HDPE Water Main
    b) 23 Water Main Fittings and Appurtenances
    c) 12 Service Connections
    d) Replace 12 services from main to meter pit
    e) Inspect and if needed replace non-compliant materials into the buildings

B. General Description

The following will describe the project changes listed above, then discuss the need, followed by a discussion on alternatives for each of the categories listed above.

1. Replacement of Existing Asbestos Lined Pipe Along Elkhart St and St Joseph St

a) Need:

(1) The Town of Bristol received additional grant funding through the CCMG program prompting a scope increase to address existing asbestos lined cement pipe. The replacement was not originally considered as part of scope for budgetary considerations. The replacement is being added to this addendum to remove the risk that the existing brittle pipes pose during construction.

b) Alternative Analysis:

(1) Alternative 1: Leave the Existing Mains Along Elkhart St. and St. Joseph St.

(a) The Town of Bristol could decline to replace the water mains. By doing nothing, the Town would be prolonging the risk of the brittle water mains breaking, and risk them breaking during the installation of the new road. Inevitably the pipes would need to be addressed in a future project or emergency repair. This would also cause damage to the newly paved roads. This alternative is not a desirable outcome and will not be considered further.

(2) Alternative 2: Replace the Existing Mains Along Elkhart St. and St. Joseph St.

(a) The water mains could be replaced as a part of the Town of Bristol Water Network, Production & Storage Improvements project that has already been approved for SRF funding. This replacement could be funded by using approximately half of the already allocated construction contingency, in conjunction with the already awarded CCMG funding. See Attachment 1 for total construction costs for the water main replacement. Replacing the water mains as a part of this project will remove the need to replace these mains in the future and the risk of them breaking during construction. The streets already have funding for repair through the CCMG making it more favorable to replace the water mains now rather than having to tear up and repair the streets in a future project.

2. Relocation of Valves at the Intersection of Vistula St and Division St

a) Need:

(1) The Town of Bristol cannot easily access important system valves. The relocation was not originally considered as part of scope for budgetary consideration. The relocation is being added to this addendum to improve system operability and maintenance flexibility.

b) Alternate Analysis:

(1) Alternative 1: Leave the Existing Valve Cluster at the Intersection of Vistula St. and Division St.

(a) The Town of Bristol could decline to relocate the valve cluster. By doing nothing the valve cluster will remain inaccessible without halting traffic along a busy corridor. Without easy access to the valves the Town has less maintenance flexibility and is unable to easily operate its water system.

(2) Alternative 2: Relocate the valves at Intersection of Vistula St. and Division St.

(a) Relocating this valve cluster will allow the water system operators to access important system valves without putting themselves at risk or halting traffic. This infrastructure will allow for greater maintenance flexibility and system operability.

The valves could be relocated as a part of the Town of Bristol Water Network Production & Storage Improvements project that has already been approved for SRF funding. This could be funded by using approximately a third of the allocated construction contingency. See Attachment 2 for total construction costs for the valve relocation.

C. Environmental Discussion

The proposed scope will be installed, stored, or used in facilities, infrastructure, or on land that is now owned by the Town. Stantec has completed a supplemental environmental review and provided a Project Environmental Review Update Memo (Attachment No. 3). This letter states that the expanded study area contains no impact to wetland resources nor does it disturb any cultural areas.

D. Cost

The anticipated project cost change will be $530,000 for Alternative 1, the water main replacement, and $310,000 for Alternative 2, the valve relocation for a total of $840,000. See Attachment 2 for total construction costs associated with this project addendum. The town understands that this is over 70% of the total $1,173,700 contingency funds. The Town understands the primary scope accepted in the PER will be completed. The Town is prepared to pay for any additional funds above the loan amount to complete this work as it has been presented.

E. Conclusion

It is recommended that the Town proceeds with Alternative 2 to replace the existing asbestos lined cement pipe.

Attached to this PER Addendum, please see updated pertinent figures, graphics, and reports.

If you have any additional questions, comments, or concerns regarding this project PER, please don't hesitate to reach out to JPR at jfoglesong@jpr1source.com, or at (574) 314-7954.

Sincerely,

J Foglesong

Jenny Foglesong, PE
Senior Project Engineer

Attachments:
Attachment No. 1 – Town Acceptance Letter
Attachment No. 2 – PER Addendum 1 Cost Estimate
Attachment No. 3 – Stantec Wetland & Archeological Evaluation Letter
Attachment No. 4 – Proposed Construction Figures – Water Main Replacement

Attachment 1
Town Acceptance Letter

BRISTOL TOWN COUNCIL
P.O. Box 122, Bristol, IN 46507

July 21, 2023

Indiana Finance Authority
State Revolving Loan Program
Water Program
100 N Senate Avenue, Suite 1275
Indianapolis, IN 46204

Attn: Jenn Pence - SRF Clean Water Program Manager

RE: Town of Bristol Water Network, Production, & Storage Improvements
DW22282001
PER Addendum No. 1

Jenn,

On behalf of the Town of Bristol, I have reviewed and approved the PER Addendum 1 documents prepared by Jones Petrie Rafinski Corp for the above subject project.

Thank you for your work on this project and we look forward to moving forward with this additional work.

Best Regards,

Mike Yoder
Town Manager

Cc: Ken Jones, PS – Jones Petrie Rafinski Corp.
Jenny Foglesong, PE – Jones Petrie Rafinski Corp.

Attachment 2
PER Addendum 1 Cost Estimate

TOWN OF BRISTOL
WATER SYSTEM IMPROVEMENT PROJECT
ELKHART ST & ST JOSEPH ST WATER MAIN REPLACEMENT
OPINION OF PROBABLE COST

Item No.	Pay Item	Price
1	PVC Water Main	$ 179,821.00
2	Water Main Fittings and Appurtenances	$ 108,825.00
3	Water Main Service Connections	$ 78,378.50
4	Fire Hydrant Replacement	$ 123,000.00
5	Site Work/Road Restoration	$ 24,200.00
6	Mobilization & Demobilization	$ 8,500.00
	Subtotal Construction Cost:	**$ 530,000.00**

INTERSECTION OF DIVISION AND VISTULA ST
OPINION OF PROBABLE COST

Item No.	Pay Item	Price
1	Water Main Installation Directional Drill	$ 81,767.50
2	Water Main Installation Open Cut	$ 30,000.00
3	Water Main Fittings and Appurtenances	$ 74,100.00
4	Water Main Service Connections	$ 31,850.00
5	Abandonment of Existing Water Mains	$ 23,575.00
6	Site Work/Road Restoration/Traffic Control	$ 44,080.00
7	Mobilization & Demobilization	$ 22,034.75
	Subtotal Construction Cost:	**$ 310,000.00**

Total Construction Cost for PER Addendum 1:	**$ 840,000.00**

Attachment 3
Stantec Wetland & Archeological Evaluation Letter

Stantec

Memo

To:	Jenny Foglesong, PE	From:	Benjamin Harvey
	Jones Petrie Rafinski Corporation		Indianapolis
Project/File:	Bristol Waterline Improvements Project	Date:	July 15, 2025

Reference: Project Environmental Review Update Memo

Introduction

Stantec provided wetland delineation and cultural resources studies to Jones Petrie Rafinski (JPR) in support of the Town of Bristol's waterline improvement project State Revolving Fund (SRF) requirements. JPR prepared and coordinated the SRF submittals and has performed ongoing design and coordination with the Town of Bristol. Based on recent design updates and additional information provided by JPR to Stantec, it is our understanding that additional areas have been added to the project and require review for potential cultural resources and regulated waters resources.

These additional areas include the intersection of E Vistula St. and S Division St., extending south to E Elkhart St. The project now proposes an expanded area to replace the water main on Vistula, coinciding with INDOT replacing the road. Most of the work in this area will include directionally drilled HDPE pipe, with an open cut section leading through a town park within previously-disturbed land. No trees will be removed as part of this work. Additional project areas include E Elkhart St. and E St. Joseph St. between S Division and Ponderosa Dr. (Pearl St.). At these locations it is proposed to repave the streets and make improvements to drainage, all taking place in the south side lane of the streets and requiring no tree removal.

Wetland Delineation

Stantec prepared a wetland delineation and waters investigation report for this project in April 2022, and an addendum study for this report in March 2024. These studies are less than 5 years old so would generally still be considered valid under US Army Corps of Engineers (USACE) guidance. During these studies, a portion of the proposed expanded project area was surveyed at the Vistula/Division intersection, which included the park area where the proposed open cut trench is proposed. No wetlands or other surface waters were identified in this location.

Stantec performed a desktop review of the entire proposed new project areas to look for signs of surface waters or wetlands. No potentially regulated resources were identified in this review. Furthermore, the majority of the proposed project takes place within existing road right-of-way and only proposes to improve existing infrastructure, so wetlands or surface waters are not present in these locations. Therefore, it is our recommendation that the project would not impact any surface waters or wetlands in any way, beyond impacts that may have been previously documented or anticipated based on previous studies. No further wetland delineation or waters investigation is necessary based on this proposed scope change.

Reference: **Bristol Waterline Improvements Project**

Cultural Resources

Stantec prepared a Phase 1a archaeological records review and reconnaissance (Phase Ia) for this project for this project in 2022, and an updated addendum to this report in 2024. During these studies, a portion of the proposed expanded project area was surveyed at the Vistula/Division intersection, which included the park area where the proposed open cut trench is proposed. Based on these studies, it was determined that the project would not have an effect on any known cultural resources. This conclusion is based on the subsurface nature of the project relative to any aboveground historic structures, and the project team identifying no new archaeological resources within undisturbed parts of the project.

Stantec performed a desktop review of the new proposed project areas and the proposed scope of work for these areas. The entire proposed new project consists of subsurface utility work, and nearly all of this work will take place within existing road right-of-way. The portion of work outside existing road right-of-way has also been previously disturbed for work within the park, and the park itself is not recorded on the Indiana Historic Sites and Structures Inventory (IHSSI) or as a cultural resources concern. The previous report concluded that none of the IHSSI resources adjacent to the project area or in the wider study area will be directly affected by the proposed project due to the subsurface nature of the water line installation. After reviewing the proposed additional work locations and scope of the project, it is our opinion that this conclusion is still valid for the project.

Conclusion

After reviewing the proposed expanded project areas and the work that is will occur in these areas, it is our opinion that the project will have no further impacts on wetlands or water resources or cultural resources because of these changes.

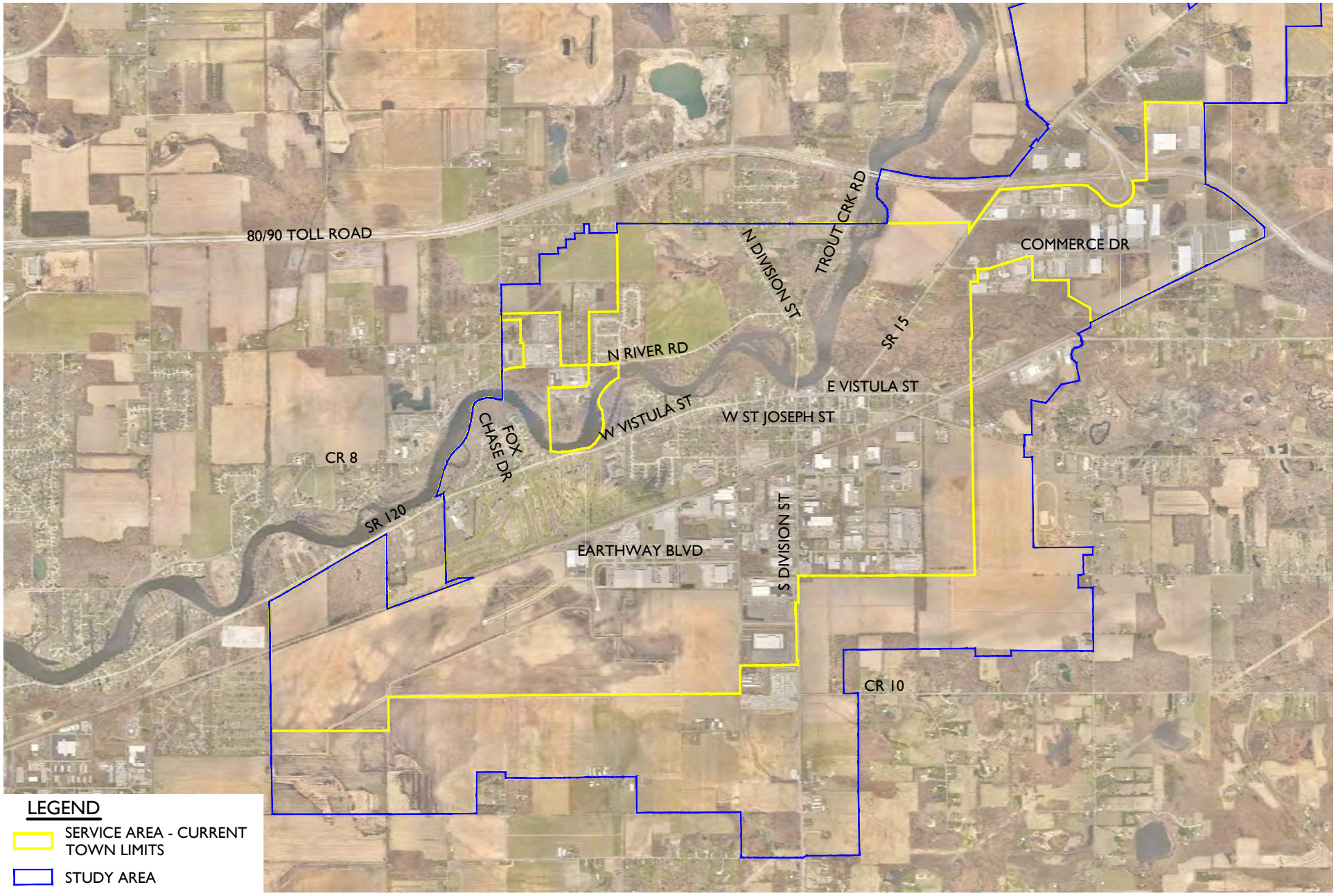
Thank you,

Stantec Consulting Services Inc.

Benjamin Harvey PWS, CPESC
Associate, Senior Environmental Project Manager
Phone: (317) 599-4390
Mobile: (463) 269-1622
benjamin.harvey@stantec.com

stantec.com

Attachment 4
Proposed Construction Figures – Water Main Replacement

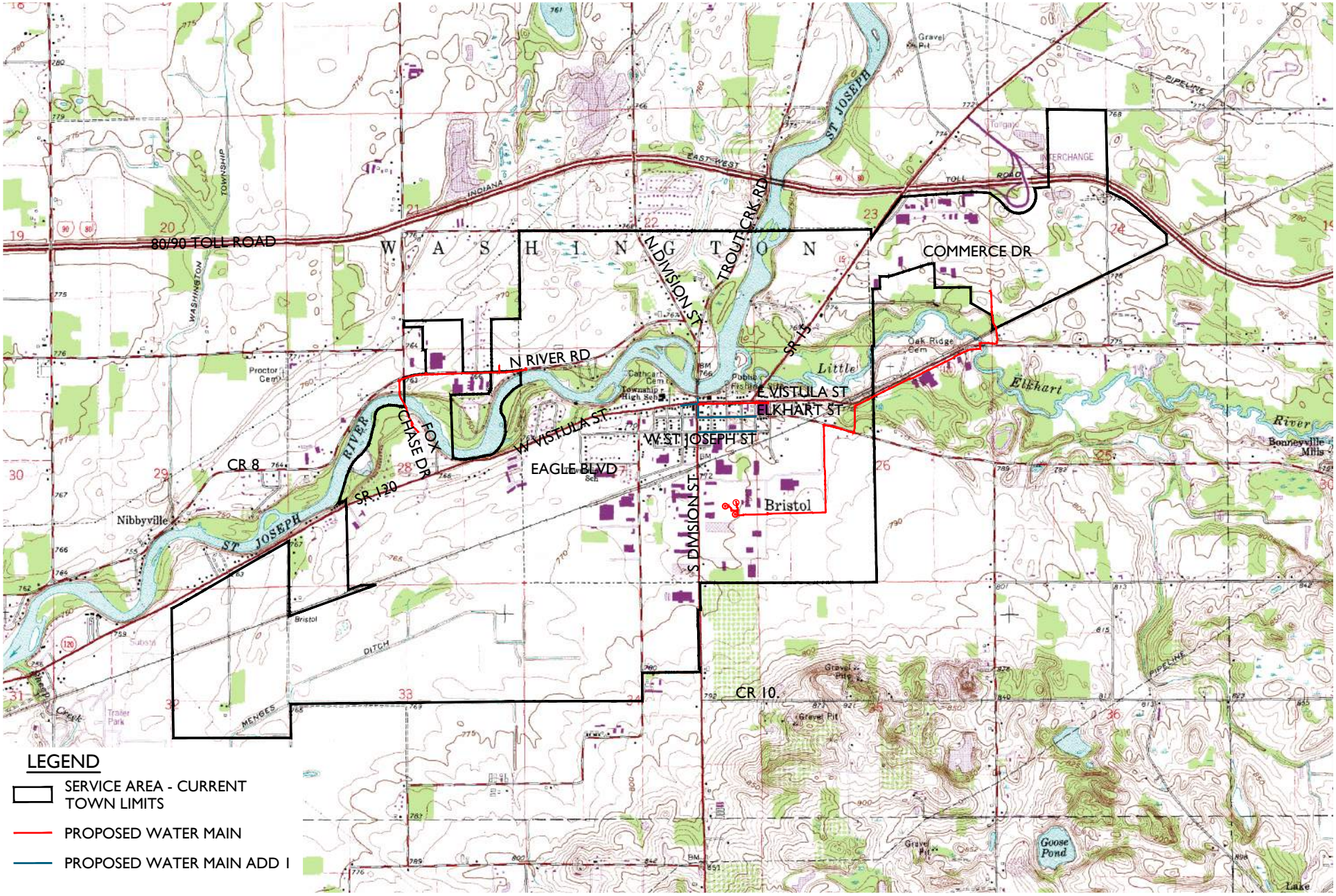


BRISTOL WATER IMPROVEMENTS

FIGURE 1
STUDY AREA

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,500 3,000

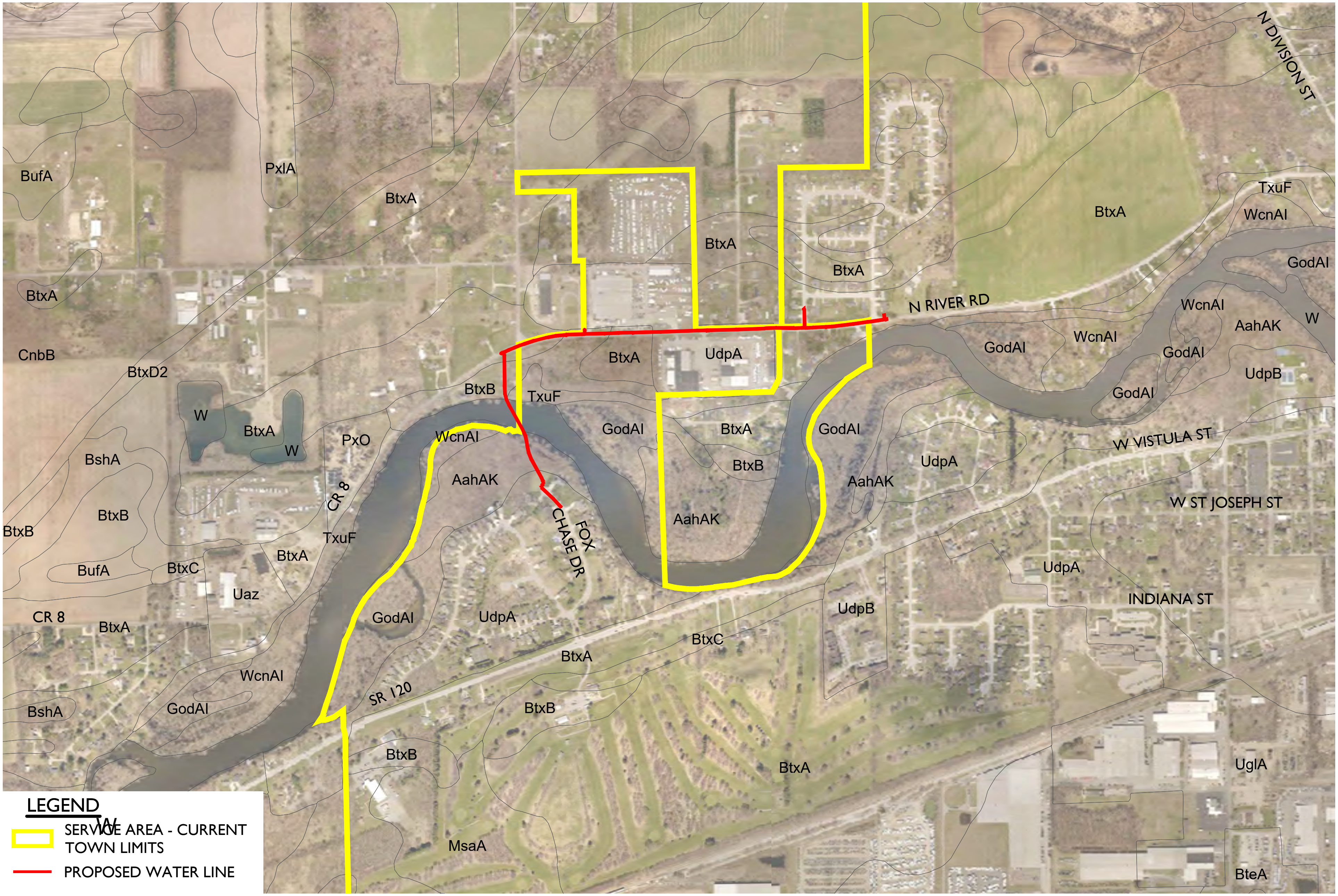


BRISTOL WATER IMPROVEMENTS

FIGURE 2
TOPOQUAD MAP

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,500 3,000



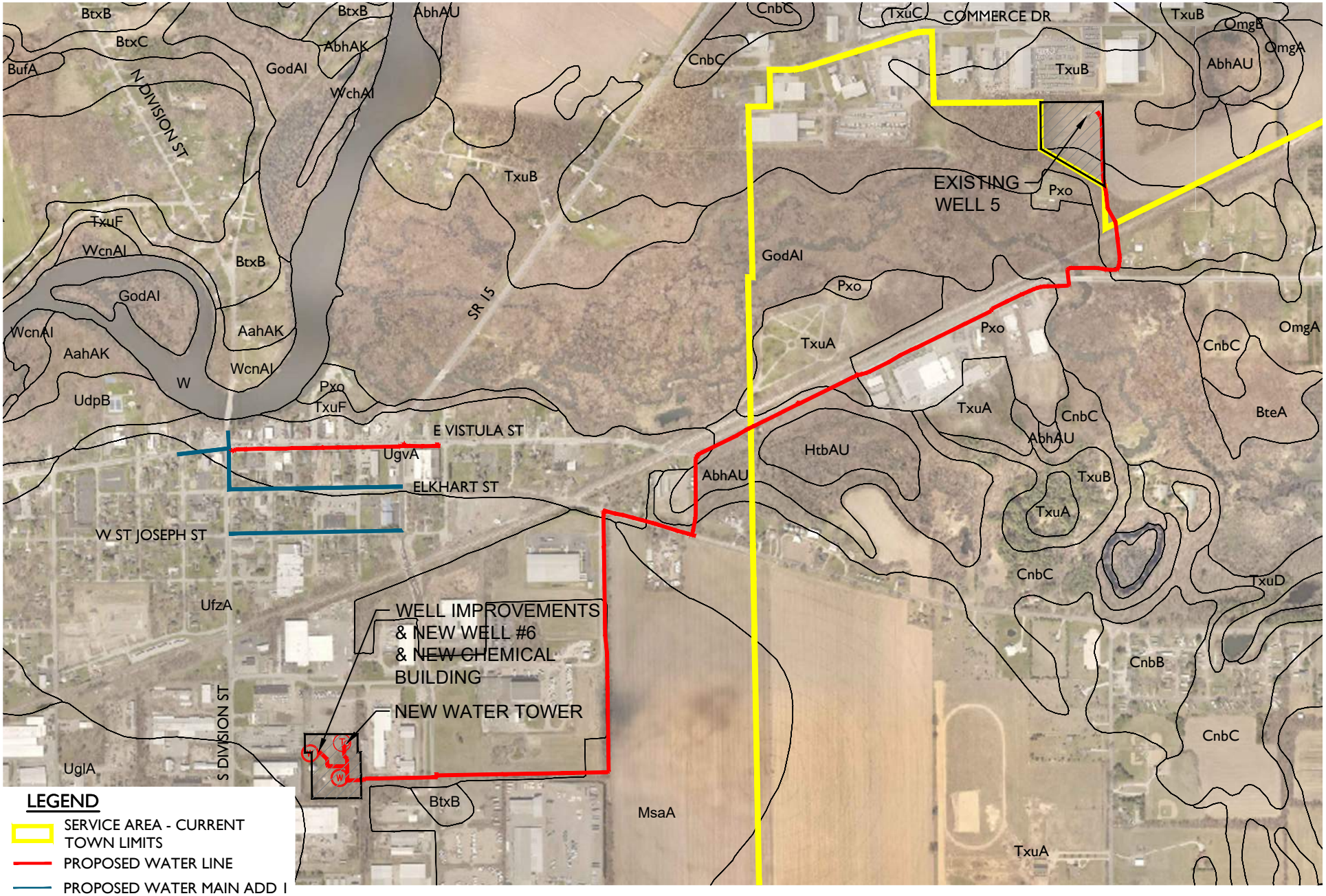
BRISTOL WATER IMPROVEMENTS

JONES PETRIE RAFINSKI

South Bend, IN
p: 574.232.4388

Fort Wayne, IN
p: 260.422.2522

FIGURE 3.1
SOILS MAP - WEST



LEGEND

- SERVICE AREA - CURRENT TOWN LIMITS
- PROPOSED WATER LINE
- PROPOSED WATER MAIN ADD 1

BRISTOL WATER IMPROVEMENTS

FIGURE 3.2
SOILS MAP - EAST & PROPOSED BUILDING SITES

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

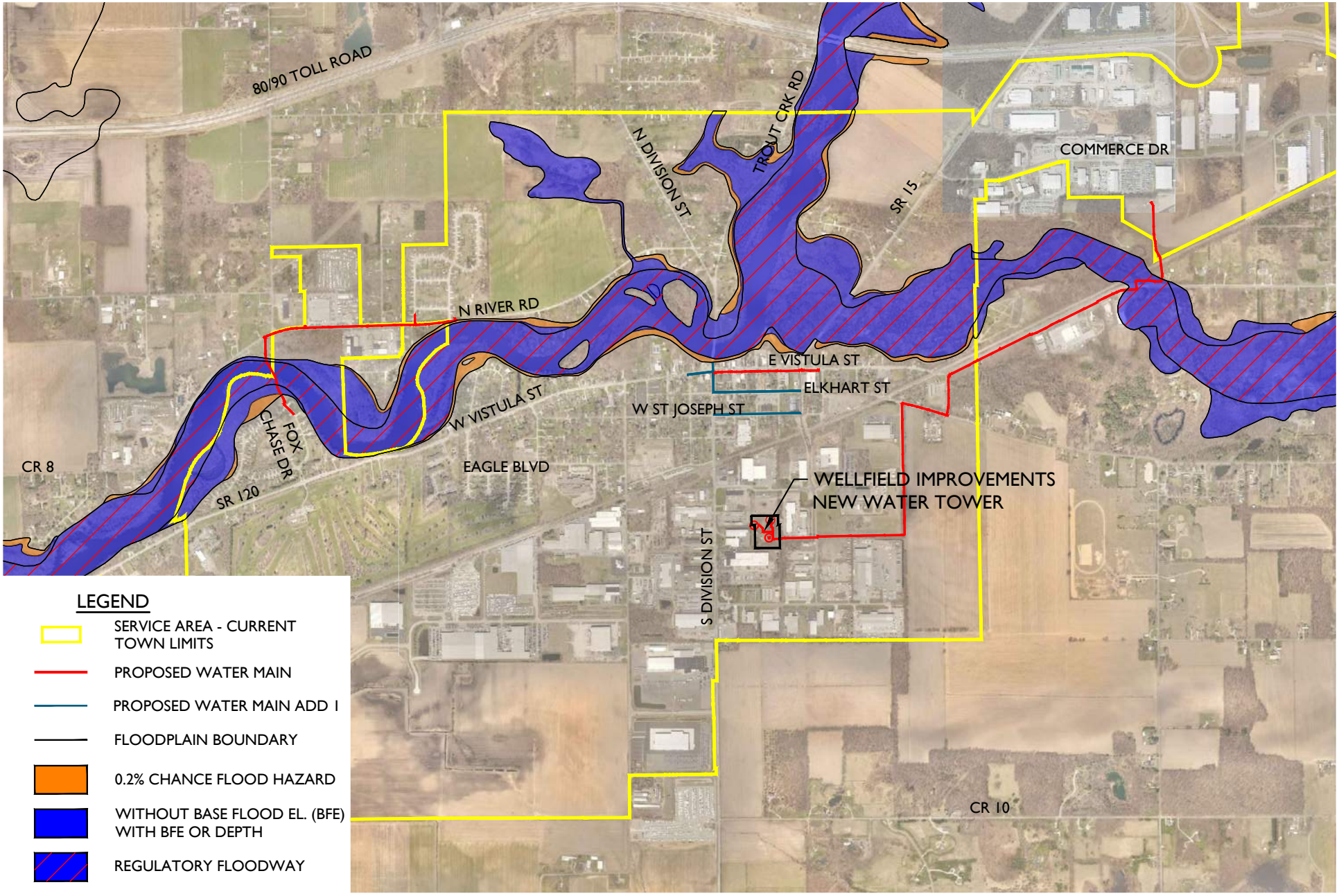
Feet
0 500 1,000

AahAK	Abscota loamy sand, 0 to 2 percent slopes, occasionally flooded, brief duration
AbhAN	Adrian muck, drained, 0 to 1 percent slopes
AbhAU	Adrian muck, undrained, 0 to 1 percent slopes
BshA	Brady sandy loam, 0 to 1 percent slopes
BteA	Brems loamy sand, 0 to 1 percent slopes
BtxA	Bristol loamy sand, 0 to 2 percent slopes
BtxB	Bristol loamy sand, 2 to 5 percent slopes
BtxC	Bristol loamy sand, 5 to 10 percent slopes
BtxD2	Bristol loamy sand, 10 to 18 percent slopes, eroded
BufA	Bronson sandy loam, 0 to 1 percent slopes
CnbA	Coloma sand, 0 to 2 percent slopes
CnbB	Coloma sand, 2 to 5 percent slopes
CnbC	Coloma sand, 5 to 10 percent slopes
CvdA	Crosier loam, 0 to 1 percent slopes
EchAN	Edwards muck, drained, 0 to 1 percent slopes
GczA	Gilford sandy loam, 0 to 2 percent slopes, gravelly subsoil
GdnA	Gilford mucky sandy loam, 0 to 1 percent slopes, gravelly subsoil
GodAl	Gravelton loam, 0 to 1 percent slopes, frequently flooded, long duration
HhaAP	Histosols, 0 to 1 percent slopes, ponded
HtbAN	Houghton muck, drained, 0 to 1 percent slopes
HtbAU	Houghton muck, disintegration moraine, 0 to 2 percent slopes
MgcA	Maumee loamy sand, 0 to 1 percent slopes
MsaA	Mishawaka sandy loam, 0 to 1 percent slopes
MvkA	Morocco loamy sand, 0 to 2 percent slopes
OmgA	Osolo loamy sand, 0 to 1 percent slopes
OmgB	Osolo loamy sand, 1 to 5 percent slopes
Pmg	Pits, gravel
PxlA	Psammaquents
Pxo	Psamments
ReyA	Rensselaer loam, 0 to 1 percent slopes
RopB	Riddles-Oshtemo fine sandy loams, 1 to 5 percent slopes
TxuA	Tyner loamy sand, 0 to 1 percent slopes
TxuB	Tyner loamy sand, 1 to 5 percent slopes
TxuC	Tyner loamy sand, 5 to 10 percent slopes
TxuD	Tyner loamy sand, 10 to 18 percent slopes
TxuF	Tyner loamy sand, 18 to 45 percent slopes
UdkA	Urban land-Brady complex, 0 to 1 percent slopes
UdpA	Urban land-Bristol complex, 0 to 1 percent slopes
UdpB	Urban land-Bristol complex, 1 to 5 percent slopes
UdrA	Urban land-Bronson complex, 0 to 1 percent slopes
UeqA	Urban land-Gilford complex, 0 to 1 percent slopes
UfzA	Urban land-Mishawaka complex, 0 to 1 percent slopes
UglA	Urban land-Osolo complex, 0 to 1 percent slopes
UgvA	Urban land-Tyner complex, 0 to 1 percent slopes
UgvB	Urban land-Tyner complex, 1 to 5 percent slopes
VnxA	Vistula loamy sand, 0 to 1 percent slopes
W	Water
WcnAl	Waterford loam, 0 to 2 percent slopes, frequently flooded, long duration

BRISTOL WATER IMPROVEMENTS

FIGURE 3.3
SOILS LEGEND

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

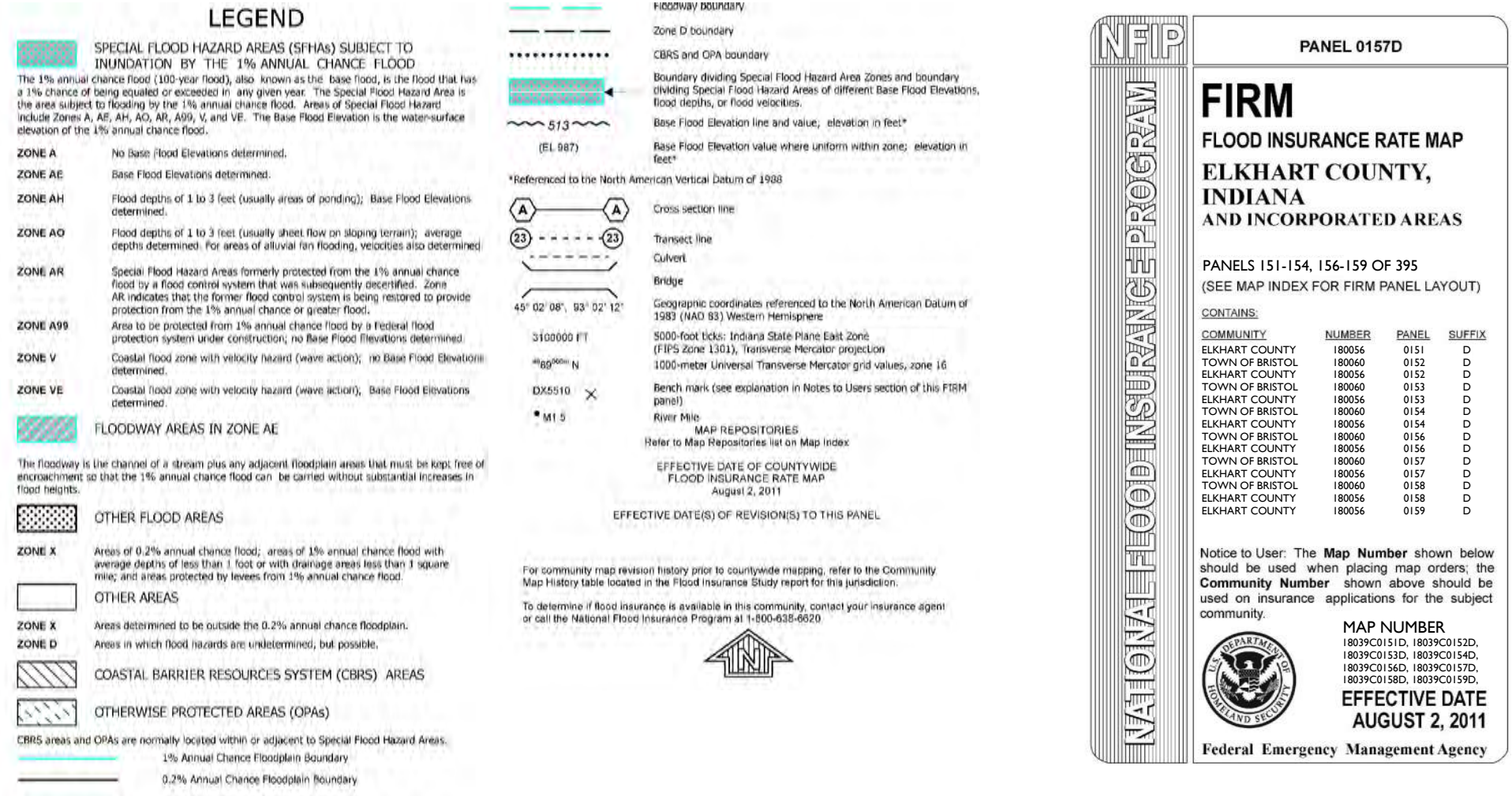


BRISTOL WATER IMPROVEMENTS

FIGURE 4.1
FLOODPLAINS

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

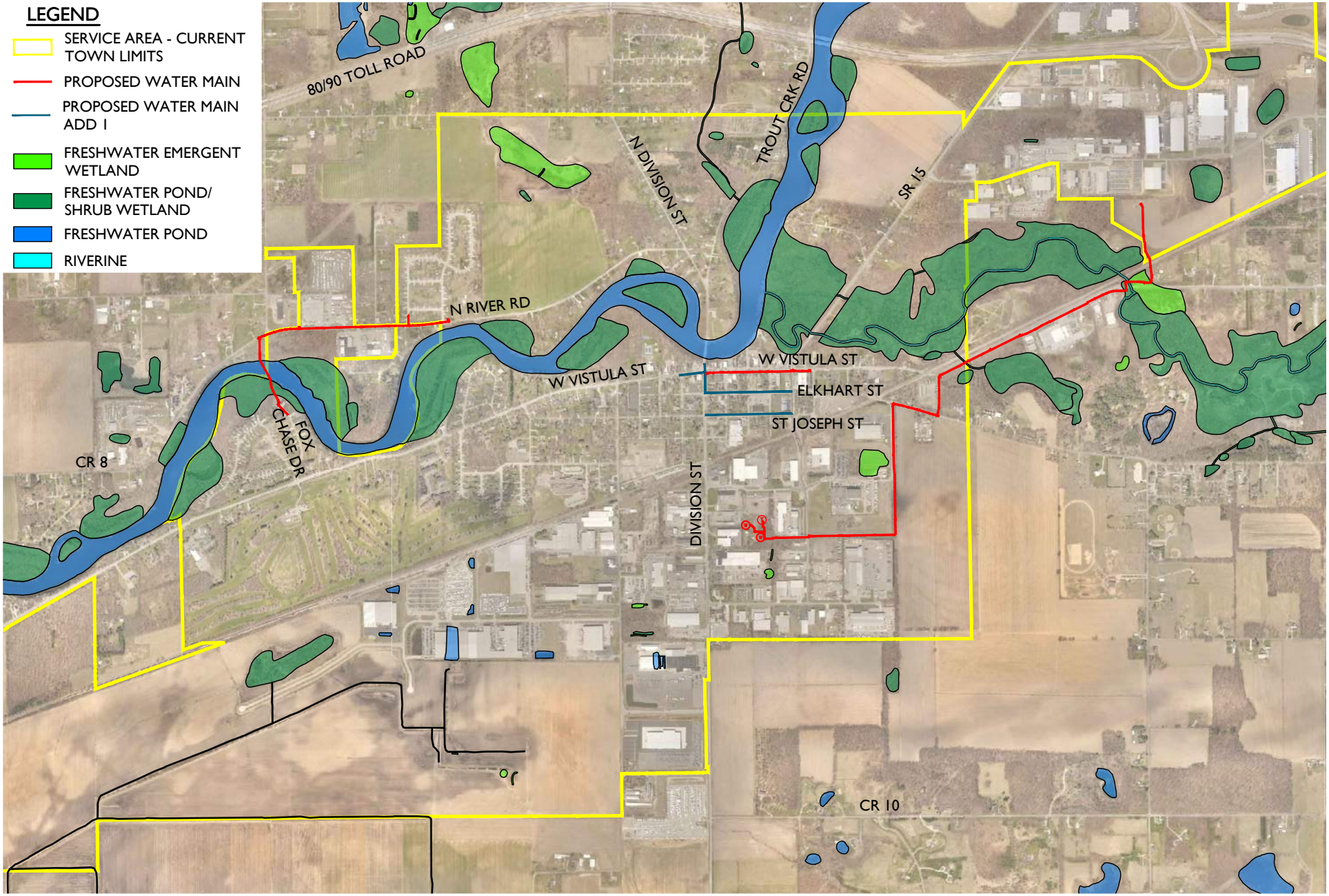
Feet
0 1,000 2,000



BRISTOL WATER IMPROVEMENTS

FIGURE 4.2
FLOODPLAIN LEGEND

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

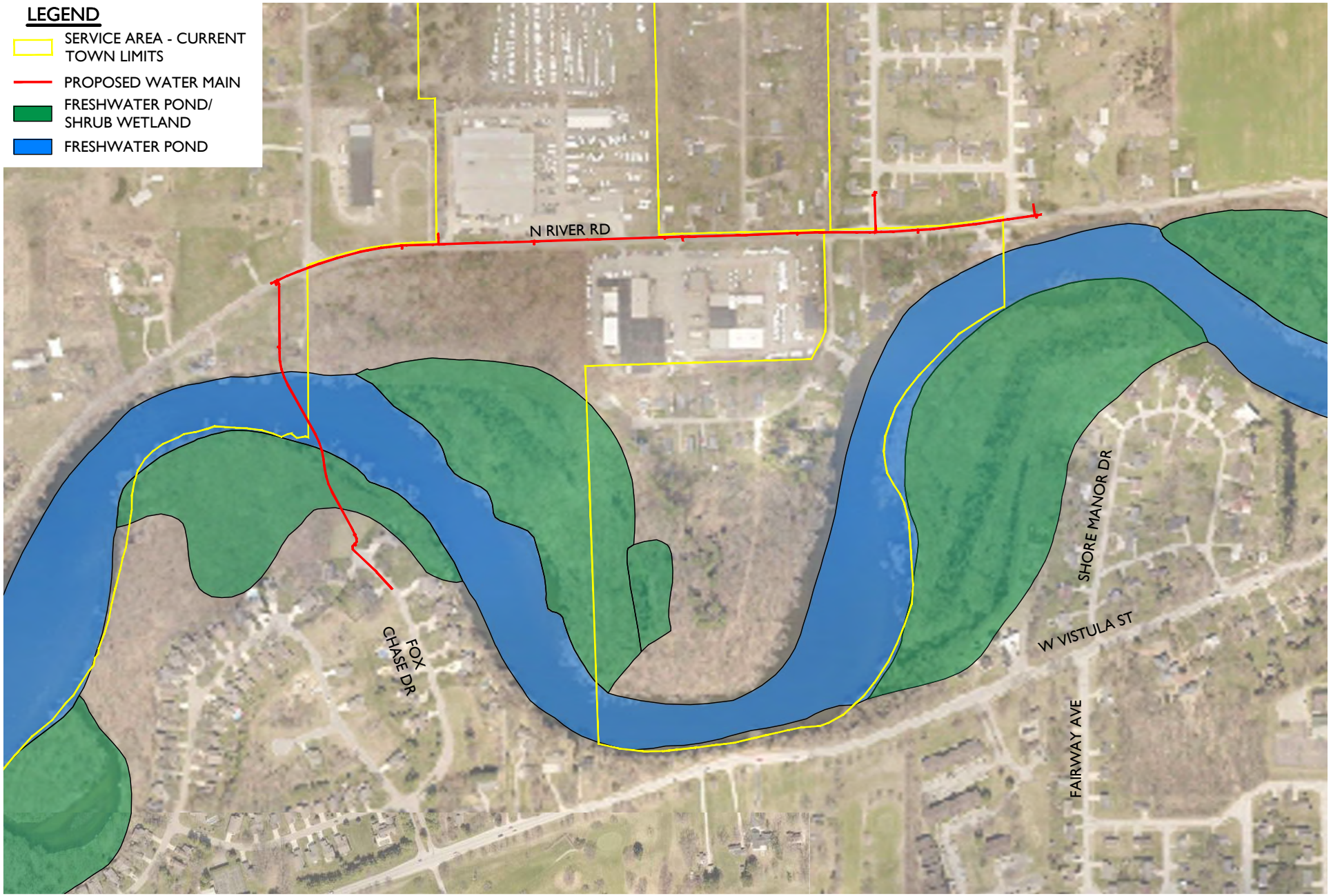


BRISTOL WATER IMPROVEMENTS

FIGURE 5
WETLANDS - TOWN LIMITS

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,500 3,000

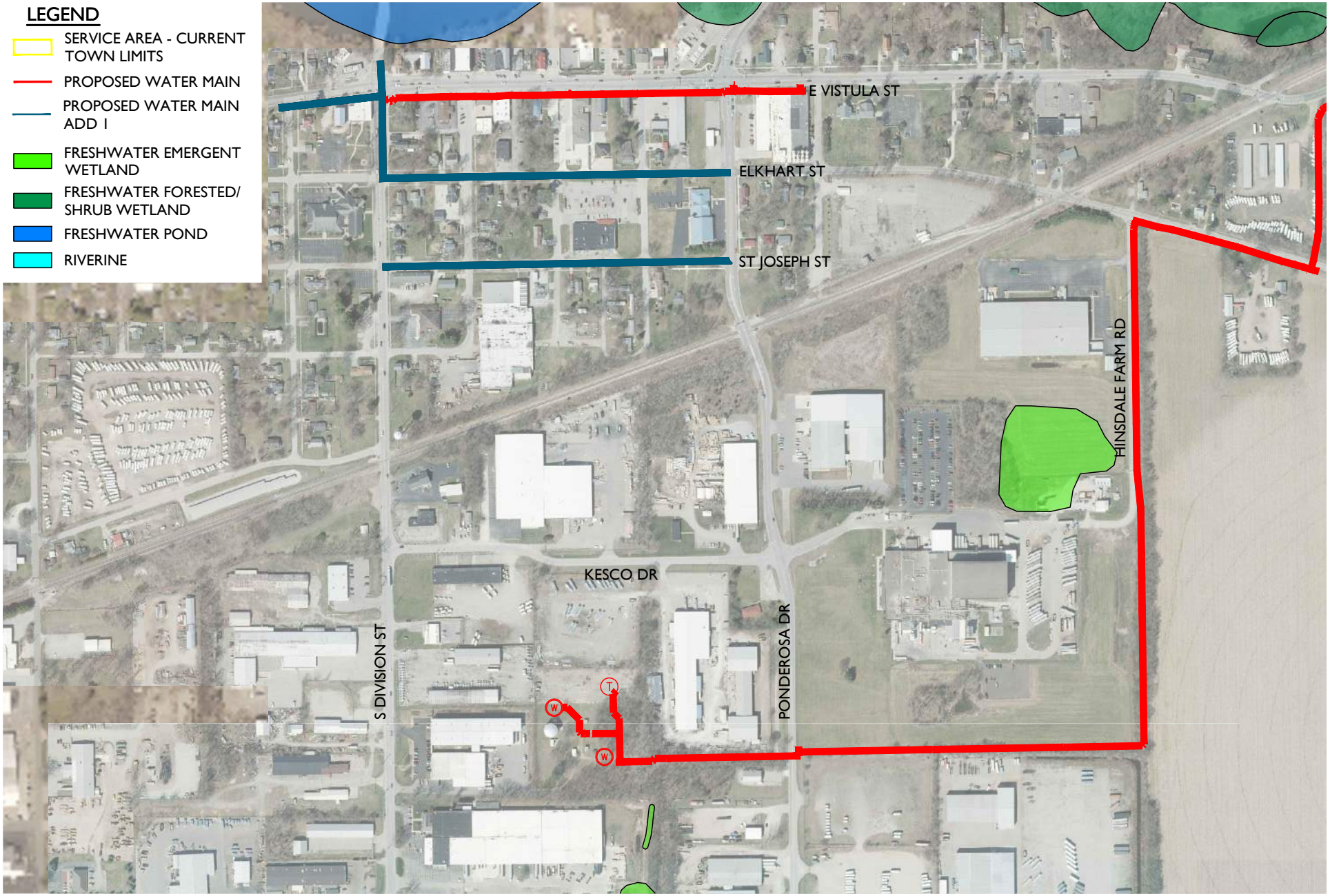


BRISTOL WATER IMPROVEMENTS

FIGURE 5.1
WETLANDS - LINEAR IMPROVEMENTS - WEST

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 250 500



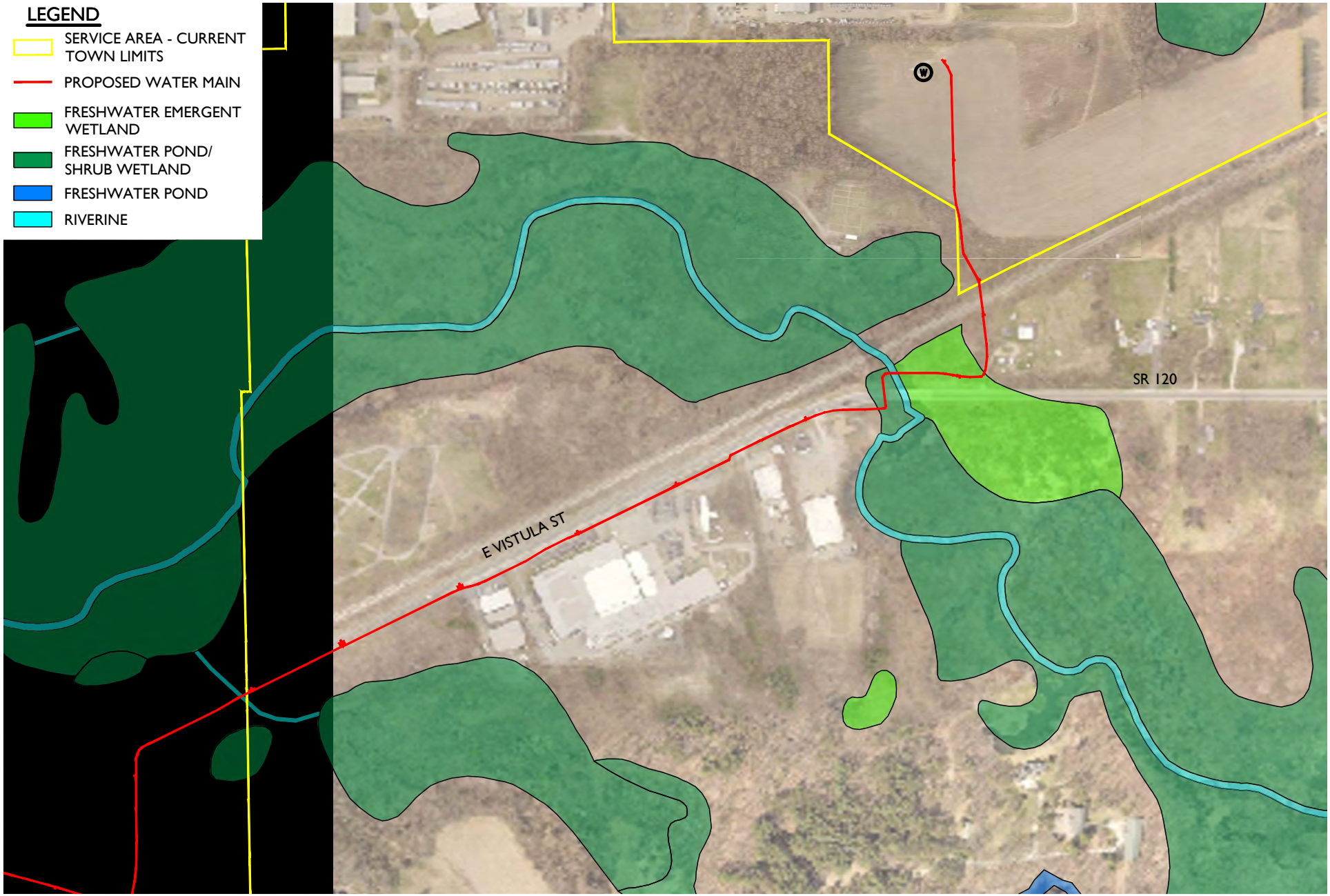
BRISTOL WATER IMPROVEMENTS

FIGURE 5.2

WETLANDS - LINEAR IMPROVEMENTS - DOWNTOWN & EAST PART 1
WETLANDS - LINEAR IMPROVEMENTS - PROPOSED TOWER

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 250 500



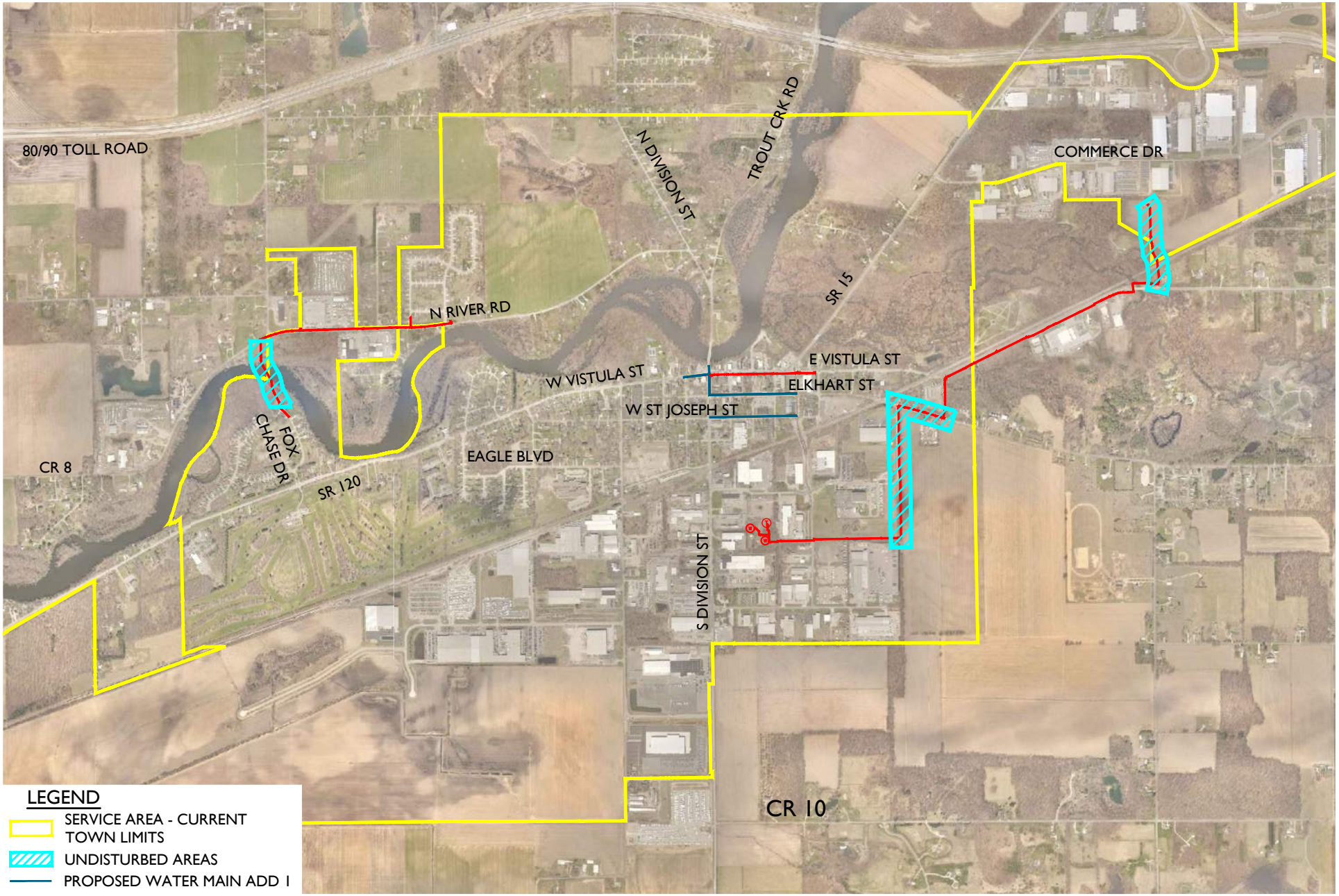
BRISTOL WATER IMPROVEMENTS

FIGURE 5.3

WETLANDS - LINEAR IMPROVEMENTS - EAST PART 2

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 250 500

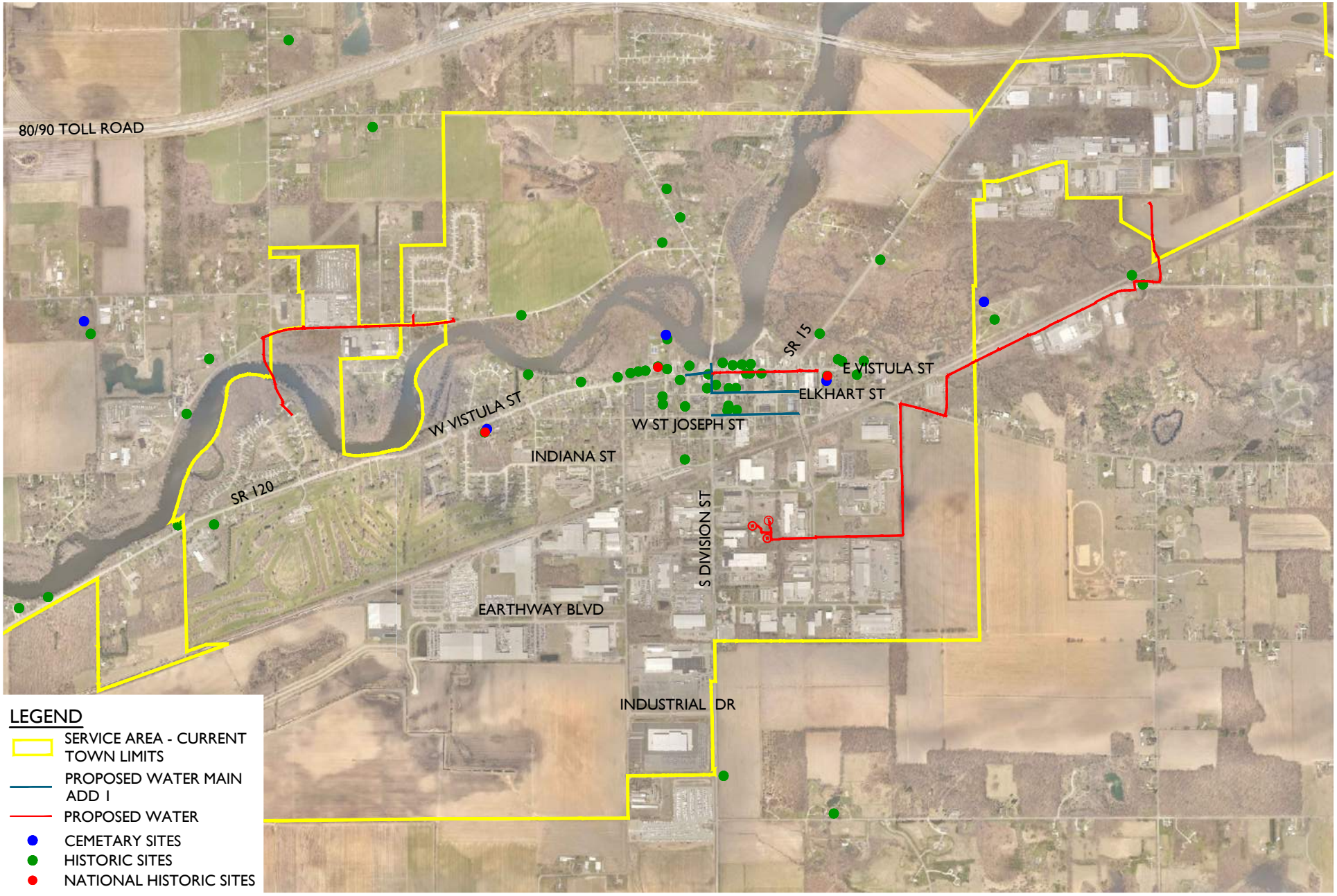


BRISTOL WATER IMPROVEMENTS

FIGURE 6
UNDISTURBED AREAS

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,000 2,000

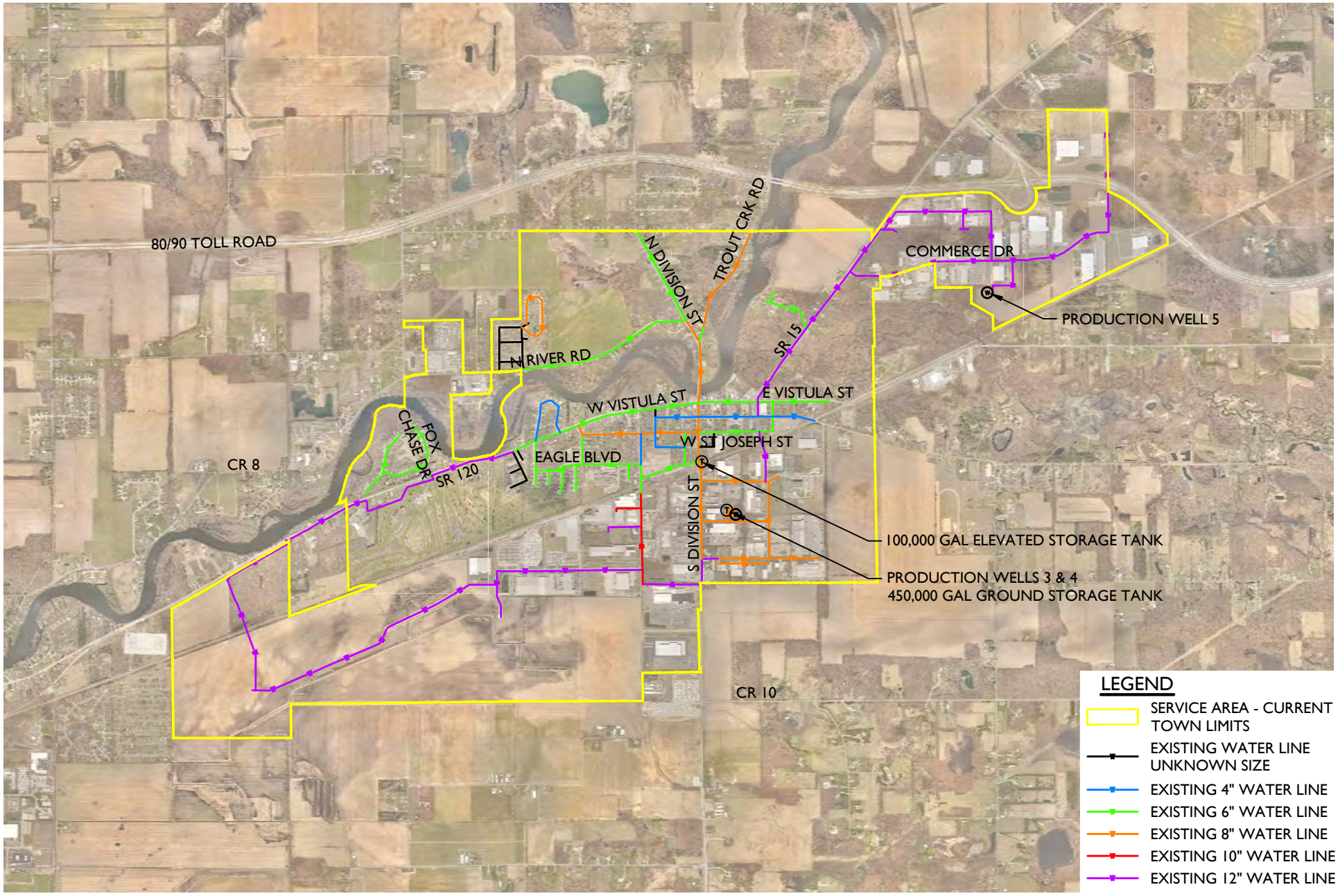


BRISTOL WATER IMPROVEMENTS

FIGURE 7
HISTORIC SITES

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,000 2,000

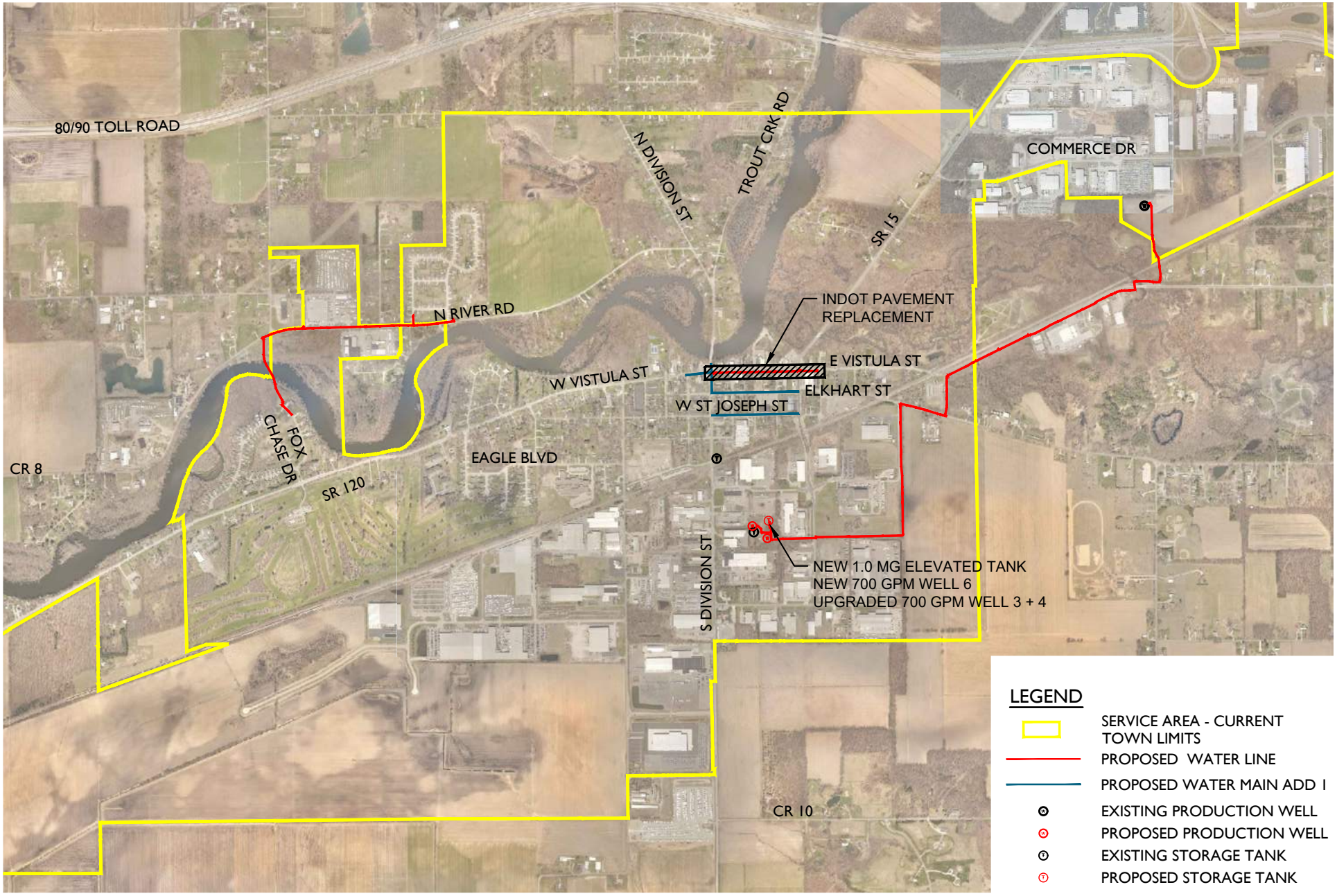


BRISTOL WATER IMPROVEMENTS

FIGURE 8
EXISTING WATER SYSTEM

JONES PETRIE RAFINSKI
South Bend, IN
p: 574.232.4388
Fort Wayne, IN
p: 260.422.2522

Feet
0 1,500 3,000



BRISTOL WATER IMPROVEMENTS

FIGURE 9
PROPOSED WATER SYSTEM

JONES PETRIE RAFINSKI
Elkhart, IN p: 574.293.7762
South Bend, IN p: 574.232.4388
Fort Wayne, IN p: 260.422.2522

Feet
0 1,500 3,000