

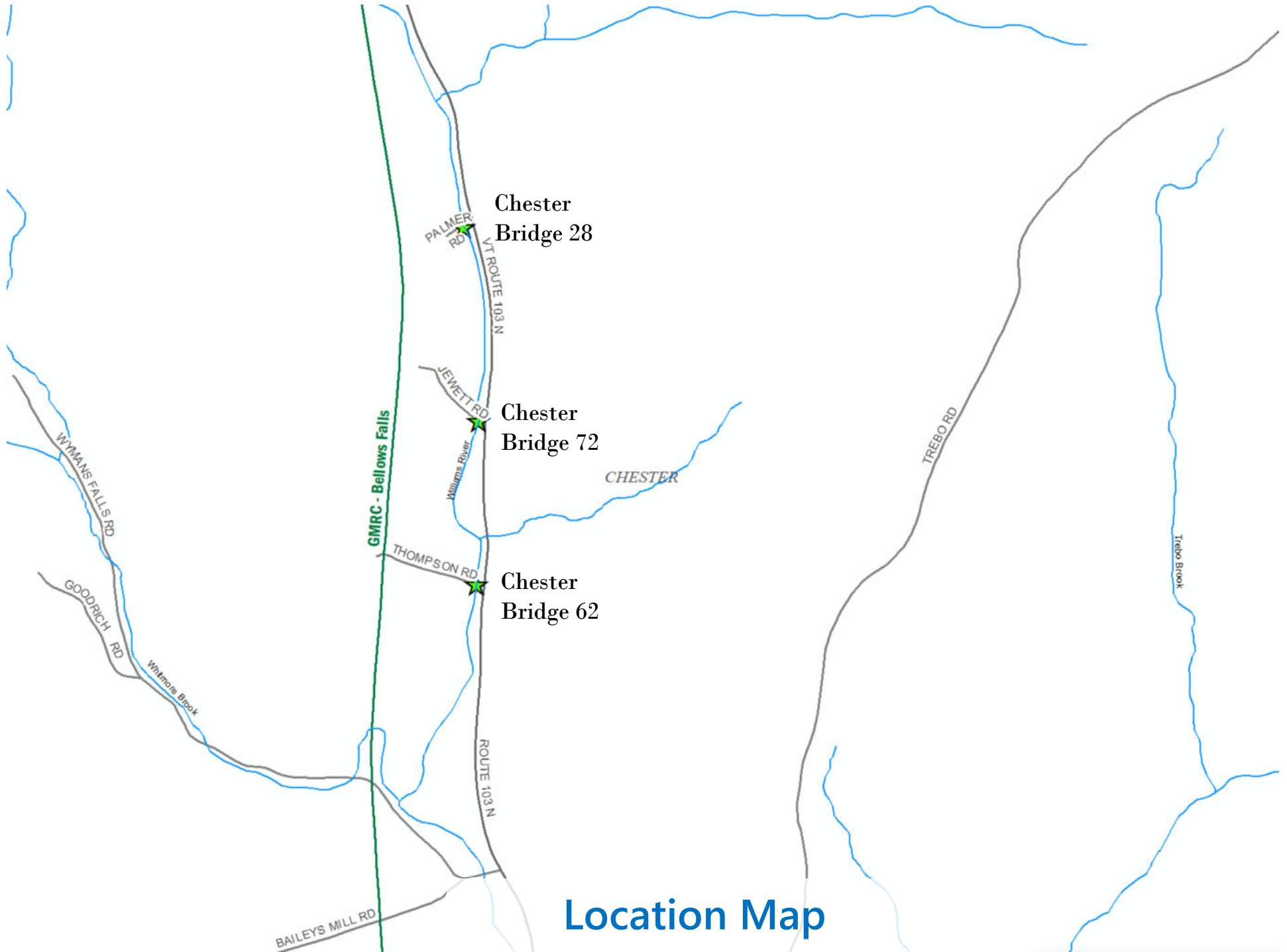


**Chester BO 1442(39)**

**Property Owner Meeting**

**Town Highway 18 (Thompson Road) – Bridge #62 over Williams  
River**

April 25, 2019



Location Map





Bridge 62  
Project Location

Jersey Girls Dairy

Palmer Rd

Jewett Rd

Thompson Rd

Stams River

Whitney Rd

Whitton Rd

Wymans Falls Rd

103

103

103

103



Looking West over Bridge



## Existing Conditions – Bridge #62 (Thompson Road)

- Roadway Classification – Local Road, Class 3 TH, Unpaved
- Bridge Type – 41' Span Timber Deck on Rolled Steel Beams and dry stone masonry abutments
- Ownership – Town of Chester
- Year Built: Unknown



# Looking East over Bridge





## Condition Ratings



### Existing Conditions - Bridge #62

- Deck Rating 6 (Satisfactory)
- Superstructure Rating 5 (Fair)
- Substructure Rating 4 (Poor)
- STRUCTURALLY DEFICIENT

## Superstructure



### Existing Conditions - Bridge #62

- Heavy Rust scaling and flaking



Looking Upstream



Existing Conditions - Bridge #62



## Bridge 72



### Existing Conditions – Bridge #72 (Jewett Road)

- Roadway Classification – Local Road, Class 3 TH, Unpaved
- Bridge Type – 44' Span Timber Deck on Rolled Steel Beams and dry stone masonry abutments
- Ownership – Town of Chester
- Year Built: 1961

10/18/2017



## Bridge 72



### Existing Conditions - Bridge #72

- Deck Rating 7 (Good)
- Superstructure Rating 6 (Satisfactory)
- Substructure Rating 5 (Fair)
- FUNCTIONALLY DEFICIENT

10/10/2017



## Bridge 72



## Existing Conditions - Bridge #72

- Dry Laid Up Stone Abutments
- Areas of voids and minor settlement

10/18/2017



## Bridge 28



### Existing Conditions – Bridge #28 (Palmer Road)

- Roadway Classification – Local Road, Class 3 TH, Unpaved
- Bridge Type – 67' Span Rolled Thru Beam Bridge
- Ownership – Town of Chester
- Year Built: 1949



## Bridge 28



### Existing Conditions - Bridge #28

- Deck Rating 6 (Satisfactory)
- Superstructure Rating 4 (Poor)
- Substructure Rating 6 (Satisfactory)
- STRUCTURALLY DEFICIENT



## Bridge 28



## Existing Conditions - Bridge #24

- Floorbeams have slotted holes and thinning flanges





## Bridge 28

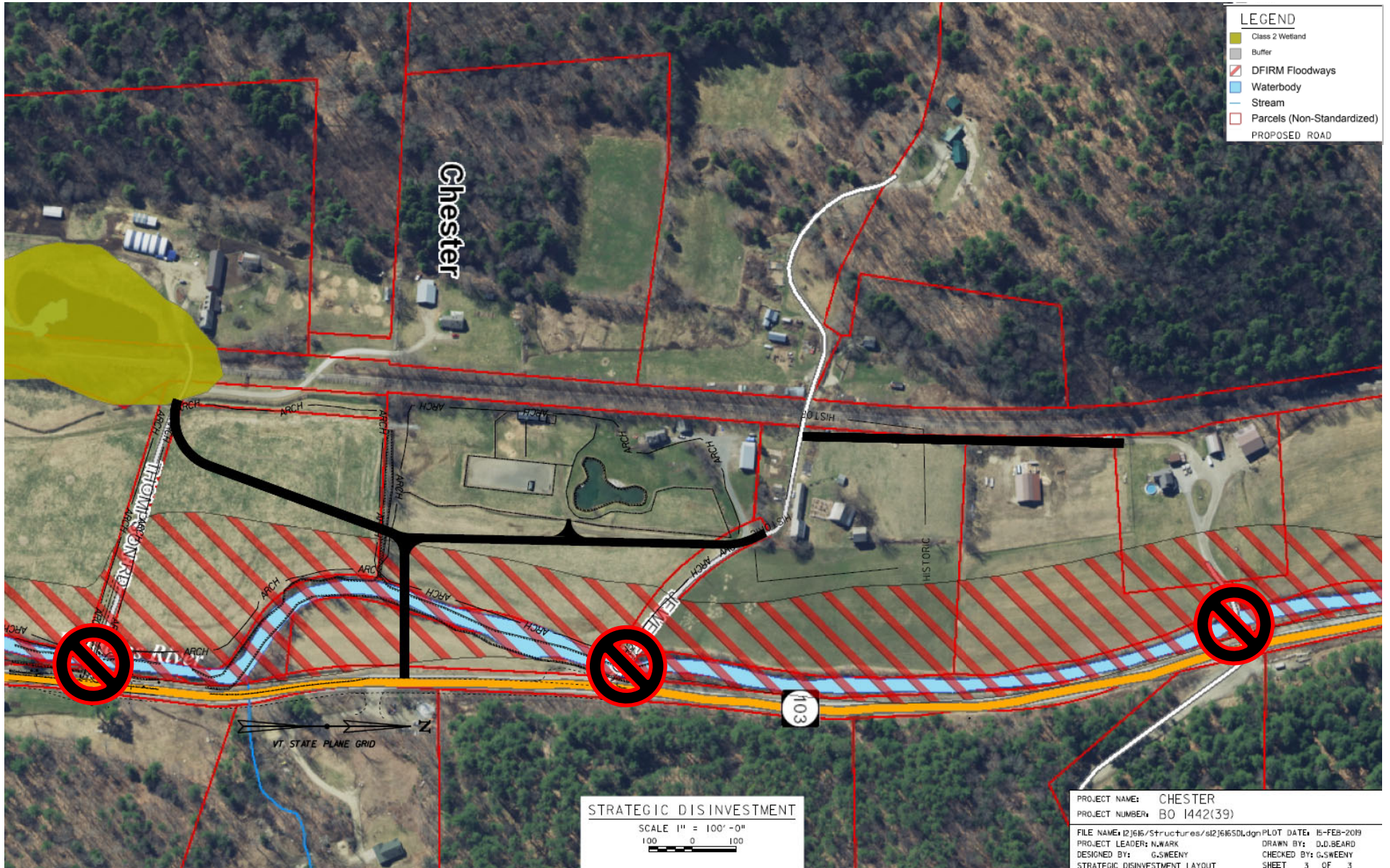


## Existing Conditions - Bridge #28

- 2-Girder Non-Redundant System



# Proposed Layout – option 3



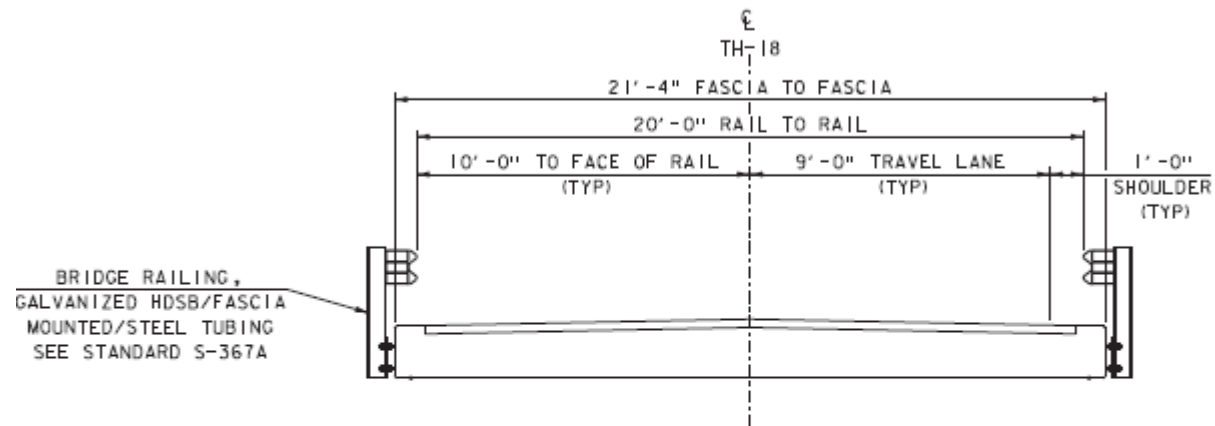


# Future Costs of Individual Replacement In-Kind

- Bridge 62: \$1.4 Million
- Bridge 72: \$1.4 Million
- Bridge 28: \$1.5 Million *(or \$900,000 for superstructure replacement only)*
  
- Total Anticipated Costs in the near future for in-kind replacement: **\$4.3 Million**
  
- Cost of Full Bridge Replacement Off-Alignment & Removal of Bridges 62, 72 & 28: **\$1.8 Million**
  - Savings in future maintenance costs – only 1 bridge to maintain

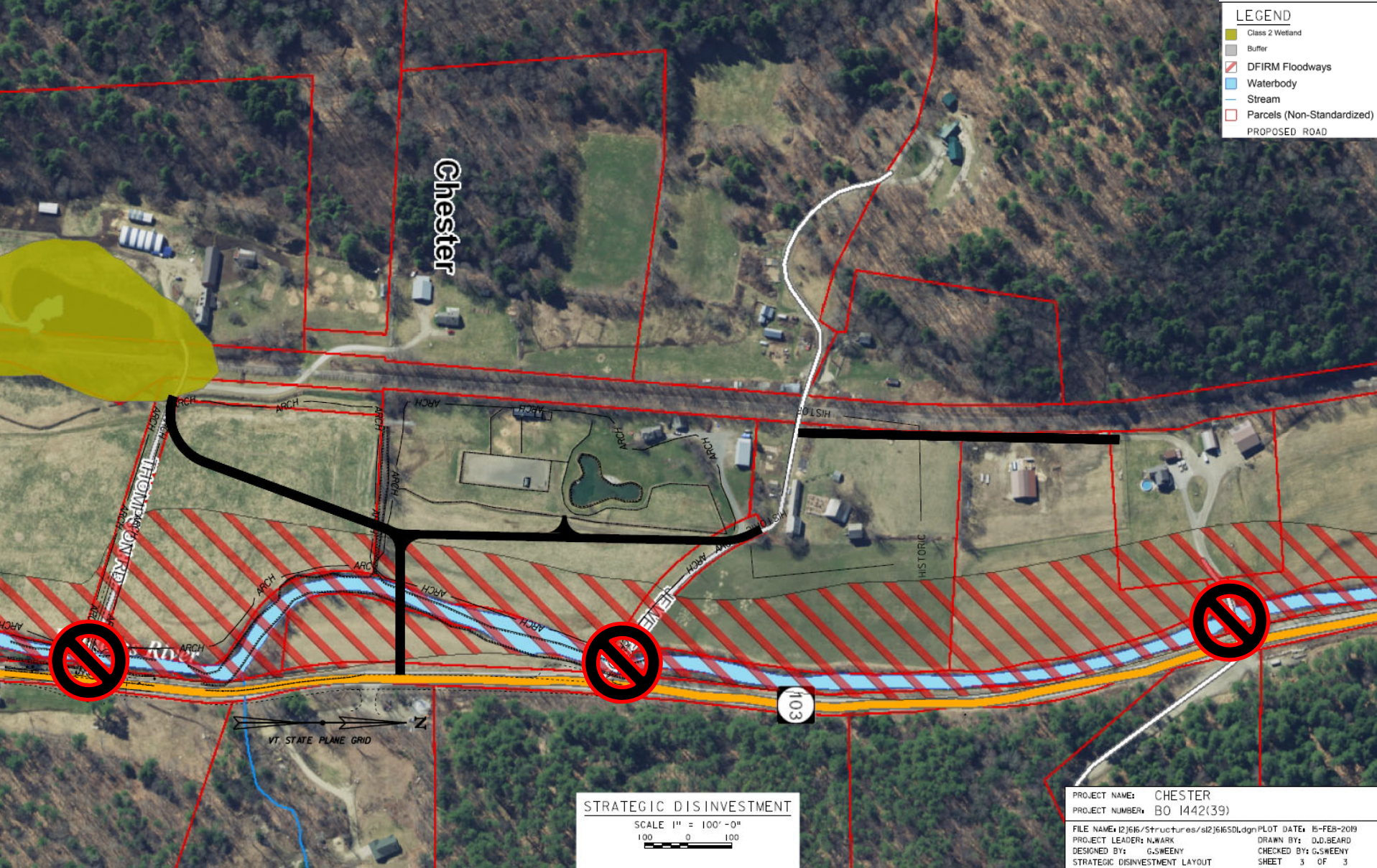


# Typical Section



ALTERNATIVE 3 BRIDGE TYPICAL SECTION  
SCALE  $\frac{3}{8}$ " = 1'-0"

# Proposed Layout – option 3





# Recommended Scope

- Full Bridge Replacement Off-Alignment & Removal of Bridges 62, 72 & 28 with Traffic Maintained on the Existing Structures
  - 9'/1' typical
  - 75 year design life
    - Savings in future maintenance and replacement costs of bridges 72 and 28
  - Right of Way Needed
  - Archaeological study needed
  
- Construction Year: 2023



# Alternatives Matrix

Chester BO 1442(39)	Alternative 1	Alternative 2		Alternative 3	Alternative 4	Alternative 5
	Rehabilitation	Full Bridge Replacement On-Alignment		Full Bridge Replacement Off-Alignment - Removal of Bridge 62	Full Bridge Replacement Off-Alignment - Removal of Bridges 62 and 72	Full Bridge Replacement Off-Alignment - Removal of Bridge 62, 72, and 28
	Offsite Detour	a. Offsite Detour	b. Temporary Bridge	Existing Bridge	Existing Bridge	Existing Bridge
<b>Total Project Costs</b>	<b>895,480</b>	<b>1,186,774</b>	<b>1,438,845</b>	<b>1,467,635</b>	<b>1,620,751</b>	<b>1,821,063</b>
Annualized Costs	44,774.00	15,823.65	19,184.59	19,568.47	21,610.01	24,280.84
Town %	2.50%	5%	10%	10%	10%	10%
Town Share	22,387.00	59,338.68	143,884.45	146,763.50	162,075.05	182,106.30
Project Development Duration <sup>3</sup>	2 years	4 years	4 years	4 years	4 years	4 years
Construction Duration	4 months	6 months	9 months	6 months	6 months	6 months
Closure Duration (If Applicable)	2 months	3 months	N/A	N/A	N/A	N/A
Typical Section - Roadway (feet)	14'	14'	14'	18'	18'	18'
Typical Section - Bridge (feet)	1'-12'-1'	1'-9'-9'-1'	1'-9'-9'-1'	1'-9'-9'-1'	1'-9'-9'-1'	1'-9'-9'-1'
Geometric Design Criteria	Substandard Width	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard
Traffic Safety	Improved	Improved	Improved	Improved	Improved	Improved
Alignment Change	No	No	No	Yes	Yes	Yes
Bicycle Access	No Change	Improved	Improved	Improved	Improved	Improved
Pedestrian Access	No Change	Improved	Improved	Improved	Improved	Improved
Hydraulics	Substandard BFW	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard
Utilities	No Change	No Change	No Change	No Change	No Change	No Change
ROW Acquisition	Yes	Yes	Yes	Yes	Yes	Yes
Road Closure	Yes	Yes	No	No	No	No
Design Life (years)	20	75	75	75	75	75



# Chester BO 1442(39) Questions and Comments

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