

# Transportation Rural Improvement Program (TRIP)

## Grant Program Application

*Please read all information provided in guidelines before completing the application.*

### Section 1 – Project Information, Contacts and Documentation

This section is intended to provide general information relating to the applicant and the proposed project, as well as an endorsement by the Municipality.

#### General Information:

Name of Municipality: Town of Cornwall

Name of Regional Council of Government (COG): Northwest Hills

CTDOT Maintenance District number: 4

Requested amount of funding for this grant: \$ 868,000

Project Name: Pedestrian Improvements

Short description of project:

Sidewalk and crosswalk improvements in West Cornwall and Cornwall Bridge

Project location (Street name, state route number, intersecting roads from/to, etc.) Please also attach a location plan (pdf, KML or shapefile) that clearly shows the expected limits of construction.

West Cornwall - Route 128 / Cornwall Bridge - Route 7 extending from a commercial building to the existing Cornwall Bridge Fire Department

Does this project impact state-owned property? (i.e.: state facilities, state routes and/or bridges, state parks, forests, or other state-owned land.) If yes, please provide the location and a brief explanation.

Yes - Minor impacts to Route 128 and Route 7

#### Please Identify the primary project type:

New Construction

Reconstruction/ Rehabilitation



Please categorize the most relevant type(s) of improvement(s) that TRIP funds will be used for.

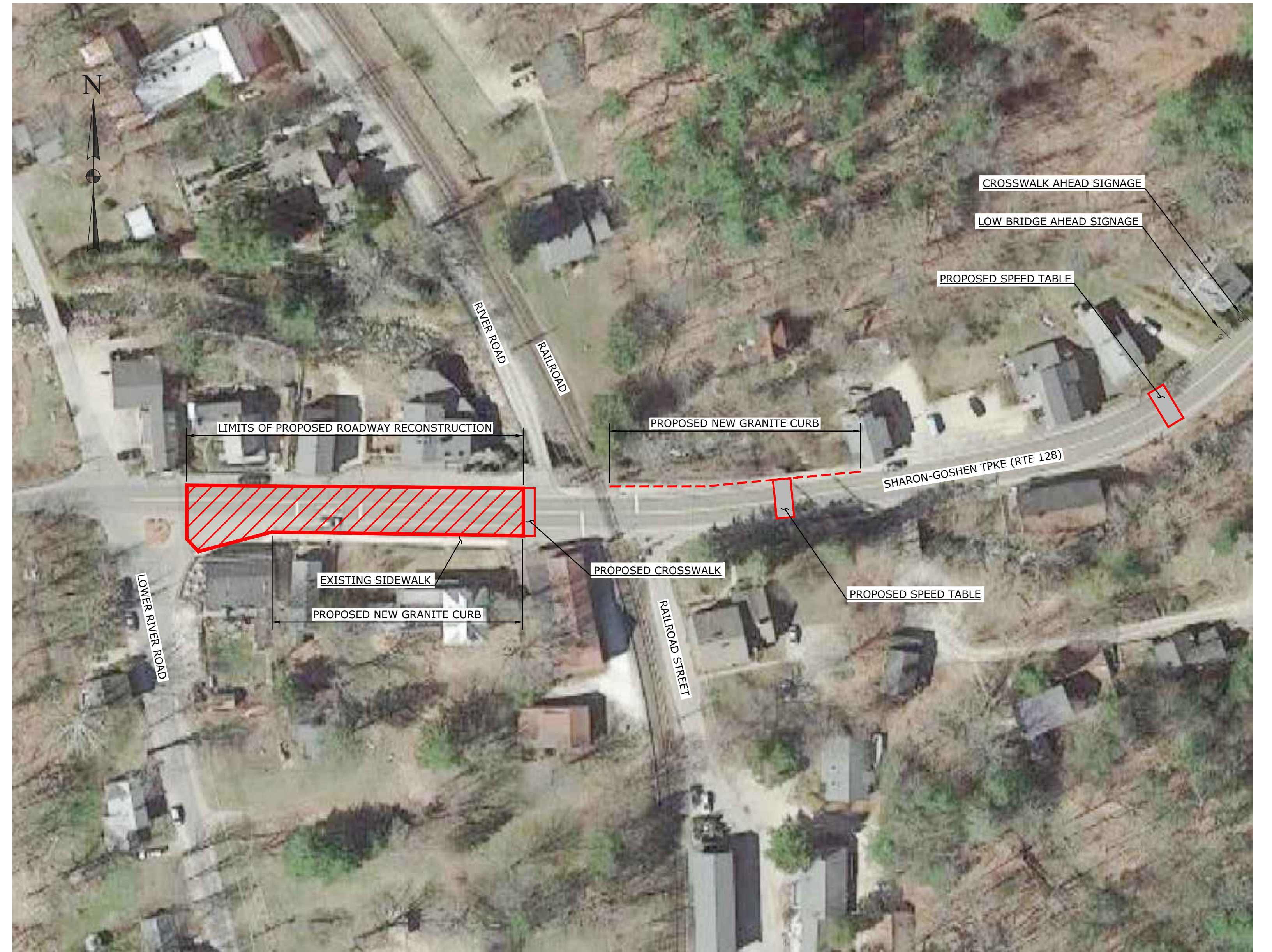
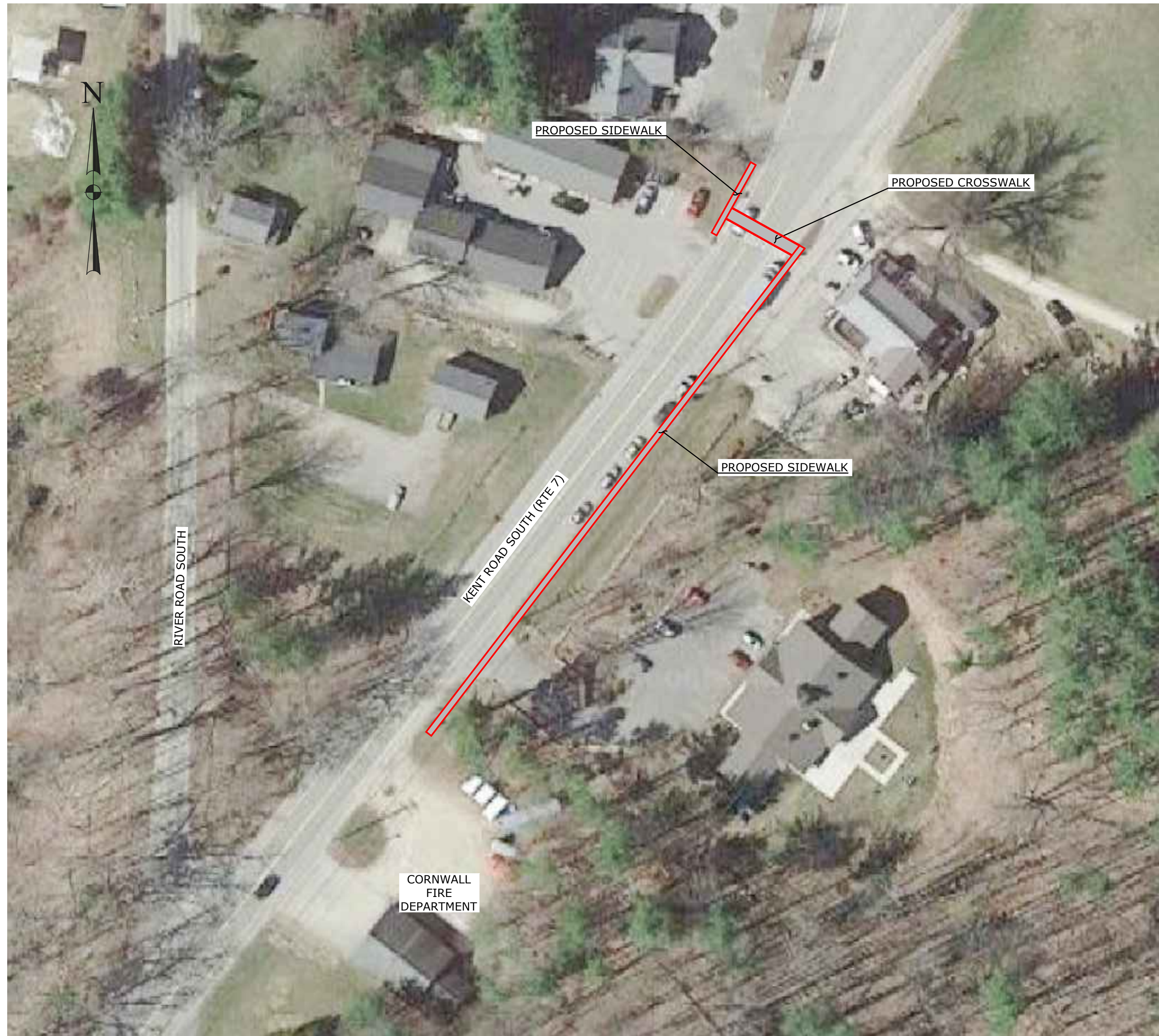
- Roadway Geometric Improvement  
Provide additional information as required in section 5A
- Stand-Alone Sidewalk Construction
- Intersection Improvement  
Provide additional information as required in section 5B
- Bicycle/Pedestrian Improvement, including Multi-Use Trail Facilities
- Bridge Rehabilitation/Replacement  
Provide additional information as required in section 5C
- Major Drainage Improvement  
Provide additional information as required in section 5D
- Pavement Structure Improvement  
Provide additional information as required in section 5E
- Traffic Signal Replacement/Upgrade/New Installation/Coordination  
Provide additional information as required in section 5F
- Roundabout  
Provide additional information as required in section 5G
- Other (please specify): \_\_\_\_\_  
Provide additional information as required in section 5H

**Please submit the following additional information in digital format, as applicable and available:**

- Site Location Map
- Property Boundary Map
- Comprehensive Concept Plans
- Preliminary Engineering Plans (if available)
- Cost Estimate
- Proposed project schedule (estimate for final design completion, construction start and completion, etc.)
- Description of known potential impacts (or enhancements) relating, but not limited, to environmental, historical, natural, or social resources, as well as rights-of-way.
- CTDOT Completed Bicycle and Pedestrian Travel Needs Assessment Form
- Description of any public involvement conducted or support for the project.

**Please include any other relevant information you feel may be helpful:**





		SUPV.	S.R.M.
		DESIGN	S.R.M.
		DRAWN	P.W.S.
		CHECKED	S.R.M.
NO.	DATE	DESCRIPTION	DATE
<b>REVISIONS</b>			
			03/27/23


  
**WMC**  
 CONSULTING ENGINEERS  
 • WENGELL, McDONNELL & COSTELLO •  
 87 HOLMES ROAD  
 NEWINGTON, CT 06111  
 (860) 667-9624

**PREPARED FOR**  
 TOWN OF CORNWALL

**ROADWAY AND SIDEWALK CONSTRUCTION**  
**CORNWALL, CONNECTICUT**

D -	CRNL	23041		SHEET
SIZE	PROJECT	FILE NAME	NUMBER	REV. OF



## Section 2 – Description of Project and Purpose and Need

Provide a detailed description of the proposed improvements as well as the purpose and need of the project. Please be as comprehensive as possible in the description of the planned activities. The purpose and need for the project should include the specific needs that will be satisfied and expected outcomes resulting from undertaking the project. It should also show how it relates to established goals and strategic plans for the community. An application that comprehensively demonstrates the following may receive maximum points for this section:

- Project description should be clear and detailed so that a reviewer can easily understand the limits and extent of the proposed improvements.
- Should be specific and clearly define what the intended purpose and need is within the context of the community and why this project is critical to achieving the purpose and need.
- Describe how this project can stimulate additional investment, leverage other resources, and/or fits into local or regional initiatives.
- Project is shown to complement local and/or regional plans such as Complete Streets, POCD or Regional Transportation Safety Plan.
- Project limits must be clear. As noted in Section 1, Applicant shall include a detailed project location plan (may be PDF, KML/Z or Shapefile)

The Cornwall pedestrian improvements will be completed in the villages of West Cornwall and Cornwall Bridge. These two areas of Town are highly used by vehicles, bicycles and pedestrians. The objective of the project is to improve the safety for pedestrians in both villages and to improve parking in West Cornwall.

In West Cornwall, the improvements will be installed along Rte. 128 (Sharon-Goshen Turnpike) and will include a new crosswalk with solar powered, high intensity activated crosswalk beacons. The project will also include the installation of two roadway “speed tables” for traffic calming purposes and improve pedestrian safety. Also, granite curbing will be installed to reduce maintenance costs. The existing roadway will be widened along the south side of Rte. 128 for a length of about 150 feet in order to provide for much needed on-street parking. There will be improvements made to the parking lot between stores. Bicycle racks will also be installed at two locations.

In Cornwall Bridge, sidewalk improvements are proposed which will include approximately 500 feet of new sidewalks extending from a commercial building southerly, along the eastern side of Rt.7, to the existing Cornwall Bridge Fire Department firehouse along Rt. 7 (Kent Road South). The work will include a new crosswalk with solar powered, high intensity activated crosswalk beacons as well as paving around the Visitor Center. The project will also include new picnic tables and bicycle racks to accommodate the visiting public.

## Section 3 –Safety and Accessibility

How does this project address a known safety concern and allow for better connectivity as it relates to users of the transportation system? The impact on Safety and Accessibility section provides the opportunity for applicants to describe how the project in their Municipality will propose to improve safety and accessibility for the community. An application that comprehensively demonstrates the following may receive maximum points for this section:

- This section should clearly describe the immediate and long-term impact on safety and connectivity within the community.
- Narrative should demonstrate how the proposed improvement is directly related to Safety and Accessibility for all users
- Data<sup>1</sup> is provided to demonstrate the need and how the project will improve safety and/or accessibility.

The project will greatly improve accommodation of pedestrian traffic along Rt. 7 which is heavily traveled. Additionally, by connecting the crosswalk location to the firehouse, additional parking that exists at the firehouse will be available for the public.

The project in West Cornwall will improve pedestrian safety adjacent to the historic covered bridge and the Village of West Cornwall. Bicycle racks will also be installed to accommodate residents and visitors to the new US Bike Route 7 (Western New England Greenway).

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<sup>1</sup> Applicants are encouraged to use available data including the Connecticut Crash Data Repository, and any other sources including local police crash records, public works complaints & LTA concerns.

## Section 4 – Project Development and Cost Estimate

This information should demonstrate the level of effort that has gone into the project development to date and help to answer the question of whether the project can be realistically completed within the proposed grant amount. For example, an infrastructure project application with evidence of scoping and/or preliminary engineering work can be expected to increase confidence in the resulting estimate. A description of the level of development the project is at, and a cost estimate shall be submitted with this application. A sample cost estimate form can be found on the Transportation Rural Improvement Program webpage at: [https://portal.ct.gov/dot/pp\\_bureau/TRIP](https://portal.ct.gov/dot/pp_bureau/TRIP). An application that comprehensively demonstrates the following may receive maximum points for this section:

- Cost estimates should provide enough detail and accuracy to demonstrate that the proposed project can realistically be accomplished within the requested grant amount.
- Cost estimate must show that reasonable thought went into the planning of the proposed improvements.
- Major construction items should be included to demonstrate comprehension of the complexity of the overall project.
- Minor Items should be included as a percentage of all Major Items (Up to 20%)
- Contingencies and Incidentals should be included to capture additional costs incurred during the course of construction.

Please see attached.



Town of Cornwall  
 Roadway and Sidewalk Construction  
 WMC Reference No.: 23041

State Project No.: N/A  
 Prepared By: MA  
 Date: 3/30/2023

**Cost Opinion**

ITEM NO.	ROADWAY ITEMS	UNIT	QUANT.	UNIT PRICE	TOTAL COST
2	0202000 A Earth Excavation	C.Y.	830	\$ 36.42	\$ 30,224.87
3	0202452 A Test Pit	Ea.	2	\$ 1,917.27	\$ 3,834.54
4	0202529 Cut Bituminous Concrete Pavement	L.F.	85	\$ 7.26	\$ 617.48
5	0209001 Formation Of Subgrade	S.Y.	1,050	\$ 6.50	\$ 6,827.04
6	0212000 Subbase	C.Y.	295	\$ 61.96	\$ 18,277.84
7	0219001 Sedimentation Control System	L.F.	1,000	\$ 6.68	\$ 6,683.78
8	0406170 HMA S1	Ton	395	\$ 155.24	\$ 61,321.60
9	0406171 HMA S0.5	Ton	260	\$ 182.83	\$ 47,536.07
10	0406236 Material For Tack Coat	Gal.	285	\$ 15.40	\$ 4,388.62
11	0813021 6" Granite Stone Curbing	L.F.	380	\$ 69.08	\$ 26,249.80
12	0815001 Bituminous Concrete Lip Curbing	L.F.	905	\$ 8.27	\$ 7,485.11
13	0816001 A Granite Slope Curbing	L.F.	20	\$ 75.00	\$ 1,500.00
14	0822100.01 Temporary Traffic Barrier	L.F.	80	\$ 77.47	\$ 6,197.71
15	0921001 A Concrete Sidewalk	S.F.	1,890	\$ 19.59	\$ 37,027.75
16	0921002 A Concrete Sidewalk - 8" Thick	S.F.	495	\$ 22.00	\$ 10,890.00
17	0921005 A Concrete Sidewalk Ramp	S.F.	95	\$ 28.46	\$ 2,703.37
18	0922500 A Bituminous Concrete Driveway (Commercial)	S.Y.	50	\$ 97.86	\$ 4,892.79
19	0922501 A Bituminous Concrete Driveway (Residential)	S.Y.	40	\$ 81.88	\$ 3,275.36
20	0944000 Furnishing and Placing Topsoil	S.Y.	900	\$ 12.57	\$ 11,315.39
21	0950005 Turf Establishment	S.Y.	900	\$ 3.96	\$ 3,560.03
22	0970006 Traffic Person (Municipal Police Officer)	Est.	1	\$ 5,100.00	\$ 5,100.00
23	0970007 Traffic Person (Uniformed Flagger)	Hr.	200	\$ 43.46	\$ 8,692.66
24	0979002 Construction Barricade Type II	Ea.	4	\$ 140.00	\$ 560.00
25	0992089 Picnic Table	Ea.	2	\$ 1,000.00	\$ 2,000.00
29	1206023 A Removal and Relocation of Existing Signing	L.S.	1	\$ 10,978.00	\$ 10,978.00
30	1208932 Sign Face Sheet Aluminum (Type IV Retroreflective)	S.F.	25	\$ 64.73	\$ 1,618.35
31	1210105 Epoxy Resin Pavement Markings, Symbols and Legends	S.F.	425	\$ 5.82	\$ 2,472.93
32	1210106 12" White Epoxy Resin Pavement Markings	L.F.	30	\$ 1.56	\$ 46.80
33	000000 High-Intensity Activated cross Walk Beacon	Ea.	1	\$ 50,000.00	\$ 50,000.00
34	000000 Bike Rack	Ea.	4	\$ 1,000.00	\$ 4,000.00
<b>SUBTOTAL</b>					<b>\$ 380,277.87</b>

MINOR ITEMS ALLOWANCE @ 15% \$ 57,041.68

**SUBTOTAL** \$ 437,319.55

ITEM NO.	LUMP SUM ITEMS	PERCENTAGE	UNIT	QUANT.	UNIT PRICE	TOTAL COST
1	0201001 A Clearing and Grubbing	2.50%	L.S.	1	\$ 11,000.00	\$ 11,000.00
26	0971001 A Maintenance and Protection of Traffic	4.00%	L.S.	1	\$ 17,500.00	\$ 17,500.00
27	0975004 Mobilization and Project Closeout	7.50%	L.S.	1	\$ 33,000.00	\$ 33,000.00
28	0980001 Construction Staking	1.50%	L.S.	1	\$ 7,000.00	\$ 7,000.00
<b>SUBTOTAL</b>					<b>\$ 68,500.00</b>	

<b>CONSTRUCTION ITEMS SUBTOTAL</b>	<b>\$ 437,319.55</b>
<b>LUMP SUM ITEMS SUBTOTAL</b>	<b>\$ 68,500.00</b>
<b>SUBTOTAL</b>	<b>\$ 505,819.55</b>
<b>CONTINGENCY @ 25%</b>	<b>\$ 126,454.89</b>
<b>INCIDENTALS @ 15%</b>	<b>\$ 75,872.93</b>
<b>2023 TOTAL</b>	<b>\$ 708,147.37</b>
<b>Projected to 2026 Bid Opening @ 7%</b>	<b>\$ 867,510.98</b>
<b>SAY 2026 TOTAL</b>	<b>\$ 868,000.00</b>

## Section 5 – Supplemental Improvement Type Information

For different project types please provide supplemental information as noted below. Failure to provide the requested information will not impact an applications eligibility but may affect the number of points awarded during scoring.

### **(A) Roadway Geometric Improvements**

- Existing 85<sup>th</sup> percentile speed
- Proposed Design Speed
- AADT

### **(B) Intersection Improvements**

- Capacity Analyses (For build and no-build conditions using base year and projected traffic volumes).\*

### **(C) Bridge Rehabilitation/Replacement**

- Latest Condition Report

### **(D) Major Drainage Improvement**

- Material, Age, Hydraulic adequacy assessment of existing drainage system (Condition Report, post-cleaning is preferred)

### **(E) Pavement Structure Improvement**

The level of investigation will be dependent upon the proposed improvements. Cores or test pits should be performed such that a representative sample of the existing roadway condition is obtained. If varying pavement conditions exist along the roadway indicating the possibility of different pavement conditions, a core or test pit should be performed in each roadway section. Attach the data obtained.

- Approximate percentage of heavy vehicles.
- Pavement thickness and type, sub-base thickness and type, and the presence of fines and/or groundwater must be noted.
- What is the anticipated pavement design? Describe the type and depth of each course including the base that is suitable for the ADT and percentage of heavy vehicles. Describe the cross-section (e.g., lanes and shoulder widths, etc.).

### **(F) Traffic Signal Replacement/Upgrade/New Installation/Coordination**

- Who is/will be responsible for ownership, maintenance, and electrical costs?
- Age of existing signals
- Capacity Analyses (For build and no-build conditions using base year and projected traffic volumes) \*
- Warrant Analysis for new signals
- Systems Engineering Analysis Form (SEAFORM) for Intelligent Transportation Systems (ITS) projects



## **(G) Roundabouts**

The following should be demonstrated or considered if a roundabout is proposed. Visit the Department's Roundabout information page for helpful resources. [CTDOT Roundabout Information](#)

- Traffic Volumes: Design level Traffic Volumes are needed to conduct a proper Capacity Analysis.
- Capacity Analysis: A Roundabout Capacity analysis and determination of lane arrangements is required - the latest version of Syncro Software shall be used.
  - If the operation of multiple intersections in series or how a roundabout might operate near other important features like a RR crossing, applicants may also consider using VISSIM for traffic modeling.
  - Will a single lane roundabout work with the design volumes? Good data is needed to have quality traffic forecasting. In some cases (higher volumes) this might require continuous counts for a while or counts on multiple days to have high confidence in the data, should discuss with CTDOT's Trip & Traffic Analysis Unit in cases where we could be on the edge of needing additional lanes.
  - If multiple lanes are needed, is it just a right turn lane, an auxiliary lane (Hybrid Roundabout?) or is a full two-lane roundabout required (two full circulating lanes)? If two full circulating lanes are needed – Internal Department discussion is required about whether or not to proceed. Some multi-line roundabout locations will not be approved for state roadways at this time.
- Design Vehicle: Identify the appropriate design vehicles (trucks, buses and check all turning movements)
- Is it a critical oversize / overweight permit vehicle route? A roundabout may not be appropriate or might need a large diameter with wide truck apron. Does the proposed design provide adequate space for vehicles with a significant turning radius? (Freight trucks, trailers, buses, and emergency vehicles) If it is near an interstate a WB 67 design might be needed. Other routes / roadways typically would want WB 62 design (required for state route to state route), highly recommended for State Route to local roads as well.
- Fastest Path Analysis: Fastest path analysis is required to verify the concept layout will achieve the necessary speed control. This helps to establish the size of the roundabout, center of the roundabout and approach alignment geometry.
- Pedestrian Accommodations: Sidewalks and crosswalks shall be part of the roundabout design
- Speed Control and Traffic Calming: Appropriate geometrics and traffic calming treatments on the approach to the roundabout shall be part of the concept layout to assess necessary Rights of Way. Roundabouts, especially on higher speed roadways should not be designed with all of the speed reduction happening close to the yield, we should be considering advance traffic calming and speed control measures where it makes sense.

**(H) Other**

- To be determined based on type of improvement proposed.

**\*Capacity Analysis:** For the purposes of this application, a simplified analysis may be performed for signalized intersections that do not require detailed assumptions, proprietary software or specialized traffic engineering skills. The “Quick Estimation Method” is described in detail in the 2010 Highway Capacity Manual, with accompanying worksheets that can be completed by hand. A brief description of the method is also described in Section 3.3.6 of the FHWA Signal Timing Manual, where it is referred to as a “Critical Movement Analysis.” The relevant section of the FHWA publication can be accessed at: <http://ops.fhwa.dot.gov/publications/fhwahop08024/chapter3.htm>

This simplified analysis will yield an approximate critical volume/capacity ratio that can be used to assess overall operation of the intersection. The build and no-build conditions should be analyzed for the existing and projected traffic volumes.



## Section 6 – Project Endorsement

### Endorsement and Recommendation of Project by the Municipality

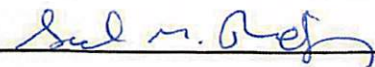
*This page must be read and signed by the Authorized Signatory of the Municipality in order for the municipality/project to be considered for TRIP funding.*

My signature below, as Authorized Signatory of the Municipality of,  
indicates acceptance of the following and further certifies that:

1. I understand that should this grant application be approved, I will be required to sign an assistance agreement/contract with the assigned administering agency delineating the terms and conditions of this grant;
2. I will comply with any grant terms and conditions required by the administering agency;
3. I understand that various permits may be required by the administering agency or other agencies as required by either the Connecticut General Statutes or Connecticut regulations, or federal law;
4. I understand that funding associated with this grant application is one-time in nature and that there is no obligation for additional funding from the Connecticut Department of Transportation;
5. I understand that if this project warrants a Connecticut Environmental Policy Act (CEPA) review pursuant to Sections 22a-1 through 22a-1h of the Connecticut General Statutes that I will comply with such an environmental assessment. Further, if a CEPA review is required, I understand that there are costs associated with such a review and that the Municipality is in a position to continue with the proposed project despite this cost;
6. I understand that this application will be examined by the Connecticut Department of Transportation for consistency with the State Plan of Conservation and Development and that I may be contacted if additional information is required for that review;
7. I understand that projects which convert twenty-five or more acres of prime farmland to a nonagricultural use will be reviewed by the Commissioner of Agriculture, in accordance with Section 22-6 of the Connecticut General Statutes; and
8. I will supply the Connecticut Department of Transportation with all documentation supporting my authority to enter into an assistance agreement, including but not limited to applicable certified minutes and by-laws from the Municipality denoting my authority to apply for the grant and the authority to enter into such an agreement should a grant be awarded.
9. I understand that if this application leads to the award of a TRIP funding for this project, that no payment will be made for project expenses incurred prior to the construction start date or after the end date (as set forth in the fully executed contract), without advance written approval by the administering state agency.
10. I have read, in full, the Transportation Rural Improvement Program (TRIP) Project Administration Guide and Application.

Authorized Signatory's Name (Please Print): Gordon Ridgway

Title: 1st Selectman, Town of Cornwall

Signature:  Date: 3/29/23