



**VTTrans Fall 2023 Transportation Alternatives (TAP)  
and  
Municipal Highway and Stormwater Mitigation Program Grant (MHSMP)  
Combined Application**

Thoroughly read the TAP and MHSMP application guidebooks before you begin your application. It includes important program information and step-by-step instructions. Pay particular attention to the application process requirements. **Applications are due by e-mail by December 8, 2023.** Please e-mail the completed application to: [Ross.gouin@vermont.gov](mailto:Ross.gouin@vermont.gov) and [Scott.robertson@vermont.gov](mailto:Scott.robertson@vermont.gov).

<u>Spear Street Shared Use Path</u> (Project Name/Title)	<u>802-658-7961 ext. 6115</u> (Phone)
<u>Erica Quallen</u> (Municipality contact person responsible for the management of this project)	<u>equallen@southburlingtonvt.gov</u> (e-mail address)
<u>South Burlington</u> (Town)	<u>\$ \$300,000</u> Amount of <b>Federal Funds requested</b> (no more than 80% of the project cost estimate).
<u>05403</u> (Zip Code)	<u>\$75,000</u> Amount of Local Match. Example: Federal Award = \$600,000 (80% of total) Local Match = \$150,000 (20% of total) Total Project Cost = \$750,000 (100% of the total)
<u>180 Market Street</u> (Mailing Address)	

County: Chittenden County

Town/Village/City: City of South Burlington

Specific location, street, or road: Spear Street from Swift Street to UVM Forestry Building

Regional Planning Commission: Chittenden County Regional Planning Commission

If a linear project, what is the length in feet? 3,950 feet

Is the project on or intersecting to a State maintained highway? Yes  No

- Note: If yes, be sure to include documentation that you have notified the VTTrans District Transportation Administrator of the intent to apply for TA funding and have provided them with a brief (one paragraph) description of the proposed project.*

Project type being applied for:  **Scoping**  **Design/Construction**

The municipality understands that a typical construction project utilizing TAP or MHSMP Program funds will take roughly three years (min.) in the Design and ROW phases prior to going to construction (as pointed out in the TAP and MHSMP Application Guides)? Yes  No

Does this project have a previously completed scoping or feasibility study? Yes  No

**Note:**

Attach a map(s) of the project area and clearly show the limits of the project as well as surrounding benefits from the proposed improvement. If the project is within or adjacent to a designated downtown, village or growth center, clearly indicate the relationship of the proposed project to the boundary of the designated area. Color photos of the area are also recommended.

**Fiscal Information:**

Accounting System Automated  Manual  Combination

SAM Unique Identifier # QLSMM3HYJP1

Fiscal Year End Month June

**Property Ownership:**

If the proposed project is on private property that will need to be acquired by the Municipality through purchase, easement, or eminent domain (includes temporary construction rights) in accordance with the “Uniform Act”, then the municipality is committed to exercising its right of **eminent domain** to acquire the rights to construct the project if necessary. Yes  No

**Funding:**

Does this project already have existing funding? If so, please describe. Yes  No

The project was funded in 2021 through the TAP Grant program and received \$300,000 (TAP TA21(4) – CA 0668)

Please note that existing projects will not be considered for additional funding without a current NEPA clearance and ROW clearance. Please provide date of clearances below:

An updated NEPA clearance is being evaluated since the alignment of the project has changed and the related historical/archaeological and wetland impacts need to be determined. These updated components are currently under way. The project is in Preliminary design so estimated ROW impacts have been determined (and property owner discussions are ongoing), but official ROW clearance has not been received.

Will you accept an award less than you applied for? Yes  No

- If yes, please indicate whether local funds will be used to make up the shortfall, or if the project scope will be reduced. If the project scope is to be reduced, describe what part of the project (please be specific) you would accept partial funding for.  
Local funds will be used to make up the funding gap if a partial award is granted.

**A support letter from the governing body of the applicant municipality or organization** and an acknowledgement and source of the local match and commitment to future maintenance responsibility for construction projects is required (must be dated within 1 year of the application). Is a letter of support attached?

Yes  No

The letter of support is on the City Council agenda for 12/18/2023 and the signed copy will be forwarded to Ross and Scott.

**Regional Planning Commission Letter of Support:**

In order to apply, the project must have a letter of support from the regional planning commission. Is a letter of support attached?

Yes  No

**PLEASE NOTE:** If this application is for salt or sand shed funding, the applicant must read and understand the **Municipal Assistance Section Salt Shed Application Guide**. All of the following scoring questions below must thoroughly convey an understanding of the salt and sand guidance provided.

**Application Scoring Criteria:**

- 1. Please give a brief description of the project (be sure to indicate the primary facility type being applied for and be concise).**

**(10 points max.)**

The Spear Street Shared Use Path includes the design and construction of a 10' wide asphalt shared use path connecting existing paths on Swift Street at the southern terminus, and the UVM Forestry Services Building at the northern terminus. The path is in design and has been laid out to be on the east side of the road from Swift Street to Songbird Road, where it crosses to the west side of the road and continues north to 705 Spear Street and the existing path.

- 2. What is the feasibility of this project? Feasibility (or Scoping) study applications will not be scored on this criterion. Also, please describe the extent of project development to date.**

**(10 points max.)**

This project underwent scoping in 2020 as part of the South Burlington Pedestrian and Bicycle Feasibility Study. The preferred alternative in this study involved the realignment of Spear Street to accommodate a path on the west side of the road. Upon further examination of the impacts and other alignments not considered in the scoping study, the conceptual design developed in 2022/2023 removes the realignment of the roadway and follows the alignment described above in Question 1.

[SouthBurlington PedestrianAndBicycleFeasibilityStudy FinalReport 20200929.pdf \(ccrvcvt.org\)](#)

Project Development to date includes the development and submission of Conceptual Plans and Estimate (submitted to VTrans in May 2023), coordination with VTrans and DEC about interactions

with the I-189 bridges and Potash Brook crossing, property owner meetings, and a public meeting (held on November 8, 2023). Preliminary Plans are now in development.

3. **Does this project address a need identified in a local or regional planning document? If so, please describe. (5 points max.)**

This project has been identified on South Burlington's Official Map ([Official Map Complete Effective 2021-10-25.pdf \(revize.com\)](#)) and is a key component of the north-south shared use path network adjacent to Spear Street. The project has been included in the City's Capital Improvement Program has been identified as a priority under the City's Penny for Paths initiative which aims to close the gaps in South Burlington's bicycle and pedestrian network.

4. **Does this project:**

- A. **Benefit a State Designated Center per the link below (i.e., downtowns, villages, or neighborhood growth centers recognized by the Vermont Department of Economic, Housing and Community Development)?**

***Not applicable for Environmental Mitigation Categories* (5 points max.)**

<http://maps.vermont.gov/ACCD/PlanningAtlas/index.html?viewer=PlanningAtlas>

The Spear Street Path project creates a connection for individuals coming from south to reach South Burlington's designated New Town Center and Neighborhood Development Area (centered around Market Street and Dorset Street, a.k.a. City Center) by providing a connection to existing facilities which lead in and out of this area. These connections can be made by travelling from the proposed path to the existing paths on Songbird Road and Dorset Street, or by continuing north on the current Spear Street Path and travelling across US-2 and the future I-89 Bike/Ped Bridge to reach City Center.

The southern terminus of the proposed Spear Street Path connects to many neighborhoods near Spear and Swift Streets and provides access to a robust path network in the western part of South Burlington which connects to Farrell Street and Shelburne Road. The construction of this path will allow residents of the new Spear Meadows housing development and other planned developments to reach the designated New Town Center on a safe and separated shared use path.

- B. **Benefit mobility for disadvantaged populations to include elderly, disabled, minorities, and low-income residents. Please describe this impact (if applicable) in detail. Supporting documentation, including recent data must be included.**

***Not applicable for Environmental Mitigation Categories* (10 points max.)**

In the current conditions, non-vehicular travelers are provided a safe shared use path facility on Spear Street, Swift Street or on the paths near I-189 and behind Farrell Park and are then left without a facility to complete their trips. Many people do not feel comfortable "taking the lane" and travelling with vehicular traffic on Spear Street, where speeds are high and there are steep hills. This connection will keep non-vehicular travelers separated from vehicles to provide safer and comfortable facilities for those who cannot or choose not to use a vehicle for transportation.

The segment of this project north of I-189 is located within a designated Opportunity Zone and connects to multiple Census Block Groups identified to have a Low-Moderate Income Percentage over 51% (Census Tracts 33.01 and 36 are directly adjacent to the project and are both located within the LMI > 51% Block Group).

Census Tract 33.01, located along the southern segment of the project, is home to a population where 17% of people speak a language other than English at home and 16.2% were born in a country other than the United States (compared to 9.3% and 7.6%, respectively, in all of Chittenden County). This Tract also has an average commute time 4 minutes shorter than the average Chittenden County worker, which provides a greater opportunity for a mode shift away from vehicles, especially if safer active transportation facilities are provided.

Census Tract 36, located along the northern segment of the project, is home to a population where 18.7% of individuals are 65 or older (compared to 17.2% in all of Chittenden County). Older individuals are more likely to have specialized mobility needs and would be less likely to be able to operate a vehicle and may require more heavily on non-motorized forms of transportation. The median household income in this Tract is \$11,000 lower and poverty rates are 3% higher than the rest of the County. This often leads to lower vehicle ownership and access and therefore increases the reliance on alternatives forms of transportation.

**5. Provide a project cost estimate below (project costs below include both federal dollars and local dollars). Projects will be scored based on whether the cost appears realistic for the size and scope of the project. For scoping studies, use PE and Local Project Management lines only.**

**Note:** If you are applying for additional funds for an existing project, show the amount being requested for this grant in the PE, ROW, Construction, Construction Engineering, and Municipal Project Management rows below. Also, be clear regarding total project cost and other funding amounts and sources in the additional funding comments box below.  
**(10 points max.)**

Preliminary Engineering (PE) <i>(Engineering, Surveying, Permitting)</i>	<b>\$ 0</b> _____
Right-of-way / Acquisition (ROW) <i>(appraisals, land acquisition and legal fees)</i>	<b>\$ 0</b> _____
Construction <i>(construction costs with reasonable contingency)</i>	<b>\$ 300,000</b> _____
Construction Engineering <i>(cost to provide inspection during construction)</i>	<b>\$ 75,000</b> _____
<i>Municipal Project Management Costs</i>	

(minimum of 10% of total PE, ROW and Construction Phases).

\$ 0

**Total Project Cost** \$ 375,000

**Addition Funding Comments: (ex. Total and additional funding for existing projects)**

The estimate associated with the May 2023 Conceptual Plans submission showed a total ROW and construction cost (including mobilization/demobilization, construction engineering and inspection, traffic control, and 15% contingency) of \$1,189,100.

As of December 2023, \$137,440 has been spent on Preliminary Engineering out of a contract amount of \$261,909 (52% of contract amount spent).

The project currently has a \$300,000 grant (\$75,000 local match required) under TAP TA21(4)/CA0668.

Additional funding is being requested only to support construction costs, with the local match being shown as going towards construction engineering.

**6. Select the eligibility category below (A, B, C or D) that best fits your project and answer the corresponding questions for that category (choose only one category). 10 bonus points will be awarded to projects that are primarily Bicycle or Pedestrian facilities.**

**A. Bicycle and Pedestrian Facilities (includes Safe Routes for Non-Drivers and Conversion of abandoned railroad corridors.**

- (i) Will the project contribute to a system of pedestrian and/or bicycle facilities? **(10 points max.)**

South Burlington has an expansive a growing network of over 20 miles of shared use paths, 30 miles of bike lanes, and 50 miles of sidewalks. The Spear Street Path project closes a key gap in this network. It will connect to existing paths on Swift Street (which continue east to Dorset Street and west to various neighborhoods) at its southern terminus, on Songbird Road in the middle of the project, and on Spear Street at its north terminus (which continues north to University and Medical Center and west to Farrell Street).

- (ii) Will the project provide access to likely generators of pedestrian and/or bicyclist activity? **(10 points max.)**

By closing the gap in the path network noted above, there would be safer access from many neighborhoods to key destinations like UVM, UVMCC, and City Center (which is a retail and commercial center in South Burlington). A key component of this project is the connection to Songbird Road which is a popular route for kids going to and from the Middle and High Schools. A recent study of potential crosswalks in the City proposed a

crossing across Dorset Street from the eastern end of Songbird Road to the path on Dorset Street. This crosswalk was warranted almost entirely by students when the intersection was observed and pedestrian counts were conducted ([South Burlington Multi-Site Crosswalk Assessment \(ccrpcvt.org\)](#)).

The project is also between 0.5 – 1.5 miles from several City parks and natural areas, including Wheeler Nature Park, Veterans Memorial Park, City Center Park, Farrell Park, Overlook Park, Szymanski Park, and Hubbard Park.

CCRPC's 2022 update to the Regional Active Transportation Plan (ATP) proposed a connection on Spear Street and their Trip Potential Analysis showed this area as having a very high trip potential for walking and biking trips as well a high level of connectivity to destinations ([2022\\_12\\_16\\_CCRPC\\_ATP\\_FINAL\\_PLAN.pdf \(ccrpcvt.org\)](#)).

- (iii) Will the project address a known, documented safety concern? **(10 points max.)**
- Also documents in the CCRPC's 2022 ATP is the high level of traffic stress on Spear Street. This has long been an area of concern for the City and our residents since traffic speeds are high and the paved shoulders are too small. In 2023, we restriped Spear Street south of Swift Street to provide 5 – 6' bike lanes in both directions, but the roadway width in this segment does not allow for this to occur. Data collected north of this project showed an 85<sup>th</sup> percentile speed of 45 – 47 mph despite the posted speed limit of 35 mph. These data were collected at the crest of the steepest sections of Spear Street where this project is proposed. This would likely indicate that the speeds are even higher as cars descend the hills. An additional concern in the project area is the presence of the I-189 bridges. The roadway is situated tightly between bridge piers, leaving less spaces for pedestrians who walk on the outside of the pavement and create a physically and visually narrowed paved arrow for those sharing the road with vehicles.

**B. Community Improvement Activities:**

- i. Explain how the project improves the economic wellbeing of the community and/or provide a benefit to state tourism? **(10 points max.)**

[Click here to enter text.](#)

- ii. Describe the anticipated impact to the public; degree of visibility, public exposure and/or public use. **(10 points max.)**

[Click here to enter text.](#)

- iii. Answer only one of the following based on the type of project:

- a) Construction of turnouts, overlooks, and viewing areas as related to scenic or historic sites. *To what extent will the project provide a view of a highly unique and scenic area?*

- b) **(10 points max.)**

[Click here to enter text.](#)

- c) Preservation or rehabilitation of historic transportation facilities. *Describe the historic significance of the historic transportation facility and the importance of the facility to the state.* **(10 points max.)**

[Click here to enter text.](#)

- d) Archeological planning and research related to impacts from a transportation project. *Describe the associated transportation project and benefit of the proposed activities.* **(10 points max.)**

[Click here to enter text.](#)

- e) Vegetation management in transportation rights of way to improve roadway safety, prevent invasive species, and provide erosion control. *Describe the extent of the current problem and the impact on the site and surrounding area.* **(10 points max.)**

[Click here to enter text.](#)



**C. Environmental Mitigation Activity Related to Stormwater and Highways  
(Including Salt and Sand Sheds)**

- i. Please describe how this application provides environmental mitigation relating to stormwater and highways. **(10 points max.)**  
[Click here to enter text.](#)
  
- ii. What information or data is provided to substantiate the current stormwater problem and associated environmental impacts? **(10 points max.)**  
[Click here to enter text.](#)
  
- iii. What substantiating data or information is provided to show that the proposed application is an effective and maintainable solution to the problem? **(10 points max.)**  
[Click here to enter text.](#)

**D. Environmental Mitigation Activity Related to Wildlife**

- i. Please describe how this application will reduce vehicle-caused wildlife mortality or will restore and maintain connectivity among terrestrial or aquatic habitats. **(10 points max.)**  
[Click here to enter text.](#)
  
- ii. What information or data is provided to substantiate the current problem and associated environmental impacts? **(10 points max.)**  
[Click here to enter text.](#)
  
- iii. What substantiating data or information is provided to show that the proposed application is an effective and manageable solution to the problem? **(10 points max.)**  
[Click here to enter text.](#)

December 4, 2023

Scott Robertson, P.E.  
Municipal Assistance Bureau TA Coordinator  
VT Agency of Transportation  
219 North Main Street  
Barre, VT 05641

Dear Scott:

This letter is in support of the City of South Burlington's application to the VTrans Transportation Alternatives (TAP) Grant Program for additional funding for the design and construction of a 3,500 foot long shared use path on Spear Street that will close a critical gap in the City's growing walk/bike network. This project was scoped by the CCRPC in 2019 and received TAP funding in 2021 but the project cost has increased due to inflation and stormwater treatment. When constructed this project will connect to existing walk/bike facilities at the UVM Forestry building, along Songbird Road, and another path that runs parallel to Swift Street. This project is necessary to create a safe connection to the downtown district, schools, and parks.

This project is supported by several sections of the CCRPC's ECOS Plan related to active transportation projects:

One of the four broad goals established at the beginning of the document states:  
*"Make public and private investments in the built environment to minimize environmental impact, maximize financial efficiency, optimize social equity and benefits, and improve public health."* ECOS Plan page 8

In the transportation discussion of key issues there's this finding:  
*"More robust investment in transportation options – transit, walking/biking, carsharing and ridesharing – could reduce congestion, vehicle miles traveled, use of single occupancy vehicles, social exclusion, and could improve public health, and enhance the economic well-being of our residents, businesses and visitors."* ECOS Plan page 63

Under future transportation investments, one of the identified focal areas is to:  
*"Expand walking and biking infrastructure to support active transportation and to provide interconnection with the region's transit system."* ECOS Plan page 93

The Public Health section also includes this as a priority strategy:  
*"Obesity -- Create policies and environmental supports that increase access to active*

*transportation, active recreation, and healthy foods.” ECOS Plan Page 103*

The financial section of the transportation element of ECOS also notes a recommended shift in new transportation funding away from roadway investments and more into transportation alternatives like walking and cycling projects (see ECOS Plan page 180).

The Plan section on implementing transportation corridor improvements identifies this priority: *“Expanding the bicycle and pedestrian networks with on- and off-road facilities and more sidewalks.” ECOS Plan page 181*

This project is also supported by the 2022 Regional Active Transportation Plan (ATP):

- *Spear Street is identified as part of the proposed regional walk/bike network.*
- *The regional network is designed to accommodate connections to important destinations, particularly schools and growth centers.*
- *The ATP’s goal is to create a safe, comfortable, and connected regional network of pedestrian and bicycle routes that appeal to all ages and abilities.*
- *The ATP supports the vision, goals and objectives of the CCRPC Metropolitan Transportation Plan, and the MTP recommends expanding walking and biking infrastructure to support active transportation, and improve interconnection with the region’s transit system.*

Thank you for your consideration of this project.

Sincerely,



















Bryan Davis  
Senior Transportation Planner

cc: Chris Shaw, CCRPC South Burlington representative

# City of South Burlington Official Map (Citywide)

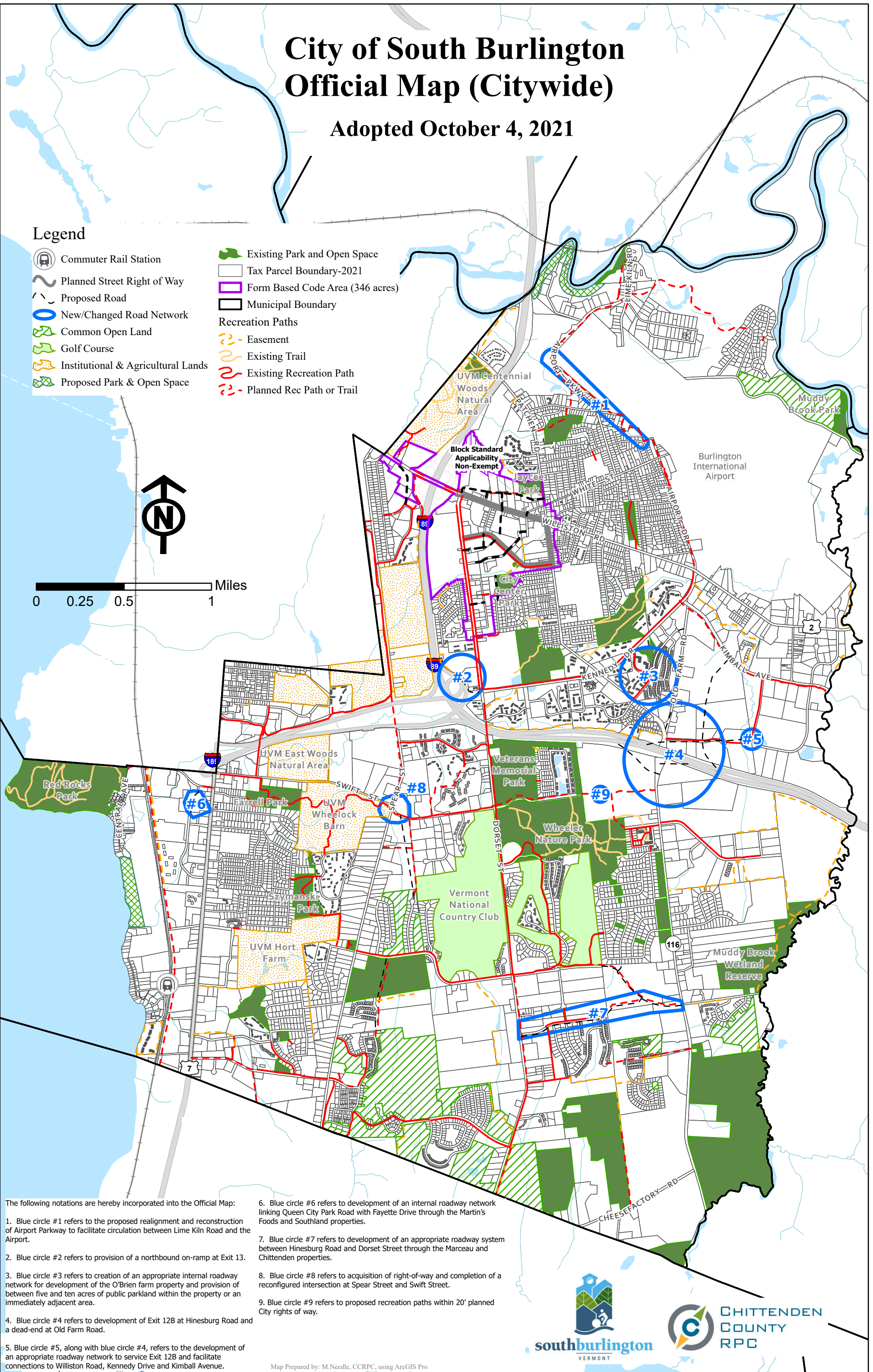
Adopted October 4, 2021

## Legend

-  Commuter Rail Station
-  Planned Street Right of Way
-  Proposed Road
-  New/Changed Road Network
-  Common Open Land
-  Golf Course
-  Institutional & Agricultural Lands
-  Proposed Park & Open Space
-  Existing Park and Open Space
-  Tax Parcel Boundary-2021
-  Form Based Code Area (346 acres)
-  Municipal Boundary
- Recreation Paths**
-  Easement
-  Existing Trail
-  Existing Recreation Path
-  Planned Rec Path or Trail



0 0.25 0.5 1 Miles



The following notations are hereby incorporated into the Official Map:

1. Blue circle #1 refers to the proposed realignment and reconstruction of Airport Parkway to facilitate circulation between Lime Kiln Road and the Airport.
2. Blue circle #2 refers to provision of a northbound on-ramp at Exit 13.
3. Blue circle #3 refers to creation of an appropriate internal roadway network for development of the O'Brien farm property and provision of between five and ten acres of public parkland within the property or an immediately adjacent area.
4. Blue circle #4 refers to development of Exit 12B at Hinesburg Road and a dead-end at Old Farm Road.
5. Blue circle #5, along with blue circle #4, refers to the development of an appropriate roadway network to service Exit 12B and facilitate connections to Williston Road, Kennedy Drive and Kimball Avenue.

6. Blue circle #6 refers to development of an internal roadway network linking Queen City Park Road with Fayette Drive through the Martin's Foods and Southland properties.
7. Blue circle #7 refers to development of an appropriate roadway system between Hinesburg Road and Dorset Street through the Marceau and Chittenden properties.
8. Blue circle #8 refers to acquisition of right-of-way and completion of a reconfigured intersection at Spear Street and Swift Street.
9. Blue circle #9 refers to proposed recreation paths within 20' planned City rights of way.

Map Prepared by: M.Needle, CCRPC, using ArcGIS Pro



# CITY OF SOUTH BURLINGTON CHITTENDEN COUNTY VERMONT

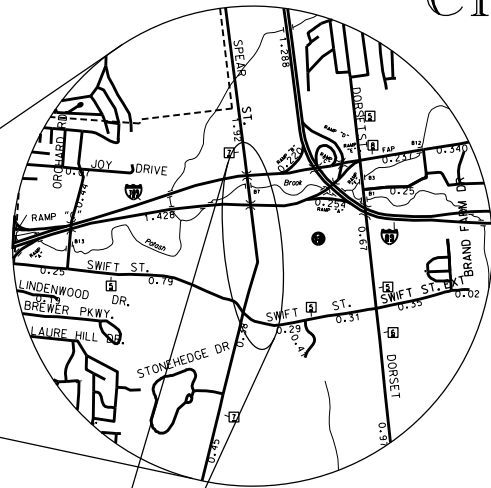
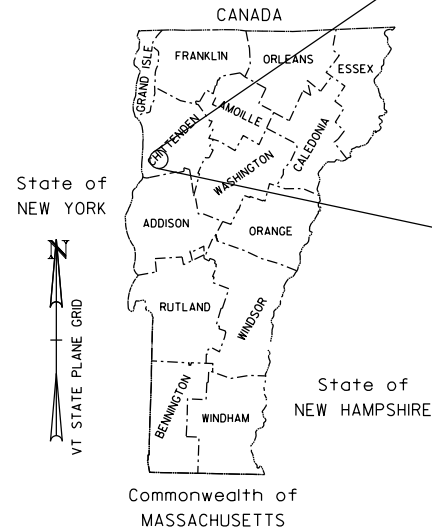


**southburlington**  
VERMONT

## PLANS OF PROPOSED SPEAR STREET SHARED USE BIKE PATH IMPROVEMENTS VTRANS PROJECT NO. TAP TA21(4)

### INDEX OF SHEETS

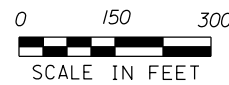
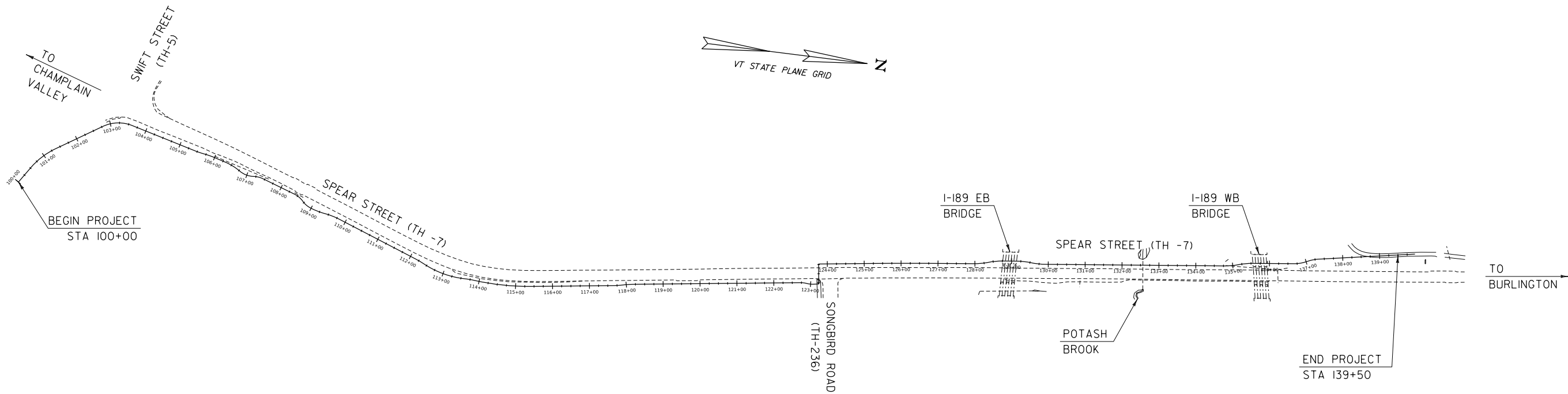
SHEET NO	DESCRIPTION
1	TITLE SHEET
2	LEGEND SHEET
3-4	PATH TYPICAL SECTIONS
5-12	PATH LAYOUT SHEETS
13-20	PATH PROFILE SHEETS
21-36	CROSS SECTIONS



### PROJECT LOCATION

PROJECT LOCATION: BEGINNING AT SWIFT STREET AND PROCEEDING NORTHERLY ALONG SPEAR STREET TO ENTRANCE TO UVM GEORGE D. AIKEN FORESTRY SCIENCES LABORATORY

PROJECT DESCRIPTION: NEW 0.75 MILE SHARED USE BIKE PATH ALONG SPEAR STREET IN SOUTH BURLINGTON, VT.



CONCEPTUAL DESIGN PLANS  
NOT FOR CONSTRUCTION

REV	DESCRIPTION	DATE

VAOT BRIDGE NO. N/A  
FILENAME 10788000  
MODEL NAME  
TITLE  
SCALE  
AS SHOWN  
DESIGNED BOC  
DRAWN ZAR  
CHECKED JAO  
DATE MAY 2023

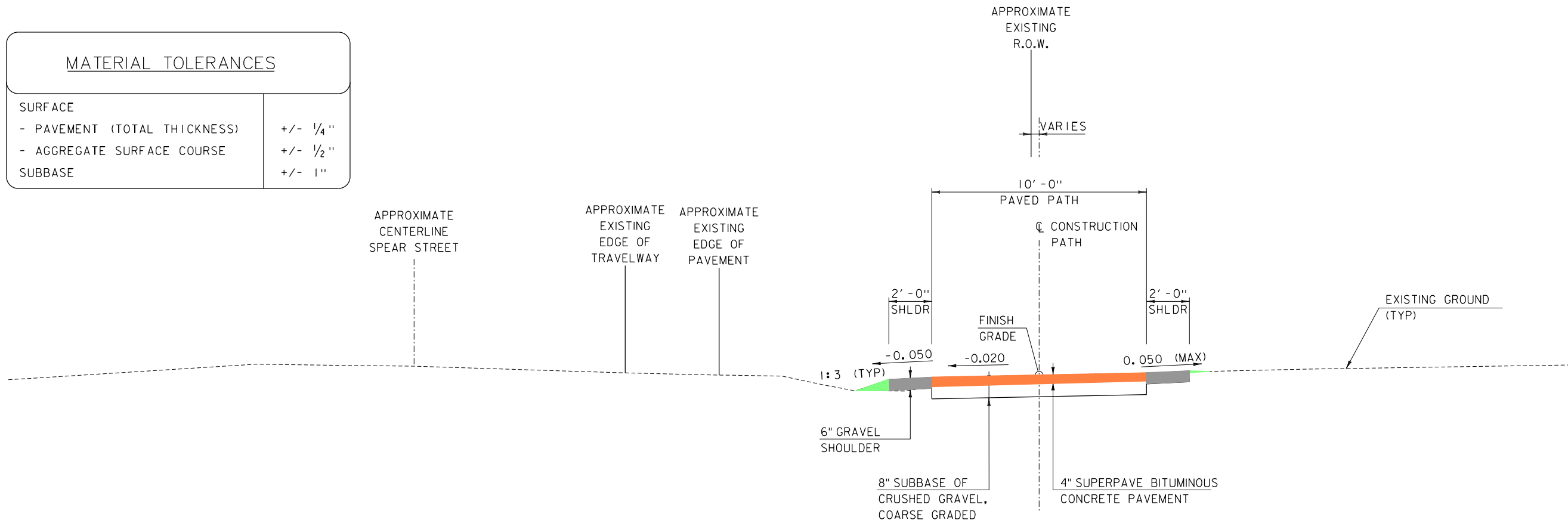
**HOYLE TANNER**  
125 College Street, 4th Floor • Burlington, VT 05401  
(802) 860-1331 • www.hoyletanner.com

CITY OF SOUTH BURLINGTON  
VTRANS PROJECT NO. TAP TA21(4)  
SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
TITLE SHEET

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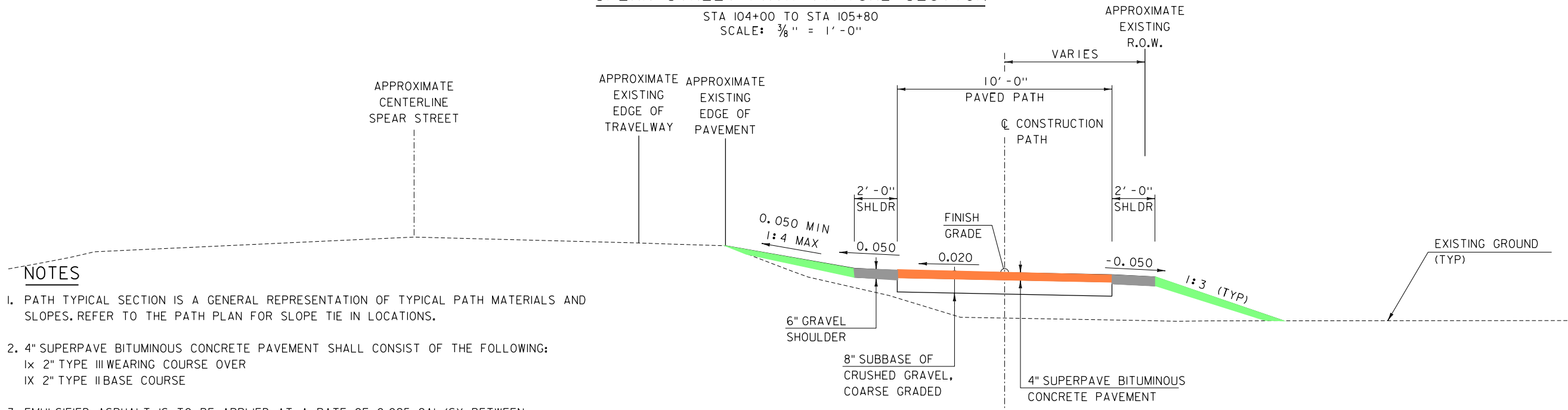
**MATERIAL TOLERANCES**

SURFACE	TOLERANCE
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"



**SPEAR STREET PATH TYPICAL SECTION**

STA 104+00 TO STA 105+80  
SCALE: 3/8" = 1'-0"



**SPEAR STREET PATH TYPICAL SECTION**

STA 110+00 TO STA 119+75  
SCALE: 3/8" = 1'-0"

**NOTES**

1. PATH TYPICAL SECTION IS A GENERAL REPRESENTATION OF TYPICAL PATH MATERIALS AND SLOPES. REFER TO THE PATH PLAN FOR SLOPE TIE IN LOCATIONS.
2. 4" SUPERPAVE BITUMINOUS CONCRETE PAVEMENT SHALL CONSIST OF THE FOLLOWING:  
IX 2" TYPE III WEARING COURSE OVER  
IX 2" TYPE II BASE COURSE
3. EMULSIFIED ASPHALT IS TO BE APPLIED AT A RATE OF 0.025 GAL/SY BETWEEN SUCCESSIVE COURSES OF NEW PAVEMENT AND 0.08 GAL/SY ON COLD PLANED SURFACES AS DIRECTED BY THE ENGINEER.
4. CITY SPECS AND DETAILS TAKE PRECEDENCE OVER VTRANS SPECS.

REV	DESCRIPTION	DATE

VAOT BRIDGE NO.	DESIGNED BY	DRAWN BY	CHECKED BY	DATE
N/A	BOB	ZAB	XOX	MAY 2023

**HOYLE TANNER**  
125 College Street, 4th Floor • Burlington, VT 05401  
(802) 860-1331 • www.hoyletanner.com

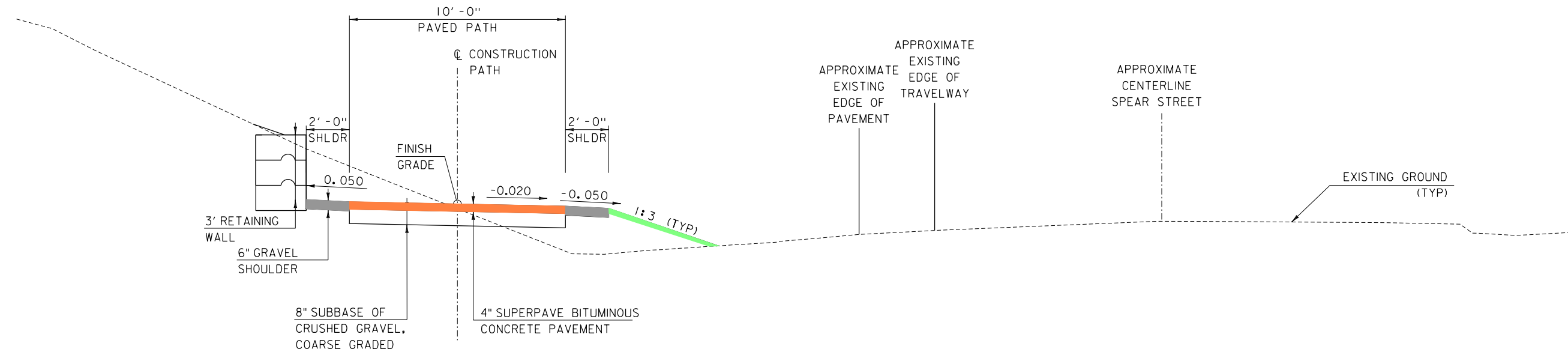
CITY OF SOUTH BURLINGTON  
VTRANS PROJECT NO. TAP TA21(4)  
SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
SPEAR STREET TYPICAL SECTION (1/2)

PROJECT NO. 21.107880.00  
SHEET NO.

**3**

SHEET 3 OF 36

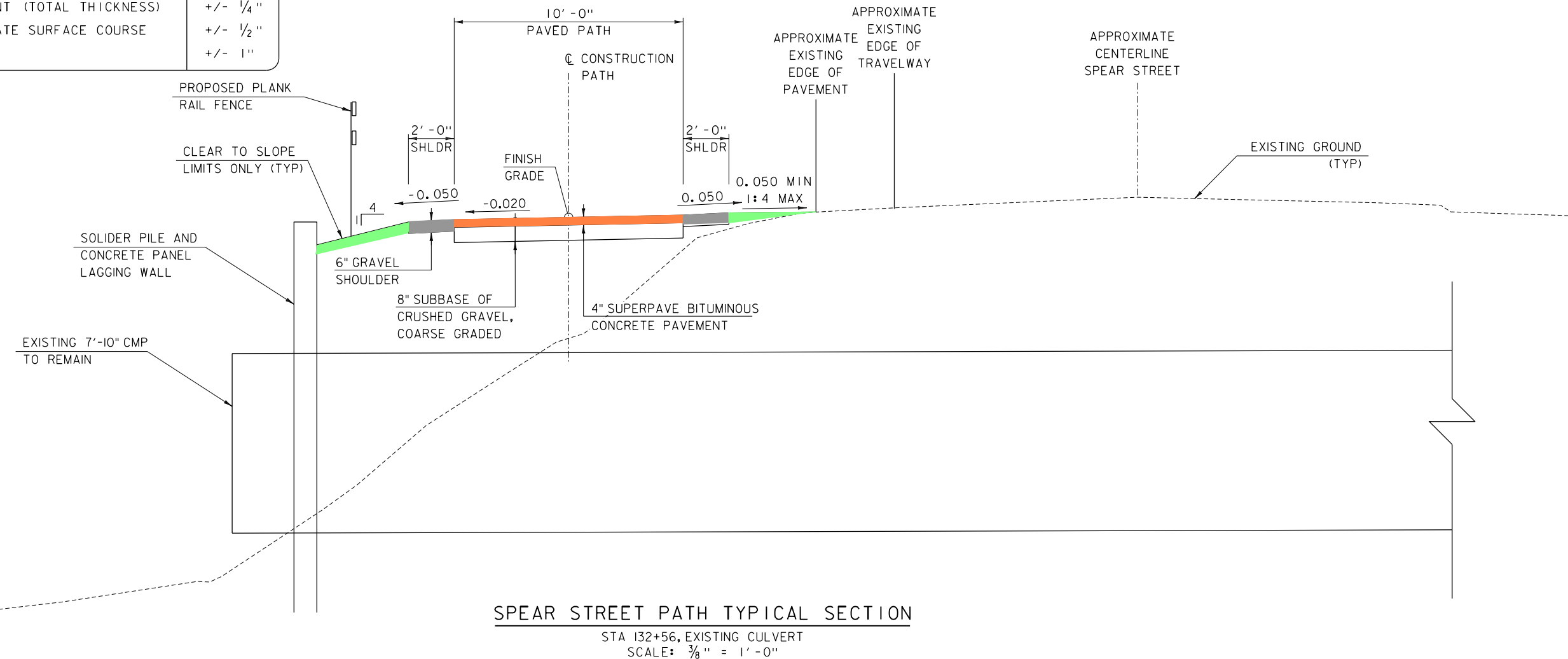
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**SPEAR STREET PATH TYPICAL SECTION**

STA 129+00, BELOW I-189 BRIDGE  
 SCALE: 3/8" = 1'-0"

MATERIAL TOLERANCES	
SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- 1/4"
- AGGREGATE SURFACE COURSE	+/- 1/2"
SUBBASE	+/- 1"



**SPEAR STREET PATH TYPICAL SECTION**

STA 132+56, EXISTING CULVERT  
 SCALE: 3/8" = 1'-0"

REV	DESCRIPTION	DATE
#		

DESIGNED	DRAWN	CHECKED	DATE
BOB	ZAB	XOX	MAY 2023

VAOT BRIDGE NO. N/A  
 FILENAME 107880typ  
 MODEL NAME 107880typ02  
 SCALE AS SHOWN  
 DATE MAY 2023

**HOYLE TANNER**  
 125 College Street, 4th Floor • Burlington, VT 05401  
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CITY OF SOUTH BURLINGTON  
 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET TYPICAL SECTION (2/2)

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REV	DESCRIPTION	DATE

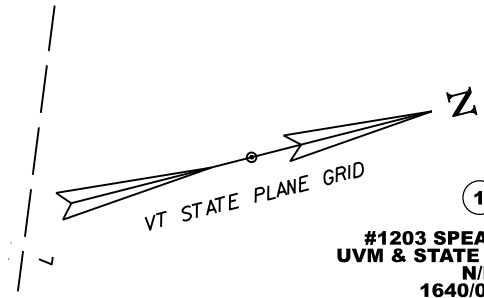
VAOT BRIDGE NO.	DESIGNED BY	BOC	DRAWN	CHECKED	DATE
N/A	107880bdr_jby		ZAR	JAO	MAY 2023
FILENAME	MODEL NAME	LAYOUT	SCALE	AS SHOWN	

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CITY OF SOUTH BURLINGTON  
 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (1 OF 8)

PROJECT NO. 21.107880.00  
 SHEET NO.  
**5**  
 SHEET 5 OF 36



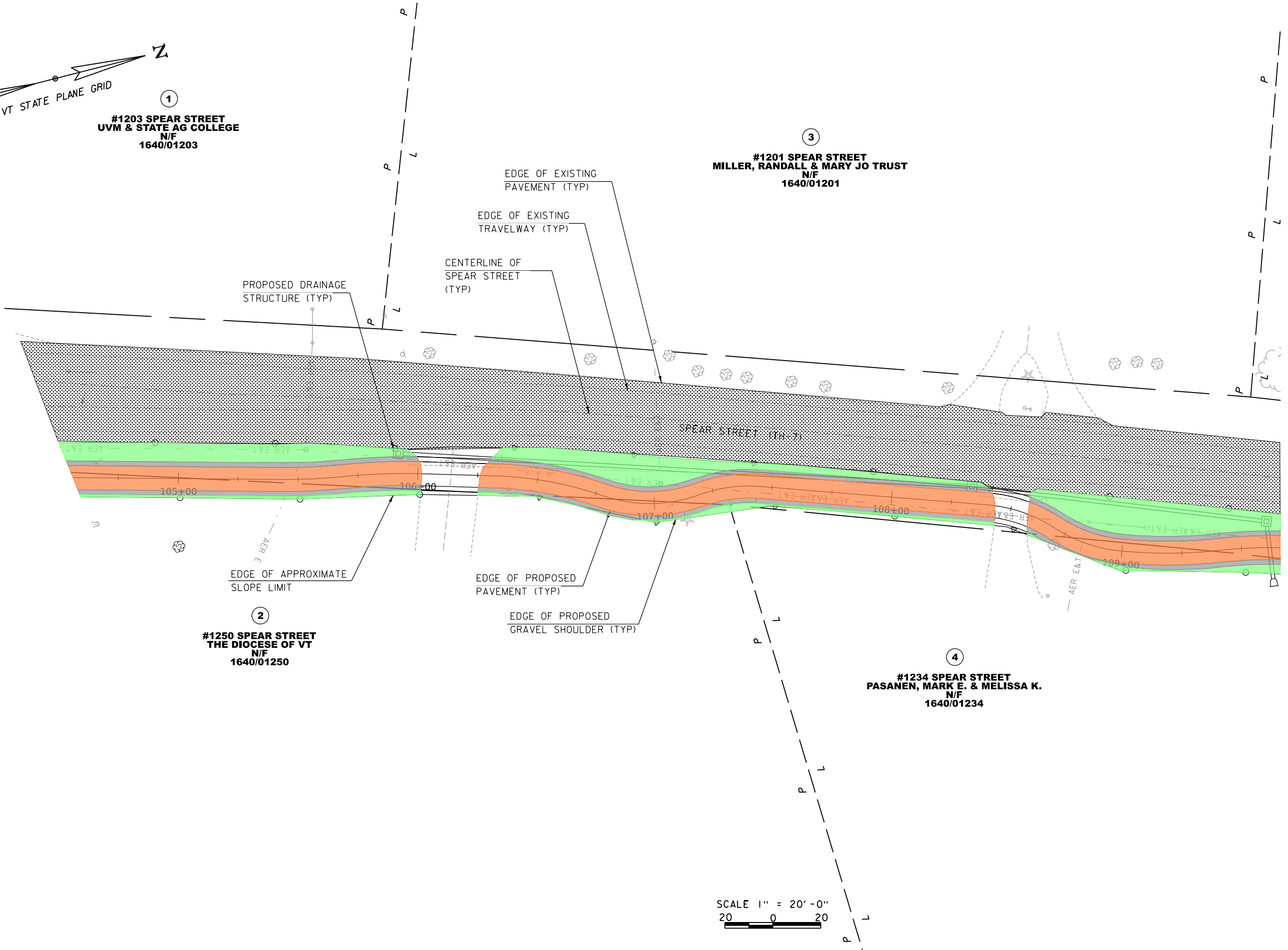


①  
**#1203 SPEAR STREET**  
UVM & STATE AG COLLEGE  
N/F  
1640/01203

③  
**#1201 SPEAR STREET**  
MILLER, RANDALL & MARY JO TRUST  
N/F  
1640/01201

②  
**#1250 SPEAR STREET**  
THE DIOCESE OF VT  
N/F  
1640/01250

④  
**#1234 SPEAR STREET**  
PASANEN, MARK E. & MELISSA K.  
N/F  
1640/01234



SCALE 1" = 20'-0"  
20 0 20

REV	DESCRIPTION	DATE

FILENAME	DESIGNED	BOC	BRAWN	CHECKED	DATE
107880bdr_jby	JBY	JBY	JBY	JBY	MAY 2023
MODEL NAME	LAY/02	ZAR	JAO	JAO	MAY 2023
SCALE	AS SHOWN				

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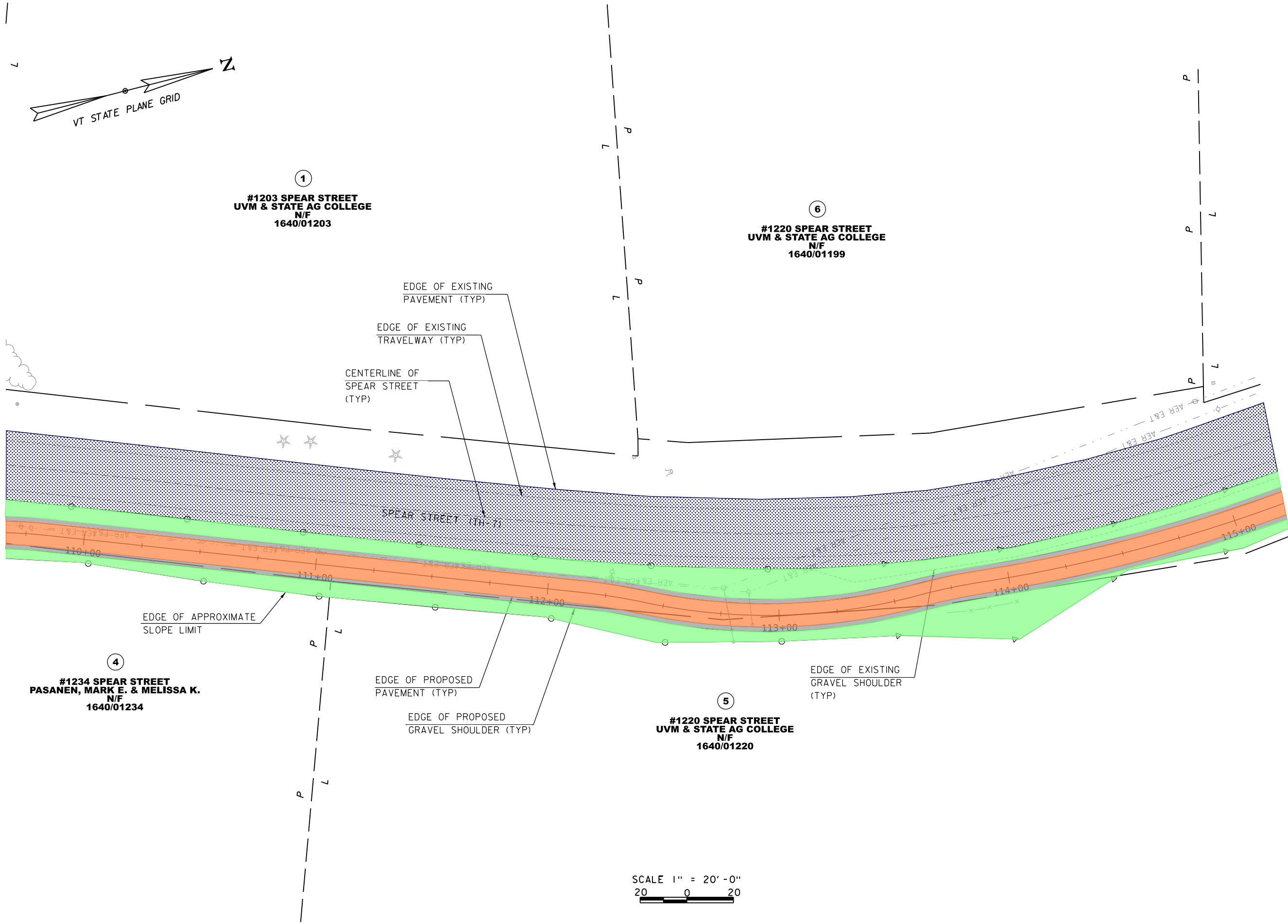
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CITY OF SOUTH BURLINGTON  
VTRANS PROJECT NO. TAP TA21(4)  
SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
SPEAR STREET LAYOUT SHEET (2 OF 8)

PROJECT NO. 21.107880.00  
SHEET NO.  
**6**  
SHEET 6 OF 36

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①  
**#1203 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
 N/F  
 1640/01203

⑥  
**#1220 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
 N/F  
 1640/01199

④  
**#1234 SPEAR STREET**  
**PASANEN, MARK E. & MELISSA K.**  
 N/F  
 1640/01234

⑤  
**#1220 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
 N/F  
 1640/01220

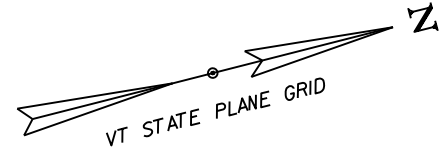
EDGE OF EXISTING PAVEMENT (TYP)  
 EDGE OF EXISTING TRAVELWAY (TYP)  
 CENTERLINE OF SPEAR STREET (TYP)

EDGE OF APPROXIMATE SLOPE LIMIT

EDGE OF PROPOSED PAVEMENT (TYP)  
 EDGE OF PROPOSED GRAVEL SHOULDER (TYP)

EDGE OF EXISTING GRAVEL SHOULDER (TYP)

SCALE 1" = 20' - 0"  
 20 0 20



REV	DESCRIPTION	DATE

VAOT BRIDGE NO. N/A  
 FILENAME 107880bdr\_lay  
 MODEL NAME LAY03  
 SCALE AS SHOWN  
 DATE MAY 2023

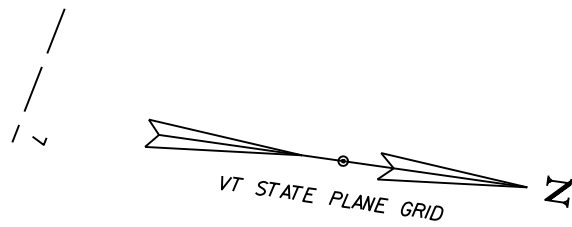
DESIGNED BY BOC  
 DRAWN BY ZAR  
 CHECKED BY JAO

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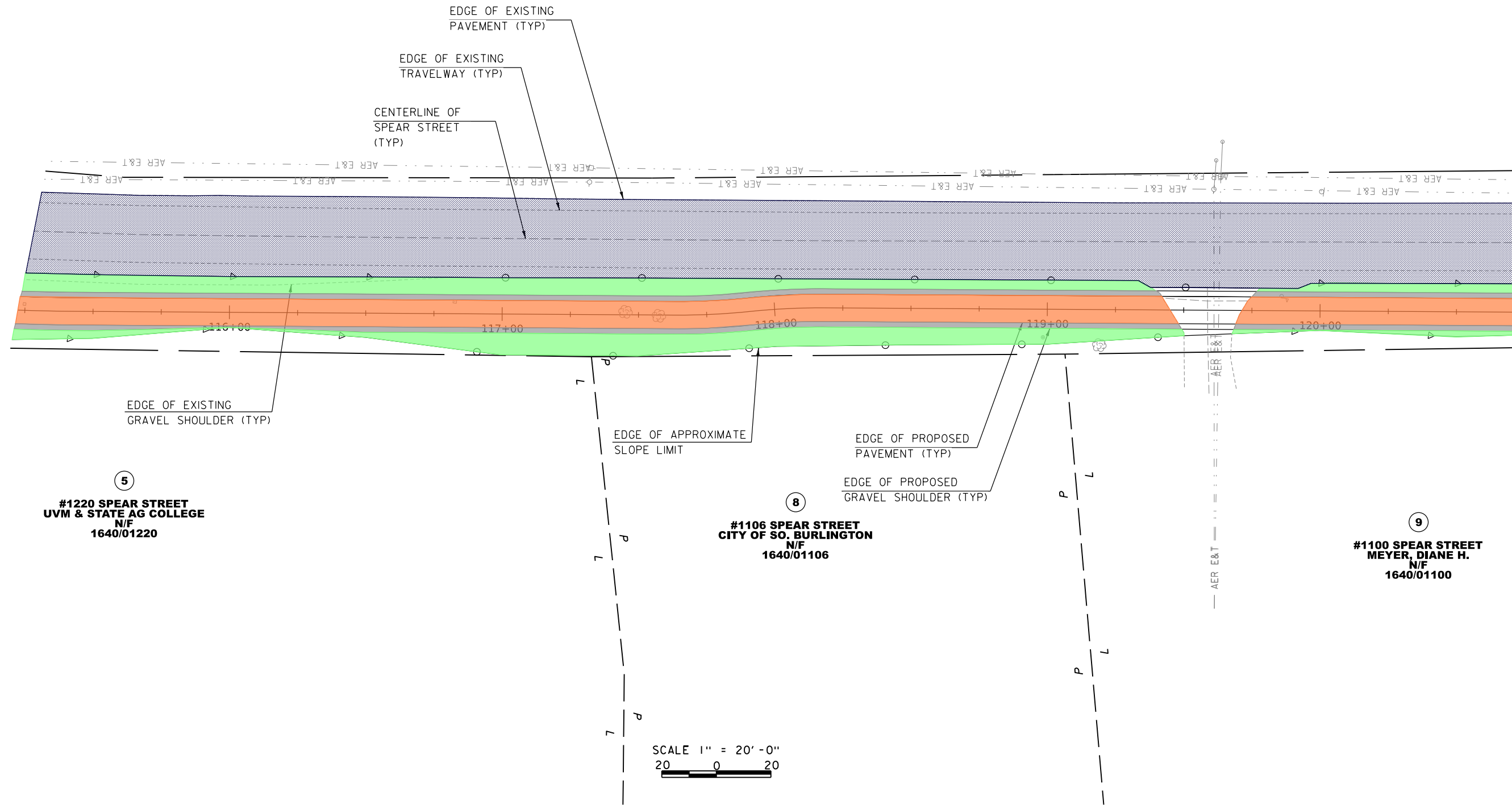
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 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (3 OF 8)

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⑦  
**#1195 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
 N/F  
 1640/01195



⑤  
**#1220 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
 N/F  
 1640/01220

⑧  
**#1106 SPEAR STREET**  
**CITY OF SO. BURLINGTON**  
 N/F  
 1640/01106

⑨  
**#1100 SPEAR STREET**  
**MEYER, DIANE H.**  
 N/F  
 1640/01100

SCALE 1" = 20' - 0"  
 20 0 20

REV	DESCRIPTION	DATE

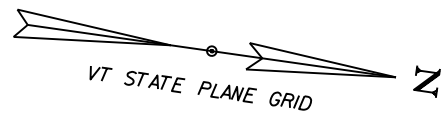
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FILENAME	DESIGNED BY
107880bdr_lay	BOC
MODEL NAME	DRAWN BY
LAY/04	ZAR
SCALE	CHECKED BY
AS SHOWN	JAO
DATE	MAY 2023



CITY OF SOUTH BURLINGTON  
 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (4 OF 8)

PROJECT NO. 21.107880.00  
 SHEET NO.  
**08**  
 SHEET 8 OF 36

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⑦  
**#1195 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
**N/F**  
**1640/01195**

EDGE OF APPROXIMATE  
 SLOPE LIMIT (TYP)

PROPOSED PLANK RAIL FENCE  
 STA 126+25 TO 127+75

EDGE OF PROPOSED  
 GRAVEL SHOULDER (TYP)

EDGE OF PROPOSED  
 PAVEMENT (TYP)

PROPOSED DRAINAGE  
 STRUCTURE (TYP)

APPROXIMATE R.O.W.

SPEAR STREET (TH-7)

SONGBIRD ROAD (TH-236)

REMOVE TREES WITHIN  
 SLOPE LIMITS (TYP)

⑩  
**#1098 SPEAR STREET**  
**HOMESTEAD DESIGN, INC.**  
**N/F**  
**1640/01098**

⑩  
**#1098 SPEAR STREET**  
**HOMESTEAD DESIGN, INC.**  
**N/F**  
**1640/01098**

EDGE OF EXISTING  
 PAVEMENT (TYP)

EDGE OF EXISTING  
 TRAVELWAY (TYP)

CENTERLINE OF  
 SPEAR STREET  
 (TYP)

SCALE 1" = 20' - 0"  
 20 0 20

REV	DESCRIPTION	DATE

FILENAME	DESIGNED	BOC	BRAWN	CHECKED	DATE
107880bdr_jby	JAO	JAO	JAO	JAO	MAY 2023
MODEL NAME	LAY/05	ZAR	JAO	JAO	
SCALE	AS SHOWN				

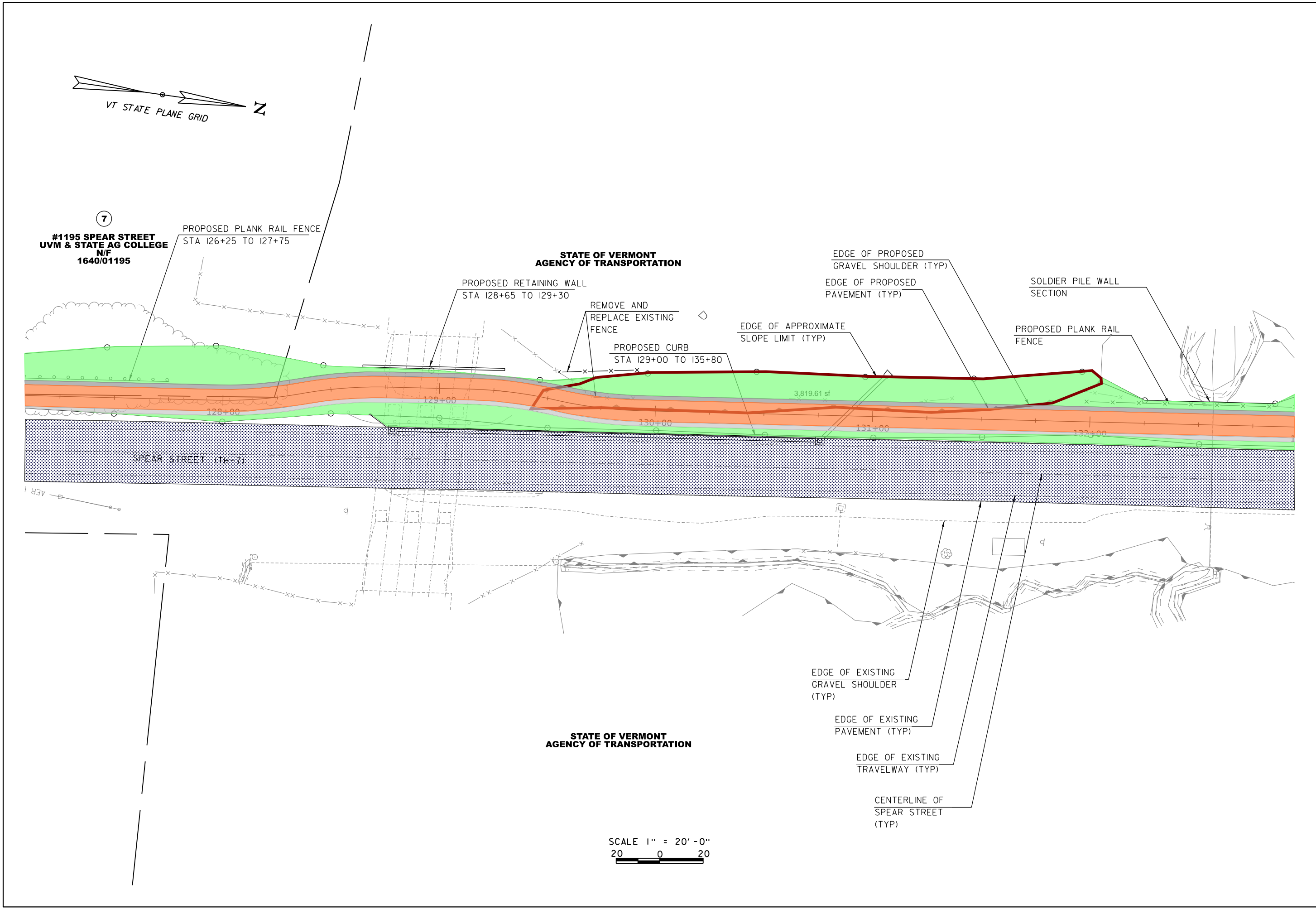
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CITY OF SOUTH BURLINGTON  
 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (5 OF 8)

5/15/2023 10:46:59 AM V:\PROJECTS\South-Burlington-VT\21\_107880\_00-Spear-Bike-Ped\CADD\CutSheets\107880bdr\_jby.dgn

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SCALE 1" = 20' - 0"  
 20 0 20

7  
**#1195 SPEAR STREET**  
**UVM & STATE AG COLLEGE**  
**N/F**  
**1640/01195**

PROPOSED PLANK RAIL FENCE  
 STA 126+25 TO 127+75

PROPOSED RETAINING WALL  
 STA 128+65 TO 129+30

REMOVE AND  
 REPLACE EXISTING  
 FENCE

PROPOSED CURB  
 STA 129+00 TO 135+80

EDGE OF APPROXIMATE  
 SLOPE LIMIT (TYP)

EDGE OF PROPOSED  
 GRAVEL SHOULDER (TYP)

EDGE OF PROPOSED  
 PAVEMENT (TYP)

SOLDIER PILE WALL  
 SECTION

PROPOSED PLANK RAIL  
 FENCE

SPEAR STREET (TH-71)

STATE OF VERMONT  
 AGENCY OF TRANSPORTATION

EDGE OF EXISTING  
 GRAVEL SHOULDER  
 (TYP)

EDGE OF EXISTING  
 PAVEMENT (TYP)

EDGE OF EXISTING  
 TRAVELWAY (TYP)

CENTERLINE OF  
 SPEAR STREET  
 (TYP)

REV	DESCRIPTION	DATE

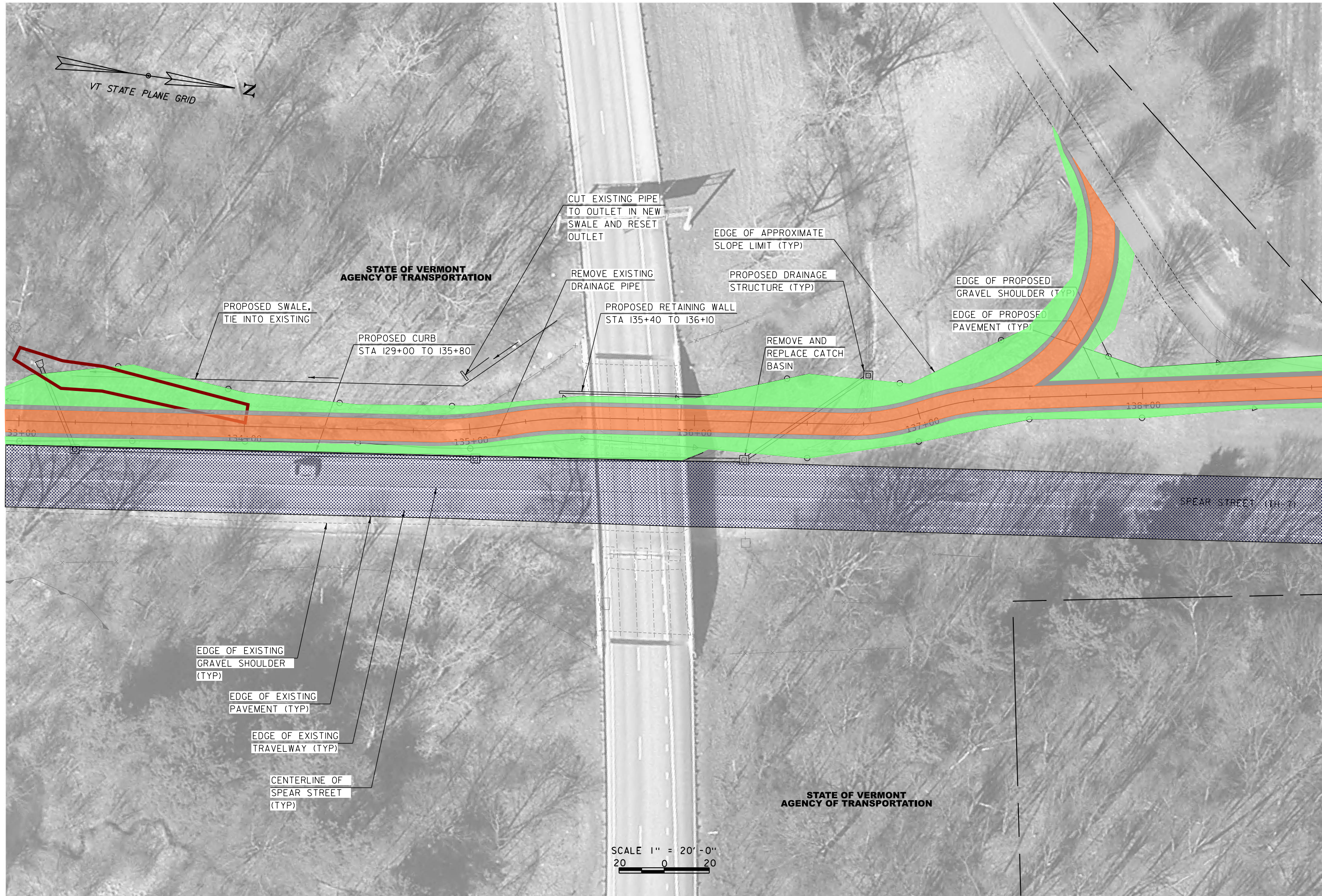
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107880bdr_lay			ZAR			MAY 2023
MODEL NAME	LAY/06					
SCALE						
AS SHOWN						

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 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (6 OF 8)



EDGE OF EXISTING GRAVEL SHOULDER (TYP)  
 EDGE OF EXISTING PAVEMENT (TYP)  
 EDGE OF EXISTING TRAVELWAY (TYP)  
 CENTERLINE OF SPEAR STREET (TYP)

SCALE 1" = 20'-0"  
 20 0 20

REV	DESCRIPTION	DATE

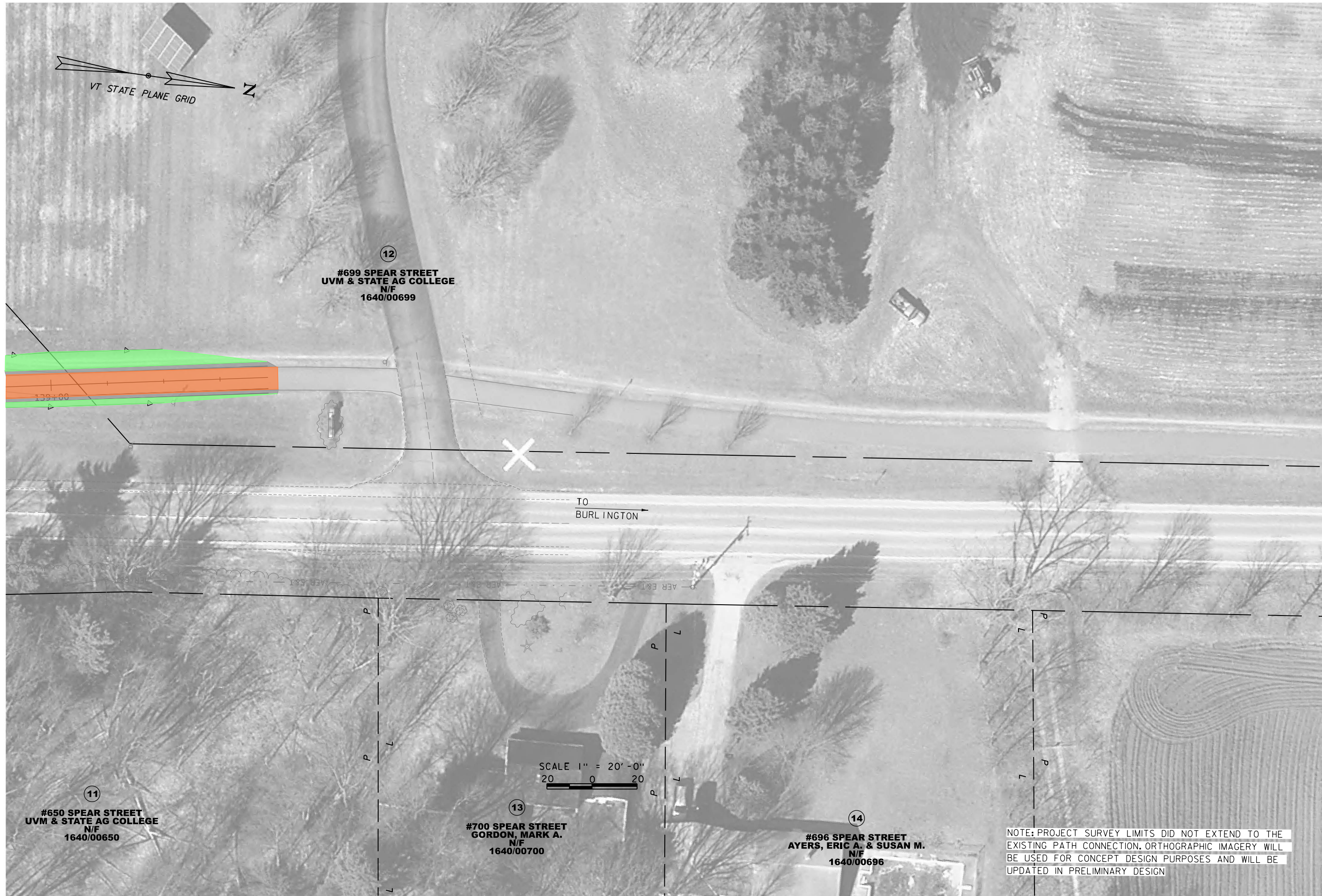
FILENAME	DESIGNED BY	BOC	DRAWN	CHECKED	DATE
107880bdr_lay	JBY		ZAR	JJO	MAY 2023
MODEL NAME	LAY/07	SCALE	AS SHOWN	DATE	

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 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (7 OF 8)

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NOTE: PROJECT SURVEY LIMITS DID NOT EXTEND TO THE EXISTING PATH CONNECTION. ORTHOGRAPHIC IMAGERY WILL BE USED FOR CONCEPT DESIGN PURPOSES AND WILL BE UPDATED IN PRELIMINARY DESIGN

REV	DESCRIPTION	DATE


  

VAOT BRIDGE NO.	DESIGNED BY	BROWNE	CHECKED	DATE
N/A	BOC	ZAR	JJO	MAY 2023
FILENAME	MODEL NAME	SCALE	AS SHOWN	
107880bdr_lay	LAY/08			

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 VTRANS PROJECT NO. TAP TA21(4)  
 SPEAR STREET BIKE AND PEDESTRIAN IMPROVEMENTS  
 SPEAR STREET LAYOUT SHEET (8 OF 8)

PROJECT NO. 21.107880.00  
 SHEET NO.  
**12**  
 SHEET 12 OF 36

 <b>HOYLE TANNER</b>	125 College Street	Calc. By:	ZAR	Date:	5/4/2023
	4th Floor	Chck. By:	BC	Date:	5/12/2023
	Burlington, VT 05401	QA'd By:		Date:	
	(802) 860-1331	Chck. By:		Date:	

**Spear Street Bike/Ped Improvements  
Engineers Estimate of Probable Construction Costs  
Hoyle Tanner Project No. 21.107880.00**

**CONCEPTUAL ESTIMATE**

**SECTION A - MAJOR ITEMS**

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST	COST
201.10	CLEARING AND GRUBBING, INCLUDING INDIVIDUAL TREES AND STUMPS	LS	1	\$ 20,000.00	\$ 20,000.00
203.15	COMMON EXCAVATION	CY	2360	\$ 15.00	\$ 35,400.00
203.31	SAND BORROW	CY	2240	\$ 27.00	\$ 60,480.00
210.10	COARSE-MILLING, BITUMINOUS PAVEMENT	SY	25	\$ 2.50	\$ 62.50
301.25	SUBBASE OF CRUSHED GRAVEL, COARSE GRADED	CY	1070	\$ 40.00	\$ 42,800.00
401.10	AGGREGATE SURFACE COURSE	CY	300	\$ 50.00	\$ 15,000.00
406.35	SUPERPAVE BITUMINOUS CONCRETE PAVEMENT	TON	1090	\$ 90.00	\$ 98,100.00
406.38	HAND PLACED BITUMINOUS CONCRETE MATERIAL, DRIVES	SY	70	\$ 25.00	\$ 1,750.00
616.28	CAST-IN-PLACE CONCRETE CURB, TYPE B	LF	770	\$ 35.00	\$ 26,950.00
620.45	PLANK RAIL FENCE	LF	253	\$ 40.00	\$ 10,120.00
651.35	TOPSOIL	CY	250	\$ 50.00	\$ 12,500.00
900.640	SPECIAL PROVISION (RETAINING WALL)	LS	1	\$ 145,500.00	\$ 145,500.00
	MISCELLANEOUS ROADWAY			8% OF ABOVE TOTAL	\$ 37,493.00
				<b>SUBTOTAL A</b>	<b>\$ 506,155.50</b>


**SECTION B - MISCELLANEOUS ITEMS**

SIGNS, MARKINGS, LOAM/HUMUS, PLANTINGS, ETC.	10%	\$ 50,615.55
	<b>SUBTOTAL B</b>	<b>\$ 556,771.05</b>

**SECTION C - MISCELLANEOUS DRAINAGE ITEMS**

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST	COST
601.0915	18" CPEP	LF	1540	\$ 40.00	\$ 61,600.00
604.20	PRECAST REINFORCED CONCRETE CATCH BASIN WITH CAST IRON GRATE	EA	11	\$ 4,000.00	\$ 44,000.00
	MISCELLANEOUS DRAINAGE	LS	1	\$ 35,649.09	\$ 35,649.09
				<b>SUBTOTAL C</b>	<b>\$ 698,020.14</b>



 <b>HOYLE TANNER</b>	125 College Street	Calc. By:	ZAR	Date:	5/4/2023
	4th Floor	Chck. By:	BC	Date:	5/12/2023
	Burlington, VT 05401	QA'd By:		Date:	
	(802) 860-1331	Chck. By:		Date:	

**Spear Street Bike/Ped Improvements**  
**Engineers Estimate of Probable Construction Costs**  
**Hoyle Tanner Project No. 21.107880.00**

**CONCEPTUAL ESTIMATE**

**SECTION D - TRAFFIC CONTROL**

ITEM NO.	DESCRIPTION	UNIT	QTY	UNIT COST	COST
630.15	FLAGGERS	HR	1000	\$ 38.00	\$ 38,000.00
641.11	TRAFFIC CONTROL, ALL-INCLUSIVE	LS	1	\$70,000.00	\$ 70,000.00
	MISCELLANEOUS TRAFFIC CONTROL		10% OF ABOVE TOTAL		\$ 10,800.00
<b>SUBTOTAL D</b>					<b>\$ 816,820.14</b>

**SECTION E - EROSION AND SEDIMENT CONTROL**

EROSION, SEDIMENT, AND POLLUTION CONTROL (HAY BALES, SILT FENCE, SWPPP, TEMP. WATER POLL. CONTROL, ETC.)		\$	7,500.00
<b>SUBTOTAL E</b>		<b>\$</b>	<b>824,320.14</b>

**SECTION F - MISC., MOBILIZATION AND CONTINGENCIES**

ROADWAY MOBILIZATION	10%	\$	82,432.01
<b>SUBTOTAL F</b>		<b>\$</b>	<b>906,752.15</b>

**SECTION H - CONSTRUCTION (CON)**

ROUNDED CONSTRUCTION SUBTOTAL:	\$	907,000.00
CONTINGENCY	15%	\$ 136,050.00
CONSTRUCTION ENGINEERING	15%	\$ 136,050.00
<b>CON TOTAL FOR PLANNING</b>	<b>\$</b>	<b>1,179,100.00</b>

**SECTION I - RIGHT-OF-WAY (ROW)**

TAKES	\$0.00
EASEMENTS	\$10,000.00
<b>ROW TOTAL</b>	<b>\$10,000.00</b>

**PROJECT TOTAL COST (CON, ROW, PE)**

**\$1,189,100.00**

This Engineers Estimate of Probable Construction Costs is based on the anticipated scope of work, as well as Hoyle, Tanner & Associates, Inc.'s experience with similar projects and understanding of current industry trends. The estimate has not been based on a final design for this project, and as such, it is intended to be preliminary in nature. It should be noted that changes in material or labor costs in the construction industry could impact the project cost in either direction.