STATE OF VERMONT
AGENCY OF TRANSPORTATION

Scoping Report

FOR

Pittsford BF 019-3(59)

US ROUTE 7, BRIDGE 108 OVER THE FURNACE BROOK

January 8, 2015

Table of Contents

I. Site Information

Bridge 108 is a State owned bridge located on US Route 7 at a four way intersection in the Pittsford Mills historic district. There are businesses and houses located in all four quadrants of the project. The bridge is approximately seven miles north of the intersection of US Route 7 and US Route 4E and is located at the intersection of US Route 7, VT Route 3, and Oxbow Road. The existing conditions were gathered from a combination of a Site Visit, the Inspection Report, the Route Log and the existing Survey. See correspondence in the Appendix for more detailed information.

Roadway Classification	Principal Arterial (US Highway, On NHS System)
Bridge Type	Two-span, concrete T-beam bridge
Bridge Length	102 feet
Year Built	1931, reconstructed in 1959
Ownership	State of Vermont

Need

Bridge 108 carries US Route 7 across the Furnace Brook. The following is a list of deficiencies of Bridge 108 and US Route 7 in this location:

1. The existing T-beams are in fair condition. They have exposed rebar, especially near joints where leakage is taking place. Pot holes throughout the deck surface have needed patching recently.

2. The existing bridge and approach widths are too narrow for the roadway classification and traffic volumes.

3. The bridge railing does not meet crash standards.

4. The sag vertical curve and headlight site distance through the project area are substandard.

Traffic

A traffic study of this site was performed by the Vermont Agency of Transportation. The traffic volumes are projected for the years 2017 and 2037.

TRAFFIC DATA	2017	2037
AADT	9,800	10,400
DHV	1,100	1,200
ADTT	810	1,200
%T	5.3	7.5
%D	56	56

Design Criteria

The design standards for this bridge project are the Vermont State Standards, dated October 22, 1997. Minimum standards are based on an ADT of 10,400, a DHV of 1,200, and a design speed of 35 mph for a Principal Arterial.

Design Criteria	Source	Existing Condition	Minimum Standard	Comment
Approach Lane and Shoulder Widths	VSS Table 3.3	11'/6' (34')	11'/8' (38')	Substandard
Bridge Lane and Shoulder Widths	VSS Section 3.7	11'/6' (34')	11'/10' (42')	Substandard
Clear Zone Distance	VSS Table 3.4		16' fill / 14' cut	
Banking	VSS Section 3.13	Varies	6% (max)	
Speed		35 mph posted, Intersection at bridge warned for 30 mph	30 mph (Design)	
Horizontal Alignment	AASHTO Green Book Table 3-9	R = 420'	R_{min} = 413' @ e = 5.2% (30 mph)	
Vertical Grade	VSS Table 3.5	-8.1679% (max)	9% (max) for rolling terrain, village	
K Values for Vertical Curves	VSS Table 3.1	K_{sag} = 29	40 crest / 50 sag	Substandard
Vertical Clearance	VSS Section 3.9	No Issues Noted	14'-3" (min)	
Stopping Sight Distance	VSS Table 3.1	170'	225'	Substandard
Bicycle/Pedestrian Criteria	VSS Table 3.8	6' shoulder	4' Shoulder	
Bridge Railing	Structures Design Manual Section 13	Historic Railing (upstream side) Curb mounted w-beam, with second w-beam block mounted on the posts	TL-4	Substandard
Hydraulics	VTrans Hydraulics Section	Passes Q_{50} storm event with over 12.0' of freeboard	Pass Q_{50} storm event with 1.0' of freeboard	
Structural Capacity	SM, Ch. 3.4.1	Not Deficient	Design Live Load: HL-93	

Inspection Report Summary

Deck Rating	5 Fair
Superstructure Rating	5 Fair
Substructure Rating	6 Satisfactory
Channel Rating	8 Very Good

05/29/2013 – Fair condition as deck & super continue to deteriorate. Minor rotation in abutment 1 and seems to have ceased years ago. Since last inspection pot holes and approach patched. Structure needs major recon or replacement in near future. ~MJK/SH

10/4/2011 – Structure is in fair condition, Deck has heavy saturation, T-beams continue to break down. Structure needs major recon or full replacement. In the meantime approaches should be shimmed and deck patched. ~MK/JM/DK

05/04/09 – Structure's in fair to satisfactory condition. Deck, superstructure and substructure continue to deteriorate at a slow pace and should be considered for recon or full replacement in near future. ~MJK

Hydraulics

This bridge is hydraulically adequate, with over 12' of freeboard at the Q_{50} design flow. Both abutments are set up on the stream banks above the Q100, so the bridge does not constrict the channel. The pier is the only part of the bridge in the channel. All flows up to Q_{500} pass through the bridge with no roadway overtopping. The VTrans Hydraulics Section has made recommendations for either a rehabilitation project or a replacement project. These recommendations can be found in the Preliminary Hydraulics Report in the Appendix.

Utilities
The existing utilities are shown on the Existing Conditions Layout Sheet, and are as follows:

Municipal Utilities

- The Town of Pittsford owns and maintains a water main along the easterly edge of US Route 7 thru the entire project area. The water main is attached to the easterly side of Bridge 108. In the Oxbow Road intersection this water main T's and extends up and along Oxbow Road and VT Route 3. There is another water main which crosses US Route 7 at the Arch Street intersection and extends along Arch Street to beyond the project area.

Public Utilities

Underground:

- There is a buried electric cable beginning at the pole in the northwest quadrant of Bridge 108 which goes to the brick house at the Arch Street intersection. There is also a buried electric cable beginning at the pole near the northeast quadrant of Bridge 108 which serves the brick house (or perhaps the sewer pump station) in that corner. There are no buried telephone/communication cables that have been reported.

Aerial:

- Aerial utilities approach the project area from the south along the easterly edge of US Route 7; these aerial utilities include a 3 phase electric line and approximately 5 communication cables. At the southern edge of the US Route 7/Oxbow Road intersection these aerial facilities cross US Route 7 to a pole near the southwest corner of Bridge 108 and then proceed north along the westerly edge of US Route 7 to a pole just north of the US Route 7/Arch Street intersection. From this pole the aerial facilities cross back to the easterly side of US Route 7.

- There are aerial electric crossings of US Route 7 near both ends of the existing bridge which power existing flashing beacons.

It is anticipated that the water main attached to the bridge and the overhead utilities will have to be relocated for construction. It will be the responsibility of the Town of Pittsford to coordinate the relocation of the municipal water main.

Right Of Way

The existing Right-of-Way is plotted on the Existing Conditions Layout Sheet. A portion of the existing upstream pier is located outside the Right-Of-Way, so all alternatives considered in this report, except the Do Nothing Alternative, will require additional Right-of-Way to be acquired.

Resources
The environmental resources present at this project are shown on the Existing Conditions Layout Sheet, and are as follows:

Biological:

Wetlands/Watercourses

No wetlands are present within the project area.

Furnace Brook is the only watercourse present in the project area. According to the 2014 "Current List of VT Priority Surface Waters-surface waters altered by flow regulation" developed by ANR this watercourse is the back up water source for the Town of Proctor. In 2009, a phase 1 geomorphic assessment was conducted by Bear Creek Environmental. Much of this reach was determined to have susceptibility for vertical and lateral instability due to channel disturbance such as loss of vegetation along the banks. The report is available for reference at Vermont River Management Section - Geomorphic Assessment.

The US Corps of Engineers and the Agency of Natural Resources- Department of Environmental Conservation would regulate all activities below ordinary high water within the Furnace Brook. Once project plans are conceptualized, the designer will need to evaluate potential impacts on waterways and evaluate required project permits.

Wildlife Habitat

No significant terrestrial wildlife habitat exists within the project area. A variety of aquatic species occur within the Furnace Brook. In stream timing restrictions will likely be required during construction.

Rare, Threatened and Endangered Species (R/T/E)

The VT Fish and Wildlife Diversity database indicates that no R/T/E species are present within the project area. The USFWS Information, Planning and Conservation System-(IPac) mapping indicates no occurrences of any federally listed species.

Agricultural

There are no prime agricultural soils within the project area.

Hazardous Materials:

According to the Vermont Agency of Natural Resources (VANR) Vermont Hazardous Sites List, there are several hazardous waste sites located along US Route 7 in the vicinity of the project. Additionally, the Mobil station adjacent to the bridge is a hazardous waste site. If a temporary bridge is placed downstream of the existing bridge, then early collaboration with the VT Hazardous Materials and Waste Coordinator should take place. Otherwise, no impacts to any

hazardous waste sites are anticipated. See the Appendix for a map showing the locations of hazardous waste sites in the project area.

Historic:

Bridge 108 is located within the Pittsford Mills Historic District with adjacent historic properties. The green space at the intersection with VT Route 3 is considered a contributing feature of the historic district.

The railing and approach of the new bridge will need to be compatible with the historic district.

Archaeological:

There are no areas of archaeological sensitivity located in the project area.

Stormwater:

There are no stormwater concerns for this project.

II. Maintenance of Traffic

The Vermont Agency of Transportation reviews each new project to determine suitability for the Accelerated Bridge Program, which focuses on faster delivery of construction plans, permitting, and Right-of-Way, as well as faster construction of projects in the field. One practice that will help in this endeavor is closing bridges for portions of the construction period, rather than providing temporary bridges. In addition to saving money, the intention is to minimize the closure period with faster construction techniques and incentives to contractors to complete projects sooner. The Agency will consider the closure option on all projects where rapid reconstruction or rehabilitation is feasible. The use of prefabricated elements in new bridges will also expedite construction schedules. This can apply to decks, superstructures, and substructures. Accelerated Construction provides enhanced safety for the workers and the travelling public while maintaining project quality. The following options have been considered:

Option 1: Off-Site Detour

This option would close the bridge and reroute traffic onto VT Route 3, to US Route 4, VT Route 30, and VT Route 73, back to US Route 7. This regional detour has an end-to-end distance of 49.0 miles. This detour adds approximately 31.2 miles to travel distance.

There are several local bypass routes that may see an increase in traffic from local passenger cars. Local bypass routes are not signed detours, but may experience higher traffic volumes if US Route 7 is closed during construction. Two of the most likely local bypass routes are as follows:

1. US Route 7, to Oxbow Road, Adams Road, Furnace Road, back to US Route 7 (4.3 miles end-to-end)

2. US Route 7, to VT Route 3, Gorham Bridge Road, Elm Street, back to US Route 7 (5.5 miles end-to-end)

Although local traffic may use the local bypass routes in the event of a closure, these routes are not appropriate for a signed detour route. The roads on the local bypass routes are not wide

enough to handle the volume of traffic on US Route 7 through Pittsford. A map of the detour route and possible local bypass routes, which could see an increase in traffic, can be found in the Appendix.

Advantages: This option would eliminate the need for a temporary bridge or phased construction, which would significantly decrease cost and time of construction.

Disadvantages: Traffic flow would not be maintained through the project corridor during construction.

Option 2: Temporary Bridge

From a constructability standpoint, a temporary bridge could only be placed on the downstream side of the existing bridge. The childcare center on the upstream side of the bridge is located too close to US Route 7 to allow for a temporary roadway, making downstream the only available option. Due to the tight constraints, the speed limit through the project would need to be reduced to 20 mph in order to fit the temporary roadway at this site. A downstream temporary bridge would have temporary impacts to a private drive located at the southeast corner of the bridge, and would also have impacts to the downstream properties. The intersections of US Route 7 with Oxbow Road and with VT Route 3 would need to be temporarily reconfigured during construction. A temporary bridge would require additional rights from adjacent property owners, and would require a temporary relocation of overhead utilities.

A two-way temporary bridge with a pedestrian walkway would be required based on the daily traffic volumes and sight distance. See the Temporary Bridge Layout Sheets in the Appendix.

Advantages: Traffic flow can be maintained through the project corridor during construction.

Disadvantages: This option would require additional Right-of-Way acquisition for placement of the temporary bridge. This option would have adverse impacts to adjacent properties and resources. There would be decreased safety to the workers and to vehicular traffic, because of cars driving near the construction site, and construction vehicles entering and exiting the construction site. This traffic control option would be costly, and time consuming, as construction activities would take a second construction season, in order to set up the temporary bridge.

Option 3: Phased Construction

Phased construction is the maintenance of traffic on the existing bridge while building one lane at a time of the proposed structure. This allows keeping the road open during construction, while having minimal impacts to adjacent property owners and environmental resources.

Phased construction is a feasible method for traffic maintenance at this site, from a construction standpoint. Due to the high volume of traffic at this site, two lanes would have to be provided for the duration of each phase. Additionally, since there is a sidewalk on the existing structure, pedestrian traffic will need to be maintained as well.

In order to accommodate these requirements for phased construction, without shifting the horizontal alignment of the proposed bridge, widening the proposed bridge, or using a temporary bridge for one of the phases, four phases would be necessary. This is not ideal and would result in a long and costly construction project. By utilizing a temporary bridge in conjunction with phasing, the number of phases can be reduced. Two possible configurations are as follows:

1. A one lane temporary bridge placed downstream of the existing bridge can be used to maintain southbound traffic. Northbound traffic and pedestrians would be maintained on Bridge 108 using phases. The new bridge could be constructed using two phases for this configuration. The temporary bridge for this option would cost approximately $158,900.

2. A temporary pedestrian bridge placed upstream of the existing bridge can be used to maintain pedestrian traffic. Both northbound and southbound traffic would be maintained on Bridge 108 using phases. The new bridge could be constructed using three phases for this configuration. The temporary bridge for this option would cost approximately $66,200. The waterline attached to the upstream fascia of bridge 108 could be attached to an upstream temporary bridge during construction.

These phases are detailed in the phasing plans in the Appendix. For either of the phasing options, the grass island before the bridge will have to be temporarily removed, and restored after construction.

Advantages: Traffic flow would be maintained through the project corridor during construction. Also, this option would have fewer impacts to adjacent properties compared to a two-way temporary bridge.

Disadvantages: Phased construction generally involves higher costs and complexity of construction. Costs are usually higher and construction duration is longer, since many construction activities have to be performed two times. Because of the complexity of this site, many construction activities would have to be performed two to four times. Additionally, since cars are traveling near construction activity, there is decreased safety. There would be some delays and disruption to traffic, since the road would have a reduced width. This option would still require Right-of-Way to be obtained.

III. Alternatives Discussion

No Action

The existing bridge is not structurally deficient. A good rule of thumb for the "No Action" alternative is to determine whether the existing bridge can stay in place without any work being performed on it during the next 10 years. The deck is leaking causing continual deterioration to the T-beams below. Additionally, recent patching of deck and approach pot holes has been required due to the deterioration of the deck. At a minimum, measures should be taken to ensure this deterioration does not continue at the current rate. In the interest of safety to the traveling public, the No Action alternative is not recommended.

Superstructure Replacement

A superstructure replacement option for this bridge would include a new precast superstructure and substructure repair as follows:

- There is no evidence of Alkali Silica Reaction taking place at the substructures. Damage appears to be from chloride attack. Therefore, details for adequate drainage are recommended to keep deicing salts off the existing substructures.
- The outer edges of the pier caps have a significant amount of spalling. The spalled areas on the piers should be prepared for patching, and patched with the appropriate concrete

repair class. Also, anodes should be put in the new concrete to discourage further deterioration.

- The existing bridge seats would be cut down and new bridge seats would be poured to accommodate the new superstructure.

- There is chloride attack along the abutment as evident by efflorescence. This is due to leaky bridge joints. This can be mitigated with minimal type concrete repair, and new bridge joints.

The existing substructure is in satisfactory condition, and it is reasonable to assume that the existing substructure can safely carry anticipated traffic loads for an additional 40 years. Since the existing T-beams are integral with the deck, replacement of the deck only is not feasible.

The existing lane widths and shoulders on the bridge are 11 feet wide and 6 feet wide respectively. This does not meet the minimum standard.

Advantages: This alternative would address the deterioration issues of the existing bridge, with minimum upfront costs. This option would have minimal impacts to adjacent properties and resources.

Disadvantages: The current bridge does not meet the minimum width standards, which this option does not improve.

Maintenance of Traffic: The possible options here would be either an offsite detour, phased construction, or a temporary bridge.

Full Bridge Replacement

Due to the many constraints at the project site, the current horizontal and vertical alignment will be maintained. The current vertical alignment does not meet standards, and will remain substandard for this alternative.

This alternative would replace the existing bridge with a new superstructure as well as a new substructure at the existing location. The various considerations under this option include: the bridge width and length, skew, superstructure type and substructure type.

a. Bridge Width

The current curb to curb width is 34 feet with a 5’-0” sidewalk. This does not meet the minimum standard of 42 feet. Since a new 80+ year bridge is being proposed, the bridge geometry should meet the minimum standards. A 42 foot width bridge with a 5’-6” sidewalk will be proposed.

b. Bridge Length and Skew

The existing bridge has two spans, totaling 102 feet long with no skew.

The Hydraulics Section has recommended that any new structure should eliminate the intermediate pier and have a clearspan normal to the channel of 70 feet. Vertical abutments with a bridge span of 70 feet will be appropriate here due to exposed bedrock, which inhibits the use of integral abutments. No skew will be recommended in order to match the site conditions.

c. Superstructure Type

Due to the irregular shape of the bridge, a prefabricated structure will most likely not be used. It is possible to replace a portion of the bridge with prefabricated beams, and then use conventional construction for the rest, but it does not seem to be the most economical solution here. Conventional construction would consist of steel beams with a composite concrete cast in place deck.

d. Substructure Type

There is visible bedrock all throughout the project location. Also, both of the existing abutments as well as the pier are founded directly on bedrock. As such, stub abutments on spread footings are recommended. In order to reduce construction time, precast abutments and footings may be used.

e. Maintenance of Traffic:

The possible options here would be either an offsite detour, phased construction, or a temporary bridge.

IV. Alternatives Summary

Based on the existing site conditions, bridge condition, and recommendations from hydraulics, there are several viable alternatives:

Alternative 1a: Superstructure Replacement with Traffic Maintained on Off-Site Detour
Alternative 1b: Superstructure Replacement with Traffic Maintained with Phased Construction
Alternative 1c: Superstructure Replacement with Traffic Maintained on a Temporary Bridge
Alternative 2a: Full Bridge Replacement (Single Span Bridge) with Traffic Maintained on Off-Site Detour
Alternative 2b: Full Bridge Replacement (Single Span Bridge) with Traffic Maintained with Phased Construction
Alternative 2c: Full Bridge Replacement (Single Span Bridge) with Traffic Maintained on Temporary Bridge

V. Cost Matrix[1]

Pittsford BF 019-3(59)		Do Nothing	Alt 1a	Alt 1b		Alt 1c	Alt 2a	Alt 2b		Alt 2c
			Superstructure Replacement				Full Bridge Replacement			
			Offsite Detour	Phased Construction: Option 1 – 2 phases	Phased Construction: Option 2 – 3 phases	Temporary Bridge	Offsite Detour	Phased Construction: Option 1 – 2 phases	Phased Construction: Option 2 – 3 phases	Temporary Bridge
COST	Bridge Cost	$0	$1,260,000	$1,386,000	$1,424,000	$1,260,000	$1,439,000	$1,583,000	$1,626,000	$1,439,000
	Removal of Structure	$0	$63,000	$73,000	$79,000	$63,000	$168,000	$194,000	$210,000	$168,000
	Roadway	$0	$394,000	$394,000	$394,000	$394,000	$437,000	$473,000	$473,000	$473,000
	Maintenance of Traffic	$0	$55,000	$270,000	$207,000	$439,000	$88,000	$335,000	$289,000	$472,000
	Construction Costs	$0	$1,722,000	$2,123,000	$2,104,000	$2,156,000	$2,168,000	$2,585,000	$2,598,000	$2,552,000
	Construction Engineering + Contingencies	$0	$532,000	$637,000	$632,000	$647,000	$651,000	$776,000	$780,000	$766,000
	Total Construction Costs w CEC	**$0**	**$2,303,600**	**$2,759,900**	**$2,735,200**	**$2,802,800**	**$2,818,400**	**$3,360,500**	**$3,377,400**	**$3,317,600**
	Preliminary Engineering[2]	**$0**	**$443,000**	**$530,750**	**$526,000**	**$539,000**	**$433,600**	**$517,000**	**$519,600**	**$510,400**
	Right of Way	**$0**	**$159,480**	**$191,070**	**$189,360**	**$194,040**	**$195,120**	**$232,650**	**$233,820**	**$229,680**
	Total Project Costs	$0	$2,906,080	$3,481,720	$3,450,560	$3,535,840	$3,447,120	$4,110,150	$4,130,820	$4,057,680
	Annualized Costs	$0	$72,700	$87,100	$86,300	$88,400	$43,100	$51,400	$51,700	$50,800
SCHEDULING	Project Development Duration[3]		5 years	5 years	5 years	5 years	5 years	5 years	5 years	5 years
	Construction Duration		6 months	18 months	18 months	18 months	6 months	18 months	18 months	18 months
	Closure Duration (If Applicable)		6 weeks	N/A	N/A	N/A	6 weeks	N/A	N/A	N/A
ENGINEERING	Typical Section - Roadway (feet)	34'	34'	34'	34'	34'	38'	38'	38'	38'
	Typical Section - Bridge (feet)	6-11-11-6-5’0” walk	6-11-11-6-5’0” walk	6-11-11-6-5’0” walk	6-11-11-6-5’0” walk	6-11-11-6-5’0” walk	10-11-11-10-5’6” walk	10-11-11-10-5’6” walk	10-11-11-10-5’6” walk	10-11-11-10-5’6” walk
	Geometric Design Criteria	Substandard vertical curve and width	Substandard vertical curve and width	Substandard vertical curve and width	Substandard vertical curve and width	Substandard vertical curve and width	Substandard vertical curve	Substandard vertical curve	Substandard vertical curve	Substandard vertical curve
	Traffic Safety	No Change	Improved	Improved	Improved	Improved	Improved	Improved	Improved	Improved
	Alignment Change	No	No	No	No	No	No	No	No	No
	Bicycle Access	No Change	No Change	No Change	No Change	No Change	Improved	Improved	Improved	Improved
	Hydraulic Performance	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard	Meets Standard
	Pedestrian Access	No Change	No Change	No Change	No Change	No Change	Improved	Improved	Improved	Improved
	Utility	No Change	Relocation	Relocation	Relocation	Relocation	Relocation	Relocation	Relocation	Relocation
OTHER	ROW Acquisition	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Road Closure	No	Yes	No	No	No	Yes	No	No	No
	Design Life	<10 years	40 years	40 years	40 years	40 years	100 years	100 years	100 years	100 years

[1] Costs are estimates only, used for comparison purposes.
[2] Preliminary Engineering costs are estimated starting from the end of the Project Definition Phase.
[3] Project Development Durations are starting from the end of the Project Definition Phase.

VI. Conclusion

We recommend **Alternative 2b**; to replace the existing structure while maintaining traffic with phasing option 2.

Structure:
While the rehabilitation option has the lowest upfront costs, a bridge replacement has a lower per year cost based on an 80 year design life compared to a 40 year design life. The annualized total cost for a full bridge replacement is less expensive than the superstructure replacement option, since the existing substructures would require costly repairs to gain only an additional 40 years of service. Additionally, the structure cost for a 102 foot superstructure is comparable to that of a 75 foot complete structure.

The proposed structure will have two 11 foot travel lanes with a 6 foot (minimum) shoulder on the downstream side and a 10 foot shoulder on the upstream side of the bridge with a 5'-6" sidewalk on the upstream side of the bridge. The substructure will be founded on ledge. There are bedrock outcrops that can be seen, so additional borings will not be necessary to determine the substructure type. However, a thorough geologic assessment of the bedrock, including an evaluation of the quality of the rock as well as other critical design parameters should take place during the design phase to verify the soundness of the rock. The existing bridge is considered historic and the proposed bridge will need to meet historic requirements. The bridge will have a single span of 75 feet with no skew to match the channel.

Utilities:
There is a complicated network of aerial utilities in the project area. There is also a network of water mains though the project area. A water main is attached to the existing bridge on the eastern side. There are also buried electric and cable utilities in the project area.

Early collaboration will need to be made with the utility companies in order to facilitate the move of these utilities. It is recommended that the water main that is attached to the existing bridge is attached to the temporary pedestrian bridge during construction.

Traffic Control:
A detour for this project would take over an hour to drive end to end. The official state detour route has an end-to-end distance of 49.0 miles, which is relatively long for the amount of traffic that would be detoured at this site. The Average Daily Traffic volume is 9,800 vehicles per day. It does not seem reasonable to send that volume of traffic around a detour of that length. Additionally, the roads on the available local bypass routes are not wide enough to handle the volume of traffic on US Route 7 through Pittsford. A two way temporary bridge with a sidewalk would have major impacts to the downstream property owners, and the temporary roadway would be less than 10 feet from the historic house in the northwest quadrant of the project. By utilizing a temporary pedestrian bridge during construction, two-way traffic can be maintained during construction with phasing. It will take three phases to construct the bridge. By phasing traffic, traffic can be maintained through the project corridor during construction, while having minimal impacts to adjacent properties. In order to phase construction, the grass island before the bridge will need to be removed. After construction the island will be restored. Additionally, VT Route 3 may need to be detoured away from its intersection with US Route 7 for a portion of the phased construction.

Additional Considerations:

Bridge 108 is located within the US Route 7 Pittsford-Brandon reconstruction project. Bridge 108 is located within segment 2 of that project. Construction for segment 2 is estimated to take place after year 2020. Coordination with the project manager of the US Route 7 reconstruction project should take place throughout each design phase of the Bridge project.

VII. Appendices

- Site Pictures
- Town Map
- Bridge Inspection Report
- Hydraulics Memo
- Preliminary Geotechnical Information
- Natural Resources Memo
- Archeology Memo
- Historic Memo
- Local Input
- Detour and Local Bypass Maps
- Plans
    - Existing Conditions
    - Alternative 1 Proposed Typical Sections
    - Alternative 1 Layout and Profile
    - Alternative 2 Proposed Typical Sections
    - Alternative 2 Layout and Profile
    - Traffic Control Sheets

Looking South over bridge


Looking North over bridge

Looking Downstream

Looking Upstream

Existing T-beam deterioration

Utility attached to bridge fascia

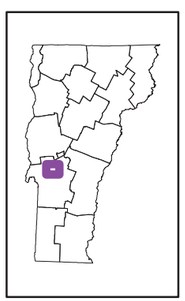
PITTSFORD BR 108
BF 019-3(59)

Scale 1:47,447

N

- INTERSTATE
- STATE LONG
- STATE SHORT
- TOWN LONG
- FAS/FAU
- FAS/FAU HWY
- INTERSTATE
- STATE HIGHWAY
- CLASS 1
- CLASS 2
- CLASS 3
- CLASS 4
- LEGAL TRAIL
- PRIVATE
- DISCONTINUED
- DISTRICT
- POLITICAL BOUNDARY
- NAMED RIVERS-STREAMS
- UNNAMED RIVERS-STREAMS

Produced by:
Mapping Unit
Vermont Agency of Transportation
August 2011



PITTSFORD
RUTLAND COUNTY
DISTRICT # 3

STRUCTURE INSPECTION, INVENTORY and APPRAISAL SHEET

Vermont Agency of Transportation ~ Structures Section ~ Bridge Management and Inspection Unit

Inspection Report for PITTSFORD **bridge no.:** 00108 **District:** 3

Located on: US 00007 ML **over** FURNACE BROOK **approximately** 7.0 MI N JCT. U.S.4 E **Owner:** 01 STATE-OWNED

CONDITION

Deck Rating: 5 FAIR

Superstructure Rating: 5 FAIR

Substructure Rating: 6 SATISFACTORY

Channel Rating: 8 VERY GOOD

Culvert Rating: N NOT APPLICABLE

Federal Str. Number: 200019010811162

Federal Sufficiency Rating: 045.9

Deficiency Status of Structure: ND

AGE and SERVICE

Year Built: 1931 **Year Reconstructed:** 1959

Service On: 5 HIGHWAY-PEDESTRIAN

Service Under: 5 WATERWAY

Lanes On the Structure: 03

Lanes Under the Structure: 00

Bypass, Detour Length (miles): 31

ADT: 010700 **% Truck ADT:** 10

Year of ADT: 1998

GEOMETRIC DATA

Length of Maximum Span (ft): 0047

Structure Length (ft): 000102

Lt Curb/Sidewalk Width (ft): 1.2

Rt Curb/Sidewalk Width (ft): 5

Bridge Rdwy Width Curb-to-Curb (ft): 42.2

Deck Width Out-to-Out (ft): 45

Appr. Roadway Width (ft): 037

Skew: 00

Bridge Median: 0 NO MEDIAN

Min Vertical Clr Over (ft): 99 FT 99 IN

Feature Under: FEATURE NOT A HIGHWAY OR RAILROAD

Min Vertical Underclr (ft): 00 FT 00 IN

STRUCTURE TYPE and MATERIALS

Bridge Type: 2 SP CONCRETE T BEAM

Number of Approach Spans 0000 **Number of Main Spans:** 002

Kind of Material and/or Design: 1 CONCRETE

Deck Structure Type: 1 CONCRETE CIP

Type of Wearing Surface: 6 BITUMINOUS

Type of Membrane 0 NONE

Deck Protection: 0 NONE

APPRAISAL *AS COMPARED TO FEDERAL STANDARDS

Bridge Railings: 0 DOES NOT MEET CURRENT STANDARD

Transitions: 0 DOES NOT MEET CURRENT STANDARD

Approach Guardrail 1 MEETS CURRENT STANDARD

Approach Guardrail Ends: 1 MEETS CURRENT STANDARD

Structural Evaluation: 5 BETTER THAN MINIMUM TOLERABLE CRITERIA

Deck Geometry: 4 MEETS MINIMUM TOLERABLE CRITERIA

Underclearances Vertical and Horizontal N NOT APPLICABLE

Waterway Adequacy: 6 OCCASIONAL OVERTOPPING OF ROADWAY WITH INSIGNIFICANT TRAFFIC DELAYS

Approach Roadway Alignment: 8 EQUAL TO DESIRABLE CRITERIA

Scour Critical Bridges: 8 STABLE FOR SCOUR

DESIGN VEHICLE, RATING, and POSTING

Load Rating Method (Inv): 1 LOAD FACTOR (LF)

Posting Status: A OPEN, NO RESTRICTION

Bridge Posting: 5 NO POSTING REQUIRED

Load Posting: 10 NO LOAD POSTING SIGNS ARE NEEDED

Posted Vehicle: POSTING NOT REQUIRED

Posted Weight (tons):

Design Load: 2 H 15

INSPECTION and CROSS REFERENCE

X-Ref. Route:

Insp. Date: 052013 **Insp. Freq. (months)** 24 **X-Ref. BrNum:**

INSPECTION SUMMARY and NEEDS

05/29/13 Fair condition as deck & super continue to deteriorate. Minor rotation in abutment 1 and seems to have ceased years ago. Since last inspection pot holes and approach patched. Structure needs major recon or replacement in near future. MJK SH

10/4/11 Structure is in fair condition, Deck has heavy saturation, t-beams continue to break down. Structure needs major recon or full replacement. In the mean time approaches should be shimmed and deck patched. MK JM DK

05/04/09 Structure's in fair to satisfactory condition. Deck, superstructure and substructure continues to deteriorate at a slow pace and should be considered for recon or full replacement in near future. ~MJK

VT AGENCY OF TRANSPORTATION PROGRAM DEVELOPMENT DIVISION

HYDRAULICS UNIT

TO: Chris Williams, Structures Project Manager

FROM: David Willey, Hydraulics Project Supervisor

DATE: March 12, 2014

SUBJECT: Pittsford BF 019-3(59), US 7 B. 108 over Furnace Brook – Preliminary Hydraulics

---

We have completed our preliminary hydraulic study for the above referenced site, and offer the following information for your use:

Existing Conditions

The existing structure was built in 1931 and reconstructed/widened in 1959. It is a two span concrete T-beam bridge. It has a clear span length of approximately 93', from face to face of abutments, with a clear height of about 26', providing a waterway opening of roughly 1570 sq. ft. Based on record plans, it appears both abutments and the pier are founded on ledge.

There is exposed ledge in the channel through the bridge. The stream makes a turn upstream and downstream of the bridge, but is straight through the bridge area. The bridge is not centered well on the channel. All flow is through the southern span during normal conditions. On the north end, the channel bank slopes up from the pier to the abutment. Thus that span is partly filled in.

The upstream average low beam elevation is approximately 434.5'. With a Q50 water surface elevation of 422.2', there is over 12' of freeboard at Q50. Both abutments are set up on the stream banks above the Q100, so the bridge does not constrict the channel. The pier is the only part of the bridge in the channel. All flows up to Q500 pass through the bridge with no roadway overtopping. Therefore, this bridge is hydraulically adequate.

Rehabilitation Recommendations

If it is determined that the foundations are in satisfactory condition, it is hydraulically acceptable to replace the superstructure. To ensure there is no increase in upstream water surface elevations, no new fill should be placed below the Q100 elevation of 423.4' that would reduce the waterway area of the bridge or channel. It appears that the channel has been stable for scour and the bridge should have no scour issues if all substructure units are on sound ledge.

Replacement Recommendations

In sizing a new structure we attempt to select structures that meet the hydraulic standards, fit the natural channel width, the roadway grade and other site conditions. A new bridge at this site should not increase upstream water surface elevations. Therefore, no new fill should be placed that would constrict the channel waterway below the Q100, because that might raise the Q100 water surface elevation.

A new bridge should be a single span. It should have at least a 70' clear span with abutments up on the channel banks above elevation 423'. The exact bridge length may be determined by the location of ledge, abutment height and other site conditions. The existing pier should be removed down to at least streambed. No new fill should be placed below elevation 423' that would reduce the waterway area of the bridge or channel. Any fill placed in front of the abutments should match the existing channel banks. The bottom of beams should also be no lower than elevation 423'. A new bridge should provide at least 730 sq. ft. of waterway area. Please realize elevation 423.0' is approximate, as it is based on several assumptions. If you decide to replace the structure and want to place any part of the structure or any fill near that elevation or lower, please contact us and we can refine our work to provide an exact elevation.

General Comments

If a new bridge is installed, the bottom of abutment footings should be at least six feet below the channel bottom, or on ledge, to prevent undermining. Abutments on piles should be designed to be free standing for a scour depth at least 6' below channel bottom.

Please contact us if you have any questions or need additional information.

Attachment

DCW

cc: Hydraulics Chrono File
Hydraulics Project File via NJW

AGENCY OF TRANSPORTATION **OFFICE MEMORANDUM**

To: Chris Williams, P.E., Project Manager, Structures

From: Callie Ewald, P.E., Senior Geotechnical Engineer via Christopher C. Benda, P.E., Soils and Foundations Engineer

Date: May 5th, 2014

Subject: Pittsford BF 019-3(59) Preliminary Geotechnical Assessment

In an effort to assist the Structures Section with their bridge type study, the Soils and Foundations Unit within the Materials and Research Section has completed a review of available geological data near Bridge No. 108 on US Route 7 which crosses over the Furnace Brook in Pittsford, Vermont. Figure 1 shows the subject bridge during a 2013 bridge inspection.

Figure 1 Photograph of Bridge 108. Photograph was taken during 2013 bridge inspection.

The bridge is a two span concrete T-Beam bridge whose abutments and pier rest directly on bedrock. The river channel at this location is floored by bedrock with recent alluvium deposits ranging from sand to boulder in size.

Normally, a review would include the examination of historical in-house bridge boring files, as-built record plans, USDA Natural Resources Conservation soil survey records, published surficial and bedrock geologic maps and water well logs on-file at the Agency of Natural Resources. A review of record plans from original construction of the current bridge were reviewed which confirmed that both the bridge abutments and pier rest directly on bedrock (Figure 2). Considering bedrock is exposed at the surface within the footprint of this bridge, a review of water well logs and USDA Natural Resources Conservation soil survey records was not necessary.

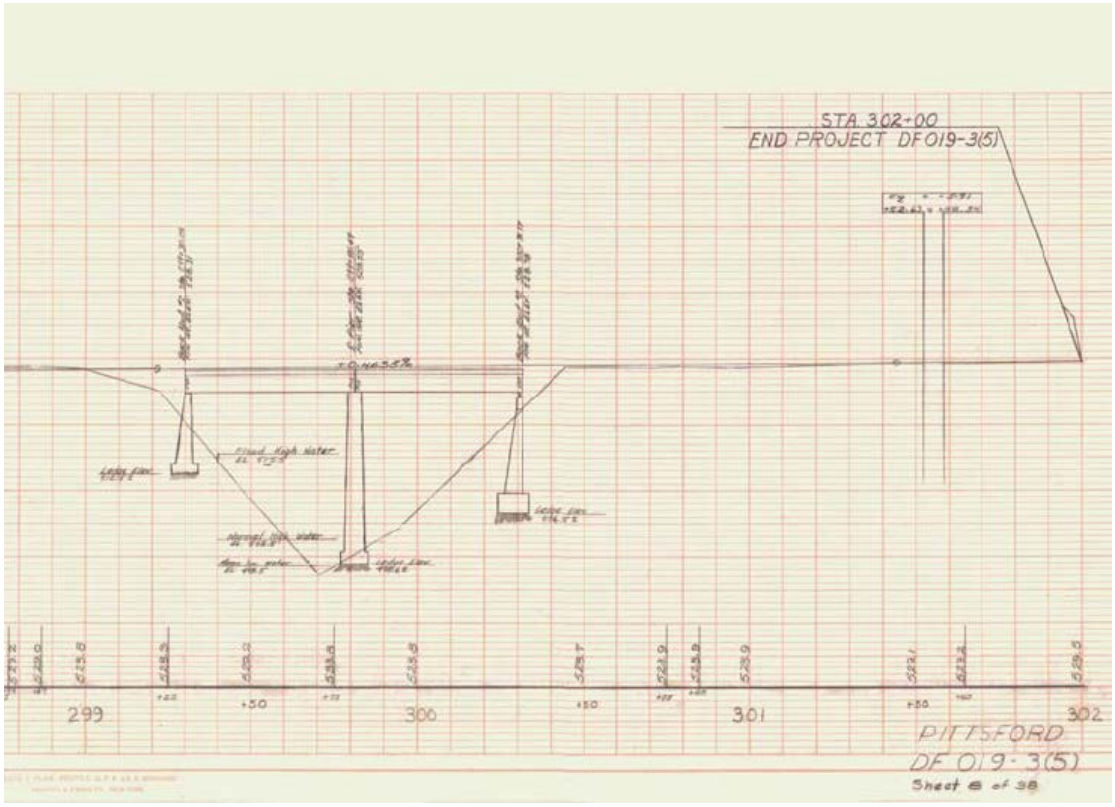


Figure 2 Plan sheet from 1958 original bridge construction.

According to the 2012 bedrock map of Vermont, the project area overlies bedrock consisting of "Buff and pink-mottled and massive or light gray, pinkish-gray weathering, and massive to poorly bedded dolostone" of the Dunham Dolostone Formation. Figure 3 shows the rock at the southeasterly abutment of the existing bridge.

Figure 3 Bedrock exposed at Abutment No. 1. Photograph was taken during 2013 bridge inspection.

It appears that thin soil cover overlies bedrock at Abutment No. 2. According to surficial geologic mapping conducted for the 1970 Vermont State Surficial Map, these soils are made up of glacial till and postglacial fluvial alluvium deposits.

Prior to the development of project plans, we recommend that a thorough geologic assessment of the bedrock on this project be performed. This assessment would include an evaluation of the quality of the rock as well as other critical design parameters such as orientation and condition of any jointing or other discontinuities which may have an impact on the design of the bridge footings. We recommend that this work be performed in conjunction with borings being performed, preferably in the summer when there is no snow or ice buildup on the rock outcrops and the level of the river is low.

Based on the limited information gathered during this investigation, possible foundation options for a bridge replacement include the following:

- Reinforced concrete abutments and pier on spread footings

It is recommended that a minimum of two borings be drilled to a depth sufficient to penetrate 10 feet into sound bedrock at the proposed abutment and pier locations in order to assess the subsurface conditions, engineering parameters of the rock, and a profile of the bedrock elevations across the proposed abutments and pier footprint. If variable conditions are encountered, additional borings should be advanced to establish a more detailed bedrock profile.

If you have any questions, please feel free to contact us at 828-2561.

c: WEA/Read File
CCB/Project File
CEE

VERMONT

State of Vermont
Program Development Division
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

[phone] 802-828-3979
[fax] 802-828-2334
[ttd] 800-253-0191

Agency of Transportation

To: James Brady, VTrans Environmental Specialist

From: Glenn Gingras, VTrans Environmental Biologist

Date: 04/18/14

Subject: Pittsford BF 019-3(59) - Natural Resource ID

I have completed my natural resource scoping review for the above referenced project. My evaluation has included the following resources: wetlands, wildlife habitat, agricultural soils, and rare, threatened and endangered species. I have reviewed all existing mapped information and performed a site review of the project area.

The project involves bridge 108 on US 7 in Pittsford, VT. The bridge carries travelers over Furnace Brook at this location. As the project is in scoping an alternative has not been selected. Resources have been identified in the surrounding area to aid in the determination of a least damaging practical alternative.

Wetlands/Watercourses

No wetlands are present within the project area.

Furnace Brook is the only watercourse present in the project area. According to the 2014 "Current List of VT Priority Surface Waters-surface waters altered by flow regulation" developed by ANR this watercourse is the back up water source for the Town of Proctor. In 2009, a phase 1 geomorphic assessment was conducted by Bear Creek Environmental. Much of this reach was determined to have susceptibility for vertical and lateral stability due to channel disturbance such as loss of vegetation along the banks. The report is available for reference at Vermont River Management Section - Geomorphic Assessment.

The US Corps of Engineers and the Agency of Natural Resources- Department of Environmental Conservation would regulate all activities below ordinary high water within the Furnace Brook. Once project plans are conceptualized we can evaluate potential impacts on waterways and evaluate project permits that will be required.

Wildlife Habitat

No significant terrestrial wildlife habitat exists within the project area. A variety of aquatic species would occur within the Furnace Brook. In stream timing restrictions will be likely required during construction.

Rare, Threatened and Endangered Species (R/T/E)

I have queried the VT Fish and Wildlife Wildlife Diversity database and no R/T/E species are present within the project area. The USFWS Information, Planning and Conservation System-(IPac) mapping indicates no occurrences of any federally listed species.

Agricultural Soils

There are no prime agricultural soils within the project area.

VERMONT

Jeannine Russell
VTrans Archaeology Officer
State of Vermont
Environmental Section
One National Life Drive
Montpelier, VT 05633-5001
www.aot.state.vt.us

Agency of Transportation

[phone] 802-828-3981
[fax] 802-828-2334
[ttd] 800-253-0191

To: James Brady, VTrans Environmental Specialist

From: Jeannine Russell, VTrans Archaeology Officer
via Brennan Gauthier, VTrans Archaeologist

Date: 2/12/2014

Subject: Pittsford BF 019-3(59) – Archaeological Resource ID

James,

I've completed my review of the proposed bridge replacement/rehabilitation of the bridge over Furnace Brook in Pittsford Mills, Pittsford, Rutland County, VT. Utilizing historic photography, maps, and newspaper accounts I've been able to piece together the history of the generalized area around the current bridge location. It appears that this bridge is the third iteration since the early 1900s, having replaced a covered bridge that stood on location since the mid 1800s. The current bridge was constructed slightly southwest of the original bridge which was knocked out in the 1920s.

Archaeological sensitivity is low in the area given the amount of disturbance and construction in the area. I've derived an APE using common-sense alternatives, but will need to reevaluate if drastic atypical off-alignment alternatives are considered. Currently, there are no mappable resources in the APE.

I've included a series of historic photos and maps to illustrate the research I've completed to make this determination. Higher resolution photos and maps can be produced upon request. Please feel free to contact me with any questions or concerns that may arise as part of this resource identification.

Sincerely,

Brennan

Brennan Gauthier
VTrans Archaeologist
Vermont Agency of Transportation
Program Development Division
Environmental Section
1 National Life Drive
Montpelier, VT 05633
tel. 802-828-3965
fax. 802-828-2334
Brennan.Gauthier@state.vt.us

VTrans Working to Get You There
Vermont Agency of Transportation

Stone, Laura

From: O'Shea, Kaitlin
Sent: Monday, January 06, 2014 10:00 AM
To: Brady, James
Cc: Newman, Scott; Williams, Chris
Subject: RE: Pittsford BF 019-3(59) Resource ID

Hi James,

I have completed the historic resource ID for Bridge 108. Bridge 108. It is located within the Pittsford Mills Historic District with adjacent historic properties. Please note that the green space is considered a contributing feature of the historic district. The properties have been identified in arcmap.

The railing and approach of the new bridge will need to be compatible with the historic district.

Thanks,
Kaitlin

Kaitlin O'Shea
Historic Preservation Specialist
Vermont Agency of Transportation

802-828-3962
Kaitlin.O'Shea@state.vt.us

From: Brady, James
Sent: Thursday, January 02, 2014 3:57 PM
To: Brown, Jane; Armstrong, Jon; Gingras, Glenn; Russell, Jeannine; Gauthier, Brennan; Newman, Scott; O'Shea, Kaitlin
Cc: Williams, Chris
Subject: Pittsford BF 019-3(59) Resource ID

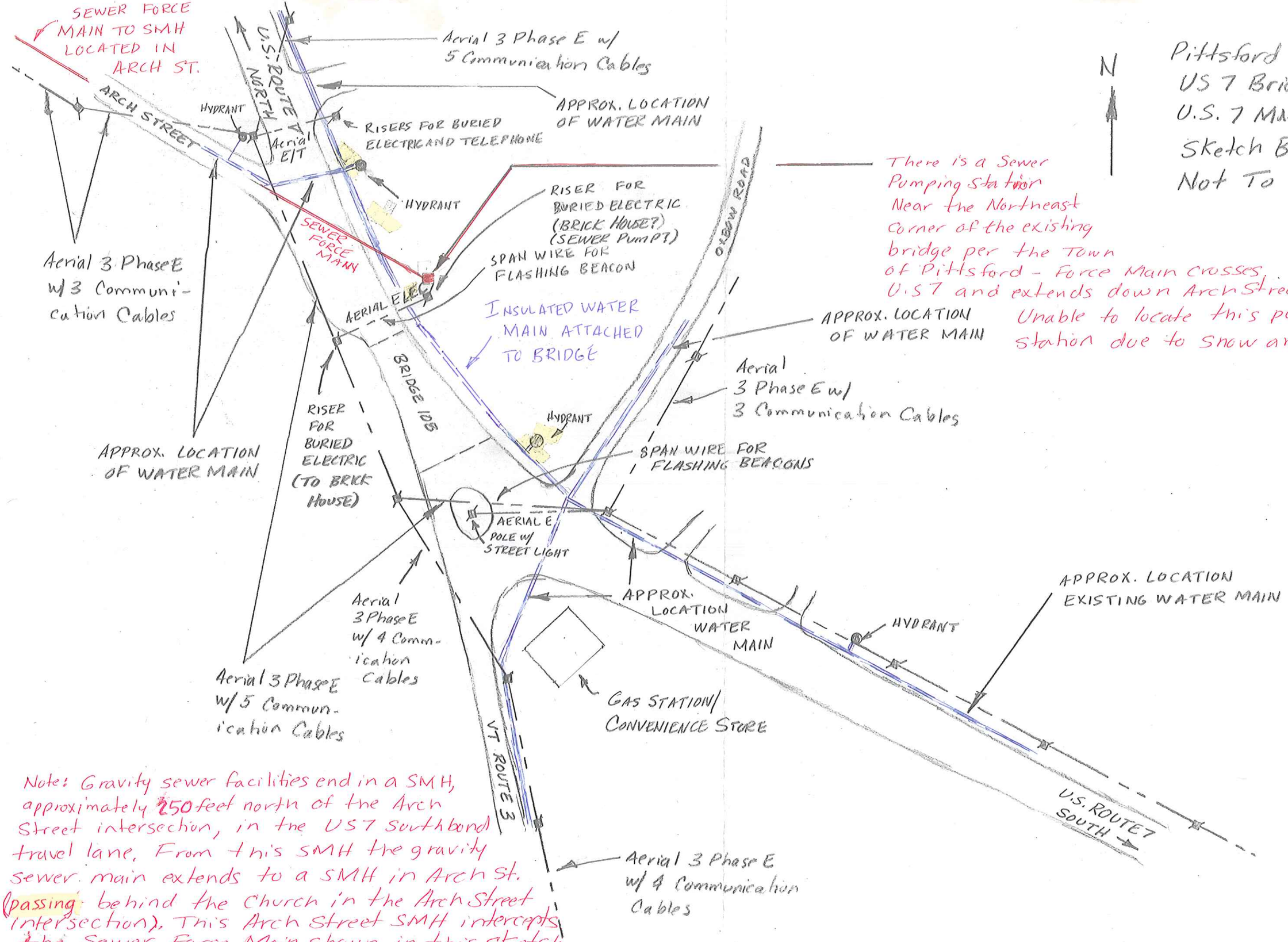
From: James Brady, Environmental Specialist
Date: January 2, 2014
Project: Pittsford BF 019-3(59)
PIN: 13B266 **EA**: 0193059 001

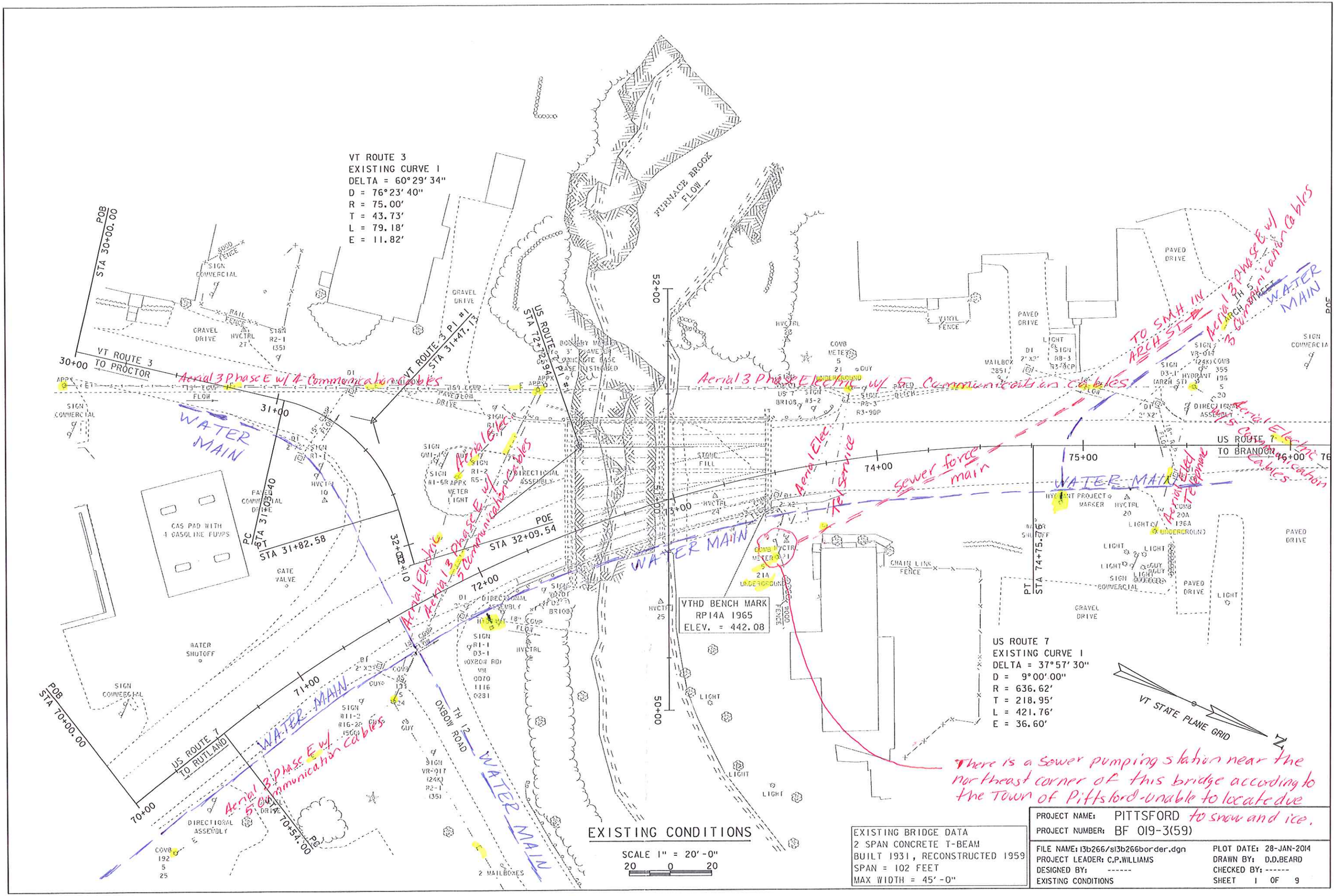
Project Manager: Chris Williams
Link to Project Folder: Z:\PDD\EnvironmentalHydraulics\EnvironmentalSpecialists\Projects\Pittsford\PittsfordBF019-3(59)

Hello All,

Please provide a resource ID for bridge 108 on US Route 7 in Pittsford over Furnace Brook. There is a location map and link to pictures in the project folder.

If you have any questions or need additional information please let me know.


SEWER FORCE MAIN TO SMH LOCATED IN ARCH ST.
ARCH STREET
HYDRANT
U.S. ROUTE 7 NORTH
Aerial E/T
Aerial 3 Phase E w/ 5 Communication Cables
APPROX. LOCATION OF WATER MAIN
RISERS FOR BURIED ELECTRIC AND TELEPHONE
HYDRANT
SEWER FORCE MAIN
RISER FOR BURIED ELECTRIC (BRICK HOUSE?) (SEWER PUMP?)
SPAN WIRE FOR FLASHING BEACON
AERIAL ELEC
INSULATED WATER MAIN ATTACHED TO BRIDGE
OLEBOW ROAD
APPROX. LOCATION OF WATER MAIN
Aerial 3 Phase E w/ 3 Communication Cables
Aerial 3 Phase E w/ 3 Communi-cation Cables
APPROX. LOCATION OF WATER MAIN
RISER FOR BURIED ELECTRIC (TO BRICK HOUSE)
BRIDGE 105
HYDRANT
SPAN WIRE FOR FLASHING BEACONS
AERIAL E
POLE W/ STREET LIGHT
Aerial 3 Phase E w/ 4 Communi-cation Cables
Aerial 3 Phase E w/ 5 Communi-cation Cables
APPROX. LOCATION WATER MAIN
HYDRANT
APPROX. LOCATION EXISTING WATER MAIN
GAS STATION/ CONVENIENCE STORE
VT ROUTE 3
U.S. ROUTE 7 SOUTH
Aerial 3 Phase E w/ 4 Communication Cables
N
There is a Sewer Pumping Station Near the Northeast Corner of the existing bridge per the Town of Pittsford - Force Main crosses U.S 7 and extends down Arch Street. Unable to locate this pumping station due to snow and ice.
Pittsford BF 019-3(59)
US 7 Bridge #108
U.S. 7 MM STA. 2.827
Sketch By L. Wheeler
Not To Scale
Note: Gravity sewer facilities end in a SMH, approximately 250 feet north of the Arch Street intersection, in the US 7 southbound travel lane. From this SMH the gravity sewer main extends to a SMH in Arch St. (passing behind the Church in the Arch Street intersection). This Arch Street SMH intercepts the Sewer Force Main shown in this sketch.



EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: l3b266/sl3b266border.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
EXISTING CONDITIONS

PLOT DATE: 28-JAN-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 1 OF 9

Vermont Agency of Transportation

General Yearly Summaries - Crash Listing: State Highways and All Federal Aid Highway Systems

From 01/01/08 To 12/31/12 General Yearly Summaries Information

*	Reporting Agency/ Number	Town	Mile Marker	Date MM/DD/YY	Time	Weather	Contributing Circumstances	Direction Of Collision	Number Of Injuries	Number Of Fatalities	Number Of Untimely Deaths	Direction	Road Group
Route: US-7 Continued ...													
	VTVSP0300/12C10 2893	Pittsford	1.89	06/06/2012	23:59	Clear	Failure to keep in proper lane	Single Vehicle Crash	1	0	0	N	SH
	1116/11PC00195	Pittsford	1.91	06/09/2011	15:20	Clear	Failure to keep in proper lane, Distracted	Single Vehicle Crash	0	0	0	N	SH
	VTVSP0300/11C10 4108	Pittsford	2.18	08/27/2011	14:04	Cloudy	Followed too closely, Inattention, No improper driving	Rear End	4	0	0	S	SH
	VTVSP0300/12C10 2572	Pittsford	2.18	05/21/2012	07:19	Clear	No improper driving, Followed too closely	Rear End	1	0	0		SH
	VTVSP0300/08C10 0081	Pittsford	2.19	01/04/2008	18:55	Clear	Failure to keep in proper lane	Single Vehicle Crash	1	0	0		SH
	VTVSP0300/09C10 2431	Pittsford	2.33	05/20/2009	14:30	Clear	No improper driving, Failure to keep in proper lane	Opp Direction Sideswipe	0	0	0		SH
	VTVSP0300/09C10 2647	Pittsford	2.35	06/03/2009	07:39	Clear	Failure to keep in proper lane, No improper driving	Same Direction Sideswipe	0	0	0		SH
	VTVSP0300/10C10 6236	Pittsford	2.35	12/20/2010	13:38	Clear	Failure to keep in proper lane, Distracted	Left Turn and Thru, Head On ^v--	0	0	0	N	SH
	VTVSP0300/09C10 5423	Pittsford	2.36	11/08/2009	18:48	Clear	No improper driving	Single Vehicle Crash	0	0	0	S	SH
	VTVSP0300/11C10 1861	Pittsford	2.37	04/25/2011	10:37	Clear	Fatigued, asleep	Single Vehicle Crash	1	0	0		SH
	VTVSP0300/08C10 2197	Pittsford	2.38	05/01/2008	07:53	Clear	Failure to keep in proper lane	Single Vehicle Crash	1	0	0		SH
	VTVSP0300/10C10 4696	Pittsford	2.51	09/22/2010	00:06	Clear	No improper driving	Single Vehicle Crash	0	0	0	S	SH
	VTVSP0300/11C10 4980	Pittsford	2.69	10/16/2011	13:36	Clear	Followed too closely, No improper driving	Rear End	1	0	0	N	SH
	VTVSP0300/08C10 6293	Pittsford	2.76	12/13/2008	14:12	Clear	No improper driving, Driving too fast for conditions	Rear End	0	0	0		SH
	VTVSP0300/12C10 0642	Pittsford	2.76	02/04/2012	10:32	Cloudy	No improper driving, Followed too closely	Rear End	0	0	0	N	SH
	VTVSP0300/09C10 3418	Pittsford	2.78	07/17/2009	14:22	Cloudy	No improper driving, Followed too closely	Rear End	0	0	0	N	SH
	VTVSP0300/11C10 2031	Pittsford	2.78	05/04/2011	07:39	Rain	Followed too closely, No improper driving	Rear End	0	0	0	N	SH
	VTVSP0300/09C10 4066	Pittsford	2.8	08/19/2009	15:20	Rain	No improper driving, Failed to yield right of way	No Turns, Thru moves only, Broadside ^<	1	0	0		SH
	VTVSP0300/08C10 0608	Pittsford	2.86	02/04/2008	11:45	Clear	Failed to yield right of way	Left Turn and Thru, Angle Broadside -->v--	1	0	0	N	SH
	VTVSP0300/08C10 3809	Pittsford	2.93	07/22/2008	17:16	Cloudy	Followed too closely, No improper driving	Rear End	1	0	0	S	SH
	VTVSP0300/09C10 2970	Pittsford	3.22	06/22/2009	08:15	Cloudy	Failure to keep in proper lane, Under the influence of medication/drugs/alcohol	Single Vehicle Crash	1	0	0		SH
	VTVSP0300/11C10 4537	Pittsford	3.3	09/20/2011	13:47	Rain	Failure to keep in proper lane, No improper driving	Opp Direction Sideswipe	0	0	0	N	SH
	VTVSP0300/10C10 2862	Pittsford	3.33	06/11/2010	13:20	Cloudy	No improper driving, Failed to yield right of way	No Turns, Thru moves only, Broadside ^<	1	0	0	N	SH
	VTVSP0300/11C10 4420	Pittsford	3.49	09/14/2011	07:05	Cloudy	No improper driving, Followed too closely, Inattention	Rear End	0	0	0		SH
	VTVSP0300/12C10 1306	Pittsford	3.49	03/12/2012	14:41	Clear	No improper driving, Followed too closely	Rear End	0	0	0	N	SH
	VTVSP0300/09C10 0666	Pittsford	3.53	02/10/2009	13:38	Clear	No improper driving, Failed to yield right of way	Right Turn and Thru, Same Direction Sideswipe/Angle Crash ^^--	0	0	0	S	SH
	1116/09PC00084	Pittsford	3.54	03/19/2009	15:32	Clear	No improper driving, Inattention, Followed too closely	Rear End	0	0	0	S	SH
	OTHER/12PC0029 5	Pittsford	3.72	07/22/2012	12:29	Clear	Followed too closely, Failure to keep in proper lane, No improper driving	Head On	0	0	0		SH
	VTVSP0300/10C10 2613	Pittsford	3.89	05/28/2010	15:21	Clear	Failure to keep in proper lane, No improper driving	Opp Direction Sideswipe	0	0	0		SH

**Crash occurred prior to the last Highway Improvement Project. This data should not be used in a crash analysis. UNK indicates the Mile Marker is Unknown.*

Vermont Agency of Transportation

Statewide Sections - Route Log Order /2 - Statewide

Years: 2006 - 2010

H.C.L No.	/3.	Route	System	Town	Mileage	ADT	Years	Crashes	Fatalities	Injuries	PDO Crashes	Critical Rate	Actual Rate	Ratio Actual/Critical	Severity Index ($/Accident /1.)
	431	US-7	Principal Arterial (r)	Wallingford	5.214 - 5.514	5442	5	8	0	5	6	2.188	2.685	1.227	$45,913
	65	US-7	Principal Arterial (r)	Wallingford	5.514 - 5.814	6421	5	16	0	11	10	2.1	4.551	2.167	$48,844
	272	US-7	Principal Arterial (r)	Clarendon	1.320 - 1.620	6648	5	11	1	2	8	2.082	3.022	1.451	$135,764
	227	US-7	Principal Arterial (r)	Clarendon	3.120 - 3.420	7769	5	13	2	10	7	2.005	3.056	1.524	$253,315
	248	US-7	Principal Arterial (r)	Clarendon	5.020 - 5.320	14050	5	20	0	7	14	1.749	2.599	1.486	$28,035
	74	US-7	Principal Arterial (r)	Rutland Town	0.064 - 0.364	17761	5	34	0	11	26	1.664	3.496	2.1	$26,891
	75	US-7	Principal Arterial (r)	Rutland Town	0.664 - 0.964	21925	5	40	0	11	33	1.595	3.332	2.089	$24,310
#	523	US-7	Principal Arterial (u)	Rutland Town, Rutland City	1.064 - 0.187	23815	5	94	0	20	79	6.386	7.209	1.129	$20,486
#	360	US-7	Principal Arterial (u)	Rutland City	0.187 - 0.487	26783	5	121	0	24	105	6.3	8.251	1.31	$19,798
* #	336	US-7	Principal Arterial (u)	Rutland City	0.687 - 0.987	19944	5	96	0	35	72	6.524	8.791	1.347	$29,376
	557	US-7	Principal Arterial (r)	Pittsford	0.795 - 1.095	7400	5	9	0	3	8	2.028	2.221	1.095	$28,544
	156	US-7	Principal Arterial (r)	Pittsford	1.295 - 1.595	7400	5	14	1	3	10	2.028	3.455	1.703	$112,393
	440	US-7	Principal Arterial (r)	Pittsford	2.295 - 2.595	7416	5	10	0	2	8	2.027	2.462	1.215	$19,340
	295	US-7	Principal Arterial (r)	Pittsford	2.595 - 2.895	7686	5	12	0	10	4	2.01	2.851	1.418	$55,683
*	499	US-7	Principal Arterial (r)	Pittsford	3.995 - 4.295	8961	5	11	0	1	10	1.938	2.242	1.157	$13,318


Hazardous Waste Site
Hazardous Waste Generators
Brownfields
Underground Storage Tank (working)
Waste Water Facilities
Solid Waste Management Districts
Rutland County SWD
Arch St
Arch St
Arch St
Elm St
Oxbow Rd
Mountain View Dr
3
7
7
© AND © 2010 NAVTEQ © 2014 Microsoft Corporation Earthstar Geographics SIO Image

Local & Regional Input Questionnaire

Project Name: Pittsford **Project Number: BR 108 BF 019-3 (59)**

Community Considerations

1. Are there any scheduled public events in the community that will generate increased traffic (e.g. vehicular, bicycles and/or pedestrians), or may be difficult to stage if the bridge is closed during construction? Examples include: a bike race, festivals, cultural events, farmers market, concerts, etc. that could be impacted? If yes, please provide date, location and event organizers' contact info. No.
2. Is there a "slow season" or period of time from May through October where traffic is less? Mid-June through mid-August sees less school-related traffic.
3. Please describe the location of emergency responders (fire, police, ambulance) and emergency response routes. Police are located on Plains Road. Fire Department is located on Pleasant/Arch Street intersection. Pittsford First Response is located at 256 Arch Street.
4. Where are the schools in your community and what are their schedules? Lothrop Elementary School (K-8) is located at 3447 US Route 7—north of the subject bridge. Their schedule is approximately 7:30 am to 4:00 pm
5. In the vicinity of the bridge, is there a land use pattern, existing generators of pedestrian and/or bicycle traffic, or zoning that will support development that is likely to lead to significant levels of walking and bicycling? Please explain. See School info, above. VT 3 is a popular, rural bicycle route and Arch Street, which ends at the bridge is the safe pedestrian route for kids walking to/from the library and post office.
6. Are there any businesses (including agricultural operations) that would be adversely impacted either by a detour or due to work zone proximity? There is a Catholic Church, Mobil Station and a day care at the subject bridge location. Omya's substantial trucking might also be impacted, as Route 7 is the preferred route into their facility in Florence.
7. Are there any important public buildings (town hall or community center) or community facilities (recreational fields or library) in close proximity to the proposed project? No. The Library and post office are located at the northern end Arch Street. The Sewer Department, Fire Dept and Highway garage are located in the vicinity of Arch and Pleasant, one block north of the bridge.
8. Are there any town highways that might be adversely impacted by traffic bypassing the construction on another local road? Yes. It is hard to imagine any bypass operation that would work for Omya's trucking. Bypassed non-truck traffic might cause congestion on likely alternative route (e.g., Adams Road). Arch Street is a local road and its intersections with US7 both north and south do not have good sight distance.
9. Are there any other municipal operations that could be adversely impacted if the bridge is closed during construction? If yes, please explain. Municipal snow removal operations might be

impacted if the subject bridge were closed and Town trucks had no way to use the bridge to get to Town roads or to turn around.

10. Please identify any local communication channels that are available—e.g. weekly or daily newspapers, blogs, radio, public access TV, Front Porch Forum, etc. Also include any unconventional means such as local low-power FM. Peg-TV, Rutland Herald, Brandon-Pittsford Reporter, VPR, Town of Pittsford website: www.pittsfordvermont.com.

11. Is there a local business association, chamber of commerce or other downtown group that we should be working with? No.

Design Considerations

1. Are there any concerns with the alignment of the existing bridge? For example, if the bridge is located on a curve, has this created any problems that we should be aware of? No.

2. Are there any concerns with the width of the existing bridge? Sidewalk could be a bit (1 foot) wider for improved municipal snow removal operations.

3. What is the current level of bicycle and pedestrian use on the bridge? Unknown.
4. If a sidewalk or wide shoulder is present on the existing bridge, should the new structure have one? Are there existing bicycle and/or pedestrian facilities on the approaches to the bridge? Yes, there is an existing sidewalk.

5. Does the Town have plans to construct either bicycle or pedestrian facilities leading up to the bridge? Please provide a copy of the planning document that demonstrates this (e.g. scoping study, master plan, corridor study) Please explain and provide documentation. No.

6. Does the bridge provide an important link in the town or statewide bicycle or pedestrian network such that you feel that bicycle and pedestrian traffic should be accommodated during construction? Yes.

7. Are there any special aesthetic considerations we should be aware of? No.

8. Are there any traffic, pedestrian or bicycle safety concerns associated with the current bridge? If yes, please explain. The sidewalk should be a bit (1 foot) wider.

9. Does the location have a history of flooding? If yes, please explain. No.

10. Are you aware of any nearby Hazardous Material Sites? No.

11. Are you aware of any historic, archeological and/or other environmental resource issues? No.

12. Are there any other comments you feel are important for us to consider that we have not mentioned yet? Please note that the Town's water main is suspended, connected to and positioned outside the subject bridge.

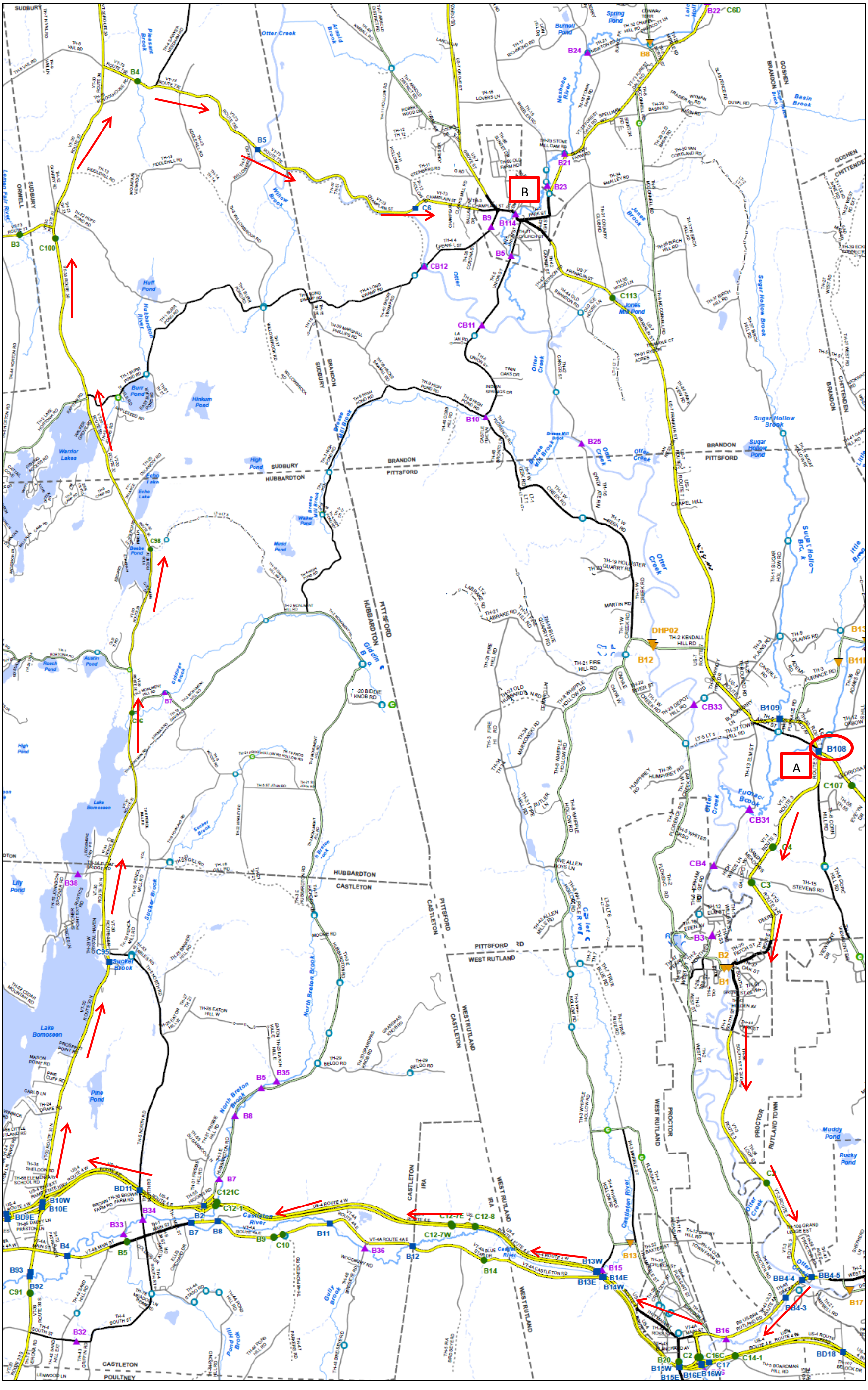
Land Use & Public Transit Considerations – to be filled out by the municipality or RPC.

1. Does your municipal land use plan reference the bridge in question? If so please provide a copy of the applicable section or sections of the plan. No.

2. Please provide a copy of your existing and future land use map, if applicable. Attached.

3. Are there any existing, pending or planned development proposal that would impact future transportation patterns near the bridge? If so please explain. No.

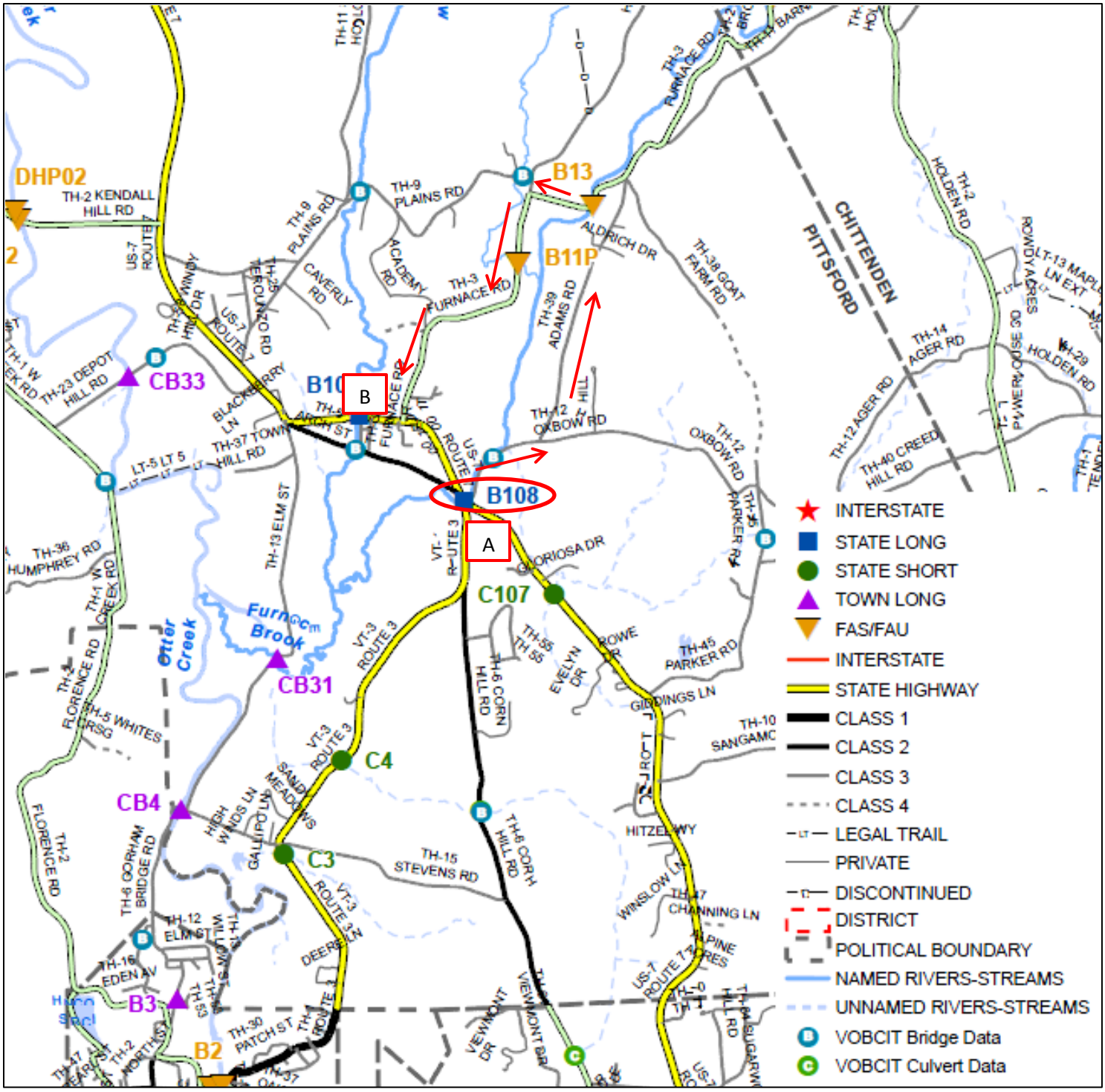
4. Is there any planned expansion of public transit service in the project area? If not known please contact your Regional Public Transit Provider. No.



Detour Route

US Route 7, to VT Route 3, US Route 4, VT Route 30, and VT Route 73, back to US Route 7

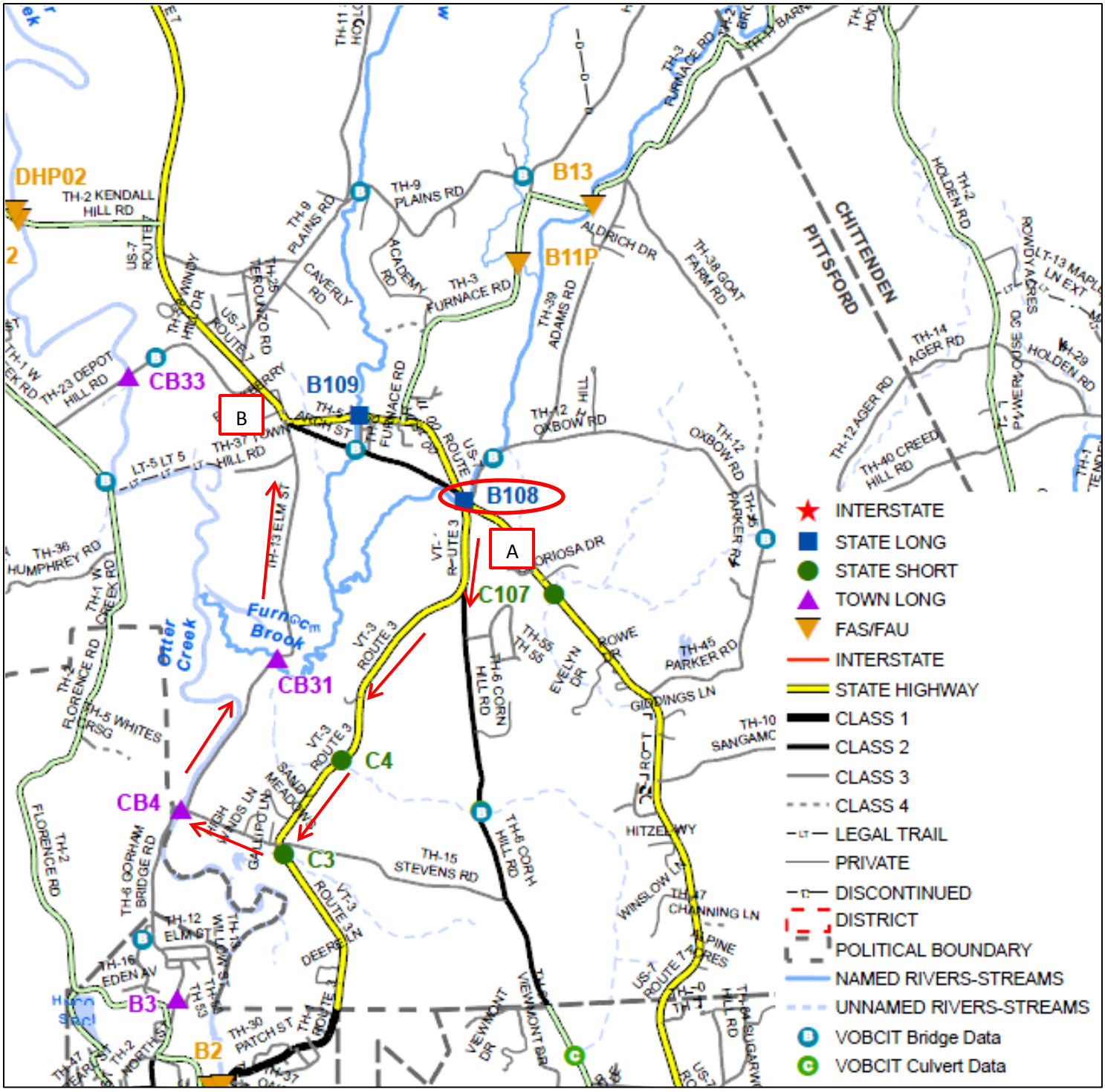
A – B Through Route: 8.9 Miles
A – B Detour Route: 40.1 Miles
Added Miles: 31.2 Miles
End-End Distance: 49.0 Miles



Local Bypass 1

US Route 7, to Oxbow Road, Adams Road, Furnace Road, back to US Route 7

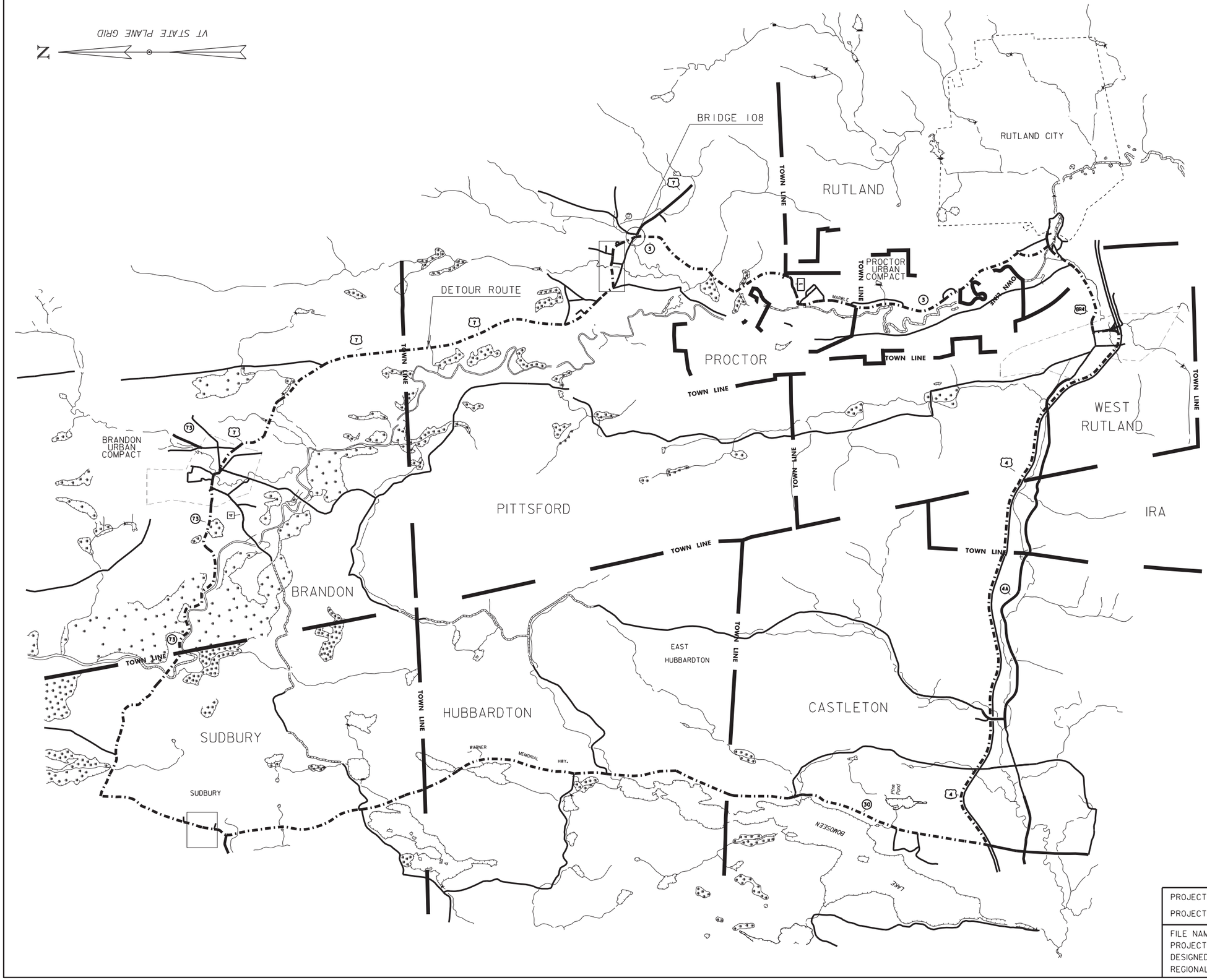
A – B Through Route: 0.6 Miles
A – B Detour Route: 3.7 Miles
Added Miles: 3.1 Miles
End-End Distance: 4.3 Miles



Local Bypass 2

US Route 7, to VT Route 3, Gorham Bridge Road, Elm Street, back to US Route 7

A – B Through Route: 1.1 Miles
A – B Detour Route: 4.4 Miles
Added Miles: 3.3 Miles
End-End Distance: 5.5 Miles



PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sI3b266detour.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: J.FITCH	DRAWN BY: D.D.BEARD
DESIGNED BY: L.J.STONE	CHECKED BY: L.J.STONE
REGIONAL DETOUR	SHEET 1 OF 17

BURO, VINCENT & CAROL V.; LEVINS, HEIDI

GRANT, R. TODD & MARY D.

STATE OF VERMONT

RANSON, THOMAS G. & GAIL L.

TOWN OF PITTSFORD

CONWAY, RICHARD G. II & SANDRA

STATE OF VERMONT

MAXHAM, ALBERT R.

ROMAN CATHOLIC DIOCESE

TOWN OF PITTSFORD

GENERAL LAND OFFICE

VT STATE PLANE GRID

N

US ROUTE 7 PI #1

US ROUTE 7 STA 72+92.94

POB STA 70+00.00

PC STA 70+54.00

PT STA 74+75.76

US ROUTE 7 TO RUTLAND

US ROUTE 7 TO BRANDON

VT ROUTE 3 TO PROCTOR

TH 12 OXBOW ROAD

FURNACE BROOK FLOW

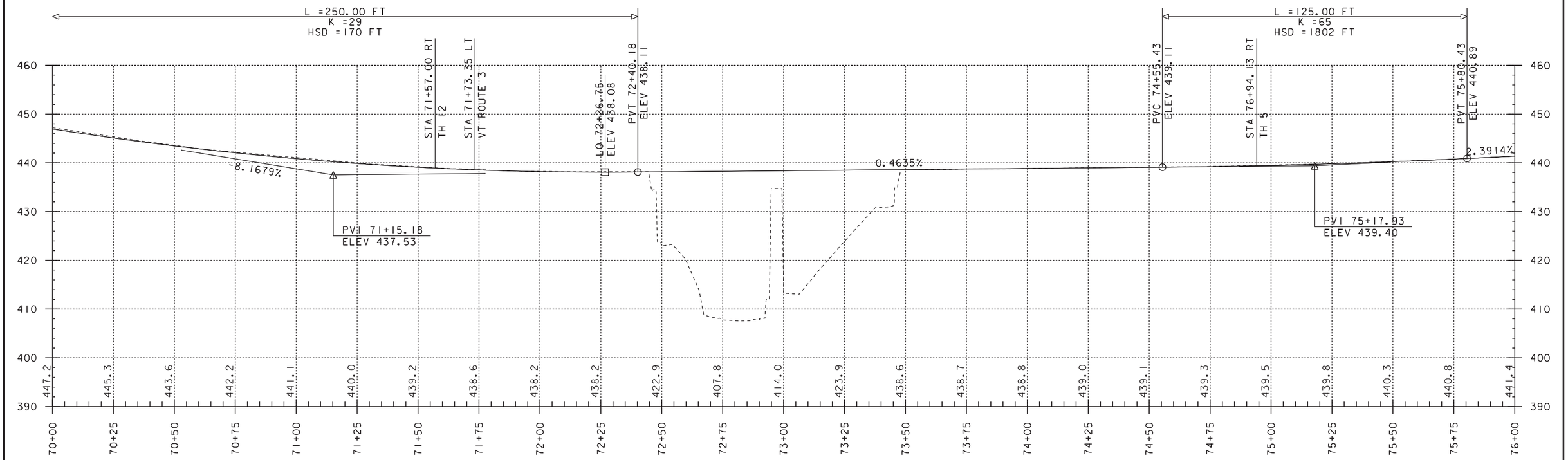
VTHD BENCH MARK
RPI4A 1965
ELEV. = 442.08

US ROUTE 7
EXISTING CURVE 1
DELTA = 37°57'30"
D = 9°00'00"
R = 636.62'
T = 218.95'
L = 421.76'
E = 36.60'

EXISTING CONDITIONS

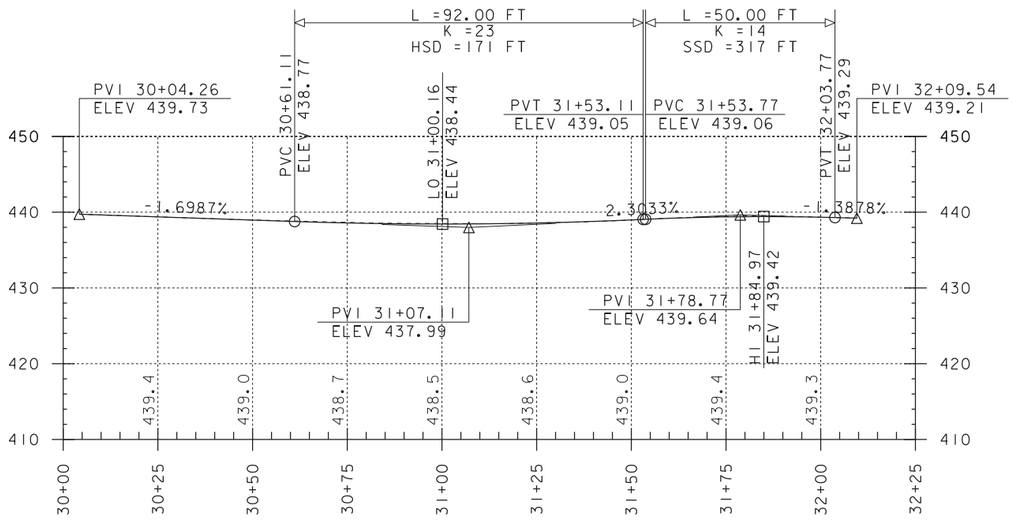
SCALE 1" = 20'-0"
20 0 20

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sI3b266border.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
EXISTING CONDITIONS	SHEET 2 OF 17



US ROUTE 7 EXISTING PROFILE

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'



VT ROUTE 3 EXISTING PROFILE

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sI3b266profile.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
PROFILE SHEET	SHEET 3 OF 17

VT 3 CURVE #1
DELTA = 60°29'34"
D = 76°23'40"
R = 75.00'
T = 43.73'
L = 79.18'
E = 11.82'

US 7 CURVE #1
DELTA = 38°57'29"
D = 13°38'37"
R = 419.95'
T = 148.54'
L = 285.54'
E = 25.50'

VT STATE PLANE GRID
N

FURNACE BROOK
FLOW

VT ROUTE 3
TO PROCTOR

CONCEPTUAL
LIMITS

BEGIN PROJECT
STA 252+25.00

BEGIN APPROACH
STA 251+75.00

END PROJECT
STA 254+50.00

END APPROACH
STA 255+00.00

PC
STA 251+79.66

PT
STA 254+65.20

PI
STA 252+28.19

TH 12
OXBOW ROAD

US ROUTE 7
TO RUTLAND

US ROUTE 7
TO BRANDON

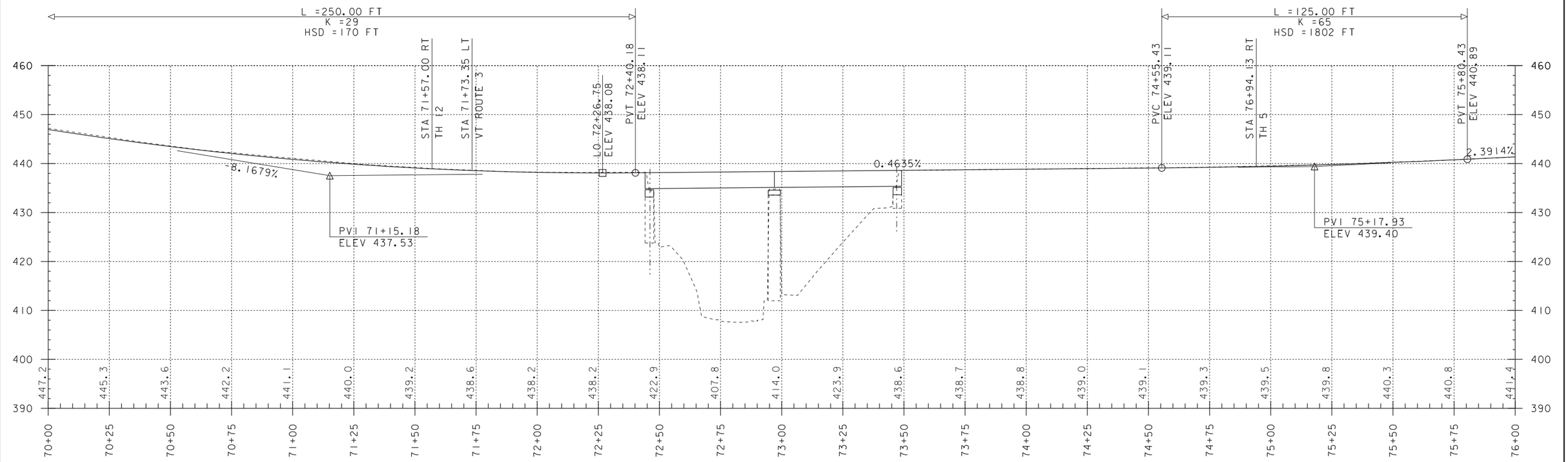
TH 5
ARCH STREET

VTHD BENCH MARK
RP14A 1965
ELEV. = 442.08

ALTERNATIVE 1 LAYOUT

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

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sI3b266nul.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: ------	CHECKED BY: ------
ALTERNATIVE 1LAYOUT	SHEET 4 OF 17



US ROUTE 7 PROFILE - ALTERNATIVE 1

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

NOTE:

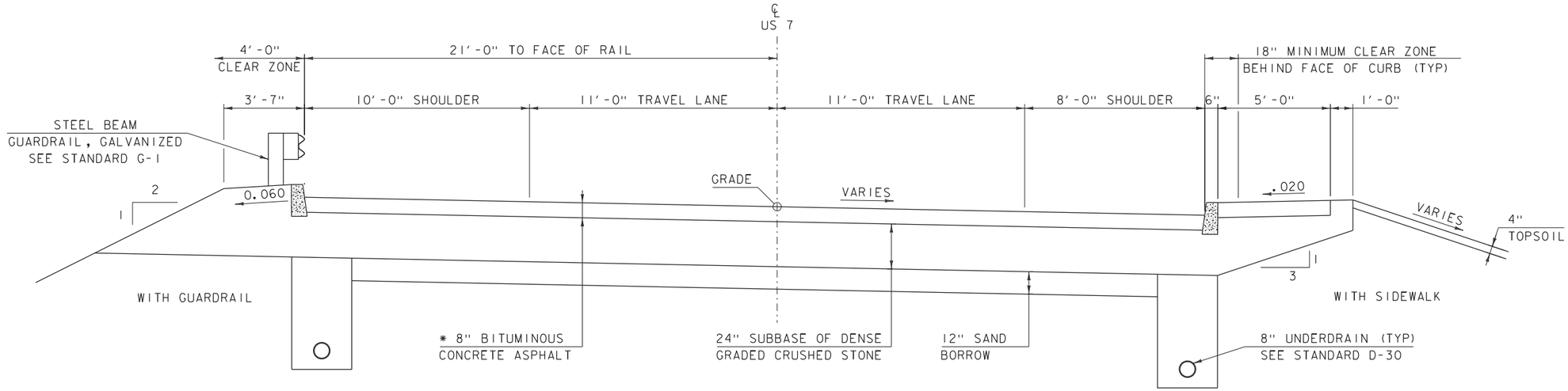
GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: 13b266/sl3b266profile.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
ALTERNATIVE 1PROFILE SHEET

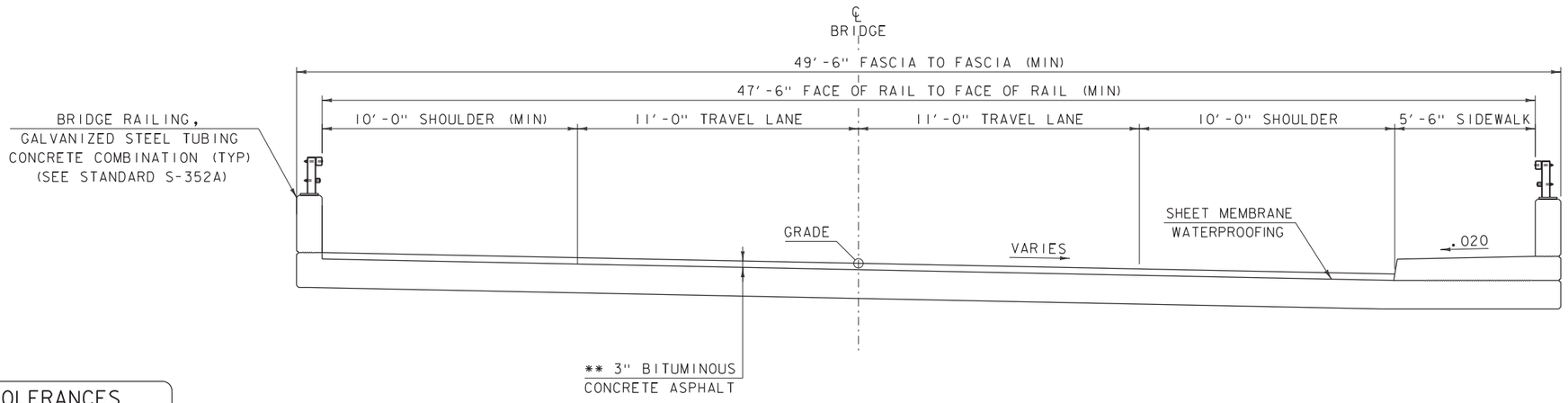
PLOT DATE: 04-DEC-2014
DRAWN BY: L.J.STONE
CHECKED BY: ------
SHEET 5 OF 17



PROPOSED US 7 TYPICAL SECTION

SCALE 3/8" = 1'-0"

*1½" TYPE IIIS OVER
1½" TYPE IIIS OVER
2½" TYPE IIS OVER
2½" TYPE IIS



FLOW

PROPOSED BRIDGE TYPICAL SECTION

SCALE 3/8" = 1'-0"

**1½" TYPE IIIS OVER
1½" TYPE IIIS

MATERIAL TOLERANCES

(IF USED ON PROJECT)

SURFACE	
- PAVEMENT (TOTAL THICKNESS)	+/- ¼"
- AGGREGATE SURFACE COURSE	+/- ½"
SUBBASE	+/- 1"
SAND BORROW	+/- 1"

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: 13b266/sl3b266typical.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ----------
TYPICAL SECTIONS

PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------

US 7 CURVE #1
DELTA = 38°57'29"
D = 13°38'37"
R = 419.95'
T = 148.54'
L = 285.54'
E = 25.50'

VT 3 CURVE #1
DELTA = 60°29'34"
D = 76°23'40"
R = 75.00'
T = 43.73'
L = 79.18'
E = 11.82'

VT STATE PLANE GRID
N

CONCEPTUAL LIMITS

BEGIN PROJECT
STA 252+25.00

BEGIN APPROACH
STA 251+75.00

END PROJECT
STA 254+50.00

END APPROACH
STA 255+00.00

PC STA 251+79.66

PI STA 252+28.19

PT STA 254+65.20

VTHD BENCH MARK
RP14A 1965
ELEV. = 442.08

VT ROUTE 3
TO PROCTOR

US ROUTE 7
TO RUTLAND

US ROUTE 7
TO BRANDON

TH 12
OXBOW ROAD

TH 5
ARCH STREET

FURNACE BROOK
FLOW

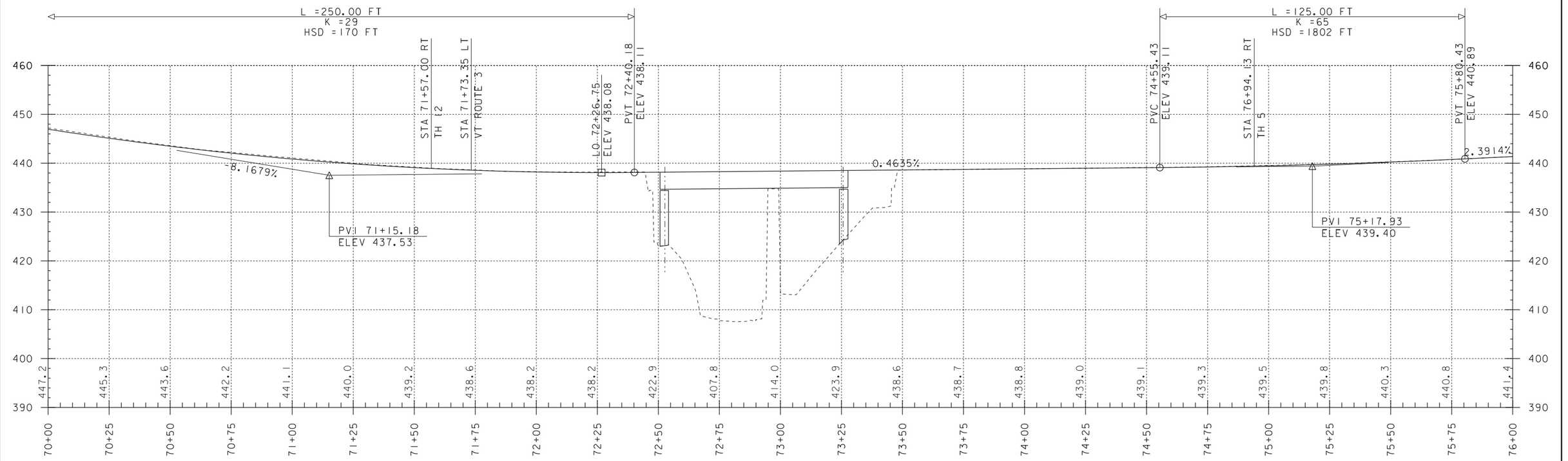
HISTORIC

GAS PAD WITH
4 GASOLINE PUMPS

ALTERNATIVE 2 LAYOUT

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

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sl3b266nul.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: L.J.STONE
DESIGNED BY: ------	CHECKED BY: ------
ALTERNATIVE 2 LAYOUT	SHEET 7 OF 17



US ROUTE 7 PROFILE - ALTERNATIVE 2

SCALE: HORIZONTAL 1"=20'
VERTICAL 1"=10'

NOTE:

GRADES SHOWN TO THE NEAREST TENTH ARE EXISTING GROUND ALONG ℄

GRADES SHOWN TO THE NEAREST HUNDREDTH ARE FINISH GRADE ALONG ℄

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: I3b266/sI3b266profile.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
ALTERNATIVE 2 PROFILE SHEET

PLOT DATE: 04-DEC-2014
DRAWN BY: L.J.STONE
CHECKED BY: ------
SHEET 8 OF 17

US 7 CURVE #1
DELTA = 38°57'29"
D = 13°38'37"
R = 419.95'
T = 148.54'
L = 285.54'
E = 25.50'

VT 3 CURVE #1
DELTA = 60°29'34"
D = 76°23'40"
R = 75.00'
T = 43.73'
L = 79.18'
E = 11.82'

POB
STA 30+00.00

CONCEPTUAL
LIMITS

PI
STA 31+47.13

PT
STA 31+82.58

BEGIN PROJECT
STA 252+25.00

BEGIN APPROACH
STA 251+75.00

POE
STA 32+09.53

PC
STA 251+19.66

END PROJECT
STA 254+50.00

END APPROACH
STA 255+00.00

PT
STA 254+65.20

FURNACE BROOK
FLOW

HISTORIC

30+00
31+00
32+00
32+10
70+00
71+00
72+00
74+00
75+00
76+00
250+00
251+00
252+00
253+00
254+00
255+00
256+00

410
420
430
440

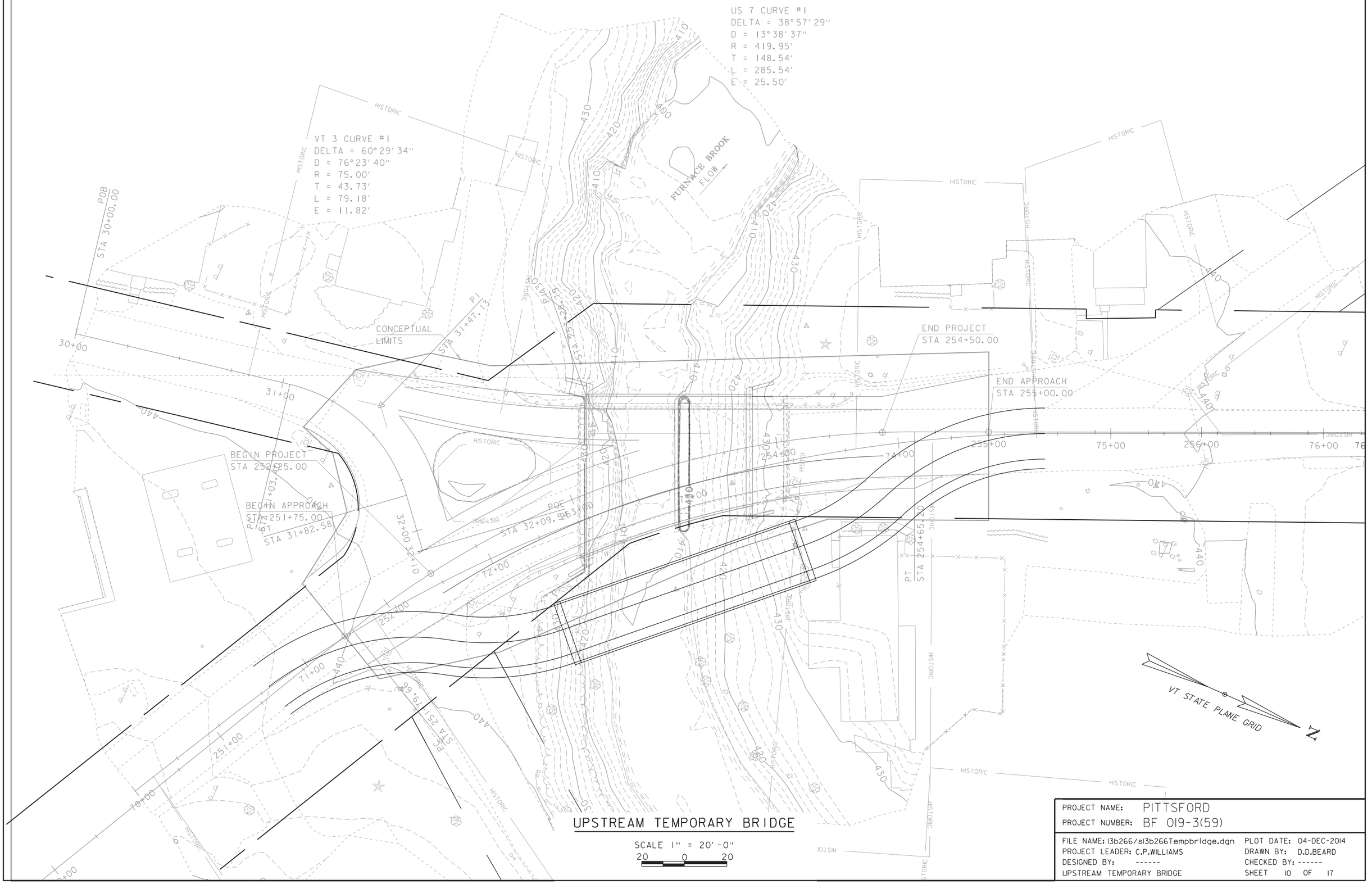
VT STATE PLANE GRID

N

DOWNSTREAM TEMPORARY BRIDGE

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

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: l3b266/sl3b266tempbridge.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
DOWNSTREAM TEMPORARY BRIDGE	SHEET 9 OF 17

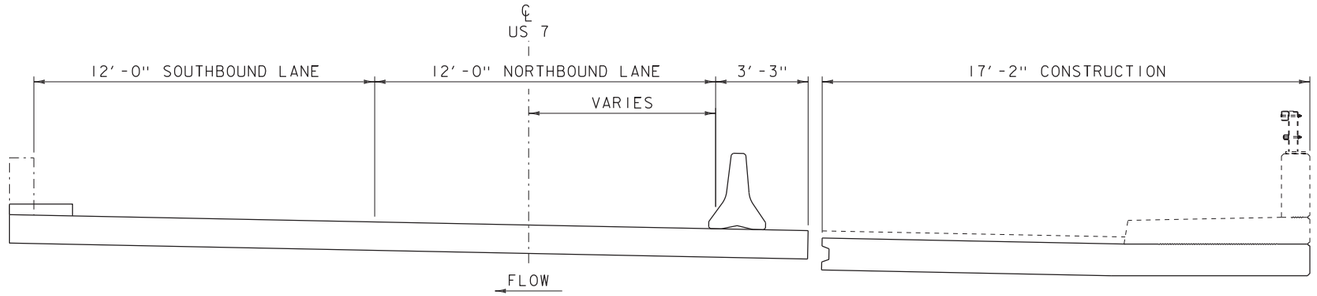


UPSTREAM TEMPORARY BRIDGE

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

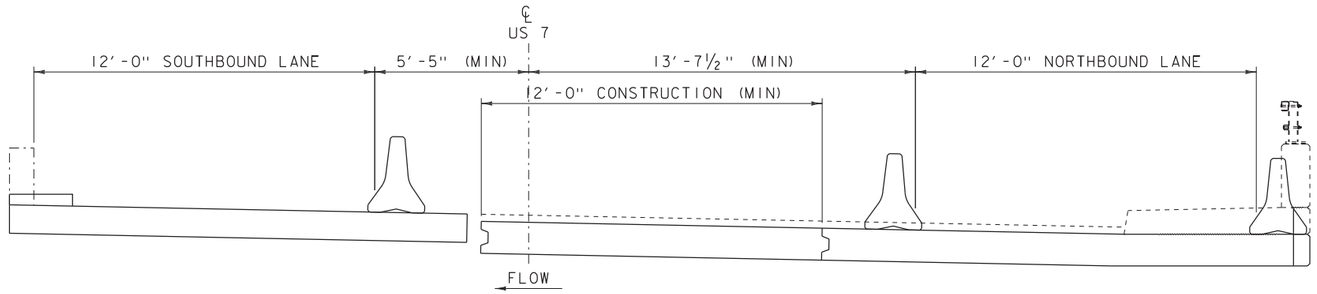
PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)

FILE NAME: 13b266/sl3b266Tempbridge.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ------	CHECKED BY: ------
UPSTREAM TEMPORARY BRIDGE	SHEET 10 OF 17



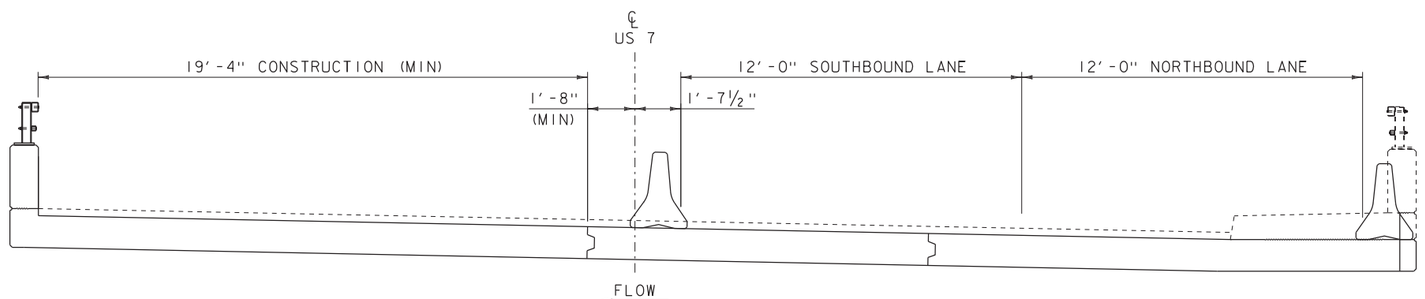
PHASE #1 TYPICAL SECTION

SCALE 3/8" = 1′-0"



PHASE #2 TYPICAL SECTION

SCALE 3/8" = 1′-0"



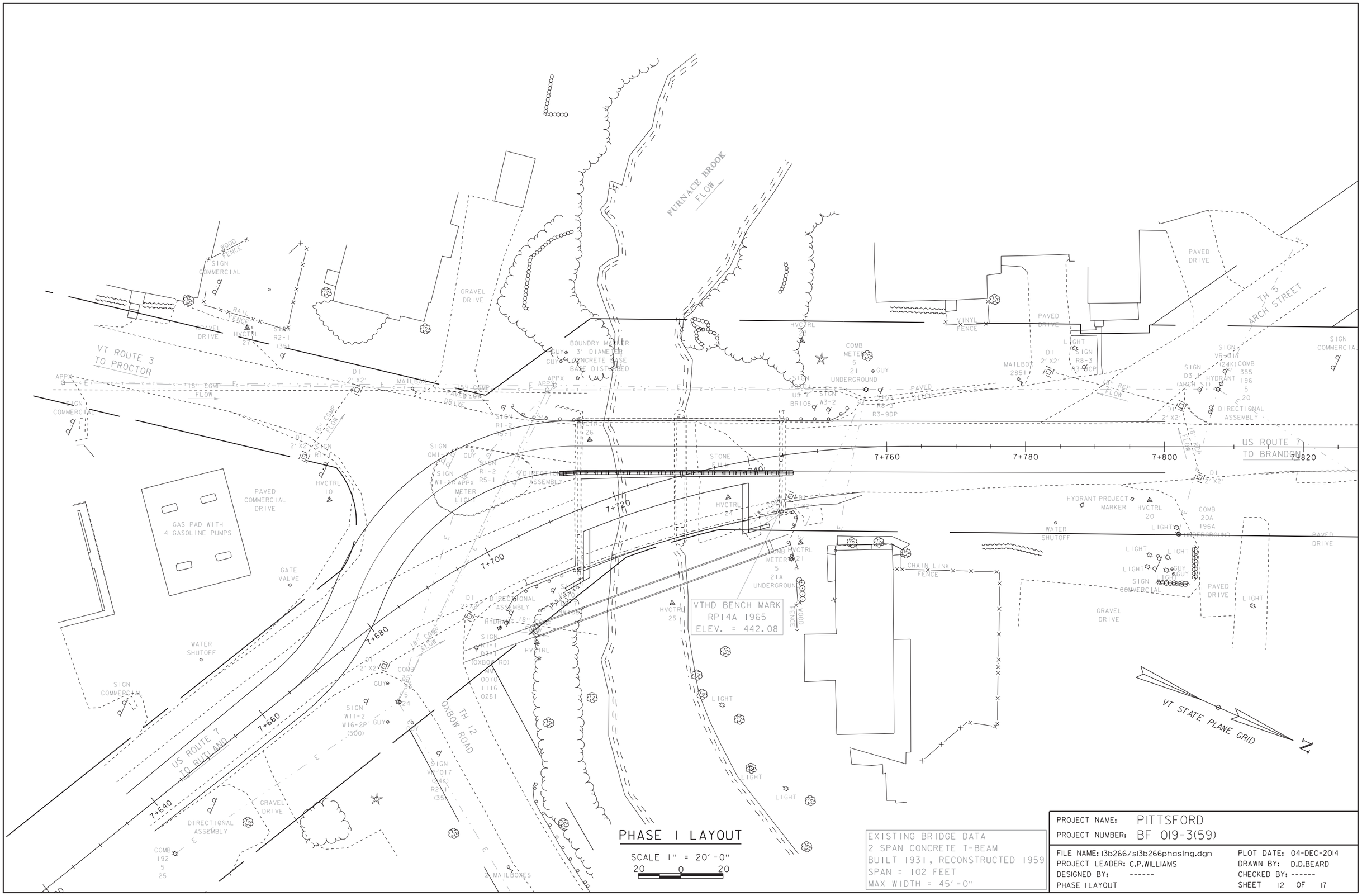
PHASE #3 TYPICAL SECTION

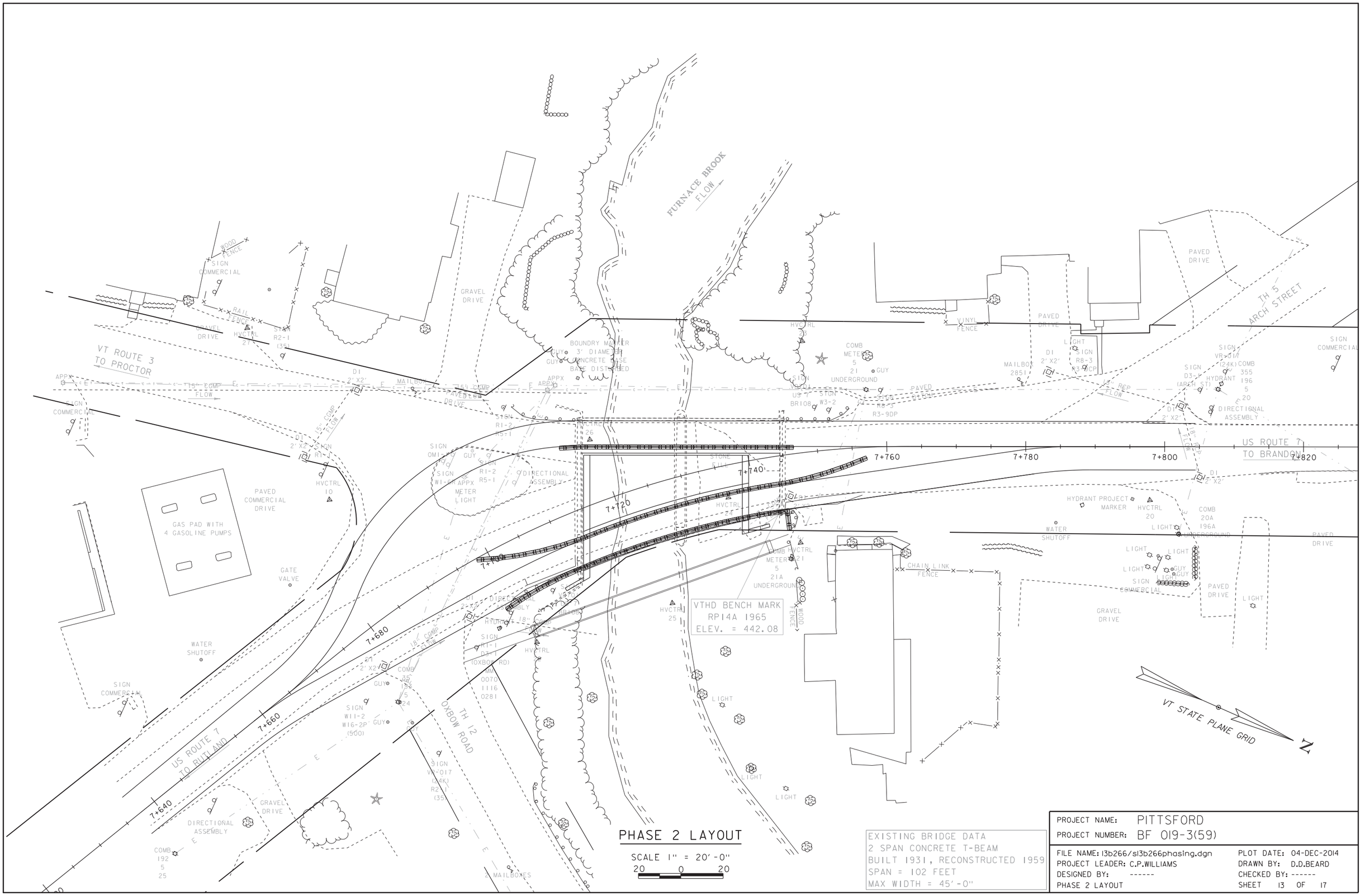
SCALE 3/8" = 1′-0"

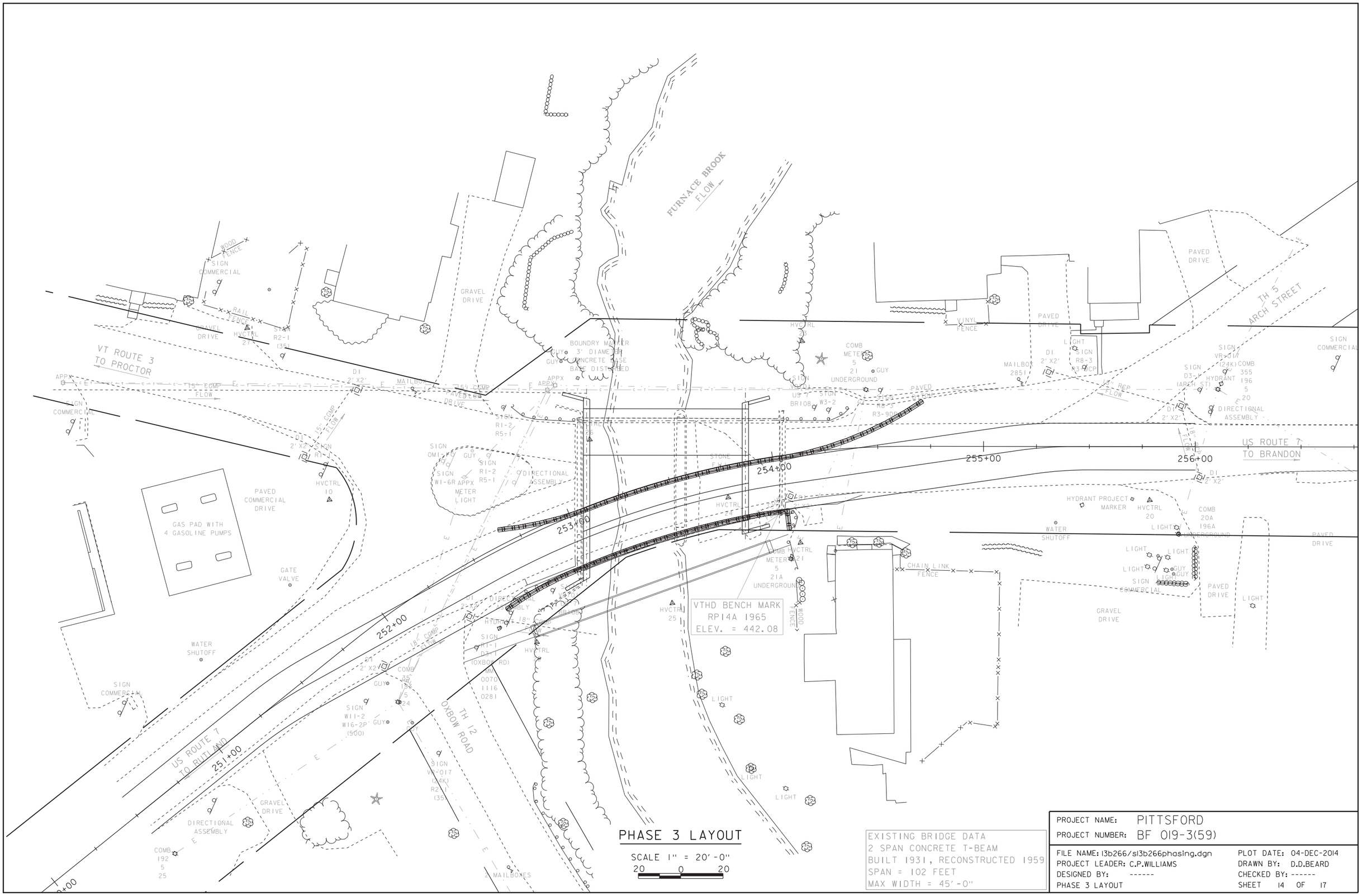
NOTE: SIDEWALK AND UPSTREAM RAILING TO BE PLACED AFTER PHASE #3. PAVEMENT TO BE PLACED AFTER SIDEWALK HAS CURED PER ENGINEERS INSTRUCTIONS.

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)

FILE NAME: I3b266/sI3b266phasing.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: J.FITCH	DRAWN BY: D.D.BEARD
DESIGNED BY: L.J.STONE	CHECKED BY: L.J.STONE
PHASING TYPICAL SECTIONS	SHEET 11 OF 17


FURNACE BROOK
FLOW
VT ROUTE 3
TO PROCTOR
US ROUTE 7
TO RUTLAND
US ROUTE 7
TO BRANDON
TH 5
ARCH STREET
TH 12
OXBOW ROAD
GRAVEL DRIVE
PAVED DRIVE
PAVED COMMERCIAL DRIVE
GAS PAD WITH 4 GASOLINE PUMPS
GATE VALVE
WATER SHUTOFF
RAIL FENCE
WOOD FENCE
VINYL FENCE
CHAIN LINK FENCE
SIGN COMMERCIAL
BOUNDRY MARKER 3' DIAMETER CONCRETE BASE BASE DISTURBED
DIRECTIONAL ASSEMBLY
MAILBOX 2851
HYDRANT
PROJECT MARKER
STONE FILL
4 MAILBOXES
7+640
7+660
7+680
7+700
7+720
7+740
7+760
7+780
7+800
7+820
VTHD BENCH MARK
RP14A 1965
ELEV. = 442.08
PHASE I LAYOUT
SCALE 1" = 20'-0"
20 0 20
VT STATE PLANE GRID
N
EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"
PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)
FILE NAME: I3b266/sI3b266phasing.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
PHASE ILAYOUT
PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 12 OF 17


FURNACE BROOK
FLOW
VT ROUTE 3
TO PROCTOR
US ROUTE 7
TO RUTLAND
US ROUTE 7
TO BRANDON
TH 5
ARCH STREET
TH 12
OXBOW ROAD
7+640
7+660
7+680
7+700
7+720
7+740
7+760
7+780
7+800
7+820
GAS PAD WITH
4 GASOLINE PUMPS
PAVED
COMMERCIAL
DRIVE
GRAVEL
DRIVE
PAVED
DRIVE
WATER
SHUTOFF
GATE
VALVE
CHAIN LINK
FENCE
WOOD
FENCE
RAIL
FENCE
VINYL
FENCE
BOUNDRY MARKER
3' DIAMETER
CONCRETE BASE
BASE DISTURBED
VTHD BENCH MARK
RP14A 1965
ELEV. = 442.08
HYDRANT PROJECT
MARKER
DIRECTIONAL
ASSEMBLY
4 MAILBOXES
VT STATE PLANE GRID
N
PHASE 2 LAYOUT
SCALE 1" = 20'-0"
20 0 20
EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"
PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)
FILE NAME: l3b266/sl3b266phasing.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
PHASE 2 LAYOUT
PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 13 OF 17



PHASE 3 LAYOUT

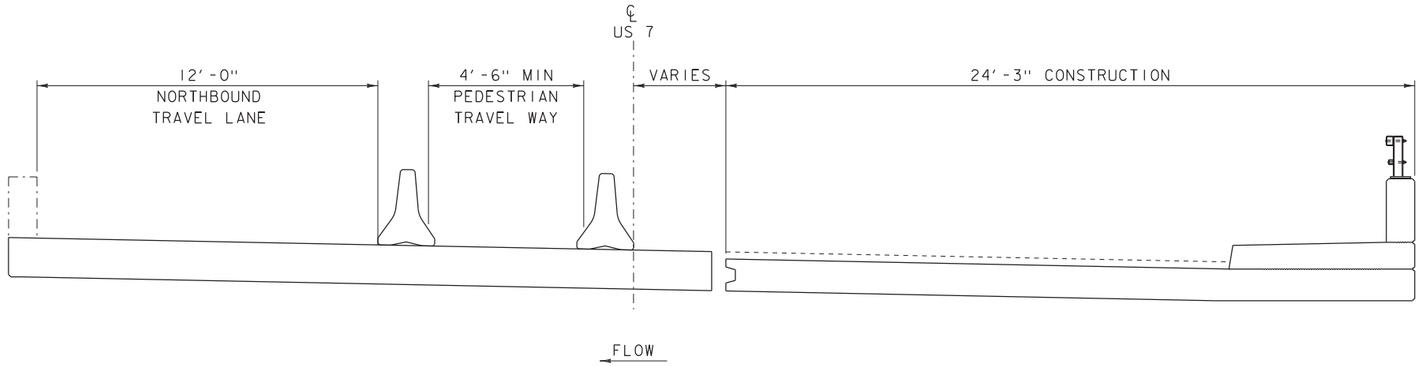
SCALE 1" = 20'-0"
20 0 20

EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

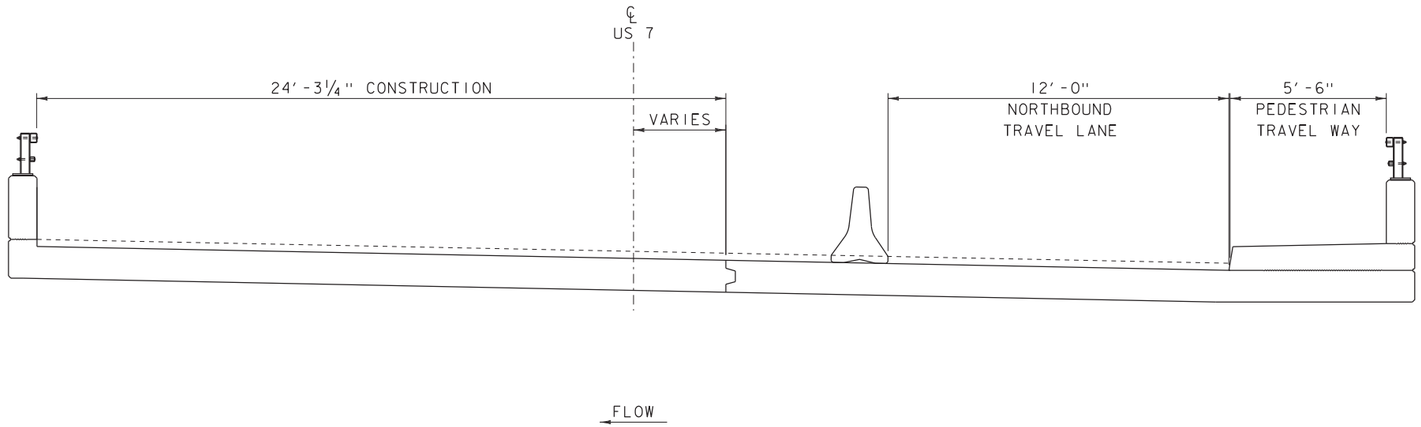
FILE NAME: 13b266/sl3b266phasing.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
PHASE 3 LAYOUT

PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------



PHASE #1 TYPICAL SECTION

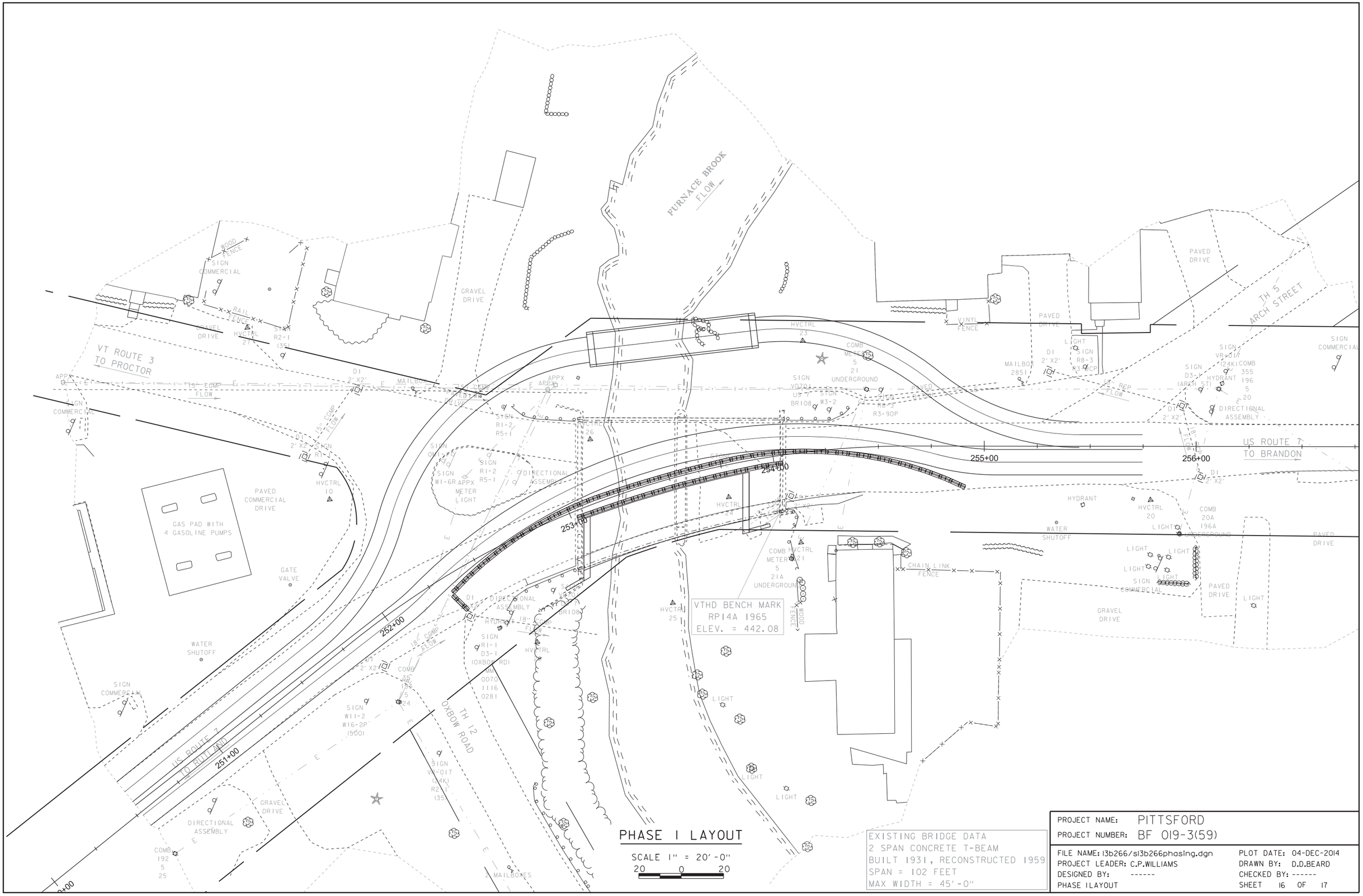
SCALE 3/8" = 1′-0"



PHASE #2 TYPICAL SECTION

SCALE 3/8" = 1′-0"

PROJECT NAME:	PITTSFORD
PROJECT NUMBER:	BF 019-3(59)
FILE NAME: I3b266/sI3b266phasing.dgn	PLOT DATE: 04-DEC-2014
PROJECT LEADER: C.P.WILLIAMS	DRAWN BY: D.D.BEARD
DESIGNED BY: ----------	CHECKED BY: ------
PHASING TYPICAL SECTIONS	SHEET 15 OF 17



PHASE I LAYOUT

SCALE 1" = 20'-0"

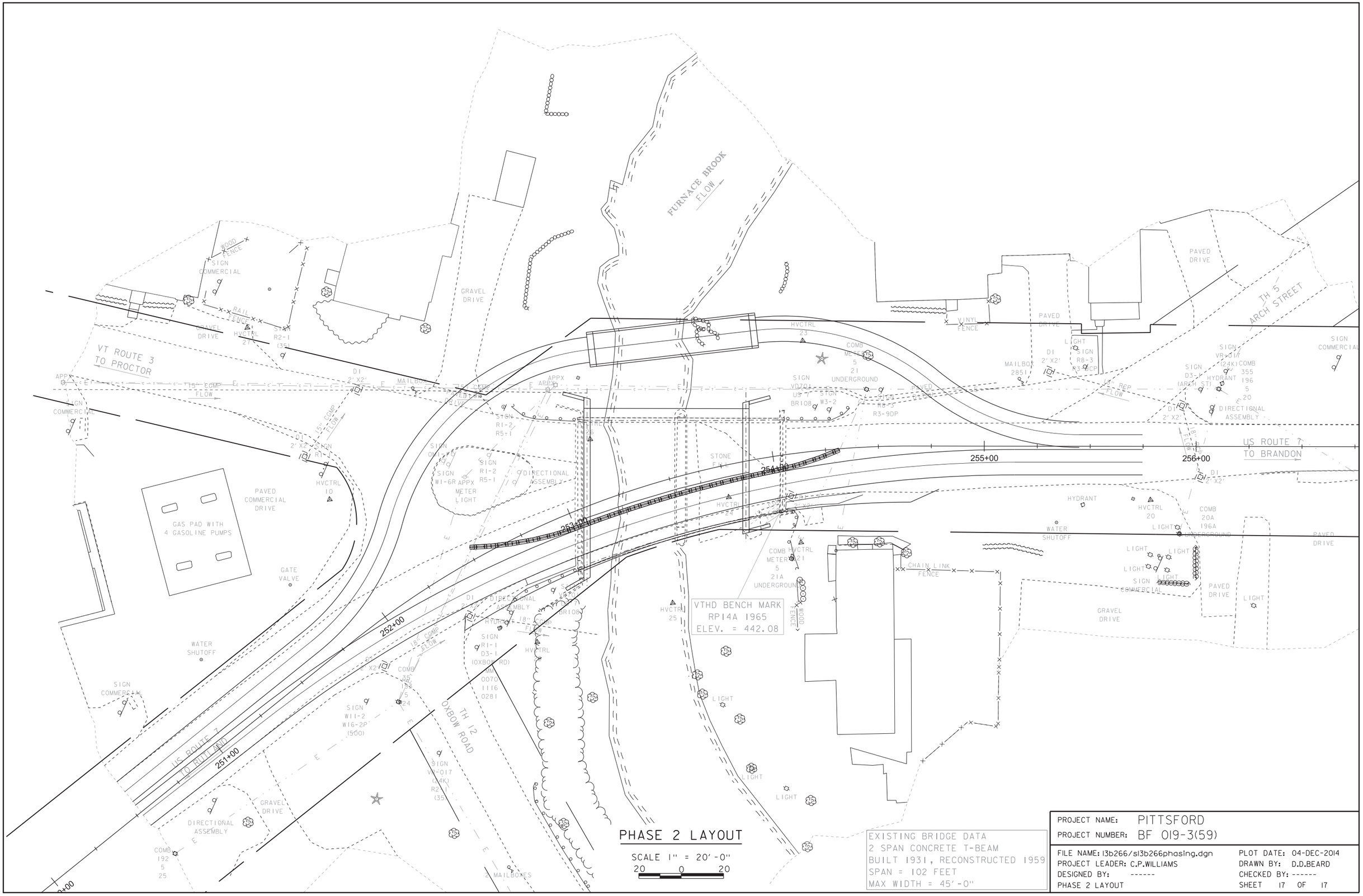
20 0 20

EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: l3b266/sl3b266phasing.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
PHASE ILAYOUT

PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------



PHASE 2 LAYOUT

SCALE 1" = 20'-0"

20 0 20

EXISTING BRIDGE DATA
2 SPAN CONCRETE T-BEAM
BUILT 1931, RECONSTRUCTED 1959
SPAN = 102 FEET
MAX WIDTH = 45'-0"

PROJECT NAME: PITTSFORD
PROJECT NUMBER: BF 019-3(59)

FILE NAME: l3b266/sl3b266phasing.dgn
PROJECT LEADER: C.P.WILLIAMS
DESIGNED BY: ------
PHASE 2 LAYOUT

PLOT DATE: 04-DEC-2014
DRAWN BY: D.D.BEARD
CHECKED BY: ------
SHEET 17 OF 17