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May 22, 2019

Laura Trieschmann State Historic Preservation Officer Vermont Division for Historic Preservation 1 National Life Drive Montpelier, VT 05633

	CONDITIONAL NO ADVERSE EFFECT
Ver	mont Division for Historic Preservation

Re: <u>Hardwick Yellow Barn Business Accelerator Project</u> Section 106 Evaluation – HUD/CDBG

Dear Ms. Trieschmann,

This letter will provide you with comments regarding the plans for the Hardwick Yellow Barn Business Accelerator Project which includes the rehabilitation of the historic Hardwick Yellow Barn at 281 VT RT 15 in Hardwick.

According to the terms of the Programmatic Agreement for HUD/CDBG funded projects, I have reviewed the above-referenced project in accordance the standards set forth in 36 C.F.R. 800, regulations established by the Advisory Council on Historic Preservation to implement Section 106 of the National Historic Preservation Act. Project review consists of identifying the project's potential impacts to historic buildings, structures, historic districts, historic landscapes and settings, and to known or potential archeological resources.

1. PROJECT DESCRIPTION

The proposed project being submitted and owned by the Town of Hardwick creates a small business incubator and accelerator center in two buildings – one existing and one proposed - on the property of the Yellow Barn in the Town of Hardwick. The project is located at 281 VT RT 15 which is the E911 address for the Hardwick Yellow Barn. The barn is located on the south side of VT RT 15 between the highway and the water treatment plant, approximately one mile west of the intersection of RT 15 and South Main Street in the center of Hardwick village. Please refer to attached location maps for additional location information.

The building to be rehabilitated is the Hardwick "Yellow Barn", a 1913 ground stable dairy barn determined National Register eligible by VDHP on 1/24/18 in a DOE concurrence. The barn is currently vacant. The second building is proposed for construction west of the Yellow Barn, comprising a one-story commercial structure with a 22,500 sq. ft. footprint per the attached plans. The total project budget is \$9,206,900 with anticipated funding from a Community Development Block Grant, a Rural Business Development Grant from USDA, the Northeastern Vermont Development Association, New Market Tax Credits, and other private lenders.

The Yellow Barn has not been used for dairying since the 1970s and a succession of car sales and repair business occupancies have altered the barn's interior and exterior since that time to suit their purposes. This has included removing all stanchions and equipment and raising the ceiling in the east end of the barn. The west end retains its low ceiling but was partitioned for the storage of car parts. Original exterior doors were replaced as were several of the original windows. Despite the changes, the barn possesses enough historic fabric to have been considered eligible by VDHP for listing in the National Register. The attached garage and shed off the rear, south elevation were determined to be non-contributing to the historic significance of the barn. More information on the history, condition, and historic status of the barn is detailed in the Historic Properties section of this report.

The barn will be rehabilitated for multiple, to-be-determined commercial occupancies with the objective of creating welcoming, functional, and efficient spaces for full-year use by small businesses. A second objective includes meeting these goals while preserving the historic character of the barn to the extent practicable. The current interior layout and conditions of the barn do not meet the needs of the planned occupancies for four basic reasons: First, structural deficiencies in the east six bays of the barn result from the raised ceiling and removal of supporting framing below the beams now visible at the new ceiling height, as well as the deteriorated concrete foundation. Second, the low ceiling and new partitions in the west end of the barn created barriers to the needed flexibility for the rental space. Third, the lack of insulation and air gaps preclude effective heating of the interior. Fourth, the limited access to the barn interior and lack of natural light are not conducive to renting out the space.

1.1 Site

Work to the project site is noted on plan sheet A1.1. and includes: removal of the non-contributing garage and shed attached to the barn's south elevation; construction of the new accelerator building to the west of the barn; regrading and drainage improvements fronting the north elevations of both buildings to move water to the west; formalizing and paving areas previously used for parking and the addition of new parking spaces and access behind the barn where the attached shed now stands; controlling access to the site with a single curb cut between the two buildings; adding a hardscaped plaza with information kiosk, light bollard, and EV charging station at the east side of the barn; landscaping the areas between the new buildings and RT 15; adding a bike rack at the northeast corner of the new building; and signage improvements and other incidental items.

1.2 Foundation

Final decisions on how to brace and jack the barn for new footings and 8" concrete frost walls will be decided in coordination with the contractor, but recommendations to do the work include the following: Interior surfaces will be stripped to expose the wall framing. The barn will be then be temporarily braced and reinforced with 2"x6" diagonals across the long and short walls. Some temporary shear plywood may be installed. Exterior siding will be removed as required to install opposing 2"x10" lumber to sandwich the wall framing at a to-be determined point on the wall, creating a temporary beam to serve at the jacking point. With the barn braced and jacked, excavation will proceed, and the frost walls will be poured. At the same time a new, insulated, reinforced, concrete, slab-on-grade floor will replace the existing concrete slab and manure gutters. A new pressure-treated sill plate will be installed, and the building lowered onto the new foundation. Review by the Division for Historic Preservation of the final plan to brace and jack the barn, if different from the above description, is a condition of this report – please see condition 7.2.

1.3 Roof

The prominent, corrugated metal-covered gambrel roof will be re-covered with a new, galvanized, ribbed steel roof. The plank roof decking will be retained and remain visible in the hayloft between the rafters. The exterior surface will be covered with a layer of 5/8" plywood to improve shear strength and



provide a flat surface for the replacement metal roof. The three ventilators and weathervanes will be preserved, and the flashing corrected as required. After repairs the ventilators will be painted with a zinc-rich, cold-galvanized coating designed for use on metal. The four pairs of 4-light dormer windows will be retained, interior energy panels installed, and the sash, trim, and sections of clapboard siding repainted. Noted in the comments for each elevation and restated here is that all elements of the existing historic eaves will be retained, repaired, and repainted. This includes the gable projection at the east end of the roof. The brick chimney at the east end of the roof is not original to the building and will be removed.

1.4 Exterior

The exterior rehabilitation preserves and repairs character-defining features and historic fabric to the maximum extent practicable, with a high preservation focus on the more visible east, north, and west elevations. The limited visibility of the rear, south-facing elevation made it the most suitable for the placement of the loading dock and introduction of natural light.

East Elevation: Features preserved and repaired on this elevation include the clapboard siding, wood eaves and cornerboards, hayloft doors and trim, and the upper historic window with storm window and trim. The overhead garage door will be replaced with an aluminum framed storefront set back 6" from the wall face. The opening for the door will be slightly altered from its current size to match the original wagon door entrance which can be determined by extant remnants of wood trim. The lower window is a replacement vinyl unit which will be replaced in this project with a 2/2 SDL wood double hung. To the right of the lower window is modern entrance door which will be removed and sided over. Repairs to wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry. All wood elements will be properly prepared and painted with high quality primers and top coats. The new foundation will be minimally exposed to the north of the new overhead door as shown on the plans.

North Elevation: Features preserved and repaired on this elevation include the clapboard siding, wood eaves and cornerboards, barn door on the far west end which will be repaired and pinned in place, and extant 2/2 wood sash windows which will be fitted with an interior energy panel. Replacement vinyl windows will be replaced in the existing openings with 2/2 SDL wood double hungs. The T111 siding will be replaced with clapboards to match existing. Repairs to wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry. All wood elements will be properly prepared and painted with high quality primers and top coats. The new foundation shall be exposed to approximately 18" above grade.

West Elevation: Features preserved on this elevation include the clapboards, eaves, gable window openings and trim, and outside door openings on the first story and trim. The vertical planks covering the three gable windows will be removed and new 2/2 SDL wood double hung windows will be installed in the openings. The outer two doors on the first story are not original to the building. Vertical plank doors will be removed, and aluminum-framed storefronts will be installed in the openings and set back 6" from the building face. The center door will be infilled with clapboards, maintaining the existing trim. Repairs to wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry if needed. All wood elements as needed will be treated with replacement to match the existing materials, methods and geometry if needed. All wood elements as needed will be treated with replacement to match the existing materials, methods and geometry if needed. All wood elements as needed will be treated with replacement to match the existing materials, methods and geometry if needed. All wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry if needed. All wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry. All wood elements will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will be properly prepared and painted with high values will b



quality primers and top coats. The new foundation will be exposed approximately 24" on this elevation as the grade is lowered to improve east to west drainage.

South Elevation: Work to this less visible elevation addresses functional issues critical for the new occupancies. A covered loading dock will extend the length of the south elevation with a shallow-pitched, membrane-covered roof with galvanized drip edge, gutters, downspouts, and square wood post supports. A centered projection will handle materials loading and unloading. Sheltered by the loading dock roof are four, regularly spaced, aluminum-framed overhead doors, one for each commercial space. Two aluminum storefront doors with side panels are also added. Above the loading dock roof and aligned with each overhead door is a 3-light transom window to allow more natural light into the commercial spaces. The original eaves, corner boards, and remaining clapboard siding is retained and repaired. Repairs to wood elements as needed will be treated with wood epoxy where possible, or with replacement to match the existing materials, methods and geometry. All wood elements will be properly prepared and painted with high quality primers and top coats. The exposed wall of the loading dock below the deck will be concrete.

The new Accelerator Building to be constructed west of the barn is shown on the plans with a proposed footprint and roof height. The setback from VT RT 15 will be the same as the barn, and the height of the building will be level with the Yellow Barn's roof purlins. Elevations have not been detailed but will be legibly modern with panels in neutral colors and textures to break up the wall planes without overwhelming the barn. This letter conditions the final design of the elevations on VDHP review and concurrence.

1.5 Structural and Interior Plan

The barn interior has been altered on the first floor to house an automobile garage in the eastern 6 bays including a ceiling raised by approximately 6 feet, a new concrete floor surface, and a sheetrocked interior. The 4 bays to the west retain the barn's plank walls and ceiling, and concrete floor with manure troughs. The metal stanchions have been removed. The open hayloft shows two eras of framing wherein the ca. 1913 construction raised and extended to the east an earlier, ca. 1860 English Barn. The older framing which is visible in the west 4 bays of the hayloft contains some well-preserved timber framing with hand-hewn beams and pegged mortise-and-tenon joints covered in wide plank exterior walls. Some alteration of the older framing is visible and additional salvaged timber appears to have been used, but enough is extant to confirm that a mid-19th century barn was absorbed into the 20th century construction. The 1913 construction raised the height of the early barn and extended it to the east. The roof rafters are supported at the ridge by diagonals extending down to the top of the walls, and by purlins at the gambrel break that rest on posts supported on full-width 6"x8" beams at each bent. This framing is a departure from the more typical scissor trusses in tall gambrel structures, likely due to the early date for this type of structure, and the encasement of the early barn.

The project will preserve existing components to the maximum extent, and use traditional, reversible techniques that will preserve existing framing and install wood sisters to meet structural code requirements. Work includes removing the existing ceilings at the east and west sides of the barn and building a new, full-length ceiling/hayloft floor at a common height approximately 18" above the level of the east side floor level. Per the attached plans, the interior framing dating to ca. 1860 and 1913 will be retained and exposed below the new ceiling except for the west side floor supports which will be removed. The new hayloft floor will be composite laminated 2"x12" joists through-bolted to the rafters on each side and carried on a new, angled wall plate over the north and south walls. The floor cavity will



be filled with cellulose for insulation. Four, regularly spaced steel columns will support an east-west carry beam embedded in the new floor. The existing 2"x6" rafters will be retained and sistered with 2"x12" rafters specified by the project engineer to meet code. The existing collar ties 12" below the gable ridge will be retained, and new 2"x8" collar ties will be added to reinforce the barn at the height of the purlins. The attached plans do not show the east end diagonals that extend from form the purlin posts inward to the lower chord. This framing will be preserved without modification.

Existing wall 2"x6" studs at the east end will be retained and sistered with 2"x6" studs. The exposed wall sheathing will be protected with Tyvek wrap and the cavities insulated with closed-cell cellulose foam. The interior of the studs will then be covered with ½" plywood to achieve required shear strength, then faced with sheetrock. At the west end of the barn the walls are framed with 8"x10" timbers and 4"x4" lateral beams up to the wall plate, all of which is exposed in the hayloft. The walls are covered below the existing parlor ceiling and framing details and conditions there are unknown. Where the heavy timber framing is present, the areas between the 8"x10" posts and beams will be infilled with a 2"x4" frame against the sheathing so the inside faces and half the sides of the framing will be exposed to the interior. If possible, the face of the lower, original lateral beams will be also be exposed. The wall sheathing and portions of the framing to be covered will be protected by Tyvek and the cavities in the framing filled with closed cell cellulose foam and covered in ½" plywood. This treatment will not meet the engineer's specifications for shear strength so the westernmost demising wall may be sheathed in plywood. This treatment is subject to structural engineering requirements and compliance with the 2015 IBC for structural design.

Three, east-west demising walls will be constructed to separate the interior into four equal bays with planned occupancy by four tenants. Interior surfaces will be faced with sheetrock throughout. Gas/forced air HVAC units will be housed in the hayloft. The mezzanine and access stairs shown on the plans will be built-to-suit for each tenant space. To meet code, the mezzanines cannot occupy more than one third of the floor space. There are no signed leases with tenants at this time and final mezzanine design is pending. As a result, the final disposition of stairs and mezzanine construction as part of this undertaking is conditioned as condition 7.3 in this letter.

2. AREA OF POTENTIAL EFFECT (APE)

The project APE is illustrated in the attached Map No. 4. It includes properties with an unobstructed or significant view of the Yellow Barn and proposed new Accelerator Building as shown on the attached site plan sheet A1.1. We note that the roof line of the proposed new building is lower than the ridge of the barn roof. The land to the east and south of the barn has seen a proliferation of commercial development since the 1970s. The Hardwick Water Treatment Plant is located directly southwest of the proposed new building. The land to the west in the APE is open for 750' until the intersection of RT 15 and RT 14 where a modern gas station and related outbuildings are located. Directly across RT 15 from the barn is a historic property listed in the State Register, behind which are wetlands. Properties in the APE are further discussed in the Historic Properties section of this report.

3. HISTORIC PROPERTIES

There is a total of eight properties in the APE referenced on Map No. 4. Six are considered noncontributing and two are considered historic per Fig 1 below.



Location	Туре	Age Ca.	Photo	Status
454 VT RT 15	Commercial	<50yrs	1, 2	N/C
17 Craftsbury Rd.	Commercial	<50yrs	1, 2	N/C
47 Craftsbury Rd.	Commercial	<50yrs	2	N/C
294 VT RT 15	House	1840	6	SR-Listed
281 VT RT 15	Barn	1913	9-38	SR-listed; NR-eligible (DOE)
278 VT RT 15	Commercial	<50yrs	3, 4	N/C
222 VT RT 15	Commercial	<50yrs	3, 4	N/C
107 Water Tr. Plt. Rd.	Industrial	<50yrs	8	N/C
222 VT RT 15 107 Water Tr. Plt. Rd.	Commercial Industrial	<50yrs <50yrs	3, 4 8	N/C N/C

Fig. 1

1840 House, 294 VT RT 15

This property known as Smith's Crossing was individually listed in the State Register in 1988 and is located across the street from the Yellow Barn in the APE. It is a 1 ½ story, eaves front, ca. 1840 Greek Revival-style house with brick walls and an asphalt shingle-covered roof. A 2-story wing is attached to the east elevation, sheathed in clapboard and fronted by an enclosed porch. Greek Revival details on the principal block includes a central entrance with paneled entablature and sidelights, and heavy rectangular wood window lintels and sills on the flaking windows. Based on our evaluation, the property has not been significantly altered since 1988 and remains eligible for its current listing in the State Register and is considered eligible for listing in the National Register of Historic Places.

1913 Yellow Barn, 294 VT RT 15

The Yellow Barn was listed in the State Register in 1988 as a related structure to the Smith's Crossing house across the street. As part of the documentation for the current project, a Determination of Eligibility (DOE) was prepared by 106 Associates and received by the VDHP on 1/24/2019. The DOE recommended that the main barn was eligible for listing in the National Register, but that the rear garage and shed did not contribute to the barn's significance. VDHP concurred with the recommendation that the barn was eligible for the National Register under Criterion C on 1/24/19.

Because the barn was determined to be eligible for the National Register under Criterion "C" only, the detailed historical narrative of the property is not included in the body of this report but is available in the DOE. The description of the barn and discussion of architectural significance are excerpted below:

"The subject "yellow barn" is listed in the State Register of Historic Places (1989) as a related building to the Greek Revival-style house (#76) on the opposite, north side of VT RT 15. Originally built by John S. Smith and known as Smith's Crossing, the farm's buildings, pasture, and woodlot would cover 265 acres by the 1880s. The farm property was broken up in the early 1970s, the house and barn are no longer in common ownership, and much of the surrounding original farm property has been developed for commercial use.

The subject barn comprises three connected buildings that form a U-shaped structure: a ca. 1913 ground stable dairy barn parallel to the road (the yellow barn), a ca. 1920 shed running parallel and to the south of the yellow barn, and a ca. 1930 garage structure joining the barn and shed at their west bays forming a long courtyard that opens to the east.

Of the three components the 1913 dairy barn possesses the most distinctive historical architecture and integrity. The 1 ½ -story, 10-bay by 3-bay barn measures 135' along RT 15, and is 34' deep. The sheet metal-covered gambrel roof has flared eaves and is capped with three, crown metal ventilators with cow



or horse motif weathervanes. The extant hay rail extends through the east wall under a ridge projection that covered the pulley. Walls are clapboarded, though the lower 2' - 3' of siding was changed to vertical plank capped by a plain wood belt course under the window sills – likely installed during work to repair the concrete foundation that extends minimally above grade in some areas. Narrow corner boards rise to a wide, 3-piece facia under open eaves with matchboard soffits and exposed rafter tails. Fenestration on the ca. 1913 barn is irregular. On the broad, north elevation facing RT 15, four shed-roofed dormers, each with two, 4-light fixed wood sash illuminate the hayloft through the lower gambrel plane. Eleven double-hung windows with plain wood trim are set in historic openings that once lit the original ground floor. Six have been fitted with replacement sash, five 2/2 wood double hungs remain. A vertical plank sliding door at the old concrete loading dock opens into the outer west bay. The opposite, south elevation has 13 first-story windows, seven of which are small, fixed-light sash and the remainder are a mix of 1/1 and 2/2 wood double hungs. The west gable retains its six original openings, three gable windows infilled with plank or plywood, and three, double-leaf plank doors on the first floor, wider in the outer bays. The east gable wall has been fitted with a modern overhead door occupying the south half of the first story. To the north of the door is a pair of double-hung windows, one newer replacement under an older 2/2 wood window with matching wood storm. A modern pedestrian door abuts the north corner board. Highlighting the entrance gable is a large hayloft door whose two leaves close to form a pointed arch in the gable peak.

The barn interior has been altered on the first floor to house an automobile garage in the eastern 6 bays including a ceiling raised by approximately 6 feet, a new concrete floor surface, and a sheetrocked interior. The 4 bays to the west retain the barn's original plank walls and ceiling, and concrete floor with manure troughs. The metal stanchions have been removed. The open hayloft shows two eras of framing wherein the ca. 1913 construction raised and extended to the east an earlier, ca. 1860 English Barn. The older framing which is visible in the west 4 bays of the hayloft contains some well-preserved timber framing with hand-hewn beams and pegged mortise-and-tenon joints covered in wide plank exterior walls. Some alteration of the older framing is visible and additional salvaged timber appears to have been used, but enough is extant to confirm that a mid-19th century barn was absorbed into the 20th century construction.

Architectural Significance

The yellow barn is historically significant under Criterion C: architecture, as a good representative example of an early 20th century ground stable barn. In its aggregate form, the courtyard formed by the later additions of the shed and connector provided space for expanded operations, protection from the wind, and efficiency of movement for farmers, and in this case operators of related businesses. However, the haphazard repairs and construction and deteriorated condition of the shed and connector additions have substantially compromised their integrity to the point where they no longer contribute to the historic significance of the barn. The yellow barn's ground-stable form and function are a product of the evolution of farming practices related to regulations, specialization, improved efficiency, and improved sanitation in the early 20th century. The elimination of the manure basement prevented unsanitary concentration of dangerous bacteria in the barn. The ground floor surface reflects regulatory changes requiring the use of concrete because it was considered easier to clean than wood. The long, relatively narrow geometry of the barn relates to increased specialization in dairying as the advent of bulk tank shipping in refrigerated railroad cars allowed for increased production and sale of fluid milk to expanded markets. The gambrel roof was preferred over the earlier gable design to enclose the largest possible space for a hayloft. The banks of operable windows on the barn reflect new regulations to improve the availability of natural light; both the windows and roof ventilators provided better ventilation. More research may reveal whether the small windows on the south elevation were located in early horse stalls. Given the early date of the barn the farm may have still been using horses for some farm operations.



Stylistically, the barn is considered Dutch Colonial Revival which was in popular use at the time for both barns and houses. The yellow barn possesses character-defining elements of the style including gambrel roof, shed-roofed dormers, and flared, open eaves with exposed rafter tails. Of further architectural significance is the adaptation of the barn structure as farms began to specialize, enclosing within it the framing of what appears to be a mid-19th century early barn. The intact, pegged, post and beam framing at the west end of the yellow barn is very probably that of the barn identified in the ca. 1911 photo #'s 26 and 27 included in this report. Extant timbers appearing to be part of the early barn framing are hand-hewn, and portions of the exterior is clad in wide vertical planks extant under the clapboards. The result is physical evidence of two areas of farming representing an important period of transition.

4. Archaeology

VDHP required a sensitivity assessment for the project given its location and planned ground disturbance. Thomas R Jamison from Hartgen Archaeological Associates was hired by the applicant to conduct the evaluation. The results of Mr. Jamison's study have been transmitted to VDHP and his conclusions and recommendations are repeated below:

6.4 Archeological Recommendations

Most of the project APE is considered to be disturbed by various filling and construction episodes over the past 100 years. However, one area that appears to retain substantial integrity is the floodplain at the west end of the property. A storm water alignment is proposed to cross the landform to outfall into the Lamoille River. The undisturbed portions of the floodplain should be avoided by that construction. If the storm water alignment is located in the Route 15 embankment and crosses to the river within the easement utilized for the temporary bridge in the early 1980s, no further archeological review is recommended. If, however, the storm water alignment must cross further to the south, the phase 1B archeological reconnaissance survey would be recommended.

5. Public Input

Three publicly warned meetings have been held to present and obtain feedback on the yellow barn accelerator project, January 17, February 7, and March 21. Several members of the public did attend, there have been no objections to the plan, and the project is widely supported in the community.

6. Assessment of Effect

This project represents a substantial investment in the Hardwick economy and a commitment to fostering the growth of small businesses. The rehabilitation of the Yellow Barn as part of this project is a recognition of the Town's agricultural heritage, and signals Hardwick's commitment to sensitively adapting historic buildings for contemporary occupancy.

Ground stable dairy barns pose particularly difficult challenges for adaptation due to low ceiling heights, light framing, and porous weather envelopes. It is for this reason that Vermont has seen a dramatic reduction in the number of these resources which can been seen collapsing on roadsides statewide. Thanks in part to its prominent location on VT RT 15, the Hardwick Yellow Barn has a 50-year history of being adapted for commercial occupancies – mostly equipment and car sales and repairs. While the



barn has been preserved, the adaptations over the years substantially altered the barn's ground floor by removing all equipment, raising the ceiling on the eastern six bays, and partitioning the four western bays for storage.

Despite the interior changes, the barn has been considered eligible for the National Register for the significance and integrity of its historic exterior, and the incorporation of mid-19th century framing from an earlier barn on this site. This project recognizes these values and preserves them with input from a team of architects, engineers, historic preservation professionals, and involved project sponsors. Consultation has also included transmittal of preliminary plans and conversations with VDHP architectural review staff. The resulting design preserves and enhances original exterior features on the three most visible elevations including siding, windows, historic doors, eave lines, and trim. Non-original exterior doors will be removed in lieu of more functional replacements. Boarded-over windows in the west gable will be reopened in their historic locations with new 2/2 sash. The roof covering will be replaced in kind, the monitor windows repaired, and the prominent ventilators repaired and painted. The project team recognized the limited visibility of the rear, south facing elevation and located the loading dock and additional fenestration for natural light there.

In terms of the structure, the project preserves the 19th and 20th century framing in the hayloft by introducing a secondary floor system that relies on the perimeter walls and metal posts for support. The new floor allows the historic tie beams to be exposed in the ground floor. Original rafters and joists are retained and reinforced with traditional and reversible sistering. Alternatives were evaluated by the architect, engineer, and historic preservation consultant and included replacement of the framing with larger timber or composite lumber. In consultation with VDHP, the project team elected to undertake the minimal impact treatment of retaining and sistering the framing to meet code, an alternative that retains existing historic fabric and structural systems and meet goals of reversibility. Like many older buildings in Vermont, collar ties will be added to ensure the integrity of the roof and wall structures. The structural work does require the raising of the ceiling in the western four bays, but the milking parlor ceiling is a feature that has already been substantially altered and whose integrity will not be materially affected by this change. Finally, plywood will be fixed to the interior ground floor walls of to ensure needed shear strength for a building type notoriously prone to leaning and racking.

The project will not adversely affect the Yellow Barn or other historic properties in the APE. The construction of the Accelerator Building to the west of the barn continues an existing pattern of commercial development along this section of VT RT 15 which includes the previous conversion of the barn. The site for the new building has been used for decades to store cars and equipment. The new building will be legibly modern and with subdued, paneled elevation materials and colors that will not visually overwhelm the barn. The footprint and massing of the new building has been established but the exterior design details are conditioned in this letter which requires review of final design by the VDHP. The view east along this section of VT RT 15 has the Yellow Barn as its terminus, and this will not change, though it is apparent that the new building will obscure some portion of the side (west) elevation from some angles.

The impact of the project on the Smith's Crossing house across VT RT 15 will not be adverse. The view of the historically related Yellow Barn will be enhanced by the north elevation's rehabilitation and formalized curb cut. The house is located on a busy commercial artery and has had a commercial enterprise located in the barn for decades and the project will not change that. The noise level compared to the previous automobile repair shop (which are known to be loud) should improve with



insulated walls. The new building will not obscure important views, blocking a relatively small wedge of view between the house and the water treatment plant. There are no other historic properties in the APE.

Based on the above analysis, we are recommending a finding of No Adverse Effect with Conditions.

7. Conditions

7.1 New Accelerator Building: The historic preservation consultant shall review the proposed elevations and transmit them with comments to VDHP for consultation and VDHP's written concurrence before construction begins.

7.2 Foundation: If the plan to brace and jack the barn for construction of the new foundation is substantively different than the description on page 2 of this letter, the revised plan shall be reviewed by the historic preservation consultant and transmitted to VDHP with the consultant's comments for VDHP's written concurrence before construction begins.

7.3 Interior Stairs and Mezzanine: If a mezzanine and stairs are to be constructed as part of this undertaking, plans shall be reviewed by the historic preservation consultant and transmitted to VDHP with the consultant's comments for VDHP's written concurrence before construction begins.

7.4 Post Review Discovery: If for any reason the project plans change and there are unexpected effects after final concurrence, the Town of Hardwick shall recommence Section 106 consultation by notifying the VDHP and VCDP Environmental Officer.

7.5 The Town of Hardwick acknowledges that construction cannot commence until the final Section 106 concurrence is provided by VDHP, which includes meeting condition 7.1 above. Without the final Section 106 concurrence, the Town runs the risk of foreclosing the Agency of Commerce and Community Development's (functioning as Agency Official) ability to complete environmental review prior to construction commencing pursuant to 800.9(b).

7.6 The Town of Hardwick acknowledges that "Proof of Completion" documentation shall be generated by the historic preservation consultant after the project has been completed to include the scope of completed work, consistency with approved plans, photographs of the completed work, and the consultant's comments on any work that did not receive concurrence from VDHP in the final Section 106 concurrence letter. The Proof of Completion documentation shall be furnished to the VDHP and VCDP Environmental Officer as part of the Agency of Commerce and Community Development's Administrative Closeout documentation for the project.



Sincerely,

cc: Jon Jewett, Center for Agricultural Economy Quin.Mann@Vermont.gov Elizabeth.Peebles@Vermont.gov

Attachments:

Maps Photos Plans





Map No. 1: Project General Location



Map No. 2: Project Location



Map No. 3: 1913 Hardwick Yellow Barn (NR-eligible per DOE) ca. 1930 Connector (non-contributing per DOE) ca. 1920 Shed (non-contributing per DOE)



Map No. 4: Area of Potential Effect



Photo 2: Looking west on VT RT 15 from site of proposed new building



Photo 4: Looking east on VT RT 15 from Yellow Barn showing at right



Photo 6: Looking northeast from west elevation of Yellow Barn, view shows the Smith's Crossing house across from Yellow Barn





Photo 8: Looking northwest from water treatment plant entrance, view shows Yellow Barn behind tree at right



Photo 10: Looking west, view shows east elevation



Photo 12: Looking southwest, view shows 1/1 vinyl sash at east end of north elevation





Photo 16: Looking west, view shows shed (left), garage connector (center) and Yellow Barn (right)



Photo 18: Looking northwest, view shows south and east elevation of non-contributing shed



Photo 20: Looking northeast, view shows connection of garage connector to Yellow Barn



Photo 22: Looking east, view shows Yellow Barn gable detail and boarded-over gable windows



Photo 23: Looking west, view shows east end of Yellow Barn converted to auto repair shop



Photo 24: Looking east, view shows east end of the Yellow Barn converted to auto repair shop with mezzanine office and overhead door in background



Photo 26: Looking southeast, view shows south wall in auto repair shop



Photo 27: Looking west, view shows southwest bays interior, and south-side exterior door on west elevation



Photo 28: Looking east, view shows southwest bays (same room as above) recently used for auto parts storage





Photo 30: Looking northeast in northwest bays (same room as above), view shows exterior door on west end of north elevation, and 2/2 wood sash windows



Photo 32: Looking southeast, view shows framing in east end of Yellow Barn hayloft



Photo 34: Looking northwest, view shows framing in west end of Yellow Barn hayloft



Photo 36: Looking southwest, view shows framing in west end of Yellow Barn hayloft





Photo 38: View shows pegged joinery detail in west end of Yellow Barn hayloft





HARDWICK YELLOW BARN BUSINESS ACCELERATOR

281 VT. RT. 15

HARDWICK VERMONT 05843











REAR ELEVATION - SOUTH 3 $\frac{1}{8}$ " = 1'-0"

RESTORE OPENING HEIGHT REPAIR / PAINT EAVE,

> TRIM, MOULDING T.M.E. NEW WOOD PORCH DOCK

NEW FOUNDATION BEYOND, EXPOSED CONCRETE



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NEW HEAVY TIMBER WOOD

SIDE ELEVATION - WEST $\frac{1}{8}$ " = 1'-0"

REPAIR EXISTING VENTILATORS. COAT WITH GALVANIZED PAINT.

REPAIR / PAINT EXISTING DOORS / TRIM

REPAIR / RESTORE / PAINT EXISTING WINDOW. NEW ENERGY PANELS

REPAIR / PAINT EAVE, TRIM, MOULDING T.M.E. REPAIR / PAINT

CLAPBOARD SIDING T.M.E. ALUMINUM STOREFRONT IN EXISTING OPENINGS (SET BACK 6")

INFILL EXISTING DOOR WITH CLAPBOARD T.M.E. NEW $\frac{2}{2}$ DOUBLE HUNG WOOD

REPLACEMENT WINDOW TO MATCH EXIST.

NEW CLAPBOARD SIDING AT BASE TO MATCH EXISTING

NEW FOUNDATION, EXPOSED CONCRETE



PROGRESS

SCALE AS NOTED

DATE 4-23-2019

DRAWN BY: PDK

CHECKED BY:

PROPOSED ELEVATIONS



SIDE ELEVATION - EAST $\frac{1}{8}$ " = 1'-0"





2



BUILDING SECTION - EAST PORTION 3/16" = 1'-0"





BUILDING SECTION - WEST PORTION 3/16" = 1'-0"

0 **/ELl**





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TYPICAL WALL SECTION 31-1/2" = 1'-0"



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YELL

- TYP. EXTERIOR WALLS

REPAIR / PAINT EXISTING SIDING AND TRIM

- EXISTING SHEATHING TO REMAIN
- HOUSE WRAP SEPERATION LAYER
- SPRAY FOAM INSULATION
- NEW 2X6 STUDS SISTERED TO EXISTING WOOD FRAMING
- INSULATED PLYWOOD SHEATHING
- GYPSUM BOARD





PROGRESS

SCALE

AS NOTED DATE

3-21-2019

DRAWN

BY: PDK

CHECKED BY:

SECTION

BUILDING

A2.2