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Mary Spencer  
Duxbury Historical Society  
c/o Mark Morse, Treasurer  
804 VT Route 100  
South Duxbury, Vermont 05660-9131

March 14, 2023

Dear Mary-

Thank you very much for inviting me to visit the South Duxbury Church and the adjacent Sunshine Temperance Hall. They constitute a pair of endearing local landmarks, and I've always been curious to examine them. Happily, I can find very little in either building which stands out in terms of requiring immediate attention. All-in-all they have both been very well cared for and seemingly lightly used, retaining a great deal of their historical integrity. Given the recent change of ownership I commend your prudence in having an assessment done, but beyond addressing some deferred maintenance I believe your group has been quite fortunate in these acquisitions in terms of the tasks which face you.

Please also note that this report is from the perspective of an architectural historian and preservation trades practitioner. There may be issues which were unobserved, and in terms of matters beyond the scope of this report, such as structural integrity, code compliance, or the presence of hazardous materials, specialists in these areas should be consulted. Finally, let this letter serve as the invoice for commissioning the report.

Invoice 21-56

Task: Site visit, conditions assessment, report generation

Amount Due: \$750

Regards,

Adam King

Director

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Conditions Assessment Report: Duxbury, Vermont  
March 14, 2023

- South Duxbury Church
- Sunshine Temperance Hall

*This assessment report has been partially funded by the Preservation Trust of Vermont*

- I. **Summary:** This report seeks to document existing conditions, highlight areas of deterioration or concern, and make recommendations as to the preservation and restoration of the South Duxbury Church in Duxbury, Vermont, as well as an adjacent structure known as the Sunshine Temperance Hall.
  
- II. **Structure Overview:** The church is a four-bay, five-bent timber frame structure with a kingpost truss roof system. The centrally-located principal entrance is in the east gable end wall which faces Vermont Route 100 and is spanned by a low wooden porch. The roof is topped by a steeple consisting of a short, square base, an octagonal louvered belfry, and a tall thin spire supported at its bottom by short ogee rafters. The wall surfaces on the north, east and south sides are pierced by large sixteen-over-sixteen wooden sash windows. The interior of the church is remarkably intact, containing what are most likely the original pews from the purported construction date of 1855. The easternmost bay of the church is occupied by a ground-floor vestibule and an open choir loft above it. In many churches of this age it is often the case that the choir is walled off, either in order to reinforce the open space or improve heating, so it is noteworthy that the choir is in its original configuration. The interior walls of the sanctuary are covered in a later 19<sup>th</sup> century or perhaps even 20<sup>th</sup> century wallpaper in a style of decorative rectangular panels.

The temperance hall is a single-story clapboard building positioned approximately 50 yards north of the church, which also has its gable end facing east towards route 100. The hall is a gathering space which dates from approximately 1896 and consists of a single large room partitioned at one end to create a short entrance hall and a kitchen with a pass-through counter.



III. South Duxbury Church:

- a. **Foundation:** In a fairly typical style for its size and age, the foundation supporting the church around its perimeter consists of dry-laid fieldstone below grade, with a few courses of stone visible above ground level. Approximately eight courses of brick are laid atop the fieldstone in order to support the frame of the building itself. Over time and due to the action of frost heaving, plus the accumulated pressure of snow banking up after falling from the roof, some areas of the foundation have shifted, particularly visible in the brick courses. Though the condition of the foundation as a whole is largely good, these areas are visibly deflected out of plumb, most notably along the church's north wall. Some other areas with more minor degrees of settlement display this movement in the form of failed mortar and brick courses which have shifted out of place. In the west foundation a small opening in the brick permits the inspection of the crawl space beneath the church. This space appears to be remarkably dry and draining reasonably well, as no floor timbers which were capable of being viewed from this vantage point showed evidence of moisture-related rot such as brown fungus. Indeed, many of the round log joists still retained their bark, the loss of which is often a sign of cyclical wet and dry conditions. Each transverse carrying beam in the floor, located in the plane of each bent of the frame, is supported by a pair of evenly-spaced fieldstone piers. Though it could not be stated with any certainty, the consistency in the style of laying each pier plus the patina on the stone suggests that these may be original to the building. Regardless of their age, these piers are supporting the transverse carrying beams with remarkable straightness. It is difficult to conceive of a system of dry-laid stone floor supports that could be in better condition. The floor system does not appear to have suffered any damage as a result of cyclical loading from above.

If any action were to be taken with regard to repairing the foundation, it should be to employ the services of a qualified historic stonemason and bricklayer to create recommendations for straightening the sections of wall which have moved out of plumb, and if repair here is impractical, exploring options related to shifting the load on the north foundation wall to be supported inboard of the north sill, such as onto additional piers or a shear wall, and replacing the brick entirely. Other smaller damaged sections should be repaired and repointed as necessary to forestall ongoing deterioration.



- b. **Frame:** The timber frame of the church is only visible in the crawl space and attic. In a manner fairly typical for the age of the church, members of relatively small dimension, such as braces, are vertically-sawn. Larger timbers such as tie-beams and floor carrying beams are hewn, and of remarkably high quality timber. The floor joists beneath the sanctuary, as well as the rafters, are log poles with one face hewn flat for board fastening. Though it is debatable whether the roof system consists of true trusses, the hewn five-sided ridge beam is supported by hewn kingposts which rise from the midpoint of each tie-beam to tenon into it. Whereas a more traditional kingpost truss would include principal rafters in each bent, this roof relies rather on round pole common rafters which tenon into the ridge beam. Given this, rather than the kingposts being diagonally braced up into principal rafters, they are instead diagonally braced down to the tie-beams beneath. The pitch on these braces is very low in order to distribute the load on the kingposts downward as close as practical to where the tie-beams are supported by the wall posts. This, plus the relatively low pitch of the roof, has created strain at the tie-beam ends which may at one time have resulted in some degree of failure. Particularly in the case of the south end of the second bent from the east, the rafter tail and plate are being restrained by large and relatively new through-bolted steel brackets. One other repair appears to be at the second bent from the west gable end of the church, which includes a later sawn kingpost. The repairs present in the roof system are of high quality and appear to be substantial, and stable as a result. Short of removing the entire roof system to replace any damaged timber, these repairs, though perhaps non-historic in nature, are an admirable compromise to help resist outward thrust at the rafter plate level. No other areas of the frame were visible which displayed any un-addressed damage.
- c. **Spire:** It is somewhat difficult to fix an exact date for the construction of the spire. The lowermost square base's timber frame is not a great deal later than that of the church itself, the only evidence of its having been added being that the ridge beam was originally continuous along the entire length of the church. In its current form the ridge beam is truncated at its intersection with the base of the spire, but a small section remains in the length of roof east of the tower base which frames up the east gable end.



The base of the spire is capped by a shallow hipped roof which still bears a covering of unpainted cedar shingles within the perimeter of the belfry octagon. The center of this roof is pierced by the access opening directly beneath the bell carriage, which, rather than being a small timber frame, is held together with large iron spikes. The octagon framing is out of hewn softwood timber secured with wooden trunnels. The bell itself bears a patent date of November 1862, which would perhaps indicate that the square lantern was built and roofed shortly after the church itself, and that at roughly the same time or a few years later the octagon was constructed, the bell installed, and access cut through the shingled surface. The slender upper spire may be a later reproduction, consisting as it does of fairly modern framing lumber with only light weathering and patina. Overall the steeple is in excellent condition, and not suffering from the ingress of water and birds which plague many other similar structures.

- d. **Paint and Siding:** The paint and wooden clapboard siding are in fair condition. It appears to have been a number of years since the building was comprehensively repainted, but at the present moment this may not be necessary. Some minor areas of damage to siding and paint would be easily remedied through inclusion as a part of an ongoing regime of diligent regular maintenance. Trim and architectural woodwork are in similarly intact condition.
- e. **Roof:** The current roofing material consists of fairly new metal standing seam. While in the attic a number of areas of stained timber and roof boards were observed, these appeared to be quite old and likely dated from the time when the roof was covered with wooden (and subsequently asphalt) shingles. The flashing around the chimney and steeple appears to be intact and not unduly permitting ingress of water.
- f. **Doors and Windows:** The principal area of concern here is with regard to the windows. Historic sashes are capable of lasting indefinitely, but do require ongoing maintenance. Though these fine sixteen over sixteen windows, which are likely original, do not show any areas of outright damage, the glazing and paint is beginning to fail. The shutters, vulnerable as they are to impact and wind damage, could also do with repair, especially in cases where louvers are damaged or missing, and shutter frames are out of square. This is highly specialized work, and qualified practitioners should be sourced.



IV. **Conclusion:** The South Duxbury Church is a fine example of a small Vermont village church, with a number of highly characteristic features which make it a valuable and highly visible local landmark. Large double-hung windows, plain massing, simple classical architectural woodwork and a restrained, delicate spire make it an attractive and valuable building. Happily, the church has been well cared for and lightly used over the course of its history, and is largely unaltered from its 1850s-60s configuration including original pews and an open choir loft or gallery. Perhaps its most unusual feature is the means of accessing the church at the principal entrance. The doors are set some considerable height above grade, necessitating the presence of a tall wooden porch spanning the façade. Many churches of similar age would have been accessed by, for example, low granite steps. Though this is perhaps not germane to the focus of this report in terms of assessing condition, the foundation of water-struck bricks atop a dry-laid fieldstone base is also somewhat anomalous. The stone piers in the basement supporting the floor are mostly regular in their footprint but narrow considerably before contacting the floor system itself. It may be that the church was raised and the courses of brick added shortly after construction, necessitating the addition of the porch.

V. **Cost Estimates:**

- a. Exterior paint touch-up: \$3,000 - \$5,000
  - b. Foundation brick pointing: \$5,000 - \$10,000
  - c. Foundation north wall resetting \$15,000 - \$20,000
  - d. Window restoration: \$2,000 - \$3,000 per opening; \$16,000 - \$20,000 total
  - e. Shutter restoration: \$500 - \$1,000 per opening; \$4,000 - \$8,000 total
- Estimated Project Cost: \$25,000 - \$50,000



## VI. Sunshine Temperance Hall

- a. **Structure Overview:** The Sunshine Temperance Hall, constructed c. 1896, is a simple wood-framed single-level building with its gable end facing east onto Route 100. Based on its massing, date of construction and elements observable, it is clear that the temperance hall is constructed in a stick frame form out of dimensional lumber.
- b. **Foundation:** The building rests atop a few visible courses of fieldstone which was likely originally dry-laid but has been mortared after the fact in a number of locations. It could not be readily determined how far the fieldstone foundation continues below grade, but regardless, given the lightness of the building and its sporadic use, the foundation is adequately supporting the building around its entire perimeter, despite the occasional shifted stone. Though the foundation does not require any repair as such, it should be monitored for any accelerated displacement.
- c. **Roof:** The roof is the element of the exterior envelope of the church which is in the best condition. It appears to be fairly new metal standing seam, and though the attic space could not be accessed for inspection, the chimney in the temperance hall does not appear to be coping with any recent water damage, though some old staining is present. It may be reasonably assumed that the flashing and roof covering are functioning well in terms of shedding snow and excluding water from the building's interior.
- d. **Trim and Paint:** Unlike the adjacent church, the paint on the Temperance Hall is in very poor condition, and should essentially be considered to be in a state of failure. The paint may indeed be original in some locations, as certain pieces of trim, such as a window casing in the south wall, retain their paint to a much greater degree, suggesting that they are replacement elements. As the paint continues to flake off of the building, the small areas of damaged clapboards largely restricted to the lowest courses will continue to become more widespread at an accelerated pace. A comprehensive repainting should be considered a priority task. As with all historic buildings, it is most prudent to assume that any paint contains lead. Given that in this case it may well be that the current paint application is original, the presence of lead paint is all but a certainty, and a painting contractor qualified in handling toxic materials should be sought.



- e. **Doors and Windows:** Though it appears that the doors and windows have had some patching and repair over their history, they have suffered a similar degree of weather-related damaging which has affected the clapboards and paint. The raised-panel entry doors have a raised grain due to the weathering of bare wood, and the two-over-two windows have failed glazing, shrinking joinery and missing glass. With a qualified contractor it should be a straightforward task to remove, restore, and reinstall the doors and windows with new glazing, repaired woodwork, fresh paint and unobtrusive weather stripping in order to regain their historic integrity, improve thermal performance and restore functionality.
  
- f. **Interior:** Perhaps apropos for a temperance hall, there is little to speak of in terms of interior decoration of the building, consisting as it does of a large single room with a small partition wall at the southeast corner to create a small pass-through kitchen. The walls are plain painted lath and plaster beneath a ceiling of hardboard and battens, and a floor of simple softwood tongue-and-groove narrow boards. A wood stove is piped into the chimney at the room's west end, and the kitchen likely dates from the early to middle part of the 20<sup>th</sup> century. Essentially the hall is just that: a plain meeting room. In terms of condition there is nothing which stands out as being unusual for a building of this type, usage pattern and age. Much like the exterior, it is readily apparent that any issues stem from deferred maintenance. The plaster is in good condition, but could perhaps benefit from repainting. If the intent is to adapt the building for more regular ongoing use, it may be useful to sensitively refinish the existing flooring, as whichever shellac or varnish which it may at one time have been coated with has largely been worn away, and the boards themselves are beginning to cup. A simple sanding and recoating would likely extend the life of the historic flooring for some considerable time, as it may not have been refinished substantially since the time of initial construction. The kitchen, though dated, is not in bad or damaged condition, and indeed has some degree of historical value in and of itself as something of an artifact.





g. **Conclusion:** The temperance hall is a building which is eloquent in its simplicity, as its very nature as a straightforward gathering space for modestly-sized groups means that there has been little scope for adaptation or alteration over the course of its history. The addition of a kitchen is the only obvious major change to the building, so it is worthy of preserving not only by virtue of its historical nature, but also due to its well-preserved state of originality. The tasks of maintaining and preserving the building should be all the more simple given the building's lack of complexity, even lacking anything beyond the simplest of physical plant now present to supply electricity. The building has suffered from a degree of neglect since construction given its limited use, but its simplicity and lightness of construction mean that despite this there are only so many elements which can deteriorate or be subject to undue stress. The foundations are sound, and could do with some resetting, but the primary focus of conservation should be in the exterior envelope, namely paint, woodwork, and doors and windows. Increasing the durability of the exterior and improving weathertightness will go a great deal towards safeguarding the Temperance Hall's admirable level of intactness.

h. **Cost Estimates:**

- i. Repaint exterior: \$3,000 - \$5,000
  - ii. Refinish floors: \$2,500 - \$5,000
  - iii. Restore windows: \$500 - \$1,000 per opening; \$4,000 - \$8,000 total
  - iv. Restore doors: \$500 - \$1,000 per door; \$1,000 - \$2,000 total
- Estimated Project Cost: \$7,500 - \$15,000 total



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## Images – South Duxbury Church

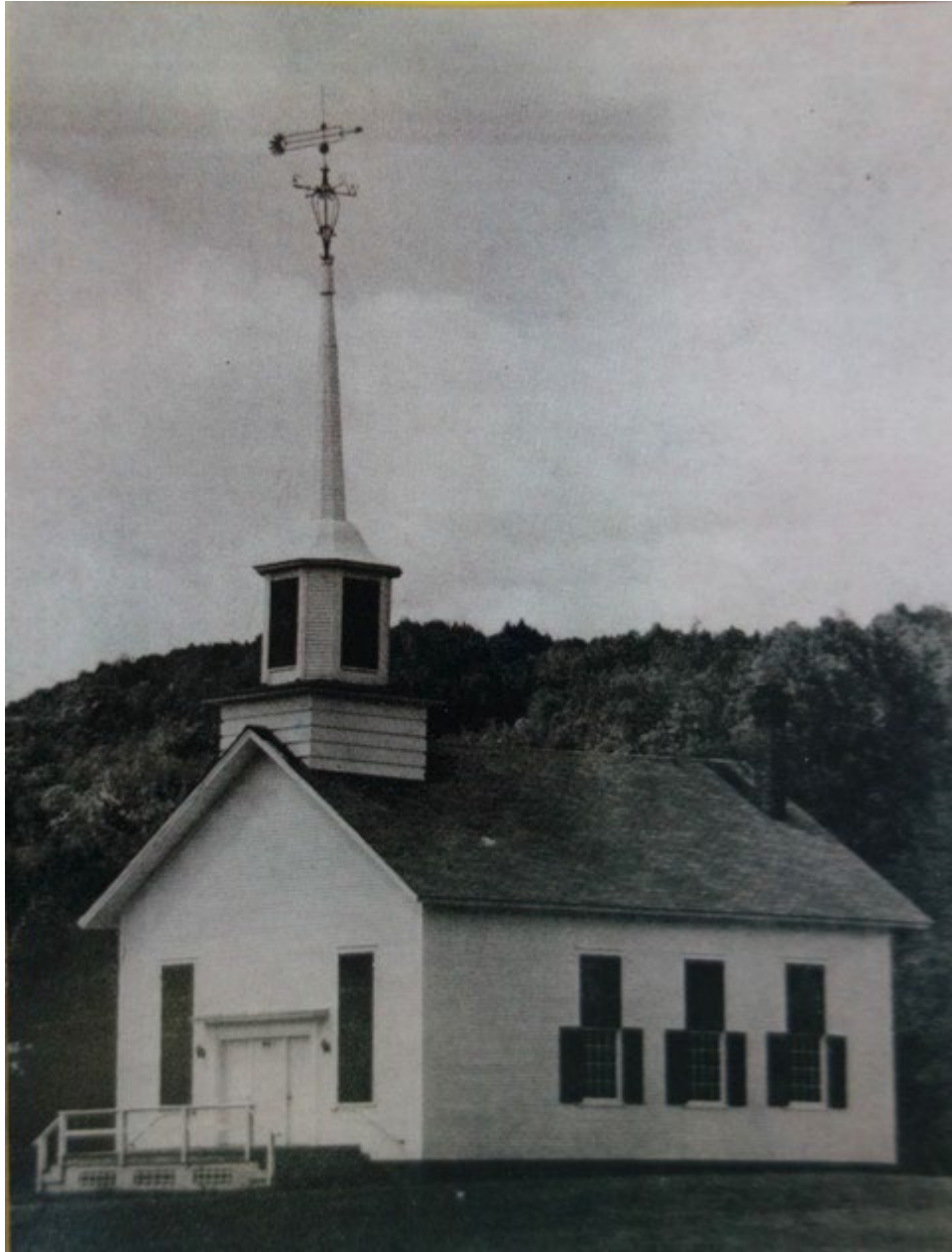


Fig. 1 – Historic Image (courtesy of Duxbury Historical Society)

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Fig. 2 – East principal entrance; note large porch and Temperance Hall in the background.

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Fig. 3 – Detail window with out-of-square shutters.

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Fig. 4 – South foundation wall; note brick courses above dry-laid fieldstone.

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Fig. 5 – Northwest corner foundation wall; note missing mortar and loose bricks.

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Fig. 7 – North foundation wall; note out-of plumb condition of the brickwork and failed mortar.

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Fig. 8 – View into the crawlspace beneath the church, in overall excellent condition.

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Fig. 9 – Interior view.

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Fig. 10 – Kingpost roof system.

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Fig. 11 – Detail view of the common rafters, kingposts and ridge beam.

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Fig. 12 – Lower belfry framing.

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Fig. 13 – Lower belfry roof shingling; bell carriage in the right foreground.

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Fig. 14 – Detail view of belfry framing; note the modern through-bolt securing the replacement upper spire to the historic belfry timber framing.

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Fig. 15 – Detail view of the bell yoke casting.

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Fig. 16 – Temperance Hall

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Fig. 17 – Detail view of damaged window, siding and fieldstone foundation.

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Fig. 18 – North eave wall.

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Fig. 19 - Detail view of west gable end – note failed original paint, intact original paint, and replacement clapboards in the left foreground.

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Fig. 20 – Kitchen area.

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Fig. 21 – Assembly room.

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Fig. 22 – Water-stained hardboard ceiling.

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