

VLR-4/28/95 NRHP 8/3/95

United States Department of the Interior  
National Park Service

National Register of Historic Places  
Registration Form

This form is for use in nominating or requesting determinations for individual properties and districts. See instructions in *How to Complete the National Register of Historic Places Registration Form* (National Register Bulletin 16A). Complete each item by marking "x" in the appropriate box or by entering the information requested. If any item does not apply to the property being documented, enter "N/A" for "not applicable." For functions, architectural classification, materials, and areas of significance, enter only categories and subcategories from the instructions. Place additional entries and narrative items on continuation sheets (NPS Form 10-900a). Use a typewriter, word processor, or computer, to complete all items.

1. Name of Property

historic name Longdale Furnace Historic District  
other names/site number VDHR File No. 03-338

2. Location

street & number Longdale Furnace Road, Iron Ore Lane, Church Road, Conner Lane not for publication N/A  
city or town Clifton Forge vicinity X  
state Virginia code VA county Alleghany code 005 zip code 24422

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act of 1986, as amended, I hereby certify that this X nomination request for determination of eligibility meets the documentation standards for registering properties in the National Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the property X meets does not meet the National Register Criteria. I recommend that this property be considered significant nationally X statewide locally. ( See continuation sheet for additional comments.)

Signature of certifying official/Title Audice Masnik  
Date 6/15/95

Virginia Department of Historic Resources  
State or Federal agency and bureau

In my opinion, the property meets does not meet the National Register criteria. ( See continuation sheet for additional comments.)

Signature of commenting or other official/Title \_\_\_\_\_  
Date \_\_\_\_\_

State or Federal agency and bureau \_\_\_\_\_

4. National Park Service Certification

I hereby certify that this property is:

- \_\_\_\_\_ entered in the National Register.  
\_\_\_\_\_ See continuation sheet.
- \_\_\_\_\_ determined eligible for the National Register.  
\_\_\_\_\_ See continuation sheet.
- \_\_\_\_\_ determined not eligible for the National Register.
- \_\_\_\_\_ removed from the National Register.
- \_\_\_\_\_ other (explain): \_\_\_\_\_

Signature of the Keeper \_\_\_\_\_

Date of Action \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Classification

<b>Ownership of Property</b> (Check as many boxes as apply)	<b>Category of Property</b> (Check only one box)	<b>Number of Resources within Property</b> (Do not include previously listed resources in the count.)		
<input checked="" type="checkbox"/> private	<input type="checkbox"/> building(s)	Contributing	Noncontributing	
<input type="checkbox"/> public-local	<input checked="" type="checkbox"/> district	<u>27</u>	<u>4</u>	buildings
<input type="checkbox"/> public-State	<input type="checkbox"/> site	<u>8</u>		sites
<input type="checkbox"/> public-Federal	<input type="checkbox"/> structure	<u>3</u>	<u>1</u>	structures
	<input type="checkbox"/> object			objects
		<u>38</u>	<u>5</u>	Total

**Name of related multiple property listing**  
(Enter "N/A" if property is not part of a multiple property listing.)

**Number of contributing resources previously listed in the National Register**

N/A 0

6. Function or Use

<b>Historic Functions</b> (Enter categories from instructions)		<b>Current Functions</b> (Enter categories from instructions)	
<i>Category</i>	<i>Subcategory</i>	<i>Category</i>	<i>Subcategory</i>
INDUSTRY/ PROCESSING/ EXTRACTION	manufacturing facility	DOMESTIC DOMESTIC	single dwelling hotel
DOMESTIC	other: company housing		
DOMESTIC	single dwelling		
TRANSPORTATION	rail-related: railroad		
HEALTH CARE	medical business/office		
DOMESTIC	secondary structure		

7. Description

<b>Architectural Classification</b> (Enter categories from instructions)	<b>Materials</b> (Enter categories from instructions)
LATE VICTORIAN: Queen Anne	foundation STONE
EARLY REPUBLIC: Federal	walls WOOD
NO STYLE	BRICK
	roof SYNTHETICS
	other WOOD
	METAL
	(see continuation sheets)

Narrative Description

(Describe the historic and current condition of the property on one or more continuation sheets.)

8. Statement of Significance

Applicable National Register Criteria

(Mark "x" in one or more boxes for the criteria qualifying the property for National Register listing.)

- A Property is associated with events that have made a significant contribution to the broad patterns of our history.
- B Property is associated with the lives of persons significant in our past.
- C Property embodies the distinctive characteristics of a type, period, or method of construction or represents the work of a master, or possesses high artistic values, or represents a significant and distinguishable entity whose components lack individual distinction.
- D Property has yielded, or is likely to yield, information important in prehistory or history.

Criteria Considerations

(Mark "X" in all the boxes that apply.)

Property is:

- A owned by a religious institution or used for religious purposes.
- B removed from its original location.
- C a birthplace or a grave.
- D a cemetery.
- E a reconstructed building, object, or structure.
- F a commemorative property.
- G less than 50 years of age or achieved significance within the past fifty years.

Areas of Significance

(Enter categories from instructions)

- A: INDUSTRY
- C: ARCHITECTURE
- D: ARCHAEOLOGY: HISTORIC--NON-ABORIGINAL

Period of Significance

1827 - 1937

Significant Dates

1827  
1874  
1919

Significant Person

(Complete if Criterion B is marked above)

Cultural Affiliation

Architect/Builder

UNKNOWN

Narrative Statement of Significance

(Explain the significance of the property on one or more continuation sheets.)

9. Major Bibliographical References

Bibliography

(Cite the books, articles, and other sources used in preparing this form on one or more continuation sheets.)

Previous documentation on file (NPS):

- preliminary determination of individual listing (36 CFR 67) has been requested
- previously listed in the National Register
- previously determined eligible by the National Register
- designated a National Historic Landmark
- recorded by Historic American Buildings Survey # \_\_\_\_\_
- recorded by Historic American Engineering Record # \_\_\_\_\_

Primary location of additional data:

- State Historic Preservation Office
- Other State agency
- Federal agency
- Local government
- University
- Other

Name of repository:

**10. Geographical Data**

Acreage of Property      approximately 50 acres

**UTM References**

(Place additional UTM references on a continuation sheet)

	Zone	Easting	Northing	Zone	Easting	Northing
1	17	615200	4185100	3	17	616300 4185300
2	17	616100	4185700	4	17	615700 4184900

— See continuation sheet.

**Verbal Boundary Description**

(Describe the boundaries of the property on a continuation sheet.)

**Boundary Justification**

(Explain why the boundaries were selected on a continuation sheet.)

**11. Form Prepared By**

name/title	<b>Leslie A. Giles, Architectural Historian</b>	date	<b>28 December 1994</b>
organization	<b>VDHR / Roanoke Regional Preservation Office</b>	telephone	<b>(703) 857-7585</b>
street & number	<b>1030 Penmar Avenue, SE</b>	state	<b>VA</b>
city or town	<b>Roanoke</b>	zip code	<b>24013</b>

**Additional Documentation**

Submit the following items with the completed form:

**Continuation Sheets**

**Maps**

A **USGS map** (7.5 or 15 minute series) indicating the property's location.

A **Sketch map** for historic districts and properties having large acreage or numerous resources.

**Photographs**

Representative **black and white photographs** of the property.

**Additional items**

(Check with the SHPO or FPO for any additional items)

**Property Owner**

(Complete this item at the request of the SHPO or FPO.)

name see attachment

street & number \_\_\_\_\_ telephone \_\_\_\_\_

city or town \_\_\_\_\_ state \_\_\_\_\_ zip code \_\_\_\_\_

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C. 470 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 18.1 hours per response including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Chief, Administrative Services Division, National Park Service, P.O. Box 37127, Washington, DC 20013-7127; and the Office of Management and Budget, Paperwork Reductions Project (1024-0018), Washington, DC 20503.

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7. DESCRIPTION (continued)

Materials

foundation	BRICK
walls	SYNTHETICS
roof	METAL STONE
other	BRICK CONCRETE STONE

Narrative Description

Summary Description and Integrity Statement

The Longdale Furnace Historic District, at the village of Longdale in northeast Alleghany County, is located southeast of Interstate 64, along portions of Longdale Furnace Road (VA Route 269 / former US Route 60), Church Road (VA Route 776), and Iron Ore Lane. Simpson Creek flows through the district, defining a narrow valley surrounded by Mill, Brushy, and North mountains. The area's particular geographic and geologic characteristics prescribed the landscape's management and exploitation by the iron industry over nearly 100 years. The historic district encompasses approximately fifty acres of the administrative, manufacturing, shipping, commercial, and residential center of the former Lucy Selina Furnace-Longdale Iron Company property. The area included within the district boundaries includes privately owned, contiguous properties historically associated with the iron foundries' operations and personnel, that retain sufficient architectural or archaeological integrity. Of the total forty-three resources identified within the district boundaries, twenty-seven buildings, eight sites, and three structures contribute to the historic character of the district, while only four buildings and one structure do not contribute. While the majority of buildings, structures, and the machinery associated with iron manufacturing on the property were dismantled after iron production ceased in 1911, the extant brick machine shop, two tall brick exhaust chimneys, the log office building laboratory, and numerous foundations and landscape features reflect characteristic aspects of the community's industrial history. In addition, single and multiple dwellings, a boarding domestic outbuildings, a carriage house, a doctor's office, and other structures are

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associated with the domestic situations of company laborers, managers, and directors remain adjacent to the industrial sites. The district excludes some historic resources in the village that have lost their architectural integrity; it also excludes some nearby historic resources that have been made discontinuous by modern highways or residential construction. Historically associated resources, now within the boundaries of the adjacent George Washington National Forest, have also been excluded, pending the U.S.D.A. Forest Service's completion of a thematic study focused on the iron industry. For the following description section, **boldface** printing indicates a contributing resource within the district. A separate inventory of resources is not included.

Natural Resources

Simpson Creek is a tributary of the Cowpasture River, which joins the Jackson River to form the headwaters of the James River. This major river flows eastward to the port of Richmond, connecting the mountainous and resource-rich western counties of Virginia with its more easterly mercantile and production centers. During the early nineteenth century, Simpson Creek served as both transportation route and power source for the ironmasters of Lucy Selina Furnace. The bellows that kept the furnace in blast was powered by a waterwheel. This wheel was turned by a regular stream of water sent through an inclined millrace from a millpond or other dammed portion of the creek. In addition, workers at the furnace undoubtedly fished and bathed in the creek and millpond. While no traces of structures or buildings associated with the early-nineteenth-century uses of the creek remain visible above ground today, **Simpson Creek** continues to be a critical feature that defines the historic landscape of the district, and is classified for the district as a contributing site. Slag, a byproduct of iron smelting, can still be found along the creek's shorelines. Stone retaining walls prevent erosion of the waterway. The southeastern slopes of Mill and Brushy mountains, along with the northwestern slope of North Mountain, also serve to define the district's setting. The steep, heavily wooded terrain that surrounds the village presents a spectacular, if rugged, frame. More important, though, is the fact that these mountains, with their abundant timber and mineral resources, made possible the development of the iron foundries and the accompanying village. The mountain terrain, which includes iron and limestone mines, colliering sites, and other iron production-related resources, is presently excluded from the district. Most of the mountain property is owned by the U.S.D.A. Forest Service, which currently is sponsoring documentation and research projects in the area. A thematic context on the Virginia iron industry is being undertaken by the Virginia SHPO and the U.S.D.A. Forest Service to form the basis of a large-scale documentation registration project for additional public and private resources. The resulting Multiple Property Documentation Form and individual nomination reports will undoubtedly identify and

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eligible or contributing historic resources associated with the former Lucy Selina Furnace--Longdale Iron Company property.

### Industrial Resources

When Lucy Selina was operated as a cold-blast charcoal-fueled iron furnace, the built environment was quite different than it appears now. The original stone furnace stack, approximately thirty-seven feet tall by nine feet square, was built in 1827 along with accessory structures such as a charcoal house, bridge house, bellows house, and casting house. Furthermore, the property included a sawmill and a gristmill, pasture land, and worker housing. Many of these resources survived through 1872, when Annie Esrey Johnson of Bryn Mawr, Pennsylvania, sketched numerous views of the furnace and vicinity (Exhibits One and Two).

The earliest surviving building in the district appears to be the two-story **Longdale Iron Company Office**, originally built for housing in the late 1820s as a part of the complex around Lucy Selina Furnace. This "dwelling for the proprietors," located on the northwest side of Simpson Creek, is immediately adjacent to the industrial ruins of the foundries. Originally only two bays wide of log construction with two entries, exterior end stone chimneys, a raised stone foundation, two-story front porch across its facade, and an exterior stair communicating between the first and second floors, the building also included a small, one-story log wing with a separate entrance. An 1872 sketch by Annie Esrey Johnson (Exhibit Three) is the only known view of the building before it was altered later in the 1870s. After 1873, the Longdale Iron Company replaced the building's small log wing with a much larger two-story, two-bay frame addition; novelty siding, two-over-two sash with peaked window lintels, and slate roofing characterized the new construction. At the same time, a two-story brick and steel plate vault was added to the central bay of the five-bay facade, and an interior stairwell replaced the former exterior stair. The building's original two-room plan was expanded into a linear three-room plan with the renovation. Although many interior features have been obscured by modern finishes, at least two original Federal mantelpieces remain, along with several examples of original plaster walls and wood moldings around doors and windows. The door of the 1870s vault even retains its shipping inscription, "Longdale Iron Company, Longdale, Alleghany Va, Via C & O RR." Modern alterations to the exterior include the installation of asbestos shingles over the logs and nov siding, probable removal of the peaked window lintel trimwork, and a minor one-story addition at the rear of the building. A small contributing frame privy dates from the twentieth century, while a modern frame garage does not contribute to the district.

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The small **Longdale Iron Company Laboratory**, with a slate-sheathed gable roof, exposed log walls, brick flue, stone foundation, and paired six-over-six sash, is located in the office's rear yard. Virtually unchanged from its early-twentieth-century appearance, the laboratory's exterior reveals infill repairs on the front facade of the building that indicate the locations of a former central doorway and notches for ceiling joists. These characteristics correspond with the external appearance of the original one-story log wing of the office as described above; they suggest that the structure was relocated to its current site when the alterations to the main building were being undertaken in the 1870s. Although the laboratory's assay equipment was sold off and removed in the early twentieth century, the building's interior retains evidence of special exhaust flues necessary for test experiments on the ores and fuels used at Longdale. A modern shed roof at the south end of the building appears to be its only non-historic alteration.

Several very visible reminders of the community's industrial heritage do remain within the district boundaries; namely, the two tall cylindrical brick **chimneys** that exhausted the iron pipe Durham stoves used to pre-heat air for the hot-blast furnaces at Longdale. Built of alternating header and stretcher brick courses with metal bands near their bases, the 106-foot chimneys are ringed with brick collars and topped by corbelled caps. The interiors of the chimneys and openings near their bases are lined with firebrick; double-coursed segmental arches span the openings. The chimneys are classified as contributing structures in the district. Adjacent to the chimneys, the brick **machine shop** also remains in fair condition and is classified as a contributing building in the district. Gothic-arched blind panels, within a recessed rectangular panel, highlight the southeast gable front of the building; similar gothic-arched panels were used on other buildings throughout the Longdale Iron Company's complex. Tongue-and-groove-paneled doors survive at arched openings along sides of the building, as do the ruins of a wooden shed attached to the northwest side of the building.

After the Longdale Iron Company lands passed into private hands in the 1920s, other industrial buildings and structures were dismantled or demolished, leaving only foundations and industrial artifacts on the property. These archaeological features, in turn, were mostly covered over in the late twentieth century by the fill required for construction of Interstate 64 through the area. Those presumed to remain within the district boundaries, include foundations for an **icehouse**, the **steam engine house**, the **carpentry shop**, and the **locomotive shops**. Fortunately, the lack of any intensive usage of the property since the historic period suggests that the archaeological contexts for these and other associated sites are intact and could therefore provide additional detailed information on the technologies and management practices utilized at the iron foundries. These known locations are considered, therefore, to be contributing sites in the district. Additional industrial resources that remain evident within portions of the district are the **graded**

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beds of the Longdale Iron Company's narrow-gauge railroad line. They are together classified as a contributing site within the district. The rail line, which led from its junction with the Chesapeake & Ohio Railroad at Longdale Station (where Simpson Creek flowed into the Cowpasture River) along Simpson Creek to the foundries, was part of a complete company-owned and -operated railroad that also included narrow-gauge tracks to the mines and quarries, six locomotives, eighty ore cars, forty coke cars, thirty-four flat cars, and three combination passenger cars. Unfortunately, none of the moving stock appears to have survived to the present.

Village Resources

The overwhelming majority of buildings and structures within the district are associated with the company town that developed around the foundries. Most of the village resources, constructed by the Longdale Iron Company from the 1870s through 1911, are located along Longdale Furnace Road. The village that came to be known as Longdale, or Longdale Furnace, was for convenience and practicality located immediately adjacent to the iron works. Laborers, clerks, supervisors, managers, doctors, and, in some cases, their families were provided such domestic accommodations as single dwellings, duplexes, boarding houses, and associated outbuildings and other structures. Since the closure of the iron works, the buildings have been adapted for use as single-family dwellings. Service buildings provided for village residents included a company store or commissary, two churches, and a doctor's office.

Predominant among the village resources is **Firmstone-Johnson House**, the large dwelling erected for the company directors in the 1870s or 1880s. Constructed upon a stone foundation, the house is built of heavy timber framing with brick infill, sheathed in novelty wood siding. Paint scrapings indicate that the building's original exterior color scheme was olive green, accented with darker olive green trimwork. Historic photographs indicate that other details on the building, such as the window sash, were highlighted by painting them in a much paler color, probably off-white. A substantial two-and-one-half-stories, the building's main block features a complex flat hipped roof with a front-facing offset gable, hipped dormers, an octagonal lantern, and brick chimneys with ornamental shafts. A slightly lower two-story rear ell, part of the original construction, incorporates similar materials and features. Turned wood ornament abounds on the building's exterior--coupled windows feature pedimented hood moldings with projecting center rondels, while eaves feature gable trim in a king-post truss pattern and drop ornaments at corner intersections. Cornerboards and watertable boards further outline the building's form. The house's dominant wraparound porch, with an integral octagonal gazebo, also incorporates extensive wood ornament, with its chamfered posts, frieze of diagonal braces

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and cross-braces, turnedwork balustrade, pedimented vestibule, and modillioned cornice. In the mid-twentieth century, asbestos shingles were installed over the siding; in the 1990s the asbestos shingles were replaced with mauve-colored vinyl siding. The original wood siding remains intact beneath the modern material. Other exterior alterations include a low, one-story gabled wing at the rear, southeast corner of the building.

The double-pile, central-passage-plan Firmstone-Johnson House includes several large spaces--dining room, double parlors, conservatory, and kitchen--on the first floor, while the upper floors are devoted primarily to bedrooms. A notable second-story feature is the small alcove at the rear of the hall that apparently served as a private chapel. The building's interior architectural features exhibit high-quality milled woodwork at the grand staircase in the central passage, around door and window openings, and in the doors, wainscot paneling, and other wall and ceiling moldings. Stained and leaded glass transoms above doorways color the light that flows into the house. Exotic imported features, such as the incised and floral-painted marble mantelpieces installed in the main level's three primary spaces, bring additional flair to the interior. Several original and period gaslight fixtures, presently wired for electricity, are in use in the house. Especially notable is the fixture located atop the newel post of the main staircase. Its cylindrical cloisonne base supports a four-light lamp; the glass globes are replacements. Modern alterations, dating from the 1990s rehabilitation of the building, have not compromised the building's interior integrity: electrical, plumbing, and other mechanical updates were carefully inserted, the kitchen equipment and layout was updated, some bedrooms were converted to provide bathroom facilities and closet spaces, and deteriorated surfaces were replaced with new plaster and wallpaper as necessary.

The **Grounds** around the Firmstone-Johnson House retain a significant amount of historic landscape materials, features, and the foundation of at least one outbuilding. A raised lawn terrace adjacent to the house's west side, formerly the site of a parterre garden of carpetbedded flowering plants, retains its form and is further demarcated by a row of young hemlock trees. Mature specimen trees of great size and height accentuate the park-like quality of the grounds. While the property was originally enclosed with a decorative picket fence, and featured brick pier gateposts, at present an attractive low stone fence and piers mark the front entry to the grounds. Overgrowth has obscured the gravel paths, stone-lined stream bed, and terraced plant beds located within the grounds but distanced from the main house. The foundations of a large greenhouse are located to the rear of the house. Contributing outbuildings associated with the house that do survive include the **Carriage Barn**, a one-and-one-half-story, wood frame building sheathed in board-and-batten siding, which features a stone foundation, jerkinhead roof covered with standing seam metal, exposed rafter ends, a louvered ventilator, a center front gable, and

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tongue-and-groove-paneled shutters and arched carriage doors; and a one-story, hipped roof **Servant's House**. This small dwelling located near the mansion's rear service entry, has been somewhat modified over the years. It does, though, retain standing seam metal roofing and a prominent interior brick chimney with a corbelled cap. Other contributing resources on the grounds include a 1920s or 1930s concrete block **garage**; and mid-1930s **stone retaining walls and piers** along the property's road frontage that were probably constructed by Civilian Conservation Corps (CCC) workers employed in the area at that time.

Near the Firmstone-Johnson House, across Longdale Furnace Road, is the **Assistant Manager's House**. This building, the second-largest single dwelling in the village, was also constructed in the 1870s or 1880s. One of the village's best-preserved buildings, the Queen Anne-style house features a front-facing gable, cross gables, and an eight-bay wraparound porch with decorative wood brackets and balustrade. The exterior is sided with weatherboards on the first floor and on the roof's gable ends, while the entire second floor is embellished with scalloped wood shingles. Wood corner boards and a belt course, single and coupled one-over-one double-hung sash windows with simple flat trim boards, brick chimneys with corbelled caps, and standing-seam metal roofing highlight the house's exterior. Modillion-like brackets embellish the building's horizontal cornices. A mature deciduous tree and shrubs, along with a entrance drive and walkway, make up the contributing elements of the landscape.

The largest concentration of contributing buildings in the district is encountered along the south side of Longdale Furnace Road, immediately upon entering the district from the southwest. Of frame or log construction, residences in the group feature regular setbacks from the road, side-gabled roofs, front porches, weatherboard or board-and-batten sidings, and double-hung windows with six-over-six or two-over-two double-hung sash. In some instances, aluminum or vinyl replacement sidings have been installed over the original wall surfaces. Facing the main road, a typical example of company housing survives at **6103 Longdale Furnace Road**: a two-story, six-bay, single-pile dwelling with stone foundation, interior end brick chimneys, and a full-length, five-bay front porch. A noncontributing concrete block garage is located in its rear yard. Next door, at **6107 Longdale Furnace Road**, a large duplex housed the families of the company doctor and of one of its managers. This symmetrical building incorporates a main block--two stories high with an attic, and four bays wide--with two subsidiary wings, each two stories high and two bays wide. A diagonally-placed interior brick chimney marks the central dividing wall between the two halves of the duplex, and two exterior end brick chimneys flank the lower wings. Separate three-bay porches shelter both of the building's front entries. The symmetrically ordered yard features two large Norway spruce trees that flank the dwelling, and two walkways that lead from the front entries to the roadway. A contributing frame **outbuilding**

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in the rear yard remains associated with the duplex. The **Company Doctor's Office** is situated in the western corner of the duplex property's front yard. This one-story, one-room gabled-front building retains a brick flue, paired windows, and multi-panel glazed entry door; a bracket-supported hipped roof shelters the entry. The next property, **6111 Longdale Furnace Road**, is another company-built duplex. Separated from the previous property by Conner Lane, the building features a four-bay facade with two front doors, a double-pile plan, a full-length, five-bay front porch, and evidence of a centered interior chimney. A noncontributing modern frame garage is located in the rear yard. The final dwelling in this group, **6113 Longdale Furnace Road**, is a one-and-one-half-story, three-bay asymmetrical house with a projecting gabled-front bay and two gabled dormers. Its single central entry suggests that the building served as a single dwelling rather than as a multiple dwelling like the others in the group.

Continuing east along Longdale Furnace Road, the **Longdale Iron Company Commissary Site** remains undeveloped, following the demolition of the building in the mid-twentieth century. The commissary, a two-story gabled-front frame building upon a one-story stone foundation, was constructed so it could accept narrow-gauge railroad cars into its ground level storage area, via tracks that connected to the company's main line on the other side of Simpson Creek. A poured concrete foundation on the site is presently used as a basketball court. Further study of the commissary site may reveal important information on the purchasing habits of the company labor force. A driveway east of the site leads from Longdale Furnace Road to an adjacent **Company House**, which apparently served as the home of a company clerk associated with the commissary. This two-story, gable-front house rests upon a raised brick foundation and features two interior brick chimneys, narrow weatherboard siding, six-over-six double-hung sash windows, and a full-length front porch with replacement supports and balustrade of wrought iron.

In close proximity to this main group of buildings are several resources along Iron Ore Lane, which runs perpendicular to Longdale Furnace Road. A company **Boarding House** at 104 Iron Ore Lane also has frontage along the adjacent main road. The two-and-one-half-story, three-bay, double-pile building is one of the largest resources in the district. Lodging and meals would have been provided there for its many male residents. Built upon a stone foundation, the building retains its original two-story rear ell, interior end chimneys, and full-length, five-bay front porch with a pedimented central entry bay and simple Stick style detailing. Further along the road, **110 Iron Ore Lane** is a small one-room-plan, two-story building with one-story gabled and shed wings. Its current residential use has not seriously compromised the building's exterior integrity. Three small wood **outbuildings**, including a privy, woodshed, and other storage, date from the early twentieth century. One additional contributing building on the property, a one- or two-room **tenement cottage**, represents a class of low-status dwellings once quite prevalent

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## Description (continued)

in the village. Of wood frame construction with vertical siding, it stands only one story high and two bays wide. Noncontributing poured concrete retaining walls and bridge supports, dating from the 1960s, were built as flood control measures along the small stream that flows through the property.

A group of three additional dwellings remains along Church Road, a roadway that parallels the curve of Simpson Creek east of the industrial sites and north of the Assistant Manager's House. The houses are oriented away from Church Road, apparently indicating that the roadway post-dates their construction. Located immediately adjacent to the carpentry shop site, the dwellings are of log or frame construction and feature simple vernacular forms. Without notable stylistic features, they were probably occupied by the foundry's lower-status workers. The buildings appear to have been used originally as duplexes or some other type of multiple dwelling. One of the three, **101 Church Road**, may actually pre-date the 1870s in part. The building's original construction featured a two-room-plan, was one-and-one-half stories in height, and included a coursed stone foundation, interior end chimneys, a gabled roof, and six-over-six double-hung sash windows. The Longdale Iron Company probably added the two-story extension to the building's north end, and the full-length, hipped-roof front porch to its east side after 1870. Although the exterior has been sheathed in aluminum siding and the front porch has been enclosed, the building retains enough of its historic appearance to be considered a contributing building in the district. It shares a dilapidated, though still contributing, board-and-batten-sheathed, gabled **duplex outbuilding** with the adjacent house, **103 Church Road**. A full two stories in height, this two-room-plan dwelling incorporates traditional local materials and forms, while introducing less-common features such as a shared interior chimney. The dwelling, which is classified as a contributing building in the district, features a gabled roof, six-over-six double-hung sash windows, a one-story full-length hipped-roof porch, and a one-story full-length rear shed addition. It has been recently sheathed in T-1-11 siding, but it retains a standing-seam metal roof. A noncontributing modern manufactured house or mobile home presently occupies a portion of the yard. **105 Church Road** completes the group of company housing along the road. The largest of the three dwellings in the small group, it faces southwest and overlooks the others. Adopting the traditional I-house form--two stories, three bays, single-pile plan--the house also includes an original two-story rear ell. The contributing building features a gabled roof sheathed in standing seam metal, an exterior end brick chimney, a brick foundation, six-over-six double-hung sash windows, and front, side, and rear porches. An associated **storage building** of wood frame construction with a gabled roof and five-panel door, also contributes to district's historic character.

One important surviving resource associated with the Longdale Iron Company's village

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### Description (continued)

been intentionally excluded from the district due to insufficient integrity. This resource, the multi-denominational church originally erected for Longdale's white residents, is engulfed by non-historic additions and has been extensively remodeled. Presently located along the village's perimeter, outside of the core concentration of buildings and sites, the church's lack of integrity prevents its inclusion.

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## Description (continued)

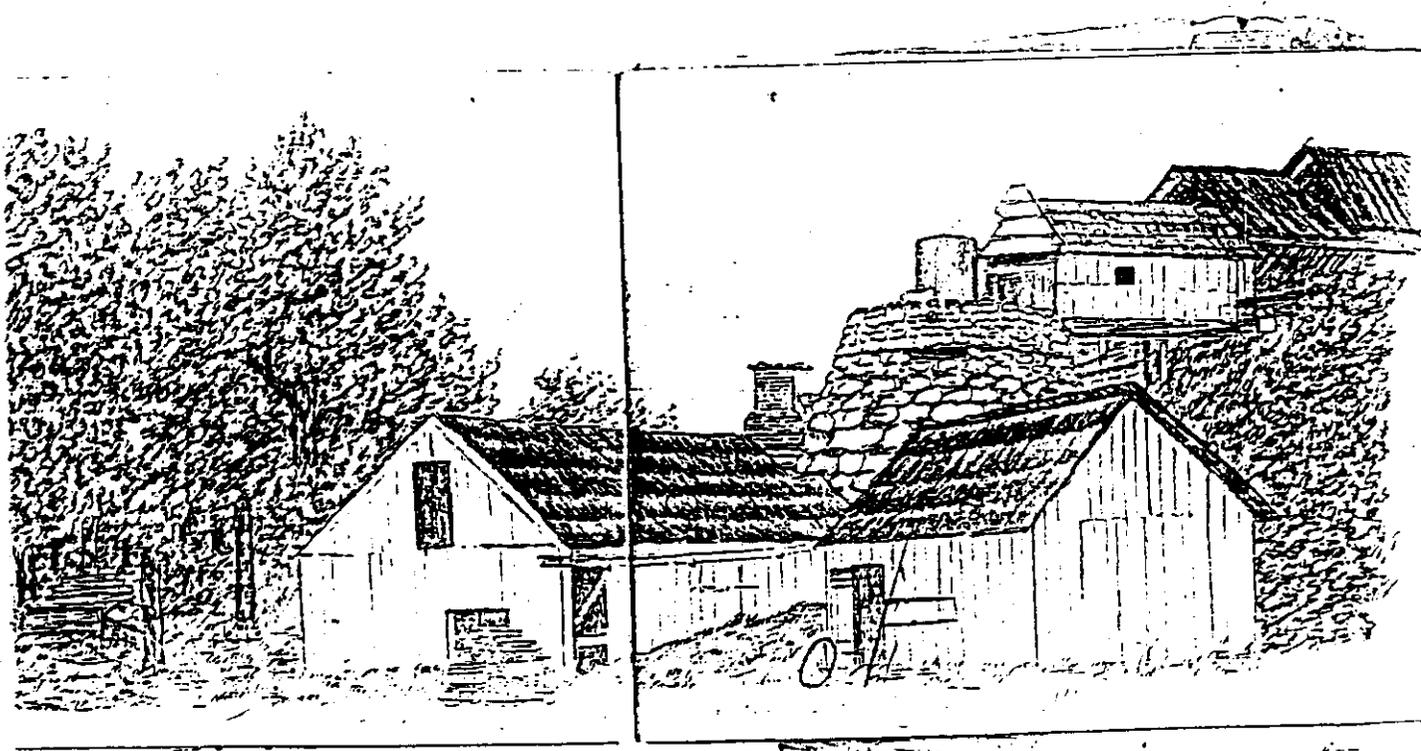


Exhibit One: "Lucy Selina Furnace." Drawing reproduced with permission from Annie Esrey Johnson's original sketchbook, *Pictures of Longdale, Va. in 1872*. This sketchbook remains in the possession of W.R. Johnson of Lynchburg, Virginia.

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Description (continued)

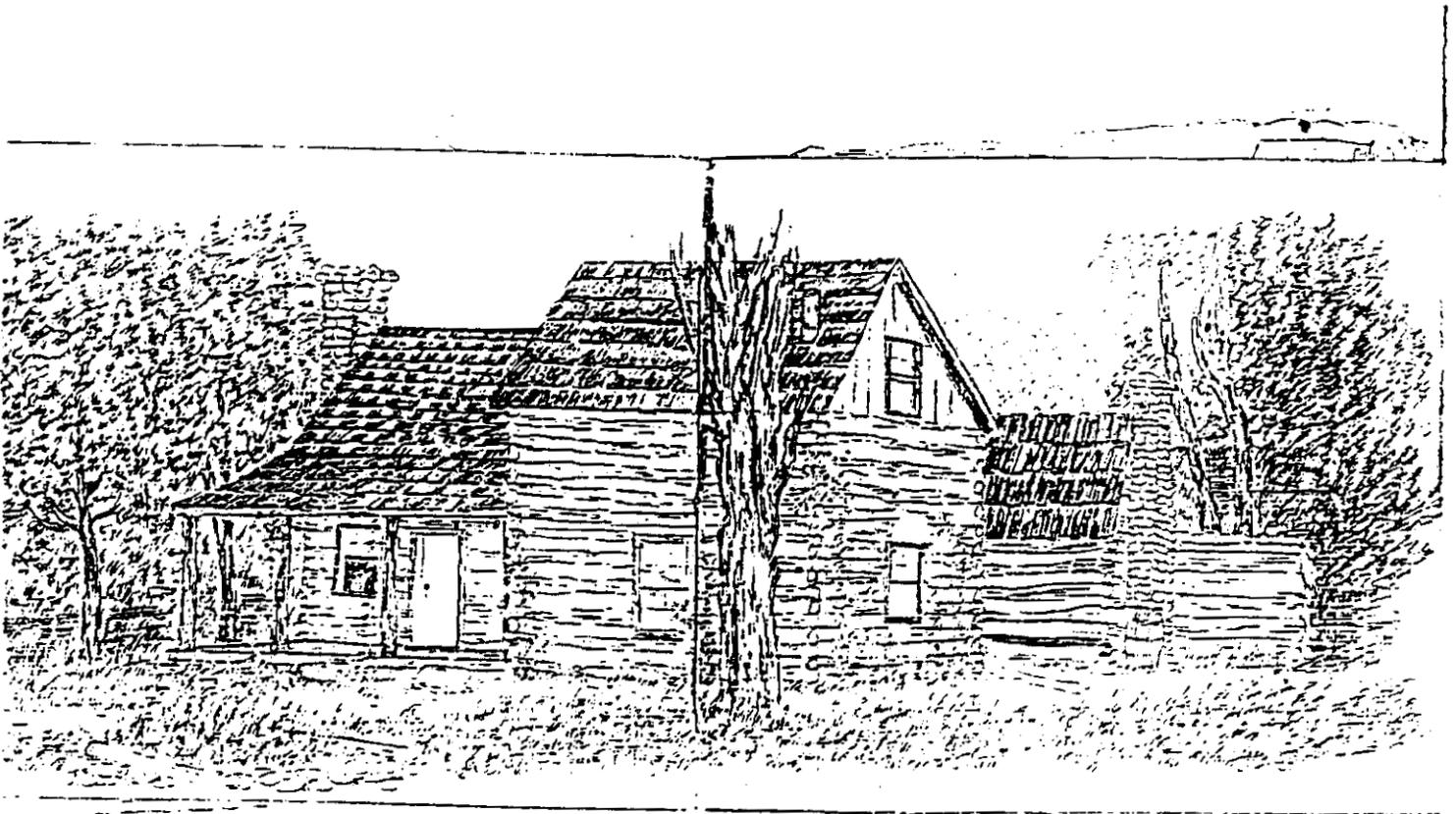


Exhibit Two: Unidentified log buildings associated with Lucy Selina Furnace. Drawing reproduced from Annie Esrey Johnson's original sketchbook, *Pictures of Longdale, Va. in 1872*. This sketchbook remains in the possession of W.R. Johnson of Lynchburg, Virginia.

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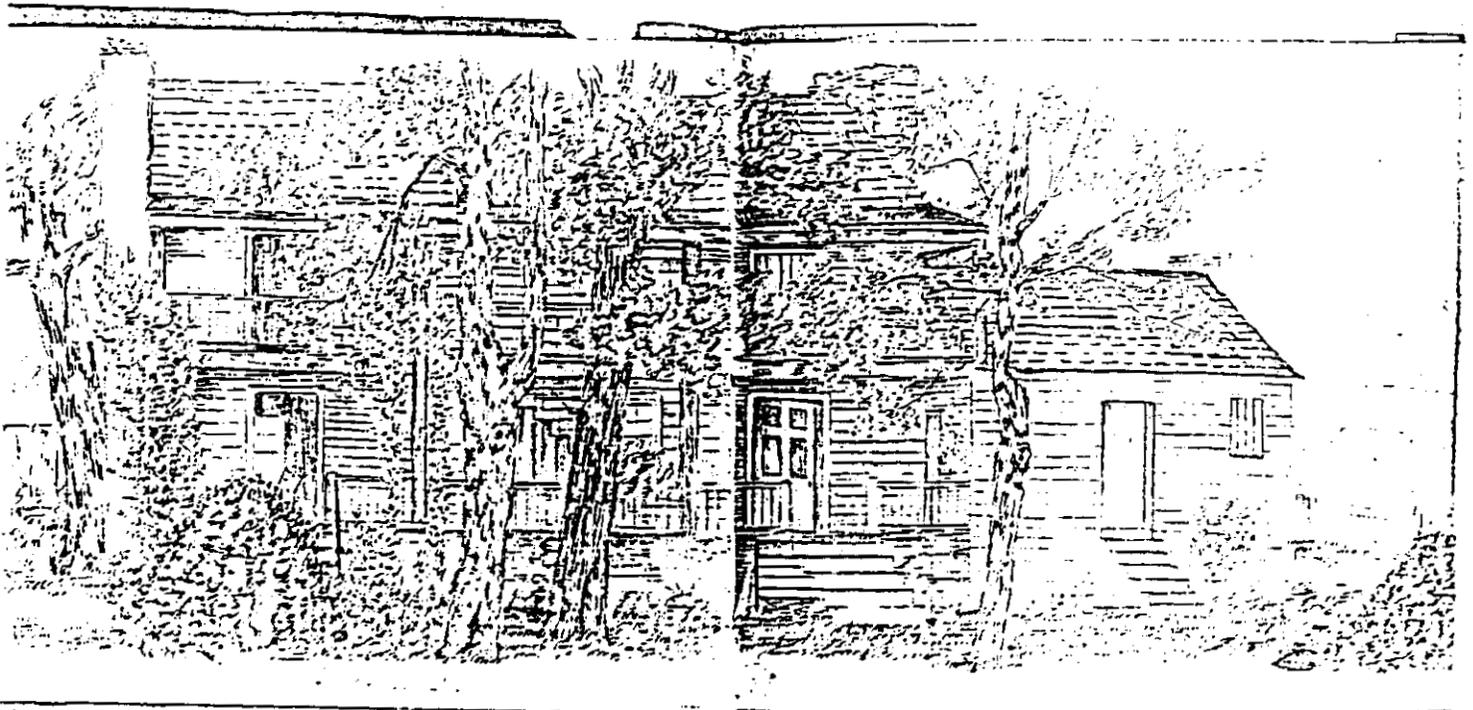


Exhibit Three: "Old Homestead." Drawing reproduced with permission from Annie Esrey Johnson's original sketchbook, *Pictures of Longdale, Va. in 1872*. This sketchbook remains in the possession of W.R. Johnson of Lynchburg, Virginia.

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8. STATEMENT OF SIGNIFICANCE (continued)

Narrative Statement of Significance

Summary Statement of Significance and Justification of Criteria

The Longdale Furnace Historic District is significant as the administrative, residential, and production center of extensive iron mining and manufacturing operations in Alleghany County, first developed in the antebellum period as a cold-blast, charcoal-fueled furnace by entrepreneurs Jordan & Irvine, and later redeveloped in the 1870s as Virginia's foremost hot-blast, coke-fueled furnaces by the Longdale Iron Company and industrialist William Firmstone. The district meets Criterion A in the category of Industry, due to its large number of surviving resources associated with the development, operation, and administration of an important regional iron manufacturing facility through three significant periods--1827-1852, 1863-1865, and 1869-1911. Slag, the primary by-product of iron production, was a second important mineral resource processed and shipped from the site, an activity undertaken from 1919 through 1932 by Wight and Company of Richmond. The district also meets Criterion C in the category of Architecture, due to the survival of a cohesive and compact group of domestic and industrial buildings that reflect the variety of construction practices and architectural styles adopted by the furnace operators during the periods of significance. In addition, the district satisfies the requirements for Criterion D in the area of Historic Non-aboriginal Archaeology, due to the high incidence of surviving foundations and other features, above and below ground, associated with the domestic and industrial activities of people working for the iron and slag producers in the nineteenth and twentieth centuries.

Historic Background and Overview

*Lucy Selina Furnace (1827-1852, 1863-1865)*

In 1827, John Jordan and John Irvine of Rockbridge County acquired eight tracts of land in Alleghany, Rockbridge, and Bath counties--totaling 26,143 acres--from Charles Ridgely of Hampton, Baltimore County, Maryland. Jordan and Irvine purchased the lands in partnership with Jordan's sons, Edwin and Samuel F. Jordan, who would be responsible for developing the mineral resources of the property. The property included a forge located near the exposed ore seams of Iron Gate Gorge, at the head of the James River. Major ore fields on the property were located farther upstream, along Simpson's Creek several miles east of its confluence with the Cowpasture River (the Cowpasture and Jackson rivers join above Iron Gate Gorge to form

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the James River). To take advantage of these ore beds, in 1827 the partners built a furnace on an 8,703-acre tract along Simpson's Creek in Alleghany County. This foundry, the Lucy Selina Furnace, was named for John Jordan's wife Lucy and John Irvine's wife Selina. Fueled with charcoal prepared from adjacent hardwood forests, and loaded with iron ore and limestone mined from open pits on the property, the Lucy Selina typified the cold-blast, charcoal-burning furnaces of the antebellum period.<sup>1</sup>

William Weaver, ironmaster of Bath Iron Works and Buffalo Forge in neighboring Rockbridge County, lured Samuel Jordan away from the Jordan & Irvine partnership in late 1829 (Jordan had married Weaver's niece, Hannah Davis, the previous year).<sup>2</sup> Ira F. Jordan took Sam Jordan's place within the business and the firm's Alleghany County ironworks continued to produce high-quality pig iron and bar iron at their furnace and forge. In 1830, the U.S. Population Census for Alleghany County recorded the free white members of the household of "J. Irvine Jordan," presumably linked with the Jordan and Irvine furnace families. Two males, aged fifteen to twenty; nine males, aged twenty to thirty; three males, aged thirty to forty; two males, aged forty to fifty, and one female, aged fifteen to twenty, occupied the Jordan household.<sup>3</sup> Although this census does not record occupations, it is likely that the large number of men in the household worked in iron mining and manufacturing activities. In 1830, thirty-eight slaves also worked at Lucy Selina Furnace; six were owned directly by the firm of Jordan & Irvine, while the remaining thirty-two were rented for a year from other owners at rates ranging from \$25 to \$70.<sup>4</sup> In general, the more highly skilled laborers exacted the highest prices. Throughout the antebellum period, ironmasters encouraged many slaves, undertaking both low- and high-skill tasks, to participate in the "overwork" system. This labor strategy commonly used at southern ironworks provided slaves with financial incentives to produce above and beyond minimum standards.<sup>5</sup>

By 1831, the Jordan & Irvine partnership had established a "complete set of Iron works" in Alleghany County. In addition to the stone furnace, the Lucy Selina property included a coal house, bridge house, bellows house, and pig house for castings. There was also apparently enough water power at the site to operate a sawmill and a gristmill for the subsistence needs of the laborers, and "a quantity of arable land valuable for pasture." Furthermore, although the partners' economic and social ties remained primarily with Rockbridge County, a "dwelling for the proprietors" was erected at the furnace.<sup>6</sup> The death of John Irvine in the 1830s did not deter the Jordans from expanding their Alleghany County operations. West of Lucy Selina Furnace, near the confluence of Simpson's Creek with the Cowpasture River, the partners built Globe Forge in 1832; its three fires and waterpowered hammer refined much of the pig iron produced

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Statement of Significance (continued)

at Lucy Selina into bar iron, a valuable commodity in the iron markets.<sup>7</sup>

By 1840, Edwin and Ira F. Jordan had taken up permanent residence in Alleghany County. The U.S. Population Census in that year enumerated three white residents and forty-three slaves in the household of Ira F. Jordan; the census also recorded Edwin Jordan's household of eight whites and twenty slaves.<sup>8</sup> Although the occupations of these free and enslaved residents were not indicated in the census records, certainly a large number of the Jordans' slaves would have been engaged in colliering, mining, hauling, and other menial tasks. Others would have worked as skilled forgemen and founders. The partners' successes in the competitive Virginia iron trade led other ironmasters, including additional members of the Jordan family, to enter the Alleghany County industry during the 1840s and 1850s. In 1847, Ira F. Jordan completed his purchase of Samuel F. Jordan's one-third interest in the Jordan & Irvine partnership. In 1848, B.J. Jordan and Company built the Dolly Ann, a steam and water hot-blast charcoal furnace located on Pounding Mill Run east of Covington. The company also built Rumsey Iron Works and Exchange Forge on Dunlap's Creek around the same time. In 1849, the Jordan & Irvine firm sold the forge and a furnace at Iron Gate Gorge to William Lyle Alexander, who renamed them "Clifton."<sup>9</sup>

The 1850 U.S. Population Census of Alleghany County does record occupations of free residents. Wage earners in fourteen contiguous households--presumably associated with both Lucy Selina Furnace and Globe Forge--included fourteen laborers, four colliers, two ironmasters, one manager, one blacksmith, one bricklayer, and one founder. Except for one collier from Pennsylvania and his Maryland-born wife, all of the households in the group were composed of native Virginians. The Alleghany County personal property tax rolls during the same year indicate that the two ironmasters, Edwin and Ira F. Jordan, were taxed for large numbers of slaves. Edwin Jordan owned thirteen slaves aged twelve to sixteen, and eleven slaves over the age of sixteen. Ira F. Jordan & Co. was taxed for forty-six slaves aged twelve to sixteen and forty-four slaves over the age of sixteen. As at most other ironworks, slaves owned or leased by the ironmasters continued to provide most of the skilled and semi-skilled labor required to sustain production of quality pig and bar iron.

By 1852, the Jordans had stopped smelting operations at Lucy Selina Furnace. The next year Edwin and Ira F. Jordan obtained their father's one-third interest in the Lucy Selina Furnace tract. In 1854 they completed and began operations at Australia Furnace, a steam- and water-powered hot-blast charcoal foundry that served as a modern replacement for Lucy Selina. Hot-blast technology, introduced to Western Virginia charcoal furnaces in the 1840s, pumped

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preheated air into the furnace. This simple technique somewhat improved the efficiency of the smelting process; furnaces that continued to use cold-blast technology could not meet the higher production levels and so were either rebuilt or abandoned. The Australia Furnace was also located on Simpson's Creek, east of the outdated Lucy Selina. Using the same rich iron ore seams as had been mined for Lucy Selina, the Jordans' output at Australia far exceeded that of the old cold-blast furnace. The 1850s marked a period of overall decline in pig iron production sites for western Virginia, though, as rising shipping costs made the more remote ironworks less profitable. At the onset of the Civil War, only fourteen of fifty furnaces built during the antebellum period remained in blast.<sup>10</sup>

The Civil War and its associated supply restrictions restored interest in and demand for the region's pig and bar iron. In 1861, Richmond's Tredegar Iron Works emerged as "the principal ordnance supplier for the Confederate States of America." Cloverdale Furnace, in Botetourt County, was the ironworks' preferred supplier of suitable pig iron, but it was closed in late 1861. To fulfill ordnance contracts, the Tredegar Iron Works had to find other reliable sources of pig iron. Joseph R. Anderson of the Tredegar company at first negotiated exclusive purchase contracts with six Virginia iron furnaces.<sup>11</sup> The poor quality and limited quantity of pig iron from these producers then led Anderson to purchase six furnaces; in 1862 he obtained Australia Furnace and 7,631 acres along Simpson Creek from the Jordans. The Lucy Selina Furnace, under the management of Ira F. Jordan, returned to blast briefly during the Civil War period. Jordan sold pig iron from the furnace to the Confederate State Nitre and Mining Bureau, which sent the product on to Tredegar Iron Works for casting.<sup>12</sup>

After the Civil War, many charcoal iron furnaces in western Virginia were returned to blast, as demand for cast and wrought iron products grew with the period's industrial developments. Two major factors remained essential to the success of iron foundries of the period: incorporation of efficient hot-blast technology, and access to reliable transportation routes. While the James River & Kanawha Canal boosters continued to promote their water-based route leading to the port of Richmond, canals were losing business to improved railroad networks. Along its route from Richmond westward through Charlottesville and Staunton into Alleghany County, the Virginia Central Railroad rebuilt lines, bridges, and depots that had been destroyed during the war, and in 1867 completed a western extension from Jackson's River Depot to Covington. In 1868 the Virginia Central took over the partially completed Covington & Ohio Railroad, and the entire system was renamed the Chesapeake & Ohio Railroad. The Chesapeake & Ohio (hereafter referred to as the C & O) Railroad soon constructed lines westward to the Ohio River, thereby making the coal fields of western Virginia and eastern West Virginia accessible to new industrial

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Statement of Significance (continued)

development along the railroad's main line.<sup>13</sup>

*Longdale Iron Company (1869-1914)*

The Longdale Iron Company was one of the first companies to take advantage of the newly expanding rail system, by centering its activities around the old Alleghany County charcoal furnace known as Lucy Selina. In 1869, the Lucy Selina Furnace tract was among several properties in Alleghany, Bath, Botetourt, and Rockbridge counties acquired from the Jordans by industrialists William Firmstone and Ario Pardee of Pennsylvania. William Firmstone, born in 1810 in Shropshire, England, had successfully used coke for fuel at an English ironworks he managed during the early 1830s. Firmstone immigrated to the United States in 1834 or 1835, and is credited by some authors as the first ironmaster to use coke as a fuel for smelting iron ore in America, at Union Furnace in Pennsylvania. Firmstone also was among the earliest ironmasters to incorporate hot-blast technology into the iron smelting process, at a charcoal iron furnace in Sciota County, Ohio, in 1836; and at another furnace in Pennsylvania, three years later.<sup>14</sup> How Firmstone and his associates learned about the Lucy Selina Furnace tract and others in the vicinity has not been determined, but apparently the wealth of relatively low-priced mineral resources in the area, and their proximity to one of the main lines of the C & O Railroad, provided sufficient incentive to purchase over twenty thousand acres. Firmstone and Pardee, partners with Guillian Fell in the Glendon Iron Company near Easton, Pennsylvania, and with Fell and R.D. Wood at Rock Hill Furnaces at Rock Hill, Pennsylvania, were experienced with modern furnace fuels and blast technologies, which they put to good use at their new property in Alleghany County.

In 1870, the Virginia General Assembly granted Firmstone and Pardee, along with Botetourt County ironmaster Samuel C. Robinson, a charter to operate the Wetumpka Iron, Mining, and Manufacturing Company, with the requirement that they sell capital stock worth at least \$200,000 but not more than \$6,000,000. The company could engage in "any or all phases of the iron business." Firmstone and Pardee, in exchange for their lands, received a majority of the company's stock. Robinson, formerly associated with Roaring Run Furnace in adjacent Botetourt County,<sup>15</sup> served as the company's first Superintendent. When returned to operation by its new owners in 1870, Lucy Selina Furnace was again fired by charcoal and temporarily utilized cold-blast technology. The federal census of 1870 (population manuscripts) identifies fifteen dwellings whose occupants are in some way associated with the ironworks. Three of the dwellings appear to have been boarding houses, as most of the occupants were unrelated adult

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males. Occupations of the residents include furnace laborer, furnace manager, furnace teamster, furnace filler, civil engineer, collier, blacksmith, blacksmith stoker, wood chopper, stone mason, and wood chopping foreman. Of the eighteen furnace laborers, fifteen were black or mulatto. Other tasks also seemed to be divided according to color lines: the three teamsters and the furnace filler were also black or mulatto, while the furnace manager, civil engineer, stone mason, blacksmiths, and wood choppers were all white.<sup>16</sup>

In 1871, the company's legislative charter was amended to reflect a change in the company's name to "Longdale Iron Company." At the same time, the company was "granted the right to build up to twenty-five miles of railroads to connect its mines and works with existing or future rail arteries; it could even exercise the right of eminent domain for its roadway, depots, stations, or other necessary purposes."<sup>17</sup> The C & O Railroad completed its connection to the Ohio River at Huntington, West Virginia, in early 1873. By April of that year, regular passenger and freight traffic began along the line. Perhaps most indicative of the railroad's importance to the Alleghany County iron industry is the fact that before the end of 1873, branch lines associated with the Longdale and Low Moor iron companies were already under construction.<sup>18</sup> In 1873, the furnace was rebuilt to run on either coke or charcoal, at either hot or cold blast. Water power still served the bellows, but the top of the stack was closed to conserve heat, and the stone stack had been replaced with a larger stack, forty-four feet high by eleven feet at the base.<sup>19</sup> The rebuilding was undertaken in anticipation of the completion of the C & O Railroad to the coalfields of West Virginia. The Longdale Iron Company had already purchased coal-yielding lands at Sewell, in Fayette County, West Virginia, immediately adjacent to the C & O lines. There, the company mined its own semi-bituminous coal and converted it into coke using beehive ovens. This high-grade "New River coke" was especially suited to the efficient production of pig iron. The Longdale Iron Company completed its rail connection in 1874, when seven miles of narrow-gauge railroad were built to connect Lucy Selina Furnace with the C & O line along Simpson's Creek near the Cowpasture River.<sup>20</sup>

The Longdale Iron Company, under the direction of engineer Harry Firmstone (William Firmstone's son), and superintendent Joseph E. Johnson (Samuel Robinson's successor), wasted no time in putting the fuel to practical use. In 1874 Lucy Selina Furnace was converted to coke fuel, becoming the first pig iron foundry in Virginia to accomplish that feat.<sup>21</sup> Its annual pig iron production capacity was some 3,750 net tons.<sup>22</sup> The success of this experiment quickly led other iron manufacturers in the region, such as the Low Moor Iron Company, to adopt New River coke as furnace fuel. The rising preference among ironmasters for coke ultimately led to the demise or conversion of Virginia's last charcoal-fueled furnaces during the fourth quarter of

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## Statement of Significance (continued)

the nineteenth century. In 1875, confidence in the Longdale Iron Company's prospects rose in accord with its early successes. That year, the company's charter was amended to allow additional growth: the company was authorized to "acquire not more than 200,000 acres of land, with a limit of 80,000 in any one county."<sup>23</sup> By 1876 the furnace stack, enlarged and exclusively fueled by coke, produced about 8,000 net tons of gray forge pig iron.<sup>24</sup>

Although William Firmstone died in 1877, the Longdale Iron Company under the leadership of Harry Firmstone (elected company president in 1887) and Joseph E. Johnson (named to the company board of directors in 1900) continued its successful iron mining and manufacturing operations for nearly forty more years, ultimately bringing Alleghany County to the forefront of iron production in Virginia. In 1879, the company's narrow-gauge rail lines were extended four miles from the furnace to the iron mines.<sup>25</sup> According to the 1880 Industrial Census, Lucy Selina Furnace (later renamed "Longdale No. 1") under the aegis of the Longdale Iron Company produced in one day of 1879 "thirty-five long tons of pig, in a week more than 219 tons, and in a month 874 tons." Although Lucy Selina was not the largest furnace in the area, the company had made it a model of efficiency.<sup>26</sup> The company's second hot-blast, coke-fueled furnace stack, "Longdale No. 2," went into blast in February 1881. Cylindrical in form and constructed of heat-conserving brick, Longdale No. 2 originally stood sixty feet high with a diameter of fourteen feet. This expansion of smelting facilities more than doubled the company's capacity, from 10,000 net tons in 1880 to 26,000 net tons in 1882. Subsequent rebuilding and refinement of the two furnace stacks and their associated mechanical systems brought the total capacity of the company up to 40,000 gross tons in 1896. In its final form (attained in 1897) Longdale No. 1 was a tapered cylindrical furnace stack of brick encircled by metal bands; no above-ground remnant of the original square-based, stone stack survived in photographs of the property dating from the 1890s. In 1904, Longdale No. 2 reached its ultimate size of seventy-five feet in height, with a diameter at bosh of eighteen feet.<sup>27</sup>

In addition to the furnaces, the Longdale Iron Company erected auxiliary buildings and structures during the late nineteenth and early twentieth centuries. Included among these were the machine shop, carpentry shop, blacksmith shop, electric plant, dynamo house, pipe fitting house, and lumber sheds.<sup>28</sup> Most of these industrial buildings were constructed of brick or of timber framing with brick infill. A few were less substantially built of plain timbers. In annual reports to the State Corporation Commission for 1908-1910, the Longdale Iron Company stated that it maintained twelve miles of main track and nearly five miles of sidings, and that it owned and operated six locomotives, eighty ore cars, forty coke cars, thirty-four flat cars, and three "combination passenger cars."<sup>29</sup> Buildings on the property associated with the maintenance of

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the company railroad included a carshop, two brick locomotive houses, a repair house, and a frame locomotive house. Structures on the property were usually built of heavy timbers; they included a "trunk line" or flume that piped water from a spring, in addition to stables and ore platforms. Sites included an ice pond and a brickyard. Portable equipment and tools considered to be valuable company assets, used in various buildings on the property, included motors and engines (the electric plant's Straight Line engine and generator), a Sterling boiler, and six iron pipe Durham stoves.<sup>30</sup>

The expansion of Longdale Iron Company's ironworks and railroad required a concurrent expansion of its labor force during the late nineteenth century. During the 1870s and 1880s, "workmen at Longdale numbered as many as 200 or even 400 within a few years."<sup>31</sup> A review of Alleghany County's Manuscript Census for population in 1900 provides a good picture of the size and composition of the company's workforce. Within the Clifton Forge Magisterial District (which did not include the city of Clifton Forge), Jesse Millner enumerated a total of 625 residents; of that total, 290 or more than 46% were employed by the Longdale Iron Company. The most labor intensive work, requiring the largest proportion of the workforce, was mining the iron ore. Of the company's 290 employees in 1900, a majority (168 individuals, or 58%) were occupied as miners. Most of them were single males in their twenties and thirties; over 60% of the miners were black. Most were housed in multiple dwellings, usually segregated by race and probably located in proximity to the mines. The temporary nature and inferior construction of these dwellings is evident from the manuscript census notations, which refer to them as either "Iron Furnace Boarding Shanty," "Shanty House," or "Shanty Boarding House." The next largest classification of company employees worked as laborers (80 individuals, or almost 28%); most of them were also housed with the miners in shanty boarding houses.

Other company occupations demanded fewer individuals, but often required specialized experience or skills. Those at Longdale in non-management or non-professional positions included seven furnace fillers, two furnace keepers, four machinists, one assistant machinist, four blacksmiths, two "moulders," three carpenters, a railroad fireman, a railroad brakeman, and two teamsters. Other positions included two general store clerks, two painters, eight cooks, a chambermaid, four servants, and three waiters. Professional and management positions within the company included the company storekeeper, a bookkeeper and assistant bookkeeper, a carpentry shop foreman, a mine superintendent, a blast furnace foreman, two chemists, a mechanical engineer, a physician, a railroad section foreman, two locomotive engineers, a station engineer, and a blast furnace manager.<sup>32</sup>

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Statement of Significance (continued)

Like many other rural industries of the period, the Longdale Iron Company ultimately developed a paternalistic "company town" that encouraged loyalty and sustained production levels by satisfying many of the domestic, commercial, transportation, educational, and religious needs of employees and their families. Although most of the company's workers were housed in the aforementioned shanty boarding houses located near the mines and quarries, employees directly associated with maintaining the furnace blasts, running the railroad and its moving stock, or providing professional, managerial or domestic services, lived in company housing adjacent to the production and administrative center of the property. Through the early 1870s, low profit margins undoubtedly kept housing quality at a marginal level. The deteriorated condition of many of the village's earliest dwellings, originally constructed to house slave laborers, warranted their replacement by more substantial frame dwellings during the 1870s and 1880s. As the company prospered and grew, it was able to build higher-quality dwellings that undoubtedly helped attract and retain experienced workers and managers.

Duplexes and single dwellings, or commodious boarding houses, served as the company-built accommodations; analysis of the buildings' locations, sizes, and levels of architectural sophistication reveal an inherent status-based hierarchy in the village. The dwellings ranged from tenement cottages of low-status workers to the twenty-room mansion of the company's directors and manager. The small one- and two-room tenement cottages, of board-and-batten construction and with minimal heating and plumbing, were relegated to hillside plots along the sheltered hollows and stream valleys of the community. Their households, usually black individuals or small families, were the cooks, servants, furnace workers and other blue-collar employees of the company. Two-story duplexes and single dwellings, of frame construction with board-and-batten or weatherboard siding, were usually situated upon the relatively level lands adjacent to Simpson Creek. Along the main road through the community, company houses were regularly spaced and set back from the right-of-way. Historically, whitewashed horizontal board fences defined the front yards and rear vegetable gardens of this row of company houses; the neighborhood-like character of the group was undoubtedly planned from the outset. These dwellings apparently housed the company supervisors, foremen and other white-collar employees, who were mostly white men with wives and children. Small wood frame outbuildings, including privies, were also located in close proximity to the dwellings, and were at times shared between dwellings. Single men without families, or whose families were distantly situated, most often resided in company boarding houses, where a housekeeper provided room and board for a fee. The company did construct at least one boarding house in the village core by 1900; the building's quality apparently far exceeded that of the shanty boarding houses at the mines. The largest domestic resources in Longdale, multistory dwellings for the manager and assistant manager of the

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**Statement of Significance (continued)**

company's operations, feature the most complex forms and the highest quality materials, and are set off from the density of other development by their placement within distinct parklike grounds.

While local tradition asserts that company directors had the mansion house at Longdale built as early as 1874, it more likely would have been constructed a few years later, after the company had more financial security upon recouping its initial investment. At least one contemporary report noted that in 1883, the C & O Railroad delivered eighty-nine car loads of lumber "for houses and other construction" to the Longdale community.<sup>33</sup> The likely use of the rail-shipped lumber would have been for more finely-crafted and -finished buildings than those normally associated with miners' camps. The mansion house and several other surviving dwellings along present-day Longdale Furnace Road were probably among the buildings that incorporated the lumber shipped in 1883. Apparently built according to the design of company manager Joseph E. Johnson, the Queen Anne-style mansion with Eastlake and Italianate detailing is one of the largest and grandest buildings of its period in the Alleghany Highlands region. Initially built as the full-time residence of the Johnson family, it also served as the part-time residence of other Longdale Iron Company executives when they visited the property. The Johnsons also hosted numerous out-of-town visitors in the company mansion; one associate noted that "among traveling geologists and engineers, in particular, their refined and hospitable home at Longdale became widely known as an oasis in the wilderness."<sup>34</sup> Historic interior and exterior photographs of the house and property, taken about 1900, reveal the sophisticated tastes of the house's residents and guests. The interior decoration, for example, incorporated the exotic layered patterns of Anglo-Japanese style in textiles, wallcoverings and furnishings. Extensive ornamental grounds, accentuating the "country house" character of the residence, included lawns, specimen trees, flower parterres, hedge borders, meandering gravel paths, and a rock garden. In addition to their aesthetic purpose, the mansion's grounds also regularly served as the setting for company picnics and other social events. After Joseph E. Johnson's 1909 retirement from active management of the company, Harry Firmstone moved from Pennsylvania to Longdale and took up full-time residence as well.

In addition to housing its work force, the Longdale Iron Company provided many of the basic services people expected to obtain in their communities. Commercial activity centered around the company's large commissary, or general merchandise store, which sold a wide variety of goods that had been shipped to the village on company trains. Scrip (issued to workers in lieu of or in addition to cash wages) was probably used to some extent for purchases made at the commissary. Passenger service on company rail lines to Longdale Station (a C & O Railroad depot) provided transportation connections to the outside world. To meet religious needs of its

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**Statement of Significance (continued)**

employees and their families, the company built two churches--one each for the black and white residents of Longdale. The company also employed several doctors, one of whom occupied a small office in a residential area opposite the furnaces, to provide medical services. Fresh water was supplied to the village from the company's mountain spring source, piped in to avoid pollution from industrial by-products. The company allowed village residents to fish and hunt on its property; at least one dammed stream formed a fishing pond. In winter, the pond yielded ice that was stored for later use. Employees were encouraged to develop their own gardens for fresh vegetables and other produce, although produce was also available from local farmers. Historic photographs indicate that a small amount of acreage in the village supported corn fields, which probably served village subsistence needs and provided fodder for livestock on the property.

Other area residents, such as farmers, millers and grocers, undoubtedly relied upon the company and its employees for a portion of their income and for social and commercial contacts. Businesses advertising their Longdale locations in the 1880s and 1890s included grist and saw mills, two or three general stores, a carpenter, and a saloon. A post office located at Longdale for several decades, although the nearest banks were in Clifton Forge.<sup>35</sup> A 1922 newspaper article, referencing the Longdale Iron Company, confirms these direct and indirect economic effects on nearby residents of Rockbridge County:

Its mines, quarries and two furnaces gave employment to a large number of men. Just over the mountain from Rockbridge it was natural that many of the sturdy young men of our North mountain region found employment there. The thrifty farmers of Colliers creek and Kerrs creek community there always found a ready market for the produce of the farm, the dairy and the garden. All kinds of country produce were there in demand and Rockbridge in a large measure supplied what was used.<sup>36</sup>

After Longdale Iron Company (1914-Present)

Economies of scale afforded by the opening of Minnesota's Mesabi iron range, in addition to increasing production costs at the Longdale mines, reduced the demand for Virginia and Longdale pig iron after 1900. By 1911, the same year that retired company manager Joseph E. Johnson died, smelting operations at Longdale shut down completely. The company directors offered the property for sale for a period of two years, after which time Harry Firmstone

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## Statement of Significance (continued)

purchased it outright with his personal fortune. In 1914, the Longdale Iron Company's charter with the State Corporation Commission was dissolved. While the Longdale Iron Company never resumed smelting activities, its iron mines and rail facilities were leased to the Low Moor Iron Company, its major local competitor since 1873, for several years after 1911. In 1919, Richard C. Wight of Richmond, Virginia, obtained a lease from Firmstone to utilize the land, railroad and machinery. Wight sold and shipped out (for road-building purposes) much of the slag that had collected on the property over the years. He also received rent from the tenants living in former company houses, and was required to maintain the company property in good condition. In 1920, he and his wife, Pocahontas Wight, purchased most of Firmstone's property. Harry Firmstone retained 442 acres, the core of the industrial and village complex, which included his residence and grounds. Firmstone continued residing at the mansion through 1922. Upon his death in March of that year, Firmstone willed the 442-acre tract--the core of the village of Longdale--to Mary Roche Johnson, widow of long-time company manager Joseph E. Johnson. She, in turn, sold the property the following year to Pocahontas and Richard C. Wight. From 1923 to 1937, most of the remaining industrial buildings and machinery were dismantled and sold as salvage materials. During their ownership of the property, the Wights became summer residents of the Firmstone-Johnson mansion, converted the greenhouse on the grounds into a swimming pool and established a grass tennis court.

In 1936, the Wights transferred over 16,000 acres of land in Alleghany County to the United States of America; presumably, this acreage includes the adjacent mountainous land now overseen by the U.S.D.A. Forest Service's George Washington National Forest. In the late 1930s the Civilian Conservation Corps (CCC) established a camp in national forest lands southwest of the village, to build the facilities of the Longdale Recreation Area located at Piney Run and Blue Suck Branch. The CCC workers also constructed stone retaining walls, bridge abutments, and entranceway piers throughout the Simpson Creek valley. Throughout the 1930s, Pocahontas and Richard C. Wight continued to divest themselves of their Longdale holdings. They subdivided the 442-acre "Longdale Furnace Tract" in 1937 into fifty variously sized lots, which were sold in several instances to their tenants or to other former employees of the Longdale Iron Company. Following the subdivision of the property, some additional housing was constructed in Longdale, and in the mid-twentieth century a tourist motel was erected adjacent to the mansion house (U.S. Route 60, now Longdale Furnace Road, was an important east-west highway during the period). A village reservoir, filled by one of the tributaries of Simpson's Creek, was developed between Church and Longdale Furnace roads around this time; it replaced piped-in spring water as the community's main water source. Interstate 64 was built alongside the old US Route 60 in the 1970s; while the highway bypassed most of the then-extant

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Statement of Significance (continued)

domestic buildings of Longdale Furnace, fill served to bury most of the industrial ruins and artifacts. Today, although some buildings at Longdale Furnace are vacant, the village remains quite intact, anchored by the evocative chimney stacks that still overlook Simpson's Creek.

End Notes

1. For a more comprehensive overview of Alleghany County's historic iron industry, see the following resources: Rick Mattson and Frances Alexander, *Historic and Architectural Survey / Clifton Forge, Virginia* (DRAFT), a report prepared for the Virginia Department of Historic Resources and the City of Clifton Forge (Charlotte, North Carolina: Mattson, Alexander and Associates, 1994), 88-93; Lester J. Cappon, "Lucy Selina's Charcoal Era," in *Virginia Cavalcade* Volume 7, No. 2 (Autumn 1957), 31-39; W. Edwin Hemphill, "Lucy Selina's Coke Era," in *Virginia Cavalcade* Volume 7, No. 2 (Autumn 1957), 40-47; and Kurt C. Russ, John M. McDaniel and Thomas C. Upchurch, "A Preliminary Archaeological Assessment of the Longdale Iron Mining Complex in Alleghany County, Virginia," a paper presented at the annual meeting of the Archaeological Society of Virginia, Staunton, Virginia, 17 October 1993 (Lexington, Virginia: Laboratory of Anthropology and Department of Sociology and Anthropology, Washington and Lee University, 1993). Blast furnace technology and other standard practices employed at Virginia's western iron foundries and forges are succinctly outlined in Charles B. Dew, *Bond of Iron: Master and Slave at Buffalo Forge* (New York and London: W.W. Norton & Company, 1994), 30-31; also see Frederick Overman, *The Manufacture of Iron*, third edition (Philadelphia: H.C. Baird, 1854).
2. Dew 1994: 72.
3. Nora B. Martin, *The Federal Censuses of 1830, 1840, and 1850, for Alleghany County, Virginia / Virginia Census Records* (Athens, Georgia: Iberian Publishing Company, 1987), 7.
4. Cappon 1957: 34.
5. Dew 1994: 108-109.
6. Cappon 1957: 31.
7. Lewis M. Walker, Jr., *An Economic and Social Survey of Alleghany County*, University of Virginia Record Extension Series Volume 20, No. 7 (March 1936), 17.

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8. Martin 1987: 31.
9. Mattson and Alexander 1994: 90.
10. *Ibid*, 91.
11. Brady Banta, "Tredegar Iron Works," in *The Iron and Steel Industry in the Nineteenth Century*, edited by Paul F. Paskoff, in the Encyclopedia of American Business History and Biography series (New York: Facts On File, 1989), 346.
12. Cappon 1957: 39.
13. Thomas W. Dixon, Jr. *Chesapeake & Ohio Alleghany Subdivision* (Alderson, West Virginia: The Chesapeake and Ohio Historical Society, Inc., 1985), 1-27.
14. Hemphill 1957: 40; William W. Hearne, "Going Back to Longdale / Where Furnaces, Mines and Mansions Were Part of a Principality," in *Iron Trade Review* Vol. 77, No. 17 (22 October 1925), 1023.
15. Perry A. Tourtellette, *Roaring Run Furnace: A Preliminary History* (U.S.D.A. Forest Service, n.d.), references Samuel C. Robinson's 1844 purchase of Roaring Run tract and furnace for "\$21,000 to be paid in pig iron in four years' time" (see Botetourt County Deed Book 27: 214 for inventory of real and personal property included in sale).
16. Nora B. Martin, transcriber, *The Federal Census of 1870 for Alleghany County, Virginia* (Athens, Georgia: Iberian Publishing Company, 1988), 60-64.
17. Hemphill 1957: 41.
18. Dixon, Jr.: 1-27.
19. John D. Capron, "Lucy Selina Furnace / Notes from American Iron & Steel Institute Directories" (unpublished notes, 8 May 1958), 1.
20. Rossiter W. Raymond, "Biographical Notice of J.E. Johnson," reprinted from *American Institute of Mining Engineers' Bulletin* No. 57 (September 1911), 4.
21. Hemphill 1957: 42.

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Statement of Significance (continued)

22. Capron 1958: 1.
23. Hemphill 1957: 41.
24. Capron 1958: 1.
25. Raymond 1911: 4.
26. Hemphill 1957: 43.
27. Capron 1958: 1-2.
28. This list of buildings and structures is derived from Alleghany County Deed Book 51: 526-538; and Deed Book 51: 538-541; which reference the sale and lease of lands at Longdale from Harry Firmstone to Richard C. and Pocahontas W. Wight in May of 1920.
29. Hemphill 1957: 45.
30. Alleghany County Deed Book 51: 526-538 and 538-541; Hemphill 1957: 45; Capron 1958: 2; Hearne 1925: 1024-1025.
31. Hemphill 1957: 42.
32. This synopsis of the 1900 Alleghany County manuscript census is derived from a detailed transcription and notes prepared by John R. Kern in 1993; using microfilmed records available in the Virginia Room, Roanoke Public Library.
33. Russ, McDaniel and Upchurch 1993: 13 [paraphrasing Jed Hotchkiss, *The Virginias: A Mining, Industrial, and Scientific Journal* Volumes 5 and 6 (Staunton, VA: S.M. Yost & Son, 1884-1885), 14].
34. Raymond 1911: 6.
35. J.H. Chataigne, *Chataigne's Virginia Business Directory and Gazetteer* (Richmond: Boughman Brothers, 1880), 101-103; Chataigne, *Chataigne's Virginia Gazetteer, Vol. III* (Richmond: J.H. Chataigne, 1884), 98-99; Chataigne, *Chataigne's Virginia Gazetteer and Classified Business Directory* (Richmond: Jenkins and Walthall Binders, 1893), 181-190; *Virginia State Directory, 1897* (Richmond: J.L. Hill Publishing Co., 1897), 130-138.

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### Statement of Significance (continued)

36. "Harry Firmstone, One-Half Century Principal Owner of Longdale Iron Property, is Dead," clipping from an unidentified Rockbridge County-based newspaper (March 1922), original in the collection of W.R. Johnson, Lynchburg, Virginia.

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**10. GEOGRAPHICAL DATA (continued)**

**Verbal Boundary Description**

The nominated property includes the following Alleghany County tax parcels in their entirety, each of which is prefixed by 047A2-01-000-: 009, 010, 012, 013, 014, 015, 016, 017A, 017B, 017G, 023, 024, and 025. The nominated property also includes portions of the following Alleghany County tax parcels, each of which is prefixed by 047A2-01-000-: 027, including that area south of the modern reservoir; and portions south of the right-of-way of Interstate 64 for each of the following parcels: 031, 031A, 035, 036, 037, 038, 039, and 040.

The nominated property is depicted on an enclosed sketch map, which is traced from Alleghany County Tax Map (1986) Section Insert 47A2, on file at the Commissioner of Revenue's Office, Alleghany County, Virginia. The sketch map indicates the locations of resources and provides an index to the mapped resources that identifies their contributing or noncontributing status within the district.

The district's boundaries are also indicated on the relevant USGS 7.5' map (Longdale Furnace, VA).

**Boundary Justification**

The district boundaries have been drawn so as to include the largest concentration of surviving contiguous buildings, structures, and sites within the former iron industry village associated with Lucy Selina Furnace and the Longdale Iron Company. District resources represent aspects of the administrative, manufacturing, transportation, commercial, and residential development that characterized the community between 1827 and 1914. The village now known as Longdale historically covered a very small portion of the Lucy Selina-Longdale Iron Company property, which also included iron mines, timber tracts, and limestone quarries. These other resources are now located on lands adjacent to the district. This acreage, mostly within the George Washington National Forest, is currently being evaluated by the U.S.D.A. Forest Service for future National Register designation and interpretation. The public lands have been excluded from the nomination, pending the completion of the federal agency's evaluation.

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PHOTOGRAPHIC DOCUMENTATION

1.
  - 1) Longdale Furnace Historic District (same for all entries)
  - 2) Alleghany County, Virginia (same for all entries)
  - 3) Leslie A. Giles, photographer (same for all entries)
  - 4) 1994
  - 5) Negative filed at Library of Virginia, Richmond, VA (same for all entries)
  - 6) Angle view of Firmstone Mansion; view facing southeast
  - 7) Negative no. 13849: 36A
  - 8) File no. 03-338 (same for all entries)
  - 9) Photo 1 of 9
  
2.
  - 4) 1991
  - 6) Company housing along Longdale Furnace Road; view facing southwest
  - 7) Negative no. 10799: 17
  - 9) Photo 2 of 9
  
3.
  - 4) 1991
  - 6) Angle view of Longdale Iron Company Office, with Laboratory in background; view facing northwest
  - 7) Negative no. 10799: 26
  - 9) Photo 3 of 9
  
4.
  - 4) 1994
  - 6) Angle view of Longdale Iron Company Machine Shop and Chimneys; view facing northeast
  - 7) Negative no. 13849: 22
  - 9) Photo 4 of 9
  
5.
  - 4) 1991
  - 6) General view of graded railroad bed built for Longdale Iron Company's narrow-gauge railroad; view facing west
  - 7) Negative no. 10799: 27
  - 9) Photo 5 of 9

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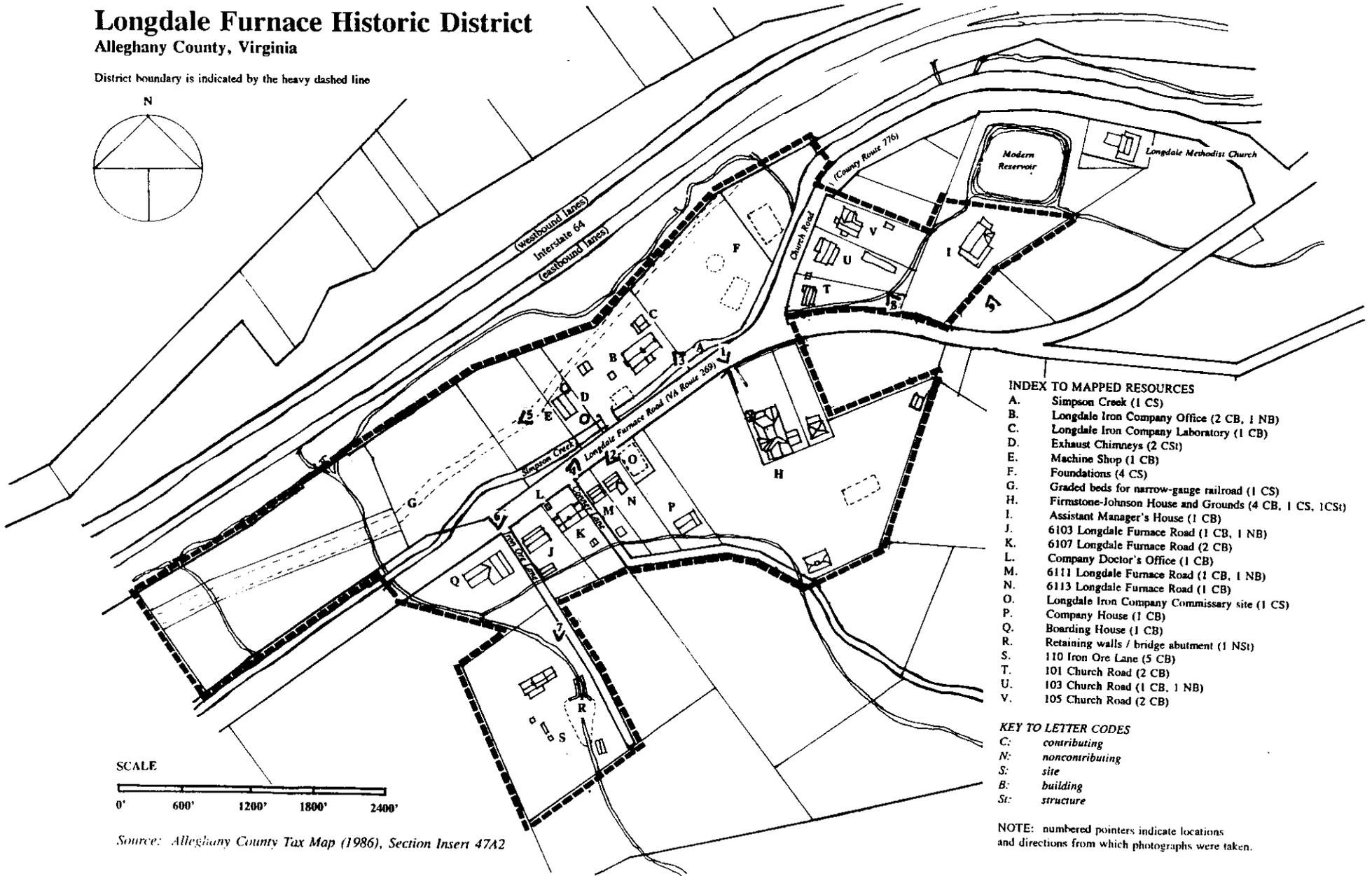
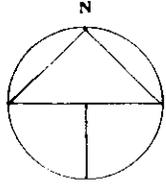
Photographic Documentation (continued)

6.    4)    1991  
      6)    Angle view of company boarding house; view facing southwest  
      7)    Negative no. 10802: 34  
      9)    Photo 6 of 9
  
7.    4)    1991  
      6)    Angle view of village reservoir/millpond and associated residence; view facing southwest  
      7)    Negative no. 10802: 33  
      9)    Photo 7 of 9
  
8.    4)    1994  
      6)    Angle view of company house along present-day Church Road; view facing northeast  
      7)    Negative no. 13849: 31  
      9)    Photo 8 of 9
  
9.    4)    1994  
      6)    Angle view of Assistant Manager's House; view facing northeast  
      7)    Negative no. 13849: 33  
      9)    Photo 9 of 9

# Longdale Furnace Historic District

## Alleghany County, Virginia

District boundary is indicated by the heavy dashed line



### INDEX TO MAPPED RESOURCES

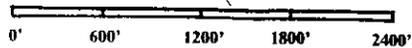
- A. Simpson Creek (1 CS)
- B. Longdale Iron Company Office (2 CB, 1 NB)
- C. Longdale Iron Company Laboratory (1 CB)
- D. Exhaust Chimneys (2 CS)
- E. Machine Shop (1 CB)
- F. Foundations (4 CS)
- G. Graded beds for narrow-gauge railroad (1 CS)
- H. Firmstone-Johnson House and Grounds (4 CB, 1 CS, 1CS)
- I. Assistant Manager's House (1 CB)
- J. 6103 Longdale Furnace Road (1 CB, 1 NB)
- K. 6107 Longdale Furnace Road (2 CB)
- L. Company Doctor's Office (1 CB)
- M. 6111 Longdale Furnace Road (1 CB, 1 NB)
- N. 6113 Longdale Furnace Road (1 CB)
- O. Longdale Iron Company Commissary site (1 CS)
- P. Company House (1 CB)
- Q. Boarding House (1 CB)
- R. Retaining walls / bridge abutment (1 NS)
- S. 110 Iron Ore Lane (5 CB)
- T. 101 Church Road (2 CB)
- U. 103 Church Road (1 CB, 1 NB)
- V. 105 Church Road (2 CB)

### KEY TO LETTER CODES

- C: contributing
- N: noncontributing
- S: site
- B: building
- St: structure

NOTE: numbered pointers indicate locations and directions from which photographs were taken.

SCALE



Source: Alleghany County Tax Map (1986), Section Insert 47A2

