NPS Form 10-900
(Rev. 8-86)

OMB No. 1024-0018

United States Department of the Interior
National Park Service

National Register of Historic Places Registration Form

1. Name of Property

historic name: Phillips Insulated Wire Company Complex

other name/site number: American Insulated Wire Company Complex

2. Location

street & number: 413 Central Avenue

not for publication: N/A

city/town: Pawtucket vicinity: N/A

state: RI county: Providence code: 007 zip code: 02861

3. Classification

Ownership of Property: Private

Category of Property: Buildings

Number of Resources within Property:

Contributing	Noncontributing	
14	4	buildings
		sites
		structures
		objects
14	4	Total

Number of contributing resources previously listed in the National Register: none

Name of related multiple property listing: N/A

4. 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.

____ See continuation sheet.

Frederick C. Williamson 14 Jan 2004
Signature of certifying official Date

State or Federal agency and bureau

In my opinion, the property ____ meets ____ does not meet the National Register criteria.

____ See continuation sheet.

Signature of commenting or other official Date

State or Federal agency and bureau

5. 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 Keeper Date of Action

6. Function or Use

Historic:	INDUSTRY	Sub:	manufacturing facility
Current:	VACANT/WORK IN PROGRESS	Sub:	manufacturing facility
	DOMESTIC		multiple dwelling
	COMMERCE		professional
	COMMERCE		specialty store
	OTHER		artists' studios

7. Description

Architectural Classification:

Late 19th/Early 20th Century American Movement

OTHER: Industrial

Other Description:

Materials: foundation STONE/Granite roof SYNTHETIC/Rubber
walls BRICK other STONE/Granite

Describe present and historic physical appearance.

X See continuation sheet.

8. Statement of Significance

Certifying official has considered the significance of this property in relation to other properties: State

Applicable National Register Criteria: A, C

Criteria Considerations (Exceptions): N/A

Areas of Significance: Architecture

Industry

Period(s) of Significance: c.1898-c.1953

Significant Dates: c.1898, 1901-02, c.1905, c.1906-17, between 1907-1917, c.1914-17, c.1918-1927

Significant Person(s): N/A

Cultural Affiliation: N/A

Architect/Builder: Unknown

State significance of property, and justify criteria, criteria considerations, and areas and periods of significance noted above.

X See continuation sheet.

9. Major Bibliographical References

_X_ See continuation sheet.

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 -- Specify Repository:

10. Geographical Data

Acreage of Property: 6 acres

UTM References:	Zone	Easting	Northing		Zone	Easting	Northing
A	19	303660	4639440	B			
C				D			

____ See continuation sheet.

Verbal Boundary Description: ____ See continuation sheet.

See page 54

Boundary Justification: ____ See continuation sheet.

See page 54

11. Form Prepared By

Name/Title: Kathryn J. Cavanaugh, Consultant

Organization: _____ Date: 10/2003

Street & Number: 197 6th Street Telephone: 401-273-4715

City or Town: Providence State: RI ZIP: 02906

Description

The Phillips Insulated Wire Company Complex located at 413 Central Avenue (formerly known as 36 Freeman Street), in Pawtucket, R.I., sprawls across three city blocks and covers about 6 acres of land. The complex includes fourteen historic brick industrial structures built between c. 1898 and 1927, all constructed by the Phillips Company during its occupancy of this site; twelve were built for manufacturing and related purposes, one for office use, and one for retail commercial use. (In addition, there are four late 20th-century structures: two manufacturing buildings of reinforced concrete and two wood-framed guard shacks; built by a later owner, the American Insulated Wire Corporation. These four modern buildings do not contribute to the overall historic and architectural significance of the property.) Altogether the complex contains an estimated 355,000 square feet of floor area.

The complex is bounded by Central Avenue on the north, freight railroad tracks and the George S. Bennett Highway (also known as the East Pawtucket Industrial Highway) on the west, another industrial property and Hunts Avenue to the south, and Mendon Avenue on the east. Two additional streets penetrate the complex, both running in a north-south direction. Freeman Street runs parallel to (and one block east of) the railroad tracks, extending at an angle southeastward from Central Avenue to its terminus (called Phillips Place) within the complex. (Originally public streets, Freeman Street and Phillips Place are now private rights-of-way.) One block east of Freeman Street is Winthrop Avenue, which runs perpendicularly between Central Avenue and Hunts Avenue. The next street east of Winthrop Avenue is Mendon Avenue.

The complex's fourteen contributing historic buildings are numbered on the accompanying site plan, and referenced herein, as Buildings 1, 2, 3, 4, 5, 6, 7, 8, 10, 10A, 11, 12, 13, and 14. (Note that there is no building numbered 9. The two non-contributing reinforced concrete structures are numbered 8A and 8B; the two guard shacks do not have numbers.) Numbered signs presently attached to most of the buildings indicate that American Insulated Wire Corporation used this same nomenclature to identify the various buildings during its occupancy of the complex (1946-2003).

Of these fourteen contributing historic buildings, the earliest is Building 4, built c. 1898 on the west side of Freeman Street. The company expanded several times during the 34 years that it occupied this site. Building 3 was added in 1901-1902, and Buildings 5, 6, 7, and 8, c. 1905,

all on the west side of Freeman Street. Buildings 1 and 2, also on the west side of Freeman Street, were built c. 1906-1917. Buildings 12, 13, and 14 (on the east side of Winthrop, the north side of Hunts Avenue, and the west side of Mendon Avenue, respectively) went up between 1907 and 1917. Buildings 10 and 11, between Freeman and Winthrop, as well as the pedestrian bridge over Freeman Street between Buildings 3 and 10, were built c. 1914-1917. The last to be constructed was Building 10A on the west side of Winthrop, built c. 1918-1927.[1] Their heights, scale, and architectural details vary, but the consistent use of red brick and granite trim for all fourteen of these buildings, and the multi-light windows in twelve of them, lends the complex an overall visual cohesion. The architect of these buildings is unknown.

The Phillips Insulated Wire Company Complex has considerable visibility in its neighborhood. From the west, the adjacent Oak Grove Cemetery provides extensive views of the buildings on the Freeman Street/Bennett Highway side of the complex. A tall brick smokestack next to Building 11, with the letters "AIW" at the top (lettering added after 1946, when the American Insulated Wire Company moved into the plant), can be seen from several blocks away.

The complex is located in the Darlington section of Pawtucket, about ¾ mile northeast of the city center, in a historically mixed-use area that includes manufacturers, businesses, residences, churches, schools, and two large cemeteries. No major natural features are found in the vicinity of the complex, and the topography is relatively level. An active freight rail line (the India Point Branch of the Providence & Worcester Railroad) immediately west of the complex runs roughly north-south, connecting Pawtucket to the adjacent communities of Attleboro, Massachusetts (and points north and northwest) and East Providence, R.I. (and points south and southeast).

Darlington originally developed during the late 19th and early 20th centuries with a similar variety of land uses, so the neighborhood has always had a very diverse visual and architectural character. That diversity persists today, although many historic buildings immediately adjacent to the Phillips complex have been significantly altered or lost.

[1] The City of Pawtucket did not issue building permits during this period, and Phillips company records were not available.xxConstruction dates were ascertained from property deeds, atlases, plat maps, and contemporary periodicals.

The historic 32-acre Oak Grove Cemetery (established 1826) lies at the southwest corner of Bennett Highway and Central Avenue. On the north side of Central Avenue, directly across the street from the Phillips complex, are two modern concrete block buildings, 1-1/2 to 3 stories tall, with deep setbacks for off-street parking in front; both are occupied by vendors of industrial/commercial supplies and equipment. On the south side of Central Avenue, immediately north of Buildings 10 and 10A, is a large paved parking lot (part of which belongs to this property) and a 1-story L-shaped modern concrete block structure housing an auto supply store. The east side of Winthrop Avenue has a more residential character, with 2- to 3- story wood frame Late Victorian and triple-decker style houses (all built between 1896-1907) observing generally consistent setbacks. (Most of these homes have been covered in vinyl or aluminum siding.) Further east, the buildings lining Central Avenue are a mix of turn-of-the-century residential (some converted to commercial uses) and modern commercial structures, varying between 1 and 3 stories tall with inconsistent setbacks. Along the south side of Hunts Avenue stand several other mid- to late-20th century industrial and residential buildings; these are all approximately 2 stories tall but vary in scale and materials, and some do not appear to be occupied. The compromised historic character of this part of Darlington only highlights the remarkable survival of the Phillips complex, with its high level of historic and architectural integrity.

The complex is generally in good to very good condition, although there are some isolated areas in individual buildings where wood floors and ceilings have suffered water damage, brick and mortar have crumbled, and wood windows have deteriorated; and Buildings 12, 13, and 14 are in fair to poor condition. American Insulated Wire Corporation occupied this property until early 2003. All buildings have been vacant since the present owners purchased the entire complex in May 2003, except for the first floor space in Building 10, which is presently leased to a restaurant supply business.

Note: This section describes each of the contributing historic buildings in numerical order. Non-contributing buildings are described at the end of the section.

Building 1 (c. 1906-1917) *Photo #2*

Original Use: Leased commercial space, 1917-1971.[2] More recently used to house AIW's computer and telephone systems.

[2] City directories, 1917-1971, list a variety of commercial businesses (druggist, tailor, barber, and a diner called Maxcy's) at the addresses 413, 415, and 417 Central

Source of Date: An 1899 property deed indicates that this site was purchased as a vacant lot. The building's footprint appears on the 1917 city atlas, with the street address 413-417 Central Avenue. It is very similar in design to Building 2 (also c. 1906-1917).[3]

A 5,640 square foot red brick building (with full basement) standing on the south side of Central Avenue between Bennett Highway and Freeman Street. (This is the only freestanding building on the west side of Freeman Street, south of Central Avenue.) Building 1 stands one story tall with a granite foundation and a flat roof with handsome corbelled cornice and corbelled brick chimney near its southern edge. The north (Central Avenue) elevation has been entirely covered over with a stucco veneer façade with overhang at the roofline, that wraps around the northwest corner (installed after 1946); evidence inside the building indicates that several storefront window openings lie underneath the stucco. The east (Freeman Street) elevation has three large window openings, all of which contain single-light glass windows (not original); the window openings have brick lintels in a sunburst pattern, which is also found over all other windows and doors on the building. The south elevation, facing a parking lot and Building 2, is divided roughly in half. The left half contains a four-bay open garage, its opening supported by a steel lintel and three wooden columns footed in concrete. The right half contains two paneled wood and glass doors (which appear to be original) and one single-light window (not original); the doors are marked 1A (access to first floor) and 1B (access to basement). The west (Bennett Highway) elevation contains one blocked window opening (boarded up and covered with the same stucco veneer as found on the north elevation), and one paneled wood and glass door (giving access to the basement).

Inside, both the main floor and the basement levels contain three rooms; the northwest corner rooms on both levels are only accessible from the west exterior doorway, not from other rooms within the building. It is not known whether the room partition walls are original, but certainly none of the interior finishes are original: the linoleum floors, faux wood paneled walls, and dropped ceilings all date from the mid-late 20th century. (Original finishes may lie underneath these modern alterations.) Two staircases descend to the basement level, one from the south and one from the west.

Ave., which is the address of this building on the 1917 atlas.xxGeneral Cable Corp. (which bought out Phillips Insulated Wire in 1927) briefly occupied 417 Central Ave. from 1944-1946.

[3] Pawtucket Land Evidence Records, Deed Book 85, Page 516 (1899). Richards Standard Atlas, 1917.

Site features include a small area of green lawn, a concrete walkway, and a few mature trees on the Freeman Street (east) side of the building; and an asphalt-paved parking lot of 12 spaces, apparently shared with Building 2, south of the building. The parking lot and the side yard are enclosed by chain link fencing approximately 8 feet tall.

Building 2 (c. 1906-1917) *Photos #2, #3, and #10*

Original Use: Corporate offices.

Source of Date: An 1896 property deed indicates that this site was purchased as a vacant lot, but Building 2 does not appear in a 1905 engraving of the complex, so apparently dates after that year. Building 2's footprint appears on the 1917 atlas, and it is illustrated in a 1919 periodical.[4]

Very similar in exterior design to Building 1 (and likely built at about the same time), but with a much better-preserved interior, Building 2 is a one-story, red brick building attached to the north end of the earlier Building 3, containing a total area of 9,120 square feet (including the basement). It has a flat roof, granite foundation, granite window sills, corbelled brick cornice, brick string course underneath the cornice, and brick lintels in a sunburst pattern (as seen on Building 1). The east (Freeman Street) façade is five bays wide, with a doorway at the far left and four windows, all separated by brick piers; the door is paneled wood and glass with a large square glass transom above. The north elevation (facing Building 1) has fourteen bays of windows divided by brick piers; and the west (Bennett Highway) elevation has five bays of windows divided by brick piers. The existing windows are aluminum 1/1 double hung sash with metal transom panels (not original); on the west elevation are four small basement windows (only the center bay does not have a basement window). Three of these are partially or wholly blocked, but the one on the far right has a wood-frame 4-light horizontal window.

Building 2 retains its original interior layout, including a wide entrance hall at the southeast corner, L-shaped interior corridor, and offices along the outside (east, north, west) edges of the building. Men's and women's restrooms, another office, a telephone booth, and what appears

[4] Deed Book 70, Page 441 (1896). 1905 engraving in the collection of the Pawtucket History Research Center. Richards Standard Atlas, 1917. *Providence Magazine*, December 1919, p. 603.

to be a conference room are grouped along the south side, adjacent to Building 3; both restrooms and the conference room have skylights, to provide natural light in the absence of windows. Original detailing and materials remain, in excellent condition, in the entrance hall, corridor, conference room, one of the offices, and the telephone booth, all of which feature dark wood floors, wainscotting (about 5 feet tall), heavy ceiling moldings, baseboards, and paneled doors; and plaster ceilings and walls.

From the main entrance on Freeman Street, the hallway rises three steps to a set of paneled wood and glass double doors, with glass transom, all enclosed by a heavy wood frame of pilasters and architrave. (That "door frame" detail is repeated at the interior entrance to Building 3, as well as twice along the east-west corridor.) Beyond these double doors is a bronze gate guarding the main corridor, and a wood-framed reception window in the left-hand wall. (The receptionist's room is actually in Building 3.) Passing through the gate into the corridor, a large framed opening to the south (left) marks the passageway to Building 3; this opening can be closed off by a large, sliding, metal door.

Walking north along the corridor, the conference room is located on the left, with two entrances, one from the north-south corridor and one from the east-west corridor. At the northeast corner of the building is a large office with private bathroom and floor-to-ceiling safe in its southwest corner; the safe appears to be original. The other interior finishes in this office (wall-to-wall carpet, dropped ceilings, and faux wood veneer wall paneling) date from the mid-late 20th century, but original features may survive underneath these later finishes. (The private bathroom is also entirely modern, with formica walls and linoleum floor.) Just west of the northeast corner office is the one office that retains nearly all of its original finishes, including wood wainscotting and trim, and plaster ceilings and walls (presumably the original wooden floors survive under the wall-to-wall carpeting). What appears to have been a door opening in the east wall of this office, connecting to the northeast corner office, has been blocked in and covered with more wainscotting.

Proceeding west along the corridor, the remaining six offices on the north and west sides of the building all have interior finishes similar to those in the northeast corner office (wall-to-wall carpet, dropped ceilings, and faux wood veneer wall paneling); again, original features may survive underneath these later finishes. Most of the offices are connected to each other as well as accessible from the corridor; the office at the

far west end of the building has a door in its south wall connecting to Building 3. On the south side of this corridor are the conference room; a small telephone booth (with an illustration of an old-fashioned phone painted on the glass of the door); another office with late 20th-century finishes (and no windows or skylights); and the women's and men's restrooms. Both restrooms feature original marble partitions, sinks, and backsplashes, wooden stall doors, tile floors, tile and plaster walls, and wood ceiling moldings. The men's room also contains a janitor's closet with wood storage cabinets that appear to be original.

Site features include a concrete sidewalk along the Freeman Street side; several shrubs in a planting bed between Building 2 and the guard house; additional shrubbery in another planting bed along the north elevation; and the asphalt paved parking lot shared with Building 1. A bed of gravel covers the approximately 20 feet of space between the west elevation and the railroad tracks; an 8-foot chain link fence runs along the entire west property line.

Building 3 (1901-1902; pedestrian bridge c. 1914-1917) *Photos #2 and #3*

Original Use: Manufacturing; first and second floors were renovated for office space in mid-late 20th century.

Source of Date: The site for this structure was purchased in two deeds dated 1893 and 1896, but Building 3's footprint is not shown on the 1895 city atlas.[5] Periodicals dated 1901 and 1902 report the expansion of the Phillips plant to nearly double its original size, with a 4-story addition and total footprint of 219 feet by 114 feet (which matches the present area of Buildings 3 and 4 as measured on the current existing conditions drawings.) Building 3 appears in the 1905 engraving. A 1914 plat map shows the proposed pedestrian bridge, which also appears on the 1917 city atlas.[5]

Building 3 is a typical late 19th-/early 20th- century red brick industrial building, almost identical to the earlier Building 4 standing just to its south. Building 3 contains a total of 60,190 square feet (including the basement); it is four stories tall with a raised basement, granite foundation, nearly flat roof, bracketed wood cornice, segmental

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[5] Deed Book 66, Page 229 and DB 61, Page 472 (1893); DB 70/441 (1896).xxEverts & Richards Atlas, 1895. *Pawtucket Gazette & Chronicle*, July 5, 1901 (p. 1) and *Providence Board of Trade Journal*, May 1902 (p. 174-176) and August 1902 (p. 296).xx1905 engraving in the collection of the Pawtucket History Research Center. Street plat card 379: "Proposed Bridge and Tunnels for Phillips Insulated Wire Co.," 1914.xxRichards Standard Atlas, 1917

arched, multi-light wood windows, and granite window sills. It occupies its full, 13,850 square feet footprint on the first floor, but the upper floors are 10,830 square feet each, reflecting a deep recess at the west side of the building. At its southeast corner stands a 6-story red brick stair and elevator tower with two segmental arched window openings at each floor level; the top two floors of windows in the tower are either boarded up or bricked up on all four sides. Between the cornice and a projecting belt of brick around the tower is a series of recessed brick panels, four on each side. Another belt course is set underneath the blind windows at the top level.

Building 3 is attached to Building 2 on the north (connected at the basement and first floor levels) and to Building 4 on the south (connected on all floors). Building 3 also connects to Building 10 via a pedestrian bridge at the second floor.

The east (Freeman Street) façade is 15 bays wide, including the stair tower. The first floor level has doors in the 4th, 8th, and 12th bays, and windows elsewhere. All three entrances have been modified: the left-hand door has a late 20th-century poured concrete stoop with metal pipe railing, oriented parallel to the façade, and a metal door with metal roof above; the middle doorway, originally a loading door, is bricked-in; and the right-hand doorway has a late 20th-century poured concrete wheelchair ramp with metal pipe railing, also oriented parallel to the façade. The right-hand door itself is deeply recessed within the segmental arched opening. All first floor windows are replacement elements. At the second floor level, the 8th bay originally held a loading door with transom, but now holds a replacement window (the original transom survives). Original loading doors survive at the 3rd and 4th floor levels (8th bay). All original windows on the 2nd, 3rd, and 4th floor level survive.

At the second floor level of the east elevation, the 4th bay is occupied by a wooden pedestrian bridge, which stretches across Freeman Street to connect to Building 10; the bridge has paneled exterior walls and seven square 4-light wood windows on its north and south elevations. On the bridge's north elevation, gold lettering reading "American Insulated Wire Corp" is painted below the windows. A 1914 plat map shows this bridge proposed along with Building 10, so it was constructed c. 1914.

The north elevation of Building 3 (facing Central Avenue) is 14 bays wide and has a corbelled parapet at the roofline. The abutting Building 2 covers the first floor level, but the three upper floors retain their

original windows.

The west elevation (facing Bennett Highway) is 15 bays wide, broken into two separate sections of 9 bays and 6 bays; the 6 bays are set back to a depth of 8 bays. At the ground floor, only 3 of the 15 windows are original; the others have been replaced and in most cases significantly closed down. A doorway in the 11th bay has also been closed down, the original large opening infilled with brick surrounding a replacement metal door, with a metal landing and stairway leading to the ground. Most of the original windows on the upper floors remain intact.

The south elevation (facing Building 4) is 8 bays wide, and contains the same multilight windows found elsewhere on the building. The 5th bay at the 2nd, 3rd, and 4th floor levels contains a wood and glass double door for access to a fire escape, which is attached to the south elevation.

Inside Building 3, the original floor plan of the first and second floors was likely similar to that presently found on the third and fourth floors: that is, an open plan interrupted only by a series of wood columns at regular intervals, with the occasional wooden partition walls enclosing small office, storage, and restroom spaces; original finishes would have included wood floors and ceilings and painted brick walls.

The present layout of the first floor features a warren of offices (plus an employees' area that includes a kitchen and restroom, and several storage and utility rooms) grouped around the main corridor and two secondary corridors. This layout appears to be the result of modifications made c. 1917 (or later) and again in the mid-late 20th century. The first series of changes seems to have been prompted by an effort to make the north end of the first floor look like the interior of the adjacent Building 2: similar wood wainscotting and trim can be seen in the entrance hall, the main corridor, the reception room (with a window into Building 2's entrance hall), and several offices. (Note that Building 3's entrance hall also features a painted tin ceiling, unique to this complex.) The fact that these finish elements are similar but not identical to Building 2's, nor as finely detailed, may mean that they were installed later than c. 1917. The first floor was upgraded again sometime in the mid-late 20th century with linoleum floors, faux wood wall paneling or sheetrock walls, additional wall partitions, and dropped ceilings - the same found in "modernized" areas of Building 2. Even the support columns are boxed and clad in faux paneling or sheetrock. An elevator and stairway in the middle of the building, providing access only between the first floor and the

basement, are likely later additions as well. A very recent change occurred to the floor in the entrance hall, which now slopes to enhance accessibility, consistent with the wheelchair ramp outside.

Similar finish conditions (faux wood paneling and sheetrock walls, linoleum floors, dropped ceilings) are found on the second floor, where partition walls form a north-south corridor with offices to either side. (The corridor aligns with the primary corridor downstairs.) Again, this layout is certainly not original, but was modified sometime in the mid-late 20th century. An opening leading to the pedestrian bridge was cut into the east wall next to the stair tower c. 1917. The wooden stairways and railings appear to be original, as do the metal doors to the stairwells and elevator shaft seen on the third and fourth floors.

The third and fourth floors both seem little changed from the original design. Their open plans are interrupted only by a series of regularly spaced wood columns tied into heavy wood beams. Wooden partition walls enclose small storage and restroom spaces along the west wall (3rd and 4th floors), and sheetrock partitions created a small office space in the southwest corner (3rd floor only). The floors are wood (with many areas protected by sheet metal plates), ceilings are wood with exposed joists, and the walls are painted brick. A small flight of wood steps leads to the fire escape in the south wall at both levels.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Building 4 (c. 1898) *Photos #2, #3, #4 and #10*

Original Use: Manufacturing.

Source of Date: An 1893 property deed indicates that the site of this building was purchased as a vacant lot. The 1894 city directory lists the Phillips Insulated Wire Company as located on Freeman Street near Central Avenue, and a building footprint (smaller than the present footprint) is shown on the 1895 city atlas. (That footprint zig-zags on its south side, which may account for the interior masonry walls now found at the basement and first floor levels.) An article in an 1898 periodical describes new construction in this location, which appears to have replaced the original building here. Articles in 1901 and 1902 publications confirm the presence of a 4-story building on this site by that time, and Building 4 appears in

its present exterior appearance in the 1905 engraving. The 1917 atlas shows the present footprint of the building.[6]

Building 4 is a typical late 19th-/early 20th-century red brick industrial building: 4 stories tall with raised basement, granite foundation, flat roof, bracketed wood cornice, segmental arched, multi-light wood windows, and granite window sills. With a total area of 68,800 square feet (including the basement), it is the largest of the nine buildings on the west side of Freeman Street. It is also the oldest part of the complex, and remains remarkably unaltered both inside and out.

Building 4 is attached to Building 3 on the north (connected on all floors) and to Building 5 on the south (connected at the basement, first and second floors).

The east (Freeman Street) façade is 15 bays wide; most of its windows appear to be original. The first floor level has loading doors in the 4th and 8th, and another door in the 14th bay. Both loading doors have been modified; a dumpster stands in front of the loading door in the 4th bay, and a poured concrete loading dock has been added to the 8th bay, where the opening has been closed down and the original loading door replaced with a metal pedestrian door. Another metal door is installed in the 14th bay.

On the north elevation (facing Building 3), the 2nd, 3rd, and 4th floors are visible from Bennett Highway; this elevation is 8 bays wide. All windows are similar in character and condition to those on the front of the building.

The west (Bennett Highway) elevation is 15 bays wide. At the first floor level, original window openings in the 1st and 11th bays have been closed down and modified into doorways. In the 8th bay on the 2nd, 3rd, and 4th floors are wood and glass fire escape doors (similar to those seen on the south elevation of Building 3), giving access to a metal fire escape. All windows are similar in character and condition to those found elsewhere on the building. A small headhouse structure is visible over the west roofline; this does not line up with the building's elevator or stairways, so it is not clear what it's purpose might be.

The south elevation of Building 4 is only exposed on the 3rd and 4th

[6] Deed Book 66, Page 229 and DB 61, Page 472 (1893).xxDirectory for Pawtucket and Central Falls, 1894.xx Everts & Richards Atlas, 1895. Board of Trade Journal, October 1898, May 1902, August 1902. *Pawtucket Gazette and Chronicle*, July 5, 1901, p. 1.xx1905 engraving in the collection of the Pawtucket History Research Center; Richards Standard Atlas, 1917

floors, with 14 bays of windows similar in character and condition to those elsewhere on the building. An exterior brick elevator shaft stands in the center of the south elevation. Several brick chimneys rise above the south roofline (visible from Bennett Highway), remnants of the boiler room that used to be located in the southwest corner of the building.

The interior of Building 4 retains its original open plan on all four floors; each floor has a series of regularly spaced wood columns, with the occasional wooden partition walls enclosing small office, storage, stairwell, and restroom spaces. No furnaces remain in the basement, but there is evidence of coal chutes, supporting a theory that the building's original boiler rooms were located at the southwest corner of the building, where two brick partition walls now enclose a large area at the basement and first floor levels. (These walls mark may mark the original footprint of the 1893 building, which was either expanded or replaced c. 1898.) Both masonry walls have several openings cut into them, some with segmental-arch lintels (presumably original) and some with rectangular lintels (presumably later alterations to facilitate circulation). The second floor has some "rooms" created with chain link fencing adjacent to Building 3, as well as a wood-framed office attached to the west wall of the elevator shaft - both clearly late 20th-century alterations. The third and fourth floors are largely unaltered; wood fire escape steps stand against the west wall at both levels. A freight elevator is located in the middle of the building and provides vertical access from the basement to the 4th floor; a second elevator, also near the middle of the building (likely a later installation), provides access only between the basement and first floor. Original finishes throughout the building include wood floors (with plates of sheet metal protecting high traffic areas), wood ceilings with exposed joists, and painted brick walls.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Building 5 (c. 1905) *Photo #4*

Original Use: Manufacturing.

Source of Date: The site for this building was purchased in two property deeds dated 1898 and 1900. Building 5 is shown in the 1905 engraving.[7]

[7] Deed Book 85, Page 162 (1898) and DB 93, Page 46 (1900).xx1905 engraving in the collection of the Pawtucket History Research Center. Note that the 1901

Building 5 is a typical late 19th-/early 20th-century industrial building: 2 stories tall with raised basement, granite foundation, flat roof, molded brick cornice, segmental arched, multi-light wood windows, and granite window sills. The total area (including basement) is 25,200 square feet.

Building 5 is attached to Building 4 on the north and to Building 6 on the south, and is connected to both at all floor levels.

The east (Freeman Street) elevation is nine bays wide, with no entrances or loading doors. Windows occupy all openings in the façade on the first and second floor levels (most of the basement windows are boarded up). The windows on the first floor are 8/8 double hung sash with an 8-light arched transom above; those on the second floor are 12/12 double hung sash.

The west (Bennett Highway) elevation is also nine bays wide; however the 5th bay on both first and second floors has a door in it: on the first floor, a double wood and glass loading door (the loading ramp itself has been removed); and on the second floor, a metal door leading to a fire escape. Most of the basement windows have been blocked up with wood panels. On the first floor, the original windows consisted of an 8/12 sash, but in the 2nd and 7th bays, the top sashes have been replaced with a wood panel containing a vent hood. On the second floor, the original windows were 12/12, but in the 4th, 6th, 7th, 8th, and 9th bays, the window openings have been closed down with a wood infill encasing a much smaller, 1/1 aluminum double hung window.

No part of the north elevation is exposed to view, but on the south elevation, the second floor level is partially visible from Bennett Highway; all of the window openings appear to be blocked up.

On the first floor the original layout and finishes are identical to those seen in Building 4: an open plan punctuated by a series of regularly spaced wood columns (encased at their bases in metal sheaths); wood flooring with protective metal plates in some areas, painted brick walls, and wood ceiling with exposed framing. In the southwest corner a small area is partitioned off with sliding wooden door and wood wall studs; and

Chronicle & Gazette article refers to a new 2-story section containing boiler and engine rooms and wire covering machinery; however, Building 5's footprint exceeds the overall area of the new plant noted in that same article, so it could not be confirmed whether this building was in fact constructed in 1901.xxHowever it was certainly standing by 1905.

in the northeast corner is a small office enclosed with plywood walls.

An enclosed stairwell (with beaded board walls) on the north wall provides circulation between the first and second floors. At the second floor level, the original layout and finishes have been modernized as in Building 3: sheetrock partition walls creating a corridor running north-south, and some offices on the west side. These offices have linoleum floors, faux wood veneer paneling, and dropped ceilings. The east side of the second floor retains its original finishes and open plan. In the main corridor, the floor ramps up to connect to the higher second floor level of Building 6. The roof contains a large skylight.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Building 6 (c. 1905-1917) *Photos #4 and #11*

Original Use: Manufacturing.

Source of Date: Deeds indicate that this site was purchased as a vacant lot in 1900; Building 6 is shown in the 1905 engraving, but appears to have a different façade than in a later image dated 1919. Building 6 also appears on the 1917 atlas.[8]

Building 6 stands 2 stories tall on the east side and 1 story tall on the west. (Note that Building 6 is a few feet taller than Building 5, despite the fact that they are both 2 stories.) Like its neighbors, Building 6 is made of red brick and has a raised basement, granite foundation, flat roof, molded brick cornice, segmental arched, multi-light wood windows, and granite window sills. The total area (including basement) is 23,030 square feet.

Building 6 is connected to Building 5 on the north and to Building 7 to the south, at all levels.

The east (Freeman Street) elevation is 2 stories tall and 8 bays wide, with no entrances other than a loading door in the 7th bay on the first floor. This loading door has a truncated multi-light window above it, and

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[8] Deed Book 93, Page 46 (1900).xx1905 engraving in the collection of the Pawtucket History Research Center.xxRichards Standard Atlas, 1917.xx*Providence Magazine*, December 1919, p. 603.

it appears that the original window opening was modified by dropping the sill to insert the loading doors. (Note the loading platform has been removed.) Windows on this elevation have a different character than those seen on Buildings 3, 4, and 5. At the basement level, the windows are divided vertically with a heavy mullion into two sections, each containing six glass lights. On the first floor, the windows are divided by heavy vertical and horizontal mullions into six sections: the bottom sections have four lights each, while the middle and top sections have six lights each. On the second floor, the windows are divided by heavy vertical and horizontal mullions into four sections, each with nine lights.
The west (Bennett Highway) elevation is 1 story tall, and only 6 bays wide due to the intrusion, at the southwest corner, of a 4-story tower belonging to Building 7. Most of the basement windows are boarded up or blocked. The first floor windows exhibit detailing similar to those on the east elevation; however, the opening in the 6th bay is placed considerably lower than its neighbors, and encloses a pair of wood and glass loading doors surmounted by multilight transoms. The loading platform has been removed.

A rooftop monitor and the west elevation of the 2-story section of the building are both visible from inside Building 7. The rooftop monitor is oriented north-south and has wood shingle walls, a very shallow pitched end gable roof, and fifteen 4-light wood windows on its east and west sides. The west elevation of the 2-story section has the same windows as seen on the east elevation at the 2nd floor.

Inside Building 6, both first and second floors exhibit their original layout and finishes: open plan with metal columns at regularly spaced intervals, wood flooring with metal plates in high-traffic areas, painted brick walls, and wood ceilings with exposed framing.

Note that the columns in this building are metal, not wood, and that its window configurations are very different from neighboring buildings. These facts may indicate that Building 6 is a later structure than Buildings 3, 4, and 5: perhaps built c. 1914-1917, contemporary with Buildings 10 and 11 on the east side of Freeman Street. Two illustrations of the Phillips Insulated Wire Company complex, dated 1905 and 1919, support this theory by showing two different east facades for this building; the earlier illustration also shows a smokestack on this building, of which no evidence is present today. Although a building apparently stood on this site as early as 1905, that building appears to have been replaced, or at least significantly altered, by 1919.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Building 7 (c. 1905) *Photo #4*

Original Use: Manufacturing (wire mill).

Source of Date: Deeds indicate that this site was purchased as a vacant lot in 1900; Building 7 is shown in the 1905 engraving. The 1914 plat map showing the proposed bridge across Freeman Street identifies this building as a wire mill.[9]

When viewed from Freeman Street, at first glance Building 7 and Building 6 appear to be one building; their 2-story heights match so exactly that they share a continuous cornice line, and their facades stand in the same vertical plane. However, by looking closely one can see the seam where the two facades join; and when viewed from the rear, their separate massing is readily evident. The windows on the two buildings are also configured differently.

Like its neighbors, Building 7 is made of red brick and has a raised basement, granite foundation, flat roof, molded brick cornice, segmental arched, multi-light wood windows, and granite window sills. This building also has a 4-story tower at its northwest corner, abutting Building 6; the function of this tower is not clear, as it has neither elevator nor stairs within it, and in fact the upper two floors are not accessible from the lower floors. The total area of Building 7 (including basement and tower) is 20,620 square feet.

Building 7 is connected to Building 6 on the north (all levels), and to Building 8 on the south (basement and first floor only).

The east (Freeman Street) elevation is 6 bays wide. In the 1st bay on the first floor is a loading door with truncated 8-light window above it; this door opening appears to be original, but the door itself is a later alteration, and the loading platform has been removed. There are no other entrances. Windows on this elevation have a different character than those seen on adjacent buildings. The basement windows may in fact have matched those on Building 6, but now most of them are boarded up; the few that

[9] Deed Book 93, Page 46 (1900).xx1905 engraving in the collection of the Pawtucket History Research Center.xxStreet Plat Card 379 (1914).

remain have two glass lights divided by a vertical mullion. On both 1st and 2nd floors, heavy horizontal mullions divide the windows into three sections, each with eight lights.

The west (Bennett Highway) elevation is 8 bays wide due to the presence of the tower at the northwest corner, which intrudes onto the footprint of Building 6. The tower is 4 stories tall, and similar in character to the tower on Building 3, with the same decorative detailing at the cornice line (a projecting belt of brick all around, and a series of recessed brick panels, five on each side). This tower has two tripartite multilight windows (like those on the building's east façade) at the first floor level, one paired casement multilight window with transom in the 2nd bay at the second floor level (2nd bay), a boarded up window opening in the center of the 3rd floor level, and a bricked in, blind window in the center of the 4th floor level. (On the tower's north, east and south elevations, window openings on the top two floors of the tower are similarly boarded up or blind.)

Elsewhere on the west elevation of the building, there is a loading door in the 5th bay (a modification of an original arched window opening), with its loading platform removed. The other windows on the first and second floors appear to match those on the east façade (a very large piece of mechanical equipment stands just next to the west elevation and partially blocks the view of the first floor). On the roof, visible from Bennett Highway, is a metal-framed structure with open sides and a metal roof; its function is unknown.

Inside Building 7, both first and second floors exhibit their original layout and finishes: open plan with metal columns at regularly spaced intervals, wood flooring with metal plates in high-traffic areas, painted brick walls, and wood ceilings with exposed framing.

As was the case with Building 6, the 1905 and 1915 illustrations of the Phillips Insulated Wire complex indicate that Building 7 changed considerably within that decade, and may even have been replaced. In the 1905 illustration, Buildings 6 and 7 are at two different heights, and a large masonry opening two bays wide appears on the 1st floor of Building 7's east façade. The 1915 illustration shows both buildings at the same height, and indeed appearing to be one building; the large masonry opening is gone, and there is no evidence of such a large opening on the building today. These changes, and the presence of metal columns within Building 7, point to a construction date of c. 1915.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Building 8 (c. 1905, façade modified after 1924) *Photos #4 and #12*

Original Use: Manufacturing (rod mill).

Source of Date: Deeds indicate that this site was purchased as a vacant lot in 1900; Building 8 is shown in the 1905 engraving. A 1907 lease between Phillips Insulated Wire Company and the neighboring Hand Brewing Company refers to this building as a "rod mill." Its footprint is on the 1917 atlas, and its original façade appears in published illustrations dated 1919 and 1924.[10]

Building 8 is made of red brick and stands two stories tall (although about 2 feet shorter than Building 7), with a raised basement, granite foundation, flat roof, molded brick cornice, multi-light wood windows in both segmental arched and rectangular openings, and granite window sills. The total area of Building 8 (including basement) is 29,280 square feet.

Building 8 is connected to Building 7 on the north (basement and first floor only), and to Building 8A on the south (first floor only).

The east (Freeman St.) facade is 16 bays wide and has two different facades. The first four bays, reading from the left, show the original design c. 1905 (consistent with the 1905, 1919, and 1924 illustrations of the complex). The remaining twelve bays represent a reconfiguration of the façade occurred after 1924, when a partial second floor level was inserted into the east side of the building.

In the original portion of the east façade are four tall, regularly spaced, segmental arched window openings, centered between the bottom and top of the building and set underneath a brick belt course and recessed brick panels below the cornice line. (A similar cornice detail is seen on the towers of Buildings 3 and 7. The same fenestration pattern is seen on the entire rear elevation; see below.) Heavy horizontal mullions divide these windows into three sections, each with 12 lights. The size and

[10] Deed Book 93, Page 46 (1900), and DB 117, Page 167 (1907 lease).xx1905 engraving in the collection of the Pawtucket History Research Center.xxRichards Standard Atlas, 1917. *Providence Magazine*, December 1919, p. 603; and January 1924, p. 33.

placement of these windows indicate that the interior space behind them is a full two stories in height. The basement windows in this section are also unusually tall, but all are bricked in. The 1st and 2nd bays are partially obscured by a concrete block loading dock addition constructed in the late 20th century (contemporary with Building 8A).

In the altered portion of the east façade, bays 5 through 16, there are rectangular multilight windows on both the first and second floors, showing where the interior was reconfigured with the addition of a partial second floor level. The basement windows are the same height as on the older part of the façade, and likewise boarded up. The first floor windows are mostly 12/12, although several of the upper sashes have been replaced with ventilation hoods. A pair of wooden loading doors occupies a segmental arched opening in the 11th bay (its lintel lies well below the lintels of the adjacent windows); the transom above has been replaced with a vent, and the loading platform has been removed. A pedestrian entrance is deeply recessed into an arched doorway in the 16th bay; above this door is a 12-light fixed window (its lintel aligns with other adjacent windows). The second floor windows are 8/8.

The west (Bennett Highway) elevation is 15 bays wide. In the 1st and 9th bays are large, segmental arched doorways, presumably once loading doors; the 1st bay has been entirely bricked in, and the 9th is presently hidden behind a large piece of mechanical equipment; both loading platforms are gone. The remaining bays contain the same tall, segmental arched, tripartite windows as seen on the original portion of the east façade. Most of the basement windows are boarded up, but mullions dividing them half vertically are visible.

Inside Building 8, most of the space soars a full two stories in height with an entirely open plan. Several metal columns support the roof, along with metal trusses; 12 skylights are cut into the roof. A partial second floor occupies the east side of the building, reached by poured concrete stairways with pipe railings at either end. The upstairs level is subdivided into three rooms: toilets, locker rooms with showers, and washrooms. The finishes include concrete floors, tile and plaster walls, wood doors and paneled ceilings.

Site features include a concrete sidewalk along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

[Note: There is no building numbered 9.]

Building 10 (c. 1914-1917) *Photos #1, #5, #6 and #7*

Original Use: Manufacturing; 1st floor currently used as retail space, leased to a restaurant supply tenant.

Source of Date: The site was acquired by deeds dated 1902 and 1907. A 1914 plat map showing the proposed bridge across Freeman Street refers to this building as the "proposed mill." Building 10's footprint appears on the 1917 atlas, and it is illustrated in a 1919 publication.[11]

Building 10 (estimated to be 84,408 sq.ft.) stands on the west side of Freeman Street, in a block bounded by Freeman Street, Central Avenue, and Winthrop Avenue. This is a handsome 3-story, L-shaped red brick building of pier and spandrel construction with granite foundation, raised basement, flat roof, and granite trim: decorative elements include belt courses wrapping around the entire building above the raised basement, above the 3rd floor, and at the cornice line, entryway surrounds, and window sills. All windows are recessed behind the brick piers and spandrels; the brick piers flanking the corner windows are thicker than the other piers. The building, which is sited at an angle to and facing Freeman Street, has a six-story stair tower at the jointure of the "L," and a four-story elevator tower.

Building 10 is attached to Building 11 on the south at the first floor level, via a 1-story connector; and also to Building 3 to the east, via the c. 1914-1917 pedestrian bridge crossing Freeman Street at the 2nd floor level.

For the purposes of description, the west (Freeman Street) façade consists of two sections, the "bridge section" at the north end, which contains the pedestrian bridge to Building 3; and the "tower section" at the south end, which includes both the stair and elevator towers.

The bridge section is 6 bays wide on Freeman Street, from the northwest corner to the pedestrian bridge. The basement windows are wood, with two lights divided vertically. The first floor windows are a similar size and configuration as the basement windows, set into the top third of

[11] Deed Book 95, Page 173 (1902) and DB 115, Page 434 (1907).xxStreet plat card 379 (1914).xxRichards Standard Atlas, 1917.xx*Providence Magazine*, December 1919, p. 603.

much taller window openings; the remaining area in each opening is infilled with brick (an original detail). The 2nd and 3rd floor windows fill their entire openings, and are each divided into four sections by heavy vertical and horizontal mullions; the top sections have six lights each, and the bottom sections (which function as casements) have 12 lights each. At the 2nd floor level, in the 6th bay, is the pedestrian bridge to Building 3. A granite-framed entryway is located underneath the bridge; it features a pair of metal gates guarding a double wood door, recessed deep within the opening.

The south elevation of the bridge section is three bays wide, from the bridge to the stair tower. Here, the first bay of windows is narrower than the 2nd and 3rd bays, and only the 3rd bay has a basement window. In the 1st bay, windows on all three floors consist of wood 6/12 single hung sash. In the 2nd and 3rd bay on all floors are paired casement windows matching those on the upper floors of the west elevation. The basement window in the 3rd bay matches the basement windows on the west elevation. In the tower section, the west elevation is 10 bays wide from the stair tower to the southwest corner.

The stair tower itself occupies the first bay of tower section's west elevation. The stair tower has a large, centered entryway framed in granite; recessed within the opening is a pair of wood double doors underneath a glass transom. The doorway is reached by a poured concrete stoop with pipe handrail (a later alteration). Above the doorway, the tower rises 6 floors. Floors two through five each have three narrow 4/8 casement windows, set back behind narrow brick piers. At the top of the tower is a triplet of windows (8 lights, 12 lights, 8 lights), separated by heavy vertical mullions. This same configuration of windows is repeated on all other elevations of the tower.

The next two bays of the tower section's west elevation contain a 1-story addition with two loading bays (a later alteration); above the loading bays are 6/12 casement windows similar to those on the upper floors of the bridge section. In the 4th bay is the freight elevator tower, a simple brick shaft with loading dock at the street level; its only windows are 12-light sash located at the top of the tower on all four sides.

The remainder of the tower section's west elevation consists of six bays of windows, similar in size and configuration to those elsewhere on this elevation. The basement windows are similar to those on the west elevation of the bridge section.

The north elevation of Building 10, facing Central Avenue, is 20 bays wide. At the first floor level, the first 8 bays are covered by the 1-story Building 10A. Elsewhere, the north elevation features windows matching those on the west elevation. There are no entrances on this side of the building.

The east elevation of Building 10, facing Winthrop Avenue, is 18 bays wide and designed similarly to the north elevation. No entrances are found on this elevation, but there is a fire escape, wood double doors for which (similar in design to those in Buildings 3 and 4) are found in the 7th bay from the left on the 2nd, 3rd, and 4th floors.

The south elevation of Building 10, facing Building 11, is 10 bays wide and designed similarly to the north and east elevations.

On all three floors, the interior of Building 10 resembles the original interiors of Buildings 3 and 4: an open plan interrupted only by a series of metal columns at regular intervals, with the occasional wooden or plywood partition walls enclosing small office, storage, and restroom spaces. Original finishes include wood floors (covered with metal plates in high-traffic areas), wood ceilings with exposed framing, and painted brick walls. A tenant selling restaurant supplies presently occupies the first floor space; the wood partition walls enclosing that business's office are new, as are the sheetrock walls enclosing the loading areas. The stairwell has its original beaded board walls and wooden steps.

A simple one-story connector runs between Buildings 10 and 11 at the first floor level; it has a brick west elevation and a wood-walled east elevation, which contains two 6-light windows. Large pieces of mechanical equipment stand on both sides of the connector and obscure its visibility.

Site features include concrete sidewalks along the east and west elevations; an asphalt paved parking lot next to the north elevation; and a small, triangular-shaped planting area south of the elevator tower. An iron picket fence and gate, with granite piers flanking the gate, stretches along the east sidewalk between Buildings 10 and 11. The entire east sidewalk next to Buildings 10 and 11 is lined with an 8-ft. chain link fence.

Building 10A (c. 1918-1927) *Photo #5*

Original Use: Unknown; currently used as a workshop.

Source of Date: Deeds indicate that the lot on which Building 10A stands was acquired in 1916, but its footprint does not appear on the 1917 atlas. This building was standing when the entire complex was sold in 1927.[12]

Building 10A (estimated 3,709 square feet) is a one-story, flat-roofed, red brick pier and spandrel structure, with raised basement, bracketed wood cornice and granite trim. Eight bays long and four bays wide, its architectural character is very similar to that of the earlier Building 10, to which it is attached near the northeast corner, and it apparently was constructed shortly afterward.

The north elevation, facing Central Avenue, is entirely hidden from view by an abutting 1-story concrete block building housing an automotive supply store (a separate property). On both west (Freeman Street) and east (Winthrop Avenue) elevations, brick piers enclose pairs of 6/12 wood windows; the basement "windows" are blind, infilled with recessed panels of brick. The building has no exterior entrances, but is accessed through Building 10.

Inside, Building 10A is one room, presently used as a workshop. The flooring is poured concrete; the walls painted brick; and the ceiling wood with exposed framing.

Site features include an asphalt paved parking lot next to the west elevation; and concrete sidewalks and chain link fencing along the east elevation.

Building 11 (c. 1914-1917) *Photos #5 and #7*

Original Use: Power Plant

Source of Date: The site was acquired by deeds dated 1902 and 1907. A 1914 plat map showing the proposed bridge across Freeman Street refers to this building as the "proposed power house." Building 11's footprint appears on the 1917 atlas, and it is illustrated in a 1919 publication.[13]

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[12] Deed Book 177, Pages 489 and 491 (1916); DB 283, Page 419 (1927).xxRichards Standard Atlas, 1917.

[13] Deed Book 95, Page 173 (1902) and DB 115, Page 434 (1907).xxStreet plat card 379 (1914).xxRichards Standard Atlas, 1917. *Providence Magazine*, December 1919, p. 603.

Building 11 (estimated 6,110 sq.ft.) is an L-shaped red brick pier and spandrel structure, with flat roof, ornamented brick cornice, and granite trim, including belt courses above and below the first floor windows and at the cornice line, which is also ornamented with recessed brick panels. The building stands the equivalent of two stories tall, although it has one main floor and a raised basement. As noted above, Building 11 is tied to Building 10 on its north elevation via a small connector structure (see Building 10 for full description).

The west elevation, facing Freeman Street, is six bays wide. An entrance framed with granite pilasters and entablature is set in the 1st bay, with a wood paneled door set deep within the recess. The basement windows are pairs of large, metal, multi-light, operable awning sash. The main floor windows are tall, multi-light, metal sash with two sets of operable awning windows in each. In the 4th bay, a double wood and glass loading door has been inserted between the main window and the basement window; there is no loading platform.

A tall smokestack with white brick lettering reading "AIW" stands at the southwest corner, tucked into the jointure of the "L." A band of corbelling circles the smokestack at the level of Building 11's cornice line. The "AIW" lettering would have been added to the smokestack after American Insulated Wire Corporation acquired this complex in 1946.

The south elevation has no windows. A wood-framed lean-to structure is attached there (not original), with a simply detailed entrance into the boiler room.

The east elevation (facing Winthrop Avenue) has 8 bays of large, metal, multi-light windows with operable awning sash and basement windows similar to those on the west facade.

The north elevation (facing Building 10) has 9 bays of windows, grouped in threes: in each trio, the center bay is wider than the two side bays. All windows are the same large, metal, multi-light windows with operable awning sash. Basement windows are similar to those on the west and east elevations.

Inside Building 11, the space is divided in half vertically. The west half has a concrete and tile floor, glazed brick walls, and a wood ceiling with exposed framing; the floor separates the main level from the basement. The east half is open from the basement up to the ceiling of the main

floor; this area contains the boilers and associated equipment, with metal catwalks providing access from the north end of the building to the south.

Site features include asphalt pavement, concrete sidewalks, an ornamental metal fence with granite piers along the Freeman Street sidewalk between Buildings 10 and 11, and an 8-ft chain link fence with gate providing access to the property from the intersection of Winthrop and Hunts Avenues.

Building 12 (c. 1907-1917) *Photo #8*

Original Use: Manufacturing.

Source of Date: Deeds indicate that the site was acquired as a vacant lot in 1907; the building's footprint appears on the 1917 atlas.[14]

Building 12 (estimated 6,571 square feet) stands at the corner of Winthrop and Hunts Avenue, on a large lot that also includes Buildings 13 and 14. The three buildings are oriented to face each other across an asphalt paved parking area, which is enclosed in chain link fencing. Building 12 is a one story red brick building with pier and spandrel construction, granite foundation, raised basement, overhanging wood cornice, flat roof, and granite window sills.

The primary façade of Building 12 is the north elevation, facing Building 13. The brick piers divide the north façade into 10 bays. Bays 1, 2, 7, 8, 9, and 10 contain large 12-light double casement windows underneath 6-light transoms; heavy wood mullions separate the sashes and transoms. Bays 3 and 4 contain shorter, 6/6 windows with similar mullions (a brick loading bay stands under the window in the 3rd bay). The 5th bay is infilled with brick; the 6th bay is another loading dock, and both are sheltered under a simple shed roofed overhang. The basement windows (where they survive) are a pair of 6-light wood sash separated by a heavy vertical mullion.

The east elevation (facing Building 14) is five bays wide, and contains the same paired 12-light casements under 6-light transoms on the main floor, and paired 6-light basement windows, as found on the north façade. The center window is slightly shorter than its neighbors (the

[14] Deed Book 115, Page 367 (1907).xxRichards Standard Atlas, 1917.

transom there is only 3 lights), and there is no basement window in this middle bay.

The south elevation (facing Hunts Avenue) is 10 bays wide, and contains the same windows found on the north and east elevations.

The west elevation (facing Winthrop Avenue) is identical to the east elevation, except that four of the five windows on the main floor are boarded up.

The interior of Building 12 follows a fairly open plan, with metal columns, painted brick walls, wood flooring, and wood ceiling with exposed framing. Wood partition walls enclose the entrance and loading areas on the north side of the building; additional partition walls (a later addition) have created smaller rooms at the southwest and northwest corner. A stairway leading to the basement is located at the north side; an underground tunnel connects Building 12 to Building 14.

Site features include concrete sidewalks and 8-foot chain link fencing along Winthrop and Hunts Avenues; and an asphalt parking area in the interior of the lot.

Building 13 (c. 1907-1917) *Photo #8*

Original Use: Garage and Storage

Source of Date: Deeds indicate that the site was acquired as a vacant lot in 1907; the building's footprint appears on the 1917 atlas.[15]

Building 13 (estimated 4,082 square feet) stands on the east side of Winthrop Avenue, on a large lot that also includes Buildings 12 and 14. It is built directly on the north property line (the property next door is a 3-story single-family residence), and faces Building 12 across an overgrown asphalt parking area.

Building 13 is a long, low, 1- to 1½-story red brick structure with granite foundation; slate hip roof and a dormer in the south roof slope at the west end of the building; flat roof at the east end of the building, and granite lintels and sills.,

[15] Deed Book 115, Page 367 (1907).xxRichards Standard Atlas, 1917.

The primary, south façade faces Building 12 and is divided into three sections. At the west end of the building is the slate roofed, brick-walled section containing paneled wood and glass double doors, centered under the dormer and between two 2/2 wood windows; all openings have granite lintels and sills. The slate-clad, gable-roofed dormer above the doorway contains a pair of wood and glass loading doors. In the middle of the façade are six garage bays with corrugated metal overhead doors framed in wood. At the east end of the building, under the flat roof, is a section which may be a later addition; it contains two pairs of wood paneled doors, and a large sliding garage door.

The west elevation (facing Winthrop Avenue) has a large garage door opening (not original; with corrugated metal overhead door) cut into the brick wall, as well as a wood paneled pedestrian door with granite lintel and sill.

The north elevation contains a row of small, square, boarded up window openings trimmed with granite lintels and sills.

The east elevation is not visible, as it butts up against the north end of Building 14.

Inside Building 13, the finishes are simple (concrete floors, brick walls, wood ceilings with exposed framing); a wood-walled stairway near the "front door" leads up to the attic level. The space is simply divided with wood partition walls into storage area and garage bays.

Site features include concrete sidewalk and 8-foot chain link fencing (with gate) along Winthrop Avenue, and an asphalt parking area in the interior of the lot.

Building 14 (c. 1907-1917) *Photo #8*

Original Use: Manufacturing.

Source of Date: Deeds indicate that the site was acquired as a vacant lot in 1907; the building's footprint appears on the 1917 atlas.[16]

Building 14 (estimated 7,792 square feet) stands at the corner of Mendon Avenue and Hunts Avenue and faces into the lot, perpendicular to

[16] Deed Book 115, Page 367 (1907).xxRichards Standard Atlas, 1917.

Buildings 12 and 13. This is a long 1-story red brick pier and spandrel building with a flat roof, granite foundation, raised basement, granite and brick window sills, and a decorative brick trim at the cornice line. A small brick addition at the north end contains a pair of wood paneled loading doors.

The primary façade is the west elevation, facing Winthrop Avenue although well set back from it. This elevation is divided into 12 bays featuring tall, shallow-arched recesses into which are set basement and main floor windows of varying sizes. The basement windows originally appear to have been 10-light wood sash, although many of those openings are presently boarded up. The 1st floor windows in the 1st, 2nd, and 7th though 12th bays are the same size as the basement windows, set into the top of their arched openings. In the 3rd bay is a set of double wood doors with multi-light arched transom, accessed from a poured concrete stoop and sheltered under a simple metal shed roof (both later additions). The 4th and 5th bays contain 10/10 wood double hung windows underneath 10-light arched transoms; and the 6th bay is blind, infilled with brick, and a granite "sill" aligning with the sill of the window in the adjacent 7th bay.

The north elevation is not visible from Mendon Avenue.

The east elevation, facing Mendon Avenue, has brick piers dividing it into 14 bays but has only two windows, both 15/15 wood double hung sash, located in the 1st and 12th bays.

The south elevation, facing Hunts Avenue, has brick piers dividing it into four bays, with 15/15 wood double hung sash in the middle two bays. The 3rd and 4th bays have small basement window openings, both boarded up.

The interior of Building 14 follows an open plan, with metal columns, painted brick walls, wood flooring, and wood ceiling with exposed framing. Wood partition walls enclose the entrance and loading areas at the northwest corner of the building. A stairway leading to the basement is located at the south wall; an underground tunnel connects Building 14 to Building 12.

Site features include concrete sidewalks along Mendon and Hunts Avenues; an 8-ft. chain link fence on Hunts Avenue between Buildings 14 and 12; and an asphalt parking area in the interior of the lot.

Non-Contributing Structures

Building 2A Guard Shack (Late 20th century)

Original Use: Occupied by security staff.
Source of Date: Visual assessment.

A small, one-story, wood-frame building sited directly north of Building 2 and facing Central Avenue, with concrete foundation, faux brick veneer walls, and asphalt shingle end gable roof that extends into an overhanging porch, supported by two metal posts, on the east (Freeman Street) side. The building has a wood and glass door and a pair of fixed single-light windows in its north elevation, a pair of 1/1 double hung wood windows in its east elevation, and another 1/1 window in its south elevation. (A former window opening on the west elevation has been "bricked" over.) The building measures approximately 10 feet by 10 feet, contains one room, and lacks any historic finishes or details.

Site features include a concrete sidewalk along the Freeman Street side; several shrubs in a planting bed between the guard house and Building 2; and another planting bed on the west side, with no plants in it.

Buildings 8A and 8B (Late 20th century)

Original Use: Manufacturing
Source of Date: Visual assessment

Buildings 8A and 8B are made of reinforced concrete and stand a tall one story (only a few feet shorter than Building 8). The buildings are connected and appear as one; both have a concrete foundation and a flat roof. Building A has two loading doors on its north elevation (facing Freeman Street); Building B has one loading door in its south elevation. Both buildings feature a line of small square windows on the west elevation (facing Bennett Highway). The interior has an open plan. Its total area has not yet been field checked.

Building 8A is connected to Building 8 on the north, and to Building 8B on the south/ southeast.

Site features include asphalt pavement along the Freeman Street side, and a bed of gravel between the west elevation and the railroad tracks.

Another line of train tracks and an 8-foot chain link fence runs along the east property line.

Building 11A Guard Shack (Late 20th century) *Photo #7*

Original Use: Occupied by security staff.
Source of Date: Visual assessment.

A small, one-story, wood-frame building sited just southeast of Building 11, next to the gate in the chain link fence at the intersection of Winthrop and Hunts Avenues. This building has a concrete foundation, wood walls, and asphalt shingle end gable roof that extends into an overhanging porch, supported by two metal posts, on the south side. The building has a wood and glass door in its west elevation and several large single-light windows. It measures approximately 10 feet by 10 feet, contains one room, and lacks any historic finishes or details.

Significance

Introduction

The Phillips Insulated Wire Company complex at 413 Central Avenue (formerly 36 Freeman Street) in Pawtucket, R.I., was built between c. 1898 and 1927 for the production of insulated, weatherproof, and slow-burning copper wire and cables, as well as bare copper wire, cables, and rods. The well-preserved complex of 14 historic industrial structures sprawls over 3 city blocks and is bounded by Central, Winthrop, Mendon, and Hunts Avenues and the Providence & Worcester Railroad tracks. (Freeman Street runs through the complex and is now a private way.) It retains integrity of location, design, setting, materials, workmanship, feeling, and association, and meets Criteria A and C for listing in the National Register. The period of significance for the complex is c. 1898-1953.

Under Criterion A, the Phillips Insulated Wire Company complex is associated with the development of the insulated wire industry in Rhode Island, especially in Pawtucket, in the late 19th and early to mid 20th centuries. Wire manufacturing in Rhode Island evolved out of the state's base metals industry; by the mid-1800s wire was being used in both the jewelry and textile industries for applications ranging from machinery to finished products such as earrings and corsets. With the advent of electrical and telephone services (introduced 1879-1880), demand began to grow for a specialized wire product: copper wiring coated with a protective insulation of rubber. Manufacturers were quick to capitalize on this new niche market: between 1888 and 1926, wire manufacturing grew into Pawtucket's 3rd largest industry (behind textiles and iron/steel products), and by the 1940s, Pawtucket had become "the world center of the wire industry."[17] The Phillips Insulated Wire Company (originally founded in 1884 in Central Falls under the name E.B. Phillips & Co.) was the first of these specialized manufacturers to be established in Pawtucket, in 1888. Incorporated in 1892 under the name Phillips Insulated Wire Co., the company relocated to the Darlington section of Pawtucket in 1893. As demand increased for electrical products and services, Phillips Insulated Wire became one of the most successful manufacturers in the city: 14 new structures were erected at the Darlington plant between c. 1898-1927. Sold to the General Cable Corp. in 1927 and then to the American Insulated Wire Corp. in 1946, the plant continued in production until 2003, continually

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[17] *Pawtucket Times*, June 14, 1941.

evolving its product lines to meet new advances in technology. Thus, in addition to representing the history of an important Pawtucket manufacturer, the Phillips Insulated Wire Company complex also symbolizes how specialization, diversification, and innovation helped the wire industry to grow and flourish long after many Rhode Island industries, especially textiles and jewelry, had declined.

Under Criterion C, the Phillips complex is an excellent example of architectural design specific to industry in the late 19th and early 20th centuries: brick walls, some with load-bearing piers; stone trim; flat roofs; exterior stair towers that extend prominently above the roof line; segmental arched window and door openings; multi-light wood windows, many with transoms; a slow-burning wood-frame structure, and open floor plans that provided plenty of space for machinery.

Insulated Wire Technology

Wire is made from ductile metals such as copper, steel, brass, gold, silver, tungsten, or aluminum. In ancient times, wire was made by hand from brass or bronze metal plates that were cut into strips and then hammered into thin, flexible rods, which could then be twisted together into ropes. By the 14th century, techniques had evolved for "drawing" (pulling) soft metals into wire of a desired length and thickness, but further advances in wire technology awaited the dawn of the industrial age.

Steel wire and cables were developed in Europe in the 1820s and first manufactured in the United States in the 1840s. In 1844, Samuel F.B. Morse used steel cable for the nation's first telegraph line, strung on wooden poles that extended between Baltimore and Washington, D.C. To protect against harsh outdoor conditions, telegraph wires were insulated with glass plates, which proved neither very durable nor particularly resistant to water penetration; by 1855, a waterproof insulating material made from hemp and gutta-percha (similar to rubber) had been developed. As the 19th century progressed, steel wire came to be used for a wide variety of other purposes, including nails, screws, safety pins, woven and barbed wire fencing, crinoline hoop skirts, corsets, hair pins, stringed musical instruments, and suspension bridge cables.

When the technology for transmitting electrical power over metal wires became available (the telephone was patented in 1876, the electric light bulb in 1879), copper proved to be the metal of choice: it has better

electrical and thermal conductive properties than steel, and is also more resistant to corrosion. (Raw copper would be supplied domestically, from U.S. copper mines in northern Michigan, Montana, Arizona, and Utah.) Small-diameter copper wire could conduct low-voltage, low-amperage currents; high-voltage, high-amperage currents need thicker, heavy-duty cable made from numerous individual wire strands twisted together.

Copper wiring used for transmitting electricity or telephone communications required insulation made from non-conductive materials, to protect the soft metal from damage, to prevent the electrical current from escaping, and to reduce interference. In 1880, as Thomas Edison was planning New York's first electric street lighting system, he experimented with burying copper wires underground in wood trenches, but he found that wet wood performed poorly as an insulator. Edison then created a new insulating material consisting of muslin strips dipped in a mixture of asphalt, linseed oil, paraffin, and beeswax, wrapped around copper wire. This worked well for a few years, but rubber insulation soon came into vogue and became the industry standard. Rubber insulation remains popular, although synthetic insulation of plastic or nylon is also used nowadays.

Since the mid-1800s, all wire has been made by machine; the processes for making steel and copper wire are quite similar. A square block of copper, called a billet, is heated and then run through rollers to press it into long rod about ¼ inch in diameter. The rod is then coiled, and these coils are "pickled" or dipped in diluted sulfuric acid to remove impurities, then washed in hot water. (Large gauge wire would be air-dried, fine gauges dried in a bake oven.) The cleaned coil of rod is fashioned into a point at one end, then threaded through one or more funnel-shaped dies (lubricated with tallow) to create the desired thickness of wire; die plates are typically made of cast iron or steel, although diamond dies are used for fine-gauge wire. As it emerges from the die, the wire is attached to a drum that rotates, drawing the wire through the die and winding it around the drum. "Intermittent" drawing machines pull wire through one die at a time; "continuous" machines, used only for fine gauges, loop the wire through a succession of dies. The wire is drawn cold, but because its hardness increases and its tensile strength decreases as it is worked, the copper occasionally needs to be annealed (heated, then gradually cooled). Depending on its intended use, a protective coating of insulation might be applied to the wire. The finished wire, which is wrapped around a spool for storage and transportation, has a uniform cross section, either round or shaped (square, oval, flat, triangular). The gauge (diameter) of the finished wire may range from about half an inch to

a fraction of a millimeter; the higher the gauge number, the finer the wire.

The equipment used in wire production includes furnaces and annealing apparatus; rolling mills; tubs, cranes, pumps, injectors, and siphons for cleaning processes;
wire-drawing machines; drawing frames (benches, die blocks and block holders, draw-out devices); straightening and cutting machines; testing equipment; insulation coating machines; and winding machines and spools of varying sizes for the finished product.

Within the Phillips Insulated Wire Company complex today, all of the wire manufacturing machinery and equipment has been removed from the buildings (although a large boiler does remain inside Building 11, the power house).

Industrial Architecture and Engineering

In the 17th and 18th centuries, buildings used for industrial purposes were relatively small structures made of wood. But manufacturing facilities had an extremely high risk of fire: not only were oils used both for lighting and for machine lubrication, but textile mills utilized extremely flammable raw materials, and in metals factories, forges were an integral part of the manufacturing process. By the early 19th century, industrial buildings were being constructed of stone with a "slow-burning" design intended to diminish the potential for fire damage. The first example of this new construction technique in Rhode Island was the Number 1 Bernon Mill in Woonsocket (1828).[18]

The slow-burning structure used granite walls, massive beams, and floor-to-ceiling columns to support both the building itself and the heavy machinery within it. The columns might be either cast iron or wood. (However, cast iron columns were susceptible to cracking or collapse, without warning, when exposed to extreme temperatures; wood columns were more reliable in a fire as they tended to char rather than burn through, especially if their edges were beveled or rounded.) Neither wall studs nor floor joists were used; unfinished interior walls and ceilings held no hidden pockets of air that could transform into chimney flues and draw fire upward. Flooring consisted of a double layer of thick boards, intended to

[18] Kulick, p. 8.

resist the penetration between floors of both flames and the water used to douse them. Another innovation was the exterior stair tower with heavy fire doors, which also helped to reduce fire risk by separating a full-height air shaft from the rest of the building. Stair towers had the added benefit of producing an open floor plan, with more room for large, bulky machinery. Gable roofs were the most common form for industrial buildings in this period, often with a continuous clerestory to add more light to the top-most floor.

By the middle of the 19th century, most Rhode Island factories were being built out of brick; it was cheaper and easier to work with than stone, although granite continued to be used for steps, to trim doors and windows, and for other minor features. During this same period, rooflines flattened out to admit more natural light into their upper stories: an adaptation made possible by the use of tar-coated roofing papers underneath tin or gravel, to make the roof water-tight. Flat roofs (with a very slight pitch for shedding water) came into widespread use by the 1870s, encouraged by insurance companies who saw them as less of a fire hazard than gable roofs. Flat roofs also allowed buildings to have a wider floor area, which appealed to manufacturers looking for ways to increase production.

Wider buildings required larger windows to bring more light into their centers. A corresponding reduction in the amount of exterior brick wall promoted the use of segmental-arched window heads, and of brick piers or pilasters built out from the façade and extending the full height of the building, to help support wall loads. Brick pier mill construction first appeared in Rhode Island at the White Rock Mill in Westerly in 1849, but did not become ubiquitous until the 1880s; however, segmental-arched windows were commonly used in local factories after 1860. Larger window openings also encouraged the development of new window forms, such as paired double-hung sash, windows with transoms, and paired double hung or casement windows with transoms.

The exterior stair tower remained a prominent feature of mill and factory construction well into the early 20th century, as it allowed for unobstructed floor areas and efficient vertical circulation. On most industrial buildings of this period, architectural ornament was scarce; a stair tower (which typically extended above the roof line) often provided the only visual focal point on these buildings.

To provide additional space for storage, for extremely heavy

equipment, for wet processes, and for machinery that produced strong vibrations, industrial buildings of the mid and late 19th century often had a basement level, excavated on a solid foundation. The basement was typically partly underground and partly above ground; basement windows let light and air into the space. Dry basements could use wooden support columns; damp basements needed metal columns or brick piers.

All fourteen of the contributing buildings within the Phillips Insulated Wire Company plant exhibit the typical architectural details of late 19th and early 20th century manufacturing facilities: brick walls, some with load-bearing piers (particularly Buildings 1, 2, 10, 10A, and 11); stone trim; flat roofs; exterior stair towers that extend prominently above the roof line (Buildings 3 and 10); segmental arched window and door openings; large, multi-light wood windows, many with transoms; a slow-burning structure; raised basements with windows; and open floor plans punctuated with regularly spaced wood and metal columns.

Although by the turn of the 20th century, industrial buildings were beginning to be made of reinforced concrete rather than brick, the only concrete buildings at the Phillips plant were built in the late 20th century by the successor company, American Insulated Wire.

Industrial Development In Pawtucket and Rhode Island, 1670-1890

Pawtucket's mighty Blackstone River began to be harnessed to serve manufacturing enterprises as early as 1671, when ironworker Joseph Jenks established a forge on the west side of Pawtucket Falls. By 1717 an industrial village had taken root in what is now the heart of downtown Pawtucket, and it soon became famous for its wide variety of iron products including farming and household tools, ships' anchors, and weaponry. Raw materials were obtained and finished goods distributed through the port of Providence, just five miles to the southwest.

The Blackstone River at Pawtucket Falls also formed the boundary between Rhode Island and Massachusetts from the mid 17th century until the mid-19th century, so in effect two separate villages, both called "Pawtucket," grew up on either side of the falls. (The village on the west side became part of the Town of North Providence in 1765; the village on the east was part of the Towns of Rehoboth, and later Seekonk, Mass. until 1862, when Rhode Island and Massachusetts readjusted their common boundaries.) While the west village was dominated by the Jenks family's ironworking concerns prior to the Revolutionary War, the east village had a

wider variety of industrial enterprises, including a grist mill, a saw mill, a potash manufactory, a linseed oil mill, a blacksmith's shop and a wheelwright's shop.

Pawtucket's position on the major overland transportation route between Boston and Providence, its river-driven power supply, its numerous skilled metal workers, and its established business relationships with Providence merchants, all proved to be major advantages in the post-Revolutionary period. Providence had emerged from the war with its maritime economy relatively unscathed, and soon cemented its position as Rhode Island's commercial center. As the 18th century drew to a close, Providence business leaders who had made extensive fortunes in international trade began to seek new investment opportunities in manufacturing, particularly of spun cotton yarn. They looked to Pawtucket's metal workers and machinists to help develop a cotton textile industry in Rhode Island.

At the time England dominated this market, thanks to the Arkwright system, a series of water-powered machines for spinning cotton yarn. The technology was a closely guarded and highly coveted secret, but attempts to reproduce it in America were unsuccessful until Samuel Slater, an Englishman with decades of experience working with the Arkwright system, arrived in Pawtucket in 1790. Almost immediately, wealthy merchant Moses Brown of Providence recruited Slater and several skilled mechanics to create an Arkwright-system textile factory in Pawtucket. Before the year was out, Slater Mill at Pawtucket Falls had begun to produce cotton yarn, and the American Industrial Revolution was born.

Meanwhile, in 1783 Oziel Wilkinson and his five sons, all highly skilled blacksmiths with a flair for innovation, had established a manufacturing base in Pawtucket. Within a decade Wilkinson shops were producing both forged iron and cut steel items, ranging from nails and screws to anchors, barrel hoops, cannons, machines for cutting screws, and many other metal products. Samuel Slater (who married Oziel Wilkinson's daughter, Hannah) went into business with his in-laws in 1799 as Samuel Slater & Company. The Wilkinson family's ingenuity in constructing new machinery and tools for textile production soon opened new markets to Pawtucket's metal-working concerns.[19]

[19] Kulik, pp. 10-11.

By 1819 Pawtucket had gained an international reputation for its cotton textiles, textile machines, and machine tools. Thirteen cotton mills and six machine shops operated on either side of Pawtucket Falls, as did a variety of other textile-related industries such as bleach and dye works, weavers, and cloth printers. Elsewhere in Rhode Island, textile manufacturing had also taken deep root; other centers of textile production in the early 19th century included Smithfield, Warwick, Coventry, Providence, Cumberland, and Woonsocket. "By 1831 there were 119 cotton mills in the state … employing 8,595 workers."[20] Within the next three decades, the woolen industry grew to become second only to cotton in Rhode Island's overall manufacturing economy; other companies began to diversify into various aspects of textile finishing, such as weaving, cotton batting, bleaching and dyeing, braided trim, leather laces, silks and velvets, and calico printing.

Meanwhile, the state's metal-working industry benefited from ever-evolving innovations in textile machinery - most notably, the introduction of steam-powered engines in the 1820s. (Rhode Island's own George S. Corliss invented the Corliss steam engine in 1848, a product that soon found its way into factories all over the world.[21]) By 1860, local metals manufacturers had diversified into making both utilitarian and luxury products such as precision tools, steam engines, hardware, fasteners, silverware and flatware, costume jewelry, and a variety of household items. Base metals used in these industries included silver, gold, brass, bronze, iron, steel, and copper.

The increasing use of coal-fired steam power in this period freed manufacturers from the need to build factories adjacent to a running river. As Pawtucket grew both physically and in population (from about 2,200 people in 1822 to over 3,300 in 1830), new factories began to be built west of the increasingly congested downtown: a development made possible not only by steam powered engines, but also by the construction of new railroad lines. The first railroad introduced in Rhode Island was the Providence & Boston, in 1835; the Providence & Worcester line, founded in 1847, passed through Pawtucket (its station was near the west end of Exchange Street, in what is now the downtown).[22] This gave Pawtucket manufacturers the ability

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[20] Ibid., p. 8.
[21] The Book of Rhode Island, p. 48.
[22] Pawtucket, R.I.: Statewide Survey Report, p. 12 has population statistics; p. 15 shows an 1855 map of Pawtucket Village with a train depot illustrated.

both to import raw materials and export finished goods over regional and national rail networks.

During the middle decades of the 19th century, Pawtucket's population exploded as immigrants arrived to work in local factories: from 3,300 residents in 1830 to 18,464 in 1870.[23] In 1874 Pawtucket was incorporated as an independent municipality, and it became a city in 1885. A variety of public improvements ensued, including municipal water supply and sewer systems (1877 and 1884, respectively) and an electric street railway (1892). The Bridge Mill Power Plant, one of Rhode Island's first electric power generators, was built by the Pawtucket Electrical Company just below Pawtucket Falls in 1893-1894.

The electric power industry in Rhode Island had gotten its start a little more than a decade earlier, soon after Thomas Edison had invented the electric light bulb in 1879. That same year, a Providence textile manufacturer became the first in the state to install electric lighting (the Riverside Worsted Mills in Olneyville section).[24] The Pawtucket Electrical Light Company was formed in 1882; and in 1886 the charter of the Pawtucket Gas Company was amended so that it too could supply electricity.[25] Meanwhile in 1884, the Narragansett Electric Lighting Company in Providence was incorporated, and soon became the industry leader in Rhode Island. Originally Narragansett Electric served 100 customers with 2-1/2 miles of copper wire and 26 wooden poles; by 1930 the company had 8,300 miles of copper wire, more than 67,200 poles, and 113,000 customers in a service area stretching from metro Providence south and west to the Connecticut border.[26]

While most manufacturers quickly saw the advantages of electricity for lighting and for other applications such as freight elevators, telephone systems (first introduced in Providence in 1879), clocks, indicators and gauges, and fire alarms, some were leery of running their machinery with it. Direct current motors tended to spark (a particular concern in textile factories) and to run at inconsistent speeds. Once alternating current motors, which could maintain constant speeds even under variable current loads, were developed, many manufacturers began to convert their facilities

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[23] Ibid, p. 19.
[24] Boucher, pp. 103-104 and Gordon and Malone, p. 316.
[25] The Book of Rhode Island, p. 266.
[26] Ibid, p. 265.

from steam to electrical power.[27] This directly influenced wire manufacturers in Rhode Island (and elsewhere) to diversify their product lines and to specialize in wiring that could be used for a variety of electrical purposes.

A considerable financial investment was required to upgrade a factory to run entirely on electrical power: not only in the equipment itself, but often also in an expansion of the physical plant to accommodate larger, heavier, more powerful machinery. Those Rhode Island manufacturers who chose to make the investment demonstrated confidence in the future growth potential of their own industries. But electrification was also a powerful incentive to build new factories, with state-of-the-art equipment, in areas of the country that had not previously seen much industrial development: especially in the Southern U.S., where land and labor were cheaper and raw materials (particularly cotton) were plentiful. In 1893 Columbia Mills in Columbia, S.C. built the nation's first all-electric cotton factory, setting the stage for Southern textile mills to give Rhode Island (and indeed all of New England) some serious competition over the next few decades.[28] Eventually, Rhode Island's textile industries would lose that battle.

But in the years during and immediately after the Civil War, Pawtucket's textile, metal-working, and related specialized industries experienced a significant boom in production. Many came to need larger facilities, and the presence of the Providence & Worcester line running through a largely undeveloped area of farmlands in eastern and northeast Pawtucket sparked a building boom in mills and factories there in the 1860s and early 1870s. By 1872 the Providence & Worcester Railroad had become a subsidiary of the New York, New Haven, & Hartford Railroad; a new passenger depot opened in 1873 on the P. & W. line, near its Central Avenue crossing in northeast Pawtucket.[29] The depot was named "Darlington Station" in honor of local businessman, real estate developer, and public servant Edwin Darling, "in recognition of his services in building up that section of Pawtucket."[30]

Edwin Darling (1834-1898) came to Pawtucket in 1855 and with his brother Ruel S. Darling opened a butcher shop and food market on North Main

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[27] Gordon and Malone, pp. 317-318.

[28] Ibid.

[29] Schneider, in *Rhode Island History*, pp. 46-47. By 1895 the N.Y., N.H. & H. controlled all but 21 of Rhode Island's nearly 500 miles of track; and, with 2,000 miles of track under its control throughout southern New England, the company had a virtual monopoly on rail service in the region.

[30] *Pawtucket Times*, December 27, 1929.

Street. In 1860 the business relocated to East Street and was dubbed "Eagle Market;" it remained in business there until 1880. At about the same time that eastern Pawtucket became part of Rhode Island in 1862, Edwin Darling acquired a large parcel of land there in order to grow fresh produce for his retail business; his Eagle Market Farm was situated on the north side of Central Avenue, between Cottage Street and Mendon Avenue (just east of the railroad tracks). In 1874 Darling platted Eagle Market Farm for speculative real estate development, and began to acquire other property nearby. [31] Meanwhile, Darling also had a political career: he served on the Pawtucket Town Council and in the Rhode Island General Assembly, as well as on various boards and commissions; and from 1880-1894 he was superintendent of the Pawtucket water works. In his many public service roles, Darling directed numerous improvements toward northeast Pawtucket. Today the entire eastern part of the city bears the name Darlington.

Phillips Insulated Wire Company

In the 1870s and 1880s Darlington attracted a number of manufacturers that had previously been based in the tiny town of Central Falls, which borders Pawtucket on the north and is only one square mile in area, leaving little room for industrial expansion. Among the Central Falls companies that relocated to Pawtucket in the 1880s was the E.B. Phillips Co., makers of bare copper and weatherproof (insulated) copper wire.

Founded in 1884 (two years after the Pawtucket Electric Company was incorporated) by brothers Edgar B. Phillips and Herbert O. Phillips, E.B. Phillips Company had 12 employees and utilized "about 50 braiders, several skein winders, and bobbin spoolers." [32] (Note the use of textile manufacturing terminology to describe the machinery for making wire. As the techniques for braiding textile fibers and for making wire cables were very similar, the insulated wire industry was able to adapt existing textile machinery to new uses.) E.B. Phillips Company first appears in city directories in 1885, at an address on Broad Street in Central Falls; by 1888 it had moved to Broad Street in Pawtucket. In 1892 the company incorporated as the Phillips Insulated Wire Co., and moved to 273 North Main Street; the following year, 1893, it began building a new plant on Freeman Street near Central Avenue in Darlington.

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[31] "The Eagle Market Farm Plat belonging to Edwin S. Darling, surveyed and platted by S.B. Cushing & Co., January 1874, partly redrawn 1877" (Land Plat Card 223).

[32] *Pawtucket Times*, June 14, 1941.

Many factors enter into a decision to construct a factory in a particular location, among them proximity to markets and transportation facilities; readily available raw materials, supplies, manufacturing equipment, and skilled labor; and access to a reliable power source and water supply. The site on which the Phillips Insulated Wire Company chose to build its new manufacturing plant in 1893 met all of these criteria. Pawtucket was a major industrial center (as were the nearby cities of Providence, Woonsocket, and Warwick, not to mention numerous other towns and villages in the Blackstone Valley), with many plants then in the process of switching from coal-fired steam to electrical power, and thus in need of insulated wire. The N.Y., N.H. & H. Railroad passed right by the new Phillips plant, and the port of Providence was just a few miles away, both giving access to regional, national, and international transportation networks. Copper was being mined in large quantities in the Midwest and new lodes were just beginning to be exploited in the western U.S.; from either section of the country, raw materials could be shipped directly to Rhode Island by rail. The quality of machinery and tools produced in Rhode Island was high, and Pawtucket itself had long had a large population of skilled metal workers. Municipal water and sewer services had been introduced to Pawtucket within the previous decade, and the city's first electric power plant had just opened that year. Public transportation (in the form of an electric street railway) was also available on Central Avenue, giving employees an easy commute to work.

In 1893, Phillips Insulated Wire became the first major manufacturing firm to locate in Darlington.[33] Within a few years it had plenty of company - including, as of 1894, another insulated wire manufacturer, Collyer Insulated Wire Co., coincidentally located at the Phillips company's old address at 273 North Main Street.[34] An 1896 advertisement that Edwin Darling placed in the *Providence Journal of Commerce* trumpeted Darlington as "The Finest Location for Manufacturing Industry in New England!:"

> "This section of the city is growing faster than any other. It has two lines of electric cars, water, gas, sewerage, new fire station, new schoolhouse, and is near to large manufacturing industries; also near the new High School building and the new Public Park. The lots are within a stone's throw of the Darlington Station, on the New York, New Haven and Hartford Railroad, where within a short time passengers

[33] Pawtucket, R.I.: Statewide Survey Report, p. 23.
[34] Collyer Insulated Wire Company first appears in city directories in 1894.

will be able to take the trains to any part of the country.

If you want land for manufacturing purposes of storage where you can receive and deliver goods into cars at your doors, and save CARTAGE equal to your rent; where you are in direct railroad communication with all points … if you want to be located in what will be the FINEST SECTION of the city in the future; if you want to be where ELECTRIC CARS will take you to any part of the city; if you want to be where there is the BEST FIRE PROTECTION and the PUREST WATER in the country; if you want to be where the BROADEST AVENUES are in the city; if you want to live on HIGH and DRY ground, FREE from malarial diseases, COME TO DARLINGTON."[35]

A sidebar to this advertisement notes that "Mechanics for all kinds of manufacturing industries can be had on call, as Pawtucket is noted for the great diversity of her industries and skilled workmen."[36]

By the end of 1898, the Phillips Insulated Wire Company employed 50 men and 12 women at its Darlington plant.[37] This modest number soon increased dramatically, as the company expanded continuously on its way to becoming "the largest firm of its kind in the country, making wire for power companies and insulated wire for electrical purposes in homes."[38]

The 1895 city atlas shows that the Phillips Insulated Wire Company plant was then considerably smaller than it is today. Its footprint occupies two abutting lots (each with a 50-foot frontage, totaling approximately 12,000 sq.ft.), on the west side of Freeman Street, perhaps 250-300 feet south of Central Avenue. The N.Y,.N.H. & H. railroad tracks directly abut the factory on the west. Most of the surrounding land later occupied by the complex was still undeveloped in 1895; Edwin Darling is shown as the owner of vacant lots on Freeman Street on either side of the Phillips plant.

By comparing the 1895 atlas to the 1917 atlas, it seems clear that what is now known as Building 4 in the complex stands on the site of the structure shown on the 1895 atlas. The zig-zag southern edge of the 1895 footprint seems to match the alignment of masonry partition walls presently found at the basement and first floor levels inside Building 4: an indication that those walls may once have formed the exterior of an earlier

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[35] *Providence Journal of Commerce*, 1896, vol. 3, p. 2.xxCapitalized phrases are rendered verbatim from the original.
[36] Ibid.
[37] Hudson and Jenks, p. 24.
[38] *Pawtucket Times*, July 14, 1936.

building. But further research has raised evidence that today's Building 4 is not in fact the same structure illustrated on the 1895 map: that earlier structure was either entirely swallowed up, or actually replaced, by the present Building 4, as the plant underwent a series of expansions between 1898 and 1902. No visual images of the Phillips Insulate Wire Company dating from before 1905 have been found, and contemporary written accounts are not entirely clear, so further study of physical evidence is recommended, but meanwhile the written record gives the following clues.

The October 1898 issue of the *Providence Board of Trade Journal* reports:

> "Owing to an increase in business, the Phillips Insulated Wire Company is having erected at Darlington a brick building with a basement. This building will be 120 by 90 feet, and a 1-story building of the same dimensions is also being put up. Hartwell, Williams, and Kingston of Providence had the contract and the building will largely be completed by January 1899. The addition will largely increase the capacity of the plant, whose product is O.K. weatherproof wire, underwriters' wire, fireproof wire, lamp cord, etc. The increase in business has been phenomenal and it is one of the important industries of Rhode Island."[39]

Recall that as of 1895 the company had a structure with approximately 100 feet of frontage on Freeman Street. (Note also the variety of insulated wire products that Phillips already produced at this early date.) By 1898 the company owned enough land on the west side of Freeman Street to accommodate two 120-foot-wide structures side by side. This article seems to describe an entirely new building, not an addition to an existing structure, which would imply that the earlier 1893 building was replaced at this time. The present footprint of the 4-story Building 4 is 120 feet wide by 112 feet deep - a larger depth than reported in this article, but still, fairly close to that description. Note, however, that there is presently no adjacent 1-story building measuring 120 by 90 feet next to Building 4: Building 3 has a similar size footprint (119 feet by 112 feet), but is 4 stories tall and exhibits no visual evidence of once having been a 1-story structure. Therefore, the 1-story structure referred to in this 1898 publication may no longer exist.

From the July 5, 1901 issue of the *Pawtucket Gazette & Chronicle* (page 1):

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[39] *Board of Trade Journal*, October 1898, p. 296.

"The Phillips Insulated Wire Company will have about doubled its plant when the new mill at Darlington is completed. This structure will measure 219 by 114 feet when complete. Part of the building will be 4 stories high, while the remaining walls will be in part two stories and in part one story in height. This space will be utilized for boiler and engine rooms and also for part of the wire covering machinery. The company is at present in a very prosperous condition. It was established in 1884. The foundations of the new plant are all in already, and the workmen have commenced laying the brick of the upper stories."

The dimensions cited almost exactly match the combined footprints of Buildings 3 and 4, as shown on current architectural drawings. The phrase "new mill," and the use of the words "structure" and "building" (singular, not plural) seem to indicate that both Buildings 3 and 4 were new construction and appeared (at least to the writer) to be one building. That interpretation could lead to a conclusion that Buildings 3 and 4 replaced the original 1893 building and the 1898 buildings. Note also that there is currently a 1-story section at the rear of Building 3, but no 2-story section to either building.

The *Providence Board of Trade Journal* further confuses matters with two articles from 1902. The May issue reported:

"An addition is soon to be made to the works of the Phillips Insulated Wire Company at Darlington. Plans call for an extension of the main building and a portion of this addition will be used for a shipping department. Since locating at Darlington the history of this company has been a series of enlargements to their plant to meet the demands of their business, which has consistently increased until there are few larger concerns of the kind in the country."[40]

By the end of that summer, the magazine issued a follow-up report:

"The new 4-story brick addition to the plant of the Phillips Insulated Wire Works in Pawtucket is completed and ready for occupancy. This concern has had an unusually prosperous career and is kept running to its full capacity."[41]

[40] *Board of Trade Journal*, May 1902, p. 174-176.
[41] *Board of Trade Journal*, August 1902, p. 296.

These two reports seem to indicate that the 4-story Building 3 was constructed in 1902 as an addition to "the main building," i.e. Building 4. The conclusion to draw here is that Building 4 was already standing at the time that Building 3 was built, and therefore Building 4 dates from the earlier expansion project of 1898.

Given the confusion found in these secondary sources, and in the absence of definitive primary source documentation, the dates assigned to these two buildings herein are c. 1898 for Building 4, and 1901-1902 for Building 3.

The same 1901 *Pawtucket Gazette & Chronicle* article that describes the expansion of at the Phillips Insulated Wire plant attributes the rapid growth of the "new suburb" of Darlington to a recent rally in the textile industry after a period of depression. Of six local factories reported to be expanding at that time, the Phillips Insulated Wire Company is the only one not directly engaged in some aspect of textile production. (The others were D.Goff & Sons, makers of mohair braids, plushes, and worsted yarns; Littlefield Manufacturing Co., cotton yarns and threads; Royal Weaving Co., silk linings and cotton velvets; Dempsey Bleachery and Dye Works; and A.T. Atherton Machine Company, which made various equipment used in textile factories.) However, the article alludes to one reason (perhaps the major reason) for Phillips Insulated Wire's own remarkably increasing business at this time: the Royal Weaving Co.'s brand new, state-of-the-art plant is described as "... a model of its kind ... Every machine is operated independently by its own motor, and the plant will depend entirely on electricity for its power." [42]

In 1901, the statewide business directory listed seven companies engaged in the manufacturing of wire and wire goods; five were in Pawtucket: H.J. Chamberlain, E. Jenckes Manufacturing Co., Collyer Insulated Wire Co., Standard Seamless Wire, and Phillips Insulated Wire.[43] By this time Phillips was producing wire products not only for manufacturing uses, but also for electric street railway systems, residential uses, and other purposes.[44] Although the wire industry in Rhode Island had begun with close ties to the textile industry, the ability to diversify product lines to meet the demands of new markets protected companies like Phillips Insulated Wire from the eventual decline and failure of the state's textile industry. Of the six Pawtucket companies reported to be expanding and modernizing

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[42] Ibid.

[43] R.I. Business Directory, in Providence City Director, 1901.

[44] Hall, p. 320.

their facilities in 1901, Phillips Insulated Wire and its successors long outlived all the others.

Within the first twelve years of Phillips' operation at this location, half of the present complex had been completed. A 1905 engraving shows Buildings 3, 4, 5 (a boiler room), 6 and 7 (a wire mill), and 8 (a rolling mill), all on the west side of Freeman Street.[45] The main structure appears to be a 4 story block with central stair tower (today's Buildings 3 and 4), situated at the north end of the complex. Attached to its south end is a 2 story block (Building 5), then a 2-story building with smokestack (Buildings 6 and 7; smokestack no longer extant), then a long, low 1-story building (Building 8). In this image, no buildings are shown standing north or east of this complex: thus Buildings 1, 2, 10, 10A, 11, 12, 13 and 14 had apparently not yet been built. The landscape between the Phillips plant and Central Avenue to the north, and along the east side of Freeman Street, is illustrated as level open space with a few trees. That would change over the next twelve years.

Between 1906 and 1917, seven more buildings and the pedestrian bridge over Freeman Street were added. Buildings 1 and 2, also on the west side of Freeman Street, were built c. 1906-1917. Building 1 stands independently at the corner of Freeman Street and Central Avenue and served as a retail commercial building (leased to tenants) while Building 2 was attached to Building 3 and housed the company's offices. In 1907 the company purchased some adjacent land bounded by Winthrop Avenue, Hunts Avenue, and Mendon Avenue; Buildings 12 (manufacturing), 13 (garage and storage), and 14 (manufacturing) were standing on that site by 1917. Buildings 10 and 11, a large new manufacturing building and a power house located between Freeman and Winthrop, were built c. 1914-1917, as was a pedestrian bridge crossing over Freeman Street between Buildings 3 and 10. Building 10A on the west side of Winthrop was the last to be constructed, c. 1918-1927. Undoubtedly at least some of this new construction was spurred by an increase in production during and after World War I: between 1914 and 1920 industrial production statewide almost tripled (up 15% in value just in one year, 1919-1920), so surely Phillips Insulated Wire contributed its share to that tremendous growth.[46]

The 1917 atlas shows that the plant had almost reached its present size by that time. Buildings 2 through 8, all connected end to end, line the

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[45] Collection of the Pawtucket History Research Center.
[46] *Providence Magazine*, January 1924, p. 9.

west side of Freeman Street, with the railroad tracks behind them. Buildings 10 and 11 stand on the east side of Freeman Street, filling about 2/3 of the triangular block bounded by Freeman Street, Central Avenue, and Winthrop Avenue. On the east side of Winthrop Avenue, just north of Hunts Avenue and west of Mendon Avenue, are Buildings 12, 13, and 14. Only Building 10A does not appear on the 1917 map; but it was standing when the plant was sold in 1927. (Buildings 8A and 8B, of course, do not appear on the 1917 atlas either, since they were constructed decades later.)

The 1917 atlas also shows how much of Darlington had been developed since the previous atlas of 1895, with a broad mix of land uses including industrial, commercial, residential, institutional, and open space. Among the new additions since 1895 are numerous houses on the east side of the railroad tracks, particularly in the blocks north of Central Avenue and east of Mendon Avenue. In addition to the Phillips Insulated Wire Co., two other large factory complexes appear, both north of Cottage Street: the Royal Weaving Company and the Burgess Cotton Mills. Scattered throughout the neighborhood are more than a dozen smaller manufacturing plants and commercial businesses, including the Darlington Coal Co., Perry Oil Co., McDuff Lumber, Pawtucket Glazed Paper Co., Blackstone Glazed Paper Co., Hope Paper Co., Blackstone Webbing Co., and Lumb Knitting Company Just southeast of the Phillips complex, on Mendon Avenue, stands the Hand Brewing Company.

The 1917-1918 city directory notes a change in the company name, to Phillips Wire Company An advertisement for the Phillips Wire Company published in the December 1919 issue of *Providence Magazine* lists the company's many products, including "bare copper rods, wires and cables; rubber covered wire and cables; weatherproof wire and cables; slow burning wire and cables; damp proof office wire and annunciator wire, for electric light, power, and street railway service." [47] This advertisement includes an illustration showing the growth of the company's physical plant, with new Buildings 2, 10, and 11 and the pedestrian bridge across Freeman Street. As in the 1905 engraving, the surrounding landscape north and east of the complex (south side of Central Avenue and east side of Winthrop Avenue) appears to be level open space with a few trees. The same advertisement is reprinted in the magazine's January 1924 issue, which also featured a glowing piece on Rhode Island's healthy manufacturing sector, concluding: "The State is now so well balanced, industrially speaking, that a disturbance in one branch of its manufacturing business does not at all

[47] *Providence Magazine*, December 1919, page. 603.

imperil its business as a whole."

Pawtucket, however, was not so well balanced in its manufacturing sector: in 1926 textile industries employed 80% of all industrial workers in the city; iron and steel companies came in second, and wire products, wood products, and several other specialty industries collectively came in third.[48] A few years later, the Great Depression hit the textile industry, and Pawtucket, particularly hard; facing ever-increasing competition from Southern mills, the textile industry eventually failed in Pawtucket, as elsewhere in Rhode Island. But the wire industry flourished over the next several decades.

[48] Boucher, pp. 125-126.

General Cable Corp.

Rhode Island's makers of insulated wire did extremely well in the 1920s, and Phillips Wire Company was no exception. Edgar B. Phillips died in 1924, and the following year Herbert O. Phillips sold his company to the Safety Cable Corp. of New Jersey. In October 1927, Safety Cable, and its subsidiary Phillips Wire, merged with four other wire companies nationwide to become General Cable Corp., in a deal reported (on the front page of the *Providence Journal-Bulletin*) to be worth more than $50 million. General Cable manufactured all classes of electrical wire at its various plants in Rhode Island, New Jersey, New York, Maryland, Pennsylvania, Illinois, Indiana, Missouri, California, and in Ontario, Canada.[49] In November 1927 General Cable purchased the Phillips Wire Company complex in Pawtucket.[50] Reflecting back on that sale in 1936, after Herbert O. Phillips's death, the *Pawtucket Times* observed that "The Phillips Wire Company at the time was one of the leading manufacturers of insulated and bare copper wire in the United States, owning in the Darlington section 14 buildings with 399,949 square feet of floor space … "[51]

The 1928-1929 Pawtucket City Directory lists the Phillips Wire Company, on Freeman Street near Central Avenue, as a division of General Cable Corp; it also notes that the company had 500 employees. That same year, Pawtucket had four other wire manufacturing companies: Collyer Insulated Wire, J.D. Crosby Co., Mackenzie Walton Co., and Sterling Insulated Wire Company

Of course, Pawtucket was not the only Rhode Island community to have successful wire and cable manufacturers. In 1927, Rhode Island had twenty wire and cable or wire products companies: one in Cranston, five in Pawtucket, three in Phillipsdale (East Providence), one in Valley Falls (Cumberland), and ten in Providence.[52] Among the well-known names in this group are United Wire & Supply, American Electrical Works, Washburn Wire Co., R.I. Wire Works, and American Insulated Wire Corp. Manufacturers in allied industries included Universal Winding Company of Cranston, which started c. 1900 making winding machines for both textile and electrical wire production. (Its internationally renowned Universal Winder made this

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[49] *Providence Journal-Bulletin*, October 20, 1927.xxThis article reports that the October 1925 sale of the Phillips Wire Company to Safety Wire involved the entire 14 building complex, plus some other real estate; however no deeds dated 1925 were found to confirm that claim.
[50] Deed Book 283, Page 419 (1927).
[51] *Pawtucket Times*, July 14, 1936.xx
[52] Rhode Island Business Directory in Providence City Directory, 1926.

company the largest firm in the world exclusively devoted to winding machines.[53]) The National Rubber Company of Bristol, R.I., founded 1860 as a manufacturer of rubber boots and shoes (incorporated in 1888 as the National India Rubber Co., and by 1901 controlled by the U.S. Rubber Co.), also entered the insulated wire and cable business in the early 20th century. After its shoe manufacturing division closed in 1931, the company focused solely on its wire products.[54]

As of the 1931-1932 city directory, the former Phillips Wire plant in Pawtucket was listed under the name "General Cable Corp (Pawtucket branch)," and the city's list of wire manufacturers included names that became giants in the industry: not only General Cable and Collyer Insulated Wire ("insulating and braiding wires of all descriptions") but also Anaconda Wire & Cable Company (insulated wire, flexible metallic and non-metallic conduit, and electrical products), Davis-Jones Insulated Wire Company (rubber insulated flexible lamp and portable cords, typically used in electrical appliances), and Carol Cable Company (wire for radios and automobiles).[55] Most of these companies remained in business into the 1980s.

By the beginning of World War II, between 4,000 and 5,000 people worked for Rhode Island's wire and cable manufacturers, the vast majority of them in Pawtucket, which staked its claim as the "world center of the wire industry." General Cable Co.'s Pawtucket plant had about 400 employees who, as part of their normal workload, handled some 5 millions pounds of copper each month and produced a wide variety of products. (General Cable was also one of the few plants in Pawtucket with its own power station, generally reserved for emergencies such as the Hurricane of 1938; and the only plant with its own rolling mill, so it supplied rod stock to other wire manufacturers.) The total value of Pawtucket's wire and allied industries was in the many millions of dollars. In 1941, 80% of Pawtucket's wire products were consumed within the United States, about half of it by the defense industry; among the wire industry's major contributions to the war effort was the manufacture of magnetic protection cable, to counteract magnetic mines. Wartime shortages of both copper and rubber presented some serious concerns, but nonetheless in June 1941 all

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[53] Kulick, p. 61.

[54] Kulick, p. 36. In 1957, Kaiser Aluminum and Chemical Corp. of Portsmouth, R.I. bought the Bristol rubber plant and continued to manufacture wire products there until the late 1970s.

[55] "Pawtucket: A Distinctly Industrial City," 1931 brochure published by the Pawtucket Chamber of Commerce, in the collection of the Pawtucket History Research Center.

wire plants were reported to be operating at 100-150% of their 1938 capacity, and the wire industry was acknowledged as one of the most stable in all Rhode Island.[56]

American Insulated Wire Corp.

The American Insulated Wire Corp. (AIW) had been established in Providence in 1926, making rubber-covered cords and cables at its plant on Baker Street. By 1936 the company had been sold to the Leviton Company of Long Island (which also owned Pacific Electric Cord in California). In 1946, an affiliate of AIW, International Wire & Cable Co., purchased the former Phillips Wire Company plant from the General Cable Company AIW moved to Pawtucket and, shortly its arrival, added the white brick lettering "AIW" to Building 11's smokestack and painted the words "American Insulated Wire Corporation " in gold across the north face of wooden pedestrian bridge over Freeman Street between Buildings 3 and 10. AIW remained in business at this plant for almost six decades.[57]

The period of significance for the former Phillips Wire Company plant ends in 1953 because of the 50-year threshold for National Register eligibility, but AIW continued to be a major player in the wire industry for the remainder of the 20th century. (The wire industry as a whole remained strong in Rhode Island until the late 1980s.) By 1962, AIW had between 500-1,000 employees; in 1986, over 1,400 employees at plants in three locations: manufacturing facilities in Pawtucket and on the state line between Attleboro, Mass. and Cumberland, R.I., and a sales office and warehouse in South Attleboro, Mass.[58]

In 1981 the *Providence Journal* reported that ''Rhode Island, with about a dozen wire and cable manufacturers, rank[ed] third among states producing wire and cable, just behind New York and Indiana. With 5,500 workers in the industry, Rhode Island has a greater percentage of its workforce in wire and cable than anywhere else.''[59] Within a decade, that rosy picture had darkened considerably: copper prices dropped, labor costs and foreign competition increased, and by the early 1990s most of Rhode Island's major wire manufacturers had either gone out of business or been

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[56] *Pawtucket Times*, June 14, 1941.

[57] Deed Book 391, Page 375 (October 7, 1946) indicates that General Cable sold its Pawtucket plant to International Wire & Cable Company That company name appears in the 1947 Pawtucket city directory at the same address as American Insulated Wire (36 Freeman Street), so International Wire & Cable appears to have been an affiliate or parent company of AIW.xxThe name American Insulated Wire does not appear in Pawtucket Land Evidence Records prior to 1957.

[58] Ibid; also, Pawtucket-Blackstone Valley Chamber of Commerce Directory of Manufacturers, 1962.

[59] *Providence Sunday Journal*, October 25, 1981.

forced to cut back significantly on their local work force. Among the victims were Carol Cable in Pawtucket, the Okonite Company in East Providence, Kaiser Aluminum in Portsmouth, and Collyer Wire & Cable in Lincoln. AIW, however, managed to survive by diversifying its product lines (following in the footsteps of its predecessor, Phillips Insulated Wire Co.).

Throughout the mid-20th century, AIW's main product was residential wiring, but in the late 1980s it shifted into manufacturing heavier, high voltage copper cable, capable of withstanding extreme weather, temperature, and stress conditions. This new product was used in major infrastructure and construction projects as well as in technological applications such as telecommunications and computers. (The Attleboro plant produced the heavier, rubber-coated high-voltage cable, while the Pawtucket plant continued to produce lighter, synthetic-coated wiring for residential purposes.) An investment of $18 million in new equipment paid off when AIW secured a contract to supply high-voltage electrical cables for lighting, ventilation, and drilling equipment as part of the Boston Harbor Tunnel Project, one of the largest water-pollution clean-up projects in U.S. history. Other high-profile projects and clients followed, included the Superconducting Supercollider, the U.S. military, Ford Motor Company, a baseball stadium in Cleveland, a commercial airport in Pittsburgh, subway systems in Los Angeles and Atlanta, water storage tunnels in New York and Chicago, and a railway freight tunnel between Sarnia, Ontario, Canada and Port Huron, Michigan. AIW also obtained contracts for several projects in foreign countries. In 1993 AIW earned $200 million in sales, and was able to maintain a workforce of 1,000 employees, 750 at the Pawtucket plant.

In 1993 the *Providence Journal* described the statewide situation as "an industrial landscape dotted with the tombstones of failed Rhode Island cable-making companies," but remarked that AIW "is casting a ray of light in Rhode Island's manufacturing gloom."[60] But AIW also had problems: Rhode Island was a very expensive place to do business, particularly in regards to taxes, labor contracts, worker's compensation, and energy costs; and the multi-story design of the old Pawtucket plant had also become outmoded and inefficient. Nonetheless, AIW kept the Pawtucket plant open even as it built a brand new production facility in Kansas. A 1999 newspaper article on the 75th anniversary of AIW noted the company's remarkable ability to

[60] "Industry Gets a Jump Start," *Providence Journal*, October, 1993.

stay in business in Pawtucket, where still it employed 750 workers - many of whom had been with the company for decades (the longest-serving employee had been on the job 52 years).[61]

AIW, one of the last surviving wire manufacturers in Rhode Island, sold its Central Avenue/Freeman Street complex in April 2003 to its present owners, a limited liability company called Central Industrial Properties. Redevelopment plans call for renovating part of the complex for housing and artists' studios, while maintaining part for commercial and light industrial use.

[61] "After 75 years, AIW has it wired," June 3, 1999.

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Geographical Data

Verbal Boundary Description and Boundary Justification

The Phillips Insulated Wire Companycomplex, proposed for listing on the National Register of Historic Places, consists of all 14 buildings that were erected by that company during its occupancy of the site between 1893 and 1927. The entire property today is shown on City of Pawtucket Assessor's Maps as Plat 9A, Lots 103, 214, 258, and 260.

LIST OF PHOTOGRAPHS

All photographs were taken by preservation consultant Kathryn J. Cavanaugh in October 2003. Negatives are on file at the R.I. Historical Preservation & Heritage Commission.

Photo #1 of 12 (Negative: Roll #1-8)

General exterior view of the complex, looking south from near the intersection of Central Avenue and Freeman Street. At right are Buildings 1 and 2 (extreme right, under trees); Building 3 is the 4-story structure with the tower. At left are Buildings 10 (with tower) and 11 (with "AIW" smokestack).

Photo #2 of 12 (Negative: Roll #1-9)

General exterior view of the west side of the complex, looking southeast from the intersection of Central Avenue and Bennett Highway. Seen from left to right and front to rear are Buildings 1, 2, 3, 4, 5, 6, 7 , and 8 (north side and west/rear elevations).

Photo #3 of 12 (Negative: Roll #1-2)

Exterior view looking southwest from Freeman Street, within the complex. Seen from right to left are Buildings 2 (partial view, 2 stories), 3 (with tower and bridge), 4, 5, and 6 (all behind bridge).

Photo #4 of 12 (Negative: Roll #3-20)

Exterior view looking northwest along Freeman Street from Phillips Place, within the complex. Seen from left to right are Buildings 8 (partial view), 7, 6, and 5 (all 2 stories), 4 and 3 (4 stories). Smokestack at right is attached to Building 11.

Photo #5 of 12 (Negative: Roll #1-4)

Exterior view looking southeast from Freeman Street, within the complex. Seen from left to right are Building 10A (partial view, 1 story), Building 10, and Building 11 (with smokestack).

Photo #6 of 12 (Negative: Roll #3-28)

Exterior view looking northeast from Freeman Street, within the complex. Seen from left to right is a partial view of the south and east elevations of Building 10.

Photo #7 of 12 (Negative: Roll #1-36)

Exterior view looking north/northwest from Winthrop Avenue. Building 11 (south and east elevations) is seen in foreground. Building 10 is partially visible in right background; Buildings 6, 5, and 4 are partially visible at left.

Photo #8 of 12 (Negative: Roll #1-35)

Exterior view looking east from Winthrop Avenue. Seen from left to right are partial views of Buildings 13, 14, and 12.

Photo #9 of 12 (Negative: Roll #4-8)

Interior view of Building 2, entrance hall, looking southwest from the stairs inside the front door. Shows original finishes, also present throughout the main corridor and in one of the offices on the north side of the building.

Photo #10 of 12 (Negative: Roll #2-2)

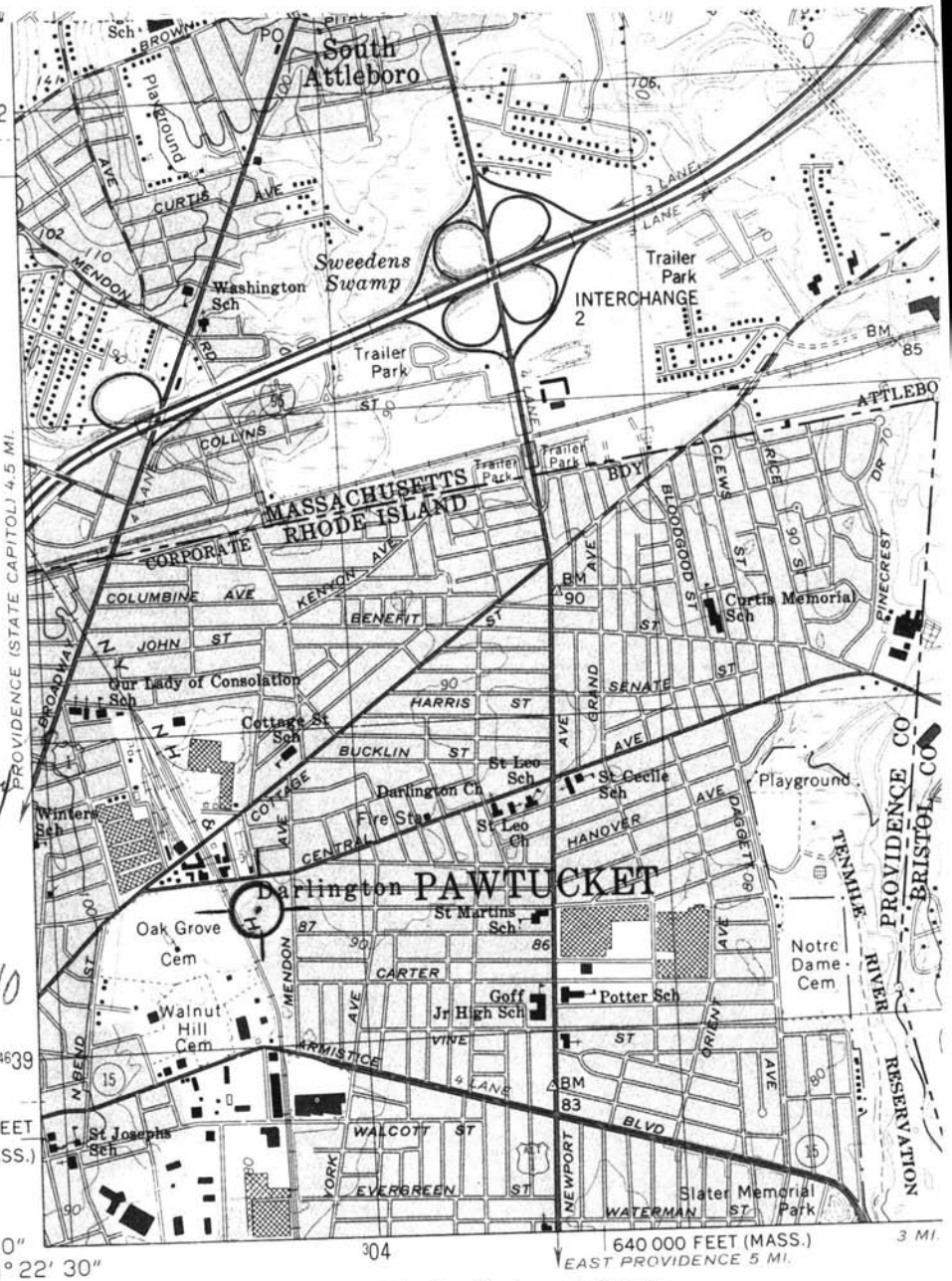
Interior view of Building 4, 4th floor, south end, looking north toward partition wall with Building 3. Shows original finishes, typical for the 3rd and 4th floors of Buildings 3 and 4, and all floors of Building 10.

Photo #11 of 12 (Negative: Roll #2-13)

Interior view of Building 6, 2nd floor, northwest corner, looking southeast toward partition wall with Building 7. Shows original finishes, typical for both Buildings 6 and 7.

Photo #12 of 12 (Negative: Roll #2-19)

Interior view of Building 8, 1st floor, south end, looking northwest toward partition wall with Building 7. Shows original 2-story interior and finishes on the west side of the building.



Phillips Insulated Wire Company Complex
Providence County
Pawtucket, RI

19-303660-4639440

(PROVIDENCE)
6767 IV SW

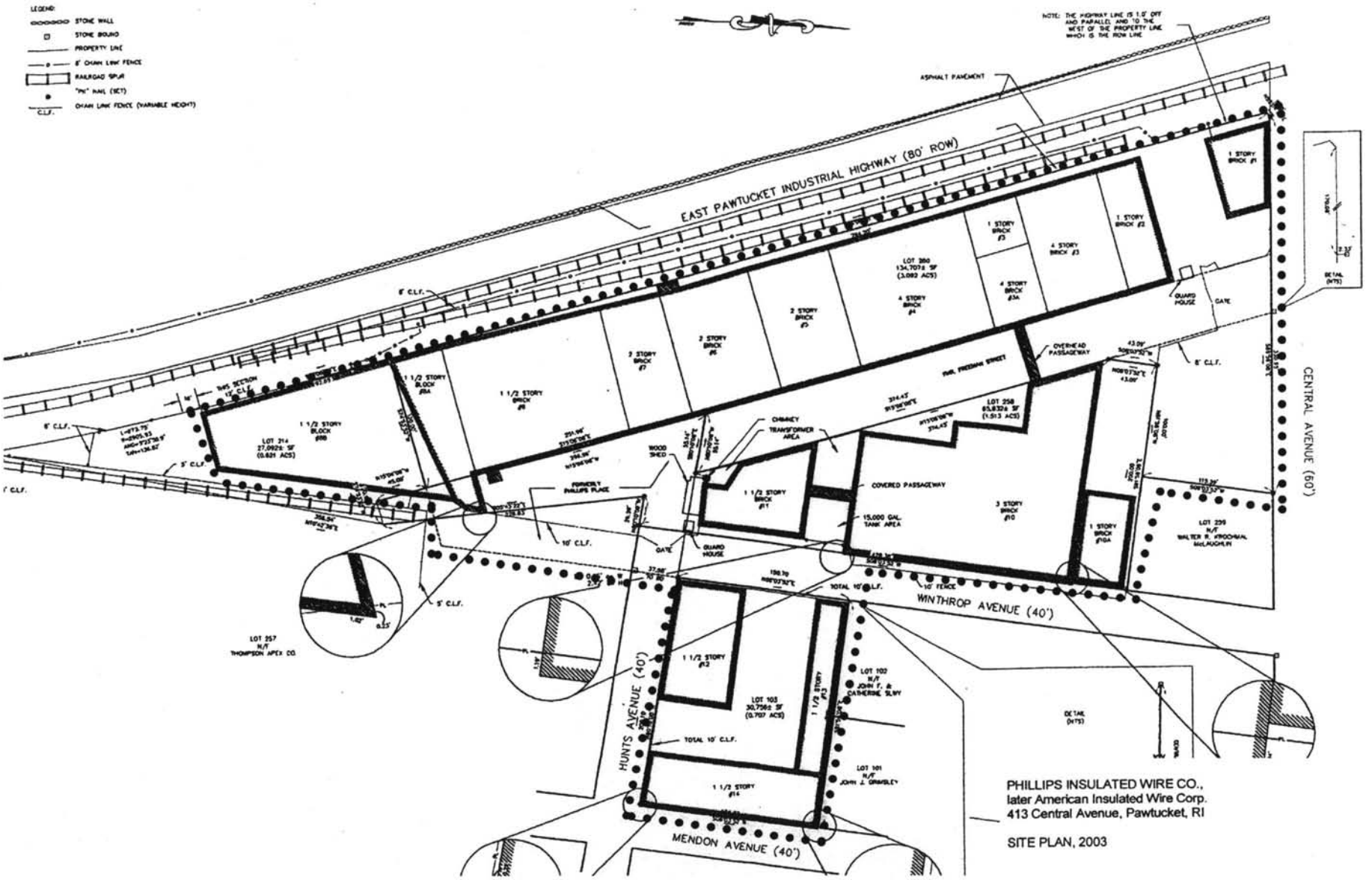
Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and Massachusetts Geodetic Survey

Topography by planetable surveys 1935 and 1938–1939
Revised 1964

Polyconic projection. 1927 North American datum
10,000-foot grids based on Massachusetts coordinate system, mainland zone, and Rhode Island coordinate system
1000-meter Universal Transverse Mercator grid, zone 19

MN
15°
267 MILS



PHILLIPS INSULATED WIRE CO.,
later American Insulated Wire Corp.
413 Central Avenue, Pawtucket, RI

SITE PLAN, 2003


BUY-RITE
Equipment

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE.
PAWTUCKET, RI 02861 (PROVIDENCE CO.)

PHOTO # 1 OF 12

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE.
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO #2 OF 12


CAN
NSULATED
CORP

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE.
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO #3 OF 12

PHILLIPS INSULATED WIRE CO.

413 CENTRAL AVE.

PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO #4 OF 12


AIW
AMERICAN INSULATED
WIRE
CORP

PHILLIPS INSULATED WIRE CO.

413 CENTRAL AVE.

PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO # 5 OF 12

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO # 6 OF 12

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO #7 OF 12


NO TRESPASSING
NO TRESPASSING

PHILLIPS INSULATED WIRE CO.

413 CENTRAL AVE.

PAWTUCKET (PROVIDENCE CO), RI 02861

PHOTO # 8 OF 12

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413 CENTRAL AVE.
PAWTUCKET, (PROVIDENCE CO.), RI 02861

PHOTO #9 OF 12


FIRE ESCAPE

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE.
PAWTUCKET (PROVIDENCE CO.), RI 02860

PHOTO #10 OF 12

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413 CENTRAL AVE
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO #11 OF 12

PHILLIPS INSULATED WIRE CO.
413 CENTRAL AVE.
PAWTUCKET (PROVIDENCE CO.), RI 02861

PHOTO # 12 OF 12