

United States Department of the Interior
National Park Service
National Register of Historic Places Registration Form

1. Name of Property

Historic Name: W-K-M Company, Inc. Historic District
Other name/site number: Williams-Koen-McManis Company
Name of related multiple property listing: N/A

2. Location

Street & number: District is bound roughly by Commerce, Sampson, Preston, and Velasco Streets
City or town: Houston State: Texas County: Harris
Not for publication: [ ] Vicinity: [ ]

3. State/Federal Agency Certification

As the designated authority under the National Historic Preservation Act, as amended, I hereby certify that this
[n] nomination [ ] request for determination of eligibility meets the documentation standards for registering properties in the National
Register of Historic Places and meets the procedural and professional requirements set forth in 36 CFR Part 60. In my opinion, the
property [x] meets [ ] does not meet the National Register criteria.

I recommend that this property be considered significant at the following levels of significance:
[ ] national [ ] statewide [x] local

Applicable National Register Criteria: [x] A [ ] B [ ] C [ ] D

Signature of certifying official / Title: Mark Wolfe, State Historic Preservation Officer
Date: 5/10/18
Texas Historical Commission
State or Federal agency / bureau or Tribal Government

In my opinion, the property [ ] meets [ ] does not meet the National Register criteria.
Signature of commenting or other official
Date
State or Federal agency / bureau or Tribal Government

4. National Park Service Certification

I hereby certify that the property is:
[ ] entered in the National Register
[ ] determined eligible for the National Register
[ ] determined not eligible for the National Register
[ ] removed from the National Register
[ ] other, explain:

Signature of the Keeper Date of Action

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**5. Classification**

**Ownership of Property**

<input checked="" type="checkbox"/>	Private
<input type="checkbox"/>	Public - Local
<input type="checkbox"/>	Public - State
<input type="checkbox"/>	Public - Federal

**Category of Property**

<input type="checkbox"/>	building(s)
<input checked="" type="checkbox"/>	district
<input type="checkbox"/>	site
<input type="checkbox"/>	structure
<input type="checkbox"/>	object

**Number of Resources within Property**

Contributing	Noncontributing	
15	1	buildings
0	0	sites
0	0	structures
0	0	objects
15	1	total

Number of contributing resources previously listed in the National Register: N/A

**6. Function or Use**

**Historic Functions:** COMMERCE/TRADE: office building; INDUSTRY/PROCESSING/EXTRACTION: manufacturing facility, warehouse

**Current Functions:** COMMERCE/TRADE: office building; INDUSTRY/PROCESSING/EXTRACTION: manufacturing facility, warehouse

**7. Description**

**Architectural Classification:** NO STYLE

**Principal Exterior Materials:** CONCRETE, GLASS, STUCCO, METAL

**Narrative Description** (see continuation sheets 7 through 16)

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**8. Statement of Significance**

**Applicable National Register Criteria**

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

**Criteria Considerations:** N/A

**Areas of Significance:** COMMERCE, INDUSTRY

**Period of Significance:** c.1925-1957

**Significant Dates:** 1949, 1954

**Significant Person** (only if criterion b is marked): N/A

**Cultural Affiliation** (only if criterion d is marked): N/A

**Architect/Builder:** Brown Construction (Builder); Architect Unknown

**Narrative Statement of Significance** (see continuation sheets 17 through 25)

**9. Major Bibliographic References**

**Bibliography** (see continuation sheets 26 through 27)

**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 (*Texas Historical Commission, Austin*)
- Other state agency
- Federal agency
- Local government
- University
- Other -- Specify Repository:

**Historic Resources Survey Number** (if assigned): N/A

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## 10. Geographical Data

**Acreage of Property:** 7.07 acres

### Coordinates

Latitude/Longitude Coordinates (use decimal degree format)

1. Latitude: 29.750667°N      Longitude: -95.340808°W

**Verbal Boundary Description:** The district is bounded by Commerce Street on the north, Sampson Street on the east, Preston Street on the south, and Velasco Street on the west. The boundaries encompass Lots 1-3, 11 & 12, Block 553, Engelke Addition; Lots 6-10 & 12, Block 544, Ranger Addition; Lots 1-5, 11 & 12, Block 554, Engelke Addition; Lots 6-12, Block 545 Ranger Addition; Lots 1-5, 11 & 12, Block 555, Engelke Addition; and Lots 9-11, Block 546, Ranger Addition, South Side Buffalo Bayou, Houston, Harris County, Texas.

**Boundary Justification:** The district boundary encompasses all extant properties historically associated with W-K-M Company, Inc. and closely follows the historic campus boundary.

## 11. Form Prepared By

Name/title: Hannah Curry-Shearouse, Victoria Myers  
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Date: September 2017

## Additional Documentation

**Maps** (see continuation sheet 28 through 29)

**Additional items** (see continuation sheets 30 through 49)

**Photographs** (see continuation sheet 5-6, 50 through 75)

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### **Photographs**

W-K-M Company, Inc. Historic District  
Houston, Harris County, TX  
Photographer: SWCA Environmental Consultants  
Date: Various, 2017

Photo 1 – Roberts Street, view north. Building #11 on the west (left), Buildings #13, #14, #10 and #21 on east (right) side of the street, September 2017

Photo 2 – Sherman Street, view west from Roberts Street, September 2017. Building #11 on south (left) side of the street, and south elevation of Non-Contributing Resource at 3217 Sherman and Building #9 are on north (right) side of the street

Photo 3 – South (rear) elevation of Building #2, #3, and #4 (left) and Buildings #5 and #6 (right). Camera facing northwest, February 2017

Photo 4 – North (front) elevation of Building #2, #3, and #4. Window, door, and signage alterations visible, camera facing south, February 2017

Photo 5 – East elevation of Building #2, #3, #4 with connection to Buildings #5 and #6, view southwest, October, 2017  
The original metal windows and glazing remain in place

Photo 6 – Building #6, interior view southeast, June 2017

Photo 7 – Building #9 (left) and 3217 Sherman (right), south (front) and east elevations, view northwest, February 2017.

Photo 8 – North (rear) and west elevations of Building #9, view southeast, February 2017

Photo 9 – Building #9, interior view south, October 2017

Photo 10 – Building #10, north and west elevations, view southeast with Building #13 in background on right and Building #16 partially visible at the left, February 2017

Photo 11 – Detail of remaining W-K-M signage on the north elevation of Building #10, view southeast, September 2017

Photo 12 – Original metal frame, new interior office walls, and clerestory windows in Building #10, view north, June 2017

Photo 13 – Building #16 interior, view south, October 2017. Metal casement windows on east elevation of Building #10 visible on right

Photo 14 – South (rear) and east elevations of Building #11, view northwest, February 2017

Photo 15 – Building #11, interior view north from second floor, June 2017

Photo 16 – West (front) and south elevations of Building #13 (left), view northeast, February 2017. South elevations for Buildings #15 and #19 are visible on right

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Photo 17 – Interior showing original finishes in Building #13, view east towards the first floor lobby, February 2017

Photo 18 – Second floor conference room in Building #13 showing original ceiling, fireplace, and wood paneling, view south, February 2017

Photo 19 – Covered space between Building #13 (left) and Building #14 (right), taken from inside Building #15, view west, October 2017

Photo 20 – Building #19, view south, October 2017. Party wall between Building #19 and Building #15 is visible on the right

Photo 21 – South (front) elevation of Building #17, view north, February 2017

Photo 22 – Interior of Building #17, view north, June 2017

Photo 23 – North elevation of Building #18 (far left) and north and west elevations of Building #20, view southeast, February 2017

Photo 24 – Interior of Building #18, view north, June 2017. Building #18's structural independence from Building #20 is visible on left

Photo 25 – North (rear) and west elevations of Building #21, view southeast, February 2017

Photo 26 – Interior from second floor of Building #21, view northeast, June 2017. Original corrugated wire glass curtain wall, steel framing, and concrete flooring visible

**Paperwork Reduction Act Statement:** This information is being collected for applications to the National Register of Historic Places to nominate properties for listing or determine eligibility for listing, to list properties, and to amend existing listings. Response to this request is required to obtain a benefit in accordance with the National Historic Preservation Act, as amended (16 U.S.C.460 et seq.).

**Estimated Burden Statement:** Public reporting burden for this form is estimated to average 100 hours per response including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding this burden estimate or any aspect of this form to the Office of Planning and Performance Management, U.S. Dept. of the Interior, 1849 C. Street, NW, Washington, DC.

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### **Narrative Description**

The W-K-M Company, Inc. Historic District is located approximately 1 mile east of the downtown Houston, Texas. Roughly bounded by Commerce Street to the north, Sampson Street to the east, Preston Street to the south, and Velasco Street to the west, the district is comprised of sixteen industrial and commercial buildings built between the 1920s and 1940s reflecting the establishment and growth of the W-K-M Company. Approximately 25% of buildings in the district were constructed before or during WWII, and 75% were built between 1945 and 1960. Most of the buildings in the district retain their historic integrity, with covered or infilled windows and doors being the most common alteration over time. The W-K-M Company Historic District contains fifteen contributing buildings and one non-contributing building most of which were built by Brown Construction.

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### **Setting and Location**

The W-K-M Company Historic District encompasses most of the parcels on six blocks that made up the W-K-M Company complex from 1919 until 1957 when they relocated from this site, then outside of the Houston city limits. The district covers approximately 7 acres within Houston's Second Ward. It is located about 1 mile east of downtown Houston and less than 1 mile south of Buffalo Bayou. The district is roughly bounded by Commerce Street to the north, Sampson Street to the east, Preston Street to the south and Velasco Street to the west, although the blocks are not on a true north-south grid. Roberts Street runs northeast to southwest through the middle of the district. Commerce Street to the west-northwest is a thoroughfare into downtown and provides access to Interstate 69/US Highway 59, which serves as one of the major highways bounding downtown. Harrisburg Boulevard, one block southwest of the district, is another major thoroughfare from the district area to downtown after it becomes Texas Avenue. Within a 1 mile radius of the district is the Myers-Spalti Manufacturing Plant Historic District (NRHP 2003) and five individual National Register properties: Union Station (NRHP 1977), Annunciation Church (NRHP 1975), Arthur B. Cohn House (NRHP 1985), The Houston Post (NRHP 2018), and Cheek Neal Coffee Company Building (NRHP 2016).

Most of the resources have primary elevations facing Sherman Street, Roberts Street, or Garrow Street. However, several of the buildings also have prominent secondary elevations facing Preston Street, Garrow Street, Sherman Street, and Commerce Street. Original lots within the district boundaries were platted for residential use. Lot sizes vary throughout the district with some of the current buildings covering multiple original lots while other buildings are on larger lots. Historically, there were rail road tracks running north-south in the blocks between Velasco and Roberts, as well as tracks running east-west on Commerce. The oldest buildings in the district appear to be located closest to the tracks. The tracks were removed, though the rail easement in the blocks is visible.

Buildings in the district are predominantly vernacular industrial buildings, with small setbacks for sidewalks or narrow parking areas. Most have a tripartite look, either as the shape of the building itself or with the use of parapet walls, providing continuity to the complex over multiple decades of growth. Buildings are mostly metal frame, some with stucco parapet walls. Common materials include metal casement windows, stucco exteriors, clerestory windows, corrugated wire glass, and painted brick or concrete block. There are some differences in building materials from pre-war and post-war construction. The pre-war buildings are constructed of brick, metal, and stucco, while the larger post-war buildings are constructed primarily from concrete, steel, stucco, and glass. However, design continuity is visible through the inclusion of clerestory window lines and the metal casement windows, which appear on both pre- and post-war buildings. The architect(s) for these buildings are unknown; Brown Construction erected most of the buildings, particularly after World War II.

The topography in and around the district is relatively flat. Surrounding structures are a mix of early-twentieth-century single-family residential and modern infill of multi-family residential, commercial, and light industrial buildings.

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Buildings in the W-K-M Company Historic District are in good condition. They retain a high level of integrity, and are representative examples of early- to mid-twentieth-century industrial buildings. Fifteen of the remaining sixteen buildings contribute to the district. The oldest buildings date to circa 1925 and are mostly warehouse and manufacturing buildings. The last contributing buildings in the district were constructed in 1949. Approximately 25% of buildings in the district were constructed prior to or during World War II, and 75% were constructed in the post-war period. The most common alterations throughout the district are covered window openings and replacement overhead doors. All the construction dates are taken from W-K-M's accounting records.

The most recent Sanborn map of the area, from 1924 with additions in 1951, covers two sheets. The company's accounting records indicate that in 1951, the W-K-M Company occupied 21 buildings over their six-block campus. The Sanborn maps number the buildings, making it easy to find the buildings and identify them using the company's original system. However, from the ordering on the Sanborn maps, it is clear that the company labeled their buildings based on chronological age and did not reorder as they demolished or combined buildings (Map 3, Figures 1-3). None of the Sanborn maps identify Building #1 or Building #12. Building #1 likely referred to either the original 1919 warehouse or the house at 220 Roberts that served as the office. The warehouse, demolished circa 1925, was on the site of the combined Buildings #2, #3, & #4. The dwelling used as the first office was demolished for the construction of Building #11 in 1947. Building #12 was either enveloped or demolished prior to the most recent revisions to the Sanborn map. Originally located to the west of Building #11, Buildings #7 and #8 were demolished c. 1995 (Figure 2c). Sanborn maps label the buildings jointly as a materials warehouse, however the site of the buildings is now part of the parking area for Building #11. Buildings in the district do not retain a single owner anymore, and the majority are still in use as active light industrial manufacturing centers. Interior descriptions and photographs are available as access and safety allowed.

### District Resources

C= Contributing; NC = Non-contributing

#### **Office & Machine Shop (C)**

##### **Building #2 #3 #4**

**3210 A Garrow Street**

**ca. 1925, alteration ca. 1945**

This resource is a one-and-a-half- and two-story, commercial warehouse building with a corrugated metal gable roof with stucco parapet walls on both the north (Garrow) and south (Preston) Elevations. Outlines for "W - K - M CO. INC." are visible on the Preston elevation, although partially obscured by vegetation (Photos 3-4, Map 3). The metal frame building is clad primarily with stucco and there is a concrete slab foundation. The structure has a long, raised wood-framed section along the gable peak with clerestory metal casement windows. There are no visible windows along the north or south elevations, though there is standing seam metal infill over window openings on the north elevation. There is one large bay door opening on the south elevation facing Preston with a roll-up metal garage door (Photo 3). The north elevation facing Garrow has one fixed window with a metal mesh screen and a central entrance. There is no access to the west elevation on the original rail easement, and there is only limited visibility. However, photos indicate that the original rail loading docks have been covered with standing-seam metal to show the original pattern of the openings. Metal infill on the east elevation connects Building #2-3-4 with Buildings #5 and #6, but the footprint of the infill appears to date to ca. 1945 as does the raised section running the length of the building. The original metal casement windows are still in place along the building's east elevation, now enclosed by the metal infill section (Photo 5). Sanborn maps label the footprint of the building collectively as 2, 3, & 4 with a two story office section at the north end and the rest called the machine shop (Figure 2b). This building, along with Buildings #5 and #6, is under separate ownership from the rest of the district. Furthermore, this building did not appear to have any tenants during survey. For these reasons, the interior spaces were not accessible during survey, but it appears

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buildings #2, #3, and #4 were constructed independently from buildings #5 and #6, thus justifying counting them separately.

### **Machine Shop (C)**

#### **Building #5**

**3210 Garrow Street (Faces Preston Street)**

**ca. 1925, alteration ca. 1945**

This resource is a one-and-a-half-story commercial warehouse building with a corrugated metal gable roof with stucco parapet walls on the Preston elevation (Photo 3, Map 3, Figure 2b). The metal frame building is clad primarily with stucco and there is a concrete slab foundation. The structure has two long, raised sections along the gable peaks with metal casement clerestory windows. Window openings on the south and east elevations have been covered with standing seam metal. Two original door openings on the south elevation remain in place. While the eastern door has been replaced with a metal overhead door, the western door appears to be the original paired wood paneled doors with multi-light openings. The east elevation also features an original vehicular opening that has been covered and is inaccessible because of landscaping and a sidewalk extension. On the north side of the building is a loading bay that connects the building to Building #6. The bay has a chain link metal gate even with the exterior walls, but the raised loading dock and overhead framing used to load finished materials into trucks is visible. Metal infill on the west elevation connects Building #2-3-4 with Buildings #5 and #6, but the footprint of the infill appears to date to ca. 1945 as does the raised section running the length of the building. The original metal casement windows on the north elevation remain in place under the metal infill. The interior has exposed steel trusses and columns. No historic machinery is extant in the building. The space is open, with a concrete slab floor. Historically separate, the buildings remain structurally separate as their original exterior walls remain in place with original metal casement windows. This building, along with Building #2-3-4 and #6, is under separate ownership than the rest of the district and did not appear to have a tenant during survey. For these reasons, additional detail about the interior is unavailable.

### **Assembly Shop (C)**

#### **Building #6**

**3210 Garrow Street**

**ca. 1925, alteration ca. 1945**

This is a one-and-a-half-story commercial warehouse building with a corrugated metal gable roof with stucco parapet walls on the north elevation. The metal frame building is clad primarily with stucco and there is a concrete slab foundation (Map 3, Figure 2b). The structure has two long, raised sections along the gable peaks with metal casement clerestory windows. There is standing seam metal infill over original window openings on the east and north elevations. The original metal casement windows for these elevations are visible on the interior. There is one large bay door opening on the western half of the north elevation, however no door was visible during the survey – only a chain link fence gates half the height of the opening. On the east elevation, there is brick and standing seam metal infill that is a former entry bay that has been made redundant through landscaping and the sidewalk. On the south elevation is a loading bay that connects the building to Building #5. The bay has a chain link metal gate even with the exterior walls, but the raised loading dock and overhead framing used to load finished materials into trucks is visible. Metal infill on the east elevation connects Building #2-3-4 with Buildings #5 and #6, but the footprint of the infill appears to date to ca. 1945 as does the raised section running the length of the building. The metal infill is structurally separate from both Building #2-3-4 and Building #6. The interior has exposed steel trusses and columns (Photo 6). No historic machinery is extant in the building. There are regularly spaced original ventilation fans along the walls of the half-story center section. The space is mostly open, with a one story, three-office section with a flat roof along the west wall. The original metal casement windows for Building #2-3-4 are visible along the west wall of this building.

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The interior floor is concrete slab. Historically separate, metal infill has been constructed between Building #5 and Building #6. This infill, however, does not join the interior spaces of the two buildings and they remain separate.

**Assembly Plant (C)**

**Building #9**

**3215 Sherman Street**

**1945**

Facing south onto Sherman, Building #9 is a one-and-a-half-story, commercial warehouse building with an asphalt roof, a brick parapet wall, and a concrete slab foundation (Photo 7, Map 3, Figure 2d). The building spans the block, narrowing at the halfway point. There is a raised section down the center of the roof. The outline of "W.K.M." is visible on the parapet on the south elevation. The metal frame building is clad with brick to the halfway point, with corrugated metal covering historic clerestory window openings along the raised section of the east and west elevations. Windows on the east and west elevations are metal casement, behind metal screens, security bars, and metal coverings. There is a single leaf, flush metal entry door and a rolling up metal garage bay door on the south elevation. There is an additional overhead metal garage bay door on the north elevation facing onto Commerce. It appears the northern portion of the building is constructed of concrete block (Photo 8). The interior has exposed steel trusses and columns (Photo 9). No historic machinery is extant in the building. The floor is concrete slab. A concrete block wall with steel swing windows and a garage bay opening connects Building #9 to the rear part of 3217 Sherman, which appears on historic Sanborn maps as an auto repair shop as well as to a locker room that appears on the Sanborn maps as WC. Though there are interior connections between the three buildings now, the buildings remain structurally independent of one another.

**Shipping Warehouse (C)**

**Building #10**

**205 Roberts Street**

**1945**

Building #10 is a one-and-a-half-story commercial warehouse with a flat asphalt roof with raised center section, stucco parapet walls with "W.K.M." applied, and concrete foundation. The steel frame brick building is clad with stucco (Photo 10 and 11, Map 3, Figure 2f). In some locations, the underlying brick is visible. The only visible windows are along the raised section and are metal casements. Window openings along the west (Roberts) elevation have mostly been filled with standing seam metal, although paired metal casement windows are visible next to the metal flush single leaf door on this elevation. The north (Sherman) elevation has three raised loading bays with roll up metal garage doors. Two additional roll up metal garage doors face west onto Roberts, however these are at street level. The original metal casement windows located on the building's east elevation, now enclosed by Building #16, remain in place. The interior has wood posts and rafters with a concrete floor (Photo 12). There have been modifications to convert the space for office use, including new infill walls and kitchen area. There is a mezzanine workspace accessible by wood stairs, however it is unclear if this is a later addition or original. The building is connected on the interior to Building #16, which was constructed approximately three years later. Both Buildings #10 and #16 are occupied currently by the same tenant, who uses both buildings as if they a single unit. However, the buildings are structurally independent and historically separate, as Building #10 was a shipping warehouse, and Building #16 was a woodworking building. For these reasons, the buildings are counted as separate resources.

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**Machine Shop (C)**  
**Building #11**  
**3218 Sherman Street**  
**1947**

Building #11 is a two-and-a-half-story commercial warehouse with a flat metal roof on a concrete slab foundation. The brick and metal frame building is clad primarily with its original corrugated wire glass curtain walls. The painted brick structure exists only as a base to the building. There are two bands of metal casement windows on all elevations, one just covered with metal above the brick base, the other serving as a spandrel band. The structure has a long, raised section down the center using the same corrugated wire glass curtain wall system, and there are regularly spaced metal downspouts on all sides of the building. All of the building's corners have flanking columns of corrugated metal panels.

The south elevation facing Garrow has a vehicular opening on the western end with a metal overhead door (Photo 14, Map 3, Figure 2c). The opening is additionally blocked with a chain link fence, and it is flanked by original corrugated metal panels. At the eastern end, there is a former opening that has been infilled with a matching brick base and a corrugated metal panel. Flanking this former opening are metal vents and a single solid metal door. At the center of the second floor, there is a metal fire escape extending from a single leaf flush metal door. The lower band of casement windows on this elevation have been covered by standing seam metal.

The west elevation faces onto the rail easement and to the original sites for Buildings #7 and #8 (demolished). The casement windows on this elevation have been covered almost entirely by standing seam metal. There is a covered loading dock located at the center of this elevation. The loading dock is one-and-a-half stories, and is clad in corrugated metal rather than wire glass. Historic photos of Building #11 do not show this elevation, but it is likely original and allowed easier cargo loading. The former sites for Buildings #7 and #8 now serve as parking areas for Building #11.

The east elevation faces onto Roberts Street and is the simplest elevation (Photo 14). Metal panels replacing sections of damaged wire glass is the only alteration to the elevation. The elevation never had doors. All the lower band of casement windows have been covered with standing seam metal panels, though they are visible from the interior. The upper band of casement windows remains in place, and many of these remain operable.

The north elevation faces onto Sherman. There is a single vehicular opening centered on this elevation. There does not appear to be a door for this opening and instead is protected by a half-height chain link fence. The opening is flanked by two sections of corrugated metal panels, and there is a single solid metal door located in the eastern section. Both bands of casement windows have been covered by standing seam metal on this elevation.

The interior has steel trusses and columns (Photo 15). The first floor is concrete and the center section opens to the roof. A spiral metal stair leads from the first floor to the second. The second floor is also concrete and wraps around the interior perimeter of the building. There is an interior office on the first floor. No historic machinery is extant. Several original light fixtures are still extant, regularly spaced along the second floor deck.

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**Office (C)**  
**Building #13**  
**201 (formerly 221) Roberts Street**  
**1947**

Building #13 is a three-story, steel frame commercial building with a flat asphalt roof. It is clad with stucco and has a center section of fossilized limestone tiles on the west elevation (Photo 10 and 16, Map 3, Figure 2f). The foundation is concrete slab. The main entry door faces Roberts and is glass with a metal security door. A central, partial width awning covers the entry. There are three flush metal doors on the south (Garrow) elevation; two from the second and third floors provide egress onto an attached metal fire escape. On the first floor, the lobby has wood paneling and built in, recessed seating and a wood reception desk (Photo 17). Flooring in the lobby and common areas is tile. Offices on all floors typically have drop ceilings with acoustic tile. Flooring varies and does not appear original. Interior doors are typically flush, wood units. The first floor also has a metal safe door leading to what was originally the company vault. The second floor conference room features a fireplace with decorative marble mantle (Photo 18). This room also has fabric wall paper finishing. There is an additional conference room on the third floor. Walls in this room are clad with wood paneling, which appears in some the walls in the office spaces throughout the building as well. Other wall finishes are plaster.

There is access from the first floor interior to both 203 Roberts and the two warehouses located behind 201 Roberts, all of which are collectively labeled on Sanborn Maps as Building #14, #15, and #19. From the exterior, however, all four structures read as separate buildings and are structurally independent of each other (Photo 19). In addition, Building #13, labeled as an office, serves a disparate function than Buildings #14, #15, and #19, which are labeled as a warehouse. For these reasons, Building #13 is counted independently from the other resources.

**Warehouse (C)**  
**Building #14**  
**203 Roberts Street**  
**1947**

This resource is a one story commercial warehouse building with a flat corrugated metal roof behind a stucco parapet wall (Photo 10, Map 3, Figure 2f). The steel frame building is clad with corrugated metal. There are two visible windows, both metal fixed units, and a metal door with rectangular light. The interior has finished walls and exposed steel trusses supporting the roof. Floors are concrete. Though each building retains a separate construction year, Sanborn maps show this space, along with Building #15 and Building #19 as one big collective warehouse. Both interior and exterior evaluation of the spaces, however, show that they are independent spaces. The rear (east) wall of Building #14 forms part of the west wall of Building #15. Two window openings and a door opening on this wall have been infilled, although it is not clear when, but does indicate that of the three, this was the oldest building and once had an exposed rear elevation. There is also access from Building #13, however, all four buildings are functionally independent.

**Warehouse (C)**  
**Building #15**  
**201 Roberts Street (faces Garrow)**  
**1948**

This resource is a one-story steel frame warehouse building with a corrugated metal gable roof behind a stucco parapet wall (Photo 16, Map 3, Figure 2f). Three of the four walls are corrugated metal, including the east wall which

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is shared with Building #19. The fourth (west) wall using the rear of Building #13 and Building #14 as a shared wall. Though each building retains a separate construction year, Sanborn maps show this space, along with Building #14 and Building #19 as one big collective warehouse. Both interior and exterior evaluation of the spaces, however, show that they are independent spaces. The rear (east) wall of Building #14 forms part of the west wall of Building #15. Two window openings and a door opening on this wall have been infilled, although it is not clear when. Building #15 and Building #19 have a party wall with a single pedestrian door, preventing shared functionality of the two buildings that were historically warehouses (Photo 20). There is also access from Building #13, however, all four buildings are functionally independent. There is a roll-up metal garage door. The interior is open, with exposed metal framing and concrete floor.

**Woodworking Building (C)**

**Building #16**

**3308 Sherman Street**

**1948**

This one-and-a-half-story commercial warehouse building faces north with a front gable corrugated metal roof with raised center section, stucco parapet wall, and concrete foundation (Photo 11, Map 3, Figure 2f). The steel frame building is clad with corrugated metal on the east, west, and south elevations. The north elevation was likely corrugated metal and is now clad in stucco to retain continuity with Building #10 on its west. The only windows visible from the exterior are along the raised section and are metal casements. There is a flush metal single leaf entry door and a roll up metal garage door on the north elevation. The interior has metal trusses and a concrete floor (Photo 13). There is a corrugated metal office space on the interior as well. Divided metal frame windows are on the west wall facing Building #10. This wall is the only interior wall with a plaster finish.

**Heat Treating Building (C)**

**Building #17**

**3303 Sherman Street**

**1948**

This resource is a one-story commercial warehouse building with a front gable corrugated metal roof and concrete foundation (Photo 21, Map 3, Figure 2g). The steel frame building is clad with corrugated metal. There are no visible windows, but there is a metal vent in the gable end. Ventilation fans are visible along the gable ridge. The Sherman elevation has a flush metal single leaf entry door and a central garage bay with a sliding corrugated metal door. The interior is open, with steel trusses and a concrete floor (Photo 22). It appears that the light fixtures are original. Two machines are in the building, however, the use and age are undetermined.

**Warehouse (C)**

**Building #18**

**3308 Garrow Street**

**1949**

This one-story steel frame warehouse has a corrugated metal gable roof with a stucco parapet wall (Photo 23, Map 3, Figure 2e). It is clad with corrugated metal on the east and west elevations while the north elevation is stuccoed. The continuation of the parapet creates the illusion that Buildings #18 and #20 are united when they are separate. There are no visible windows but there is a roll-up metal garage door and a single leaf flush metal door facing Garrow. The interior has steel trusses and a concrete floor (Photo 24). Several finished walls create office spaces. From the interior, there is a regular pattern of lighter corrugated roofing material which function as skylights.

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**Warehouse (C)**

**Building #19**

**201 Roberts (faces Garrow)**

**1949**

A one-story steel frame warehouse, this resource has a corrugated metal gable roof with a stucco parapet wall (Photo 16, Map 3, Figure 2f). The corrugated metal southeast elevation has a single metal vent. There is a roll-up metal garage door and a single leaf flush metal entry door facing Garrow. The interior is open, with steel trusses and a concrete floor. Though each building retains a separate construction year, Sanborn maps show this space, along with Building #14 and Building #15 as one big collective warehouse. Both interior and exterior evaluation of the spaces, however, show that they are independent spaces. Building #15 and Building #19 have a party wall (Photo 20). There is also access from Building #13 through Building #15, however, all four buildings are functionally independent.

**Warehouse (C)**

**Building #20**

**3302 Garrow Street**

**1949**

This building is a one-story steel frame warehouse with a corrugated metal gable roof with a stucco parapet wall (Photo 23, Map 3, Figure 2e). It is clad with stucco. There are no windows. There are two roll-up metal garage doors on the north elevation facing Garrow Street and an additional roll up metal garage door facing Roberts Street. Two single leaf flush metal doors face Garrow, each next to one of the garage doors. The interior has steel trusses and a concrete floor. The open interior has infill to create offices with a hallway under each gable.

**Machine Shop (C)**

**Building #21**

**3301 Sherman Street**

**1949**

Somewhat similar to building #11, this two-and-a-half-story commercial warehouse has a flat metal roof on a concrete slab foundation (Photo 25, Map 3, Figure 2g). The steel frame building is clad with a mix of corrugated wire glass curtain walls, standing seam metal, corrugated metal, painted concrete block, and metal casement windows. There are two bands of metal casement windows on all elevations (mostly covered with metal), one just above the concrete block base, the other serving as a spandrel band. The structure has a long, raised section using the same corrugated wire glass curtain wall system. This section is off-set to the right of center. There are regularly spaced metal downspouts on all sides of the building. All of the building's corners have flanking columns of corrugated metal panels.

The south elevation facing Sherman has a vehicular opening on the eastern end with a metal overhead door. This entry is centered under the raise section. The opening is additionally blocked with a chain link fence, and it is flanked by original corrugated metal panels. On the western end, there is a flush metal single leaf door. The single leaf door is under an attached corrugated metal awning supported by metal posts.

The Roberts (west) elevation has two raised loading bay openings with metal roll up garage doors. The openings are additionally blocked with a chain link fence, and flanked by original corrugated metal panels. Damaged sections of the wire glass have been replaced by corrugated metal, including a large section covering all levels of the north elevation. Some of the original casement windows are visible above the concrete block base in the central portion of

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this elevation. The Commerce (north) elevation has a large bay of mostly replacement corrugated metal with paired corrugated metal doors. At the top of the bay, framing for loading of materials is still extant.

The interior has steel trusses and columns (Photo 26). The first floor is concrete and the center section opens to the roof. The second floor is also concrete and wraps around three sides of the interior perimeter. There is an interior office on the first floor. No historic machinery remains. Several original light fixtures are still extant, regularly spaced along the second floor deck.

**Auto Repair Shop (NC)**

**3217 Sherman Street**

**Original date of construction ca. 1944, alteration ca. 1960, after the period of significance**

One-story, commercial warehouse building with a front gable, corrugated metal roof and a concrete slab foundation (Photo 7, Map 3, Figure 2d). The metal frame building is clad with corrugated metal. There is a single leaf, flush metal entry door and a vehicular entry with an overhead metal door. There is a partial width, flat, corrugated metal awning centered on the southwest elevation. There are no visible windows.

The historic auto repair shop located on this site remains in place. However, an addition was constructed circa 1960, after W-K-M relocated to their Missouri City facilities, and enveloped the original shop. The alteration caused this resource to lose its integrity of materials, design, and workmanship. While historic age, the current configuration falls outside the period of significance. For those reasons, the building at 3217 Sherman is a non-contributing resource to the historic district.

**Integrity**

The district retains integrity of location, materials, feeling, and association, and a somewhat diminished integrity of design, workmanship, and setting. The W-K-M historic district remains in its original location, east of downtown Houston, and the center of the district retains the feeling of a light industrial manufacturing complex. However, outside the district, the setting has converted from predominantly light industrial manufacturing and working class housing to denser single-family and multi-family housing. Though many light industrial complexes remain, their number is dwindling, making W-K-M one of the best intact complexes in this part of Houston.

Though most alterations occurred during the period of significance and are considered historic alterations, minor alterations over the last sixty years have resulted in somewhat diminished integrity of design and workmanship. These alterations include covering or removal of original windows, loss of original signage, installation of new doors, and additions of new fire escapes for life safety. However, these losses are minor. The district retains integrity of materials, particularly in Buildings #11 and #21, where they retain their original corrugated wire glass curtain walls. Building #13 also retains its original limestone tile ornament. Many of the vernacular warehouse buildings retain original windows, stucco, and framing, allowing the district to continue to convey the variety of original materials used in W-K-M's construction.

Furthermore, only two W-K-M buildings have been demolished outside the period of significance, so the district retains its original spacing and density. The district's occupation over six city blocks continues to convey how the company manufactured and shipped its products. The retention of so much of the original historic fabric bolsters its integrity of association and feeling.

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**District Inventory Table**

<b>WKM Building #</b>	<b>Address</b>	<b>Construction Date</b>	<b>Contributing/Non-Contributing</b>
2, 3, & 4	3210A Garrow Street	ca. 1925	C
5	3210 Garrow Street	ca. 1925	C
6	3210 Garrow Street	ca. 1925	C
9	3215 Sherman Street	1945	C
10	205 Roberts Street	1945	C
11	3218 Sherman Street	1947	C
13	201 Roberts Street	1947	C
14	203 Roberts Street	1947	C
15	201 Roberts Street	1948	C
16	3308 Sherman Street	1948	C
17	3303 Sherman Street	1948	C
18	3308 Garrow Street	1949	C
19	201 Roberts Street	1949	C
20	3302 Garrow Street	1949	C
21	3301 Sherman Street	1949	C
N/A	3217 Sherman Street	ca. 1944, altered ca. 1960	NC

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## Statement of Significance

W-K-M Company, Incorporated was founded in 1919 by Clint F. Williams, L. O. Koen, and Fred McManis. Originally named Williams-Koen-McManis, they quickly shortened the name to the internationally recognized brand W-K-M. The company, an oil and gas pipeline supplier, is best known for their precedent setting and innovative pipe cleaning and coating machines, rotary slips, and high-pressure valves essential for oil and gas well maintenance and function. W-K-M's patented designs have been staples for pipeline projects since the 1920s and at their peak, and marketing materials indicate W-K-M valves were widely used in oil and gas pipelines worldwide.<sup>1</sup> Government contracts during World War II led to rapid expansion of services and the campus in the post-war period. Though the company was purchased in 1954, the W-K-M brand was so well known and respected that it endured, even when no longer independently operated. To date, the W-K-M brand continues as a trademarked line of products for Cameron, a subsidiary of Schlumberger. The W-K-M Company, Inc. Historic District is nominated to the National Register of Historic Places under Criterion A for Commerce and Industry at a local level of significance with a period of significance of 1925-1957.

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## Overview of the Oil Industry

The modern oil and gas industry first traces its history to 1806 when brothers David and Joseph Ruffner constructed the first deliberate, tool-made well near Charleston, West Virginia.<sup>2</sup> The Ruffner well, as it is now known, was constructed in order to dig deeper into the spring on their land, intending to extract larger quantities of brine than they were receiving naturally. Building on the success of the Ruffner well, other citizens and companies began constructing wells for the purpose of commercial extraction and sale.

The introduction of industry and machinery meant that the whale oil industry was no longer capable of producing all of the oil necessary, and entrepreneurs were ready to find the next new product. Though other wells in the nineteenth century had identified petroleum, the first well deliberately constructed for the extraction of commercial-use oil was the Drake Well, constructed in 1859 in Titusville, Pennsylvania with an output of 20-30 oil barrels (bbl) per day.<sup>3</sup> Following the Drake Well, other petroleum wells in the United States and globally were constructed, with the United States as the leading producer of petroleum and petroleum products.<sup>4</sup> In 1901, however, Texas alone would become the nation's leader in petroleum output.

On January 10, 1901, Spindletop, near Beaumont, Texas, became an icon of the modern oil and gas industry. Though Texas was already producing oil during the late nineteenth century, the quantities of oil coming from Spindletop changed the state's economy and set the stage for Texas' future. The first well at Spindletop, known as the Lucas Gusher, produced over 100,000 bbl per day, more than 3,000 times that of the Drake well. Wells at Spindletop produced more oil in a single day than every other well in the world combined.<sup>5</sup> Additionally, the unexpected size of the well lead the owners to scramble as they tried to find a way to temper the flow. It took the team nine days to create the first multiple-valve control apparatus, commonly called a Christmas Tree.<sup>6</sup> These types of valves would become W-K-M's specialty.

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<sup>1</sup> Photo caption, December 27, 1954. Photo by Bob Bailly. ACF Archival Collection, Series 22, Box 7, Folder 2. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>2</sup> J.E. Brantly, History of Oil Well Drilling, Houston: Gulf Publishing Company, 1971, pg. 6.

<sup>3</sup> J.E. Brantly, History of Oil Well Drilling, Houston: Gulf Publishing Company, 1971, pg. 8.

<sup>4</sup> Ibid.

<sup>5</sup> "Spindletop launches Modern Petroleum Industry," Petroleum History Almanac, American Oil & Gas Society. Accessed July 27, 2017 <http://aoghs.org/oil-almanac/spindletop-launches-modern-oil-industry/>

<sup>6</sup> Diana Davis Olien & Roger M. Olien, Oil in Texas: The Gusher Age, 1895-1945. Austin: University of Texas Press, 2002, pg. 31.

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Though the initial discovery of high-producing oil wells were located near Beaumont and Port Arthur, in 1908 the Texas Company, commonly known as Texaco, relocated its corporate headquarters to Houston.<sup>7</sup> Soon, the other major oil companies followed suite and while the Beaumont and Port Arthur areas represented some of the greatest refining centers in the world in 1920, Houston was the corporate center of the petroleum industry in Texas.<sup>8</sup> In addition to major oil companies establishing their headquarters in the city, Houston and the surrounding area also saw an influx industrial manufactures specializing in oil field equipment. For instance, Union Iron Works in 1906 began selling and marketing pipe specifically for oil movement, and Hughes Tool Company began producing specialty drill bits that would work well in the Gulf Coastal soils.<sup>9</sup>

### Creation of W-K-M Company, Incorporated

W-K-M Company, Incorporated was founded in 1919 in Houston, Texas as an oil and gas pipeline supplier, and they became a particularly important company for the production of rotary slips and pipeline valves.<sup>10</sup> Using \$800 of their own cash and a \$2,000 loan, founders Clint F. Williams, L.O. Koen, and Fred McManis located their manufacturing and distribution company to the east of Houston's downtown. Their first offices were a warehouse and a repurposed residence near the corner of Velasco and Roberts Streets in a predominantly industrial area (Figure 1). The company also rented space in the Beatty-West Building at the corner of Walker and Main downtown until at least 1927.<sup>11</sup> The 1930 City Directory, however, reports that their general offices were within the proposed district boundaries at Congress (now Garrow) and Roberts.

W-K-M formally incorporated in November 1922 with Williams, McManis, and D.J. Bryant listed as incorporators on their filings. Bryant had been serving as Secretary on the Board of Directors. Koen, though not an incorporator, was listed as one of the company's directors.<sup>12</sup> Williams served as company president through 1926, with Koen and McManis both serving as vice presidents; McManis additionally took on the role of general manager.<sup>13</sup> Williams did not stay in Houston for long, moving to Mexia, Texas and then later to Tonkawa, Oklahoma. These moves can be tracked in the company's increased sales in those areas as well as through census records.<sup>14</sup> Williams also owned Williams Iron Works, which was one of W-K-M's early suppliers.<sup>15</sup> Williams was granted four patents, three of which were granted posthumously as an incorporator for Williams Iron Works. Williams' 1925 patent improved oil well elevators, while his posthumous 1936 and 1938 patents all related to oil well drill bits.<sup>16</sup> Williams' innovation unfortunately ended when he died in a plane crash outside of Fort Worth in 1930.<sup>17</sup>

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<sup>7</sup> Anna Mod, "Texas Company Building," National Register of Historic Places, National Park Service, 2002, Section 8, pg. 31.

<sup>8</sup> Diana Davis Olien & Roger M. Olien, Oil in Texas: The Gusher Age, 1895-1945. Austin: University of Texas Press, 2002, pg. 60.

<sup>9</sup> *Ibid.*, pg. 60.

<sup>10</sup> *Ibid.*, pg. 61.

<sup>11</sup> "WKM Price Sheet & Description pamphlet no. 265, effective June 10, 1927," ACF Archival Collection, Series 22, Box 6, Folder 3. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>12</sup> Charter, W-K-M Company, Inc. ACF Archival Collection, Series 22, Box 5, Folder 2. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>13</sup> Houston City Directory, 1925.

<sup>14</sup> W-K-M Sales, 1921. ACF Archival Collection, Series 22, Box 2, Folder 4. St. Louis Mercantile Library. University of Missouri, St. Louis.; 1930 Census Records, Oklahoma.

<sup>15</sup> Transfer General Ledger, W-K-M Inc. 1922-1925. ACF Archival Collection, Series 22, Box 2, Folder 7. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>16</sup> United States Patents No. 1,543,966, No. 2,058,749, No. 2,058,750, and No. 2,124,521.

<sup>17</sup> "Tonkawa Air Victim to be Buried Here," *The Oklahoman*. April 29, 1930. Article copied to Williams' Find-a-Grave listing, accessed April 14, 2017. <https://www.findagrave.com/cgi-bin/fg.cgi?page=gr&GRid=58563327>

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McManis, who took over as company president following Williams' departure, also held four patents to his name, and Koen held three. McManis' 1928 patented device for cleaning and coating pipes revolutionized the oil and gas industry by mechanizing work that was previously exclusively manual. McManis' patent has been referenced fifteen times since being filed, including most recently in 2004.<sup>18</sup> Koen's 1935 rotary slip design has been referenced over two dozen times by other patents, including most recently in 2007.<sup>19</sup> W-K-M additionally was the assignee for another two dozen patents filed by their employees between 1919 and 1954. The continued references to their designs speak to the quality and precedence of the work, and the number of unique patents for which W-K-M was the assignee allowed them to be the sole manufacturer for a number of in-demand products.

While W-K-M is not a household brand name as they did not manufacture consumer goods, petroleum companies are very familiar with their products and the advancements they brought to the industry, particularly their valves. Piping valves allow suppliers to control the flow of product from the source to its destination. Valves are most useful for ensuring that the quantity of oil does not overwhelm the pipes and that the flow can be stopped in case of a spill. Valves also allow the flow to be stopped so that the pipes can be maintained.<sup>20</sup> As the oil industry continued to grow and drill in new locations, suppliers such as W-K-M, developed new products to meet the changing needs.

[W-K-M] produced many industry firsts, including the first 5,000, 10,000, 15,000, and 20,000 psi gate valves and the first dual, triple and quadruple completion gate valves. The company pioneered the development of new materials for critical applications and for hostile environments such as hydrogen sulfide. It was also the first to manufacture valves and actuators for ocean floor completions. In 1933, W-K-M introduced the first through-conduit expanding gate valve for oil and gas well control. Known today as the Pow-R-Seal gate valve, it was undergone numerous refinements and improvements while retaining its basic design. After World War II, W-K-M began to design and manufacture pipeline valves in the through-conduit expanding gate design. The company quickly established itself as a leader in this industry and expanded its facilities to meet heavy demand.<sup>21</sup>

A "completion" as it relates to gate valves refers to "the assembly of downhole tubulars and equipment required to enable safe and efficient production from an oil or gas well."<sup>22</sup> The increased number of completions would have been coupled with increased psi capabilities, allowing oil companies to drill higher pressure wells more safely. An actuator is a "type of motor that is responsible for moving or controlling a mechanism or system."<sup>23</sup> Actuators would be necessary for controlling valves located on the ocean floor for off-shore rigs, as those depths are not safe for personnel. W-K-M's specialty, the high-pressure gate valve, creates a solid barrier (or gate) within a pipe run in order to stop or redirect the

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<sup>18</sup> Fred McManis, "Device for cleaning and coating pipe," Patent No. US 1821352 A, March 22, 1928. United States Patent Office. Available at <https://www.google.com/patents/US1821352>

<sup>19</sup> L.O. Koen, "Rotary Slip," Patent No. US 2231923 A, December 2, 1935. United States Patent Office. Available at <https://www.google.com/patents/US2231923>

<sup>20</sup> "Fact Sheet: Valves on a Pipeline," National Energy Board, Government of Canada, updated December 1, 2016. Accessed July 27, 2017 <https://www.neb-one.gc.ca/bts/nws/fs/vlvplnfs-eng.html>

<sup>21</sup> "At W-K-M, progress with 'zero defects'." *The Oil Daily*, May 6, 1985, C13. *General OneFile* (accessed October 26, 2017). <http://go.galegroup.com.proxy1.athensams.net/ps/i.do?p=ITOF&sw=w&u=txshrp100185&v=2.1&it=r&id=GALE%7CA3764462&asid=454977f56d61aeeda6b9e6c60820f822>. W-K-M's pioneering Pow-R-Seal gate valve is still produced in 2017 by Cameron, nearly 100 years after W-K-M was established.

<sup>22</sup> "Completion," *Oilfield Glossary*, Schlumberger. Accessed October 27, 2017 <http://www.glossary.oilfield.slb.com/Terms/c/completion.aspx>

<sup>23</sup> Davecramer, "What are actuators and Different Types of Actuators?" Western Design Center, Inc. December 9, 2016. Accessed October 27, 2017 <http://wdc65xx.com/lessons/what-are-actuators-and-different-types-of-actuators/>

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flow of product. A through conduit gate valve differs from a typical gate valve by ensuring that the gate is connected to the main body of the valve. A through conduit valve also allows for a gate that matches the diameter of the pipe, making it possible to send pipe-cleaning devices through the pipes to remove debris and deposits from the pipe interior.<sup>24</sup>

In addition to their valves, W-K-M was best known for their pipe coating machines and rotary slips. Pipe coating machines followed the path of an oil and gas pipeline and applied exterior coatings to the pipes in order to prevent deterioration.<sup>25</sup> Rotary slips hold large pipes in place while new sections of pipe are screwed onto the end of the existing pipe. They also ensure that pieces of pipe do not fall down the well.<sup>26</sup> These products are all essential for pipeline and oil well maintenance, and W-K-M's patented designs quickly dominated the industry. In particular, at its peak, W-K-M valves were used in a high number (perhaps as high as 75%) of all oil and gas pipelines worldwide.

As the industry demand for W-K-M products grew, so did W-K-M. The company's 1951 general ledger listed the company's real estate holdings to that point. At the beginning of January 1927, W-K-M owned parts of blocks 545, 553, 554, and 555 with buildings facing onto Roberts, and by the end of the month, the company purchased a new parcel on block 554, and another new parcel on that same block was purchased in May that year (Figure 3). Those parcels were the last real estate purchases the company made until after World War II.<sup>27</sup>

As the United States provided aid to Allied nations and joined the war effort at the end of 1941, the City of Houston became a prime location for many defense contracts with the available transportation networks, including rail, automobile, and the Houston Ship Channel allowing for distribution of goods manufactured for the war effort. Houston's industrial sector, particularly petrochemical companies and the oil and gas companies, expanded tremendously during World War II, producing synthetic rubber in addition to the fuel required to keep the war effort moving.<sup>28</sup>

## W-K-M in World War II

W-K-M started receiving defense-related contracts as early as June 1941, months before the United States' official entrance into World War II. As President of the company, McManis sent a letter to the stockholders in June 1941 stating that W-K-M had a "large backlog of unfilled orders" and that "a substantial part of this is defense work."<sup>29</sup> By 1942, the company reported that "the business which the Company will do for some time in the future will largely be on Government Contracts and will amount to considerably more per month than during normal times and on normal lines of equipment."<sup>30</sup> By 1943, sales were 250% greater than they were in 1941.<sup>31</sup> In 1944, government contracts made up 81.5% of all sales.<sup>32</sup> A 1946 letter from the Price Adjustment Board under the United States Maritime Commission

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<sup>24</sup> Ankit Chugh, "Gate Valve Types, Construction, Applications and Advantages," *Piping Guide*, October 2013. Accessed October 27, 2017 <http://www.pipingguide.net/2013/10/gate-valve-types-construction.html>

<sup>25</sup> James D. Cummings, "Pipe Coating Apparatus," United States Patent Office. Filed January 12, 1929, approved April 19, 1932. Serial No. 332,147.

<sup>26</sup> "Slips," Oilfield Glossary, Schlumberger Limited. Accessed July 27, 2017 <http://www.glossary.oilfield.slb.com/Terms/s/slips.aspx>

<sup>27</sup> "Real Estate," General Ledger to 1951. ACF Archival Collection, Series 22, Box 3, Folder 2. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>28</sup> Grace Cynkar, Kristen Brown, Anna Mod, and James Steely, "Modernist Commercial, Governmental, and Institutional Buildings in Houston, Texas, 1945-1976. Multiple Property Documentation Form. January 2015. On file at Texas Historical Commission. Pg. 6-7.

<sup>29</sup> Letter from Fred McManis, President, to "all Common and Preferred Stockholders of W-K-M Company, Inc." June 10, 1941. Series 22, Box 1, Folder 6. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>30</sup> Minutes of Special Meeting of the Board of Directors, W-K-M Co., Inc. August 7, 1942. Series 22, Box 1, Folder 6. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>31</sup> "Renegotiation File, 1942-1943." Series 22, Box 5, Folder 6. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>32</sup> "Form A Annual Financial Report," April 24, 1944. Series 22, Box 1, Folder 11. St. Louis Mercantile Library, University of Missouri, St. Louis.

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indicates that most of W-K-M's government contracts were related to naval construction and valves for naval vessels.<sup>33</sup> Though no records indicate precisely what services and products were provided to the U.S. Navy, gate valves, W-K-M's specialty, are particularly important to maritime construction and use.<sup>34</sup> W-K-M's expertise in high-pressure valves and their innovations in valves safe for use on the ocean floor would have been invaluable to the Navy and may have contributed to submarine construction.

W-K-M's participation in wartime manufacturing was not unique. During World War II, President Roosevelt issued an edict that the United States "must out-produce [our enemies] so overwhelmingly, so that there can be no question of our ability to provide a crushing superiority of equipment in any theatre of the world war."<sup>35</sup> Following the attack at Pearl Harbor, manufacturing companies of all types were engaged for wartime manufacturing. For instance, the automobile manufacturers collectively produced over 3 million vehicles in 1941; during the four years the U.S. was involved officially in the war, they collectively produced just 139 cars.<sup>36</sup> The government's demand for goods generated a 96% increase in industrial productivity, and corporate after-tax profits more than doubled.<sup>37</sup>

A 1943 letter from the company's renegotiation file, presumably to the wartime Price Adjustment Board, indicated that the company's first priorities following World War II would be repairs to existing machinery and buildings as well as the reestablishment of the company's sales force. The letter states that

As a result of 168 hours continuous work per week, our machinery and equipment show plenty of wear – we estimate an expenditure of over \$100,000.00 to replace our machines and tools alone, after the war when they are available to us. During 1941, a pre war [sic] year, we spent \$7,975.55 on repairs to machinery and equipment, while in 1943 the cost was \$41,280.44, which is self explanatory [sic].

In this same letter, the company also estimated a cost of up to \$35,000.00 to replace the concrete flooring in their plant buildings and "thousands of dollars post war expense" to reorganize the company sales force, both nationally and internationally.<sup>38</sup> As a result, no new real estate was purchased until 1947.

### Post-War Changes

Following World War II, Houston's politicians and civic leaders were determined to retain their enormous wartime boom. Local efforts resulted in Houston's continued growth, visible in the city's jump from the 21<sup>st</sup> largest city in the nation in 1940 to 14<sup>th</sup> in 1950, and 7<sup>th</sup> by 1960. Houston's economic success brought more federal projects during the 1960s, including a new federal post office and most notably the National Aeronautics and Space Administration (NASA) Manned Spacecraft Center, now Johnson Space Center. Other local growth following World War II included expansion of

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<sup>33</sup> Letter from John R. Paull at Price Adjustment Board under United States Maritime Commission. February 24, 1946. Series 22, Box 5, Folder 1. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>34</sup> Ashish, "Types of Valves Used on Ships: Gate Valve – Part 1," *Marine Insight*, February 7, 2017. Accessed October 26, 2017 <https://www.marineinsight.com/tech/types-of-valves-used-on-ships-gate-valve-part-1/>

<sup>35</sup> "War Production." *The War*. Public Broadcasting Service. September 2007. Accessed October 26, 2017 [http://www.pbs.org/thewar/at\\_home\\_war\\_production.htm](http://www.pbs.org/thewar/at_home_war_production.htm)

<sup>36</sup> "War Production." *The War*. Public Broadcasting Service. September 2007. Accessed October 26, 2017 [http://www.pbs.org/thewar/at\\_home\\_war\\_production.htm](http://www.pbs.org/thewar/at_home_war_production.htm)

<sup>37</sup> Doris Goodwin, "The Way We Won: America's Economic Breakthrough During World War II," *The American Prospect*. Fall 1992. Accessed October 26, 2017 <http://prospect.org/article/way-we-won-americas-economic-breakthrough-during-world-war-ii>

<sup>38</sup> "Renegotiation file, 1942-1943," pg. 1. ACF Archival Collection, Series 22, Box 5, Folder 6. St. Louis Mercantile Library. University of Missouri, St. Louis.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

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the petrochemical industry, refineries along the Houston Ship Channel, and the founding of the Texas Medical Center. Houston was determined to use the momentum from World War II for sustainable growth.<sup>39</sup>

W-K-M followed the same growth patterns as the rest of the city. Though presumably the company first completed the repairs and replacements required for their equipment and existing facilities, the company's expansion into through-conduit gate valve design and manufacturing necessitated more space.<sup>40</sup> In May 1947, the company purchased a parcel on block 545 and three parcels on block 546. Two more parcels on block 545 were purchased in June 1947, and the last of the company's real estate in east downtown included five parcels on block 544 in March 1948.<sup>41</sup> A diagram of their real estate holdings over time is included as Figure 3, though there are some parcels that go unmentioned in the available accounting records. These parcels, however, were historically W-K-M-owned, as is visible through the construction of the district's contributing resources in and near those locations.

At their peak, the campus included at least eighteen buildings spread over six blocks. Though the remaining company records are extensive, the records do not include a map of the campus at its peak. The only extant documentation of the campus comes from the Sanborn Fire Insurance Company maps. New buildings typically were constructed immediately adjacent to existing warehouses and shops, making it difficult to read on the Sanborn maps the exact number of buildings on site. It is assumed that the building numbers on the Sanborn maps match the building numbers in the company's financial records.

Records indicate that in 1944, W-K-M's buildings included their general office, a garage, Warehouse 2-3-4, Warehouse 5, Warehouse 6, Building 7, Building 8, and Building 9 with construction for Building 10 beginning at the end of 1944. Payments for Building 11 first appear in 1946, with payments for Buildings 12-14 beginning in 1947. Buildings 16-19 are entered on the books in 1948, and Buildings 20 and 21 are completed in 1949.<sup>42</sup> The payments for all of the post-war construction went to Brown Construction, however, the records do not have enough information to trace accurately precisely which Brown Construction Company was involved. The real estate acquisitions and new construction clearly went hand-in-hand as W-K-M took advantage of the post-war economy to expand and prosper.

Koen retired in 1943, and in 1949, McManis, as the only remaining founder, dissolved and sold the company in what is assumed to be an effort to get his affairs in order at the end of his life.<sup>43</sup> The company's stock was sold, and the proceeds split between Southwestern University in Georgetown, Texas and to Wheaton College in Wheaton, Illinois; the two institutions had equal ownership over the company.<sup>44</sup>

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<sup>39</sup> Grace Cynkar, Kristen Brown, Anna Mod, and James Steely, "Modernist Commercial, Governmental, and Institutional Buildings in Houston, Texas, 1945-1976. Multiple Property Documentation Form. January 2015. On file at Texas Historical Commission. Pg. 7-8, 12.

<sup>40</sup> "At W-K-M, progress with 'zero defects'." *The Oil Daily*, May 6, 1985, C13. *General One File* (accessed October 26, 2017). <http://go.galegroup.com.proxy1.athensams.net/ps/i.do?p=ITOF&sw=w&u=txshrp100185&v=2.1&it=r&id=GALE%7CA3764462&asid=454977f56d61aeeda6b9e6c60820f822>.

<sup>41</sup> "Real Estate," General Ledger to 1951. ACF Archival Collection, Series 22, Box 3, Folder 2. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>42</sup> "Buildings," General Ledger to 1951. ACF Archival Collection, Series 22, Box 3, Folder 2. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>43</sup> Presentation by ACF Industries, Incorporated to AMA (American Management Association) Conference on Acquisition of W-K-M. November 2, 1956, pg. Bootes 8. ACF Archival Collection, Series 22, Box 1, Folder 1. St. Louis Mercantile Library. University of Missouri, St. Louis.

<sup>44</sup> Minutes of Special Meeting of Board of Directors. October 10, 1949. ACF Archival Collection, Series 22, Box 1, Folder 5. St. Louis Mercantile Library. University of Missouri, St. Louis.

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Each participating institution would only have to put up a minimal sum to become fully invested as an owner. The value of the W-K-M stock would be set at \$250 per share, with twenty thousand shares being issued for \$5 million. The institutions would pay only \$1 per share at the outset, at which point all the company stock would be distributed among them. The other \$249 of the share value would be paid to the McManis couple over the years out of the earnings of the company, now under the ownership of the participating institutions. Seventy percent of the annual earnings would be paid on the stock purchases, 20 percent would be carried to the operating reserve, and 10 percent would be paid out to the new owners *pro rata* until the stock was paid out. McManis would at the outset remain as active manager of the company.<sup>45</sup>

McManis was only loosely affiliated with both religiously-oriented institutions. One of McManis' relatives had recommended Wheaton College as a valuable investment following the stock market crash in 1929, and he became a regular donor to the college during the next twenty years.<sup>46</sup> Southwestern University and McManis were affiliated with the Methodist religion, and there is some evidence that McManis had been making anonymous contributions to the university for many years.<sup>47</sup> Adjusted for inflation, W-K-M's 1949 \$250 stock value would be almost \$2,600 per share in 2017. As a comparison, General Motors stock value in 1949 was a little more than \$38 per share.<sup>48</sup> Hughes Tool, another industrial products manufacturer did not become a publically traded company until 1972, so direct comparisons to a similar company are difficult to evaluate.<sup>49</sup>

Under the arrangement for the two institutions, "Southwestern's annual share of earnings from the company increased from \$4,877.24 to \$147,053.49 over the five years it was half-owner of the company, a total of \$384,743.29, a regular outside income the like of which the school had never before experienced."<sup>50</sup> Since the two schools had equal shares, Wheaton College likely saw the same returns and impact.

Prior to 1950, when Congress revised the tax code, non-profit organizations did not pay taxes on any for-profit entities under their control. Organizations had to settle any debts associated with the for-profit entity before the new regulations took effect, so the two institutions were not affected until 1954, and both schools divested their interests in W-K-M before they were subject to paying taxes.<sup>51</sup>

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<sup>45</sup> William B. Jones, *To Survive and Excel: The Story of Southwestern University, 1840-2000*. Georgetown, Texas: Southwestern University Press, 2006, pg. 379.

<sup>46</sup> "McManis Hall," *Wheaton History A to Z*, Wheaton College. Accessed October 26, 2017 <http://a2z.my.wheaton.edu/student-housing/mcmanis-hall>

<sup>47</sup> William B. Jones, *To Survive and Excel: The Story of Southwestern University, 1840-2000*. Georgetown, Texas: Southwestern University Press, 2006, pg. 379.

<sup>48</sup> "First November Meeting, 1949," *Proceedings of the Board of Regents*, University of Michigan. Ann Arbor: University of Michigan Press, pg. 526.

<sup>49</sup> Nicholas Lemann, "Texas Primer: the Hughes Tool Bit," *Texas Monthly*, February 1982. Accessed October 28, 2017 <https://www.texasmonthly.com/the-culture/texas-primer-the-hughes-drill-bit/>

<sup>50</sup> William B. Jones, *To Survive and Excel: The Story of Southwestern University, 1840-2000*. Georgetown, Texas: Southwestern University Press, 2006, pg. 379.

<sup>51</sup> Presentation by ACF Industries, Incorporated to AMA (American Management Association) Conference on Acquisition of W-K-M. November 2, 1956, pgs. Bootes 8-9. ACF Archival Collection, Series 22, Box 1, Folder 1. St. Louis Mercantile Library. University of Missouri, St. Louis.

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That year, American Car & Foundry (ACF), later called ACF Industries, purchased W-K-M from Southwestern and Wheaton for more than \$7 million, closing the deal at the Lamar Hotel in Houston.<sup>52</sup> Southwestern reports that it sold its half for \$3,565,433.87 with \$3,055,378.15 going directly into their endowment.<sup>53</sup> Adjusted for inflation, Southwestern's contribution to their endowment would total more than \$28,000,000 in 2017.<sup>54</sup> Though no records for Wheaton's portion of the sale have been identified, the two institutions' equal ownership of the company suggests the same total amount as Southwestern. How Wheaton used their windfall, however, is unknown.

When it purchased W-K-M, ACF Industries was best known for its railcar production and their work in low-pressure valves. Due to the popularity, reliability, and respect afforded to the W-K-M brand, ACF elected to retain the W-K-M brand as a separate subsidiary and keeping on W-K-M's 425 employees to continue their legacy of innovation and access to their oil and gas partners.<sup>55</sup> The new legal name for the ACF subsidiary was the W-K-M Manufacturing Company.<sup>56</sup>

While under control of Southwestern and Wheaton, there were very few – if any – upgrades to the Houston properties, which included all the resources in the current district boundaries. In a 1956 presentation about their acquisition of W-K-M, ACF leaders noted:

W-K-M's production was accomplished in a plant in Houston that, like the ACF valve facilities in Detroit, was inadequate. Equipment was old, and some of it was obsolete. The physical arrangement was impractical. The plant was sprawled over parts of six city blocks in a busy section of Houston: items could be moved from one building to another only through gaps in traffic...the streets and sidewalks were used as excess storage space.<sup>57</sup>

These concerns regarding W-K-M's existing facilities spurred ACF's construction of a new valve manufacturing facility in Missouri City, Texas, a suburb of Houston. The decision to remain in the Houston area allowed ACF to retain all of W-K-M's staff while enlarging the facility and providing room for future expansion. The new W-K-M plant in Missouri City opened in 1956 with all operations completely moved to the site by the end of 1957.

Following W-K-M's departure from the site, the buildings were purchased by real estate investors and have been leased to other companies. The buildings were purchased by the current owners in 1974, though the name of the legal entities has changed. Typical tenants in the buildings continued to be light industrial manufacturers. These tenants have included Stewart and Stevenson Company; Wolf Valve Company, which repaired valves; Clayton Manufacturing Company, which provided uniforms; Restline Bedding Company, which made mattresses; Dixie Glass wall system manufacturers; and Verne Engineering, small water craft manufacturers. In 2017, tenants in former W-K-M buildings include TXRX Labs in buildings 9, 10, 14, 15 16, 18, 19, and half of 20; Plant Process Machine Work in buildings 11, 17, and 21; Knew Goods recycling and distribution in building 9; and RootLab steel and wood designers and fabricators in the other half of building 20.

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<sup>52</sup> Ibid., pg. Richmond second 1; William B. Jones, To Survive and Excel: The Story of Southwestern University, 1840-2000. Georgetown, Texas: Southwestern University Press, 2006, pg. 401.

<sup>53</sup> Ibid., pg. 401.

<sup>54</sup> Consumer Price Index Inflation Calculator. Bureau of Labor Statistics, United States Department of Labor. Accessed October 27, 2017 <https://data.bls.gov/cgi-bin/cpicalc.pl>

<sup>55</sup> "ACF To Make Valves in New Houston Plant," *Longview News-Journal*, April 29, 1954, pg. 6. Accessed via Newspapers.com.

<sup>56</sup> Ibid., pg. Richmond second 3.

<sup>57</sup> Presentation by ACF Industries, Incorporated to AMA (American Management Association) Conference on Acquisition of W-K-M. November 2, 1956, pgs. Furrer 10-11. ACF Archival Collection, Series 22, Box 1, Folder 1. St. Louis Mercantile Library. University of Missouri, St. Louis.

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## Summary

The W-K-M Company, Inc. Historic District is nominated to the National Register of Historic Places at the local level of significance under Criterion A for Commerce and Industry for its association with the establishment and growth of the W-K-M Company. W-K-M was recognized as a leader in the oil and gas industry. The company's designs for mechanical pipe coating application, improved rotary slips, and high-pressure gate valves and the precedents those patents set, created a valuable legacy for W-K-M. The W-K-M brand dominated the oil and gas industry for over thirty years as an independent company before its purchase by ACF Industries in 1954. However, even after its purchase, W-K-M's position as an industry leader for both valves and drilling equipment caused the new owners to embrace this patented innovation and retain the W-K-M brand and products.<sup>58</sup> This trend has continued through 2018, where W-K-M remains a brand of products sold by Cameron, a Schlumberger company.<sup>59</sup> The period of significance ranges from 1925 through 1957, which spans the years the company operated out of their facilities in east Houston.

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<sup>58</sup> Correspondence with Greg Johnson, President of United Valve and valve historian. Via Email, September 6, 2017.

<sup>59</sup> The line of W-K-M branded valves is available to view online. Accessed September 7, 2017 <http://cameron.slb.com/products-and-services/valves-index/wkm>

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[http://www.pbs.org/thewar/at\\_home\\_war\\_production.htm](http://www.pbs.org/thewar/at_home_war_production.htm)

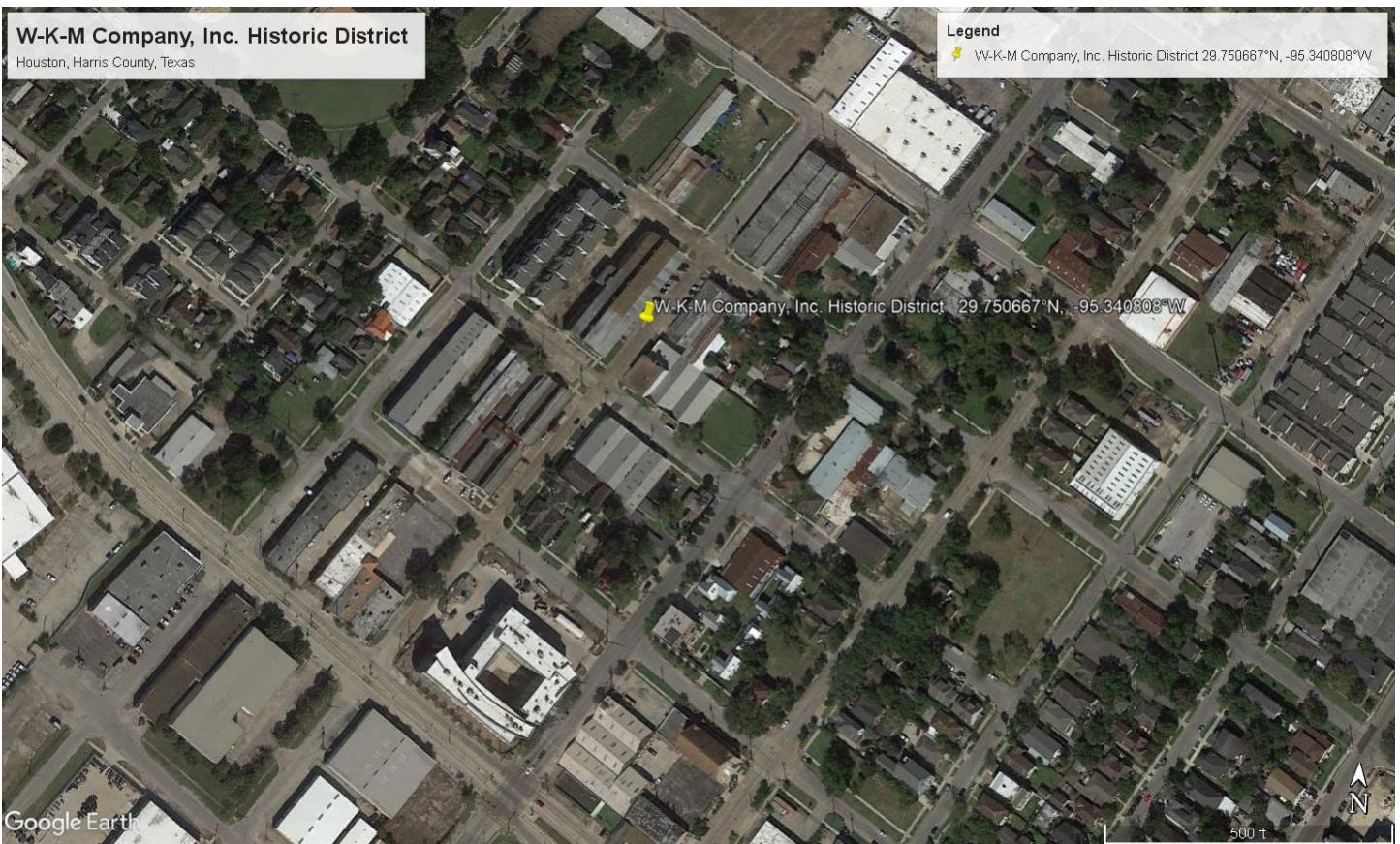
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Map 1: Harris County, Texas



Map 2: Google Earth aerial, accessed April 23, 2018.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas



Path: S:\Projects\41019 - WKM Company\MAPS\CIR\PRESERVATION\REPORT MAPS\WKM Company - NRHP Map.mxd

<p>10245 West Little York, Suite 600 Houston, Texas 77040 (281) 617-3217 phone (281) 617-3227 fax www.swca.com</p>	<p><b>W-K-M COMPANY                  HISTORIC DISTRICT</b>                  PROPOSED NRHP MAP                  HARRIS COUNTY, TEXAS</p>	<ul style="list-style-type: none"> <li>● Contributing Location (Field ID)</li> <li>○ Non-Contributing Location (Field ID)</li> <li>▭ Proposed National Register Historic District Boundary</li> <li>▭ Building Footprint</li> </ul>	<p>0 50 100 Feet 0 10 20 30 Meters</p>	Background: Google Earth Imagery (2016)
				Scale: 1:1,500 Created By: JS Approved By: MCS SWCA Project No.: 41019 Date Produced: October 30, 2017 NAD 1983 StatePlane Texas South Central FIPS 4204 Feet

Map 3: District boundary with contributing and non-contributing resources.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

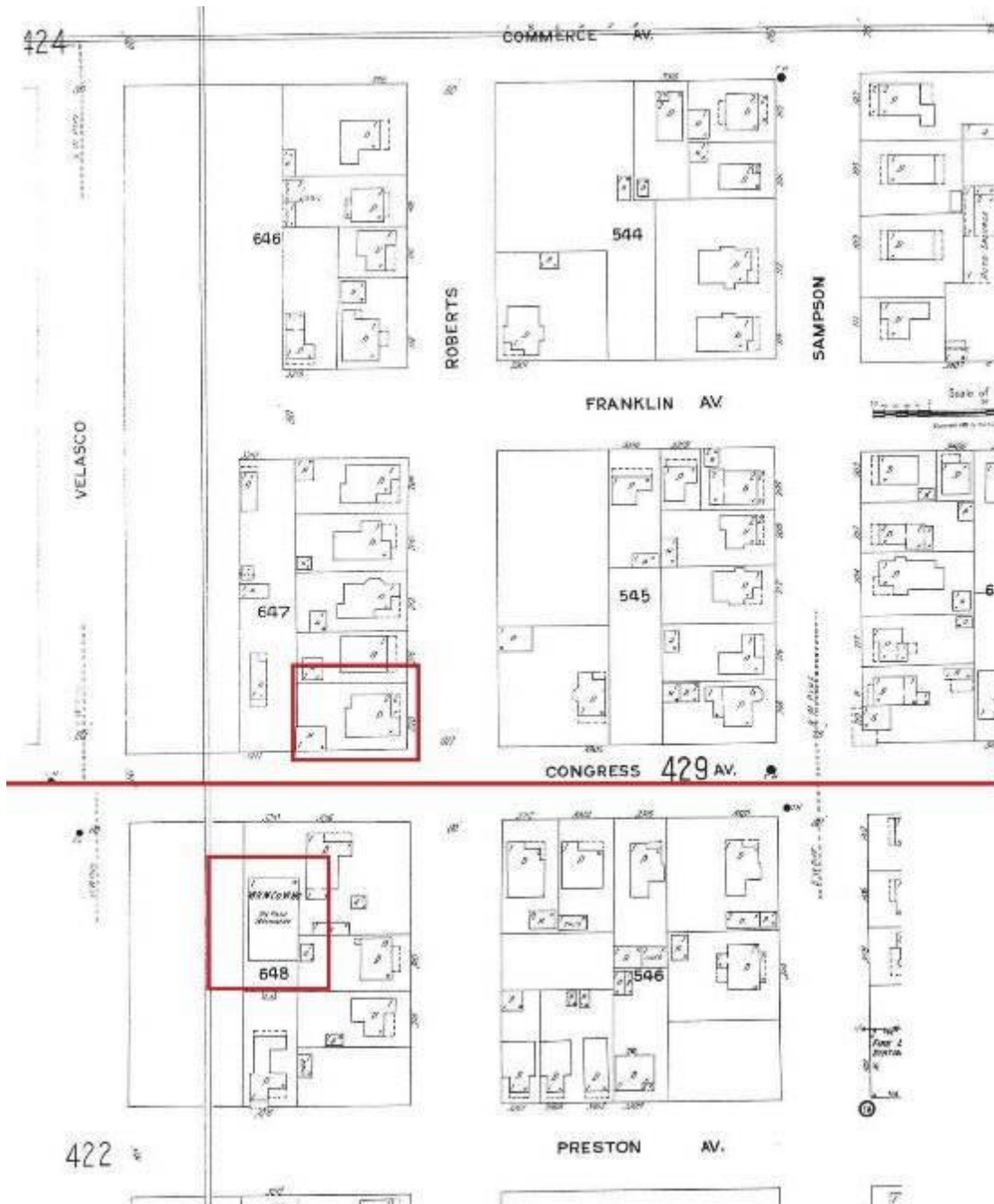


Figure 1: 1924 Sanborn Fire Insurance Company map, volume 4, sheets 425 and 429. These maps show the original 1919 warehouse (bottom) and the location of the first office building (top). The red line down the center marks where the two map sheets meet.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

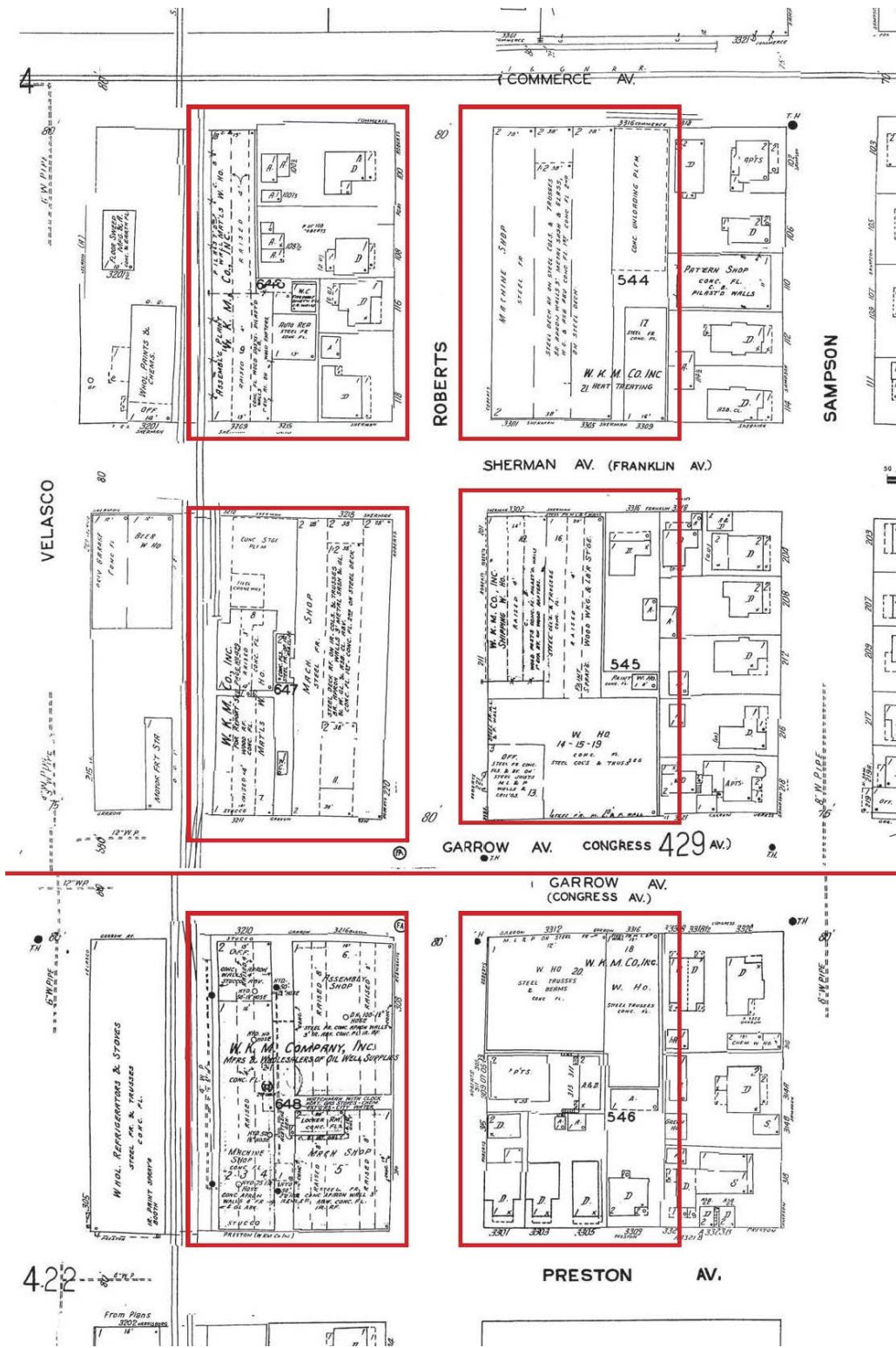


Figure 2a: 1924-1951 Sanborn Fire Insurance Company map, volume 4, sheets 425 and 429. This map shows the campus at its largest. Available at Houston Metropolitan Research Center.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

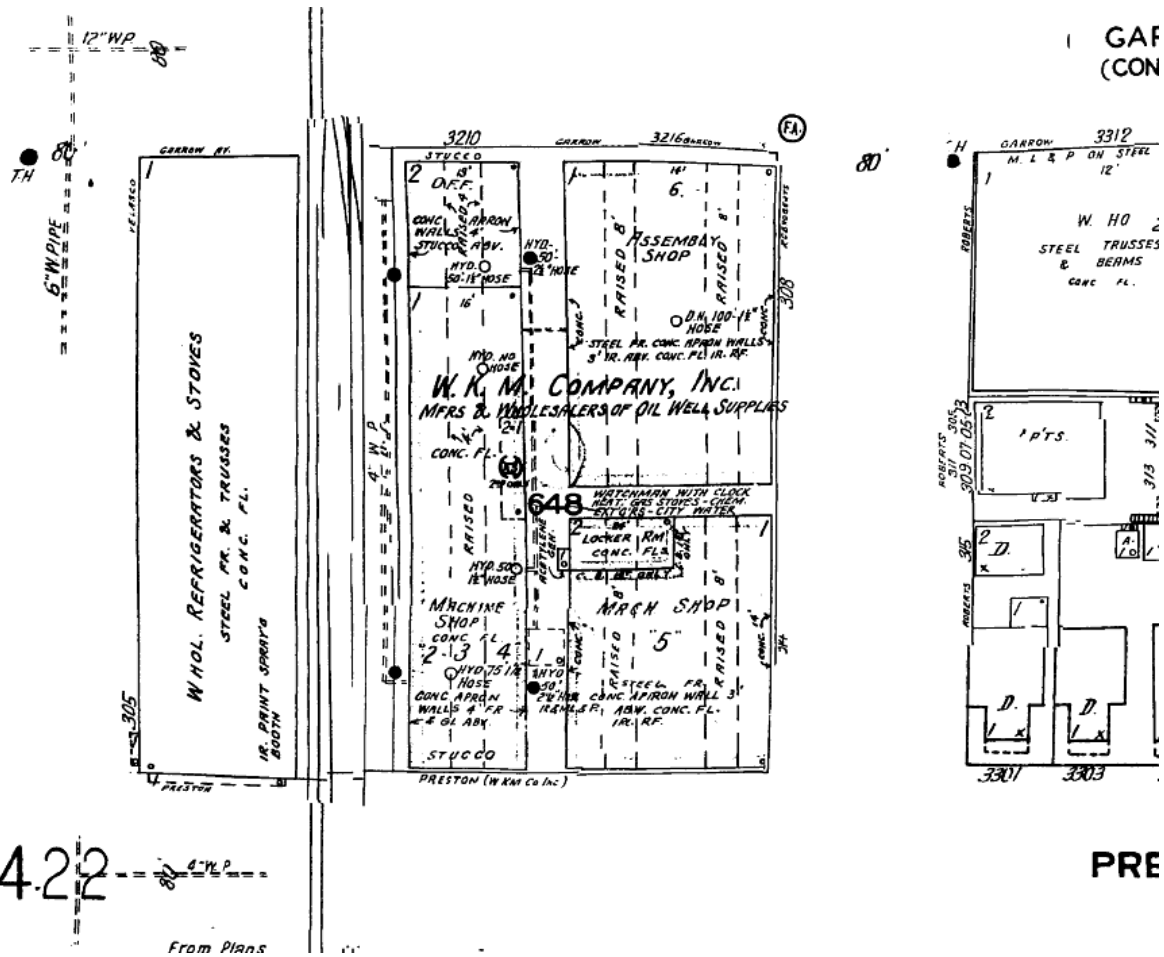


Figure 2b: 1924-1951 Sanborn Fire Insurance Company, volume 4, sheet 429 showing block 648. This block features Buildings #2-3-4, #5, and #6. Access provided via ProQuest Digital Sanborn Maps 1867-1970.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

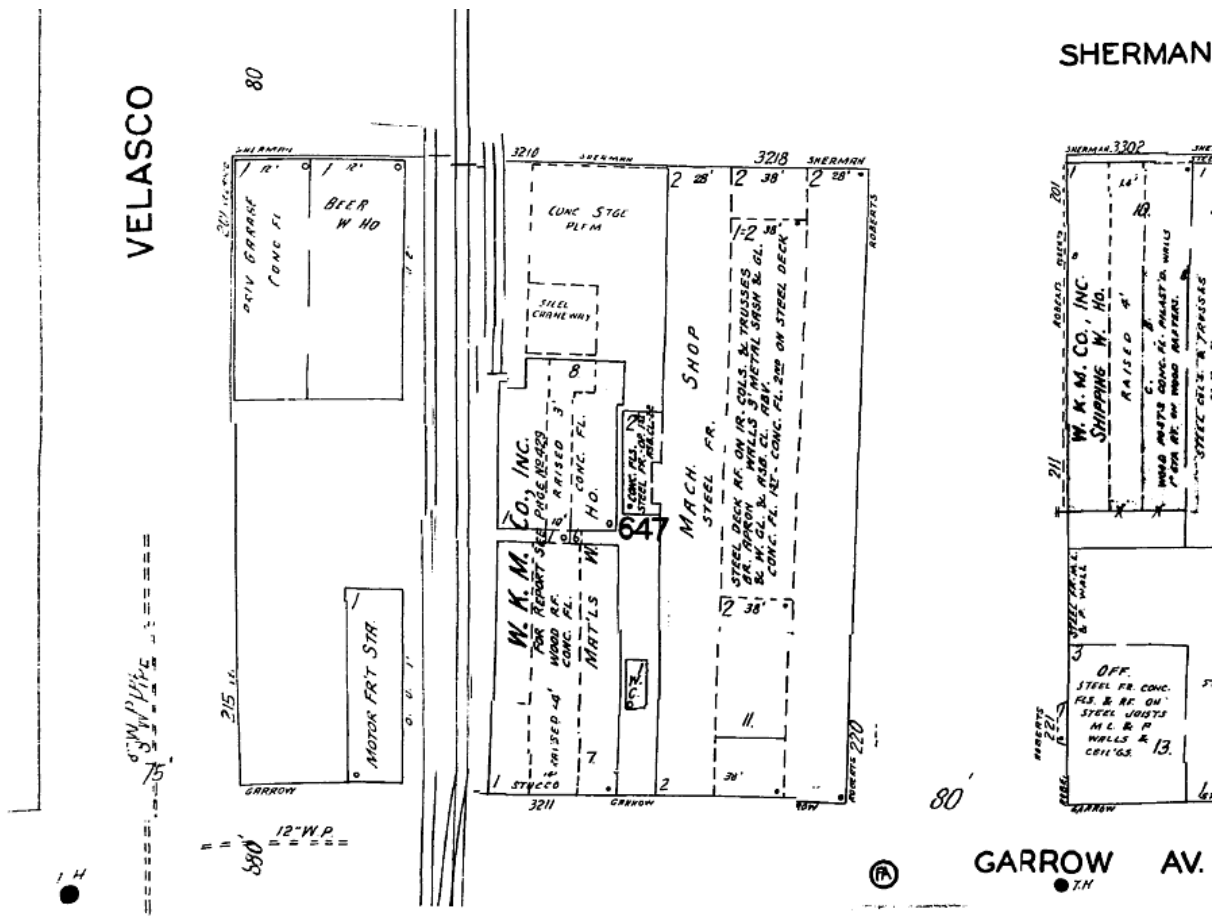


Figure 2c: 1924-1951 Sanborn Fire Insurance Company, volume 4, sheet 425 showing block 647. This block features Buildings #7 and #8 (demolished) and #11. Access provided via ProQuest Digital Sanborn Maps 1867-1970.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

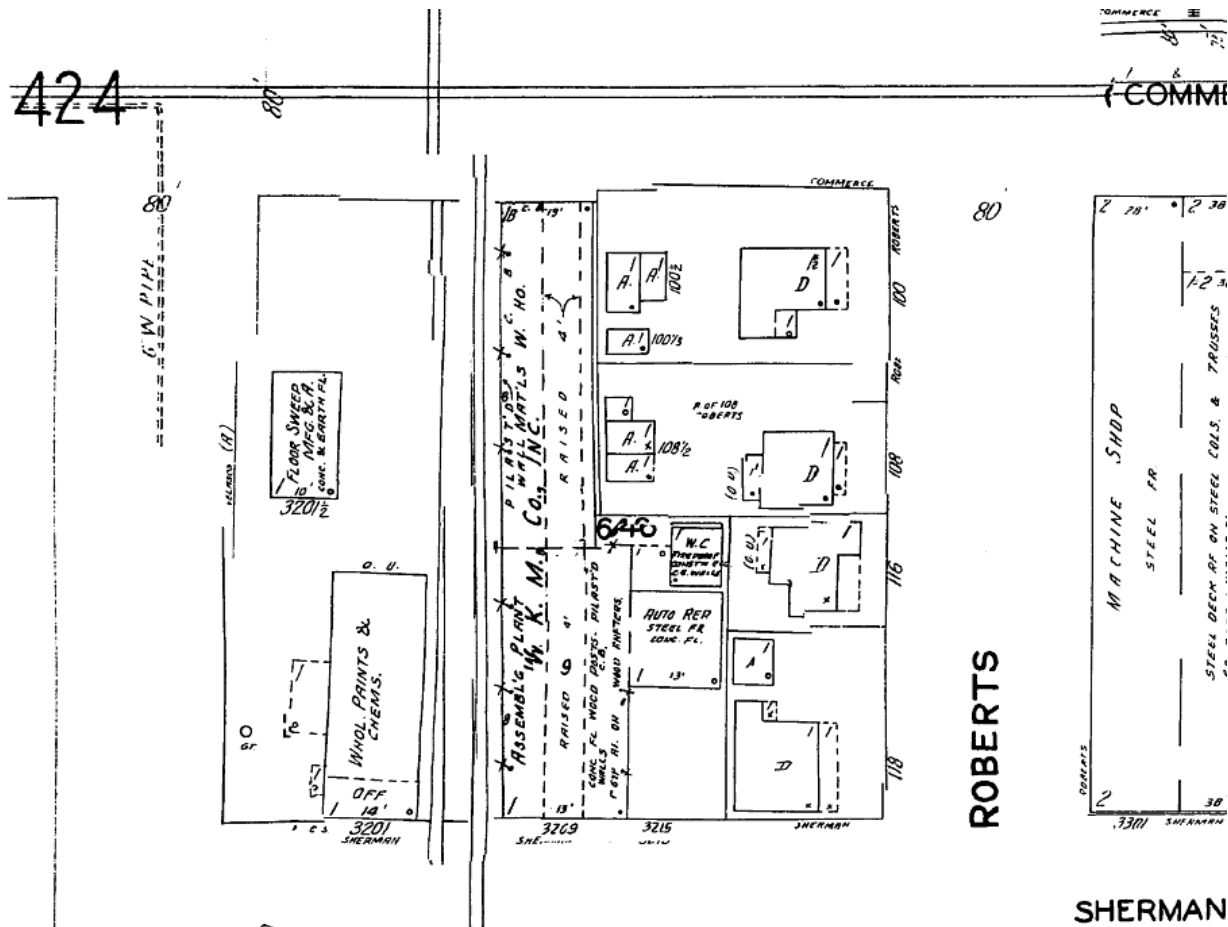


Figure 2d: 1924-1951 Sanborn Fire Insurance Company volume 4, sheet 425 showing block 646. This block features Building #9 and 3217 Sherman (NC). Access provided via ProQuest Digital Sanborn Maps 1867-1970.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

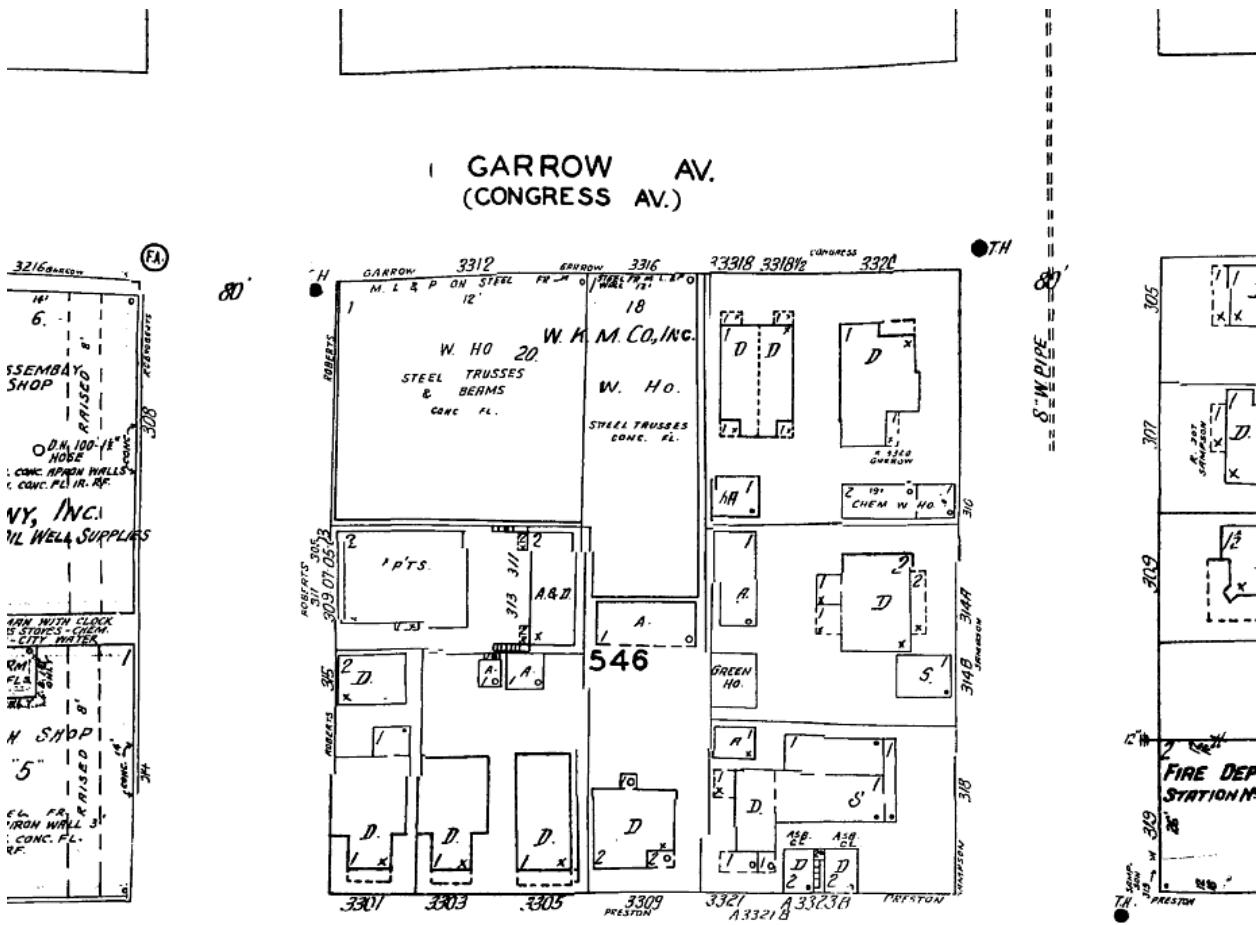


Figure 2e: 1924-1951 Sanborn Fire Insurance Company volume 4, sheet 429 showing block 546. This block features Buildings #20 and #18. Access provided via ProQuest Digital Sanborn Maps 1867-1970.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

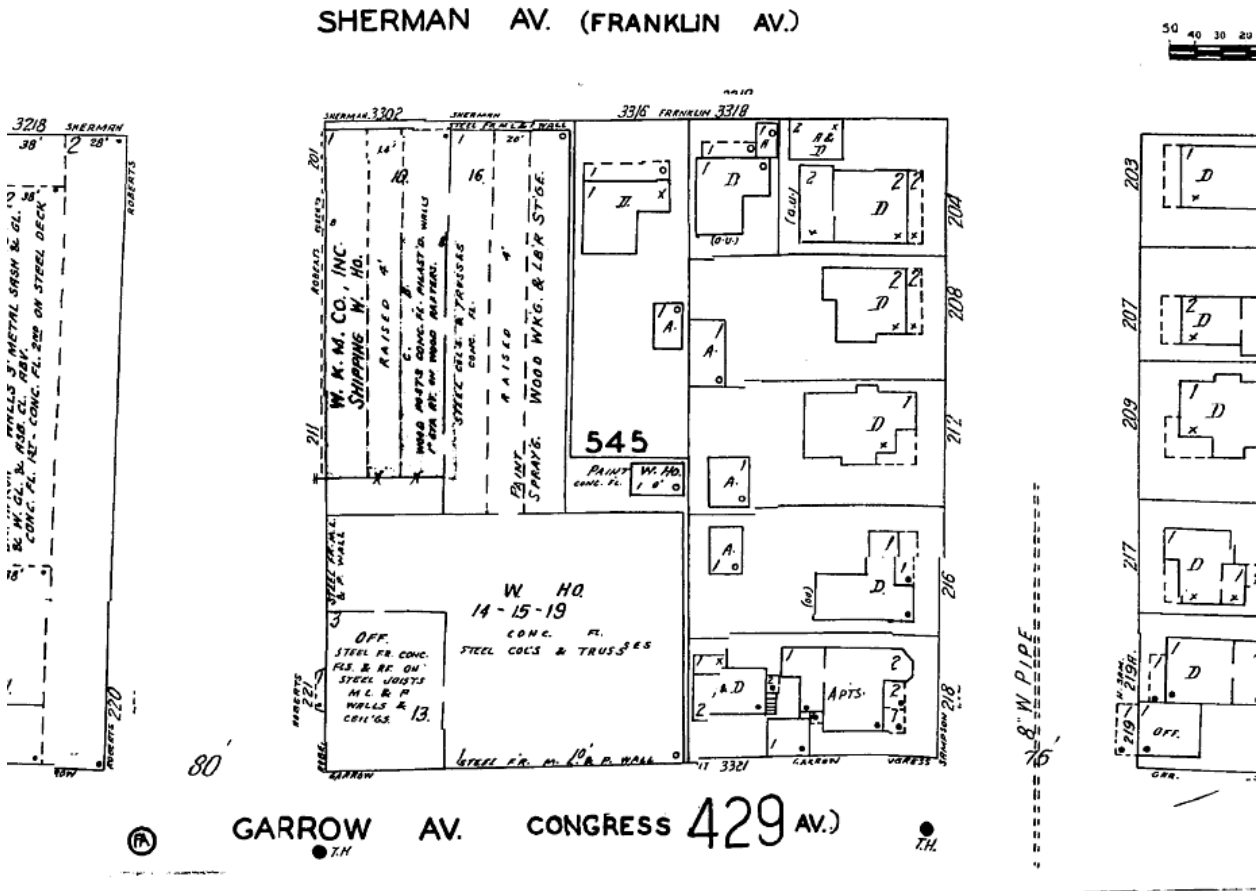


Figure 2f: 1924-1951 Sanborn Fire Insurance Company volume 4, sheet 425 showing block 545. This block features buildings #10, #13, #14, #15, #16 and #19. Access provided via ProQuest Digital Sanborn Maps 1867-1970.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

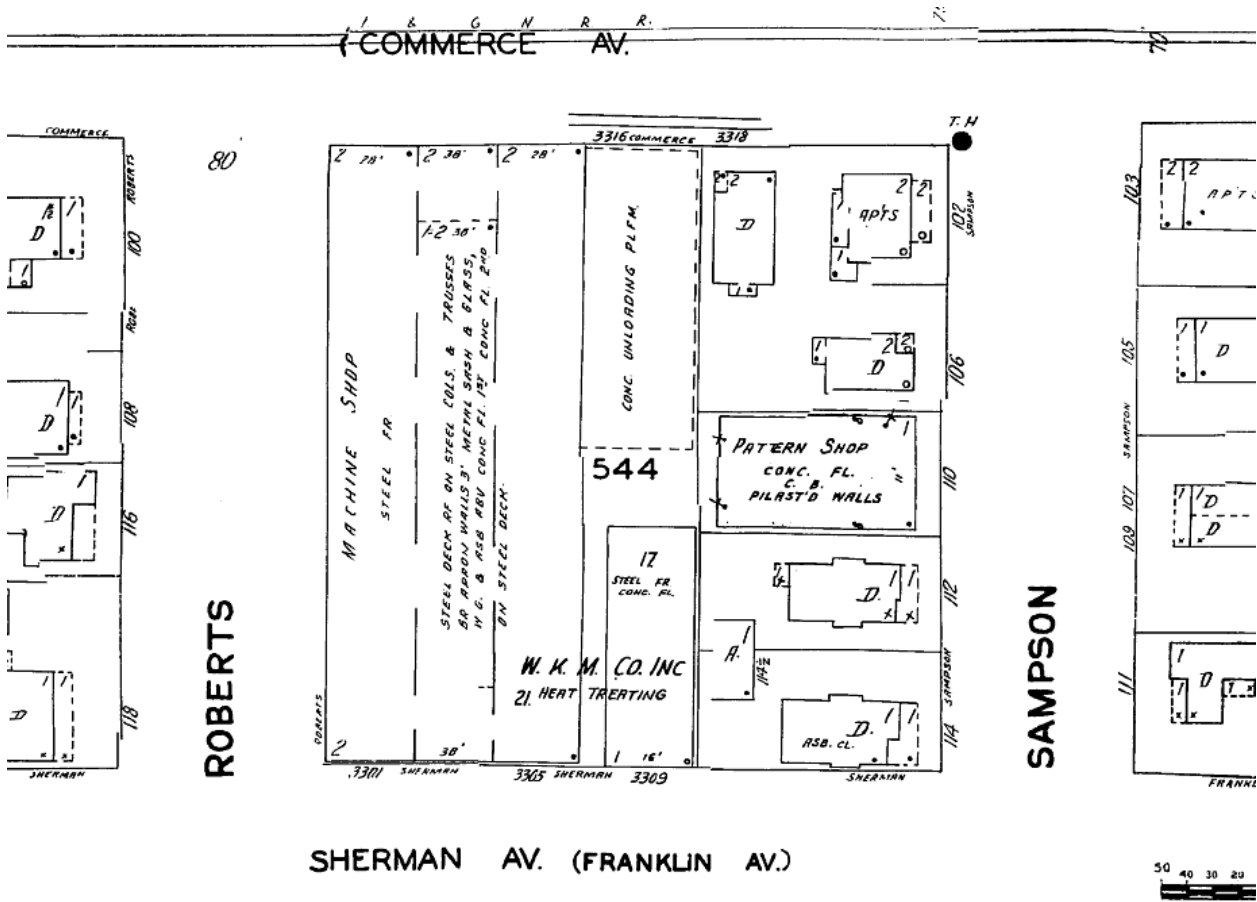


Figure 2g: 1924-1951 Sanborn Fire Insurance Company volume 4, sheet 425 showing block 544. This block features Buildings #17 and #21. Access provided via ProQuest Digital Sanborn Maps 1867-1970.

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Figure 3 – Adapted 2016 Harris County Appraisal District facet map 5457D showing the evolution of W-K-M’s campus based on information from the company’s 1951 accounting records. Parcels outlined in purple and red all belong to the current property owners. Though Lots 6 and 7 on Block 544 are not mentioned in the accounting records, Building #21 does span those parcels and therefore were historically associated with the company. The remaining white parcels within the current ownership were historically not associated with W-K-M.

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Figure 4: W-K-M's original office building at 220 Roberts, c. 1919. Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

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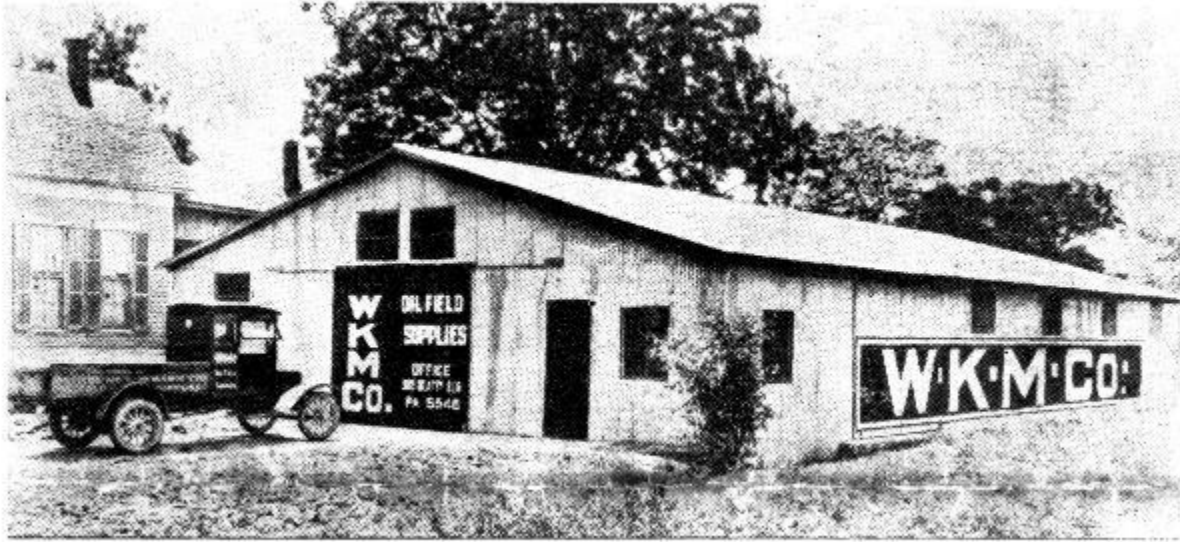


Figure 5: W-K-M's original warehouse and manufacturing building, c. 1919. Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

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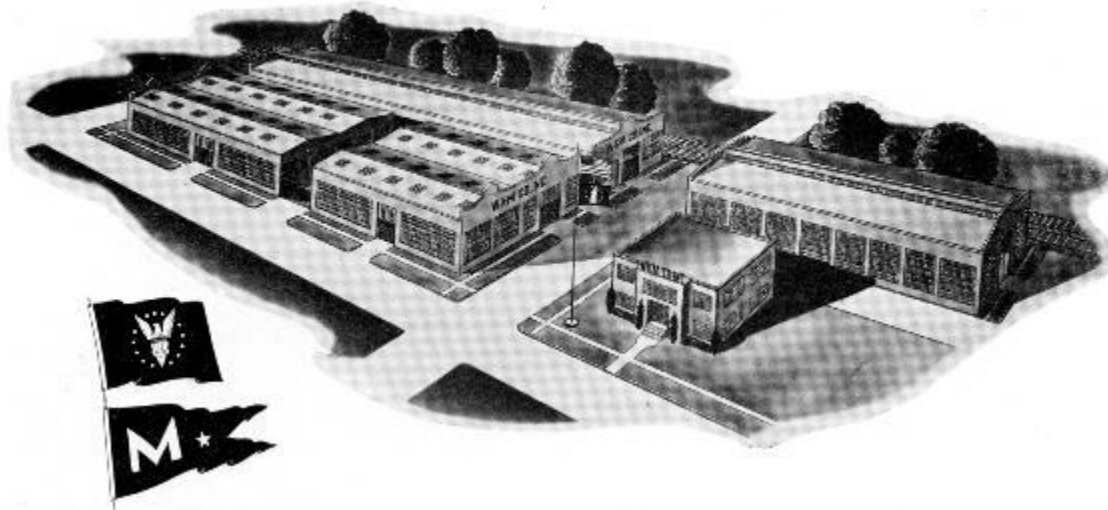


Figure 6: Rendering of the W-K-M Company, Inc. complex, c. 1945. The rendering shows Building #2-3-4 (rear, left), Building #5 (front, left), Building #6 (front, center), the original Office (front, right), and the now-demolished Building #7 (rear, right) Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

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Figure 7: Photo of the then-new office building (#13), 1948. Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

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Figure 8: Photo of Building #11 after construction, 1947. Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

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Figure 9: Photo of Building #11 interior during manufacturing. Steel interior structure, concrete floor, brick and corrugated glass exterior visible, c. 1956. Courtesy University of Missouri, St. Louis – St. Louis Mercantile Library

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Figure 10: Photo of Building #11 interior during the production of a gate valve. Steel interior structure, double-height manufacturing space, and clerestory windows visible, c. 1956.

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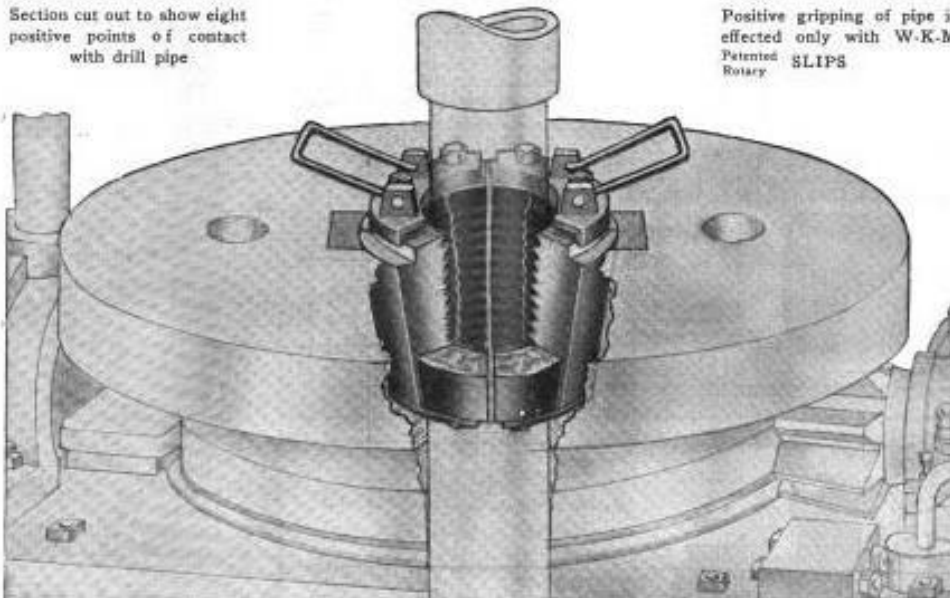
THE OIL WEEKLY

JULY 1, 1922

# THE WONDERFUL W-K-M Patented Rotary SLIP (REGISTERED TRADE NAME)

FULLY PATENTED—Any Infringements will be Vigorously Prosecuted

Section cut out to show eight  
positive points of contact  
with drill pipe.



Positive gripping of pipe is  
effected only with W-K-M  
Patented SLIPS  
Rotary.

SLIPS TO FIT EVERY ROTARY MADE

## W-K-M COMPANY

Sole Licensees—Under Livergood Patents

WEST BUILDING

HOUSTON, TEXAS

Figure 11 – 1922 advertisement in *The Oil Weekly* showing a cross section of a W-K-M rotary slip.

W-K-M Company, Inc. Historic District, Houston, Harris County, Texas

W-K-M COMPANY, Inc.

W-K-M

HOUSTON, TEXAS

W-K-M ROTARY SLIPS

Type 35—Friction Slips



The latest advancement in rotary slips comes from the pioneer slip manufacturer in this improved design, thoroughly field tested and now protecting the longest pipe strings. Allows more gripping area, greater holding capacity, and a soft action. Takes hold or releases instantly, and will not slip, cut or bottleneck your pipe. Extreme light weight permits ease of handling. Highly flexible. Should wear occur on segments, they're readily replaced on the derrick floor, or redressed, at a nominal cost, making slips same as new. Long life assured by highest quality one-piece, drop-forged and heat-treated segments.

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W-K-M TUBING SLIPS



Series 12,000

The original flexible, one-man tubing slip is furnished in all sizes to 4 1/2-inch inclusive. Slips are forged steel throughout; and spider is top-grade steel casting. Segments may be redressed any number of times. Made in Regular type, for depths to 3000 feet, Deepwell type, for depths to 6000 feet, and the newest and latest Series 12,000, for depths to 12,000 feet.

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Write for Pamphlet No. 320.



Deepwell Type



Regular Type

W-K-M MUD SCREEN — SERIES 1100

The W-K-M Mud Screen employs a very simple means of operation; the flow of returns from the well under a pelton wheel rotates in turn the screening drum. This is not a whipping action, and consequently screen cloths last indefinitely.

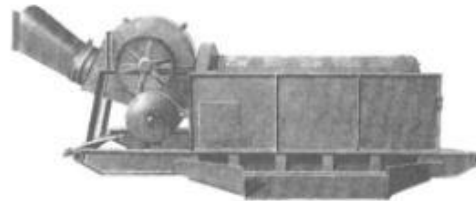
Operating expense is exactly nothing . . . maintenance cost is negligible due principally to the total absence of

turbines, motors or generators. Nor is there any destructive vibration to cause frequent shut-downs for repairs or screen cloth replacements.

Good clean samples of cuttings may be taken at any time, as they are thoroughly cleaned of mud before being discharged.

For extremely heavy going, a mud motor, connected to your mud pump, provides that extra power or accelerated rotation to discharge unusually heavy loads of shale, or to quickly clean out the screen.

All parts of the W-K-M Mud Screen are designed for ease of operation and long life. Frictionless bearings carry



all moving shafts and are fitted for Alemite lubrication. Driving gears run in a bath of oil.

All bearings are thoroughly sealed off against the entrance of mud or other foreign matter.

Final drive for drum is by a rigidly mounted, cut steel sprocket, meshing with a special high-grade roller chain, which lasts indefinitely.

Write for fully descriptive literature.

W-K-M KING PIN BRAKE LINING

Designed particularly to dissipate the extreme heat generated in the brake flanges, and to avoid scoring or grooving of brake flanges, naturally increasing the life of both lining and flanges. The pins spaced throughout the lining not only conduct the heat away from the flanges, but provide a thin film over the braking surface, preventing scoring, and maintaining a constant friction. Pins are forced into the lining by special, patented machines, under terrific hydraulic pressure, where they are expanded after the manner of a rivet, and become an integral part of the lining. Prices of King Pin Lining are no higher than for ordinary lining.

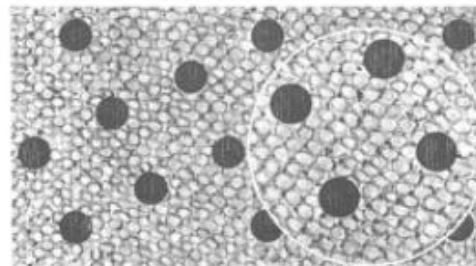


Figure 12 – Excerpts from W-K-M's 1939 sales catalog showing their rotary slips, tubing slips, and mud screens. Available in Shale Shakers and Drilling Fluid Systems: Techniques and Technology for Improving Solids Control Management by the American Association of Drilling Engineers. Page 26.

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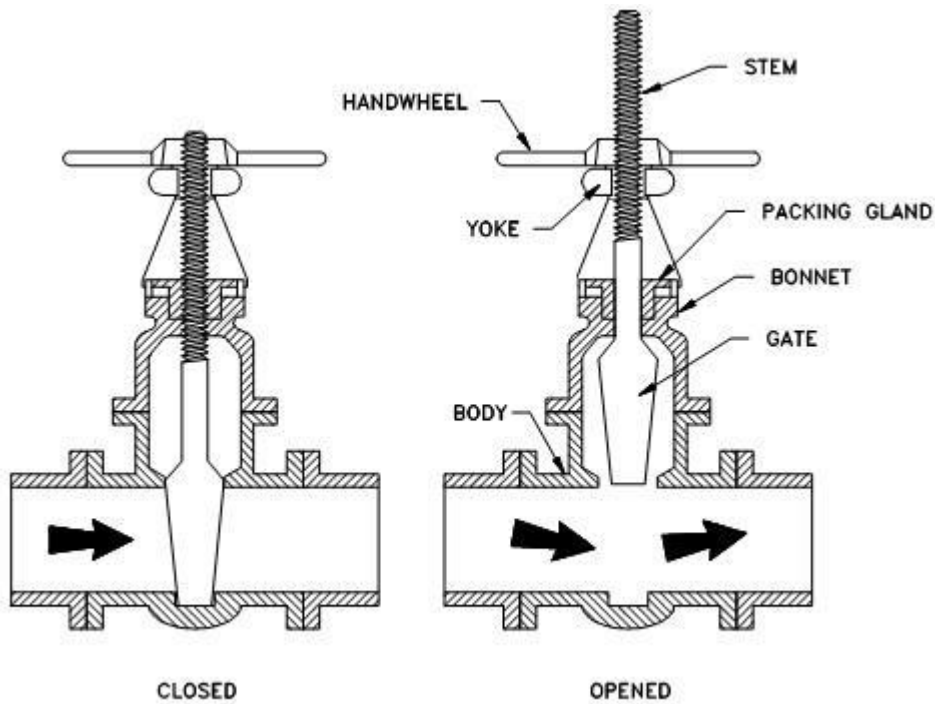


Figure 13 – Diagram of a gate valve in operation. W-K-M specialized in high-pressure gate valves like this one. Courtesy Marine Insight.

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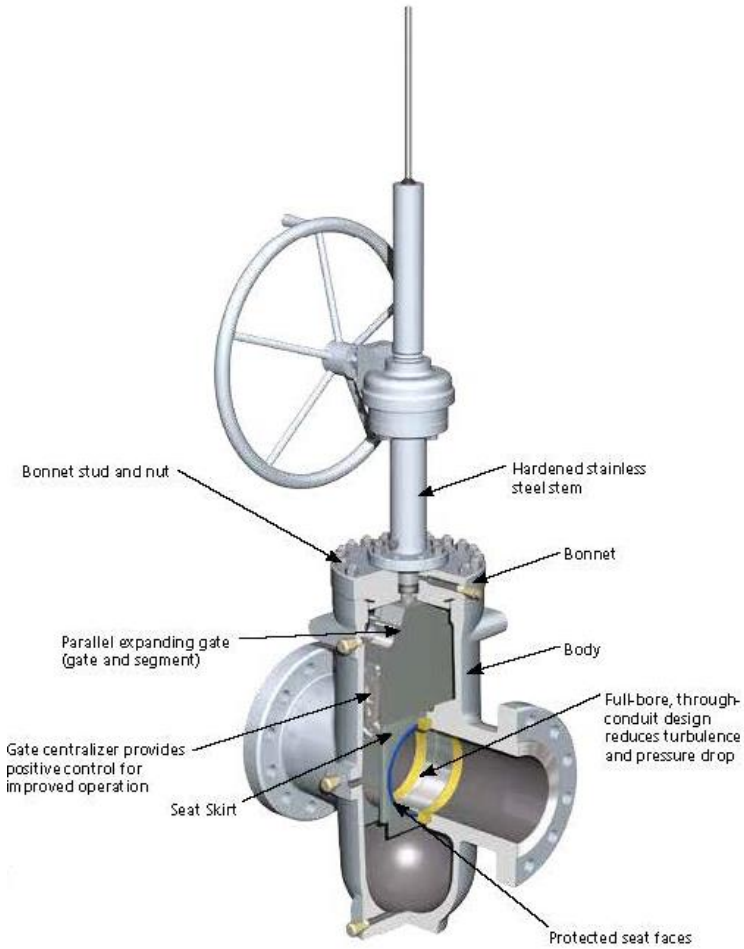


Figure 14 – Diagram of the current model of W-K-M Pow-R-Seal Gate Valve, as appearing in Cameron’s current product catalogues.

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Photo 1 – Roberts Street, view north. Building #11 on the west (left), Buildings #13, #14, #10 and #21 on east (right) side of the street, September 2017

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Photo 2 – Sherman Street, view west from Roberts Street, September 2017. Building #11 on south (left) side of the street, and south elevation of Non-Contributing Resource at 3217 Sherman and Building #9 are on north (right) side of the street.

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Photo 3 – South (rear) elevation of Building #2, #3, and #4 (left) and Buildings #5 and #6 (right). Camera facing northwest, February 2017.

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Photo 4 – North (front) elevation of Building #2, #3, and #4. Window, door, and signage alterations visible, camera facing south, February 2017.

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Photo 5 – East elevation of Building #2, #3, #4 with connection to Buildings #5 and #6, view southwest, October, 2017. The original metal windows and glazing remain in place.

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Photo 6 – Building #6, interior view southeast, June 2017.

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Photo 7 – Building #9 (left) and 3217 Sherman (right), south (front) and east elevations, view northwest, February 2017.

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Photo 8 –North (rear) and west elevations of Building #9, view southeast, February 2017.

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Photo 9 – Building #9, interior view south, October 2017

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Photo 10 – Building #10, north and west elevations, view southeast with Building #13 in background on right and Building #16 partially visible at the left, February 2017

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Photo 11 – Detail of remaining W-K-M signage on the north elevation of Building #10, view southeast, September 2017

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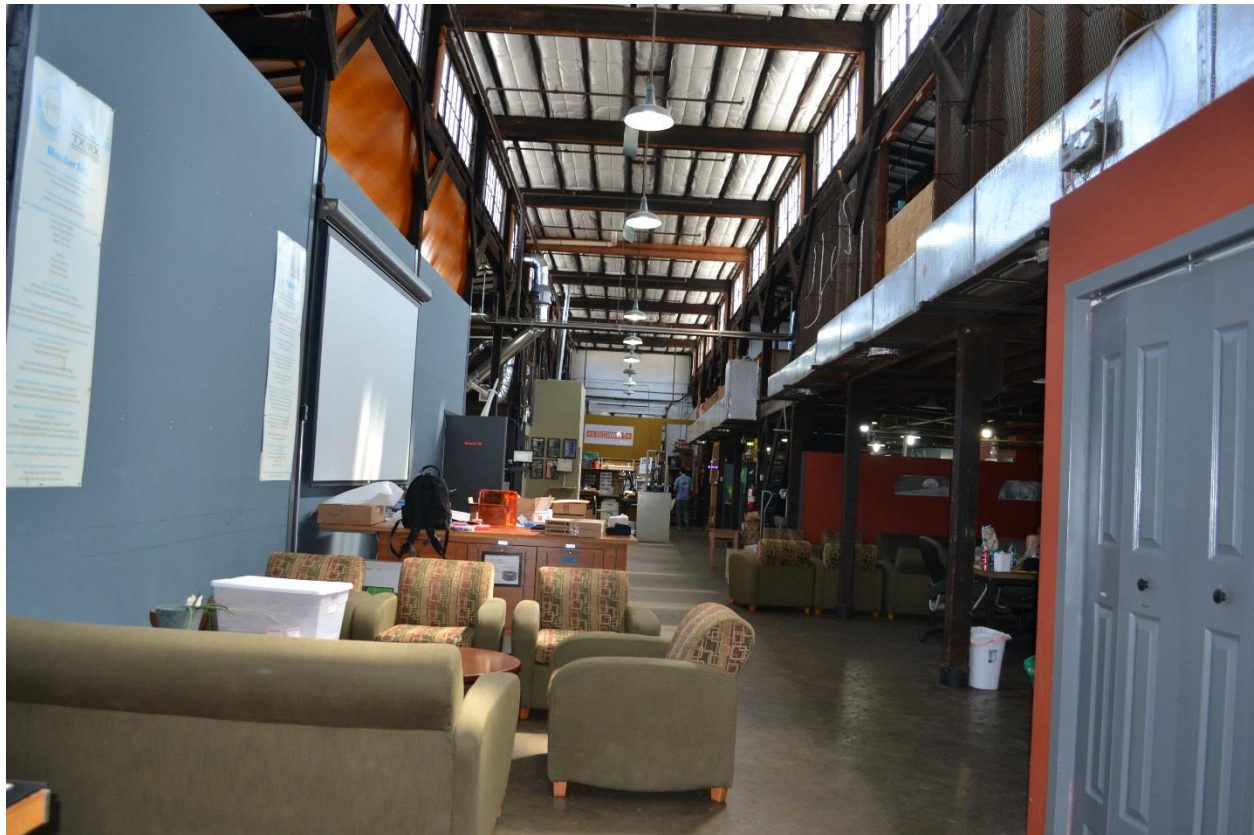


Photo 12 – Original metal frame, new interior office walls, and clerestory windows in Building #10, view north, June 2017.

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Photo 13 – Building #16 interior, view south, October 2017. Metal casement windows on east elevation of Building #10 visible on right.

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Photo 14 – South (rear) and east elevations of Building #11, view northwest, February 2017.

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Photo 15 – Building #11, interior view north from second floor, June 2017.

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Photo 16 – West (front) and south elevations of Building #13 (left), view northeast, February 2017. South elevations for Buildings #15 and #19 are visible on right.

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Photo 17 – Interior showing original finishes in Building #13, view east towards the first floor lobby, February 2017.

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Photo 18 – Second floor conference room in Building #13 showing original ceiling, fireplace, and wood paneling, view south, February 2017.

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Photo 19 – Covered space between Building #13 (left) and Building #14 (right), taken from inside Building #15, view west, October 2017.

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Photo 20 – Building #19, view south, October 2017. Party wall between Building #19 and Building #15 is visible on the right.

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Photo 21 – South (front) elevation of Building #17, view north, February 2017.

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Photo 22 – Interior of Building #17, view north, June 2017.

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Photo 23 – North elevation of Building #18 (far left) and north and west elevations of Building #20, view southeast, February 2017.

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Photo 24 – Interior of Building #18, view north, June 2017. Building #18’s structural independence from Building #20 is visible on left.

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Photo 25 – North (rear) and west elevations of Building #21, view southeast, February 2017.

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Photo 26 – Interior from second floor of Building #21, view northeast, June 2017. Original corrugated wire glass curtain wall, steel framing, and concrete flooring visible.