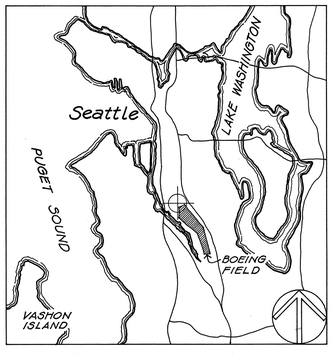
GEORGETOWN
STEAM PLANT
SEATTLE, WASHINGTON

THE GEORGETOWN STEAM PLANT IS A STEAM-DRIVEN ELECTRICAL GENERATING STATION. DESIGNED BY STONE & WEBSTER ENGINEERING CORP., THE PLANT WAS BUILT BY THE SEATTLE ELECTRIC COMPANY IN 1906. THE STRUCTURE CONTAINS SIXTEEN, 500 HORSEPOWER STIRLING BOILERS WHICH SUPPLY STEAM TO TWO VERTICAL TURBINES. THE SMALLER 1906 UNIT GENERATES 3000 KILOWATTS AND A LARGER 1907 UNIT GENERATES 8000 KILOWATTS. IN 1917 SEATTLE ELECTRIC INSTALLED A 10000 KILOWATT HORIZONTAL TURBINE GENERATOR UNIT MANUFACTURED BY THE GENERAL ELECTRIC COMPANY.

THE GEORGETOWN STEAM PLANT WAS USED PRIMARILY AS A STANDBY AND PEAKING FACILITY. IT PROVIDED ALTERNATING CURRENT FOR GENERAL USE AND DIRECT CURRENT FOR THE SEATTLE STREETCAR SYSTEM. IT IS THE LAST OPERATIVE EXAMPLE OF VERTICAL CURTIS TURBINES IN THE UNITED STATES.

THIS RECORDING PROJECT IS PART OF THE HISTORIC AMERICAN ENGINEERING RECORD (HAER), A LONG-RANGE PROGRAM TO DOCUMENT HISTORICALLY SIGNIFICANT ENGINEERING AND INDUSTRIAL WORKS IN THE UNITED STATES. THE HAER PROGRAM IS A DIVISION OF THE NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR. THE GEORGETOWN STEAM PLANT RECORDING PROJECT WAS COSPONSORED DURING THE SUMMER OF 1979 BY THE HISTORIC AMERICAN ENGINEERING RECORD, AND BY SEATTLE CITY LIGHT.

THE FIELD WORK, MEASURED DRAWINGS, HISTORICAL REPORTS, AND PHOTOGRAPHS WERE PREPARED UNDER THE DIRECTION OF T. ALLAN COMP, Ph.D., CHIEF, CULTURAL RESOURCES, PACIFIC NORTHWEST REGION, NATIONAL PARK SERVICE. THE RECORDING TEAM CONSISTED OF STEPHEN P. LUBAR, ASSISTANT HISTORIAN; BARRY A. RICHARDS, ARCHITECTURAL SUPERVISOR; YOSHIKADO KOYAMA, ARCHITECTURAL DELINEATOR. FORMAL PHOTOGRAPHY WAS DONE BY JET LOWE.



LOCATION MAP

0 5 10 1"=3.25mi

Based on Rand McNally & Co. 1981
Seattle Street Map
UTM 10.551540.5265525

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GEORGETOWN STEAM PLANT PROJECT
HISTORIC AMERICAN ENGINEERING RECORD
PACIFIC NORTHWEST REGION
UNITED STATES DEPARTMENT OF THE INTERIOR

GEORGETOWN STEAM PLANT · 1906
1300 SOUTH GREELY STREET
KING COUNTY
SEATTLE WASHINGTON

HISTORIC AMERICAN ENGINEERING RECORD
WA-1

SHEET 1 OF 8

TRIM LINE

ELLIS AVENUE SOUTH

WARSAW ST

EDDY STREET

FLORA AVENUE SOUTH

ELLIS AVENUE SOUTH

SOUTH ALBRO PLACE

SOUTH HARDY STREET

TO BOEING AIRFIELD

SITE PLAN

0 50 100 150 200 FEET 1" = 60'

0 5 10 20 30 40 50 METERS 1: 720

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OFFICE OF ARCHEOLOGY AND HISTORIC PRESERVATION
HERITAGE CONSERVATION AND RECREATION SERVICE
UNITED STATES DEPARTMENT OF THE INTERIOR

GEORGETOWN STEAM PLANT · 1906

1300 SOUTH GREELY STREET
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SHEET 2 OF 8

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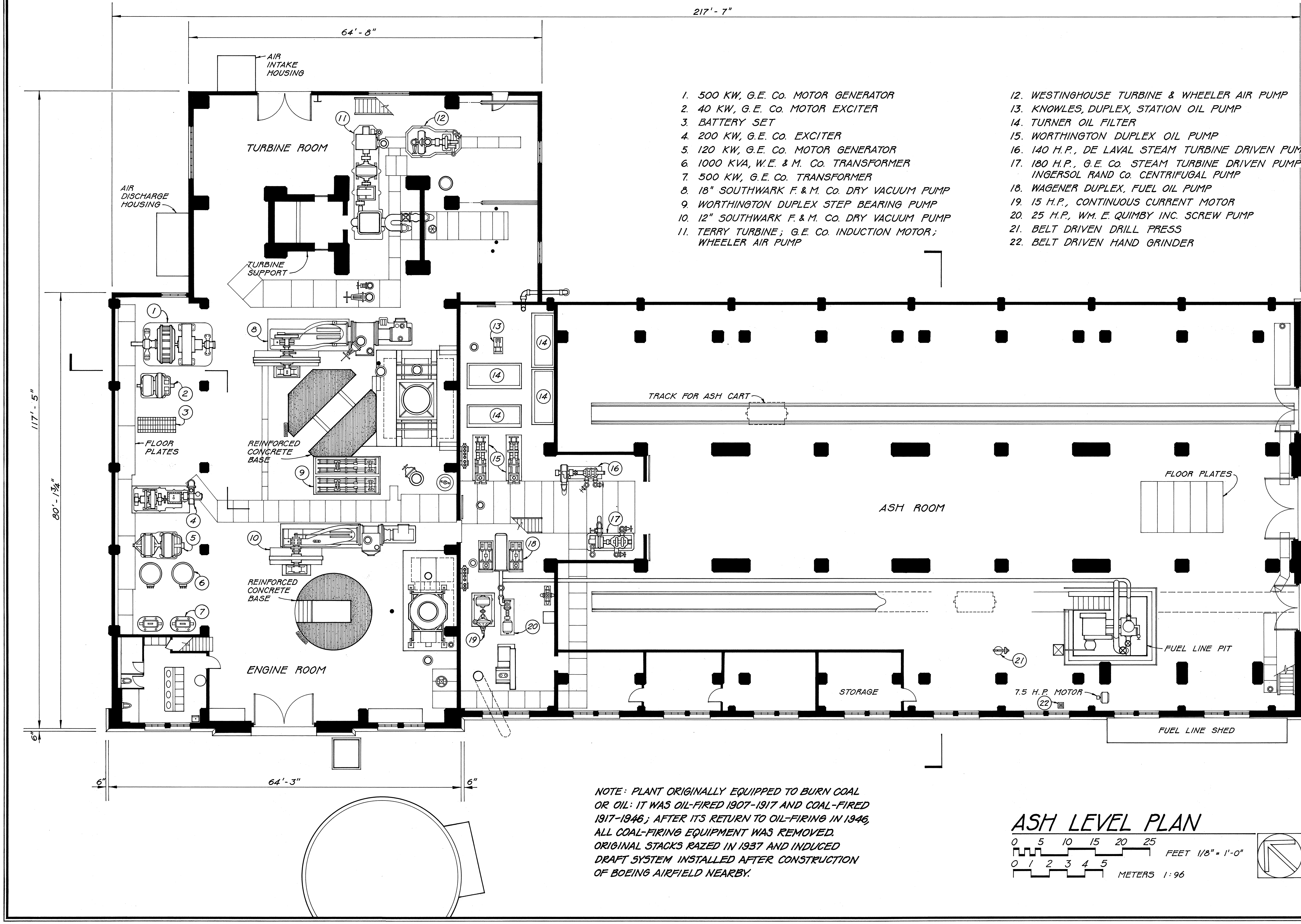
WA-1

TRIM LINE



1. 500 KW, G.E. Co. MOTOR GENERATOR
2. 40 KW, G.E. Co. MOTOR EXCITER
3. BATTERY SET
4. 200 KW, G.E. Co. EXCITER
5. 120 KW, G.E. Co. MOTOR GENERATOR
6. 1000 KVA, W.E. & M. Co. TRANSFORMER
7. 500 KW, G.E. Co. TRANSFORMER
8. 18" SOUTHWARK F. & M. Co. DRY VACUUM PUMP
9. WORTHINGTON DUPLEX STEP BEARING PUMP
10. 12" SOUTHWARK F. & M. Co. DRY VACUUM PUMP
11. TERRY TURBINE; G.E. Co. INDUCTION MOTOR; WHEELER AIR PUMP
12. WESTINGHOUSE TURBINE & WHEELER AIR PUMP
13. KNOWLES, DUPLEX, STATION OIL PUMP
14. TURNER OIL FILTER
15. WORTHINGTON DUPLEX OIL PUMP
16. 140 H.P., DE LAVAL STEAM TURBINE DRIVEN PUMP
17. 180 H.P., G.E. Co. STEAM TURBINE DRIVEN PUMP; INGERSOL RAND Co. CENTRIFUGAL PUMP
18. WAGENER DUPLEX, FUEL OIL PUMP
19. 15 H.P., CONTINUOUS CURRENT MOTOR
20. 25 H.P., WM. E. QUIMBY INC. SCREW PUMP
21. BELT DRIVEN DRILL PRESS
22. BELT DRIVEN HAND GRINDER

NOTE: PLANT ORIGINALLY EQUIPPED TO BURN COAL OR OIL: IT WAS OIL-FIRED 1907-1917 AND COAL-FIRED 1917-1946; AFTER ITS RETURN TO OIL-FIRING IN 1946, ALL COAL-FIRING EQUIPMENT WAS REMOVED. ORIGINAL STACKS RAZED IN 1937 AND INDUCED DRAFT SYSTEM INSTALLED AFTER CONSTRUCTION OF BOEING AIRFIELD NEARBY.

ASH LEVEL PLAN

0 5 10 15 20 25 FEET 1/8" = 1'-0"

0 1 2 3 4 5 METERS 1:96

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SHEET 3 of 8
HISTORIC AMERICAN ENGINEERING RECORD WA-1

TRIM LINE

217'-7"

64'-8"

117'-5"

80'-1¾"

64'-3"

10000 KW
TURBINE GENERATOR
(UNIT No. 3)

TURBINE PLATFORM

8000 KW
TURBINE
GENERATOR
(UNIT No. 2)

ENGINE ROOM

20000 GAL.
WATER
TANK

3000 KW
TURBINE
GENERATOR
(UNIT No. 1)

OFFICE

METAL GRATE WALKWAY

BOILER ROOM

METAL GRATE WALKWAY

CONDENSING
WATER TANK

1. No. XIV WEISS, BAROMETRIC CONDENSER
2. No. XIII WEISS, BAROMETRIC CONDENSER
3. 5000 H.P. COCHRANE OPEN HEATER
4. 3000 H.P. COCHRANE OPEN HEATER
5. 932 H.P. STIRLING BOILER
6. 946 H.P. STIRLING BOILER
7. JOHNSTON BROS. INC. START-UP BOILER
8. G.E. Co. FIELD RHEOSTAT

BOILER LEVEL PLAN

0 5 10 15 20 25 FEET 1/8" = 1'-0"

0 1 2 3 4 5 METERS 1:96

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SEATTLE WASHINGTON

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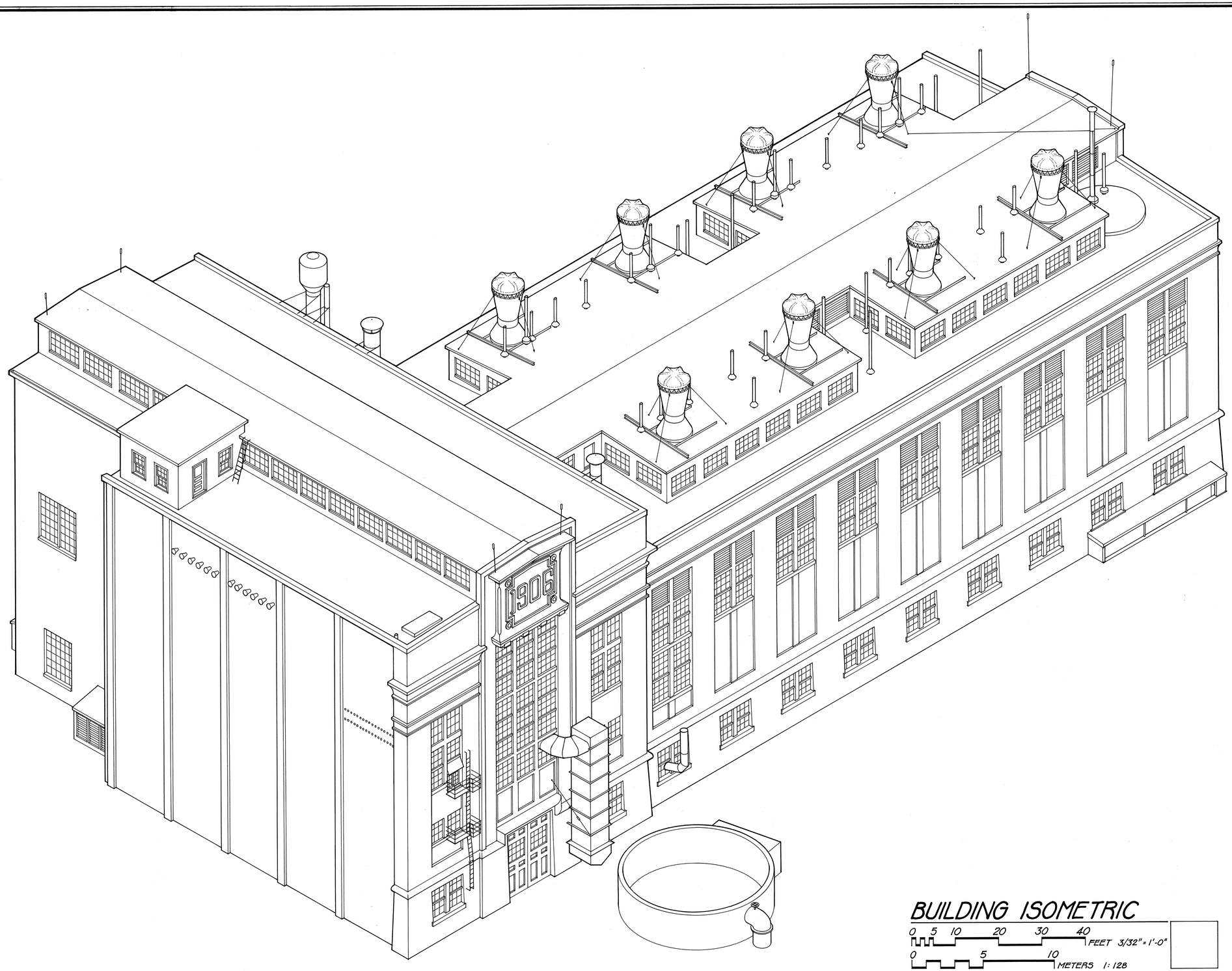

BUILDING ISOMETRIC

0 5 10 20 30 40 FEET 3/32" = 1'-0"

0 5 10 METERS 1:128

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WASHINGTON

SHEET 5 OF 8

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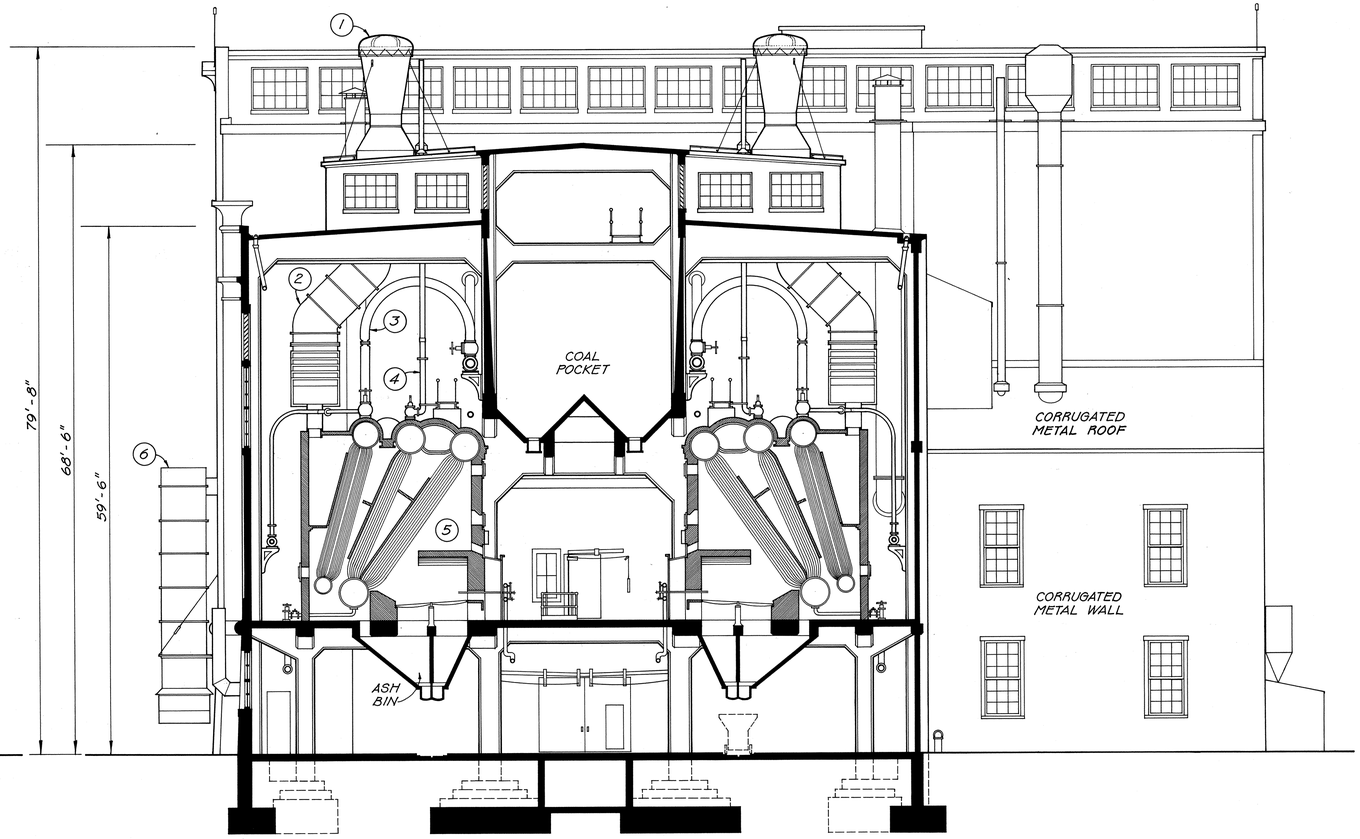
TRIM LINE

TRIM LINE

SOUTH ELEVATION



1. EXHAUST STACK
2. BOILER UPTAKE
3. STEAM HEADER
4. EXHAUST PIPES
5. 932 H.P. STIRLING BOILER
6. AIR DISCHARGE HOUSING

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CROSS SECTION

0 5 10 15 20 25 FEET 1/8" = 1'-0"

0 1 2 3 4 5 METERS 1:96

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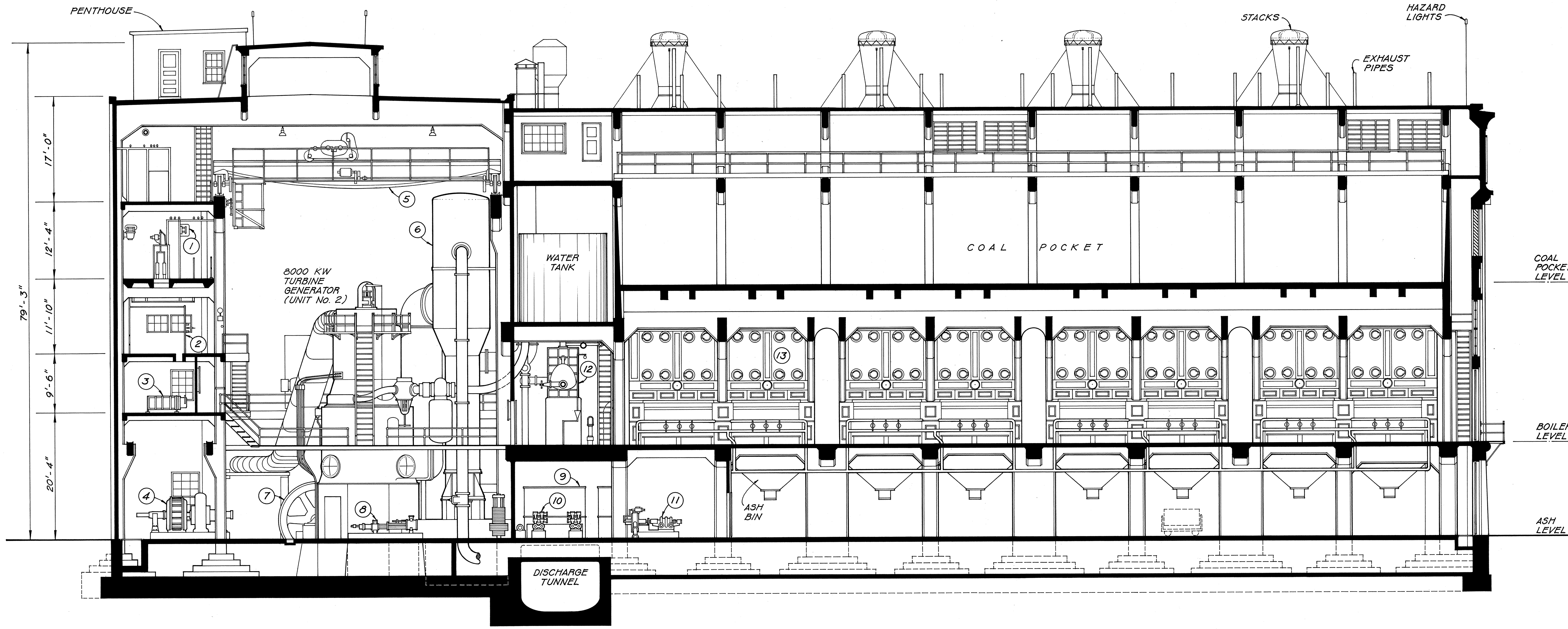
TRIM LINE

TRIM LINE



1. OIL SWITCH
2. SWITCHBOARD
3. G.E. Co. FIELD RHEOSTAT
4. 500 KW, G.E. Co. MOTOR GENERATOR
5. 50 TON CRANE
6. No. XIV WEISS BAROMETRIC CONDENSER
7. 18" SOUTHWARK F. & M. Co. DRY VACUUM PUMP
8. WORTHINGTON DUPLEX STEP BEARING PUMP
9. TURNER OIL FILTER
10. WORTHINGTON DUPLEX OIL PUMP
11. 140 H.P., DE LAVAL STEAM TURBINE DRIVEN PUMP
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LONGITUDINAL SECTION

0 5 10 15 20 25 FEET 1/8" = 1'-0"

0 1 2 3 4 5 METERS 1:96

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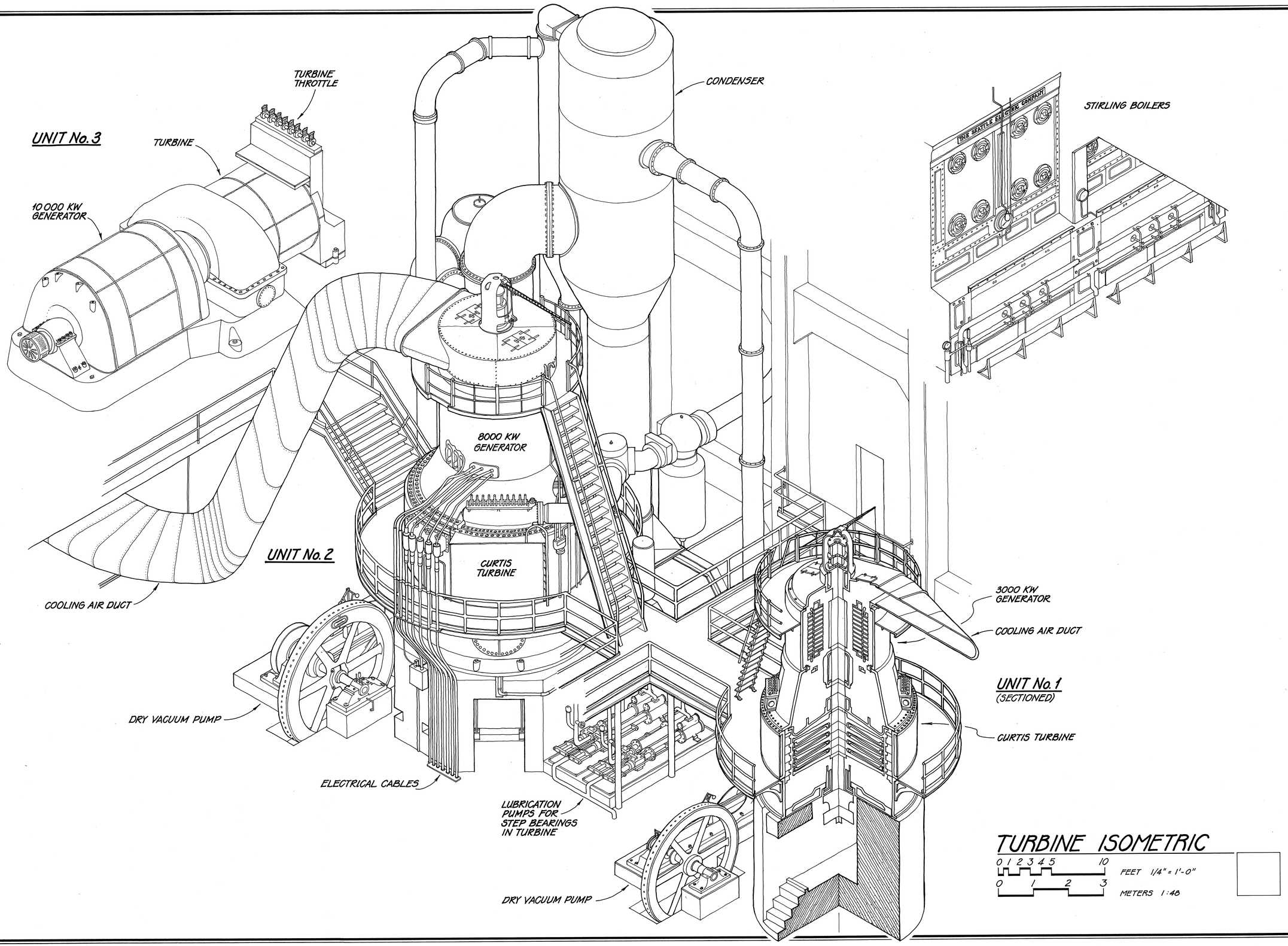
TRIM LINE

TRIM LINE



TURBINE ISOMETRIC

0 1 2 3 4 5 10 FEET 1/4" = 1'-0"

0 1 2 3 METERS 1:48

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TRIM LINE