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HISTORIC BUILDING REPORT

**Bishopsgate Goods Station
Shoreditch High Street/Wheler Street
Hackney/Tower Hamlets
London E1**

May 1996

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ROYAL COMMISSION ON THE HISTORICAL MONUMENTS OF ENGLAND

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SHOREDITCH HIGH STREET/WHELER STREET

BISHOPSGATE GOODS STATION

Summary

Bishopsgate Goods Station was formerly one of London's largest railway depôts. The upper storeys of a substantial complex were destroyed by fire in 1964, but much fabric survived to witness to the origins, construction and use of the facility. The site was developed in 1839-42 as Shoreditch Station, the London terminus of the Eastern Counties Railway, to designs by John Braithwaite, the Railway Company's Engineer. The station was found to be inconvenient and the Great Eastern Railway Company replaced it with Liverpool Street Station, which opened in 1875. This led to redevelopment of the site of the earlier station to be a goods station, to handle East Anglian agricultural produce, manufactured goods and Continental imports. The rebuilding was carried out in 1877-82 to designs by Alfred A. Langley, the Great Eastern Railway Company Engineer. To the west the earlier terminus was entirely replaced with a three-level structure. From this only the lower level survives, with vaults, sidings, roadways and some ornamental ironwork in its entrance gates. Further east an 800ft (240m) length of the elliptically-arched viaduct of 1839-42 that had approached the original station was retained as the core of a complex of vaults, sidings and roadways, designed though scarcely used as fish and vegetable markets. Most of this survives with remnants of an 1890s hydraulic system, including parts of two accumulators and two 20-ton wagon lifts. The site is disused except as a car park; proposals for northwards extension of the East London Line involving clearance of the remains of Bishopsgate Station led to the making of this record in 1995.

Report

Historical Development

Bishopsgate Goods Station has its origins in the Shoreditch Terminus of the Eastern Counties Railway. Following an 1836 Act the Eastern Counties Railway Company constructed railway lines from Norwich and Yarmouth into London. The London passenger terminus and a viaduct approach were built in 1839-42 to plans by John Braithwaite, the Company Engineer, with a Mr Curtis as the building contractor. The terminus, initially known as Shoreditch Station, was

an imposing Italianate edifice. The approach on a viaduct meant that the platforms were above street level, so ramped roads swept up to either side of the principal west façade. The terminus was renamed Bishopsgate Station in 1846, perhaps in an attempt to neutralize a perception that the station was too remote from the City. It was this problem and general congestion that led the Great Eastern Railway Company, successor to the Eastern Counties, to build Liverpool Street Station significantly further southwest. An Act for this was passed in 1864, but the station did not open until 1875.

Upon this change the original terminus was converted to be a goods depôt. Its railway lines served an agriculturally rich area. They also brought to London a wide range of manufactured goods and had important links with the Continent via Harwich. Plans for rebuilding the terminus as a goods station were drawn up from December 1876. These involved expansion, through the clearance of a wider area that included housing to the north. By 1879 the terminus had been replaced with a new street-level sub-structure providing storage vaults, sidings and roadways for rail-to-road transhipment. Two further storeys, for the goods station platforms and a large warehouse, were up by 1881. Finally, about 800ft (240m) of the viaduct east of the station (and Wheeler Street) was encased with substantial storage and transit additions at street-level, to open in 1882 as fish and vegetable markets. All these works were designed by Alfred A. Langley, the Great Eastern Railway Company Engineer, and built by Vernon and Ewens of Cheltenham.

Objections to the new markets from the Corporation of London and other City vested interests obliged the Railway Company to describe them as a "depôt". This was insufficient to placate opposition and legal judgements forced the new markets to close in 1884. Traders transferred their premises to nearby Columbia Market, then enlarged for this purpose, maintaining tenancies of vaults at the goods station as warehousing.

The substantial complex of Bishopsgate Goods Station was one of London's largest goods depôts. It had a capacity of about 600 railway wagons, some 1600 carts went in and out every day, and over 1000 people were employed here by 1933.

The goods station platforms and warehouse on the upper levels were entirely destroyed by fire on 4 December 1964. Their remains were cleared and abandoned, save for use of the platform-level floor as an open-air car park. The street-level or "basement" storage and transit areas survived, with the 1839-42 viaduct embedded within the 1877-82 additions.

The Goods Station Exterior

The surviving parts of the complex are built of red brick, with white brick and stone dressings to the external elevations, which are low and inconspicuous. In general they are of little architectural consequence, though embellished by Moline's patent iron sashes, with rosettes at the intersections of the glazing bars. Principal road access to the goods station was from Shoreditch High Street to the west, and it was here that external display was concentrated. There are double ornamental wrought-iron entrance gates across the roadway entrance to the "basement" transit area at street level. Above this entrance there is a three-light stone oriel window, formerly no more than a screen at the back of the weigh office outside the main road entrance to the viaduct-level goods station, now entirely gone. This latter entrance was reached by an inclined roadway or ramp from Wheler Street to the east skirting the south side of the goods station. Another ramped road, which does survive, led from Shoreditch High Street up around the north side of the goods station to what was known as the "continental bank" to its northeast. This double ramp arrangement was a more functional reprise of the symmetrical ramps that had risen to either side of the original terminus. At the lower end of the north ramp there is a long ornamental wrought-iron gate, swung from a cast-iron pier at the end of the wall along the ramp's outer or west side. This gate and pier were manufactured and erected by Barnard Bishop & Barnards, of London and Norwich, in 1884.

The Goods Station Basement (west of Wheler Street)

The west section of the street-level basement has covered roadways to the west, north and south, serving vaulted storage areas, all built in 1877-9. A central wagon lift at the east end of this section allowed goods to be brought down from the railway lines above. Two lines of rails run westwards from the wagon lift, bisecting the area. From these there were seven sidings to the north, each serving a pair of platforms in a segmental vault. To the south there was a single siding in the western vault; the other south side vaults were served directly from a platform off the east-west line. The spatial division of further vaults to the far west has been altered; latterly some of the larger spaces in this area were used for a canteen and a kitchen. There are loading platforms from the siding and storage vaults to the north and south covered roadways, which have eastern entrances from Wheler Street. The upper levels over these

roadways were supported by brick jack-arching on substantial wrought-iron girders, paired in places. A gap in this cover to the southwest represents the position of a hydraulic wagon lift.

The Viaduct

The viaduct that led to the 1839-42 terminus was originally about 1 1/4 miles (2km) long carrying two lines of track. As with other early railways into London a viaduct approach to the terminus was adopted as appropriate for a densely built-up area. The western 800ft (240m) of the viaduct survive between Brick Lane and Wheler Street, crossing the latter to terminate just west of Wheler Street, where the fragmentary and irregular nature of the early fabric may indicate the easternmost extent of the original terminus building. The viaduct is entirely embedded in later brickwork. It is of stock brick with broad north-south elliptical vaults, one of which bestrides Wheler Street, where it is best seen. Stone impost bands and rendered plinths articulate the piers between the vaults, which were divided into four, three or two by pointed cross vaults. The shaping of these vaults makes this an elegant structure which must once have impressed with its openness, even if the Gothic character of the cross vaulting might have seemed curiously at odds with the Italianate terminus. As surviving the viaduct widens from about 46ft6in. (14m) to about 55ft (16.5m), but it has been cut back on its north side, perhaps losing about 8ft (2.4m) in width along its whole length. The remains of the early viaduct extend no further east than Brick Lane.

The "Market" Basement (east of Wheler Street)

The layout of the street-level market facilities built in 1877-82 was dictated by the viaduct around which they were built. The elliptical vaults were simply extended southwards, though with segmental vaults preferred to the subtler original shape. On the north side of the viaduct a central covered railroad was laid, beyond which further segmental vaults echo the viaduct. Outer covered roadways, to north and south, completed the complex. The whole centred on a wagon lift on the central railroad upon which descended goods-laden trucks from the sidings outside the goods station.

The central railroad has triple lines, that to the north serving a continuous platform, that to the south serving sidings into many of the vaults. Along the south line there survive parts of 15ft-diameter turntables, presumably of c1880, of girder-frame construction with

wrought-iron tensioning rods. The central railroad has paired wrought-iron girder and brick jack-arch roofing spanning 46ft (13.8m), butted into the viaduct to the south. The vaults on the north side were laid out in 1881-2 to be a fish market, with 38 stalls in 19 arches. Those on the south side were made to be a vegetable market in 16 arches. The nine southern vaults to the east of centre had their own sidings and semi-basements under raised timber floors, with timber check-booths in their southwest corners. These may have been constructed as part of works for the fitting of the market offices carried out by Bangs & Company in 1881-2. The north and south roadways retain timber gates at their Wheler Street ends, with a weighbridge just inside to the north, and a timber-built check office or weigh booth to the south. Platforms from the market or store vaults onto the roadways facilitated loading into carts. As elsewhere these roadways have wrought-iron girder and brick jack-arch ceilings.

There was a wagon repair shop to the far northeast, towards Sclater Street. This space survives as a light industrial unit with what appears to be its original timber roof.

Hydraulic Fittings

Bishopsgate Goods Station had numerous turntables, lifts, cranes, capstans and snatch-heads for the movement of wagons and goods. Horses were also, of course, crucial to the powering of the establishment. Such plant as existed in the 1880s was apparently powered by two gas engines. Hydraulic power was installed following upon an 1891 agreement between the Great Eastern Railway Company and Sir W G Armstrong, Mitchell & Company for the supply of a large quantity of plant. This provided for an independent system based to either side of Wheler Street on the south side of the southern roadways. There were two steam engines, providing 150 hp, which may have supplanted the gas engines in a space on the goods station or viaduct level at the west end of what was called the "Fruit Bank", that is immediately east of Wheler Street. The base of an 80ft chimney survives in this position, abutting what was apparently a boiler house at street level. East from this was a coal store, and beyond a chamber for the accumulators that stored the hydraulic power. The 1891 agreement provided for a single accumulator, specified as 20in. by 17ft stroke. A second accumulator, for installation in the same space, was ordered from Armstrong & Company in 1897. The timber heads, guide rails and rams of both these accumulators survive, as does the cast-iron cross head of that to the north, and part of the wrought-iron weight case of that to the south. East of this chamber

there was a fitting shop, wherein there survives evidence for drive shafting in the shape of brackets from the vault.

The 20-ton wagon lifts, or truck hoists, on either side of Wheler Street were crucial to the working of the street-level parts of the goods station; they were the only means of introducing goods from above. They both survive in fragmentary states. The lifts powered by the gas engines were replaced with hydraulic lifts in 1891, as part of the agreement with Armstrong & Company. They were then specified as being 27ft by 12ft, and 21ft7in. high. The plan dimensions of the west lift as it survives are 14ft9in. (4.4m) by 42ft6in. (12.8m). It has the remains of a central shaft with double hydraulic rams. Guide posts were centred on the long east and west sides, for a wrought-iron platform with a timber floor. The lift to the east appeared to have had six guide posts, those to the centre trussed for additional strength. The goods station or viaduct-level superstructures to the wagon hoists, which had been remade in the 1930s, had wholly collapsed.

Acknowledgements

This record was made co-operatively with the Greater London Industrial Archaeology Society, through Malcolm Tucker, with further assistance from Tim Smith. RCHME is grateful to Peter Welvaert of Railtrack for providing access and information, as well as to John Watling of the Great Eastern Railway Society for further useful information.

Sources

"Bishopsgate Goods Station, L.N.E.R.", *The Railway Magazine*, vol. 72, 1933, pp. 164-172.
Tim Smith, "Hydraulic Power at Bishopsgate Goods and Spitalfields", unpublished notes, 1995.

Survey of London, xxvii, 1956, pp. 252-255.

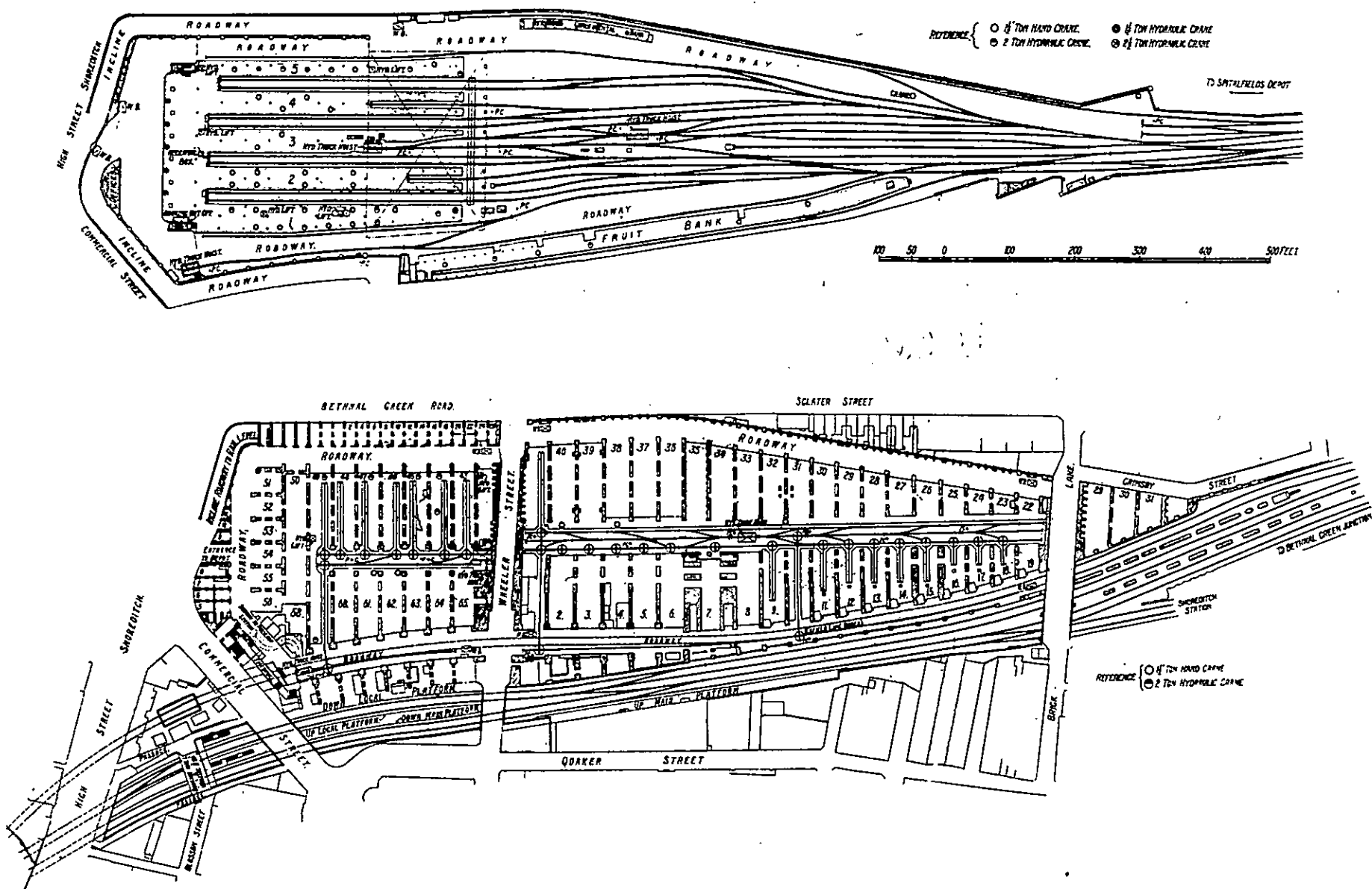
John Watling, "Bishopsgate and Spitalfields", *British Railway Journal*, Special Great Eastern Railway Edition, nd (c1988), pp. 85-118.

Recorded July-August 1995

Drawings by A. Donald and M. Tucker

Photographs by S. Barker

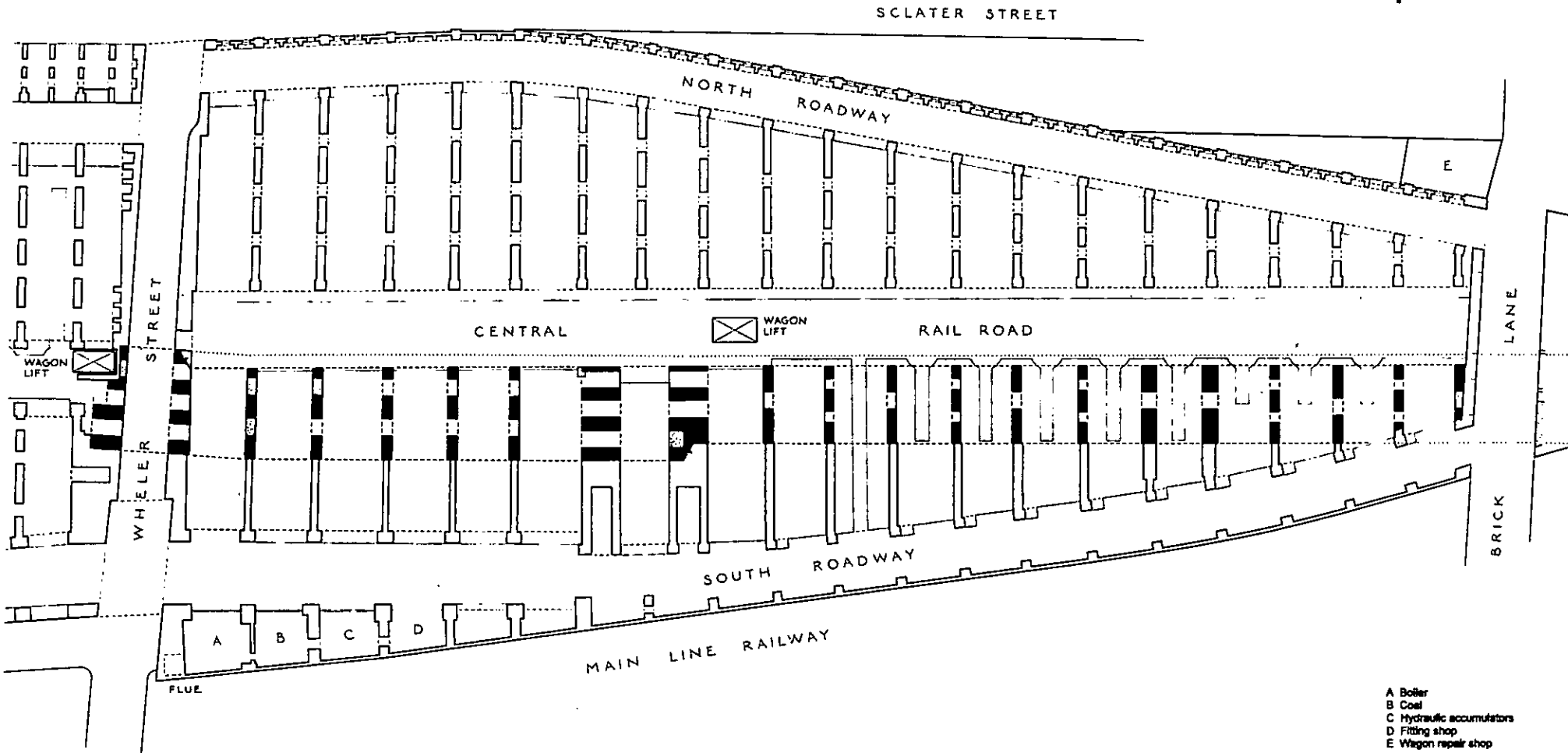
Report by P. Guillery



PLANS OF RAIL (above) AND BASEMENT (below) LEVELS, BISHOPSGATE GOODS STATION.

Partially based on archive drawings supplied by Railtrack Property

The eastern part of the site is in the Borough of Tower Hamlets



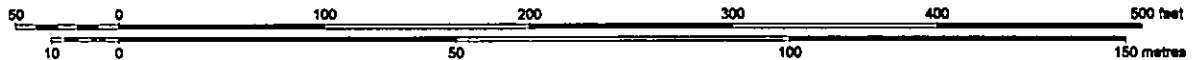
PLAN AT STREET LEVEL (OMITTING WEST END)
SHOWING SURVIVAL OF 1840 - 42 VIADUCT

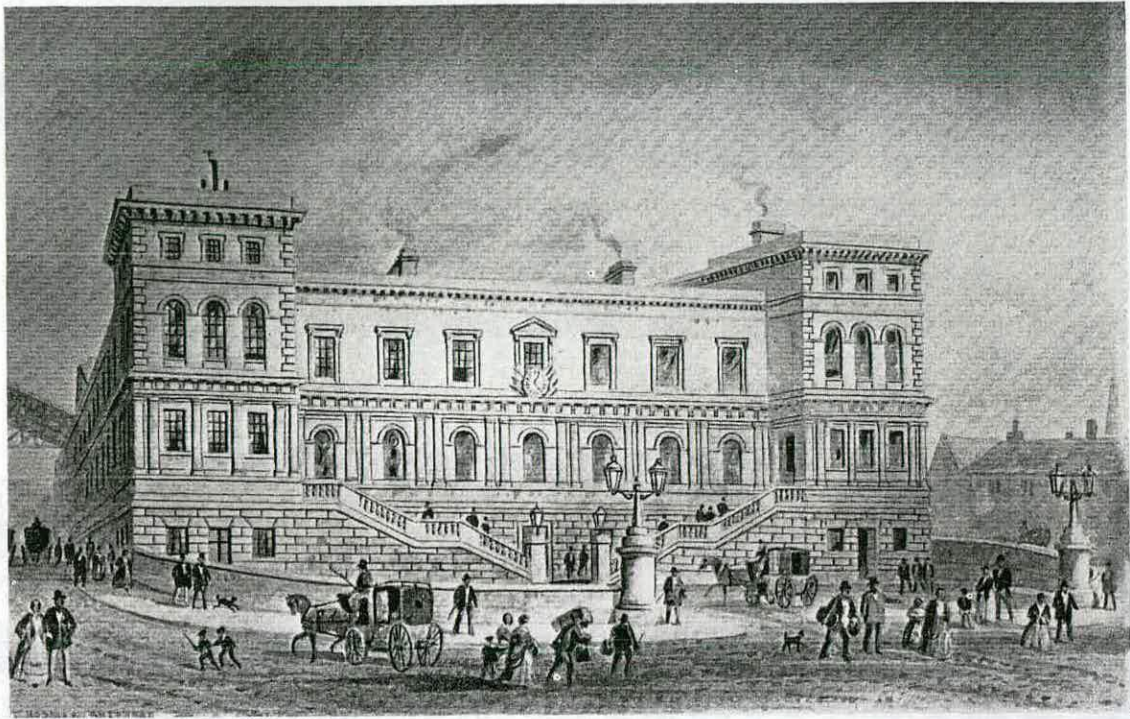
- A Boiler
- B Coal
- C Hydraulic accumulators
- D Fitting shop
- E Wagon repair shop

- Surviving 1840 - 42 viaduct
- Conjectural extent of 1840 - 42 viaduct

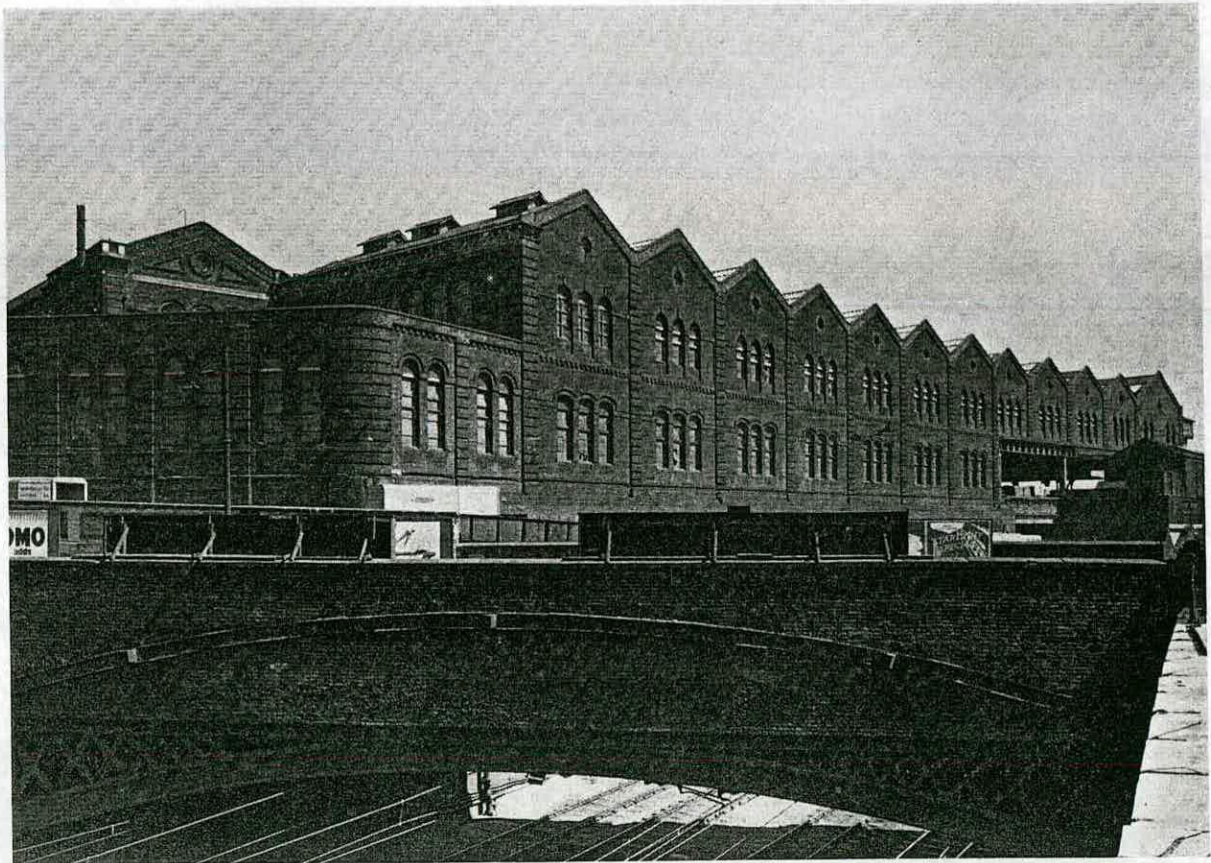
BISHOPSGATE GOODS STATION
Shoreditch High Street London E1

Borough of Hackney
Surveyed August 1995
Grid reference TQ 335 822
NBR no. 94371
Drawn by A.D.





a. Shoreditch terminus of Eastern Counties Railway, 1839–42. John Braithwaite and/or Sancton Wood, architect(s) (p. 252) *Demol.*



b. Bishopsgate Goods Station, 1879–81. Alfred A. Langley, engineer.
Later addition in foreground (p. 254)



GLRO c1960

JOB NUMBER 95/1910

DATE TAKEN 12/07/95 PHOTOGRAPHER SB
ADDRESS BISHOPSGATE GOODS STATION
SHOREDITCH HIGH STREET

HACKNEY
LO

NEGS TAKEN 28

BB95/10124 WHELER STREET, VIEW FROM NORTH SHOWING 1840'S VIADUCT

BB95/10125 WHELER STREET, 1840'S VIADUCT, EAST SIDE, VIEW FROM NORTH
WEST

BB95/10126 ORIGINAL GATE OF GOODS STATION AT CORNER OF SHOREDITCH HIGH ST
& BETHNEL GREEN ROAD, VIEW FROM EAST

BB95/10127 ORIGINAL GATE OF GOODS STATION AT CORNER OF SHOREDITCH HIGH ST
& BETHNEL GREEN ROAD, VIEW FROM SOUTH EAST

BB95/10128 NORTH SIDE OF WHELER STREET TO BETHNEL GREEN ROAD, VIEW
FROM NORTH EAST

BB95/10129 NORTH SIDE OF WHELER STREET TO BETHNEL GREEN ROAD, VIEW
FROM NORTH WEST

BB95/10130 GROUND LEVEL ENTRANCE TO WEST SIDE OF GOODS STATION, VIEW
FROM NORTH WEST

BB95/10131 WHELER STREET, VIEW FROM SOUTH WEST

BB95/10132 NORTH ELEVATION ON EAST SIDE OF GOODS STATION, DETAIL
OF WINDOW

BB95/10133 WEST SIDE, NORTH SIDE, WEST BAY, VIEW FROM SOUTH EAST

BB95/10134 WEST SIDE, EAST END, CENTRAL, WAGON LIFT, VIEW FROM
NORTH WEST

BB95/10135 WEST SIDE, WEST END OF CENTRAL RAIL-WAY, SHOWING TURN-TABLE
AREA & SIDING, VIEW FROM SOUTH

BB95/10136 WEST SIDE, CENTRAL RAIL-WAY AREA, VIEW FROM WEST

BB95/10137 EAST SIDE OF GOODS STATION, VIEW OF SOUTH ELEVATION FROM
SOUTH WEST

BB95/10138 EAST SIDE, OFFICE AT SOUTH ENTRANCE, VIEW FROM SOUTH EAST

BB95/10139 EAST SIDE, SOUTH ROAD-WAY, VIEW FROM WEST

BB95/10140 EAST SIDE, SOUTH ROAD-WAY, VIEW FROM EAST

BB95/10142 EAST SIDE, SOUTH SIDE, 3RD BAY FROM WEST, ACCUMALATORS,
GENERAL VIEW FROM NORTH WEST

BB95/10143 EAST SIDE, SOUTH SIDE, 3RD BAY FROM WEST, ACCUMALATORS,
DETAIL, VIEW FROM NORTH

BB95/10144 EAST SIDE, SOUTH SIDE, 3RD BAY FROM WEST, ACCUMALATORS,
VIEW FROM NORTH EAST

BB95/10145 EAST SIDE, SOUTH SIDE ROAD-WAY, BAY 7, VIEW FROM SOUTH WEST

BB95/10146 EAST SIDE, SOUTH SIDE ROAD-WAY, BAY 7, INTERIOR, VIEW FROM
SOUTH WEST

BB95/10147 EAST SIDE, SOUTH SIDE, 4TH BAY FROM WEST, FITTING SHOP
VIEW FROM NORTH WEST

BB95/10148 EAST SIDE, CENTRAL RAIL-WAY, VIEW FROM EAST END LOOKING
TOWARDS WAGON LIFT

BB95/10149 EAST SIDE, CENTRAL RAIL-WAY, VIEW FROM WEST END LOOKING
TOWARDS WAGON LIFT

BB95/10150 EAST SIDE, CENTRAL RAIL-WAY, DETAIL OF TURN-TABLE AT WEST END
VIEW FROM SOUTH WEST

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613
←

RCHME

Negative No.: BB95/10130

Photographer: SB

NMRC

Date Taken: 12/07/95

Kemble Drive

Address: BISHOPSGATE GOODS STATION
SHOREDITCH HIGH STREET

Swindon SN2 2GZ

Tel. 01793 414600

Fax. 01793 414606

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GROUND LEVEL ENTRANCE TO WEST SIDE OF GOODS STATION. VIEW
FROM NORTH WEST



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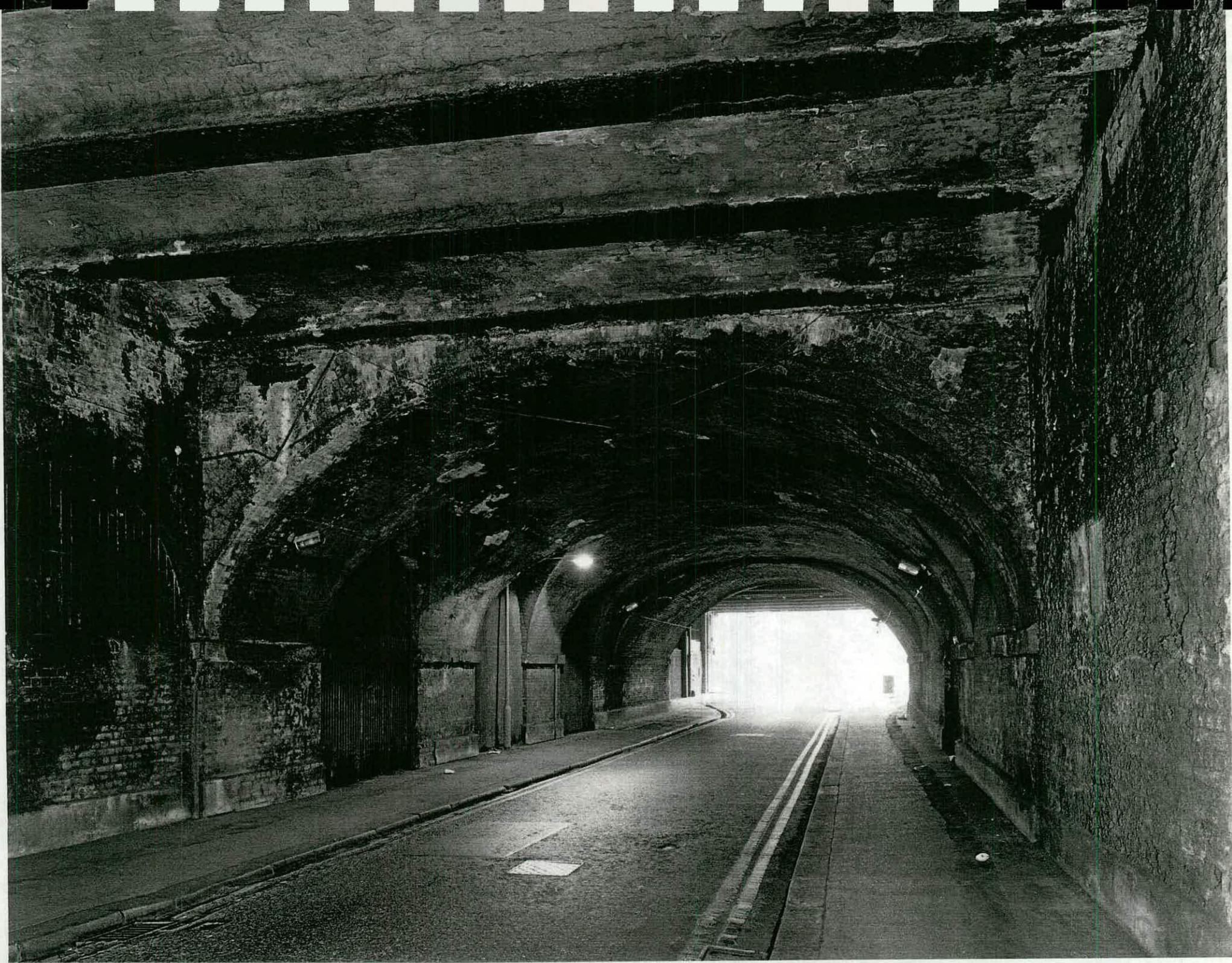
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WEST SIDE. WEST END OF CENTRAL RAIL-WAY. SHOWING TURN-TABLE
AREA & SIDING. VIEW FROM SOUTH



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WHEELER STREET. VIEW FROM NORTH SHOWING 1840'S VIADUCT



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Photographer: SB
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SHOREDITCH HIGH STREET

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EAST SIDE. CENTRAL RAIL-WAY. VIEW FROM EAST END LOOKING
TOWARDS WAGON LIFT



RCHME

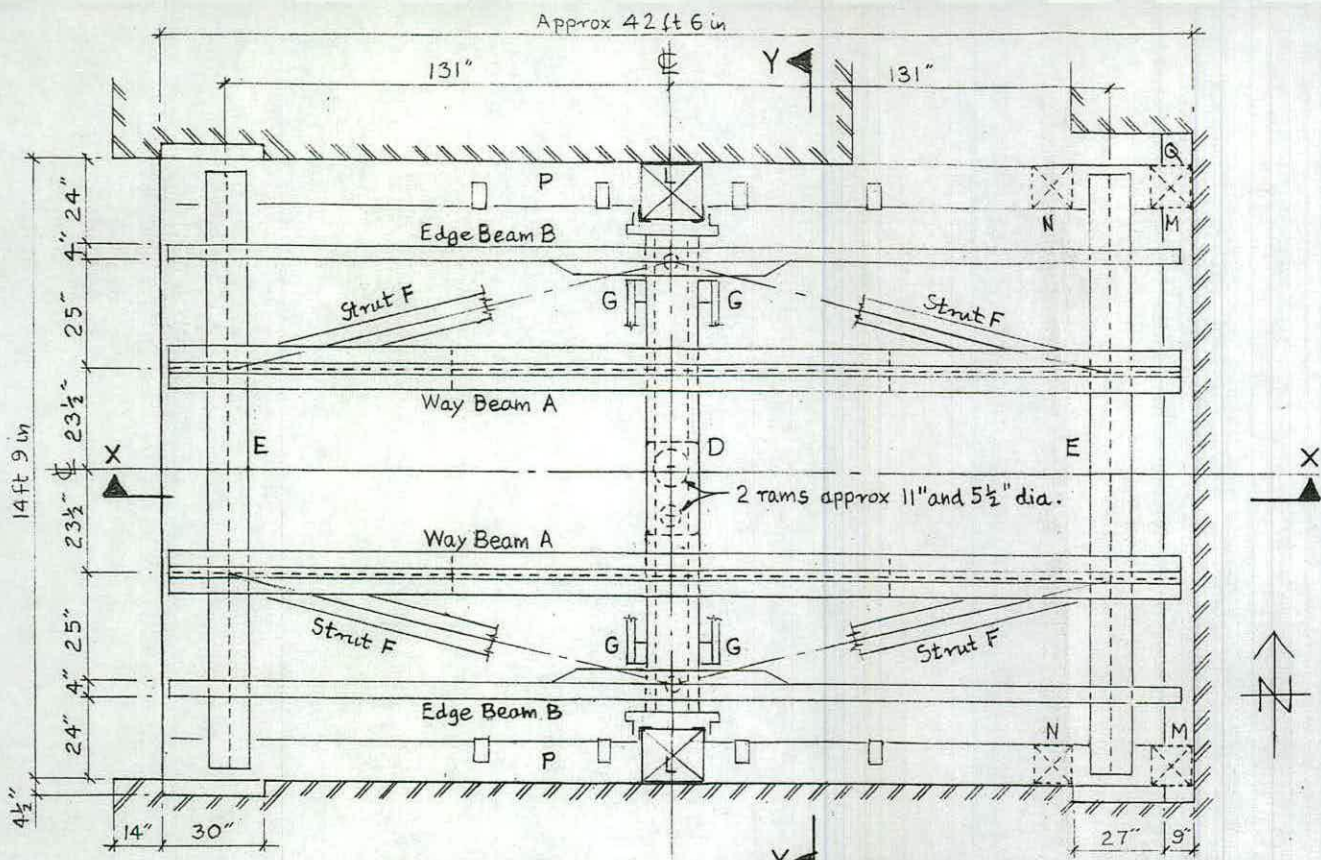
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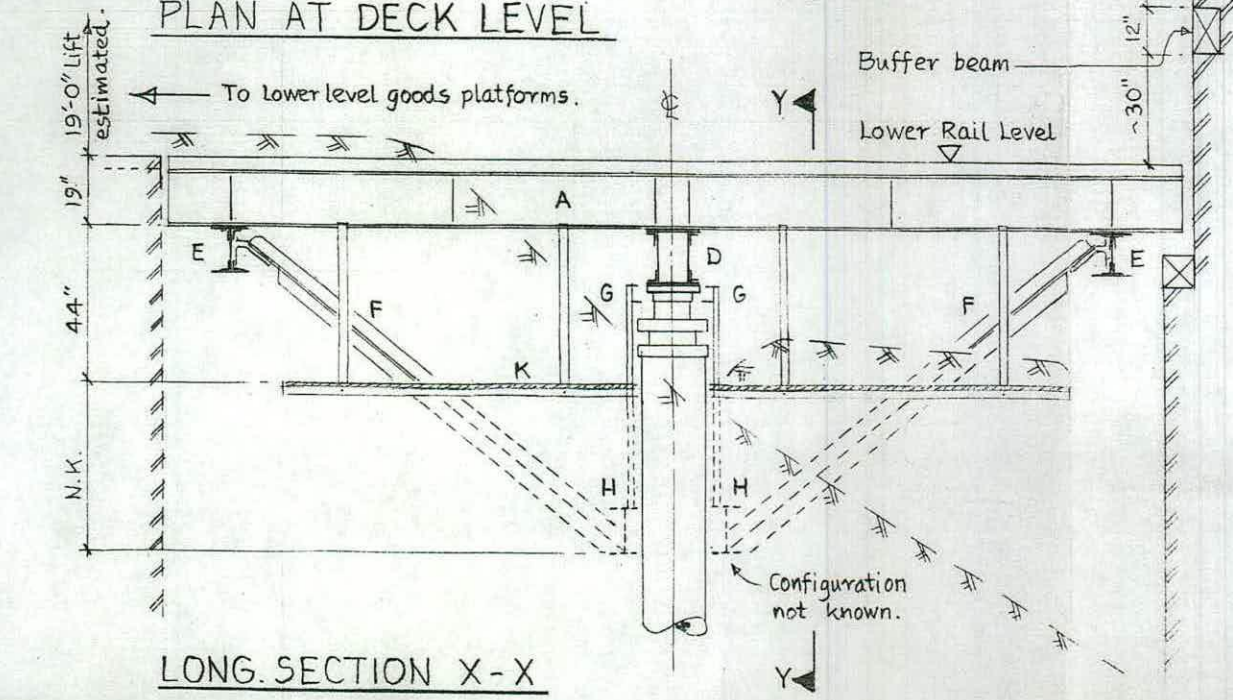
BISHOPSGATE GOODS STATION
SHOREDITCH HIGH STREET

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EAST SIDE. SOUTH SIDE. 3RD BAY FROM WEST. ACCUMALATORS,
GENERAL VIEW FROM NORTH WEST



PLAN AT DECK LEVEL



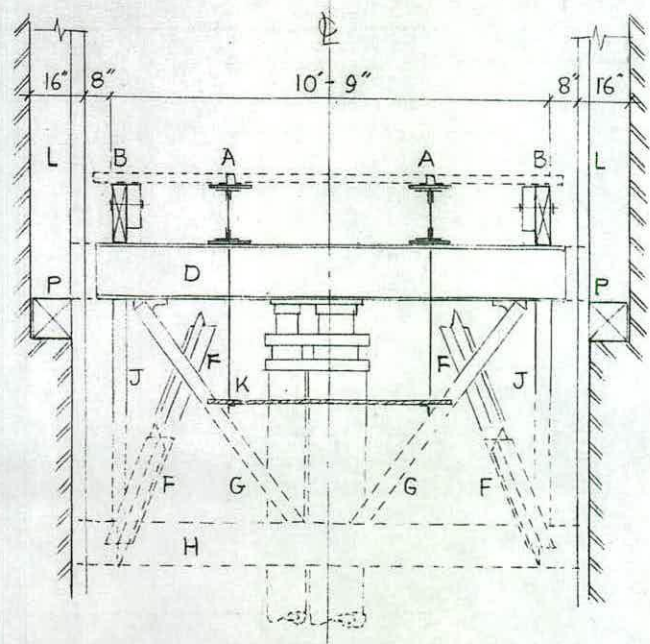
LONG SECTION X-X

BISHOPSGATE GOODS STATION:
 WAGON HOIST W. OF WHEELER ST.
 PLAN AND SECTIONS. 1:40
 Part-measured and drawn by M.T. Tucker, July 1995

Note: Wood & metalwork above deck level destroyed by fire. Structure largely buried in debris & fill. Top of debris indicated thus: Conjured features shown thus:

Stock brickwork: . Staffs, blue brickwork:

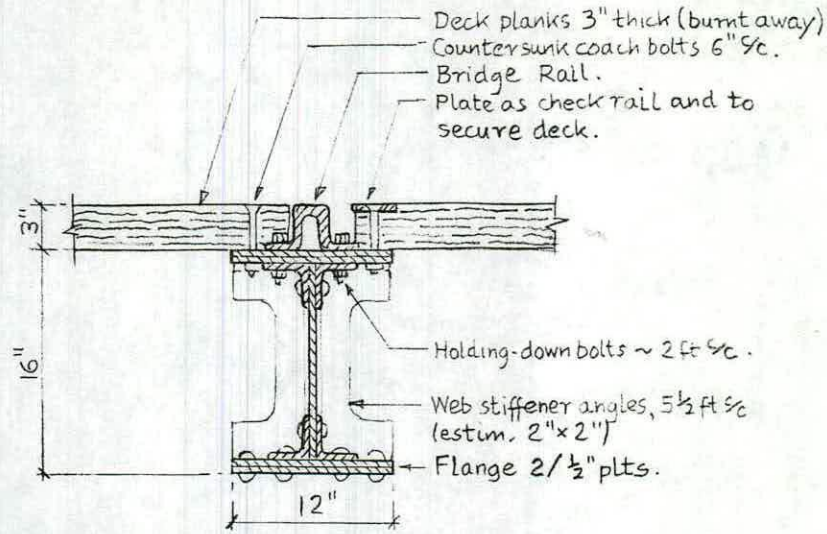
For list of parts and details, see further drawing.



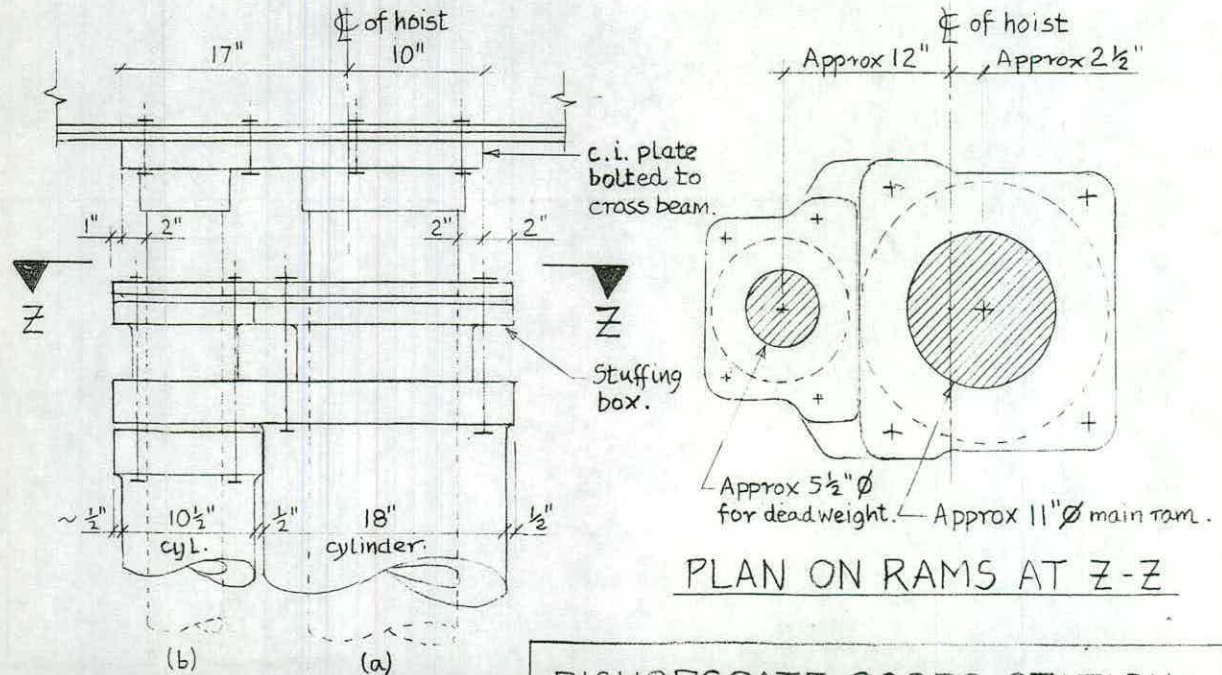
CROSS SECTION Y-Y

COMPONENTS OF HOIST:

- AA : Way Beams, $16\frac{1}{4} \times 12$ " rivetted plate girders carrying 3" deep bridge rails and 3" thick timber deck: SEE DETAIL.
 - BB : 17×4 " timber Edge Beams. Reinforced over central cross beam with 12×4 " timber, 72" long, bolted to side of each beam.
 - D : Main Cross Beam, $16\frac{1}{2} \times 15$ " rivetted box girder. Webs $10 \frac{5}{8}$ ".
 - EE : End Cross Beams, estimated 12×10 " rivetted plate girders.
 - FFFF : Raking Struts, $9 \times 8\frac{1}{2}$ " rivetted cruciform of $9 \times \frac{1}{2}$ " web and 4 no $4 \times 4 \times \frac{5}{8}$ " angles. Bolted to cast-iron special brackets bolted to web of EE.
 - GGGG : Diagonal braces, 2 pairs of 4×2 " rolled iron channels bolted to cast-iron special brackets bolted to underside of D 23" clear between webs of] [.
 - HH : Lower Cross Beams, details unknown.
 - JJ : Hanger Posts, 2 no. $4\frac{1}{2}$ " o.d., possibly tubes encasing rods, and presumed fixed to crosshead between lower cross beams.
 - KK : Access Platform, for maintenance, $1\frac{1}{4}$ " transverse planks on 2×2 " rolled iron angles longitudinally, hung from $2\frac{1}{4} \times \frac{1}{2}$ " flat hangers at 5'-6" c/c, strapped to lower flanges of AA.
 - LL : Central Guide Posts, approx 18×16 " timber, bolted to walls. Guides clasping corners next to hoist, of 2 no. $3\frac{1}{2} \times 3\frac{1}{2}$ " rolled iron angles (These collapsed spirally when posts burnt down). Brackets bolted to end plates of Cross Beam to clasp guides but are hidden by debris.
 - MM : Presumed End Guide Posts, indicated by 13" wide band of protruding mortar joints in end wall built against them.
 - NN : Presumed Subsidiary Guide Posts, deduced from 9" wide wrought-iron junction plate bolted to south sill beam P.
- (Note that M may be closer to N than drawn. M and N probably occurred at both ends. (Destroyed in fire. No close access.)
- Q : Chain, hanging from bracket at top of wall which restrained M. Vertical tie rod (fallen sideways) adjacent.
 - P : Longitudinal sill beam, 11×12 " timber, anchored to face of wall below by 4 no 4×1 " flat bars hooked over top.
- Rams : (a) 18 " o.d., approx 11 " dia. ram; { measured with difficulty }
 (b) $\sim 10\frac{1}{2}$ " o.d., approx $5\frac{1}{2}$ " dia. ram. { - access problem }
 SEE DETAIL.



DETAIL OF WAY BEAM



ELEVATION ON RAMS

PLAN ON RAMS AT Z-Z

BISHOPSGATE GOODS STATION:
 WAGON HOIST W. OF WHEELER ST.
 DETAILS 1:10
 Measured and drawn by M.T. Tucker, July 1995