

STATE OF OHIO
 DEPARTMENT OF TRANSPORTATION

CUY-17-283
 CUYAHOGA COUNTY

RIVEREDGE TOWNSHIP
 CITY OF FAIRVIEW PARK
 CITY OF CLEVELAND

THE COMMISSIONERS OF CUYAHOGA COUNTY, OHIO, DO HEREBY CERTIFY THAT THE ABOVE DESCRIBED PROJECT HAS BEEN APPROVED BY THE BOARD OF COMMISSIONERS OF CUYAHOGA COUNTY, OHIO, AND THAT THE PROJECT IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO REVISED PUBLIC WORKS ACT, CHAPTER 554, R.C.

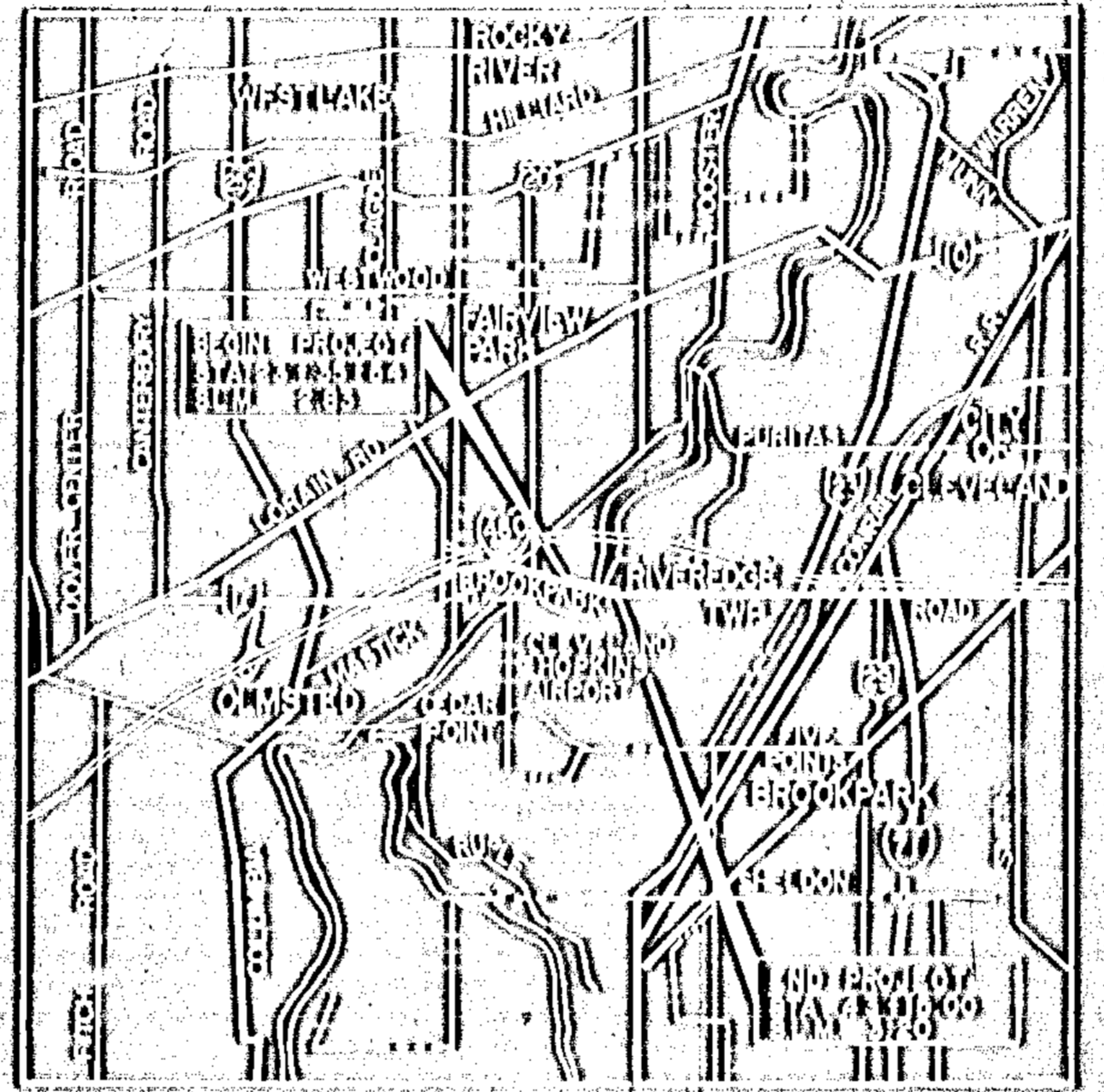
BOARD OF COMMISSIONERS
 CUYAHOGA COUNTY
 DATE: 10/15/13

THE ENGINEER'S CERTIFICATE AND THE PLAN OF THE PROJECT ARE HEREBY APPROVED BY THE BOARD OF COMMISSIONERS OF CUYAHOGA COUNTY, OHIO, AND THE PROJECT IS IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO REVISED PUBLIC WORKS ACT, CHAPTER 554, R.C.

APPROVED: [Signature]
 COUNTY ENGINEER
 DATE: [Blank]
 DIRECTOR OF DEPARTMENT OF TRANSPORTATION
 DATE: [Blank]
 ENGINEER, BUREAU OF HIGHWAY AND STRUCTURAL DESIGN
 DATE: [Blank]
 CHIEF ENGINEER, PLANNING AND DESIGN
 DATE: [Blank]
 DIRECTOR, DEPARTMENT OF TRANSPORTATION
 DATE: [Blank]

- CONVENTIONAL SIGNS**
- WATER LINE
 - GAS LINE
 - UNDERGROUND ELECTRICAL
 - RAILROAD
 - EXISTING RETAINING WALL
 - EXISTING GEMER
 - PROPOSED GEMER
 - EXISTING GUARD RAIL
 - PROPOSED GUARD RAIL
 - TREES AND STUMPS
 - TREES AND STUMPS TO BE REMOVED
 - TELEPHONE OR TELEGRAPH POLES
 - LIGHT POLE
 - CORNER POLE
 - WATER HYDRANT
 - EXISTING TRAFFIC SIGNAL
 - PROPOSED TRAFFIC SIGNAL

- INDEX OF SHEETS**
- TITLE SHEET
 - SCHEMATIC PLAN
 - TYPICAL SECTION
 - GENERAL NOTES
 - GENERAL SUMMARIES
 - MISCELLANEOUS DETAILS
 - APPROACH DETAILS
 - DETOUR PLAN
 - LIGHTING AND PAVEMENT MARKING
 - STRUCTURE OVER 20' SPAN



LOCATION PLAN
 SCALE: AS SHOWN

LINE DATA		FAIRVIEW PARK	RIVEREDGE TOWNSHIP	CLEVELAND	TOTAL
BEGIN PROJECT	STA 1+00.00	STA 1+00.00	STA 1+00.00	STA 1+00.00	STA 1+00.00
END PROJECT	STA 1+00.00	STA 1+00.00	STA 1+00.00	STA 1+00.00	STA 1+00.00
LENGTH OF PROJECT	0.00	0.00	0.00	0.00	0.00
ADDITIONAL WORK	0.00	0.00	0.00	0.00	0.00
LENGTH OF WORK	0.00	0.00	0.00	0.00	0.00

APPROVED BY: [Signature]
 DATE: 10/15/13

COMMISSIONER OF TRANSPORTATION
 DEPARTMENT OF TRANSPORTATION

NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT
1	CONCRETE	100	CU YD	100.00
2	STEEL	100	TON	100.00
3	PAVEMENT	100	SQ YD	100.00
4	GRASS	100	SQ YD	100.00
5	WATER	100	CU YD	100.00
6	GAS	100	CU YD	100.00
7	ELECTRICAL	100	CU YD	100.00
8	RAILROAD	100	CU YD	100.00
9	RETAINING WALL	100	CU YD	100.00
10	GEMER	100	CU YD	100.00
11	GUARD RAIL	100	CU YD	100.00
12	TREES	100	CU YD	100.00
13	STUMPS	100	CU YD	100.00
14	TELEPHONE	100	CU YD	100.00
15	TRAFFIC SIGNAL	100	CU YD	100.00

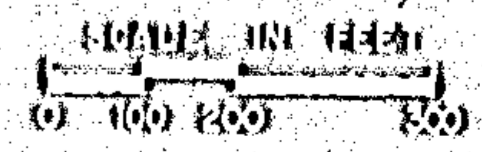
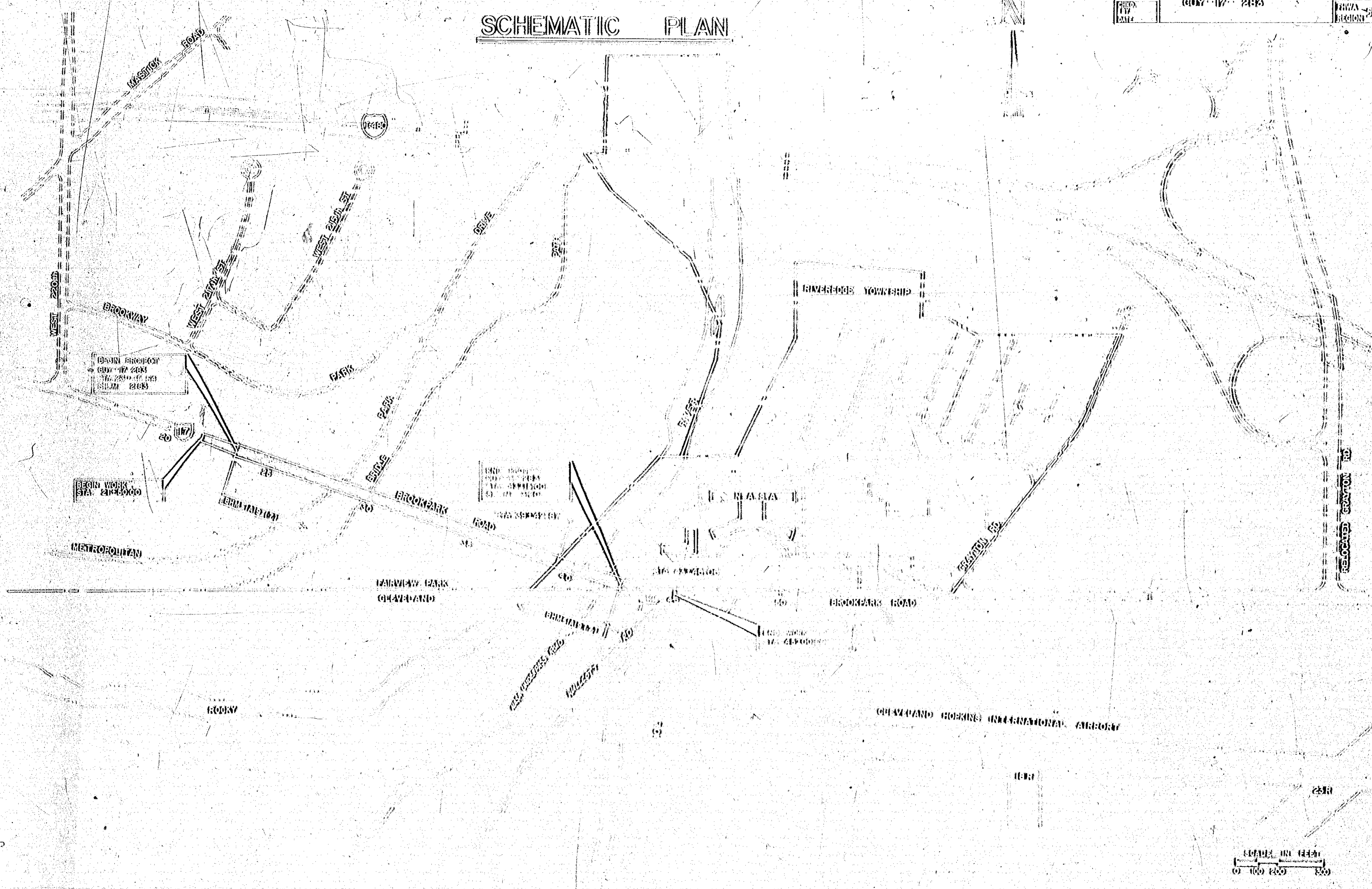
NO.	DATE	NO.	DATE	CURRENT AMOUNT	REVISION AMOUNT	TOTAL
1	10/15/13	1	10/15/13	10000	0	10000
2	10/15/13	2	10/15/13	10000	0	20000
3	10/15/13	3	10/15/13	10000	0	30000
4	10/15/13	4	10/15/13	10000	0	40000
5	10/15/13	5	10/15/13	10000	0	50000
6	10/15/13	6	10/15/13	10000	0	60000
7	10/15/13	7	10/15/13	10000	0	70000
8	10/15/13	8	10/15/13	10000	0	80000
9	10/15/13	9	10/15/13	10000	0	90000
10	10/15/13	10	10/15/13	10000	0	100000

DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION
 APPROVED: [Signature]
 DATE: [Blank]

SCHEMATIC PLAN

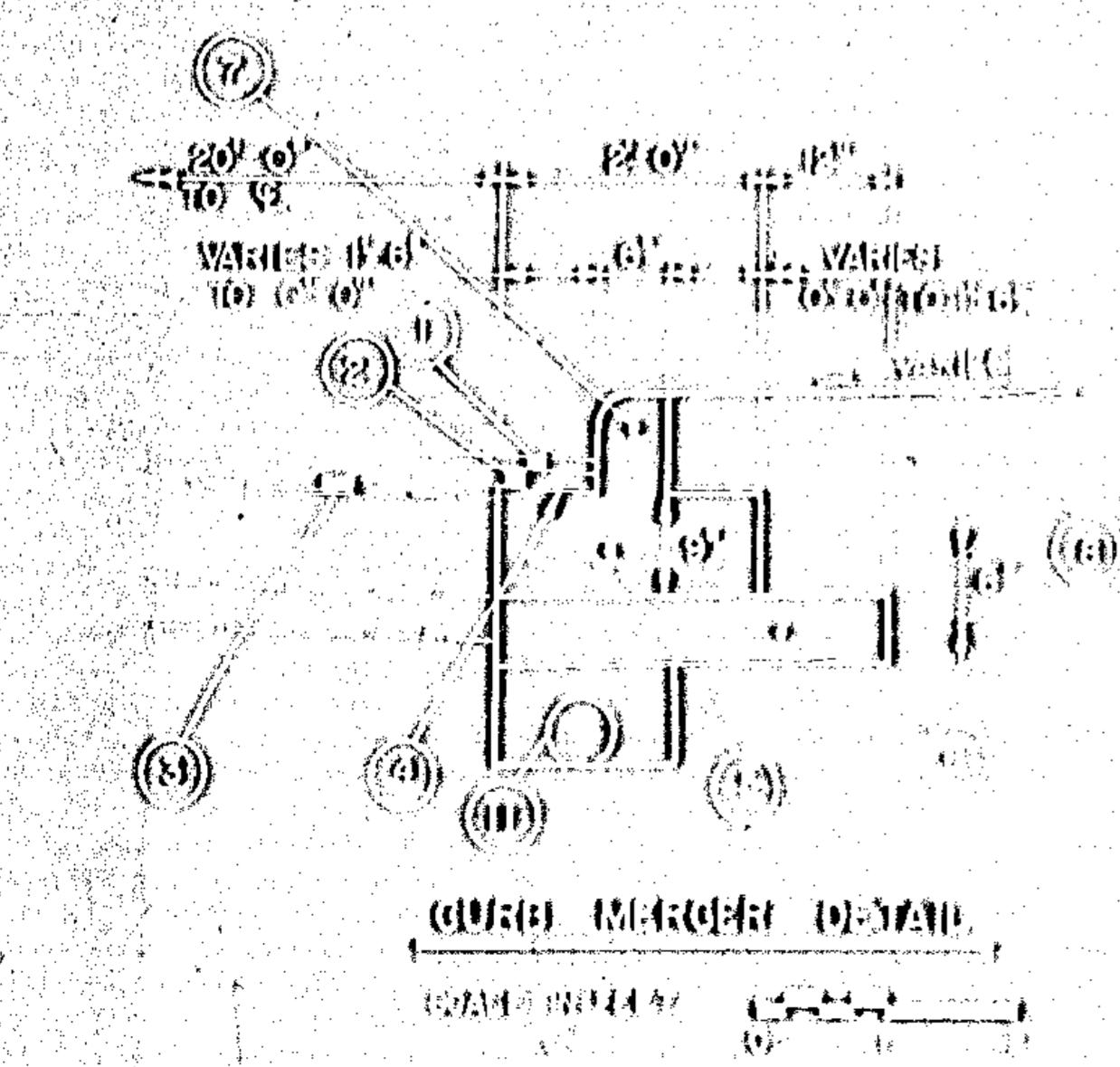
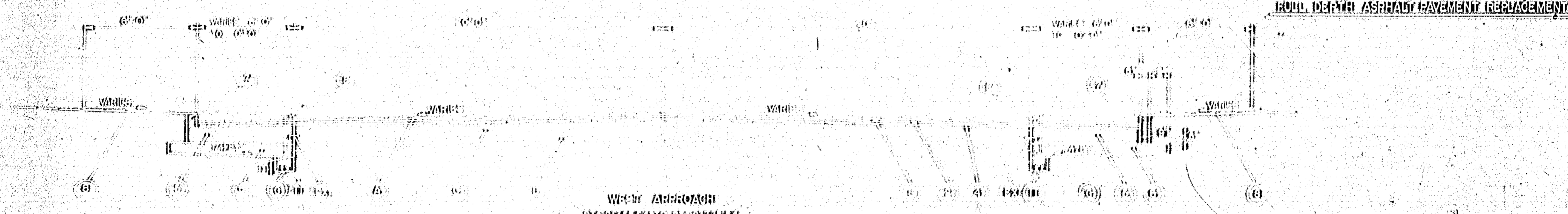
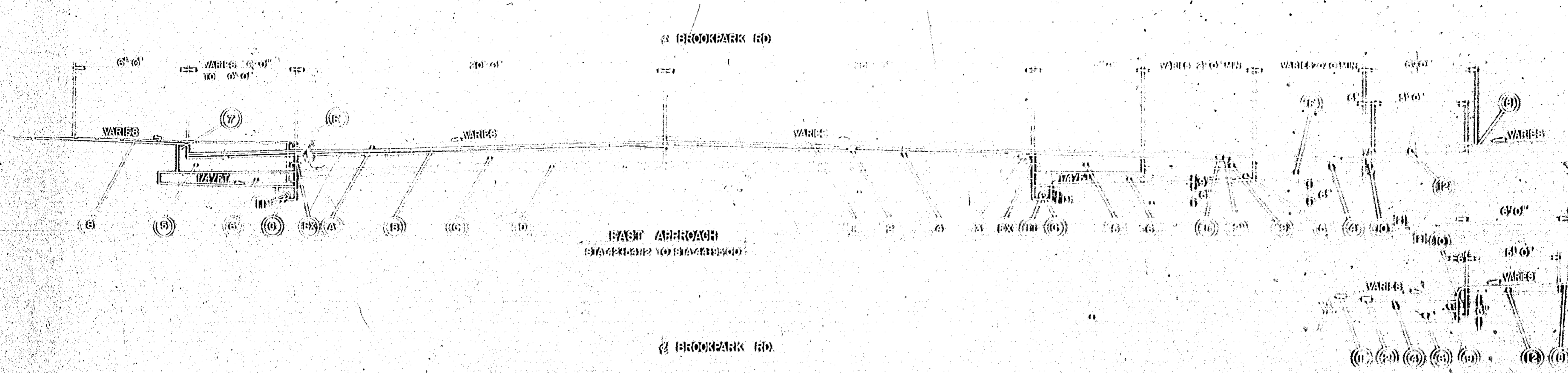
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BY	...
CHECKED BY	...
APPROVED BY	...

CONTRACT NO. 17-123
SHEET NO. 1234



TYPICAL SECTIONS

TYPE 404



- EXISTING PAVEMENT PROFILE**
- (1) 1/2" (12.5mm) ASPHALT SURFACE
 - (2) 1" (25mm) ASPHALT SURFACE
 - (3) 1" (25mm) ASPHALT SURFACE
 - (4) 1" (25mm) ASPHALT SURFACE
 - (5) 1" (25mm) ASPHALT SURFACE
 - (6) 1" (25mm) ASPHALT SURFACE
 - (7) 1" (25mm) ASPHALT SURFACE
 - (8) 1" (25mm) ASPHALT SURFACE
 - (9) 1" (25mm) ASPHALT SURFACE
 - (10) 1" (25mm) ASPHALT SURFACE
 - (11) 1" (25mm) ASPHALT SURFACE
 - (12) 1" (25mm) ASPHALT SURFACE
 - (13) 1" (25mm) ASPHALT SURFACE
 - (14) 1" (25mm) ASPHALT SURFACE
 - (15) 1" (25mm) ASPHALT SURFACE
 - (16) 1" (25mm) ASPHALT SURFACE
 - (17) 1" (25mm) ASPHALT SURFACE
 - (18) 1" (25mm) ASPHALT SURFACE
 - (19) 1" (25mm) ASPHALT SURFACE
 - (20) 1" (25mm) ASPHALT SURFACE
- NEW PAVEMENT PROFILE**
- (1) 1/2" (12.5mm) ASPHALT SURFACE
 - (2) 1" (25mm) ASPHALT SURFACE
 - (3) 1" (25mm) ASPHALT SURFACE
 - (4) 1" (25mm) ASPHALT SURFACE
 - (5) 1" (25mm) ASPHALT SURFACE
 - (6) 1" (25mm) ASPHALT SURFACE
 - (7) 1" (25mm) ASPHALT SURFACE
 - (8) 1" (25mm) ASPHALT SURFACE
 - (9) 1" (25mm) ASPHALT SURFACE
 - (10) 1" (25mm) ASPHALT SURFACE
 - (11) 1" (25mm) ASPHALT SURFACE
 - (12) 1" (25mm) ASPHALT SURFACE
 - (13) 1" (25mm) ASPHALT SURFACE
 - (14) 1" (25mm) ASPHALT SURFACE
 - (15) 1" (25mm) ASPHALT SURFACE
 - (16) 1" (25mm) ASPHALT SURFACE
 - (17) 1" (25mm) ASPHALT SURFACE
 - (18) 1" (25mm) ASPHALT SURFACE
 - (19) 1" (25mm) ASPHALT SURFACE
 - (20) 1" (25mm) ASPHALT SURFACE

GENERAL NOTES



CUYAHOGA COUNTY
CIVIL ENGINEER
NO. 2113



FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 600 SQ. FT. OF FLOOR SPACE. PAYMENT SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 619 FIELD OFFICE.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON USGS. DATUM.

UNDERGROUND UTILITIES

THE LOCATIONS OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 163.02 OR.

EXISTING TYPICAL SECTIONS

EXISTING TYPICAL SECTIONS HAVE BEEN TAKEN FROM RECORDS AND ARE BELIEVED TO REPRESENT THE EXISTING PAVEMENTS BUT THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF SAME.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

DEPARTMENT OF PUBLIC UTILITIES
DIVISION OF WATER AND HEAT
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
(216) 271-4226

OHIO HEAT STEAMBOAT COMPANY
620 SUPERIOR AVENUE
CLEVELAND, OHIO 44115
(216) 522-6024

DEPARTMENT OF PUBLIC SAFETY
DIVISION OF TRAFFIC ENGINEERING
AND PARKING
2001 FRANK AVENUE
CLEVELAND, OHIO 44115
(216) 624-5124

EAST OHIO GAS COMPANY
1201 EAST 154TH STREET
CLEVELAND, OHIO 44130
(216) 831-2424

DEPARTMENT OF PUBLIC SERVICE
DIVISION OF ENGINEERING
PLANS AND SURVEYS
ROOM 519 CITY HALL
601 LAKESIDE AVENUE
CLEVELAND, OHIO 44115
(216) 624-2231

CLEVELAND ECONOMIC DEVELOPMENT
53 PUBLIC SQUARE
CLEVELAND, OHIO 44114
(216) 624-2100

DIVISION OF AIRPORTS
CLEVELAND HOPKINS INTERNATIONAL AIRPORT
212256000

CLEVELAND POLICE DEPARTMENT
TRAFFIC DIVISION
1200 ONTARIO STREET
CLEVELAND, OHIO 44115
(216) 624-1000

CITY OF FAIRVIEW PARK
CITY HALL 21222200
PARK DEPARTMENT 21222200

REGIONAL TRANSIT AUTHORITY
610 SUPERIOR AVENUE, 11TH
FLOOR
CLEVELAND, OHIO 44115
(216) 624-2100

CLEVELAND METROPOLITAN
TRANSIT AUTHORITY
610 SUPERIOR AVENUE, 11TH
FLOOR
CLEVELAND, OHIO 44115
(216) 624-2100

MAINTENANCE OF TRAFFIC

WHERE THE WORK CALLED FOR UNDER THIS CONTRACT INVOLVES THE CLOSING OF STREETS OR THE REDUCING OF TRAFFIC, THE CONTRACTOR SHALL PROCEED TO THE FULLEST EXTENT THE WORK INVOLVED SO AS TO REDUCE TO A MINIMUM THE LENGTH OF TIME THE ROADWAY WILL BE CLOSED TO TRAFFIC. NO STREET WILL BE CLOSED TO TRAFFIC OR PARTIALLY UNTIL NECESSARY FOR CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY OF CLEVELAND TRAFFIC ENGINEERING DIVISION THE CITY OF FAIRVIEW PARK AND THE PROJECT ENGINEER IN WRITING (AND FOURTEEN DAYS IN ADVANCE OF ANY CLOSING OR PARTIAL CLOSING OF AN EXISTING STREET. ALL TRAFFIC CONTROL MEASURES SHALL COMPLY WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). NO RESERVANT OR TEMPORARY ROAD CAN BE OPENED TO TRAFFIC UNTIL ALL TRAFFIC MARKING AND TRAFFIC CONTROL DEVICES ARE INSTALLED IN ACCORDANCE WITH THE MUTCD.

THE CONTRACTOR WILL BE PERMITTED TO CLOSE SIDEWALKS FOR A MAXIMUM PERIOD OF 24 MONTHS DURING WHICH TIME TRAFFIC WILL BE DIVERTED AS SHOWN ELSEWHERE IN THE PLANS (SEE SHEET NO. 111).

LOCAL ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES. VEHICULAR AND PEDESTRIAN TRAFFIC WILL BE MAINTAINED AT ALL TIMES ON THE MAIN UNDERPASS ROADWAY FOR MAINTENANCE OF TRAFFIC INVOLVING THE CLEVELAND METROPOLITAN SYSTEM (SEE SHEET NO. 111).

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER.

ITEM 410 TRAFFIC CONTROL SURFACE, TYPE A OR B	10,000 YD
ITEM 619 GRANULUM SIDEWALK	10,000 YD
ITEM 618 WATER	10,000 GAL

UNDERPASS

WHERE EXISTING UNDERPASSES ARE ENCOUNTERED AND NO PROVISION HAS BEEN MADE FOR NEW UNDERPASSES, THEY SHALL BE CONNECTED TO NEW UNDERPASSES TO BE INSTALLED. A QUANTITY OF 100 FEET HAS BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR THAT PURPOSE. THE MATERIALS SHALL NOT BE ORDERED BY THE CONTRACTOR UNLESS APPROVED IN WRITING FROM THE PROJECT ENGINEER. NEW UNDERPASSES SHALL BE CONNECTED TO EXISTING UNDERPASSES TO BE USED AS DIRECTED BY THE ENGINEER.

CONCRETE QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIAL OR LABOR FOR CONCRETE WORK UNLESS SET UP TO BE USED AS DIRECTED BY THE ENGINEER UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK QUANTITIES AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A PART OF RECORD BY INCORPORATION INTO THE FINAL CHANGEORDER COVERING COMPLETION OF THIS PROJECT.

RECORDS TO BE KEPT

THE CONTRACTOR SHALL KEEP ALL RECORDS RELATING TO THE WORK OF THIS PROJECT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT. THE CONTRACTOR SHALL KEEP ALL RECORDS RELATING TO THE WORK OF THIS PROJECT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT. THE CONTRACTOR SHALL KEEP ALL RECORDS RELATING TO THE WORK OF THIS PROJECT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.

CONCRETE

THE CONTRACTOR SHALL MAINTAIN RECORDS OF ALL CONCRETE WORK DONE ON THE PROJECT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT. THE CONTRACTOR SHALL MAINTAIN RECORDS OF ALL CONCRETE WORK DONE ON THE PROJECT IN ACCORDANCE WITH THE TERMS OF THE CONTRACT.

ITEM 620 STORM SEWER CLEANING

AS PART OF THIS CONTRACT IT WILL BE NECESSARY TO CLEAN AND INSPECT THE EXISTING STORM SEWER IN MERRY COURT FROM FROM THE GUY W. B. B. AT GUY W. B. B. STATION TO THE MANHOLE AT GUY W. B. B. STATION. STORM SEWER CLEANING SHALL BE DONE AT THE CITY AND GUY W. B. B. STATION. IT IS DETERMINED THAT ALL CITY AND GUY W. B. B. STATION HAS BEEN REMOVED TO THE SATISFACTION OF THE ENGINEER. ALL MATERIALS THAT ARE TO BE ADJUSTED OR RECONSTRUCTED TO GUY W. B. B. STATION. ALL MATERIALS THAT ARE TO BE ADJUSTED OR RECONSTRUCTED TO GUY W. B. B. STATION. ALL MATERIALS THAT ARE TO BE ADJUSTED OR RECONSTRUCTED TO GUY W. B. B. STATION.

PAYMENT FOR CLEANING OF THE CONDUIT SHALL BE AT THE CONTRACTOR'S RISK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF STORM SEWER CLEANING, WHICH SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE STORM SEWER CLEANING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF STORM SEWER CLEANING, WHICH SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE STORM SEWER CLEANING.

AN ESTIMATED QUANTITY OF 10,000 YD OF "ITEM 620 STORM SEWER CLEANING" WAS INCLUDED IN THE GENERAL SUMMARY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF STORM SEWER CLEANING, WHICH SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE STORM SEWER CLEANING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF STORM SEWER CLEANING, WHICH SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR THE STORM SEWER CLEANING.

ITEM 620 STORM SEWER CLEANING	10,000 YD
ITEM 621 STORM SEWER CLEANING	10,000 YD
ITEM 622 STORM SEWER CLEANING	10,000 YD

NONE OF THE ABOVE MATERIALS SHALL BE ORDERED BY THE CONTRACTOR UNLESS AS DIRECTED BY THE ENGINEER.

ITEM 623 WATERWORK

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF WATERWORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF WATERWORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF WATERWORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF WATERWORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COST OF WATERWORK.

ITEM 623 WATERWORK	10,000 YD	10,000 YD	10,000 YD
ITEM 624 WATERWORK	10,000 YD	10,000 YD	10,000 YD
ITEM 625 WATERWORK	10,000 YD	10,000 YD	10,000 YD
ITEM 626 WATERWORK	10,000 YD	10,000 YD	10,000 YD

GENERAL NOTES

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT, AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF THE EXISTING SEWERS WITHIN THE WORK LIMITS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTIONS SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, TRUNKS, CATCH BASINS AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE. ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE-MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE CONDUIT ITEMS OF THE CONTRACT.

TEMPORARY EROSION AND SEDIMENT CONTROL

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR EROSION AND SEDIMENT CONTROL MEASURES:

ITEM 207 - TEMPORARY SEEDING AND MULCHING	200 BAY
ITEM 207 - STRAW OR HAYBALES	100 EA.
ITEM 659 - REPAIR SEEDING AND MULCHING	60 BAY
ITEM 659 - COMMERCIAL FERTILIZER	6000 TONS
ITEM 659 - WATER	11 MGAL.
ITEM 659 - MOWING	22 MOWS

WATERING AND MOWING PERMANENT SEEDING AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER TO PROMOTE GROWTH AND TO CARE FOR THE PERMANENT SEEDING AREAS, AS REQUIRED:

659 WATER	11 MGAL.
659 MOWING	22 MOWS

EROSION CONTROL

ITEMS 601 AND 602 ARE PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO MAKE ANY OF THESE ITEMS, AND TUFF OF A STABLE NATURE WILL NOT BE REMOVED IN ORDER TO MAKE 602. THE ENGINEER SHALL CHECK AND NOTIFY QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES FOR THESE ITEMS WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION.

ITEM 660 SODDING, AS PER PLAN

PAYMENT FOR PREPARING SODDED AREAS SHALL ALSO INCLUDE A 2" TOP SOIL (CONTAINING UNDERNEATH THE SOIL, CONSISTING OF POSSIBLE, HEAVY, TOYAL SOIL, WHICH IS A Mixture OF SUBSOIL OR CLAY).

SEEDING AND MOWING PERMANENT SEEDING AREAS

THE FOLLOWING ESTIMATED QUANTITIES ARE TO BE USED AS DIRECTED BY THE ENGINEER FOR SEEDING AND MOWING PERMANENT SEEDING AREAS:

659 COMMERCIAL FERTILIZER	6000 TONS
659 AGRICULTURAL MOWING	22 MOWS

CONCRETE JOINTS IN BASE WIDENING

WHERE NEW CONCRETE BASE IS PLACED ADJACENT TO EXISTING CONCRETE BASE, CONCRETE JOINTS SHALL BE PROVIDED IN THE NEW BASE SO AS TO FORM A CONTINUOUS JOINT WITH THAT IN THE EXISTING BASE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN NEW BASE SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING 1024. IF NECESSARY, ADDITIONAL JOINTS SHALL BE PROVIDED IN NEW BASE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

CONNECTION TO EXISTING SEWER

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING SEWER BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE RESPECTIVE CONDUIT ITEMS.

ITEM 602 MANHOLES

THE LOCATION AND COVER ACCEPTANCE OPERATIONS SHALL BE AS DESCRIBED BY THE STANDARD CONSTRUCTION DRAWING 1024. THE QUANTITIES INDICATED ARE BASED ON STANDARD CONSTRUCTION DRAWING 1024. THE QUANTITIES INDICATED ARE BASED ON STANDARD CONSTRUCTION DRAWING 1024.

LOCATION OF MANHOLES

THE LOCATIONS OF GUARDRAIL BARS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE ADVISED WHEN ANY ADJUSTMENTS WILL AFFECT MAXIMUM PROTECTION FOR TRAFFIC.

GRADE AND ALIGNMENT

THE PROPOSED ELEVATION SHALL BE IN ACCORDANCE WITH THE EXISTING ELEVATION. ORIGINAL CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROPOSED GRADE ARE ON FILE FOR INSPECTION IN THE OFFICE OF THE ENGINEER. THE PROPOSED GRADE IS SUBJECT TO CHANGE.

ITEM 601 MANHOLES WITH SEEDING, GRASS AND COVER

ITEM 601 MANHOLES WITH SEEDING, GRASS AND COVER SHALL BE AS PER PLAN. THE QUANTITIES INDICATED ARE BASED ON STANDARD CONSTRUCTION DRAWING 1024.

ITEM 602 MANHOLES WITH SEEDING AND COVER

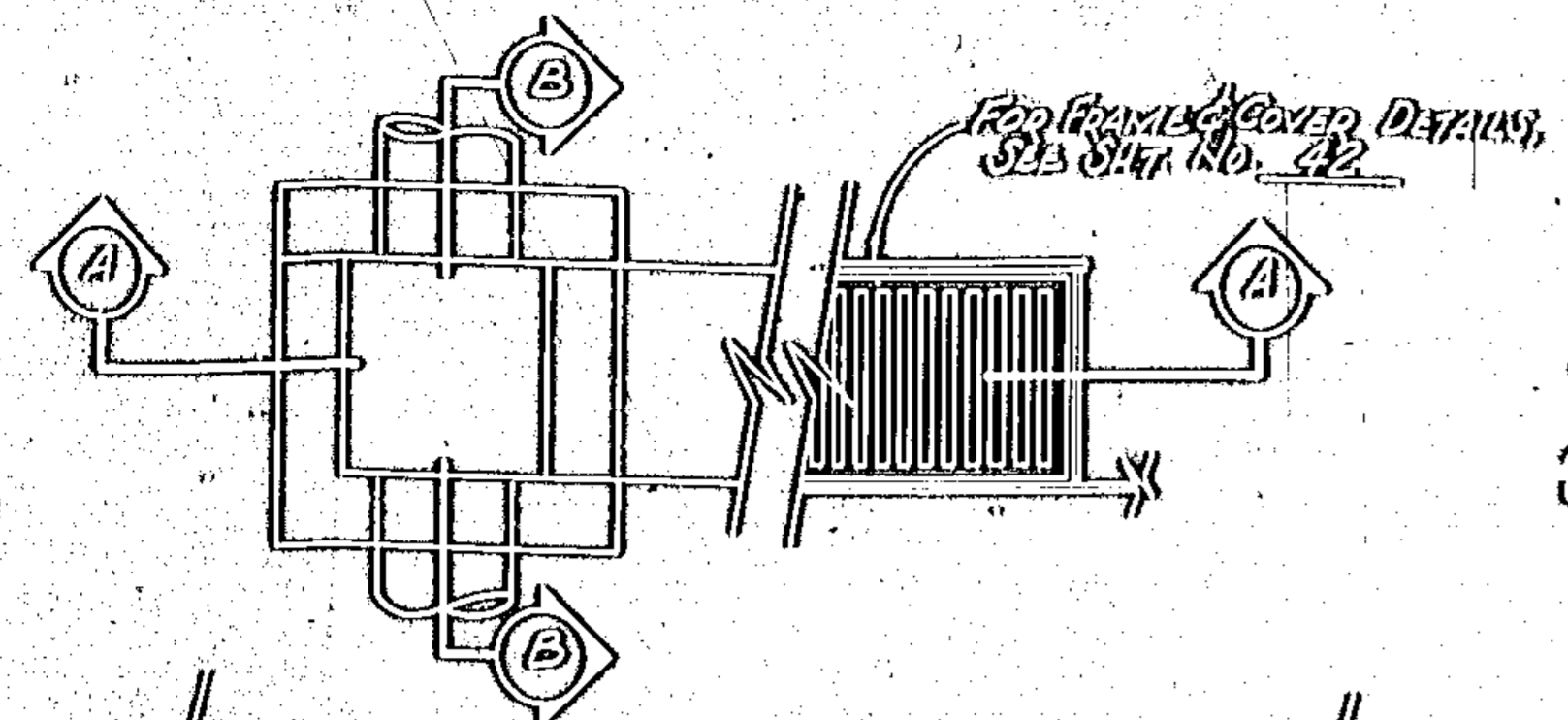
THE CONTRACTOR SHALL FURNISH AND INSTALL COVER EACH MANHOLE WITH SEEDING AT THE LOCATION SHOWN ON THE PLANS. THE QUANTITIES INDICATED ON THE PLANS SHALL BE CAREFULLY LOCATED OVER THE MANHOLE AND SHALL BE SET TRUE AND TRUE TO ELEVATION AS REQUIRED.

CAST IRON SHALL BE USED FOR MANHOLES AND WITH NO SEEDING REQUIREMENT AS TO GRADE.

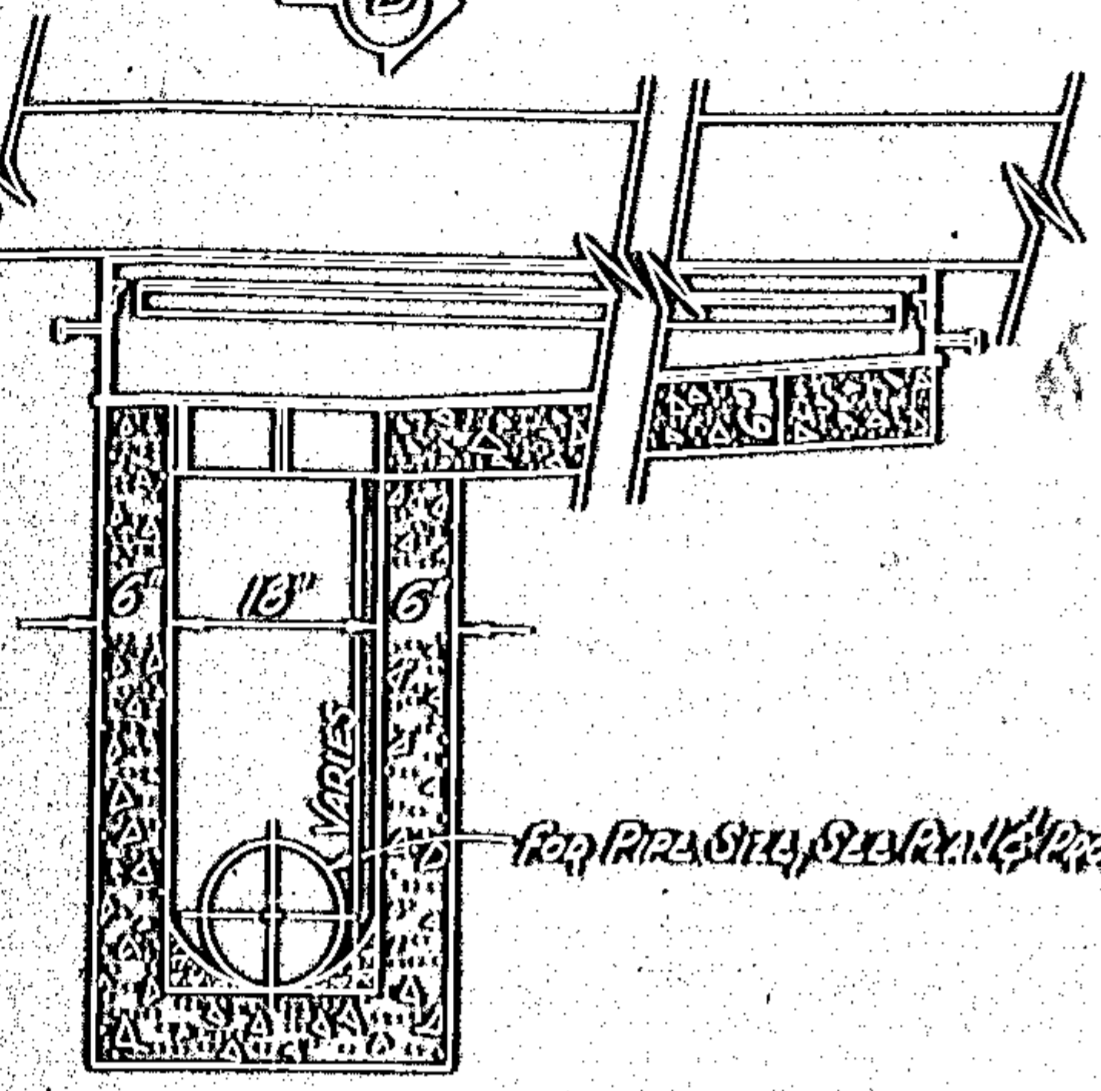
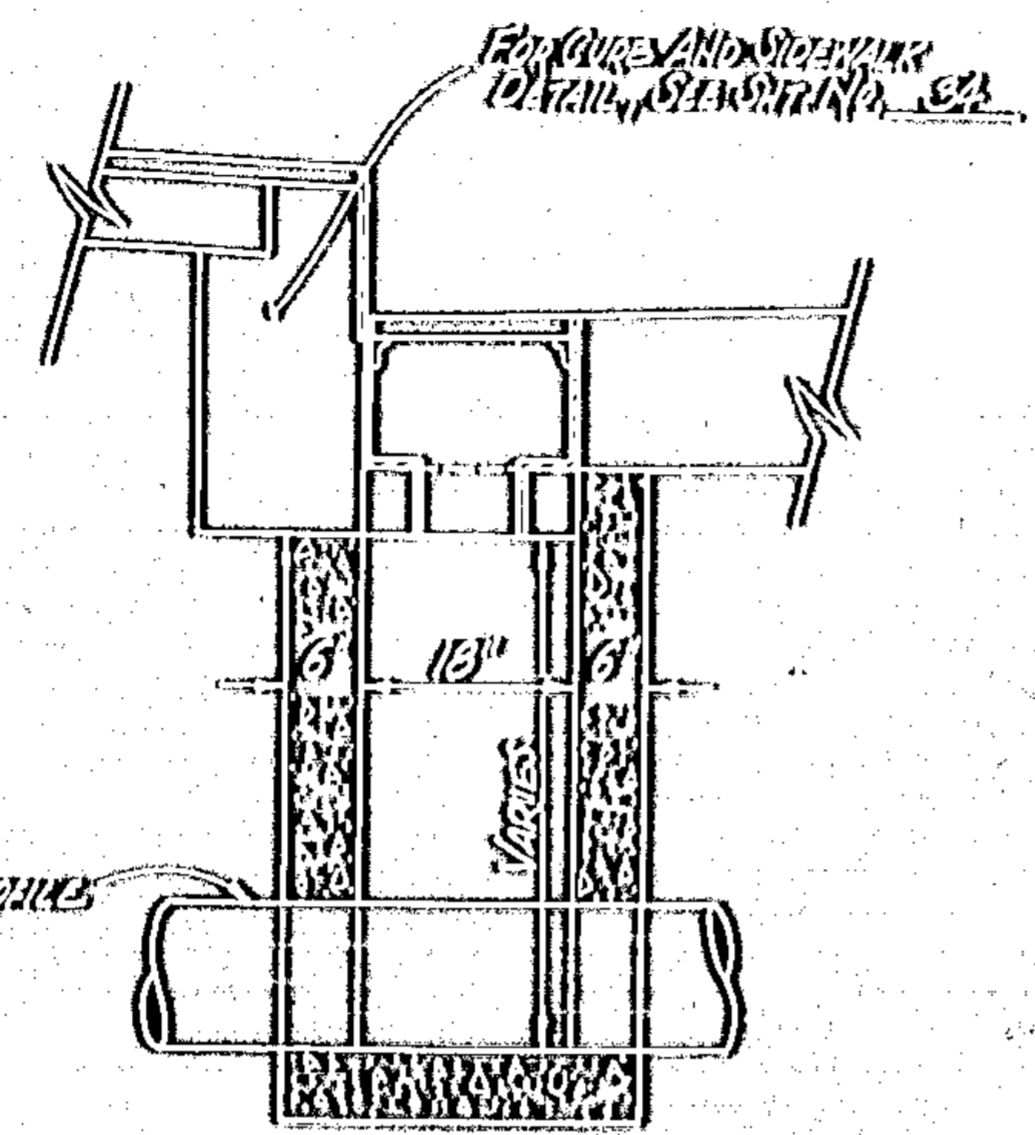
PAYMENT FOR MANHOLE AND COVER SHALL BE THE UNIT PRICE BID FOR THE MANHOLE WORK COVERED BY THEM.

GENERAL SUMMARY

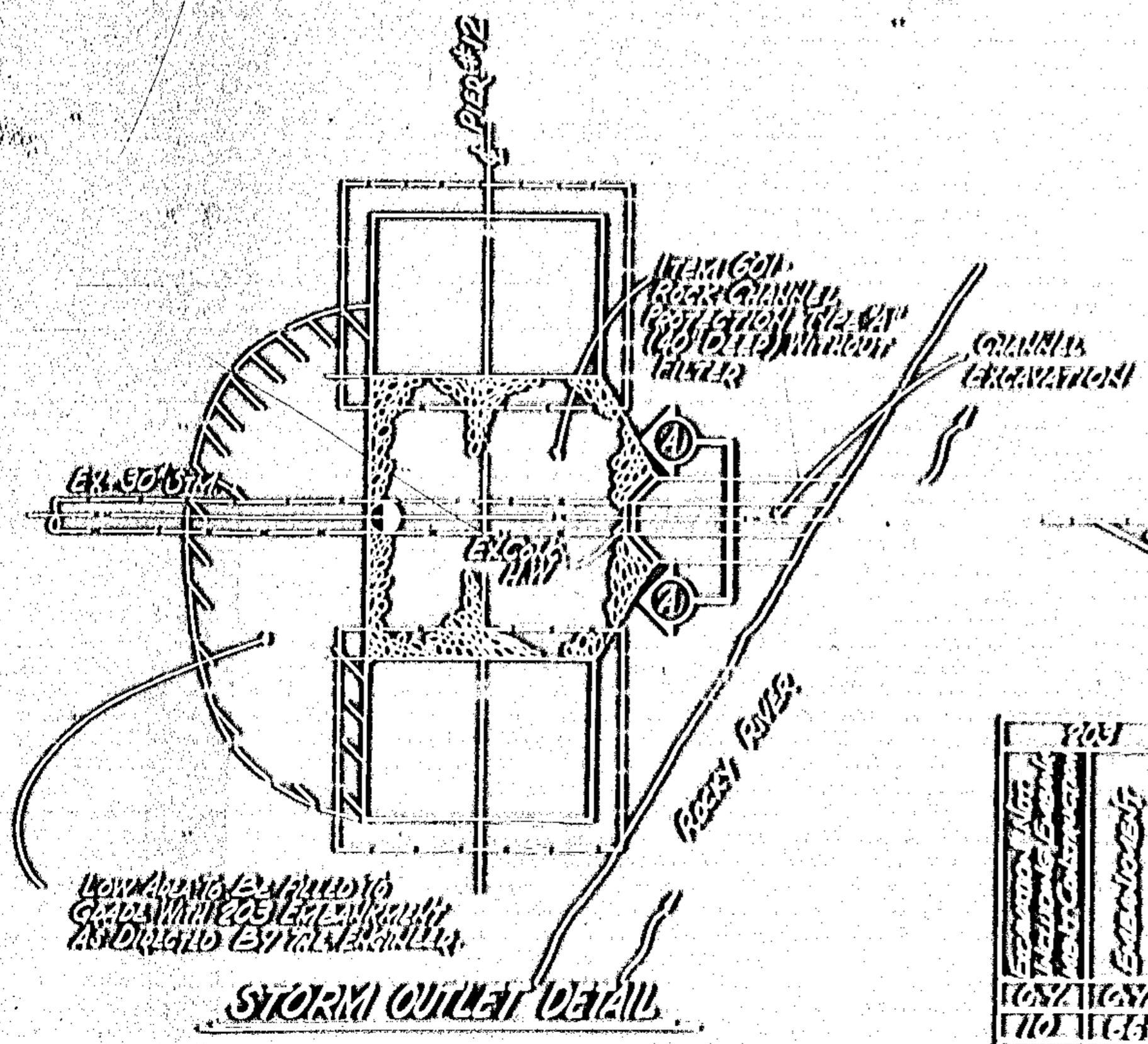
ITEM	SHEET NUMBERS				GRAND TOTAL	UNIT	DESCRIPTION
	4	9	10	13			
							PAVEMENT
301			10		10	301	FLUORINATED AGGREGATE BASE, APPROXIMATE
303			410		410	303	CONCRETE BASE
310			102		102	310	SUBBASE, TYPE III
402			101		101	402	ASPHALT CONCRETE, AG 20
403			62		62	403	ASPHALT CONCRETE, AG 20
404			72		72	404	ASPHALT CONCRETE, AG 20
407			203		203	407	TAR COAT
407			9		9	407	COVER/AGGREGATE
609			603		603	609	CURB, STANDARD TYPE 2E
609			103		103	609	CURB, STANDARD TYPE C
611			203		203	611	REINFORCED CONCRETE APPROACH WALL, MODIFIED AS PER DRAWING
620		47	13		100	620	REINFORCED CONCRETE APPROACH WALL, MODIFIED AS PER DRAWING
							WATER WORK
6021		11			11	6021	RECONSTRUCT MANHOLE TO GRADE AS PER PLAN
6021		11			11	6021	WATER BOX AND COVER
6021		11	11		11	6021	ADJUST WATER BOX TO GRADE
6021		11	11		11	6021	ADJUST MANHOLE RING AND COVER TO GRADE
							CONTINUED
							SEE SHEET NO. 12 FOR GENERAL SUMMARY
							TRAFFIC CONTROL
621				27	27	621	WALK SIGN
621				27	27	621	CONSTRUCTION SIGN
621				27	27	621	CONSTRUCTION SIGN
621				27	27	621	CONSTRUCTION SIGN
							CONTINUED
							SEE SHEET NO. 12 FOR GENERAL SUMMARY
622					100	622	CONSTRUCTION SIGN
622					100	622	CONSTRUCTION SIGN
622					100	622	CONSTRUCTION SIGN
622					100	622	CONSTRUCTION SIGN



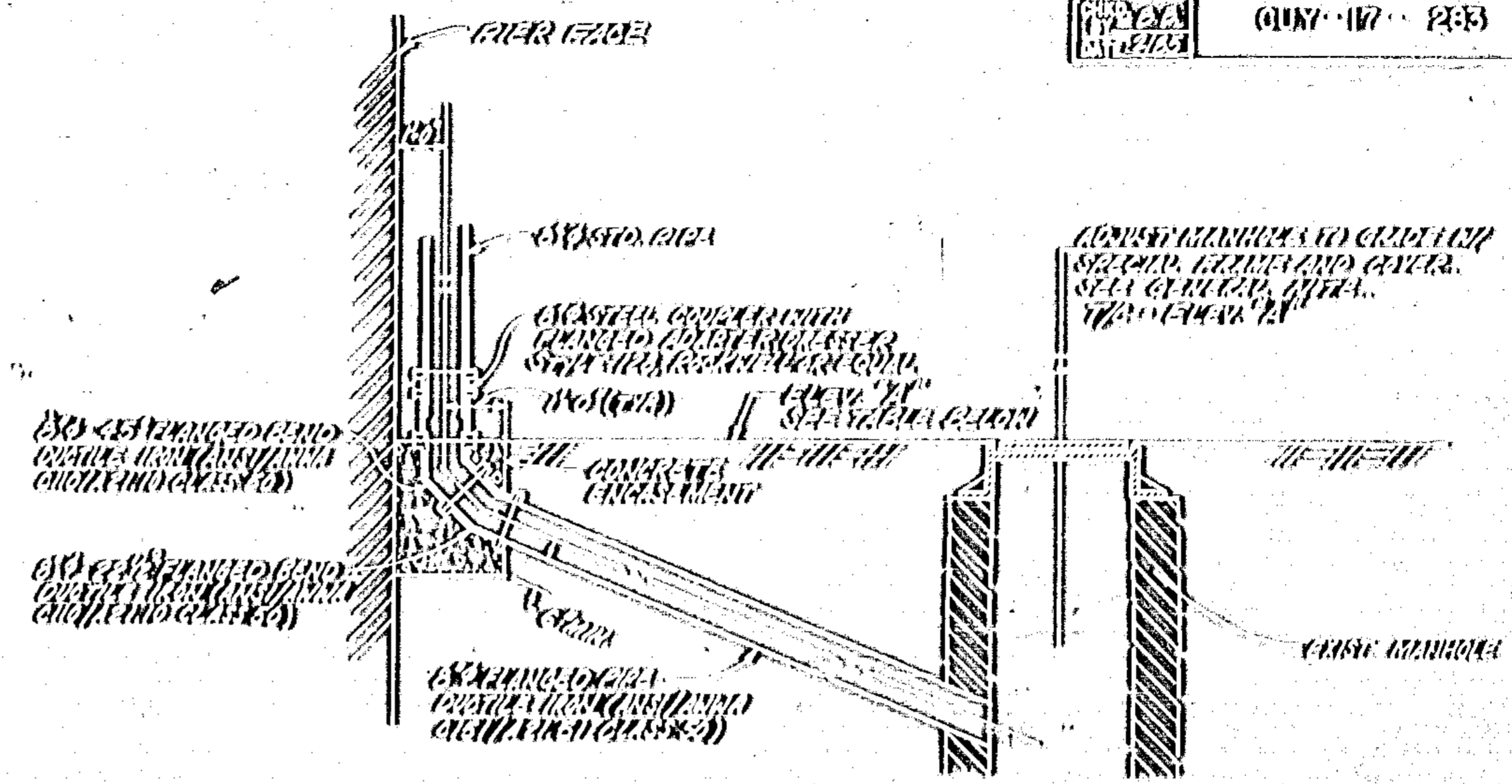
NOTES:
 FOR CURB, FRAME
 AND EXPOSED PARTS
 SEE SHEET NO. 22



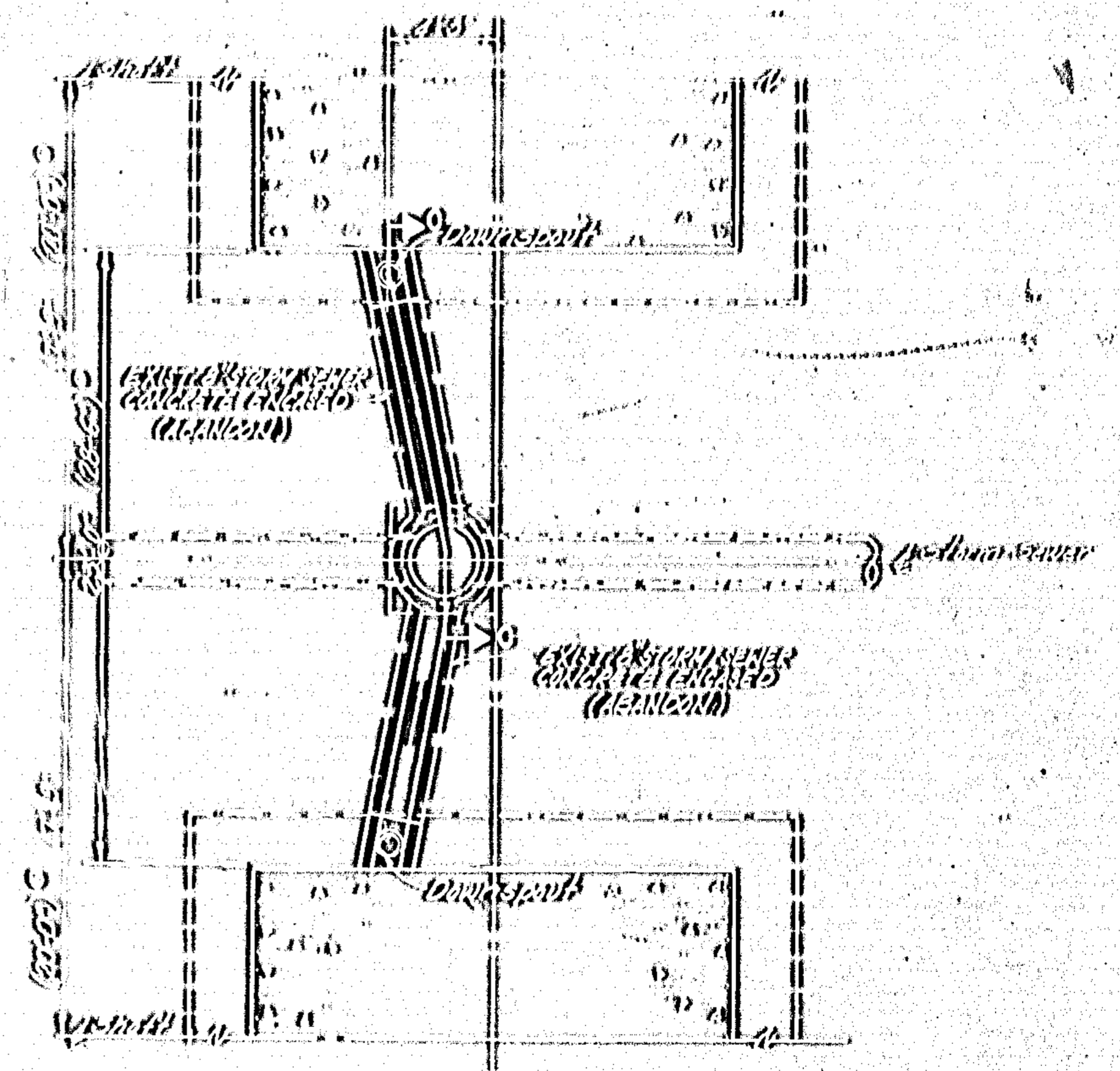
CURB CATCH BASIN DETAIL
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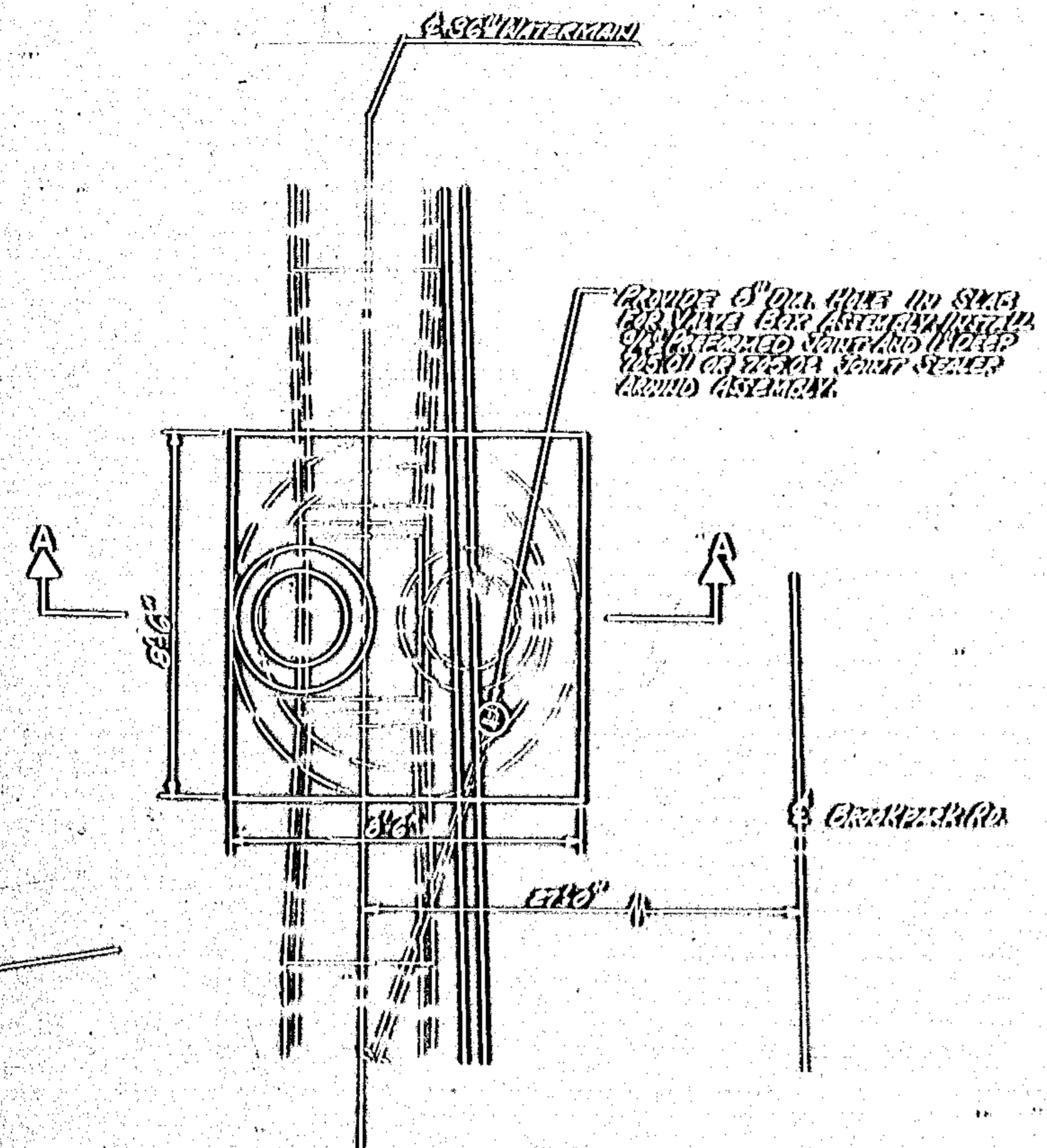
NO.	DESCRIPTION	AMOUNT	UNIT
1	CONCRETE		
2	IRON		
3	STEEL		
4	PAVEMENT		
5	GRASS		
6	WOOD		
7	BRICK		
8	GLASS		
9	ROOFING		
10	PLASTER		
11	PAINT		
12	WATER		
13	ELECTRICITY		
14	TELEPHONE		
15	SEWER		
16	WATER		
17	WATER		
18	WATER		
19	WATER		
20	WATER		



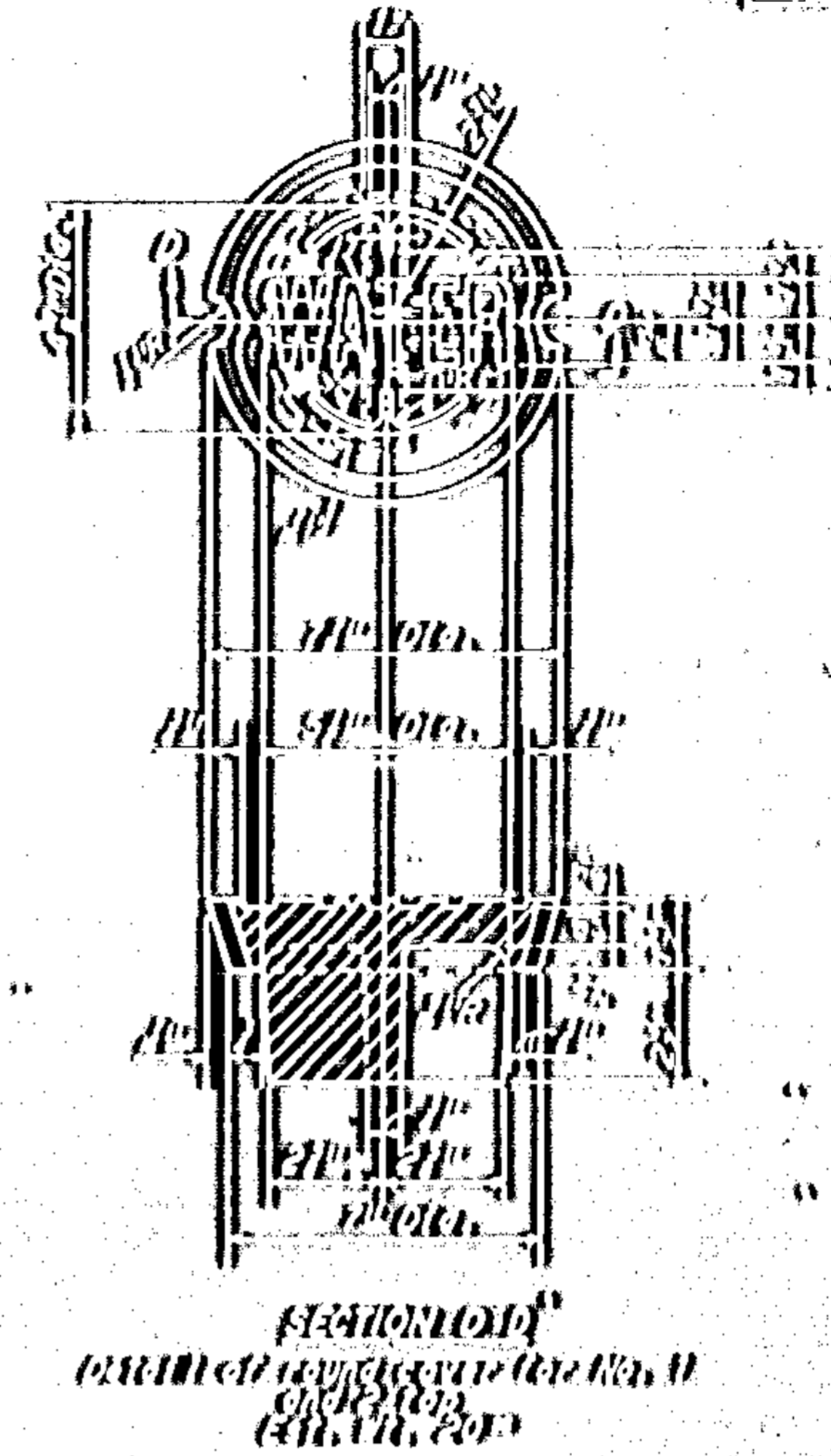
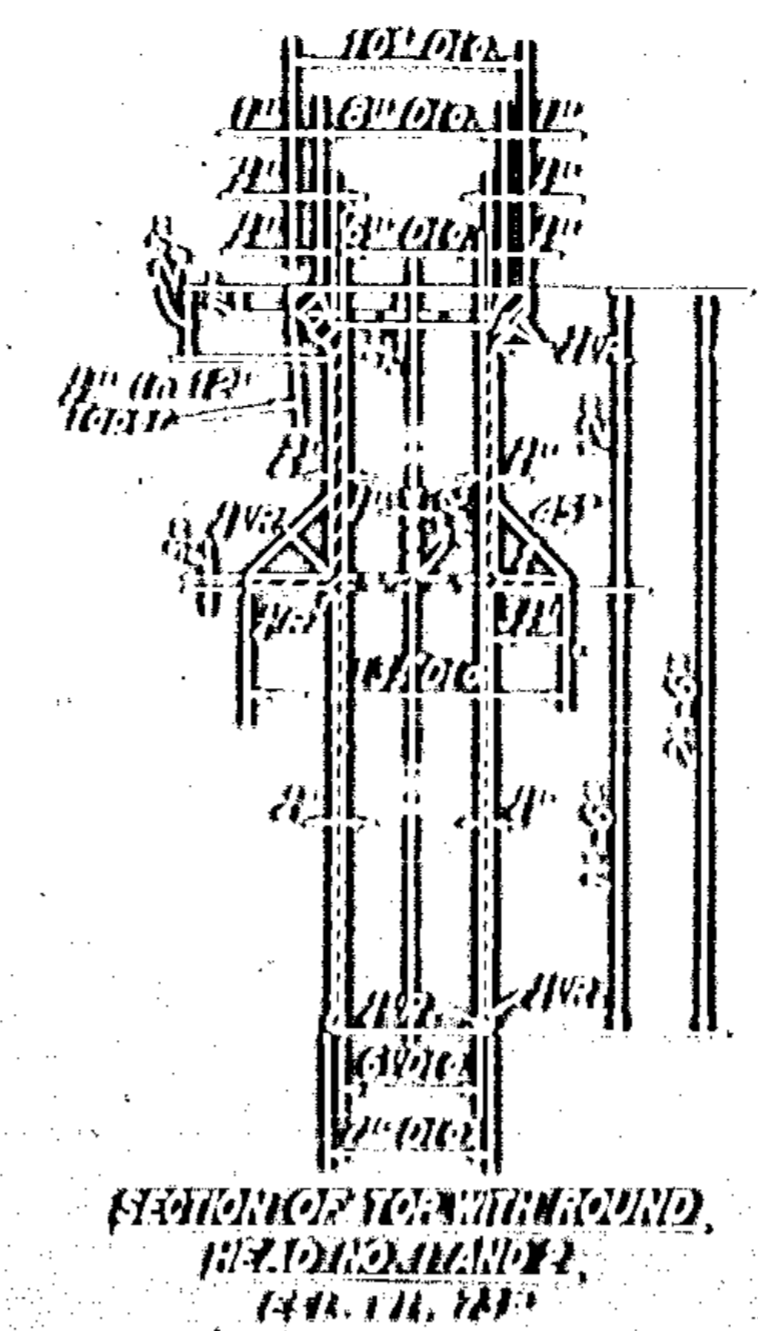
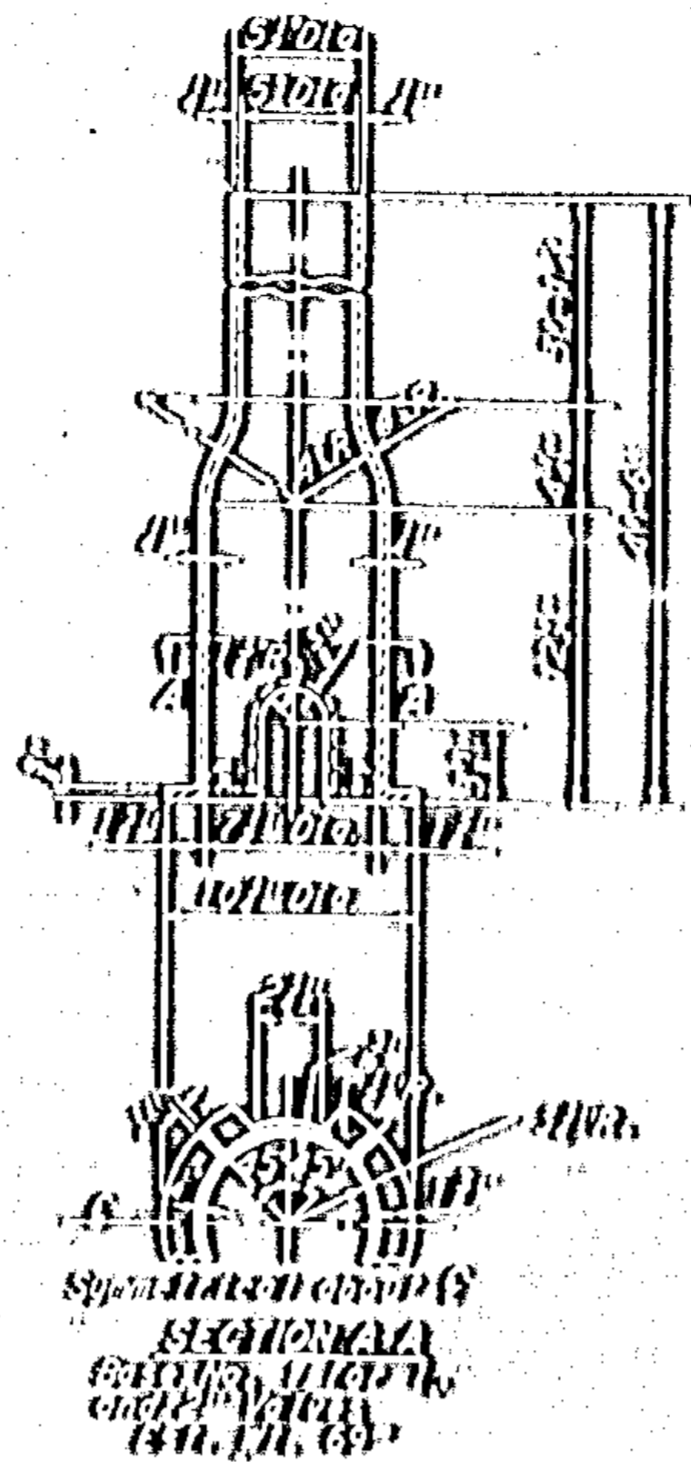
NOTES:
 FOR CURB, FRAME
 AND EXPOSED PARTS
 SEE SHEET NO. 22



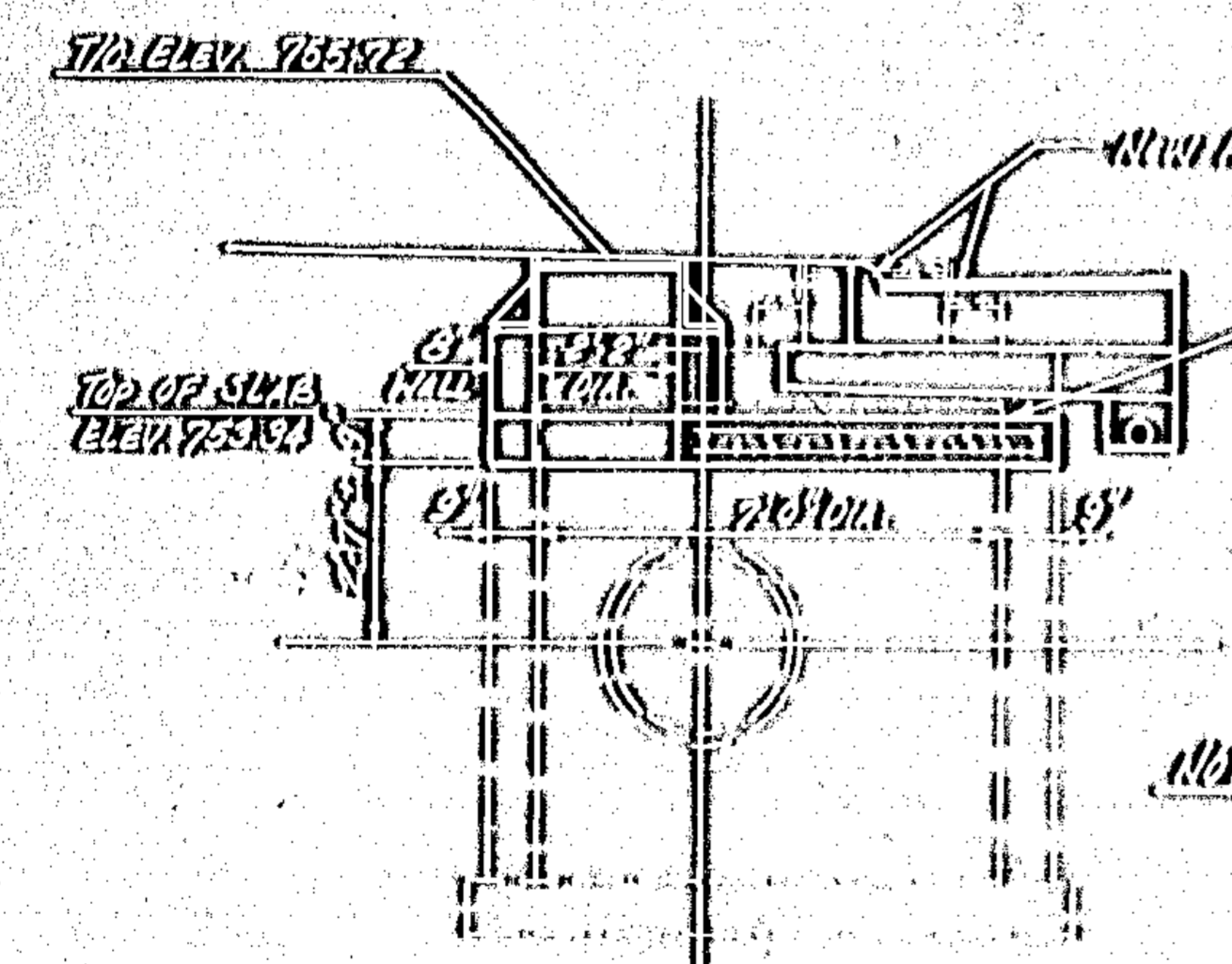
NO.	DESCRIPTION	AMOUNT	UNIT
1	CONCRETE		
2	IRON		
3	STEEL		
4	PAVEMENT		
5	GRASS		
6	WOOD		
7	BRICK		
8	GLASS		
9	ROOFING		
10	PLASTER		
11	PAINT		
12	WATER		
13	ELECTRICITY		
14	TELEPHONE		
15	SEWER		
16	WATER		
17	WATER		
18	WATER		
19	WATER		
20	WATER		



PROVIDE 2" DIA. HOLES IN SILEX FOR VALVE AND INSTRUMENT PIPES TO BE INSTALLED. VALVE AND INSTRUMENT PIPES TO BE INSTALLED FROM SEWER BRIND ASSEMBLY.



STANDARD DIMENSIONS (INCHES)



SECTION A-A
 (WHOLE RECONSTRUCTED)
 10/25/23
 J.E.S.

NOTE: ALL DIMENSIONS SHOWN IN THIS DRAWING ARE TO BE TAKEN FROM THE TOP OF THE SILEX BEARING SURFACE UNLESS OTHERWISE SPECIFIED.

NOTE: ALL DIMENSIONS SHOWN IN THIS DRAWING ARE TO BE TAKEN FROM THE TOP OF THE SILEX BEARING SURFACE UNLESS OTHERWISE SPECIFIED.

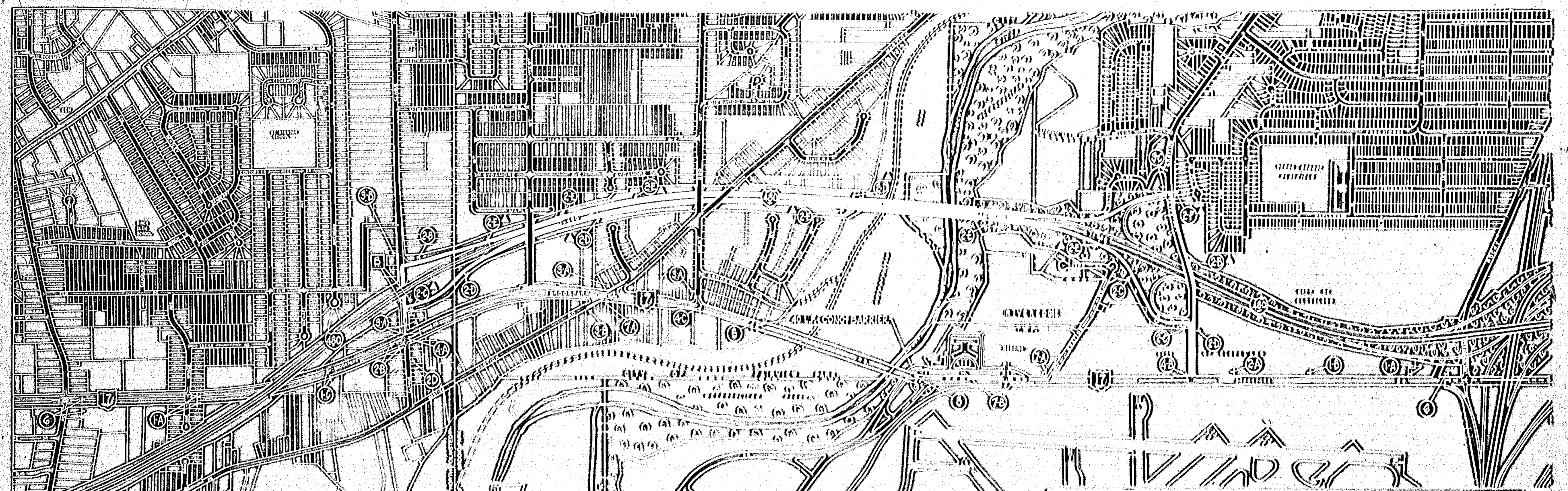
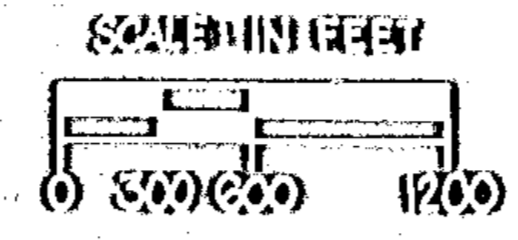
NOTE: ALL DIMENSIONS SHOWN IN THIS DRAWING ARE TO BE TAKEN FROM THE TOP OF THE SILEX BEARING SURFACE UNLESS OTHERWISE SPECIFIED.

DETOUR PLAN

DATE: _____
 DRAWN BY: _____
 CHECKED BY: _____
 SCALE: 1" = 1000'
 SHEET NO. 17

QUAYHOGA COUNTY
 DIST. 17 (BROOK PARK RD)

- NOTES:**
- (A) ESTIMATED QUANTITIES ARE FOR INFORMATION ONLY. ALL ITEMS ARE TO BE QUOTED IN UNIT AND QUANTITIES FOR THE CONTRACTOR'S OFFER.
 - (B) REMOVE EXISTING CURB (SHOWING STRIPS (DIMENSIONS) SHOWN NORTH OF C&E. (ENTRANCE) ONLY.



- (1) DETOUR SIGN
- (2) ADVANCE SIGN
- (3) AHEAD SIGN
- (4) ROAD CLOSED SIGN
- (5) ONE WAY SIGN
- (6) ROAD CLOSED SIGN
- (7) ROAD CLOSED SIGN
- (8) ROAD CLOSED SIGN
- (9) ROAD CLOSED SIGN
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- (21) ROAD CLOSED SIGN
- (22) ROAD CLOSED SIGN
- (23) ROAD CLOSED SIGN

LOCATION	ESTIMATED QUANTITIES												
	BRIDGE	CONCRETE	ASPH	PAV	GRAVEL	CRACK	SEWER	WATER	MANHOLE	STAKE	POST	CONCRETE	MEASUREMENT
1													
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SPECIFICATIONS

THESE NOTES ARE SUPPLEMENTAL TO ITEMS 625 AND 740 OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REFERENCE SHALL BE MADE TO STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET OF THESE PLANS.

UTILITIES

SEE SHEET NO. 4

625.00 - GENERAL

THE POWER SUPPLYING AGENCY FOR THIS PROJECT IS -

THE CLEVELAND ELECTRIC ILLUMINATING COMPANY,
 ILLUMINATING BUILDING
 CLEVELAND, OHIO 44103

THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF 5% VOLTAGE DROP PERMISSIBLE ON BRANCH CIRCUITS. THE PROJECT WILL BE GIVEN 120 VOLT CONTROLLED TWO WIRE SECONDARY SERVICE ONE SIDE GROUNDING FROM THE CLEVELAND ELECTRIC ILLUMINATING COMPANY.

THIS PROJECT HAS BEEN DESIGNED ON THE BASIS OF FULL DUCTING WITH 1.2 FOOT CANONS AVERAGE MINIMAL ILLUMINATION WITH A MAXIMUM UNIFORMITY RATIO OF 4.0 TO 1.0, FOR CONVENTIONAL UNITS.

625.07 - TABLE LUMINAIRES

TABLE LUMINAIRES SHALL HAVE SINGLE RATED 120 VOLT, 250 WATT INTEGRAL REGULATOR BALLASTS FOR USE WITH HIGH PRESSURE SODIUM LAMPS AND SHALL BE GENERAL ELECTRIC (GEO.), GEOSIA, HINDS OR TUDOR, TAT AMERICAN (TAT), OR EQUIV. APPROVED BY THE ENGINEER. A PHOTO ELECTRIC CELL IS REQUIRED ON ALL 120 VOLT UNITS.

TABLE LAMPS

HIGH PRESSURE SODIUM LAMPS SHALL BE GENERAL ELECTRIC "MERCURY", GEOSIA "MERCURY", TUDOR "MERCURY", OR EQUIV. APPROVED BY THE ENGINEER.

ITEMS FROM

LIGHT FIXTURES AND/OR LIGHT FIXTURES, TABLE LAMP FIXTURES AND STEEL BRACKETS FOR MOUNTING TABLE LAMP CONDUITS SHALL CONFORM TO THE REQUIREMENTS OF TABLE AND DETAILS SHOWN ON THE PLANS AND STANDARD DRAWINGS, OR THE APPROVED SHOP DRAWINGS FOR THE RESPECTIVE LIGHT FIXTURE TYPES. TABLE LAMP SHALL BE MADE BY THE LIGHT FIXTURE CO. FOR EACH SET OF THE SIZE REQUIRED AND NECESSARY TO INSTALL ONE LAMP, AND THE FIXTURE SHALL CONFORM TO THE GENERAL REQUIREMENTS FOR TABLE LAMP AND TABLE LAMP AND TABLE LAMP (SEE PLAN 740).

CONDUIT ON STRUCTURES

EXPANSION JOINTS FOR CONDUIT ON STRUCTURES SHALL BE OF TYPE A.C. GROUPS HINDS TYPE X0 4, HINDS TYPE X0 4, OR EQUIV. APPROVED BY THE ENGINEER. EACH EXPANSION JOINT SHALL HAVE A CORNER EXTERNAL BENDING NUMBER.

625.02 HAZARDOUS MATERIALS

NO MATERIAL FURNISHED UNDER THIS SPECIFICATION SHALL CONTAIN UNSPECIFIED ELEMENTS (LEAD), TRANSFORMERS, CAPACITORS AND CONDENSERS SHALL BE MARKED "NO LEAD" IN ACCORDANCE WITH FEDERAL ENVIRONMENTAL PROTECTION AGENCY REGULATION 40 CFR 741.

ITEM 625 - TABLE BRACING KIT

THIS ITEM SHALL CONSIST OF BRACING AND INSULATING ANGLE APPROVED TABLE BRACING KIT AS DESCRIBED IN PARTICULARS OF SECTION 740 OF THE CITY CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE COST OF ALL MATERIALS, LABOR AND EQUIPMENT NECESSARY FOR THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE FOR EACH TABLE 625 - TABLE BRACING KIT.

GENERAL SUMMARY

DESCRIPTION QUANTITIES

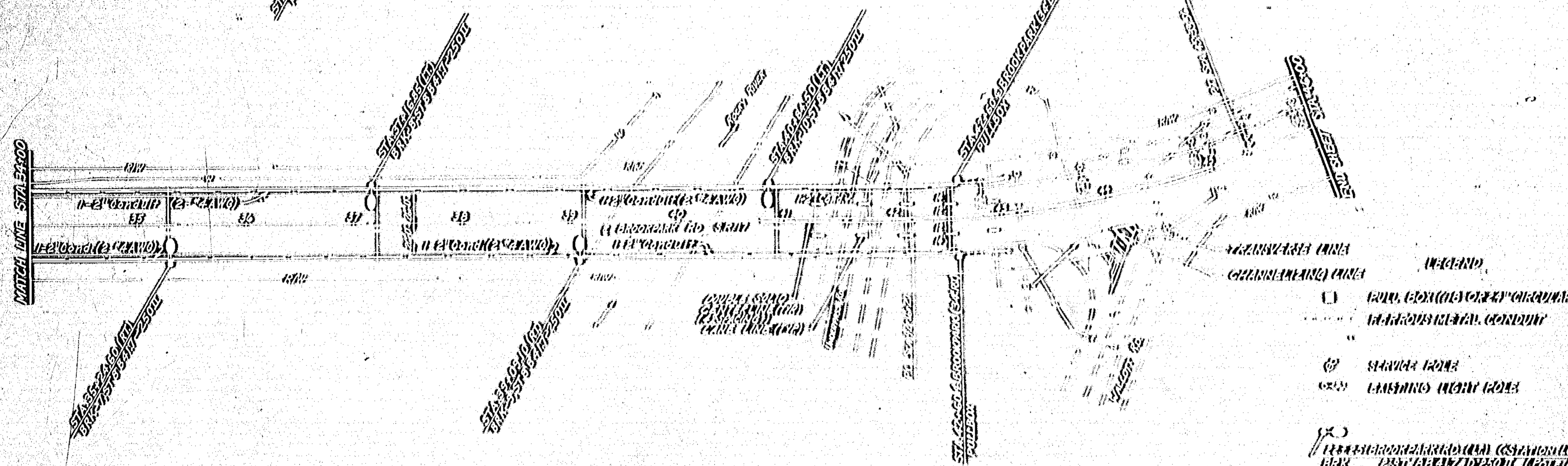
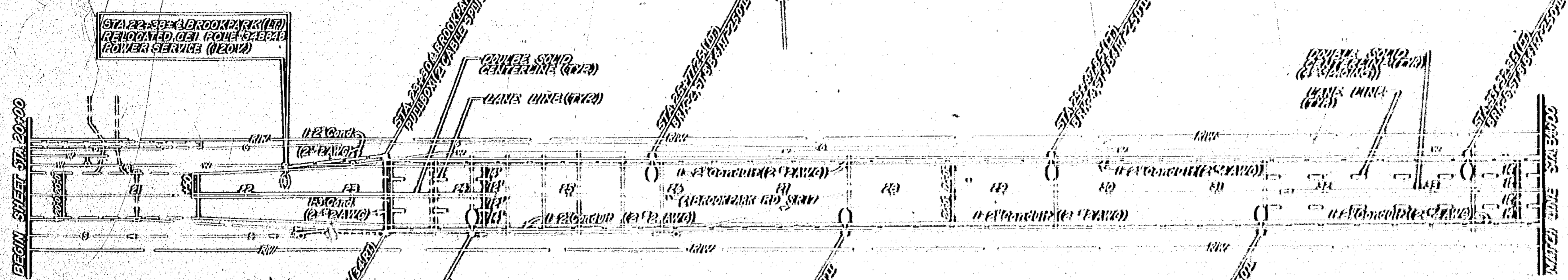
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	PRICE	TOTAL	REMARKS	NO.
101	TABLE BRACING KIT	10	EA	12.00	120.00		101
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103	TABLE BRACING KIT	10	EA	12.00	120.00		103
104	TABLE BRACING KIT	10	EA	12.00	120.00		104
105	TABLE BRACING KIT	10	EA	12.00	120.00		105
106	TABLE BRACING KIT	10	EA	12.00	120.00		106
107	TABLE BRACING KIT	10	EA	12.00	120.00		107
108	TABLE BRACING KIT	10	EA	12.00	120.00		108
109	TABLE BRACING KIT	10	EA	12.00	120.00		109
110	TABLE BRACING KIT	10	EA	12.00	120.00		110
111	TABLE BRACING KIT	10	EA	12.00	120.00		111
112	TABLE BRACING KIT	10	EA	12.00	120.00		112
113	TABLE BRACING KIT	10	EA	12.00	120.00		113
114	TABLE BRACING KIT	10	EA	12.00	120.00		114
115	TABLE BRACING KIT	10	EA	12.00	120.00		115
116	TABLE BRACING KIT	10	EA	12.00	120.00		116
117	TABLE BRACING KIT	10	EA	12.00	120.00		117
118	TABLE BRACING KIT	10	EA	12.00	120.00		118
119	TABLE BRACING KIT	10	EA	12.00	120.00		119
120	TABLE BRACING KIT	10	EA	12.00	120.00		120
121	TABLE BRACING KIT	10	EA	12.00	120.00		121
122	TABLE BRACING KIT	10	EA	12.00	120.00		122
123	TABLE BRACING KIT	10	EA	12.00	120.00		123
124	TABLE BRACING KIT	10	EA	12.00	120.00		124
125	TABLE BRACING KIT	10	EA	12.00	120.00		125
126	TABLE BRACING KIT	10	EA	12.00	120.00		126
127	TABLE BRACING KIT	10	EA	12.00	120.00		127

UTILITY MARKING (U) SUB-SUMMARY

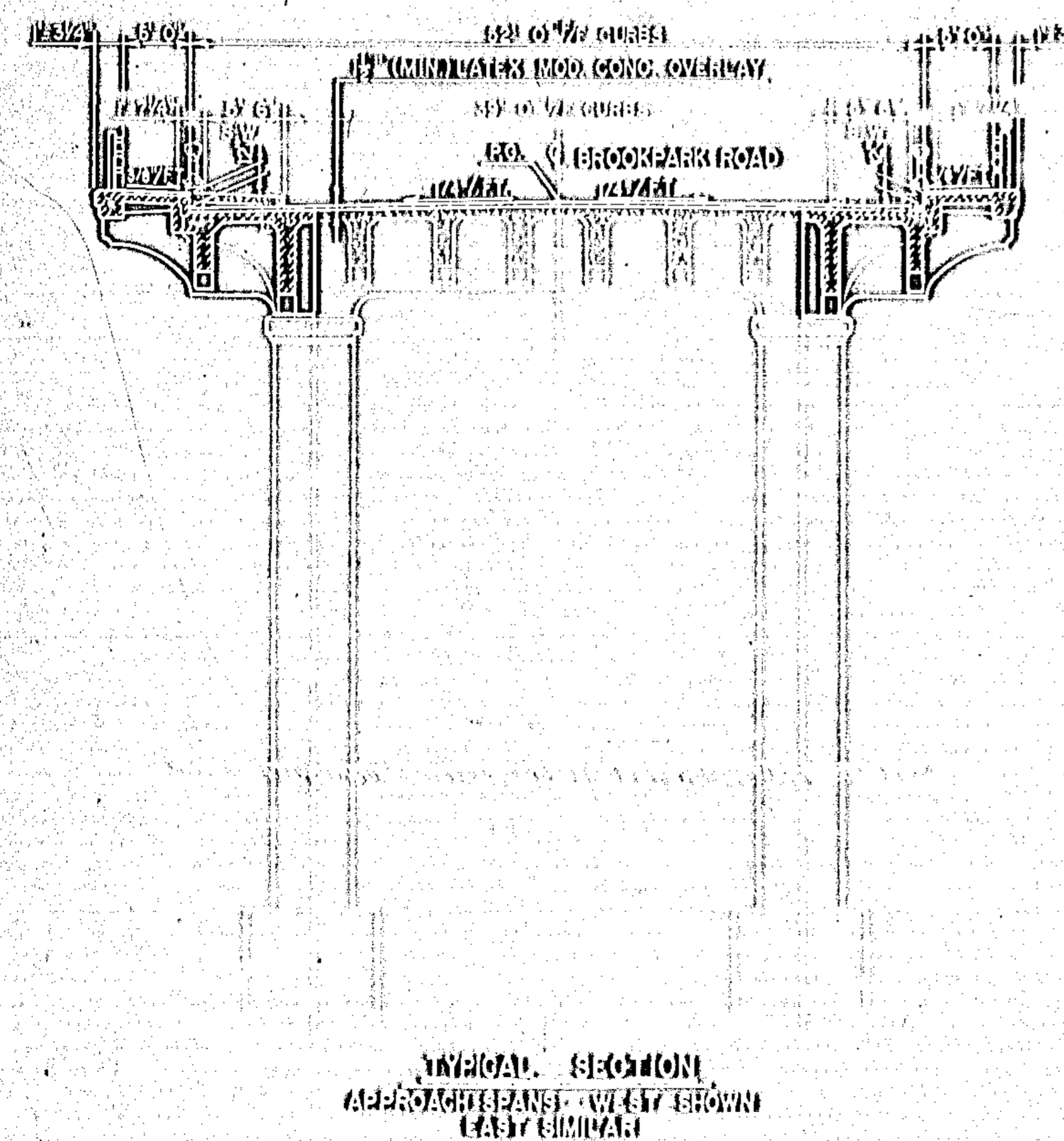
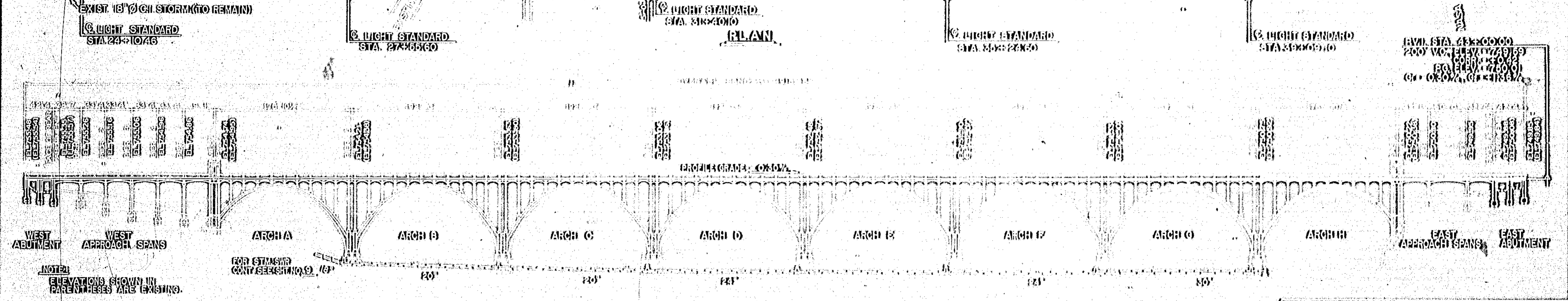
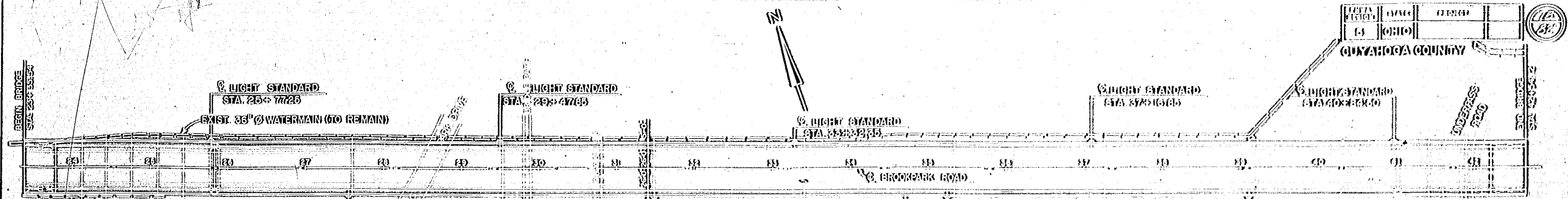
REFERENCE NO.	SIDE	STATION	STATION	LIGHT POLE DESIGN SYSTEM (15'00")		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		LUMINAIRE (25'00" HIGHS)		
				1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A	1-B	1-A
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UTILITY MARKING (U) SUB-SUMMARY

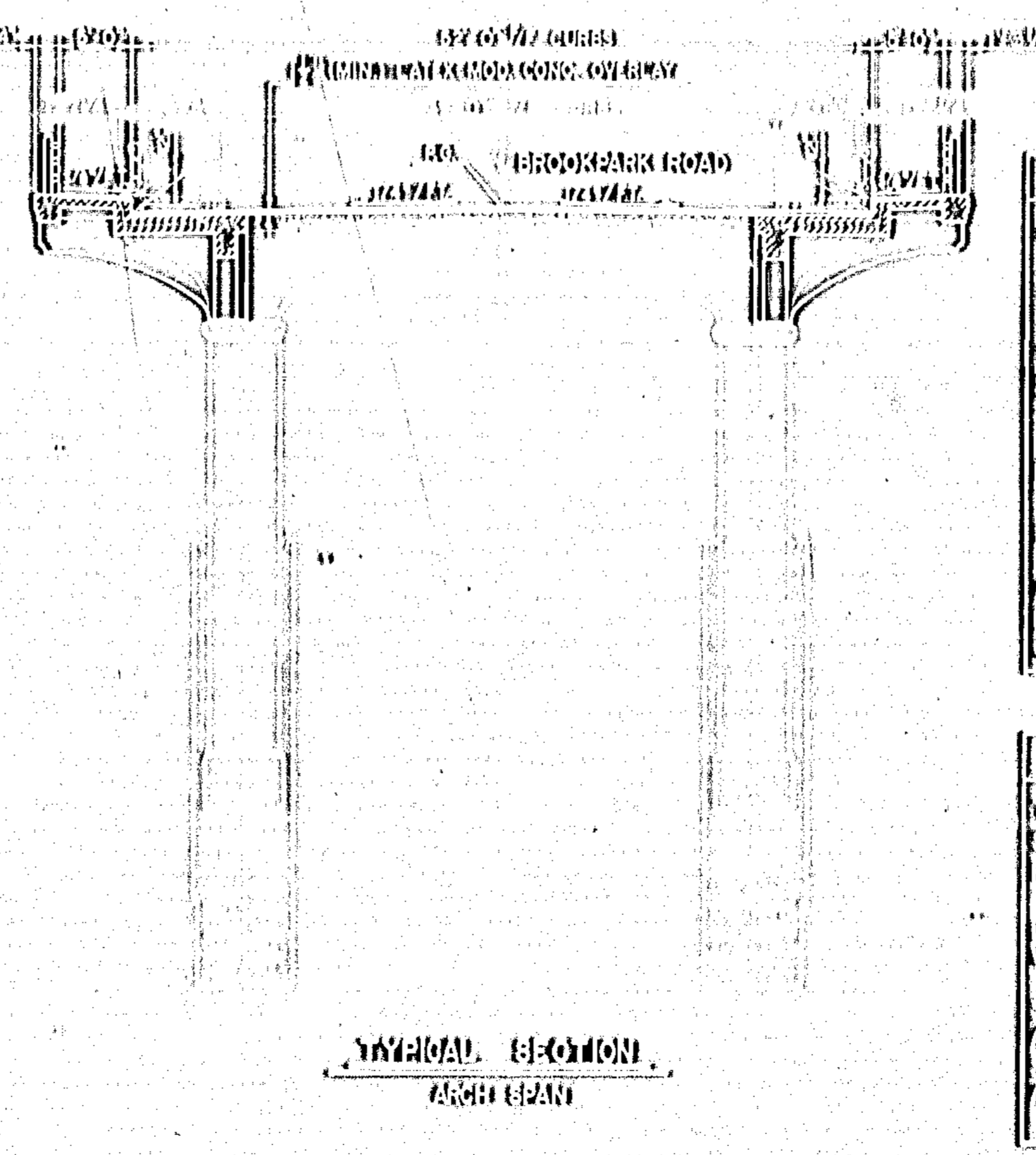
SIDE	STATION	STATION	UTILITY MARKING (U) SUB-SUMMARY			
			TRAFFIC	WATER	SEWER	TELEPHONE
W	00000	00000				</



- (1) 12" REINFORCED CONCRETE (120V)
- (2) 12" REINFORCED CONCRETE
- (3) 12" REINFORCED CONCRETE
- (4) 12" REINFORCED CONCRETE
- (5) 12" REINFORCED CONCRETE
- (6) 12" REINFORCED CONCRETE
- (7) 12" REINFORCED CONCRETE
- (8) 12" REINFORCED CONCRETE
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- (14) 12" REINFORCED CONCRETE
- (15) 12" REINFORCED CONCRETE
- (16) 12" REINFORCED CONCRETE
- (17) 12" REINFORCED CONCRETE
- (18) 12" REINFORCED CONCRETE
- (19) 12" REINFORCED CONCRETE
- (20) 12" REINFORCED CONCRETE



TYPICAL SECTION
 APPROACH SPANS - WEST ABUTMENT



TYPICAL SECTION
 ARCH SPAN

EXISTING STRUCTURE

1. All concrete in the structure is to be removed and replaced with reinforced concrete. The existing concrete is to be removed to a depth of 12 inches below the existing surface. The existing concrete is to be removed to a depth of 12 inches below the existing surface. The existing concrete is to be removed to a depth of 12 inches below the existing surface.

2. All steel in the structure is to be removed and replaced with new steel. The existing steel is to be removed to a depth of 12 inches below the existing surface. The existing steel is to be removed to a depth of 12 inches below the existing surface. The existing steel is to be removed to a depth of 12 inches below the existing surface.

3. All masonry in the structure is to be removed and replaced with new masonry. The existing masonry is to be removed to a depth of 12 inches below the existing surface. The existing masonry is to be removed to a depth of 12 inches below the existing surface. The existing masonry is to be removed to a depth of 12 inches below the existing surface.

PROPOSED STRUCTURE

1. All concrete in the structure is to be removed and replaced with new concrete. The existing concrete is to be removed to a depth of 12 inches below the existing surface. The existing concrete is to be removed to a depth of 12 inches below the existing surface. The existing concrete is to be removed to a depth of 12 inches below the existing surface.

2. All steel in the structure is to be removed and replaced with new steel. The existing steel is to be removed to a depth of 12 inches below the existing surface. The existing steel is to be removed to a depth of 12 inches below the existing surface. The existing steel is to be removed to a depth of 12 inches below the existing surface.

3. All masonry in the structure is to be removed and replaced with new masonry. The existing masonry is to be removed to a depth of 12 inches below the existing surface. The existing masonry is to be removed to a depth of 12 inches below the existing surface. The existing masonry is to be removed to a depth of 12 inches below the existing surface.

STRUCTURE SHEET INDEX	
SUBJECT	SHEET NO.
General Elevation and Typical Sections	15
General Notes	16-18
Structural Details	19
Archway Structure Removal Details	20-21
Abutment Structure Details	22-23
Approach Span Structure Details	24-25
Arch Span Structure Details	26-27
Pier Details	28
Foundation Details	29
Deck Structure Details	30-31
Expansion Joint Details	32-33
Grid Frame Details	34
Rolling Details	35-37
Retaining Wall Details	38-40
Inventory of Detail Section	41-42

AGENCY OF ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 2100 W. 12th Street, Cleveland, Ohio

QUAYANDA COUNTY ENGINEER
 CLEVELAND OHIO

BROOKPARK ROAD
 UNDER CONSTRUCTION
 CLEVELAND, OHIO

GENERAL PLAN AND ELEVATION
 TYPICAL SECTIONS

COUNTY ENGINEER: HERRING, J. B. DATE: 1931

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
1931	12/1	1931	

STANDARD DRAWING REFERENCES

DESCRIPTION	DWG. NO.	SHEET NO.	DATE
APPROACHES	AS-11-01	B-3	11/27/61
HIGHWAY LIGHTING	HL-4		11/27/61
HIGHWAY LIGHTING	HL-5		11/27/61
HIGHWAY LIGHTING	HL-7		11/27/61

(R) INDICATES REVISED DATE.

SUPPLEMENTAL SPECIFICATION REFERENCES

DESCRIPTION	NO.	DATE
PROXY COATED REINFORCING STEEL	624	10/26/62
CONCRETE CURING AND PROTECTIVE MEMBRANE	626	11/27/61
BRIDGE DECK REPAIR AND OVERLAY WITH LATEX MODIFIED CONCRETE	625	01/13/62
ELASTOMERIC COMPRESSION SEAMS FOR STRUCTURAL STEEL JOINTS	629	10/18/61
LATEX FOR CONCRETE MODIFICATION FOR SS, CS, CSB, CSB, SEE BELOW	633	02/14/60

NEW CONSTRUCTION ON THIS BRIDGE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1953 AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

DESIGN DATA

DESIGN LOADING - HS-20-44

DESIGN STRESSES

CONCRETE CLASS C - COMPRESSIVE STRENGTH - 4500 P.S.I.

CONCRETE CLASS C - COMPRESSIVE STRENGTH - 4000 P.S.I.

REINFORCING STEEL - ASTM A615, A616, A617, - GRADE 60 MINIMUM YIELD STRENGTH 60000 P.S.I.

STRUCTURAL STEEL - A53 - YIELD STRENGTH - 36000 P.S.I.

DECK PROTECTION METHOD

PROXY COATED REINFORCING STEEL, TOP AND BOTTOM BAR, NEW CONSTRUCTION, LATEX MODIFIED CONCRETE OVERLAY FULL DECK WIDTH AND SIDEWALKS.

SUPPLEMENTAL SPECIFICATION REFERENCES

DESCRIPTION	NO.	DATE
GROUP ANCHORING WITH NON-SHRINKING EPOXY MORTAR	653	01/23/62
NON-SHRINKING EPOXY MORTAR FOR GROUP ANCHORING	653	01/23/62

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO THE SECTIONS NOTES AND NOTES.

CONTRACT BID PRICES SHALL BE BASED UPON A REVISION OF THE UNDETAILED DESCRIPTIONS ABOVE AND UPON A FIELD EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROPOSED WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

REINFORCEMENT FOR EXISTING REINFORCING STEEL

ANY EXISTING REINFORCING BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK WHICH ARE UNDER CONSTRUCTION BY THE CONTRACTOR'S CONCRETE REMOVAL OPERATIONS SHALL BE REBARRED WITH NEW STEEL AT THE CORNERS. ANY EXISTING REINFORCING BARS IDENTIFIED BY THE ENGINEER AS UNSOUND BECAUSE OF CORROSION SHALL BE REBARRED WITH NEW STEEL, AND A MINIMUM OF #2000 GROUND IS INCLUDED IN THE SPEC FOR THIS REBAR.

MAINTENANCE OF STREAM

SEE DETAIL NOTES AND NOTES REFERRED TO IN THE PLANS.

UTILITIES

THE EXISTING 8" DIAMETER WATER MAIN SHALL BE MAINTAINED IN SERVICE DURING CONSTRUCTION. THE CONTRACTOR SHALL EXCAVATE THIS PROPOSED METHOD OF PROTECTING AND MAINTAINING THE WATER MAIN DURING CONSTRUCTION TO THE DIRECTOR FOR APPROVAL. NO CONSTRUCTION OPERATIONS AFFECTING THE EXISTING 8" WATER MAIN SHALL BE PERMITTED WITHOUT PRIOR APPROVAL OF THE DIRECTOR.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE

UNLESS OTHERWISE INDICATED IN THE PLANS, REMOVAL OF PORTIONS OF THE EXISTING STRUCTURE SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THIS SPEC AND THE GENERAL NOTE SPECIAL REQUIREMENTS. MINORIAL WORK OVER THE EXISTING STRUCTURE SHALL BE PERMITTED.

METHODS OF EXISTING CONCRETE REMOVAL SHALL BE DETERMINED BY EACH OWNER TO PROVIDE A SQUARE EDGE FOR REINFORCEMENT OF NEW CONCRETE. DEPTH OF CUT SHALL BE AT LEAST ONE INCH. CORES SHALL BE EXPOSED IN EXISTING CONCRETE SO AS NOT TO HIDE OR CONCEAL DAMAGE EXISTING REINFORCING WHICH IS TO REMAIN. THE CONCRETE SHALL BE REMOVED BY USE OF APPROVED MECHANICAL METHODS EMPLOYING POINTED AND HEAVY CHISEL EDGE TOOLS. THE WEIGHT OF THE HAMMERS SHALL BE NOT MORE THAN 35 LBS. FOR REMOVAL WITHIN 12" OF CORNERS TO BE REBARRED. CORNERS WITHIN 12" OF CORNERS TO BE REBARRED SHALL BE REBARRED WITHIN 12" OF CORNERS TO BE REBARRED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF THE STREAM DURING THE REMOVAL. SUBJECT TO APPROVAL OF THE DIRECTOR.

REINFORCING BARS SHALL NOT BE REBARRED IN CONTACT WITH REINFORCING STEEL. WHAT IS TO BE REMAINED IN THE EXISTING STRUCTURE. WHERE BARS HAVE BEEN EXPOSED AND CONCRETE AND REINFORCING STEEL THAT IS TO BE REMAINED HAS BEEN EXPOSED, THE UNEXPOSED CONCRETE ADJACENT TO THE BAR SHALL BE REMOVED TO A DEPTH WHICH WILL RESULT NEW CONCRETE TO BOND TO THE ENTIRE PERIPHERY OF THE BAR IS REQUIRED. A MINIMUM OF TWO INCH CLEARANCE AROUND THE PERIPHERY OF THE STEEL SHALL BE PROVIDED.

THE USE OF EXPLOSIVES AND DYNAMITE IS PROHIBITED.

ALL MATERIAL REMOVED IN THE EXECUTION OF THIS PROJECT SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE SITE. STORAGE OF MATERIAL REMOVED FROM DISposal OR REUSE SHALL BE WHERE AND AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE COUNTY ENGINEER AND THE COUNTY ENGINEER'S OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE COUNTY ENGINEER AND THE COUNTY ENGINEER'S OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE COUNTY ENGINEER AND THE COUNTY ENGINEER'S OFFICE.

FINAL SPECIAL TREATMENT OF CONCRETE SURFACES

ALL CONCRETE SURFACES WITHIN AFTER CONSTRUCTION WITH EXCEPT OF THE EXISTING AND EXISTING SURFACES, THE UNDERSIDE OF THE ABUTMENT WALLS, THE EXISTING BARS AND THE INSIDE OF THE ABUTMENT WALLS, ALL INTERIOR SURFACES, THE EXISTING SURFACES OF EXISTING STRUCTURES, AND THE UNDERSIDE OF THE DECK SHALL BE TREATED WITH AN APPROVED POLYMER AND OTHER SURFACES AS DIRECTED BY THE ENGINEER. SHALL BE COATED WITH AN APPROVED POLYMER AND OTHER SURFACES AS DIRECTED BY THE ENGINEER. SHALL BE COATED WITH AN APPROVED POLYMER AND OTHER SURFACES AS DIRECTED BY THE ENGINEER.

THE MATERIAL SHALL BE CONCRETE MARK-653 AS MANUFACTURED BY THE CONCRETE COMPANY, CLEVELAND, OHIO; POLYMER AS MANUFACTURED BY POLYMER INTERNATIONAL CORPORATION, DEER PARK, NEW YORK; EPOXY AS MANUFACTURED BY ADHESIVE ENGINEERING COMPANY, SAN CARLOS, CALIFORNIA OR APPROVED EQUAL. SURFACE PREPARATION, PROTECTIVE APPLICATION AND CURING SHALL BE IN STRICT ACCORDANCE WITH THE INSTRUCTIONS OF THE MANUFACTURER.

THE COLOR SHALL MATCH AS CLOSELY AS POSSIBLE THE EXISTING CLEAN CONCRETE. A TEST SAMPLE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL PRIOR TO APPLYING THE COATING.

METHOD OF MEASUREMENT

THE QUANTITY OF FINISH COATING TO BE PAID FOR SHALL BE THE NUMBER OF SQUARE FEET OF SURFACE TO BE COATED.

BASES FOR PAYMENT

COST OF ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COAT THE STRUCTURE IN ACCORDANCE WITH THESE SPECIFICATIONS SHALL BE PAID FOR.

ITEM	UNIT	DESCRIPTION
1.00	SQ. FT.	FINISH COATING OF CONCRETE STRUCTURE

ALLEN H. HARRIS & ASSOCIATES, LIMITED
 COUNTY ENGINEER
 CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
 CHEVELAND, OHIO

BROOKPARK ROAD
 CLEVELAND, OHIO

GENERAL NOTES

COUNTY ENGINEER'S OFFICE
 RECORDS FILED, DATE 11/27/61

NO. B-1091

DESIGN: [] DRAWN: [] CHECKED: [] REVISED TO: []

GENERAL NOTES - STRUCTURE REPAIR

INVENTORY OF DETERIORATION: THESE PLANS, SHEETS 61 THRU 62, PRESENT AN INVENTORY OF THE DETERIORATION PRESENT ON THE BROOKPARK ROAD BRIDGE OVER ROCKY RIVER BY TYPE AND EXTENT. THE INVENTORY WAS PERFORMED BETWEEN MAY 22 AND JUNE 26, 1973 AND WAS RE-INVENTORIED FEBRUARY 1983.

THE ORIGINAL INVENTORY WAS OF THE TOTAL STRUCTURE BUT AS IS INDICATED ON THE PLANS, PORTIONS OF THE STRUCTURE WILL BE REMOVED FOR THE WIDENING PART OF THE REHABILITATION PROJECT AND WILL NOT REQUIRE REPAIR. THE RE-INVENTORY WAS RESTRICTED TO THOSE PORTIONS OF THE STRUCTURE TO REMAIN AFTER REMOVAL OPERATIONS.

THE QUANTITIES LISTED IN THE SUMMARY OF QUANTITIES SHEET 61 ARE THE ESTIMATED AMOUNT OF THE VARIOUS TYPE OF REPAIR REQUIRED TO REHABILITATE THE STRUCTURE AND DO NOT INCLUDE THOSE AREAS TO BE REMOVED. THESE QUANTITIES ARE BASED ON VISUAL INSPECTION OF THE EXISTING STRUCTURE AND ARE NOT TO BE CONSIDERED TO REPRESENT THE EXACT AMOUNT OF REPAIR REQUIRED TO REHABILITATE THE BRIDGE. PAYMENT WILL BE BASED ON THE ACTUAL WORK PERFORMED AT THE UNIT PRICE BID FOR THE REPAIRS, AS DIRECTED BY THE ENGINEER.

DESCRIPTION OF DETERIORATION: SHEET 62 OF THE PLANS PROVIDES PHOTOGRAPHIC REPRESENTATION OF THE VARIOUS TYPES OF DETERIORATION PRESENT, ALONG WITH A WRITTEN DESCRIPTION OF EACH.

INSPECTION OF REPAIR AREAS: THE LOCATION OF THE EXISTING AREAS OF THE BRIDGE WHICH REQUIRE REPAIR ARE SHOWN ON THE INVENTORY OF DETERIORATION, SHEETS 61 THRU 62. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MATERIAL, EQUIPMENT, AND LABOR TO PERMIT INSPECTION OF THESE LOCATIONS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER IN MAKING A DETAILED EXAMINATION TO MARK THE AREAS OF REPAIR TO BE MADE. THE MATERIAL, EQUIPMENT, AND LABOR SHALL BE FURNISHED FOR WHATEVER LENGTH OF TIME MAY BE NECESSARY TO CONDUCT THIS EXAMINATION.

COST OF ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO CONDUCT THE INSPECTION OF REPAIR AREAS SHALL BE INCLUDED IN ITEM SPECIAL, INSPECTION OF REPAIR AREAS.

CONCRETE REPAIR: UNLESS OTHERWISE INDICATED IN THE FOLLOWING REPAIR METHODS, ALL CONCRETE REPAIR SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF ITEMS 519 OR 520 EXCEPT THAT AN EPOXY BONDING AGENT SHALL BE USED TO BOND NEW CONCRETE TO EXISTING (SEE NOTE "BONDING NEW CONCRETE TO EXISTING CONCRETE") AND EXISTING PRIMARY REINFORCING STEEL SHALL BE EPOXY COATED (WHERE DIRECTED BY THE ENGINEER) IN ACCORDANCE WITH THE SAME (BUT NOT ALSO) AND SURFACES TO RECEIVE EPOXY BONDING COMPOUND MUST BE SAND-BLASTED CLEAN.

PAYMENT FOR CONCRETE REPAIR: UNLESS OTHERWISE INDICATED, CONCRETE REPAIR SHALL BE PAID FOR UNDER ITEM SPECIAL, PATCHING CONCRETE STRUCTURE (REPAIR EQUAL TO OR LESS THAN 6" AVERAGE DEPTH) OR ITEM SPECIAL, PATCHING CONCRETE STRUCTURE (REPAIR GREATER THAN 6" AVERAGE DEPTH).

REPAIR METHODS: FOLLOWING IS A DESCRIPTION OF THE SUGGESTED REPAIR METHODS TO BE EMPLOYED FOR EACH OF THE VARIOUS TYPES OF DETERIORATION DESCRIBED ON SHEET 62.

SCALE: IN ACCORDANCE WITH ITEMS 519 OR 520 AS NOTED HEREIN.

SCALE: IN ALL CASES OF SCALE REPAIR, THE EXISTING REINFORCING STEEL SHALL BE EXPOSED TO DETERMINE IF CORROSION IS PRESENT. WHERE THE EXISTING REINFORCING IS CORRODED, THE BARS SHALL BE UNDERCUT BY A MINIMUM OF 2" AND CLEANED FREE OF ALL CORROSION. PRIOR TO COMPLETING THE REPAIR, THE EXISTING REINFORCING SHALL BE INSPECTED BY THE ENGINEER AND SHALL BE EITHER EPOXY COATED OR REPAIRED, AS DIRECTED.

DETERMINATION: LARGE AREAS OF THE EXISTING STRUCTURE APPEAR TO SUFFER FROM DETERIORATION. IN MOST CASES THE EXISTING CONCRETE SURFACE APPEARS TO BE IN GOOD CONDITION WITH NO VISIBLE CRACKS OR DEFECTS. NO REPAIR SHALL BE REQUIRED. IN THOSE AREAS, WHERE DETERIORATION OF THE CONCRETE SURFACE IS ACCOMPANIED BY A VISIBLE CRACK OR CRACKS, THE CONDITION SHALL BE REPAIRED BY THE APPLICATION OF AN EPOXY COMPOUND AS DESCRIBED IN THE REPAIR OF CRACKS.

COST OF ALL EQUIPMENT, MATERIAL, AND LABOR REQUIRED TO REPAIR CRACKS, DETERMINED CONCRETE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, REPAIR OF DETERIORATION WITH CRACKS.

MISSING CASOTA: MISSING CASOTA IS DIVIDED INTO TWO TYPES, ARCH CASOTA AND COLUMN CASOTA. IN BOTH CASES, THE CASOTA SHALL BE RESTORED TO ORIGINAL SHAPE AND DIMENSIONS AS DETERMINED BY ADJACENT CASOTA IN SOUND CONDITION. FOR MINIMUM EXISTING CONCRETE REMOVAL LIMITS FOR ARCH CASOTA REPAIR, SEE DETAIL SHEET 63. WHERE THE MISSING COLUMN CASOTA IS OUTSIDE THE CENTERLINE OF THE COLUMN, THE STRUCTURE REMOVAL SHALL BE EXTENDED TO THE BOTTOM OF THE CASOTA AND REPAIRED WITH THE NEW CONSTRUCTION FOR WIDENING. (SEE DETAIL SHEET 62). OTHER MISSING COLUMN CASOTA SHALL BE REPAIRED IN ACCORDANCE WITH ITEMS 519 OR 520 AS NOTED BY THESE NOTES.

COST OF ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO REPAIR THE MISSING CASOTA SHALL BE INCLUDED IN ITEM SPECIAL, CASOTA REPAIR, ARCH OR CASOTA REPAIR, COLUMN/CASOTA. EXCEPT THAT COST OF COLUMN CASOTA REMOVED AND REPAIRED WITH STRUCTURE WIDENING OPERATIONS, SHALL BE INCLUDED WITH APPROPRIATE ITEMS OF STRUCTURE REMOVAL AND REPLACEMENT FOR PAYMENT.

PAYMENT: IN ACCORDANCE WITH ITEMS 519 OR 520 AS NOTED HEREIN.

CRACKS: THE METHOD OF REPAIR SHALL DEPEND ON THE TYPE OF CRACK TO BE REPAIRED. FOR CRACKS NOT ASSOCIATED WITH CORROSION OF REINFORCING STEEL AND WHERE THE ADJACENT CONCRETE IS SOUND AND NOT DETERIORATED, THE CRACK SHALL BE REPAIRED BY THE PRESSURE INJECTION OF EPOXY RESIN BONDING COMPOUND. THE METHOD SHALL CONSIST OF VEGEATATIVELY SEALING THE SURFACE OF THE CRACK (EXCEPT FOR OCCASIONAL CRACKS), INJECTING THE EPOXY THROUGH THE CRACK SO AS TO COMPLETELY FILL THE CRACK, AND THEN SEALING THE VEGEATATIVE SEAL. THE OPERATION SHALL NOT DEGRADE THE SURFACE OF THE CONCRETE.

THE EPOXY SHALL BE 100% SOLID MATERIAL AND SHALL DEVELOP THE STRENGTH OF THE CONCRETE. IN GENERAL, THE REPAIR PROCEDURE SHALL BE SIMILAR TO THE METHOD USED BY THE STRUCTURAL CONCRETE BONDING DIVISION OF THE AERIAL ENGINEERING COMPANY, 1001 INDUSTRIAL ROAD, SAN CARLOS, CALIFORNIA.

FOR CRACKS IN THE CONCRETE WHICH ARE CAUSED BY THE CORROSION OF REINFORCING BARS FROM THE CONCRETE SURFACE, THE REPAIR SHALL BE SIMILAR TO THAT REPAIRED FOR REPAIR OF SPALLS.

REPAIR OF CRACKS IN CONCRETE, INCLUDING EPOXY INJECTION, SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM SPECIAL, REPAIRING OF CRACKS IN CONCRETE. THIS PRICE SHALL BE PAYMENT IN FULL FOR FURNISHING ALL MATERIALS, EQUIPMENT, AND LABOR TO COMPLETE THE WORK.

REPAIRING OF CRACKS IN CONCRETE CAUSED BY CORRODED REINFORCING SHALL BE PAID FOR AT THE UNIT PRICE BID FOR ITEM SPECIAL, PATCHING OF CONCRETE STRUCTURE (REPAIR EQUAL TO OR LESS THAN 6" AVERAGE DEPTH) OR ITEM SPECIAL, PATCHING OF CONCRETE STRUCTURE (REPAIR GREATER THAN 6" AVERAGE DEPTH).

CORNER CRACK REPAIR METHOD: SHALL CONSIST OF REMOVAL OF THE EXISTING CONCRETE SO AS TO EXPOSE THE REINFORCING BAR AT THE CORNER. THE CONCRETE SHALL BE REMOVED IN SUCH A FASHION THAT THE EXISTING REPAIR SHALL BE A MINIMUM OF 2" CLEAR FROM THE RESULTING CONCRETE SURFACE WHICH SHALL BE APPROXIMATELY NORMAL TO THE EXISTING CONCRETE SURFACE. THE EXTENT OF REMOVAL SHALL ALSO SATISFY THE REQUIREMENT OF ITEMS 519 OR 520. THE CORNER SPACE BE REMOVED TO MATCH EXISTING ADJACENT REPAIRS IN ACCORDANCE WITH ITEMS 519 OR 520. SEE DETAIL SHEET 63.

COST OF ALL EQUIPMENT, MATERIAL, AND LABOR REQUIRED TO REPAIR CORNER CRACKS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, REPAIR OF CORNER CRACKS.

PAYMENT: IN ACCORDANCE WITH ITEMS 519 OR 520 AS NOTED HEREIN.

REINFORCING REQUIRED:

FOR ALL PORTIONS OF BRIDGE INTO CONCRETE OR STONE MASONRY AND THE FURNISHING AND PLACING OF GROUT INTO THE HOLES SHALL BE IN ACCORDANCE WITH SUBPARAGRAPH SPECIFICATION 513 AND SUBPARAGRAPH SPECIFICATION 513 EXCEPT FOR THE BASIS OF PAYMENT, INCLUDING LABOR, FURNISHING AND PLACING AND SHOOTING EPOXY RESIN AND BONDING STRUCTURAL ELEMENTS SHALL BE MEASURED AS A UNIT AND PAID FOR AT THE CONTRACT UNIT PRICE BID FOR ITEM 519, OTHER NOTES, AS PER UNIT. THIS PRICE SHALL BE PAYMENT IN FULL FOR ALL MATERIALS, EQUIPMENT, AND LABOR AND INCIDENTAL NECESSARY TO COMPLETE THE WORK.

REPLACEMENT REINFORCING: IT IS INTENDED THAT ALL EXISTING REINFORCING STEEL, UNLESS OTHERWISE INDICATED, SHALL BE REMOVED, CLEANED, REINFORCING WHICH IS FOUND TO BE MISSING OR UNSUITABLE FOR REPAIR BECAUSE OF EXCESSIVE CORROSION OR NONCONFORMING REPAIRED BARS, SHALL BE REPAIRED. REPLACEMENT REINFORCING SHALL HAVE CROSS-SECTIONAL AREA EQUIVALENT TO THAT OF THE ORIGINAL BARS AND SHALL BE PLACED AS NEAR AS POSSIBLE TO THEIR ORIGINAL PLAN LOCATION. CORB SHALL BE IN ACCORDANCE WITH ITEM 519 AND THE BARS SHALL BE PROTECTED BY WRAPPING OR APPROVED MECHANICAL SPACER AS PER SPECIAL. ALL REPLACEMENT BARS SHALL BE EPOXY COATED.

REPLACEMENT REINFORCING SHALL BE USED AS DIRECTED BY THE ENGINEER AND SHALL BE TREATED BY WEIGHT AND LENGTH BASED ON TOTAL CONCRETE WEIGHT FOR THE SIZE OF BARS USED. COST OF ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR REMOVAL OF EXISTING REINFORCING AND REPLACEMENT WITH NEW REINFORCING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL, EPOXY COATED REINFORCING BARS, (GROUP 6).

BONDING NEW CONCRETE TO EXISTING CONCRETE: POLYURETHANE-BASED ADHESIVE SHALL BE USED FOR BONDING NEW AND ADJACENT EXISTING CONCRETE TO EXISTING CONCRETE. THE ADHESIVE FOR ALL APPLICATIONS EXCEPT WHERE CONTACT WITH EXISTING CONCRETE, SHALL BE DURAC TOX AS MANUFACTURED BY DURAC INTERNATIONAL CORP., DEERBARK, NEW YORK, (PHONED NO. 300), AS MANUFACTURED BY STEVENSON MANUFACTURING CO., INC., (PHONED NO. 400), OR ADHESIVE, AS MANUFACTURED BY THE CHEMICAL CO., (PHONED NO. 400). BONDING REPAIRS AS MANUFACTURED BY THE CHEMICAL CO., (PHONED NO. 400) OR CHEMICAL CO., (PHONED NO. 400) SHALL REQUIRE A SMOOTH COATED MATERIAL DEPENDING ON THE RECOMMENDATION OF THE MANUFACTURER.

PREPARATION OF THE SURFACE OF THE EXISTING CONCRETE SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. JUST PRIOR TO APPLICATION, THE PREPARED SURFACE SHALL BE FLOUSED WITH WATER TO REMOVE ALL DUST. WHEN THE SURFACE IS DRY OR LOW, THE ADHESIVE SHALL BE APPLIED BY THOROUGHLY BRUSHING ONTO THE SURFACE A THICKNESS OF NOT LESS THAN 1/8" WITH THE COVERAGE AVERAGE AT LEAST ONE GALLON PER 100 SQ. FT. IF THE ADHESIVE IS 100% SOLID AND IS TO LONGER THAN, BEFORE THE CONCRETE OR MORTAR CAN BE PLACED A SECOND COAT OF ADHESIVE SHALL BE APPLIED. MANUFACTURER'S RECOMMENDATIONS FOR CURING OF THIS ADHESIVE AND HEALTH PRECAUTIONS SHALL BE STRICTLY OBSERVED.

WHERE EXISTING REINFORCING BARS ARE EXPOSED IN THE AREA TO BE PATCHED, THEY SHALL ALSO BE COATED WITH THE ADHESIVE FOLLOWING THE SAME INSTRUCTIONS AND RECOMMENDATIONS FOR APPLICATION AS FOR BONDING NEW CONCRETE TO EXISTING CONCRETE.

COST OF ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO APPLY THE BONDING ADHESIVE TO THE EXISTING CONCRETE AND/OR REINFORCING STEEL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE TREATMENT ITEM OF STRUCTURE REPAIR.

CONCRETE COATING AFTER ALL WIDENING AND REPAIR OPERATIONS ARE COMPLETED, A COATING SHALL BE APPLIED TO DESIGNATED SURFACES OF THE NEW AND EXISTING CONSTRUCTION TO PROVIDE PROTECTION AND A UNIFORM APPEARANCE. FOR SURFACES TO BE COATED, MATERIAL AND APPLICATION INSTRUCTIONS, AND METHOD OF PAYMENT SEE GENERAL NOTES - STRUCTURE WIDENING.

ARCHITECTURE & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND OHIO			
QUAYHOGA COUNTY		ENGINEER	
CLEVELAND OHIO			
BROOKPARK ROAD HARBING QUAYHOGA CO. CLEVELAND OHIO CHIEF OF CLEVELAND COUNTY ENGINEERS			
GENERAL NOTES STRUCTURE REPAIR			
COUNTY	REVISION NO.	REVISION NO.	DATE
OHIO	89	1001	04/16/77
NO. B-191			
DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
KR1		CR1	

SPECIAL REQUIREMENTS INVOLVING WORK OVER THE CLEVELAND METROPARKS SYSTEM

THE CONTRACTOR SHALL CAREFULLY ADHERE TO THE FOLLOWING SPECIFIC REQUIREMENTS:

- A. ALL CONSTRUCTION WORK SHALL BE LIMITED WITHIN THE CONFINES OF THE EXISTING RIGHT OF WAY OF THE STRUCTURE.
- B. NO DEBRIS OR CONSTRUCTION MATERIALS SHALL BE STORED OUTSIDE OF THE BRIDGE RIGHT OF WAY ON CLEVELAND METROPARKS SYSTEM PROPERTY BEFORE, DURING, OR AFTER CONSTRUCTION WORK ON THE BRIDGE. THE CONTRACTOR SHALL NOT AMONG RUBBER OR DEBRIS FROM BRIDGE CONSTRUCTION OR WATER CLEANING TO WASHOR OTHERWISE BE CARRIED DOWNSTREAM VIA ANY WATERCOURSE ONTO CLEVELAND METROPARKS SYSTEM PROPERTY.
- C. ACCESS TO CLEVELAND METROPARKS SYSTEM ROADWAYS, SUCH AS VALLEY PARKWAY, SHALL BE MAINTAINED AT ALL TIMES. TRUCKWAY TRAFFIC SHALL BE MAINTAINED ALSO ON ALL PARKWAYS AT ALL TIMES. TRAFFIC SHALL BE MAINTAINED ALSO ON THE BIKEWAY AT ALL TIMES, AND PEDESTRIAN AND EQUESTRIAN ACCESS TO CLEVELAND METROPARKS FACILITIES SHALL BE MAINTAINED AT ALL TIMES.
- D. THE PARK ROADS, IN CONJUNCTION WITH OTHER LOCAL STREETS, SHALL NOT BE DESIGNATED AS DETOUR ROUTE WHILE THE BRIDGE IS BEING RECONSTRUCTED.
- E. AS MUCH OF THE WORK AS POSSIBLE SHALL BE PERFORMED FROM THE STRUCTURE RATHER THAN FROM THE PROPERTY BELOW.
- F. SPECIAL PRECAUTIONS SHALL BE TAKEN, SUCH AS NETTING LINED WITH CANVAS OR OTHER RESTRICTIVE DEVICES, TO PREVENT ANY MATERIALS FROM FALLING ONTO THE PARK ROADWAY, BIKE PATH, EQUESTRIAN TRAIL, OR INTO THE RIVER BENEATH THE BRIDGE. IF IT IS NECESSARY TO LOWER CONCRETE, STEEL, OR OTHER MATERIALS IN OTHER AREAS OF THE RIGHT OF WAY, THE CONTRACTOR SHALL SUBMIT PLANS AND PROCEDURES FOR APPROVAL BEFORE COMMENCING SUCH WORK. ALL SPECIAL PRECAUTIONS SHALL BE SUBJECT TO APPROVAL OF CLEVELAND METROPARKS SYSTEM.
- G. REHABILITATION WORK ON THE BRIDGE WILL REQUIRE ACCESS TO THE BRIDGE RIGHT OF WAY. WORK WITHIN THE BRIDGE RIGHT OF WAY WILL BE COORDINATED WITH CLEVELAND METROPARKS SYSTEM AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR. THIS PERTAINS TO ACCESS, MAINTENANCE OF VEHICULAR AND PEDESTRIAN TRAFFIC ON THE PARK ROAD AND BIKE PATH, AND OTHER USES OF PARK FACILITIES. IF IT IS REQUIRED BY THE CONTRACTOR TO USE PARK ROADS FOR ACCESS TO THE EXISTING BRIDGE RIGHT OF WAY FOR WORK PURPOSES, THEN THE CONTRACTOR MUST OBTAIN ALL NECESSARY PERMITS FROM THE PARK BOARD, CLEVELAND METROPARKS SYSTEM. ALL COSTS INVOLVED IN OBTAINING PERMITS FROM THE PARK BOARD SHALL BE PAID BY THE CONTRACTOR AT HIS EXPENSE. NO ACCESS TO THE BRIDGE RIGHT OF WAY OVER METROPARKS SYSTEM ROADWAYS OR PROPERTY WILL OCCUR UNTIL AFTER NECESSARY PERMITS HAVE BEEN OBTAINED.
- H. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE CHANNELS ACROSS THE BRIDGE RIGHT OF WAY DURING CONSTRUCTION WORK, SO AS TO PREVENT EROSION TO OR GOING OF ANY CANALS OR ADJACENT CLEVELAND METROPARKS SYSTEM PROPERTIES. THIS INCLUDES BUT IS NOT LIMITED TO THE CARRIAGE ROYAL COVER.
- I. TREES, SHRUBS, AND OTHER NATURAL FEATURES LOCATED ON CLEVELAND METROPARKS SYSTEM PROPERTIES, ADJACENT TO THE BRIDGE RIGHT OF WAY, SHALL BE PROTECTED FROM ALL DAMAGES WHICH MAY RESULT FROM THE CONTRACTOR'S WORK DURING THE REHABILITATION OF THE BRIDGE. ANY DAMAGES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE, OR REPAIRED BY CLEVELAND METROPARKS SYSTEM AND PAID FOR BY THE CONTRACTOR AT HIS OWN EXPENSE SUBJECT TO REVIEW AND COORDINATION WITH THE PARK BOARD (CLEVELAND METROPARKS SYSTEM). THE CONTRACTOR'S WORK SHALL BE CLOSELY MONITORED BY THE CLEVELAND METROPARKS SYSTEM RANGERS AND STAFF.
- J. ANY AREAS DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR AT HIS OWN EXPENSE. AREAS DISTURBED BY THE CONTRACTOR, IN ANY WAY AND IN ANY FORM, WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN CONDITIONS WHICH EXISTED PRIOR TO THE REHABILITATION WORK AS DESCRIBED IN SPECIFICATIONS PARTS, 104.01, 104.02, AND 104.03. SEEDING OF THE BRIDGE RIGHT OF WAY AREAS DISTURBED DURING THE REHABILITATION WORK SHALL BE ACCOMPLISHED USING A MIXTURE OF COB RED FESCUE (FESTUCA RUBRA), COB KENTUCKY BLUEGRASS (COA PRENSIS), AND 20% ANNUAL WHEATGRASS (TRITICUM MONSIEUR) OR EQUIVALENT MIXTURE OF GRADE TOLERANT WHEATGRASSES OF EQUAL OR SUPERIOR QUALITY, AS APPROVED BY THE CLEVELAND METROPARKS SYSTEM.
- K. TREE CANALS AND OTHER MAINTAINED CANALS ON PUBLIC OR PRIVATE PROPERTIES, NOT DESCRIBED ABOVE, IF DISTURBED BY THE CONTRACTOR DURING REHABILITATION WORK, SHALL BE RESTORED IN ACCORDANCE WITH SPECIFICATION 104.03. THIS INCLUDES BUT IS NOT LIMITED TO TREE CANALS ALONG THE CENTER LEGION OF BROOKPARK ROAD WITHIN THE PROJECT AREA.

THE COST OF ALL MATERIAL, EQUIPMENT, AND LABOR NECESSARY TO IMPLEMENT THESE REQUIREMENTS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE REHABILITATION WORK OF CONSTRUCTION OR STRUCTURE REPAIR.

AGENCE (INCORPORATED) ASSOCIATES, LIMITED CONSULTING ENGINEERS 10000 WOODLAND AVENUE, SUITE 1000, CLEVELAND, OHIO 44131			
QUAYHOGA COUNTY	CLEVELAND OHIO	ENGINEER	
BROOKPARK ROAD BRIDGE NO. QUAYHOGA 0233 CLEVELAND, OHIO CHIEF OF QUAYHOGA COUNTY HIGHWAYS			
GENERAL NOTES			
COUNTY	NO.	REVISION	DATE
QUAYHOGA	B-1091		
DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
10/21		10/21	

NOTE:
 ITEM 202, PORTIONS OF STRUCTURE REMOVED INCLUDES THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND ARE NOT SEPARATELY LISTED FOR PAYMENT.

THE FOLLOWING MAJOR ITEMS ARE INCLUDED:
 ITEM ABUTMENTS APPROXIMATE QUANTITY ARCH SPANS RAKONS TOTAL
 REINFORCED CONCRETE 633 CY 4800Y 2097CY 8700Y 8700Y
 ASPHALTIC CONCRETE 61 CY 1800Y 910CY
 STRUCTURE DRAINAGE 13 CAST IRON SCOURERS AND ABOUT 1700LB OF 6" DOWNSPROUT

ESTIMATED QUANTITIES										
ITEM	TOTAL	UNIT	DESCRIPTION	WEST ABUTMENT	WEST APPROACH	ARCHES	EAST ABUTMENT	EAST APPROACH	GENERAL	
202		CUM	PORTIONS OF STRUCTURE REMOVED							
603	225	CY	UNCLASSIFIED EXCAVATION	172			172			
605	60	CY	SHALE EXCAVATION	20			20			
609	17333	LB	REINFORCING STEEL, GRADE 60	4220	3200	6373	1600	2030		
610	324	EA	POWER HOSES (AS PER PLAN)	112			172		40	
611	3335	CY	CLASS "B" CONCRETE, SUPERSTRUCTURE		631	2471		231		
611	472	CY	CLASS "C" CONCRETE, ABUTMENTS ABOVE FOOTINGS	154			234			
611	63	CY	CLASS "C" CONCRETE, FOOTINGS	23			33			
615	63207	LB	SAFETY CURE BRACE, AS PER QUANTITIES CERTIFICATION (NOT REQUIRED)						63207	
616	124	LF	STRUCTURAL STEEL EXPANSION JOINTS INCLUDING EMBLEMATIC COMPRESSION BEARS, 4" NOMINAL WIDTH, AS PER PLAN						124	
616	633	LF	STRUCTURAL STEEL EXPANSION JOINTS INCLUDING EMBLEMATIC COMPRESSION BEARS, 13" NOMINAL WIDTH, AS PER PLAN						633	
616	4	EA	BEARING DEVIATORS (AS PER PLAN) (AS PER QUANTITIES CERTIFICATION)	2	2		2	2		
616	4	EA	BEARING DEVIATORS (AS PER PLAN) (AS PER QUANTITIES CERTIFICATION)			4				
617	3333	LF	RAINING AS PER PLAN						3333	
618	18	EA	COURTESY AS PER PLAN						18	
618	1807	LF	6" DIA DOWNSPROUT, AS PER PLAN						1807	
621			SEE SHEET 12 FOR DETAILED SUMMARY							
623	780107	EA	600Y COATED REINFORCING STEEL, GRADE 60	1224	6337	6173	6163	2700	725	
624	733	CY	PAVER MODIFIED CONCRETE OVER EXISTING ASPHALT SURFACE, MINIMUM	11	33	600	11	60		
626		CUM	REMOVAL OF EXISTING BEARING DEVIATORS, AS PER PLAN							
626		CUM	REMOVAL OF EXISTING ARCHES							
626	11300	EA	CASTING CONCRETE STRUCTURE, BEARING DEVIATORS WITH 6" DIA DOWNSPROUT	110	600	1000	100	250		
626	15000	EA	CASTING CONCRETE STRUCTURE, BEARING DEVIATORS WITH 6" DIA DOWNSPROUT	60	600	2000	50	120		
626	23333	EA	CASTING OF CONCRETE CURBS	1220	7271	2327	2281	2271		
626	1500	LF	ASPHALT PAVEMENT, ARCH			1100				
626	300	LF	ASPHALT PAVEMENT, COMMON			200		80		
626	4000	LF	PAVEMENT OF EXISTING CONCRETE WITH 6" DIA DOWNSPROUT	60	110	3700	20	60		
626	3500	LF	PAVEMENT OF EXISTING ARCHES			3300		200		
626	6000	EA	CASTING OF DEVIATORS (AS PER PLAN)	60	110	3700		60		

ESTIMATED QUANTITIES AS INDICATED BY DESCRIPTION.

ASSOCIATION OF ENGINEERS, LIMITED
 CONSULTING ENGINEERS
 CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
 CLEVELAND OHIO

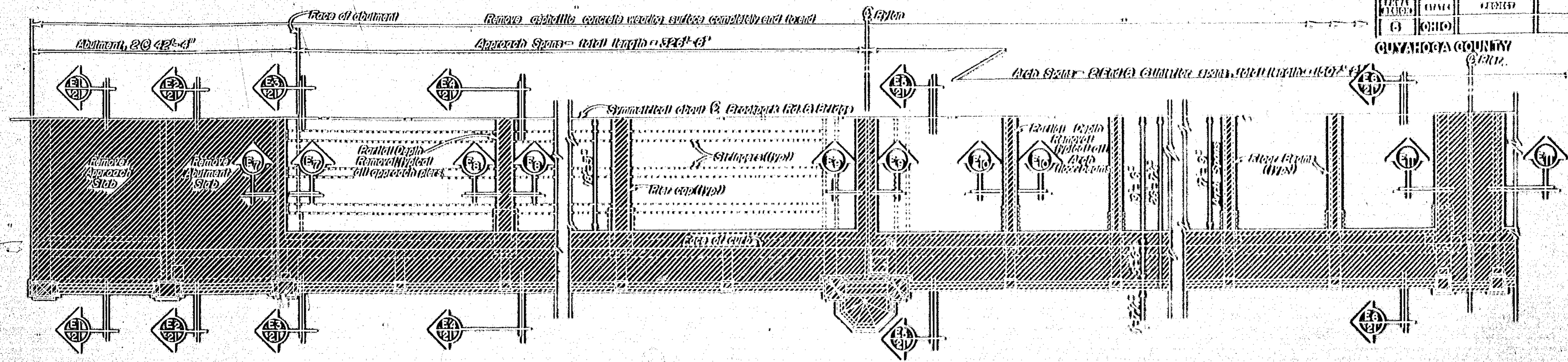
BROOKPARK ROAD
 (R.D. NO. 47A) CEBB
 CLEVELAND, OHIO

ESTIMATED QUANTITIES

COUNTY: QUAYHOGA, OHIO PROJECT NO.: 101 DATE: 1/25/55

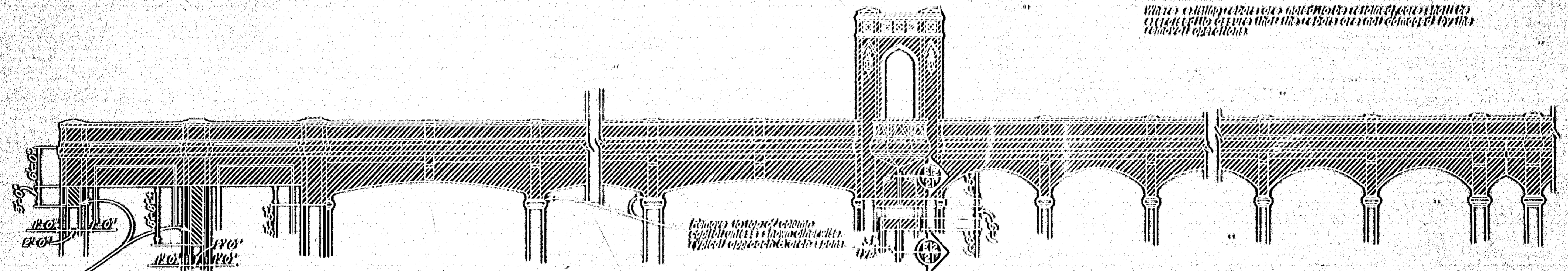
NO. B-101

DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
		CAMM	

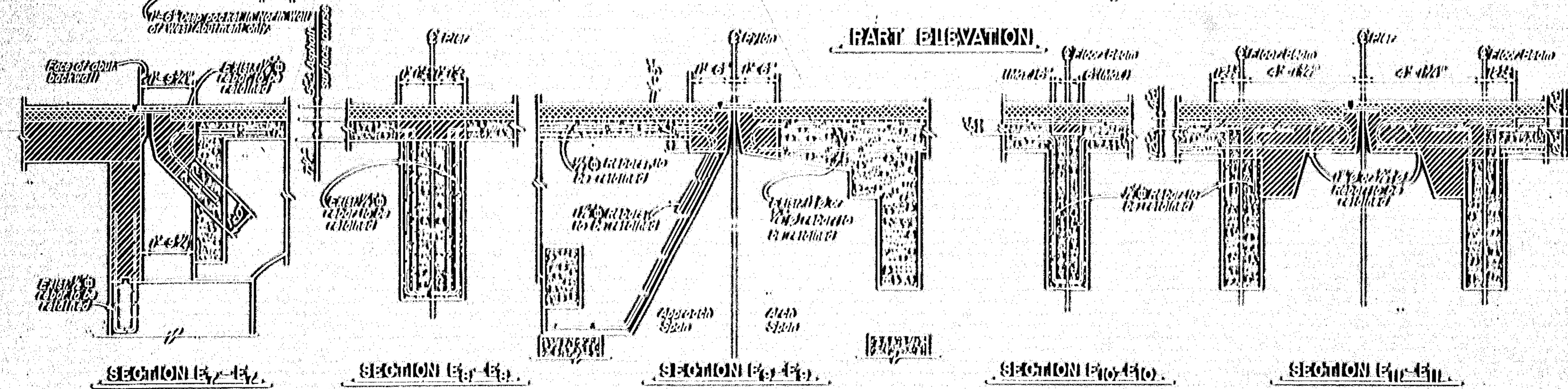


PART PLAN

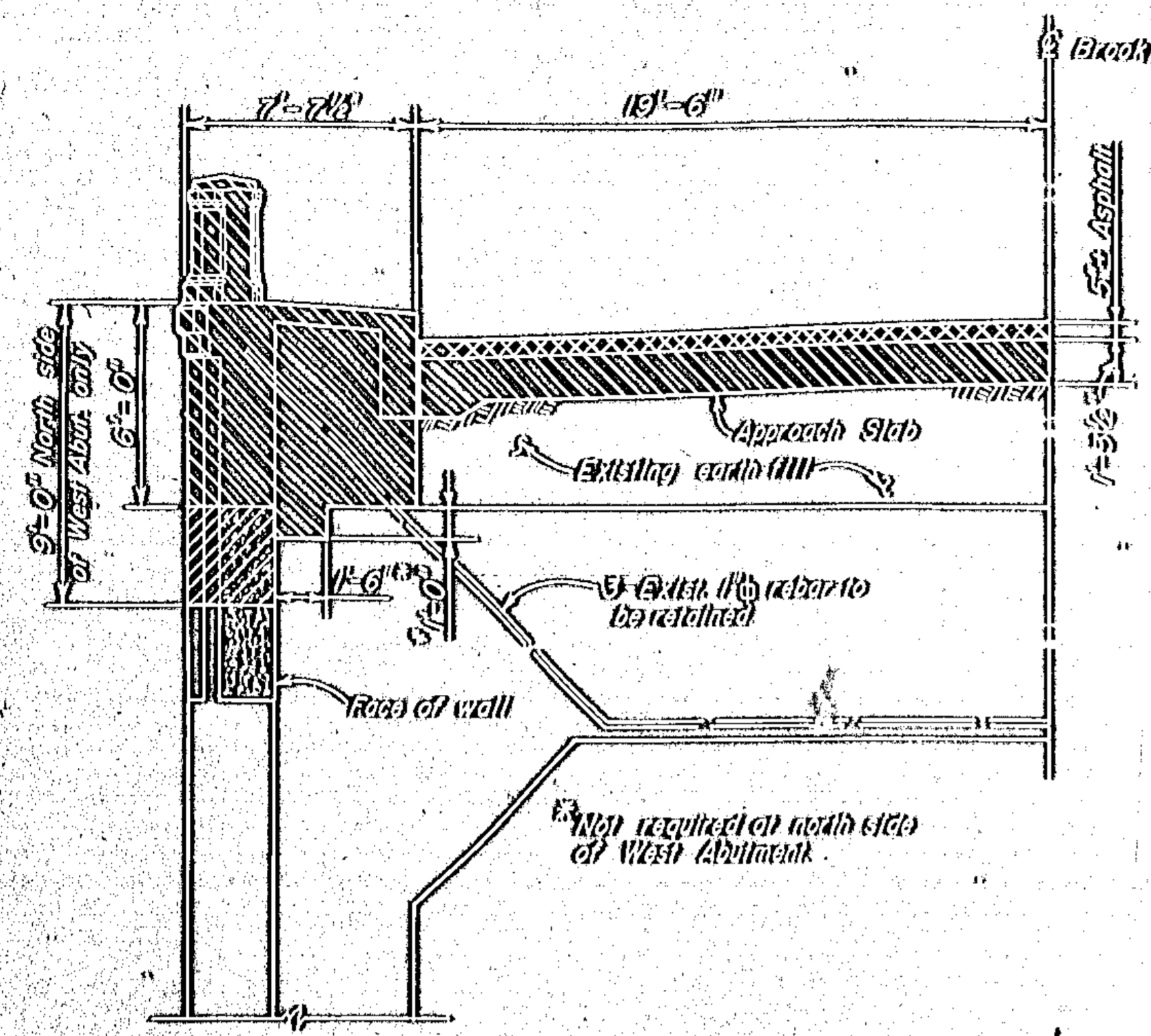
NOTES:
 1. All elevations indicate the height of existing structure measured upward to the top of the existing bridge.
 2. All elevations are referred to datum.
 3. Hatched areas indicate structure to be removed.
 4. Dotted areas indicate structure to be replaced.
 5. All elevations are referred to datum.



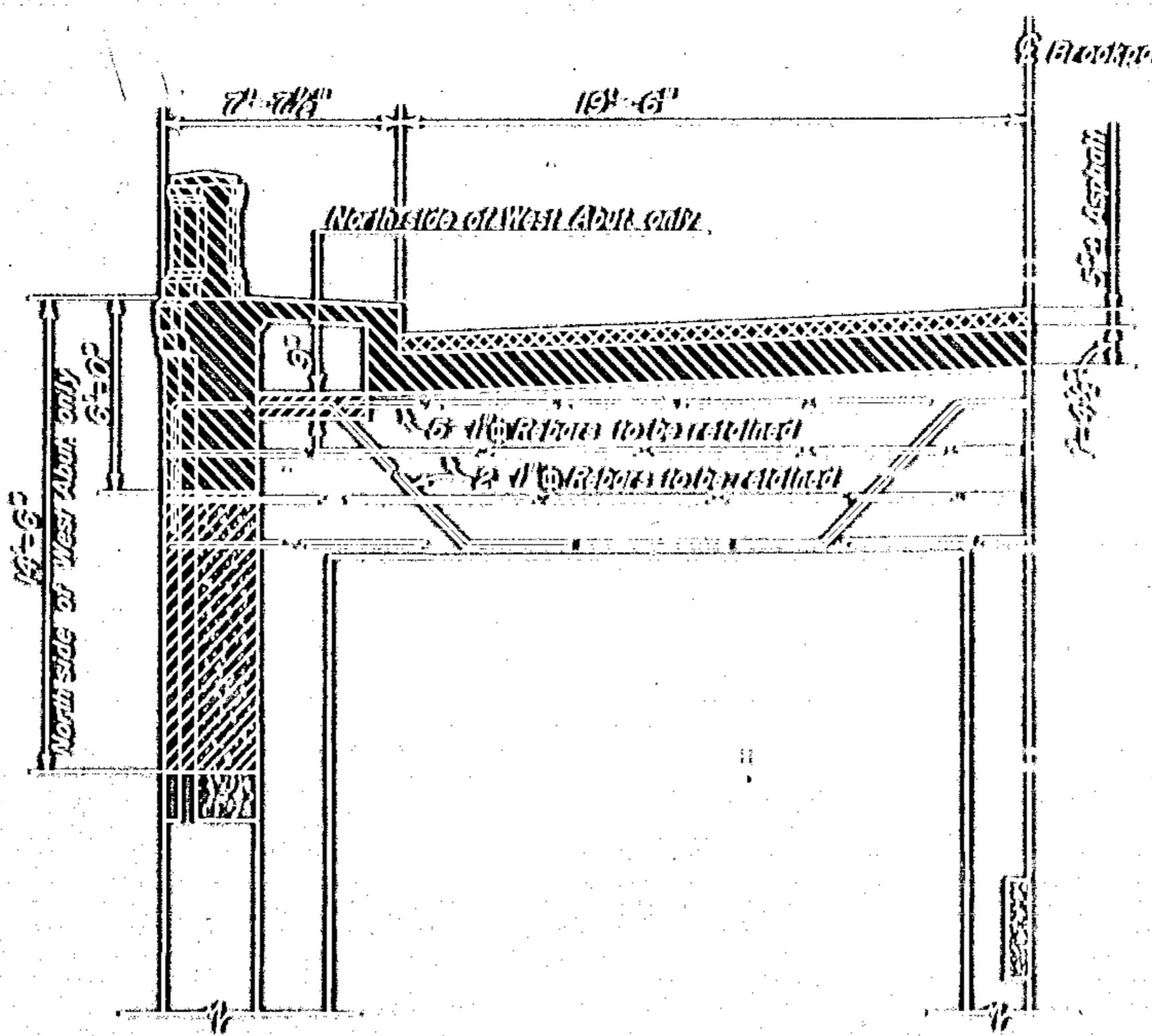
PART ELEVATION



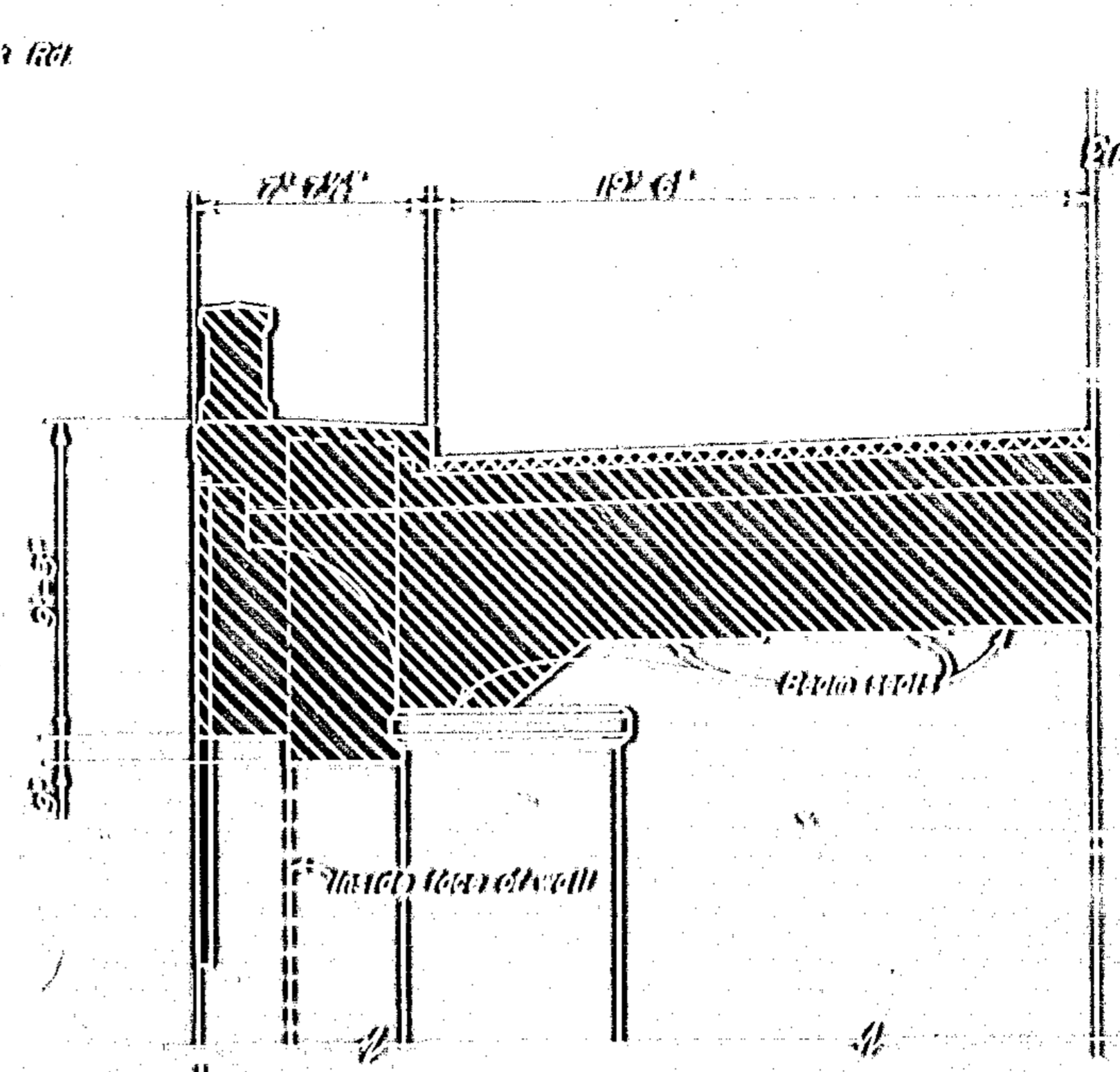
ARCHITECTURE BY ASSOCIATES, LIMITED CONSULTING ENGINEERS COLUMBUS, OHIO			
CUYAHOGA COUNTY ENGINEER CLEVELAND, OHIO			
BROOKPARK ROAD BRIDGE NO. CUYA 4023 OVERLOOK AVENUE CITY OF CLEVELAND, OHIO			
EXISTING STRUCTURE REMOVAL DETAILS			
BRIDGE NO. 4023	REPORT NO. 7081	DATE	SCALE
NO. B-1191			
DESIGN WJL	DRAWN WJL	CHECKED CARRI	REVISED TO AS BUILT



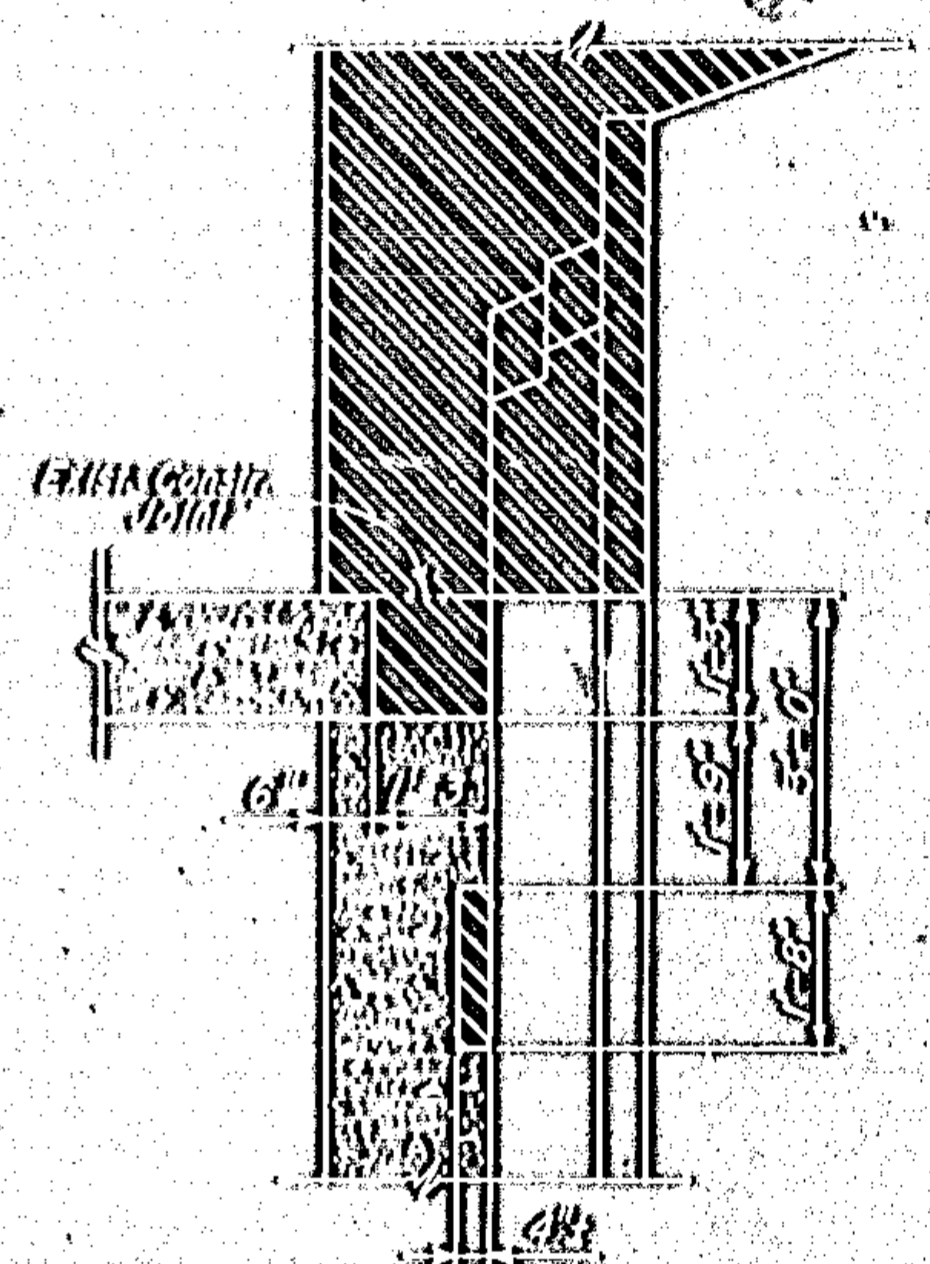
SECTION E1-E1



SECTION E2-E2

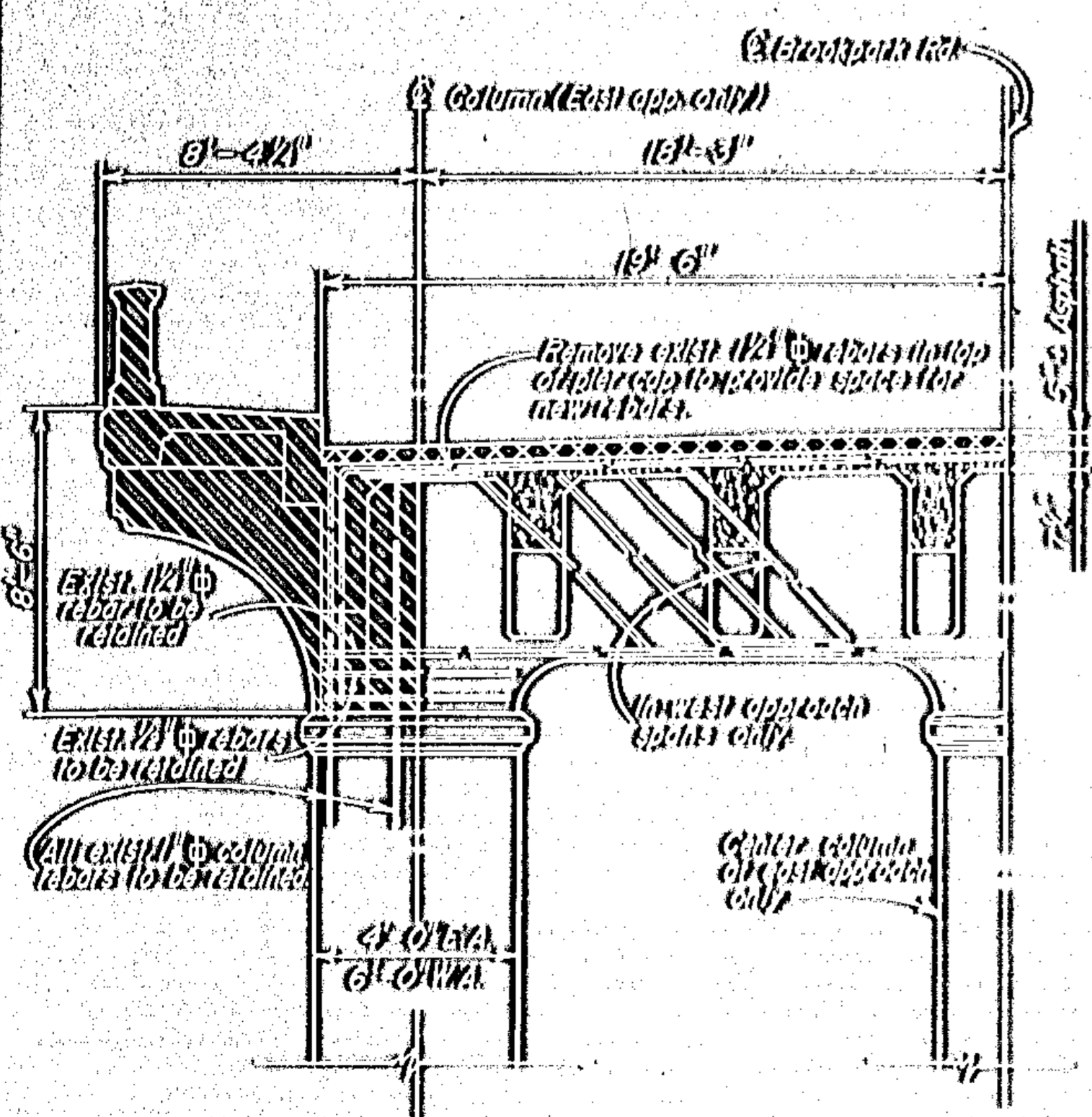


SECTION E3-E3

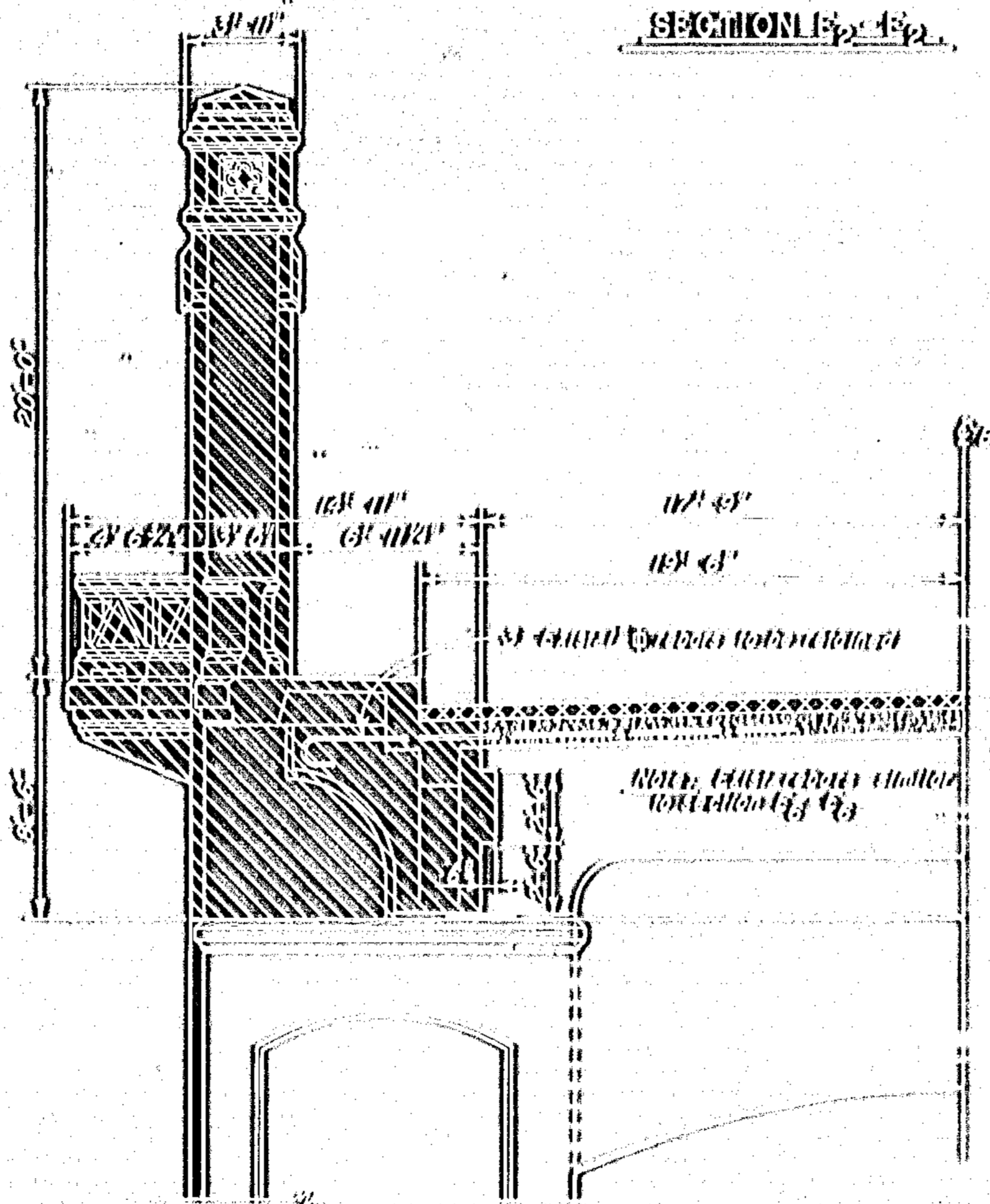


SECTION E4-E4

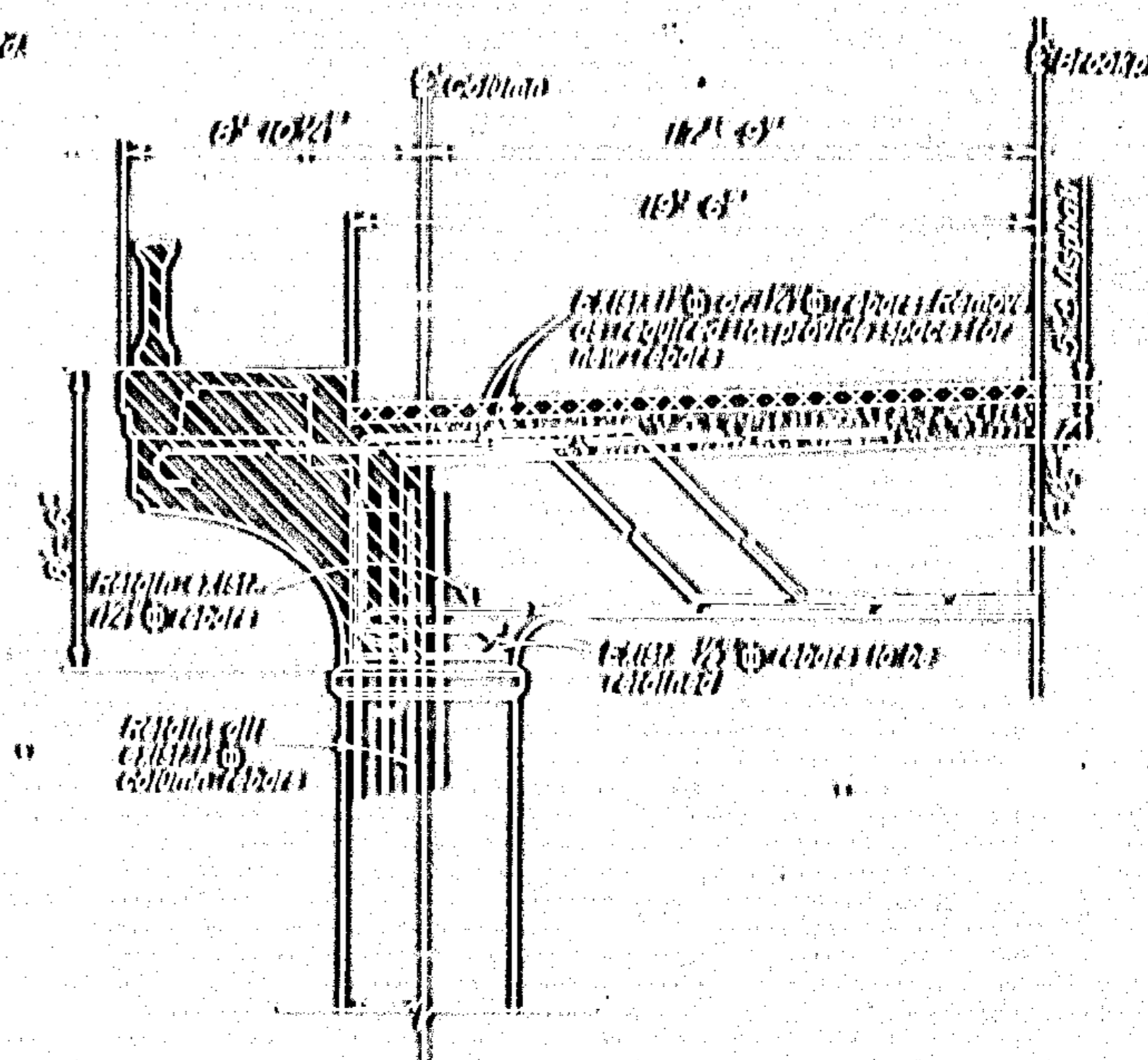
NOTE:
1. See Section E1-E1 for details of wall and foundation.



SECTION E5-E5

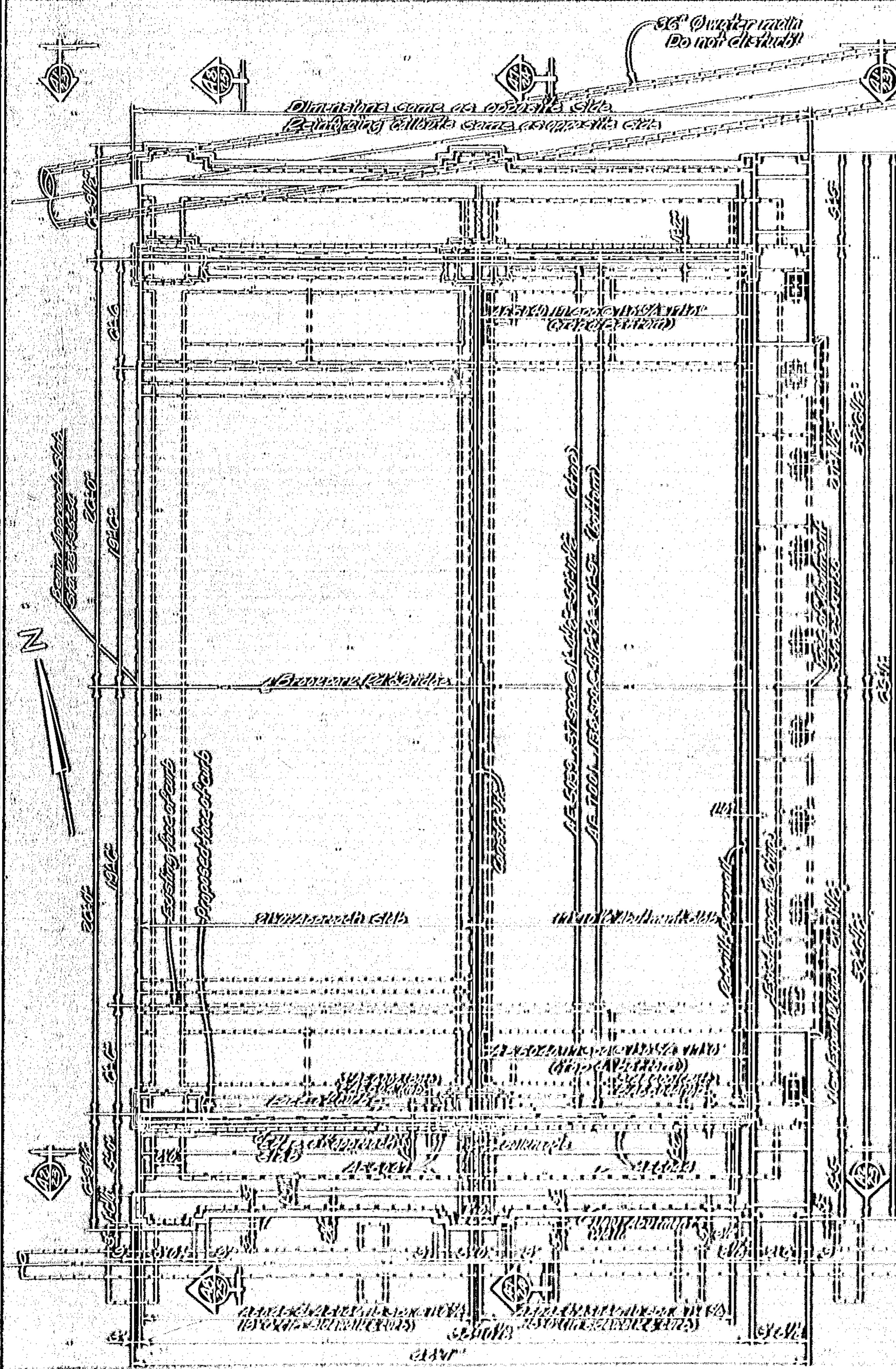


SECTION E6-E6



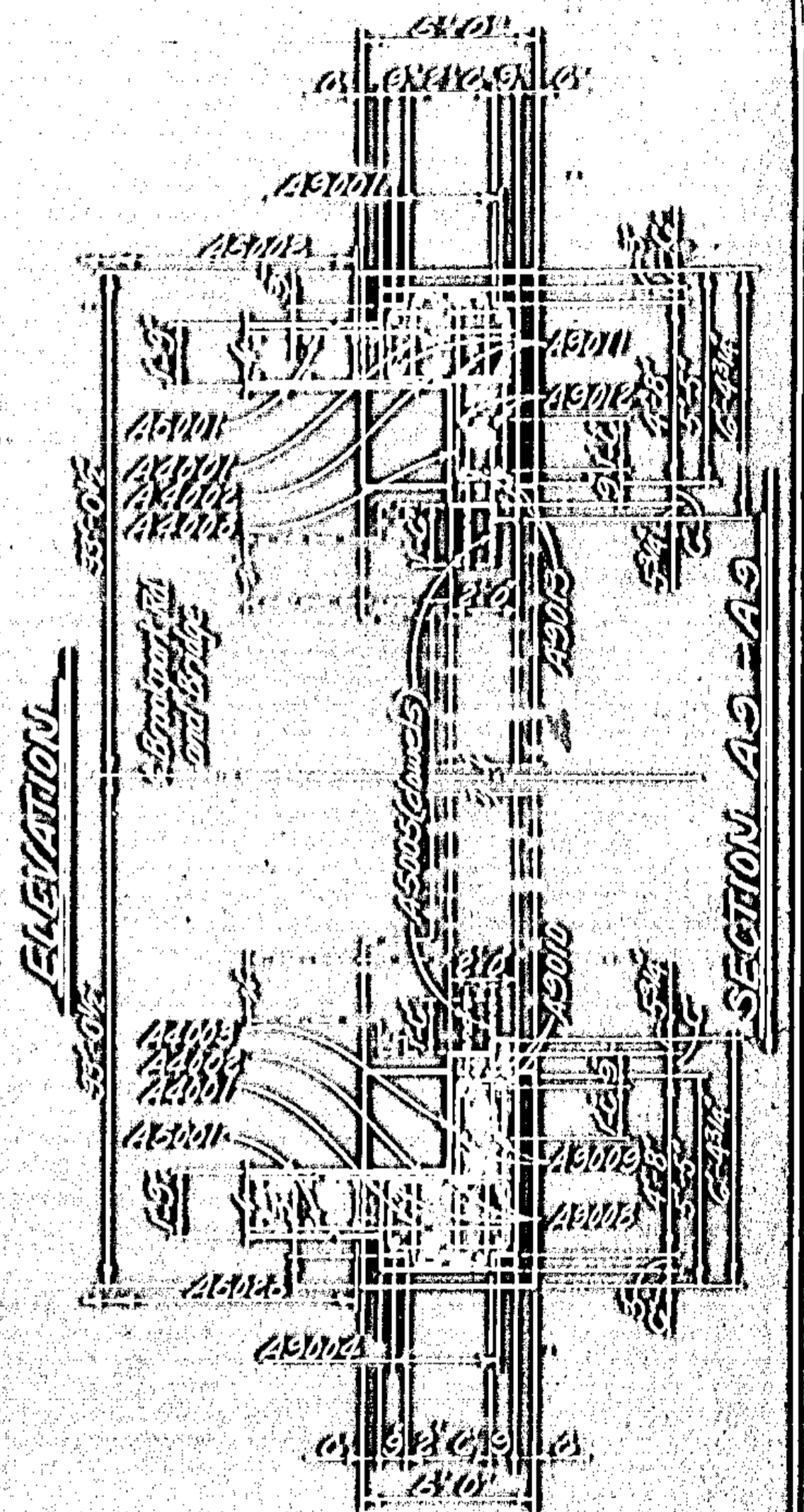
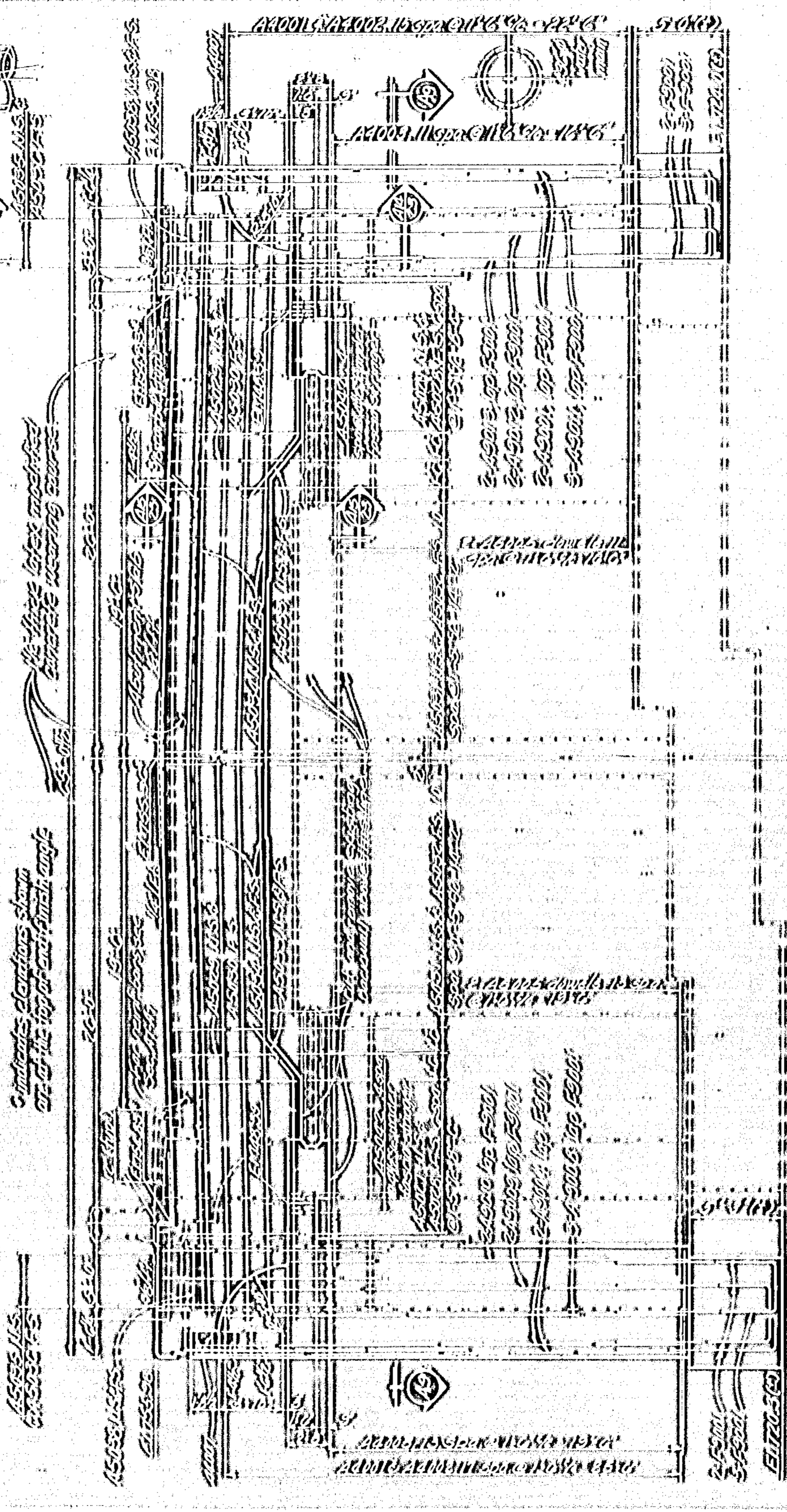
SECTION E7-E7

ARCHITECTURE BY ARCHITECTS LIMITED CORPORATION ENGINEERS COLUMBUS, OHIO			
CUYAHOGA COUNTY	ENGINEER	OHIO	
BROOKPARK ROAD HIGHLAND, OHIO COLUMBUS, OHIO CHIEF OF HIGHWAY DEPARTMENT			
EXISTING STRUCTURE REMOVAL DETAILS			
COUNTY	NO. 89	REPORT NO. 1068	DATE 2/17/28
NO. B-1191			
DESIGN 1/27/28	DRAWN 1/27/28	CHECKED 2/1/28	REVISED TO AS SHOWN



PLAN

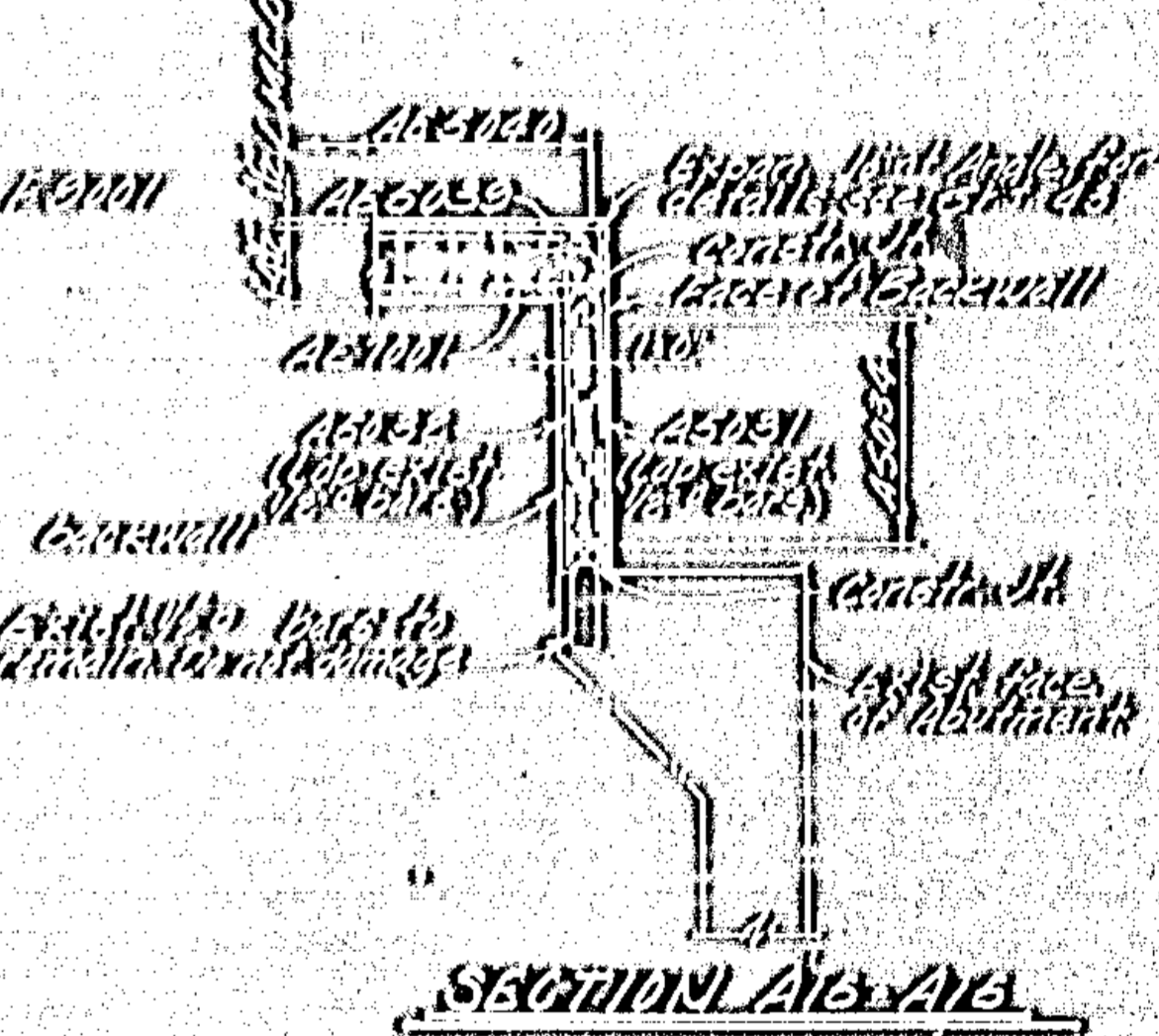
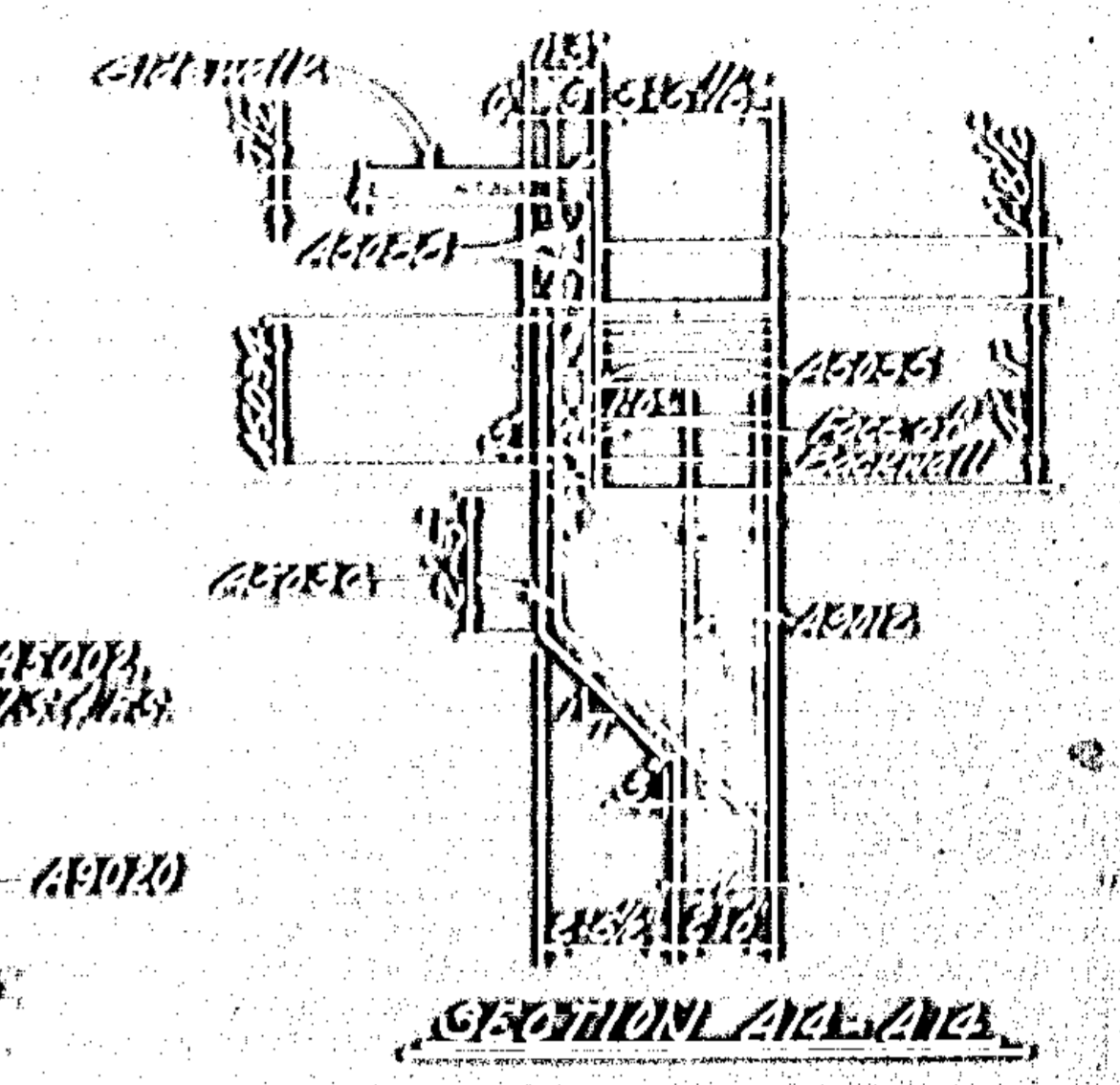
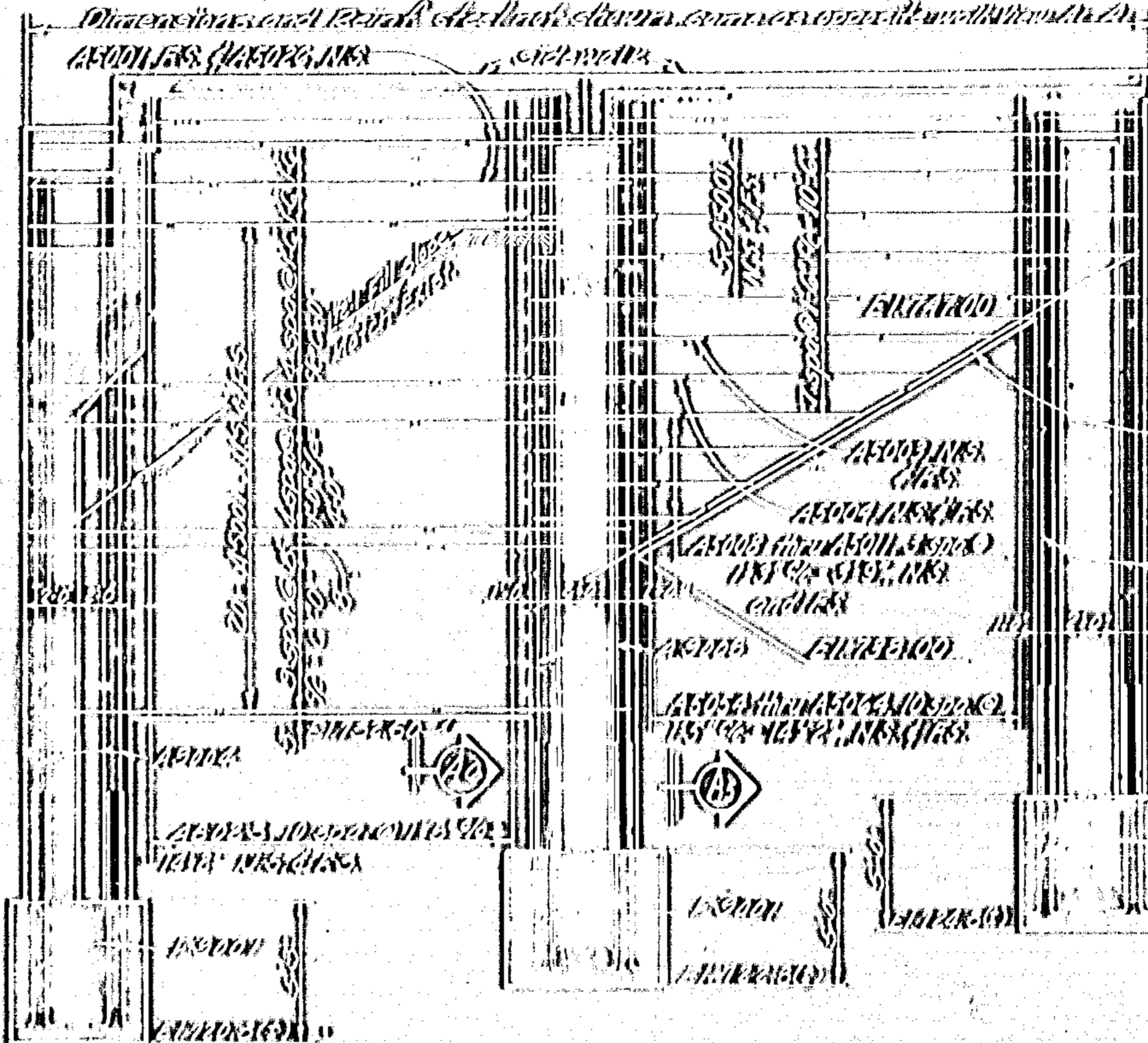
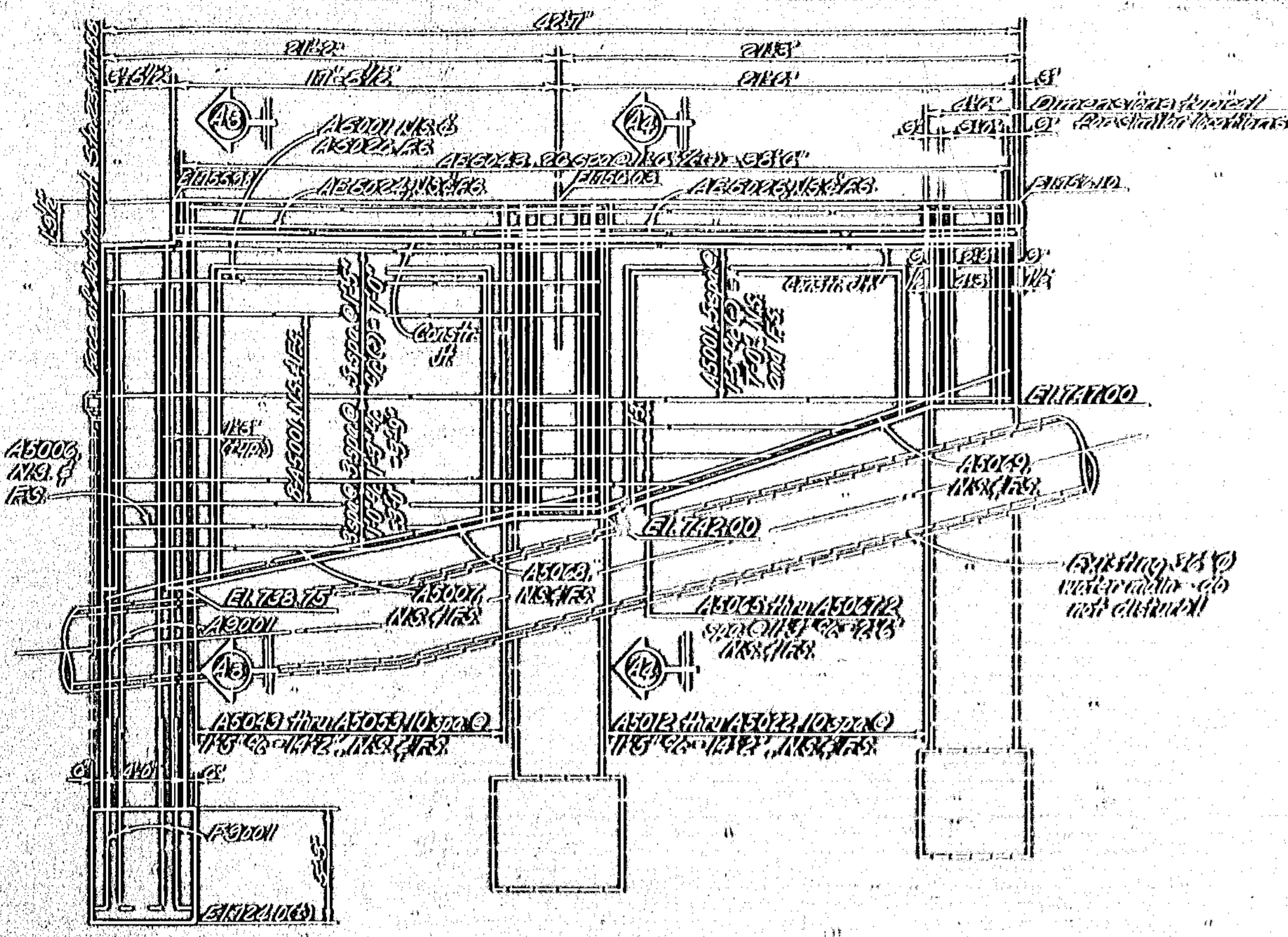
Transition of storm sewer at bridge ends



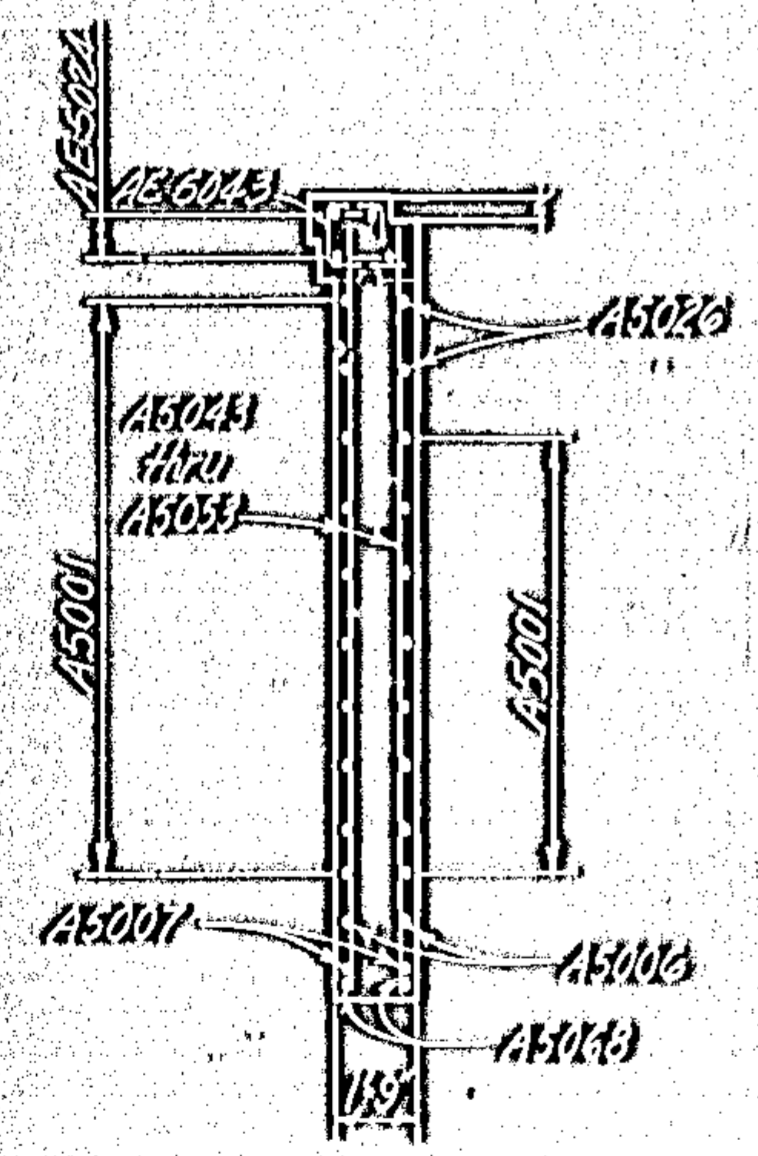
ELEVATION

SECTION A-A

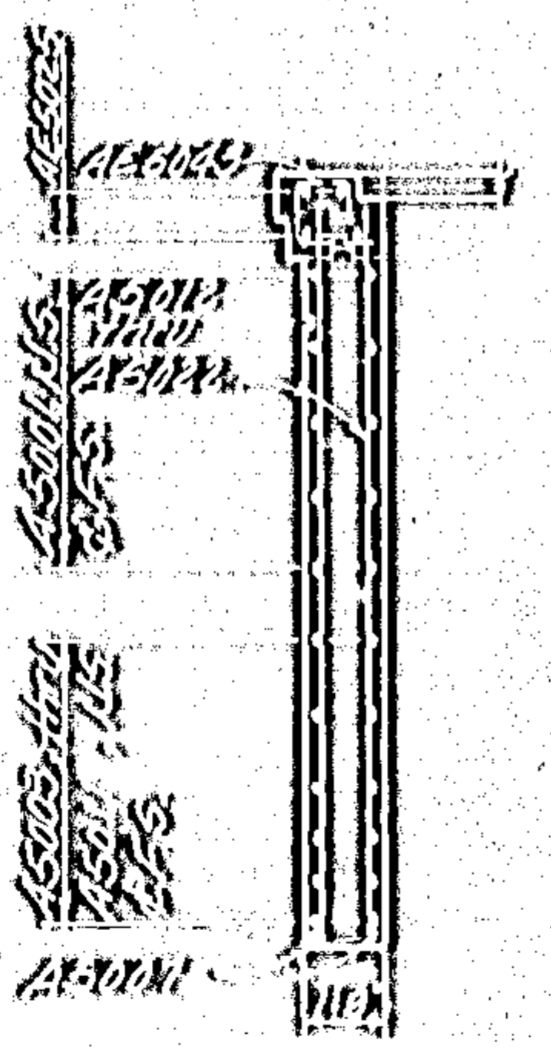
ALDEN ENGINEERING ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
QUAYHOGA COUNTY		ENGINEER	
CHEVAND		OHIO	
BROOKPARK ROAD			
ENGINEERING OFFICE OVERLOOK BUILDING CLEVELAND, OHIO			
WEST ABUTMENT WIDENING DETAILS			
COUNTY	NO.	DATE	DATE
OHIO	89	NOV. 1931	
NO. B-191			
DESIGN	DRAWN	CHECKED	REVIEWED
1931	1931	1931	1931



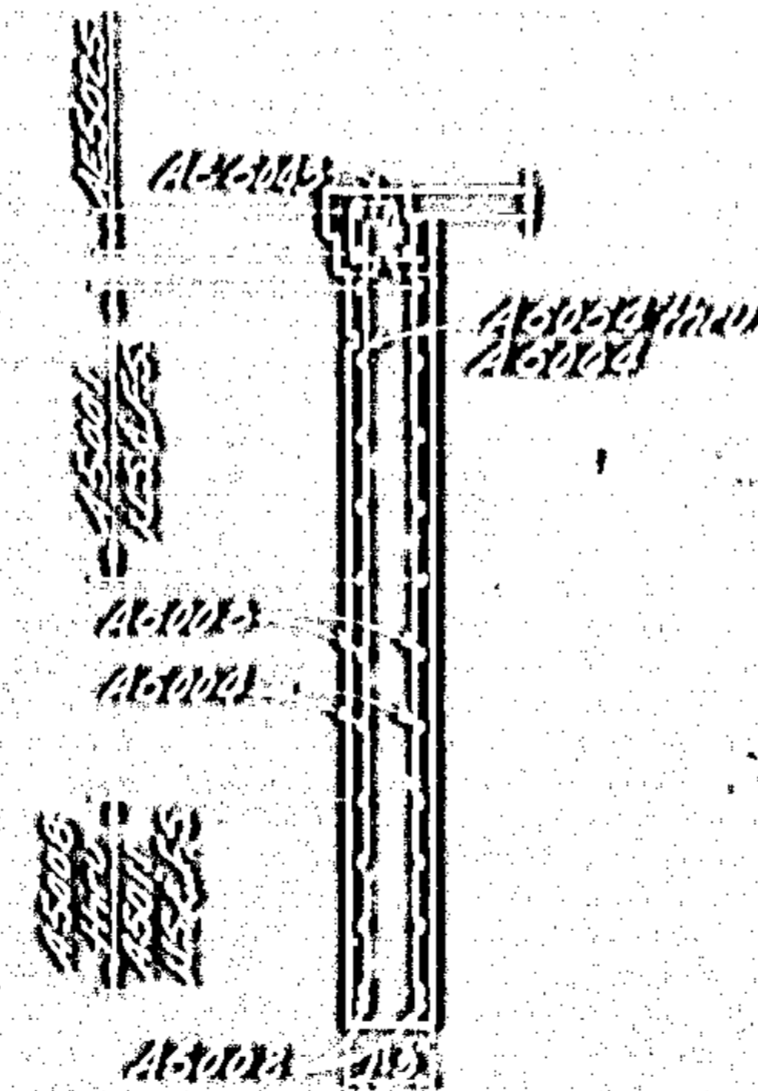
VIEW A-A



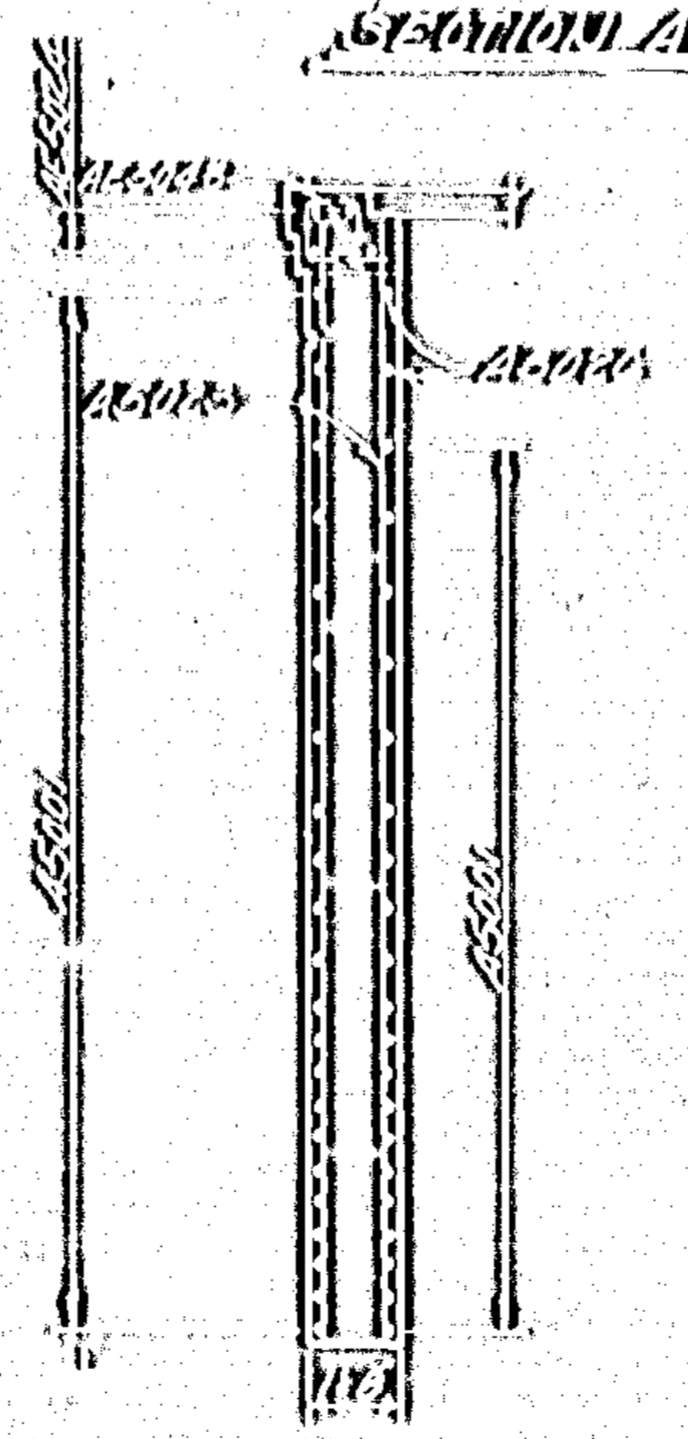
SECTION A-A



SECTION B-B



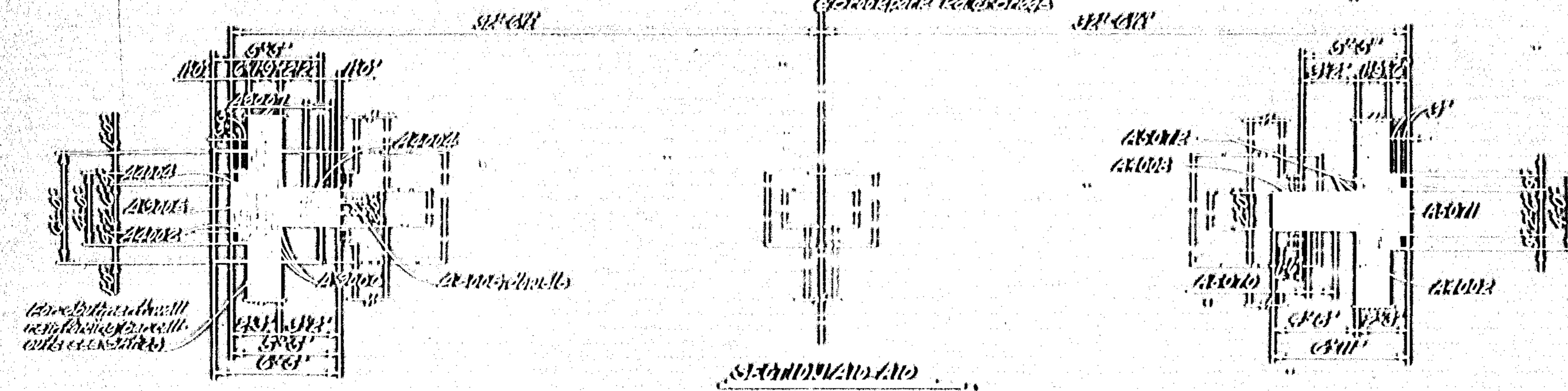
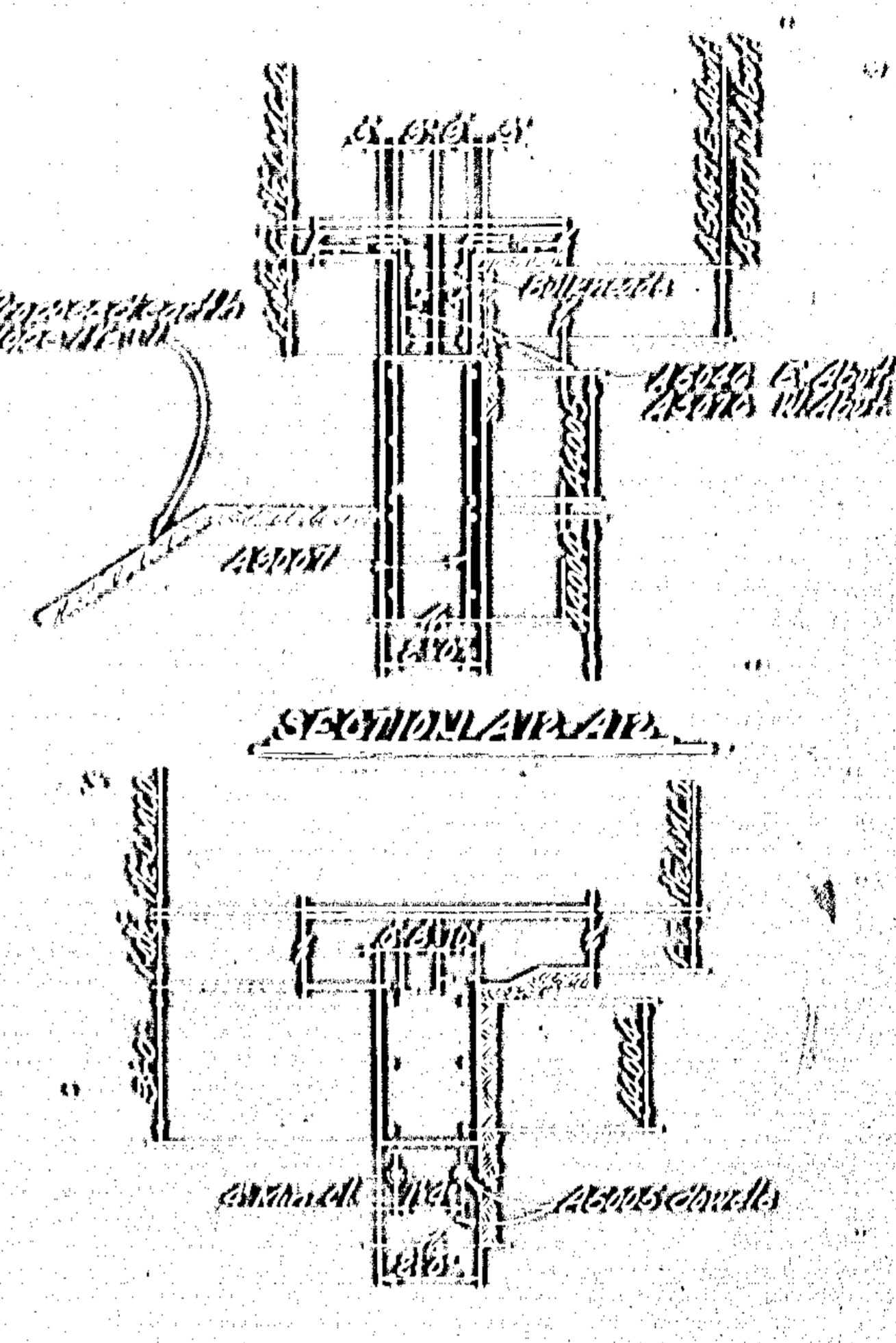
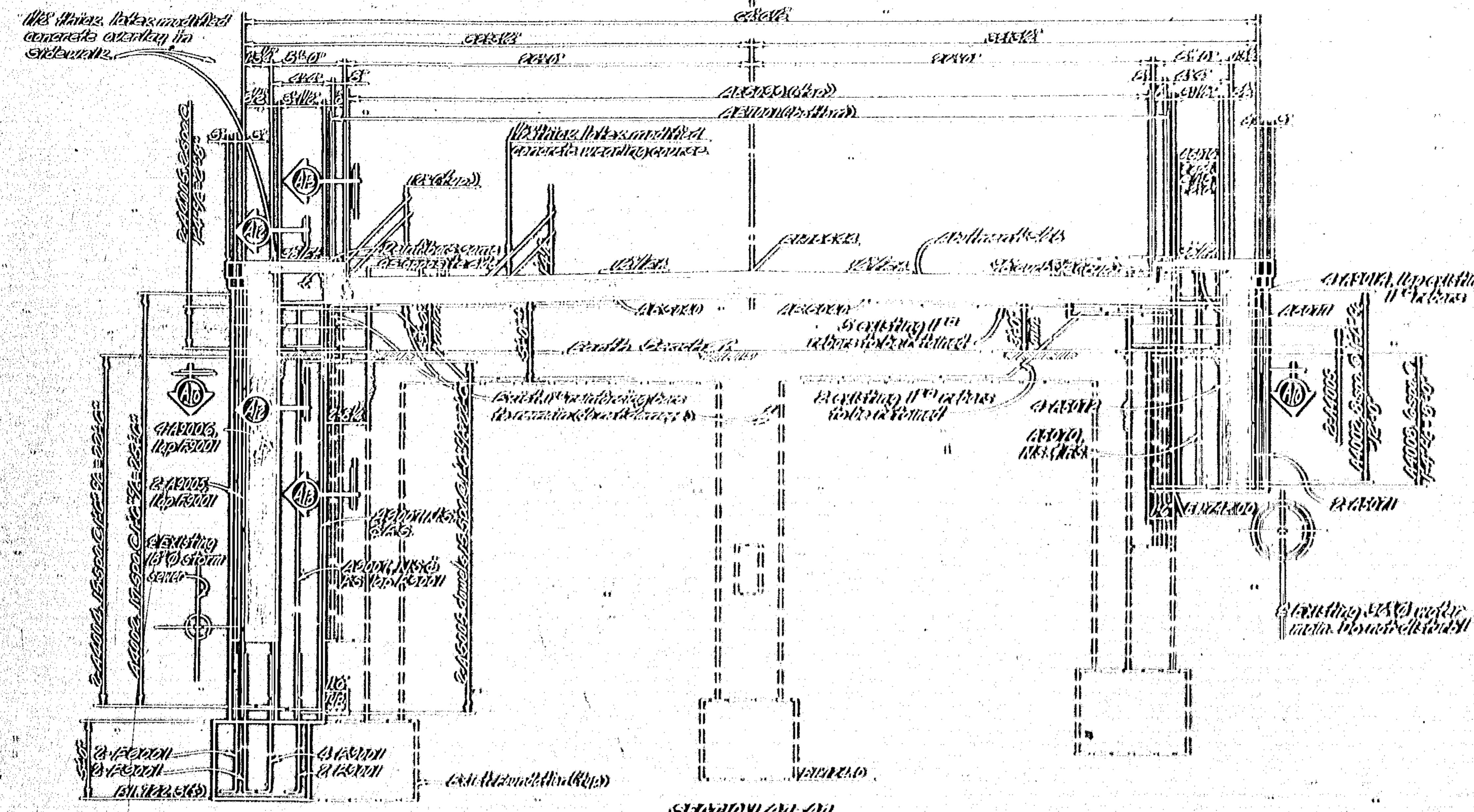
SECTION C-C



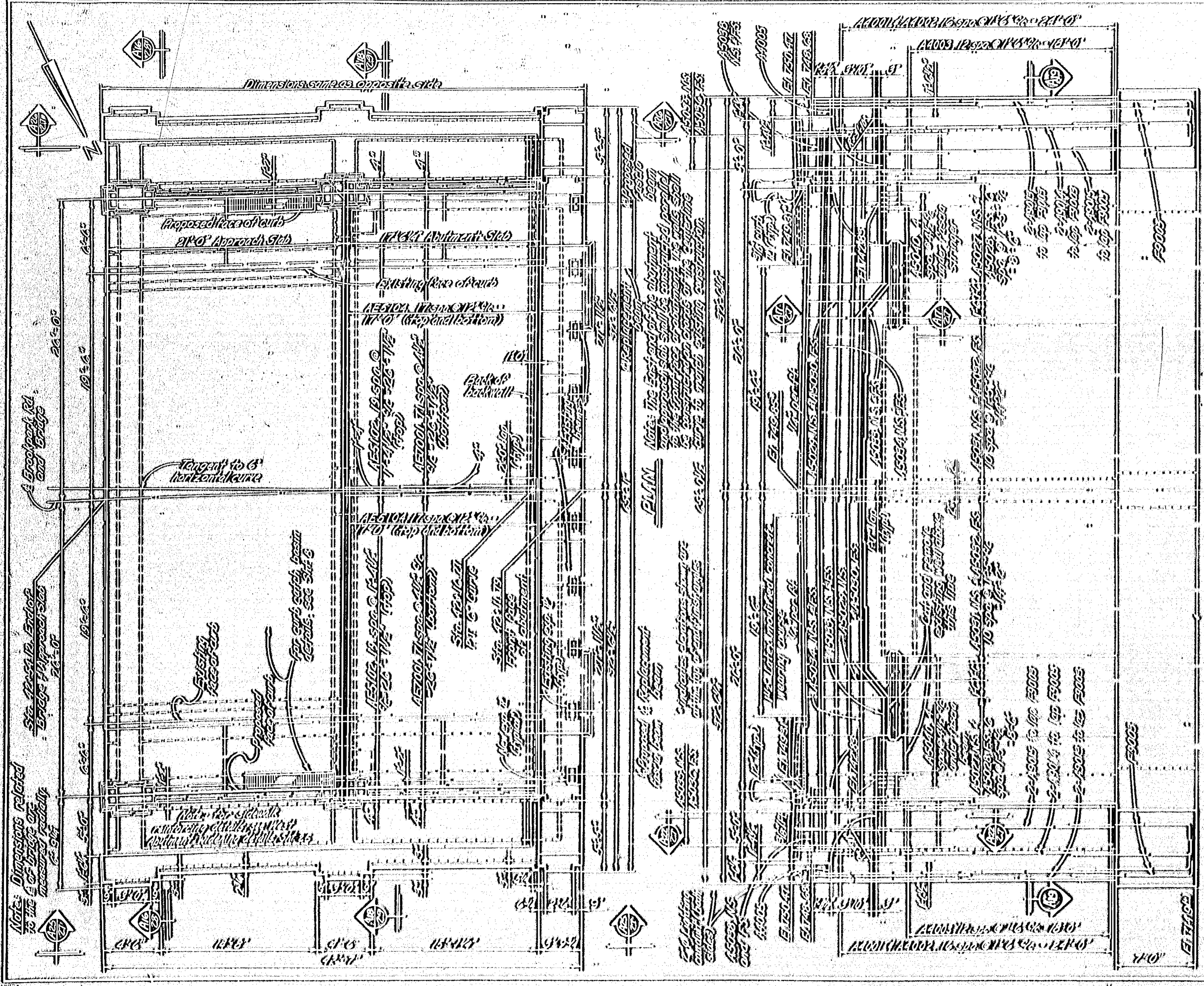
SECTION D-D

ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED
 TO BE IN FEET AND INCHES

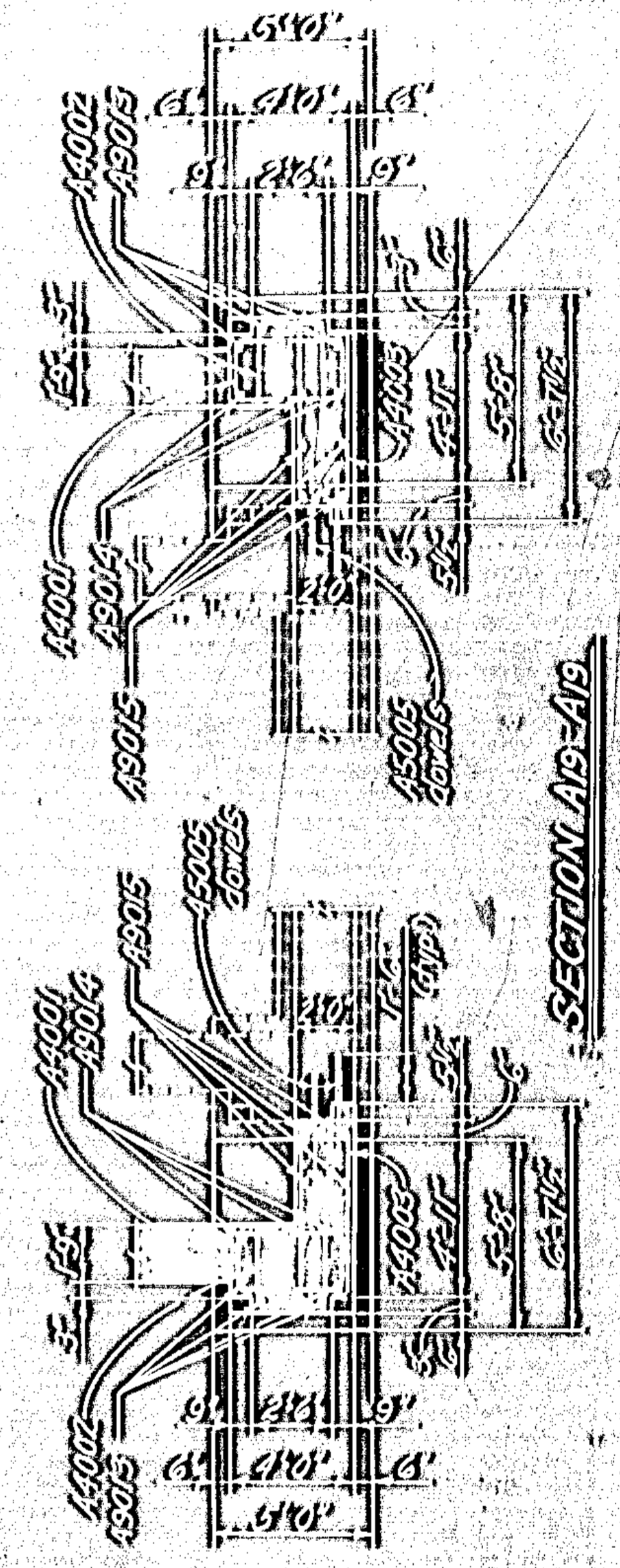
AMERICAN BRIDGE COMPANY, LIMITED ENGINEERS CLEVELAND, OHIO			
CUYAHOGA COUNTY ENGINEER CHEVAND OHIO			
BROOKPARK ROAD BRIDGE NO. 614 OVER OVERLOOKY CREEK CITY OF CHEVAND OHIO			
WEST ABUTMENT WIDENING DETAILS			
COUNTY BRIDGE NO. 614	GEOMETRIC NO. 7051	DATE 1/22/22	
NO. B-191			
DESIGN W.M.	DRAWN 1926	CHECKED C.M.M.	REVISIONS TO BE MADE BY



AMERICAN ENGINEERING CORPORATION, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
CUNYAHOGA COUNTY ENGINEER CLEVELAND OHIO			
BROOKPARK ROAD IMPROVING AND WIDENING OVER THE CLEVELAND DISTRICT (PART OF CLEVELAND DISTRICT)			
WEST ALIGNMENT WIDENING DETAILS			
COUNTY ENGINEER, CLEVELAND, OHIO, DATE 1911			
NO. B-1191			
DESIGNED	DRAWN	CHECKED	REVIEWED
1911	1911	1911	1911



ELEVATION



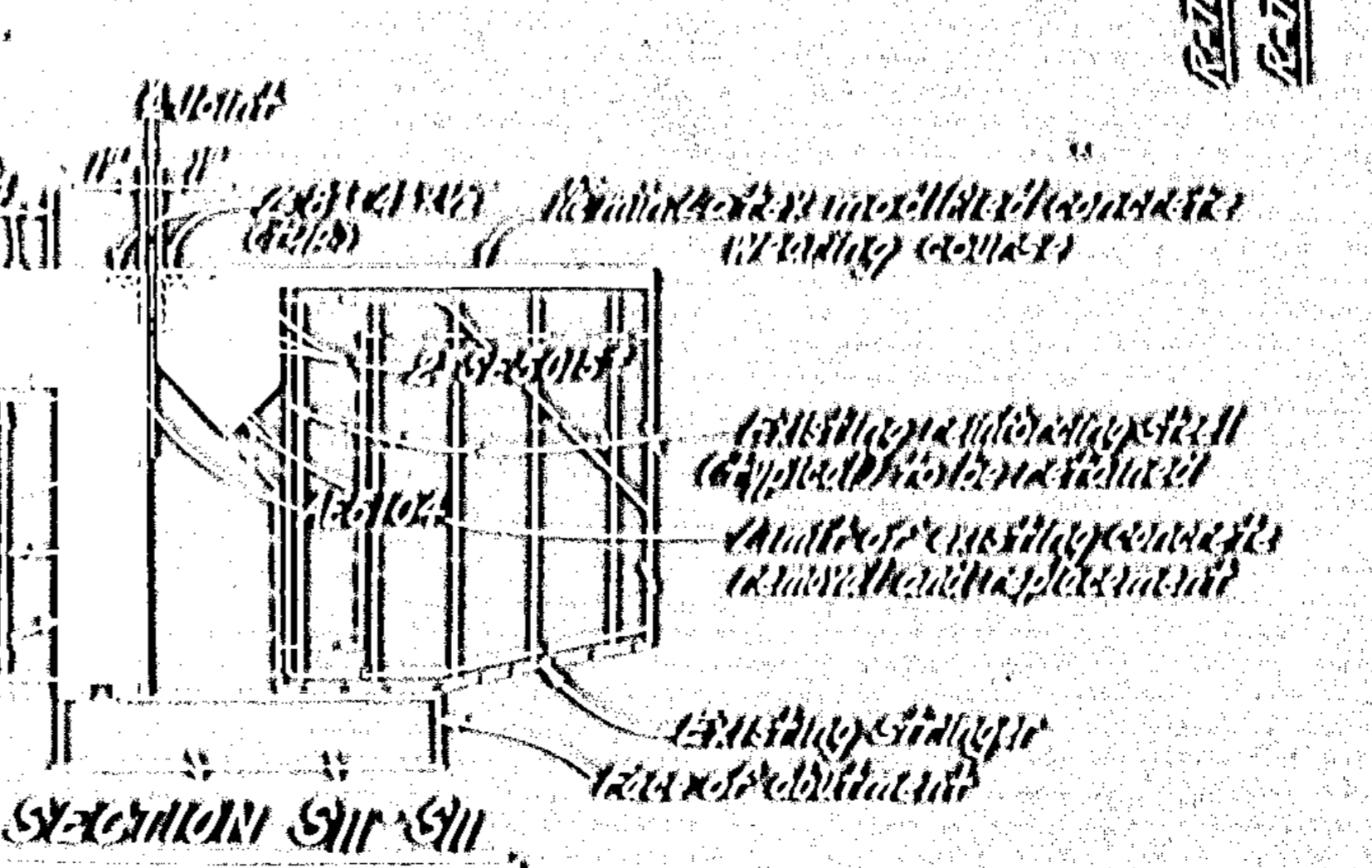
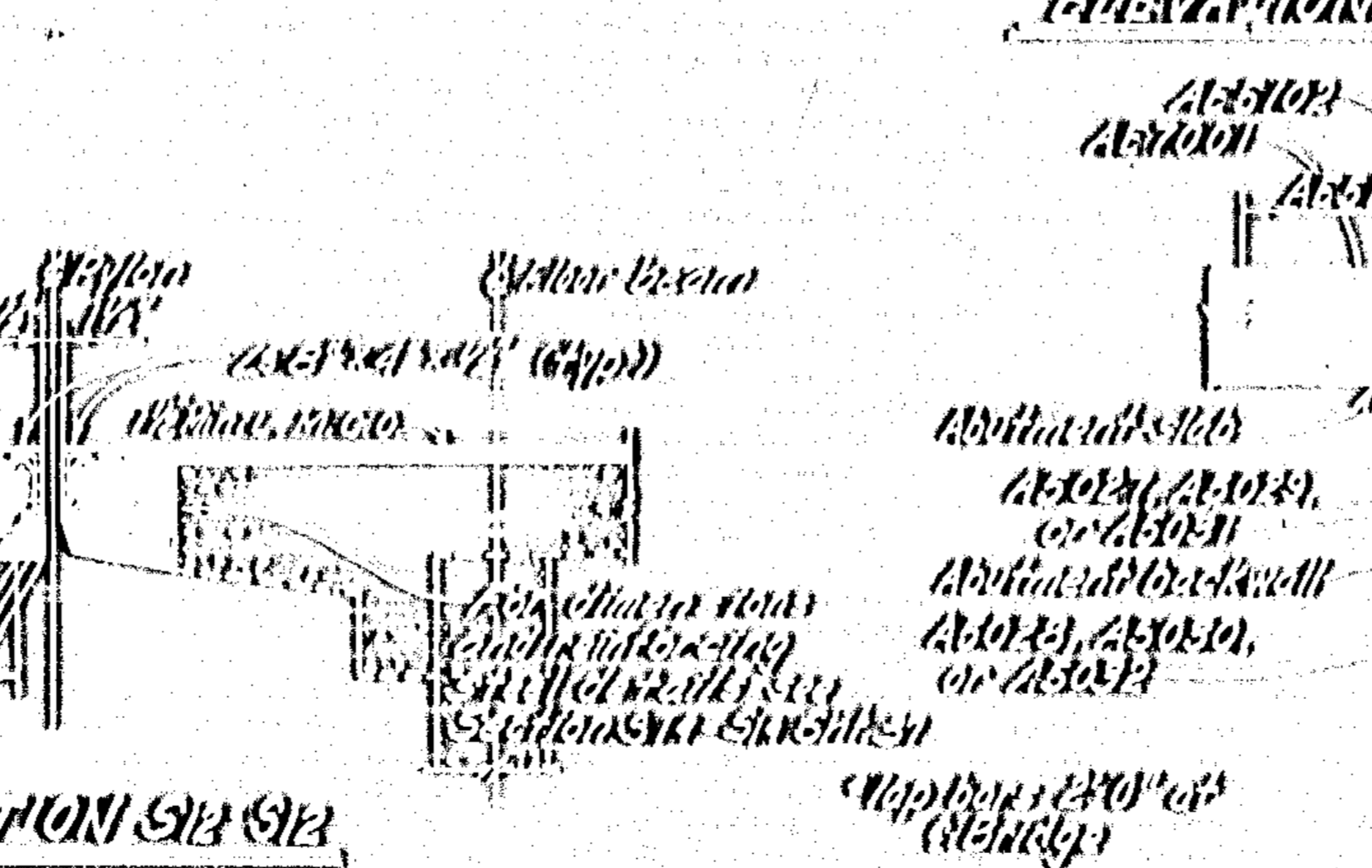
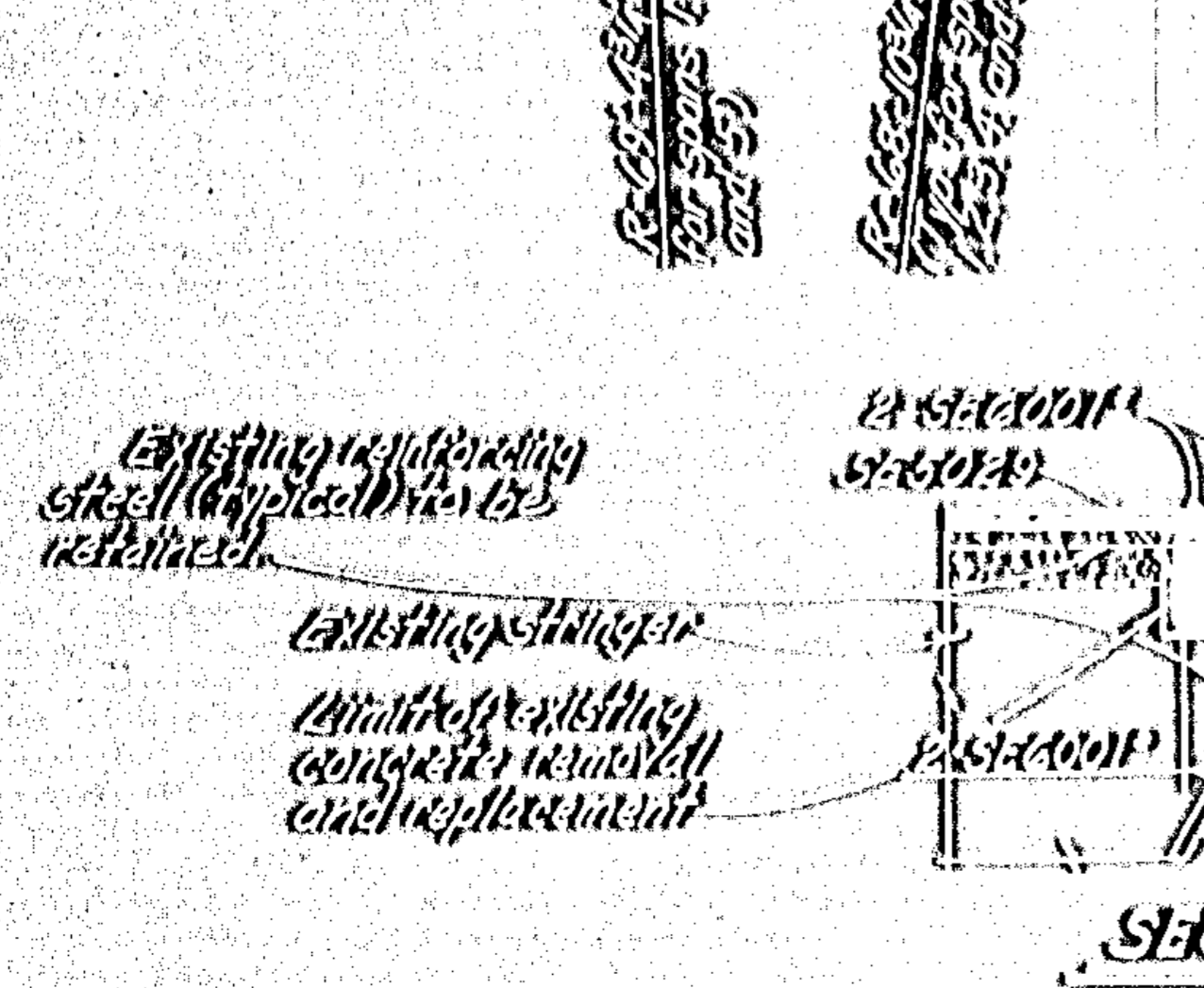
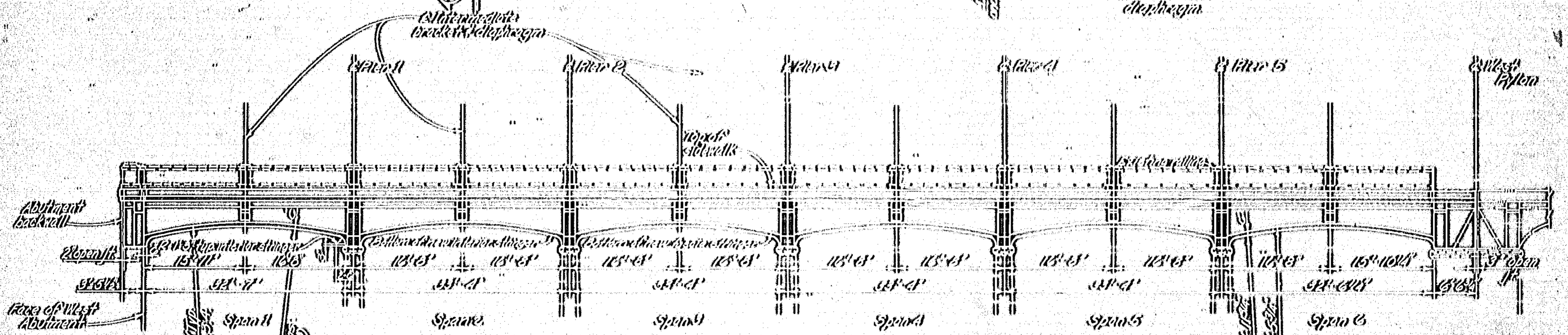
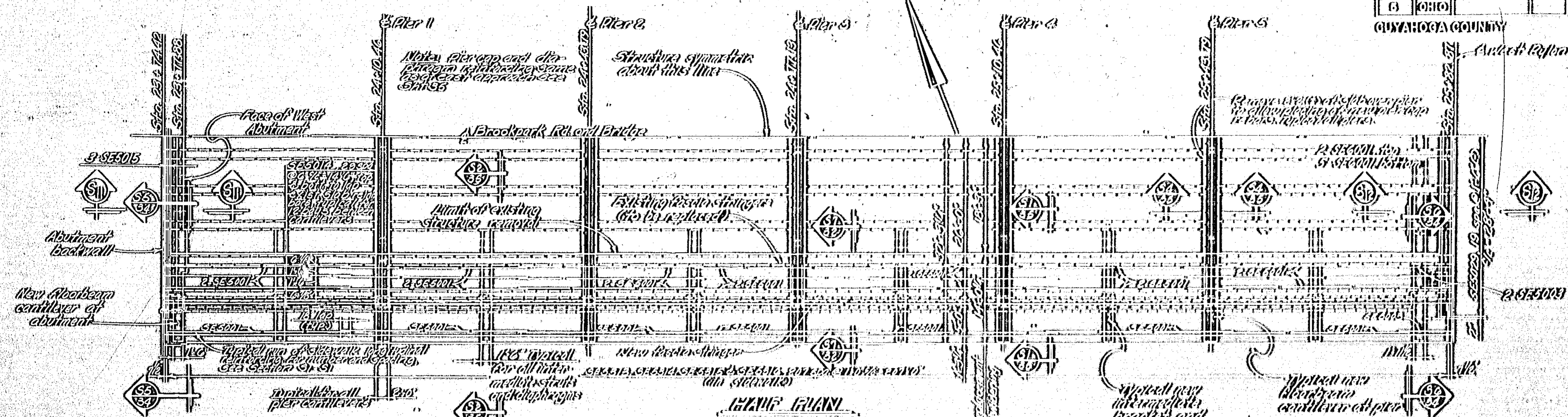
AMERICAN INSTITUTION OF PROFESSIONALS, LIMITED ENGINEERS AND ARCHITECTS COLUMBUS, OHIO			
OHIO COUNTY ENGINEER		OHIO	
BROOKPARK ROAD BRIDGE NO. 191 COLUMBUS, OHIO			
EAST ABUTMENT WIDENING DETAILS			
DESIGN 1911	DRAWN 1911	CHECKED 1911	REVIEWED 1911

Notes: Dimensions related to the E or W side are measured from the center line of the road.

Note: The East end of the abutment and approach slab shall be constructed parallel to the front face of abutment. The walls shall be constructed on a grade at the existing curb to match existing construction.

Note: Indicates location of the top of the abutment.

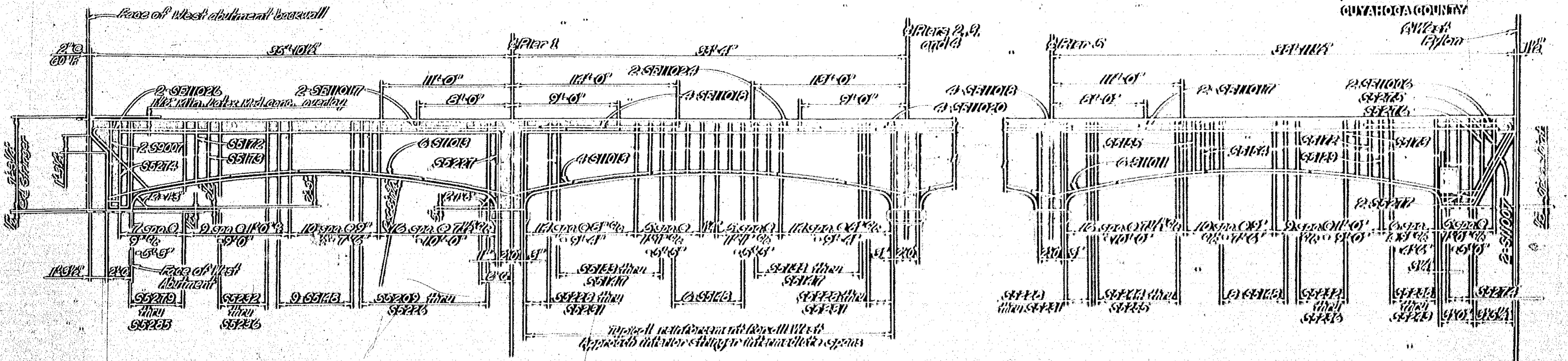
Note: Indicates location of the top of the abutment.



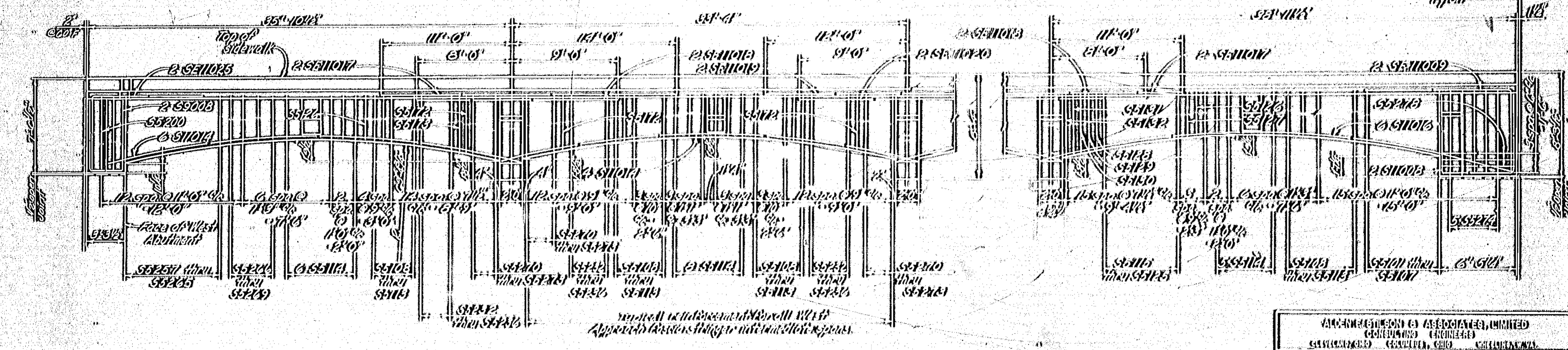
ARCHITECTURE & ASSOCIATES, LIMITED ENGINEERS			
QUAYHOGA COUNTY ENGINEER CHEVANDER, QUAYHOGA, OHIO			
BROOKPARK ROAD			
BRIDGE NO. 1017A (2E3) OVER HOGY CREEK CHILDS CREEK AND HANCOCK TOWNSHIP			
WEST APPROACH SPANS WIDENING DETAILS			
COUNTY	BRIDGE NO.	REPORT NO.	DATE
OHIO	89	1017A	12-1-53
NO. B-101			
DESIGN	DRAWN	CHECKED	REVISED
CHD	EMC	CMR	YOUNG

DATE	BY	CHECKED	REVISION
3	1010		

QUAYHOGA COUNTY
GHEAVLAND OHIO



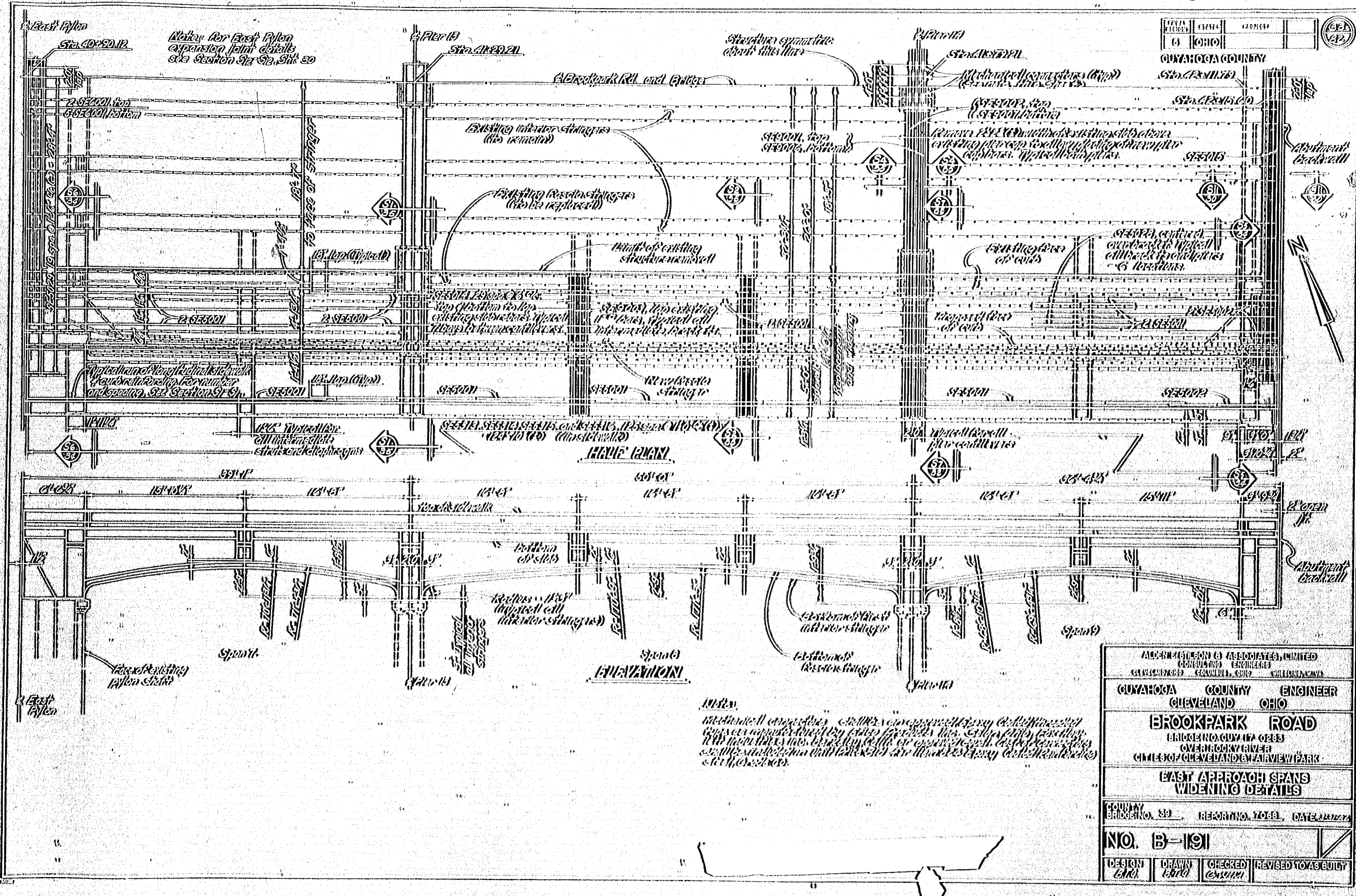
NEW INTERIOR STRINGER



NEW WINDYBIA STRINGER

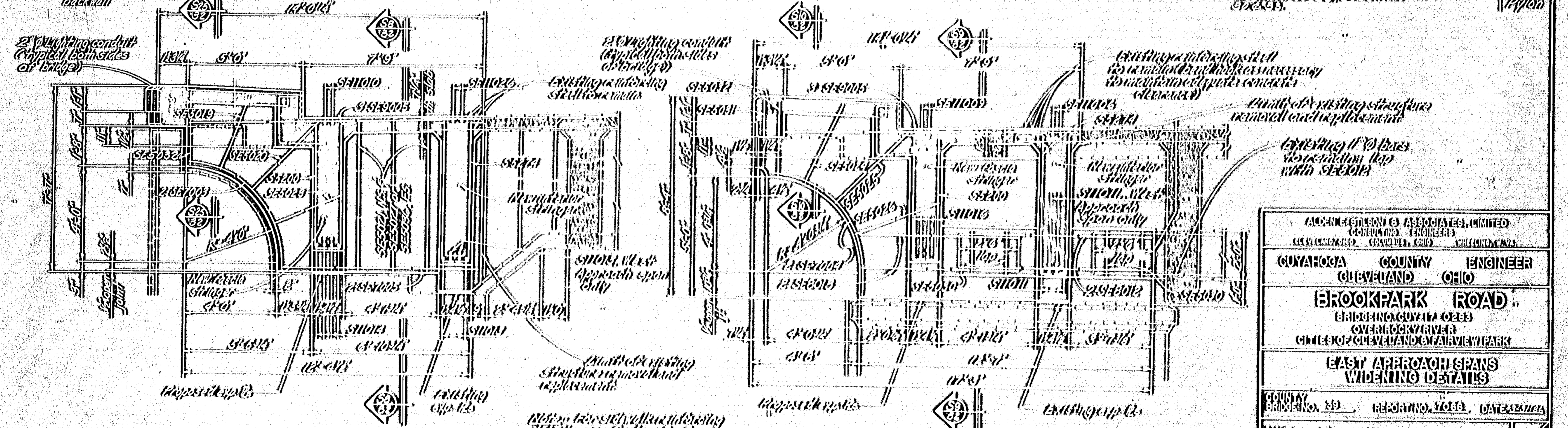
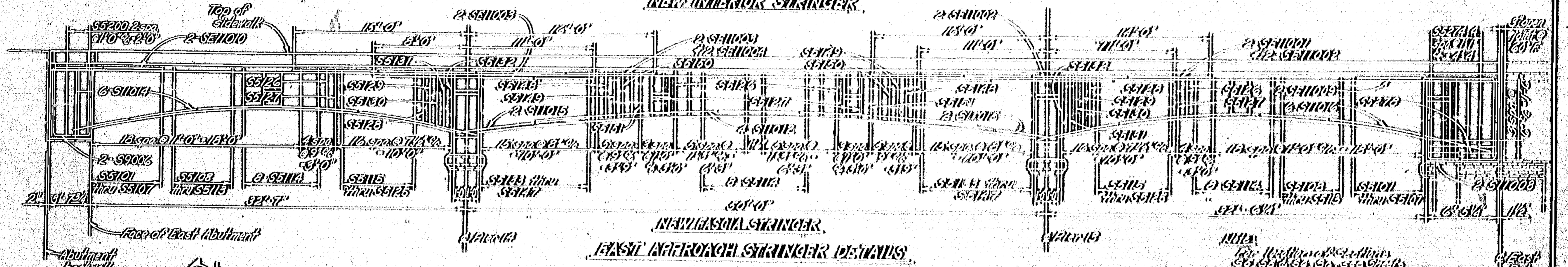
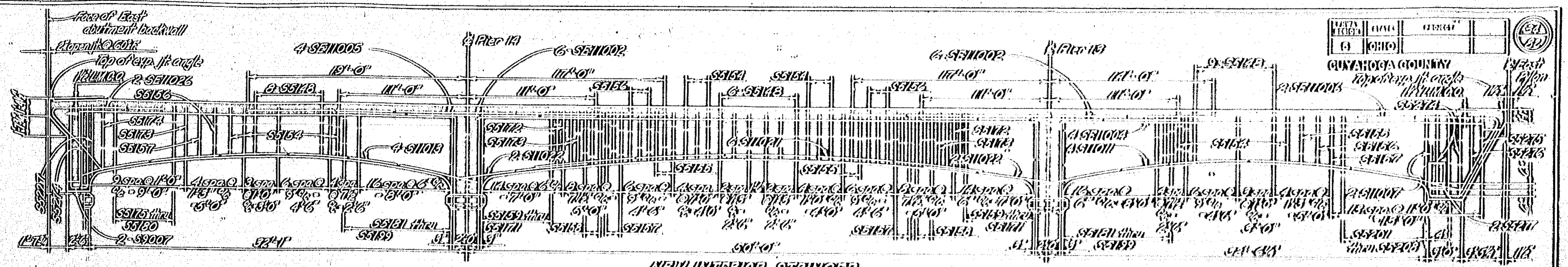
WEST APPROACH STRINGER DETAILS

ARCHITECTURE & ENGINEERING, LIMITED COLUMBUS, OHIO			
QUAYHOGA COUNTY	COLUMBUS, OHIO	ENGINEER	
BROOKPARK ROAD			
HARRISBURG, OHIO			
OVERLOOK AVENUE			
CITY OF COLUMBUS, OHIO			
WEST APPROACH SPANS			
WIDENING DETAILS			
COUNTY	NO. 89	REVISION	DATE
OHIO			
NO. B-191			
DESIGN	DRAWN	CHECKED	REVISIONS
ENG.	ENG.	ENGR.	

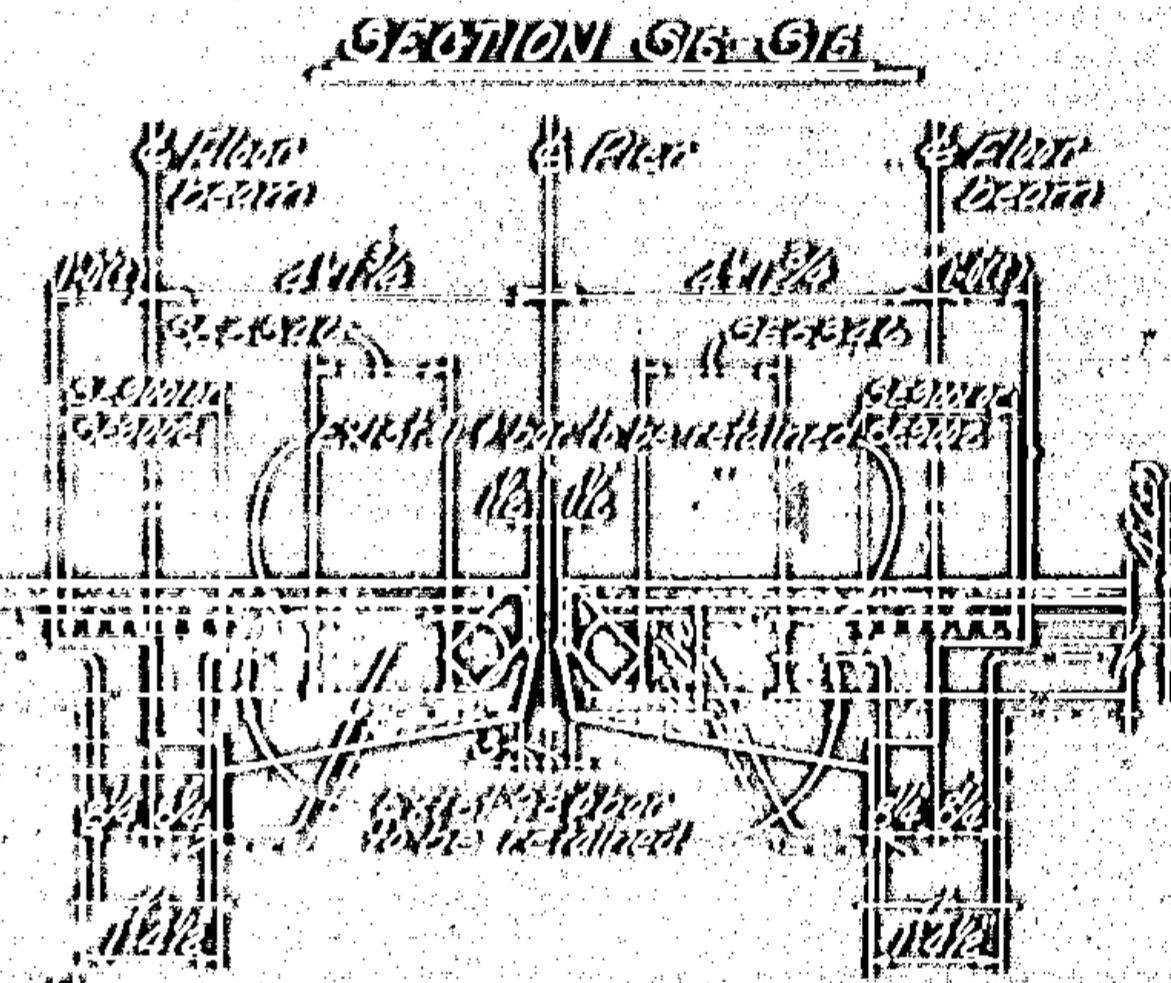
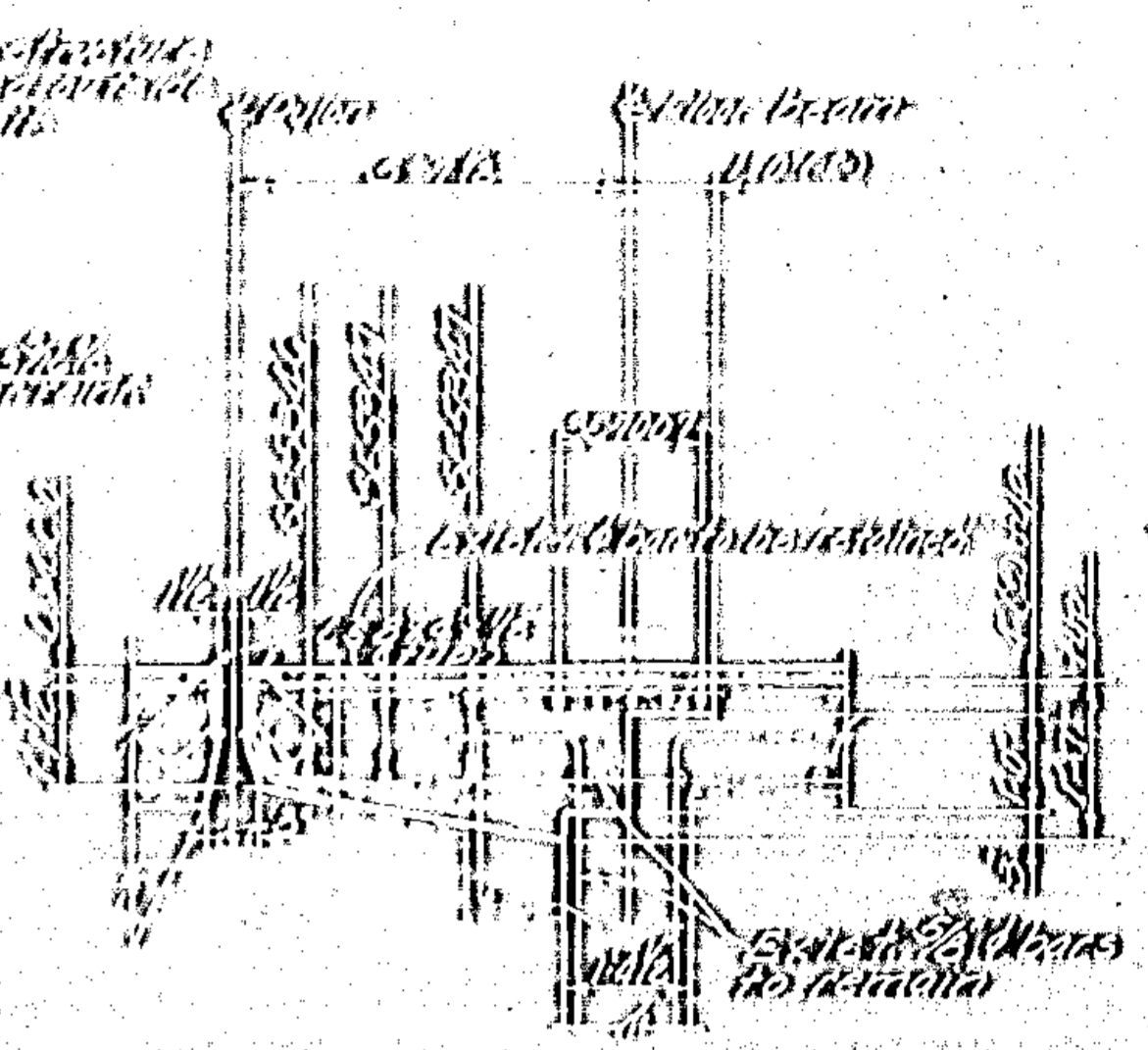
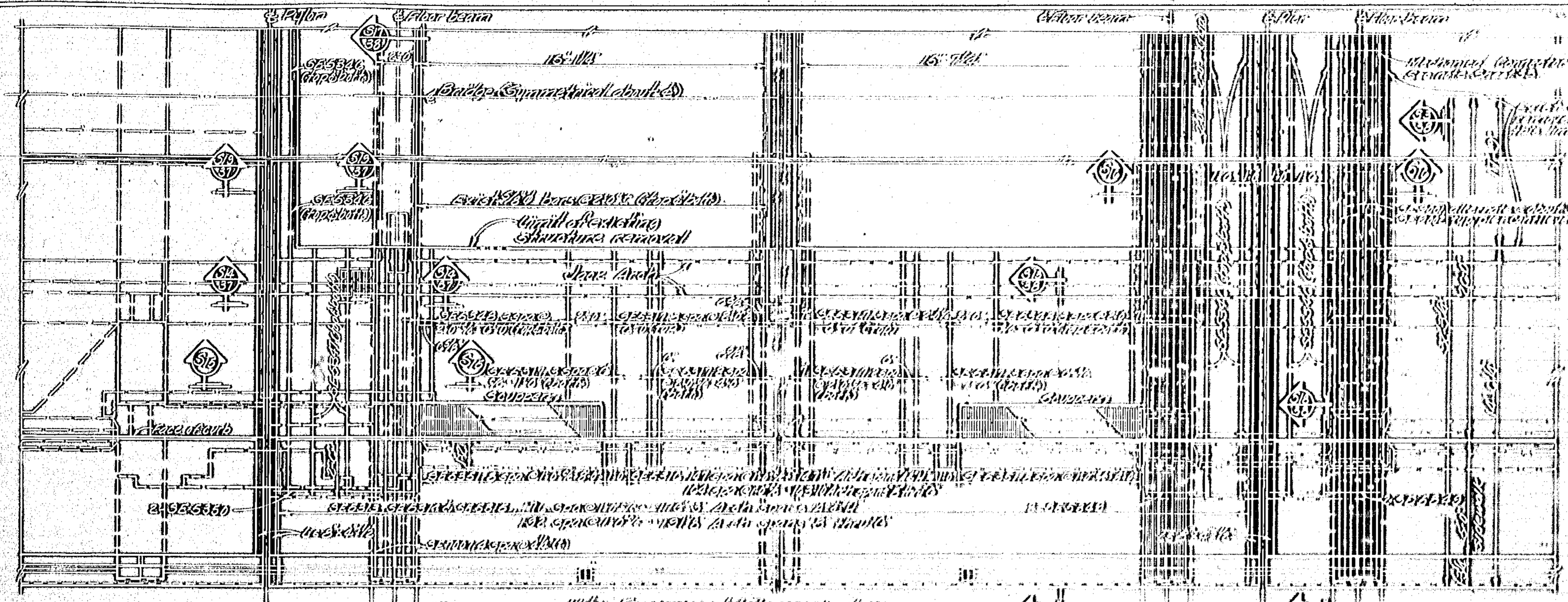


Method of construction shall be approved by the Engineer. Any changes in the design shall be approved by the Engineer. The contractor shall be responsible for the construction of the bridge.

ARCHITECTURE & ENGINEERING, LIMITED 10000 CHEVINGTON AVENUE CLEVELAND, OHIO 44130			
CUYAHOGA COUNTY	CHEVELAND OHIO	ENGINEER	
BROOKPARK ROAD			
BRIDGE NO. CUYA 1003			
OVER HIGHWAY 100			
CITY OF CHEVELAND AND NEW PARK			
EAST APPROACH SPANS			
WIDENING DETAILS			
COUNTY	BRIDGE NO. 89	PROJECT NO. 7081	DATE 1/15/54
NO. B-191			
DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
EMC	EMC	EMC	

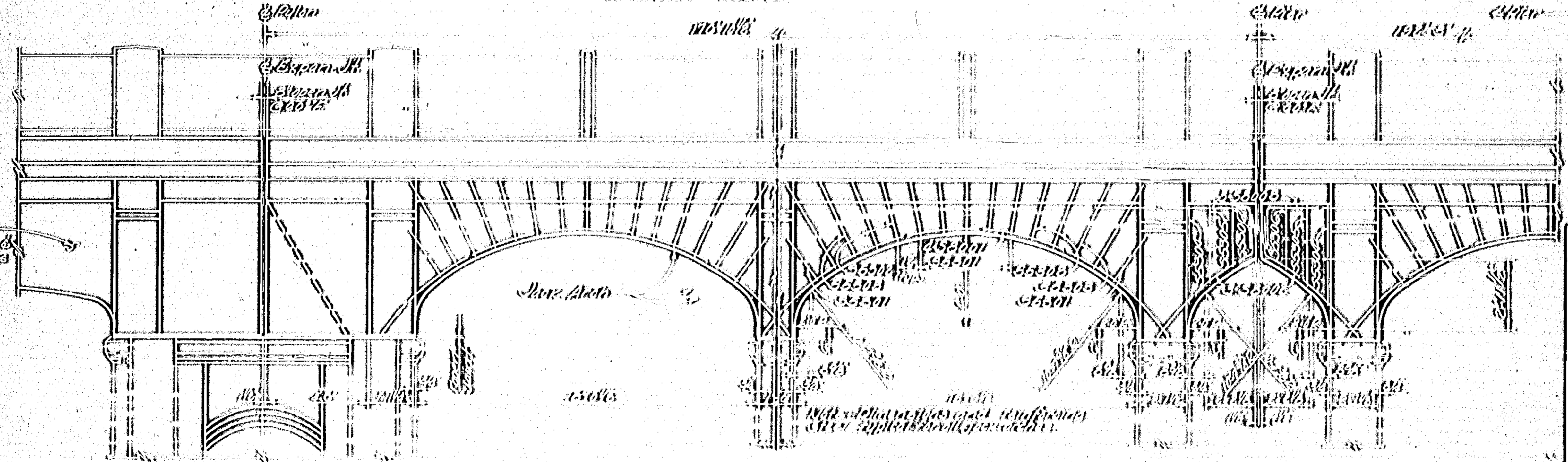


ALDEN ENGINEERING ASSOCIATES, LIMITED CLEVELAND, OHIO			
CUYAHOGA COUNTY ENGINEER CLEVELAND, OHIO			
BROOKPARK ROAD BRIDGE (CUYAHOGA CO.) OVER CUYAHOGA RIVER CLEVELAND, OHIO			
EAST APPROACH SPANS WIDENING DETAILS			
COUNTY	BRIDGE NO.	SECTION	DATE
OHIO	85	B-191	12/15/54
DESIGN	DRAWN	CHECKED	REVISED TO ACHIEVE
()	()	()	()



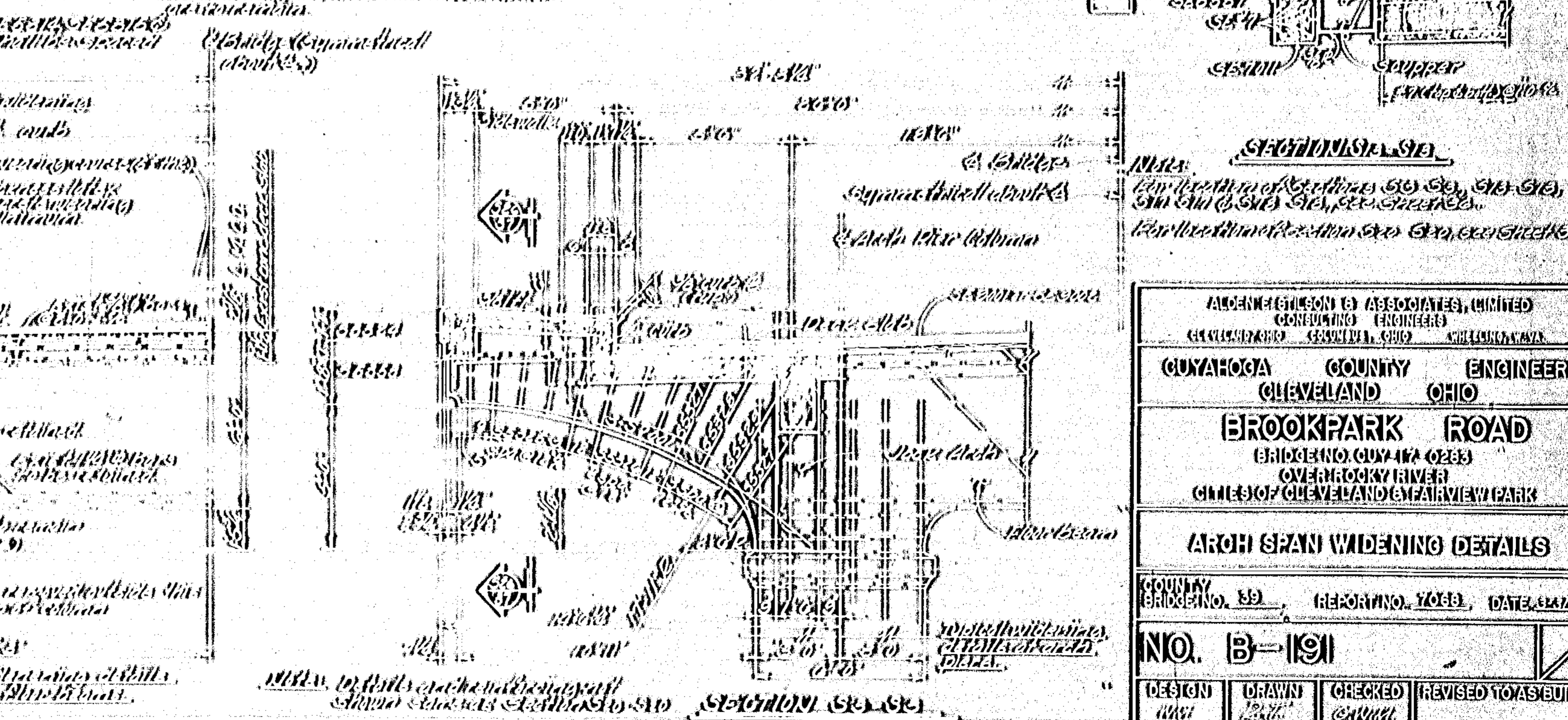
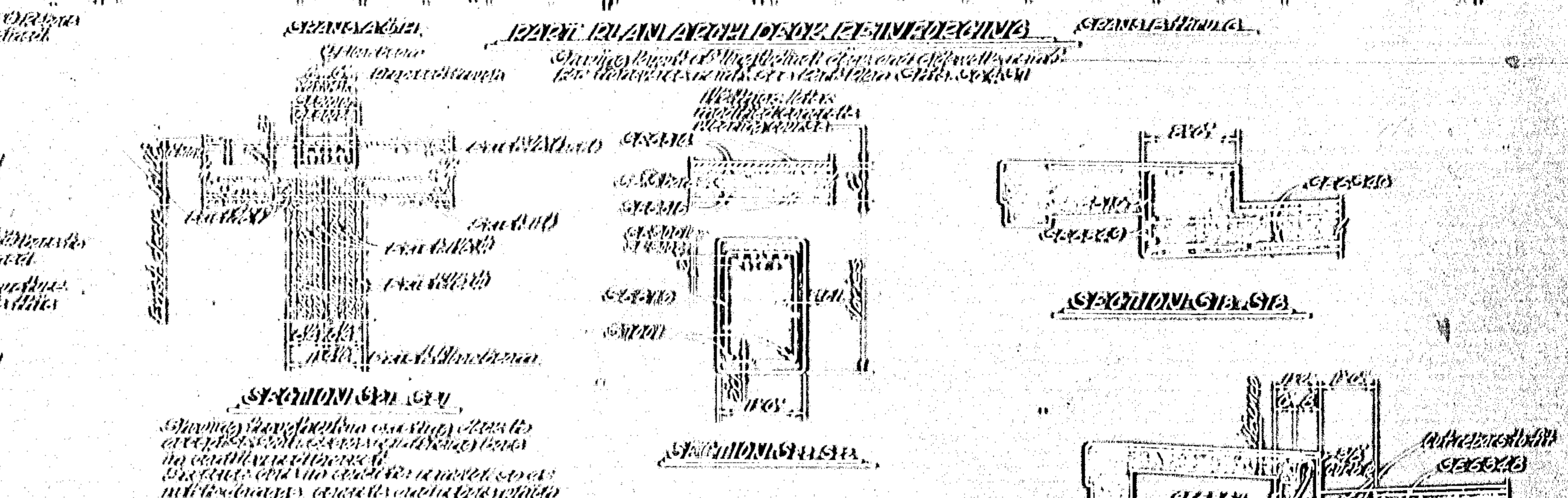
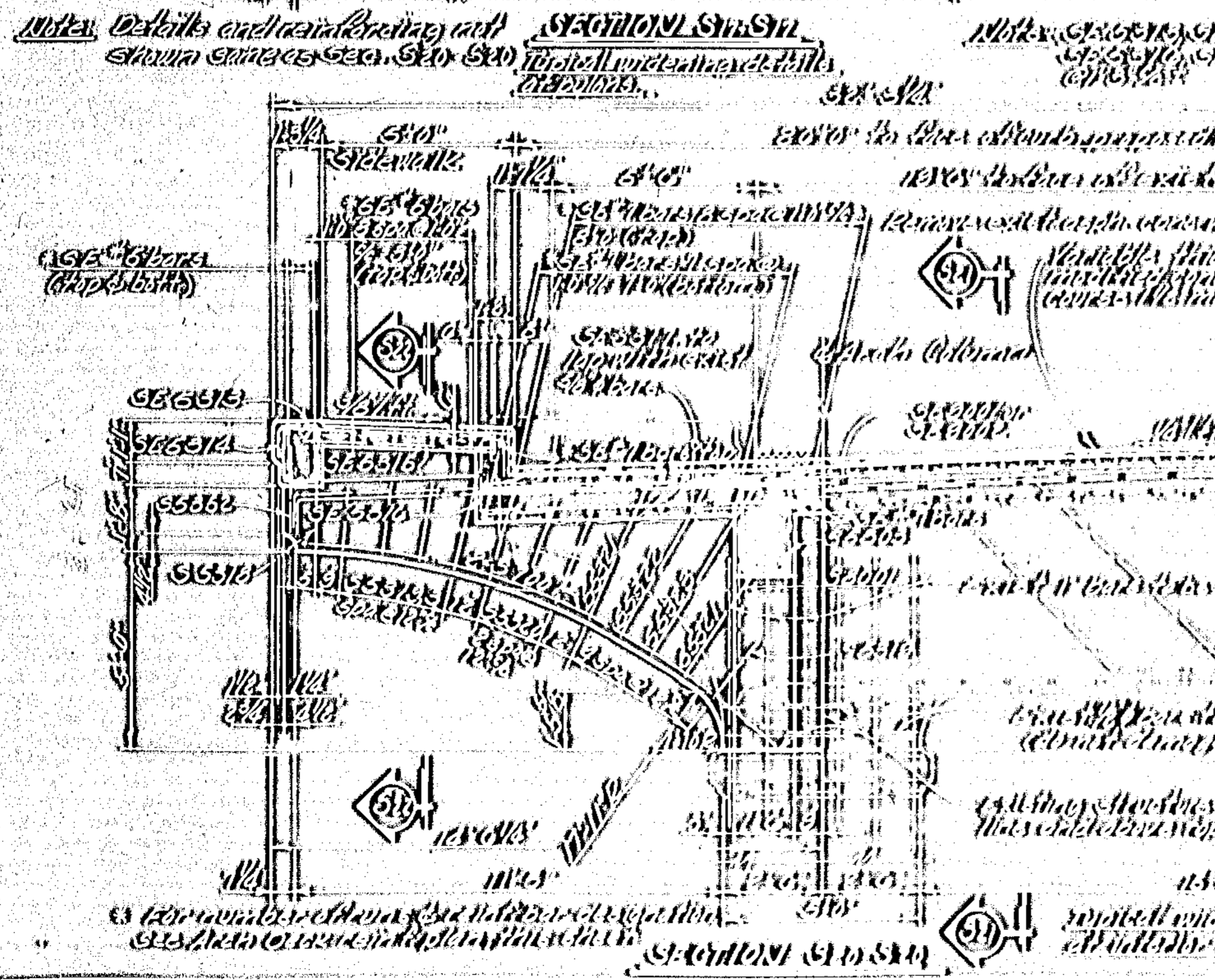
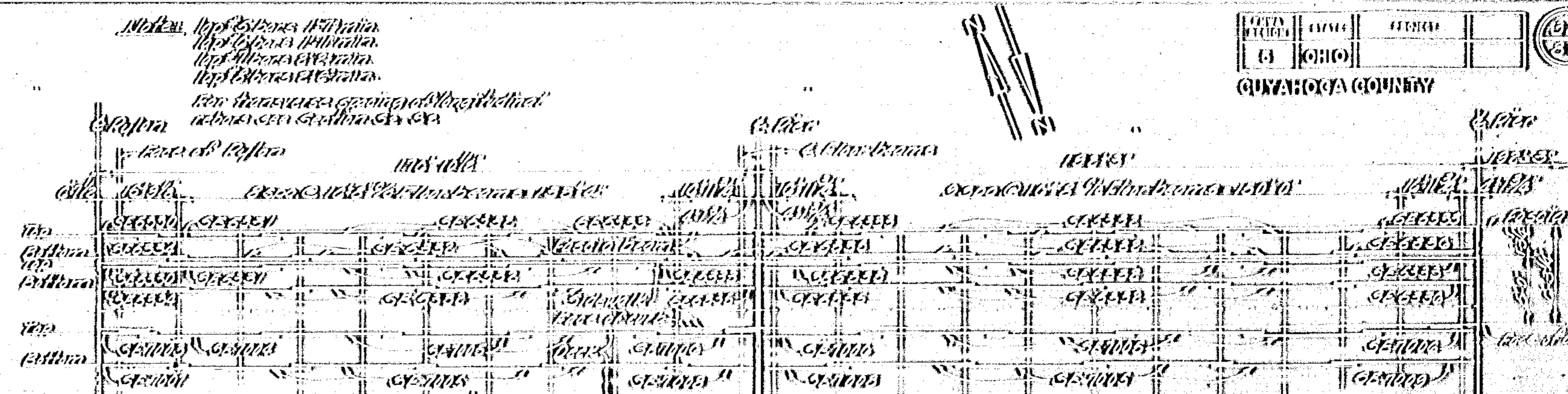
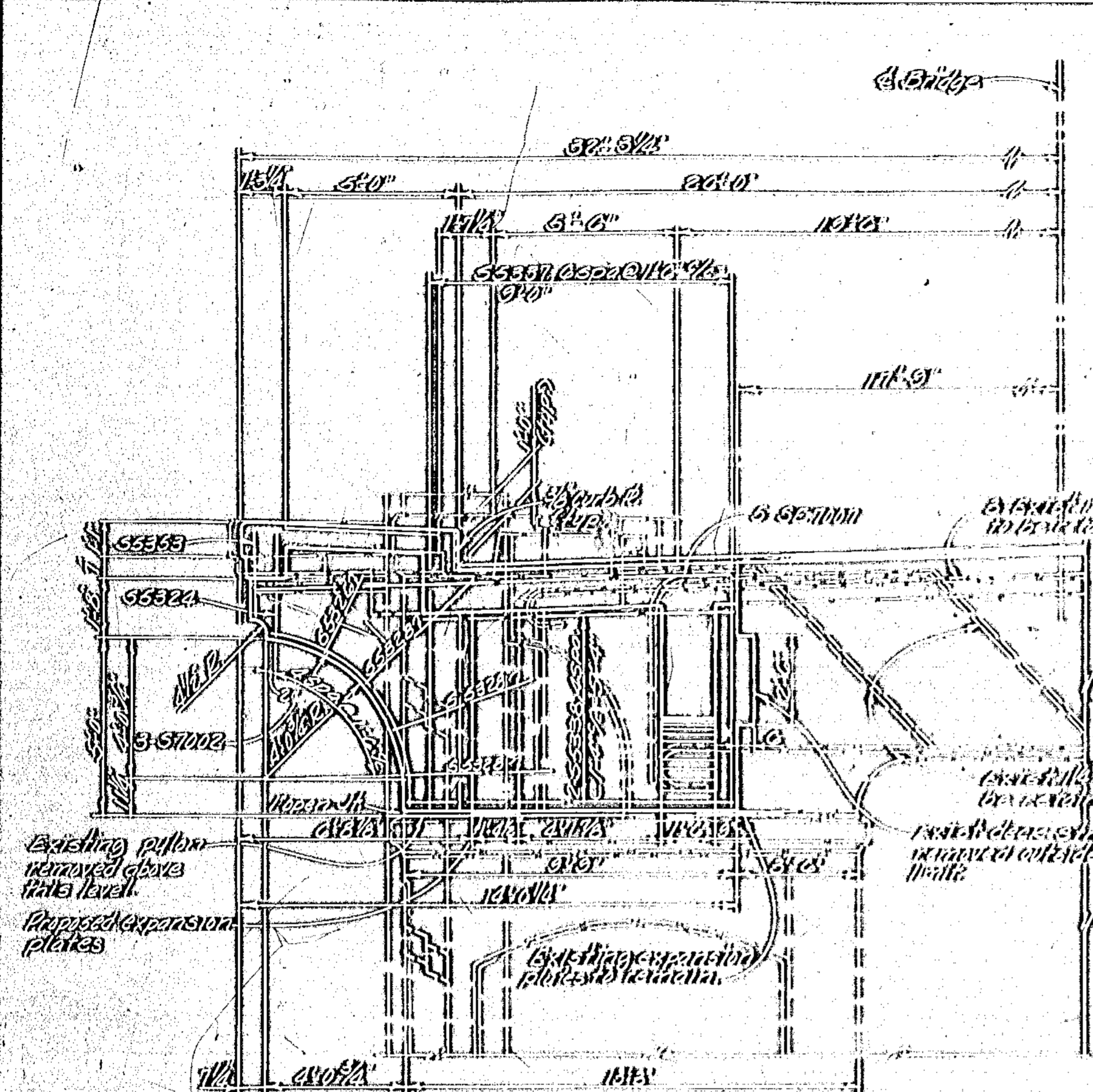
PLAN - PLAN

Showing elevations and details of deck
to piers and abutment.
For full details see other drawings
of this project.

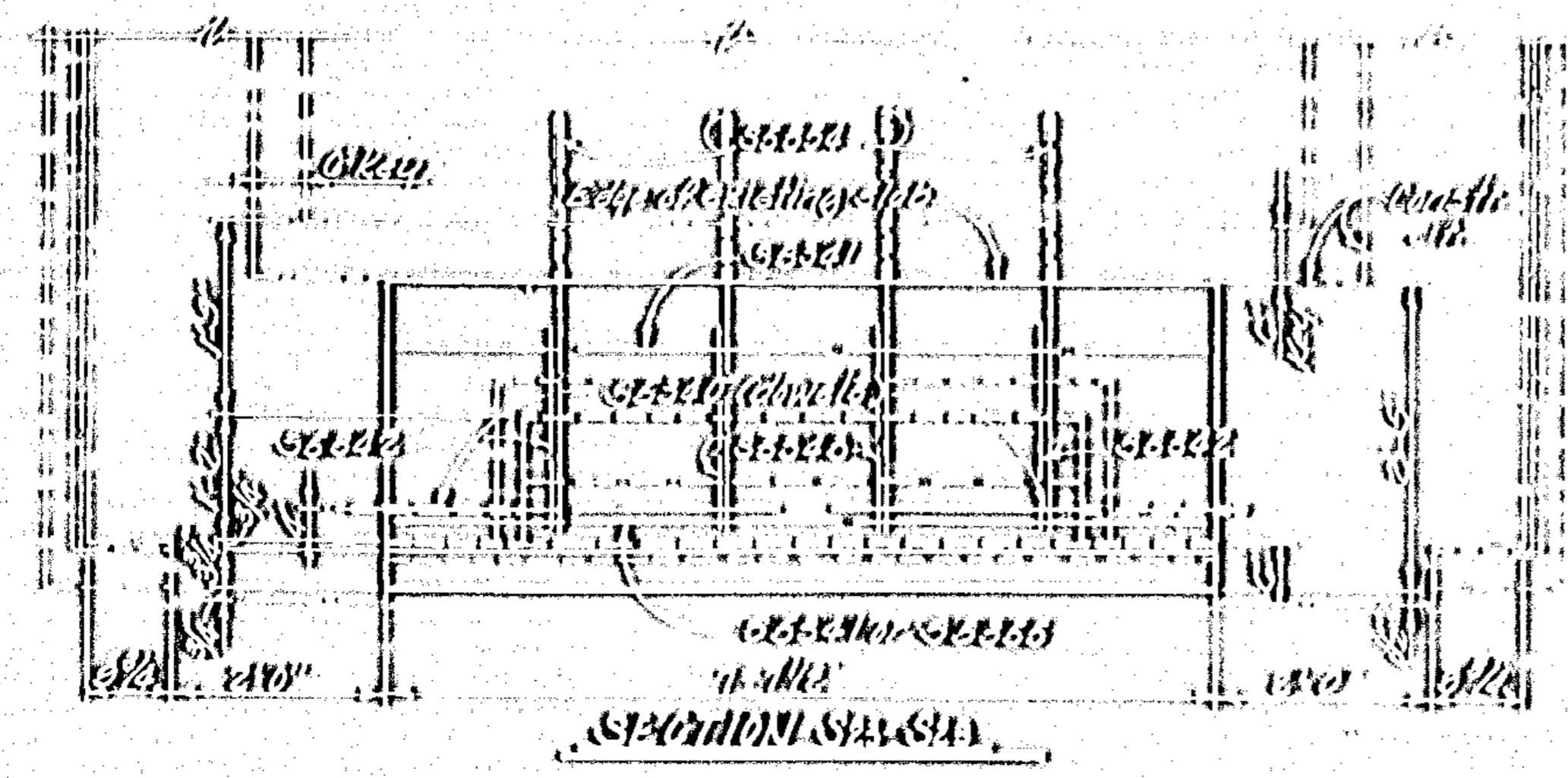
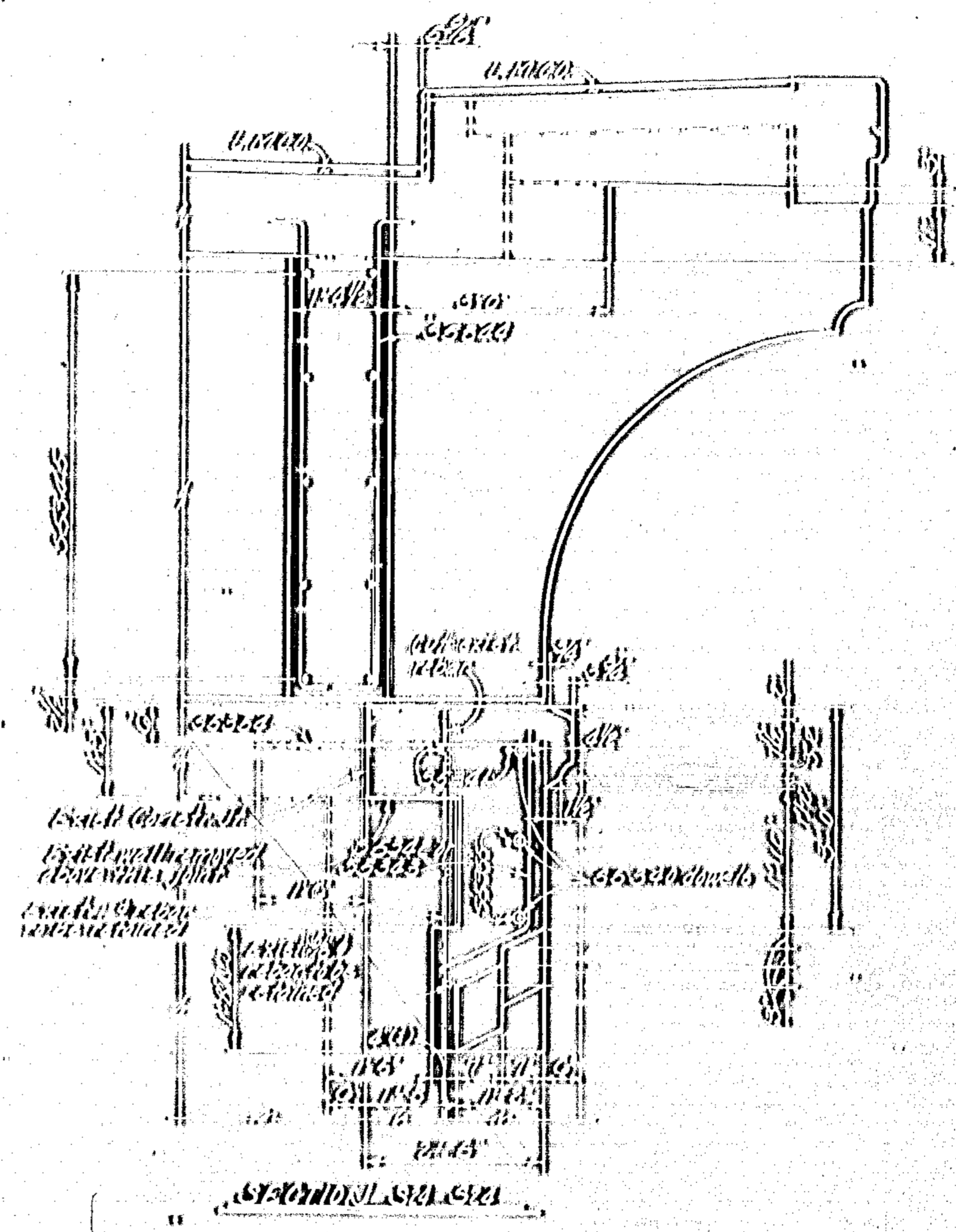
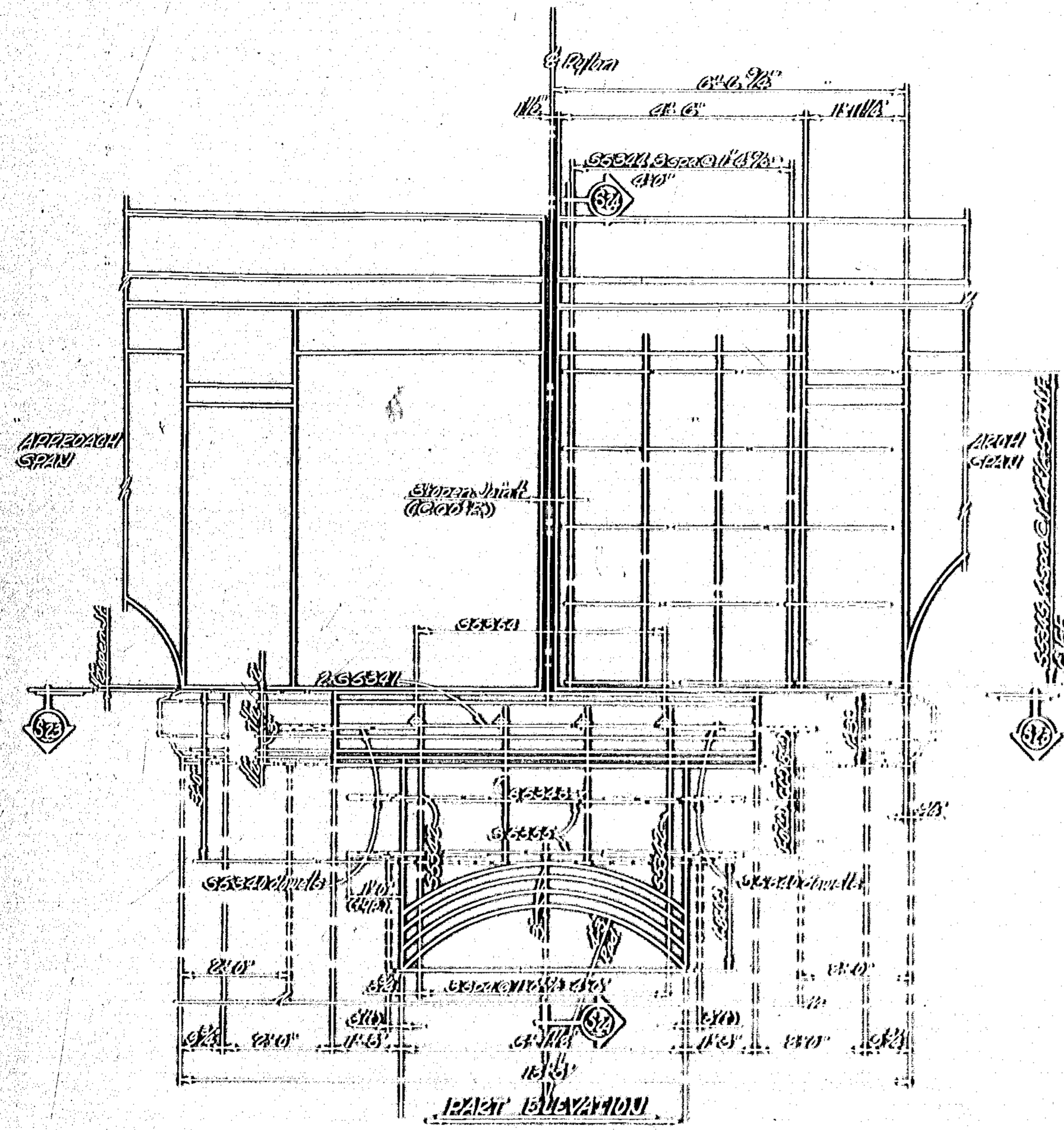


PLAN - SUBSTANTIUM

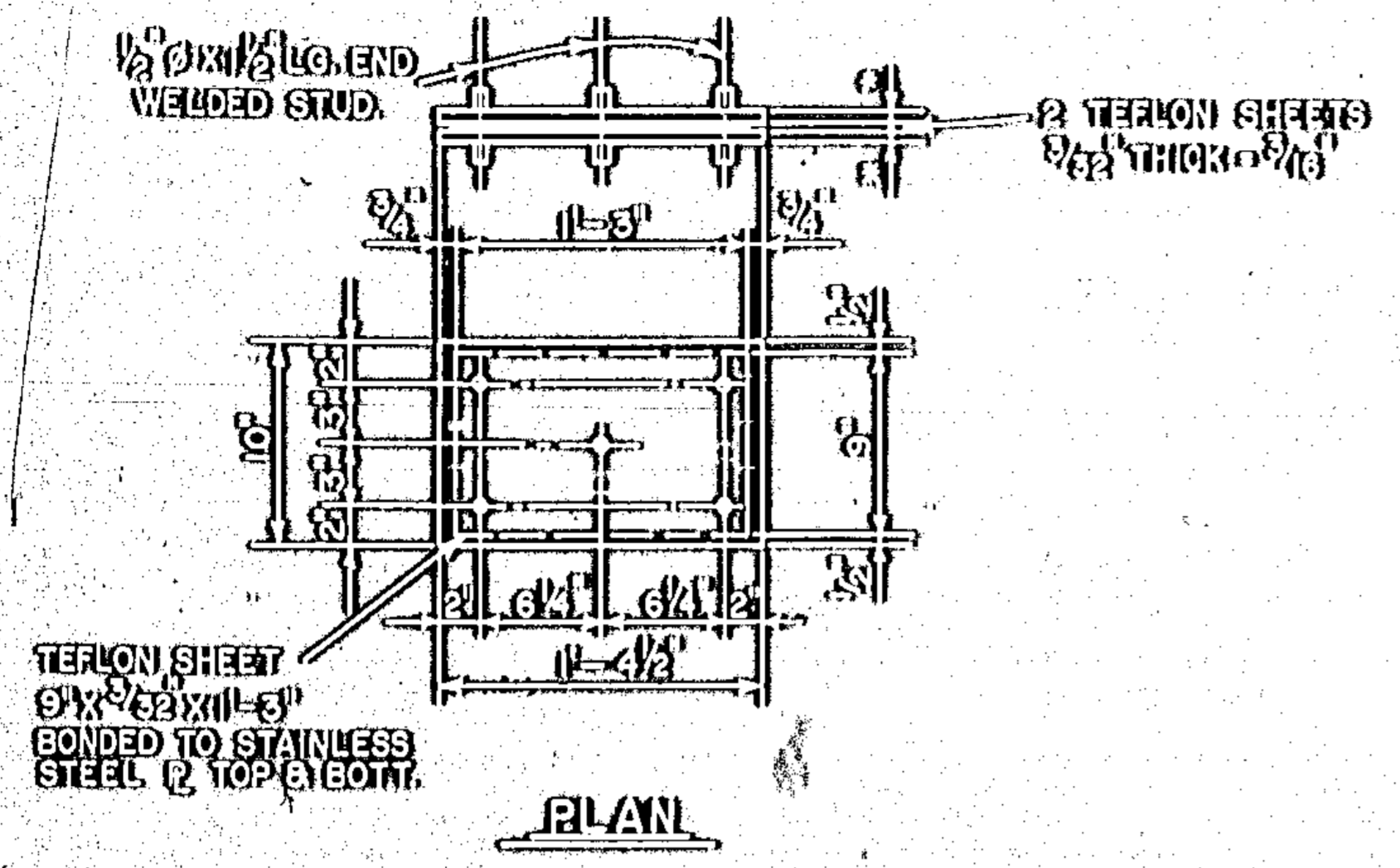
ARCHENBURNSON & ASSOCIATES, LIMITED			
CONSULTING ENGINEERS			
COLUMBUS, OHIO			
QUAYHOGA COUNTY	COUNTY ENGINEER	REISINGER	
CLEVELAND, OHIO			
BROOKPARK ROAD			
BRIDGE NO. 69			
OVERLAND, OHIO			
REVISIONS			
ARCH BRIDGE WIDENING DETAILS			
COUNTY	BRIDGE NO. 69	REVISION NO.	DATE
NO. B-1191			
DESIGN	DRAWN	CHECKED	REVISED
1921	1921	1921	1921



AMERICAN INSTITUTION OF ARCHITECTS, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
QUAYHOGA COUNTY ENGINEER CLEVELAND OHIO			
BROOKPARK ROAD BRIDGE ON QUAYHOGA RIVER OVERLOOKY HILL CITY OF CLEVELAND, OHIO			
ARCH BRAN WIDENING DETAILS			
COUNTRY	PROJECT NO.	REPORT NO.	DATE
OHIO	89	7023	10/10/20
NO. B-191			
DESIGN	DRAWN	CHECKED	REVISIONS
J.M.	J.M.	J.M.	

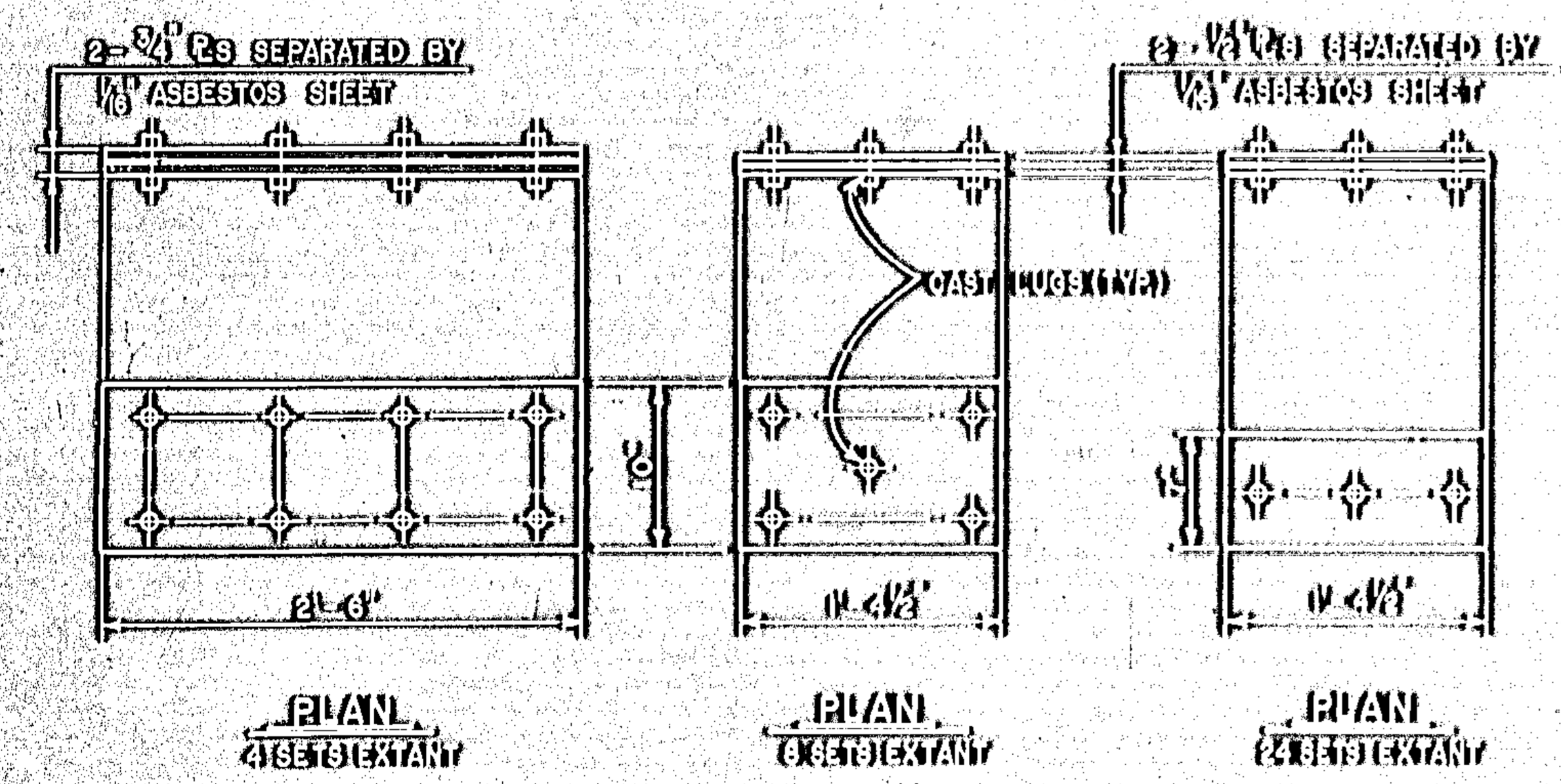


AMERICAN ENGINEERING CORPORATION, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
CHEVASE COUNTY CHEVASE COUNTY, OHIO		ENGINEER OHIO	
BROOK PARK ROAD CHEVASE COUNTY, OHIO CHEVASE COUNTY, OHIO CHEVASE COUNTY, OHIO			
PIER DETAILS			
COUNTY BROOK PARK, OHIO	REPORT NO. 101	DATE	SCALE
NO. B-101			
DESIGN 101	DRAWN 101	CHECKED 101	REVISIONS 101



DETAILS OF PROPOSED STAINLESS STEEL EXPANSION PLATES

PROVIDE 8 SETS USING 1/8" THICK PLATES FOR NEW STRINGERS AT ABUTMENT AND AT APPROX. SPAN SIDE OF PYLONS AND 4 SETS USING 3/4" THICK PLATES AT ARCH SPAN SIDE OF PYLONS.



DETAILS OF EXISTING BRONZE EXPANSION PLATES

NOTE: GROUND INFORMATION ONLY

INSTALLATION OF EXISTING BRONZE EXPANSION DEVICES

THE BRONZE EXPANSION DEVICES (THERMALLY EXPANDED BRONZE SHEETS) TO BE USED TO PROVIDE A LOW FRICTION SURFACE SHALL BE MADE FROM 3003 ALUMINUM (NON-HEAT TREATABLE) SHEETS, MEETING THE REQUIREMENTS OF ASTM SPEC. B209, REINFORCED WITH GROUND GLASS FIBERS, AS MANUFACTURED BY THE BRONZE MANUFACTURER. THE BRONZE EXPANSION DEVICES SHALL BE MANUFACTURED TO THE REQUIREMENTS OF THE BRONZE MANUFACTURER. THE BRONZE EXPANSION DEVICES SHALL BE MANUFACTURED TO THE REQUIREMENTS OF THE BRONZE MANUFACTURER. THE BRONZE EXPANSION DEVICES SHALL BE MANUFACTURED TO THE REQUIREMENTS OF THE BRONZE MANUFACTURER.

THE STAINLESS STEEL PLATES SHALL BE OF THE TYPE INDICATED ON THE DRAWING AND SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION A240 TYPE 304. THE END WELDED STUDS SHALL BE OF MATERIAL COMPATIBLE WITH THAT OF THE PLATES.

AFTER REMOVAL OF THE BRONZE SHEETS AND INSTALLATION OF THE STUDS, A TRUE PLAIN SURFACE SHALL BE OBTAINED FROM CONTACT BETWEEN THE EXISTING BRONZE SURFACES.

BONDING OF THE STAINLESS STEEL PLATES TO THE BRONZE SHEETS SHALL BE PERFORMED IN THE MANNER OF THE BRONZE MANUFACTURER. SEPARATION OF THE BRONZE ADHESIVE AND SUBSTRATE SURFACE PREPARATION AND ADHESIVE APPLICATION PROCEDURES GIVEN HEREON SHALL BE BY THE BRONZE MANUFACTURER WITH APPROVAL OF THE DIRECTOR. AS A CONDITION OF SUCH APPROVAL, THE BRONZE MANUFACTURER SHALL SUBMIT A COPY OF THE SPECIFICATIONS OF HIS PROPOSED BONDING SYSTEM.

THE BONDING SURFACE OF THE STEEL SHALL BE CLEANED OF RUST, SCALE, OIL AND GREASE BY BRUSH CLEANING. THE ENTIRE SURFACE TO BE BONDED SHALL BE BRUSH CLEANED TO THE ANGLE REQUIRED AND THEN CLEAN WITH CLEANING SOLVENT. BRUSH CLEANING SHALL BE PERFORMED WITHIN A PERIOD OF FOUR HOURS PRIOR TO BONDING.

THE STEEL SURFACE SHALL BE COATED IF REQUIRED.

NOT MORE THAN ONE MONTH FROM DATE OF ORDER, A SUFFICIENT QUANTITY OF BRONZE SHALL BE PREPARED FOR THE AMOUNT OF WORK TO BE REQUIRED. APPROPRIATE MEASURED DIMENSIONS OF THE TWO COMPONENTS SHALL BE FURNISHED IN ACCORDANCE WITH THE BRONZE MANUFACTURER'S INSTRUCTIONS. TO INSURE ACCURATE OPERATIONS FROM ALL PRODUCTION RUNS AND A RELIABLE HIGH-LEVEL FINISH OF UNIFORM CONSISTENCY, THE BRONZE MANUFACTURER SHALL PROVIDE SPECIFIC INSTRUCTIONS AND, IF NECESSARY, SPECIAL EQUIPMENT FOR THE PROPER BONDING OF THE BRONZE COMPONENTS.

A THIN UNIFORM COAT OF BRONZE SHALL BE SPRAYED OVER THE ENTIRE SURFACE TO BE BONDED. THE BRONZE SHALL BE APPLIED TO EITHER THE STEEL OR THE BRONZE SURFACE OR TO BOTH.

THE BRONZE SURFACE SHALL THEN BE BONDED TO THE STEEL SURFACE UNDER VACUUM CONTROLLED CONDITIONS USING HEAT AND PRESSURE FOR THE TIME REQUIRED TO SET THE BRONZE ADHESIVE USED.

A COPY OF THE BRONZE MANUFACTURER'S INSTRUCTIONS, THE COMPLETE PROCEDURE USED TO OBTAIN AVERAGE TENSILE STRENGTH, AND A LISTED TESTED SAMPLE SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL PRIOR TO THE START OF PRODUCTION ORDER.

METHOD OF MEASUREMENT: THE QUANTITY SHALL BE THE NUMBER OF UNITS CONSISTING OF TWO PLATES WITH BRONZE BONDING REQUIRED.

BASES OF PAYMENT: ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO IMPLEMENT THE PROVISIONS OF THESE SPECIFICATIONS SHALL BE PAID FOR IN THE CONTRACT PRICE TO BE DETERMINED.

ITEM	UNIT	DESCRIPTION
100	EACH	BRONZE EXPANSION DEVICES (THERMALLY EXPANDED BRONZE SHEETS) 1/8" THICK, 9" x 6 1/2" x 1/8"
100	EACH	BRONZE EXPANSION DEVICES (THERMALLY EXPANDED BRONZE SHEETS) 3/4" THICK, 9" x 6 1/2" x 3/8"

INSTALLATION OF PROPOSED STAINLESS STEEL EXPANSION DEVICES

THE BRONZE EXPANSION DEVICES AND BRONZE PLATES (PREPARED BY A 3003 ALUMINUM (NON-HEAT TREATABLE) SHEETS COATED WITH GLASS FIBERS TO ACT AS A LOW FRICTION SURFACE).

THE INTENT OF THIS ITEM IS TO REPLACE THE EXISTING BRONZE WITH STAINLESS STEEL.

THE STAINLESS STEEL SHALL CONFORM TO THE REQUIREMENTS FOR STAINLESS STEEL AS STATED IN THE SPECIFICATION FOR STAINLESS STEEL (THERMALLY EXPANDED BRONZE SHEETS). THE SHEETS SHALL BE 3003 ALUMINUM (NON-HEAT TREATABLE) SHEETS COATED WITH GLASS FIBERS TO ACT AS A LOW FRICTION SURFACE. THE BRONZE PLATES AND SHEETS ARE REQUIRED FOR EACH BEARING.

THE FOLLOWING PROCEDURE SHALL BE USED TO IMPLEMENT THE REMOVAL OF THE EXISTING BRONZE:

(A) AFTER THE REMOVAL OF EXISTING CONCRETE REQUIRED FOR WIDENING OF THE BRIDGE IS COMPLETE IN THE SPAN UNDER CONSIDERATION, THE END OF THE BRONZE SHALL BE JACKED UP IN ORDER TO REMOVE THE BRONZE SHEET AND CLEAN THE SURFACE OF THE BRONZE PLATE. THE END OF THE BRONZE SHALL BE RAISED A MINIMUM OF 1/2" INCH. CARE SHALL BE EXERCISED IN THE JACKING OPERATION TO INSURE THAT THE TOTAL WEIGHT OF THE BRONZE IS RAISED UNIFORMLY AND THAT NO DAMAGE TO THE STRUCTURE RESULTS.

(B) UPON COMPLETION OF JACKING OF THE END OF THE BRONZE, THE EXISTING BRONZE PLATE SHALL BE REMOVED AND THE BRONZE PLATE CLEANED IN ACCORDANCE WITH INSTRUCTIONS SUPPLIED BY THE BRONZE MANUFACTURER OF THE BRONZE BONDING AGENT.

(C) THE SURFACE OF THE BRONZE SHEET TO BE IN CONTACT WITH THE BRONZE PLATE SHALL BE TREATED IN ACCORDANCE WITH THE BRONZE MANUFACTURER'S INSTRUCTIONS AND COATED WITH BRONZE BONDING AGENT. TWO BRONZE SHEETS SHALL BE INSERTED BETWEEN THE BRONZE PLATE AND BRONZE PLATE. WHEN STAINLESS STEEL IS IN PLACE AT ALL BEARING LOCATIONS, THE BRONZE SHALL BE REMOVED.

THE BRONZE BONDING COMPOUND SHALL BE SUPPLIED BY THE MANUFACTURER OF THE STAINLESS STEEL AND SHALL BE FURNISHED TO THE BRONZE MANUFACTURER WITH THE BRONZE PLATE AND THE STAINLESS STEEL SHEET. IN ADDITION, IT SHALL HAVE ADEQUATE TENSILE STRENGTH TO SUPPORT SUFFICIENT WEIGHT TO COMPLETE OPERATIONS NECESSARY TO INSERT THE STAINLESS STEEL SHEET AND LOWER THE STRUCTURE.

THE CONTRACTOR SHALL SUBMIT THIS PROPOSED METHOD AND PROCEDURE FOR JACKING THE STRUCTURE TO THE DIRECTOR FOR APPROVAL. NO JACKING OPERATIONS WILL BE PERMITTED WITHOUT APPROVAL OF THE DIRECTOR.

BASES OF PAYMENT: THE COST OF ALL MATERIAL, LABOR AND EQUIPMENT REQUIRED TO IMPLEMENT THE PROVISIONS OF THESE SPECIFICATIONS SHALL BE INCLUDED IN THE CONTRACT PRICE TO BE DETERMINED.

ITEM	UNIT	DESCRIPTION
100	EACH	REMOVAL OF EXISTING BRONZE DEVICES

ALLEN HAMILTON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
CLEVELAND, OHIO

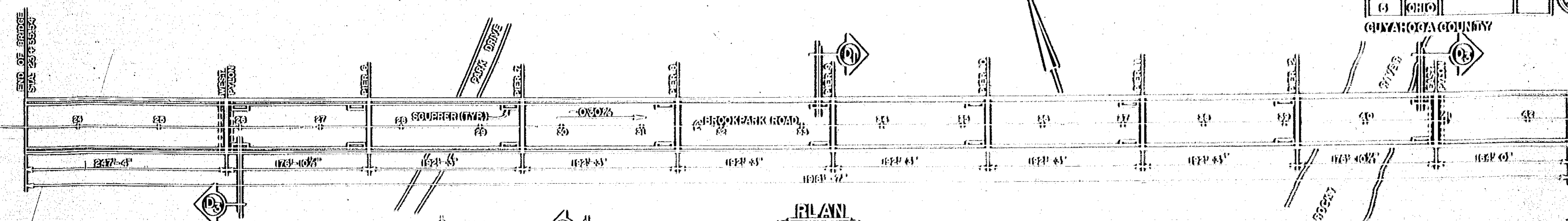
BROOKPARK ROAD
HIDDEN VALLEY
OVERLOOK AVENUE
CLEVELAND, OHIO

BEARING DEVICES

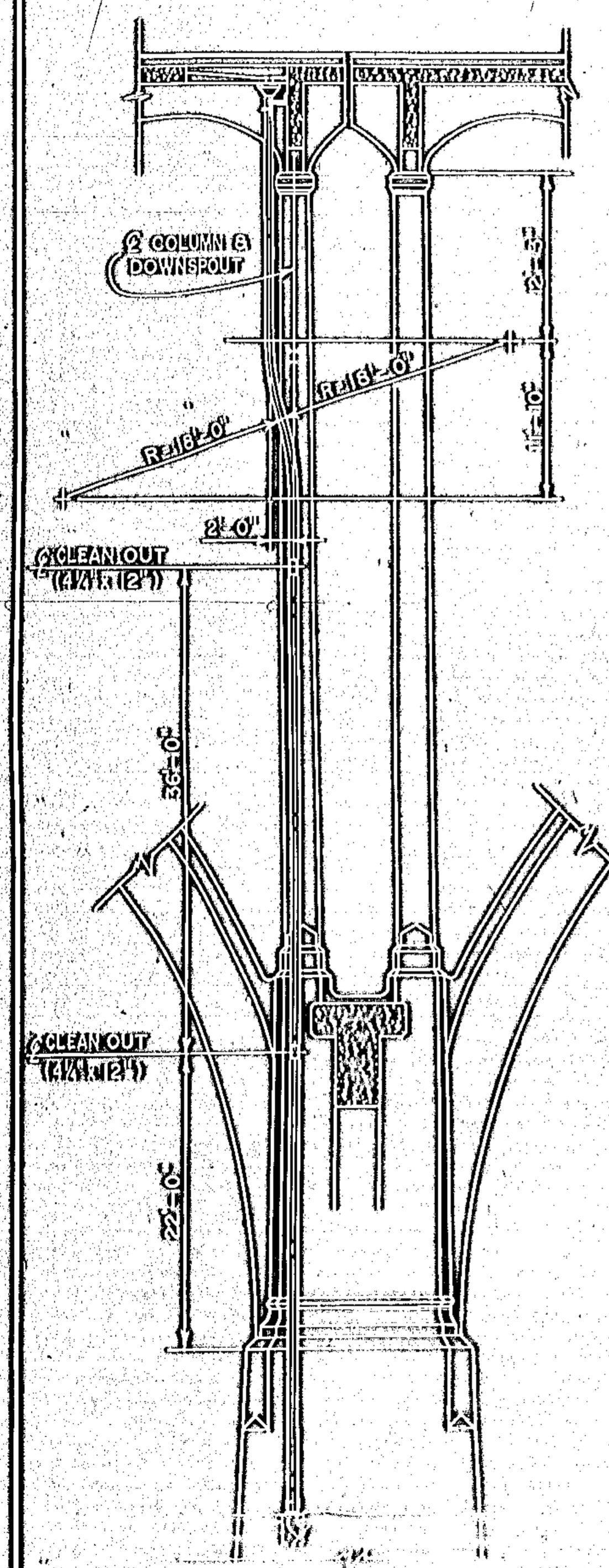
COUNTRY BRIDGE NO. 89. REPAIRING. DATE: 11/11/51

NO. B-191

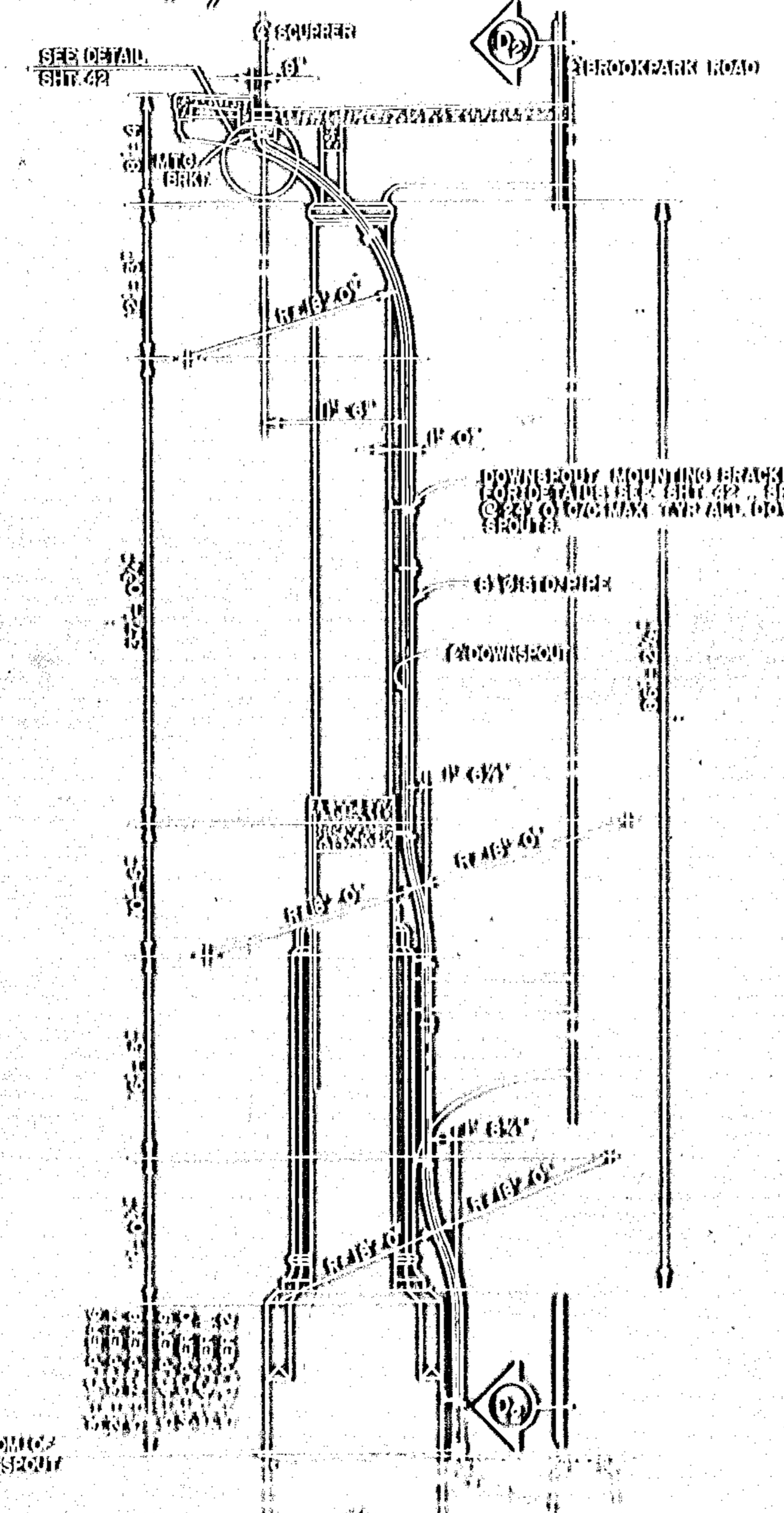
DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
11/11/51	11/11/51	11/11/51	



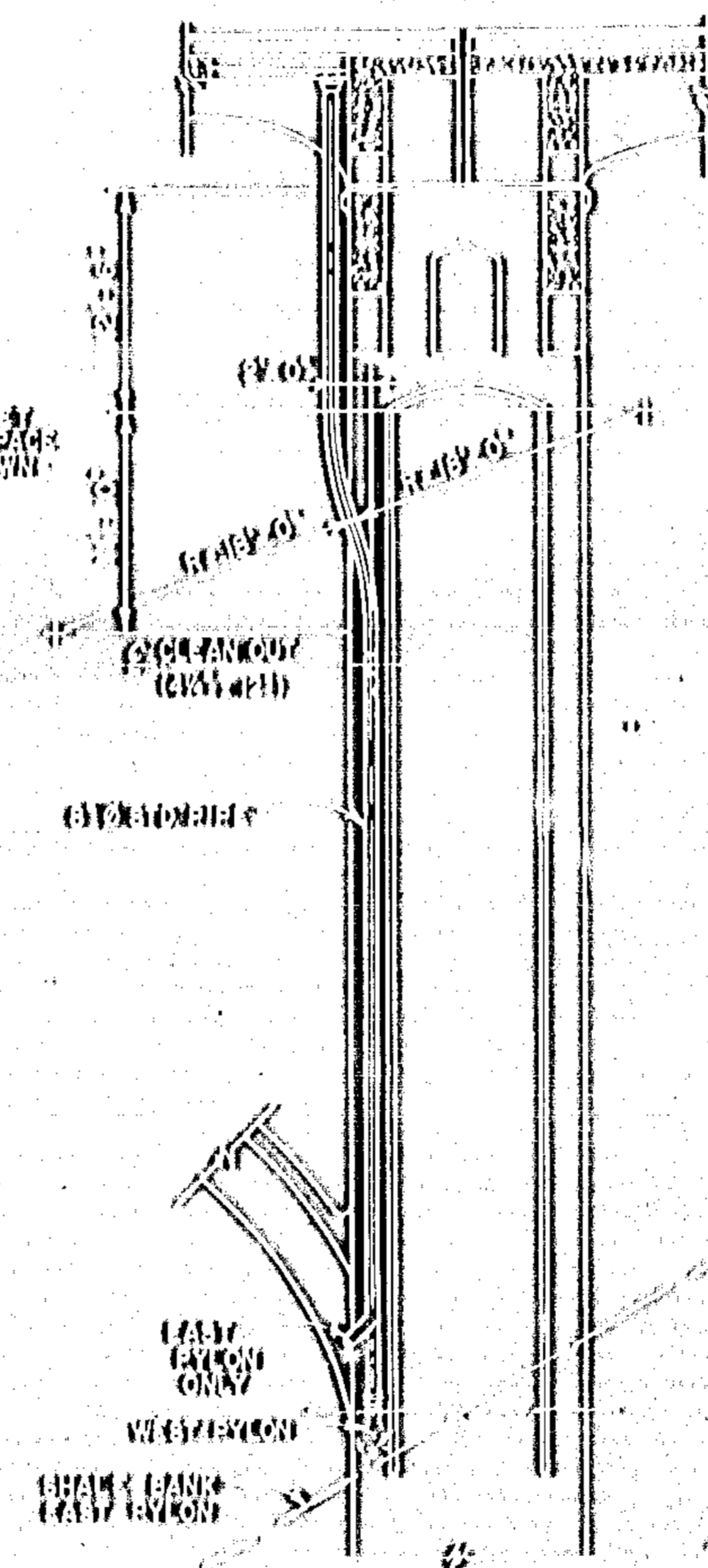
PLAN



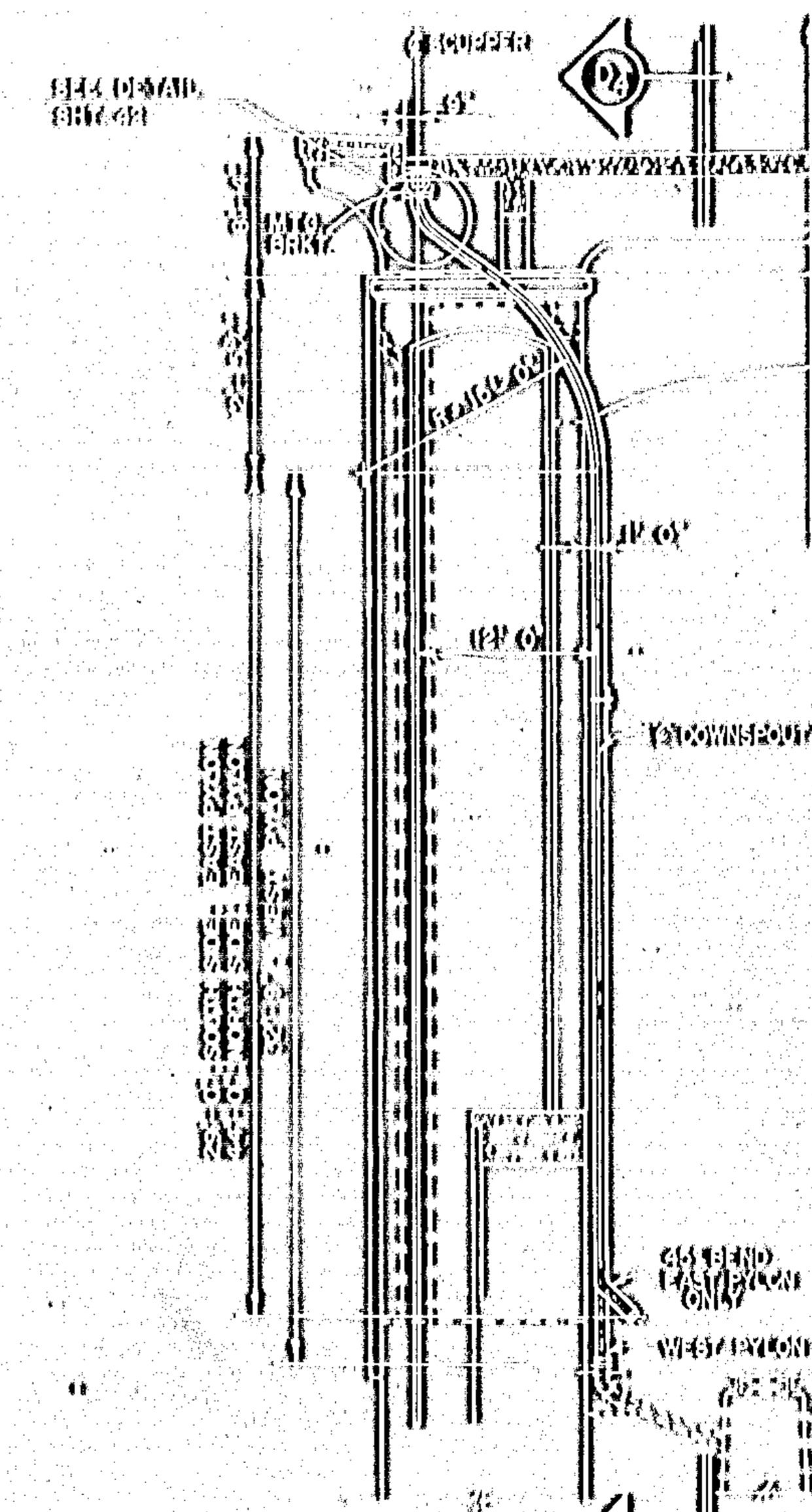
SECTION D2-D2 DOWNSTREAM DETAILS AT PIERS



SECTION D2-D2



SECTION D2-D2



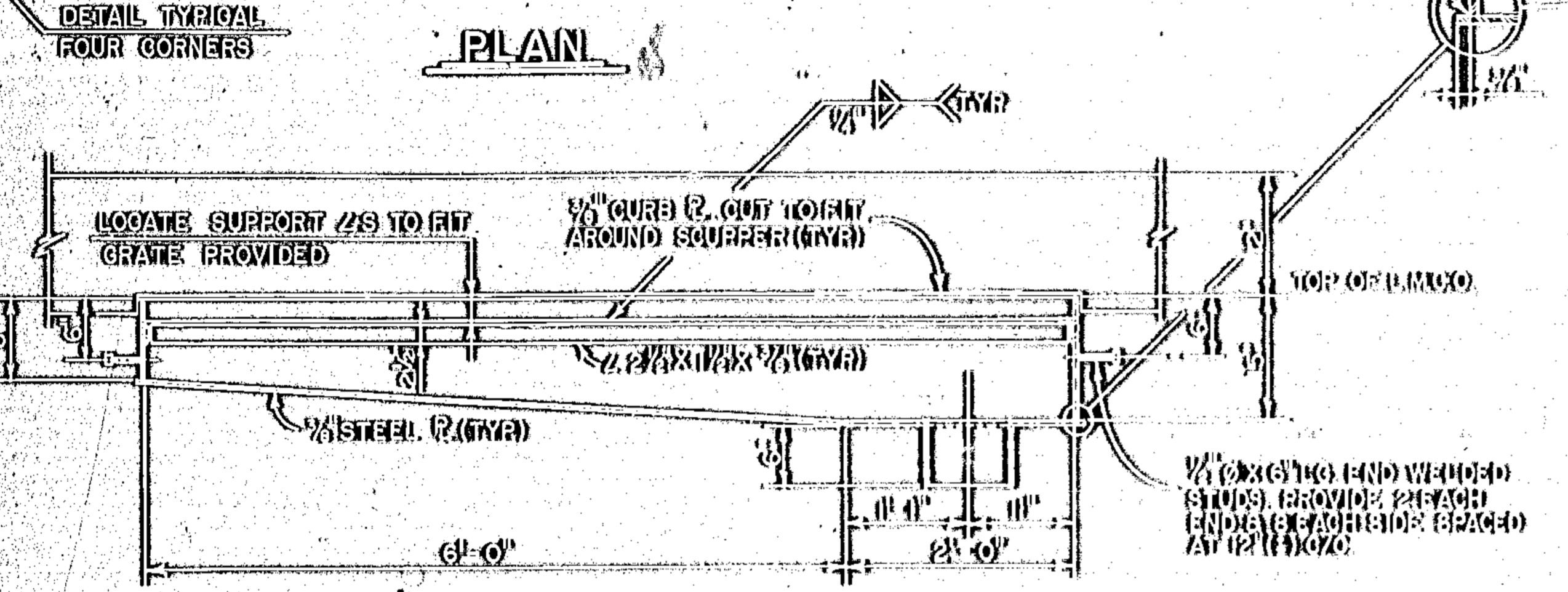
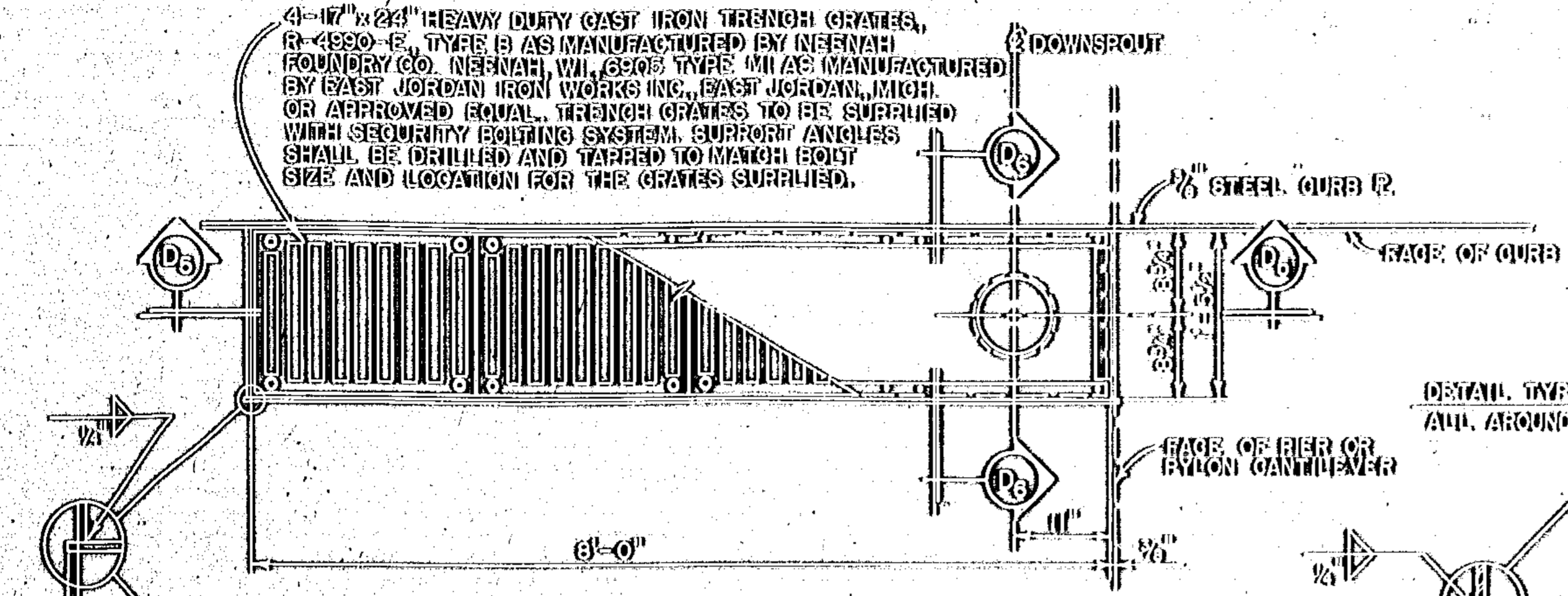
SECTION D2-D2

NOTES:

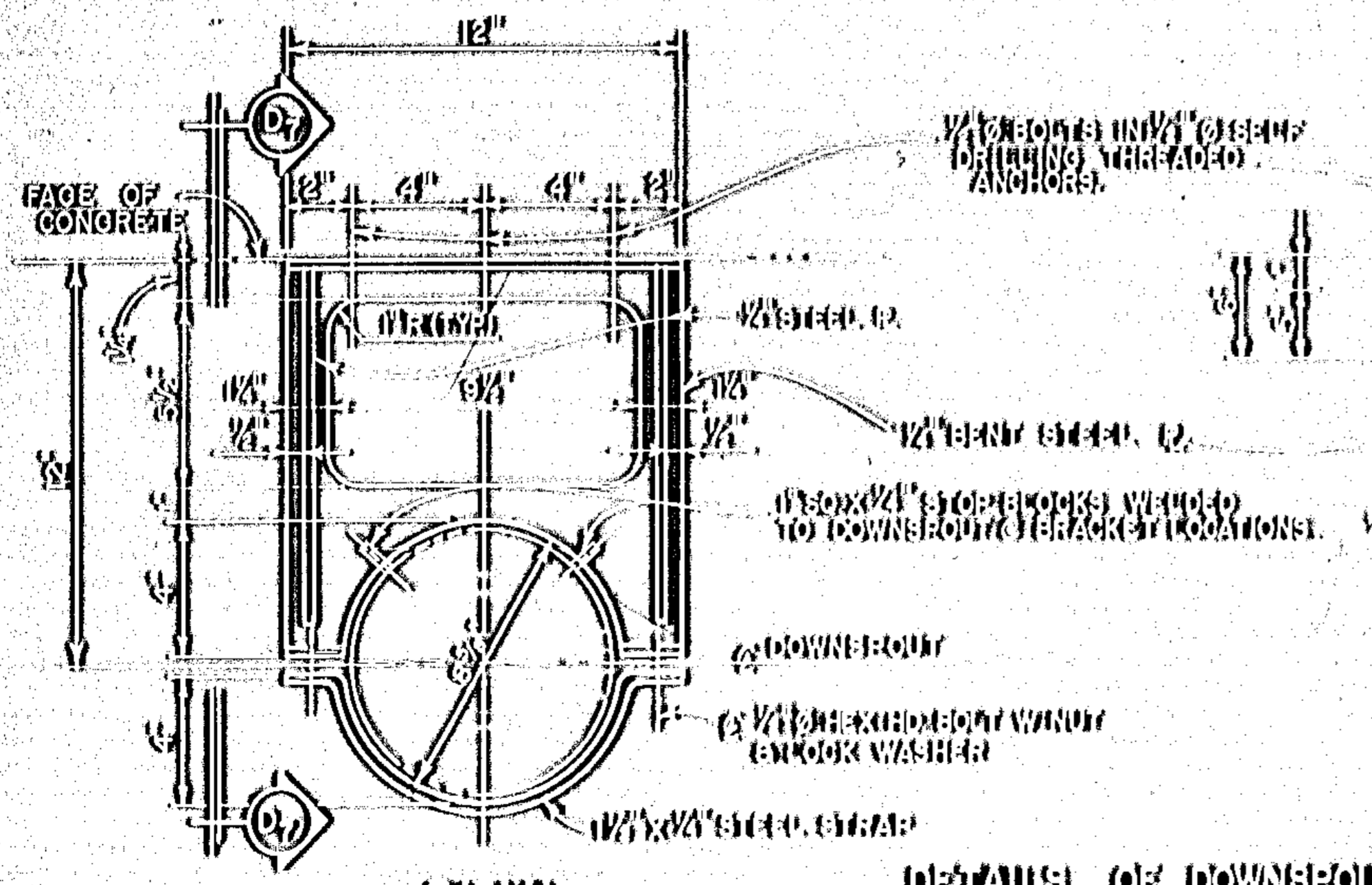
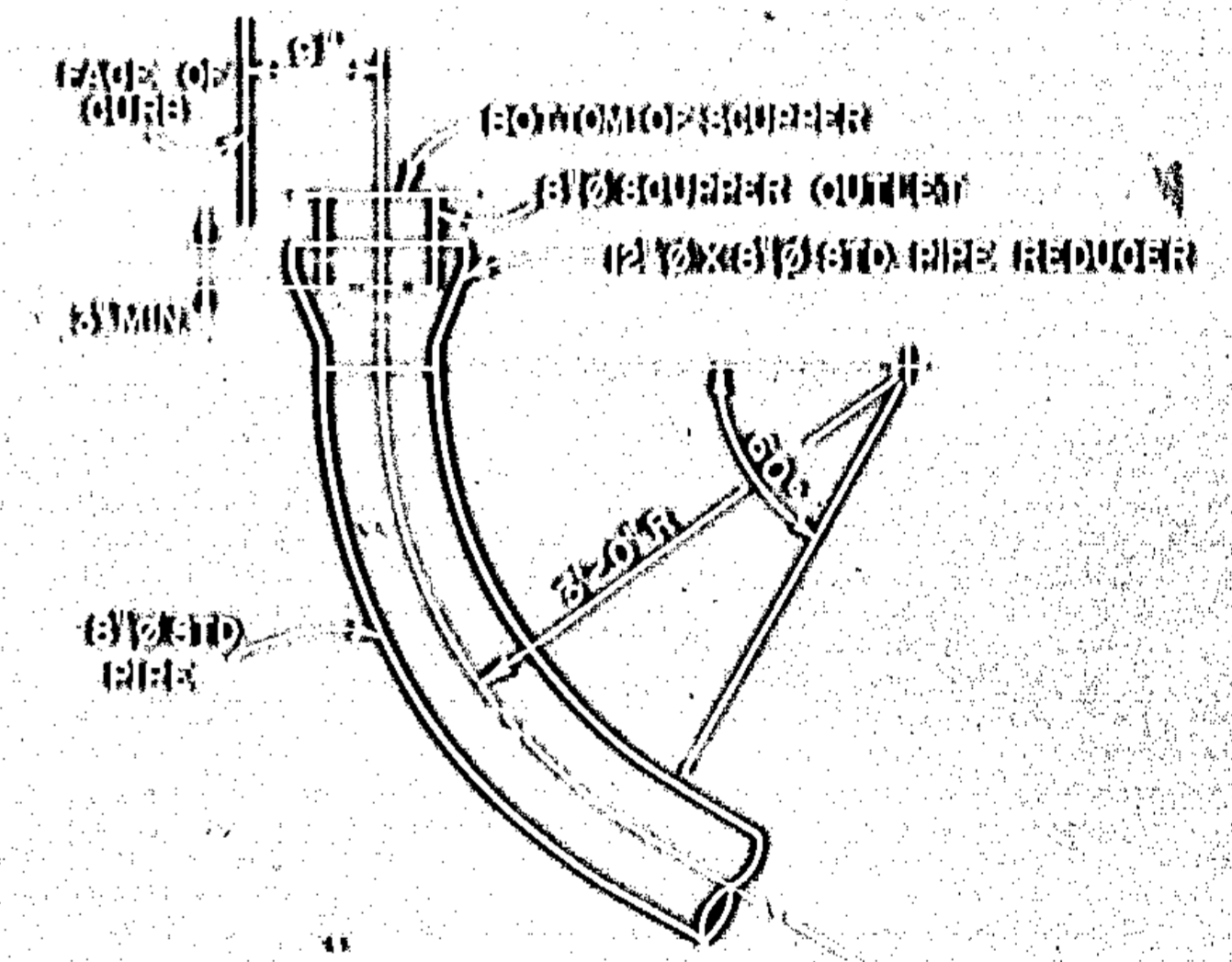
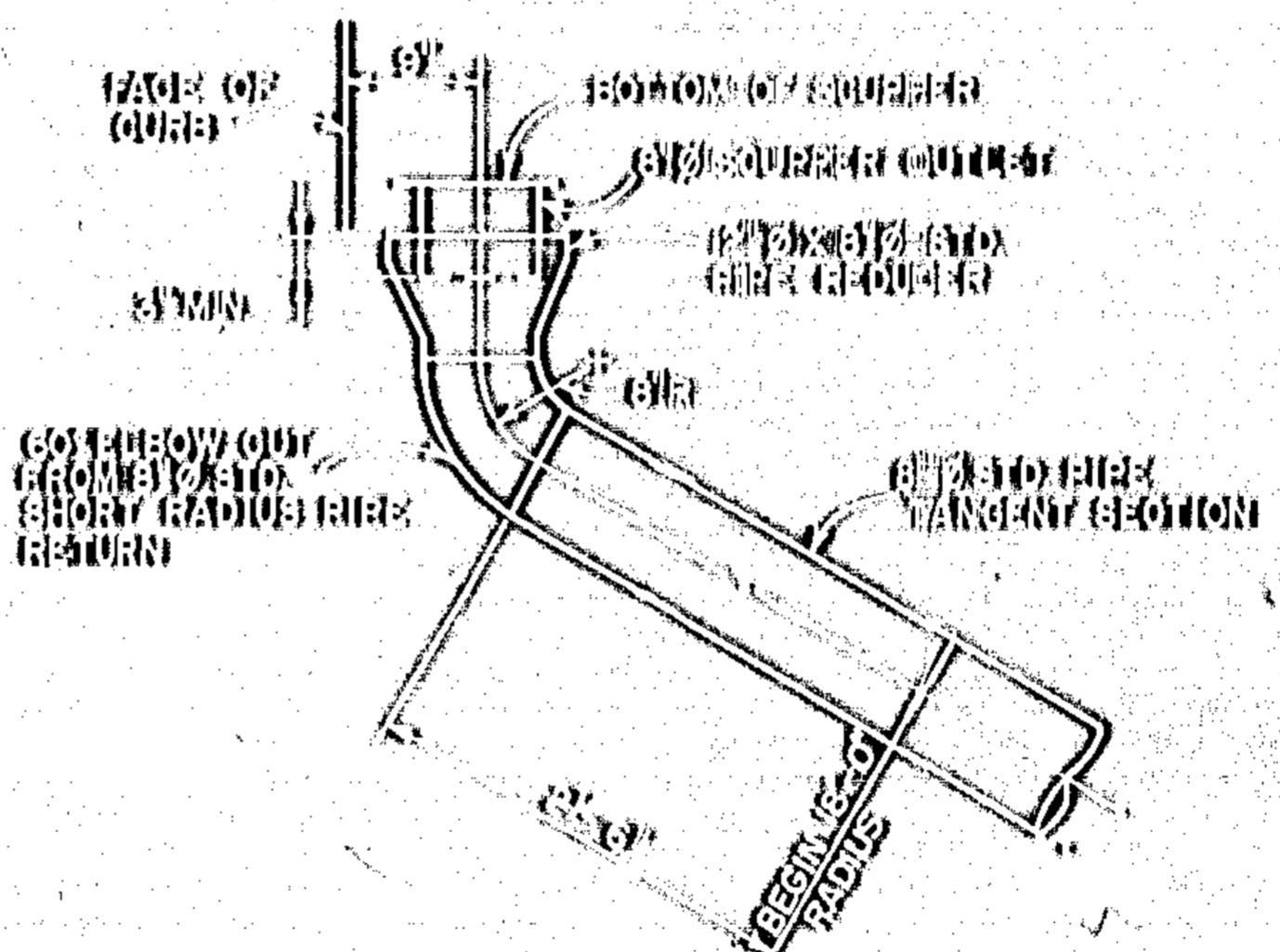
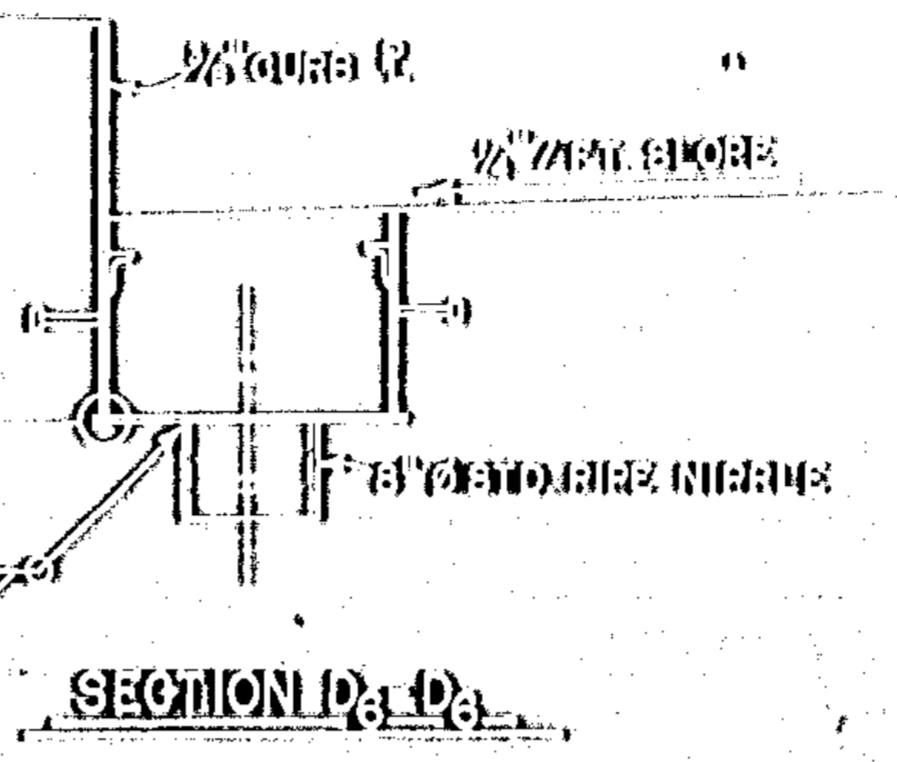
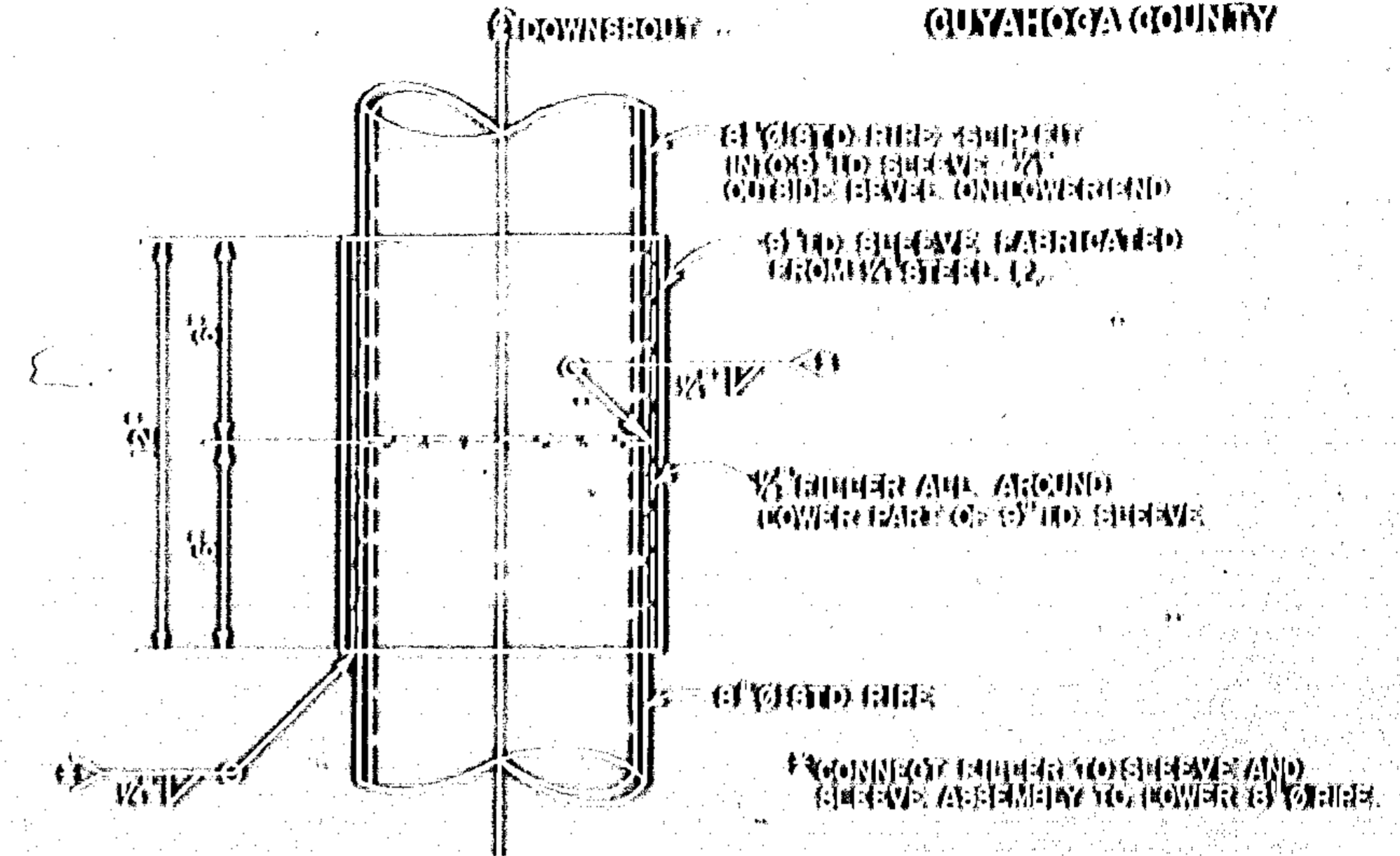
- FOR EQUER (TYPED) SEE SHIT 42.
- DOWNROUT SHALL BE FABRICATED FROM STANDARD WEIGHT STEEL, BARS AND WELDING (MANNING).
- THE DOWNROUT SHALL BE FABRICATED IN SECTIONS SPACED TO FACILITATE SHIPING AND ERECTION.
- ALL SHOP CONNECTIONS SHALL BE WELDED.
- ALL FIELD CONNECTIONS SHALL BE AS DETAIL SHIT 42.
- THE DOWNROUTS AND MOUNTING BRACKETS SHALL BE GUARANTEED IN ACCORDANCE WITH SEC. 717.02.
- SHOP DRAWINGS SHALL INCLUDE DETAILS OF THE EQUER BRACKETS.
- SHOP DRAWINGS (ANCHORS) FOR THE MOUNTING BRACKETS SHALL CONFORM TO SEC. 717.01. THE SHIP DRAWING (ANCHORS) SHALL BE USED IN LIEU OF THE SHOP DRAWING (ANCHORS) IN LOCATIONS WHERE NEW CONCRETE IS CAST FOR.
- COST OF MOUNTING BRACKETS, FIELD CONNECTIONS AND ANCHORS TO BE INCLUDED IN THE UNIT PRICE AND FOR THE MOUNTING BRACKETS, AS SHIT 42.
- CONDITIONS OF DOWNROUT CONNECTION TO EXISTING MOUNTING BRACKETS SEE SECTION (C), SHIT 42.

ARCHITECTURE & ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
CUYAHOGA COUNTY CHEVELAND OHIO		ENGINEER OHIO	
BROOKPARK ROAD BRIDGE NO. CUY 17A 02B CUYAHOGA RIVER CHEVELAND, OHIO			
DECK DRAINAGE DETAILS			
COUNTY BRIDGE NO. 89	REPORT NO. 1013	DATE 11/15/53	
NO. B-191			
DESIGN WMM	DRAWN WMM	CHECKED CHM	REVISED TO ASSEMBLY

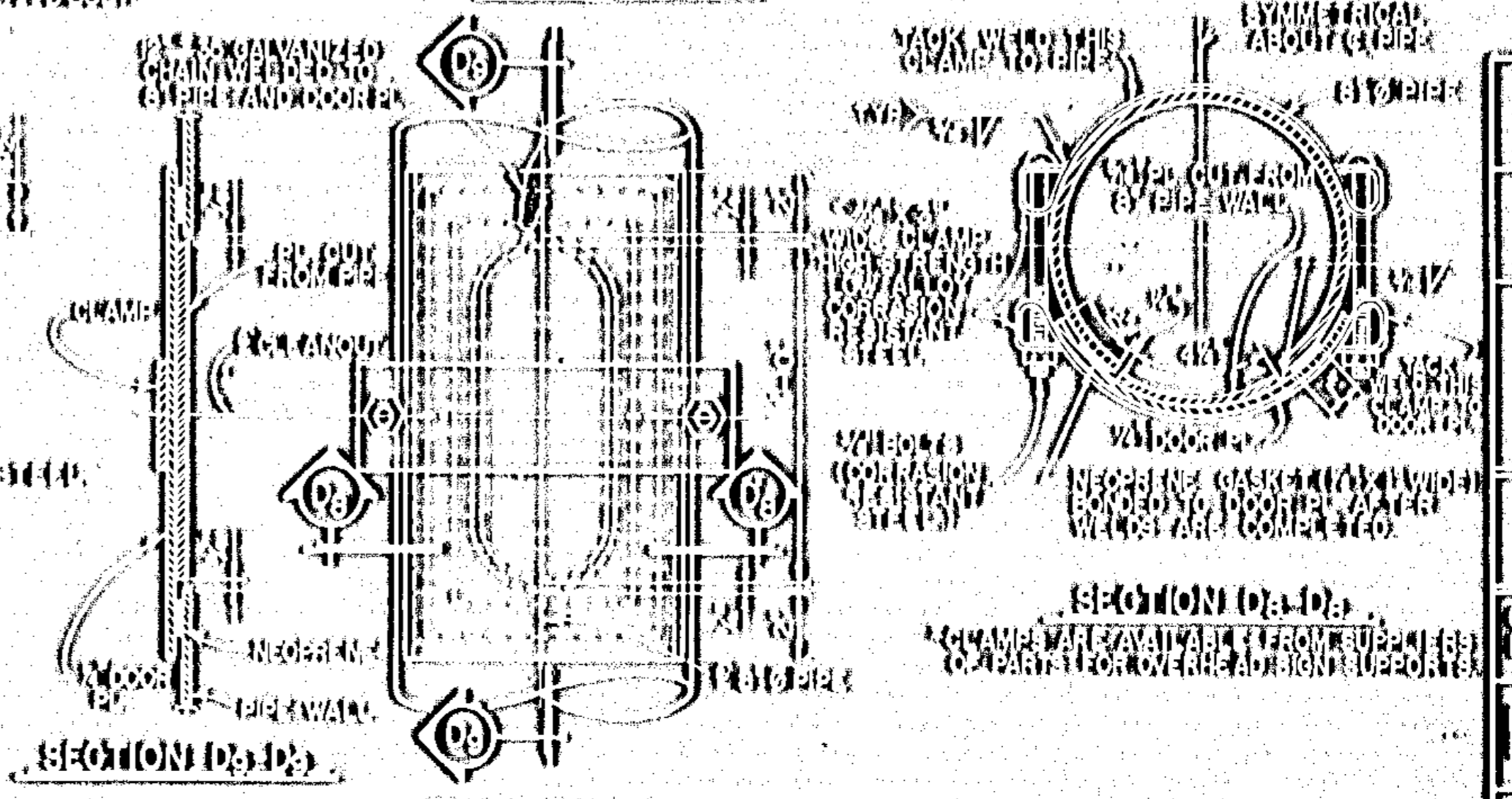
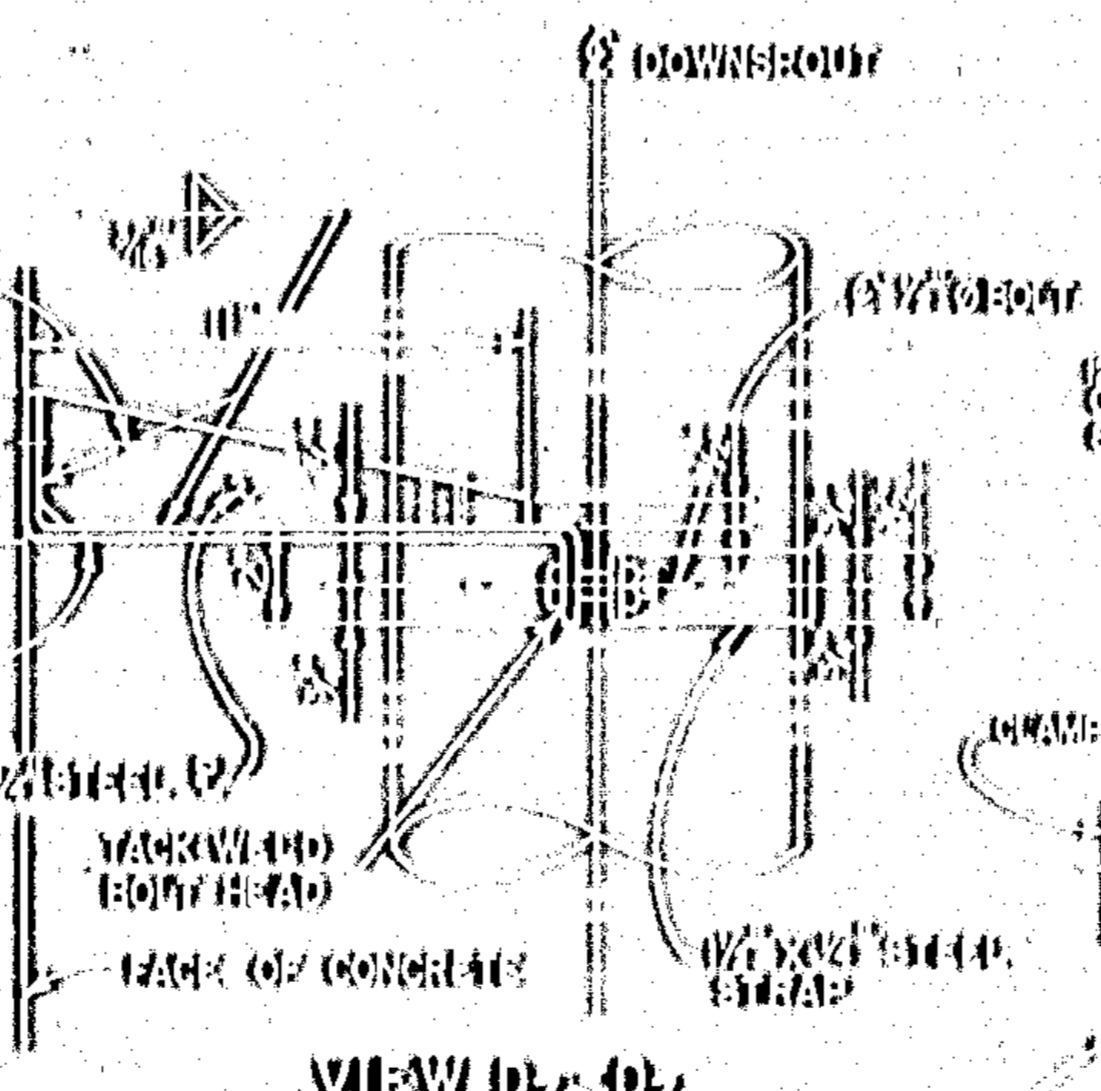
4-17" x 24" HEAVY DUTY CAST IRON TRENCH GRATES, R-4590-E TYPE B AS MANUFACTURED BY NEEVAH FOUNDRY CO. NEEVAH, W.I., 6308 TYPE M1 AS MANUFACTURED BY EAST JORDAN IRON WORKS INC., EAST JORDAN, MICH. OR APPROVED EQUAL. TRENCH GRATES TO BE SUPPLIED WITH SECURITY BOLTING SYSTEM. SUPPORT ANGLES SHALL BE DRILLED AND TAPPED TO MATCH BOLT SIZE AND LOCATION FOR THE GRATES SUPPLIED.



SCUPPER DETAILS

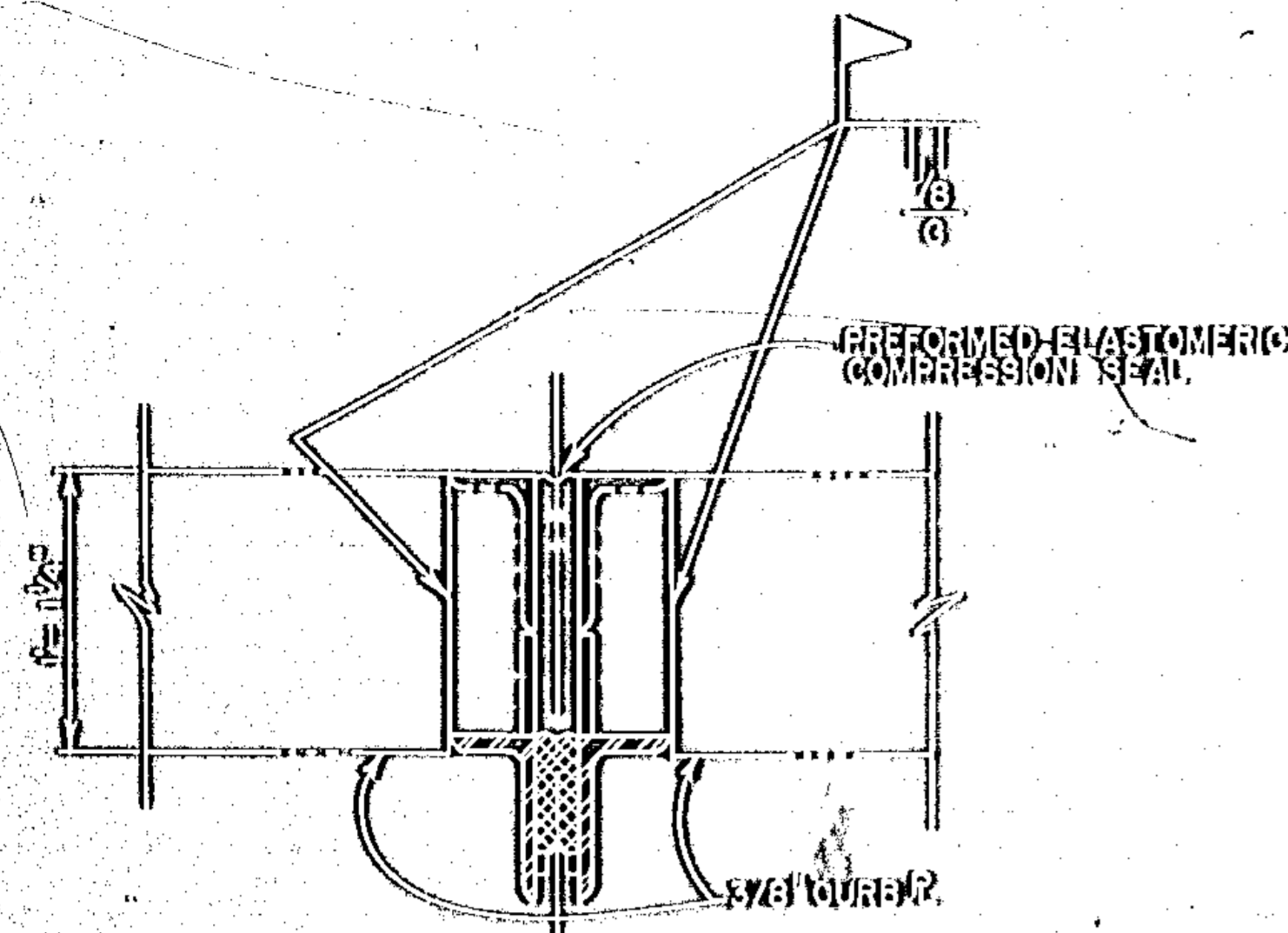


DETAILS OF DOWNSPOUT MOUNTING BRACKET

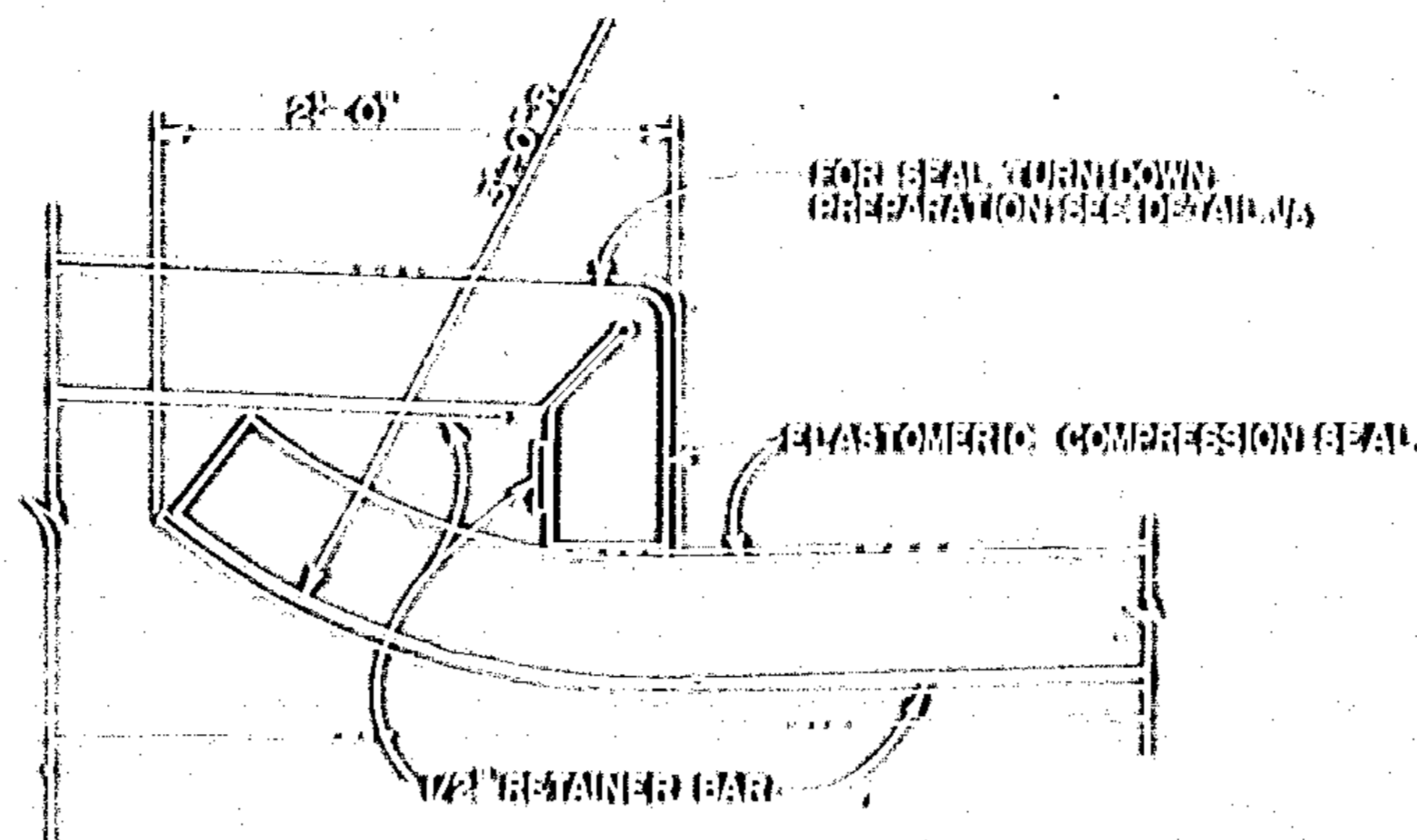


QUANAOYA COUNTRY

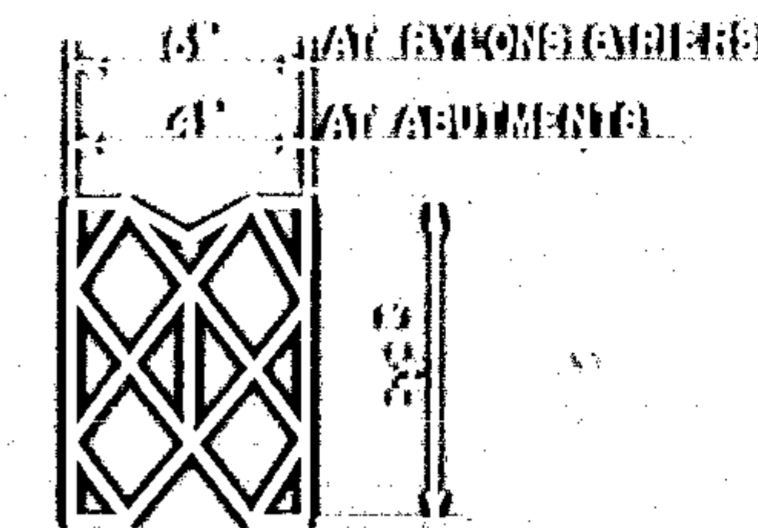
ARCHITECTURE OF ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
QUANAOYA COUNTRY ENGINEER CLEVELAND OHIO			
BROOKPARK ROAD BRIDGE COLUMBIANA OHIO OVERLOOKY RIVER CITY OF CLEVELAND OHIO			
DECK DRAINAGE DETAILS			
COUNTRY	PROJECT NO.	REVISION NO.	DATE
QUANAOYA	101	1	1991
NO. B-101		DESIGN	DRAWN
		CHKD	REVISED TO ASSEMBLY



SECTION 14 (P)
TYPICAL CURB AND EXPANSION JOINTS

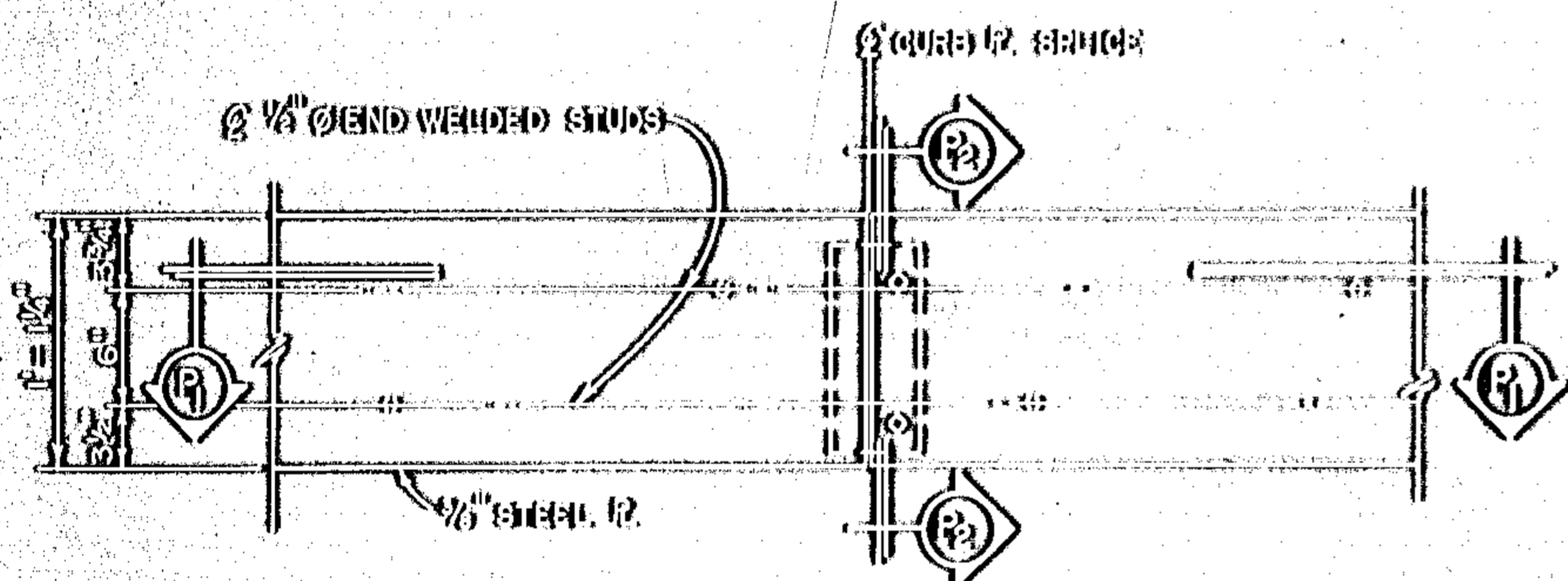


DETAIL OF ELASTOMERIC COMPRESSION SEAL AT CURBS

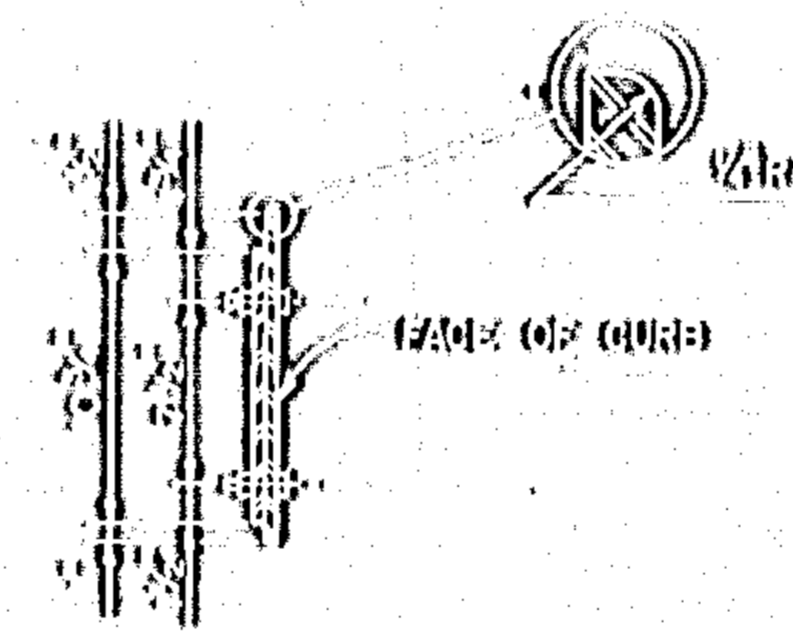


COMPRESSION SEAL DETAIL

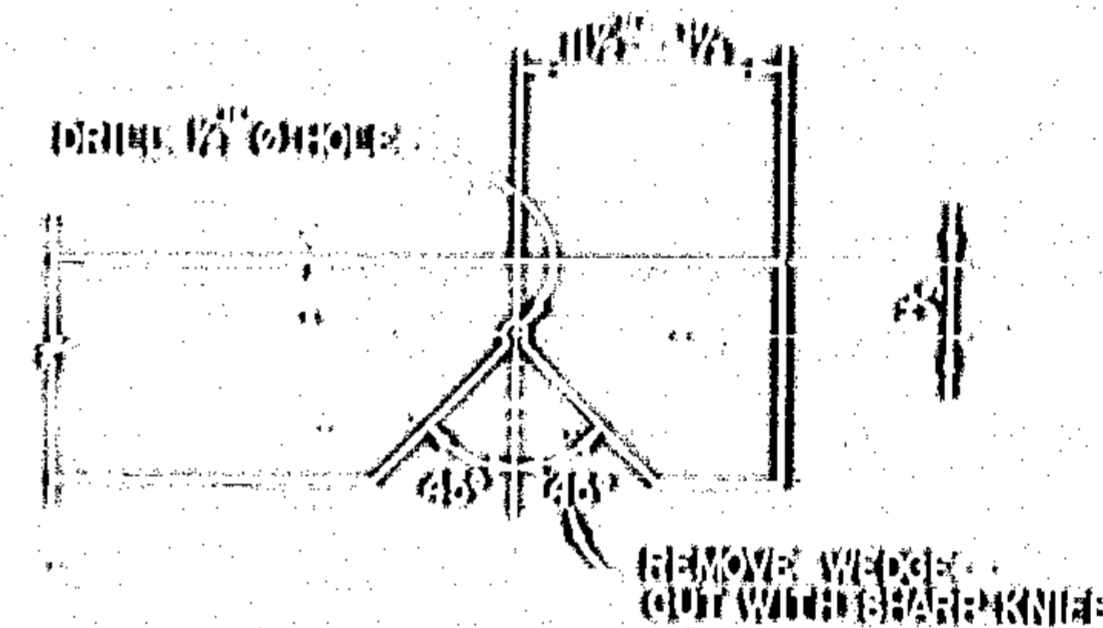
NOTE: THE COMPRESSION SEAL SHALL BE MADE OF A PREFORMED ELASTOMERIC MATERIAL WHICH SHALL BE COMPRESSED TO A MINIMUM OF 25% OF ITS ORIGINAL THICKNESS AT THE JOINT.



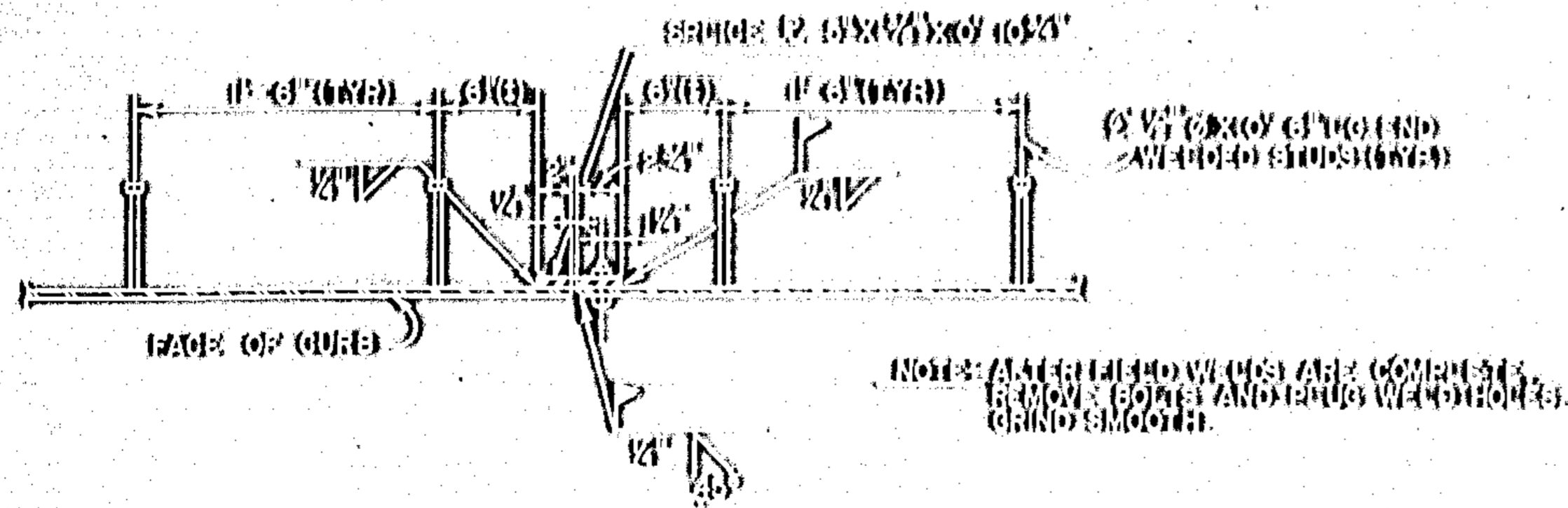
ELEVATION



SECTION 12 (P)



DETAIL OF CURB SHOWING SEPARATION FOR SEAL TURN-DOWN AT CURBS

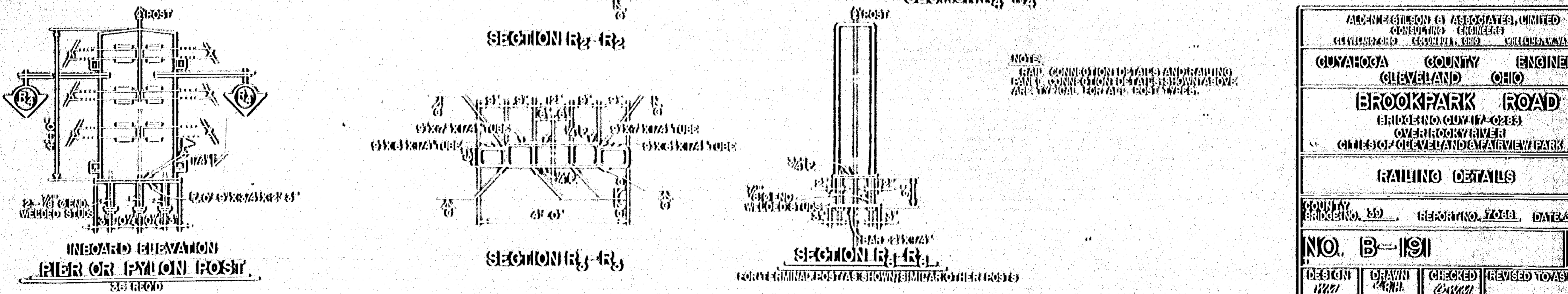
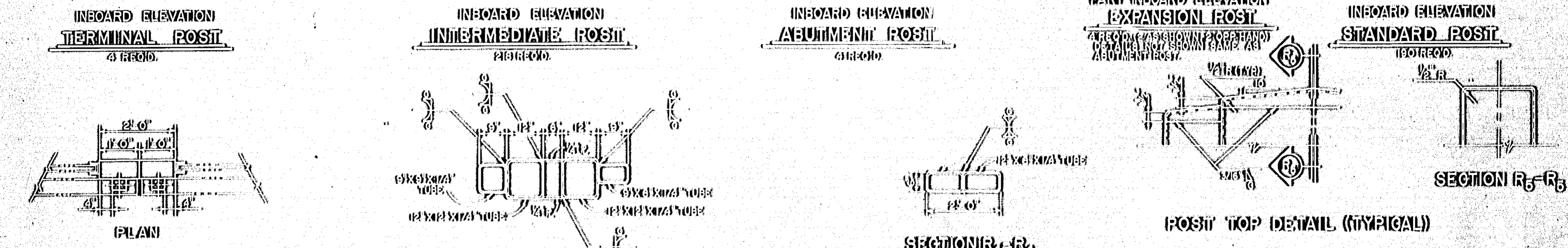
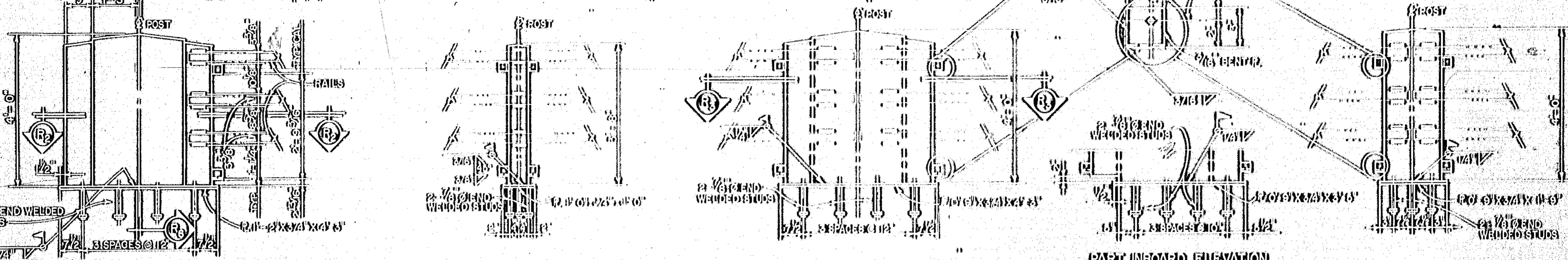
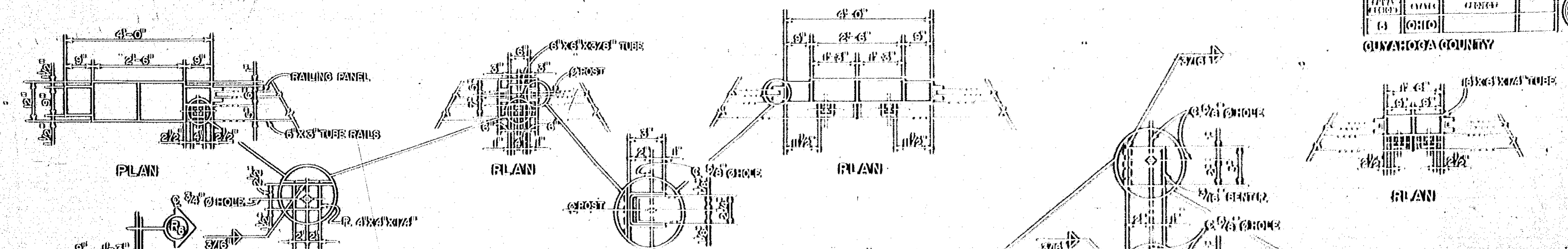


CURB FLANGE DETAILS

NOTE:

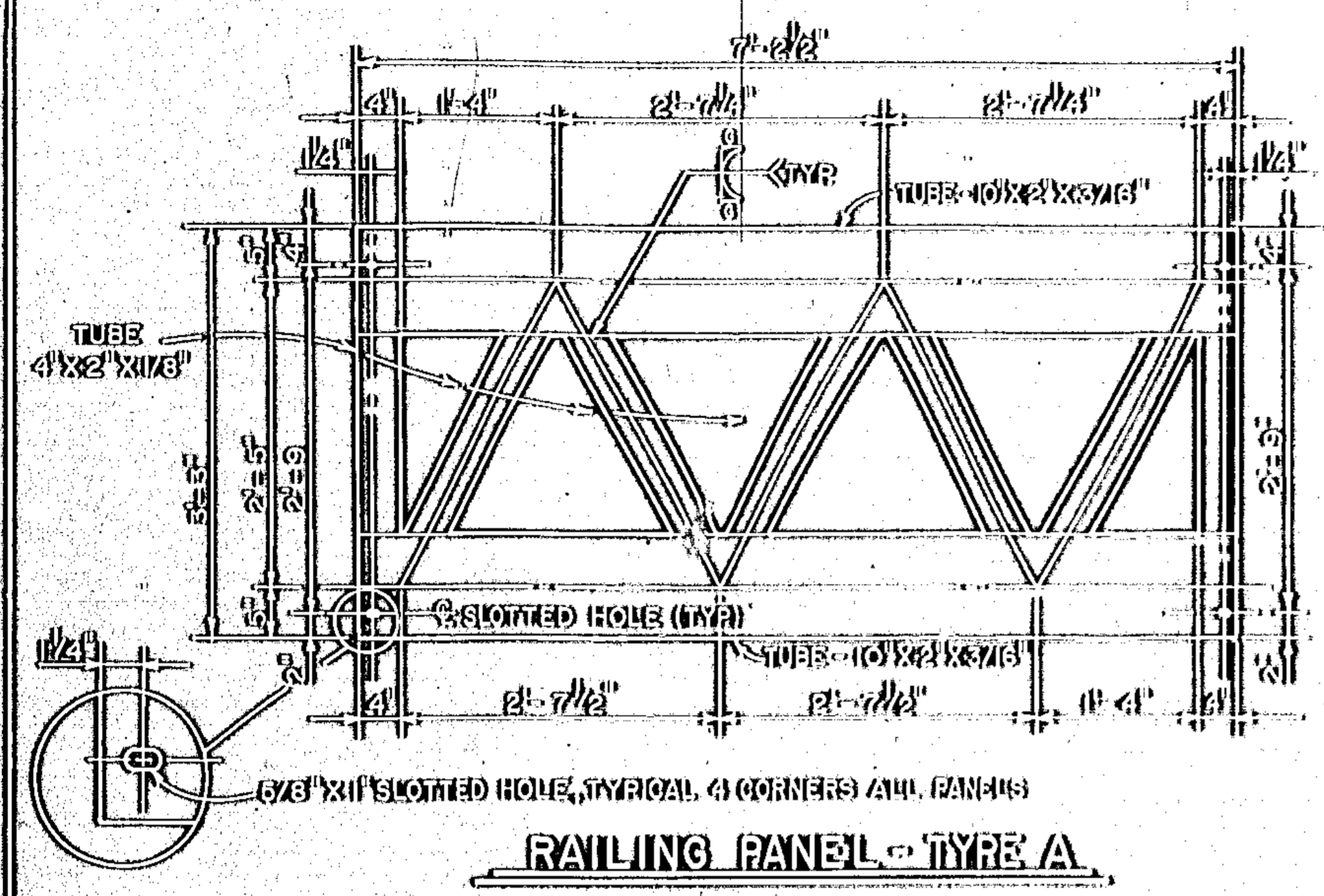
THE 1/2" CURB FLANGE SHALL BE MADE OF A36 STEEL.
 THE CONTACT SURFACES OF THE CURB FLANGE SHALL BE PAINTED IMPERMEABLE WITH THE SURFACES BEING ONE (1) COAT OF PRIMER AND ONE INTERMEDIATE COAT AND ONE FINISH COAT OF ZINC MODIFIED TO MATCH THE COLOR OF THE CONCRETE THE UNDERLAYS AND FINISH OVERS SHALL BE PAINTED THEREON.
 COST OF PAINTING SHALL BE INCLUDED IN THE UNIT PRICE FOR THE CURB, 1/2" CURB FLANGE, AS SHOWN FOR INFORMATION OF SECTION 02 11 11 (SEE SPEC).

ARCHITECTURE OF ASSOCIATES, LIMITED CONSULTING ENGINEERS CINCINNATI, OHIO CLEVELAND, OHIO			
CUNYAHOGA COUNTY		ENGINEER	
CLEVELAND		OHIO	
BROOKPARK ROAD BRIDGE AND CURB OVER CUMBERLAND RIVER CITY OF CLEVELAND AND GARFIELD PARK			
COMPRESSION SEAL EXPANSION JOINT (A) CURB FLANGE DETAILS			
COUNTY RECORD NO. 89	SECTION NO. 3031	DATE 11/21/31	
NO. B-1191			
DESIGN 11/21	DRAWN 11/21	CHECKED 11/21	REVISED TO RESULT

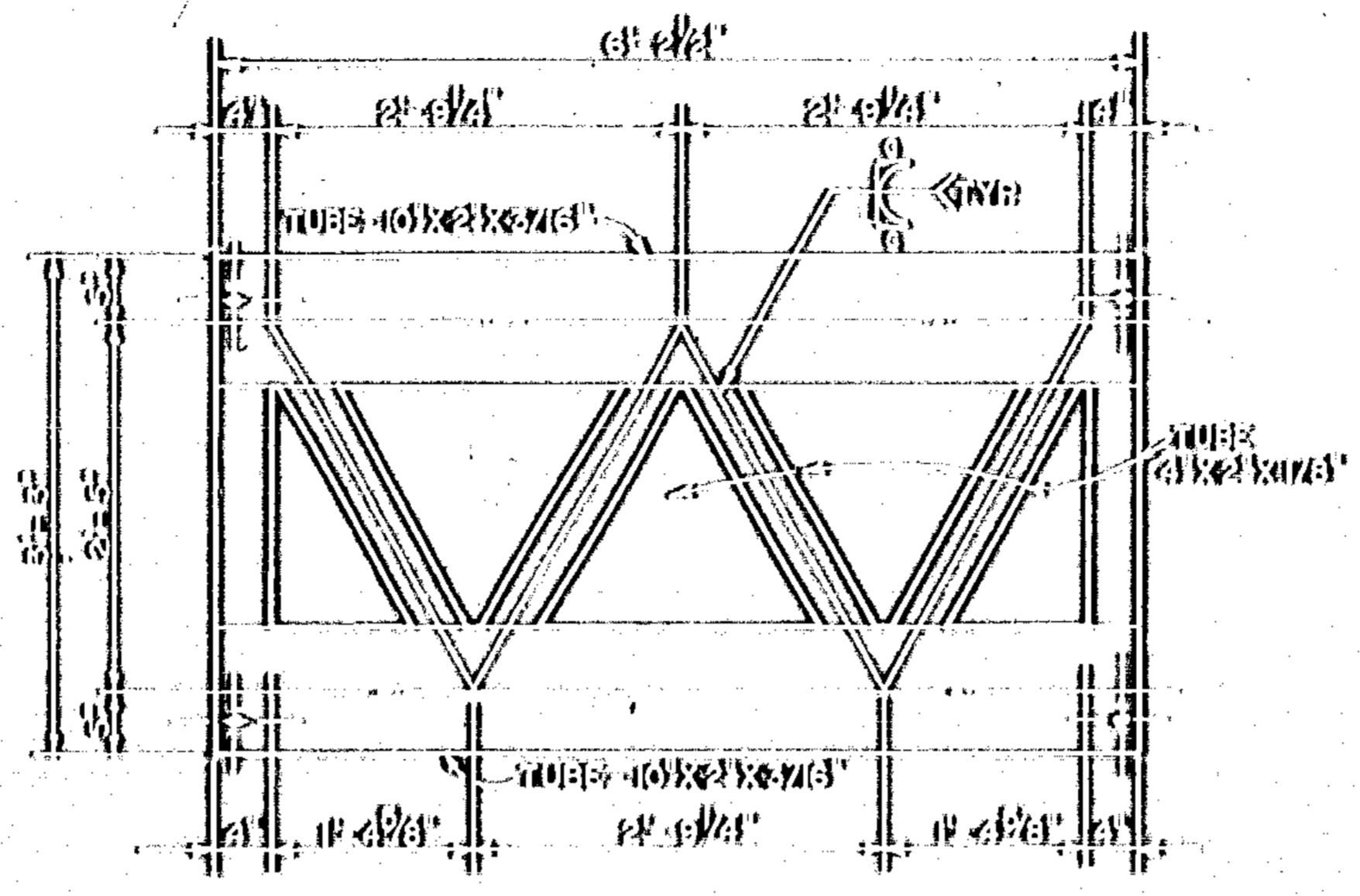


NOTE:
 1. ALL CONNECTIONS SHALL BE MADE IN ACCORDANCE WITH THE AISC STEEL CONNECTION MANUAL, 10TH EDITION, 1989, UNLESS OTHERWISE SPECIFIED.
 2. ALL DIMENSIONS ARE IN FEET AND INCHES, UNLESS OTHERWISE SPECIFIED.

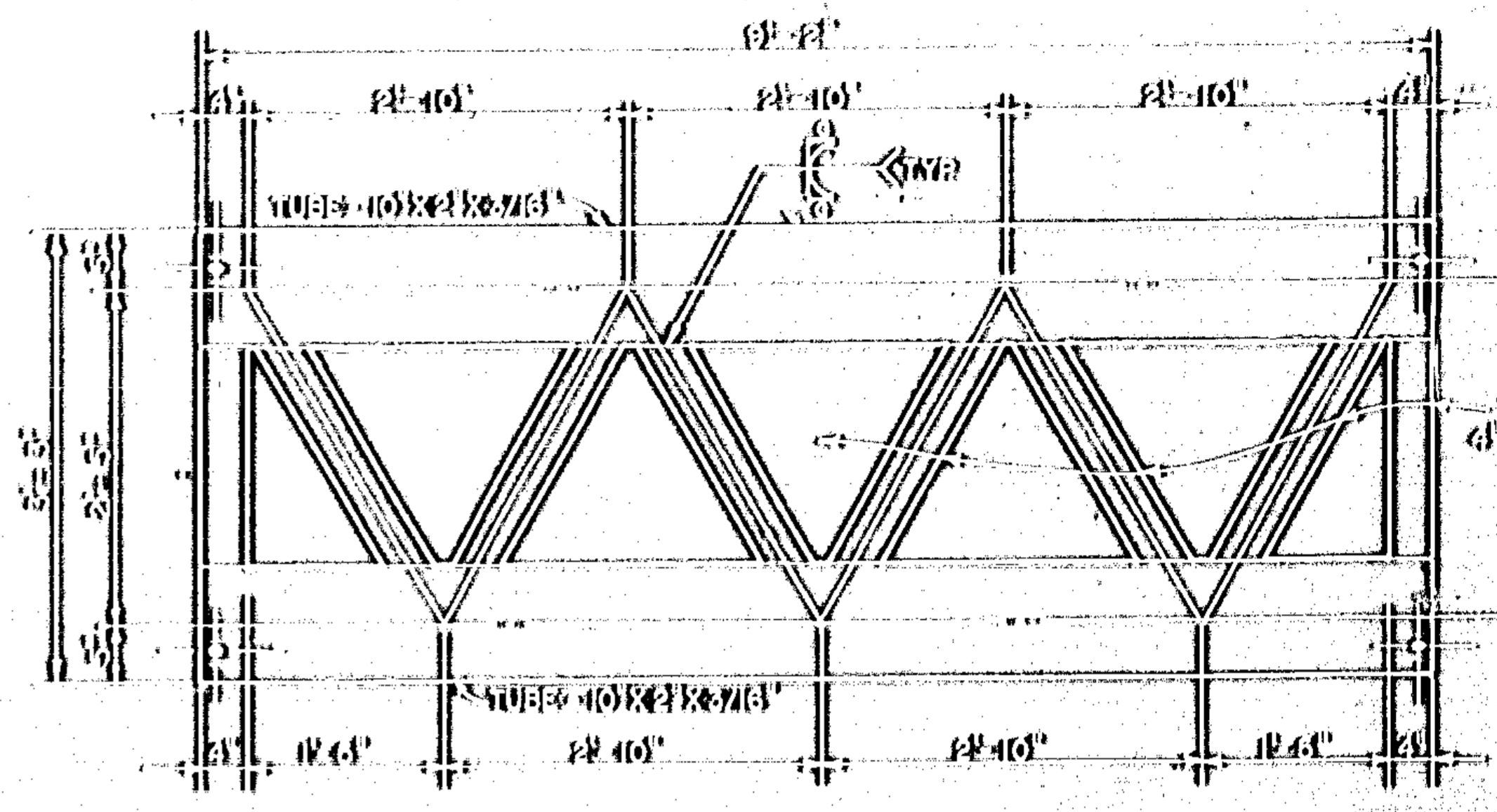
AMERICAN BRIDGE ENGINEERS, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
QUAHOGA COUNTY ENGINEER CLEVELAND, OHIO			
BROOKPARK ROAD BRIDGE OVER QUAHOGA RIVER OVER CROOKY RIVER CLEVELAND, OHIO			
RAILING DETAILS			
COUNTY (Bridge No.) 89	PROJECT NO. 7011	DATE 1/25/53	
NO. B-1191			
DESIGN ()	DRAWING ()	CHECKED ()	REVIEWED ()



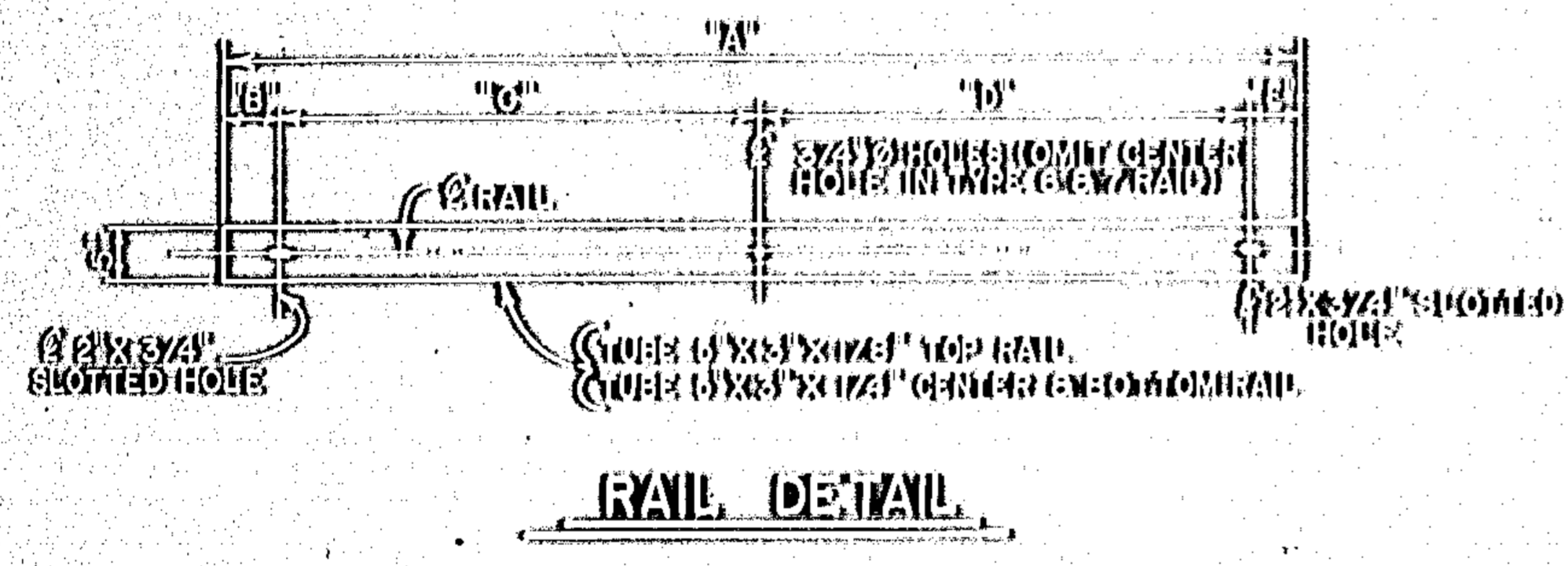
RAILING PANEL - TYPE A
USE 4" X 2" X 1/8" TUBE



RAILING PANEL - TYPE B
USE 4" X 2" X 1/8" TUBE



RAILING PANEL - TYPE C
USE 4" X 2" X 1/8" TUBE



RAIL DETAIL

TABLE OF RAIL DIMENSIONS

RAIL TYPE	DIMENSION					NO. HOLES		
	A	B	C	D	E	TOP	BOTTOM	TOTAL
1	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
2	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
3	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
4	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
5	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
6	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4
7	12'-0"	4'-0"	4'-0"	4'-0"	4'-0"	2	2	4

ALDEN BRIDGEMAN & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
CLEVELAND, OHIO

CUYAHOGA COUNTY ENGINEER
CLEVELAND OHIO

BROOKPARK ROAD
BRIDGE NO. CUYA 174-0233
OVER BROOKLYN RIVER
CITY OF CLEVELAND AND CUYAHOGA COUNTY

RAILING DETAILS

COUNTY BRIDGE NO. 89 REPORT NO. 7031 DATE

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO
CHC	CHC	CHC	



CUVAHOGA COUNTY
BROOKPARK ROAD

MARK	NUM.	LENGTH	HEIGHT	TYPE	A	B	C	D	E	NOTE
EAST APPROACH SPAN (CONTINUED)										
S 5175	2	10-4		1	0-6	4-5	1-0	4-5	0-6	1
THRU			1410		VARY	LENGTH	BY	0-4		
					VARY	DIM. BY	0-2			
					VARY	DIM. BY	0-2			
S 5180	2	12-0		1	0-6	5-3	1-0	5-3	0-6	1
S 5181	4	9-6		1	0-6	4-0	1-0	4-0	0-6	1
THRU			872		VARY	LENGTH	BY	0-2		
					VARY	DIM. BY	0-1			
					VARY	DIM. BY	0-1			
S 5193	4	12-6		1	0-6	5-6	1-0	5-6	0-6	1
S 5200	6	19-8	66	1	0-6	6-1	1-0	6-1	0-6	
S 5201	2	10-2		1	0-6	4-4	1-0	4-4	0-6	1
THRU			1139		VARY	LENGTH	BY	0-4		
					VARY	DIM. BY	0-2			
					VARY	DIM. BY	0-2			
S 5208	2	12-6		1	0-6	5-6	1-0	5-6	0-6	1
S 5274	13	15-0	232	1	0-6	6-8	1-0	6-8	0-6	
S 5275	2	9-6	20	1	0-6	4-0	1-0	4-0	0-6	
S 5276	2	12-10	27	1	0-6	5-6	1-0	5-6	0-6	
S 5277	3	5-11	43	1		2-7	1-0	2-7		
S 5278	6	11-8	62	3	1-0	6-1	1-0	6-1		
S 5227	2	12-0	22	1	0-6	5-6	1-0	5-6	0-6	
S 9006	4	14-10	202	1		6-1	3-3	6-1		
S 9007	4	14-9	201	1		6-10	1-6	6-10		

BRIDGE -- CONT'D. EAST APPROACH										
S 11007	4	12-9	271	15	4-4	2-6	3-9		5-7	
S 11008	4	13-4	300	1		6-4	3-4		6-4	
S 11011	6	36-8	1158	5	7-1	3	33-0			
S 11012	6	39-0	1158	5	7-1	6	33-0			
S 11013	6	34-6	1173	5	6-9	3	33-0			
S 11014	12	34-6	2210	5	6-9	2	33-0			
S 11015	6	14-3	473	5	7-1	3	33-0			
S 11016	12	39-9	2561	5	7-1	3	33-0			
S 11021	12	39-0	2566	5	7-1	0	33-0			
S 11022	6	14-3	473	5	7-1	0	33-0			
SE 5001	192	30-0	6008	6T						
SE 5002	48	10-10	512	6T						
SE 5004	4	7-5	311	3T	1-6	1-6	1-6	1-6		
SE 5005	4	8-7	333	3T	2-4	1-6	2-4	1-6		
SE 5006	4	8-8	333	1T	0-6	3-3	1-6	3-3	0-6	
SE 5007	4	8-4	333	1T	0-6	3-1	1-6	3-1	0-6	
SE 5008	16	12-10	2171	1T	0-6	3-4	1-6	3-4	0-6	
SE 5009	4	9-7	40	3T	2-10	1-6	2-10	1-6		
SE 5010	6	6-11	59	3T	2-0	1-2	2-0	1-2		
SE 5011	6	6-10	57	3T	0-6	2-7	1-2	2-7	0-6	
SE 5012	40	7-8	320	1T	0-6	3-0	1-2	3-0	0-6	
SE 5013	8	6-8	72	1T	0-6	3-6	1-2	3-6	0-6	
SE 5014	640	6-8	7152	6T						
SE 5015	6	23-6	1133	6T						
SE 5016	6	6-8	541	3T	1-6	1-2	1-6	1-2		
SE 5017	4	6-8	371	3T	2-3	1-6	2-3	1-6		
SE 5018	6	6-2	63	1T	0-6	3-3	1-2	3-3	0-6	
SE 5019	2	6-4	171	1T	0-6	3-4	1-2	3-4	0-6	
SE 5020	2	6-10	211	1T	0-6	3-1	1-2	3-1	0-6	
SE 5021	6	7-11	130	1T	0-6	1-2	0			
SE 5022	18	6-10	1121	6T						
SE 5023	2	6-2	161	1T	0-6	3-3	1-2	3-3	0-6	
SE 5024	2	6-4	183	1T	0-6	3-7	1-6	3-7	0-6	
SE 5025	2	10-3	221	1T	0-6	4-2	1-6	4-2	0-6	
SE 5026	2	6-10	241	1T	0-6	3-10	1-6	3-10	0-6	
SE 5027	6	6-6	42	1T	0-6	1-7	3-2	1-7		
SE 5028	46	4-8	203	1T	0-6	3-1				
SE 5029	6	6-8	1133	3T	1-2	0-6	1-2	0-6		
SE 5030	6	6-8	43	3T	0-6	0-6	0-6	0-6		
SE 5031	2	7-6	101	3T	2-1	1-2	2-1	1-2		
SE 5032	4	6-7	53	3T	2-10	1-2	2-10	1-2		
SE 5033	6	13-4	161	6T						

MARK	NUM.	LENGTH	HEIGHT	TYPE	A	B	C	D	E	NOTE
BRIDGE -- CONT'D. EAST APPROACH										
SE 6001	6	9-3	77	6T						
SE 6002	6	7-8	67	6T						
SE 6003	252	6-1	1232	3T	0-11	0-4	0-11	0-4		
SE 6004	252	7-4	1227	2T	0-9	6-10	1-0			
SE 6005	252	5-3	1130	6T						
SE 6006	252	4-0	1033	1T		1-9	1-9	0-9		
SE 6007	161	23-6	627	6T						
SE 7001	6	9-4	1230	2T	3-11	7-9	1-0	1-7	1-3	
SE 7002	163	7-4	220	2T	3-9	1-2	1-11	1-7		
SE 7003	4	6-4	52	3T	4-2		6-4			
SE 7004	4	7-3	59	3T	4-3	0-4	6-6			
SE 7005	4	6-6	69	6T						
SE 7006	6	7-2	117	6T						
SE 8001	6	6-3	116	6T						
SE 8002	6	6-6	123	6T						
SE 9001	10	30-7	1010	1T	1-0	23-10				
SE 9002	10	32-7	1100	1T	1-0	31-10				
SE 9003	24	12-3	101	6T						
SE 9004	24	6-7	127	6T						
SE 9005	6	10-10	223	6T						
SE 9006	10	30-4	1072	1T	0-6	23-10				
SE 9007	10	33-4	1172	1T	0-6	33-10				
SE 1001	4	30-0	631	6T						
SE 1002	32	23-0	370	6T						
SE 1003	6	19-0	631	6T						
SE 1004	12	31-0	1171	6T						
SE 1005	6	31-0	1171	6T						
SE 1006	4	19-3	493	4T	3-1	6-4	11-2			
SE 1007	4	13-0	331	4T	1-2	6-4				
SE 1008	4	13-3	314	4T	0-6	6-7				
SE 1009	4	13-2	314	4T	4-7	4-7	6-6			

MARK	NUM.	LENGTH	HEIGHT	TYPE	A	B	C	D	E	NOTE
BRIDGE -- CONT'D. EAST APPROACH										
S 5175	4	9-4	39	1T	0-6	3-11	1-0	3-11	0-6	
S 5176	4	9-6	40	1T	0-6	4-0	1-0	4-0	0-6	
S 5177	10	10-4	102	1T	0-6	4-3	1-0	4-3	0-6	
S 5178	6	10-2	221	1T	0-6	4-4	1-0	4-4	0-6	
S 5179	4	10-3	157	1T	0-6	4-11	1-0	4-11	0-6	
S 5180	2	9-4		1T	0-6	3-11	1-0	3-11	0-6	1
THRU			603		VARY	LENGTH	BY	0-2		
					VARY	DIM. BY	0-1			
					VARY	DIM. BY	0-1			
S 5193	2	12-2		1T	0-6	3-4	1-0	3-4	0-6	1
S 5194	2	12-6	23	1T	0-6	3-4	1-0	3-4	0-6	
S 5195	13	11-8	614	1T	0-6	3-11	1-0	3-11	0-6	1
THRU			614		VARY	LENGTH	BY	0-4		
					VARY	DIM. BY	0-2			
					VARY	DIM. BY	0-2			
S 5199	13	12-6		1T	0-6	3-7	1-0	3-7	0-6	1
S 5200	24	12-2		1T	0-6	3-11	1-0	3-11	0-6	1
S 5201	13	11-8	614	1T	0-6	3-11	1-0	3-11	0-6	1
THRU			614		VARY	LENGTH	BY	0-4		
					VARY	DIM. BY	0-2			
					VARY	DIM. BY	0-2			
S 5208	13	12-6		1T	0-6	3-7	1-0	3-7	0-6	1
S 5209	24	12-4		1T	0-6	3-11	1-0	3-11	0-6	1
THRU			1103		VARY	LENGTH	BY	0-2		
					VARY	DIM. BY	0-1			
					VARY	DIM. BY	0-1			
S 5273	24	10-0		1T	0-6	4-3	1-0	4-3	0-6	1
S 5274	24	11-0		1T	0-6	4-3	1-0	4-3	0-6	1
THRU			1103		VARY	LENGTH	BY	0-4		
					VARY	DIM. BY	0-2			

**CUYAHOGA COUNTY
BROOKPARK ROAD**

NOTES

1. INDICATED BEARS ARE FOR BAR VARIETIES
AND SHOULD BE USED BY DESIGNATED
QUANTITIES. OVERLAP TO BE USED
AS SHOWN. BEARING SHOULD BE FOR EACH
SECTION UNLESS OTHERWISE INDICATED.

BAR SIZE DESIGNATION

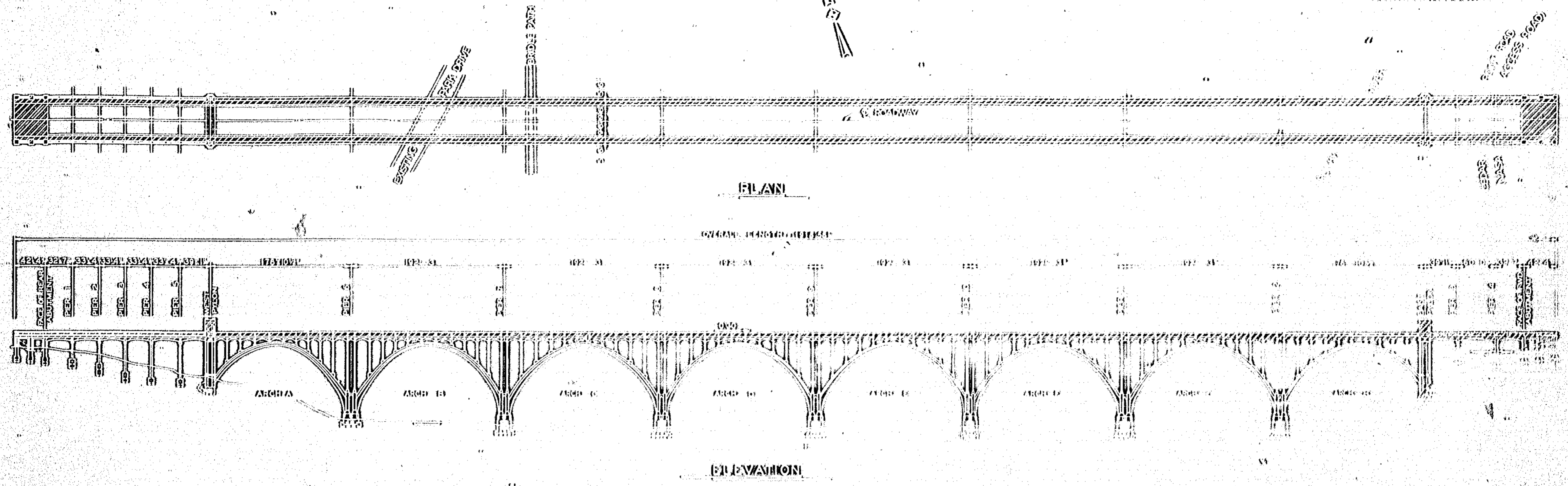
BAR SIZE IS INDICATED IN THE BAR MARK.
THE BAR WEIGHT CHECKS FOUR DIGITS ARE
USED, AND FIRST TWO DIGITS CHECKS HAVE
PRIORITY. INDICATE THE BAR SIZE
NUMBER, FOR EXAMPLE, A101 IS A NO. 10
#101 BAR AND A1010 IS A NO. 10 #101.

REFER TO ONE SECTION NUMBER, 700,
700A THROUGH 700G AND 700H,
SUBSTITUTED ADDITIONAL REINFORCING
BARS. SHOWN BE PROVIDED FOR SCHEDULE
REINFORCING BARS BE PROVIDED IN
THE REINFORCING BAR GROUP BY PROXY
QUANTITY, LISTED IN ADDENDUM SHEET
NUMBER.

A BAR MARK WITH THE PREFIX "P" INDICATES
THE REINFORCING BAR GROUP BY PROXY
QUANTITY.

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTES
SE 5001	683	30'-0"	10813	ST						
SE 5002	413	10'-10"	5412	ST						
SE 5003	110	7'-5"	771	3	1'-6"	1'-6"	1'-6"	1'-6"		
SE 5004	110	9'-7"	901	3	2'-4"	1'-6"	2'-4"	1'-6"		
SE 5005	110	9'-7"	901	3	0'-6"	3'-3"	1'-6"	3'-3"	0'-6"	
SE 5006	110	9'-7"	901	3	0'-6"	3'-3"	1'-6"	3'-3"	0'-6"	
SE 5007	110	9'-7"	901	3	0'-6"	3'-3"	1'-6"	3'-3"	0'-6"	
SE 5008	40	12'-10"	5335	11	0'-6"	5'-4"	1'-6"	5'-4"	0'-6"	
SE 5009	110	9'-7"	1001	3	2'-10"	1'-6"	2'-10"	1'-6"		
SE 5010	112	6'-11"	671	3	2'-0"	1'-2"	2'-0"	1'-2"		
SE 5011	112	6'-11"	671	3	0'-6"	2'-7"	1'-2"	2'-7"	0'-6"	
SE 5012	60	7'-8"	4301	11	0'-6"	3'-0"	1'-2"	3'-0"	0'-6"	
SE 5013	112	6'-8"	1031	11	0'-6"	3'-6"	1'-2"	3'-6"	0'-6"	
SE 5014	112	6'-8"	1031	11	0'-6"	3'-6"	1'-2"	3'-6"	0'-6"	
SE 5015	6	29'-6"	1931	ST						
SE 5016	112	6'-5"	801	3	1'-6"	1'-2"	1'-6"	1'-2"		
SE 5017	110	9'-9"	911	3	2'-5"	1'-6"	2'-5"	1'-6"		
SE 5018	112	6'-2"	1021	11	0'-6"	3'-3"	1'-2"	3'-3"	0'-6"	
SE 5019	2	9'-4"	1171	11	0'-6"	3'-4"	1'-2"	3'-4"	0'-6"	
SE 5020	2	9'-10"	211	11	0'-6"	4'-11"	1'-2"	4'-11"	0'-6"	
SE 5021	6	7'-11"	501	11	6'-11"	2'-0"				
SE 5022	113	9'-10"	1631	ST						
SE 5023	2	9'-2"	1171	11	0'-6"	3'-3"	1'-2"	3'-3"	0'-6"	
SE 5024	2	9'-6"	211	11	0'-6"	3'-7"	1'-6"	3'-7"	0'-6"	
SE 5025	2	10'-6"	221	11	0'-6"	4'-2"	1'-6"	4'-2"	0'-6"	
SE 5026	2	9'-10"	211	11	0'-6"	3'-10"	1'-6"	3'-10"	0'-6"	
SE 5027	413	4'-6"	211	11	1'-6"	3'-11"				
SE 5028	413	4'-6"	1931	3	1'-4"	0'-11"	1'-4"	0'-11"		
SE 5029	6	5'-9"	413	3	0'-11"	1'-6"	0'-11"	1'-6"		
SE 5030	2	7'-2"	113	3	2'-5"	1'-2"	2'-5"	1'-2"		
SE 5031	2	8'-7"	113	3	2'-10"	1'-2"	2'-10"	1'-2"		
SE 5032	20	11'-7"	211	ST						
SE 5033	20	9'-6"	1931	ST						
SE 5034	20	7'-8"	1931	ST						
SE 5035	6	6'-10"	413	112	1'-0"	1'-3"	3'-6"	1'-3"		
SE 5313	413	5'-11"	2206	3	0'-11"	1'-6"	0'-11"	1'-6"		
SE 5314	413	7'-4"	5335	2	0'-9"	5'-10"	1'-0"			
SE 5315	413	5'-3"	2206	ST						
SE 5316	413	4'-0"	1173	11	1'-9"	1'-9"	0'-9"			

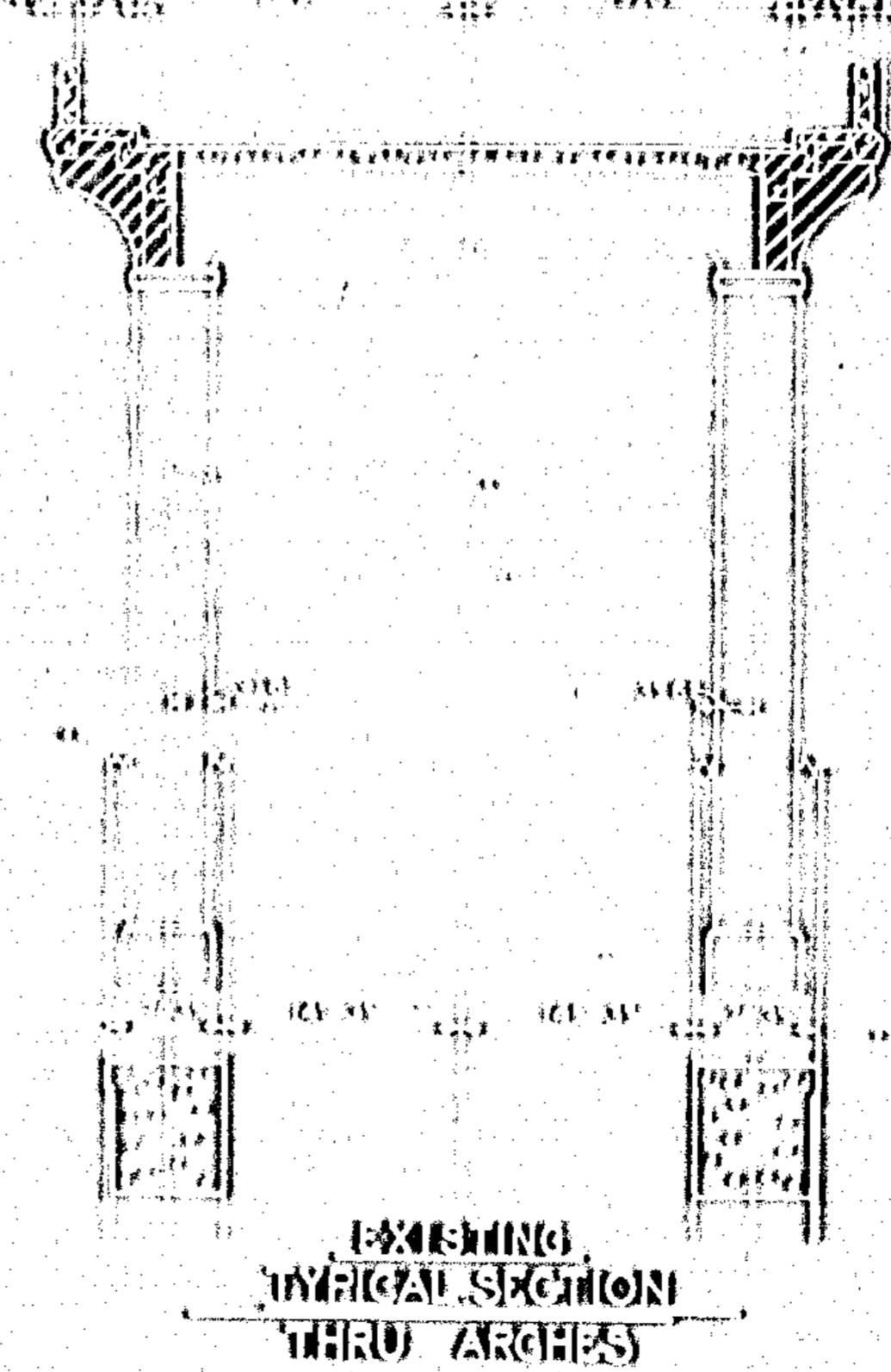
MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	E	NOTES
SE 5001	1201	6'-0"	7335	11	0'-6"	2'-2"	1'-2"	2'-2"	0'-6"	
SE 5002	613	7'-0"	5024	11	0'-6"	2'-6"	1'-2"	2'-6"	0'-6"	
SE 5003	613	9'-0"	6135	11	0'-6"	3'-0"	1'-2"	3'-0"	0'-6"	
SE 5004	213	11'-11"	3121	3	1'-2"	4'-11"	1'-2"	4'-11"		
SE 5005	213	9'-5"	2135	3	1'-2"	3'-3"	1'-2"	3'-3"		
SE 5006	213	9'-5"	2135	3	1'-2"	3'-3"	1'-2"	3'-3"		
SE 5007	6	9'-5"	6131	11	1'-2"	2'-7"	1'-2"	2'-7"		
SE 5008	6	9'-5"	6131	11	1'-2"	2'-7"	1'-2"	2'-7"		
SE 5009	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5010	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5011	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5012	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5013	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5014	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5015	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5016	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5017	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5018	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5019	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5020	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5021	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5022	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5023	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5024	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5025	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5026	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5027	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5028	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5029	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5030	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5031	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5032	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5033	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5034	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5035	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5036	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5037	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5038	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5039	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5040	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5041	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5042	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5043	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5044	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5045	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5046	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5047	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5048	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5049	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5050	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5051	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5052	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5053	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5054	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5055	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5056	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5057	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5058	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5059	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5060	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5061	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5062	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5063	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5064	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5065	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5066	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5067	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5068	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5069	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5070	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5071	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5072	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5073	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5074	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5075	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5076	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		
SE 5077	413	6'-5"	211	3	1'-2"	1'-6"	1'-2"	1'-6"		



SUMMARY OF QUANTITIES

ELEMENT OF STRUCTURE	SYMBOL	BRICKS		STONES		CONCRETE		REINFORCING IRON		PAVING		DRAINAGE		TOTAL	
		CU YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD	CU YD	SQ YD
WEST APPROACH SPANS	BRICKWORK	181	60	52	110	6	10	6	10						
	CONCRETE	582	630												
	PAVING	16	60	101	130										
ARCH SPANS	BRICKWORK	123	620	67	620	110	120								
	CONCRETE	1087	1320	310	120	318	1120	318	1120						
	PAVING	1623	610	1123	1120										
EAST APPROACH SPANS	BRICKWORK	6	10	32	60	11	10								
	CONCRETE	1	10	5	60	33	10								
	PAVING	1	10	162	130										
TOTAL	ESTIMATED QUANTITY	3214	610	1622	610	620	610	620	610	620	610	620	610	620	610
TOTAL	ACTUAL QUANTITY	3214	610	1622	610	620	610	620	610	620	610	620	610	620	610

NOTE:
 Gross height given denotes height of existing structure to be removed for structure widening. Report all sheets.
 The physical inventory of measured quantities of materials was performed between May 22 and June 22, 1912.
 The inventory of quantities of materials was performed between May 22 and June 22, 1912. The values listed in the column headed 'Est of the Summary of Quantities' table, this sheet, are the results of the re-inventory.



ARTHUR CHRISTIAN & ASSOCIATES, LIMITED
 (INCORPORATED ENGINEERS)
 1000 BROADWAY, CHICAGO, ILL. & CHICAGO, ILL.

QUAYTOSCA COUNTY ENGINEER
 CHAVAN AND OHIO

BROOKPARK ROAD
 BRIDGE NO. QUAYTOSCA COUNTY
 QUAYTOSCA COUNTY, OHIO
 CHIEF OF CHEMICAL AND METALLURGY DEPT.

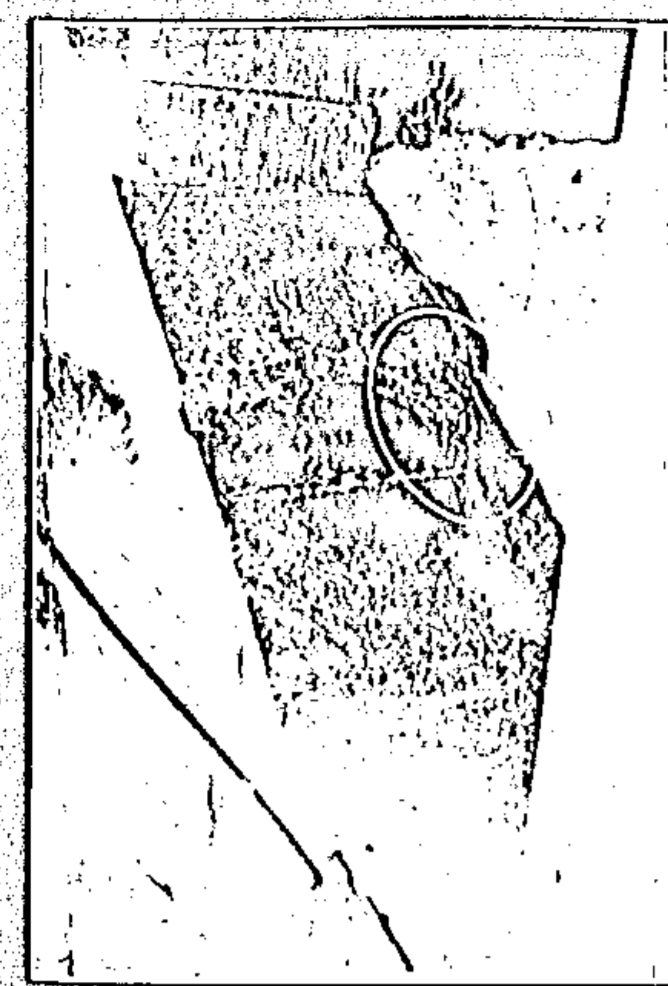
BRIDGE PLAN & QUANTITIES

COUNTY: QUAYTOSCA BRIDGE NO.: 1001 DATE: 1912

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO	APPROVED
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*Yes - Physical inventory of quantities of materials
 *No - Estimated quantities of materials



Scale

SCALE - Magnitude of surface mortar and aggregate. The depth of scale varies from 1/4" to 1/2".
 Light scale - loss of surface mortar up to 1/4" depth with surface exposure of coarse aggregate.
 Severe scale - loss of coarse aggregate as well as mortar and fine aggregate. Depth of loss exceeds 1/4".

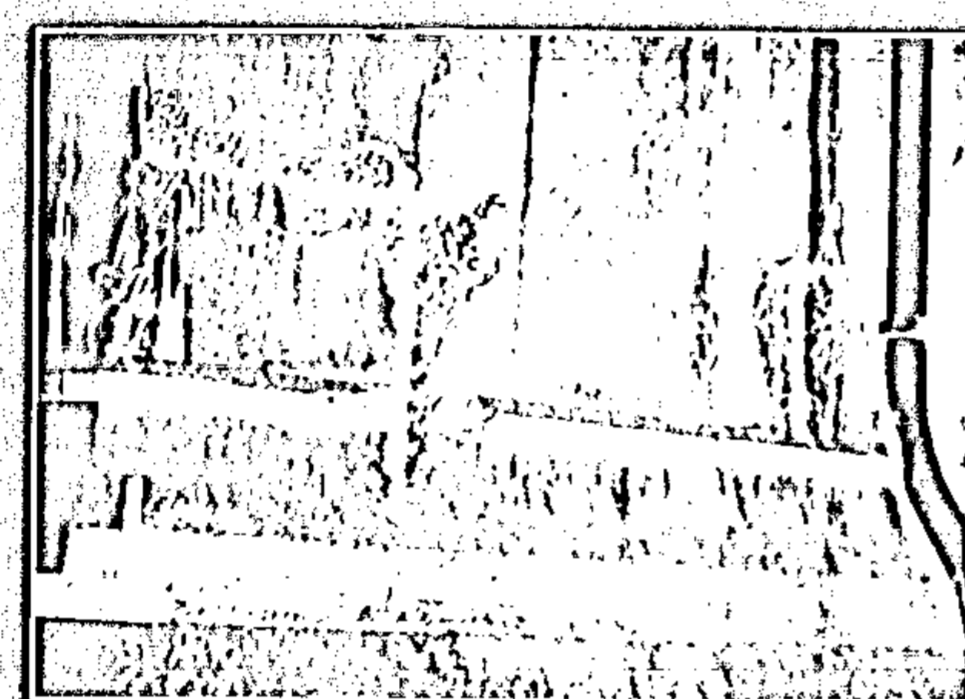
Delamination may vary from light to severe at the same location.



SCALE



SCALE - Similar to light scale, but depth is usually the cause of a vertical crack. The depth of the scale varies from 1/4" to 1/2". The crack may be vertical or horizontal. The depth of the scale is the same as the depth of the crack.



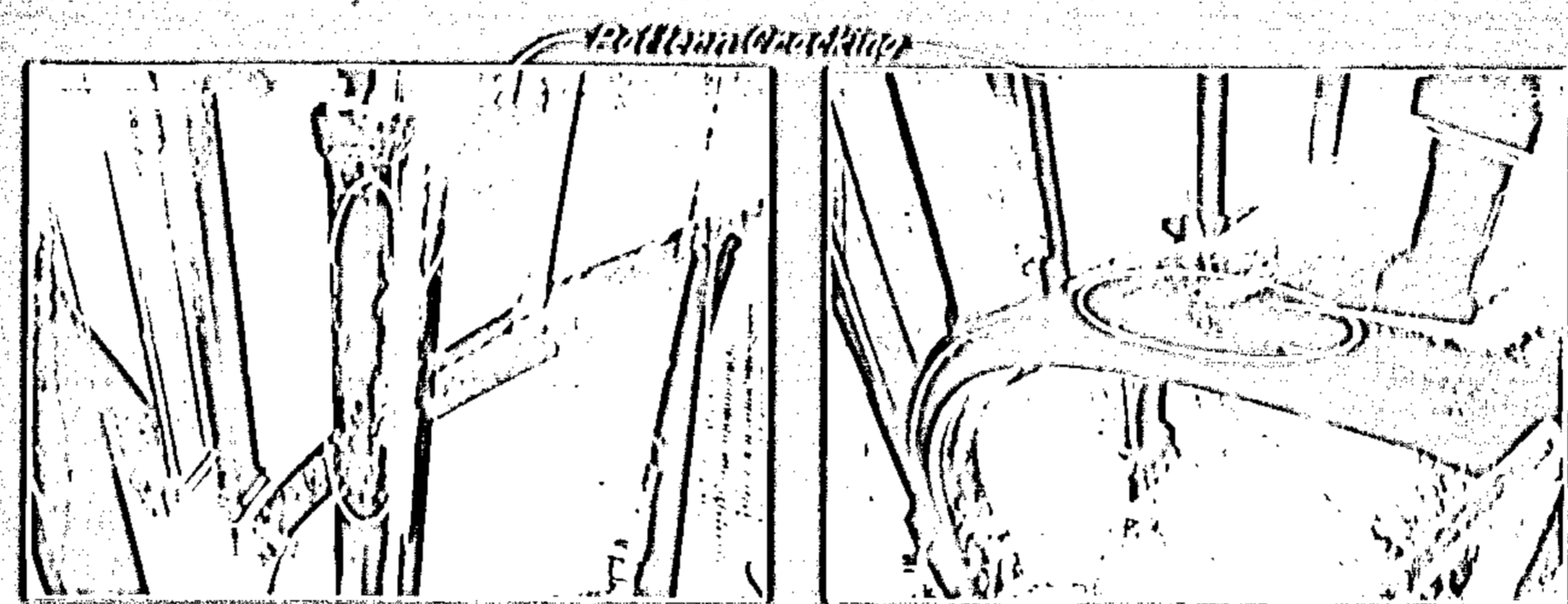
SCALE



Missing fascia

MISSING FASCIA - Areas where the fascia is missing from the concrete surface.

MISSING FASCIA



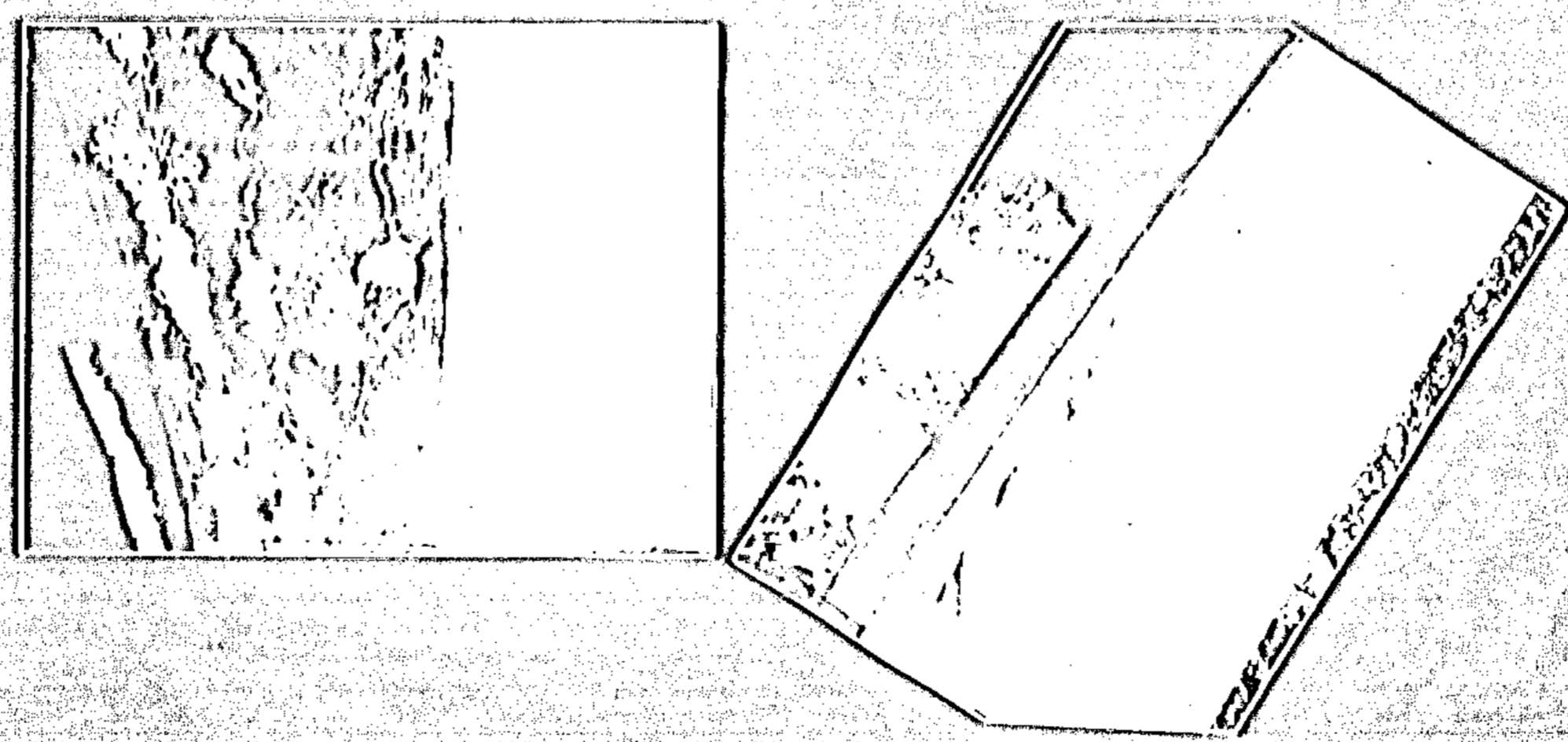
CORNER CRACK

CORNER CRACK - Cracks which extend completely through the concrete at the corner of a joint.

POROUTES - Small openings in the concrete surface which are caused by air or water passing through the concrete.

POROUTES

FAHRENHEIT CRACKING



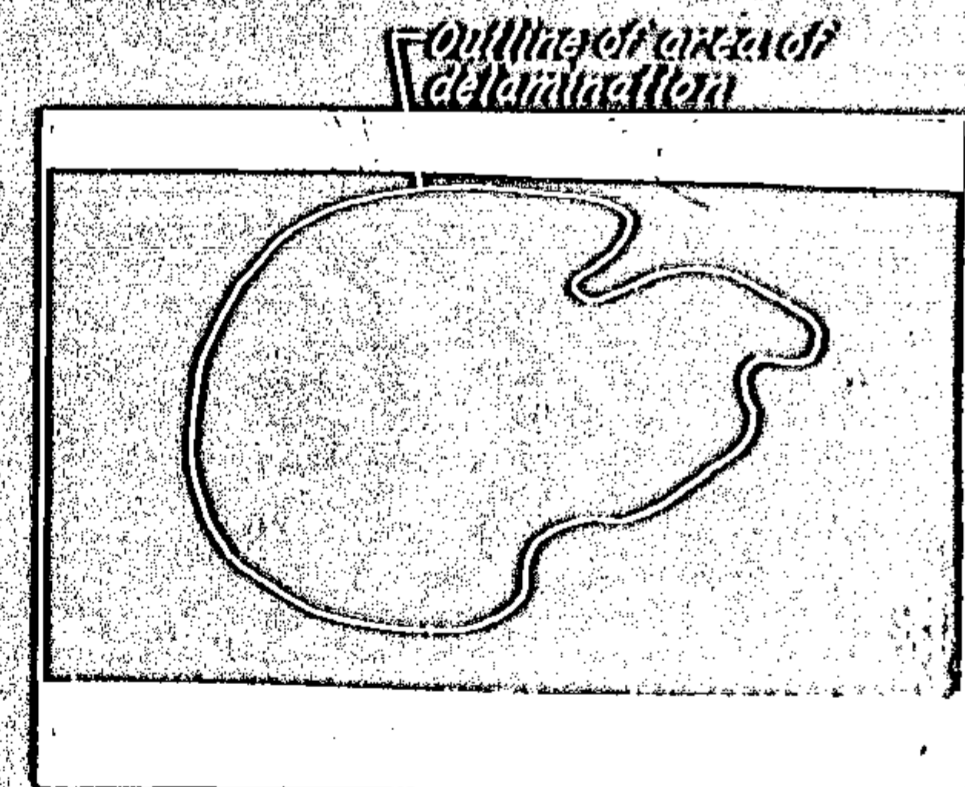
CRACK - A line or groove in the concrete surface which is caused by shrinkage or expansion.

CRACK



HONEYCOMB - Areas where the mortar elements have been removed by aggregate and concrete surface during construction. Patches made for these areas have a different color.

HONEYCOMB



Outline of area of delamination



Area of delamination with surface exposed to weather.

DELAMINATION - A condition in which the concrete surface has separated from the aggregate.

DELAMINATION

ALLEN WHEELER & ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 CLEVELAND, OHIO

CUYAHOGA COUNTY ENGINEER
 CLEVELAND OHIO

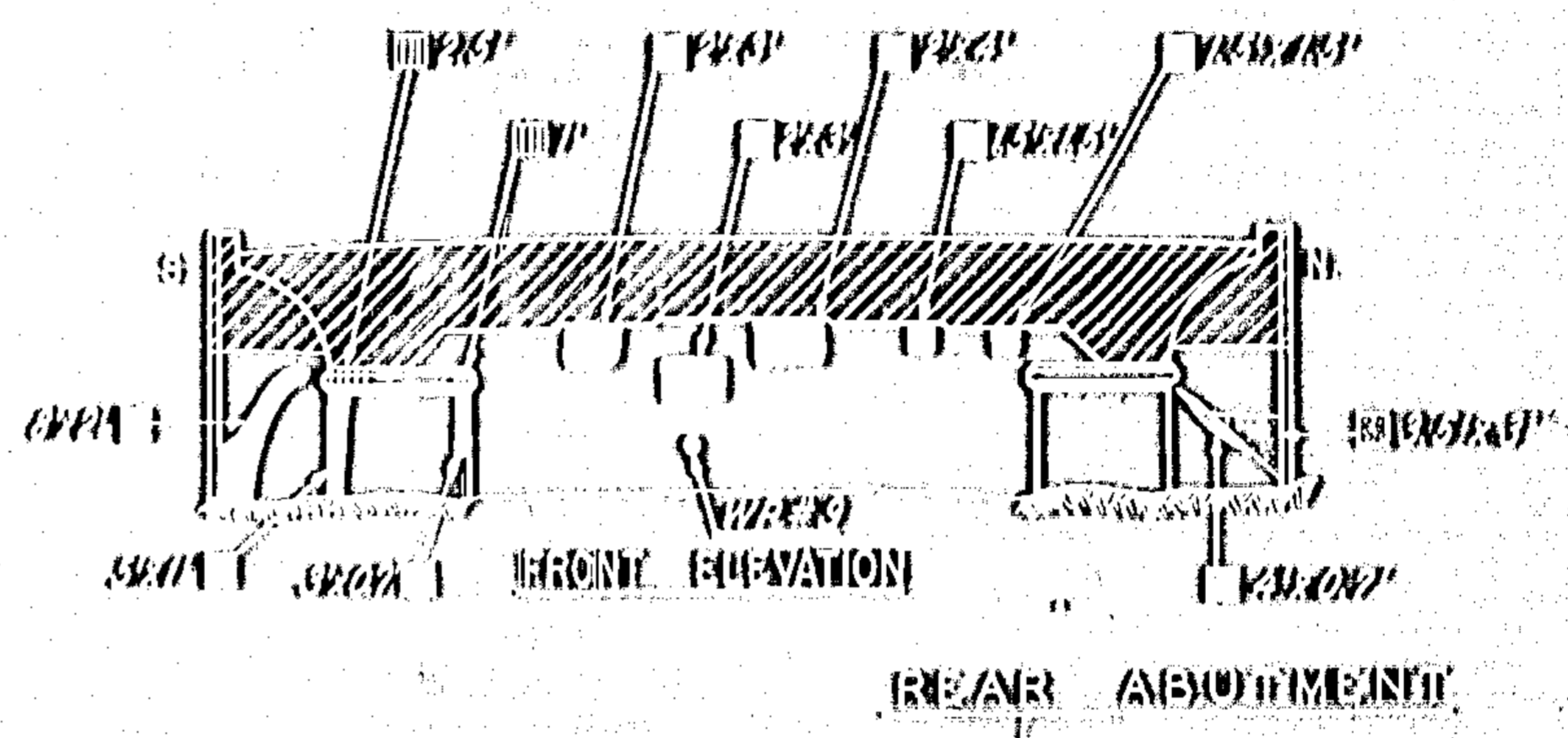
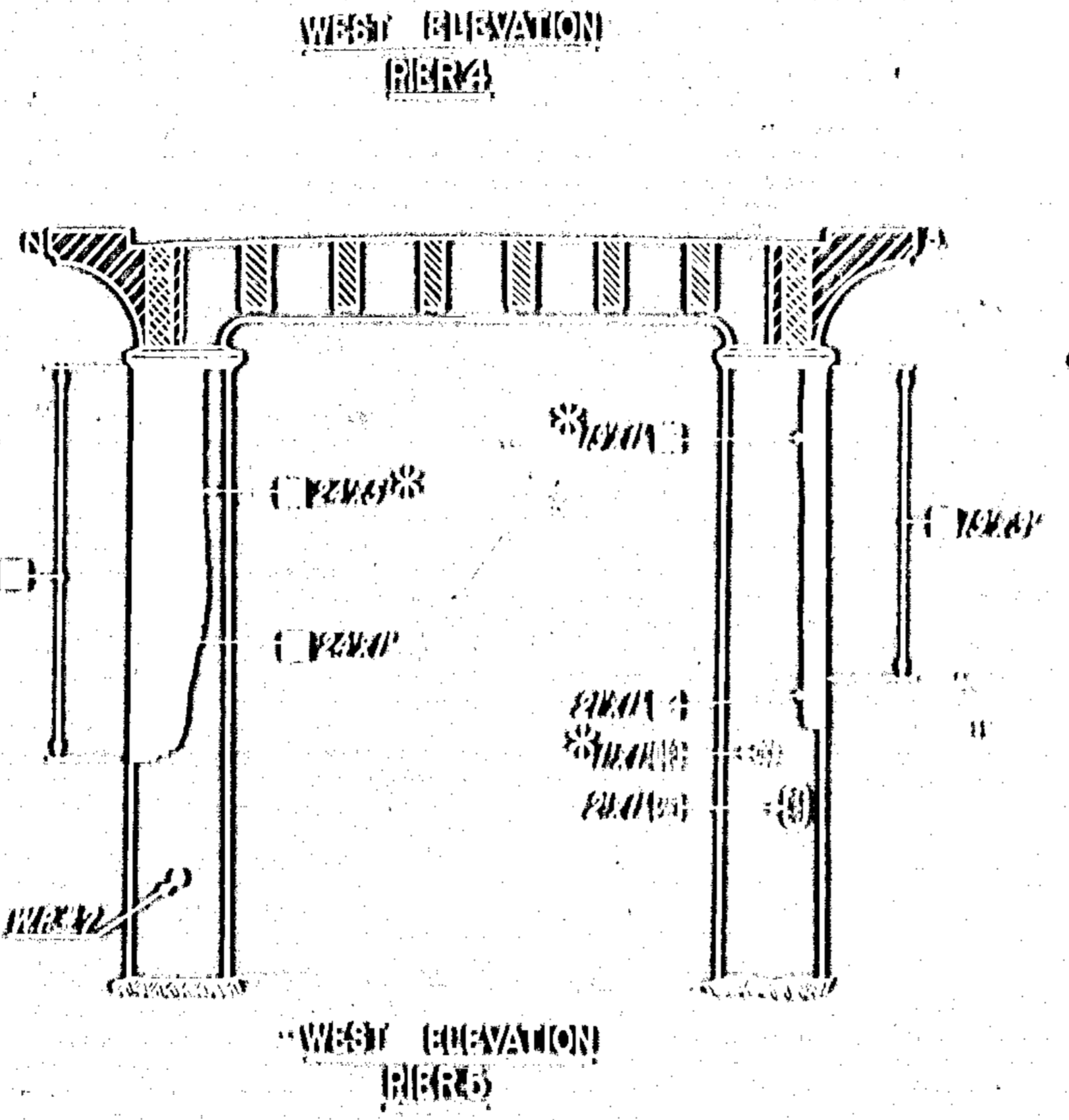
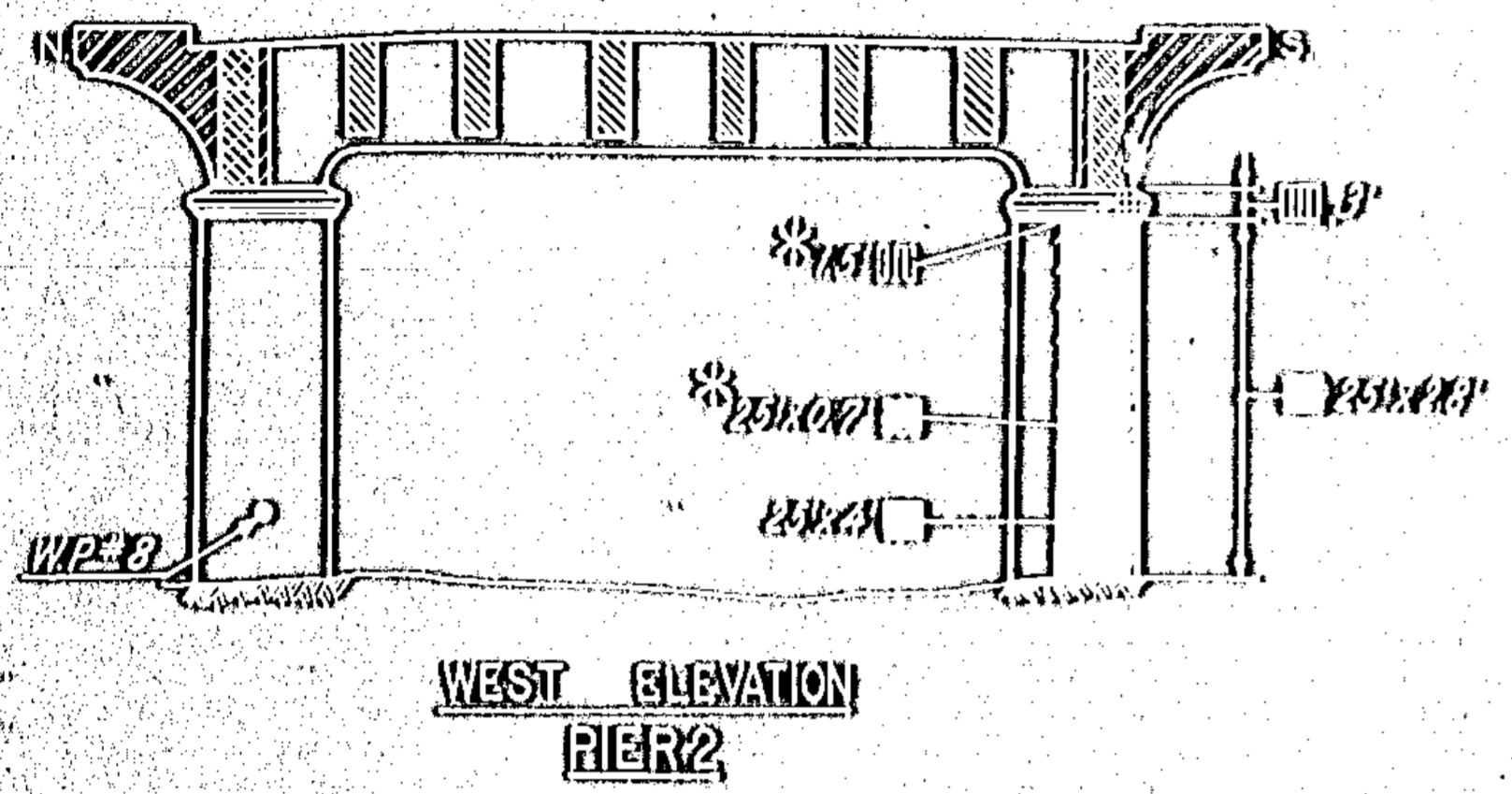
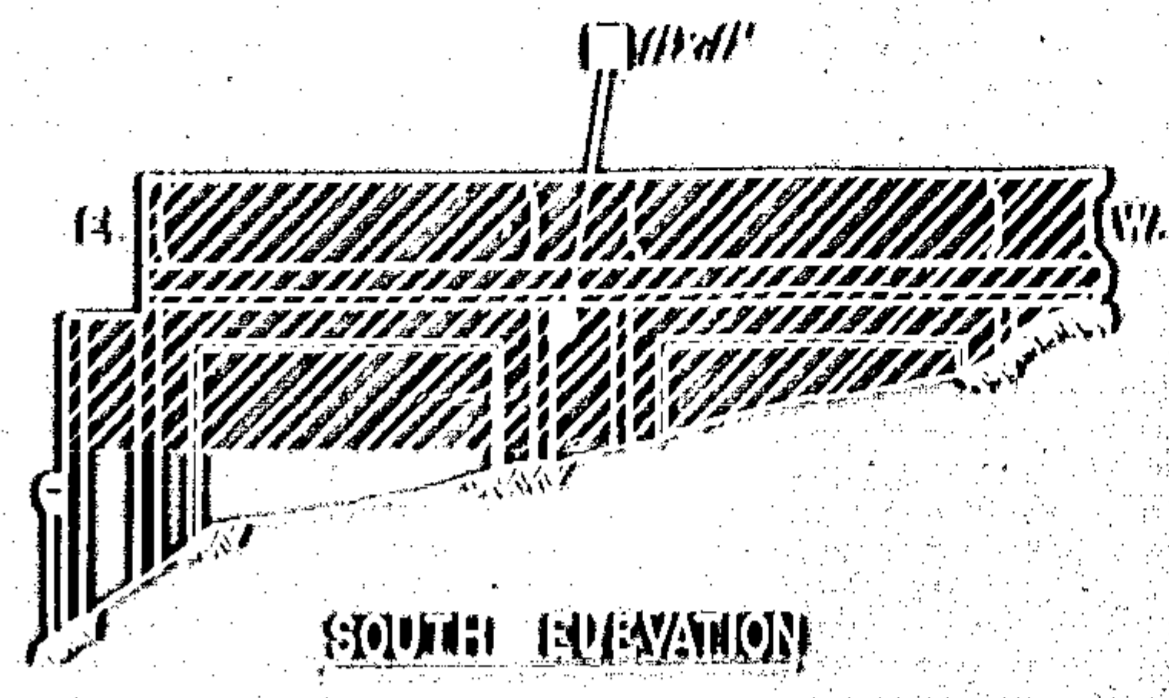
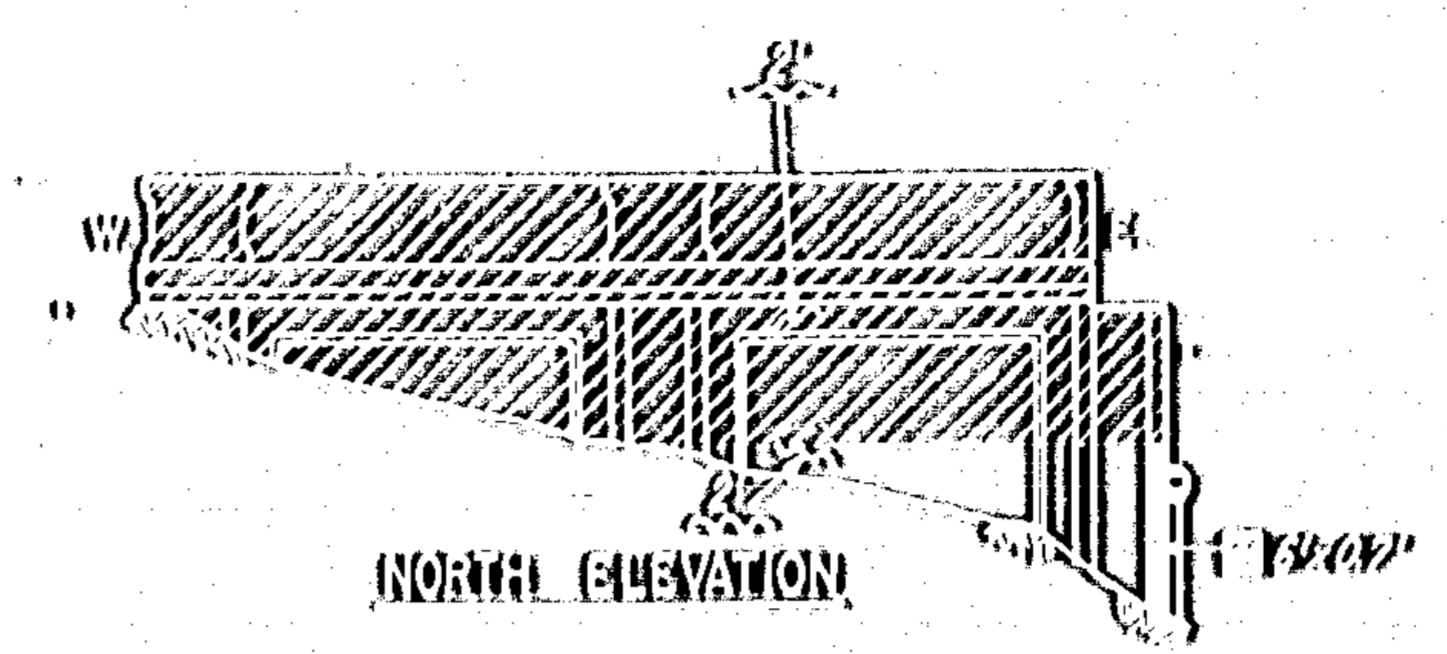
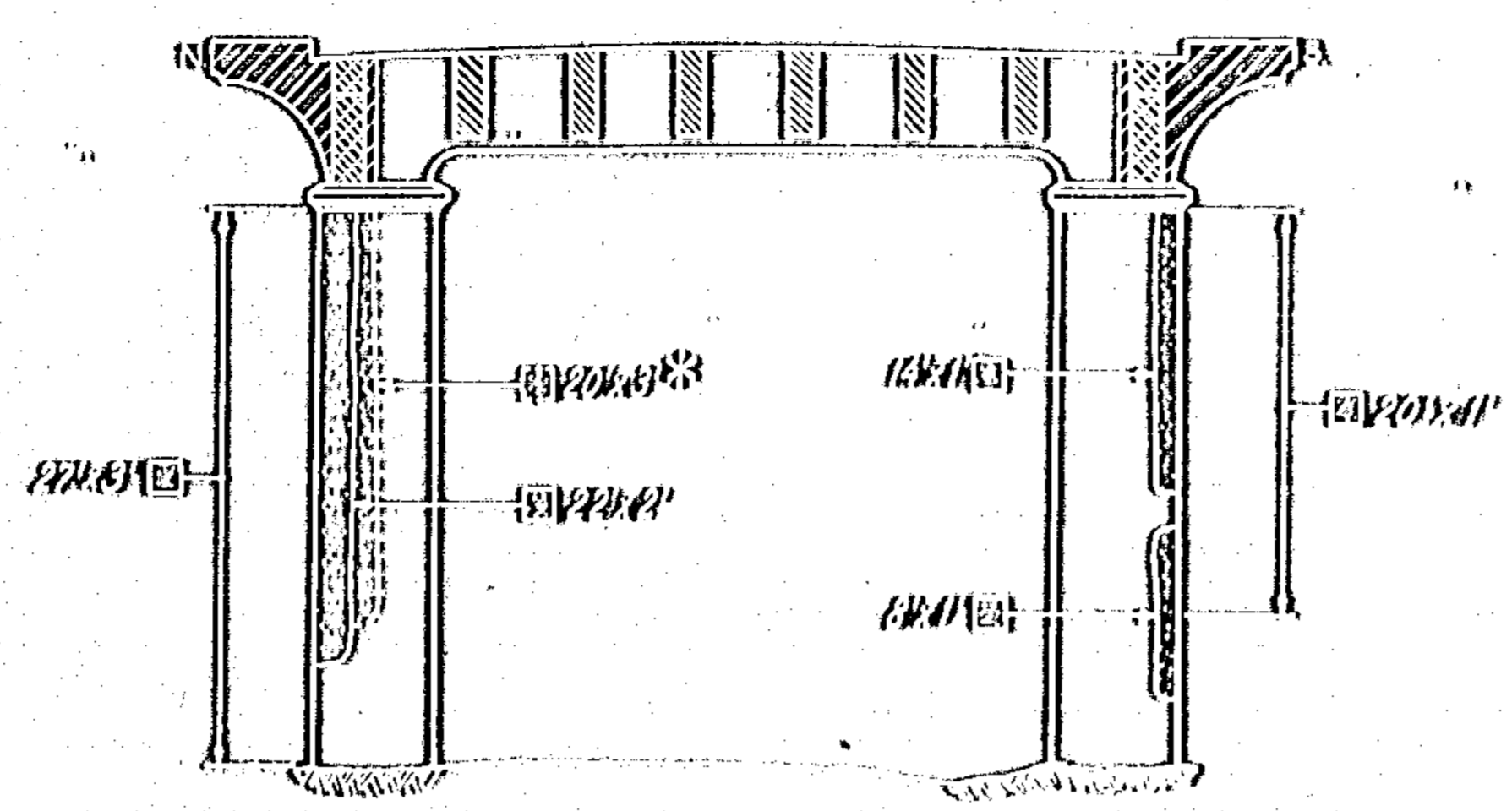
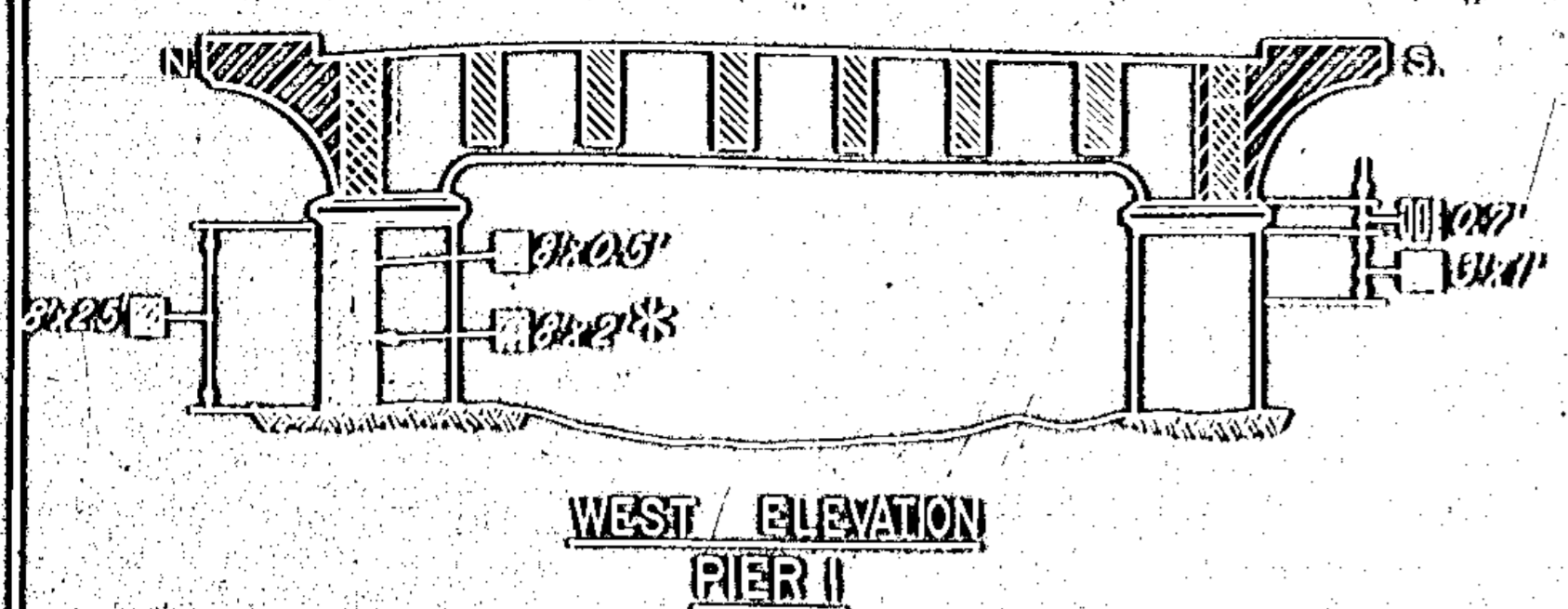
BROOKPARK ROAD
 BRIDGE NO. GUY 17-0283
 OVER ROCKY RIVER
 CITY OF CLEVELAND & FAIRVIEW PARK

DETERIORATION DESCRIPTION

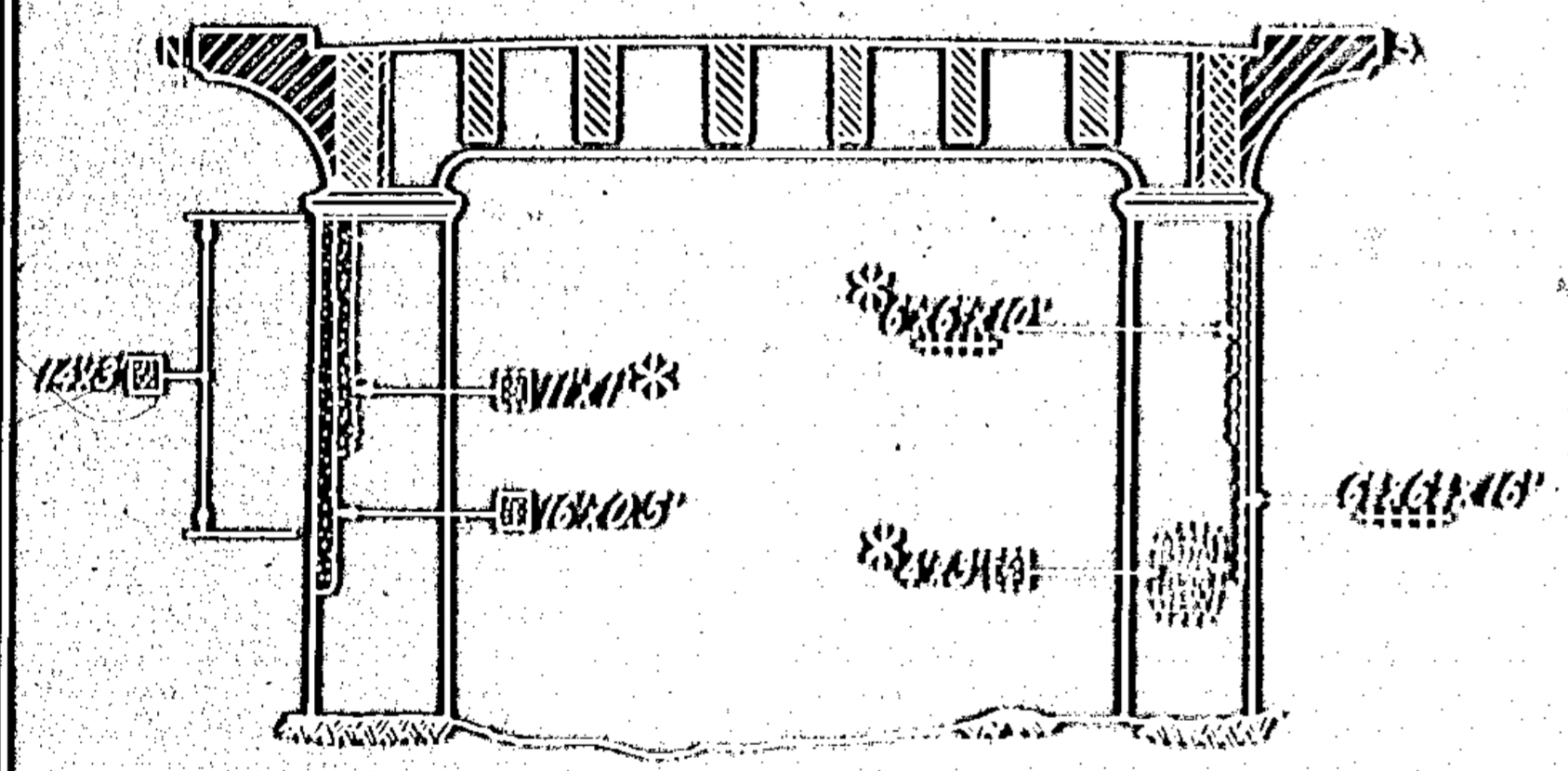
COUNTY BRIDGE NO. 139 REPORT NO. 7061 DATE FEB 1973

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
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Notes:
 Quantities and measurements shown on this sheet are based on the best inventory of field conditions. Changes resulting from the reference inventory are included in the quantity of quantities sheet etc.



WEST APPROACH

QUANTITIES SHEET

DESCRIPTION	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT
CONCRETE	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD
STEEL	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS

WEST APPROACH

WEST APPROACH

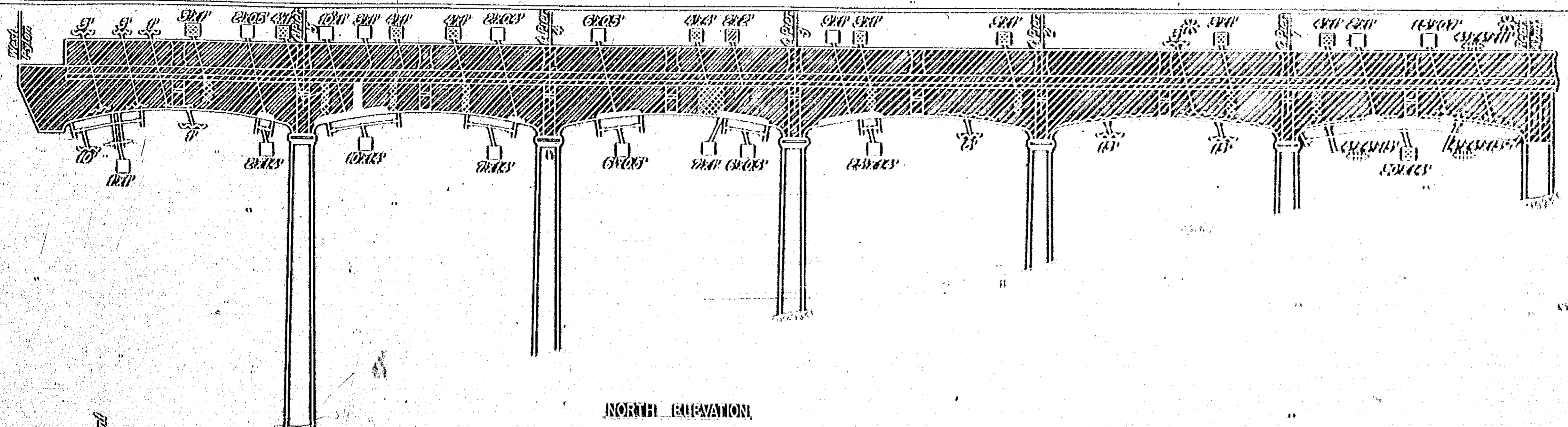
QUANTITIES SHEET

DESCRIPTION	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT
CONCRETE	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD
STEEL	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS

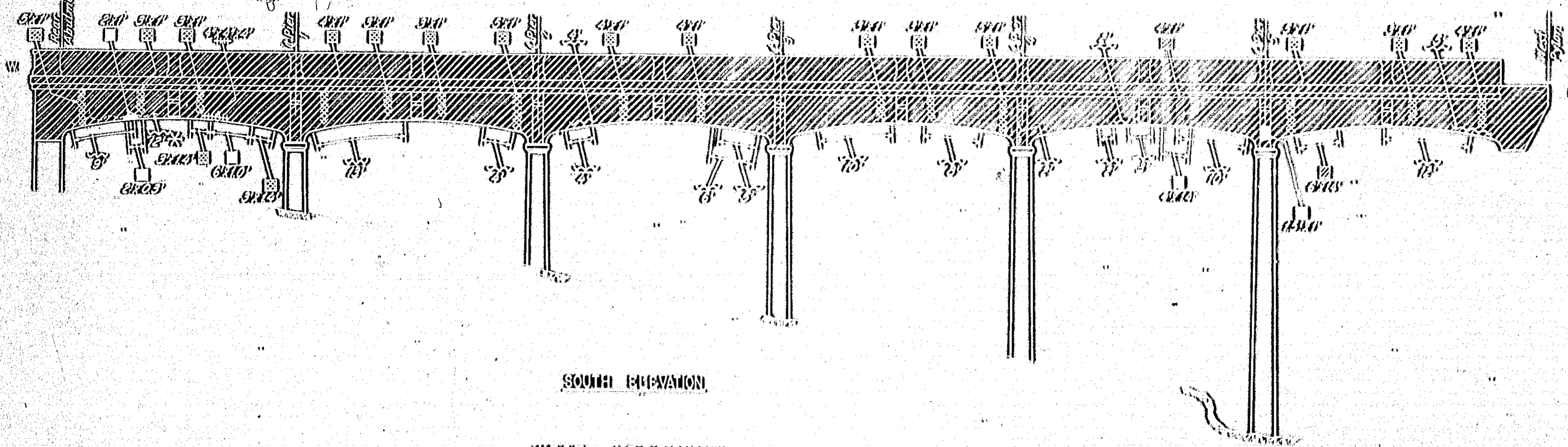
QUANTITIES SHEET

DESCRIPTION	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT
CONCRETE	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD	100	CU YD
STEEL	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS	100	TONS

AMERICAN CORPORATION OF ENGINEERS, LIMITED
 CLEVELAND, OHIO
 COUNTY OF CUYAHOGA
 CLEVELAND, OHIO
BROOKPARK ROAD
 BRIDGE NO. 1047A OVER CUYAHOGA RIVER
 CHIEF OF CLEVELAND WATERWORKS
WEST APPROACH
 REAR ABUTMENT & PIERS 1 THRU 3
 COUNTY OF CUYAHOGA, OHIO
 NO. B-1191
 DESIGNER: [Name] DRAWN: [Name] CHECKED: [Name] REVIEWED: [Name]



NORTH ELEVATION



SOUTH ELEVATION

WEST APPROACH

NOTE:
 Quantities shown are based on the
 structure shown on the 1911 inventory of
 the State of Ohio. Changes resulting
 from the 1911 inventory are included in
 the Summary of Quantities, sheet 51.

Quantities shown are based on the structure shown on the 1911 inventory of the State of Ohio. Changes resulting from the 1911 inventory are included in the Summary of Quantities, sheet 51.

ITEM	QUANTITY	UNIT	PRICE	TOTAL
CONCRETE	100	CU YD	1.00	100.00
STEEL	50	TONS	2.00	100.00
BRICK	1000	SQ YD	0.10	100.00
CEMENT	100	BU	1.00	100.00
GRAVEL	100	CU YD	0.50	50.00
SAND	100	CU YD	0.50	50.00
PAVING	100	SQ YD	1.00	100.00
DRIVE	100	SQ YD	1.00	100.00
GRASS	100	SQ YD	0.10	10.00
TOTAL				600.00

AMERICAN ENGINEERING COMPANY
 CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
 CLEVELAND, OHIO

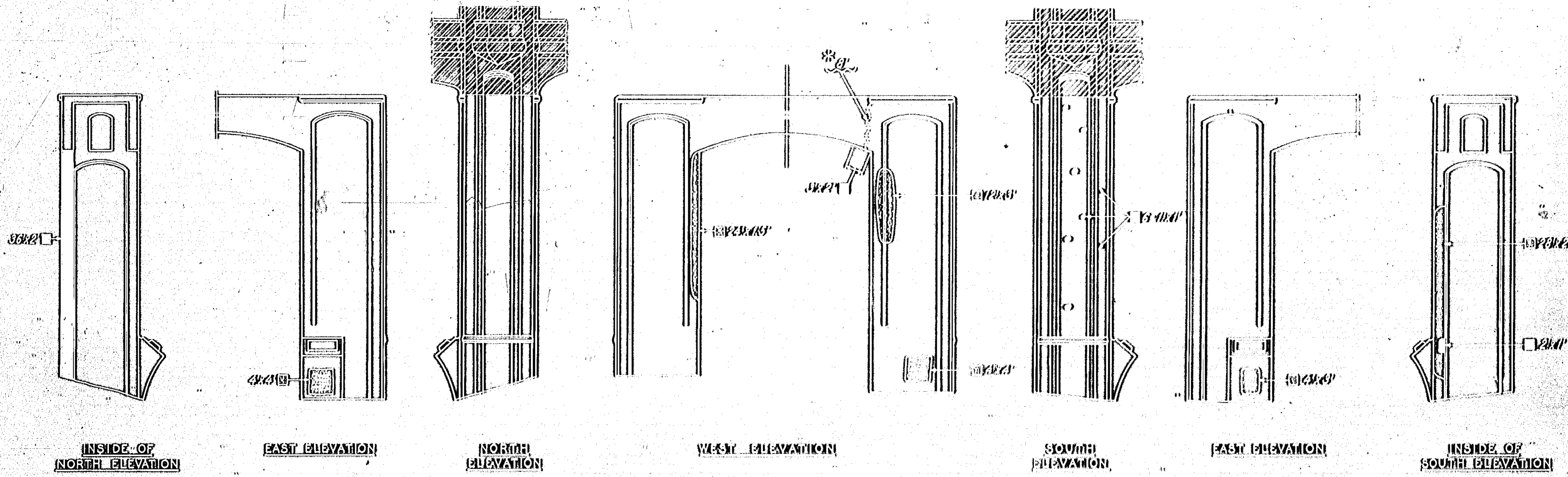
BROOKPARK ROAD
 BRIDGE NO. QUAYHOGA 101
 CLEVELAND, OHIO

WEST APPROACH
 NORTH & SOUTH ELEVATION

COUNTY ENGINEER: HERBERT W. ROBEY, DAYTON, OHIO

NO. B-1191

DATE	DRAWN	CHECKED	REVISIONS
1911			



NORTH SIDE

WEST PYLON

SOUTH SIDE

Note:
 Quantities and measurements shown on this sheet are based on the best inventory of physical observations. Changes resulting from the revised inventory are included in the Summary of Quantities, sheet 51.

Quantities of materials of pylon and its details

ITEMS OF MATERIALS	ESTIMATE		QUANTITIES		VOLUMES		WEIGHTS		COSTS	
	NO.	QTY.	CU. YDS.	SQ. YDS.	TONS	TONS	TONS	TONS	RS.	RS.
Concrete	1	100								
Steel	2	100								
Bricks	3	100								
Other	4	100								
TOTAL		400								

AMERICAN ENGINEERING ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 COLLEGE ROAD, COLOMBO, CEYLON

CUNNINGHAM COUNTRY ENGINEER
 CHAVELAND ORO

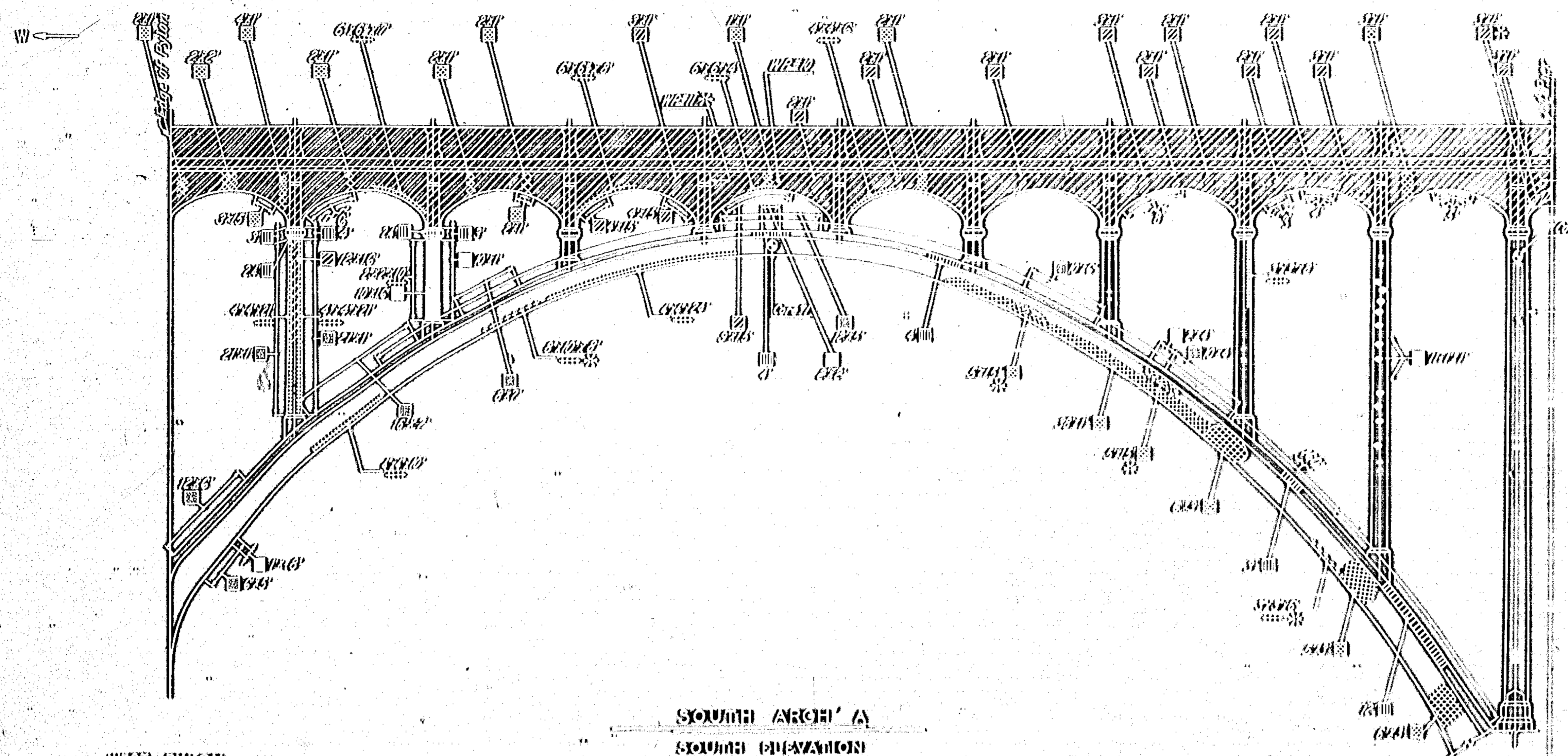
BROOKPARK ROAD
 (BRIDGE NO. CUNNINGHAM)
 CUNNINGHAM RIVER
 DISTRICT OF CHAVELAND, CANTONMENT

WEST PYLON

COUNTRY: CEYLON
 DRAWING NO.: 51
 REVISION: 1003
 DATE: 1/1/22

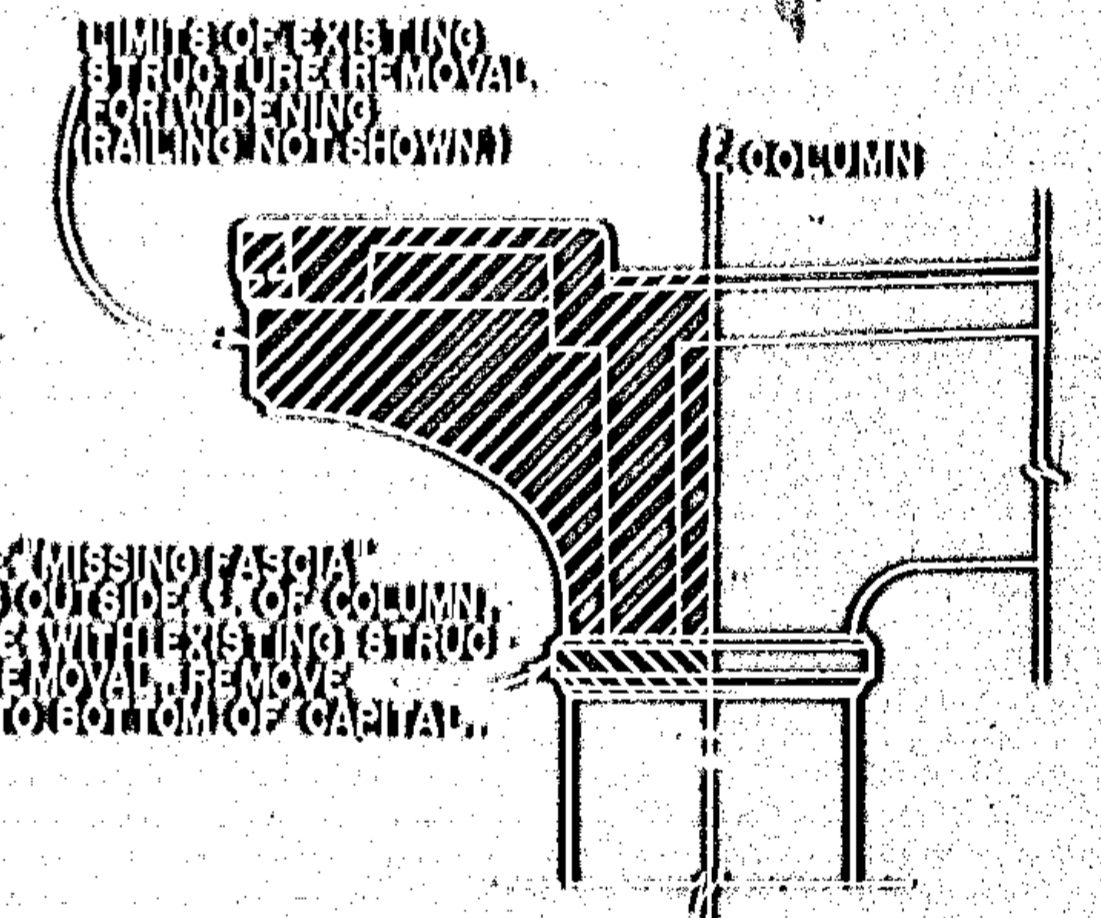
NO. B-101

DESIGNED	DRAWN	CHECKED	REVIEWED
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QUINCY COUNTY

STANDARD
 LABORATORY
 COMPANY



DETAIL OF EXISTING STRUCTURE REMOVAL

WEST PAVILION

SOUTH ARCH A
 SOUTH PAVILION

PIER G

Notes: 1. All materials shall be of quality specified, and shall conform to the following table.

CLASSIFICATION OF STRUCTURE	STEEL	BRASS	COPPER	ZINC	LEAD	GLASS	CONCRETE	ROCK	WOOD
STANDARD	100					100	100		
ARCH	100					100	100		
TOTAL QUANTITIES	100	100	100	100	100	100	100		

Notes:
 1. All materials shall be of quality specified, and shall conform to the following table.

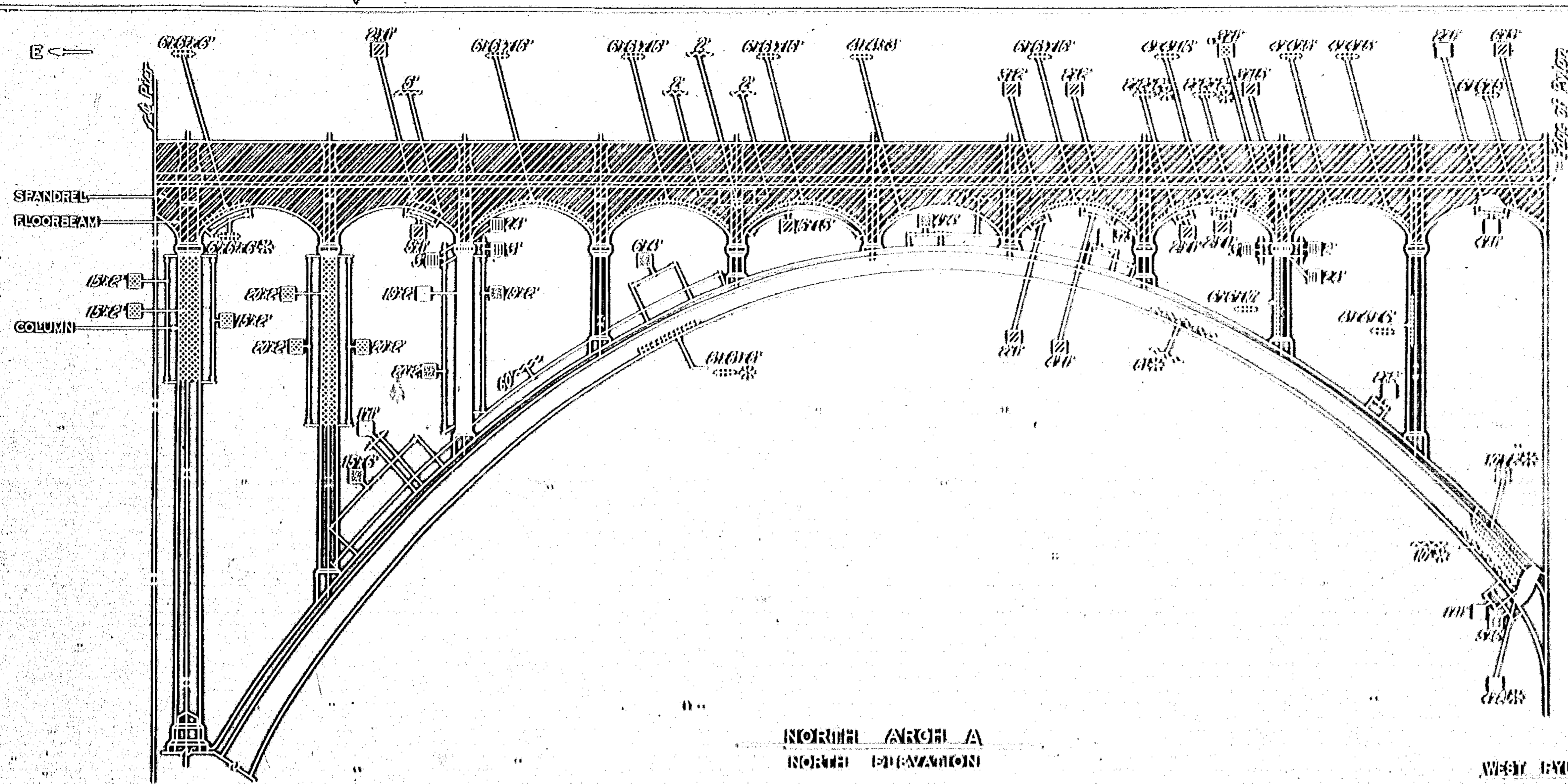
Notes:
 1. All materials shall be of quality specified, and shall conform to the following table.

QUINCY COUNTY ENGINEER

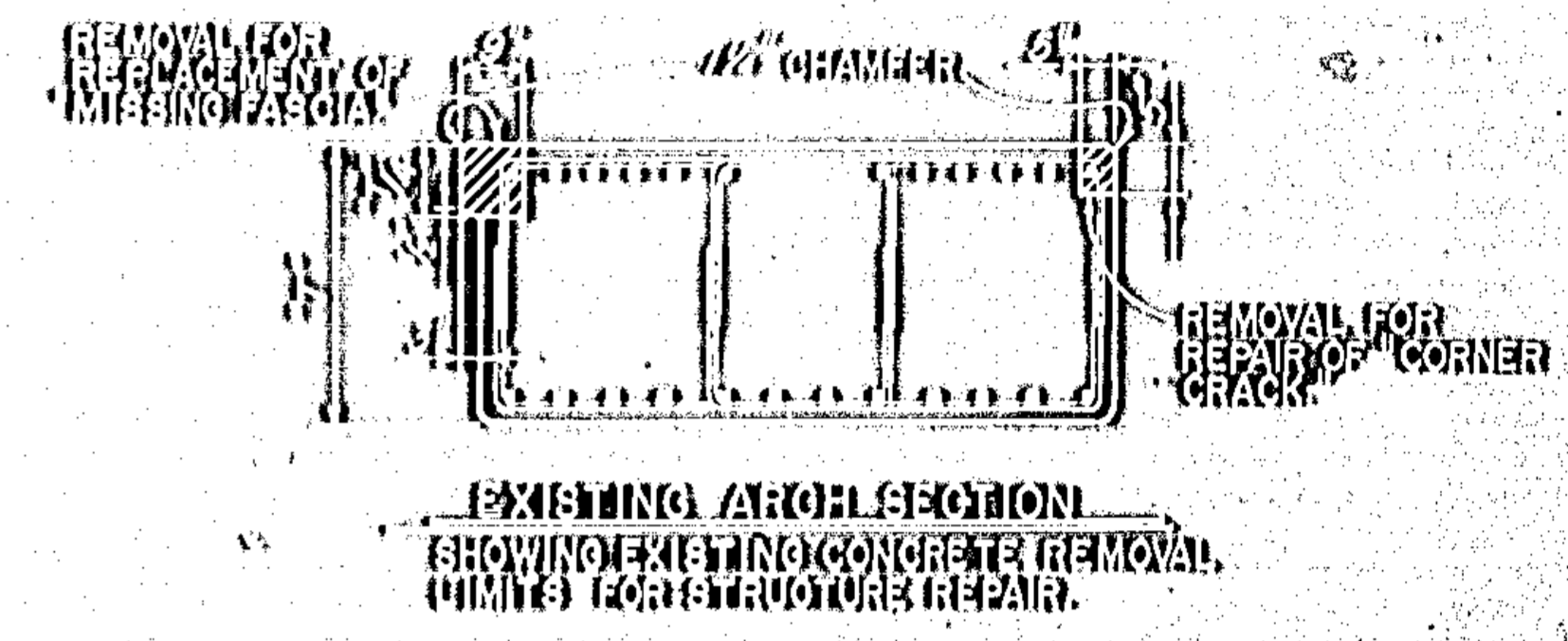
BRIDGEPARK ROAD

SOUTH ARCH A

NO. B-191



NORTH ARCH A
NORTH ELEVATION



CHAMBER
SHOWING REMOVAL OF CONCRETE
FOR REPAIR.

PIER 6

WEST ELEVATION

Note:
Quantities and measurements shown on this sheet are based on the 1923 inventory of physical deterioration. Changes resulting from the 1923 inventory are indicated in the Summary of Quantities, sheet 61.

Quantities and measurements shown on this sheet are based on the 1923 inventory of physical deterioration. Changes resulting from the 1923 inventory are indicated in the Summary of Quantities, sheet 61.

ITEM	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT
SPANDREL	107	CU YD	0		0		0		0	
FLOORBEAM	0		0		0		0		0	
COLUMN	10	PIERS	0		0		0		0	
ARCH	10	PIERS	0		0		0		0	
TOTAL QUANTITIES	117		0		0		0		0	

ANDRE HERRON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
10000 EAST 12TH STREET, CLEVELAND, OHIO

CLEVELAND COUNTY ENGINEER
CLEVELAND OHIO

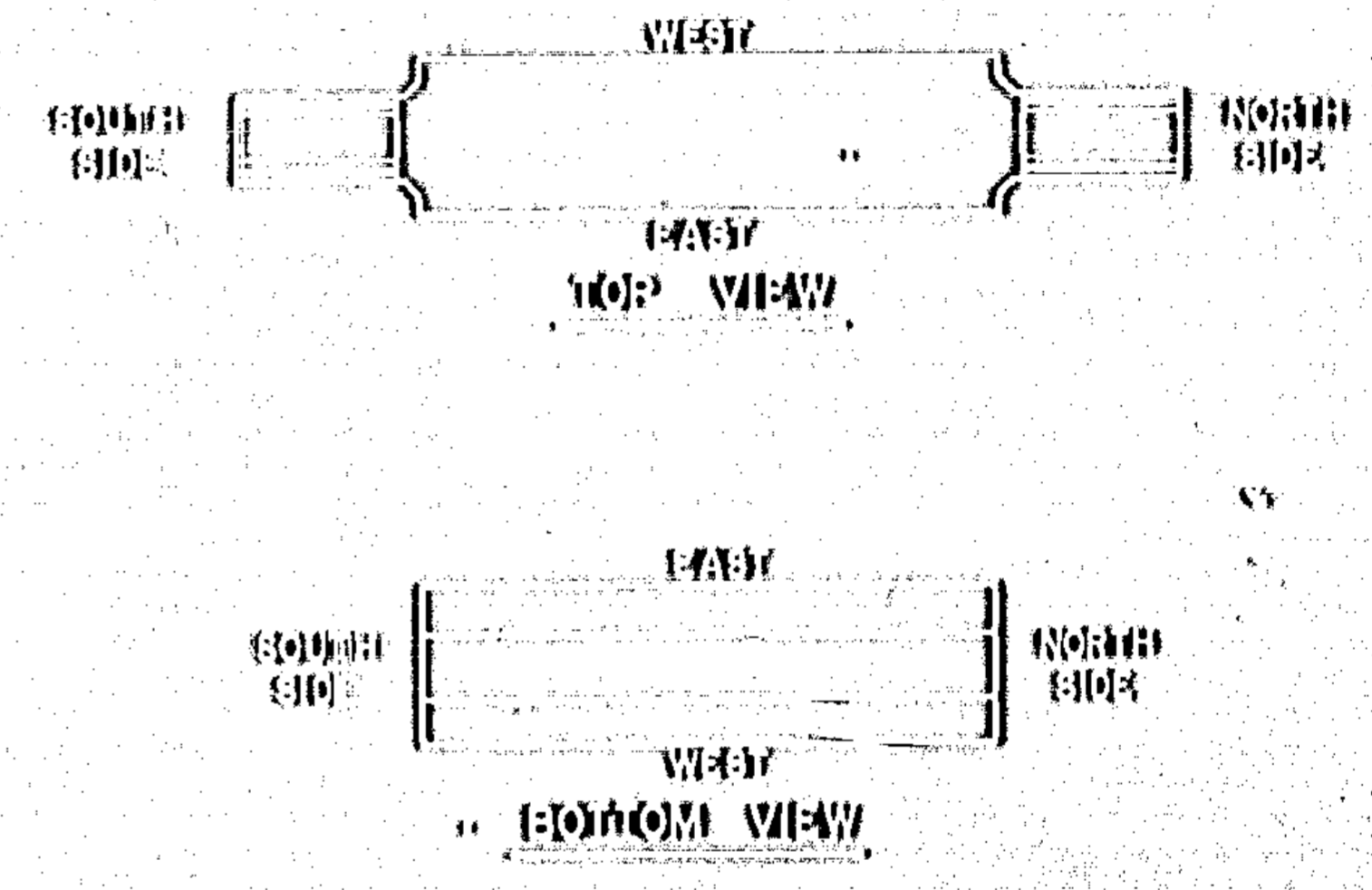
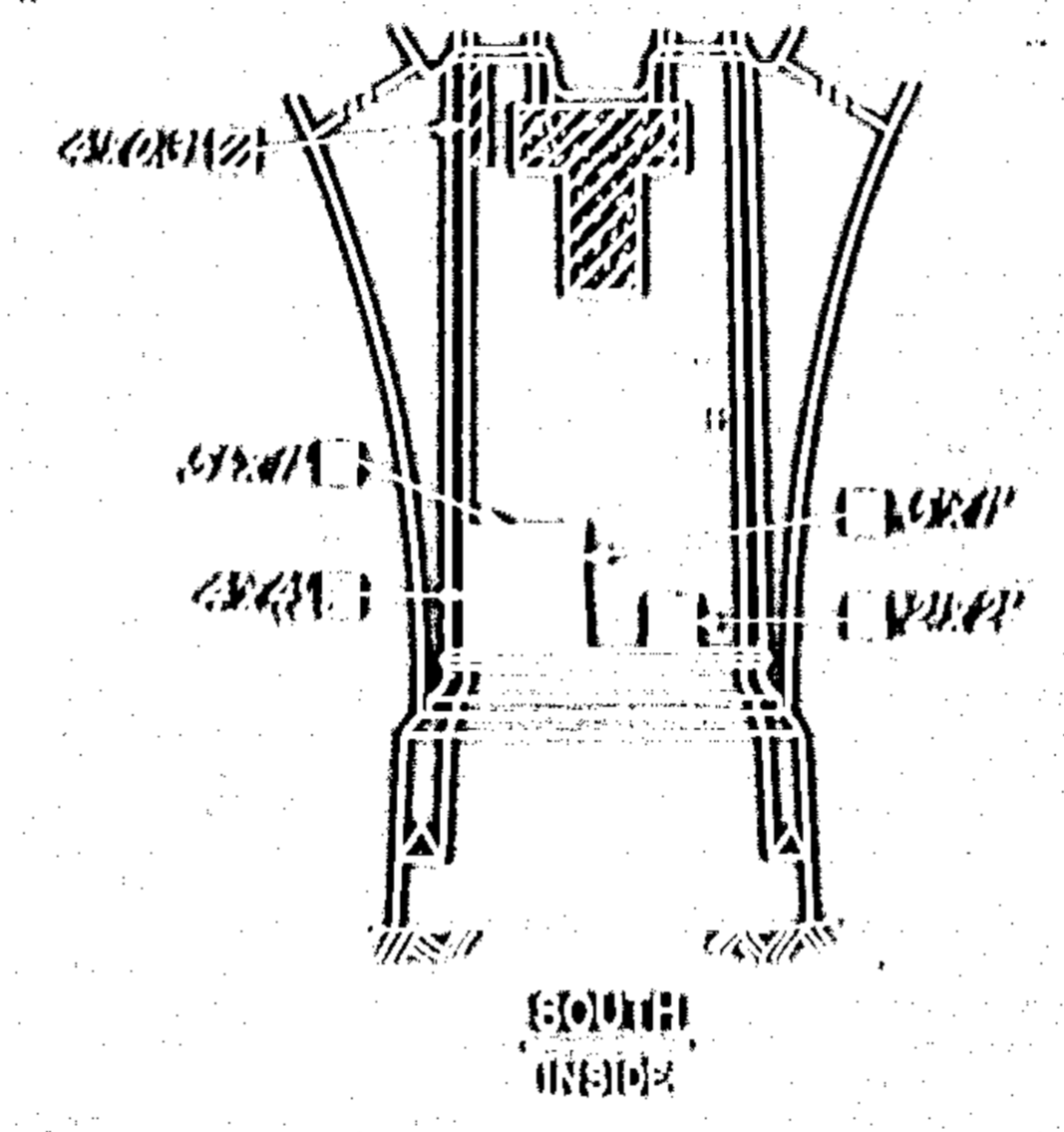
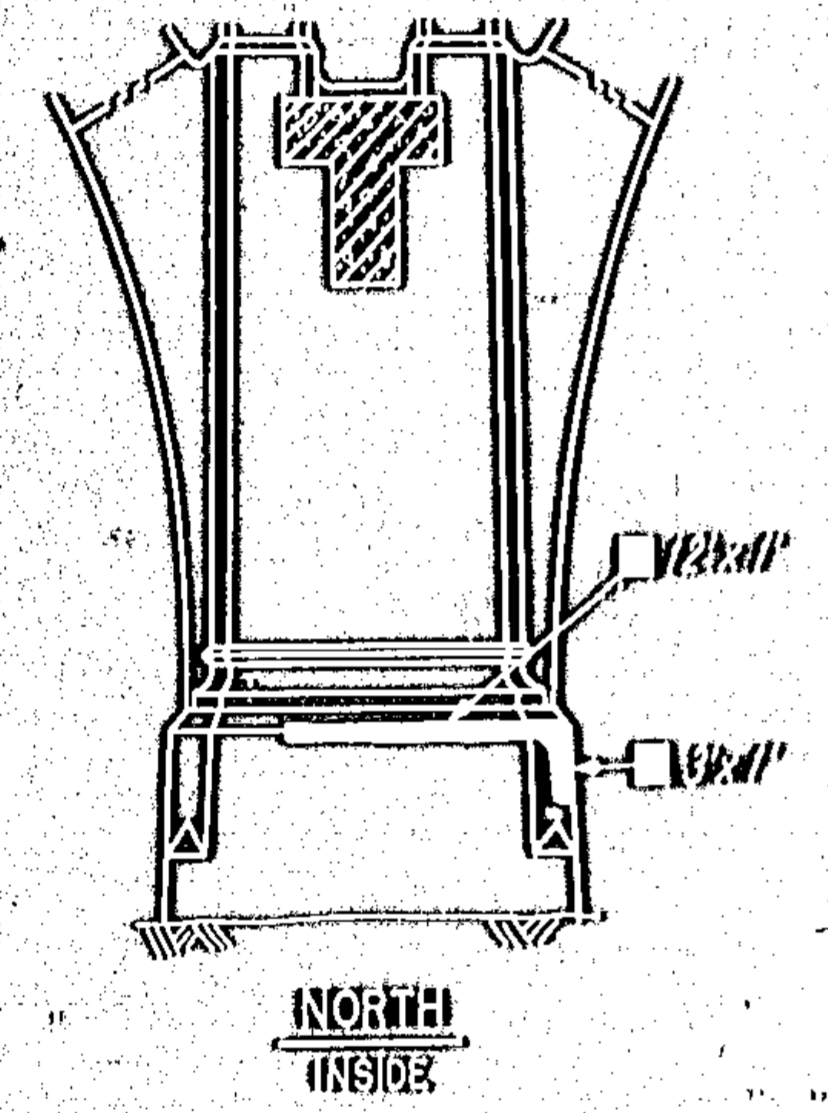
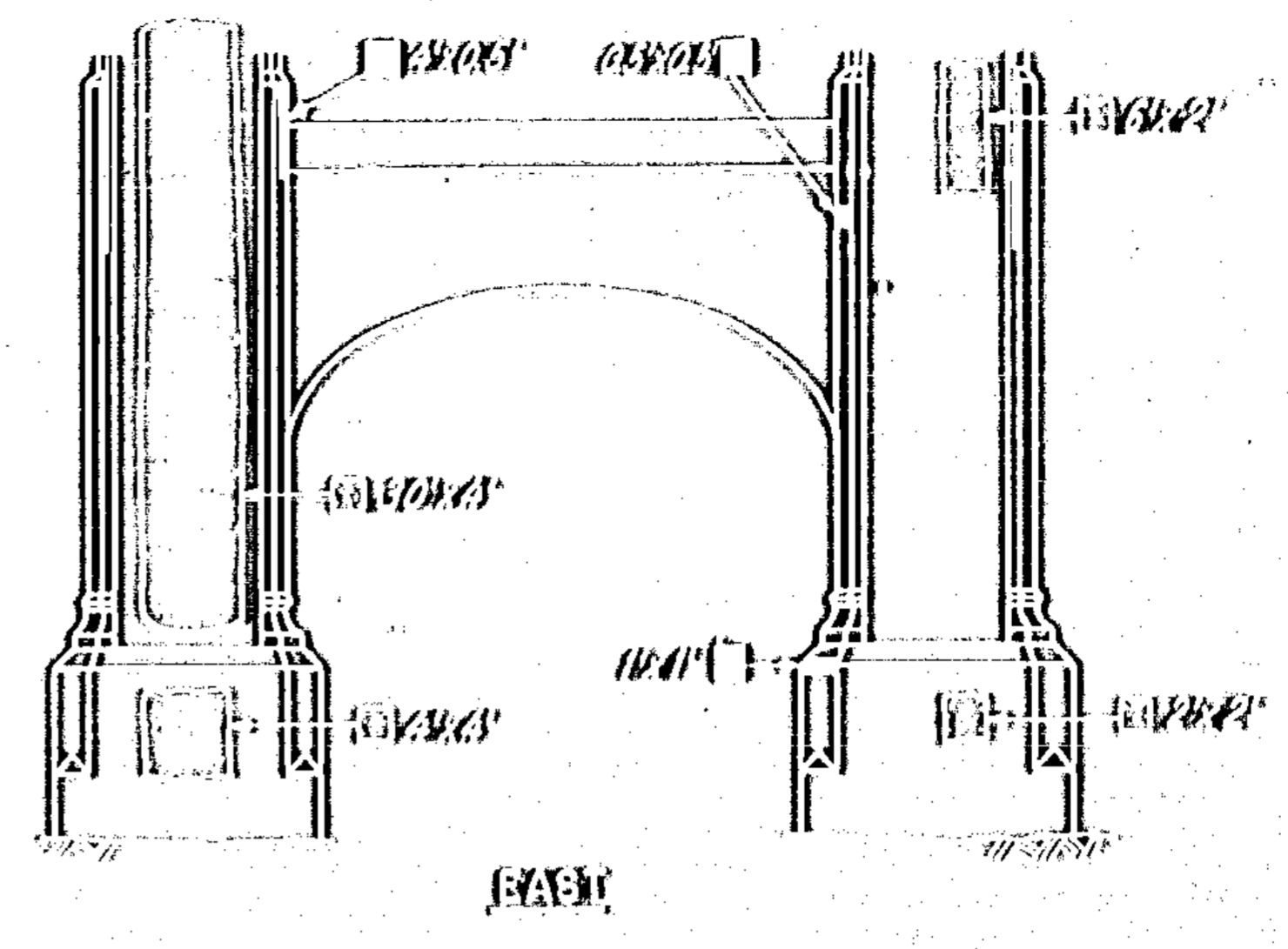
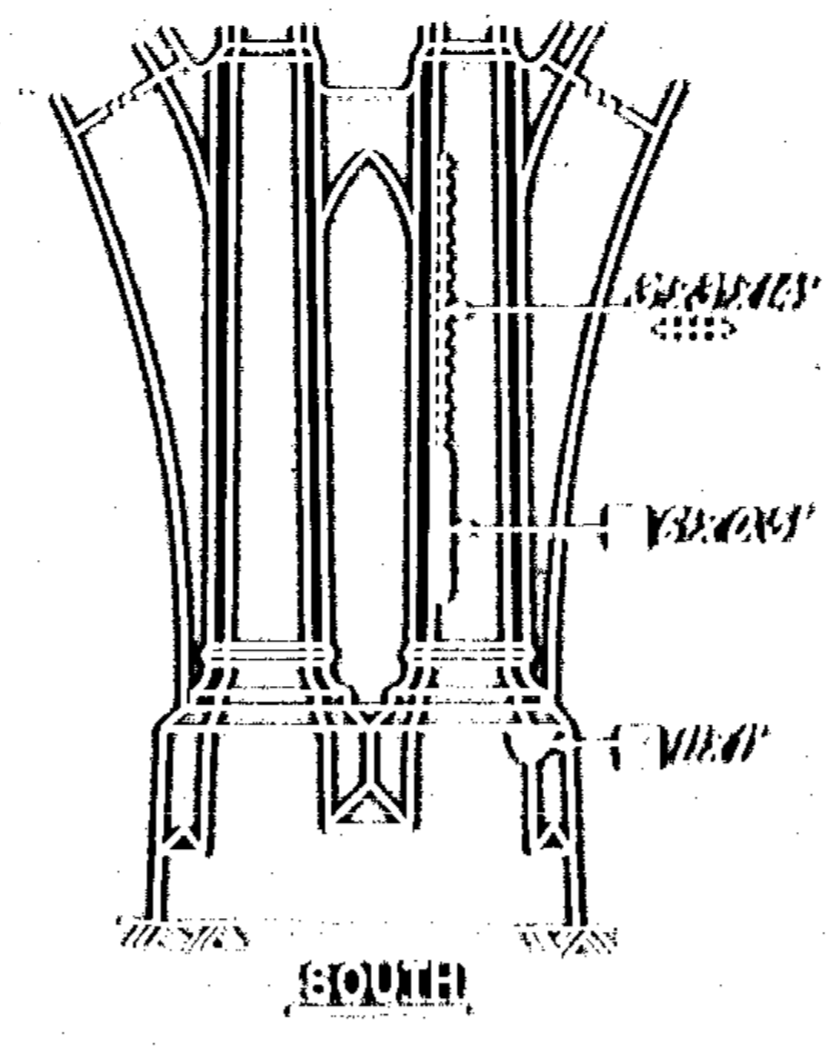
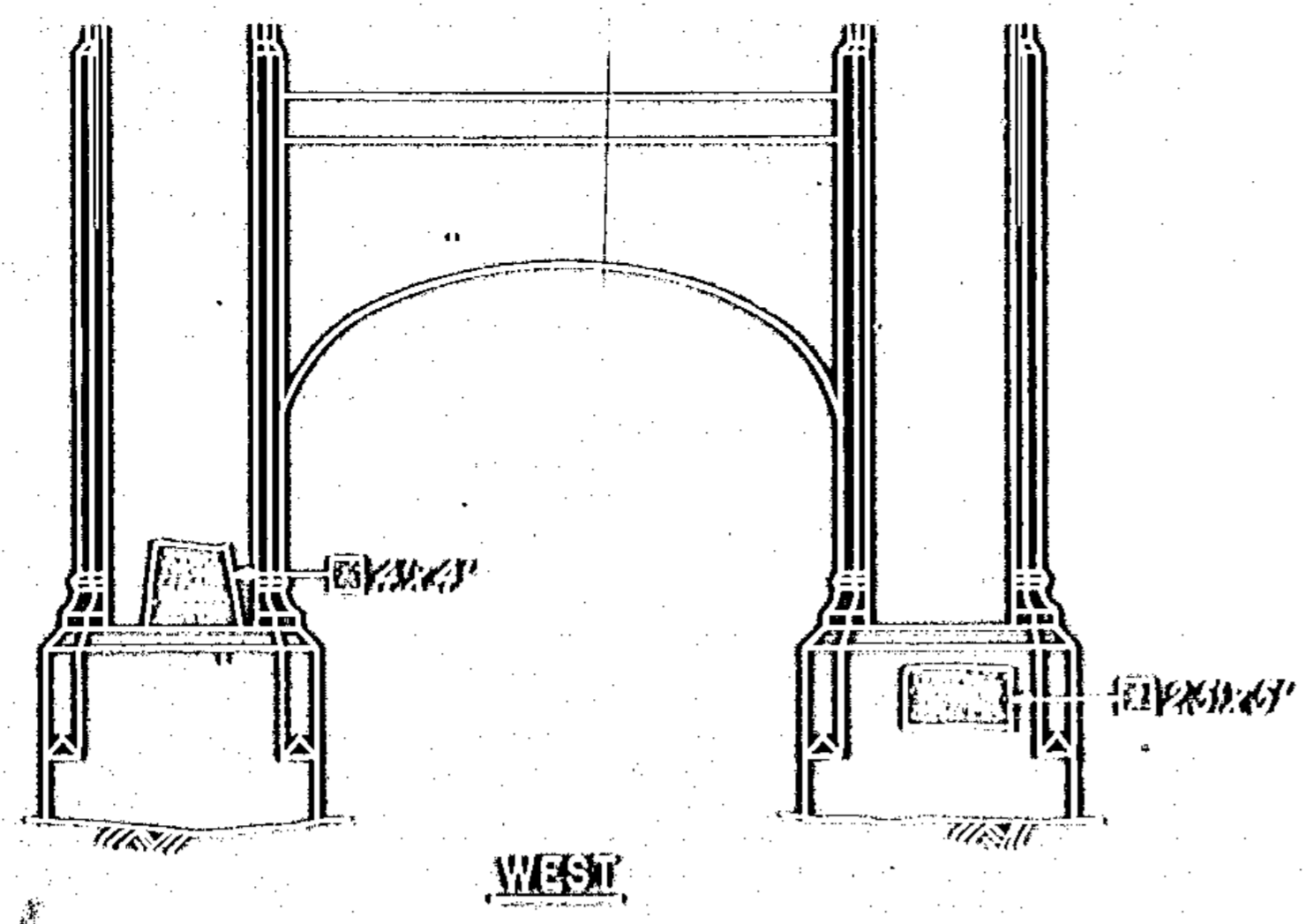
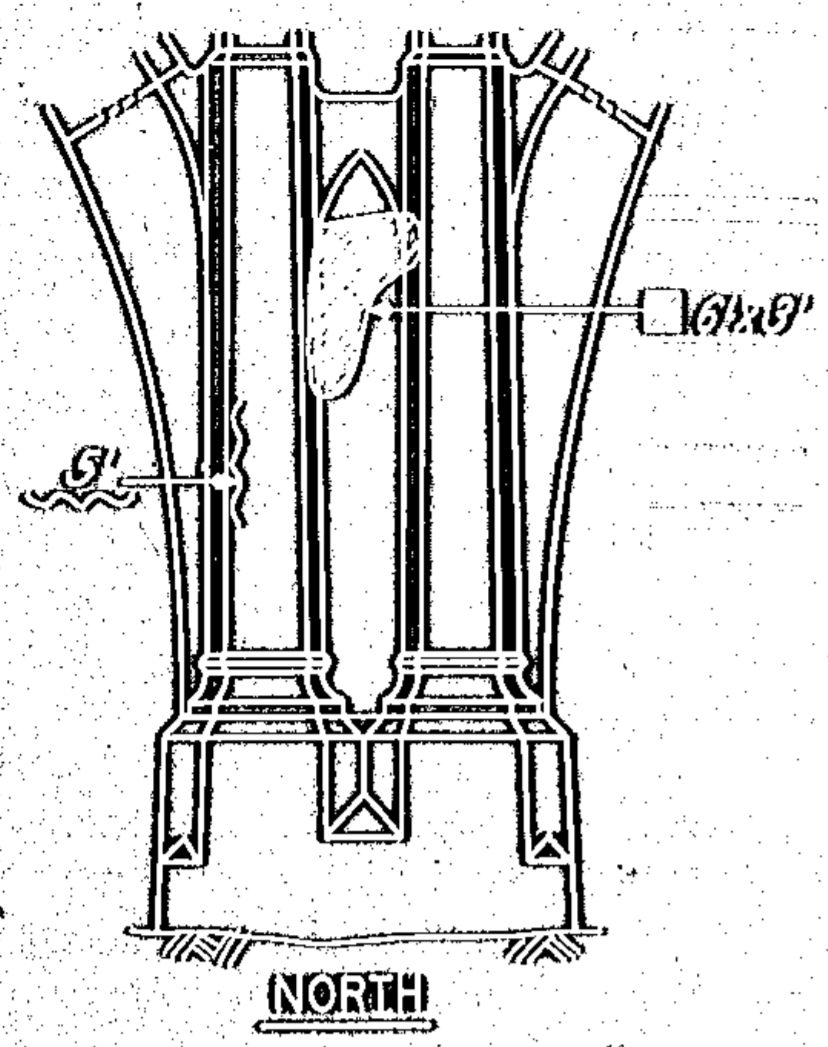
BROOKPARK ROAD
BRIDGE NO. 60747 (2023)
OVER CLEVELAND RIVER
CITY OF CLEVELAND, OHIO

NORTH ARCH A

COUNTY ENGINEER: GEORGE W. JOYCE
DATE: 1923

NO. B-1191

DESIGNER: [] DRAWN: [] CHECKED: [] REVISIONS: []



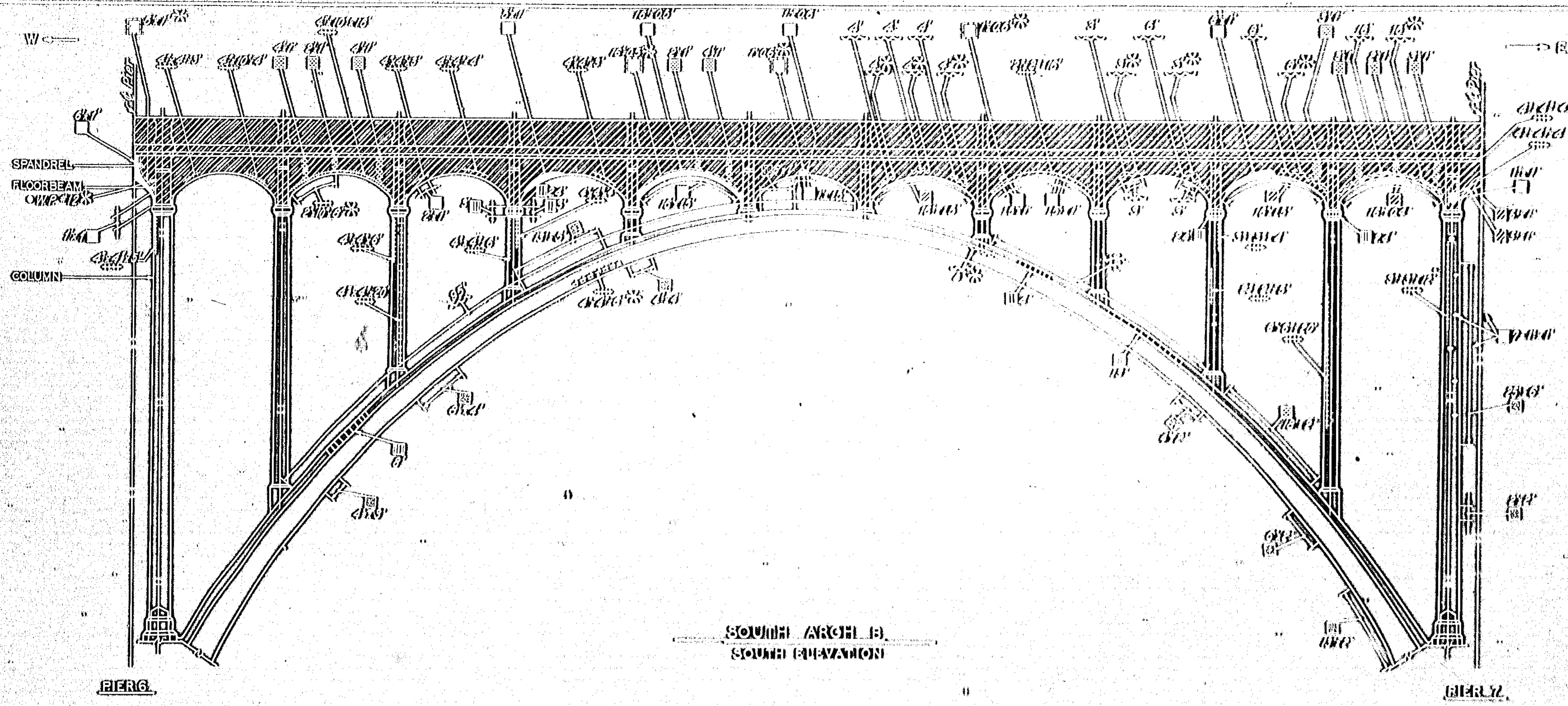
PIER 6

Note:
Quantities and measurements shown on this sheet are based on the 1923 inventory of physical calculations. Changes resulting from the 1923 inventory are included in the Summary of Quantities, Sheet 31.

QUANTITIES

NO.	DESCRIPTION	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY
1	Concrete	cu yd	113	cu yd	113						
2	Reinforcing Steel	lbs	11	lbs	11						
3	Formwork	sq ft	11	sq ft	11						
4	Ironwork	lbs	11	lbs	11						
5	Paint	gal	11	gal	11						

AMERICAN ENGINEERING ASSOCIATES, LIMITED CONSULTING ENGINEERS CLEVELAND, OHIO			
CUYAHOGA COUNTY		ENGINEER	
CLEVELAND, OHIO			
BROOKPARK ROAD			
BRIDGE NO. 474 OVER CUYAHOGA RIVER CITY OF CLEVELAND & WARREN PARK			
PIER 6			
DESIGNED BY: [Signature] DATE: [Date]			
NO. B-191			
DESIGN	DRAWN	CHECKED	APPROVED



SOUTH ARCH B
 SOUTH ELEVATION

NOTES:
 Quantities and measurements shown on this sheet are based on the 1923 inventory of physical deterioration. Changes resulting from the 1926 inventory are included in the Summary of Quantities, sheet 61.

Notes to the Engineer:

NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL	NO.	DESCRIPTION	UNIT	QTY	UNIT PRICE	TOTAL
1	CONCRETE	CU YD	10	1.20	12.00	1	CONCRETE	CU YD	10	1.20	12.00
2	STEEL	TON	5	1.80	9.00	2	STEEL	TON	5	1.80	9.00
3	WOOD	CU YD	2	0.60	1.20	3	WOOD	CU YD	2	0.60	1.20
4	PAINT	TON	1	1.00	1.00	4	PAINT	TON	1	1.00	1.00
5	LABOR	DAY	100	0.10	10.00	5	LABOR	DAY	100	0.10	10.00
6	TRANSIT	DAY	10	0.10	1.00	6	TRANSIT	DAY	10	0.10	1.00
7	CONCRETE	CU YD	15	1.20	18.00	7	CONCRETE	CU YD	15	1.20	18.00
8	STEEL	TON	10	1.80	18.00	8	STEEL	TON	10	1.80	18.00
9	WOOD	CU YD	5	0.60	3.00	9	WOOD	CU YD	5	0.60	3.00
10	PAINT	TON	2	1.00	2.00	10	PAINT	TON	2	1.00	2.00
11	LABOR	DAY	200	0.10	20.00	11	LABOR	DAY	200	0.10	20.00
12	TRANSIT	DAY	20	0.10	2.00	12	TRANSIT	DAY	20	0.10	2.00

CONTRACTOR'S CHECK
 APPROVED FOR THE ENGINEER

ENGINEER'S DIVISION OF HIGHWAYS, LIMITED
 CUYAHOGA COUNTY ENGINEER
 CLEVELAND, OHIO

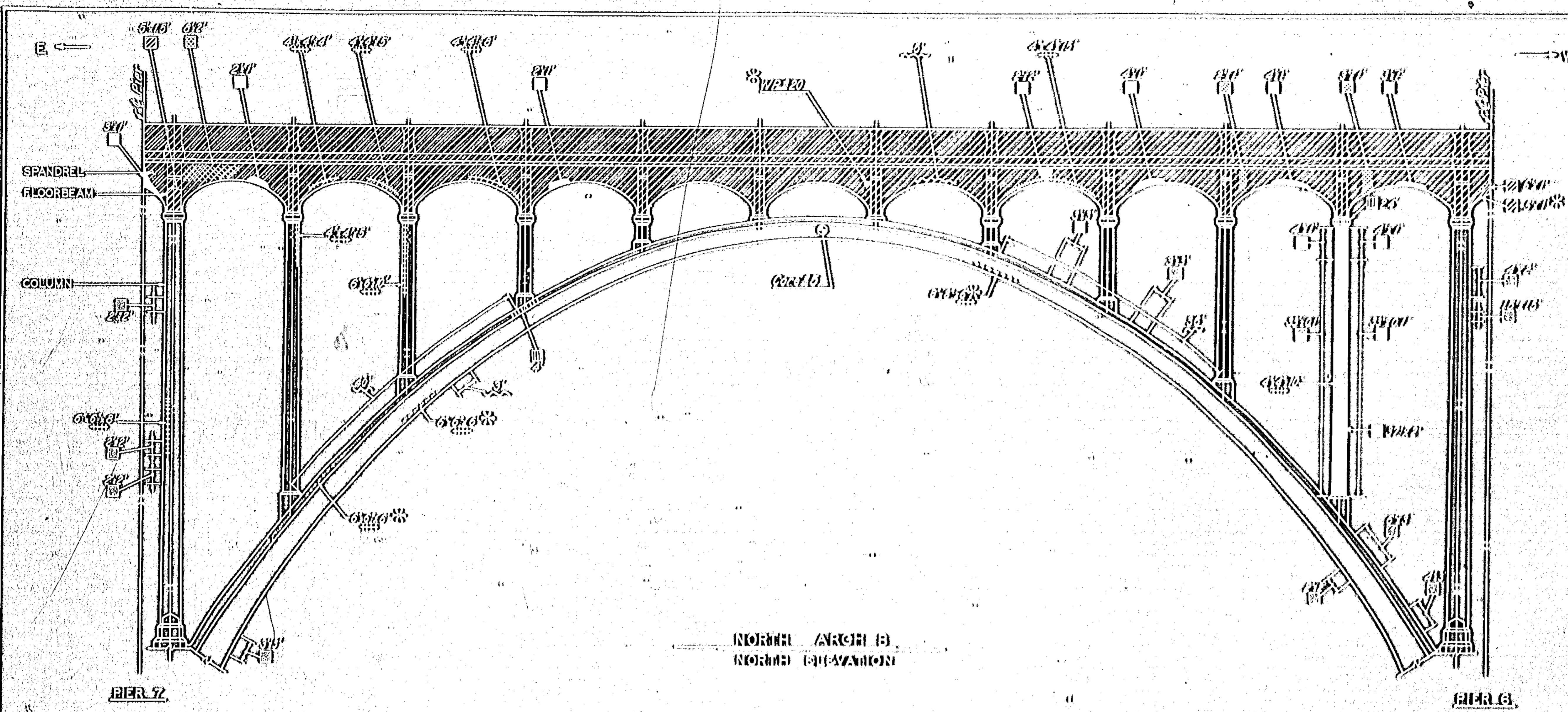
BROOKPARK ROAD
 BRIDGE NO. 6047A OVER
 CLEVELAND RIVER
 CLEVELAND, OHIO

SOUTH ARCH B

COUNTY BRIDGE NO. 60 DATE 8-1-23
 BRIDGE NO. 6047A DATE 8-1-23

NO. B-191

DESIGN DRAWN CHECKED REVISIONS



NORTH ARCH (B)
 NORTH ORIENTATION

Notes
 Quantities and measurements shown on this sheet are based on the 1923 inventory of physical data taken. Changes resulting from the 1924 inventory are indicated on the Summary of Quantities, sheet 11.

ITEM	QTY	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT
SPANDELL	11	sq ft	11	sq ft	11	sq ft	11	sq ft	11	sq ft
FLOOR BEAM	11	sq ft	11	sq ft	11	sq ft	11	sq ft	11	sq ft
COLUMN	11	sq ft	11	sq ft	11	sq ft	11	sq ft	11	sq ft
ARCH	11	sq ft	11	sq ft	11	sq ft	11	sq ft	11	sq ft
TOTAL QUANTITIES	11	sq ft	11	sq ft	11	sq ft	11	sq ft	11	sq ft

QUAYTACCA COUNTY ENGINEERING
 CHAMBERLAND, OHIO

QUAYTACCA COUNTY ENGINEERING
 CHAMBERLAND, OHIO

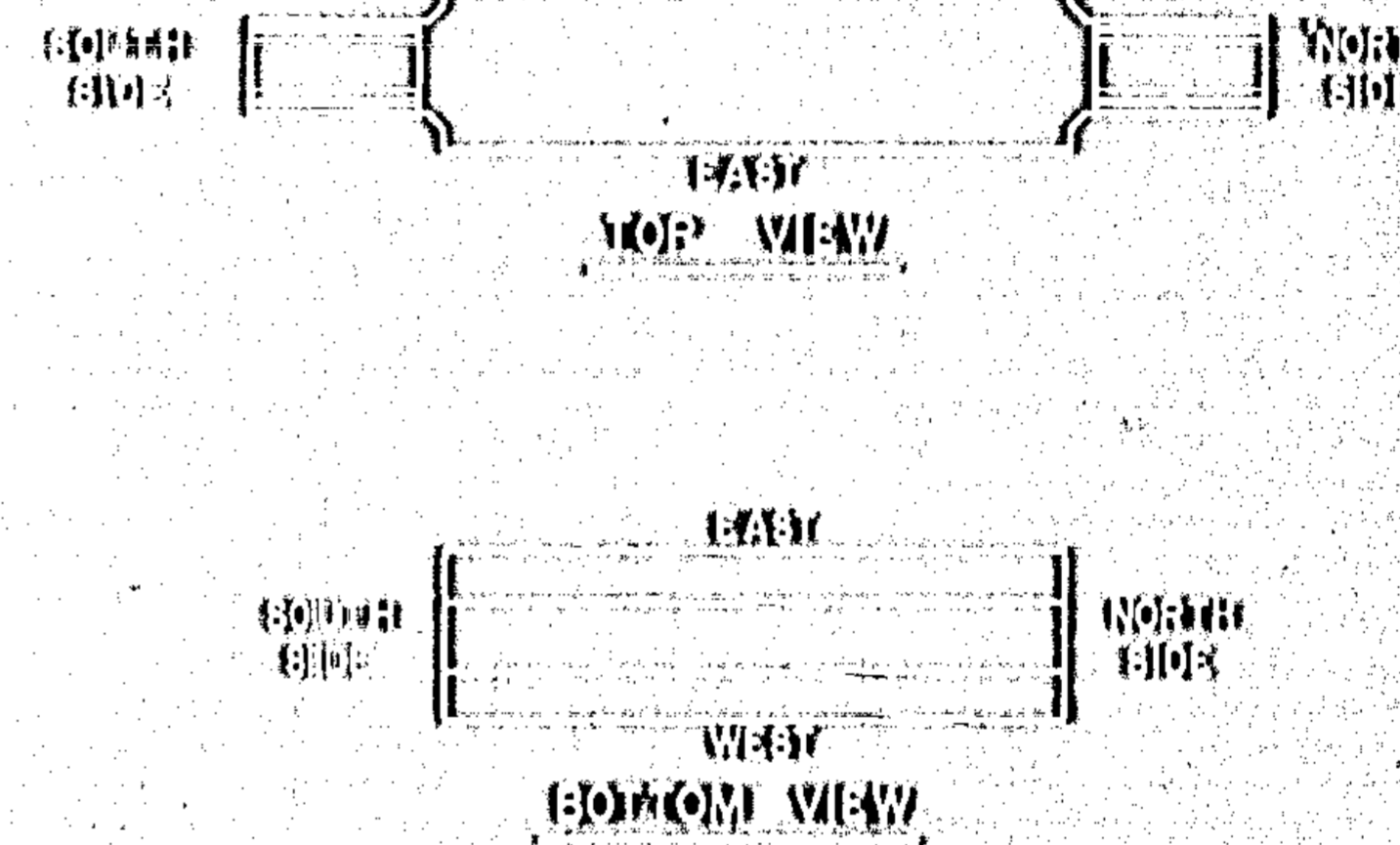
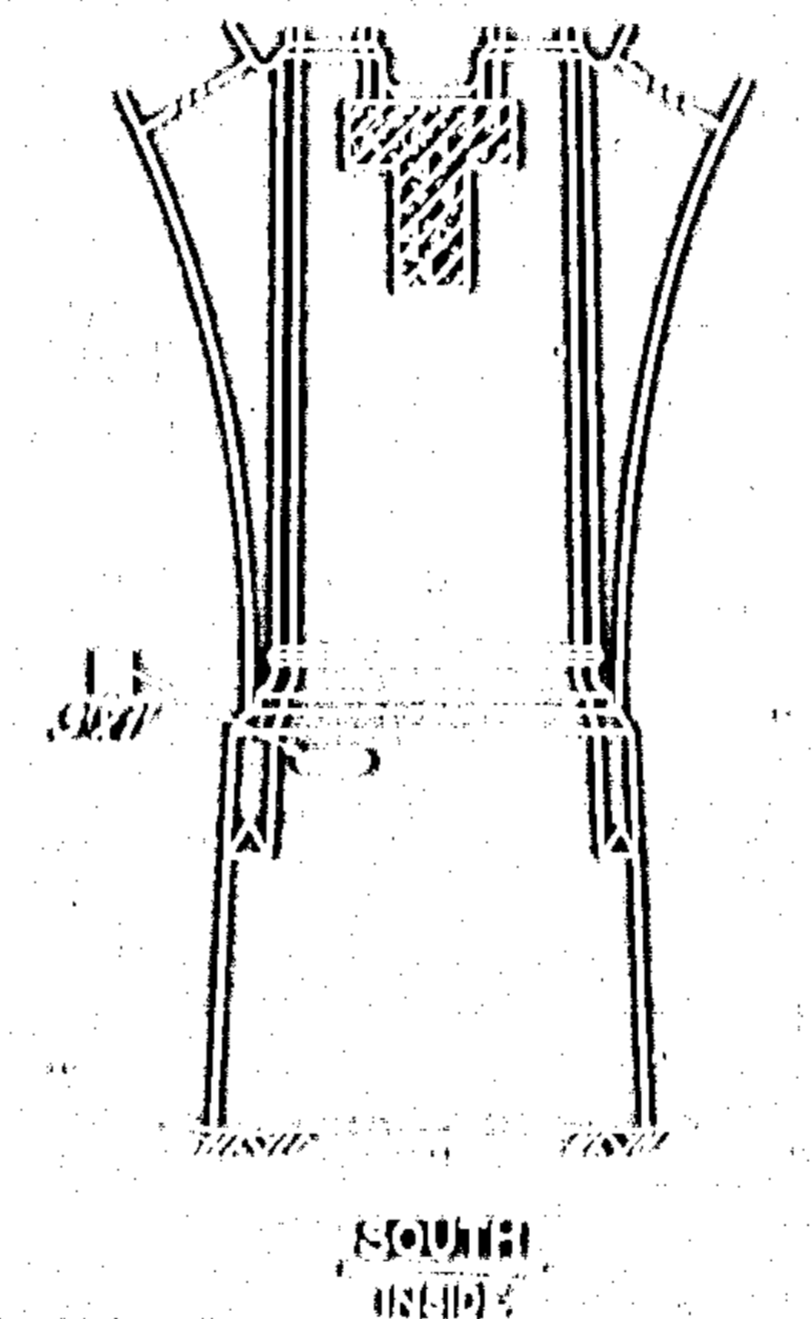
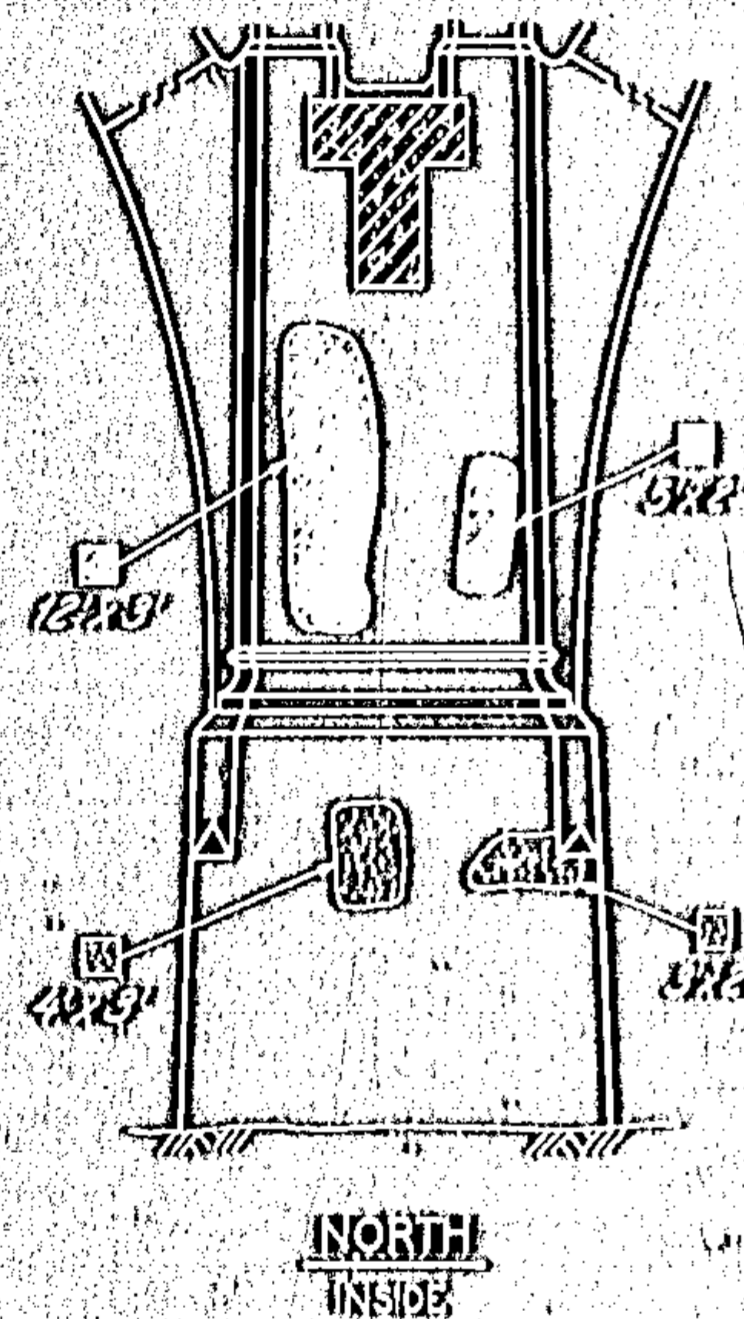
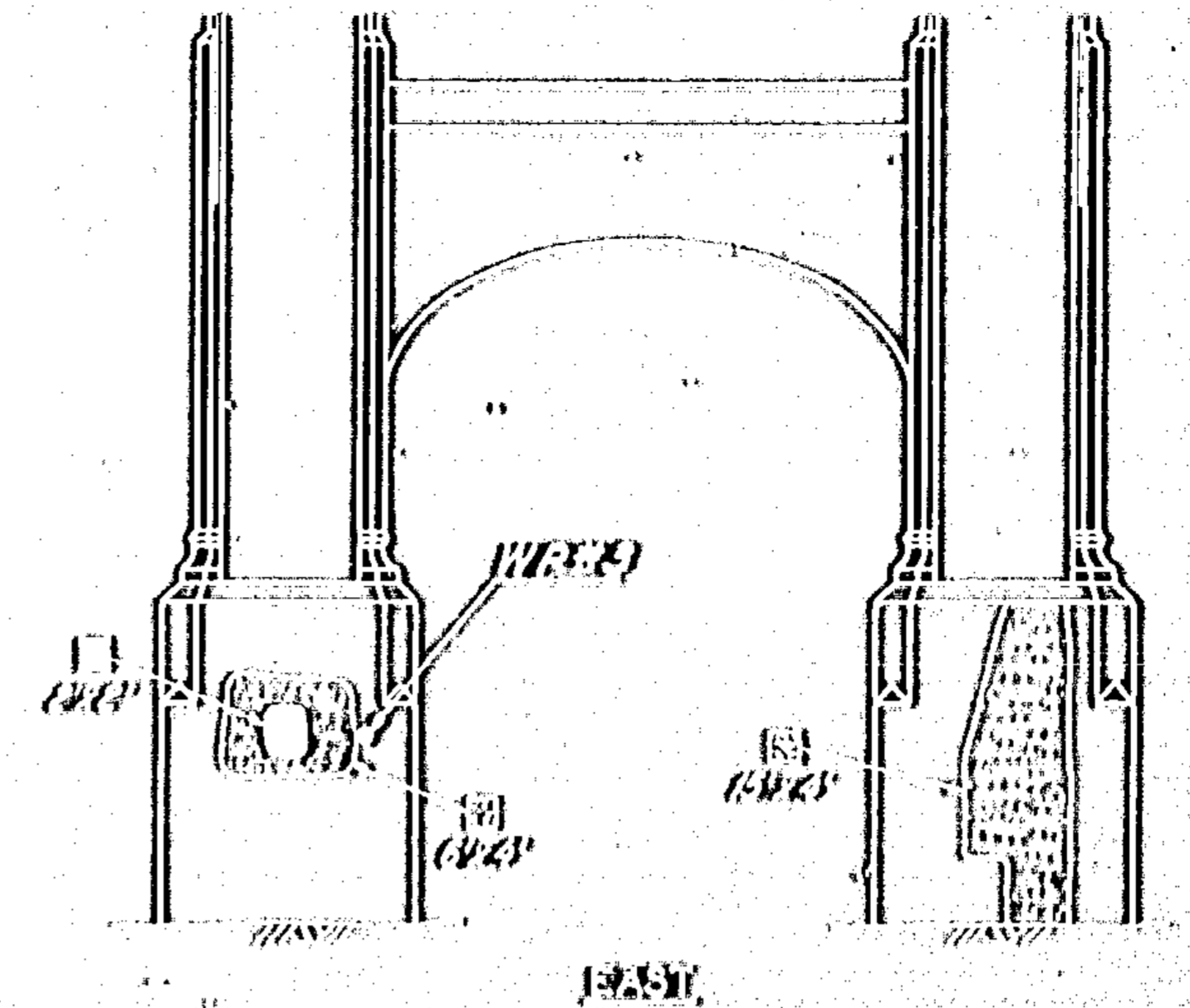
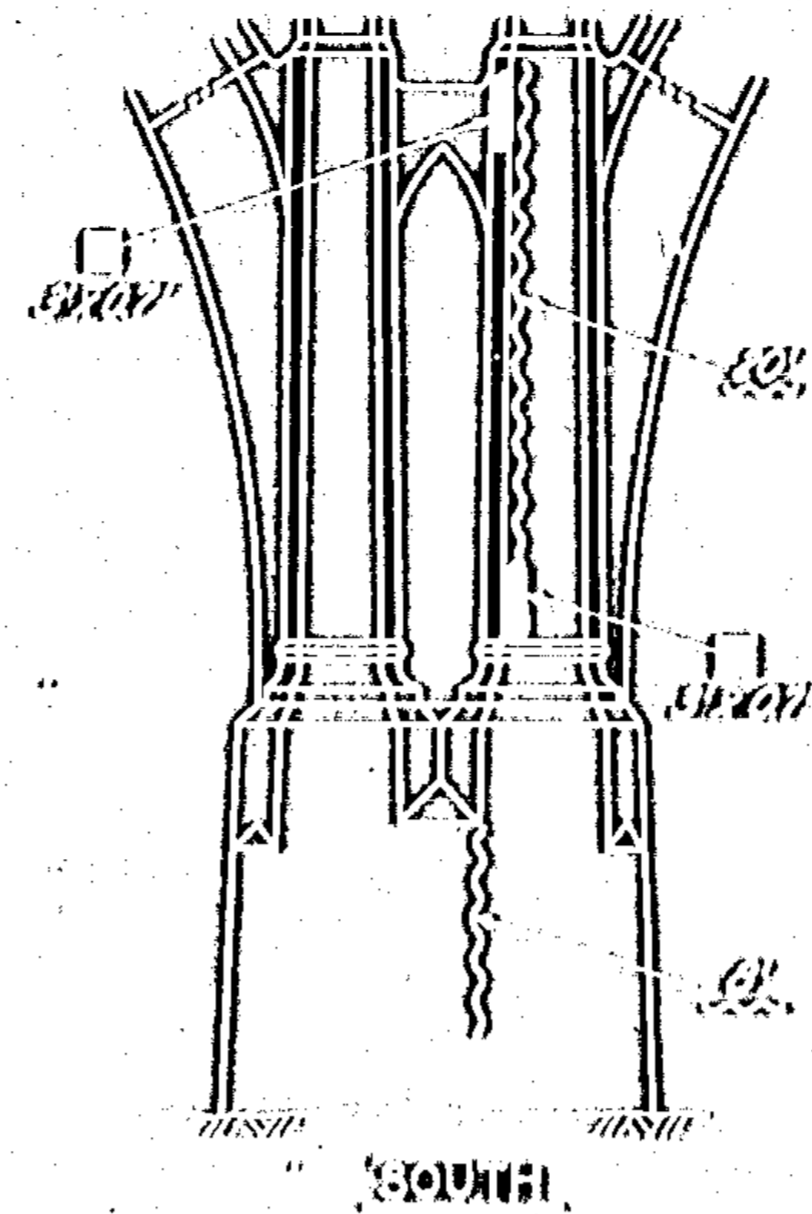
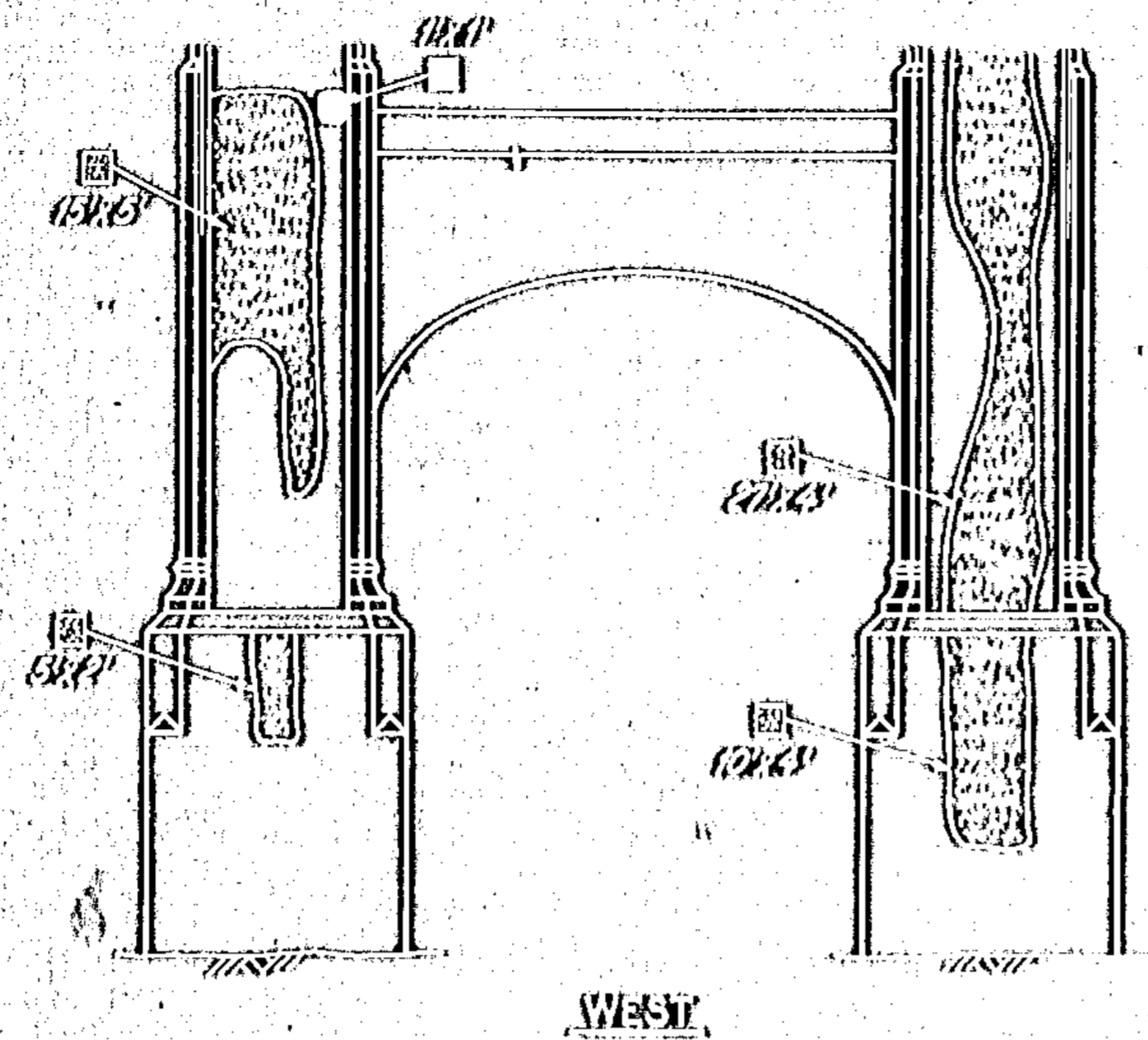
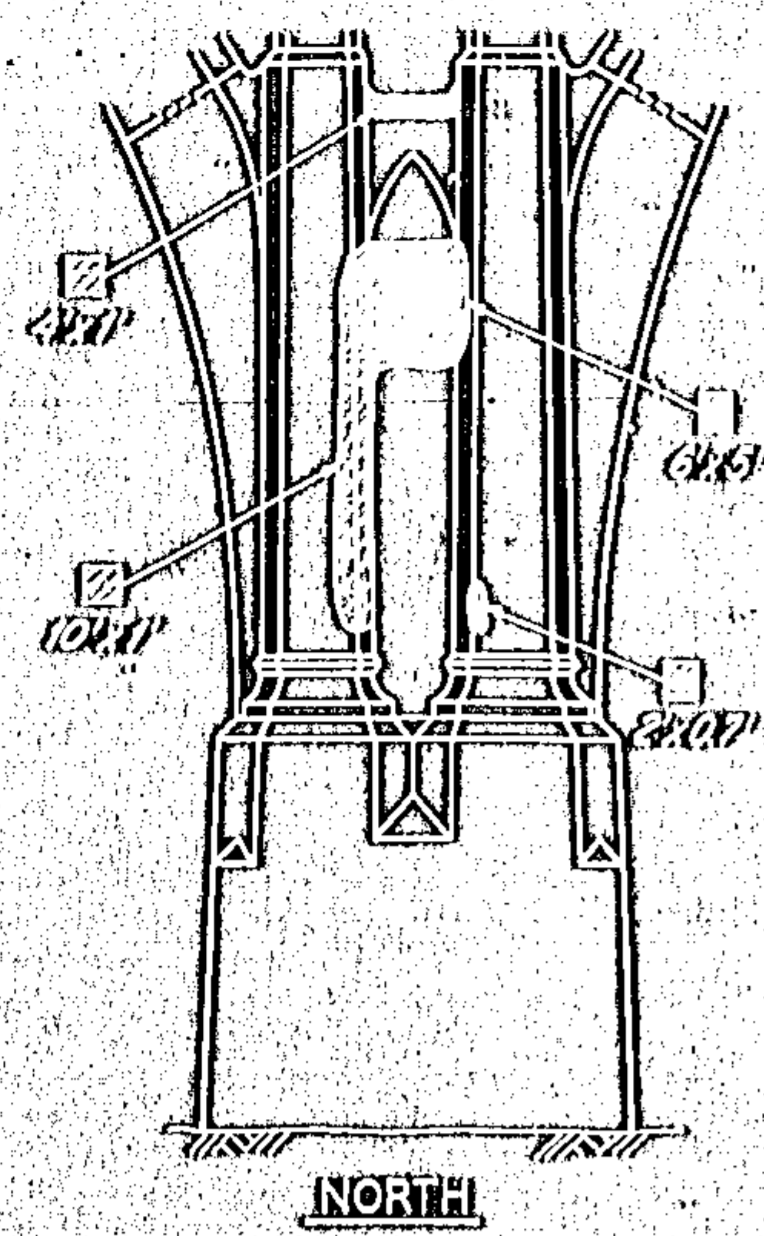
BROOKPARK ROAD
 BRIDGE NO. QUAYTACCA 6223
 QUAYTACCA COUNTY ENGINEERING
 CHAMBERLAND, OHIO

NORTH ARCH B

COUNTY ENGINEER: _____
 REPORTING: _____ DATE: _____

NO. B-191

DESIGN: _____ DRAWING: _____ CHECKED: _____ REVIEWED: _____



NOTE:
Quantities and measurements shown on this sheet are based on the present location of physical data. Changes resulting from the present location are included in the Summary of Quantities, Sheet 61.

112.3 112.3 112.3 112.3 112.3 112.3 112.3 112.3 112.3 112.3

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL	UNIT PRICE	TOTAL
1	CONCRETE	CU YD	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
2	STEEL	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
3	BRICK	1000	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
4	CEMENT	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
5	LABOR	HOUR	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
6	PAINT	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
7	WOOD	CU YD	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
8	IRON	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
9	BRASS	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
10	LEAD	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
11	ZINC	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
12	COPPER	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
13	ALUMINUM	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
14	GLASS	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
15	ROOFING	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
16	PLASTER	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
17	PAINT	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
18	GLASS	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
19	ROOFING	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3
20	PLASTER	TON	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3	112.3

AMERICAN ENGINEERING CORPORATION, LIMITED
 CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
 CLEVELAND, OHIO

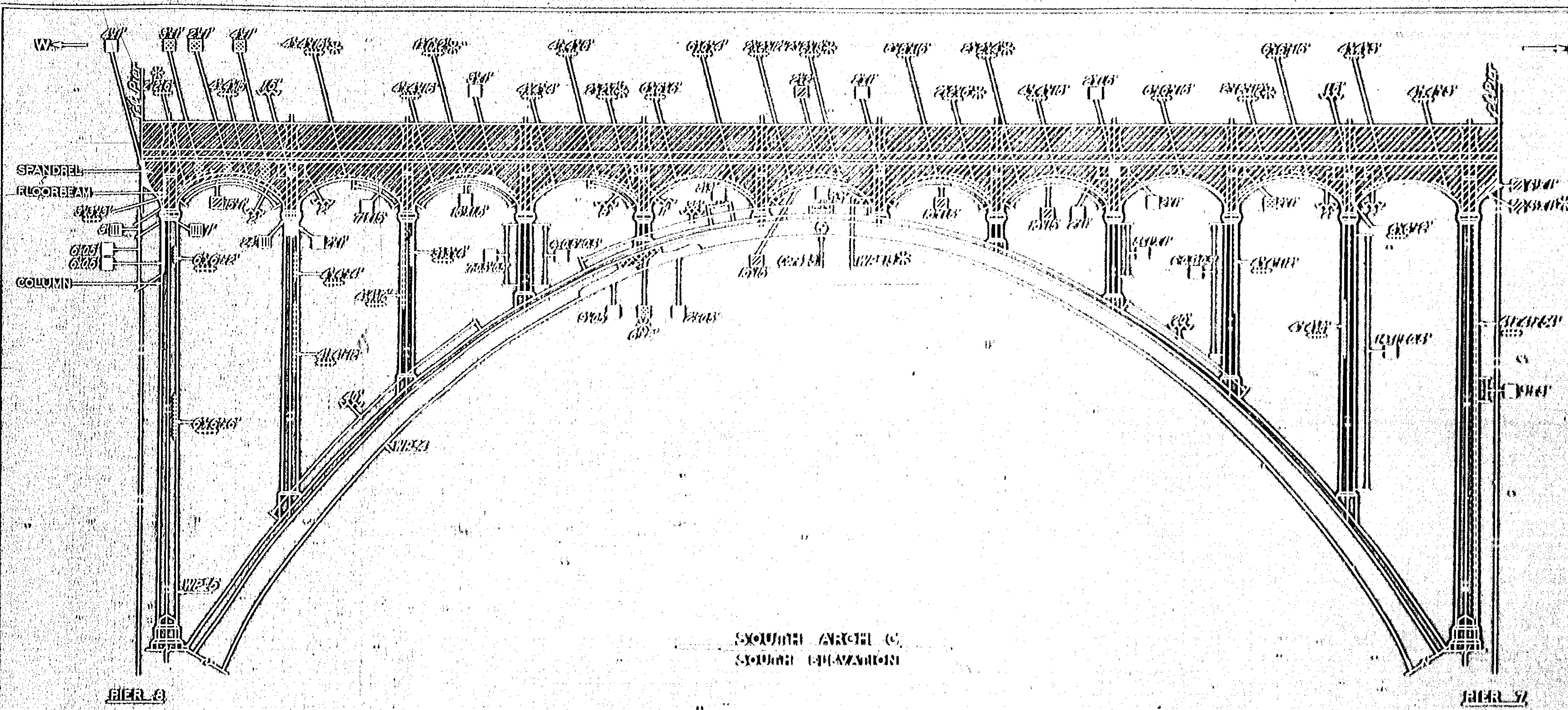
BROOKPARK ROAD
 BRIDGE NO. QUAYHOGA 0223
 OVER BROOK RIVER
 CLEVELAND, OHIO

PUB. 7

COUNTY (No. 59) BRIDGE NO. (0223) DRAWING NO.

NO. B-191

DESIGN DRAWN CHECKED REVISIONS



SOUTH ARCH C
 SOUTH QUAYAHOGA

Note:
 Quantities and measurements shown on this sheet are based on the latest inventory of physical data on file. Changes resulting from the latest inventory are included in the Summary of Quantities, sheet 01.

Quantities shall be reported in accordance with the following table:

DESCRIPTION	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY	UNIT	QUANTITY
SPANDRELL	CU YD	107	CU YD	17			CU YD	181		
RUCORE BEAM	CU YD	23					CU YD	113		
COLUMN	CU YD	11	CU YD	3			CU YD	113		
ARCH	CU YD	11					CU YD	113		
TOTAL QUANTITIES		152		23			CU YD	510		510

(Note)
 Quantities shall be reported in accordance with the following table:
 (Note)
 Quantities shall be reported in accordance with the following table:
 (Note)
 Quantities shall be reported in accordance with the following table:

AMERICAN SYSTEM OF ENGINEERS, LIMITED
 CONSULTING ENGINEERS
 CLEVELAND, OHIO

QUAYAHOGA COUNTY ENGINEER
 CLEVELAND OHIO

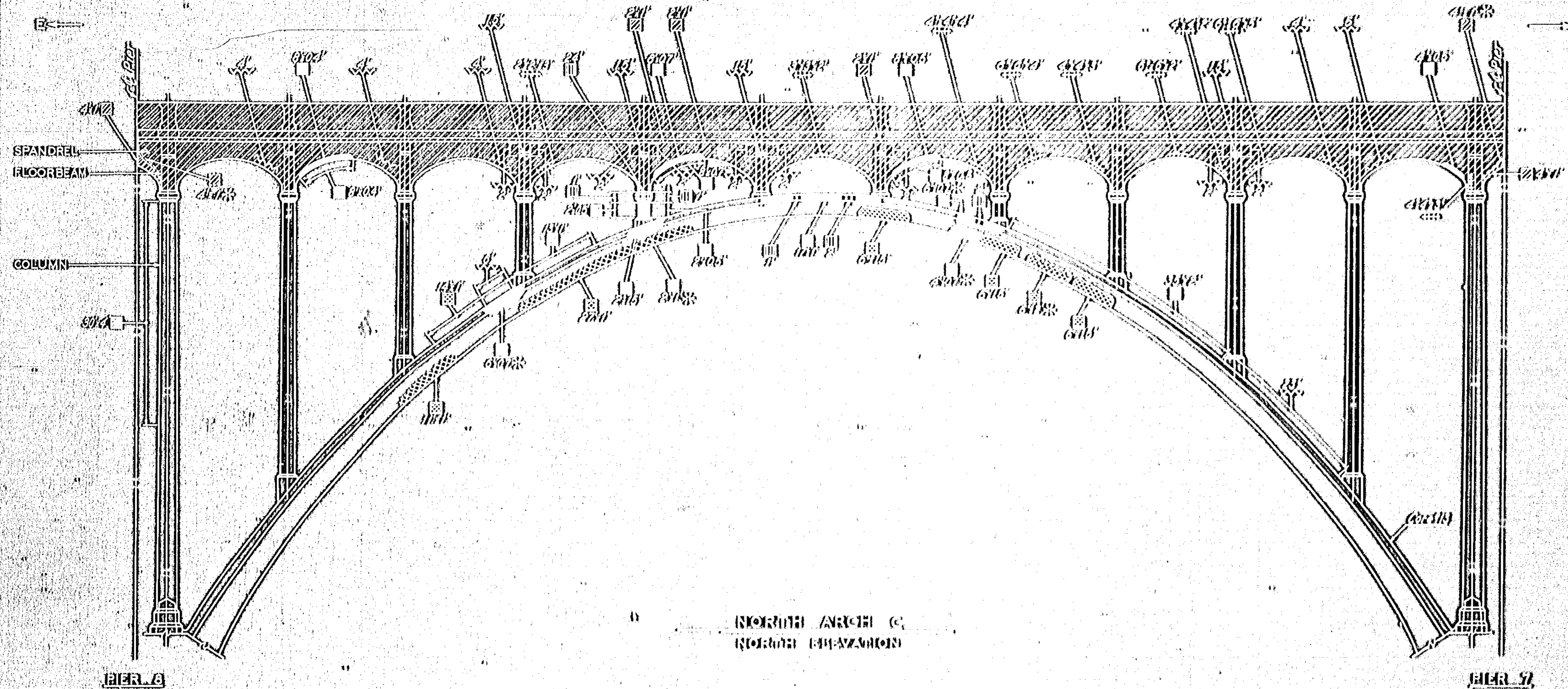
BROOKPARK ROAD
 BRIDGE OVER QUAYAHOGA RIVER
 CLEVELAND, OHIO

SOUTH ARCH C

COUNTY ENGINEER (No. 19) HERBERT W. YOSE, DATE 1/1/23

NO. B-191

DESIGN DRAWN CHECKED REVISED TO AS BUILT



NORTH ARCH C
 NORTH ELEVATION

PIER 6

PIER 7

Note
 Quantities and measurements shown on this sheet are based on the 1923 inventory of physical construction. Changes resulting from the 1925-26 inventory are indicated in the Summary of Quantities, sheet 61.

Quantities are based on the 1923 inventory of physical construction.

ITEM	QUANTITY	UNIT	PRICE	TOTAL	REMARKS
CONCRETE	111	CU YD	1.85	205.35	
IRON	11	TONS	18	198.00	
STEEL	11	TONS	18	198.00	
WOOD	11	CUBIC FEET	1.25	13.75	
PAINT	11	GALLONS	1.25	13.75	
LABOR	11	HOURS	1.25	13.75	
SMALL QUANTITIES	111	VARIOUS	1.25	13.75	

(SEE SHEET 61)
 Changes in construction are indicated in the Summary of Quantities, sheet 61.

QUAYASOGA COUNTY ENGINEER
 (CLEVELAND) OHIO

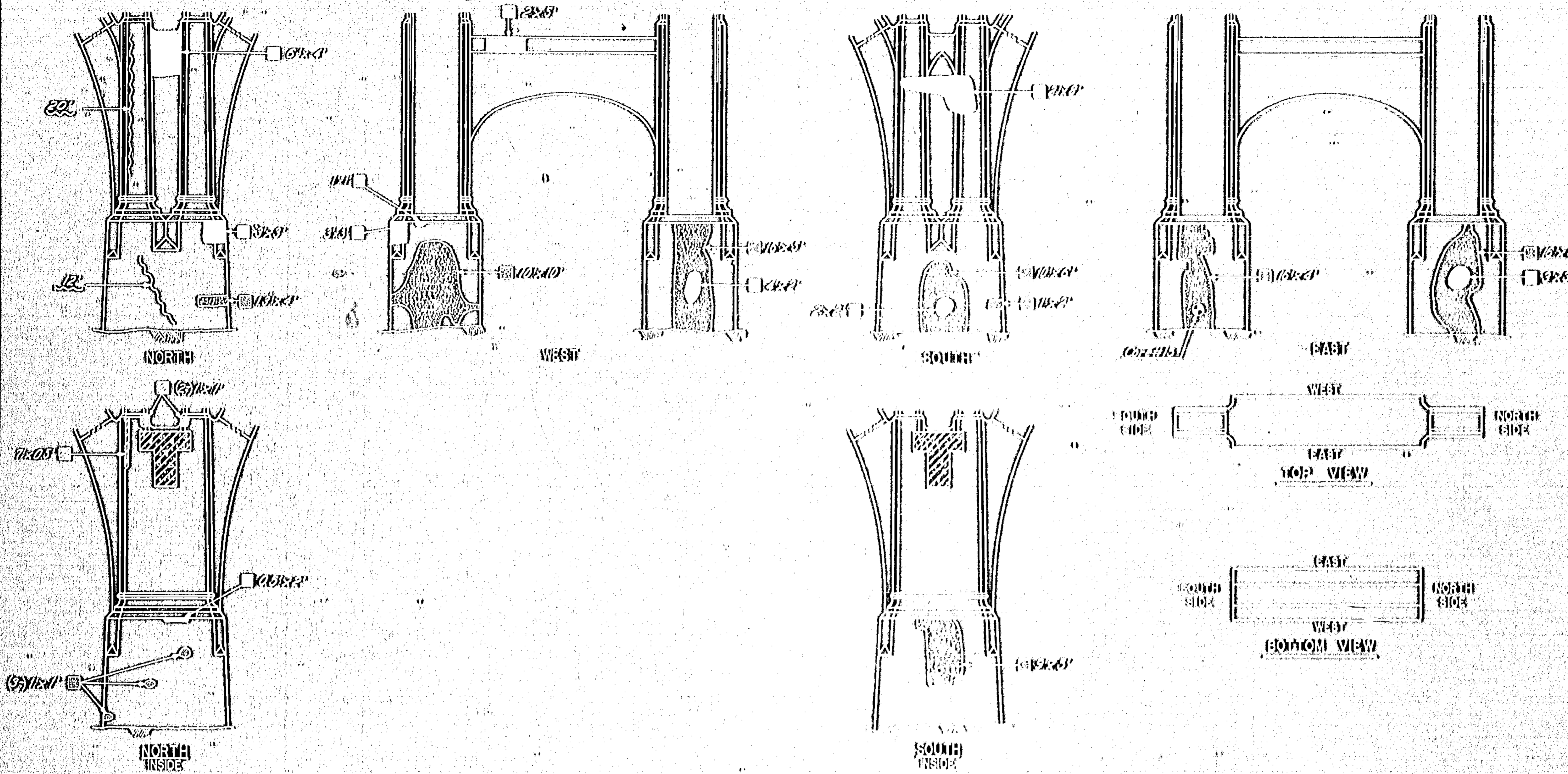
BROOKPARK ROAD
 (PIER NO. QUAYASOGA)
 (PIER NO. QUAYASOGA)
 (PIER NO. QUAYASOGA)

NORTH ARCH C

COUNTY PROJECT NO. 157 PROJECT NO. 7081 DATE 12/22/22

NO. B-1591

DESIGN DRAWN CHECKED REVISED TO AS BUILT



PIER B

NOTES
 Quantities and measurements shown on this sheet are based on the 1912 inventory of physical deterioration. Changes resulting from the 1913-14 inventory are indicated in the Summary of Quantities sheet.

CHECKED
 State of Ohio
 Cuyahoga County Engineer

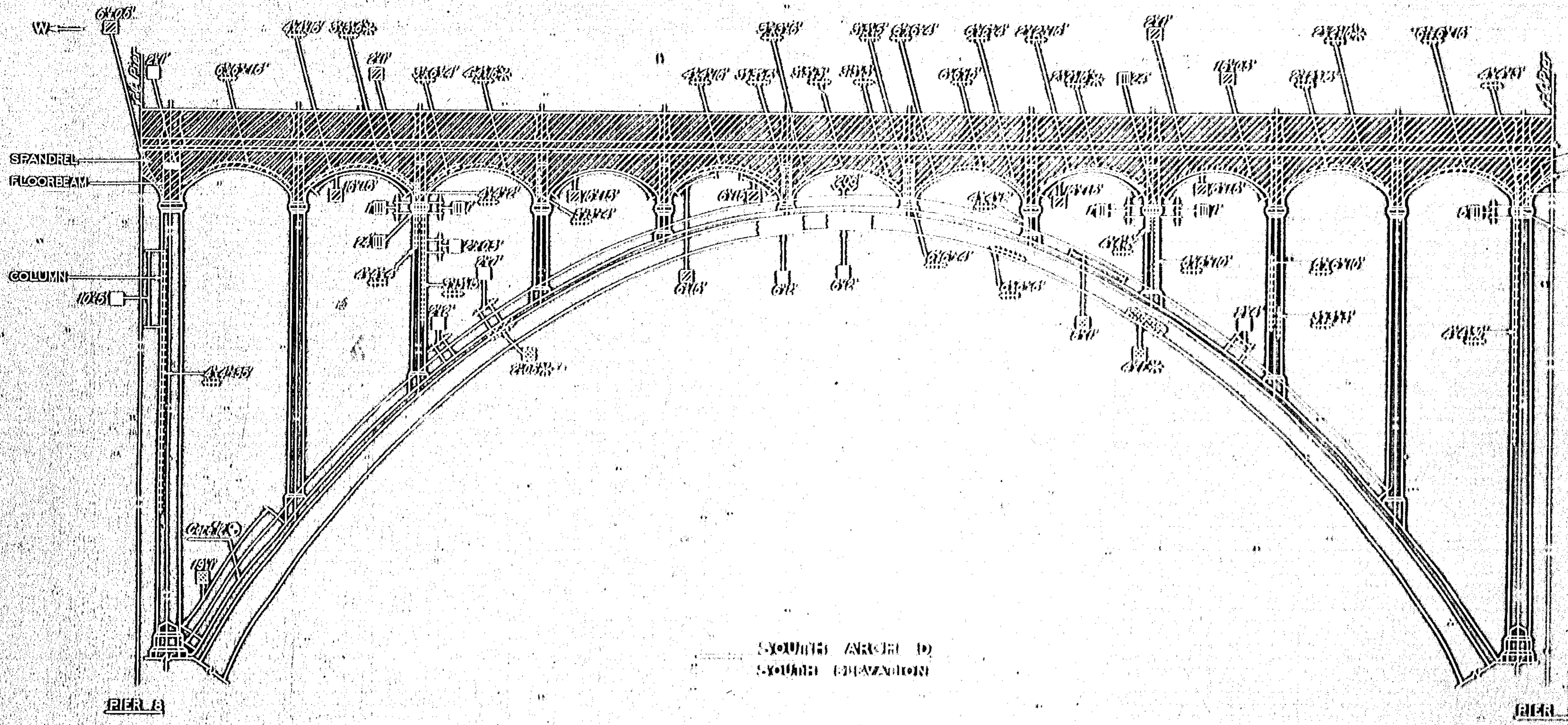
SECTION	NO.	QTY.	UNIT	AMOUNT	REMARKS
Concrete	100	100	cu yd	100	
Reinforcing Iron	100	100	lb	100	
Brick	100	100	sq ft	100	
Stone	100	100	cu yd	100	
Gravel	100	100	cu yd	100	
Sand	100	100	cu yd	100	
Other	100	100	sq ft	100	
TOTAL					

ARCHITECTURAL ENGINEERS, LIMITED
 CUYAHOGA COUNTY ENGINEER
 CUYAHOGA COUNTY, OHIO

BROOKPARK ROAD
 BRIDGE NO. CUYA 1022
 CUYAHOGA COUNTY
 OFFICE OF CUYAHOGA COUNTY ENGINEER

PIER B

COUNTY ENGINEER
 BRIDGE NO. 1022
 DATE SET
NO. B-101
 DESIGN DRAWN CHECKED REVISIONS



SOUTH ARCH D
SOUTH ABRAHAM

Notes
Quantities and measurements shown on this sheet are based on the latest inventory of physical conditions. Changes resulting from the latest inventory are included in the Summary of Quantities, Sheet G.

Summary of Quantities

ITEM	QUANTITY	UNIT	PRICE	TOTAL	REMARKS
SPANDREL	113	CU YD	1.00	113.00	
FLOOR BEAM	113	CU YD	1.00	113.00	
COLUMN	113	CU YD	1.00	113.00	
ARCH	113	CU YD	1.00	113.00	
TOTAL QUANTITIES	452			452.00	

Checked by
Cleveland County Engineer
Abraham D. ...

AGENTS: BUREAU OF ARCHITECTS, LIMITED
CLEVELAND COUNTY ENGINEER
CLEVELAND COUNTY, OHIO

CLEVELAND COUNTY ENGINEER
CLEVELAND COUNTY, OHIO

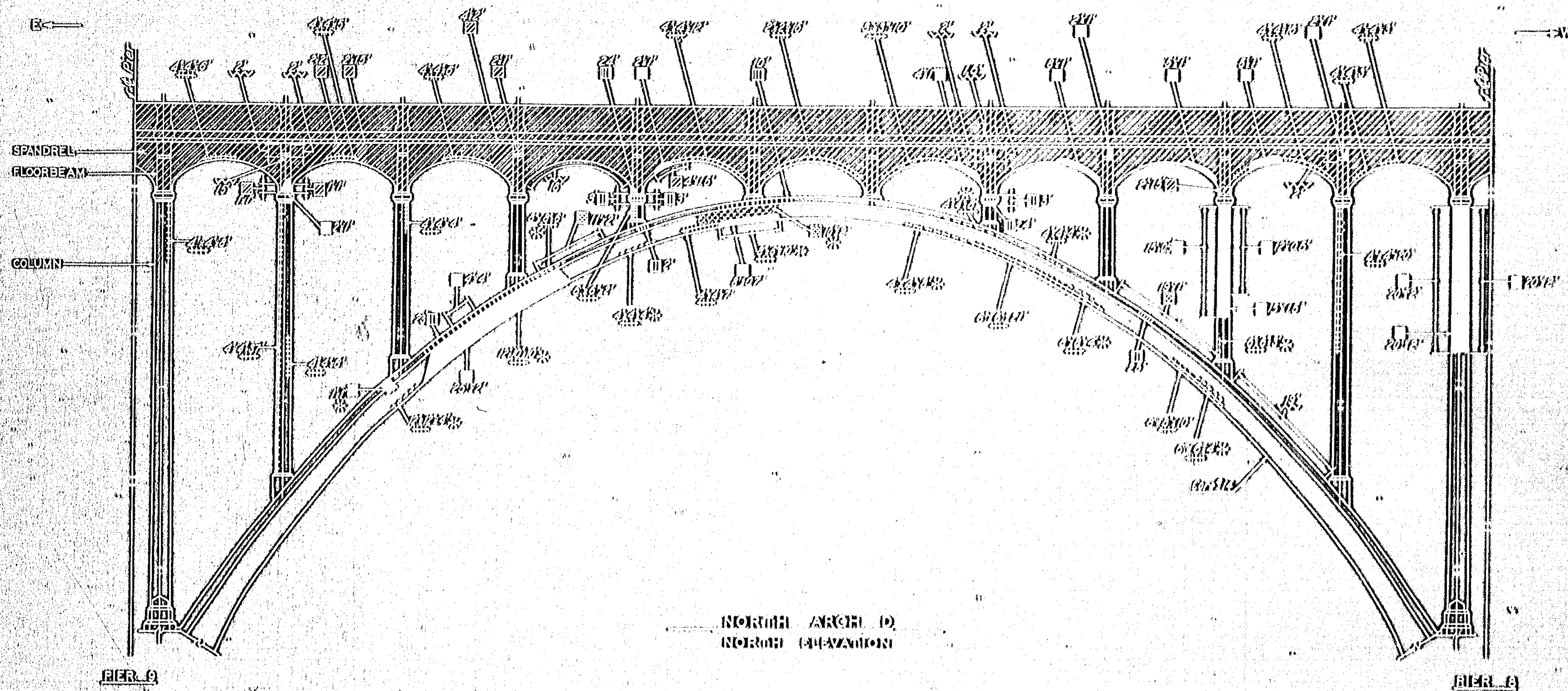
BROOKPARK ROAD
BRIDGE NO. 6247 (223)
OVER CLEVELAND RIVER
CITY OF CLEVELAND, OHIO

SOUTH ARCH D

COUNTY (Bridge No.) 89 RECORD NO. 7033 DATE 10/10/19

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO AS BUILT
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REF. 9

REF. 8

NORTH ARCH D
NORTH (CH-AZ-101)

Notes
Quantities and measurements shown on this sheet are based on the last inventory of physical deterioration. Changes resulting from the latest inventory are included in the Summary of Quantities, sheet 6A.

Notes
All quantities are based on the last inventory of physical deterioration.

ITEM	QTY	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
SPANDREL	13	sq ft	13	sq ft	13	sq ft	13	sq ft	13	sq ft	13
FLOORBEAM	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12
COLUMN	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12
ARCH	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12	sq ft	12
TOTAL	48	sq ft	48	sq ft	48	sq ft	48	sq ft	48	sq ft	48

Notes
All quantities are based on the last inventory of physical deterioration.

AMERICAN BRIDGE & STRUCTURE CO. LIMITED
COLUMBUS, OHIO

CUYAHOGA COUNTY ENGINEER
CHEVAND OHIO

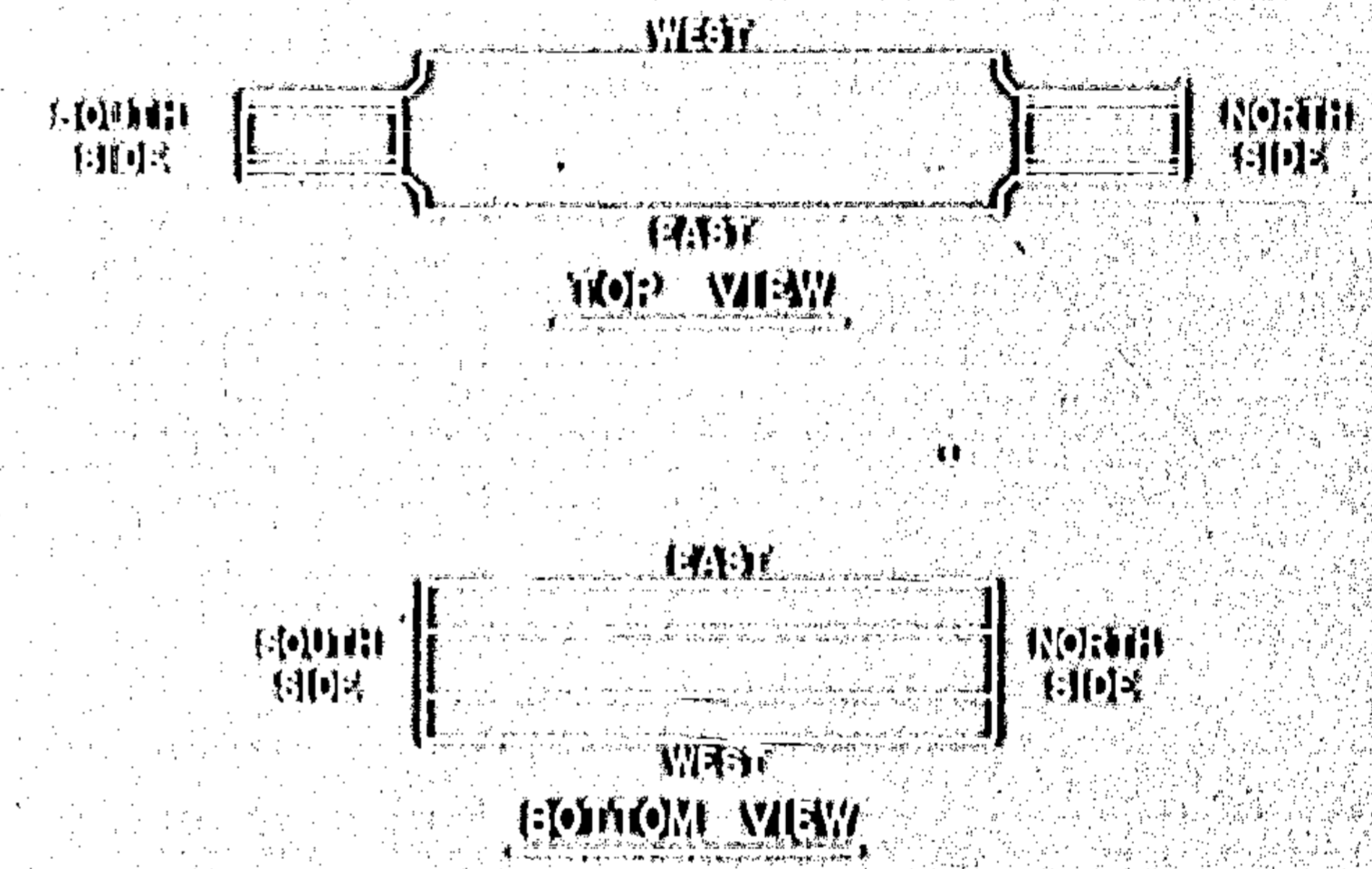
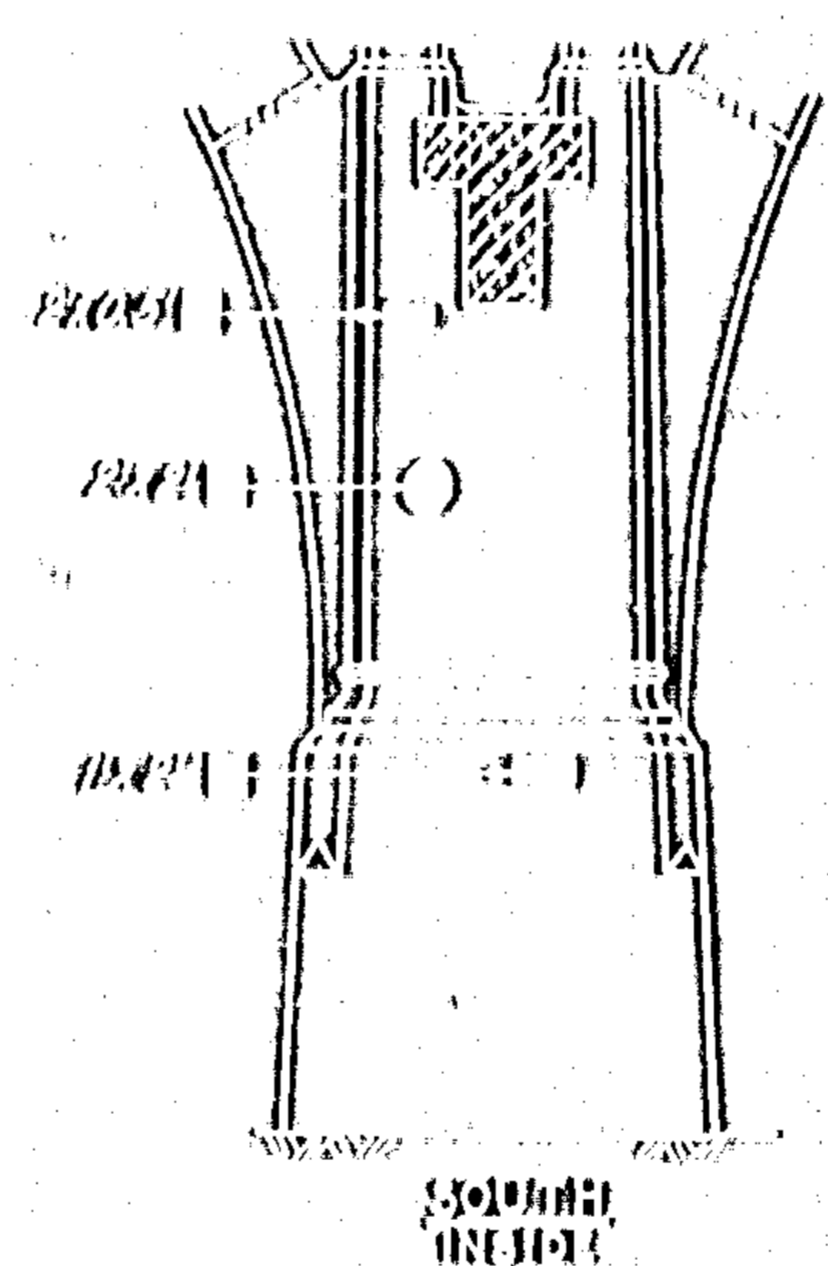
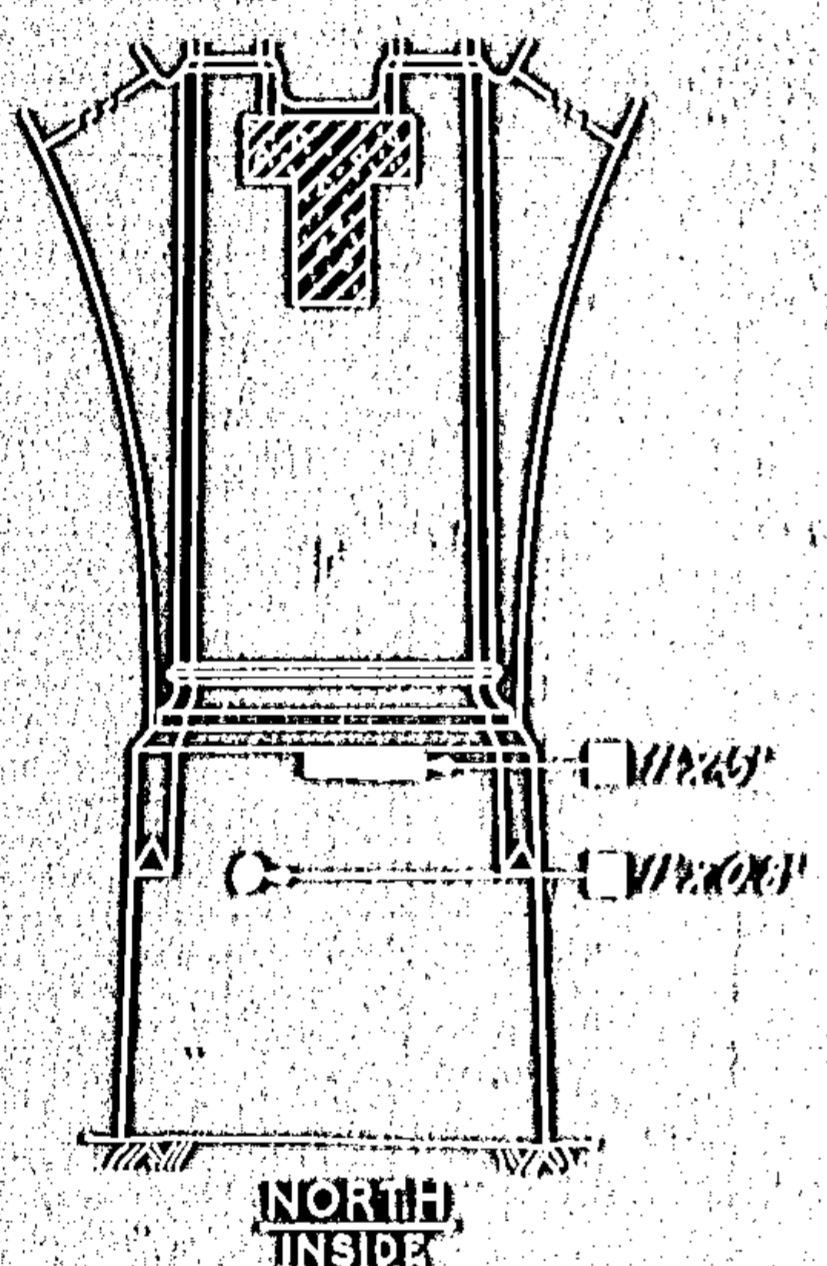
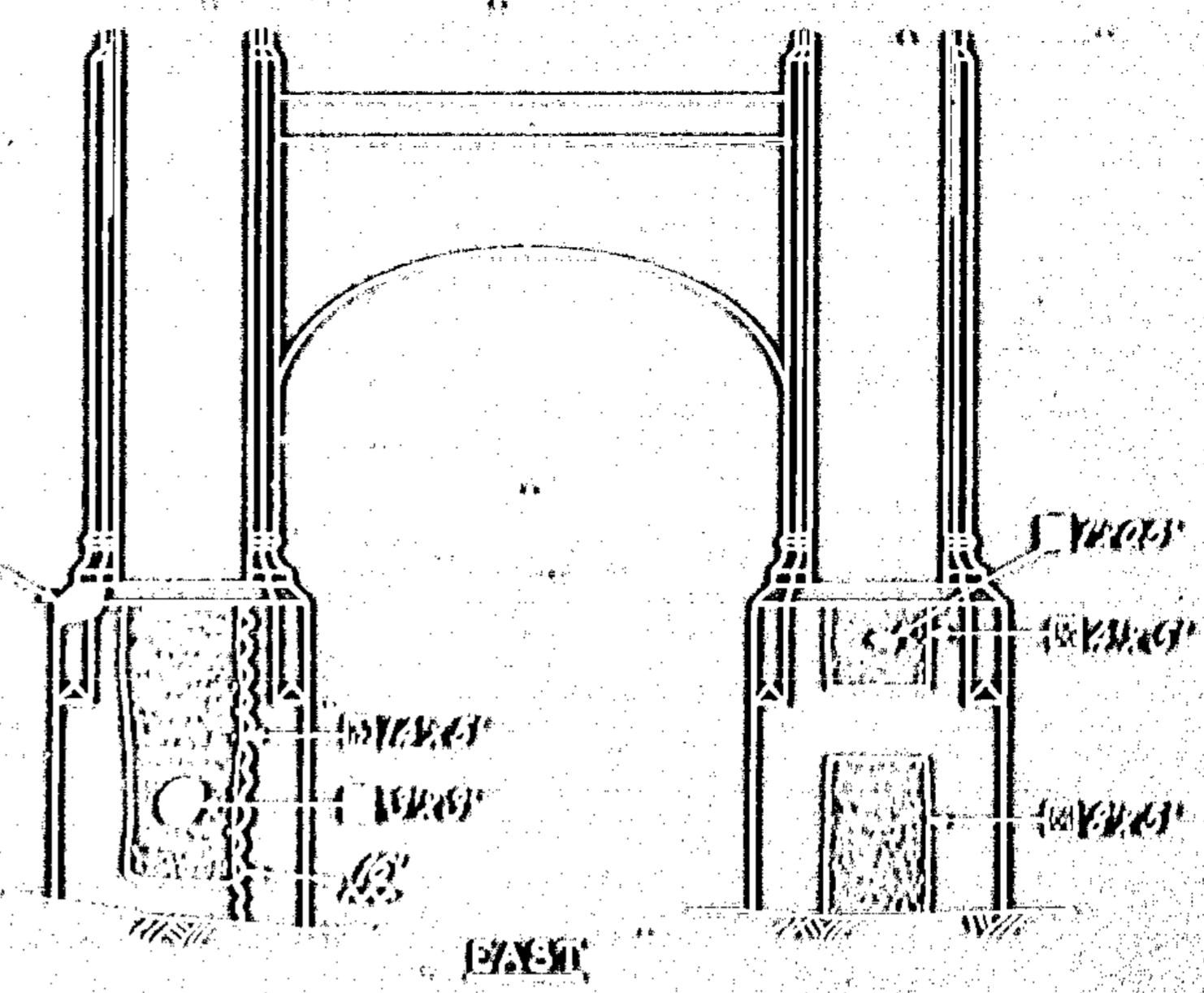
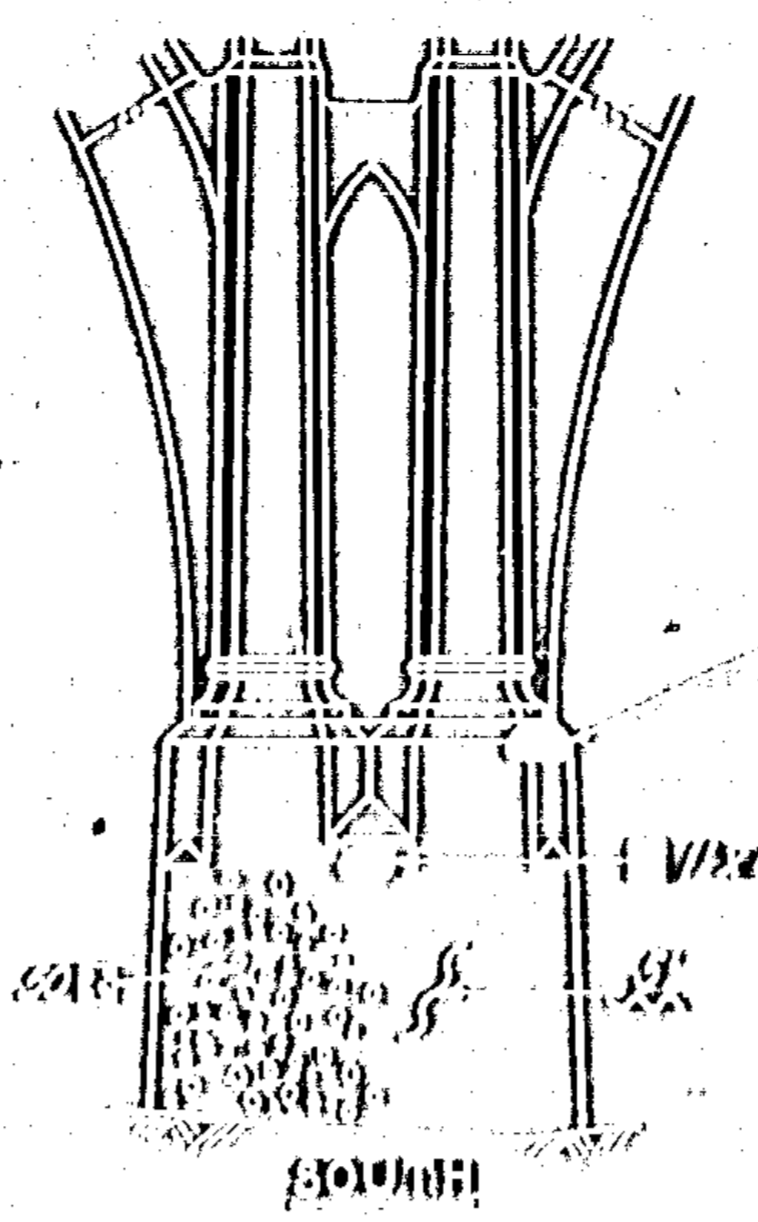
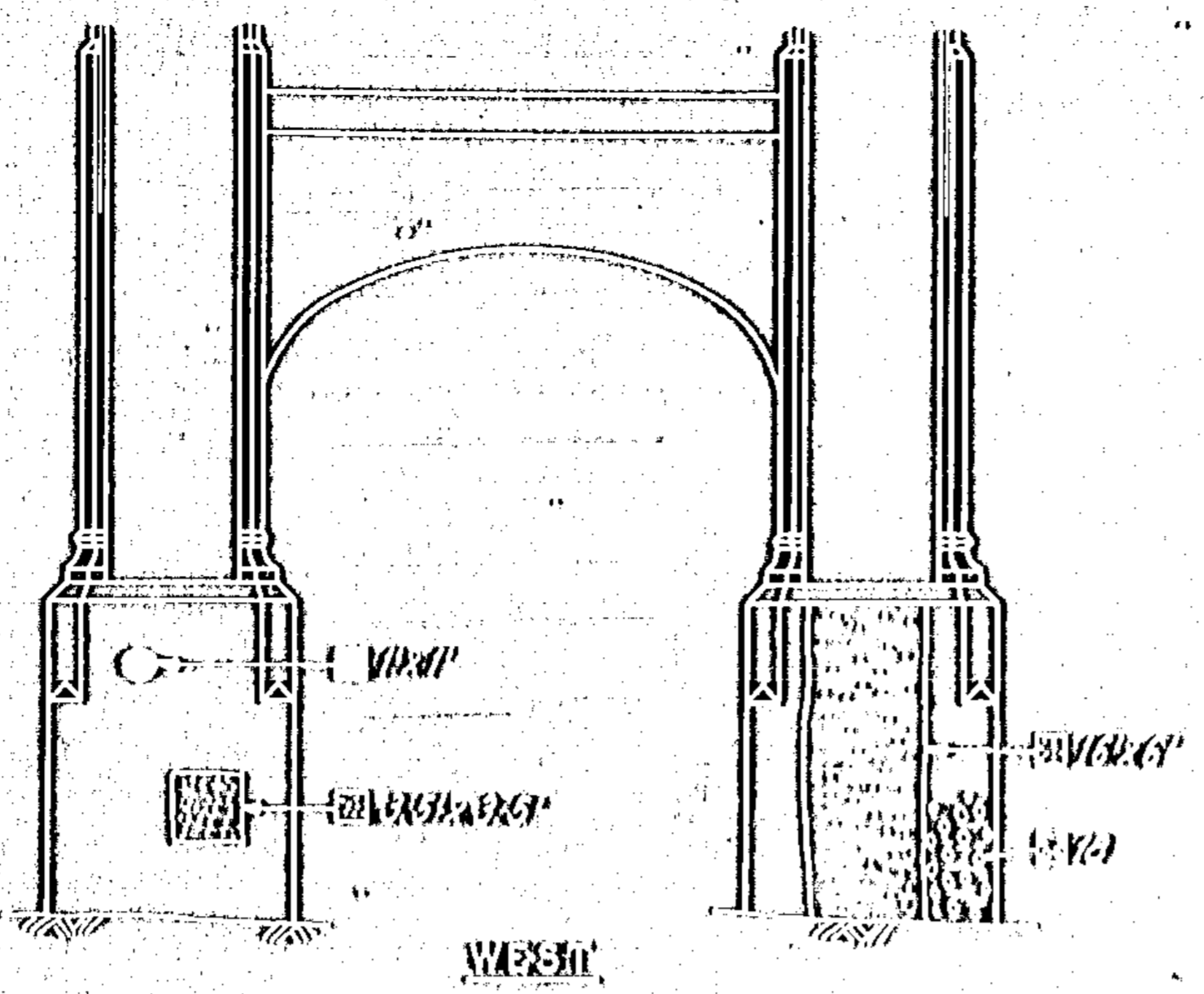
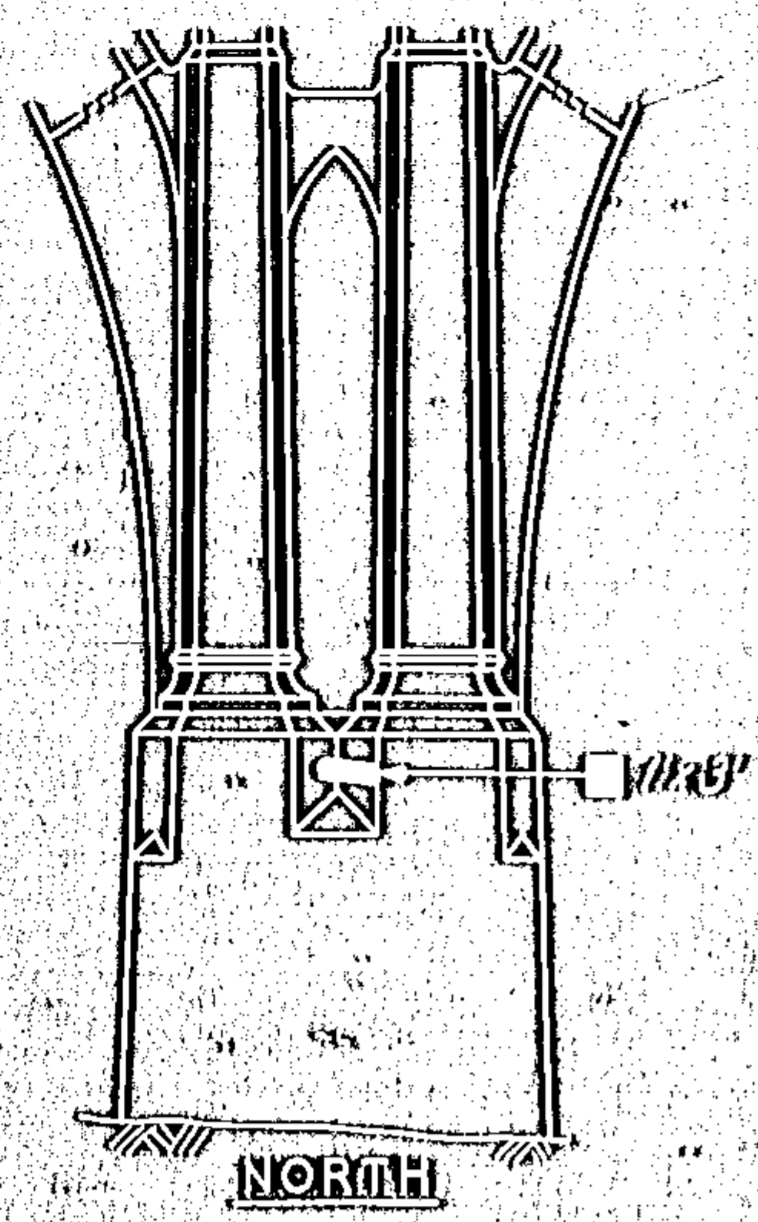
BROOKPARK ROAD
BRIDGE NO. CUYA 0223
OVER BROOKLYN RIVER
CITY OF CHEVAND AND CHEVAND PARK

NORTH ARCH D

COUNTRY: OHIO
BRIDGE NO. 89
REPORT NO. 1001
DATE: 12/15/14

NO. B-101

DESIGNED	DRAWN	CHECKED	REVIEWED
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NOTE:
Quantities and measurements shown on this sheet are based on the 1923 inventory of physical deterioration. Changes resulting from the 1925 inventory are included in the Summary of Quantities, sheet 51.

ITEM	QTY	UNIT	AMOUNT	PRICE	TOTAL	REMARKS
Concrete	100	cu yd	100	1.00	100.00	
Reinforcing Steel	100	lb	100	0.10	10.00	
Formwork	100	sq ft	100	0.05	5.00	
Paint	100	gal	100	0.02	2.00	
Ironwork	100	lb	100	0.10	10.00	
Gravel	100	cu yd	100	1.00	100.00	
Sand	100	cu yd	100	1.00	100.00	
Water	100	cu yd	100	1.00	100.00	
Other	100	cu yd	100	1.00	100.00	

QUAYHOGA COUNTRY ENGINEER
CLEVELAND OHIO

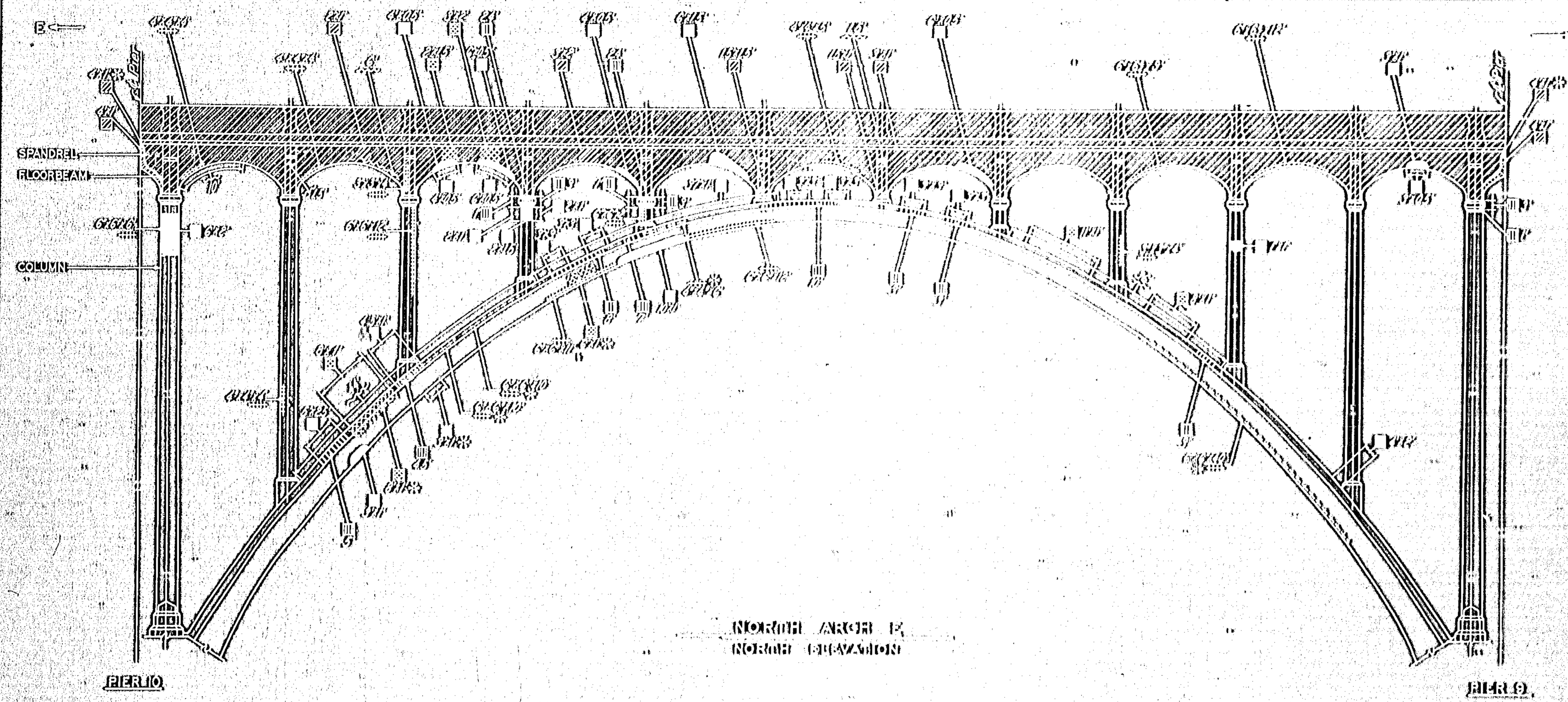
BROOKPARK ROAD
BRIDGE NO. QUAYHOGA 0223
OVER QUAYHOGA RIVER
CHIEFCO-CLEVELAND-CHESTERVIEW PARK

PIER 9

COUNTRY (REPORTING) 83 REPORTING 7033 DATE 2/23/24

NO. B-191

DESIGN DRAWN CHECKED REVISED TO ASSEMBLE



NORTH ARCH E
North Elevation

Note:
Quantities and measurements shown on this sheet are based on the best inventory of physical elevations. Changes resulting from the best inventory are included in the Summary of Quantities, Sheet G.

Quantities shall be based on the best inventory of physical elevations.

ITEM	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY
SPANDREL	CU YD	12	CU YD	12						
FLOOR BEAM	CU YD	0								
COLUMN	CU YD	13								
ARCH	CU YD	14	CU YD	14						
TOTAL QUANTITIES		123		123						

QUAYHOGA COUNTY ENGINEER
CHEVELAND OHIO

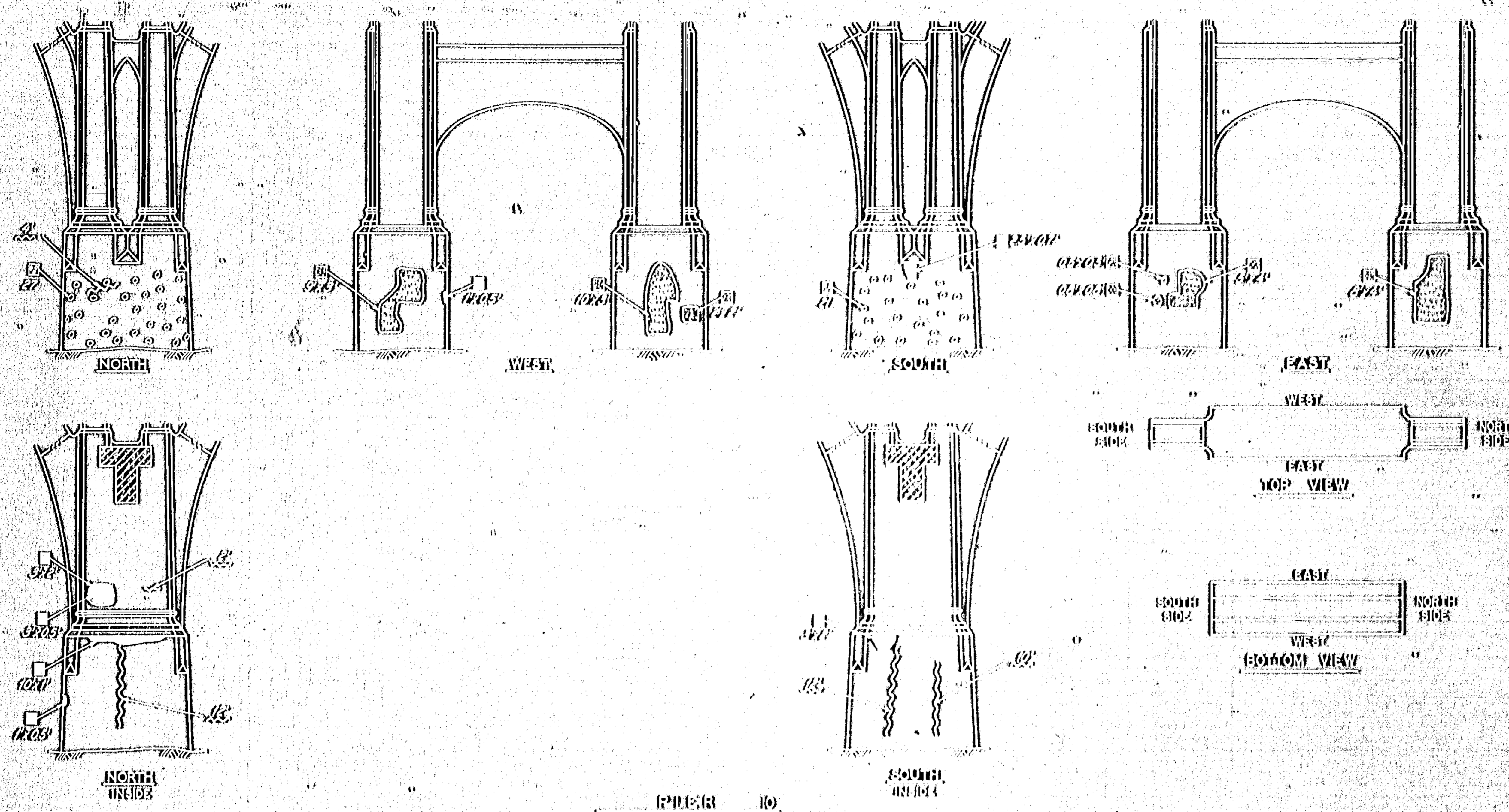
BROOKPARK ROAD
BRIDGE NO. 6747 OVER
GREAT AND LITTLE RIVERS
CITY OF CLEVELAND, OHIO

NORTH ARCH E

COUNTY ENGINEER NO. 89 HERBERT H. YOUNG, DATE 12/1/22

NO. B-1191

DESIGN	DRAWN	CHECKED	REVIEWED
			TOAS BULLY



PIER 10

NOTE: Quantities and measurements shown on sheet are based on the 1910 inventory of physical deterioration. Changes resulting from the 1911 inventory are included in the Summary of Quantities, sheet 51.

ITEM	QUANTITY		CUBIC FEET		CUBIC YARDS		CUBIC FEET		CUBIC YARDS	
	1910	1911	1910	1911	1910	1911	1910	1911	1910	1911
Concrete	100	110	100	110	100	110	100	110	100	110
Steel	200	220	200	220	200	220	200	220	200	220
Brick	300	330	300	330	300	330	300	330	300	330
Stone	400	440	400	440	400	440	400	440	400	440
Other	500	550	500	550	500	550	500	550	500	550

WALTER B. STUBBS & ASSOCIATES, LIMITED
 CONSULTING ENGINEERS
 CLEVELAND, OHIO

QUAYANOGA COUNTRY ENGINEERING
 (CLEVELAND) OHIO

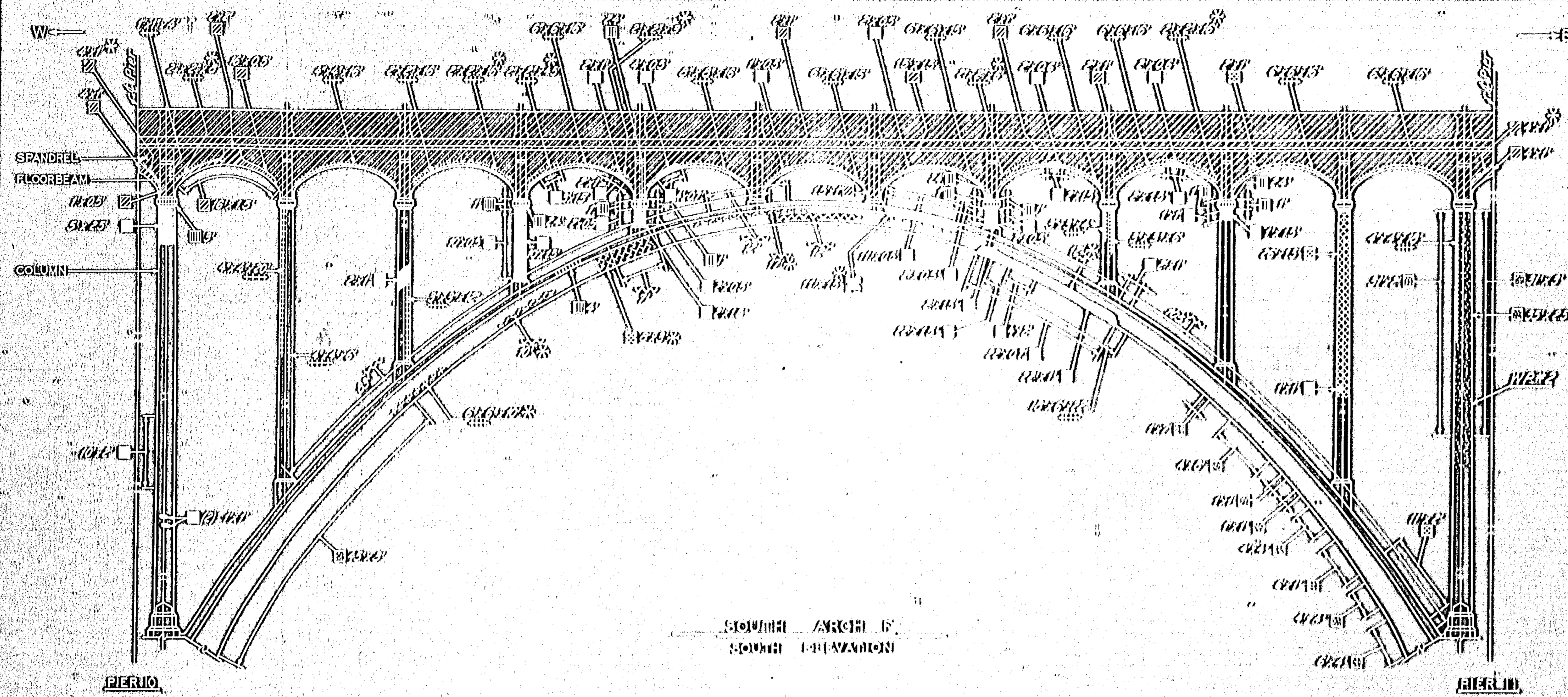
BROOKPARK ROAD
 BRIDGE NO. 474 (23)
 OVER ROCKY RIVER
 CLEVELAND, OHIO

PIER 10

COUNTRY BRIDGE NO. 49 REPORT NO. 7031 DATE 1911

NO. B-191

DESIGN	DRAWN	CHECKED	REVISED TO



SOUTH ARCH F
SECTION THROUGH ARCH

Notes
 Quantities and measurements shown on sheet are based on the 1973 Inventory physical data collection. Changes resulting from the 1973-74 Inventory are included in the Summary of Quantities sheet on...

QUANTITIES AND MEASUREMENTS SHOWN ON SHEET ARE BASED ON THE 1973 INVENTORY PHYSICAL DATA COLLECTION. CHANGES RESULTING FROM THE 1973-74 INVENTORY ARE INCLUDED IN THE SUMMARY OF QUANTITIES SHEET ON...

ITEM	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT
SPANDREL	CU YD	121	CU YD	121				121			
FLOORBEAM	CU YD	121	CU YD	121				121			
COLUMN	CU YD	121	CU YD	121	121	121	121	121			
ARCH	CU YD	121	CU YD	121	121	121	121	121			
TOTAL QUANTITIES		121		121	121	121	121	121			

AMERICAN DIVISION OF AEGION CORP., LIMITED
 CIVIL ENGINEERS
 CLEVELAND, OHIO

CUYAHOGA COUNTY ENGINEER
 CLEVELAND OHIO

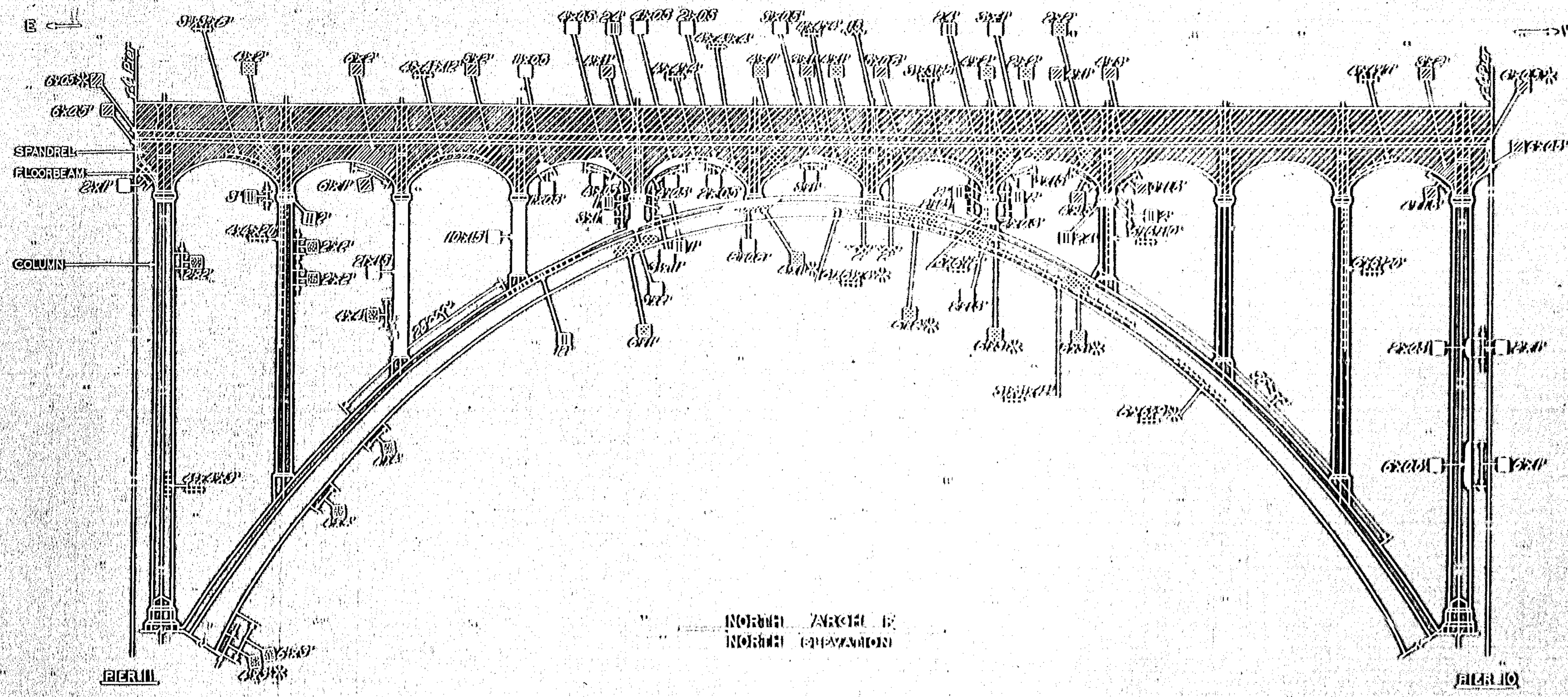
BROOKPARK ROAD
 BRIDGE NO. CUYA 174-0233
 OVER CUYA RIVER
 CITIES OF CLEVELAND AND BROADVIEW PARK

SOUTH ARCH F

COUNTY: CUYAHOGA
 BRIDGE NO.: 174-0233
 REPORT NO.: 101-1
 DATE: 1973

NO B-191

DESIGN	DRAWN	CHECKED	REVISED TO ASB
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NORTH ARCH F
QUAYHOGA COUNTY

Note:
Quantities and measurements shown on this sheet are based on the pre-inventory of physical quantities. Changes resulting from the re-estimate inventory are included in the Summary of Quantities, sheet G1.

Quantities shall not be used for any other purpose than that for which they were prepared.

ITEM	QUANTITY	UNIT	PRICE	TOTAL	PERCENT	AMOUNT	PERCENT	TOTAL
SPANDREL	11	CU YD	1.00	11.00	11	11.00	11	11.00
FLOOR BEAM	1	CU YD	1.00	1.00	1	1.00	1	1.00
COLUMN	1	CU YD	1.00	1.00	1	1.00	1	1.00
ARCH	1	CU YD	1.00	1.00	1	1.00	1	1.00
TOTAL QUANTITIES	14	CU YD	1.00	14.00	14	14.00	14	14.00

AMERICAN ENGINEERING & ARCHITECTS, LIMITED
 11000 EAST AVENUE
 CLEVELAND, OHIO

QUAYHOGA COUNTY ENGINEER
 CLEVELAND OHIO

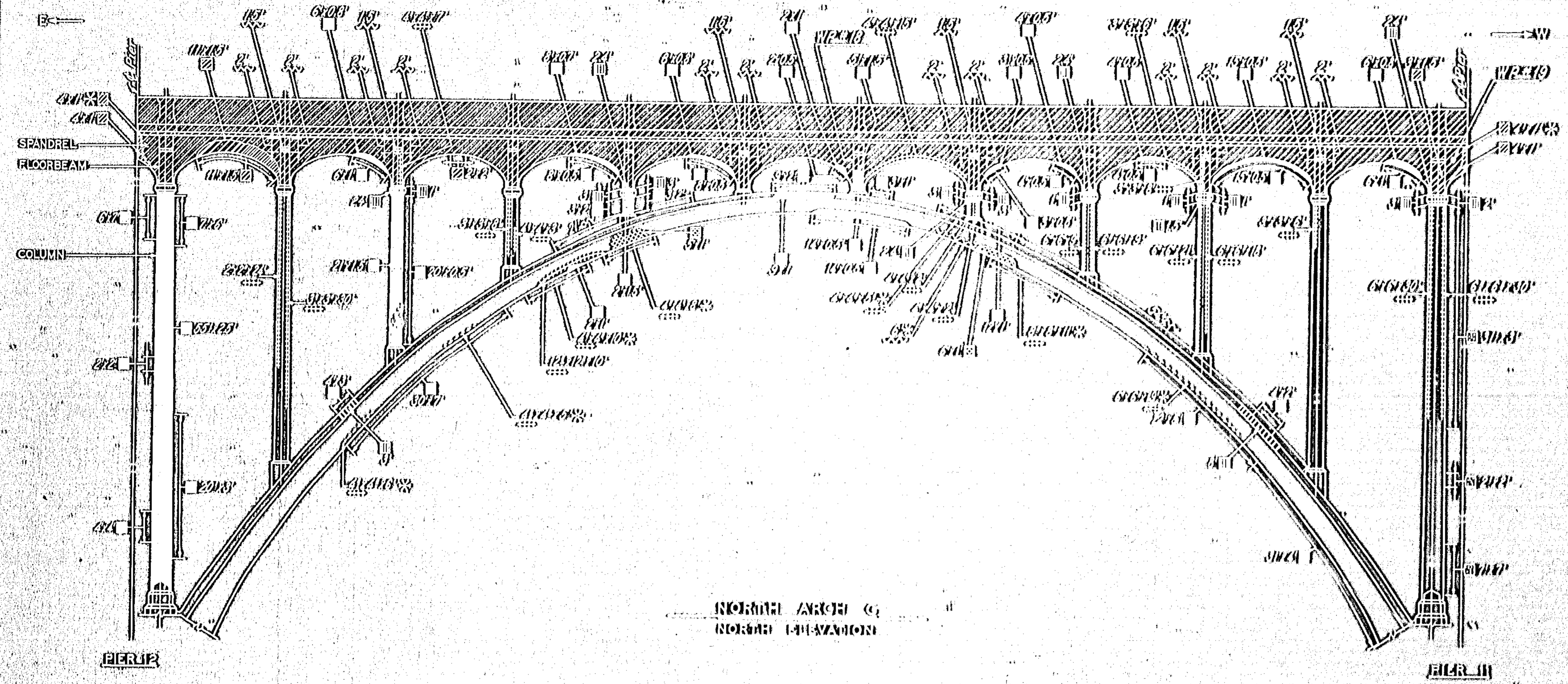
BROOKPARK ROAD
 BRIDGE NO. QUAYHOGA 0233
 OVER CLEVELAND RIVER
 CLEVELAND, OHIO

NORTH ARCH F

COUNTY (No. 35) REPORT NO. 1068 DATE 12/27/17

NO B-191

DESIGNED	DRAWN	CHECKED	REVIEWED



NORTH ARCH &
 NORTH ABUTMENT

NOTE
 Quantiles measurements shown on this sheet are based on the 1923 inventory of bridge data. Changes resulting from the 1925-1926 inventory are included in the Summary of Quantiles, sheet 61.

QUANTILES

QUANTILE NO.	SPAN 4	SPAN 5	SPAN 6	SPAN 7	SPAN 8	SPAN 9	SPAN 10	SPAN 11	SPAN 12
SPAN REL	121	97							
FLOOR BEAM	77	32							
COLUMN	9	1							
PIER II	121								
PIER III	121								
ARCH	121								
QUANTILES	121	112							

W. H. ...
 CLEVELAND, OHIO

ENGINEERING COMPANY OF ASSOCIATES, LIMITED
 CLEVELAND, OHIO

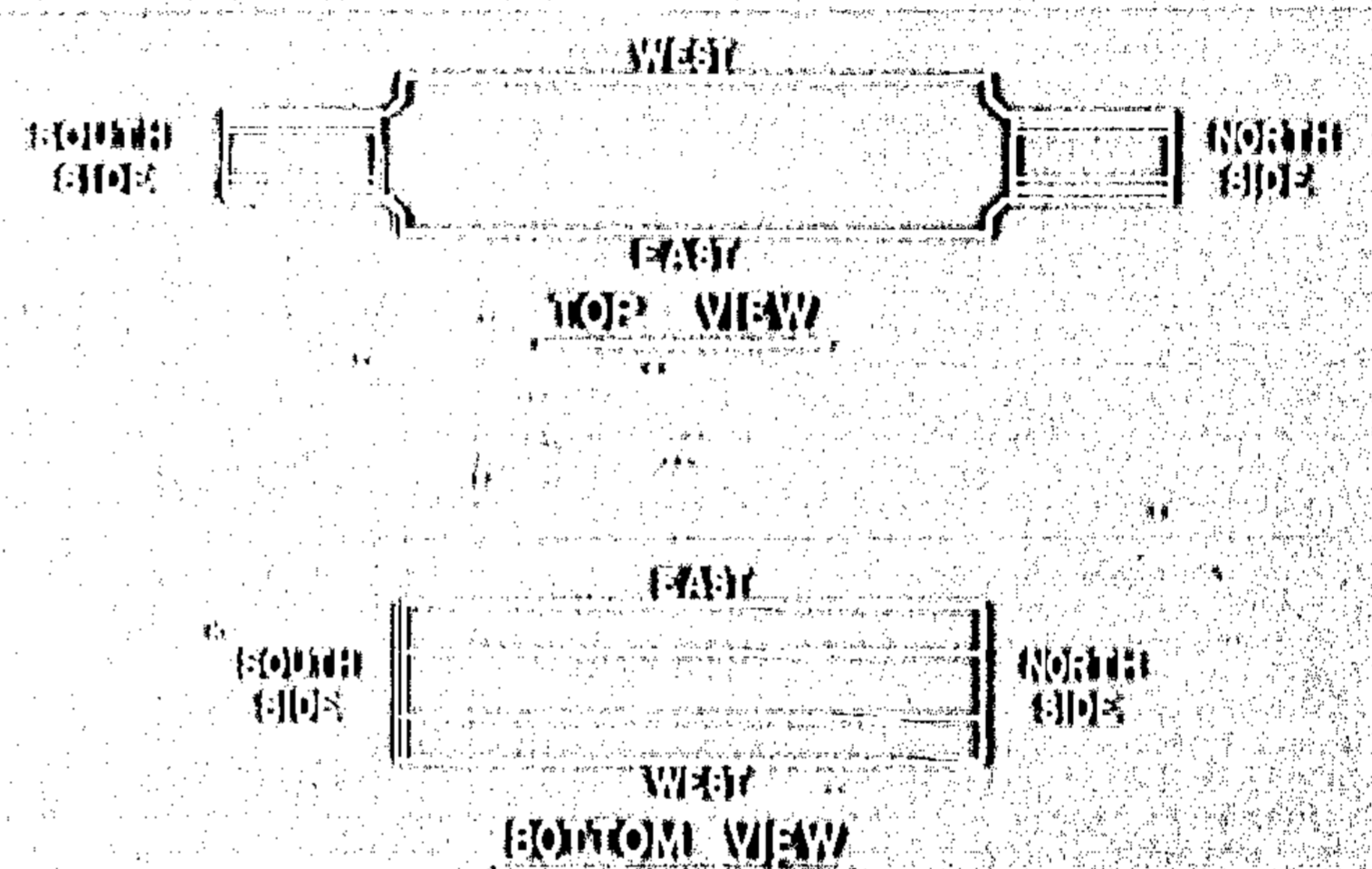
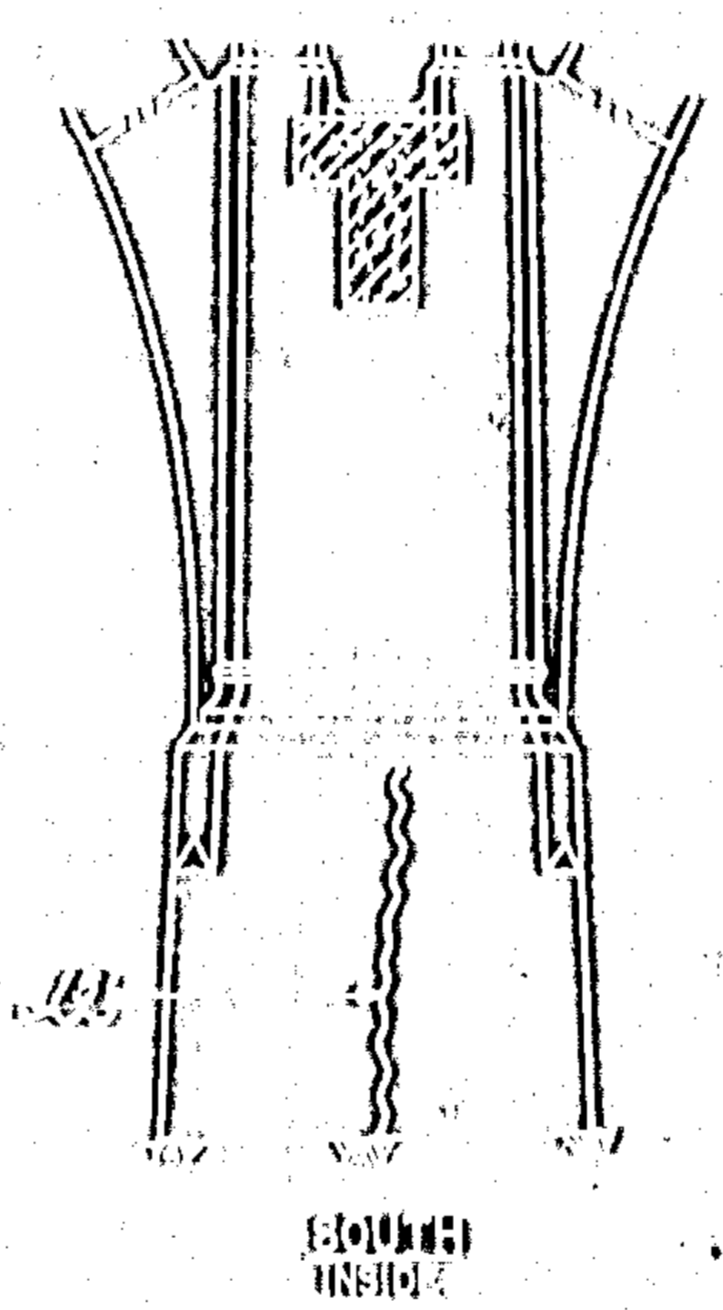
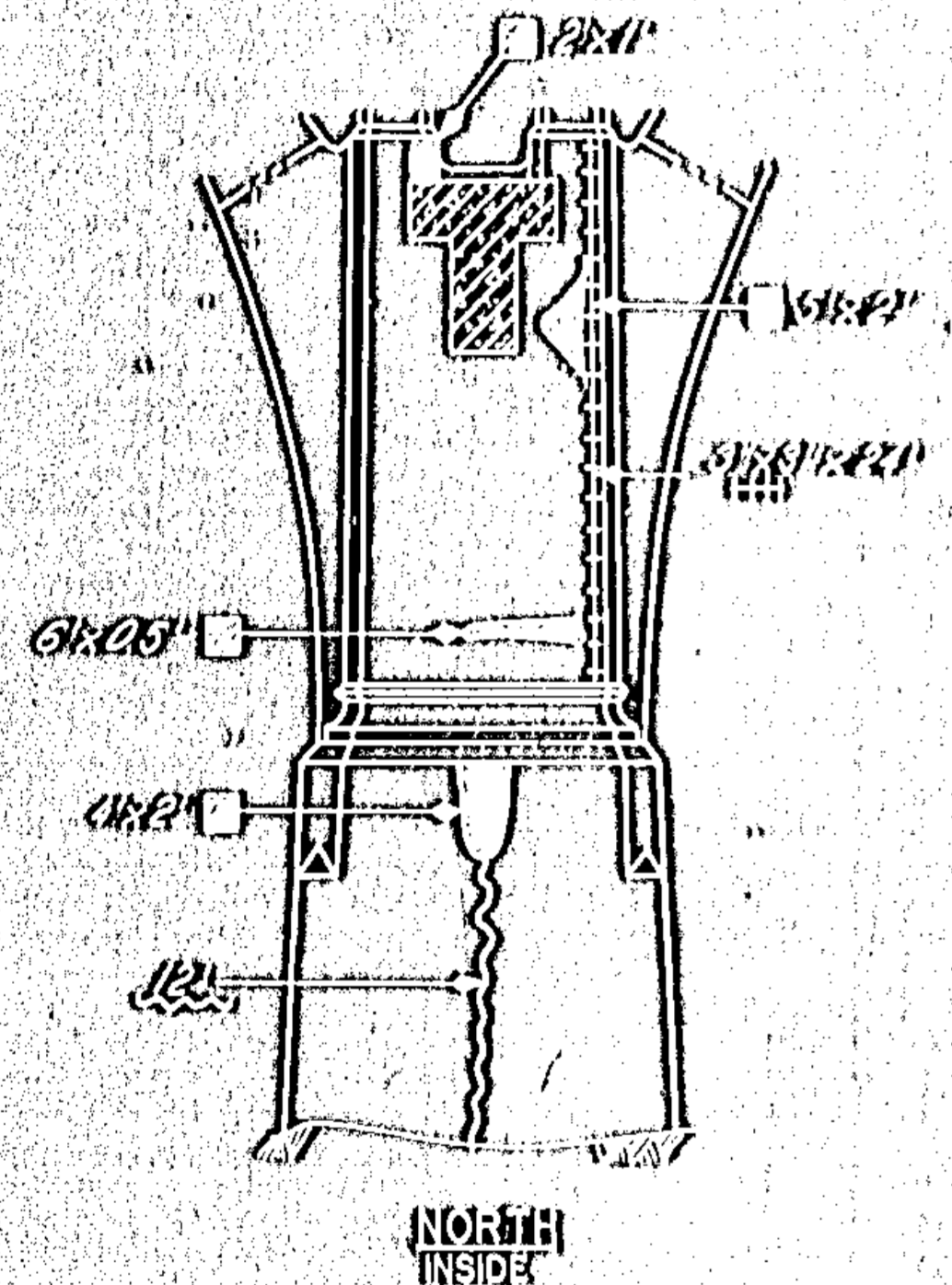
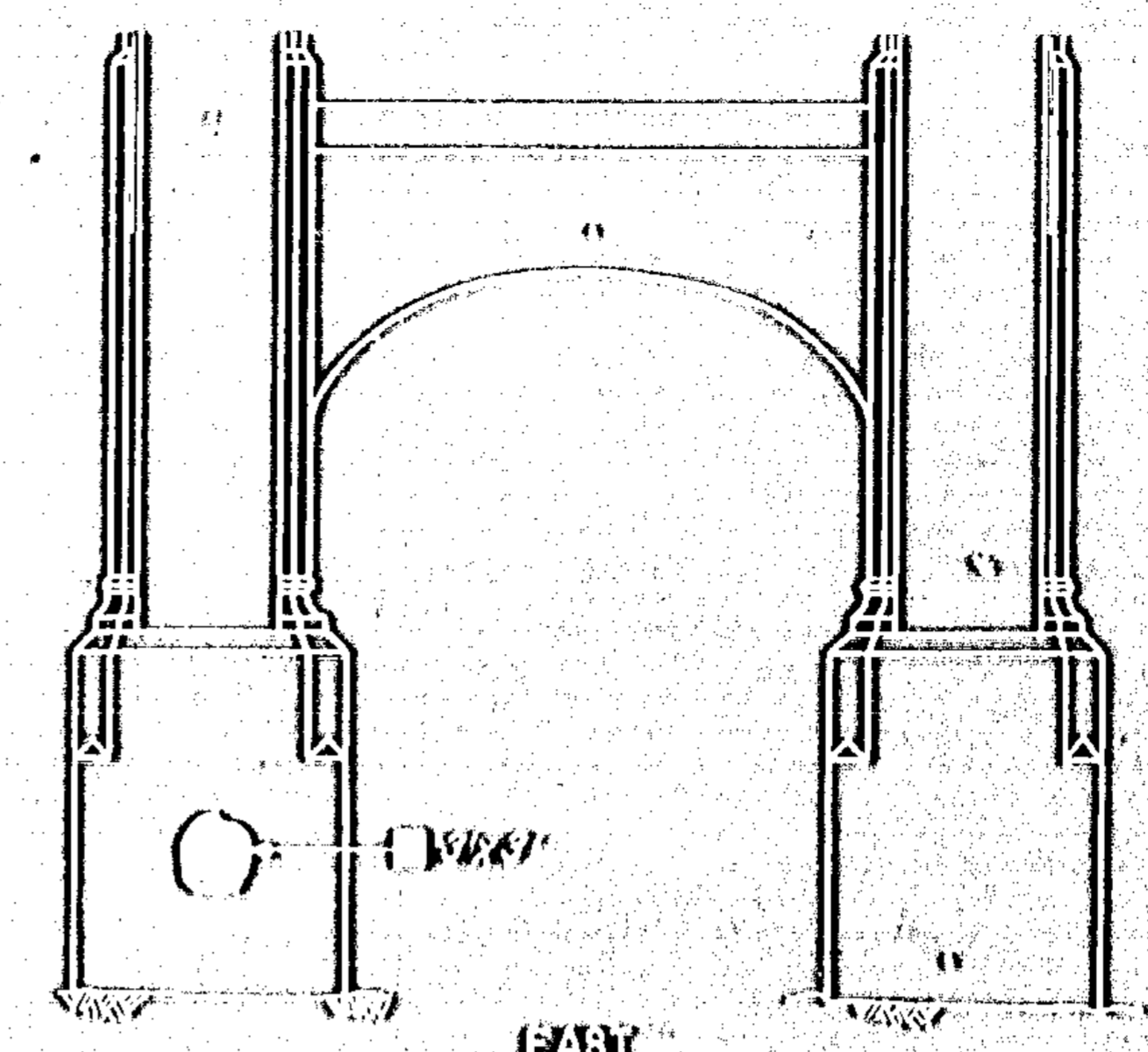
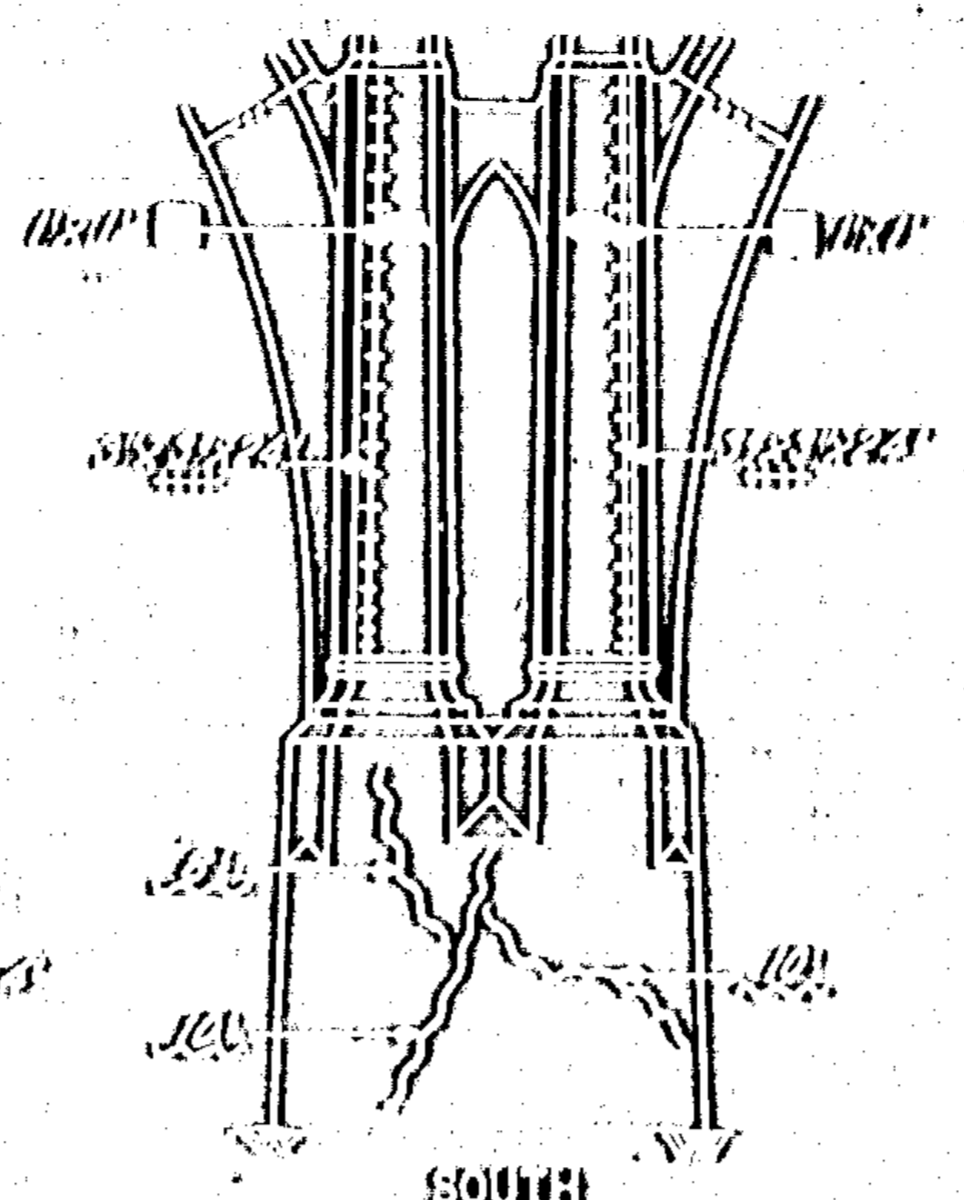
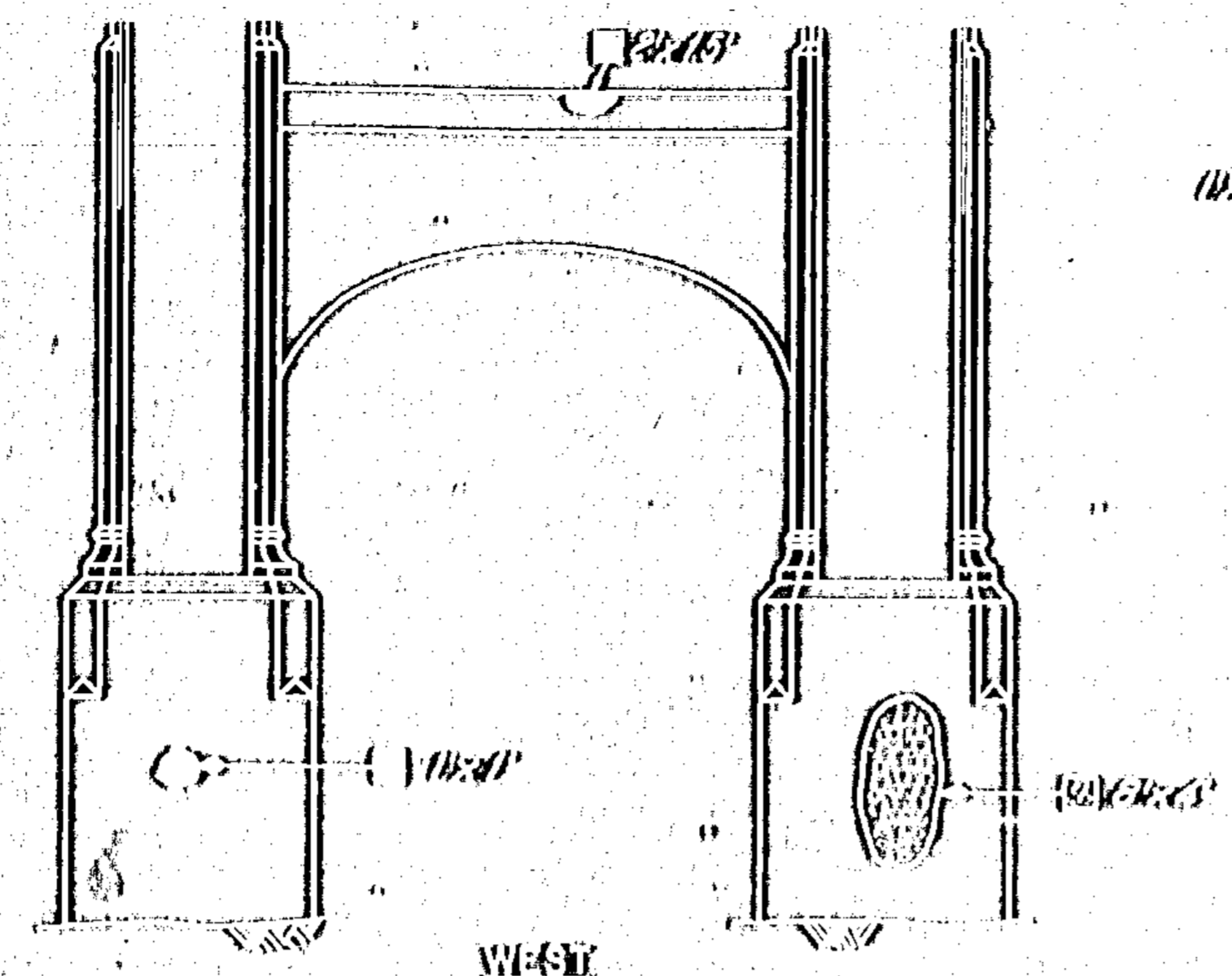
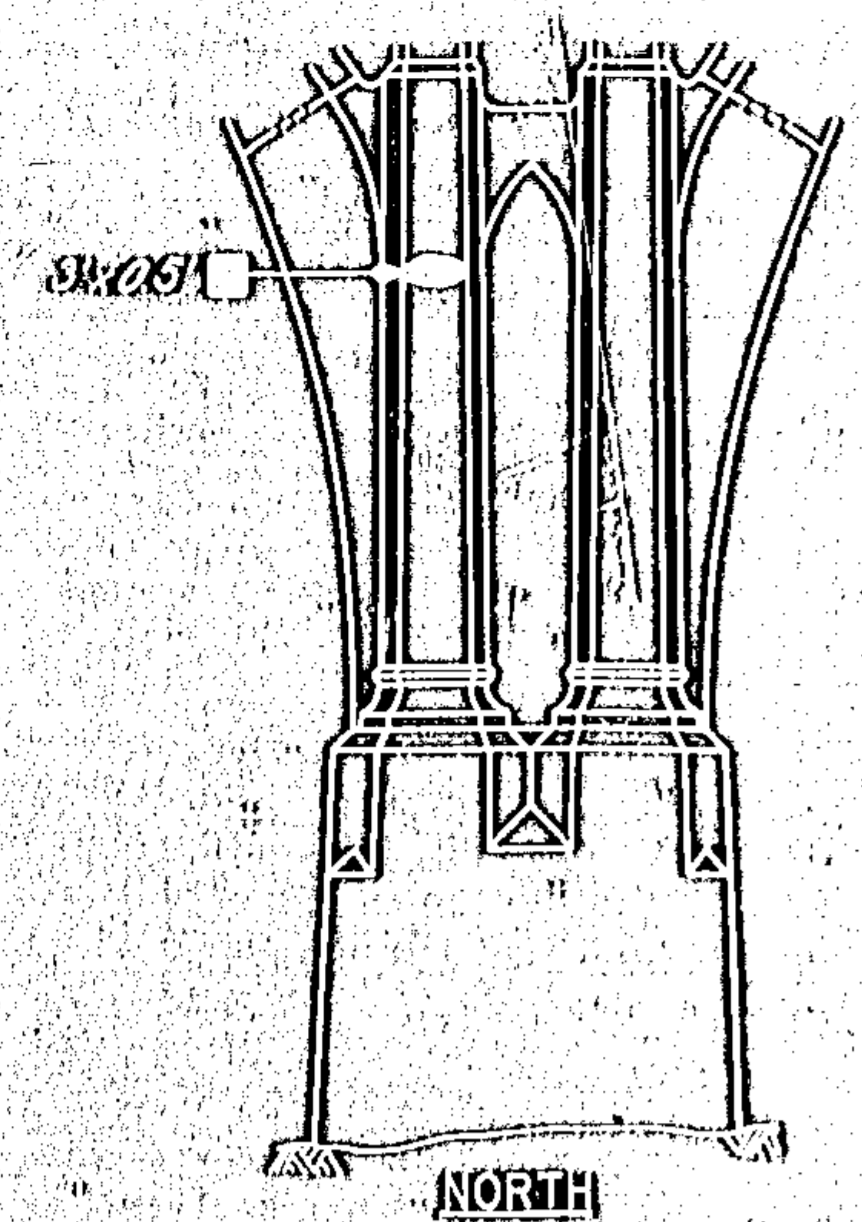
QUAYHOGA COUNTY ENGINEER
 CLEVELAND OHIO

BROOKPARK ROAD
 BRIDGE NO. QUAYHOGA 223
 COLUMBIAN RIVER
 CLEVELAND, OHIO

NORTH ARCH C

COUNTY ROAD NO. 89 RECORD NO. 101 DATE 1925

NO B-191



PIER 12

Note: Quantities and measurements shown on this sheet are based on the best inventory of physical deterioration. Changes resulting from the best inventory are included in the quantity of quantities sheet.

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL	REMARKS
1	CONCRETE	CU YD	100	1.00	100.00	
2	STEEL	TONS	50	2.00	100.00	
3	LABOR	HOURS	1000	0.10	100.00	
4	EQUIPMENT	HOURS	100	1.00	100.00	
5	PAINT	SQ YD	1000	0.10	100.00	
6	REINFORCING	TONS	50	2.00	100.00	
7	FORMWORK	SQ YD	1000	0.10	100.00	
8	CONCRETE	CU YD	100	1.00	100.00	
9	STEEL	TONS	50	2.00	100.00	
10	LABOR	HOURS	1000	0.10	100.00	
11	EQUIPMENT	HOURS	100	1.00	100.00	
12	PAINT	SQ YD	1000	0.10	100.00	
13	REINFORCING	TONS	50	2.00	100.00	
14	FORMWORK	SQ YD	1000	0.10	100.00	
15	CONCRETE	CU YD	100	1.00	100.00	
16	STEEL	TONS	50	2.00	100.00	
17	LABOR	HOURS	1000	0.10	100.00	
18	EQUIPMENT	HOURS	100	1.00	100.00	
19	PAINT	SQ YD	1000	0.10	100.00	
20	REINFORCING	TONS	50	2.00	100.00	
21	FORMWORK	SQ YD	1000	0.10	100.00	
22	CONCRETE	CU YD	100	1.00	100.00	
23	STEEL	TONS	50	2.00	100.00	
24	LABOR	HOURS	1000	0.10	100.00	
25	EQUIPMENT	HOURS	100	1.00	100.00	
26	PAINT	SQ YD	1000	0.10	100.00	
27	REINFORCING	TONS	50	2.00	100.00	
28	FORMWORK	SQ YD	1000	0.10	100.00	
29	CONCRETE	CU YD	100	1.00	100.00	
30	STEEL	TONS	50	2.00	100.00	
31	LABOR	HOURS	1000	0.10	100.00	
32	EQUIPMENT	HOURS	100	1.00	100.00	
33	PAINT	SQ YD	1000	0.10	100.00	
34	REINFORCING	TONS	50	2.00	100.00	
35	FORMWORK	SQ YD	1000	0.10	100.00	
36	CONCRETE	CU YD	100	1.00	100.00	
37	STEEL	TONS	50	2.00	100.00	
38	LABOR	HOURS	1000	0.10	100.00	
39	EQUIPMENT	HOURS	100	1.00	100.00	
40	PAINT	SQ YD	1000	0.10	100.00	
41	REINFORCING	TONS	50	2.00	100.00	
42	FORMWORK	SQ YD	1000	0.10	100.00	
43	CONCRETE	CU YD	100	1.00	100.00	
44	STEEL	TONS	50	2.00	100.00	
45	LABOR	HOURS	1000	0.10	100.00	
46	EQUIPMENT	HOURS	100	1.00	100.00	
47	PAINT	SQ YD	1000	0.10	100.00	
48	REINFORCING	TONS	50	2.00	100.00	
49	FORMWORK	SQ YD	1000	0.10	100.00	
50	CONCRETE	CU YD	100	1.00	100.00	

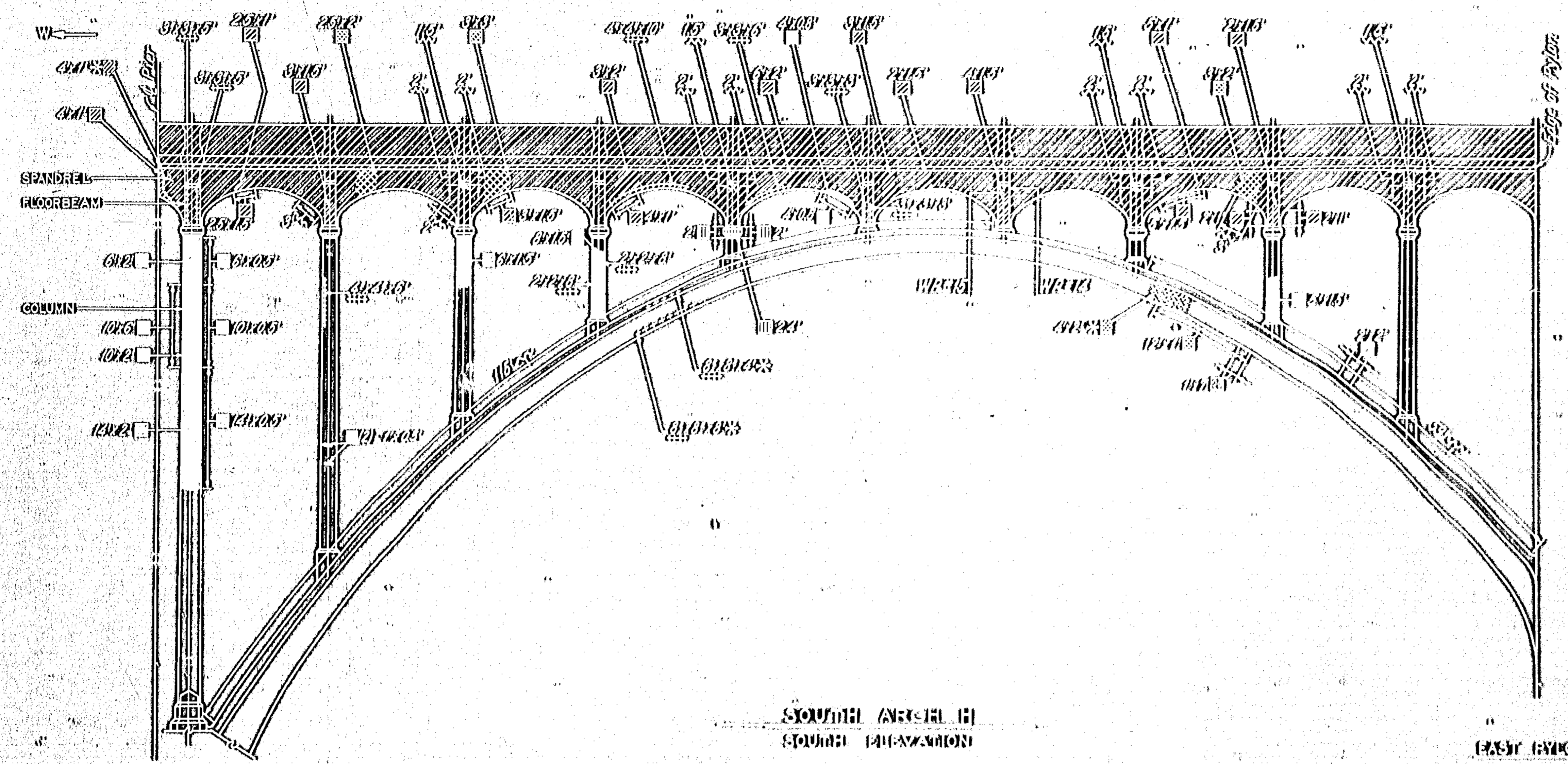
ARCHITECTURE & ENGINEERING ASSOCIATES, LIMITED
 CUYAHOGA COUNTY ENGINEER
 CLEVELAND, OHIO

BROOKPARK ROAD
 BRIDGE NO. 474 (223)
 CUYAHOGA COUNTY
 CLEVELAND, OHIO

PIER 12

DESIGN: [] DRAWN: [] CHECKED: [] REVISED TO AS BUILT: []

NO B-191



RIB 12

SOUTH ARCH II
SOUTH PIER-ARCH

EAST Pylon

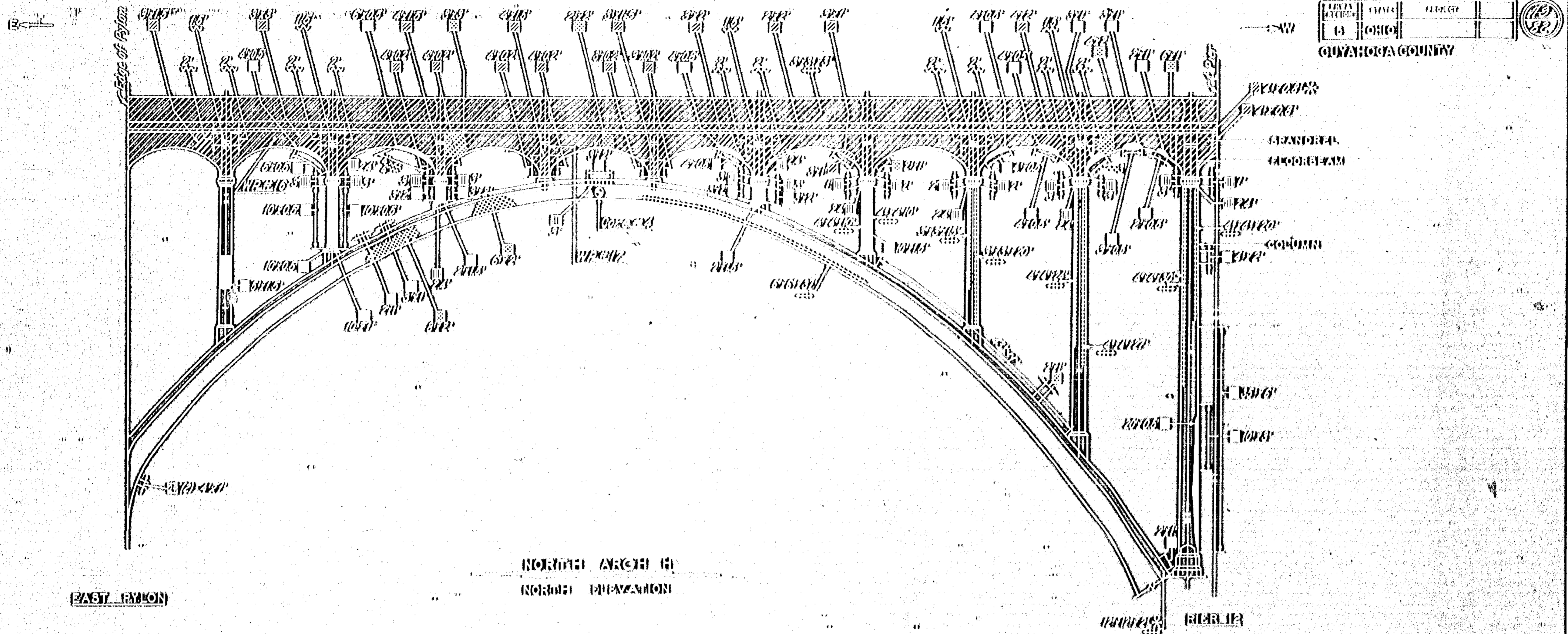
All quantities and measurements shown on this sheet are based on the text inventory of physical data on file. Changes resulting from the text inventory are included in the Summary of Quantities sheet on...

Quantities

DESCRIPTION	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY
STRANDS	LB	10	10			10	10			
MOORING	LB	10	10			10	10			
COLUMN	LB	10	10			10	10			
ARCH	LB	10	10			10	10			
TOTAL QUANTITIES		10	10			10	10			

Concrete strength 4000 psi
Concrete strength 4000 psi

ARCHER ENGINEERING & ARCHITECTS, LIMITED
 1000 BROADWAY, NEW YORK, N.Y.
 CUNYATOGA COUNTY ENGINEER
 C. H. DAVIDSON, OHIO
BROOKPARK ROAD
 BRIDGE NO. 4074-4075
 CUMING CREEK
 TOWNSHIP OF CHESTERLAND, CHESTERLAND TWP.
SOUTH ARCH II
 COUNTY (BRIDGE NO. 4074-4075) CHESTERLAND TWP., CHESTERLAND TWP.
NO. B-109
 DESIGN DRAWN CHECKED REVISIONS



Note
 Quantities and measurements shown on this sheet are based on the field inventory of physical conditions. Changes resulting from the use of the survey are included in the quantity of quantities sheet.

Quantities

ITEM	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY	UNIT	QTY
CONCRETE	CU YD	120	CU YD	120	CU YD	120	CU YD	120	CU YD	120
STEEL	TONS	10	TONS	10	TONS	10	TONS	10	TONS	10
BRICK	1000	100	1000	100	1000	100	1000	100	1000	100
CEMENT	TONS	5	TONS	5	TONS	5	TONS	5	TONS	5
WOOD	CU YD	10	CU YD	10	CU YD	10	CU YD	10	CU YD	10
PAINT	TONS	1	TONS	1	TONS	1	TONS	1	TONS	1
IRON	TONS	1	TONS	1	TONS	1	TONS	1	TONS	1
BRASS	TONS	1	TONS	1	TONS	1	TONS	1	TONS	1
GLASS	TONS	1	TONS	1	TONS	1	TONS	1	TONS	1
OTHER	TONS	1	TONS	1	TONS	1	TONS	1	TONS	1

© 1910
 Columbia County Bridge Co.
 Bridge No. 1000
 Bridge No. 1000

AMERICAN BRIDGE CO. ENGINEERS, LIMITED
 COLUMBIA COUNTY ENGINEERS
 COLUMBIA COUNTY, OHIO

COLUMBIA COUNTY ENGINEER
 CHEVINGTON OHIO

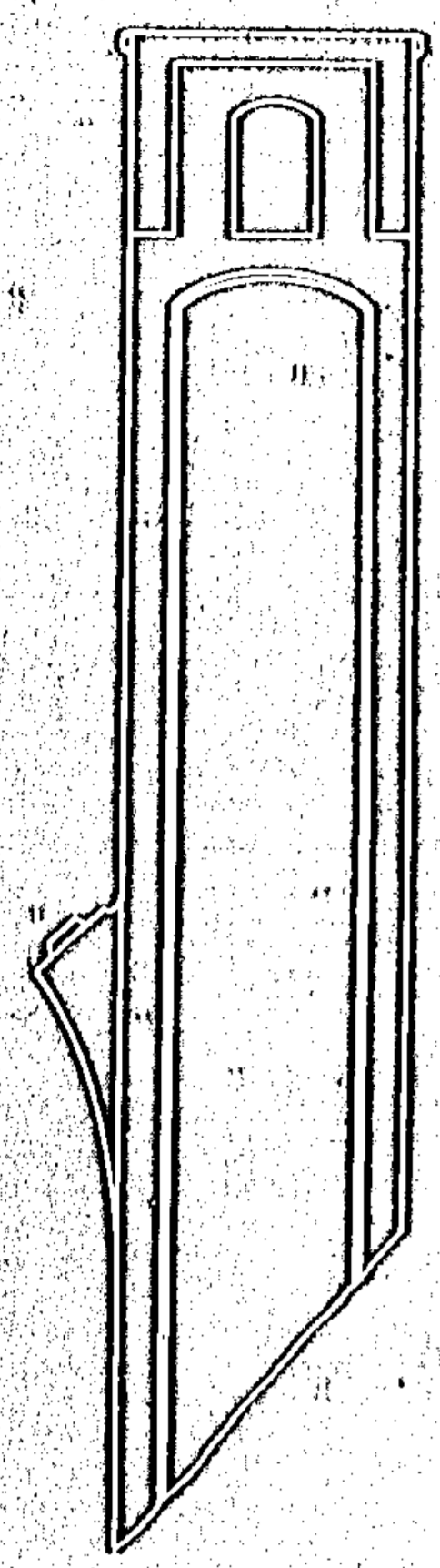
BROOKPARK ROAD
 BRIDGE NO. 1000
 COLUMBIA COUNTY, OHIO

NORTH ARCH II

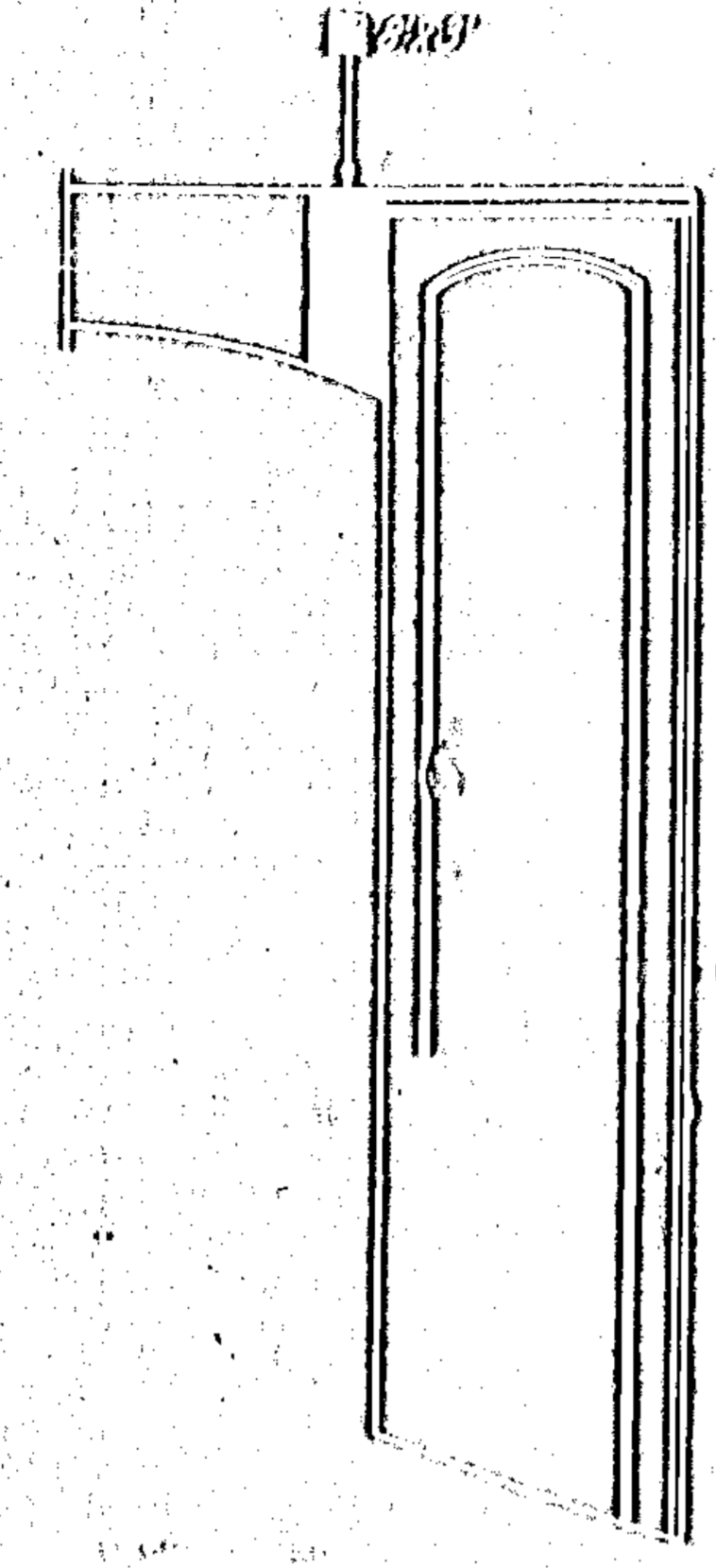
CHEVINGTON, OHIO, JANUARY 10, 1910

NO B-191

DESIGN DRAWN CHECKED REVISIONS

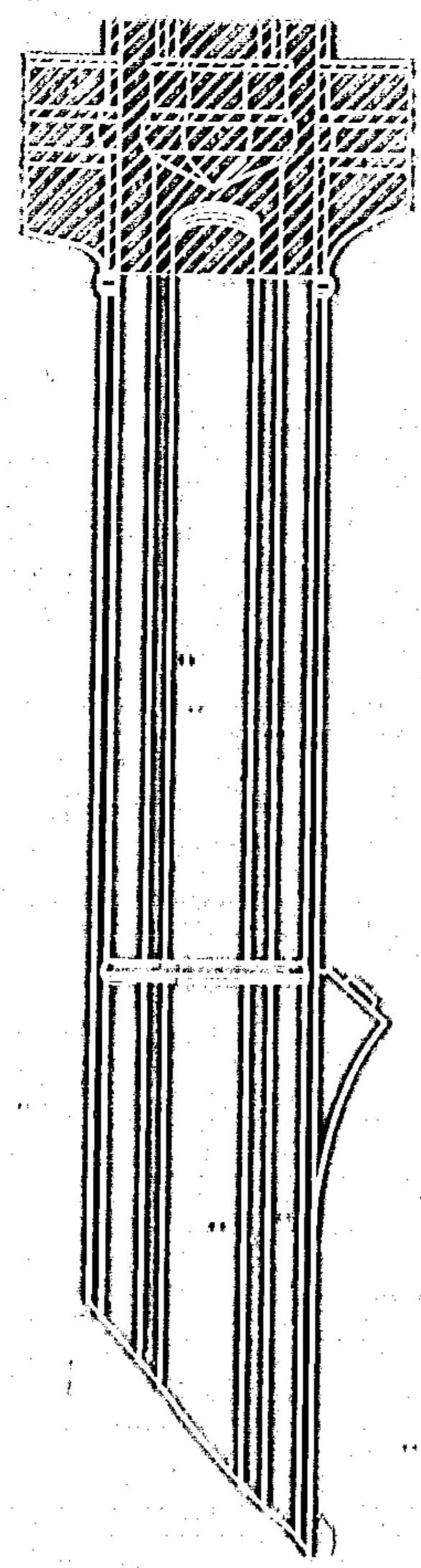


INSIDE OF NORTH ELEVATION



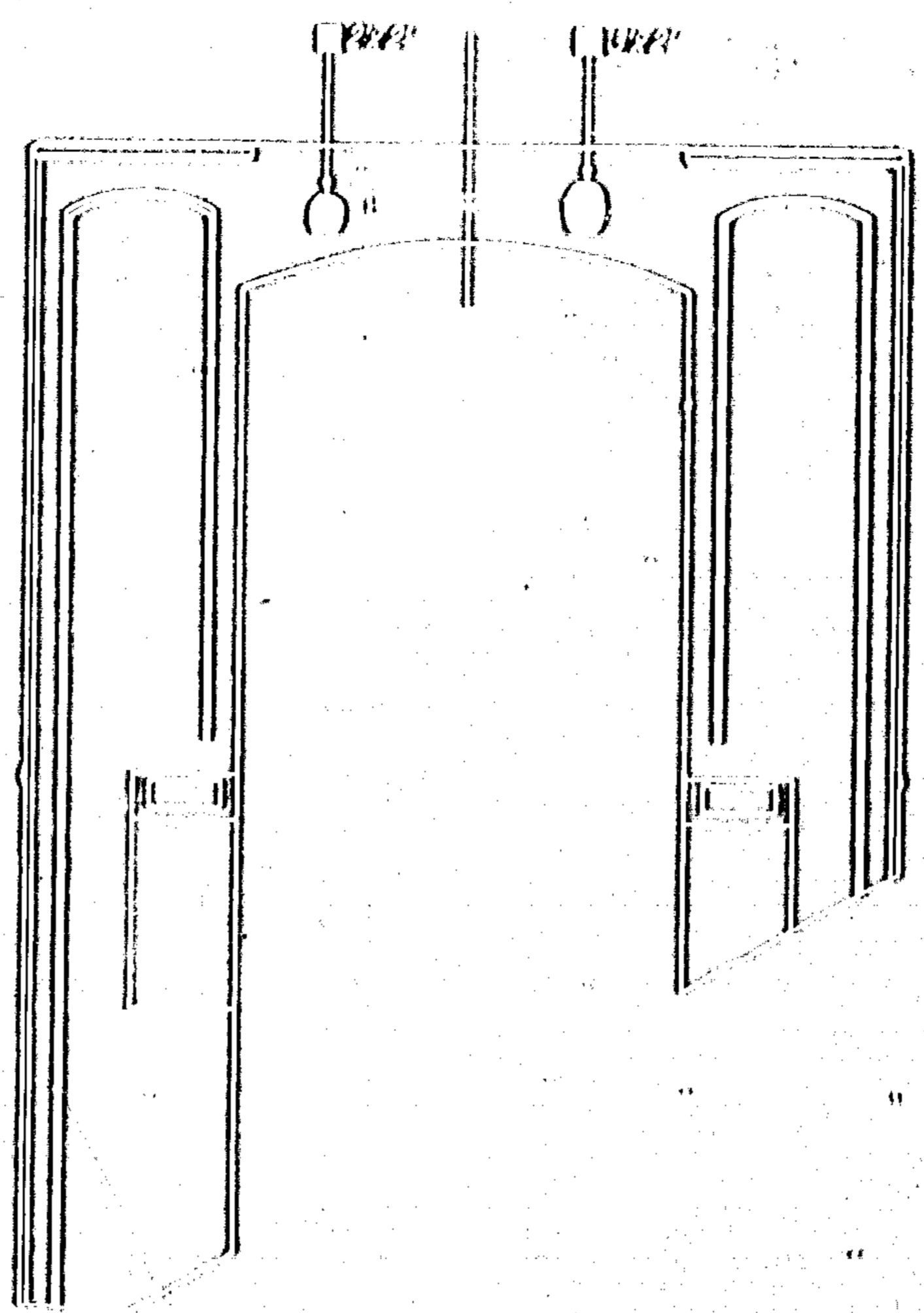
EAST ELEVATION NORTH PYLON

NORTH SIDE



NORTH ELEVATION EAST PYLON

EAST SIDE

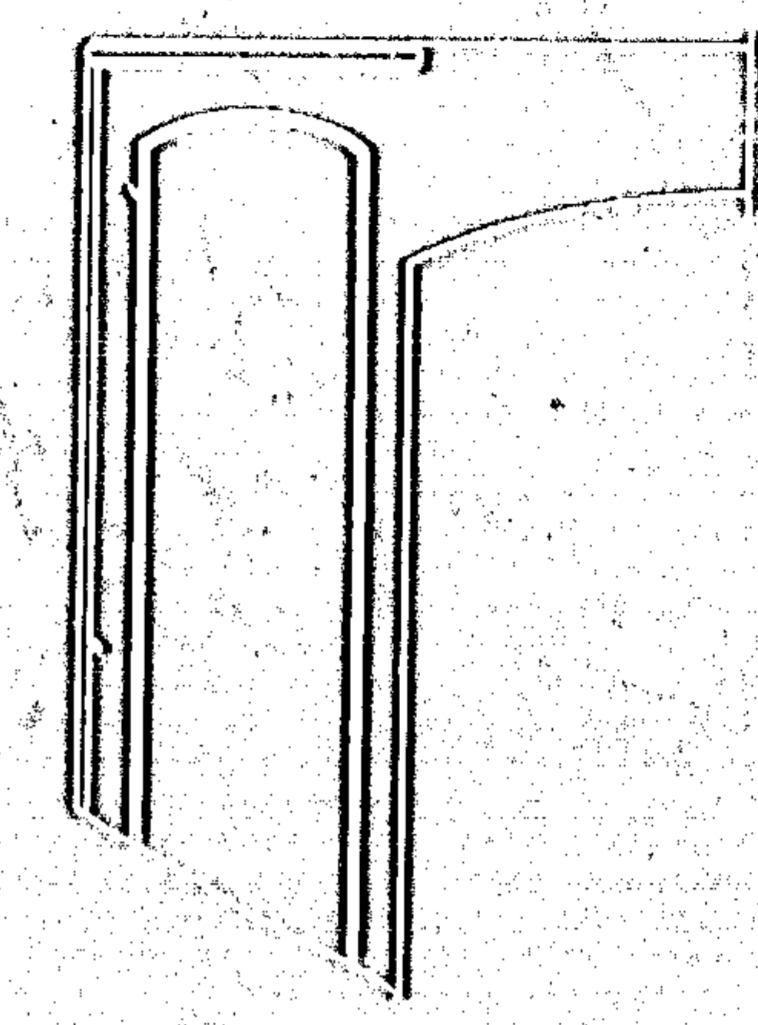


WEST ELEVATION NORTH PYLON

WEST SIDE

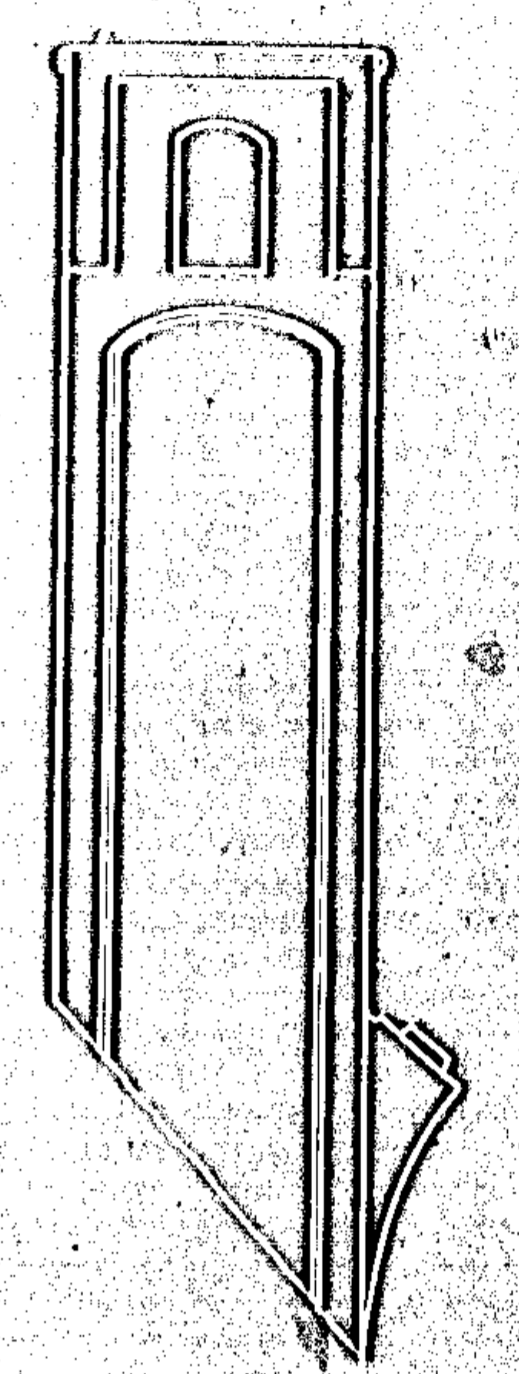


SOUTH ELEVATION NORTH PYLON



EAST ELEVATION SOUTH PYLON

SOUTH SIDE



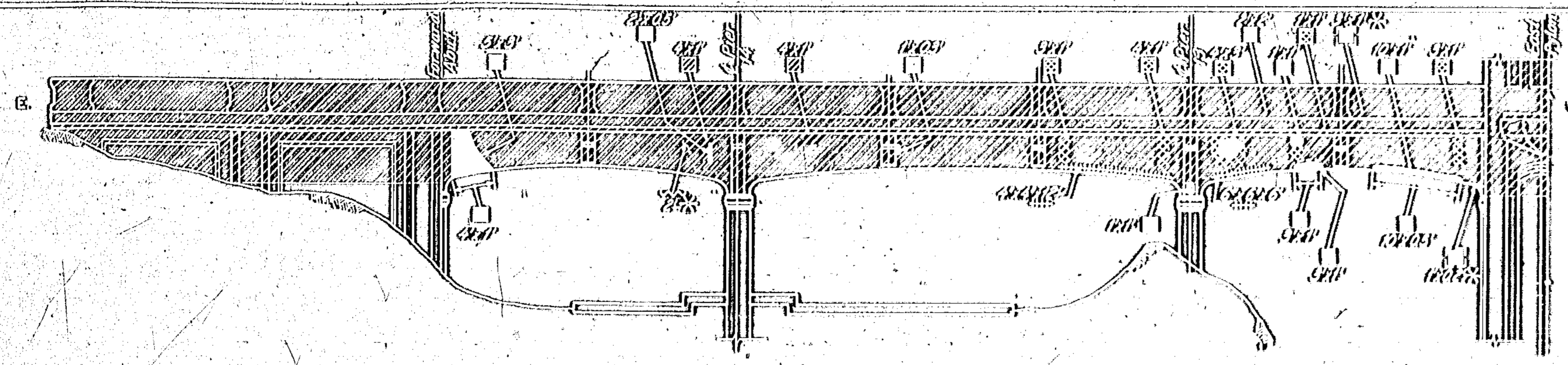
INSIDE OF SOUTH ELEVATION

QUAYHOGA COUNTY

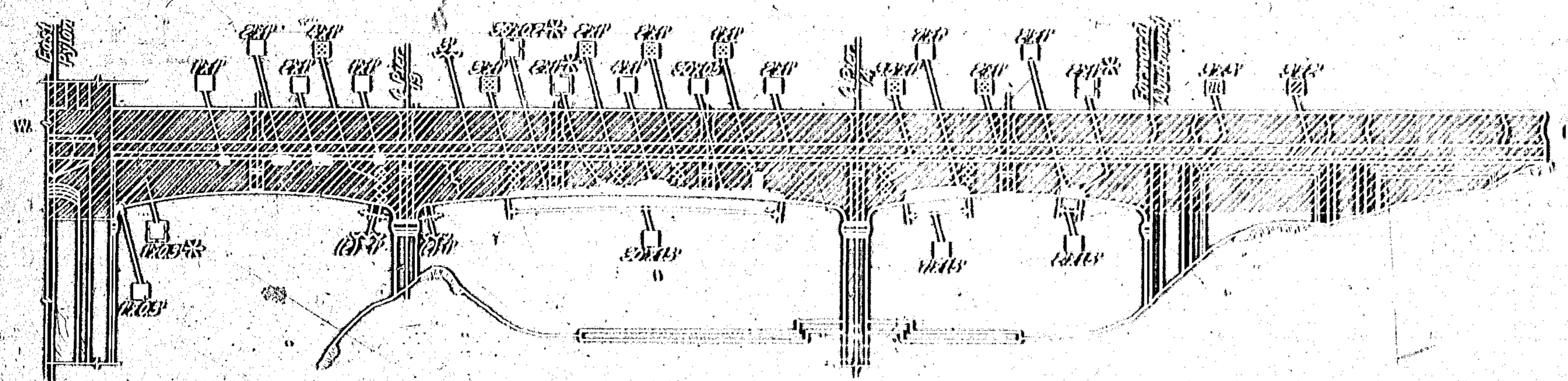
NO.	DESCRIPTION	QTY	UNIT	AMOUNT	REMARKS
1	CONCRETE	100	CU YD	100	
2	STEEL	50	TONS	50	
3	BRICK	1000	SQ YD	1000	
4	PAINT	100	GALES	100	
5	LABOR	1000	HRS	1000	
6	CEMENT	100	TONS	100	
7	AGGREGATE	100	CU YD	100	
8	WOOD	100	CU YD	100	
9	GLASS	100	SQ FT	100	
10	IRON	100	TONS	100	
11	BRASS	100	LB	100	
12	COPPER	100	LB	100	
13	ZINC	100	LB	100	
14	LEAD	100	LB	100	
15	PUTTY	100	BU	100	
16	GLUE	100	BU	100	
17	PAINT	100	GALES	100	
18	LABOR	1000	HRS	1000	
19	CEMENT	100	TONS	100	
20	AGGREGATE	100	CU YD	100	
21	WOOD	100	CU YD	100	
22	GLASS	100	SQ FT	100	
23	IRON	100	TONS	100	
24	BRASS	100	LB	100	
25	COPPER	100	LB	100	
26	ZINC	100	LB	100	
27	LEAD	100	LB	100	
28	PUTTY	100	BU	100	
29	GLUE	100	BU	100	
30	PAINT	100	GALES	100	
31	LABOR	1000	HRS	1000	
32	CEMENT	100	TONS	100	
33	AGGREGATE	100	CU YD	100	
34	WOOD	100	CU YD	100	
35	GLASS	100	SQ FT	100	
36	IRON	100	TONS	100	
37	BRASS	100	LB	100	
38	COPPER	100	LB	100	
39	ZINC	100	LB	100	
40	LEAD	100	LB	100	
41	PUTTY	100	BU	100	
42	GLUE	100	BU	100	
43	PAINT	100	GALES	100	
44	LABOR	1000	HRS	1000	
45	CEMENT	100	TONS	100	
46	AGGREGATE	100	CU YD	100	
47	WOOD	100	CU YD	100	
48	GLASS	100	SQ FT	100	
49	IRON	100	TONS	100	
50	BRASS	100	LB	100	
51	COPPER	100	LB	100	
52	ZINC	100	LB	100	
53	LEAD	100	LB	100	
54	PUTTY	100	BU	100	
55	GLUE	100	BU	100	
56	PAINT	100	GALES	100	
57	LABOR	1000	HRS	1000	
58	CEMENT	100	TONS	100	
59	AGGREGATE	100	CU YD	100	
60	WOOD	100	CU YD	100	
61	GLASS	100	SQ FT	100	
62	IRON	100	TONS	100	
63	BRASS	100	LB	100	
64	COPPER	100	LB	100	
65	ZINC	100	LB	100	
66	LEAD	100	LB	100	
67	PUTTY	100	BU	100	
68	GLUE	100	BU	100	
69	PAINT	100	GALES	100	
70	LABOR	1000	HRS	1000	
71	CEMENT	100	TONS	100	
72	AGGREGATE	100	CU YD	100	
73	WOOD	100	CU YD	100	
74	GLASS	100	SQ FT	100	
75	IRON	100	TONS	100	
76	BRASS	100	LB	100	
77	COPPER	100	LB	100	
78	ZINC	100	LB	100	
79	LEAD	100	LB	100	
80	PUTTY	100	BU	100	
81	GLUE	100	BU	100	
82	PAINT	100	GALES	100	
83	LABOR	1000	HRS	1000	
84	CEMENT	100	TONS	100	
85	AGGREGATE	100	CU YD	100	
86	WOOD	100	CU YD	100	
87	GLASS	100	SQ FT	100	
88	IRON	100	TONS	100	
89	BRASS	100	LB	100	
90	COPPER	100	LB	100	
91	ZINC	100	LB	100	
92	LEAD	100	LB	100	
93	PUTTY	100	BU	100	
94	GLUE	100	BU	100	
95	PAINT	100	GALES	100	
96	LABOR	1000	HRS	1000	
97	CEMENT	100	TONS	100	
98	AGGREGATE	100	CU YD	100	
99	WOOD	100	CU YD	100	
100	GLASS	100	SQ FT	100	

NOTES
 (1) All work to be done in accordance with the specifications for the project.
 (2) All materials to be of the best quality.
 (3) All work to be done in accordance with the drawings.

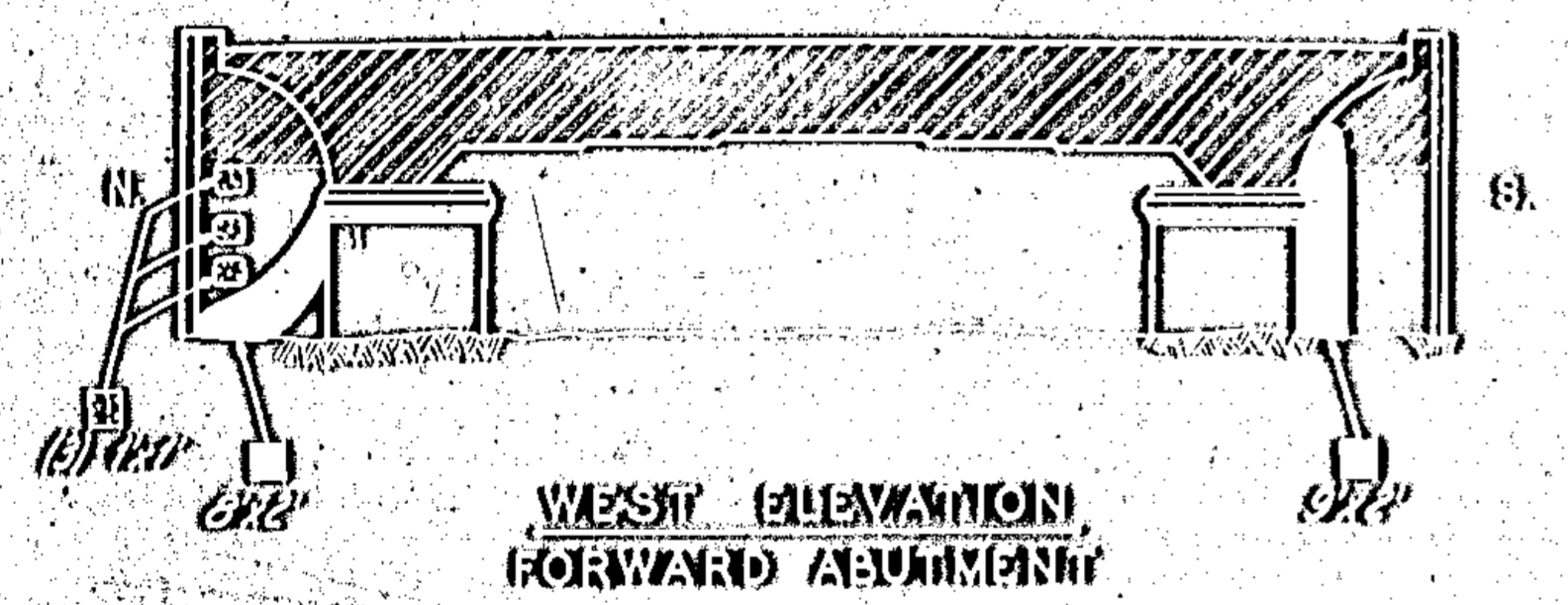
QUAYHOGA COUNTY ENGINEER
 BROOKPARK ROAD
 EAST PYLON
 NO B-191
 DESIGN DRAWN CHECKED REVISIONS



NORTH ELEVATION



SOUTH ELEVATION



WEST ELEVATION
FORWARD APPROACH

EAST APPROACH

NOTE
 Details and measurements shown on this sheet are based on the field inventory of 1910. Changes resulting from the 1910 inventory are indicated by the summary of Quantities, sheet 10.

Scale: 1/4" = 1'-0"

ITEM	QUANTITY	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT	UNIT	AMOUNT
CONCRETE	10	CU YD	10	CU YD	10	CU YD	10	CU YD	10
STEEL	10	TONS	10	TONS	10	TONS	10	TONS	10
BRICK	10	CU YD	10	CU YD	10	CU YD	10	CU YD	10
CEMENT	10	TONS	10	TONS	10	TONS	10	TONS	10
WOOD	10	CU YD	10	CU YD	10	CU YD	10	CU YD	10
PAINT	10	TONS	10	TONS	10	TONS	10	TONS	10
LABOR	10	MAN HOURS	10	MAN HOURS	10	MAN HOURS	10	MAN HOURS	10
TOTAL	10		10		10		10		10

AMERICAN ENGINEERING COMPANY			
CHICAGO, ILLINOIS			
QUINCY	COUNTY	ENGINEER	
(CLEVELAND)	(OHIO)		
BROOKPARK ROAD			
(BRIDGE OVER CREEK)			
CITY OF CLEVELAND AND CLEVELAND PARK			
EAST APPROACH			
NORTH & SOUTH ELEVATION			
COUNTY	NO. 89	REVISIONS	DATE
NO	B-101		
DESIGN	DRAWN	CHECKED	REVIEWED