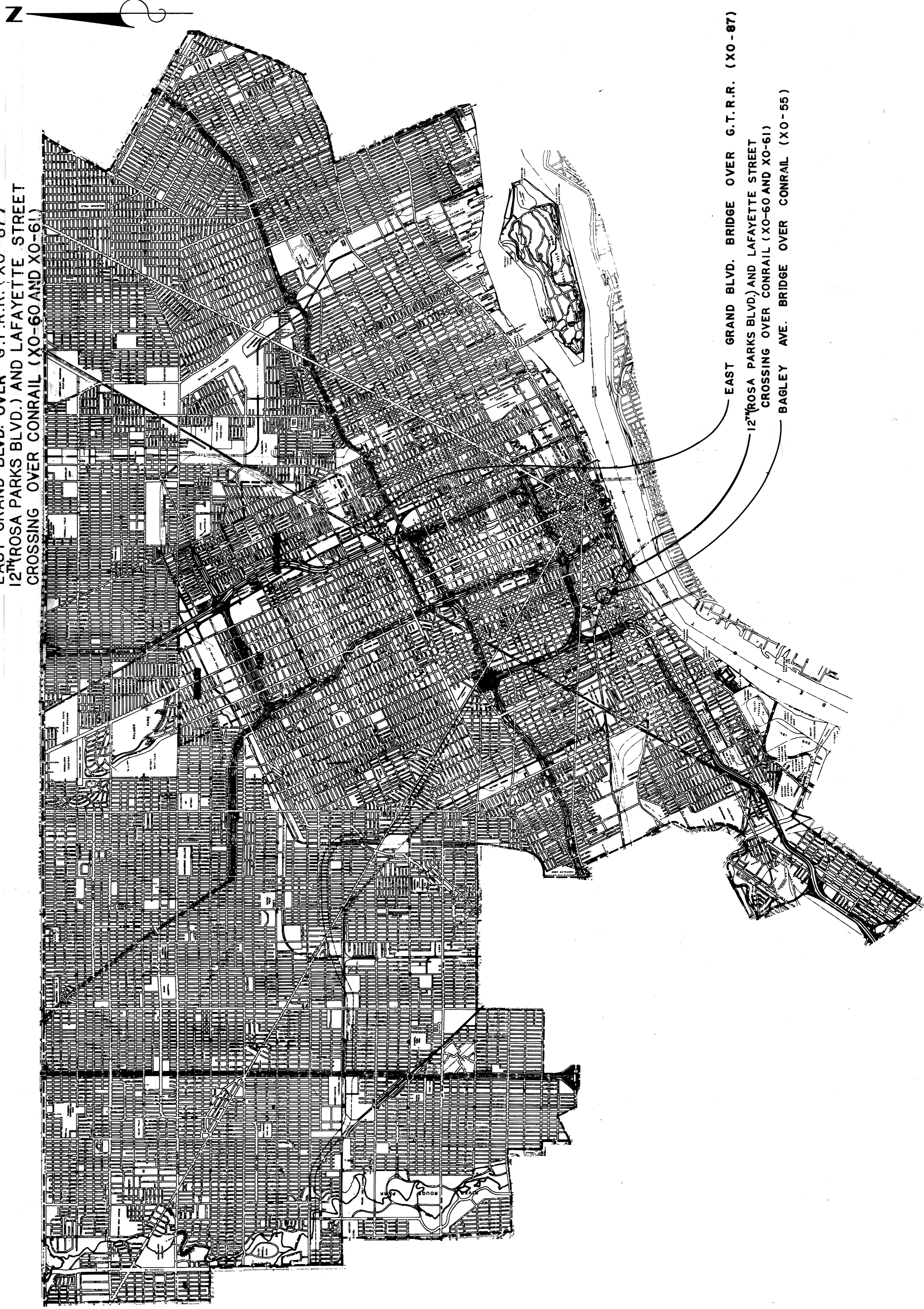


CITY OF DETROIT
COLEMAN A. YOUNG — MAYOR
CITY ENGINEERING DEPARTMENT

PLANS FOR PROPOSED
BRIDGE PROTECTIVE FENCING
FOR

DEPARTMENT OF PUBLIC WORKS
 BAGLEY AVE. OVER CONRAIL (XO-55)
 EAST GRAND BLVD. OVER G.T.R.R. (XO-87)
 12TH (ROSA PARKS BLVD.) AND LAFAYETTE STREET
 CROSSING OVER CONRAIL (XO-60 AND XO-61)



INDEX OF SHEETS

1. BAGLEY AVE. BRIDGE OVER CONRAIL (XO-55)
 PROTECTIVE FENCING DETAILS
2. EAST GRAND BLVD. BRIDGE OVER G.T.R.R. (XO-87)
 PROTECTIVE FENCING DETAILS
3. 12TH (ROSA PARKS BLVD.) AND LAFAYETTE STREET
 CROSSING OVER CONRAIL (XO-60 AND XO-61)
 PROTECTIVE FENCING DETAILS

PROJECT: INSTALLATION OF PROTECTIVE FENCING ON BAGLEY AVE. BRIDGE OVER CONRAIL (XO-55) AND EAST GRAND BLVD. BRIDGE OVER G.T.R.R. (XO-87) AND 12TH STREET (ROSA PARKS BLVD.) AND LAFAYETTE STREET CROSSING OVER CONRAIL (XO-60 AND XO-61) IN DETROIT.

CONTRACT NO. P W - 6785

PLANS PREPARED BY
CITY ENGINEERING DEPARTMENT

RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	STRUCTURAL ENGINEER	4-6-90	DATE
RECOMMENDED FOR APPROVAL	<i>[Signature]</i>	ENGINEER OF INSPECTION	4-6-90	DATE
APPROVED	<i>[Signature]</i>	DEPUTY DIRECTOR	4-6-90	DATE
APPROVED	<i>[Signature]</i>	DIRECTOR	4-6-90	DATE

DATE

REVISIONS	DATE	BY	DESCRIPTION

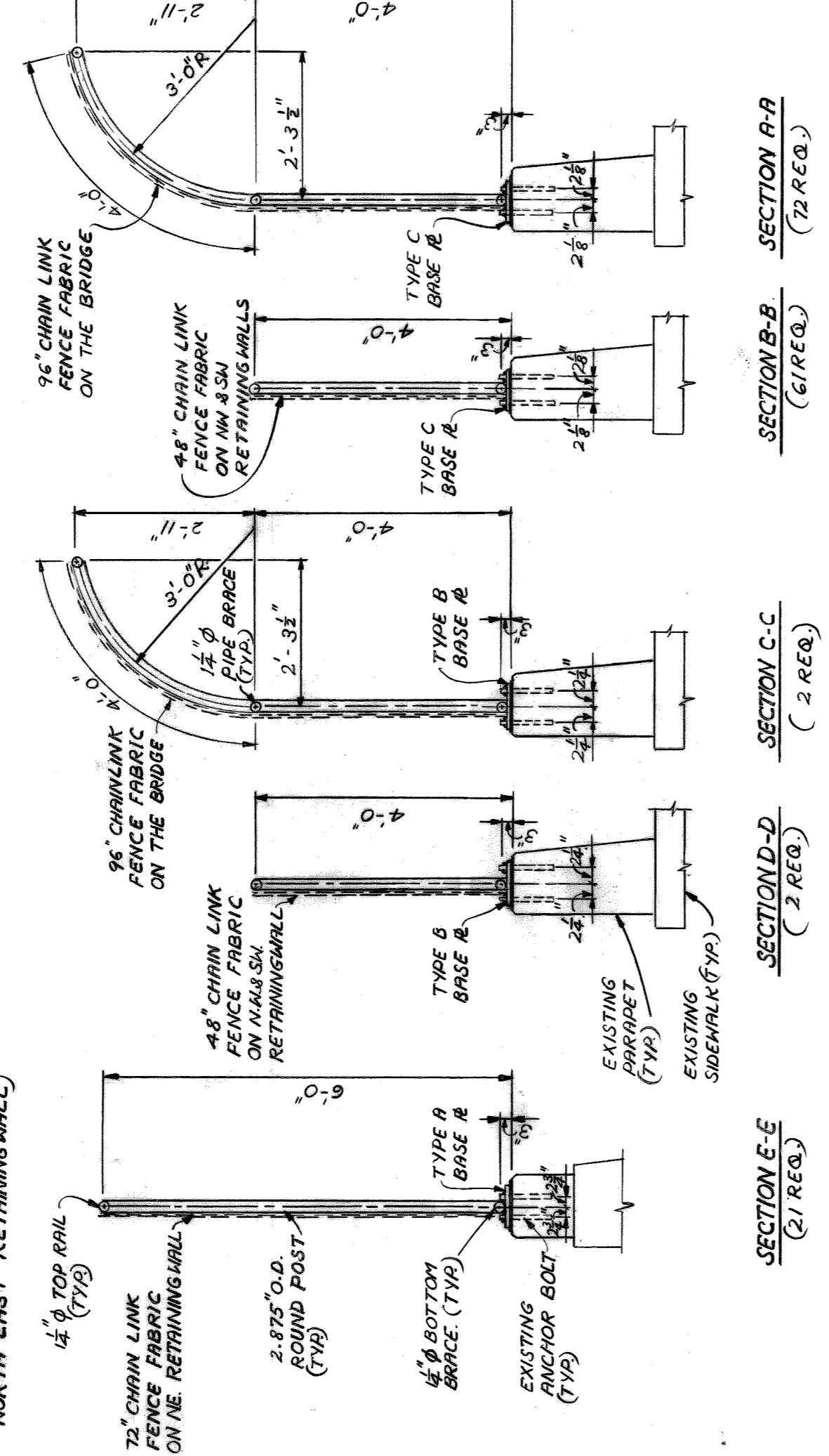
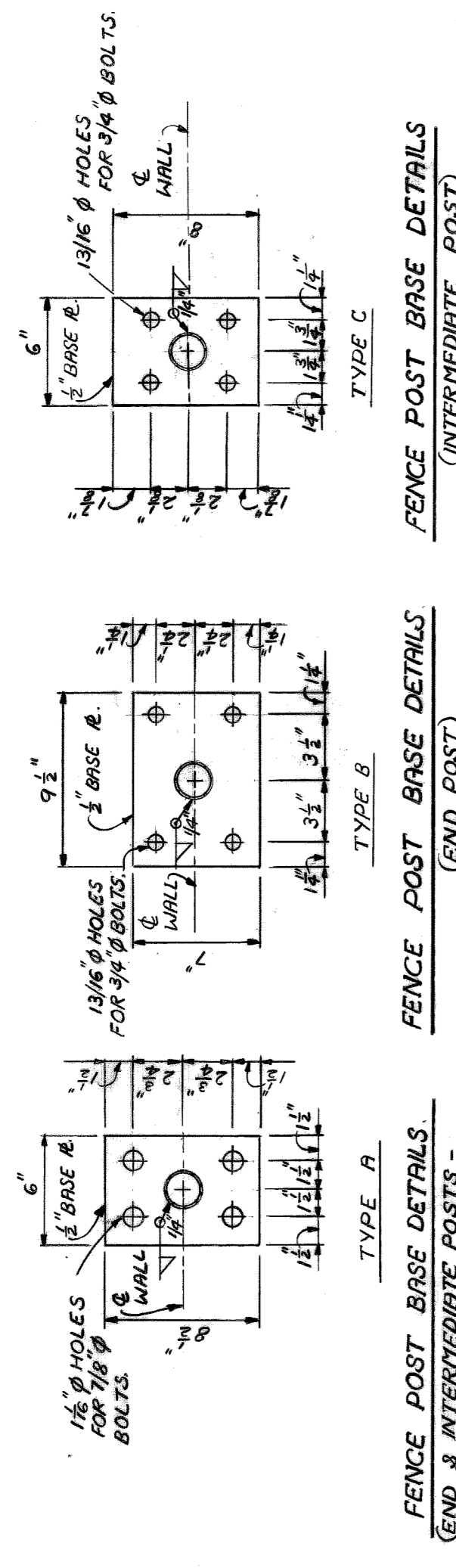
designed by J.J.
 drawn by J.J.
 checked by J.J.
 approved: *[Signature]*

CITY OF DETROIT
 city engineering department
 for DPW

PROTECTIVE FENCING DETAILS

BAGLEY AVE.
 BRIDGE OVER CONRAIL (XO-55)

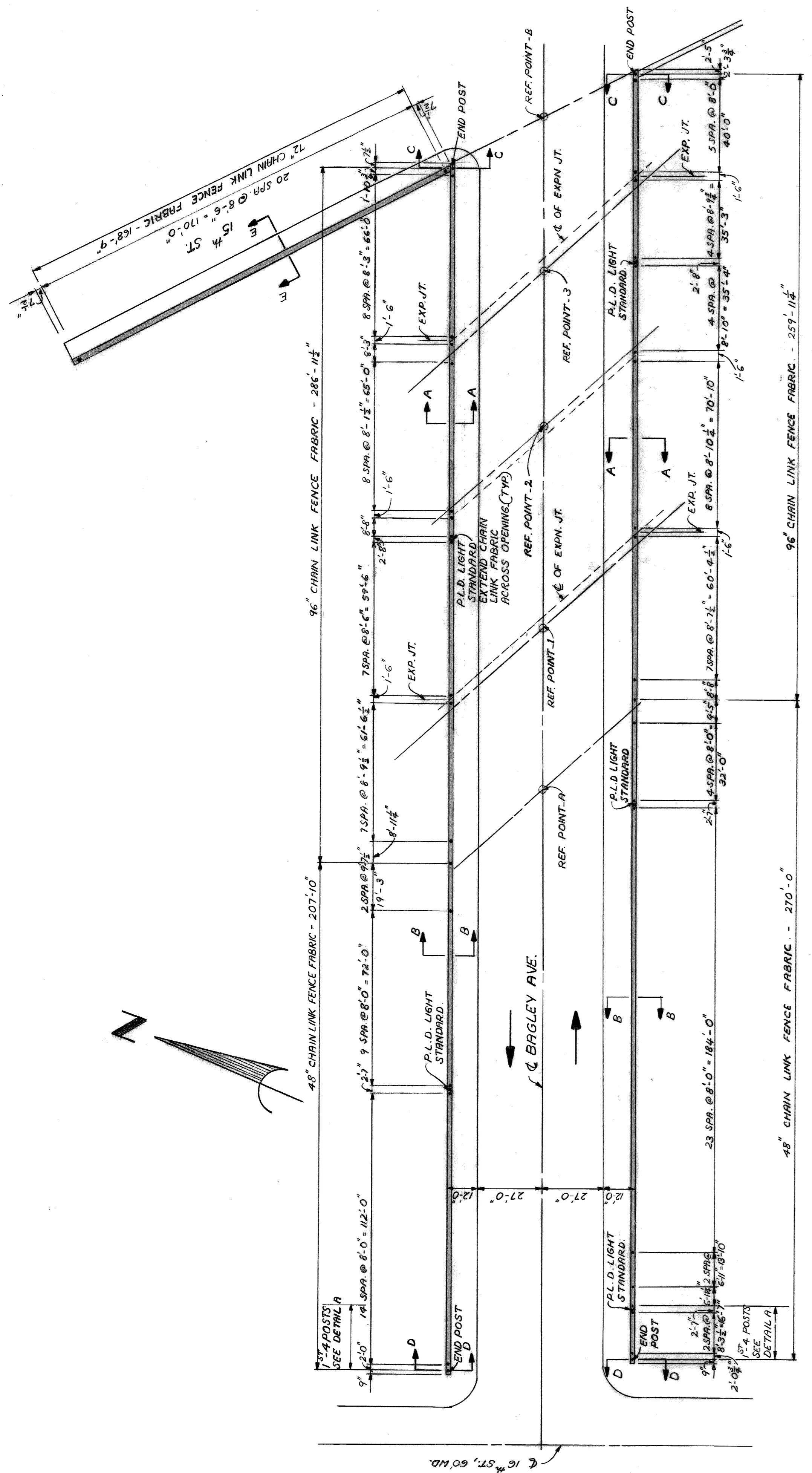
a.o. 89-22-45
 contract no. PW - 6785
 sheet 1 of 3
 drawing no. date SEPT. 1989



SECTION THRU PROPOSED FENCING

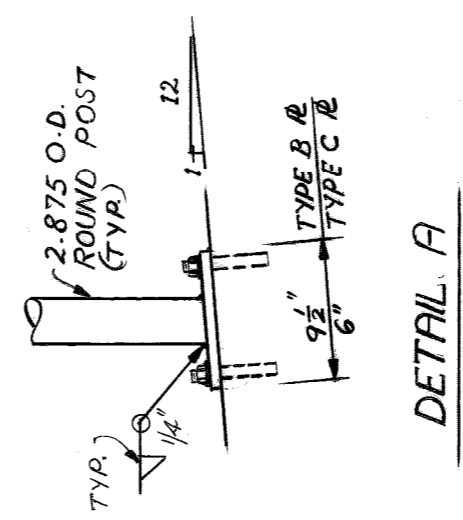
INFORMATIONAL QUANTITY
 PEDESTRIAN FENCING STRUCTURE - 7,285 SQ. FT.

GENERAL NOTES
 ALL REMAINING EXISTING ONE TUBE RAILING AND CHAIN LINK FENCING SHALL BE SALVAGED AND SHIPPED TO DPW - WESTERN YARD AT 2463 MICHIGAN AVENUE, 72 HOURS PRIOR TO SHIPPING CALL ARTHUR KOMARSKI AT 224-0039 AT DPW.
 ALL COMPONENTS ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A-53 AFTER FABRICATION.
 ALL POSTS SHALL BE 2 1/2" O.D. PIPE OR TUBE HEIGHTS 5.79 LBS. PER FT.
 ALL POSTS AND TUBING SHALL BE FURNISHED WITH MANUFACTURERS STANDARD CONNECTIONS AND ITS MINIMUM HEIGHT SHALL BE WITHIN 5% OF THAT SPECIFIED. POSTS SHALL BE BENT IN THE SHOP AS SHOWN ON THE PLAN.
 FABRIC FASTENERS SHALL BE DOUBLE-TWISTED, 9 GAUGE, GALVANIZED STEEL.
 ALL FABRIC OR CHAIN LINK FENCE SHALL BE FURNISHED WITH KNUCKLING AT BOTH SELVAGES.
 THE WORK COVERED BY THIS PLAN INCLUDES FURNISHING AND INSTALLING PEDESTRIAN FENCING AND GROUNDING SYSTEM AS SHOWN AND MAINTAINING TRAFFIC.
 SEE SPECIAL PROVISION FOR PEDESTRIAN FENCING - STRUCTURES.
 SEE SUPPLEMENTAL SPECIFICATION FOR ELECTRICAL GROUNDING SYSTEM.
 STEEL FOR POSTS SHALL CONFORM TO ASTM A53, GALVANIZED IN ACCORDANCE WITH ASTM A.123
 THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE IF REQUESTED SURFACES OF ANCHOR BOLT ON WHICH THE SPECTER COATING HAS BEEN DAMAGED SHALL BE THOROUGHLY CLEANED BY WIRE BRUSHING AND THEN PAINTED WITH 2 COATS OF AN APPROVED ZINC-RICH PAINT.
 CARE SHALL BE TAKEN SO THAT DEBRIS DOES NOT FALL FROM STRUCTURE.
 TENSION BRAS SHALL BE 3/16" X 1/4" GALVANIZED STEEL.
 CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE FABRICATING.
 EXPANSION ANCHORED BOLTS OF THE SIZE INDICATED SHALL BE BETHLEHEM WME ROOF EXPANSION TYPE WITH K-1 SELF DRILLING ANCHOR OR APPROVED EQUAL BOLT CO - SPECIAL SELF DRILLING ANCHOR OR APPROVED EQUAL POSTS AND TUBING SHALL BE BENT IN THE SHOP AS SHOWN ON THE PLANS.
 FENCE FABRIC SHALL BE GALVANIZED, "9 GAUGE WITH A 1" MESH.
 ALL WORK SHALL CONFORM TO M.D.O.T STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION 1984 EDITION EXCEPT AS SHOWN OR NOTED ON THE PLAN.

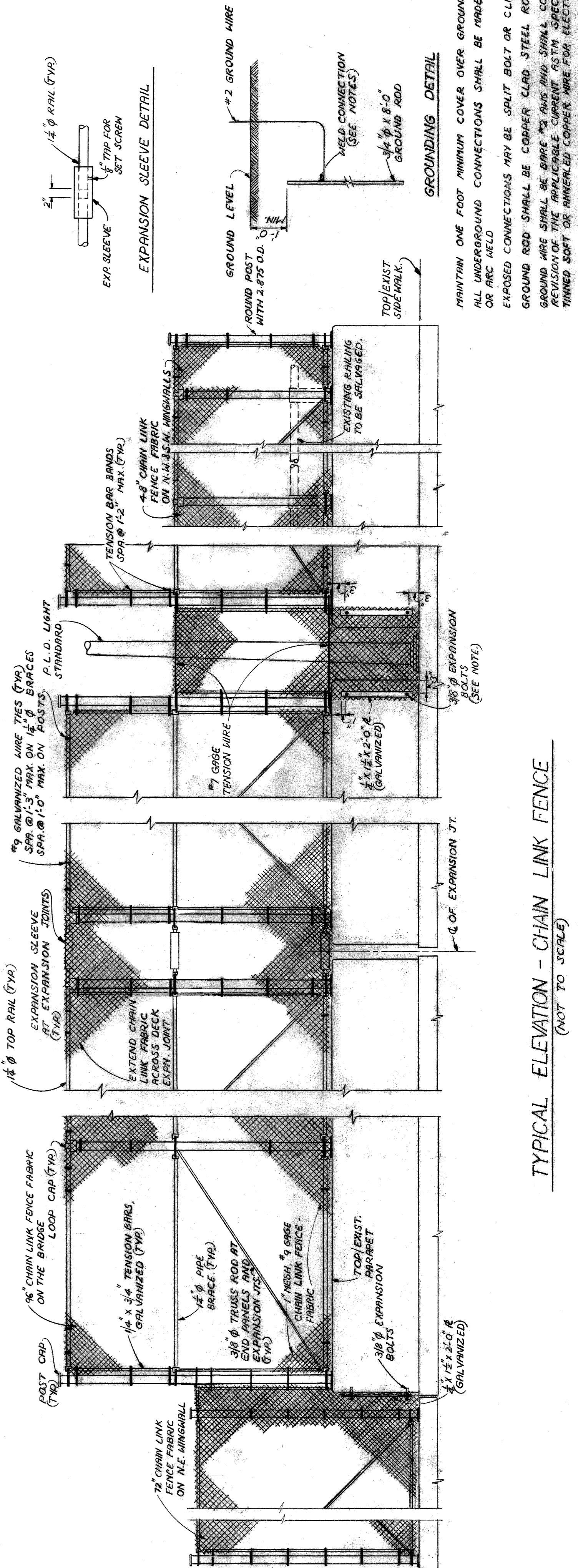


FENCE POST SPACING PLAN
 (NOT TO SCALE)

NOTE: ALL NEW FENCING SHALL BE INSTALLED ON EXISTING ORIGINAL ANCHOR BOLTS.



DETAIL A



TYPICAL ELEVATION - CHAIN LINK FENCE
 (NOT TO SCALE)

EXPANSION SLEEVE DETAIL
 MAINTAIN ONE FOOT MINIMUM COVER OVER GROUND WIRE AND GROUND ROD.
 ALL UNDERGROUND CONNECTIONS SHALL BE MADE BY CROWDED, THERMATEX OR ARC WELD.
 EXPOSED CONNECTIONS MAY BE SPLIT BOLT OR CLAMP TYPE.
 GROUND WIRE SHALL BE COPPER CLAD STEEL ROD 3/4" MIN. DIA. AND 8'-0" LG.
 GROUND ROD SHALL BE BARE #3 ANS AND SHALL CONFORM TO THE LATEST REVISION OF THE APPLICABLE CURRENT ASTM SPECIFICATION ASTM B 33 FOR TINNED SOFT OR ANNEALED COPPER WIRE FOR ELECTRICAL PURPOSES.

REVISIONS	DATE	BY	CHK'D	APP'D	VD

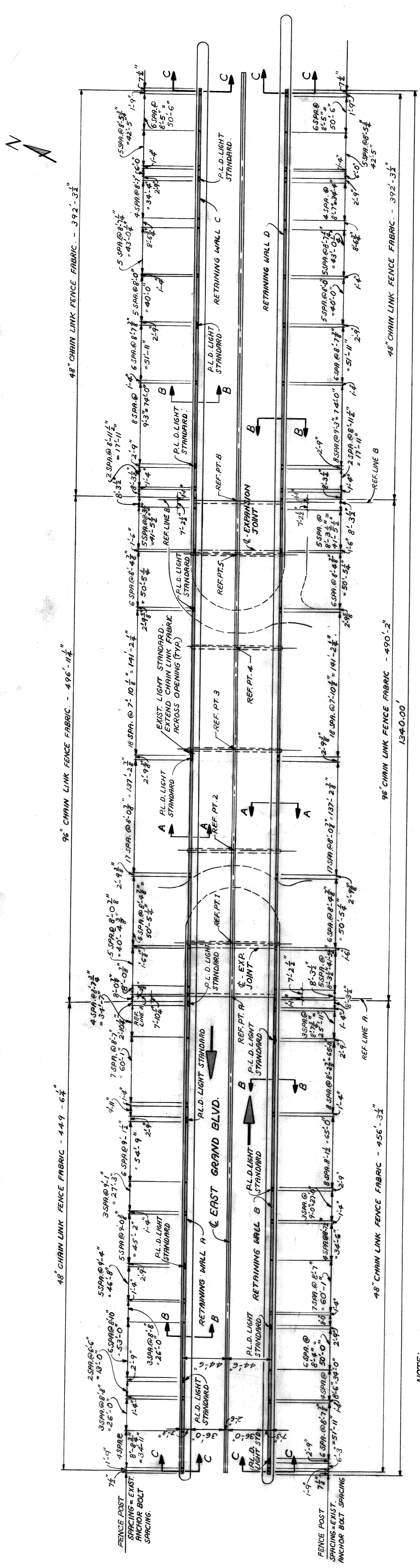
designed by J.J.
 drawn by J.J.
 checked by [Signature]
 approved by [Signature]

CITY OF DETROIT
 city engineering department
 for DPW

PROTECTIVE FENCING DETAILS

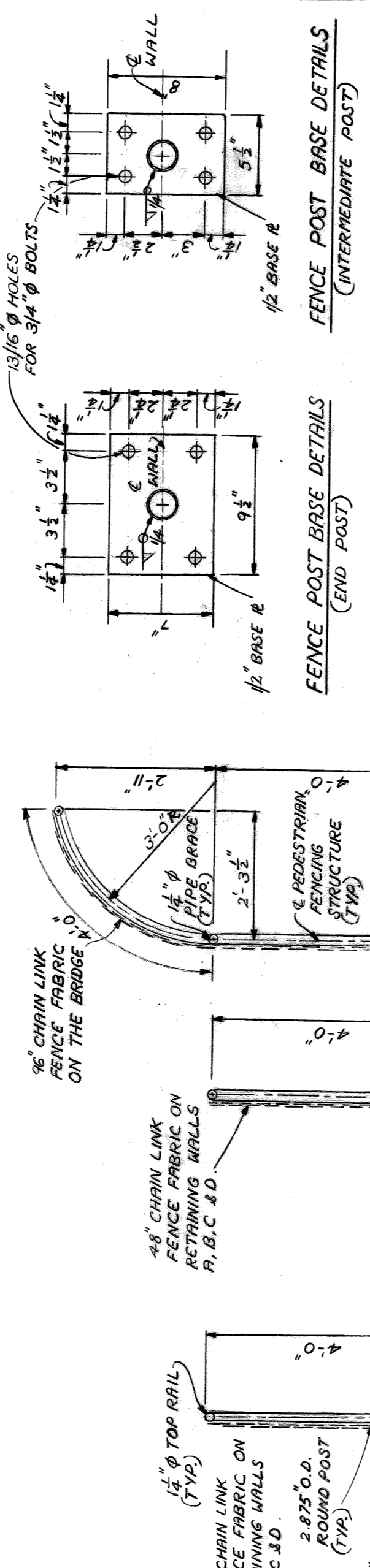
EAST GRAND BLVD. BRIDGE OVER G.T.R.R. (XO-87)

a.o. 89-22-45
 contract no. PW-6785
 sheet 2 of 3
 drawing no.
 date SEPT. - 1989



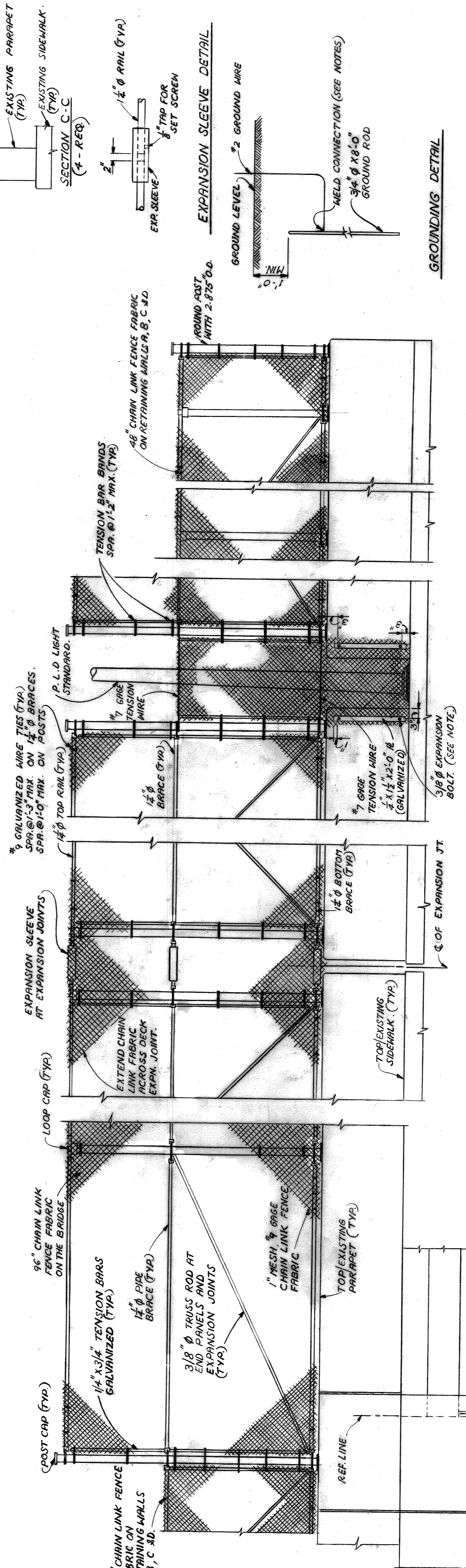
FENCE POST SPACING PLAN (N.T.S.)

NOTE: ALL NEW FENCING SHALL BE INSTALLED ON EXISTING ORIGINAL ANCHOR BOLTS



INFORMATIONAL QUANTITY
 PEDESTRIAN FENCING STRUCTURES = 14660 SQ. FT.

GENERAL NOTES:
 ALL COMPONENTS ARE TO BE GALVANIZED IN ACCORDANCE WITH A.S.T.M. A-153 AFTER FABRICATION.
 ALL POSTS SHALL BE 2\"/>



TYPICAL ELEVATION - CHAIN LINK FENCE (N.T.S.)

MINIMUM ONE FOOT MINIMUM COVER OVER GROUND WIRE AND GROUND ROD.
 ALL UNDERGROUND CONNECTIONS SHALL BE MADE BY CHASE, THROUGHT,
 EXPOSED CONNECTIONS MAY BE SPLIT BOLT OR CLAMP TYPE.
 GROUND ROD SHALL BE COPPER CLAD STEEL ROD 3/4\"/>

DATE	APPROVED	DESIGNED	DRAWN	CHECKED	APPROVED
		H.L.S.		M.C.	M. Chan

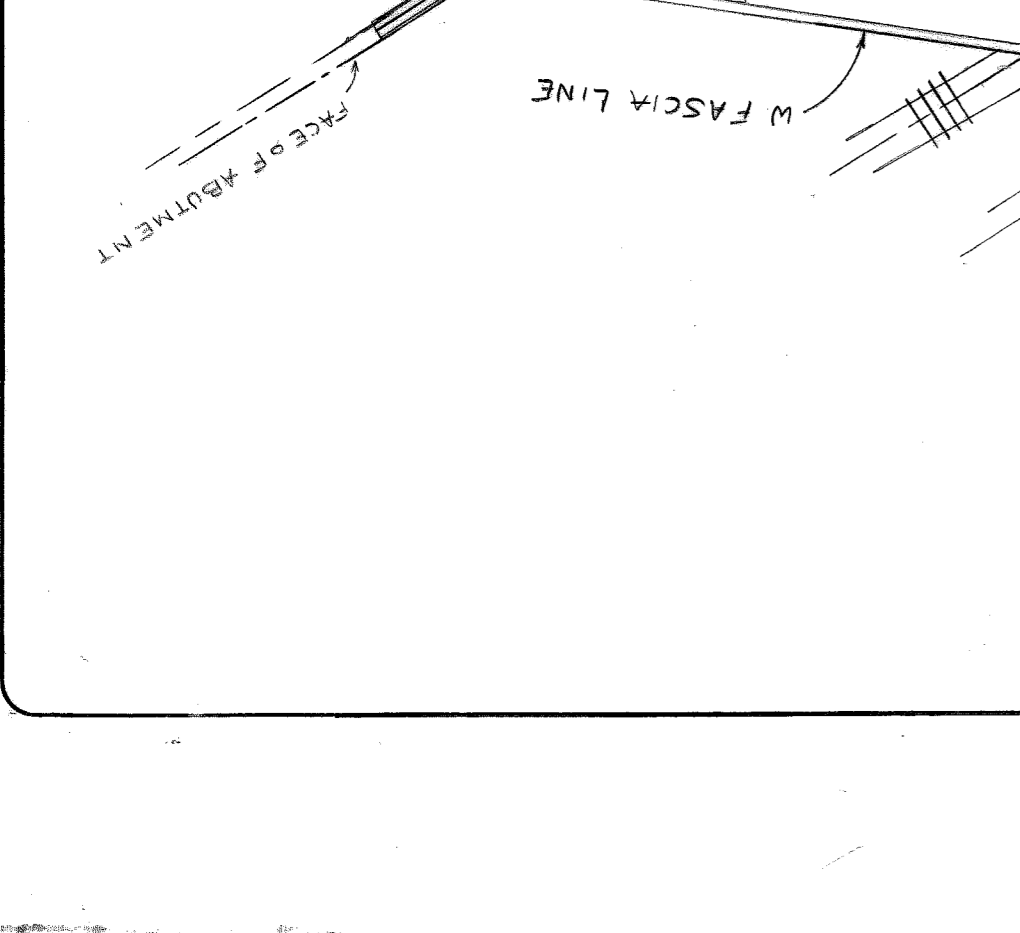
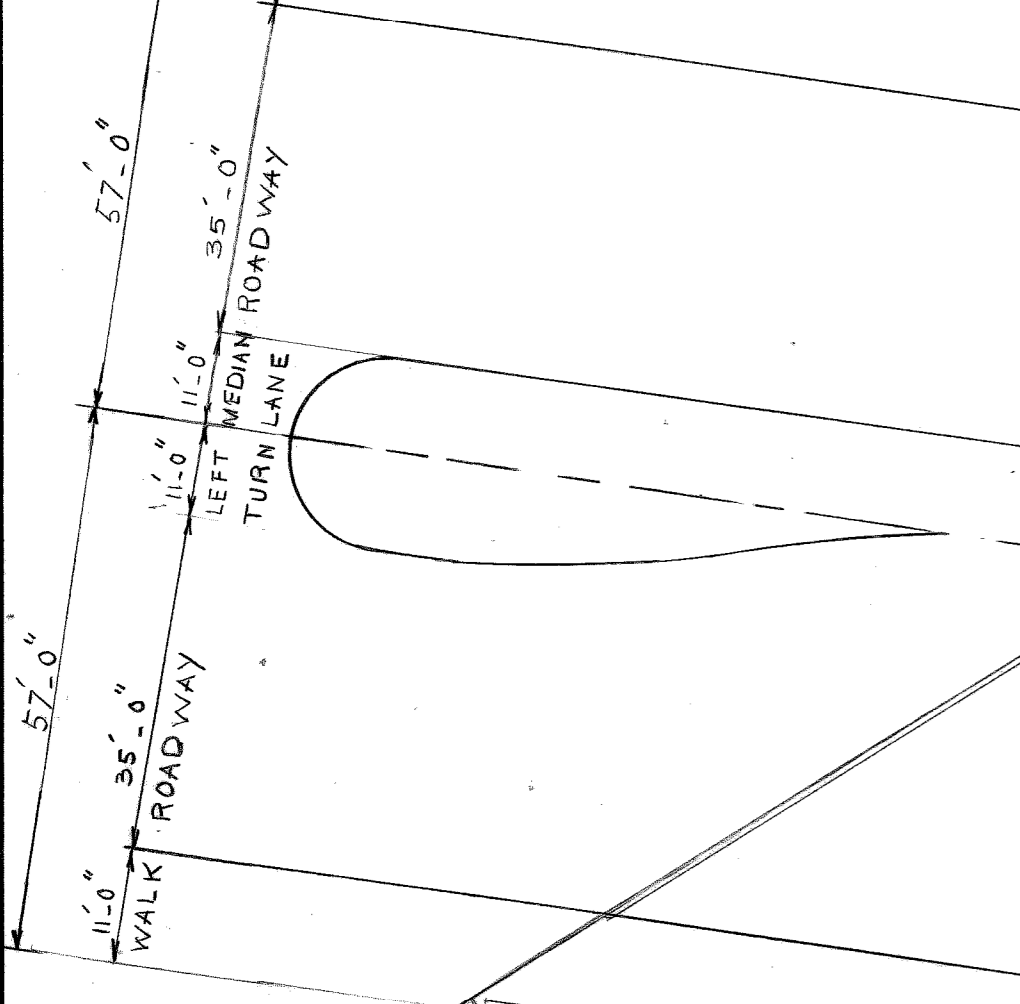
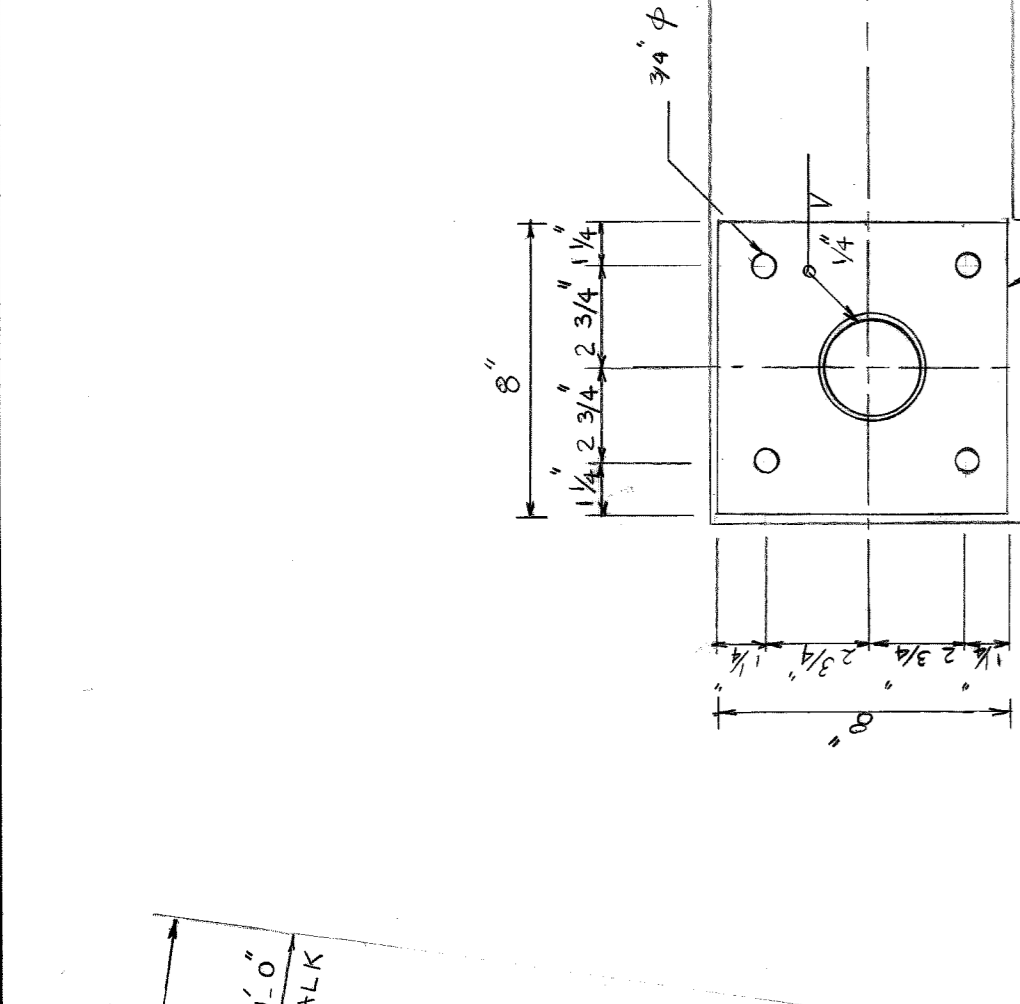
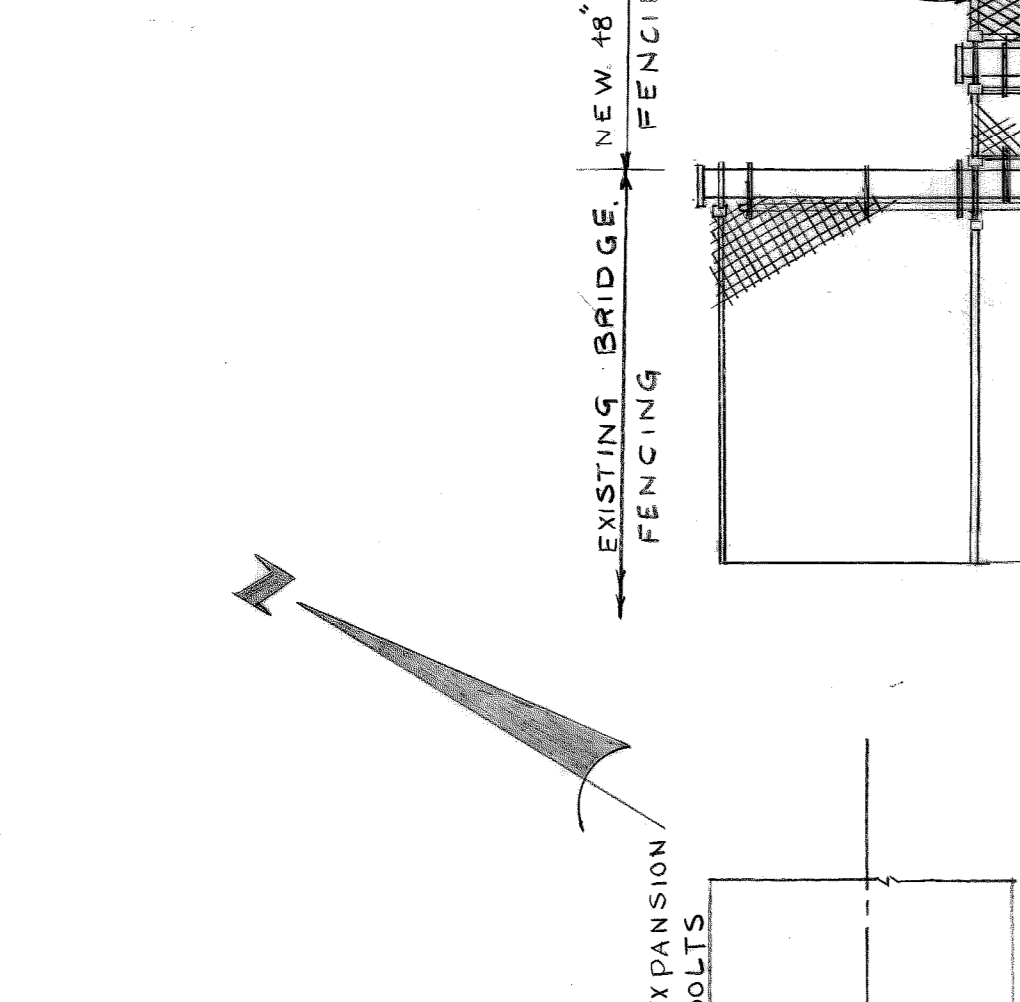
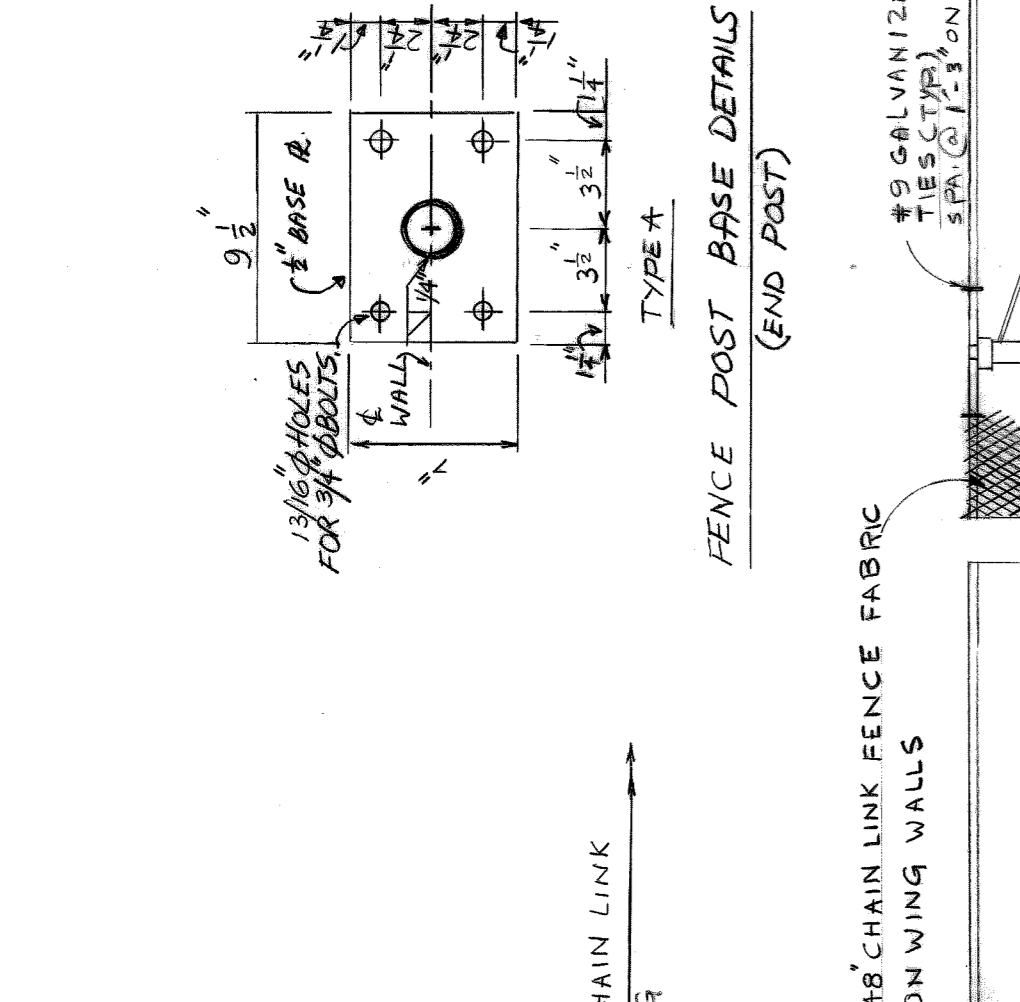
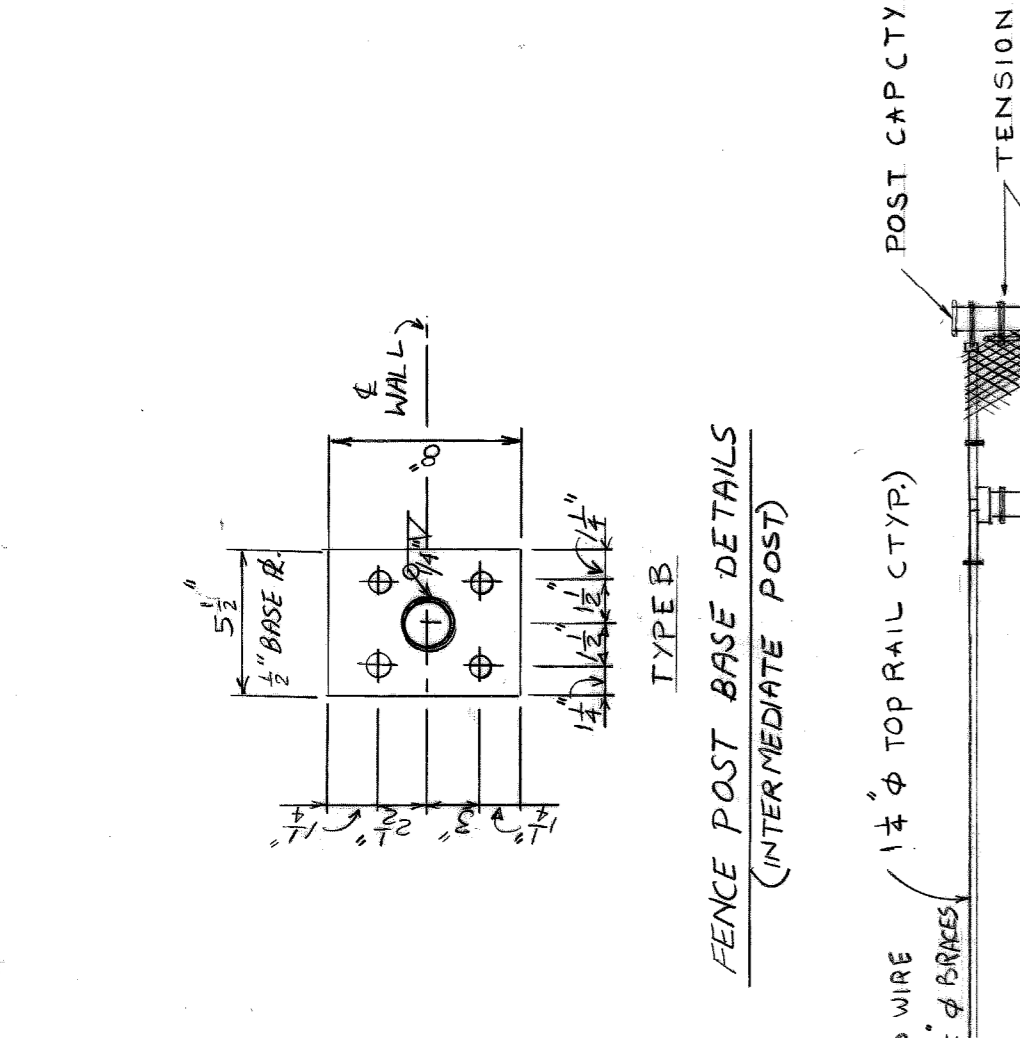
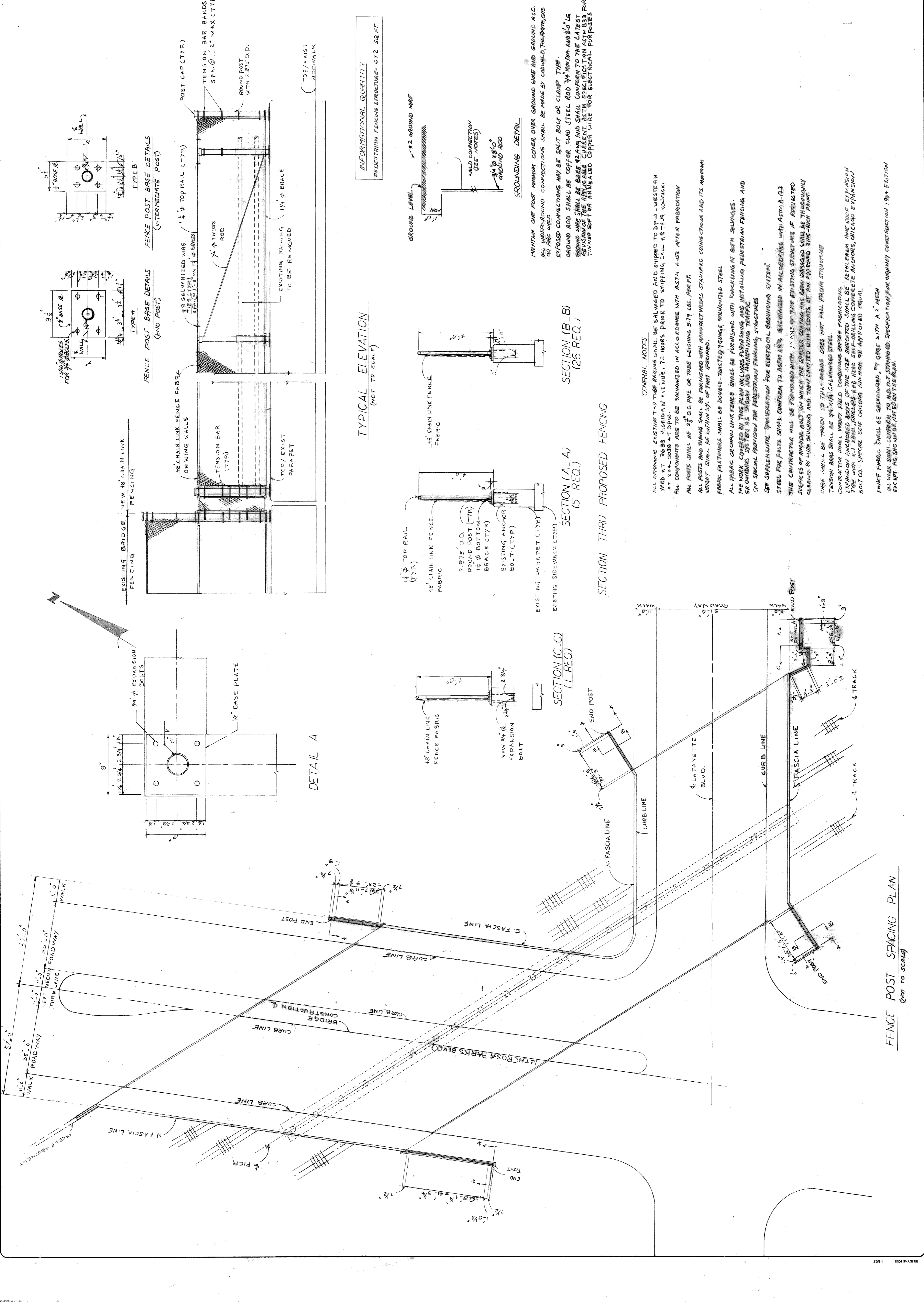
designed by H.L.S.
 drawn by
 checked by M.C.
 approved: M. Chan

CITY OF DETROIT
 city engineering department
 for D.P.W.

PROTECTIVE FENCING DETAIL

TWELFTH STREET
 ROSA PARKS BLVD BRIDGE
 XO-601 & LAFAYETTE OVER CONRAIL
 XO-611

a.o. 89-22-45
 contract no. PW 6785
 sheet 3 of 3
 drawing no.
 date MAR. 1990



SECTION (A-A)
 (5 REQ.)

SECTION (B-B)
 (26 REQ.)

SECTION (C-C)
 (1 REQ.)

SECTION THRU PROPOSED FENCING

GENERAL NOTES

INFORMATIONAL QUANTITY
 PEDESTRIAN FENCING STRUCTURE - 672 SQ.FT.

MAINTAIN ONE FOOT MINIMUM COVER OVER GROUND WIRE AND GROUND ROD. ALL UNDERGROUND CONNECTIONS SHALL BE MADE BY COR-WELD, THERMATEAS, OR FMC WELD. EXPOSED CONNECTIONS MAY BE SPLIT BOLT OR CLAMP TYPE. GROUND ROD SHALL BE COPPER CLAD STEEL ROD 3/4" DIA. AND 8' LG. GROUND WIRE SHALL BE BARE #2 AWG AND SHALL CONFORM TO THE LATEST REVISIONS OF THE APPLICABLE CURRENT ASTM SPECIFICATION ASTM B33 FOR TINNED SOFT OR ANNEALED COPPER WIRE FOR ELECTRICAL PURPOSES.

ALL REMAINING EXISTING TWO TUBE RAILING SHALL BE SALVAGED AND SHIPPED TO DPW - WESTERN YARD AT 2633 MICHIGAN AVE. IN 72 HOURS PRIOR TO SHIPPING CALL ARTHUR KOWALSKI AT 244-0039 AT DPW. ALL COMPONENTS ARE TO BE GALVANIZED IN ACCORDANCE WITH ASTM A-103 AFTER FABRICATION. ALL POSTS SHALL BE 2" O.D. PIPE OR TUBE WEIGHING 5.79 LBS. PER FT. ALL POSTS AND TUBING SHALL BE FURNISHED WITH MANUFACTURERS STANDARD CONNECTIONS AND ITS MINIMUM WEIGHT SHALL BE WITHIN 5% OF THAT SPECIFIED. FABRIC FASTENERS SHALL BE DOUBLE-TWISTED 9 GAUGE, GALVANIZED STEEL. ALL FABRIC OR CHAIN LINK FENCE SHALL BE FURNISHED WITH KNUCKLING AT BOTH SELVAGES. THE WORK COVERED BY THIS PLAN INCLUDES FURNISHING AND INSTALLING PEDESTRIAN FENCING, AND GROUNDING SYSTEM AS SHOWN AND MAINTAINING TRAFFIC. SEE SPECIAL PROVISION FOR PEDESTRIAN FENCING STRUCTURES. SEE SUPPLEMENTAL SPECIFICATION FOR ELECTRICAL GROUNDING SYSTEM. STEEL FOR PARTS SHALL CONFORM TO ASTM A-103 GALVANIZED IN ACCORDANCE WITH ASTM A-123. THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE IF REQUESTED. SURFACES OF ANCHOR BOLTS WHICH THE GREATER COATING HAS BEEN DAMAGED SHALL BE THOROUGHLY CLEANED BY WIRE BRUSHING AND THEN PRIMAINTED WITH EPOXY OF AN APPROVED EPOXY-RICH PRIMAINT. CORNERS SHALL BE TAKEN SO THAT DEBRIS DOES NOT FALL FROM STRUCTURE. TENSION BARS SHALL BE 3/4" DIA GALVANIZED STEEL. CONTRACTOR SHALL VERIFY FIELD CONDITIONS BEFORE FABRICATING. EXPANSION ANCHORED BOLTS OF THE SIZE INDICATED SHALL BE BETHLEHEM MAKE ADD 5% EXTENSION TYPE WITH K-7 SHELL, PHILLIPS HEAD SELF-DRILLING CONCRETE ANCHORS, CHICAGO EXPANSION BOLT CO. - SPECIAL SELF-DRILLING ANCHOR OR APPROVED EQUAL. FENCE FABRIC SHALL BE GALVANIZED, #9 GAGE WITH A 2" MESH. ALL WORK SHALL CONFORM TO H.D.O.T. STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION 1984 EDITION EXCEPT AS SHOWN OR NOTED ON THE PLAN.

EXISTING BRIDGE, NEW 48" CHAIN LINK FENCING
 TYPE A
 TYPE B
 FENCE POST BASE DETAILS (END POST)
 FENCE POST BASE DETAILS (INTERMEDIATE POST)
 TENSION BAR BANDS SPA. @ 1'-2" MAX (CTYP.)
 TENSION BAR (TYP.)
 3/4" TRUSS ROD
 1 1/4" BRACE
 1 1/4" TOP RAIL (CTYP.)
 2.875" O.D. ROUND POST (TYP.)
 1 1/2" BOTTOM BRACE (CTYP.)
 48" CHAIN LINK FENCE FABRIC
 1 1/2" TOP RAIL (TYP.)
 48" CHAIN LINK FENCE FABRIC
 1 1/4" TOP RAIL (TYP.)
 48" CHAIN LINK FENCE FABRIC
 2.875" O.D. ROUND POST (TYP.)
 1 1/2" BOTTOM BRACE (CTYP.)
 EXISTING ANCHOR BOLT (CTYP.)
 EXISTING PARAPET (CTYP.)
 EXISTING SIDEWALK (CTYP.)
 1 1/2" TOP RAIL (TYP.)
 48" CHAIN LINK FENCE FABRIC
 2.875" O.D. ROUND POST (TYP.)
 1 1/2" BOTTOM BRACE (CTYP.)
 EXISTING ANCHOR BOLT (CTYP.)
 EXISTING PARAPET (CTYP.)
 EXISTING SIDEWALK (CTYP.)
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 EXISTING SIDEWALK (CTYP.)
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 EXISTING PARAPET (CTYP.)
 EXISTING SIDEWALK (CTYP.)

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 EXISTING ANCHOR BOLT (CTYP.)
 EXISTING PARAPET (CTYP.)
 EXISTING SIDEWALK (CTYP.)

DETAIL A

FENCE POST SPACING PLAN
 (NOT TO SCALE)