THE IMPROVEMENTS COVERED BY THESE PLANS SHALL BE DONE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION 1990 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND SUPPLEMENTAL SPECIFICATIONS.

THE PROPOSED IMPROVEMENTS COVERED BY THESE PLANS ARE IN ACCORDANCE WITH THE AASHTD; A POLICY ON GEOMETRIC DESIGN OF HIGHWAY AND STREETS, 1984.

ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS SHALL BE BEVELED WITH 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

THE DESIGN OF STRUCTURAL MEMBERS IS BASED ON MATERIAL HAVING THE FOLLOWING GRADES AND STRESSES:

CONCRETE GRADE 35S	f'c =	3,000 PSI
CONCRETE GRADE 45D	f'c =	4,000 PSI
PRESTRESSED CONCRETE	f'c =	5,000 PSI
STEEL REINFORCEMENT (PRESTRESSED BEAM STIRRUPS)	f'y =	40,000 PSI
STEEL REINFORCEMENT	f'y =	60,000 PSI
PRESTRESSING STRANDS	f's =	270,000 PSI

CITY OF DETROIT

DENNIS W. ARCHER - MAYOR

CITY ENGINEERING DEPARTMENT

PLANS FOR PROPOSED

BRIDGE RECONSTRUCTION AND REPAIR

FOR

DEPARTMENT OF PUBLIC WORKS

INDEX OF SHEETS

INSULRUHE BRIDGE RECONSTRUCTION

MDOT STANDARDS

II-39K	TRANSVERSE PAVEMENT JOINTS
II-40G	LAID TRANSFER ASSEMBLIES FOR TRANSVERSE JOINT
II-41G	LONGITUDINAL PAVEMENT JOINTS
II-52F	TEMPORARY CONCRETE BARRIER
V-96D	SOIL EROISION AND SEDIMENTATION CONTROL MEASURES
VI-125H	LIGHTED ARROWS AND BARRICADES
VI-126E	PLACEMENT OF TEMPORARY CONCRETE BARRIER
XI-103C	MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY & NAME PLATE DETAILS

PROJECT:	CONTRACT NO.

PLANS PREPARED BY

CITY ENGINEERING DEPARTMENT

RECOMMENDED FOR APPROVAL _____ DATE

RECOMMENDED FOR APPROVAL _____ DATE

APPROVED _____ DATE

APPROVED _____ DIRECTOR DATE

DATE	DRWG. NO.

SUMMARY OF ESTIMATED QUANTITIES

ITEM NUMBER	ITEMS	TOTAL PLAN QUANTITY	UNIT	SHEET R-2	SHEET R-3	SHEET S-1	SHEET S-2	SHEET S-3	SHEET S-4	SHEET S-5	SHEET S-6	SHEET S-7	SHEET S-8	SHEET S-9	SHEET A-1	SHEET A-2	SHEET T-1	SHEET	SHEET	SHEET	SHEET	SHEET	ENTIRE PROJECT	TOTAL AS-CONSTRUCTED QUANTITY
2010001	CLEARING	.1	ACRE	.1																				
2060001	REMOVAL OF STRUCTURES	1	LUMP SUM	1																				
2070002	REMOVING PAVEMENT	416	SYD	416																				
2070006	REMOVING SIDEWALK	61	SYD	61																				
2080001	EARTH EXCAVATION	230	CYD	230																				
2080021	EMBANKMENT (CIP)	12	CYD	12																				
2080051	GRANULAR MATERIAL CLASS II	20	CYD	20																				
2090003	UNCLASSIFIED FOUNDATION EXCAVATION	1650	CYD	1650																				
2090005	STRUCTURE BACKFILL (CIP)	640	CYD	640																				
2130015	SILT FENCE	200	LFT	200																				
2130017	FILTER BAG	2	EACH	2																				
3010123	AGGREGATE BASE UNDER CONCRETE (6" IN PLACE)	452	SYD		452												1							
4000090	BITUMINOUS MIXTURE NO 1100L 20AA	73	TONS		73																			
4500173	CONCRETE PAVEMENT WITH INTEGRAL CURB - REINF. 9"	416	SYD		416																			
4500275	EXPANSION JOINT E2	88	LFT		88																			
4500276	EXPANSION JOINT E3	59	LFT		59																			
4500086	MISCELLANEOUS CONCRETE PAVEMENT WITH INTERIOR CURB - REINFORCEMENT VARIABLE THICKNESS	26	SYD		26																			
5030004	CONCRETE GRADE 35S	10	LYD							10														
5030023	SUBSTRUCTURE CONCRETE	275.3	CYD							275.3														
5030024	SUPERSTRUCTURE CONCRETE	70.4	CYD									70.4												
5030027	FORMING, FINISHING AND CURING-SUPERSTRUCTURE CONCRETE	1	L.S.									1												
5030030	STEEL REINFORCEMENT	20454	LBS											20454										
5030031	STEEL REINFORCEMENT, EPOXY COATED	8969	LBS											8969										
5030052	PENETRATING WATER REPELLANT TREATMENT	16	SYD							16														
5030250	STRUCTURE NAME PLATE																							
5037000	PRE-CAST ORNAMENTAL CONCRETE CAP	1	L.S.												1									
5040062	ELASTOMERIC BEARING PADS 1"	42	SFT									42												
5050002	PRESTRESSED CONCRETE DECK 17"	1992	SFT									1992												
5050008	POST TENSIONING		L.S.																					
5060001	JOINT WATERPROOFING	480	SFT							320		160												
5140046	ADJUSTING DRAINAGE STRUCTURE (MANHOLE)	1	EACH	1																				
5140047	RECONSTRUCTING DRAINAGE STRUCTURE (MANHOLES)	2.5	FT	2.5																				
6010017	RIPRAP, HEAVY	125	CYD	125																				
6110002	4" CONCRETE SIDEWALK	550	SFT		550																			
6117000	BRICK FACING	200	SYD												200									
6200001	MOVING FENCE	25	LFT	25																				
6310026	BARRICADE, TYPE II LIGHTED (FURNISHED)	31	EACH														31							
6310027	BARRICADE, TYPE II LIGHTED (OPERATED)	31	EACH														31							
6310036	BARRICADE, TYPE III (FURNISHED)	7	EACH														7							
6310037	BARRICADE, TYPE III (OPERATED)	7	EACH														7							
6310057	SIGN, TYPE B TEMPORARY	129	SFT														129							
6362300	MOBILIZATION	1	L.S.																					
6530007	CLASS A SEEDING	8	LBS	8																				
6530010	CHEMICAL FERTILIZER NUTRIENT	20	LBS	20																				
6530014	TOP SOIL SURFACE 3"	400	SYD	400																				
6530030	MULCH	.2	TON	.2																				
6530031	ANCHORING MULCH	.1	ACRE	.1																				
6907000	RELOCATING LIGHTING STANDARD	1	L.S.	1																				
	ALTERNATE STONE ORNAMENTAL CAP	1	L.S.												1									

DATE	REVISION	DATE	REVISION
	ORIGINAL ISSUE		
			FINAL WITH THE 'AS CONSTRUCTED'

DRAWN: C.J.B.
DRAFT CHECK: F.T.
DESIGN CHECK: B.C.
APPROVED: F.T.

TOPO	LEVELS
P.S. NO.	PAGE
P.C. NO.	BY
	PAGE

CITY OF DETROIT

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd
Detroit, Michigan 48226

INSELRUHE BRIDGE RECONSTRUCTION

SUMMARY OF ESTIMATED QUANTITIES

FED. PROJ. NO.

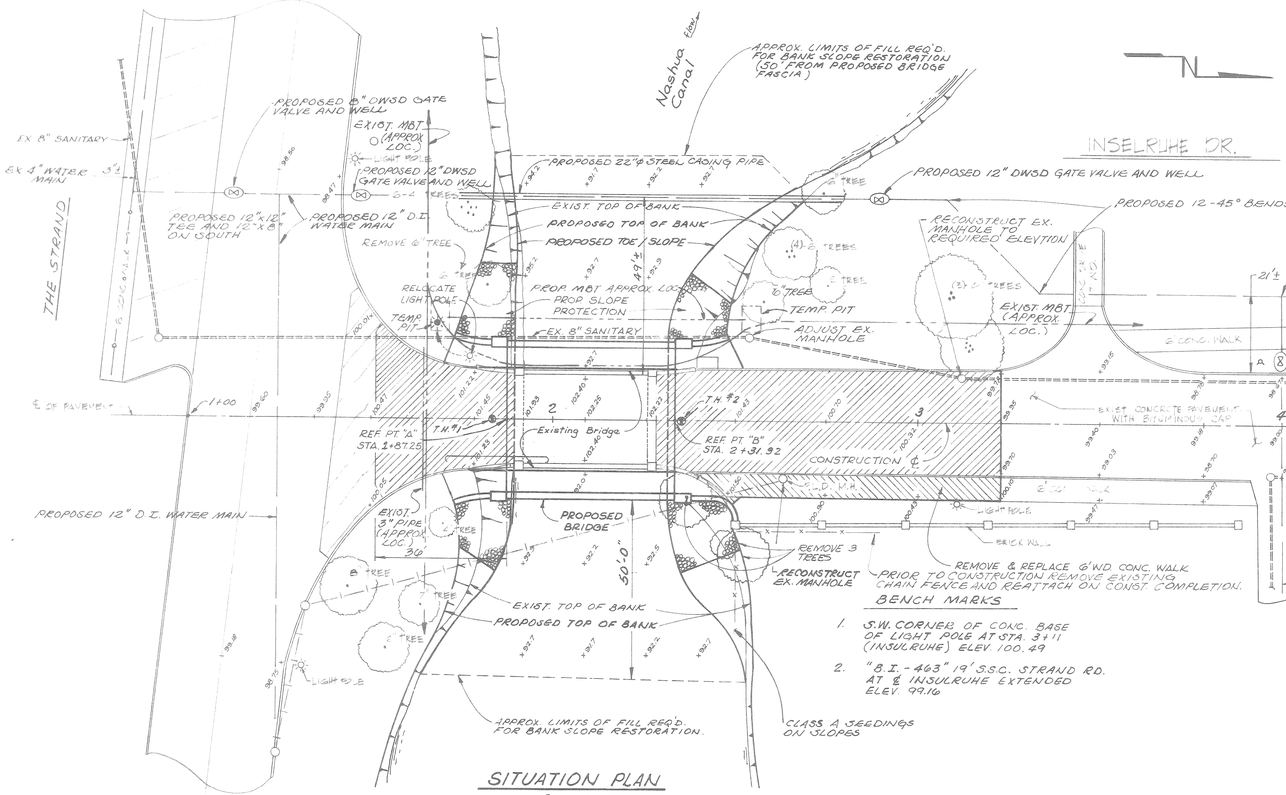
DATE: JULY, 1993

SCALE: NONE

JOB No.: 9304

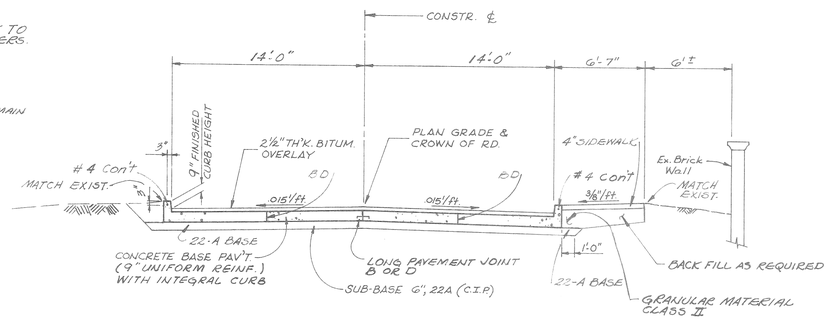
R-1

3/14/01
9304 R1



SITUATION PLAN
1" = 20'

NOTE:
WATER MAIN WORK TO BE DONE BY OTHERS.



TYPICAL APPROACH SECTION
STA. 2+31.92 to STA. 3+25
Scale: 3/16" = 1'-0"

BENCH MARKS
1. S.W. CORNER OF CONC. BASE OF LIGHT POLE AT STA. 3+11 (INSELRUHE) ELEV. 100.49
2. "B.I. - 463" 19' S.S.C. STRAND RD. AT ℄ INSELRUHE EXTENDED ELEV. 99.16

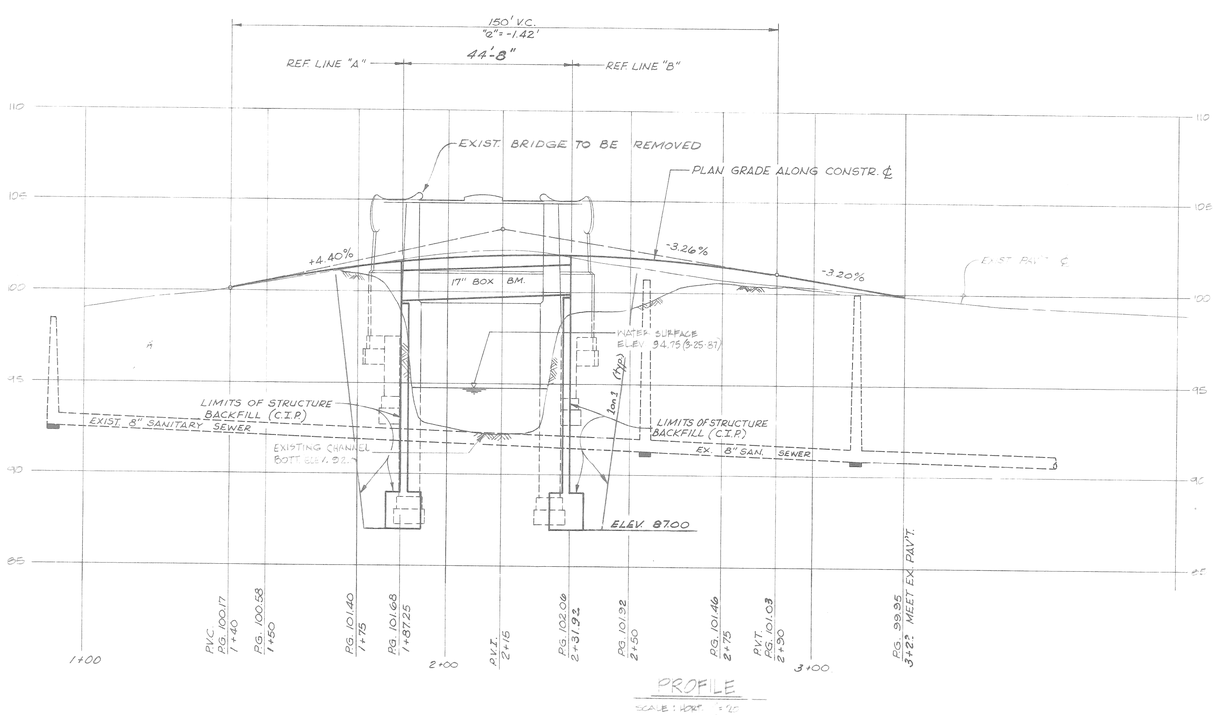
UTILITIES
DETROIT WATER AND SEWAGE DEPT.
WATER BOARD BLDG. 14TH. FLOOR
735 RANDOLPH, RM. 1401
1-313-224-4748

PUBLIC LIGHTING DEPARTMENT
9449 GRINELL
1-313-267-7220

MICHIGAN BELL
EXECUTIVE AND GENERAL OFFICES
444 MICHIGAN DET.
1-313-223-9900

QUANTITIES

REMOVAL OF STRUCTURES	L.S.
REMOVING PAVEMENT	416 S.Y.
REMOVING CONCRETE SIDEWALK	61 S.Y.
CLEARING	.1 ACRE
RECONSTRUCTING MANHOLES	2.5 FT.
ADJUSTING MANHOLES	1 EA.
EARTH EXCAVATION	230 C.Y.
GRANULAR MATERIAL, CLASS II	20 C.Y.
EMBANKMENT	12 C.Y.
HEAVY RIPRAP	125 S.Y.
UNCLASSIFIED FOUNDATION EXCAVATION	1650 C.Y.
STRUCTURE BACKFILL (CIP)	640 C.Y.
CLASS A SEEDING	8 LBS.
3" TOPSOIL SURFACE	400 S.Y.
CHEMICAL FERTILIZER NUTRIENT	20 LBS
MULCH	.2 TON
ANCHORING MULCH	.1 ACRE
RELOCATING LIGHTING STANDARD	L.S.
GEOTEXTILE SILT FENCE	200 L.F.
GEOTEXTILE FILTER BAGS	2 EACH
MOVING FENCE	25 L.F.



PROFILE
SCALE: 1"=10' HOR. 1"=5' VERT.

NOTES
1. The Contractor shall locate all active underground utilities prior to starting work and shall conduct his operations in such a manner as to insure that those utilities not requiring relocation will not be disturbed.
2. For protection of underground utilities, the Contractor shall dial 1-800-482-7171 a minimum of 48 hrs. prior to excavating in the vicinity of utility lines. All "MISS-DIG" participating members will thus be routinely notified. This does not relieve the Contractor of the responsibility of notifying utility owners who may not be a part of the "MISS-DIG" alert system.
3. For detailed pavement grades, see sheet R-2.
4. All elevations are based on City of Detroit datum.
5. Insulruhe Road will be closed to all public traffic during construction.
6. For construction signing and barricading, see sheet T-1.
7. Place Silt Fence as directed by the Engineer.

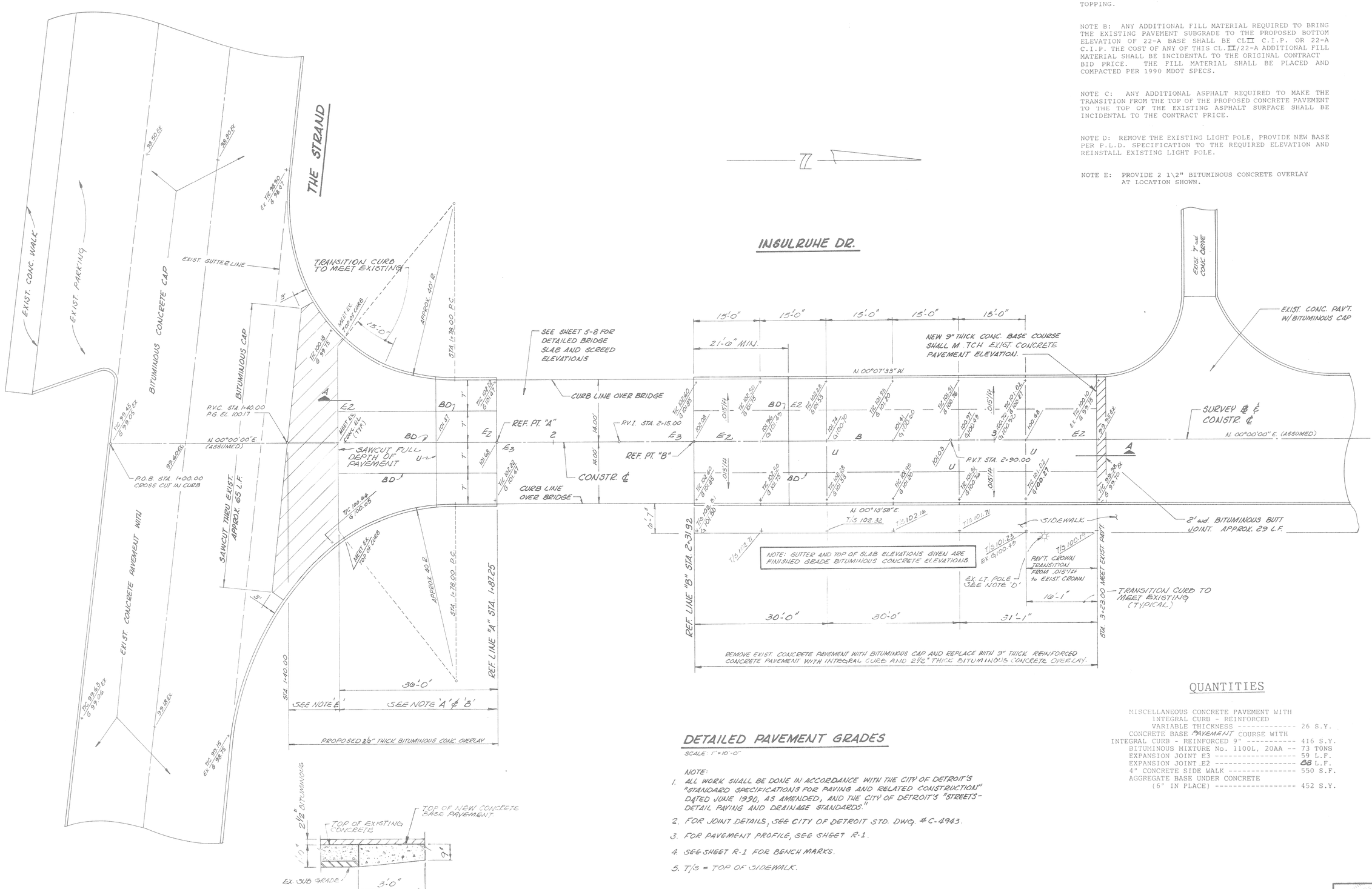
LEGEND
- Exist bridge to be demolished.
- Remove existing concrete pavement with bituminous overlay, including curbs.
- Remove and replace concrete sidewalk.
- Remove and replace bituminous cap only.
- ○ Existing manhole
- ☼ Exist P.L.D. Light pole.
- —|—|— Exist. P.L.D. Underground conduit
- +99.90 Exist. elevation
- ------ Telephone (MBT)

Sheet Title: SITE PLAN

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
615 Griswold Street
Detroit, Michigan 48226

DESIGN BY K.C.H.
DRAWN BY K.C.H./C.J.B.
CHECKED BY S.O.
DATE
PROJECT NO. 8605
SHEET NO. R-2



NOTE A: REMOVE EXISTING PAVEMENT, REPLACE BASE WITH 9" UNIFORMLY REINFORCED CONCRETE BASE WITH INTEGRAL CURB, WT AND PROVIDE 2 1/2" TYPE 20 AA BITUMINOUS CONCRETE TOPPING.

NOTE B: ANY ADDITIONAL FILL MATERIAL REQUIRED TO BRING THE EXISTING PAVEMENT SUBGRADE TO THE PROPOSED BOTTOM ELEVATION OF 22-A BASE SHALL BE CL III C.I.P. OR 22-A C.I.P. THE COST OF ANY OF THIS CL. III/22-A ADDITIONAL FILL MATERIAL SHALL BE INCIDENTAL TO THE ORIGINAL CONTRACT BID PRICE. THE FILL MATERIAL SHALL BE PLACED AND COMPACTED PER 1990 MDOT SPECS.

NOTE C: ANY ADDITIONAL ASPHALT REQUIRED TO MAKE THE TRANSITION FROM THE TOP OF THE PROPOSED CONCRETE PAVEMENT TO THE TOP OF THE EXISTING ASPHALT SURFACE SHALL BE INCIDENTAL TO THE CONTRACT PRICE.

NOTE D: REMOVE THE EXISTING LIGHT POLE, PROVIDE NEW BASE PER P.L.D. SPECIFICATION TO THE REQUIRED ELEVATION AND REINSTALL EXISTING LIGHT POLE.

NOTE E: PROVIDE 2 1\2" BITUMINOUS CONCRETE OVERLAY AT LOCATION SHOWN.

QUANTITIES

MISCELLANEOUS CONCRETE PAVEMENT WITH INTEGRAL CURB - REINFORCED VARIABLE THICKNESS	26 S.Y.
CONCRETE BASE PAVEMENT COURSE WITH INTEGRAL CURB - REINFORCED 9"	416 S.Y.
BITUMINOUS MIXTURE No. 1100L, 20AA	73 TONS
EXPANSION JOINT E3	59 L.F.
EXPANSION JOINT E2	88 L.F.
4" CONCRETE SIDE WALK	550 S.F.
AGGREGATE BASE UNDER CONCRETE (6" IN PLACE)	452 S.Y.

DETAILED PAVEMENT GRADES

SCALE: 1"=10'-0"

NOTE:

1. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF DETROIT'S "STANDARD SPECIFICATIONS FOR PAVING AND RELATED CONSTRUCTION" DATED JUNE 1990, AS AMENDED, AND THE CITY OF DETROIT'S "STREETS-DETAIL PAVING AND DRAINAGE STANDARDS."
2. FOR JOINT DETAILS, SEE CITY OF DETROIT STD. DWG. # C-4943.
3. FOR PAVEMENT PROFILE, SEE SHEET R-1.
4. SEE SHEET R-1 FOR BENCH MARKS.
5. T/S = TOP OF SIDEWALK.

SECTION A

SCALE: 1/2"=1'-0"

NOTE: SEE NOTE E

R-2

Sheet Title: DETAILED PAVEMENT GRADES

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

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Engineers, Architects, Planners
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Detroit, Michigan 48226

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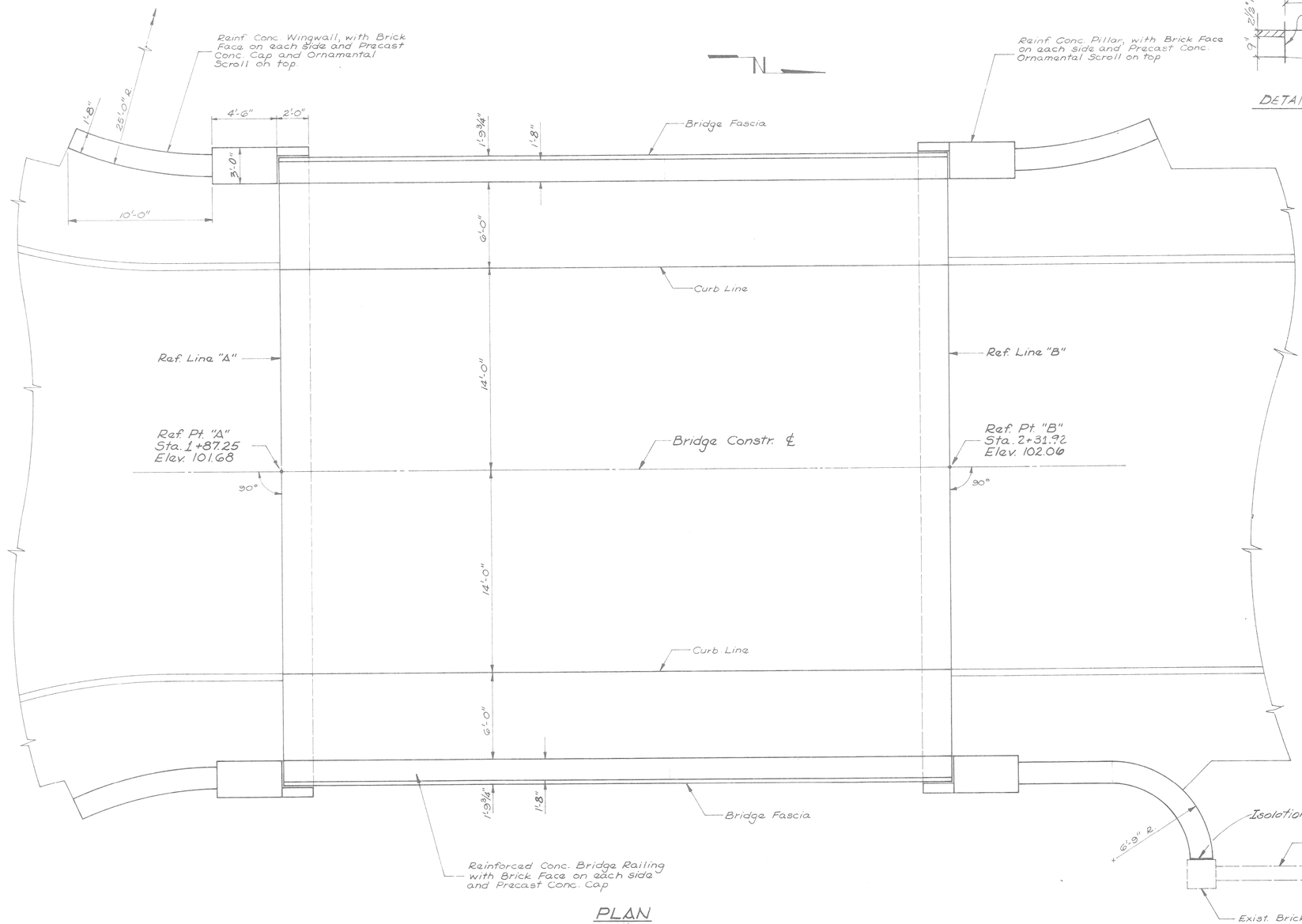
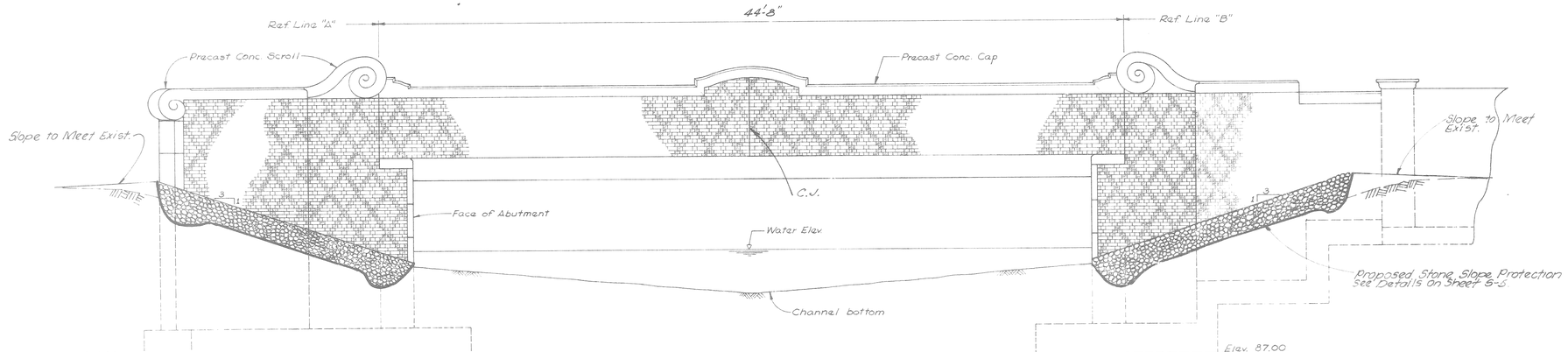
DRAWN BY	R.A.M.
CHECKED BY	K.C.H./S.C.
DATE	
PROJECT NO.	8605
SHEET NO.	R-3

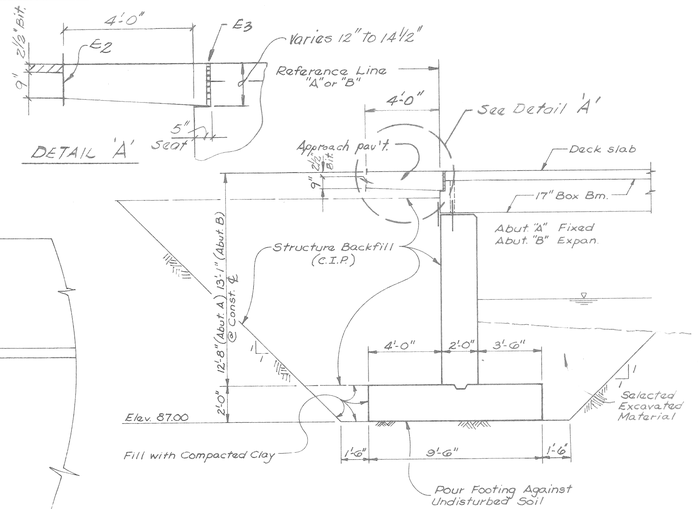


PLAN

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



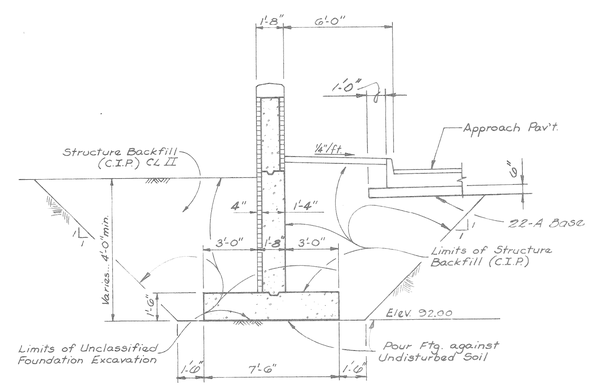
ELEVATION



TYPICAL ABUTMENT SECTION

Abut "A" shown ; Abut "B" reverse

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



TYPICAL WINGWALL SECTION

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

General Notes:

1. The design of this structure is based on current AASHTO Standard Specifications for Highway Bridges, HS-20 Loading.
2. Except where otherwise indicated on these structure sheets or in the proposal and supplemental specifications contained herein, all materials and workmanship for the bridge shall be in accordance with the Michigan Department of Transportation Standard Specifications for construction (1990 Edition.) Roadways, curbs, sidewalks and site restoration shall conform to City of Detroit standards.
3. Live Load plus impact deflection does not exceed 1/1000 of the span length.
4. The Load Factor Method of design was used for this structure.
5. The superstructure is designed to allow for a future wearing surface dead load of 25 p.s.f. on the roadway surface.
6. The design of the structural members is based on material of the following grades and stresses:
   Concrete: Grade 45D ——— f'_c = 4,000 p.s.i.
   Steel Reinforcement ——— f_y = 60,000 p.s.i.
7. No Cofferdam has been provided for this project. Contractor shall provide protection for the excavations included in the item "Unclassified Foundation Excavation".
8. Any water pumped from excavations shall be run through "Geotextile Filter Bags".

Sheet Title: GENERAL PLAN OF STRUCTURE

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

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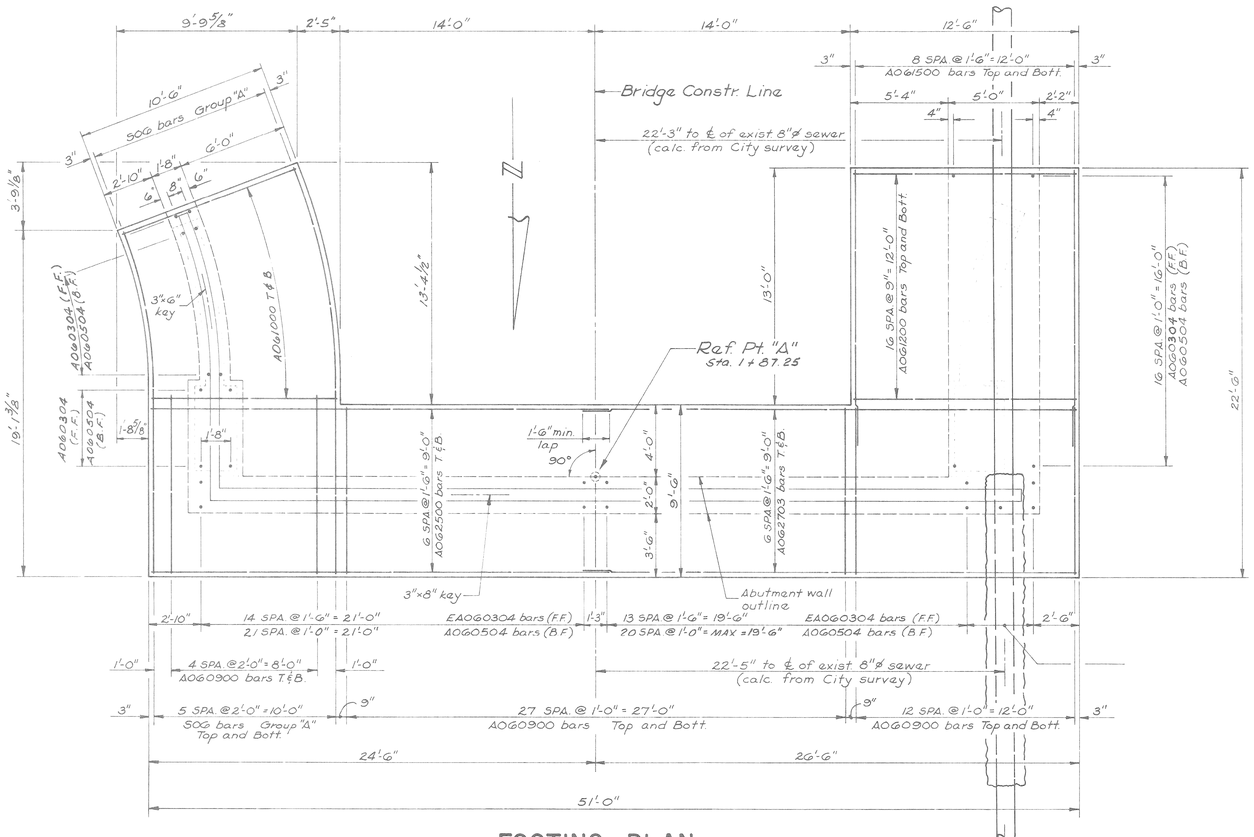
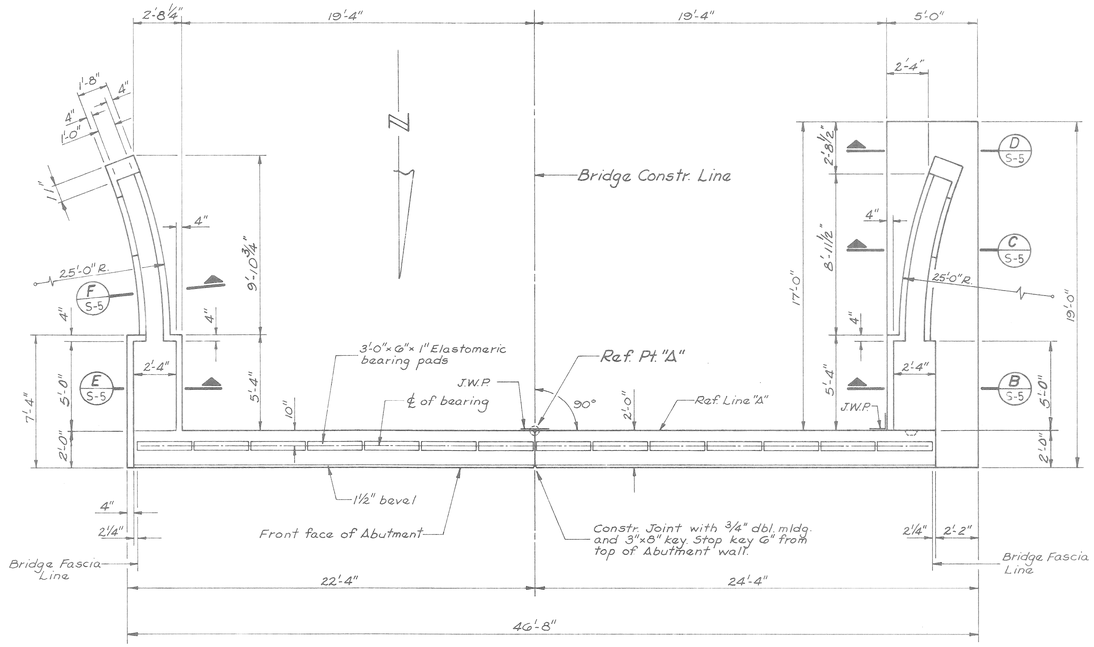
645 Griswold Street

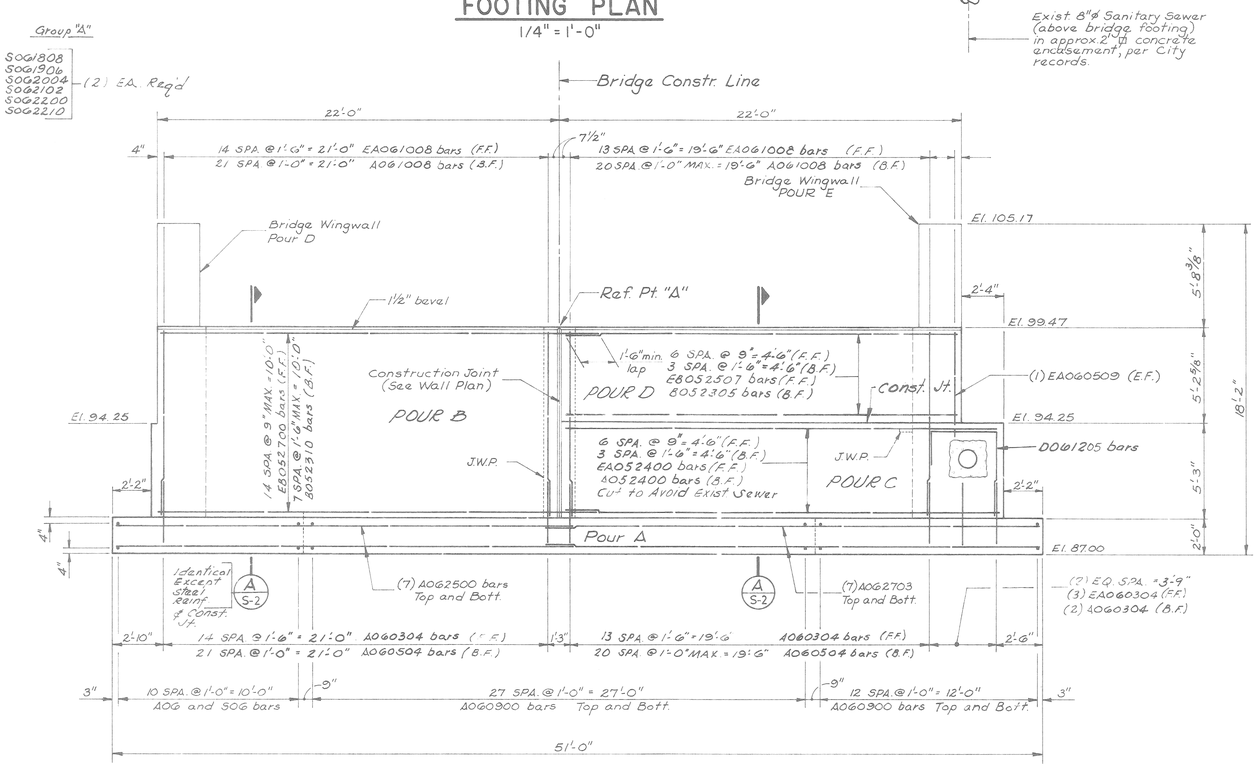
DESIGN BY	K.C.H./S.O.
DRAWN BY	K.C.H.
CHECKED B	K.C.H./S.O.
DATE	
PROJECT NO	8605
SHEET NO.	S-1



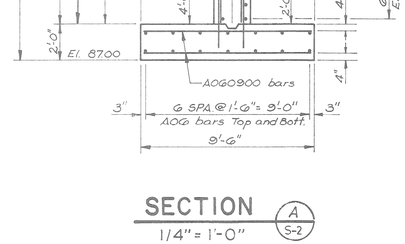
FOOTING PLAN
1/4" = 1'-0"



WALL PLAN
1/4" = 1'-0"



ELEVATION
1/4" = 1'-0"



SECTION
1/4" = 1'-0"

General Notes : (Abutments "A and B")

(F.F.) denotes front face (or outside face)

(B.F.) denotes back face (or inside face)

(E.F.) denotes each face

J.W.P. denotes Joint Waterproofing

The concrete surface below the elastomeric bearing pads shall be broom finished and shall be clean and dry at the time the bearing pads are installed.

Bars with the prefix "E" shall be Epoxy coated.

Maximum average foundation pressure D.L. only = 2170 p.s.f.

Maximum foundation pressure D.L. + L.L. = 2950 p.s.f.

The top and front face of the Abutments shall be given an application of protective sealant coating for concrete after the elastomeric bearing pads have been placed.

Shore and support existing 6" sanitary sewer before and during construction.

Sheet Title: ABUTMENT "A" PLAN AND SECTIONS

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
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1420 Washington Blvd.

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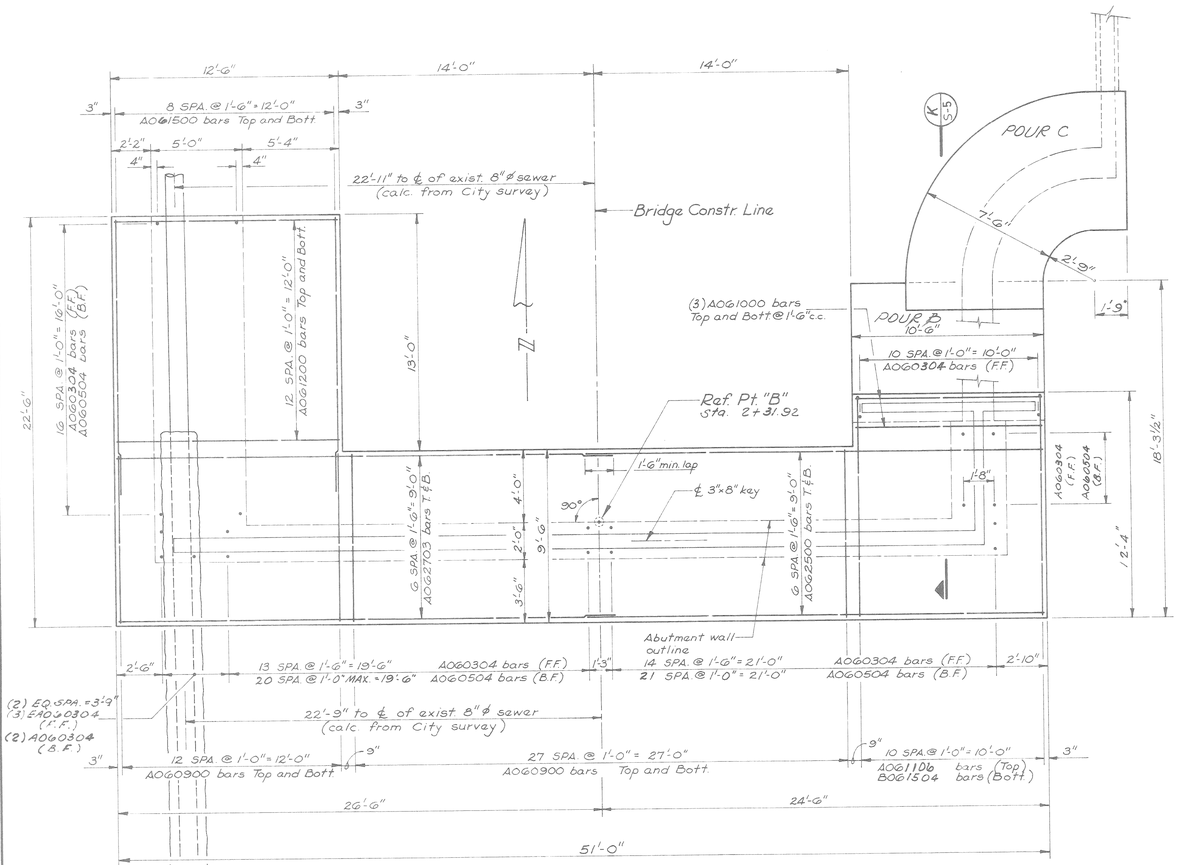
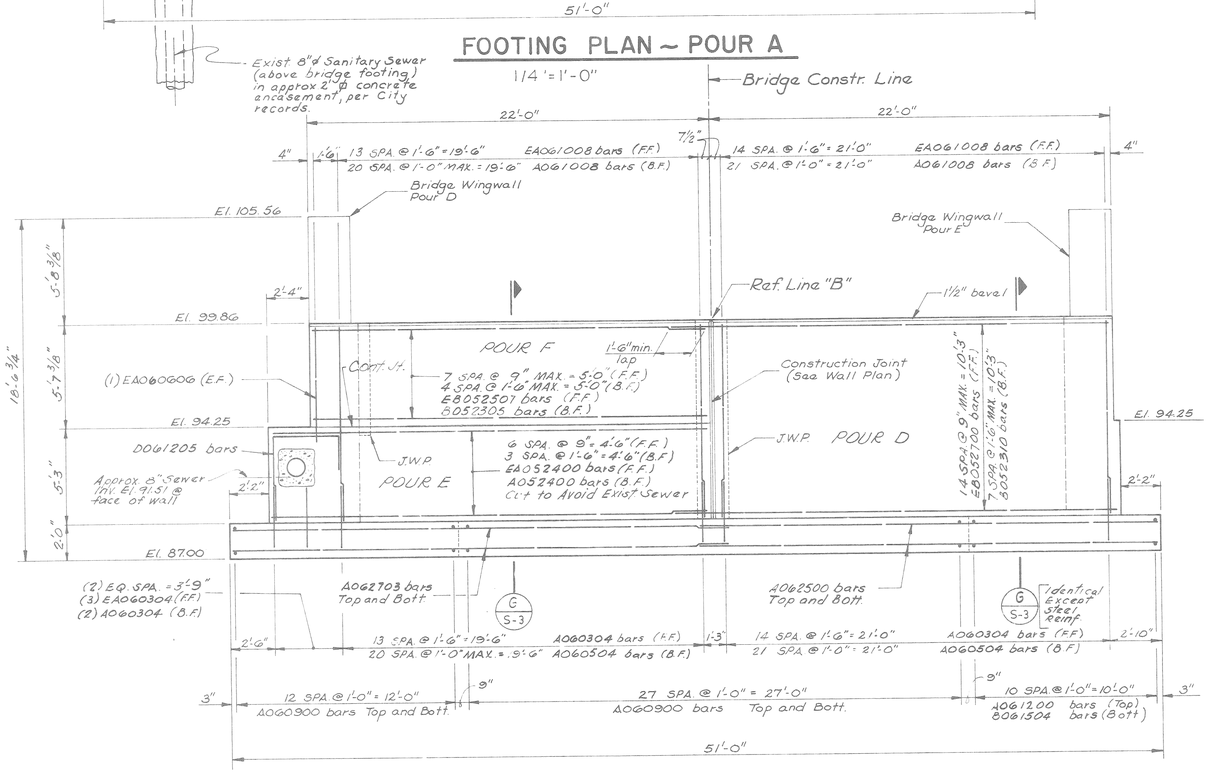
CHECKED BY	S.O.
DATE	
PROJECT NO.	8605
SHEET NO.	S-2



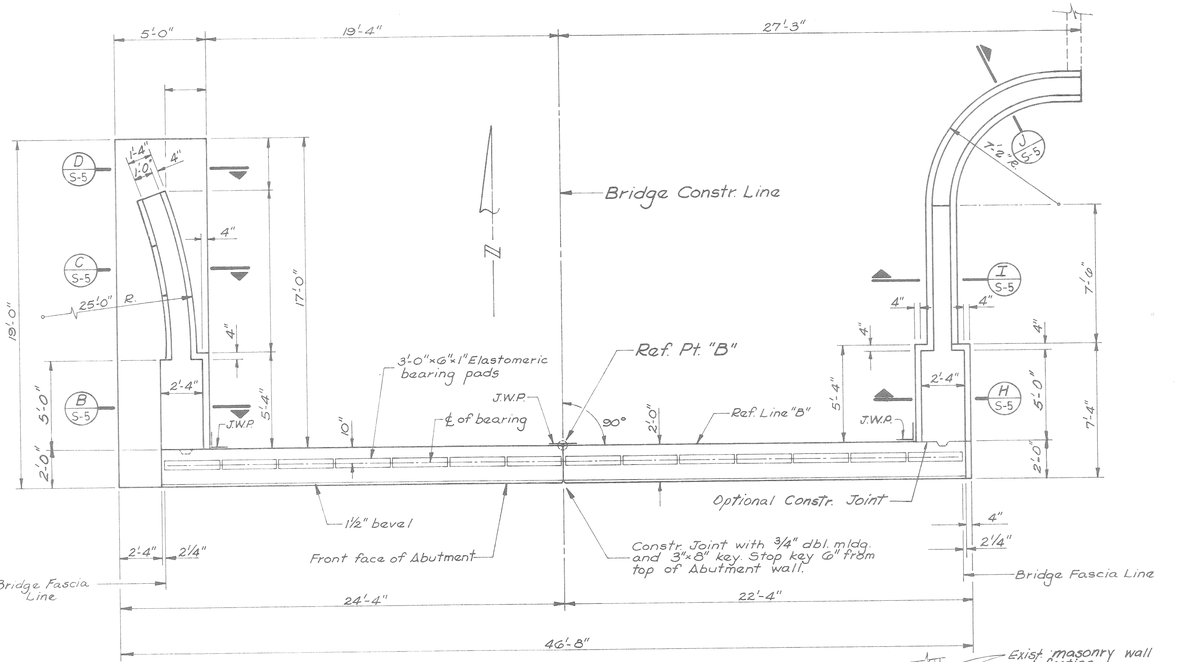
FOOTING PLAN ~ POUR A

1/4" = 1'-0"



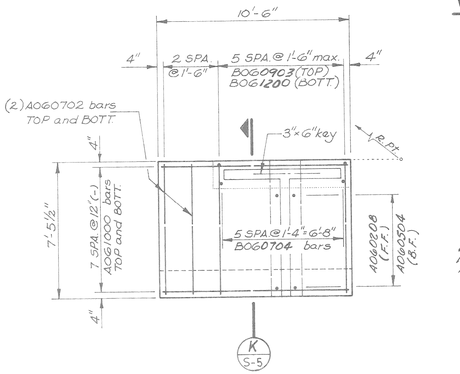
ELEVATION

1/4" = 1'-0"



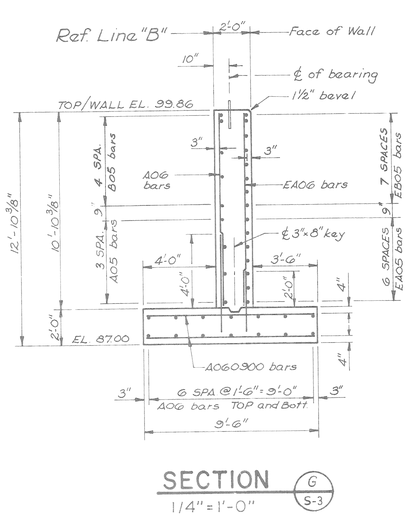
WALL PLAN

1/4" = 1'-0"



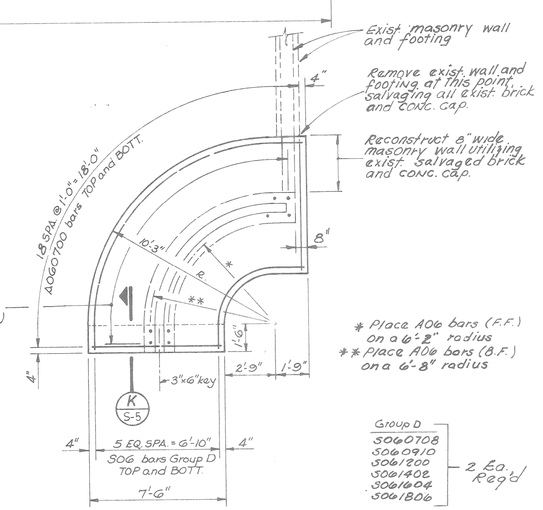
FOOTING PLAN ~ POUR B

1/4" = 1'-0"



SECTION G S-3

1/4" = 1'-0"



FOOTING PLAN ~ POUR C

1/4" = 1'-0"

Sheet Title

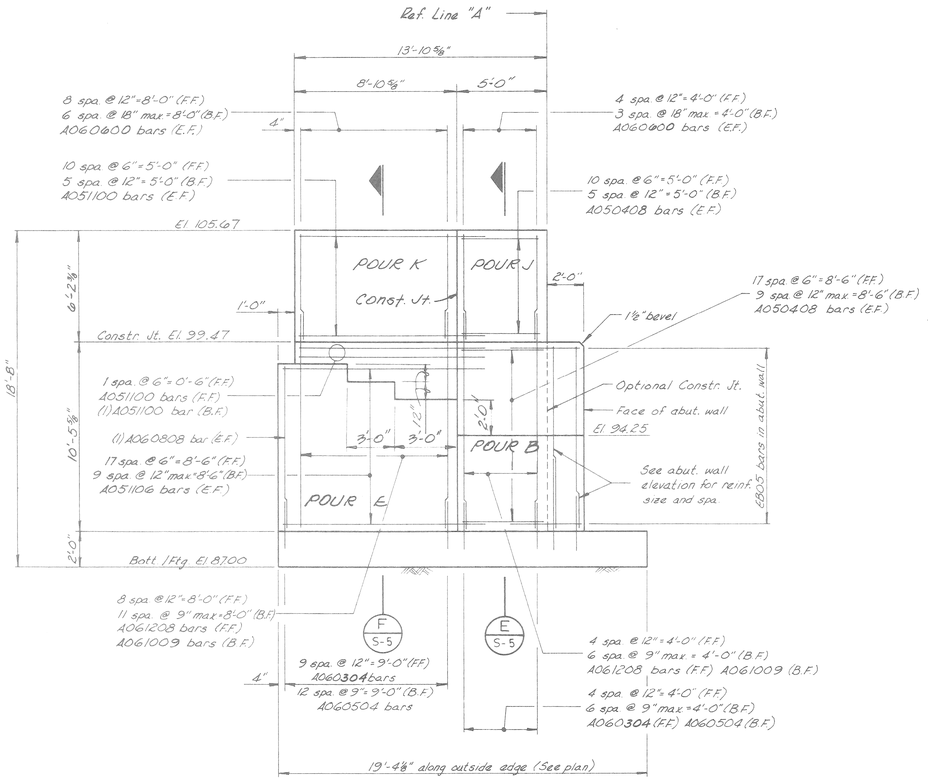
ABUTMENT "B" PLAN AND SECTIONS

Project

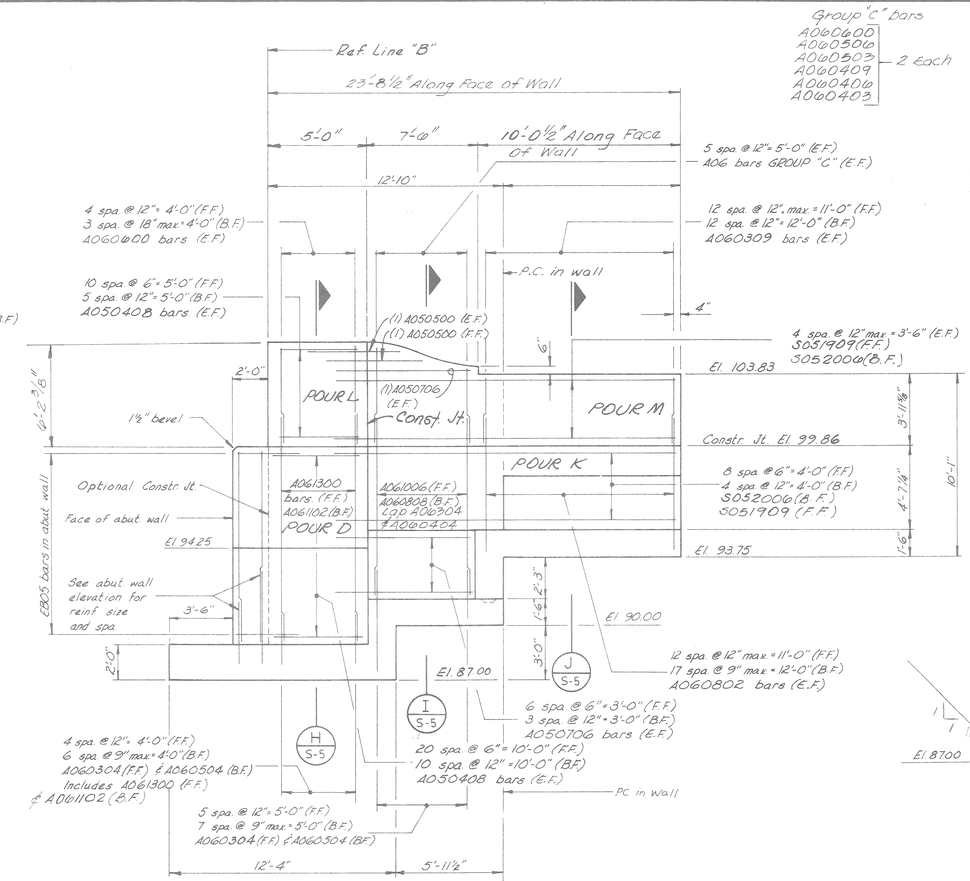
CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.

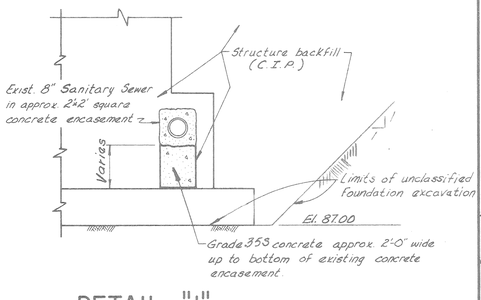
DESIGN BY	KCH/SO
DRAWN BY	KCH
CHECKED BY	KCH/SO
DATE	
PROJECT NO.	8605
SHEET NO.	S-3



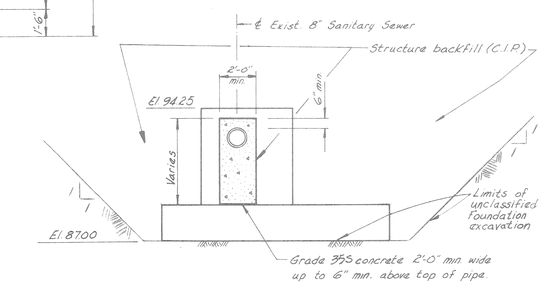
SOUTHEAST WINGWALL ELEVATION
1/4" = 1'-0"



NORTHEAST WINGWALL ELEVATION
1/4" = 1'-0"



DETAIL "1"
1/4" = 1'-0"



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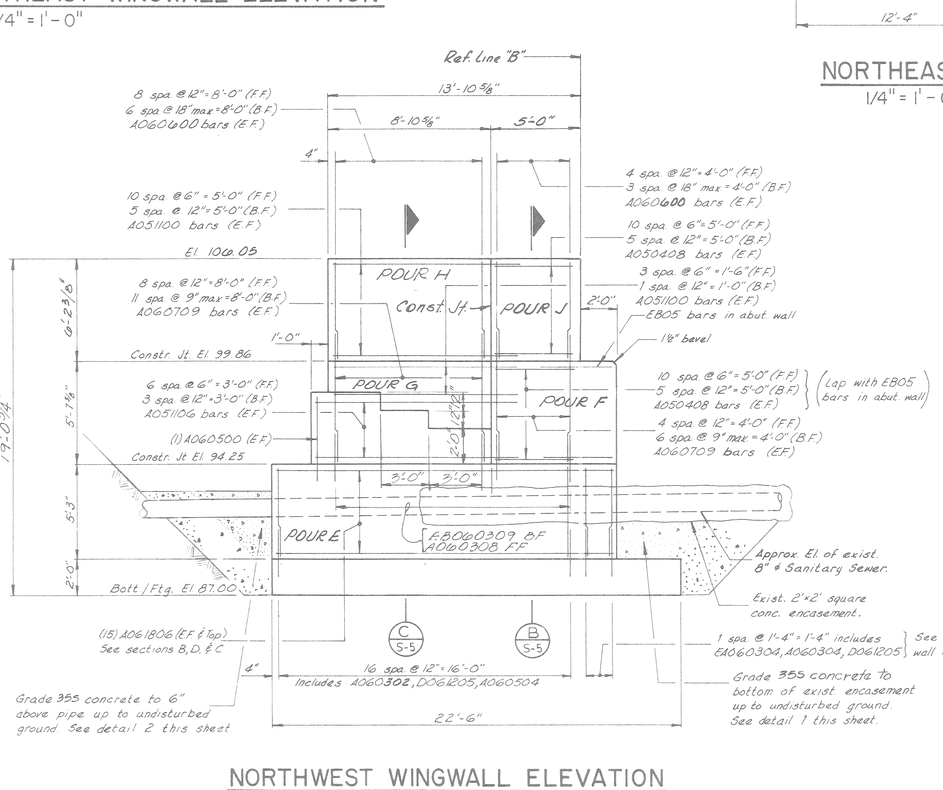
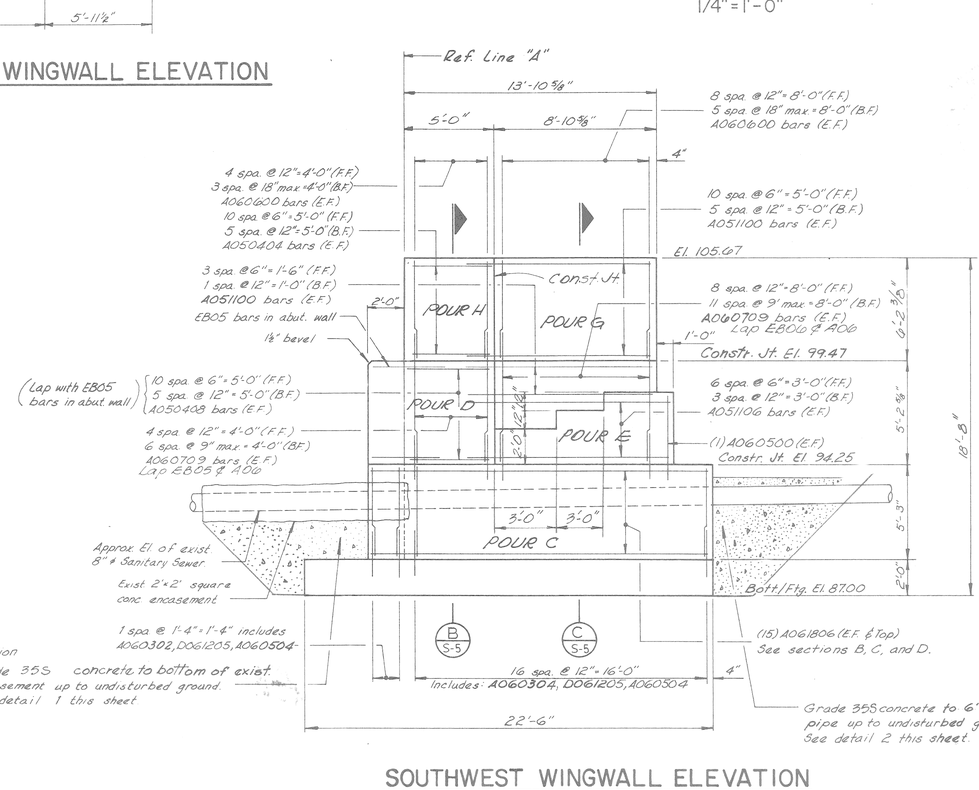


NORTHWEST WINGWALL ELEVATION
1/4" = 1'-0"



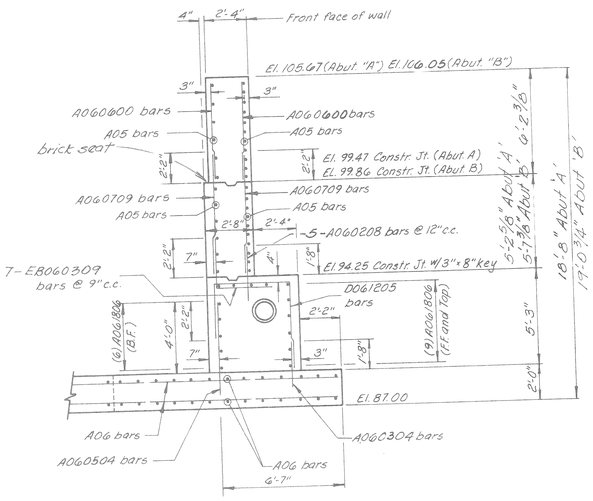
SOUTHWEST WINGWALL ELEVATION
1/4" = 1'-0"

Sheet Title
WINGWALLS, SECTIONS AND DETAILS

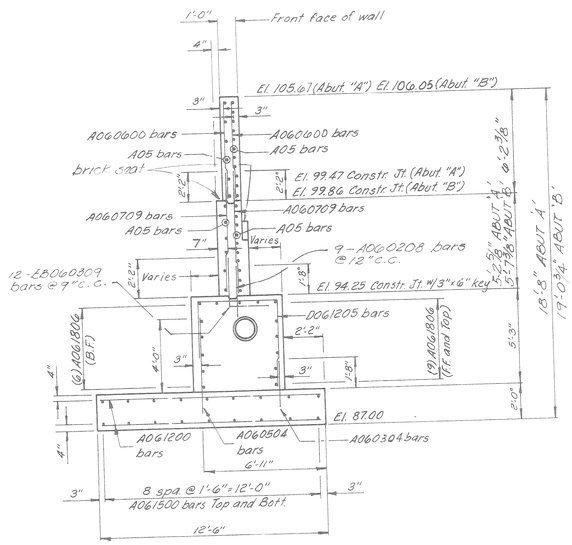
Project
CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd. (48226)

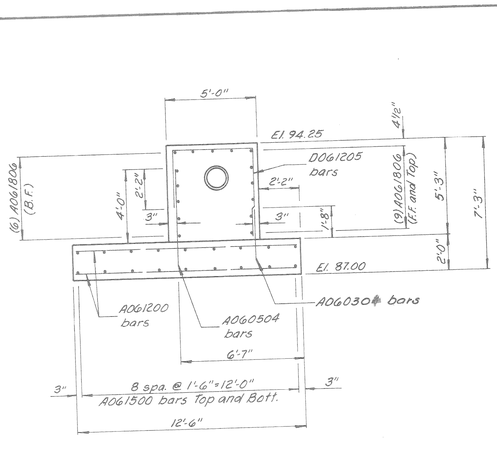
DESIGN BY	K.C.H. / S.O.
DRAWN BY	K.C.H. / L.S.
CHECKED BY	K.C.H. / S.O.
DATE	
PROJECT NO.	8605
SHEET NO.	S-4



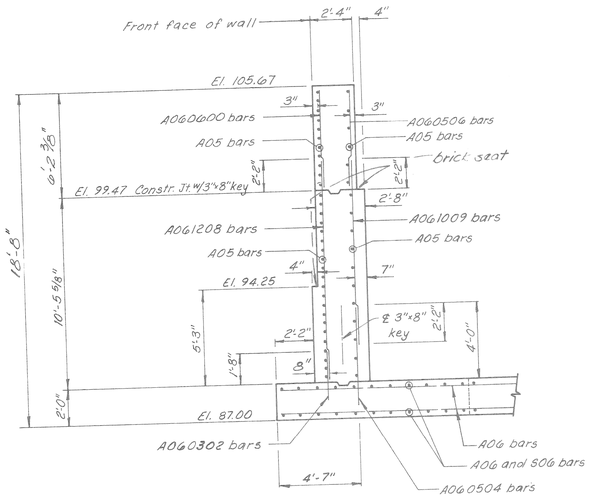
SECTION B S-3
1/4"=1'-0"



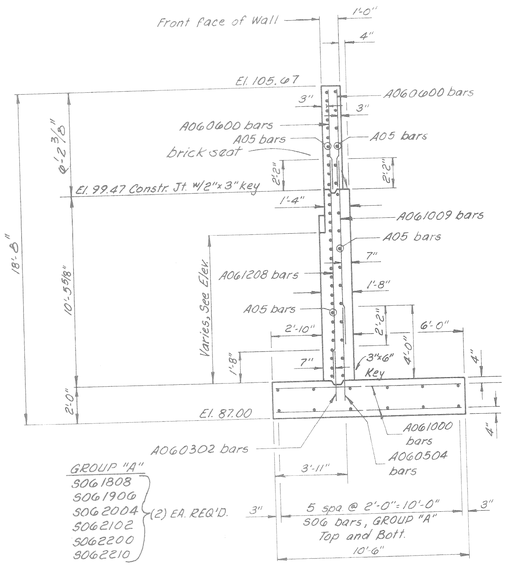
SECTION C S-3
1/4"=1'-0"



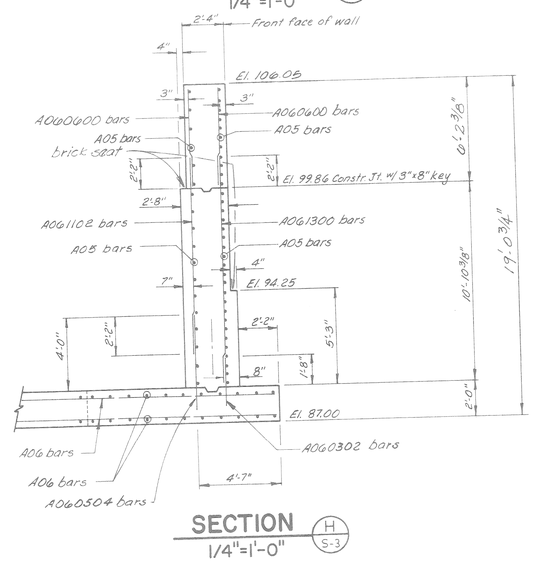
SECTION D S-3
1/4"=1'-0"



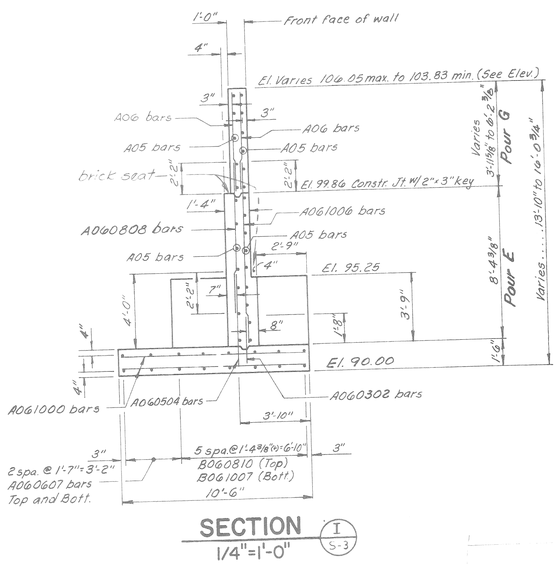
SECTION E S-2
1/4"=1'-0"



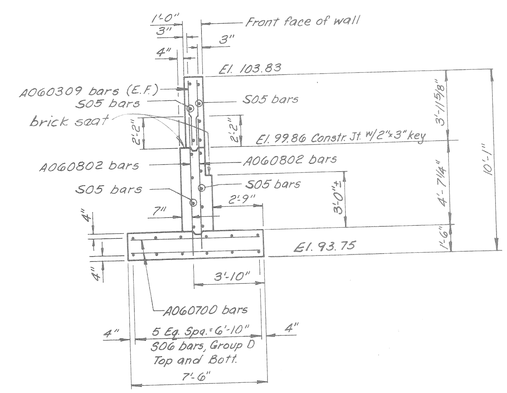
SECTION F S-2
1/4"=1'-0"



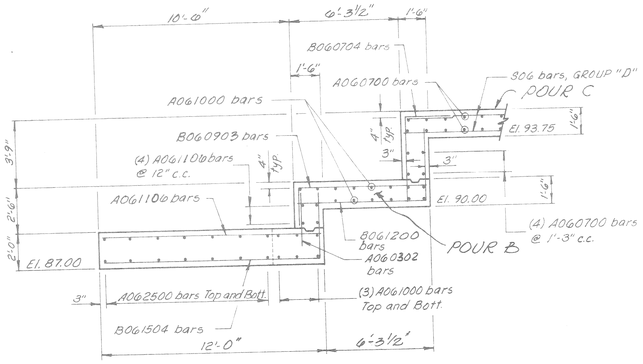
SECTION H S-3
1/4"=1'-0"



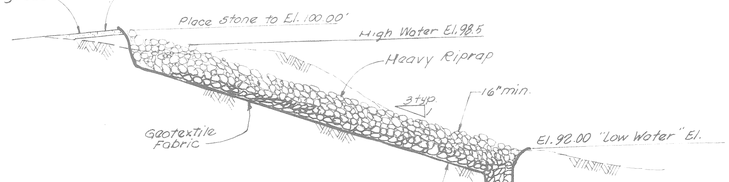
SECTION I S-3
1/4"=1'-0"



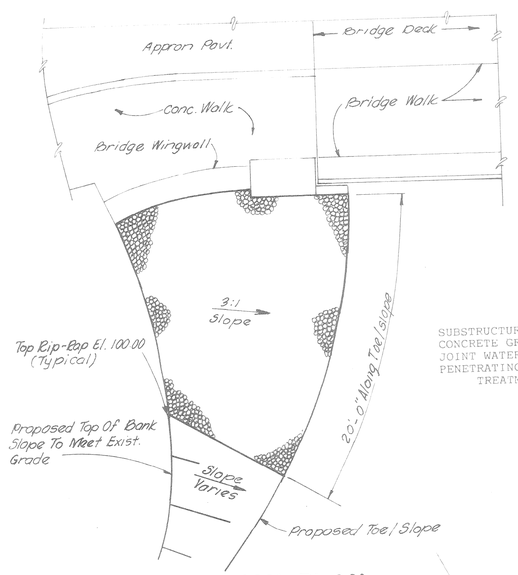
SECTION J S-3
1/4"=1'-0"



SECTION K S-3
1/4"=1'-0"



SLOPE PROTECTION SECTION
NO SCALE



SLOPE PROTECTION PLAN
S.E. CORNER... OTHER CORNERS ARE SIMILAR

ABUT. A & B
QUANTITIES

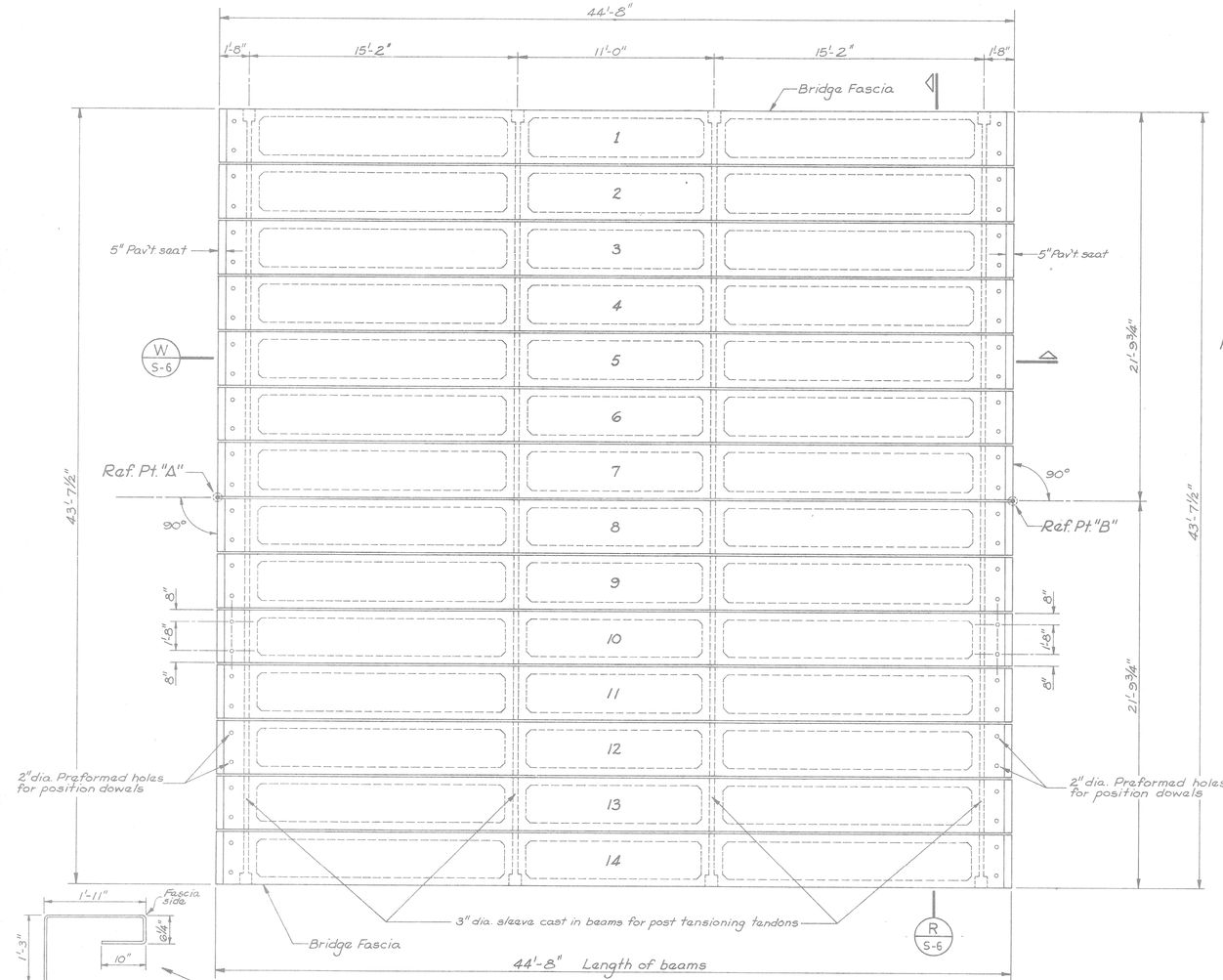
SUBSTRUCTURE CONCRETE	275.3 C.Y.
CONCRETE GRADE 35S	10 C.Y.
JOINT WATERPROOFING	320 S.F.
PENETRATING WATER REPELLANT TREATMENT	16 S.Y.

Sheet Title: WINGWALL SECTIONS AND DETAILS

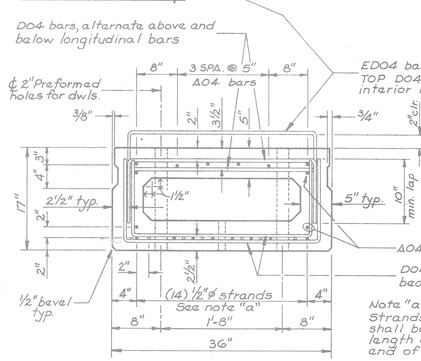
Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.

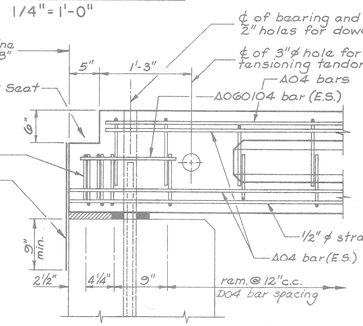
DESIGN BY	K.C.H./S.C.
DRAWN BY	K.C.H./C.S.
CHECKED BY	K.C.H./S.C.
DATE	
PROJECT NO.	8605
SHEET NO.	S-5



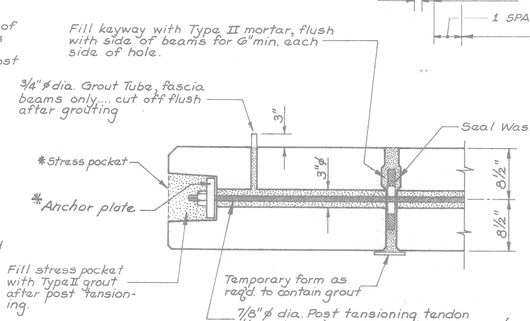
ERECTION DIAGRAM
1/4" = 1'-0"



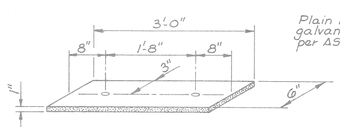
TYPICAL BEAM SECTION
1" = 1'-0"



SECTION THRU END BLOCKS
1" = 1'-0"

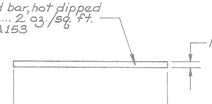


POST TENSIONING DETAIL
1" = 1'-0"

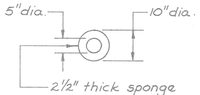


ELASTOMERIC BEARING PAD DETAIL

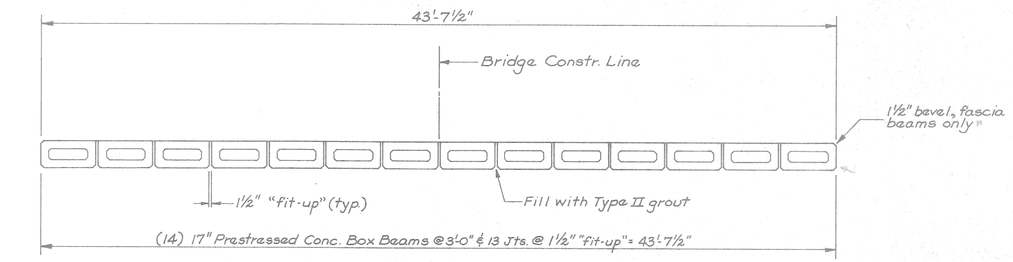
Plain round bar, hot dipped galvanized... 2.93 lbs/sq. ft. per ASTM A163



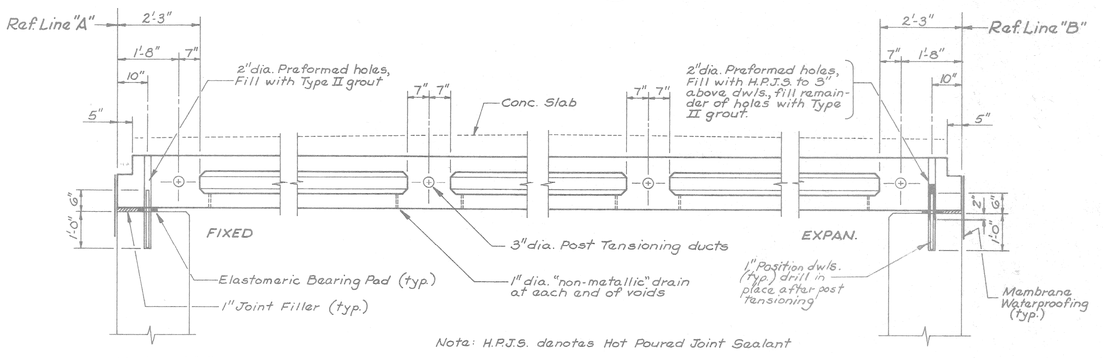
POSITION DOWEL



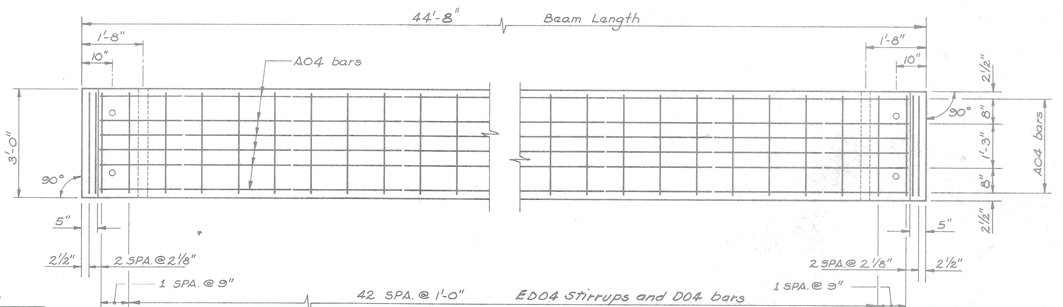
SEAL WASHER



SECTION
1/4" = 1'-0"
R S-6



SECTION
1/2" = 1'-0"
W S-6



TYPICAL BEAM PLAN
1/2" = 1'-0"

1. Precast, prestressed concrete box beams shall be manufactured and erected in accordance with Section 505 of the M.D.O.T. Standard Specifications.
2. Prestressing strands shall be 1/2" diameter, with a cross-sectional area of 0.153 sq. inches, meeting the requirements of ASTM A416, Grade 270. Initial prestress shall be 31.0 kips per strand.
3. The estimated camber of each beam is 2 inches. This camber is due to prestressing and dead load of beam only.
4. Post Tensioning force shall be 82.5 kips per tendon.
5. The approximate weight of each beam is 44500 lb. / ea.
6. Heavy equipment shall not be allowed on any beams which are being grouted or which have been grouted but not yet post tensioned.
7. Elastomer for Elastomeric bearing pads shall be nominal 50 durometer hardness. The design of these pads is based on a maximum pressure of 500 p.s.i. D.L. and 800 p.s.i. D.L. + L.L.
8. Beams with "honeycomb" to such extent as to affect the strength or resistance to deterioration will not be accepted.
9. The design of the structural members is based on material of the following grades and stresses
   - Concrete: Grade 45D ——— f'_c = 4000 p.s.i.
   - Steel Reinforcement ——— f_y = 60,000 p.s.i.
   - Steel Reinforcement: Stirrups for Prestressed Beams ——— f_y = 40,000 p.s.i.
   - Prestressed Concrete ——— f'_c = 5,000 p.s.i. (28 day min. strength)
   - Prestressing Strands ——— f'_s = 270,000 p.s.i.
10. Position dowels shall be steel meeting the requirements of ASTM-A36.
11. Tack Welding of steel reinforcement is prohibited.
12. The compressive strength of the beam concrete at the time of prestressing force release shall not be less than 3500 p.s.i.
13. The top surface of all box beams shall be intentionally roughened.
14. The Contractor shall provide details of the beam lifting devices he intends to use.

a. Fill all voids between each beam with Type II grout for the full depth of beams prior to post tensioning. Plug ends of beams before grouting.

b. Grout tube, tendons, washers, bolts, seal washers, temporary forms, 1" joint filler and Type II grout will not be paid for separately, but will be included in the pay item "Post-Tensioning".

*c. Stress pockets and anchor plates shall be as required for the post-tensioning system provided.

STATE OF MICHIGAN — KENNETH C. HAMEL — ENGINEER — 25703 — PROFESSIONAL ENGINEER

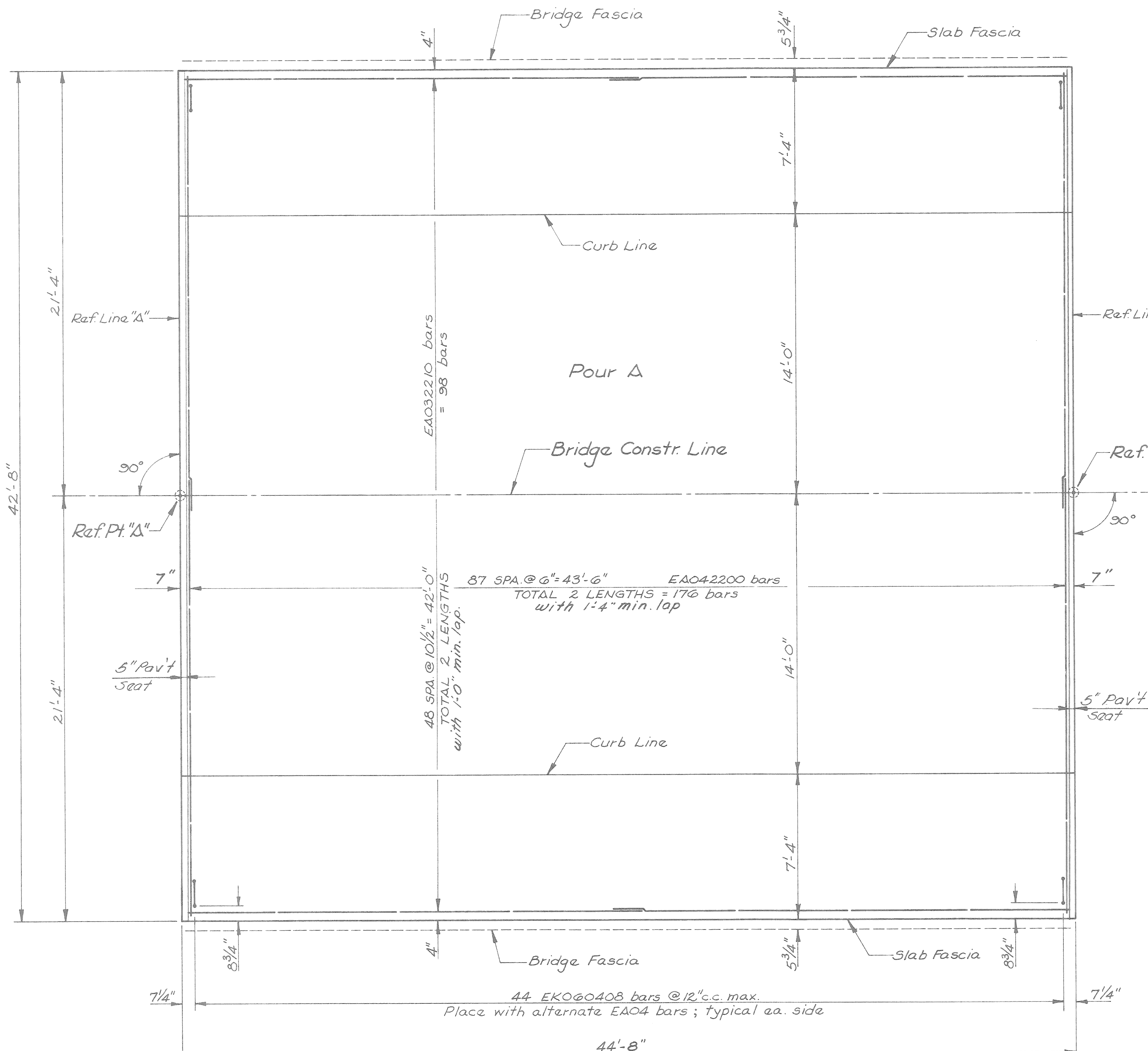
Sheet Title: SUPERSTRUCTURE DETAILS

CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

Project

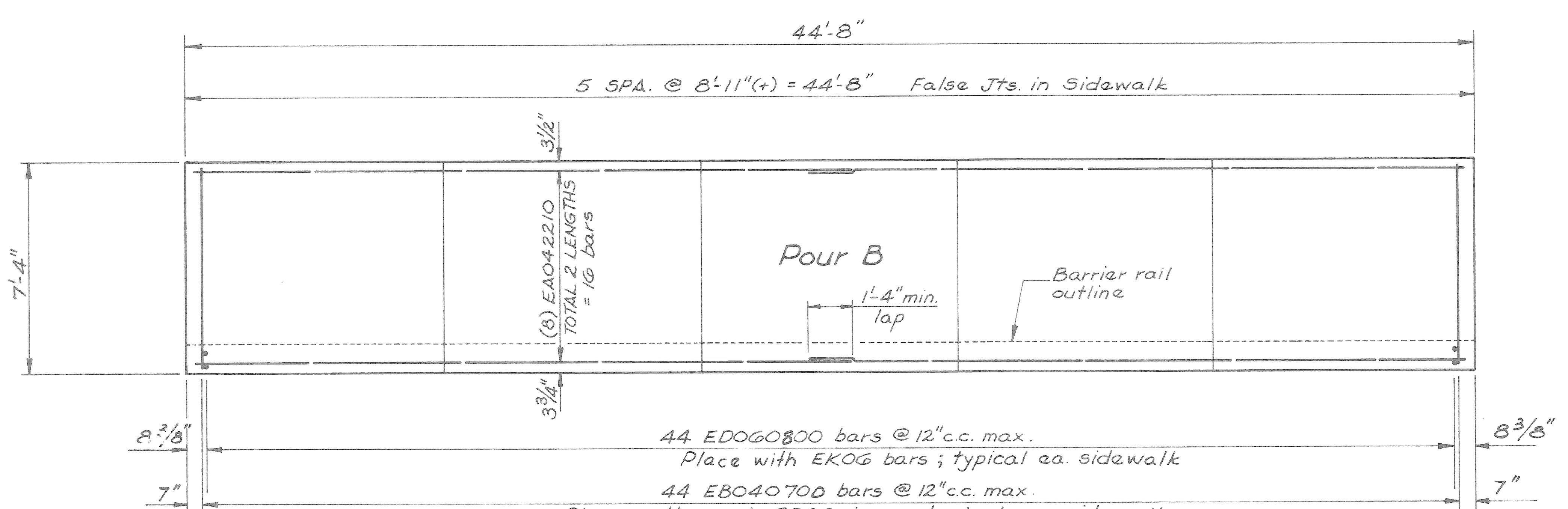
MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.
Detroit, Michigan 48226

DESIGN BY	K.C.H./S.O.
DRAWN BY	K.C.H.
CHECKED BY	K.C.H./S.O.
DATE	
PROJECT NO.	8605
SHEET NO.	S-6



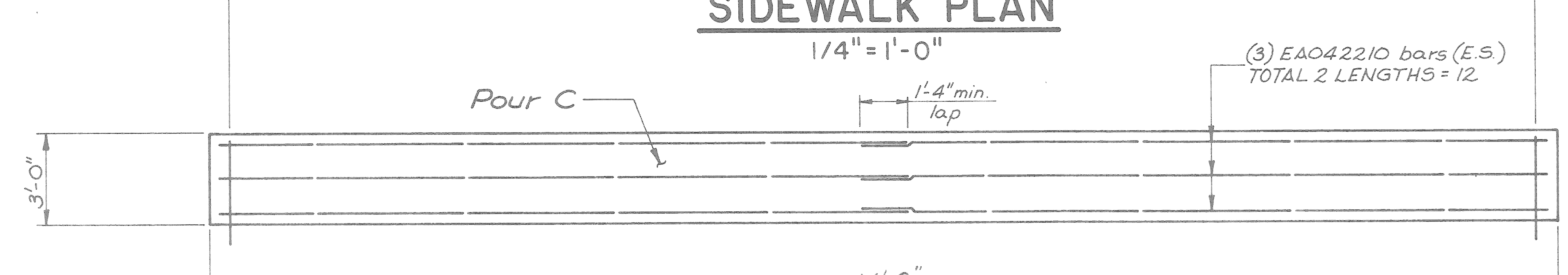
PLAN OF SLAB

1/4" = 1'-0"



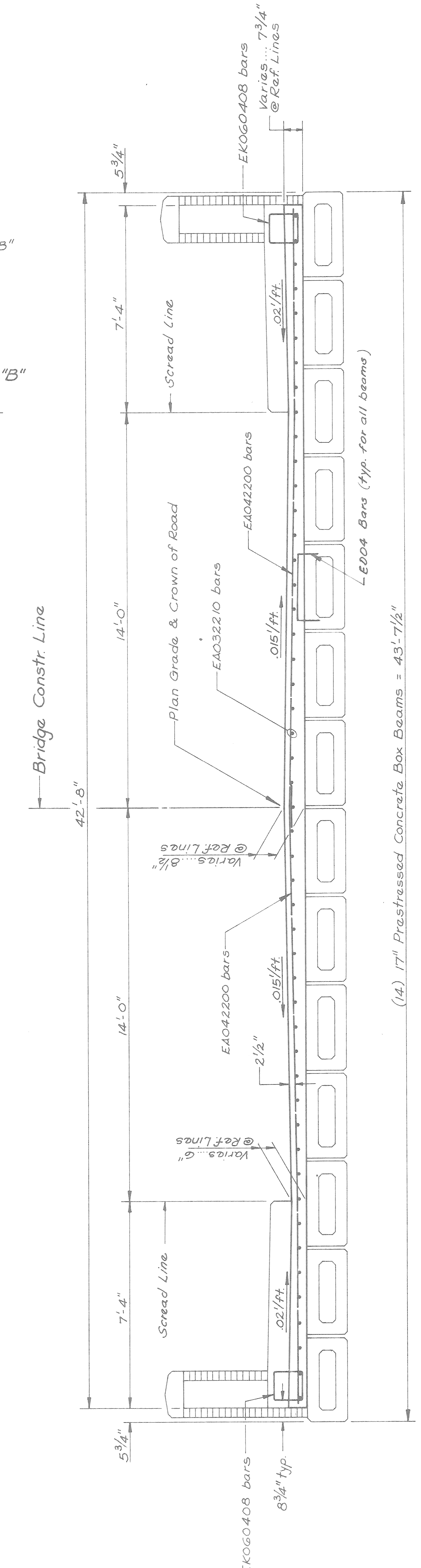
SIDEWALK PLAN

1/4" = 1'-0"



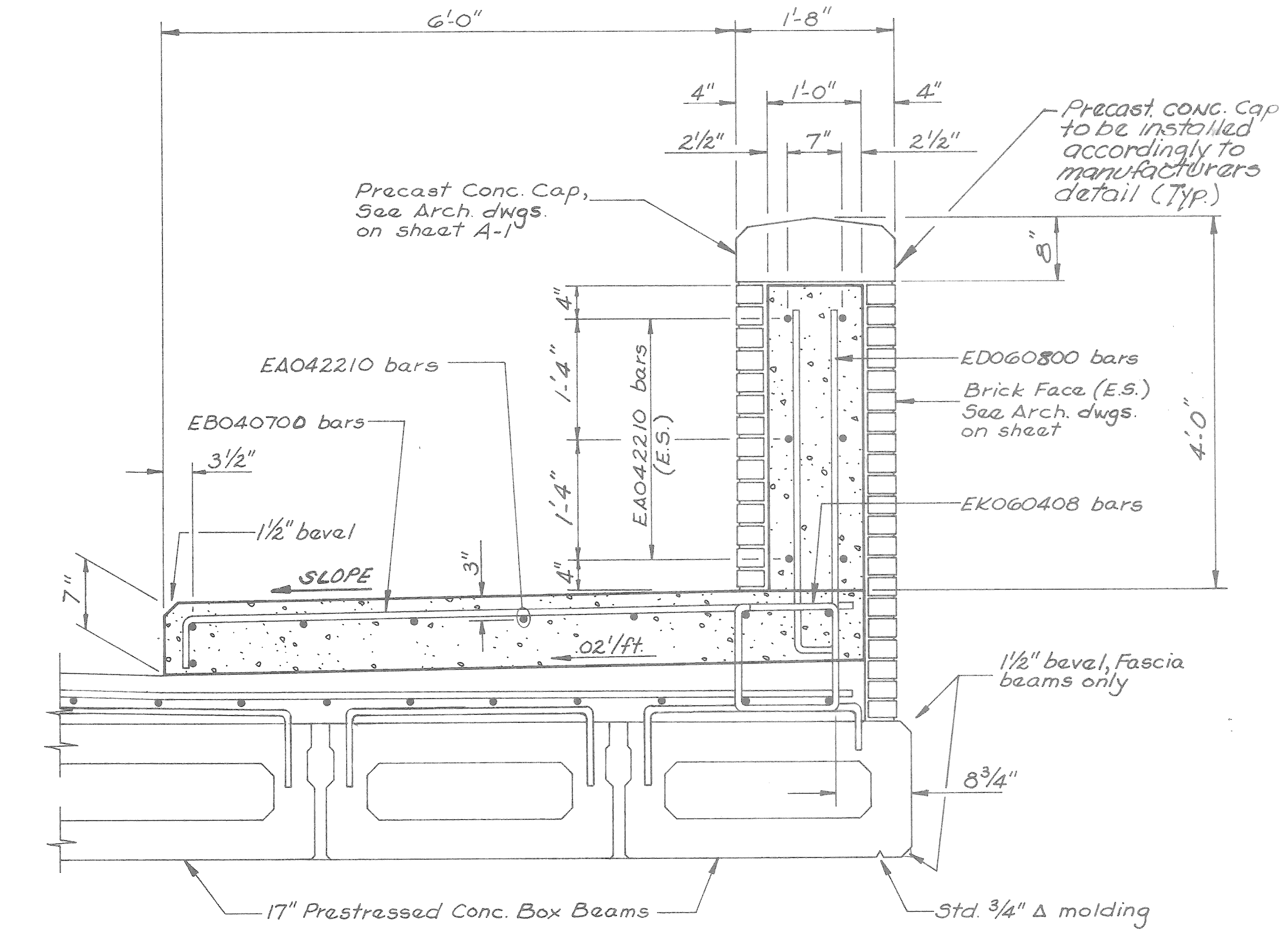
BARRIER RAILING ELEVATION

1/4" = 1'-0"



TYPICAL DECK SECTION

3/8" = 1'-0"



TYPICAL SIDEWALK SECTION

3/4" = 1'-0"

CONCRETE POURS	
POUR	AMOUNT
A	41.2 C.Y.
B	2 @ 9.1 C.Y. = 18.2 C.Y.
C	2 @ 5.5 C.Y. = 11.0 C.Y.

QUANTITIES

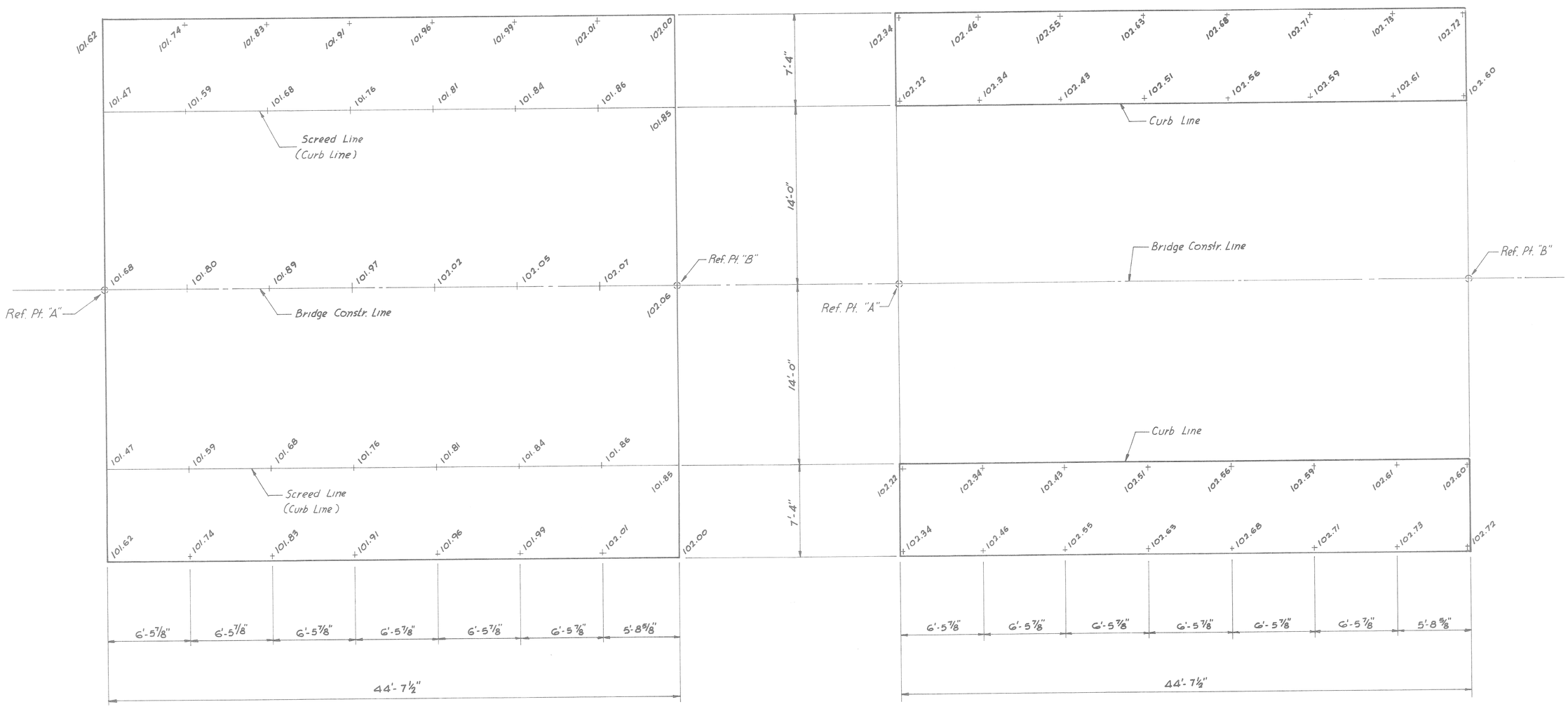
1" ELASTOMERIC BEARING PAD	42 S.F.
17" PRESTRESSED CONCRETE DECK	1992 S.F.
SUPERSTRUCTURE CONCRETE	70.4 C.Y.
FORMING, FINISHING & CURING SUPERSTRUCTURE CONCRETE	L.S.
POST TENSIONING	L.S.
JOINT WATERPROOFING	160 S.F.

Sheet Title: PLAN OF SLAB AND SECTIONS

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.

DESIGN BY K.C.H.
DRAWN BY K.C.H.
CHECKED BY S.O.
DATE
PROJECT NO. 8605
SHEET NO. S-7



SLAB AND SCREED DETAILS

1/4"= 1'-0"

SIDEWALK ELEVATIONS

1/4"= 1'-0"

NOTES:

1. FOR SLAB AND SIDEWALK STEEL REINFORCEMENT DETAILS, SEE SHEET S-7.
2. THE BRIDGE CONSTRUCTION LINE IS ALONG A VERTICAL CURVE. FOR PROFILE DATA SEE SHEET R-1.
3. ALL ELEVATIONS ARE BASED ON CITY OF DETROIT DATUM.
4. SIDEWALK POUR SHALL NOT BE CAST UNTIL SLAB CONCRETE HAS ATTAINED AT LEAST 75% OF ITS DESIGN STRENGTH AS DETERMINED BY TABLE 7.01-A OF THE STANDARD SPECIFICATIONS.

STATE OF MICHIGAN
BHAGU PATEL
ENGINEER
No. 28203
REGISTERED PROFESSIONAL ENGINEER

Sheet Title
SLAB AND SCREED DETAILS AND SIDEWALK ELEVATIONS

Project
CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners

DESIGN BY K.C.N.
DRAWN BY J.C.
CHECKED B S.O.
DATE
PROJECT NO 8605
SHEET NO S-8

ABUT A

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D	TOTAL WT.
A062703								6	27'-3"	14	573
A062500								6	25'-0"	14	526
A061806								6	18'-6"	15	417
A061500								6	15'-0"	16	406
A061208								6	12'-8"	14	266
A061200								6	12'-0"	34	613
A061009								6	10'-9"	19	307
EA061008								6	10'-8"	29	465
A061008								6	10'-8"	43	689
A061000								6	10'-0"	34	511
A060900								6	9'-0"	46	622
A060808								6	8'-8"	2	26
A060709								6	7'-9"	33	384
A060600								6	6'-0"	50	451
A060504								6	5'-4"	82	657
A060500								6	5'-0"	2	15
A060304								6	3'-4"	62	310
A060208								6	2'-8"	14	56
EA052400								5	24'-0"	7	175
A052400								5	24'-0"	4	100
A051106								5	11'-6"	39	468
A051100								5	11'-0"	44	505
A050408								5	4'-8"	79	385
EB060309	1'-3"	2'-6"						6	3'-9"	19	107
EB052700	23'-6"	3'-6"						5	27'-0"	15	422
EB052507	21'-6"	4'-1"						5	25'-7"	7	187
B052310	21'-10"	2'-0"						5	23'-10"	8	199
B052305	20'-8"	2'-10"						5	23'-3"	4	88
D061205	4'-11"	4'-6 3/4"	2'-11 1/4"					6	12'-5"	17	317
S062210	10'-3"	12'-7"	0	31'-9"				6	22'-10"	2	69
S062200	10'-3"	11'-9"	0	29'-9"				6	22'-0"	2	66
S062102	10'-3"	10'-11"	0	27'-9"				6	21'-2"	2	64
S062004	10'-3"	10'-1"	0	25'-9"				6	20'-4"	2	61
S061906	10'-3"	9'-3"	0	23'-9"				6	19'-6"	2	59
S061808	10'-3"	8'-5"	0	21'-9"				6	18'-8"	2	56

TOTAL = 9266

EPOXY COATED TOTAL = 1249

ABUT B

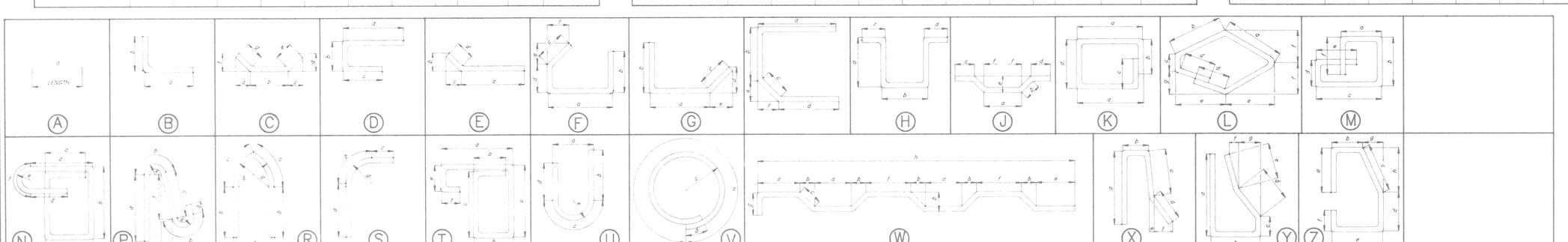
BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D	TOTAL WT.
A062703								6	27'-3"	14	573
A062500								6	25'-0"	14	526
A061806								6	18'-6"	15	417
A061500								6	15'-0"	18	406
A061300								6	13'-0"	14	273
A061200								6	12'-0"	26	469
A061106								6	11'-6"	11	190
A061102								6	11'-2"	7	117
A061006								6	10'-6"	6	95
A061000								6	10'-0"	19	285
EA061008								6	10'-8"	29	465
A061008								6	10'-8"	43	689
A060900								6	9'-0"	82	1108
A060808								6	8'-8"	8	104
A060802								6	8'-2"	31	380
A060709								6	7'-9"	33	384
A060702								6	7'-2"	4	43
A060700								6	7'-0"	38	400
A060606								6	6'-6"	2	20
A060600								6	6'-0"	36	324
A060506								6	5'-6"	2	17
A060504								6	5'-4"	81	649
A060503								6	5'-3"	2	16
A060500								6	5'-0"	2	15
A060409								6	4'-9"	2	14
A060406								6	4'-6"	2	14
A060403								6	4'-3"	2	13
A060309								6	3'-9"	26	293
A060304								6	3'-4"	83	415
A060208								6	2'-8"	14	56
EA052400								5	24'-0"	7	175
A052400								5	24'-0"	4	100
A051106								5	11'-6"	11	132
A051100								5	11'-0"	23	266
A050706								5	7'-6"	13	102
A050500								5	5'-0"	3	16
A050408								5	4'-8"	83	404
B061504	11'-6"	3'-10"						6	15'-4"	11	253
B061200	7'-3"	4'-8"						6	12'-0"	6	108
B060903	7'-3"	2'-6"						6	9'-3"	6	83
B060704	4'-9"	2'-7"						6	7'-4"	6	66
EB060309	1'-3"	2'-6"						6	3'-9"	9	107
EB052700	23'-6"	3'-6"						5	27'-0"	13	422
EB052507	21'-6"	4'-1"						5	25'-7"	8	213
B052310	21'-10"	2'-0"						5	23'-10"	8	199
B052305	20'-8"	2'-10"						5	23'-3"	4	98
D061205	4'-11"	4'-6 3/4"	2'-11 1/4"					6	12'-5"	17	317
S061806	1'-6"	15'-7"	1'-7"	7'-11"				6	18'-6"	2	56
S061604	1'-3"	13'-6"	1'-7"	8'-7"				6	16'-4"	2	49
S061402	1'-3"	11'-3"	1'-6"	7'-2"				6	14'-2"	2	43
S061200	1'-3"	9'-2"	1'-7"	5'-10"				6	12'-0"	2	36
S060910	1'-3"	6'-11"	1'-7"	4'-5"				6	9'-10"	2	30
S060708	1'-3"	4'-10"	1'-7"	3'-1"				6	7'-8"	2	23
S052006	9'-6"	10'-3"	9"	6'-6 1/2"				5	20'-6"	10	214
S051909	9'-6"	9'-6"	9"	6'-1"				5	19'-9"	14	288

TOTAL = 11188

EPOXY COATED TOTAL = 1382

SUPERSTRUCTURE

BAR	DIMENSIONS a	b	c	d	e	f	g	SIZE	LENGTH	NO. REQ'D	TOTAL WT.
EA042210								4	22'-10"	56	826
EA042200								4	22'-0"	176	2586
EA032210								3	22'-10"	98	841
EB040700	6'-6"	6"						4	7'-0"	88	411
ED060800	3'-8 3/4"	6 1/2"	3'-8 3/4"					6	8'-0"	88	1057
EK060408	10"	11 1/2"	11 1/2"	1'-1"				6	4'-8"	88	617
										TOTAL	= 6338



NOTE: Tolerance in cutting and bending are as established in the Manual of Standard Practice of the Concrete Reinf. Steel Institute and Detailing Manual of the American Concrete Institute. Steel for reinforcement shall be intermediate or hard grade only.

NOTE: All right bends in Reinforcing Steel to be made about a pin of the minimum diameter allowed by the Standard Specifications.

STEEL REINF. 20454 #

STEEL REINF., EPOXY COATED 8969 #

DATE	REVISION	DATE	REVISION
	ORIGINAL ISSUE		
			FINAL MEASURE RECORD SET

DRAWN: C.J.B.
DRAFT CHECK: F.T.
DESIGN CHECK: B.C.
APPROVED: F.T.

TOPO		LEVELS	
FLD. BK.	PAGE	FLD. BK.	PAGE

CITY OF DETROIT

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.
Detroit, Michigan 48226

INSELRUHE BRIDGE RECONSTRUCTION

SUMMARY OF STEEL REINFORCEMENT

FED. PROJ. NO.

DATE: JULY, 1993

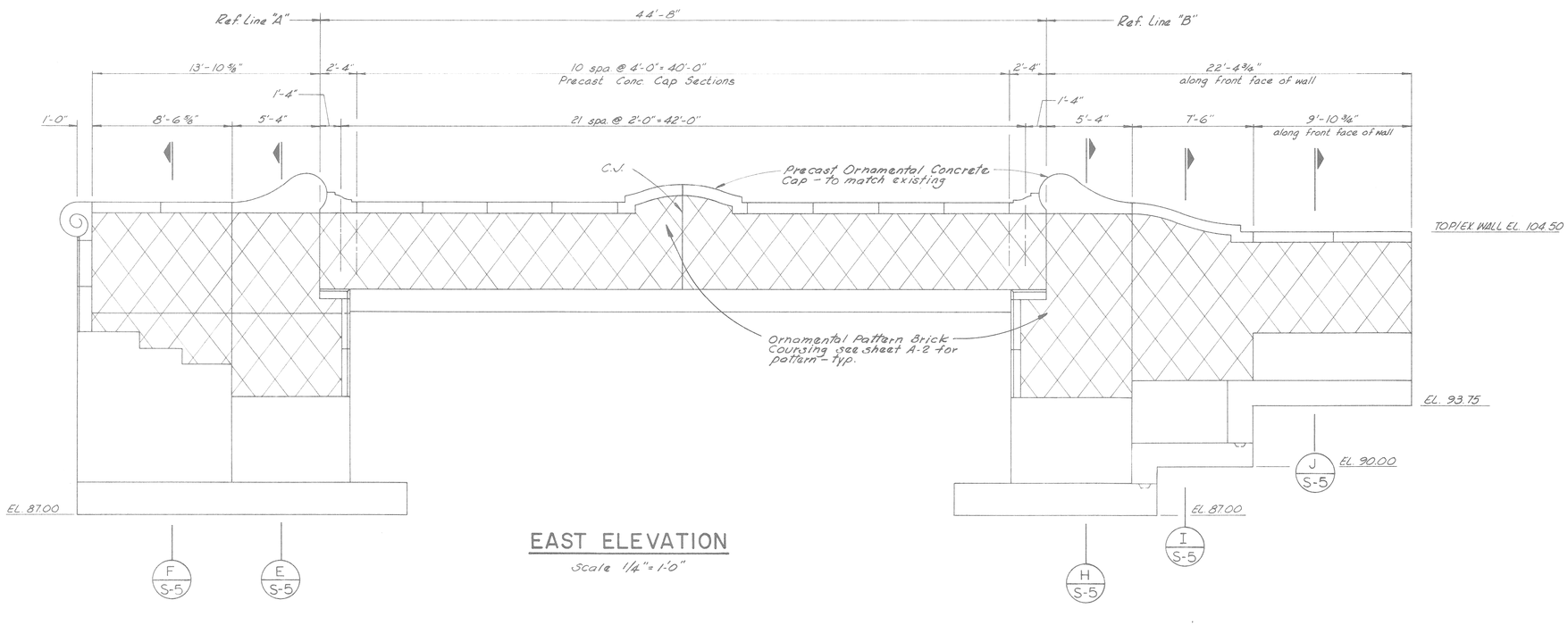
SCALE: NONE

JOB No.: 9304

S-9

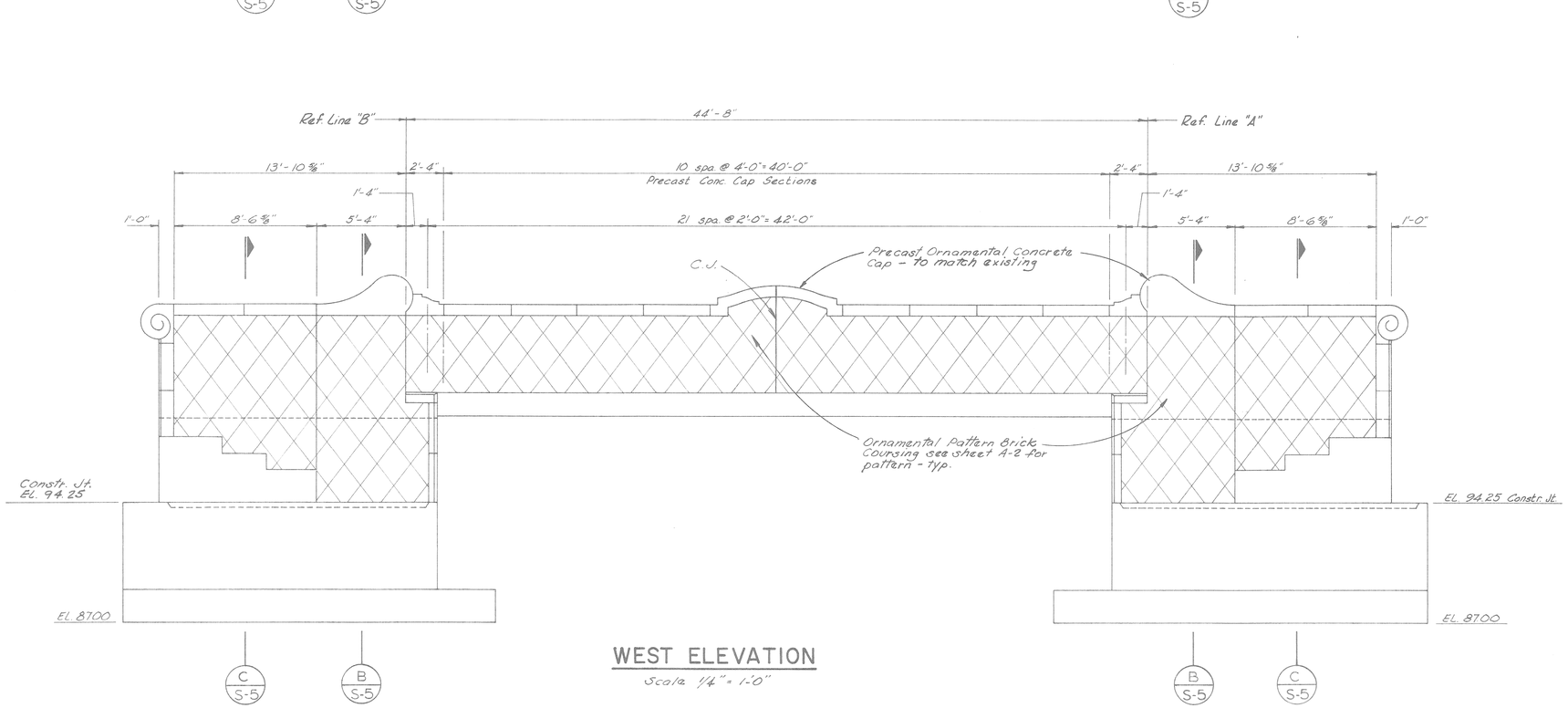
7/12/93

9304-S9



EAST ELEVATION

Scale 1/4" = 1'-0"



WEST ELEVATION

Scale 1/4" = 1'-0"

QUANTITIES

BRICK FACING ---------- 200 S.Y.
PRECAST ORNAMENTAL CONCRETE CAP --- L.S.
ALTERNATE
STONE ORNAMENTAL CAP --------- L.S.

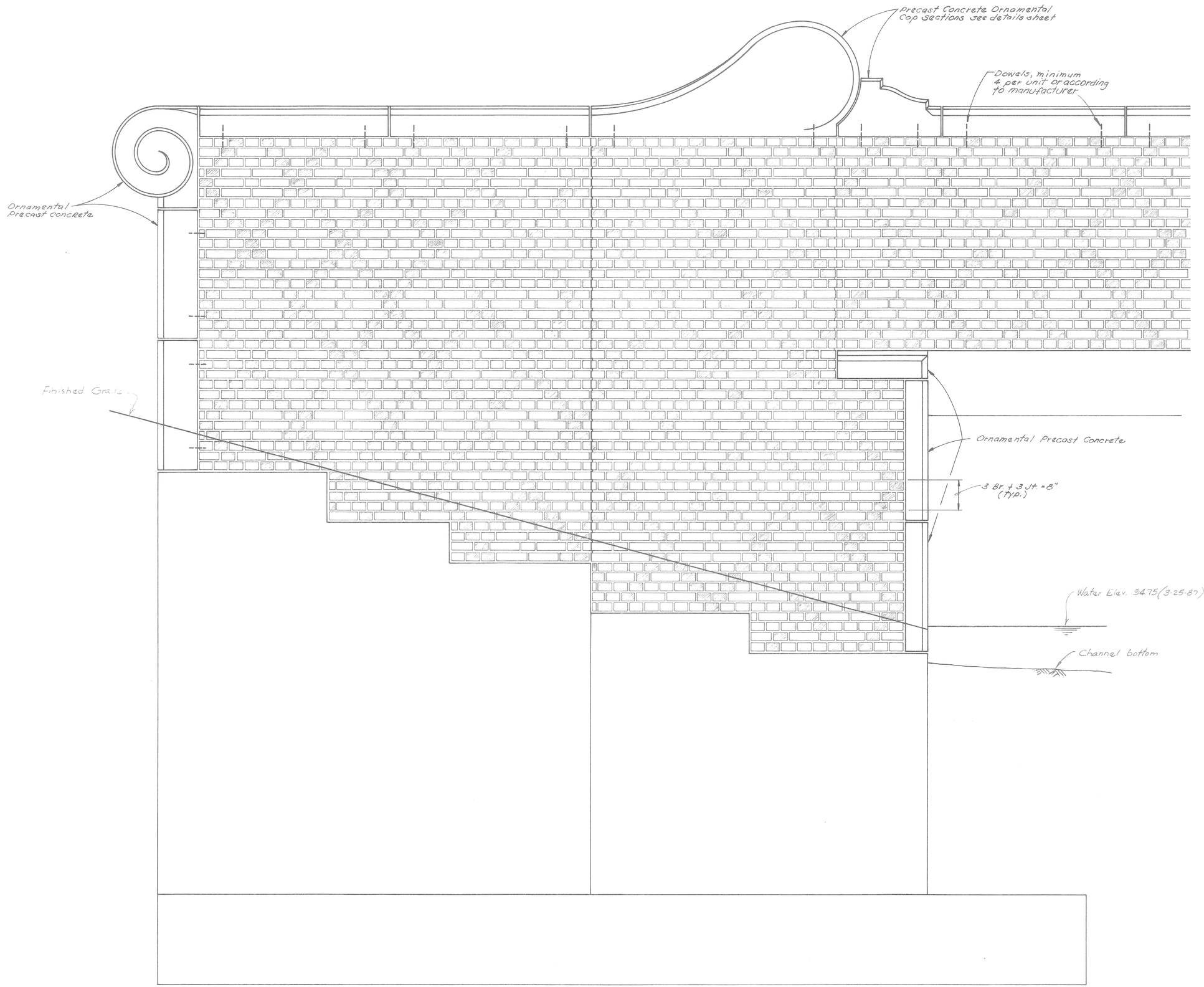
Sheet Title: ARCHITECTURAL DETAILS

Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.

DESIGN BY K.C.H.
DRAWN BY K.C.H.
CHECKED BY D.L.M.
DATE
PROJECT NO. 8605
SHEET NO. A-1

REGISTERED PROFESSIONAL ENGINEER STATE OF MICHIGAN BHAGU PATEL ENGINEER No. 28263



TYP. WING WALL ELEVATION DETAIL

Scale 1" = 1'-0"

Sheet Title: ARCHITECTURAL DETAILS

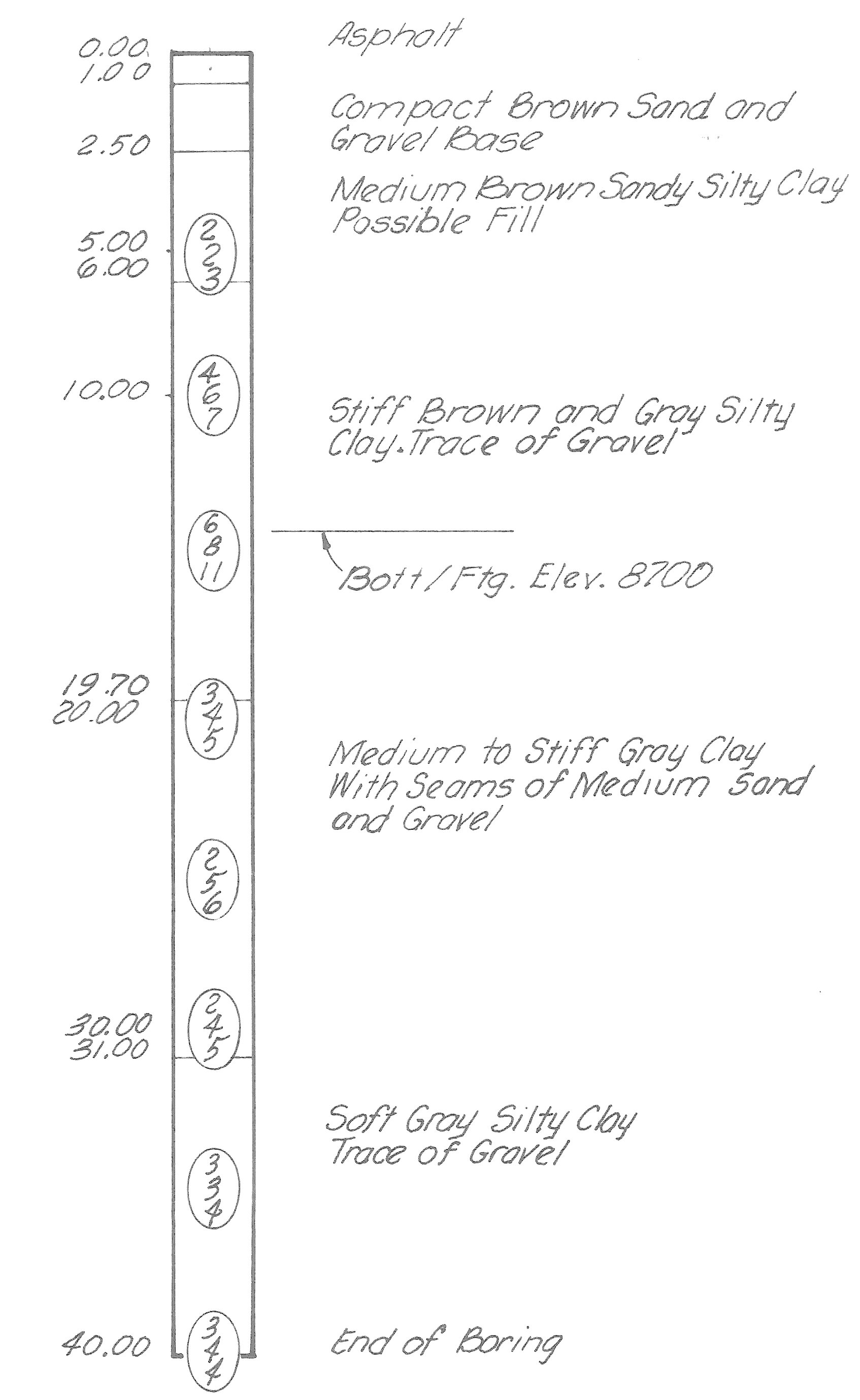
Project: CITY OF DETROIT
INSELRUHE BRIDGE RECONSTRUCTION

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
1420 Washington Blvd.
Detroit, Michigan 48226

DESIGN BY: K.C.H.
DRAWN BY:
CHECKED BY: D.L.M.
DATE:
PROJECT NO.: 8605
SHEET NO.: A-2

BHAGU PATEL ENGINEER No. 28263 STATE OF MICHIGAN LICENSED PROFESSIONAL ENGINEER

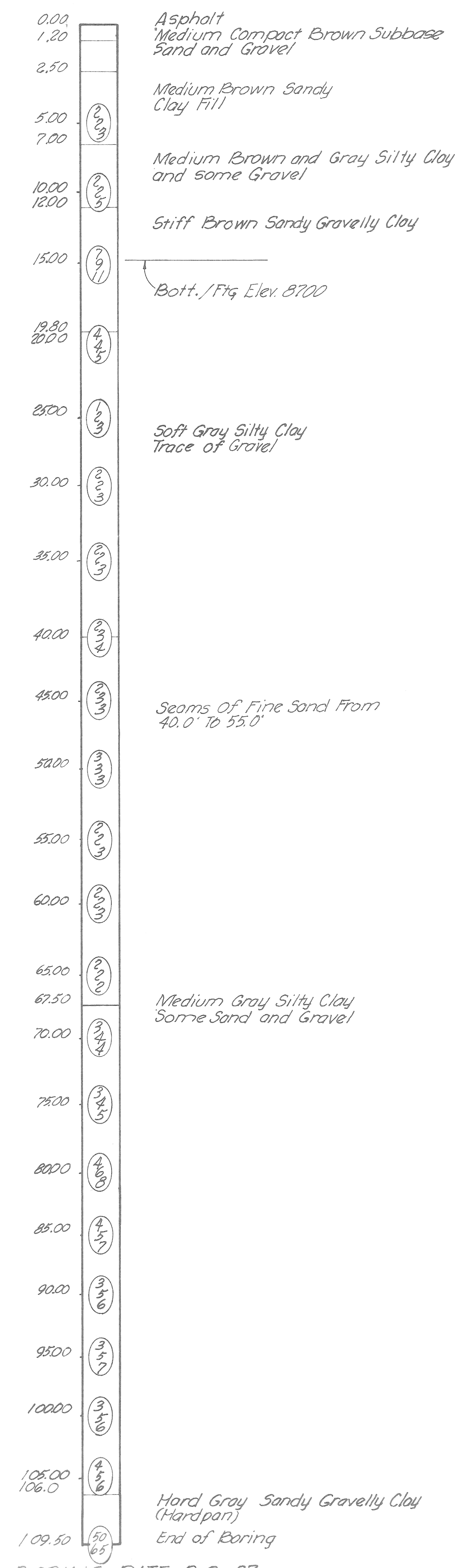
TEST HOLE NO. 1



BORING DATE 2-2-87

Encountered Water in Sand Seams at 20.00'. Boring Dry at Completion Backfilled With Excavated Materials

TEST HOLE NO. 2



BORING DATE 2-3-87

Boring was Backfilled with Bentonite Slurry

Notes:

(Circle, top to bottom:) 1st 6", 2nd 6", 3rd 6"

1. Number In Circle Denotes Number Of Blows Required To Drive A 2.00" O.D. x 1.50" I.D. Split Spoon Sampler 3 Successive 6" Increments Using A 140# Hammer Falling 30"
2. The Soil Boring Logs Represent Point Information. Presentation Of This Information In No Way Implies That Subsurface Conditions Are The Same At Locations Other Than The Exact Location Of The Boring.

State of Michigan Licensed Professional Engineer — Bhagu Patel, Engineer

Project: CITY OF DETROIT — INSELRUHE BRIDGE RECONSTRUCTION

SOIL BORING LOGS NO.1 and 2

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Engineers, Architects, Planners
1420 Washington Blvd.

DESIGN BY	
DRAWN BY	C.W.
CHECKED BY	S.O.
DATE	
PROJECT NO.	8605
SHEET NO.	SB-1

CITY OF DETROIT

INSELRUHE BRIDGE RECONSTRUCTION

TRAFFIC MAINTENANCE PLAN

Project

MADISON MADISON INTERNATIONAL OF MICHIGAN
Engineers, Architects, Planners
Two Woodward Avenue
Detroit, Michigan 48226

DESIGN BY KCH
DRAWN BY
CHECKED BY
DATE
PROJECT NO. 8605
SHEET NO. T-1

STAGE II

ONE-WAY TRAFFIC
12'0" MIN
100'
200' MIN.
200'
THE STRAND
ONE-WAY TRAFFIC
PLACE TWO (2) TYPE III BARRICADES WITH 3 LIGHTS ON EACH BARRICADE OR LIGHTED ARROW PANEL.
250' TRANSITION; TYPE II BARRICADES SPACED AT 25' MAX. LIGHTS ON EVERY BARRICADE
NO LEFT TURN R3-1 24"x24"
TYPE II BARRICADES AT 25' MAX
LIGHTS ON EVERY BARRICADE
PROPOSED BRIDGE
CONSTRUCTION ZONE
INSELRUHE

QUANTITIES

BARRICADES TYPE III LIGHTED, FURNISHED ---- 31 EA.
BARRICADES TYPE III LIGHTED, OPERATED ---- 31 EA.
BARRICADES TYPE III LIGHTED, FURNISHED --- 7 EA.
BARRICADES TYPE III LIGHTED, OPERATED ---- 7 EA.
SIGN, TYPE B TEMPORARY ---------- 129 S.F.

END CONSTRUCTION G20-2 60"x 24"
W4-2 36"x36"
LEFT LANE CLOSED AHEAD W20-5 48"x48"
500'
500'
CONSTRUCTION AHEAD W20-1 48"x48"
DETROIT RIVER
THE STRAND
LAKE TACOMA
TYPE II BARRICADES EVERY 25'... LIGHTS ON EVERY BARRICADE - SEE DETAIL BELOW
PLACE THREE (3) TYPE III BARRICADES WITH 3 LIGHTS ON EACH BARRICADE
TYPE III BARRICADES OR LIGHTED ARROW PANEL
ROAD CLOSED R-11-2 48"x30"
INSELRUHE AVE.
PICNIC WAY
CONSTRUCTION AHEAD W20-1 48"x48"
ROAD CLOSED TO THRU TRAFFIC R-11-4 60"x30"
LOITER WAY
PLACE TWO (2) TYPE III BARRICADES WITH 3 LIGHTS ON EACH BARRICADES