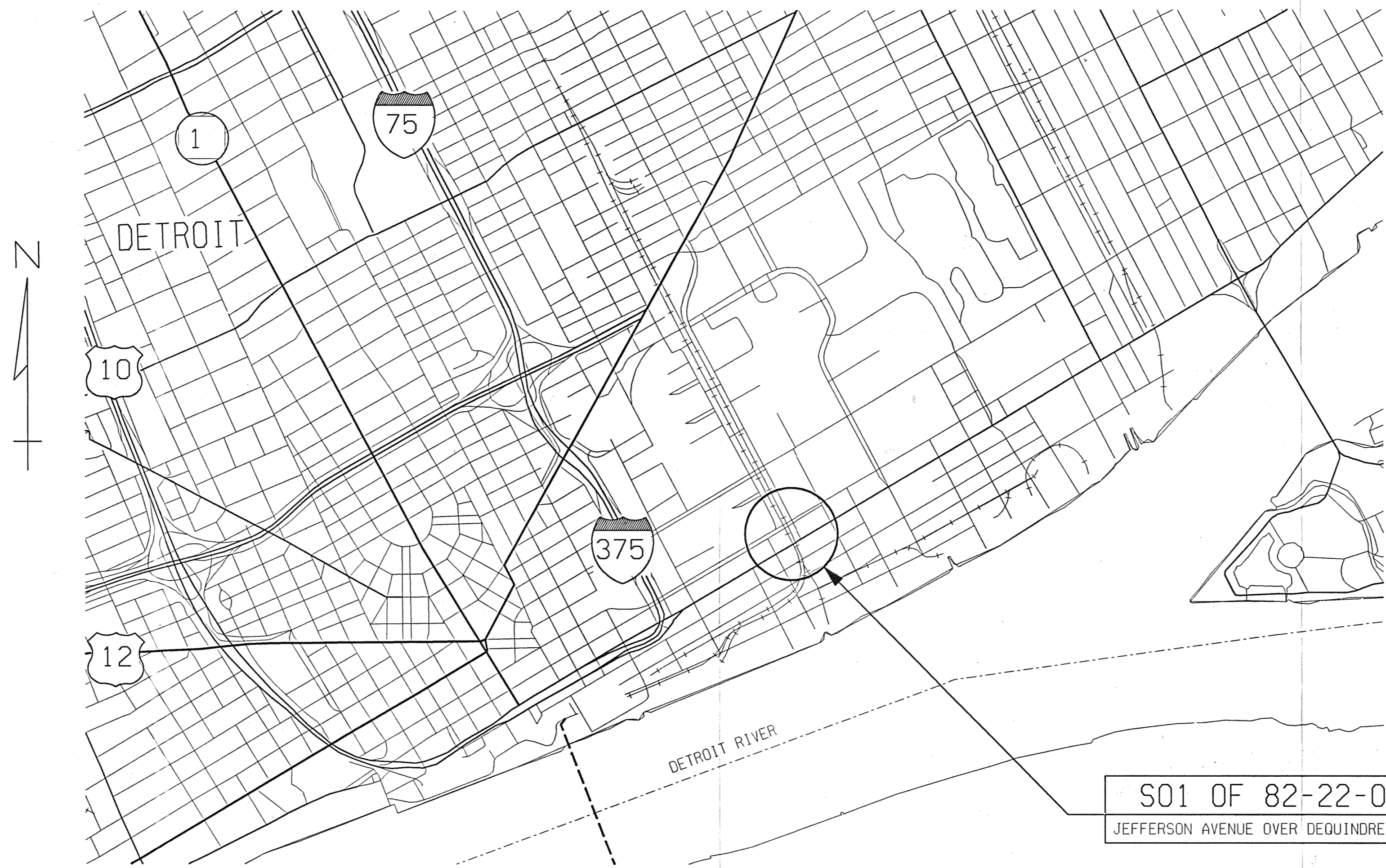


PLAN INDEX	
SH. NO	DESCRIPTION
1	TITLE SHEET
2-3	APPROACH TYPICAL SECTIONS
4-5	ROAD DETAIL SHEET
6	NOTESHEET
7	LEGEND SHEET
8	REMOVAL SHEET
9	CONSTRUCTION SHEET
10-17	MAINTAINING TRAFFIC/CONSTRUCTION STAGING
18	PAVEMENT MARKING SHEET
19-20	WATERMAIN SHEETS
21-45	ELECTRICAL SHEETS
46	EXPANSION JOINT DETAILS
47	PLD CONDUIT DETAILS
48	GENERAL PLAN OF SITE
49	LOG OF BORINGS
50-51	GENERAL PLAN OF STRUCTURE
52	EXISTING GENERAL PLAN OF SITE
53-54	EXISTING GENERAL PLAN OF STRUCTURE (REMOVAL)
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56	EXISTING STRUCTURAL DETAILS
57-59	CONSTRUCTION STAGING
60-61	DRILLED SHAFT DETAILS
62-68	ABUTMENT DETAILS
69-70	PRESTRESSED CONCRETE I-BEAM DETAILS
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78	SLAB AND SCREED DETAILS
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80a	MONUMENT BOXES (SPECIAL DETAIL)
80b-80c	PLACEMENT OF TEMPORARY CONCRETE BARRIER (S.D.)

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION
 IN CO-OPERATION WITH
MICHIGAN DEPARTMENT OF TRANSPORTATION
AND FEDERAL HIGHWAY ADMINISTRATION
 PLANS OF PROPOSED BRIDGE REPLACEMENT # S01 OF 82-22-02

CONTROL SECTION BRT 82022
 JOB NUMBER 49717A
 FED PROJECT NUMBER BRT 0482 (134)
 FED ITEM NUMBER RR4245

JEFFERSON AVENUE BRIDGE OVER DEQUINDRE CUT
 WAYNE COUNTY
 CITY OF DETROIT



TITLE SHEET LEGEND

PROPOSED BRIDGE PROJECT	
EXISTING ROADS	
CITY STREET	
COUNTY	
STATE ROUTES	
FEDERAL DIVIDED ROUTES	
FEDERAL DIVIDED INTERSTATE ROUTES	
HOT MIX ASPHALT	
GRAVEL	
SECTION LINE	
CITY, VILLAGE OR TOWNSHIP LIMITS	
RAILROADS	

GENERAL NOTES

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS25 LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

EXCEPT WHERE OTHERWISE INDICATED ON THESE PLANS, OR IN THE PROPOSAL AND SUPPLEMENTAL SPECIFICATIONS CONTAINED HEREIN, ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION 2003 EDITION.

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

CONCRETE: GRADE D	$f'c = 4,000$ psi
STEEL REINFORCEMENT	$f_y = 60,000$ psi
STEEL REINFORCEMENT: STIRRUPS FOR PRESTRESSED BEAMS	$f_y = 40,000$ psi
PRESTRESSED CONCRETE PRESTRESSING STRANDS	$f'c = 7,000$ psi $f's = 270,000$ psi

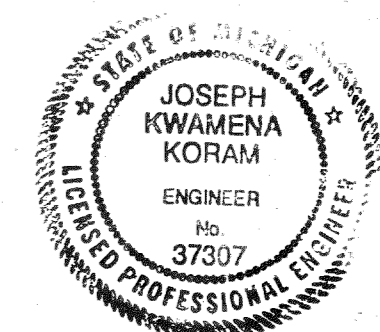
PROPOSED PLAN DIMENSIONS ARE IN FEET/INCHES UNLESS OTHERWISE SHOWN. ELEVATIONS, COORDINATES AND CURVE DATA ARE IN FEET.

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

CONTRACT FOR: REMOVAL AND REPLACEMENT OF EXISTING STRUCTURE, APPROACH RECONSTRUCTION, MSE WALLS, AND SLOPE RESTORATION

THESE PLANS WERE PREPARED FOR THE
CITY OF DETROIT, CITY ENGINEERING DIVISION
BY

PB PARSONS BRINCKERHOFF, INC.
535 GRISWOLD STREET, SUITE 1525
DETROIT, MICHIGAN 48226
313-963-5760



JMK
02/10/05

CITY OF DETROIT
CITY ENGINEERING DIVISION
DEPARTMENT OF PUBLIC WORKS

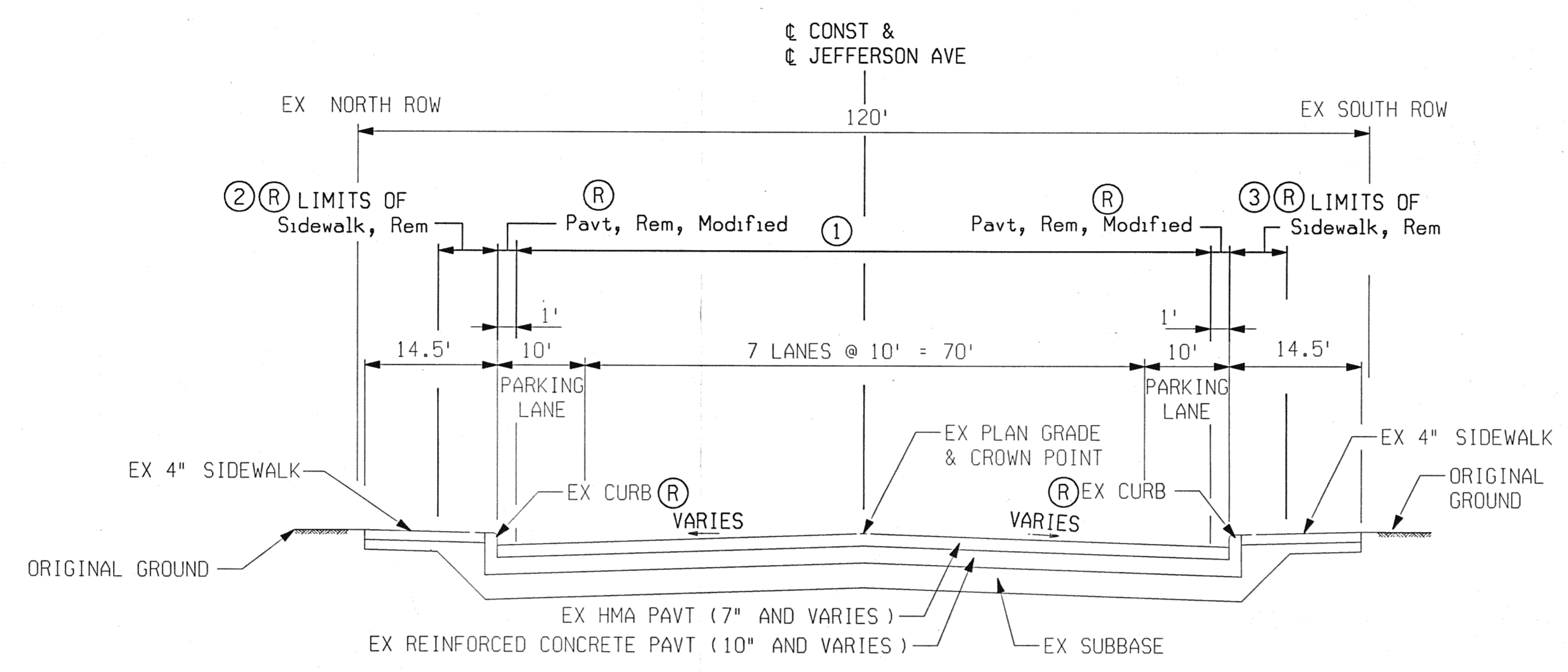
APPROVALS

RECOMMENDED FOR APPROVAL	<i>Rodolfo Flores</i>	2/11/05
	STRUCTURAL ENGINEER	DATE
RECOMMENDED FOR APPROVAL	<i>William Tally</i>	2/11/05
	HEAD ENGINEER	DATE
APPROVED BY	_____	_____
	CITY ENGINEER	DATE

CONTROL SECTION	JOB NUMBER	FEDERAL NUMBERS		SHEET NO.
		PROJECT	ITEM	
BRT 82022	49717A	BRT 0482 (134)	RR4245	1

DATE: 2/10/2005
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NO.	DESCRIPTION	DATE	BY



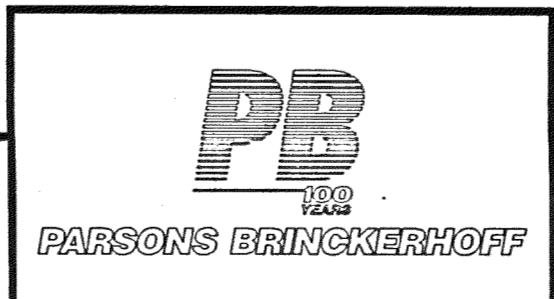
- ② 7' c CONST & c JEFFERSON AVE
STA 8+50.00 TO STA 9+00.00
14.5' c CONST & c JEFFERSON AVE
STA 9+00.00 TO STA 9+97.41 & STA 10+94.21 TO STA 11+24.04
- ③ 7' c CONST & c JEFFERSON AVE
STA 8+50.00 TO STA 9+00.00 & STA 11+75.00 TO STA 12+10.00
14.5' c CONST & c JEFFERSON AVE
STA 9+00.00 TO STA 9+96.75 & STA 10+84.27 TO STA 11+75.00

EXISTING TYPICAL APPROACH SECTION

IN DIRECTION OF INCREASING STATIONING
TO APPLY:

- c CONST. & c JEFFERSON AVE. STA 8+50 TO STA 9+33.00 ① Cold Milling HMA Surface, Modified (3" DEPTH AVG)
- c CONST. & c JEFFERSON AVE. STA 9+33.00 TO STA 9+94.22 (BRIDGE) ① Pavt, Rem, Modified
- c CONST. & c JEFFERSON AVE. STA 10+88.97 (BRIDGE) TO STA 11+36.00 ① Pavt, Rem, Modified
- c CONST. & c JEFFERSON AVE. STA 11+36.00 TO STA 12+48.09 ① Cold Milling HMA Surface, Modified (3" DEPTH AVG)

NOTE: GAP EXISTING BRIDGE c CONST & c JEFFERSON AVE
STA 9+94.22 TO STA 10+88.97

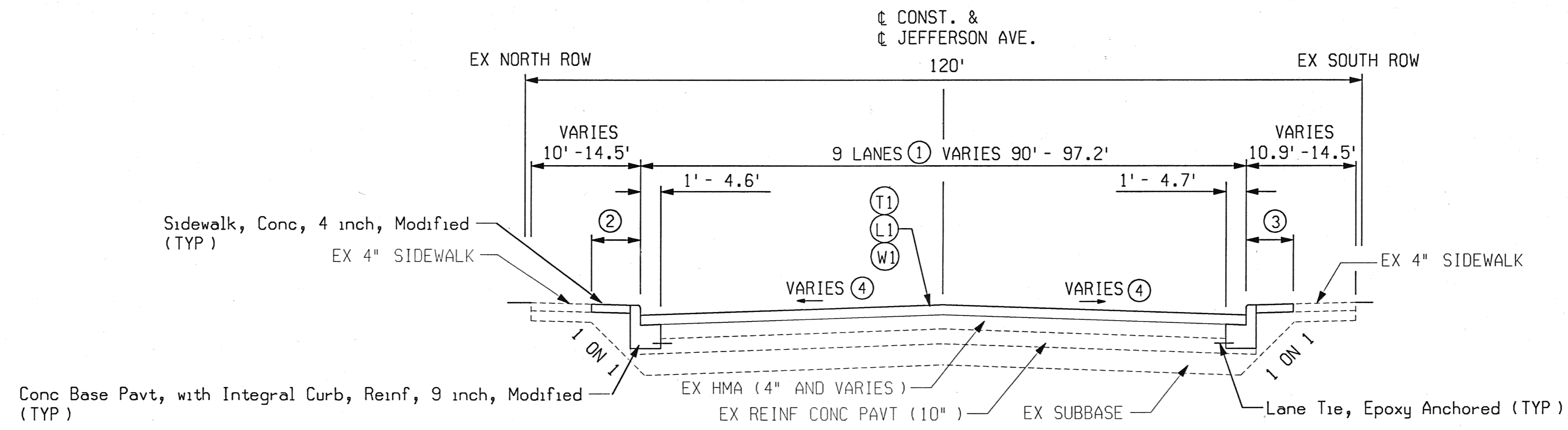


CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT			
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	NTS	49717A	2 OF 80

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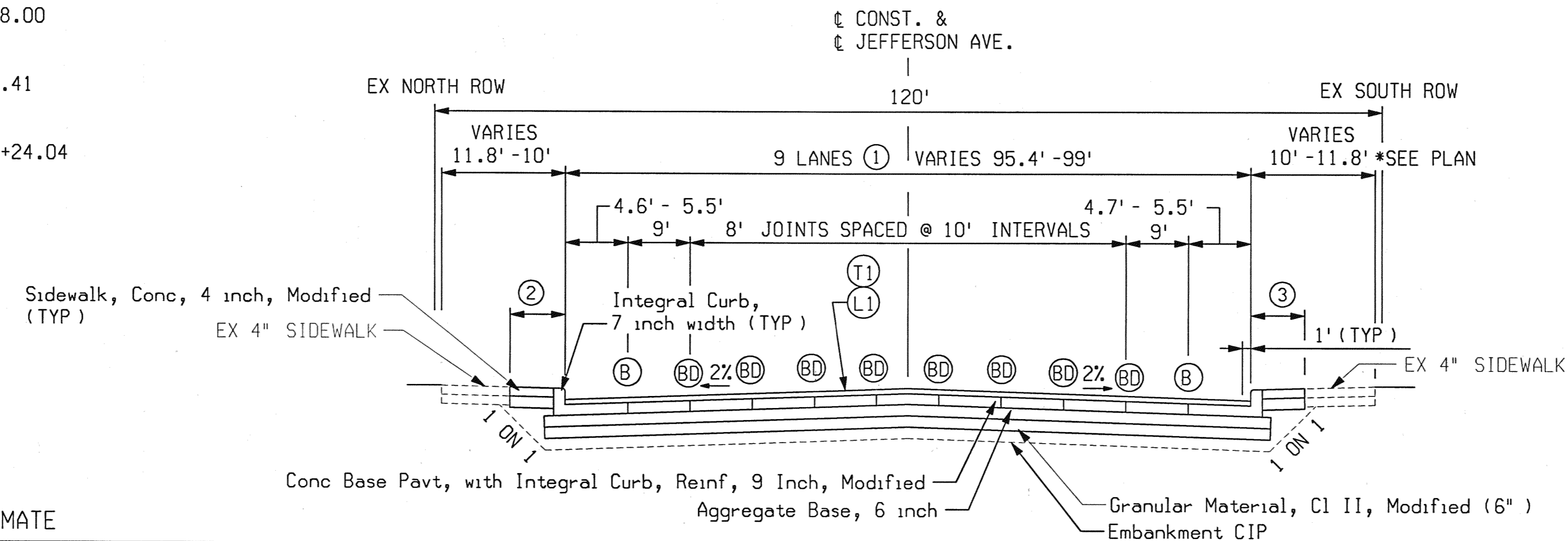


PROPOSED TYPICAL APPROACH SECTION

IN DIRECTION OF INCREASING STATIONING TO APPLY:

- ② TO APPLY:
- WIDTH 7.0'
CONST. & JEFFERSON AVE STA 8+50.00 TO STA 8+57.00
- WIDTH VARIES 7' - 5.6'
CONST. & JEFFERSON AVE STA 8+57.00 TO STA 9+00.00
- WIDTH VARIES 13.1' - 10.0'
CONST. & JEFFERSON AVE STA 9+00.00 TO STA 9+78.00
- WIDTH 10.0'
CONST & JEFFERSON AVE STA 9+78.00 TO STA 9+97.41
- WIDTH 10.0'
CONST. & JEFFERSON AVE STA 10+94.21 TO STA 11+24.04

- CONST. & JEFFERSON AVE. STA 8+50.00 TO STA 9+33.00 ① LANE WIDTH VARIES FROM 10.0' TO 10.6' ④ VARIES FROM *PARABOLIC CROWN TO 2%
- CONST. & JEFFERSON AVE. STA 11+36.00 TO STA 12+48.09 ① LANE WIDTH VARIES FROM 10.8' TO 10.0' ④ VARIES FROM 2% TO *PARABOLIC CROWN
- * SEE SHEET 4 ROAD DETAIL SHEET FOR TYPICAL PARABOLIC CROWN SECTION AND SHEET 5 FOR TRANSITION GRADES



PROPOSED TYPICAL APPROACH SECTION

IN DIRECTION OF INCREASING STATIONING TO APPLY:

- ③ TO APPLY:
- WIDTH VARIES 7' - 5.9'
CONST & JEFFERSON AVE STA 8+50.00 TO STA 9+00.00
- WIDTH VARIES 13.4' to 10.0'
CONST & JEFFERSON AVE STA 9+00.00 TO STA 9+69.52
- WIDTH 10'
CONST & JEFFERSON AVE STA 9+69.52 TO STA 9+96.75
- WIDTH VARIES 10' TO 13.2'
CONST & JEFFERSON AVE STA 10+84.27 TO STA 11+75.00
- WIDTH VARIES 5.7' TO 7.0'
CONST & JEFFERSON AVE STA 11+75 TO STA 12+06.00
- WIDTH 7'
CONST & JEFFERSON AVE STA 12+06 TO STA 12+10

- CONST. & JEFFERSON AVE. STA 9+33.00 TO STA 9+94.22* (BRIDGE)
① LANE WIDTH VARIES FROM 10.6' TO 11.0' - SEE SHEET 9
- CONST. & JEFFERSON AVE. STA 10+88.97* (BRIDGE) TO STA 11+36.00
① LANE WIDTH VARIES FROM 11.0' TO 10.8' - SEE SHEET 9

NOTE GAP PROPOSED BRIDGE CONST & JEFFERSON AVE STA 9+94.22 TO STA 10+88.97
*REINFORCED CONCRETE FROM STA 9+91.22 TO STA 9+94.22 AND FROM STA 10+88.97 TO STA 10+91.97

HMA APPLICATION ESTIMATE

IDENT NO.	ITEM	RATE lb/syd	PERFORMANCE GRADE	REMARKS
T1	HMA, 4C	165	64-22	TOP COURSE
L1	HMA, 3C	165	64-22	LEVEL COURSE
W1	HMA, 3C	VARIES	64-22	WEDGING COURSE
FOR INFORMATION ONLY: HMA BOND COAT		0-0.10 GAL PER SYD		

NOTE: THE MIX DESIGN AND/OR JMF TARGET VALUE FOR AIR Voids IS TO BE ADJUSTED TO 2.5%.
FOR SHOULDER CORRUGATIONS REFER TO STANDARD PLAN R-112 SERIES

JOINT LEGEND FOR PAVEMENT JOINTS:

- ⓑ - LONGITUDINAL BULKHEAD JOINT, ACCORDING TO STANDARD PLAN R-41 SERIES.
- ⓓ - OPTIONAL ⓑ OR ⓓ JOINT
- ⓓ - LOGITUDINAL LANE TIE JOINT WITH TIE BARS, ACCORDING TO STANDARD PLAN R-41 SERIES
- E2 - 1" TRANSVERSE EXPANSION JOINT WITH LOAD TRANSFER DEVICES, SEALED WITH HOT-POURED RUBBER-ASPHALT SEALANT, ACCORDING TO STANDARD PLAN R-39 SERIES, SYMBOL (E2).
- E3 - 1" TRANSVERSE EXPANSION JOINT IN CONCRETE PAVEMENT WITHOUT LOAD TRANSFER DEVICES, SEALED WITH HOT-POURED RUBBER-ASPHALT, ACCORDING TO STANDARD PLAN R-39 SERIES, SYMBOL (E3).

JOINT SPACING TO FOLLOW PROPOSED LANE LINES

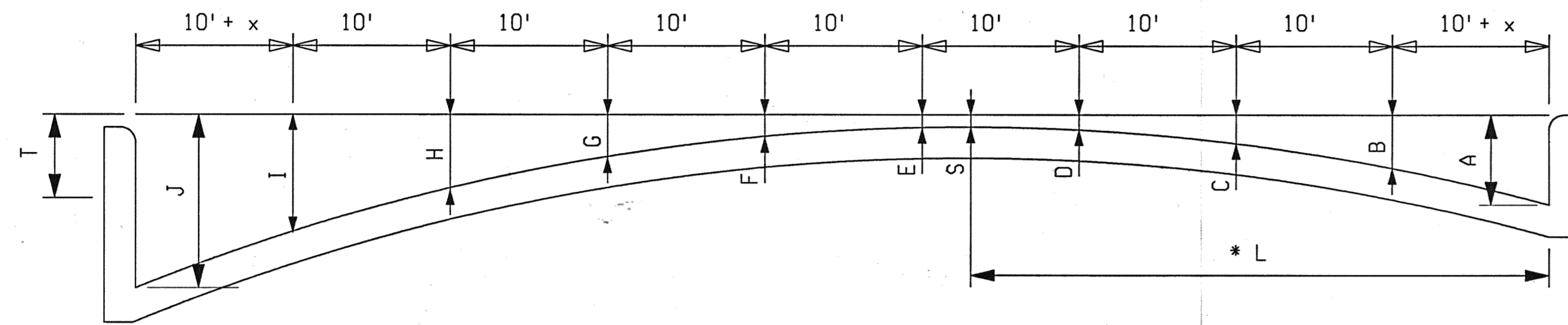


CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT			
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	NTS	49717A	3 OF 80

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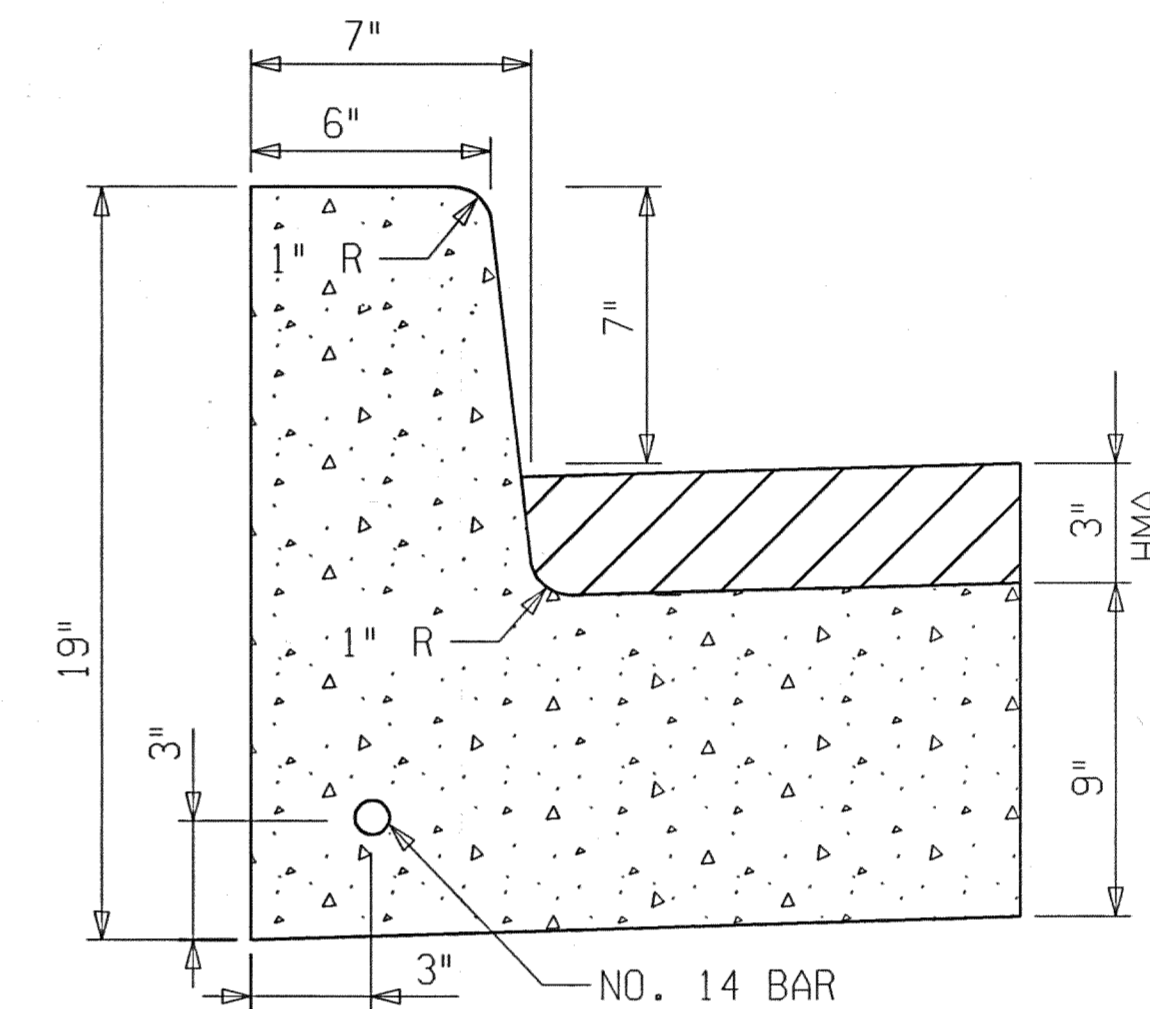
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NO.	DESCRIPTION	DATE	BY



$$x = \frac{\text{PAVEMENT WIDTH} - 90}{2}$$

Pavement Width	Curb Height	T	A	B	C	D	E	F	G	H	I	J	L	S
99 to 90 Feet	7 Inches	0.000	0.583	0.287	0.065	-0.083	-0.157	-0.157	-0.083	0.065	0.287	0.583	45.000	-0.167
		0.054	0.583	0.293	0.077	-0.065	-0.133	-0.127	-0.047	0.107	0.335	0.637	44.190	-0.140
		0.108	0.583	0.299	0.089	-0.047	-0.109	-0.097	-0.011	0.149	0.383	0.691	43.380	-0.114
		0.162	0.583	0.305	0.101	-0.029	-0.085	-0.067	0.025	0.191	0.431	0.745	42.570	-0.088
		0.216	0.583	0.311	0.113	-0.011	-0.061	-0.037	0.061	0.233	0.479	0.799	41.760	-0.063
		0.270	0.583	0.317	0.125	0.007	-0.037	-0.007	0.097	0.275	0.527	0.853	40.950	-0.038
		0.324	0.583	0.323	0.137	0.025	-0.013	0.023	0.133	0.317	0.575	0.907	40.140	-0.013
		0.378	0.583	0.329	0.149	0.043	0.011	0.053	0.169	0.359	0.623	0.961	39.330	0.010
		0.432	0.583	0.335	0.161	0.061	0.035	0.083	0.205	0.401	0.671	1.015	38.520	0.034
		0.486	0.583	0.341	0.173	0.079	0.059	0.113	0.241	0.443	0.719	1.069	37.710	0.057
0.540	0.583	0.347	0.185	0.097	0.083	0.143	0.277	0.485	0.767	1.123	36.900	0.079		

* L = DISTANCE FROM FACE OF CURB (HIGH SIDE) TO CROWN
(TYPICAL DETAIL PAVEMENT GRADES)



INTEGRAL CURB DETAIL
(NOT TO SCALE)



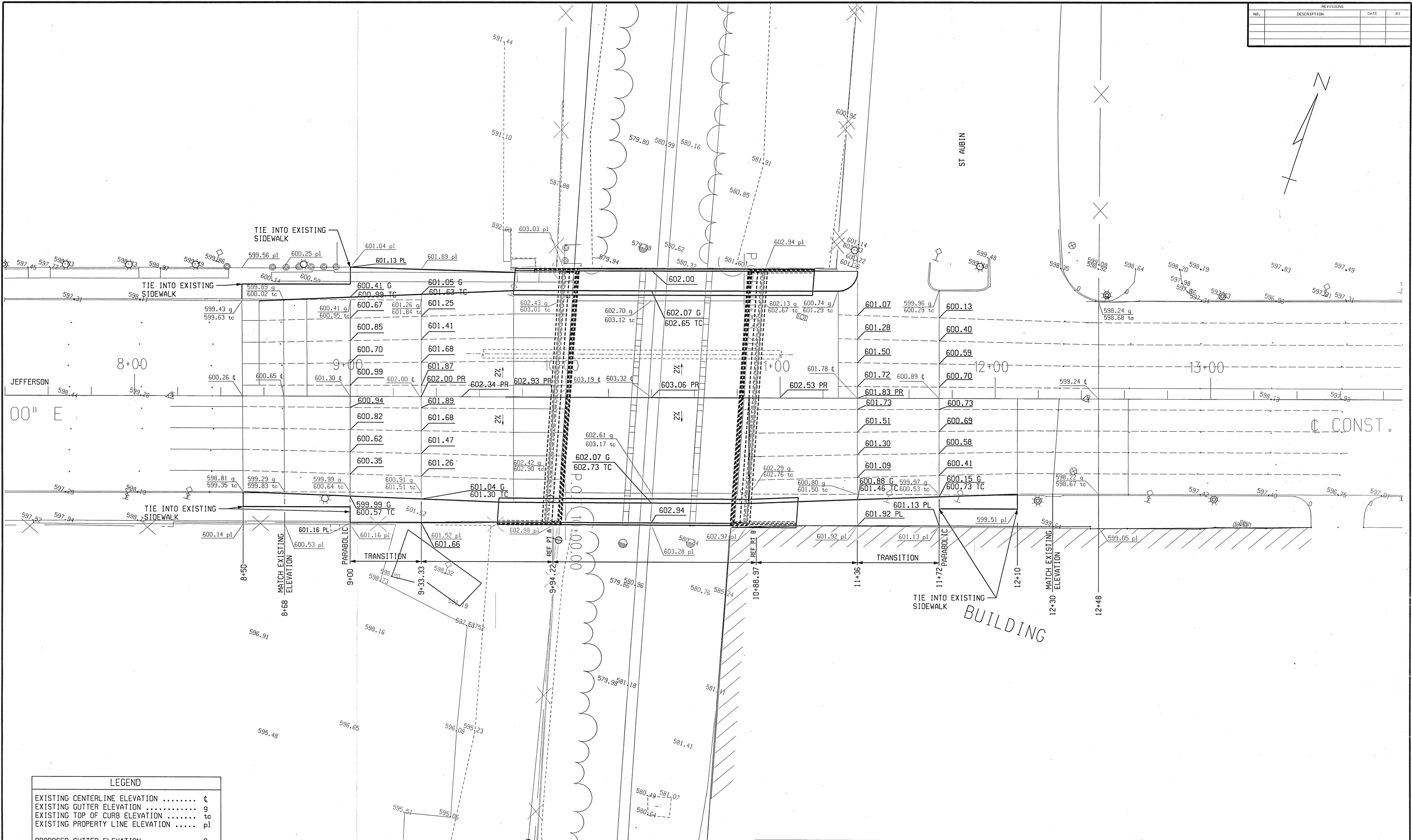
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT
ROAD DETAIL SHEET

DATE	SCALE:	JOB NO.	SHEET:
02/11/05	1" = 50'	49717A	4 OF 80

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LEGEND	
EXISTING CENTERLINE ELEVATION	¢
EXISTING GUTTER ELEVATION	g
EXISTING TOP OF CURB ELEVATION	tc
EXISTING PROPERTY LINE ELEVATION	pl
PROPOSED GUTTER ELEVATION	G
PROPOSED TOP OF CURB ELEVATION	TC
PROPOSED CENTERLINE	PR



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT DETAIL GRADES			
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	1" = 20'	49717A	5 OF 80

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ENGINEERING REPORT NO	ENVIRON IMPACT STMT	N/A	
METHOD OF SURVEY	FIELD	YEAR 2003	
SURVEY ORDER	SURVEY CHIEF	YEAR 2003	
AERIAL SURVEY NO		YEAR N/A	
HORIZ DATUM	CITY OF DETROIT	VERT DATUM	CITY OF DETROIT
ROAD DESIGN INITIATED	2003	COMPLETED	2005
PRELIMINARY PLANS BY	PB	FINAL PLANS BY	PB
FIELD INSPECTION (G1) BY	EARL HOWARD	DATE	08/04/04
PLANS-IN-HAND BY (FHWA)	AND (MDOT) TENNES	DATE	2005

GENERAL PLAN NOTES

UNDERGROUND UTILITIES

FOR PROTECTION OF UNDERGROUND UTILITIES AND IN CONFORMANCE WITH PUBLIC ACT 53, 1974, THE CONTRACTOR SHALL DIAL 1-800-482-7171 A MINIMUM OF THREE FULL WORKING DAYS, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS PRIOR TO BEGINNING EACH EXCAVATION IN AREAS WHERE PUBLIC UTILITIES HAVE NOT BEEN PREVIOUSLY LOCATED. 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.

MDOT'S FREEWAY LIGHTING SYSTEM, THE SCANDI SYSTEM AND OTHER MISCELLANEOUS ELECTRICAL SYSTEMS ARE NOT A PART OF MISS DIG.

ADJUSTING MONUMENT BOXES

IT IS THE INTENT THAT ALL GOVERNMENT CORNERS ON THIS PROJECT BE PRESERVED AND THAT, WHERE NECESSARY, MONUMENT BOXES BE PLACED OR ADJUSTED. WHETHER SHOWN OR NOT.

PAVEMENT MARKINGS

ALL MARKINGS, SHAPES AND DIMENSIONS, SHALL CONFORM WITH MDOT PAVEMENT MARKING TYPICALS VIII-900E, VIII-905E, VIII-935E AND VIII-945E, UNLESS OTHERWISE SPECIFIED BY SPECIAL PROVISIONS.

PAVEMENT REMOVAL QUANTITIES

PAVEMENT REMOVAL AS SHOWN ON THE PLANS SHALL BE AT THE DISCRETION OF THE ENGINEER. IF IN HIS/HER JUDGEMENT, AREAS OF PAVEMENT MAY BE LEFT IN PLACE, OR ADDITIONAL AREAS ADDED TO PROVIDE THE PROPER CROSS-SECTION AND BASE. ADJUSTMENTS CAN BE MADE IN QUANTITIES.

SOIL EROSION MEASURES

PLACE TEMPORARY SEED AND MULCH AS SOON AS POSSIBLE. CRITICAL GRADES SHOULD BE PROTECTED WITH EITHER SOD OR SEED/MULCH AS DIRECTED BY THE ENGINEER.

EARTHWORK

ALL EARTHWORK GRADING AND COMPACTING REQUIRED TO RECONSTRUCT APPROACH PAVEMENTS WILL NOT BE PAID FOR SEPARATELY BUT WILL BE INCLUDED IN PAYMENT FOR APPROACH ITEMS.

CONCRETE

ALL APPROACH CONCRETE SHALL BE GRADE S2 UNLESS OTHERWISE DIRECTED.

STAGING FOR CONSTRUCTION:

THE CONTRACTOR SHALL OBTAIN ACCESS TO DEQUINDRE CUT FOR STORAGE OF MATERIALS AND STAGING OF CONSTRUCTION WORK.

EXTERNAL LONGITUDINAL PAVEMENT JOINT

LONGITUDINAL JOINTS ADJACENT TO BRIDGE APPROACH CURB AND GUTTER OR CONCRETE SHOULDERS WILL NOT BE PAID SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN PAYMENT FOR MISCELLANEOUS REINFORCED CONCRETE PAVEMENT.

SIGNS

ANY CITY SIGNS REQUIRING RELOCATION DUE TO CONSTRUCTION OPERATIONS SHALL BE SALVAGED AND RESET BY THE CONTRACTOR AT LOCATIONS DESIGNATED BY THE ENGINEER. THIS WORK WILL BE CONSIDERED INCLUDED IN PAYMENT FOR OTHER CONTRACT ITEMS.

SOIL BORINGS AND/OR PAVEMENT CORES

THE SOIL BORING LOGS AND/OR PAVEMENT CORES REPRESENT POINT INFORMATION. NO INFERENCE SHOULD BE MADE THAT SUBSURFACE OR PAVEMENT CONDITIONS ARE THE SAME AT OTHER LOCATIONS.

EXISTING WATERMAINS

THE CONTRACTOR WILL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATERMAINS DURING THE CONSTRUCTION OF THIS PROJECT. FOR PLACEMENT OF 48" MAIN, CONTRACTOR WILL REMOVE RELEVANT PORTIONS OF EXISTING FOOTING

UTILITY CLEARANCE

THERE SHALL BE A MINIMUM OF 1' OF CLEARANCE BETWEEN EXISTING UTILITIES AND THE BOTTOM WALL FOOTINGS AT UTILITY CROSSINGS.

OLD PLANS

THE EXISTING OLD PLANS WERE REFERRED TO IN THE DESIGN OF THIS PROJECT: CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS JOB No PW 5752

IN ADDITION, OTHER OLD PLANS THAT PREDATE THIS PROJECT MAY BE AVAILABLE. THESE PLANS MAY BE REVIEWED IN THE CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS OFFICE DURING NORMAL WORKING HOURS.

PUBLIC UTILITIES

THE EXISTING UTILITIES LISTED BELOW AND SHOWN ON THESE PLANS REPRESENT THE BEST INFORMATION AVAILABLE AS OBTAINED ON OUR SURVEYS. THIS INFORMATION DOES NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO BE SATISFIED AS TO IT'S ACCURACY AND THE LOCATION OF EXISTING UTILITIES.

NAME OF OWNER	KIND OF UTILITY
MICHIGAN CONSOLIDATED GAS CO. 3200 HOBSON DETROIT, MICHIGAN 48201 ATTN: PAUL HARTMAN PHONE No.: (313) 577-7236	GAS
DETROIT EDISON COMPANY 2000 SECOND AVE., RM 518 SB DETROIT, MICHIGAN 48226 ATTN: ROBERT PETROFF PHONE No.: (313) 235-6515	ELECTRIC
SBC AMERITECH 31100 PLYMOUTH ROAD, RM 301 LIVONIA, MICHIGAN 48150 ATTN: DENNIS LEWIS PHONE No.: (734) 523-6891	TELEPHONE
CITY OF DETROIT (PUBLIC LIGHTING DEPT) 9449 GRINNEL AVE DETROIT, MICHIGAN 48213 ATTN: STAN TOPOLEWSKI PHONE No.: (313) 267-7228	LIGHTING
COMCAST CABLEVISION OF DETROIT 12775 LYNDON DETROIT, MICHIGAN 48227 ATTN: RUSTY KEMPER PHONE No.: (313) 934-2600 X540	CABLE
CITY OF DETROIT (DWSD) DETROIT DESIGN SECTION 1420 WASHINGTON BLVD, 6TH FLOOR DETROIT, MICHIGAN 48226 ATTN: DALJIT SINGH PHONE No.: (313) 964-9889	WATER
METROMEDIA FIBER NETWORK SERVICES 810 JORIE BOULEVARD, STE 110 OAK BROOK, ILLINOIS 60523 ATTN: JOHN FISK PHONE No.: (630) 371-0700	FIBER OPTIC

NOTES APPLYING TO STANDARD PLANS

WHERE THE FOLLOWING ITEMS ARE CALLED FOR ON PLANS, THEY ARE TO BE CONSTRUCTED ACCORDING TO THE STANDARD PLAN GIVEN BELOW OPPOSITE EACH ITEM UNLESS OTHERWISE INDICATED.

MONUMENT BOXES	R-11-D (S.D.)
TEMPORARY CONCRETE BARRIER	R-52-D
SOIL EROSION & SEDIMENTATION CONTROL MEASURES	R-96-C
TEMPORARY TRAFFIC CONTROL DEVICES	R-125-C
PLACEMENT OF TEMPORARY CONCRETE BARRIER	R-126-E (S.D.)
CONVENTIONAL PAVEMENT REINFORCEMENT	R-45-E
LONGITUDINAL PAVEMENT JOINTS	R-41-D
TRANSVERSE PAVEMENT JOINTS	R-39-F.

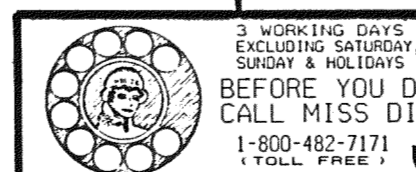
BRIDGE STANDARD PLANS

RAILING, AESTHETIC PARAPET TUBE	B-25-C
MOLDING, BEVEL, LIGHT STANDARD ANCHOR BOLT ASSEMBLY AND NAME PLATE DETAILS	B-103-D

MISCELLANEOUS ESTIMATES

THE FOLLOWING ITEMS OF WORK SHALL BE DONE AS THEY APPLY THROUGHOUT THE PROJECT. THESE ITEMS ARE NOT DETAILED OR INCLUDED ON THE PLAN AND PROFILE SHEETS:

MISCELLANEOUS ITEMS		
1	LS	Contractor Staking
38	Hr	Staking Plan Errors and Extras, One Person
15	Hr	Staking Plan Errors and Extras, Two Person
22	Hr	Staking Plan Errors and Extras, Three Person
1	LS	Project Cleanup
1	Ea	Monument Box, Adj
1	Ea	Monument Preservation
70	Syd	Pavt Repr, Rem, Modified
5	Ton	Hand Patching
2	Ea	Water Shutoff, Adj, Modified
200	Ft	Sewer Cleanout, Modified
4	Ea	Dr Structure Cleaning, Modified
10	Ton	Conditioning Existing Pavement, Modified
10	Ton	Cement, Modified
100	Cyd	Non Haz Contaminated Material Handling and Disposal, LM
100	Syd	Slope Restoration
1	LS	Relocation and Site Cleanup
MAINTAINING TRAFFIC ITEMS		
17500	Ft	Pavt Mrkg, Type R, 4 inch, White, Temp
11300	Ft	Pavt Mrkg, Type R, 4 inch, Yellow, Temp
7	Ea	Barricade, Type III, High Intensity, Lighted, Furn
7	Ea	Barricade, Type III, High Intensity, Lighted, Oper
1510	Ft	Conc Barrier, Temp, Adjusted
1510	Ft	Conc Barrier, Temp, Furn
1510	Ft	Conc Barrier, Temp, Oper
3	Ea	Lighted Arrow, Type C, Furn
3	Ea	Lighted Arrow, Type C, Oper
1	LS	Minor Traf Devices
150	Ea	Plastic Drum, High Intensity, Lighted, Furn
150	Ea	Plastic Drum, High Intensity, Lighted, Oper
732	Sft	Sign, Type B, Temp, Prismatic, Furn
732	Sft	Sign, Type B, Temp, Prismatic, Oper
PERMANENT PAVEMENT MARKINGS		
90	Ft	Pavt Mrkg, Durable Reflectorized, 18 inch, Stop Bar
360	Ft	Pavt Mrkg, Durable Reflectorized, 6 inch, Crosswalk
1	Ea	Pavt Mrkg, Durable Reflectorized, Lt Turn Arrow Sym
1	Ea	Pavt Mrkg, Durable Reflectorized, Only
1230	Ft	Pavt Mrkg, Durable Reflectorized, Pavt Stripes, 4 inch, White
4950	Ft	Pavt Mrkg, Durable Reflectorized, Pavt Stripes, 4 inch, Yellow
10500	Ft	Pavt Mrkg, Longit, 6 inch or Less Width, Rem



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JEFFERSON AVE OVER DEQUINDRE CUT			
NOTESHEET			
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02/11/05	NONE	49717A	6 OF 80

DATE: 2/17/2005 CHECKED BY: FILE NAME: g:\p\Projects\35455D-Detroit Bridges\MOI\notesheet.dgn

REVISIONS			
NO.	DESCRIPTION	DATE	BY

WATER & DRAINAGE SYMBOLS

- ⊙ EXISTING CATCH BASIN
- ⊕ PROPOSED CATCH BASIN
- EXISTING MANHOLE
- PROPOSED MANHOLE
- ◁ EXISTING CULVERT END SECTION
- ▷ PROPOSED CULVERT END SECTION
- ⌒ EXISTING HEADWALL
- ⌒ PROPOSED HEADWALL
- ⊖ WATER SHUTOFF (Service Valve)
- GATE VALVE
- ⊙ GATEWELL
- ⊕ WATER METER
- ⊗ WATER MANHOLE
- ⊙ EXISTING FIRE HYDRANT
- ⊙ PROPOSED FIRE HYDRANT
- ⊙ (ADJ-HYD) ADJUST FIRE HYDRANT
- ⊙ (ADJ) ADJUST DRAINAGE STRUCTURE
- ⊙ (ADJ-K) ADJUST DRAINAGE STRUCTURE W/COVER
- ⊙ (ADJ-B/O) ADJUST DRAINAGE STRUCTURE BY OTHERS
- ⊙ (REC) RECONSTRUCT DRAINAGE STRUCTURE
- ⊙ (REC-K) RECONSTRUCT DRAINAGE STRUCTURE W/COVER
- ⊙ (REL-B/O) RELOCATE - BY OTHERS
- ⊙ (SR-I) SIDEWALK RAMP TYPE
- ∧ CHECK DAM (PROFILES)
- ∧ DIKE (PROFILES)
- W.T. ∩ WATER TABLE (PROFILES)
- GUARD POST
- ⊙ WATER WELL

UTILITIES SYMBOLS

- ⊙ POWER POLE
- ⊙ TELEPHONE POLE
- ⊙ GUY POLE
- ⊙ LIGHT POLE
- ⊙ POWER LIGHT POLE
- ⊕ TELEPHONE MANHOLE
- ⊗ POWER TOWER
- ⊗ GAS VALVE
- ⊙ WALK/NO-WALK
- ⊙ DEADMAN FOR GUYWIRE
- ⊙ RAILROAD SIGNAL
- ⊙ ELECTRICAL MANHOLE
- ⊙ ELECTRICAL HANDHOLE
- ⊙ TELEPHONE PEDESTAL/RISER

MISCELLANEOUS SYMBOLS

- ⊗ RIPRAP
- ⊙ SIGN
- ⊙ STUMP
- ⊙ SWAMP
- ⊙ DECIDUOUS TREE
- ⊙ EVERGREEN TREE
- ⊙ MAIL BOX
- ⊙ QUARTER CORNER
- ⊙ SECTION CORNER
- ⊙ HALF QUARTER SECTION
- ⊙ T.H. TEST HOLE NO.
- 123 BEAM G. R. RUN NUMBER (EXISTING)
- 123 BEAM G. R. RUN NUMBER (PROPOSED)

HAZARDOUS OR FLAMMABLE MATERIAL USED WITH UNDERGROUND GAS & ELECTRICAL LINES

CAUTION - CRITICAL UNDERGROUND UTILITY USED WITH FIBER OPTICS LINES

- PROP 36" --- PROPOSED CULVERT/SEWER
- EX 12" CMP ----- EXISTING CULVERT/SEWER
- 123 PROPOSED DRAINAGE STRUCTURE NUMBER

UTILITY PATTERNS

- ELEC --- ELECTRICAL LINE
- 24" GAS --- GAS LINE
- 12" OIL --- OIL LINE
- TELE --- TELEPHONE LINE
- 36" WM --- WATER LINE
- CTV --- CABLE TV
- FO --- FIBER OPTICS
- --- POWER TRANSMISSION LINE

R.O.W. PATTERNS

- xx --- EX. LIMITED ACCESS R.O.W.
- --- EXISTING R.O.W.
- xx --- PROP LIMITED ACCESS R.O.W.
- --- PROP FREE ACCESS R.O.W.
- --- SECTION LINE

TOPO PATTERNS

- HEDGE LINE
- TREE LINE
- x-x-x-x-x-x-x-x-x-x --- EXISTING FENCE
- x-x-x-x-x-x-x-x-x-x --- PROPOSED FENCE
- --- EXISTING GUARD RAIL
- --- PROPOSED GUARD RAIL
- --- DRAINAGE CRS/EDGE OF WATER
- WETLANDS AREA
- --- ABANDON ANY UTILITY
- /// --- CITY LIMITS
- --- RAILROAD
- --- SOUND ABATEMENT WALL
- --- CONCRETE MEDIAN BARRIER/BARRIER WALL
- --- SLOPE STAKE LINE

REAL ESTATE SYMBOLS

- PROPERTY OWNERSHIP ARROW
- ↗ CONTIGUOUS PROPERTY SYMBOL
- 123456 PARCEL NUMBER BOX
- PARCEL LINES

DRIVE/APPROACH LEGEND

- CONCRETE
- BITUMINOUS
- AGGREGATE

REMOVAL LEGEND

- REMOVING BITUMINOUS
- REMOVING SIDEWALK
- REMOVING PAVEMENT
- COLD-MILLING
- REMOVING CURB & GUTTER
- REMOVING (R)
- ABANDONING (A)
- SAVE (S)
- BULKHEAD (B)
- CLEARING (C)

SPECIAL LEGEND THIS PROJECT



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**JEFFERSON AVE OVER DEQUINDRE CUT
LEGEND SHEET**

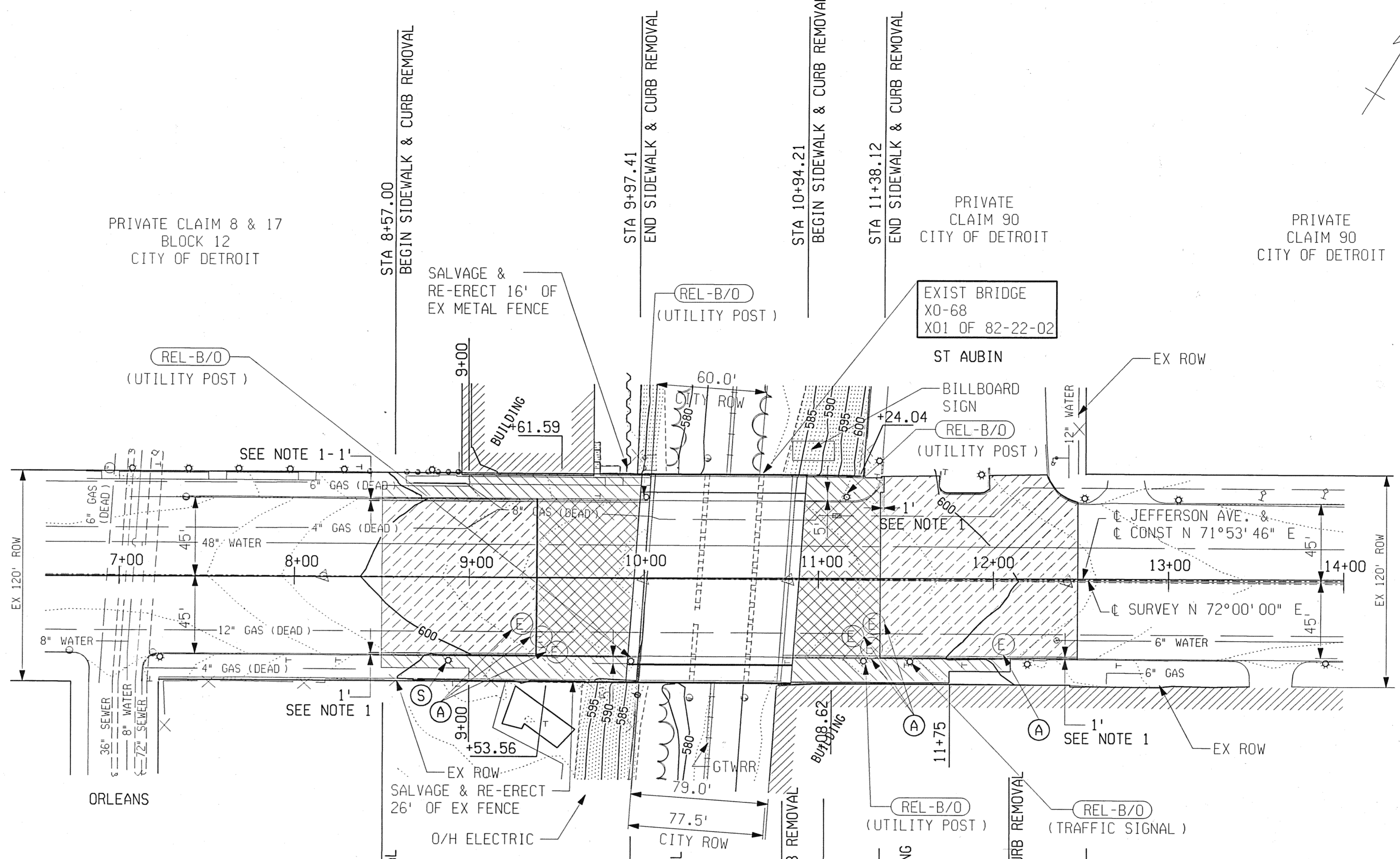
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02/11/05	NONE	49717A	7 OF 80

REVISIONS			
NO.	DESCRIPTION	DATE	BY

DATE: 2/10/2005 3:35:01 PM
WORKED ON BY:
DATE:
CHECKED BY:

JEFFERSON AVE

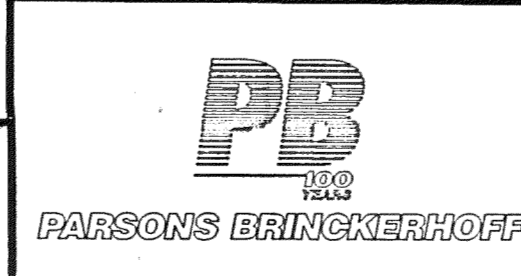
JEFFERSON AVE



REMOVAL LEGEND	
Cold Milling HMA Surface, Modified	
Sidewalk, Rem	
Pavt, Rem, Modified	
REMOVING	(R)
ABANDONING	(A)
SAVE	(S)
BULKHEAD	(B)
CLEARING	(C)
RELOCATE BY OTHERS	(REL-B/O)

REMOVAL QUANTITIES THIS SHEET	
650 Syd	Sidewalk, Rem
1080 Syd	Pavt, Rem, Modified
2150 Syd	Cold Milling HMA Surface, Modified

- NOTES:
- REMOVE 1' WIDE STRIP OF PAVEMENT ALONG CURB THROUGH THE COLD MILLING SECTIONS, WHERE THE PAVEMENT IS BEING WIDENING
 - SEE SHEETS 50-52 FOR BRIDGE REMOVAL
 - SAWCUTTING IS INCLUDED IN THE PAY ITEM FOR Pavt, Rem, Modified AND Sidewalk, Rem
 - CURB REMOVAL IS INCLUDED IN THE PAY ITEM FOR Pavt, Rem, Modified

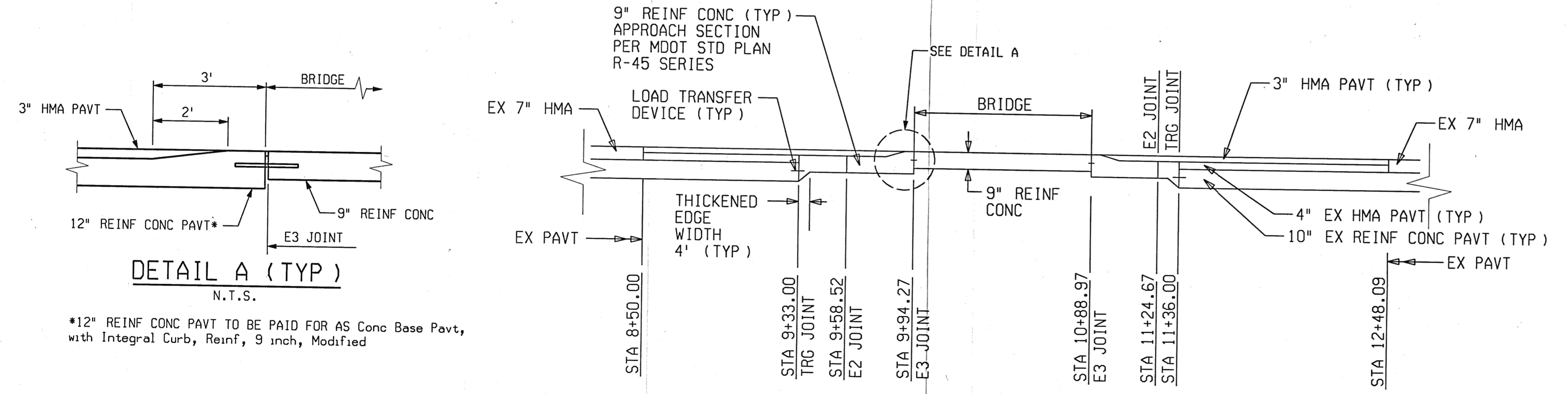
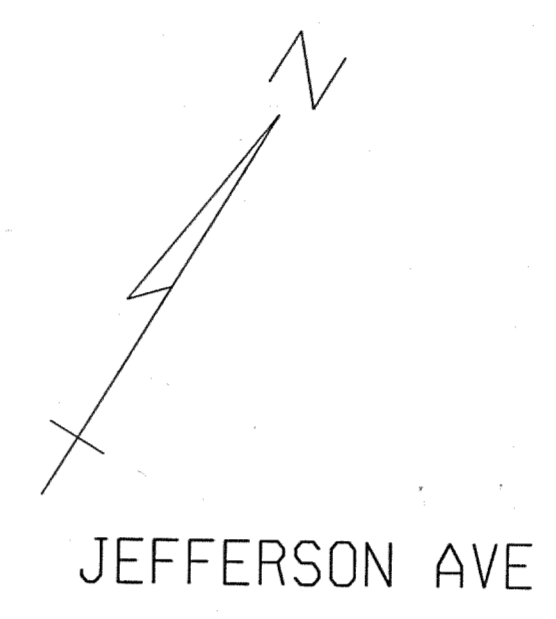
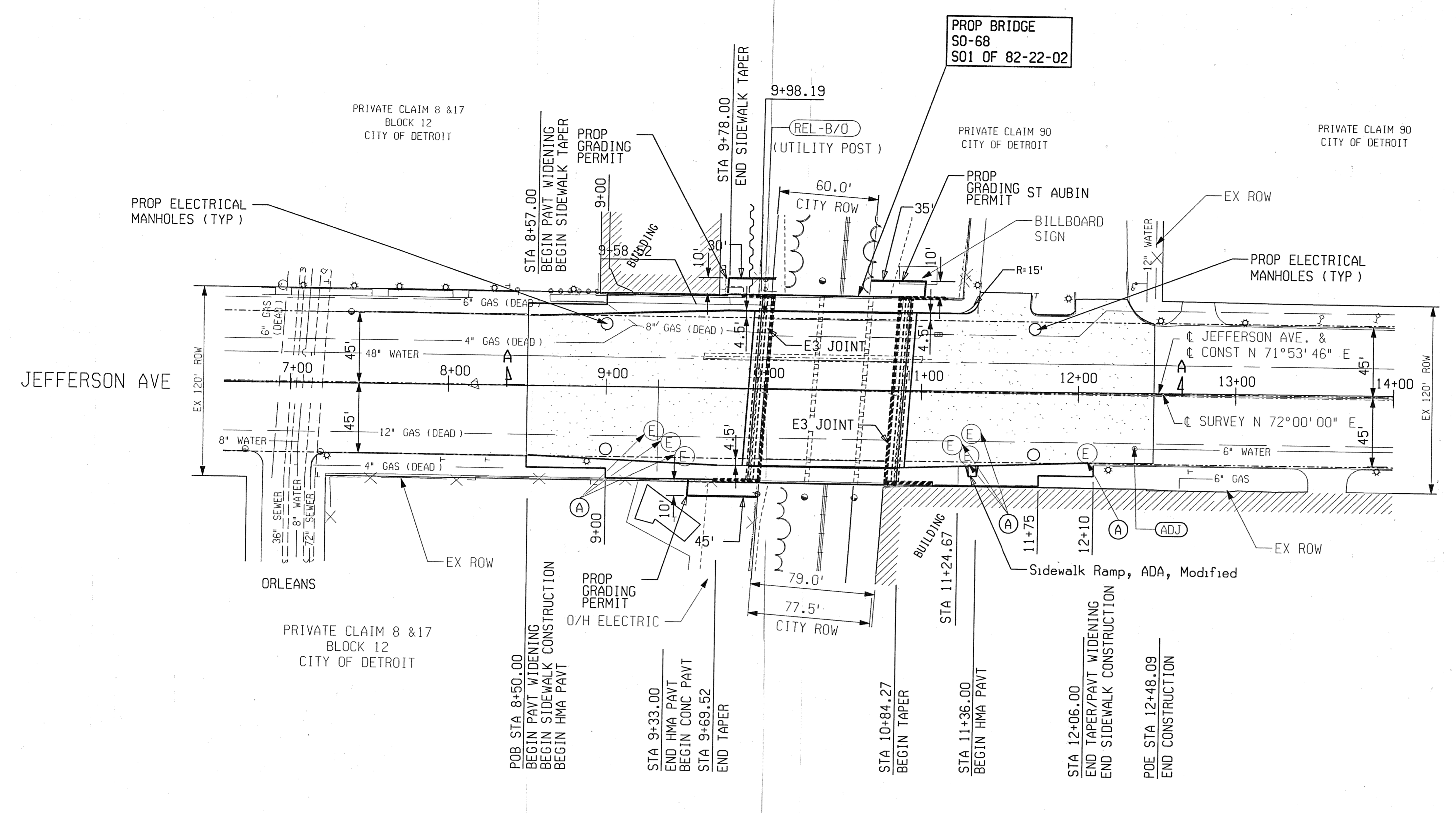


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JEFFERSON AVE OVER DEQUINDRE CUT REMOVAL SHEET			
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	1" = 40'	49717A	8 OF 80

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NO.	DESCRIPTION	DATE	BY

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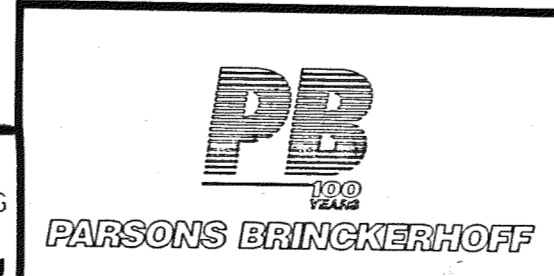


CONSTRUCTION QUANTITIES THIS SHEET

4620	Sft	Sidewalk, Conc, 4 inch, Modified
1220	Syd	Conc Base Pavt, with Integral Curb, Reinf, 9 inch, Modified
1230	Syd	Aggregate Base, 6 inch
300	Ton	HMA, 3C
280	Ton	HMA, 4C
25	Ton	HMA Approach, Modified
20	Sft	Sidewalk Ramp, ADA, Modified
220	Cyd	Granular Material, Cl II, Modified
185	Sft	Sidewalk, Conc, 6 inch, Modified

*12" REINF CONC PAVT TO BE PAID FOR AS Conc Base Pavt, with Integral Curb, Reinf, 9 inch, Modified

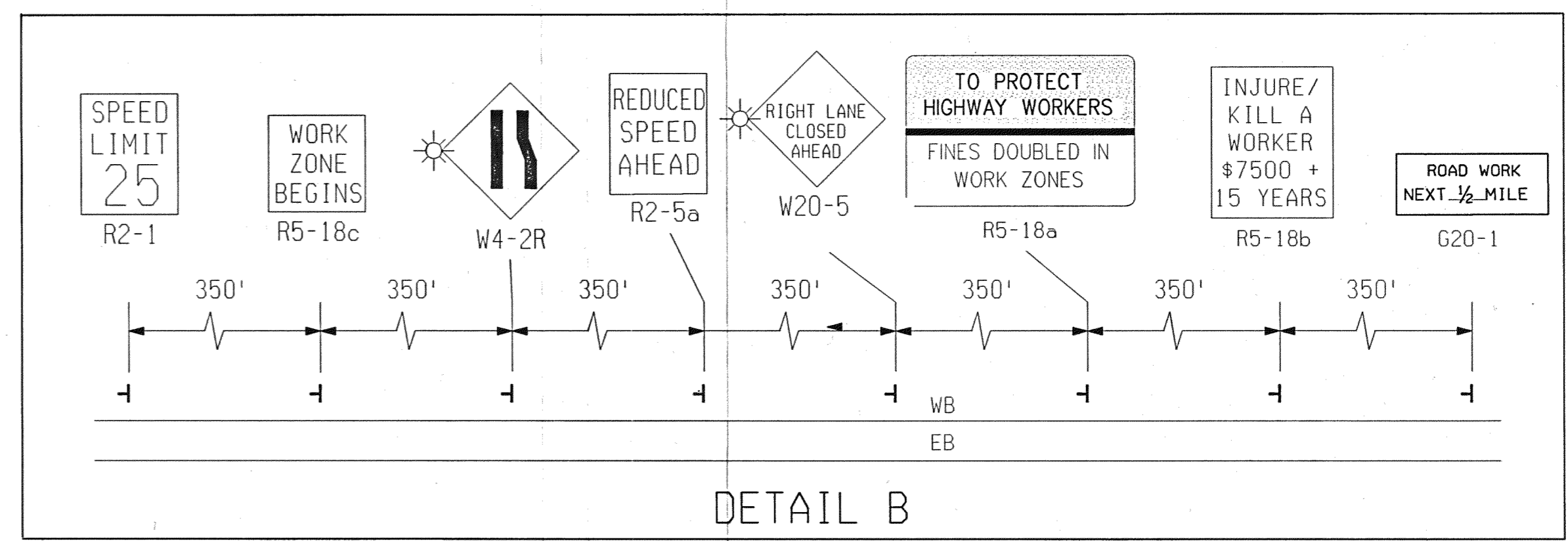
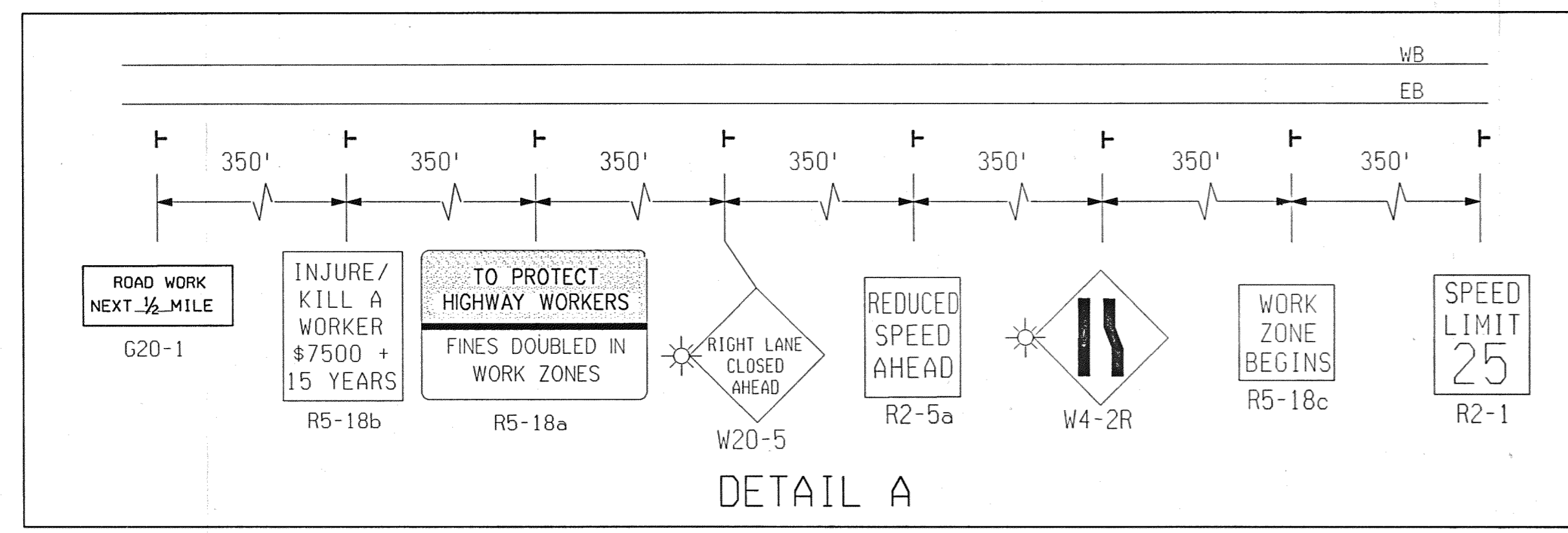
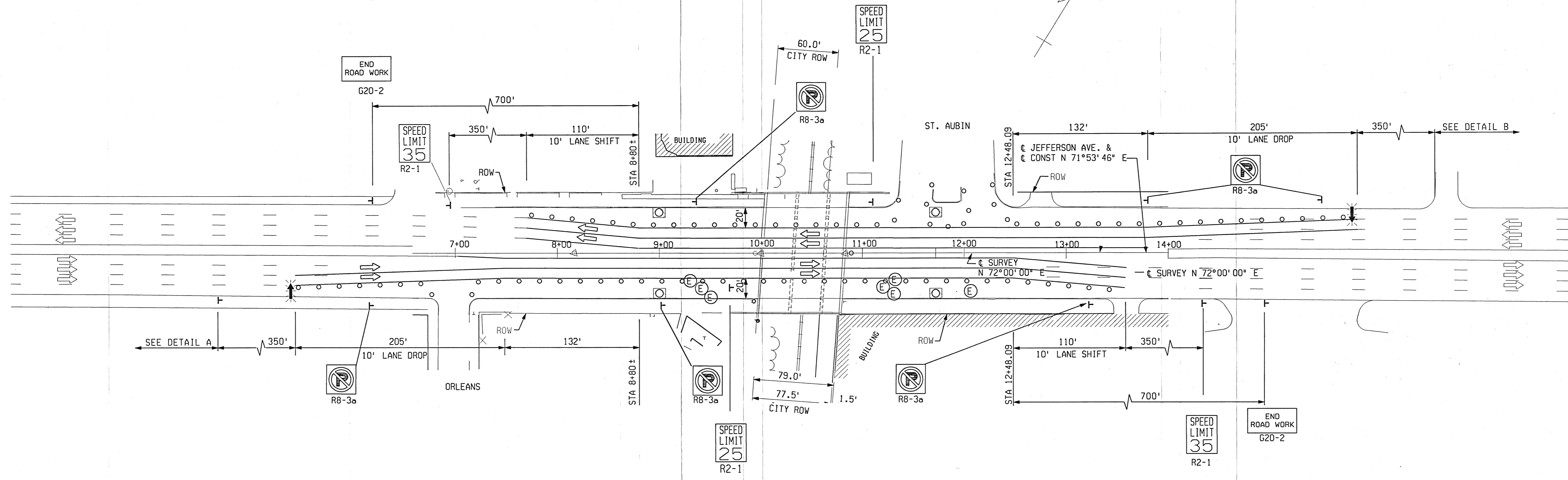
NOTE:
 LOCATION OF THE PROPOSED MANHOLES SHALL BE DIRECTED BY THE ENGINEER.
 SIDEWALK AT INTERSECTION SHOULD BE Sidewalk, Conc, 6 inch, Modified



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JEFFERSON AVE OVER DEQUINDRE CUT CONSTRUCTION SHEET			
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STAGE I
LOOKING UPSTATION

KEY

- ○ ○ CHANNELIZING DEVICES
- ← LIGHTED ARROW PANEL
- ☀ TYPE A WARNING FLASHER (REQUIRED)
- TRAFFIC FLOW
- ⊥ TYPE III BARRICADE
- TEMP CONC BARRICADE

STAGE I:
CONDUCT CLOSURE OF OUTER WEST AND EASTBOUND LANES USING TYPICAL M 018E.
CONSTRUCT MANHOLES FOR PUBLIC LIGHTING DEPARTMENT IN OUTER WEST AND EASTBOUND LANES EAST AND WEST OF BRIDGE. SIDEWALKS IN BOTH WEST AND EASTBOUND DIRECTIONS WILL REMAIN OPEN.



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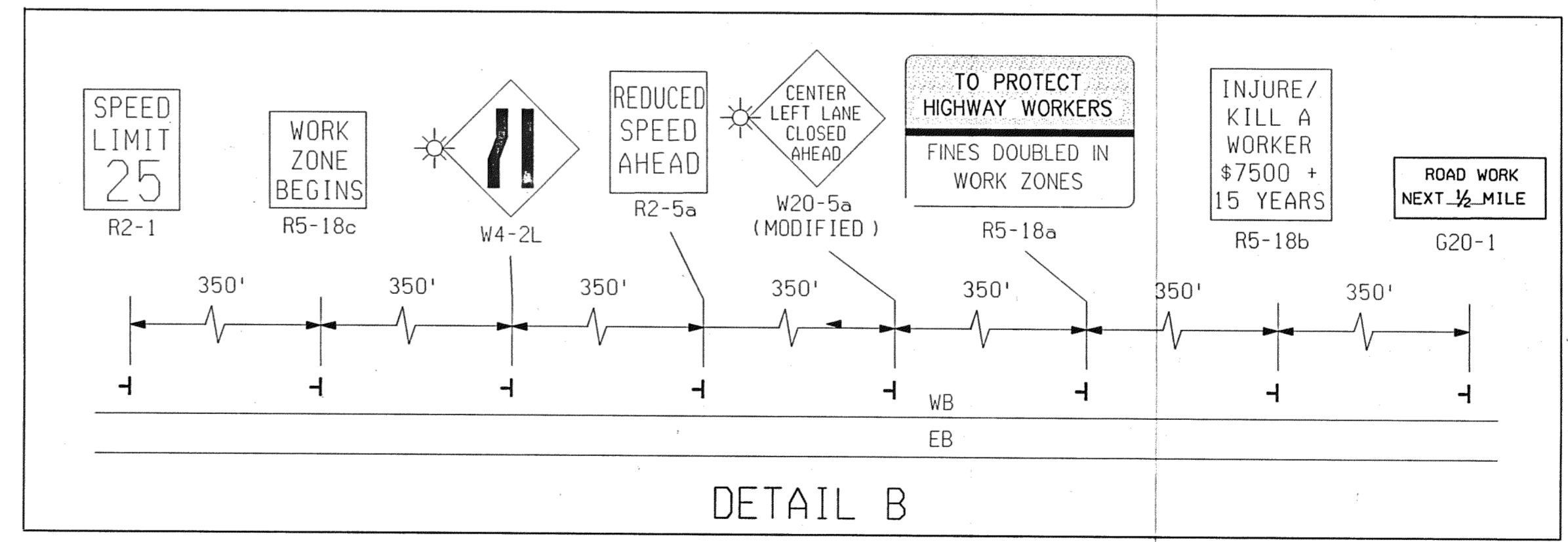
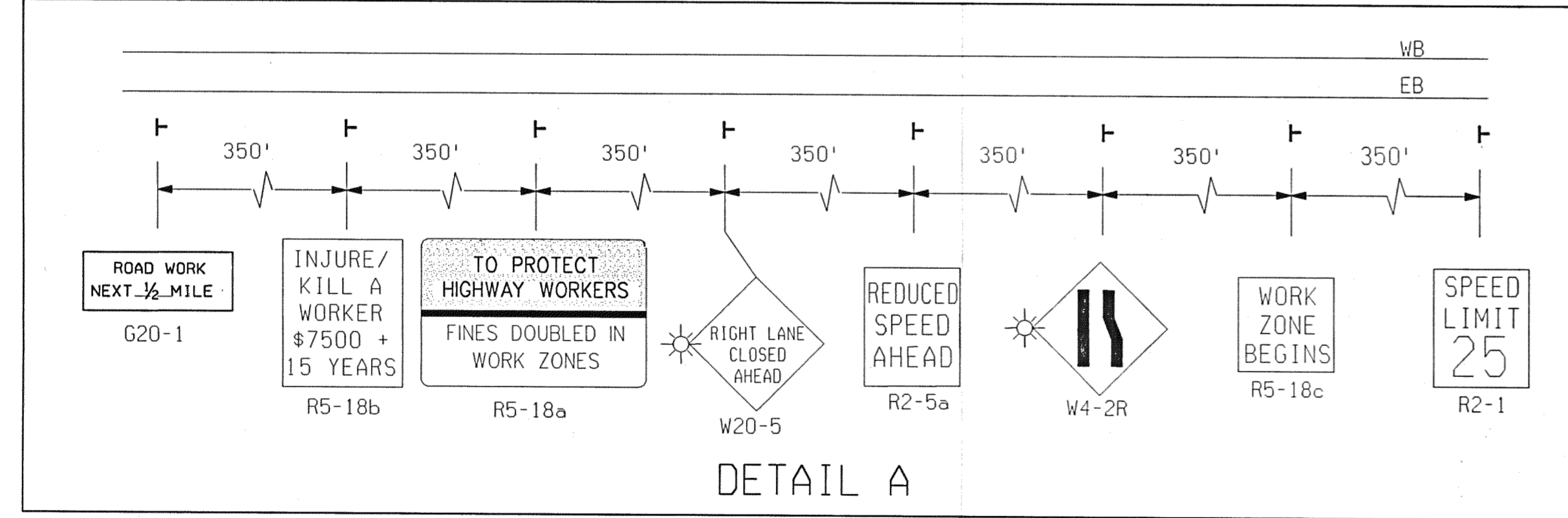
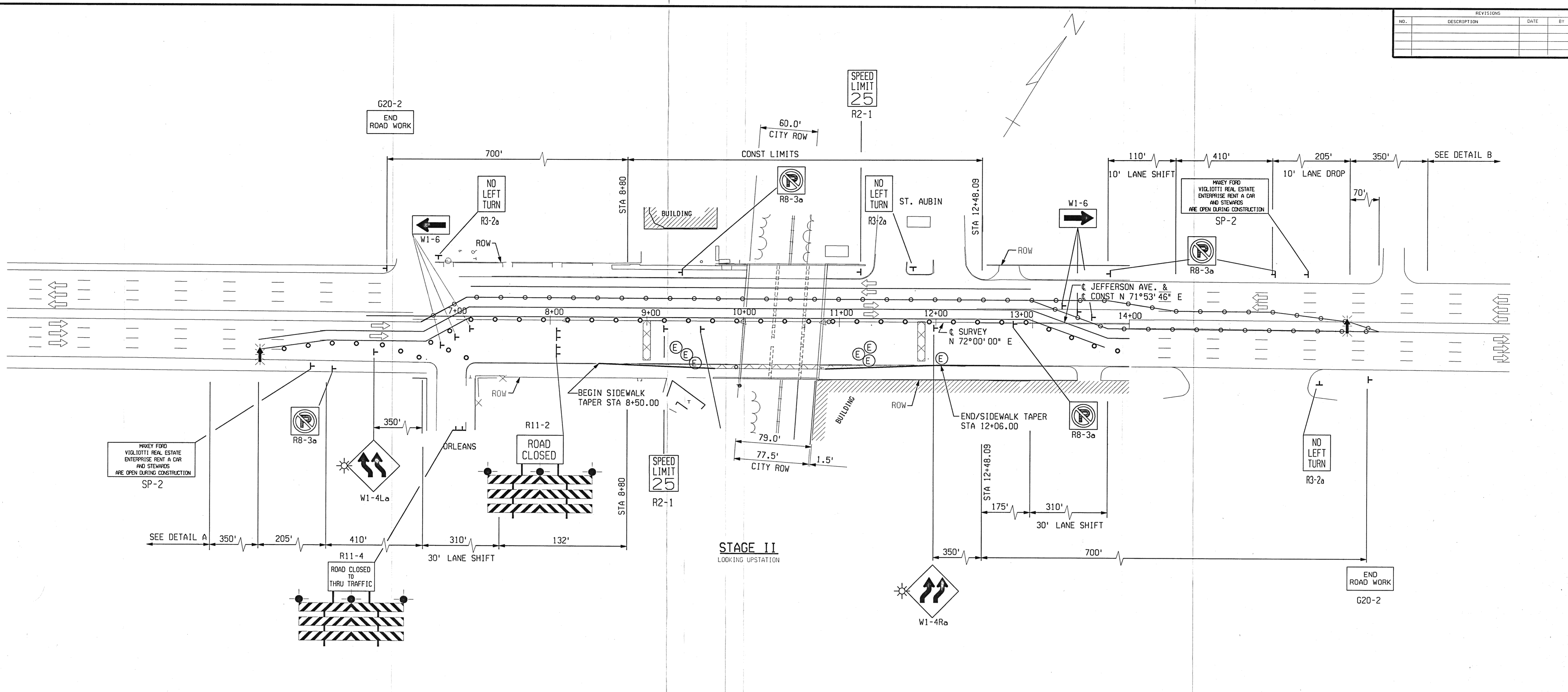
JEFFERSON AVE OVER DEQUINDRE CUT
MAINTAINING TRAFFIC

DATE	SCALE:	JOB NO.	SHEET:
02/11/05	NTS	49717A	10 OF 80

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NO.	DESCRIPTION	DATE	BY

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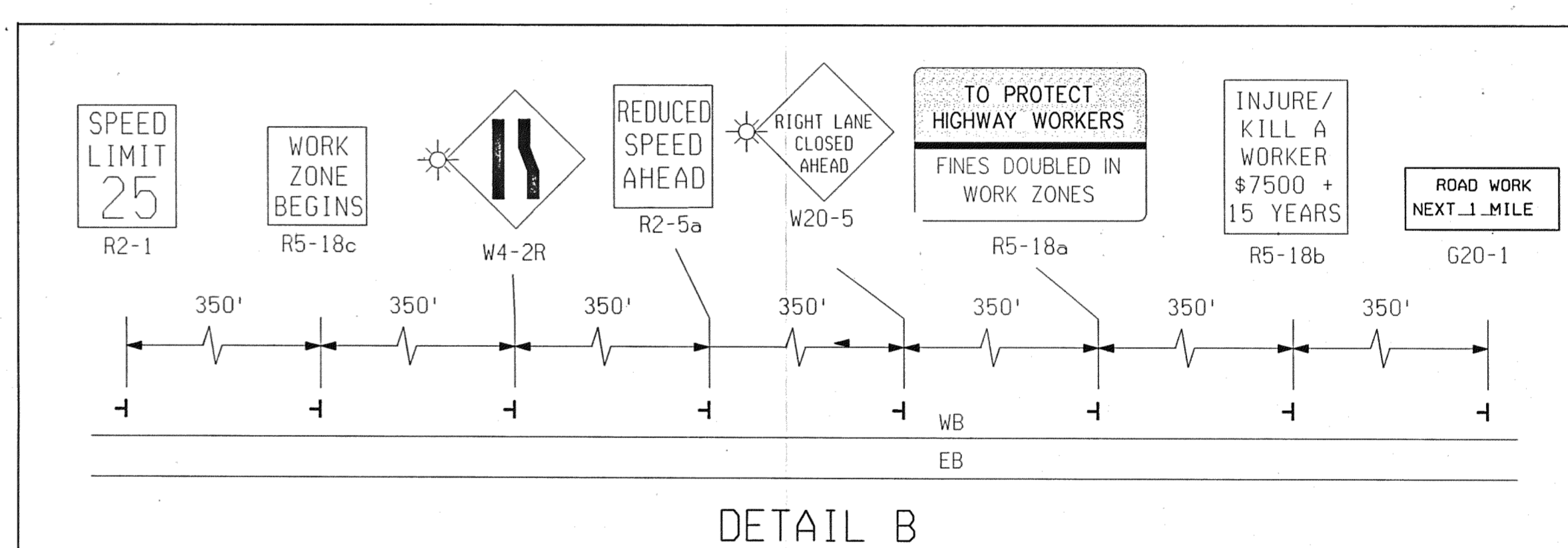
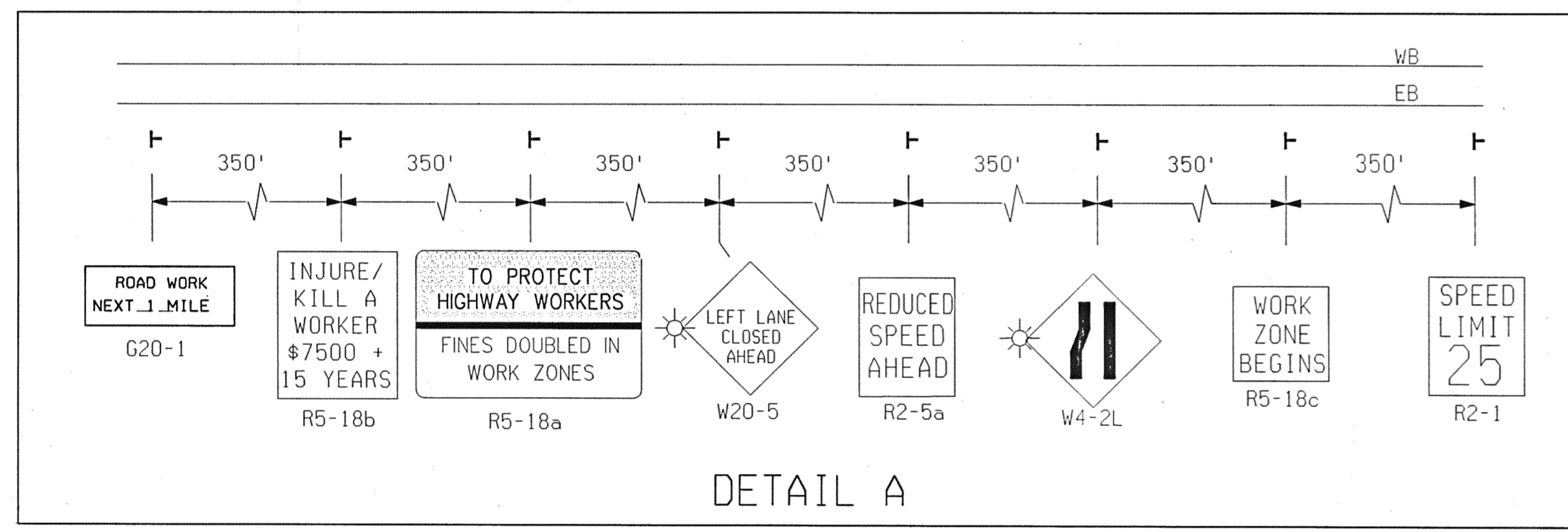
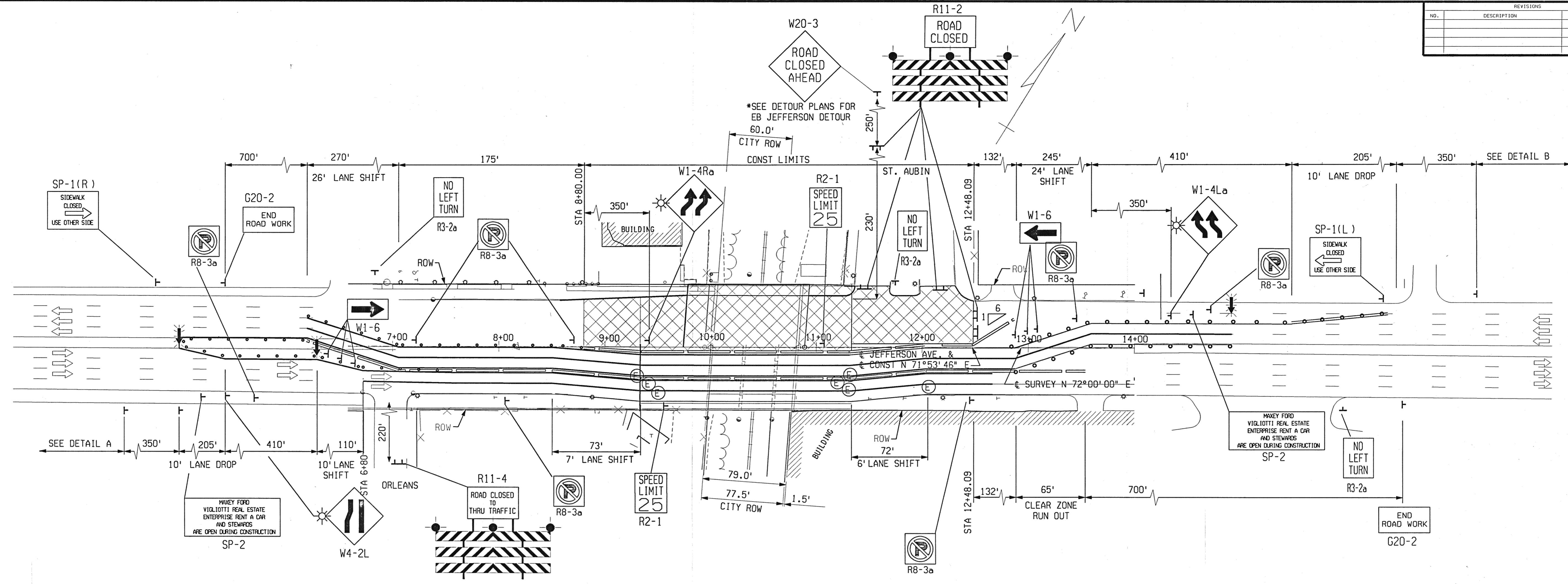


- KEY**
- ○ ○ CHANNELIZING DEVICES
 - ← LIGHTED ARROW PANEL
 - ☀ TYPE A WARNING FLASHER (REQUIRED)
 - TRAFFIC FLOW
 - ⊥ TYPE III BARRICADE
 - TEMP CONC BARRICADE

STAGE II:
SHIFT WESTBOUND TRAFFIC INTO TWO WB OUTSIDE LANES. CONDUCT CLOSURE OF EASTBOUND LANES. SHIFT EASTBOUND TRAFFIC INTO WESTBOUND LANES PER TYPICAL M 050E. CONSTRUCT DUCT FOR PLD CONDUITS ON EASTBOUND SIDE OF BRIDGE. REMOVE PORTION OF SIDEWALK ON EASTBOUND REQUIRED FOR TRAFFIC SHIFT DURING STAGE III.

<p>CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION</p>	<p>JEFFERSON AVE OVER DEQUINDRE CUT MAINTAINING TRAFFIC</p>		<p>DATE 02/11/05</p>	<p>SCALE: NTS</p>	<p>JOB NO. 49717A</p>	<p>SHEET: 11 OF 80</p>
	<p>PARSONS BRINCKERHOFF</p>					

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STAGE III
LOOKING UPSTATION

- KEY**
- ○ ○ CHANNELIZING DEVICES
 - ← LIGHTED ARROW PANEL
 - ☀ TYPE A WARNING FLASHER (REQUIRED)
 - TRAFFIC FLOW
 - ⊥ TYPE III BARRICADE
 - TEMP CONC BARRICADE

STAGE III:
SET UP TEMPORARY CONCRETE BARRIER ON EB JEFFERSON AVENUE. SHIFT EB TRAFFIC TO EB OUTSIDE LANES. SHIFT WB TRAFFIC INSIDE TO EB LANES. CLOSE WB LANES TO TRAFFIC AT BRIDGE. CLOSE ST. AUBIN AT LARNED ST. AVENUE (SEE DETOUR PLANS). CLOSE NB ORLEANS ST. TO THRU TRAFFIC AT JEFFERSON AVENUE. REMOVE NORTH HALF OF EXISTING BRIDGE. CONSTRUCT NORTH HALF OF BRIDGE. CONSTRUCT REMAINDER OF DUCTS FOR PLD CONDUITS TO MANHOLES ON WESTBOUND SIDE OF ROADWAY. ONLY FIVE FEET OF SIDEWALK SHALL BE CONSTRUCTED DURING THIS STAGE.

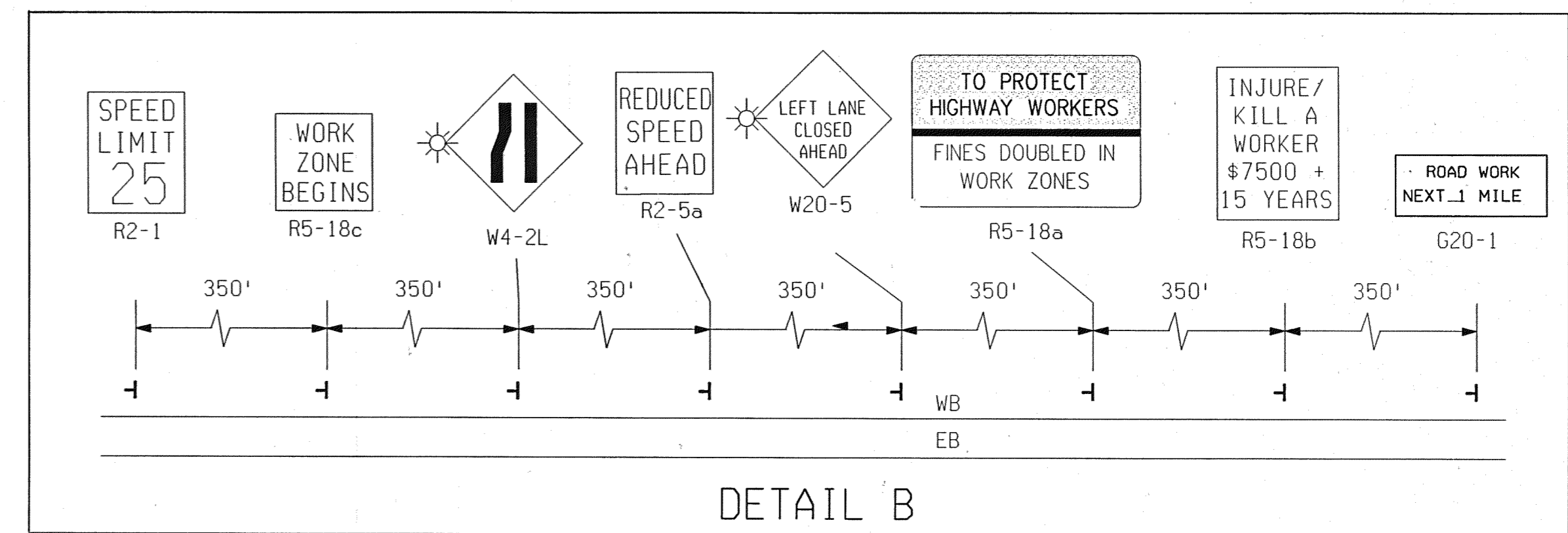
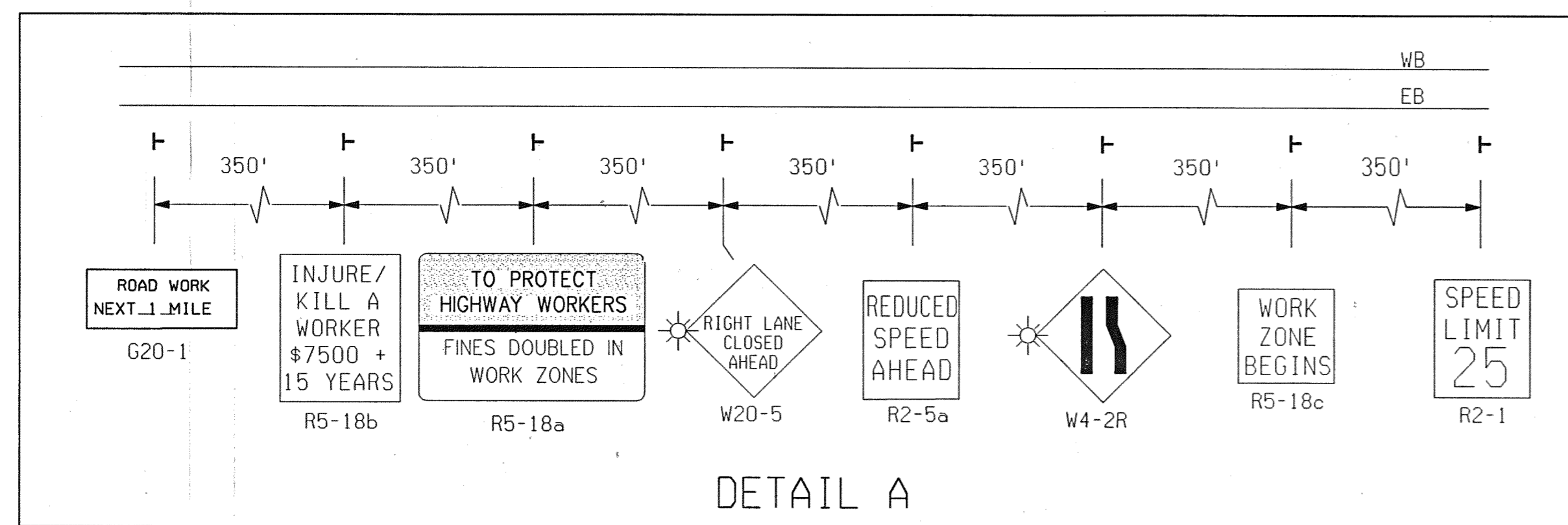
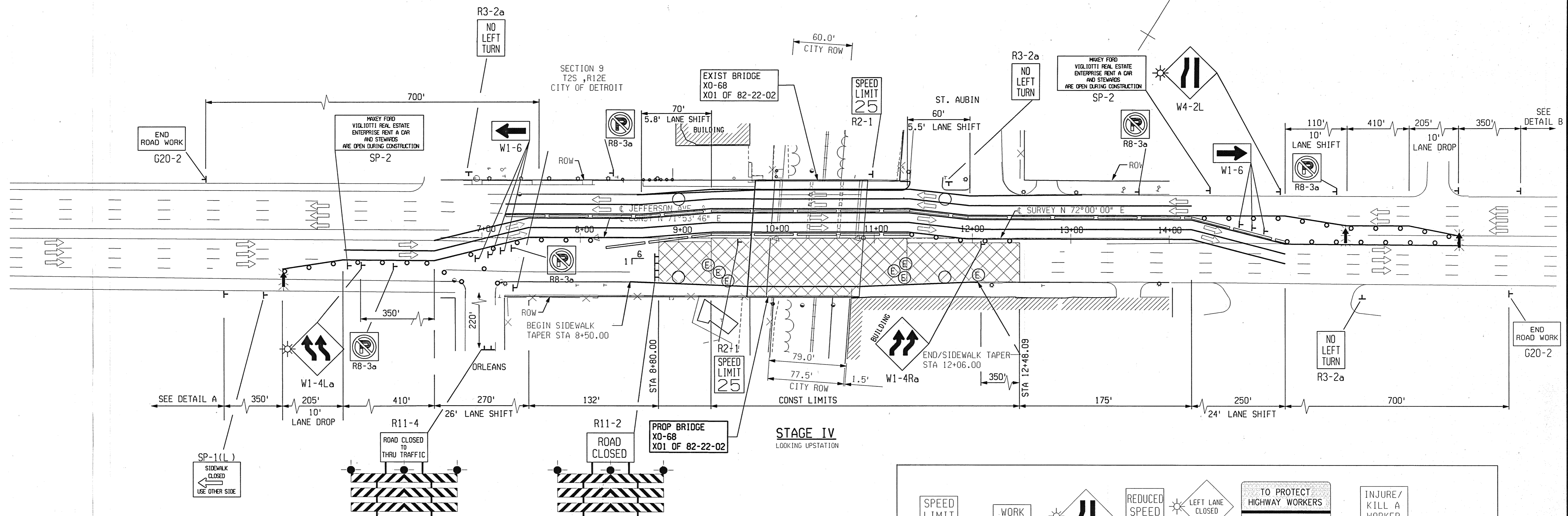


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JEFFERSON AVE OVER DEQUINDRE CUT MAINTAINING TRAFFIC			
DATE	SCALE:	JOB NO.	SHEET:
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DATE: 2/10/2005 3:33:02 PM
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FILE NAME: g:\Projects\35458D Detroit Bridges\DOT\Stage 3.dgn

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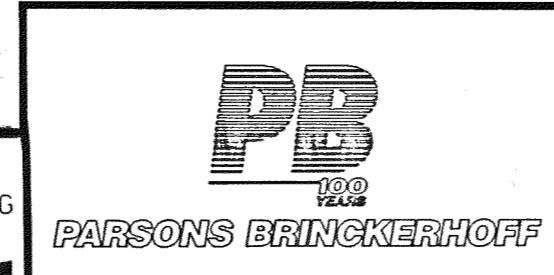
- KEY**
- ○ ○ CHANNELIZING DEVICES
 - ← LIGHTED ARROW PANEL
 - ☀ TYPE A WARNING FLASHER (REQUIRED)
 - TRAFFIC FLOW
 - TT TYPE III BARRICADE
 - TEMP CONC BARRICADE

STAGE IVA:

PLACE TEMPORARY CONCRETE BARRIER ON COMPLETED NORTH HALF OF BRIDGE. SHIFT WB TRAFFIC OUTER WB LANES. SHIFT EB TRAFFIC TO INSIDE WB LANES. CLOSE EB LANES TO TRAFFIC AT BRIDGE. CLOSE OUTSIDE LANE ON SOUTHBOUND ST. AUBIN. BAG TRAFFIC SIGNALS AT ST. AUBIN AND PROHIBIT LEFT TURNS FROM JEFFERSON AVENUE TO ST. AUBIN. REMOVE AND CONSTRUCT SOUTH HALF OF BRIDGE.

STAGE IVB:

REMOVE TEMPORARY CONCRETE BARRIER AND OPEN BRIDGE TO WB AND EB TRAFFIC. CLOSE OUTERMOST WB LANE (PARKING LANE). CONSTRUCT REMAINDER OF WB SIDEWALK. COLD MILL AND OVERLAY CENTER LANE USING TRAFFIC REGULATORS.

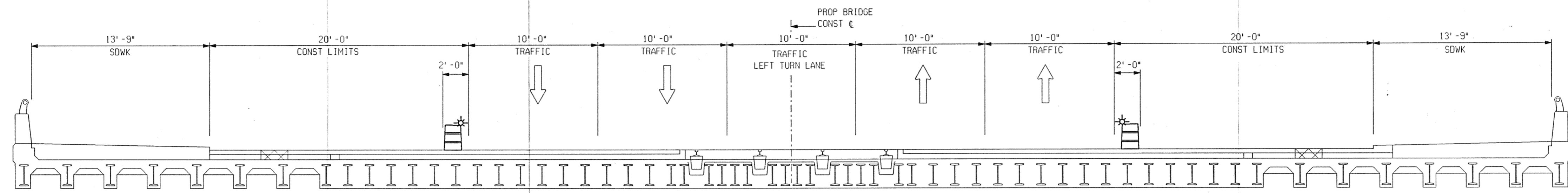


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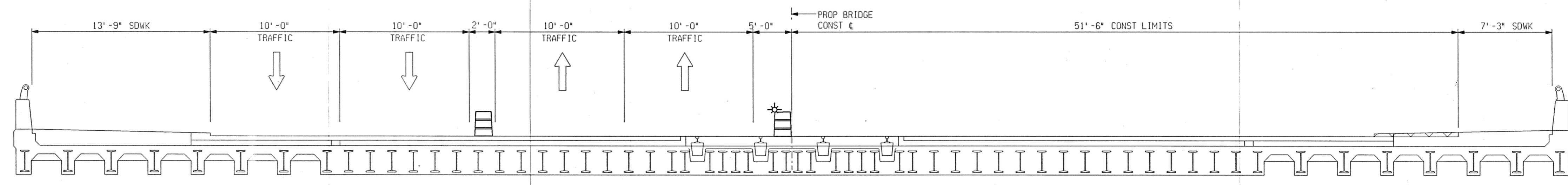
JEFFERSON AVE OVER DEQUINDRE CUT			
MAINTAINING TRAFFIC			
DATE	SCALE:	JOB NO.	SHEET:
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REVISIONS			
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STAGE I
LOOKING UPSTATION



STAGE II
LOOKING UPSTATION

STAGE I:
CONDUCT CLOSURE OF OUTER WEST AND EASTBOUND LANES USING TYPICAL M 018E. CONSTRUCT MANHOLES FOR PUBLIC LIGHTING DEPARTMENT IN OUTER WEST AND EASTBOUND LANES EAST AND WEST OF BRIDGE. SIDEWALKS IN BOTH WEST AND EASTBOUND DIRECTIONS WILL REMAIN OPEN.

STAGE II:
SHIFT WESTBOUND TRAFFIC INTO TWO WB OUTSIDE LANES. CONDUCT CLOSURE OF EASTBOUND LANES. SHIFT EASTBOUND TRAFFIC INTO WESTBOUND LANES PER TYPICAL M 050E. CONSTRUCT DUCT FOR PLD CONDUITS ON EASTBOUND SIDE OF BRIDGE. REMOVE PORTION OF SIDEWALK ON EASTBOUND REQUIRED FOR TRAFFIC SHIFT DURING STAGE III.



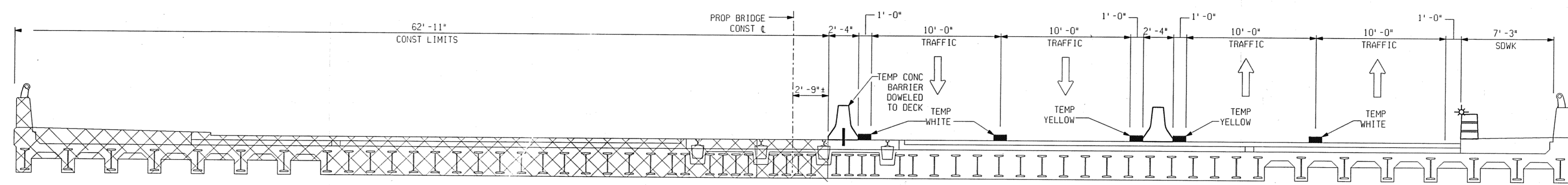
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JEFFERSON AVE OVER DEQUINDRE CUT			
MAINTAINING TRAFFIC			
DATE	SCALE:	JOB NO.	SHEET:
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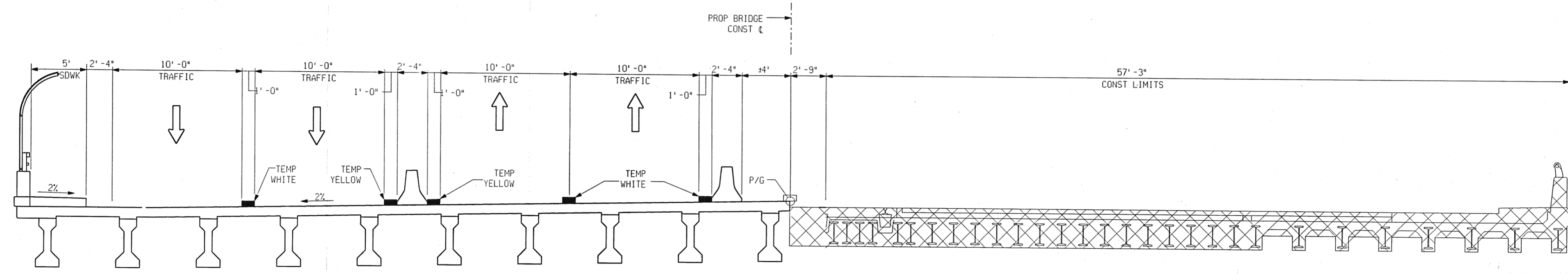
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STAGE III
LOOKING UPSTATION



STAGE IV
LOOKING UPSTATION

STAGE III:

SET UP TEMPORARY CONCRETE BARRIER ON EB JEFFERSON AVENUE. SHIFT EB TRAFFIC TO EB OUTSIDE LANES. SHIFT WB TRAFFIC INSIDE TO EB LANES. CLOSE WB LANES TO TRAFFIC AT BRIDGE. CLOSE ST. AUBIN AT LARNED ST. AVENUE (SEE DETOUR PLANS). CLOSE NB ORLEANS ST. TO THRU TRAFFIC AT JEFFERSON AVENUE. REMOVE NORTH HALF OF EXISTING BRIDGE. CONSTRUCT NORTH HALF OF BRIDGE. CONSTRUCT REMAINDER OF DUCTS FOR PLD CONDUITS TO MANHOLES ON WESTBOUND SIDE OF ROADWAY. ONLY FIVE FEET OF SIDEWALK SHALL BE CONSTRUCTED DURING THIS STAGE.

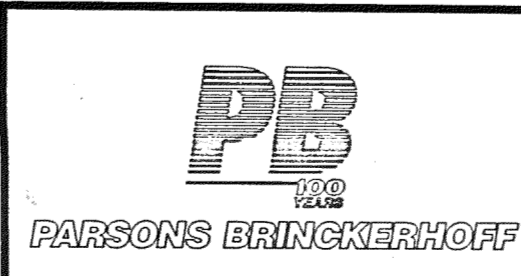
STAGE IVA:

PLACE TEMPORARY CONCRETE BARRIER ON COMPLETED NORTH HALF OF BRIDGE. SHIFT WB TRAFFIC OUTER WB LANES. SHIFT EB TRAFFIC TO INSIDE WB LANES. CLOSE EB LANES TO TRAFFIC AT BRIDGE. CLOSE OUTSIDE LANE ON SOUTHBOUND ST. AUBIN. BAG TRAFFIC SIGNALS AT ST. AUBIN AND PROHIBIT LEFT TURNS FROM JEFFERSON AVENUE TO ST. AUBIN. REMOVE AND CONSTRUCT SOUTH HALF OF BRIDGE.

STAGE IVB:

REMOVE TEMPORARY CONCRETE BARRIER AND OPEN BRIDGE TO WB AND EB TRAFFIC. CLOSE OUTERMOST WB LANE (PARKING LANE). CONSTRUCT REMAINDER OF WB SIDEWALK. COLD MILL AND OVERLAY CENTER LANE USING TRAFFIC REGULATORS.

LEGEND	
↑	MAINTAIN TRAFFIC
▨	TEMPORARY CONSTRUCTION
▩	PERMANENT CONSTRUCTION
⊞	LIGHTED PLASTIC DRUM
▭	TEMP CONC BARRIER



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JEFFERSON AVE OVER DEQUINDRE CUT MAINTAINING TRAFFIC			
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	NTS	49717A	15 OF 80

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- ① SB ST AUBIN CLOSED LARNED TO JEFFERSON
- ② DETOUR
WB JEFFERSON ← → EB JEFFERSON
- ③ DETOUR
WB JEFFERSON ↑
- ④ DETOUR
WB JEFFERSON ←
- ⑤ DETOUR
WB JEFFERSON →
- ⑥ DETOUR
EB JEFFERSON ↑
- ⑦ DETOUR
EB JEFFERSON →
- ⑧ DETOUR
EB JEFFERSON ←
- ⑨ DETOUR ENDS
EB JEFFERSON
- ⑩ DETOUR ENDS
WB JEFFERSON
- ⑪ ROAD CLOSED



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JEFFERSON AVE OVER DEQUINDRE CUT
STAGE III DETOUR PLAN

DATE 02/11/05	SCALE: 1" = 50'	JOB NO. 49717A	SHEET: 16 OF 80
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FILE NAME: g:\Projects\354580 Detroit Bridges\MOT\JEFFdetour.dgn
 CHECKED BY: DATE: WORKED ON BY: DATE: 2/10/2005 3:23:49 PM

STAGE I - IV SIGN LEGEND

TYPE B TEMPORARY SIGNING	MMUTCD NO.	SIZE (in x in)	TEXT HT(in)	REQ,D QUANT	AREA (sqft)	TOTAL (sqft)
	G20-1	60 x 24	6	2	10	20
	W20-5	48 x 48	6	1	16	16
	W20-5	48 x 48	6	2	16	32
	R11-2	48 x 30	6	5	10	50
	R2-1	24 x 30	4	4	5	20
	G20-2	60 x 24	6	2	10	20
	R5-18c	48 x 60	6	2	20	40
	R5-18b	48 x 60	6	2	20	40
	W1-6	48 x 24	-	6	8	48
	W4-2	48 x 48	-	2	16	32
	W4-2	48 x 48	-	2	16	32
	W1-4La	48 x 48	-	1	16	16
	W1-4Ra	48 x 48	-	1	16	16
	R5-18a	96 x 60	6	2	40	80
	W20-3	48 x 48	6	2	16	32
	R2-5a	24 x 30	4	2	5	10
	R3-2A	24 x 30	4	3	5	15

TYPE B TEMPORARY SIGNING	MMUTCD NO.	SIZE (in x in)	TEXT HT(in)	REQ,D QUANT	AREA (sqft)	TOTAL (sqft)
	SP-1 (LT)	48 x 36	5	2	12	24
	SP-1 (RT)	48 x 36	5	2	12	24
	SP-2	90 x 36	4	1	22.5	22.5
	R8-3a	24 x 24	N/A	7	4	28
	SP-3	42 x 36	4	1	10.5	10.5
	D3-2a	42 x 12	4	5	3.5	17.5
	D3-2a	42 x 12	4	5	3.5	17.5
	M4-9 (UP)	30 x 24	4	2	5	10
	M4-9 (R)	30 x 24	4	3	5	15
	M4-9 (L)	30 x 24	4	3	5	15
	R11-4	60 x 30	6	1	12.5	12.5
	R2-1	24 x 30	4	2	5	10
	M4-8a	24 x 18	4	2	3	6

REVISIONS			
NO.	DESCRIPTION	DATE	BY



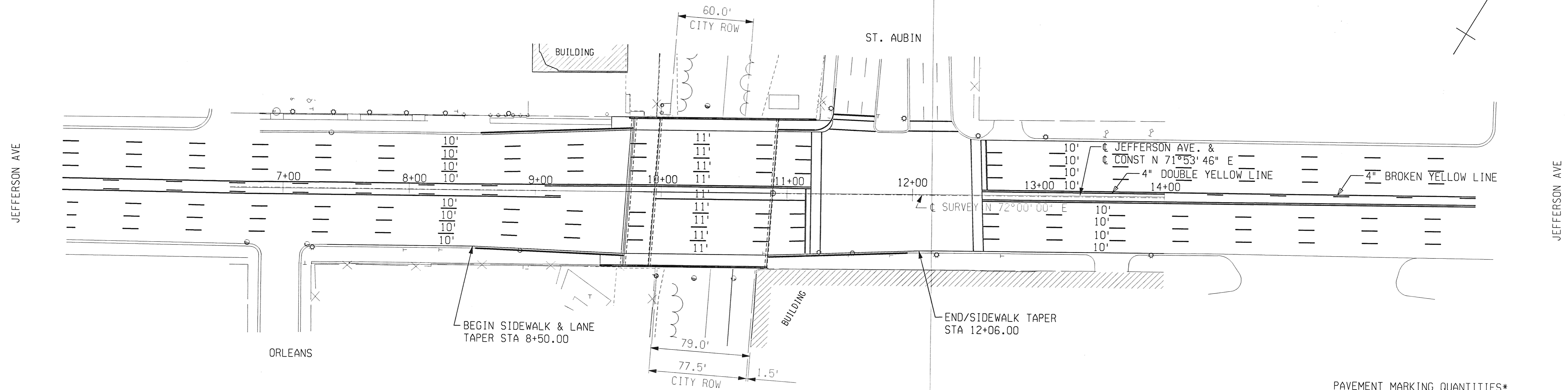
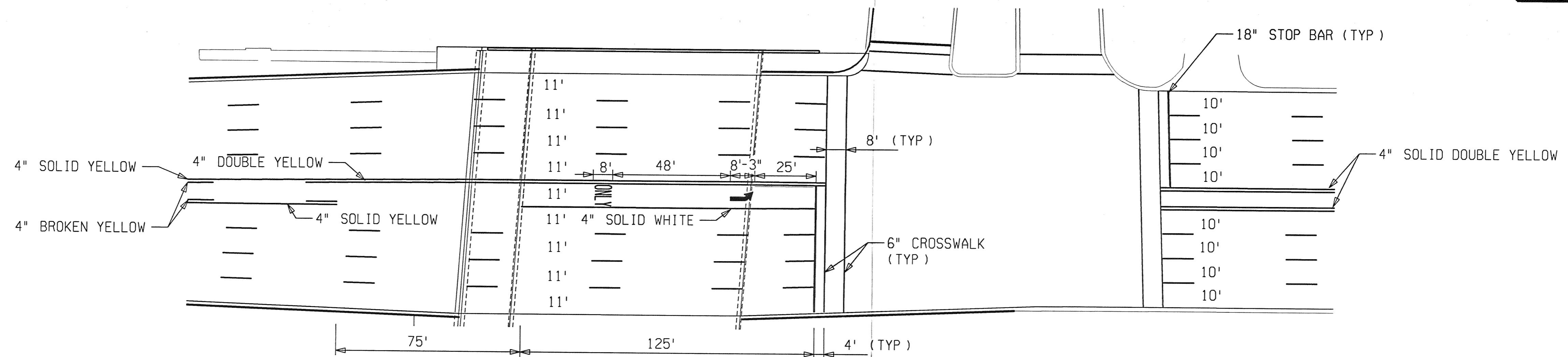
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT
MAINTAINING TRAFFIC, SIGN LEGEND

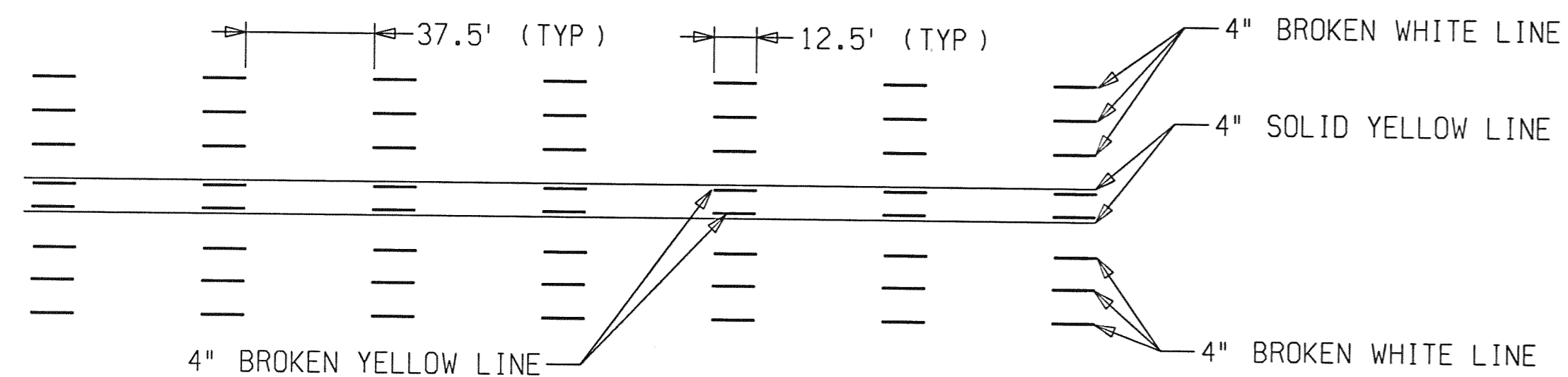
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	NONE	49717A	17 OF 80

TYPICAL INTERSECTION PAVEMENT MARKING

REVISIONS			
NO.	DESCRIPTION	DATE	BY



TYPICAL PAVEMENT MARKING DETAIL



NOTE: PROPOSED PAVEMENT MARKING BASED ON LIMITS OF PAVEMENT MARKING REMOVAL FOR M.O.T.

PAVEMENT MARKING QUANTITIES*

* SEE NOTESHEET



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

JEFFERSON AVE OVER DEQUINDRE CUT PAVEMENT MARKING SHEET

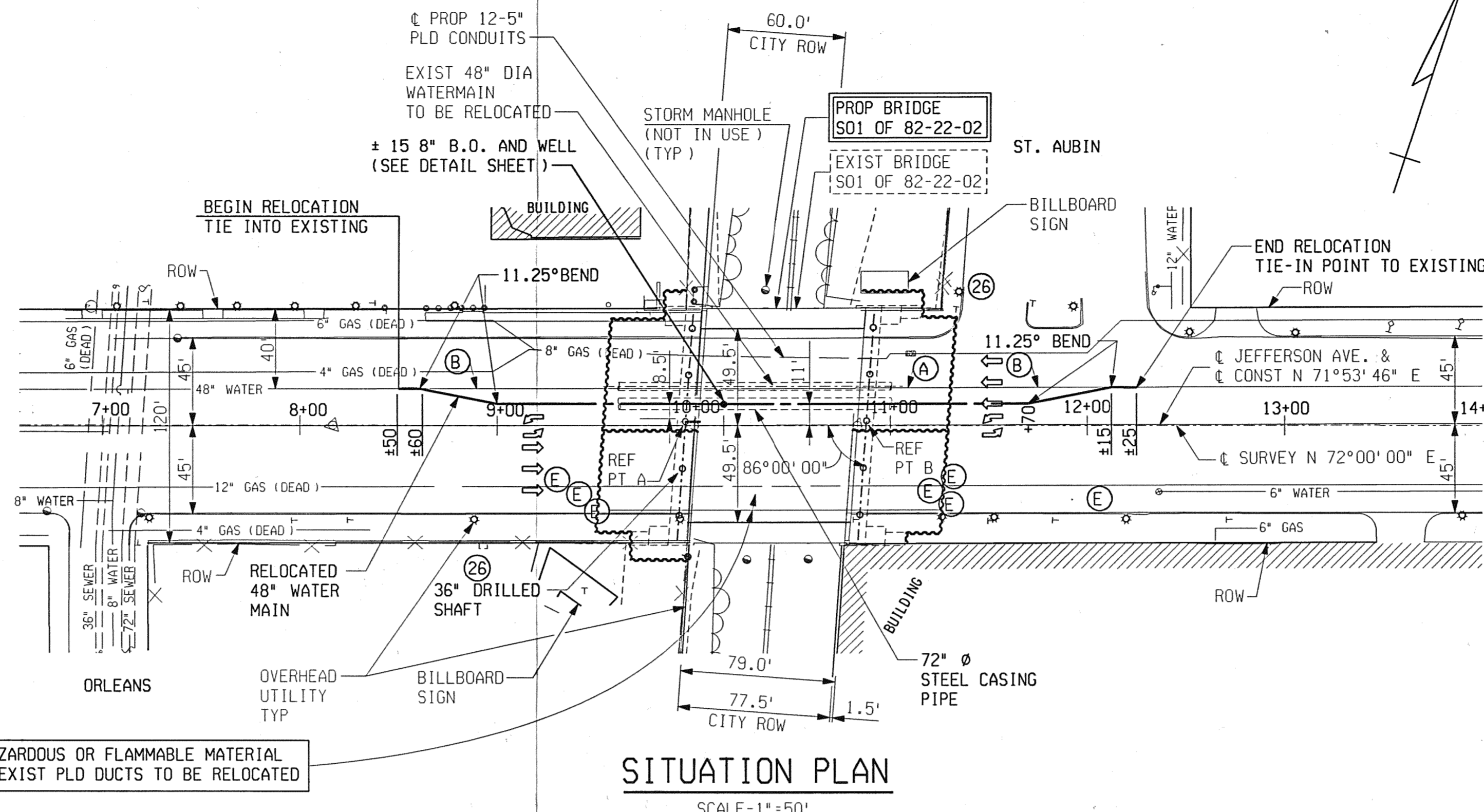
DATE	SCALE:	JOB NO.	SHEET:
02/11/05	1" = 50'	49717A	18 OF 80

CHECKED BY: DATE: WORKED ON BY: DATE: 2/10/2005 3:21:10 PM
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

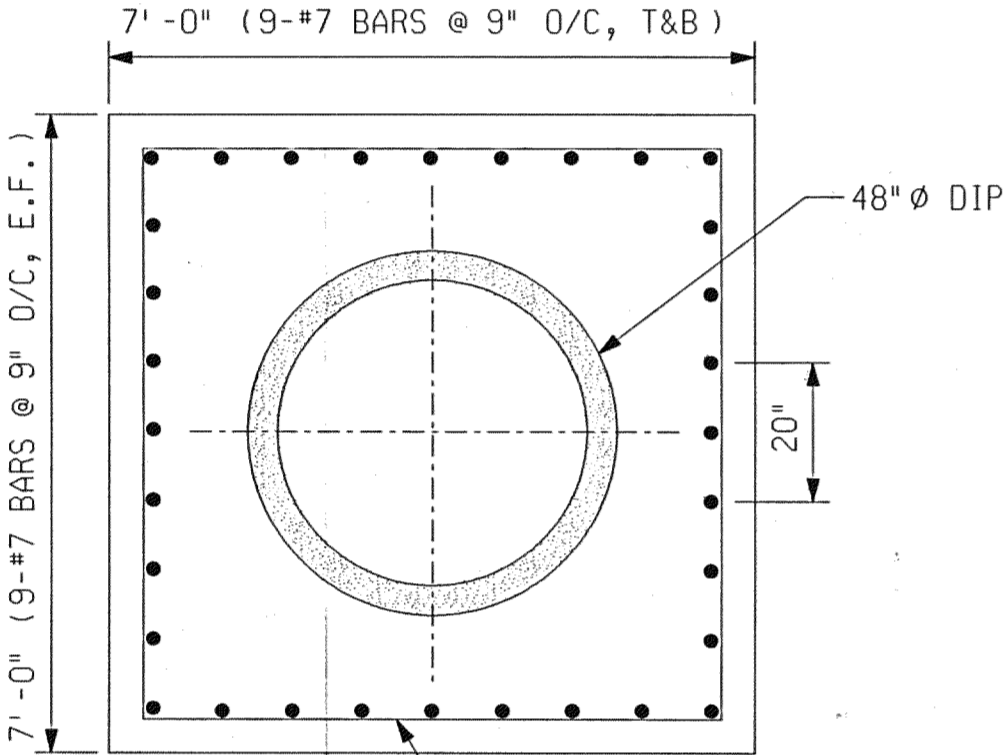
NOTES:

- ALL CONSTRUCTION SHALL COMPLY WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT.
- EXISTING PIPE ELEVATIONS ARE BASED ON AVAILABLE INFORMATION FROM DWSD 1915 FIELD NOTES AND ARE ONLY APPROXIMATE.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF THE EXISTING PIPE AT THE PROPOSED TIE IN LOCATIONS PRIOR TO RELOCATION OF WATER MAIN.
- A MINIMUM CLEARANCE OF 3.5' HORIZONTAL AND 1.5' VERTICAL SHALL BE MAINTAINED BETWEEN THE PIPE AND THE NEAREST UTILITY OR STRUCTURE.
- THE CONTRACTOR SHALL ENSURE THAT THERE IS NO INTERRUPTION OF SERVICE EXCEPT WHEN CONNECTING THE RELOCATED PIPE TO THE EXISTING.
- INTERRUPTION OF SERVICE FOR THE PURPOSE OF CONNECTING THE RELOCATED PIPE TO THE EXISTING SHALL BE DONE DURING LOW WATER SEASON (NOVEMBER TO APRIL) AND SHALL BE DONE ONLY DURING THE WEEKEND HOURS. THE WORK SHALL BE COORDINATED WITH THE SYSTEMS CONTROL AND OPERATIONS GROUP.
- THE CONTRACTOR SHALL NOTIFY DWSD 3 WORKING DAYS PRIOR TO START OF CONSTRUCTION. (CONTACT PERSON IS K. V. RAMACHANDRAN: 313-833-8443)
- THE CONTRACTOR SHALL EXPOSE THE EXISTING MAIN BEFORE DRIVING SHEET PILES. ALL BENDS SHALL BE ENCASED IN CONCRETE PER THE ENCASEMENT DETAIL.
- THE CONTRACTOR SHALL BULKHEAD THE ABANDONED WATERMAIN. IT SHALL BE FILLED WITH STABILIZED CEMENT FLYASH. PAYMENT FOR STABILIZED CEMENT FLYASH SHALL BE INCLUDED IN THE PAY ITEM: Sewer Bulkhead, 48 inch.
- FROM DWSD RECORDS THE NEAREST GATE VALVES ARE LOCATED ON THE EAST SERVICE DRIVE OF THE CHRYSLER FREEWAY AND AT THE INTERSECTION OF JEFFERSON AVENUE AND DUBOIS TO THE EAST OF THE CONSTRUCTION SITE. THERE ARE GATE VALVES ON BRANCH LINES BETWEEN THESE TWO LOCATIONS. THE CONTRACTOR SHALL LOCATE THESE AND SHALL ENSURE THAT THEY ARE OPERATIONAL BEFORE COMMENCING ANY WATERMAIN WORK. IN THE EVENT ANY OF THESE IS NOT OPERATIONAL HE SHALL INFORM DWSD AND HAVE THEM REPAIRED BEFORE BEGINNING RELOCATION OF THE EXISTING LINE.
- USE DUCTILE IRON RESTRAINED JOINT PIPE.
- ALL PLAN DIMENSIONS ARE HORIZONTAL.
- STEEL CASING PIPE SHALL MEET THE REQUIREMENTS OF AREMA.
- TESTING AND DISINFECTION SHALL BE DONE ACCORDING TO DWSD STANDARDS.
- THE CONTRACTOR SHALL PROVIDE 48" ADAPTERS FOR THE CONNECTIONS OF DIFFERENT PIPE MATERIALS. SUBMIT SHOP DRAWING FOR DWSD APPROVAL.



SITUATION PLAN

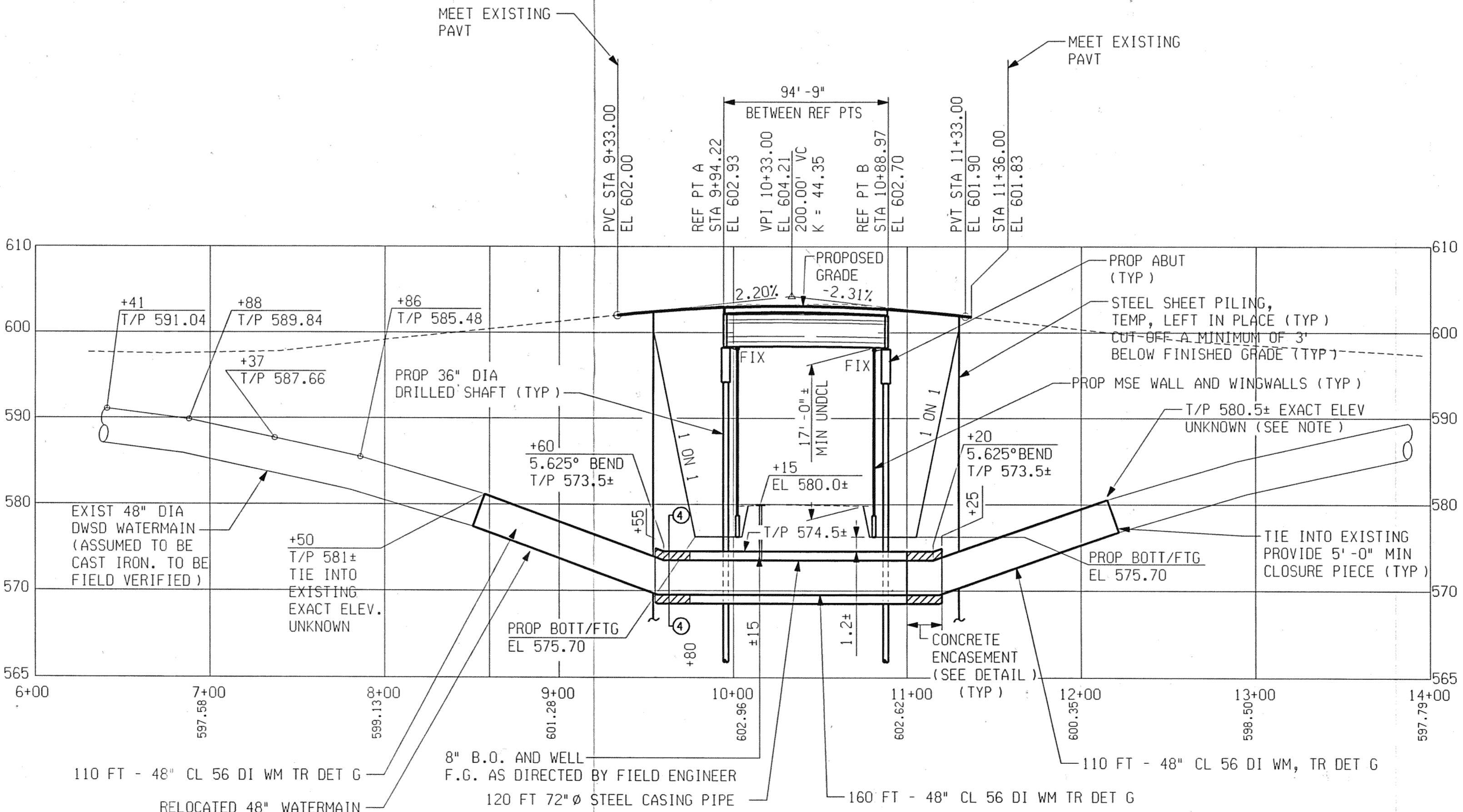
SCALE - 1" = 50'



* REINFORCING STEEL REQUIRED = 15.23 SQ. IN. ACTUAL = 19.2 SQ. IN.

4 48" CONC. PIPE ENCASEMENT SECTION N.T.S.

* PAYMENT FOR REINFORCING STEEL IS INCLUDED IN PAYMENT FOR Conc Grade P1



PROFILE ALONG JEFFERSON AVE

VERT. SCALE - 1" = 10'
HOR. SCALE - 1" = 50'

WATERMAIN QUANTITIES THIS SHEET

380	Ft	Water Main, DI, 48 inch, Tr Det G
120	Ft	Steel Casing Pipe, 72 inch, Tr Det G *
1	Ea	Gate Well, Blow-off Well
60	Cyd	Conc Grade P1
1	Ea	Gate Well, Abandon
2	Ea	Water Main, 48 inch, Cut and Plug
4	Ea	11.25 Degrees Bend
2	Ea	5.625 Degrees Bend
1	Ea	48 inch x 48 inch x 48 inch Tee
650	Lbs	Dr Structure Cover
2	Ea	Sewer Bulkhead, 48 inch
1	Ea	48 inch Tapping Sleeve and Valve

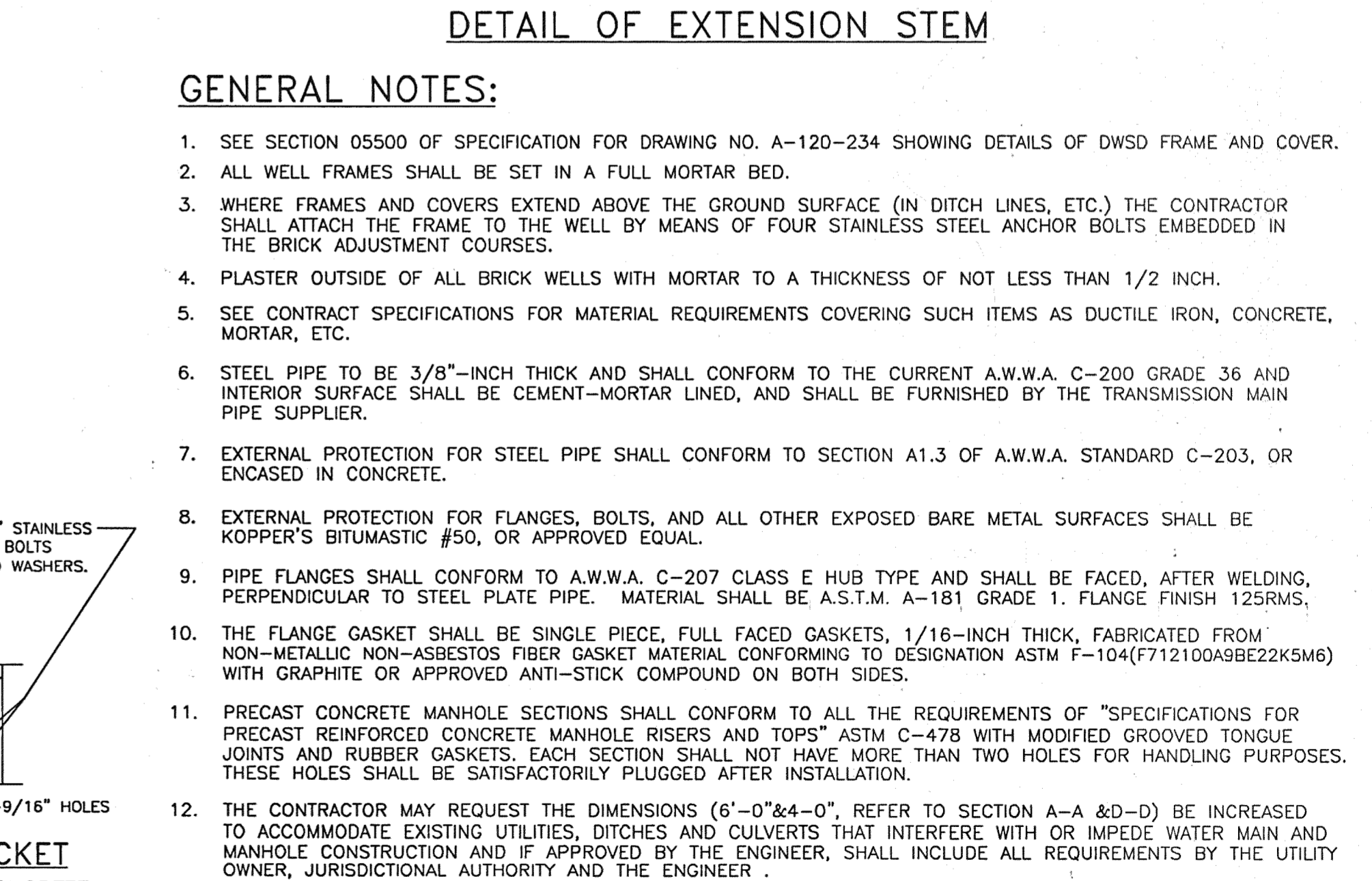
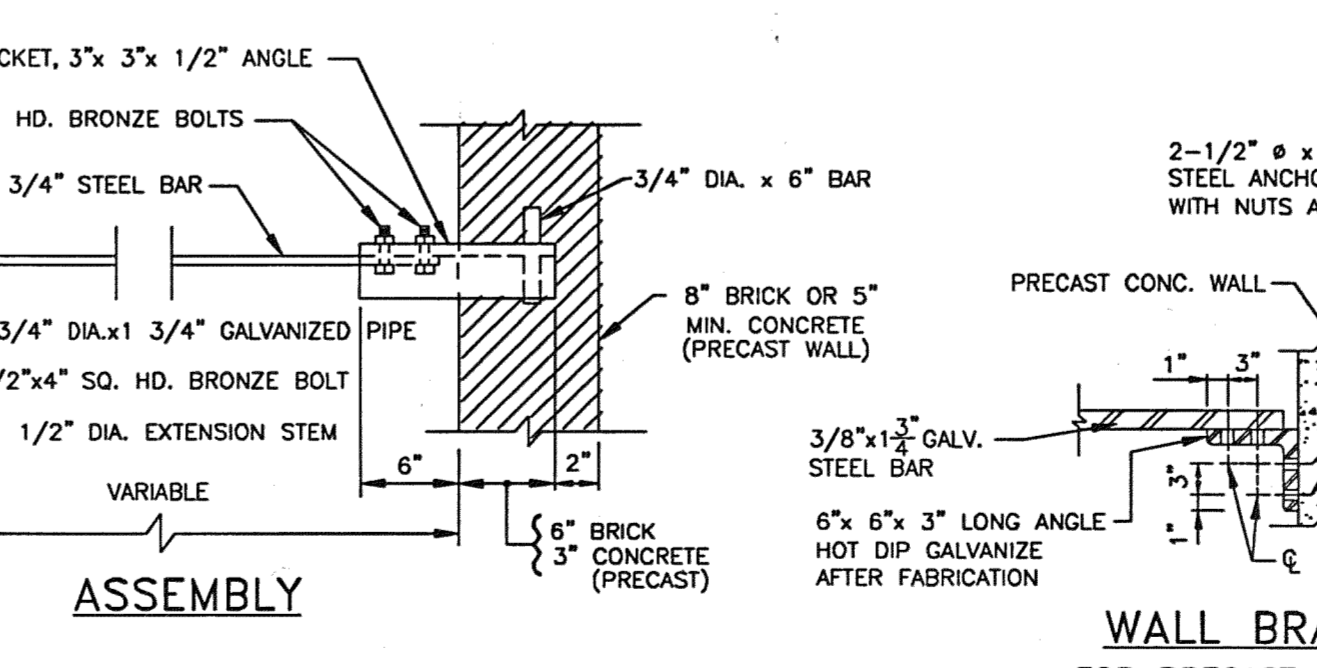
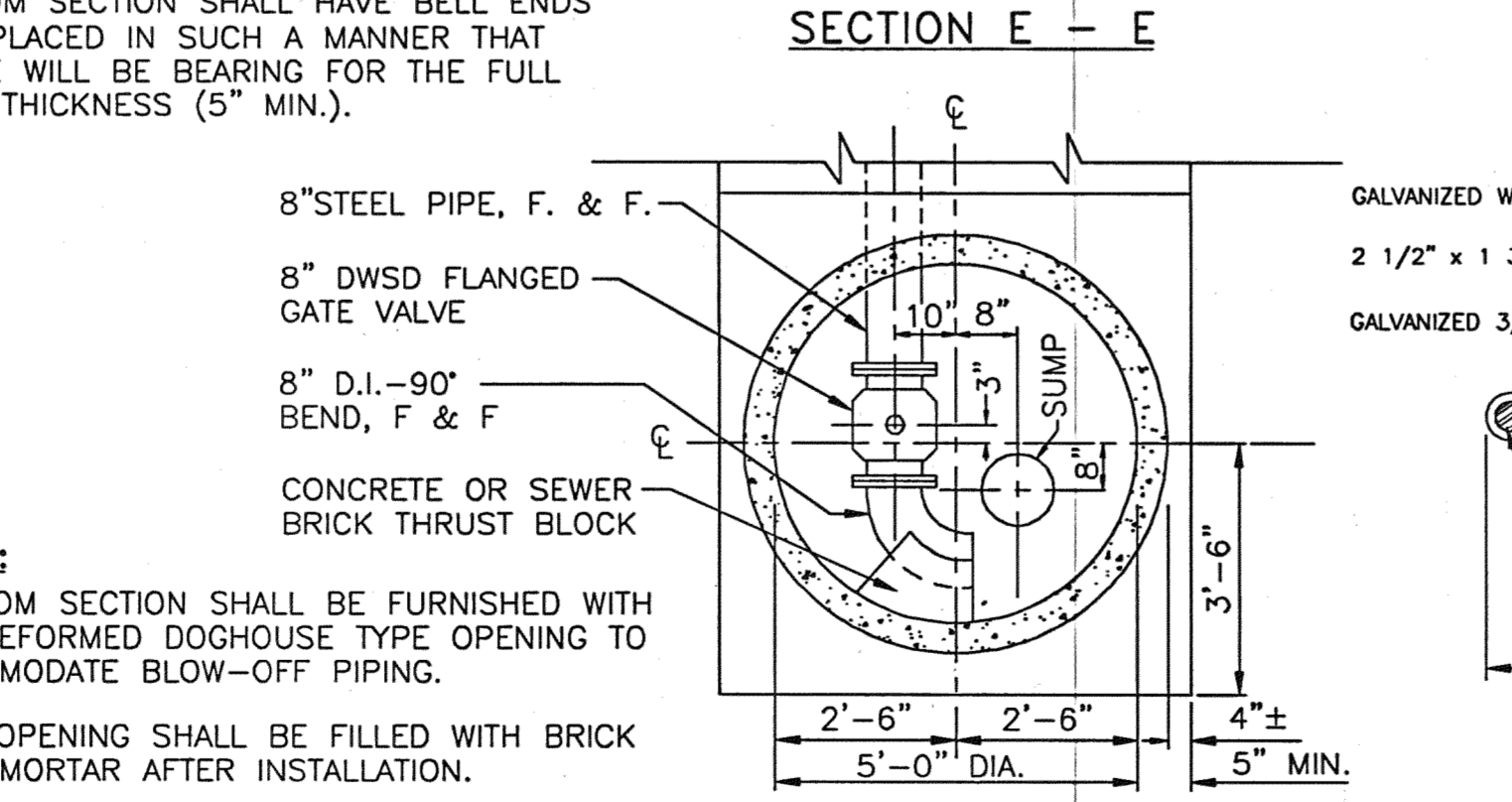
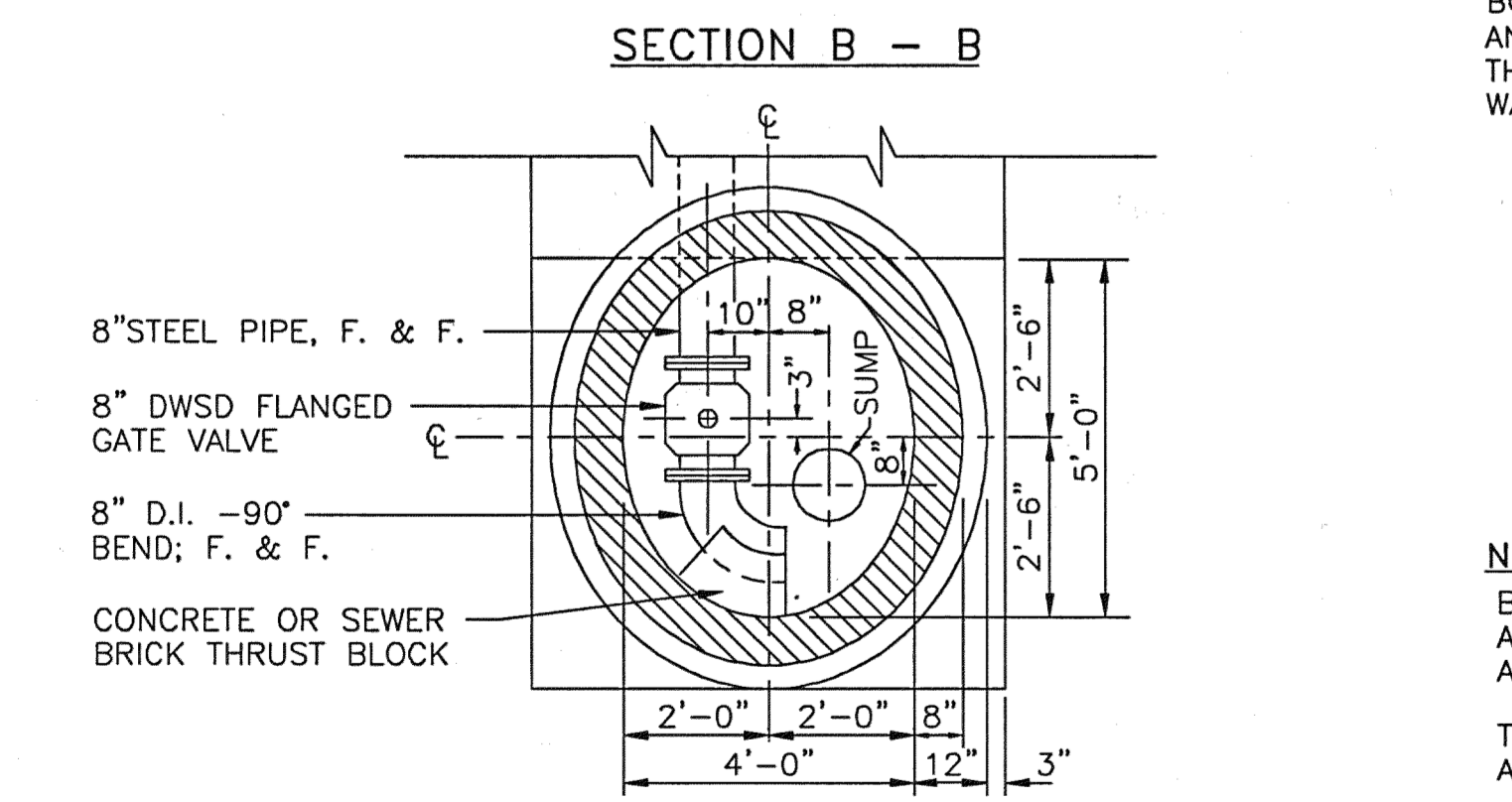
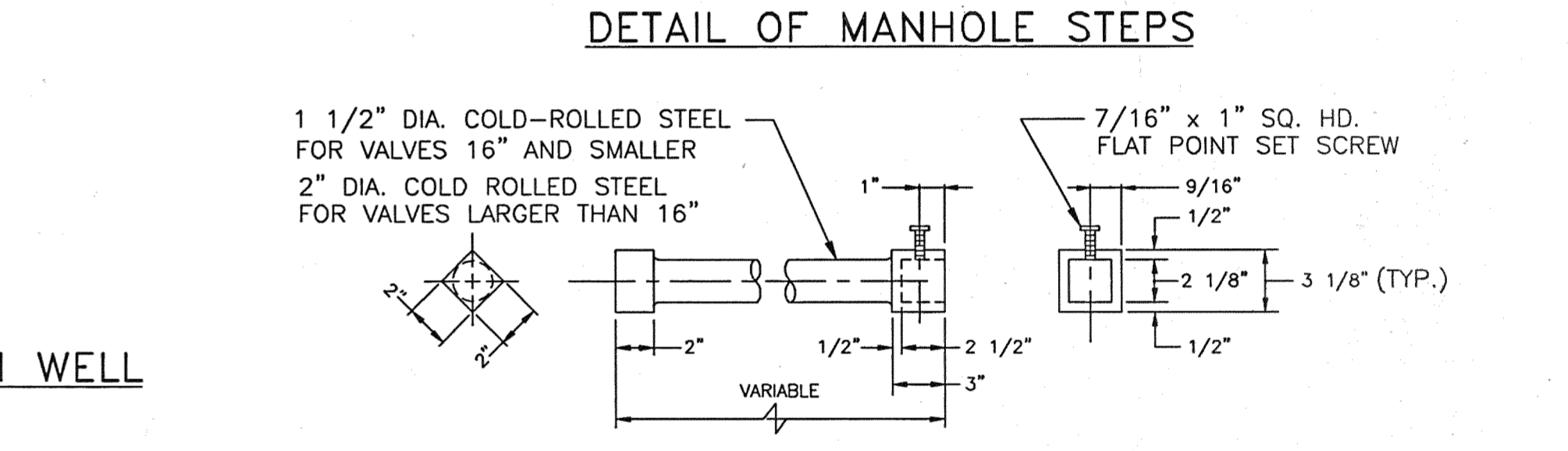
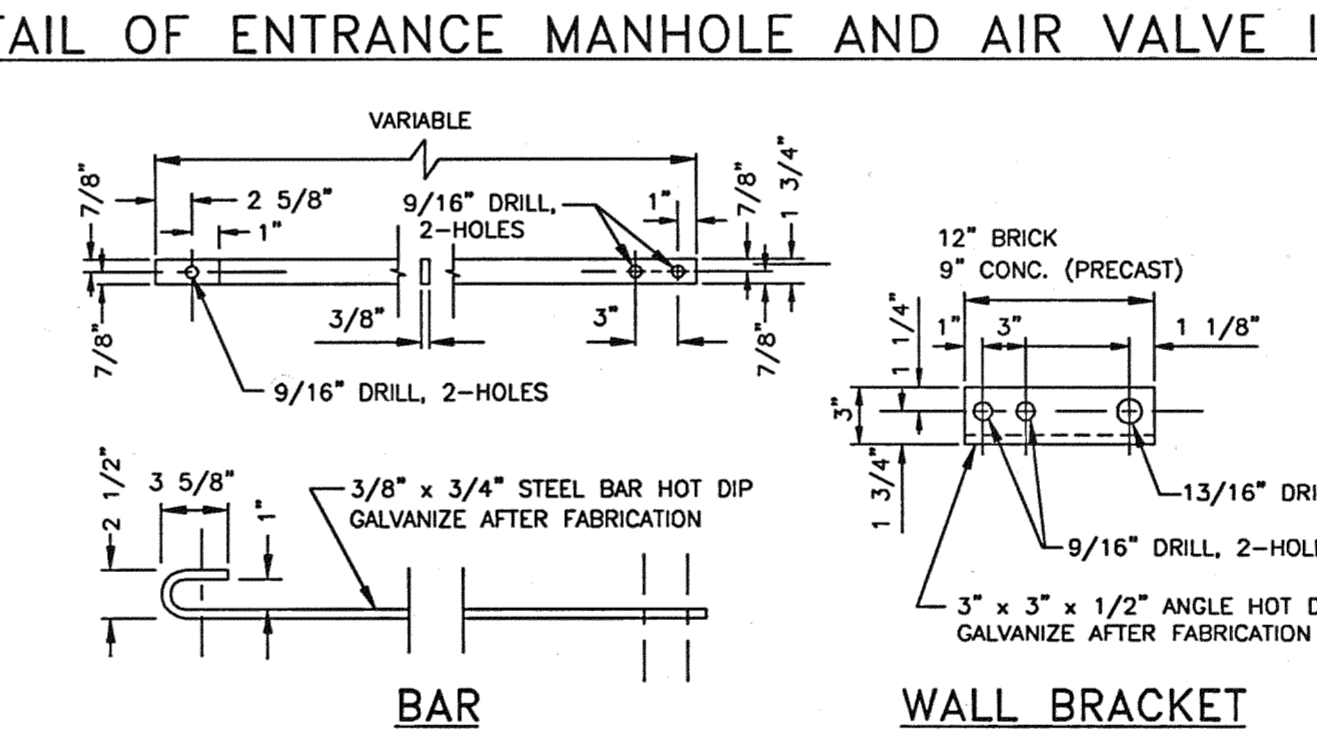
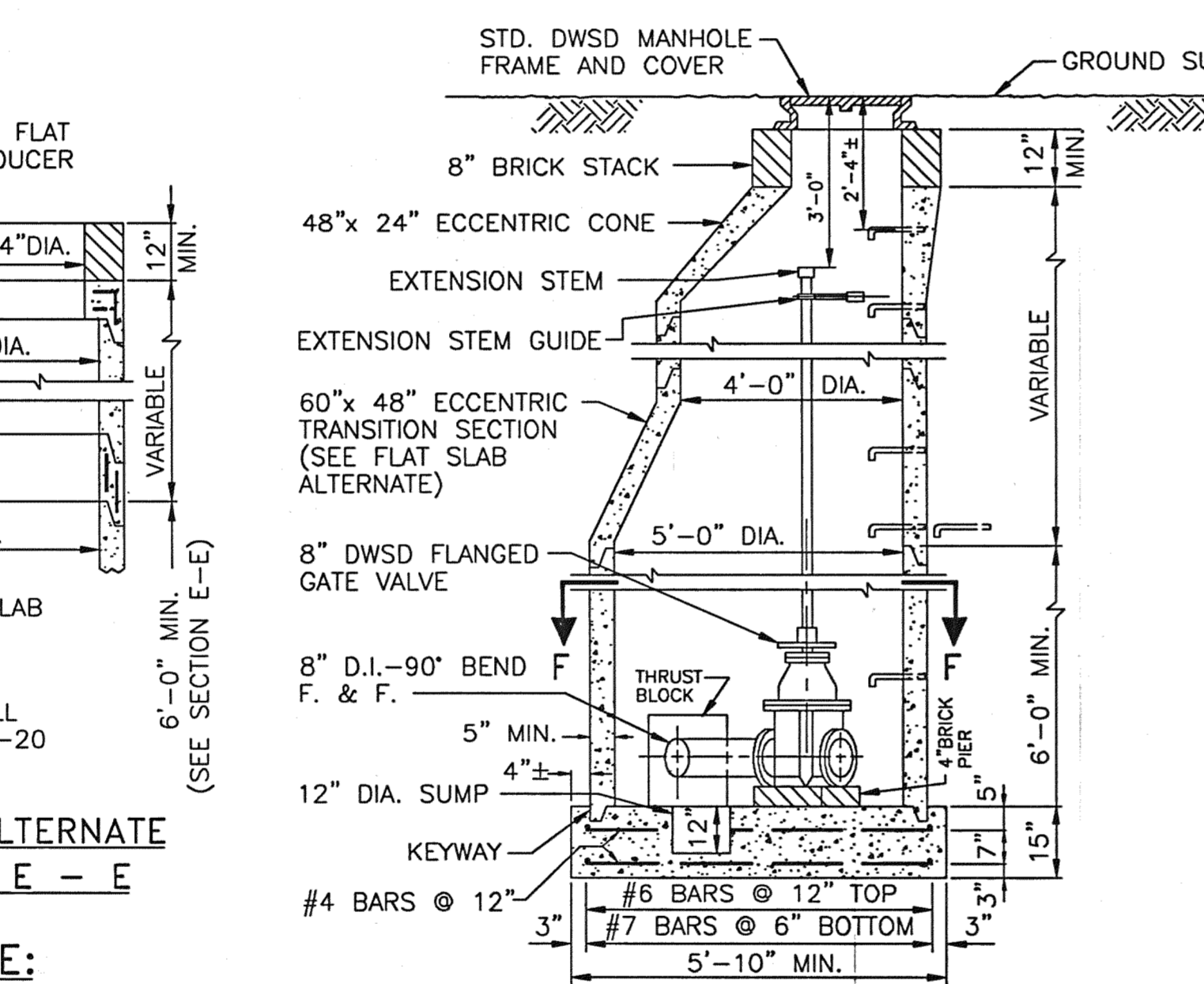
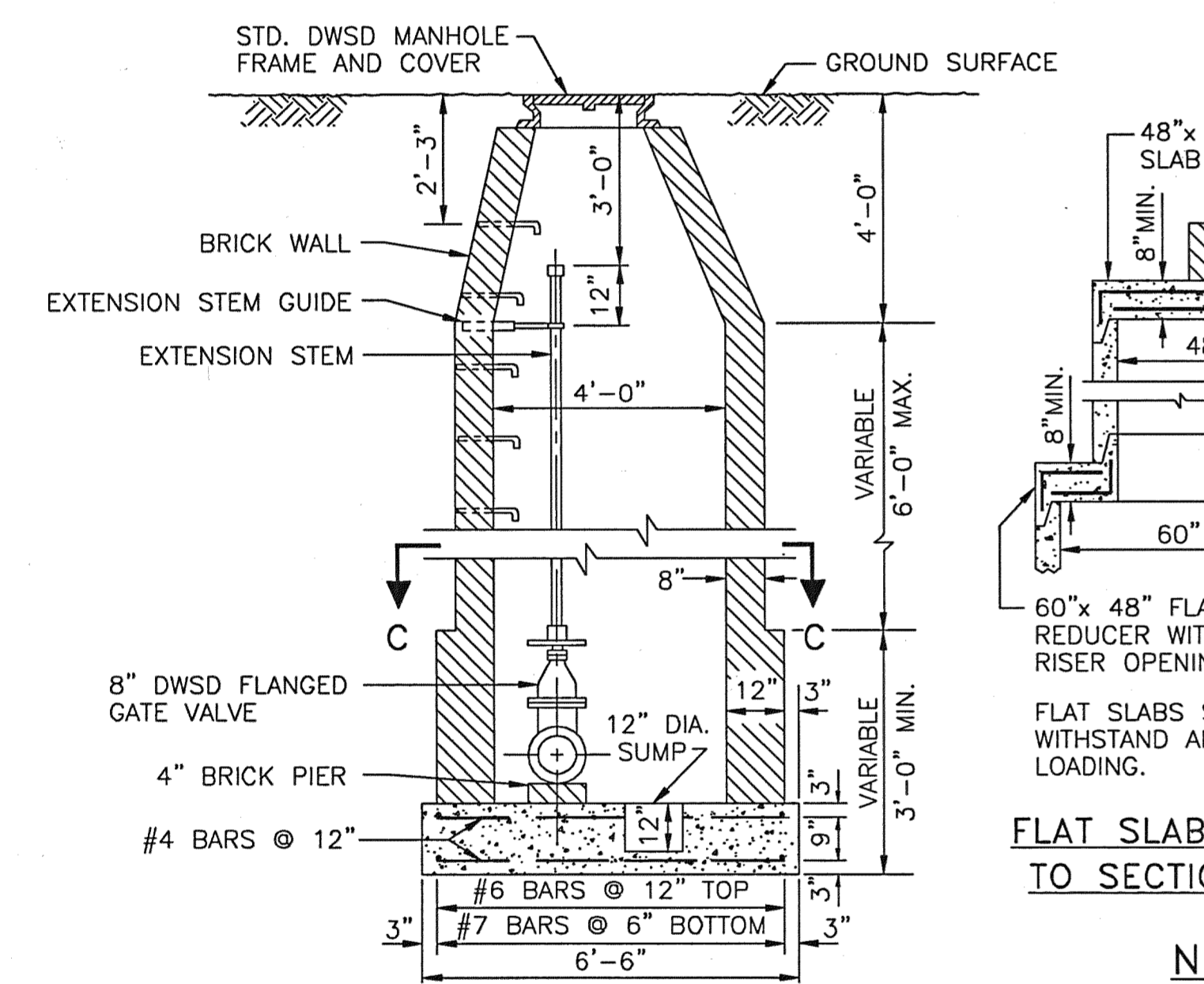
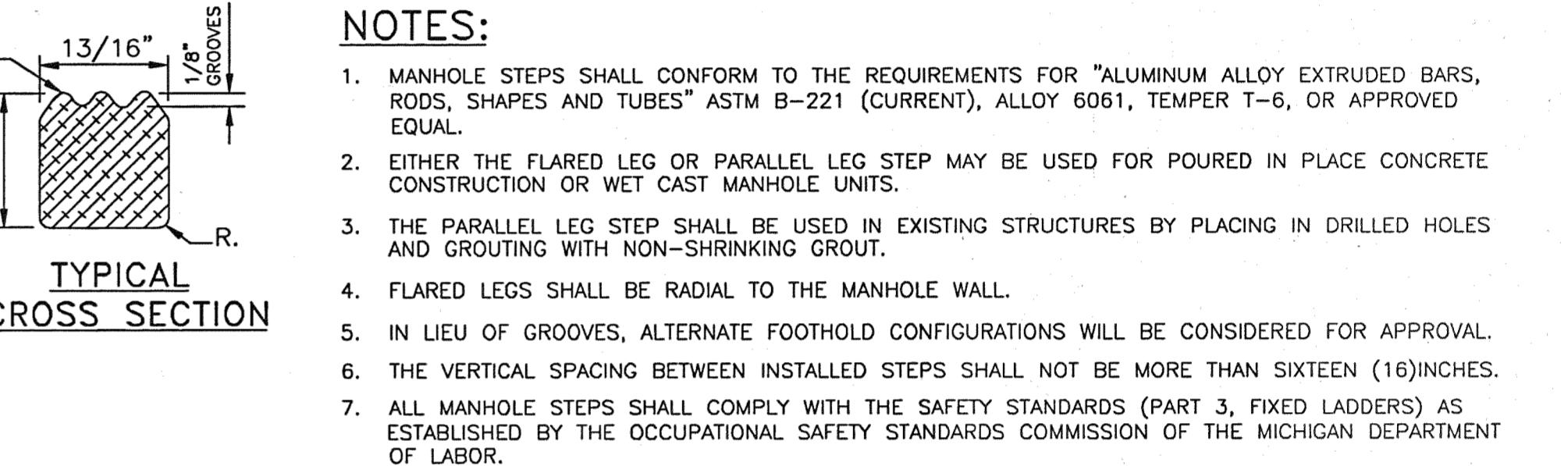
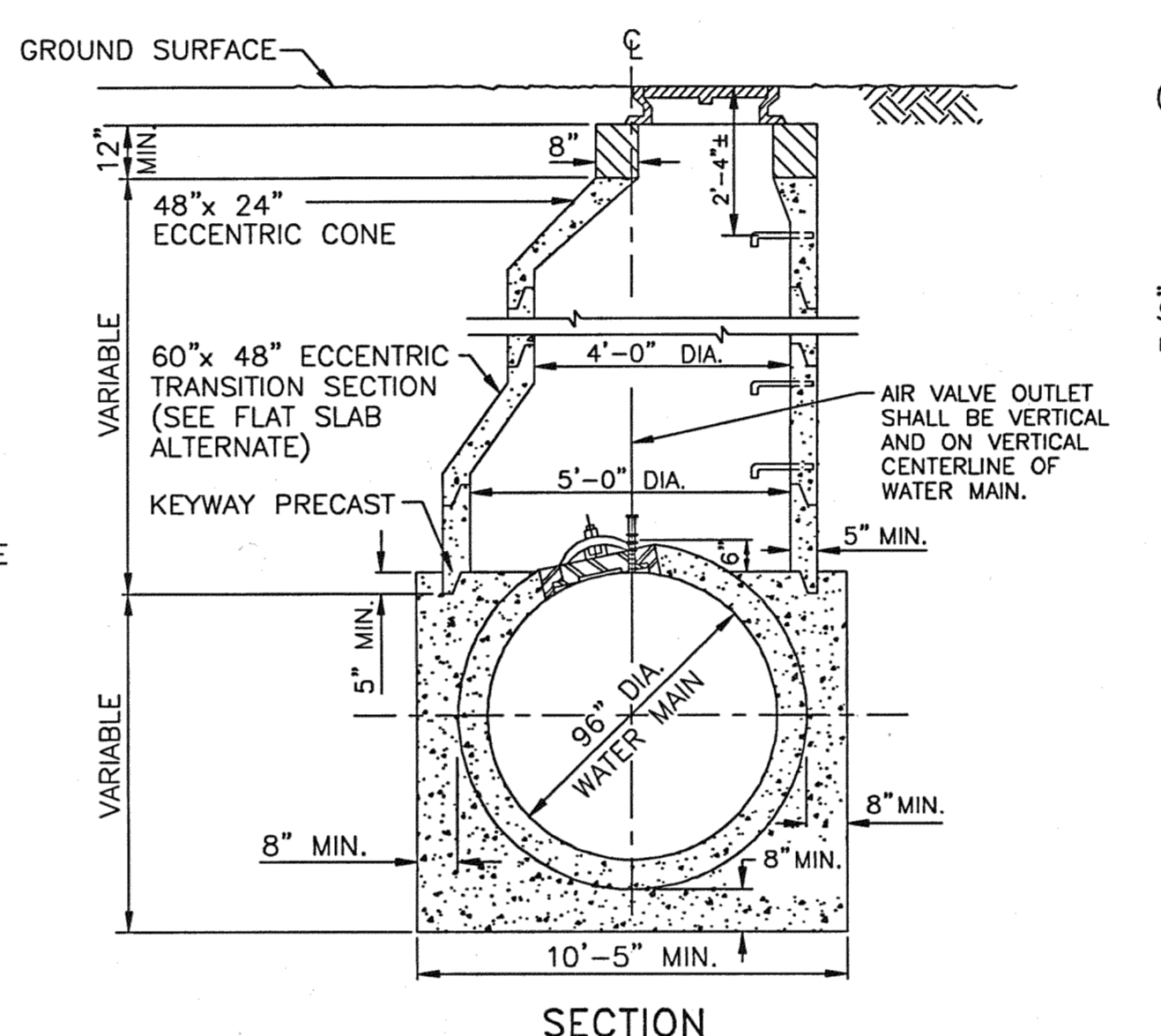
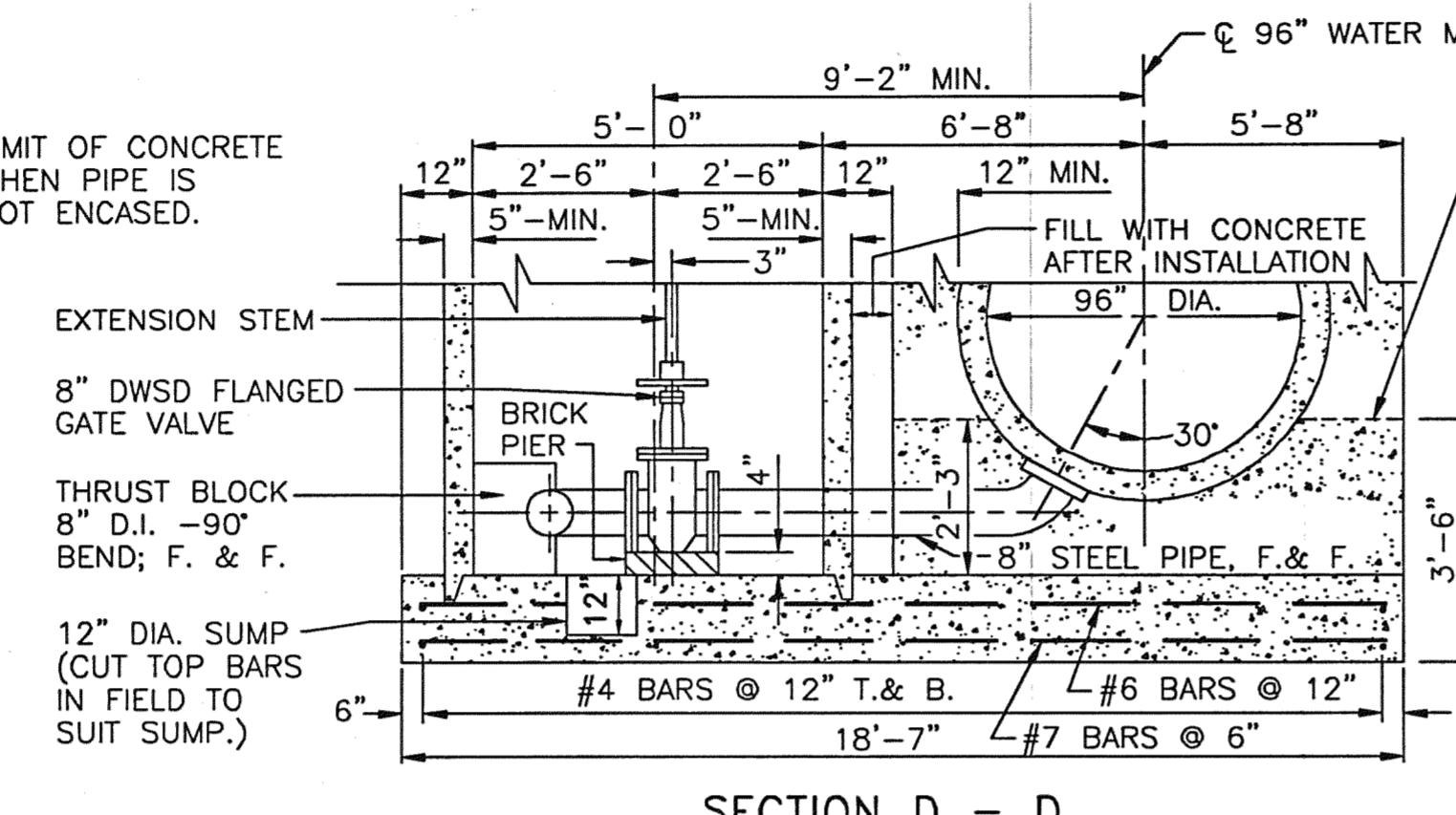
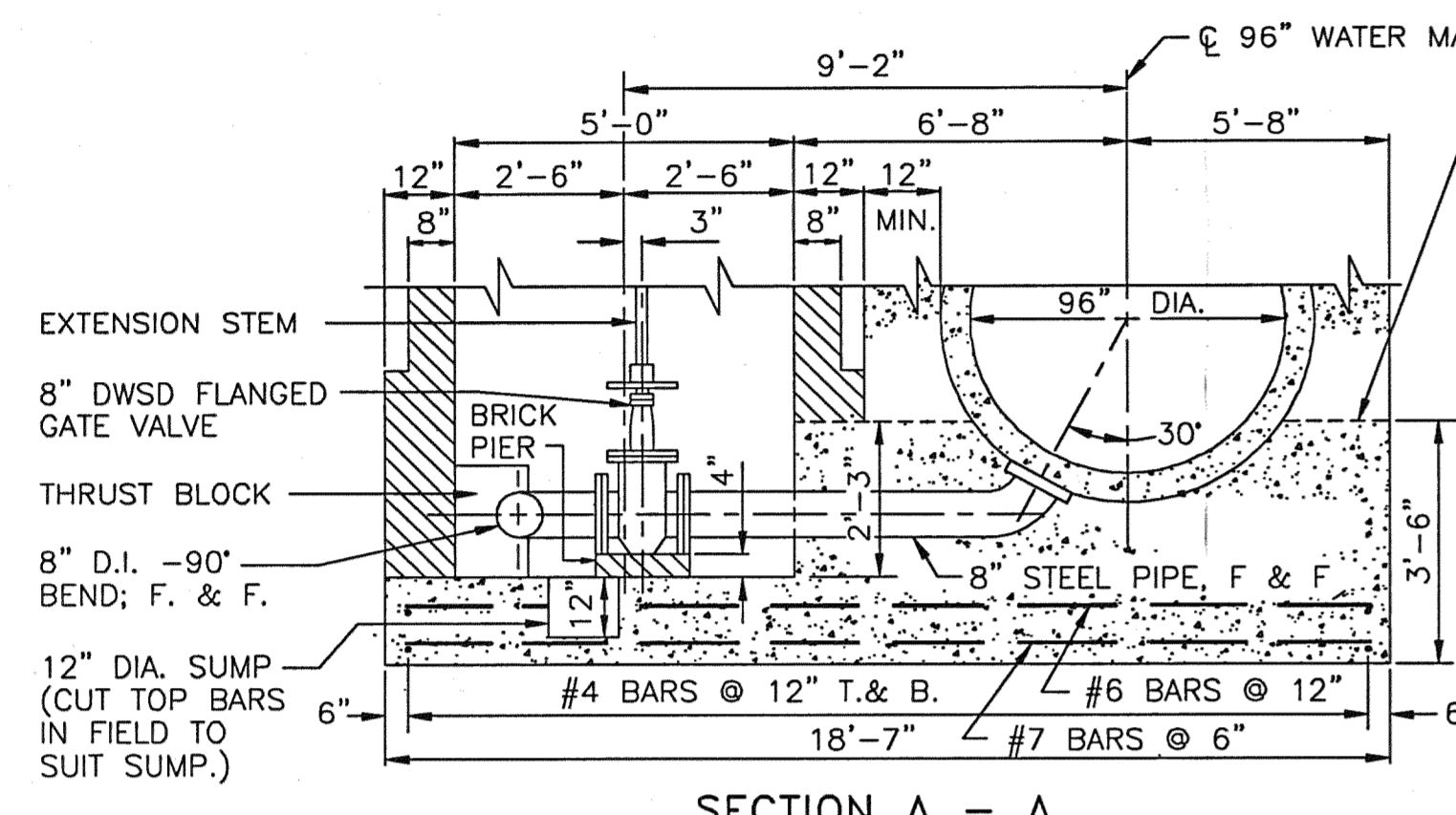
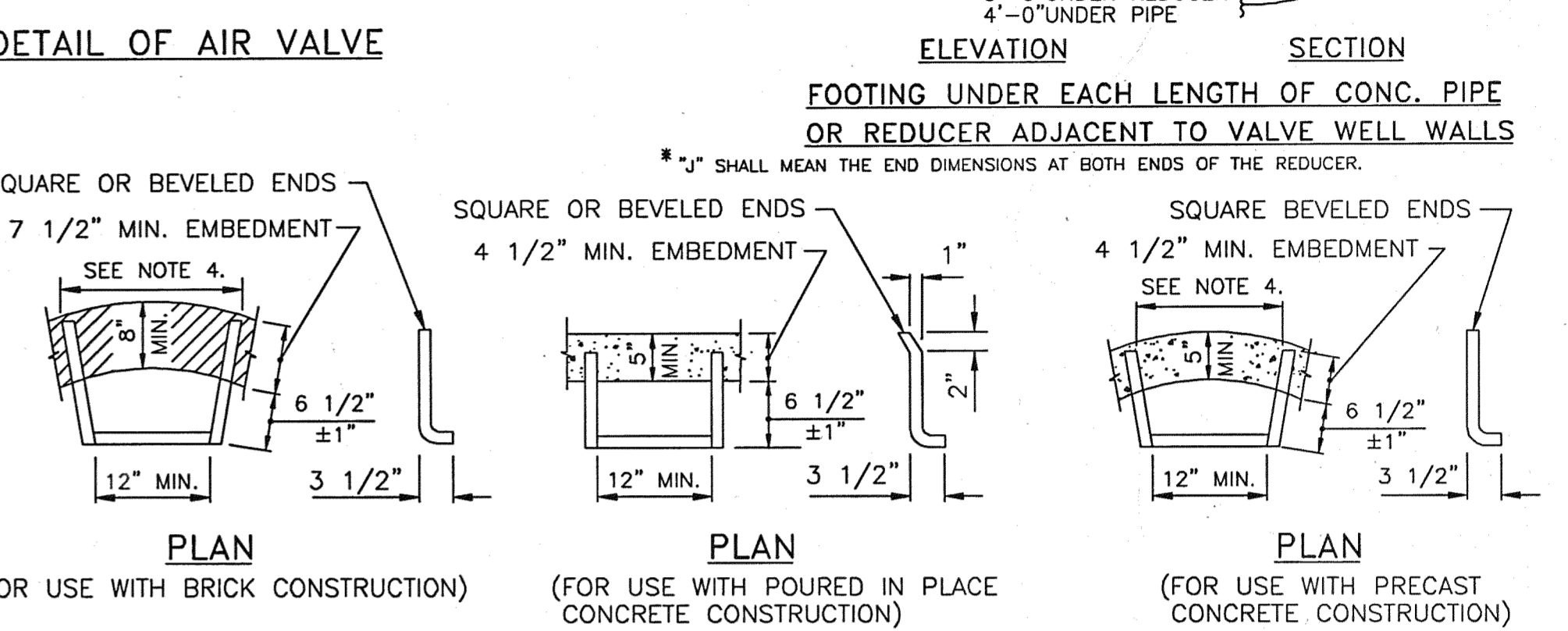
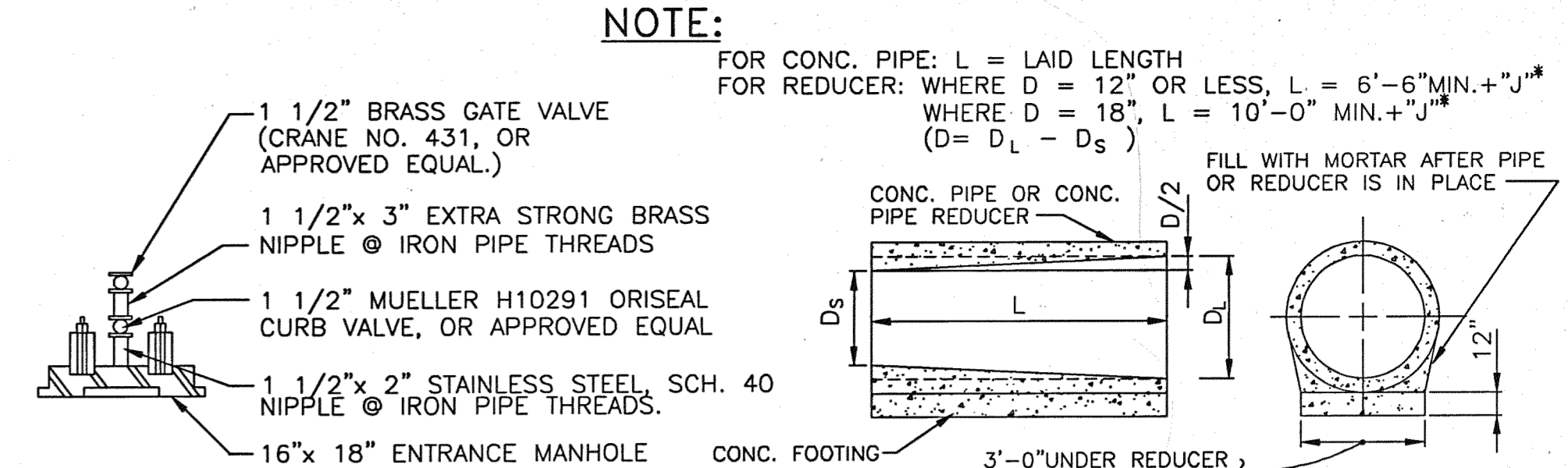
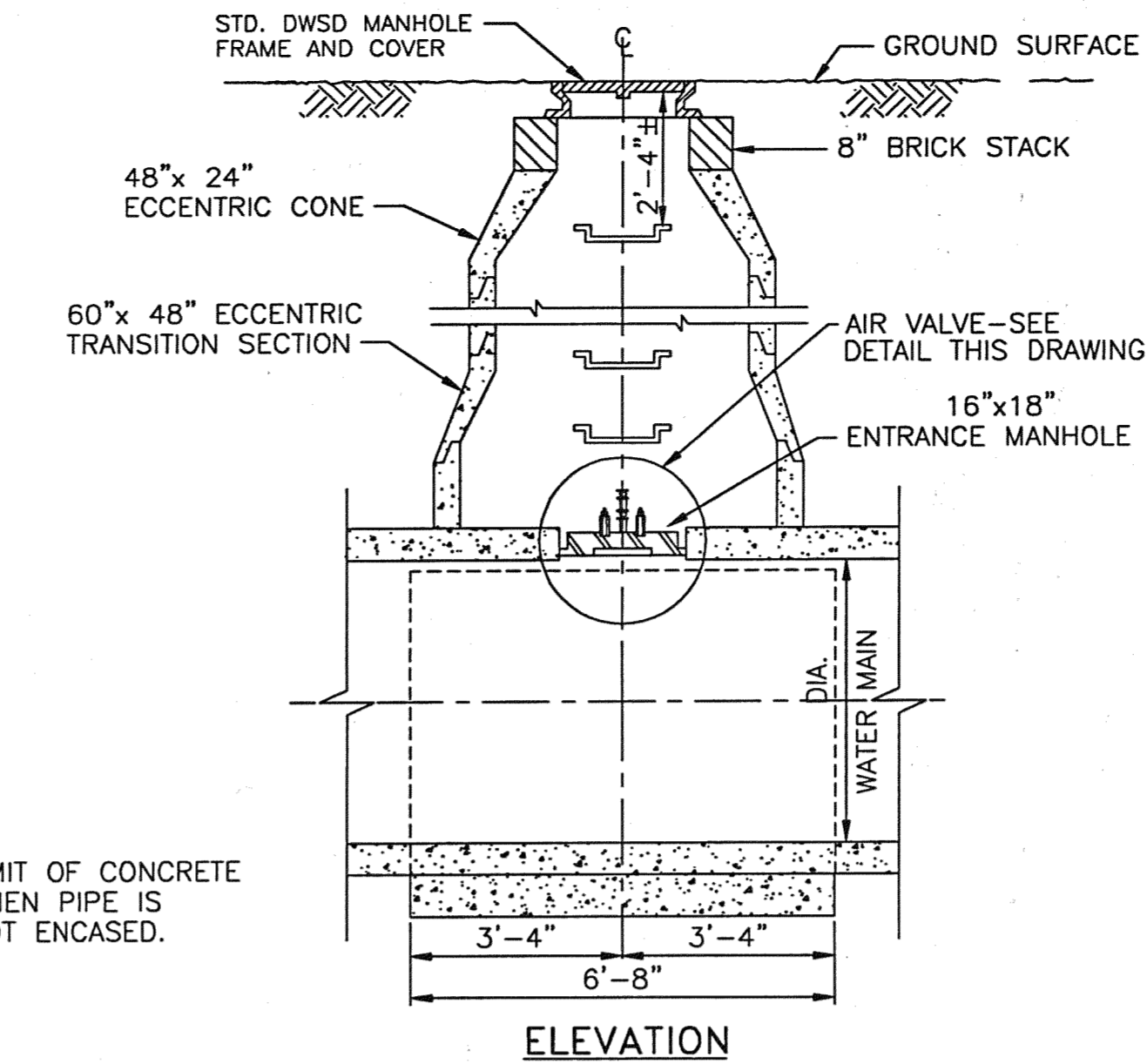
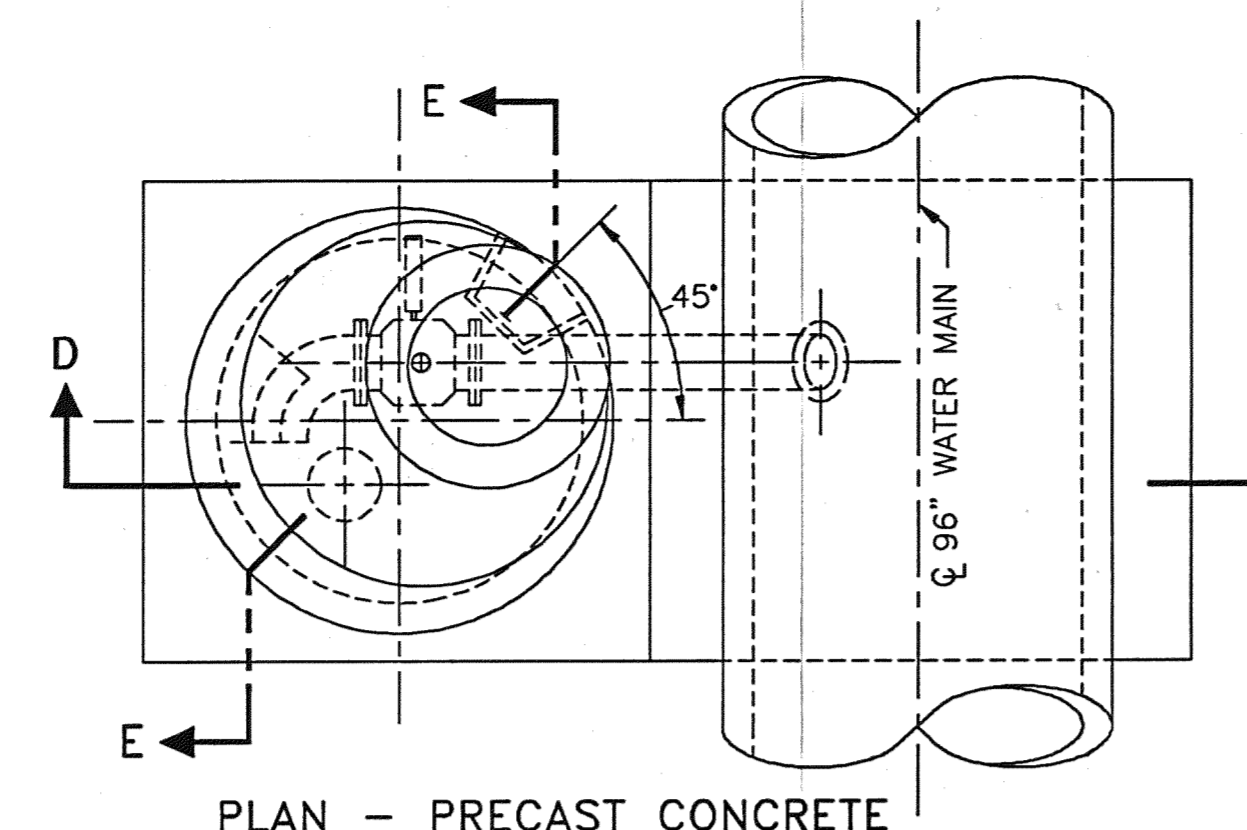
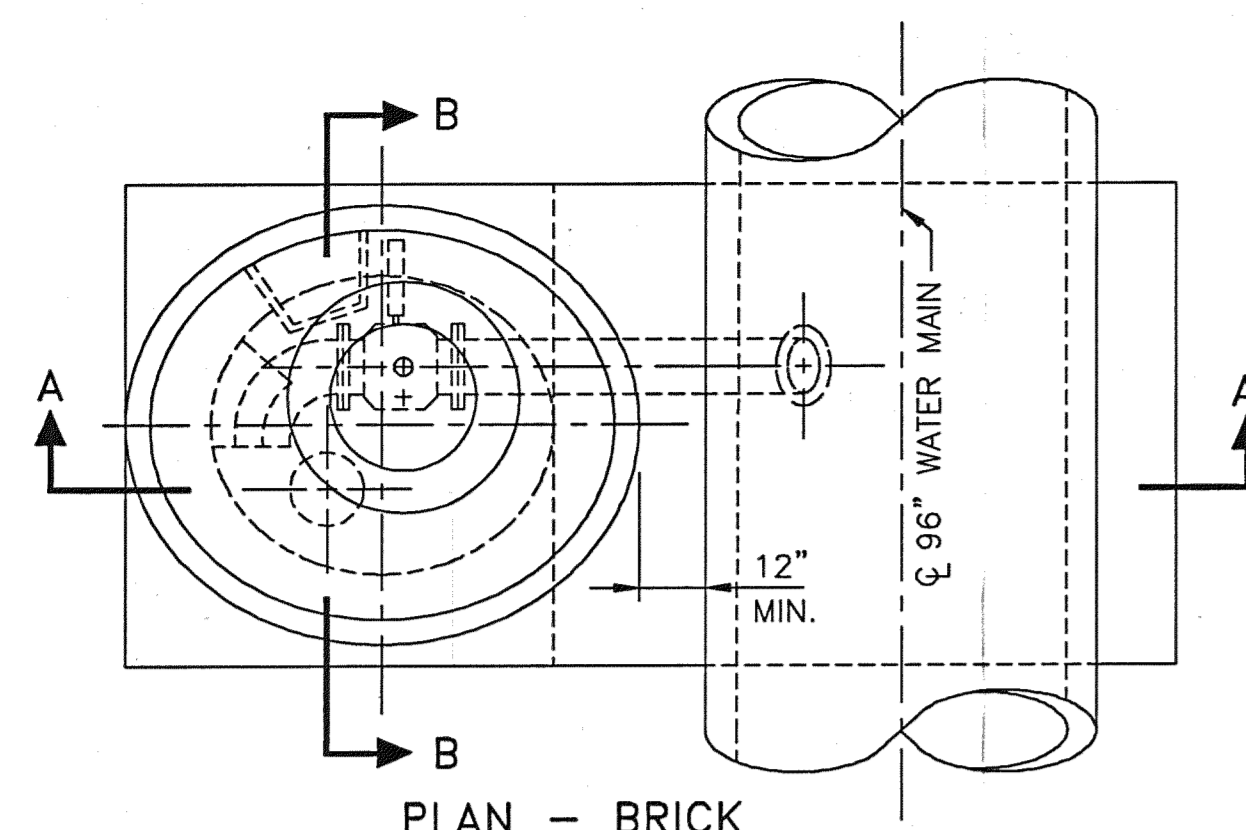


CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

WATER MAIN
JEFFERSON AVE OVER DEQUINDRE CUT

DATE	SCALE:	JOB NO.	SHEET:
02/11/05	1" = 50'	49717A	19 OF 80

DATE: 2/17/2005 5:08:50 PM
WORKED ON BY:
DATE:
CHECKED BY:
FILE NAME: g:\Projects\35458D Detroit Bridges\WaterMain\Watermain.dgn



F					
E					
D					
C					
B					
A					
	DESCRIPTION	CHK'D	APRVD.	DATE	
	REVISIONS				

DESIGNED BY:	
DRAWN BY:	C. L. WILKINS
CHECKED BY:	S. T. DIOSO
ENGINEER:	
HEAD ENGINEER:	

SCALE:	NOT TO SCALE
DATE:	02-11-05

CITY OF DETROIT WATER AND SEWERAGE DEPARTMENT ENGINEERING DIVISION					M.D.E.Q. PERMIT NO. W054048
					FED. REF. NO.
					CONTRACT NO. JN49717A
					FILE NO.
SECTION MAP	TOWN	RANGE	SECTION	PORTION CODE	FAMIS NO. 000000
					DRAWING NO. 20 of 80

MISCELLANEOUS DETAILS

GENERAL NOTES:

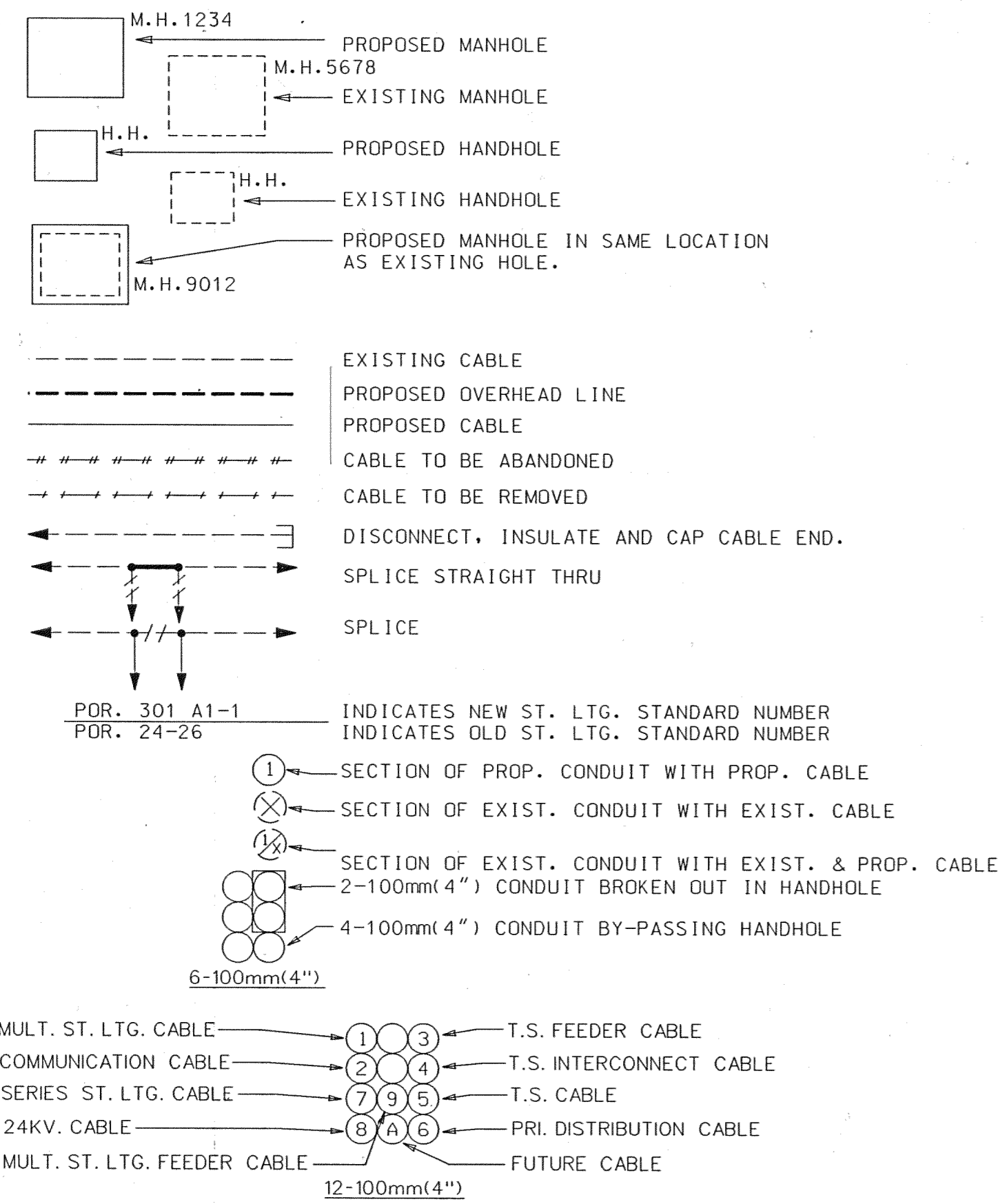
- SEE SECTION 05500 OF SPECIFICATION FOR DRAWING NO. A-120-234 SHOWING DETAILS OF DWSD FRAME AND COVER.
 - ALL WELL FRAMES SHALL BE SET IN A FULL MORTAR BED.
 - WHERE FRAMES AND COVERS EXTEND ABOVE THE GROUND SURFACE (IN DITCH LINES, ETC.) THE CONTRACTOR SHALL ATTACH THE FRAME TO THE WELL BY MEANS OF FOUR STAINLESS STEEL ANCHOR BOLTS EMBEDDED IN THE BRICK ADJUSTMENT COURSES.
 - PLASTER OUTSIDE OF ALL BRICK WELLS WITH MORTAR TO A THICKNESS OF NOT LESS THAN 1/2 INCH.
 - SEE CONTRACT SPECIFICATIONS FOR MATERIAL REQUIREMENTS COVERING SUCH ITEMS AS DUCTILE IRON, CONCRETE, MORTAR, ETC.
 - STEEL PIPE TO BE 3/8"-INCH THICK AND SHALL CONFORM TO THE CURRENT A.W.W.A. C-200 GRADE 36 AND INTERIOR SURFACE SHALL BE CEMENT-MORTAR LINED, AND SHALL BE FURNISHED BY THE TRANSMISSION MAIN PIPE SUPPLIER.
 - EXTERNAL PROTECTION FOR STEEL PIPE SHALL CONFORM TO SECTION A1.3 OF A.W.W.A. STANDARD C-203, OR ENCASED IN CONCRETE.
 - EXTERNAL PROTECTION FOR FLANGES, BOLTS, AND ALL OTHER EXPOSED BARE METAL SURFACES SHALL BE KOPPER'S BITUMASTIC #50, OR APPROVED EQUAL.
 - PIPE FLANGES SHALL CONFORM TO A.W.W.A. C-207 CLASS E HUB TYPE AND SHALL BE FACED, AFTER WELDING, PERPENDICULAR TO STEEL PLATE PIPE. MATERIAL SHALL BE A.S.T.M. A-181 GRADE 1. FLANGE FINISH 125RMS.
 - THE FLANGE GASKET SHALL BE SINGLE PIECE, FULL FACED GASKETS, 1/16-INCH THICK, FABRICATED FROM NON-METALLIC NON-ASBESTOS FIBER GASKET MATERIAL CONFORMING TO DESIGNATION ASTM F-104(F71210DAGBE22K5M6) WITH GRAPHITE OR APPROVED ANTI-STICK COMPOUND ON BOTH SIDES.
 - PRECAST CONCRETE MANHOLE SECTIONS SHALL CONFORM TO ALL THE REQUIREMENTS OF "SPECIFICATIONS FOR PRECAST REINFORCED CONCRETE MANHOLE RISERS AND TOPS" ASTM C-478 WITH MODIFIED GROOVED TONGUE JOINTS AND RUBBER GASKETS. EACH SECTION SHALL NOT HAVE MORE THAN TWO HOLES FOR HANDLING PURPOSES. THESE HOLES SHALL BE SATISFACTORILY PLUGGED AFTER INSTALLATION.
 - THE CONTRACTOR MAY REQUEST THE DIMENSIONS (6'-0" & 4'-0") REFER TO SECTION A-A & D-D) BE INCREASED TO ACCOMMODATE EXISTING UTILITIES, DITCHES AND CULVERTS THAT INTERFERE WITH OR IMPEDE WATER MAIN AND MANHOLE CONSTRUCTION AND IF APPROVED BY THE ENGINEER, SHALL INCLUDE ALL REQUIREMENTS BY THE UTILITY OWNER, JURISDICTIONAL AUTHORITY AND THE ENGINEER.
- UNDER THE ABOVE REQUEST, DITCHES SHALL BE REPLACED WITH APPROVED CULVERT TREATMENT. THE ABOVE MAY BE IN LIEU OF RELOCATING FACILITIES BUT NOT PRECLUDE THAT OPTION, THE OPTION SELECTED AND APPROVED SHALL BE AT NO ADDITIONAL CONTRACT COST.

UNDERGROUND

- FIRE HYDRANT
EXISTING MANHOLE
EXISTING HANDHOLE
EXISTING DUCT RUN
ABANDON EXISTING DUCT RUN
EXISTING DIRECT BURIAL OR PARKWAY CABLE
ABANDON DIRECT BURIAL OR PARKWAY CABLE
INSTALL DIRECT BURIAL CABLE (NO. AND SIZE WILL BE SHOW)
BUILD ENCASED CONDUIT (E.C.) (NO. AND SIZE WILL BE SHOWN)
INSTALL DIRECT BURIAL CONDUIT (D.B.) (NO. AND SIZE WILL BE SHOWN)
JACKED-BORED CONDUIT (J.B.) (NO. AND SIZE WILL BE SHOWN)
BUILD NEW MANHOLE (2-WAY)
BUILD NEW MANHOLE (3-WAY)
BUILD NEW MANHOLE (4-WAY)
BUILD NEW MANHOLE (CORNER)
BUILD NEW HANDHOLE (ROUND OR SQUARE AS INDICATED ON PLANS).
BUILD POLYMER CONCRETE HANDHOLE
BUILD TYPE "S" HANDHOLE
BUILD TYPE "D" HANDHOLE
EXISTING UNDERGROUND-FED ST.LTG. UNIT AND FOUNDATION
REMOVE UNDERGROUND-FED ST.LTG. UNIT AND FOUNDATION (EXCEPT AS OTHERWISE NOTED)
INSTALL CODE 009-00,010-06, OR 118-06 AS NOTED ST. LTG. UNIT ON BRIDGE OR NEW FDN. INSTALL LUMINAIRE (SALVAGED), EXCEPT WHERE OTHERWISE NOTED. ANCHOR BOLTS IN BRIDGE DECK ON PLAN BY OTHERS
SALVAGED UNDERGROUND-FED ST. LTG. UNIT ON NEW FOUNDATION.

DIAGRAMS

(U.G.-FED. ST. LTG. STD. SYMBOLS ARE THE SAME AS THE UNDERGROUND LEGEND ON THIS SHEET).



LEGEND SHEET

DIAGRAMS

- INDICATES 2000V., 1-1/2 #6 ST. LTG. CABLE
INDICATES 2000V., 1-1/2 #6 ST. LTG. CABLE & 1-#6 NEUTRAL.
INDICATES 2000V., 2-1/2 #6 ST. LTG. CABLES & 1-#6 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 480/960V.
INDICATES 2000V., 1-1/2 #2 ST. LTG. CABLE
INDICATES 2000V., 1-1/2 #2 ST. LTG. CABLE & 1-#2 NEUTRAL.
INDICATES 2000V., 2-1/2 #2 ST. LTG. CABLES & 1-#2 NEUTRAL (ALL UNLABELED CABLE GROUPS ON WIRING DIAGRAM ARE SUCH.) 240/480V.
INDICATES 2000V., 3-1/2 #2 ST. LTG. CABLES & 1-#2 NEUTRAL.
INDICATES REMOVE CABLES IN CONDUIT (REGARDLESS OF SIZE OR NUMBER OF CABLES IN THE CONDUIT.)
INSTALL 7500V., 1-1/2 #8 L.C. ST. LTG. CABLE
INSTALL 7500V., 2-1/2 #8 L.C. ST. LTG. CABLES

OVERHEAD

- INSTALL OVERHEAD ALLEY LTG. UNIT. WITH 1.83m BRACKET ARM.
INSTALL OVERHEAD RESIDENTIAL LTG. (4.88m ARM WITH TYPE I 4-WAY LUMINAIRE SHOWN)
INSTALL OVERHEAD RESIDENTIAL LTG. UNIT (3.048m. ARM WITH TYPE II 2-WAY LUMINAIRE SHOWN)
EXISTING WOOD POLE (AMERITECH POLE SHOWN)
REMOVE WOOD POLE (P.L.D. POLE SHOWN)
REPLACE WOOD POLE (HEIGHT & CLASS AS INDICATED)
INSTALL WOOD POLE (HEIGHT & CLASS AS INDICATED) (USE SALVAGED POLE WHERE INDICATED)
EXISTING OVERHEAD ST. LTG. UNIT
REMOVE OVERHEAD ST. LTG. UNIT (D.E. CO. POLE SHOWN)
INSTALL OVERHEAD ST. LTG. UNIT WITH 8FT. MAIN ST. LTG. BRACKET ARM.
EXISTING OVERHEAD LINE
REMOVE OVERHEAD LINE
INSTALL OVERHEAD LINE
INSTALL AND LATER REMOVE OVERHEAD LINE
INSTALL GUY AND ANCHOR (10mm GUY UNLESS OTHERWISE NOTED)
REMOVE GUY AND ANCHOR ROD
INSTALL POLE GUY (10mm GUY UNLESS OTHERWISE NOTED)
INSTALL ARM GUY (6mm GUY UNLESS OTHERWISE NOTED)
REMOVE GUY (POLE OR ARM GUY WILL BE INDICATED)
RM. MATERIALS TO BE REMOVED
IN. MATERIALS TO BE INSTALLED
C.P. CABLE POLE
EX. EXISTING MATERIALS
M.S.S. MAKE WOOD POLE SELF-SUPPORTING IN CRUSHED STONE
XYZ PHASES OF P.L.D. DISTRIBUTION WIRES OR EQUIPMENT
E D.E. CO. DISTRIBUTION WIRE
e.s. D.E. SECONDARY WIRE
INSTALL SUSPENSION INSULATOR
P.L.D. DISTRIBUTION WIRE
P.L.D. SECONDARY WIRE
P.L.D. SERIES ST. LTG. WIRE
P.L.D. MULT. ST. LTG. WIRE

GENERAL

- GUARD RAIL (CONCRETE)
GUARD RAIL (STEEL)
CENTER LINE (CL)
PROPERTY LINE (PL) OR RIGHT OF WAY (ROW)
PAVEMENT JOINTLINE AND CURB
CURB LINE
EXISTING ROUND CATCH BASIN
EXISTING RECTANGLE CATCH BASIN
EXISTING SEWER LINE, MANHOLE AND CATCH BASIN
EXISTING DETROIT EDISON UNDERGROUND LINE AND MANHOLE
EXISTING AMERITECH TELEPHONE UNDERGROUND LINE AND MANHOLE
EXISTING GAS LINE AND MANHOLE
EXISTING WATER LINE AND HANDHOLE
EXISTING DETROIT PUBLIC LIGHTING UNDERGROUND LINE AND HANDHOLE.
EXISTING DETROIT EDISON UNDERGROUND STEAM LINE
EXISTING R.R. TRACKS
EXISTING STREETCAR TRACKS
EXISTING FENCE
EXISTING PUBLIC TELEPHONE
EXISTING TELEPHONE CONTROL BOX
EXISTING TRANSFORMER
NEW TRANSFORMER
EXISTING R.R. CROSSING GATE AND FLASHERS
EXISTING R.R. FLASHERS
EXISTING R.R. CROSSING MAST ARM AND FLASHERS
EXISTING DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
INSTALL DOUBLE POST SIGN (TYPE SHOWN ON PLANS)
EXISTING SINGLE POST SIGN (TYPE SHOWN ON PLANS)
INSTALL SINGLE POST SIGN (TYPE SHOWN ON PLANS)
EXISTING MAST ARM ROAD SIGN (TYPE SHOWN ON PLANS)

TRAFFIC SIGNAL

- POCH POLE CONTACT HEIGHT OF TRAFFIC SIGNAL SPAN WIRE
L.C.H. LOWEST CONTACT HEIGHT OF TRAFFIC SIGNAL TO SPAN WIRE.
REMOVE HOOD AND INSTALL LAMPS (INCIDENTAL TO INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT)
BACK-OUT LAMPS AND HOOD (SIGNALS INCLUDED IN THE INSTALLATION OF TRAFFIC SIGNAL ON THIS CONTRACT).
EXISTING STOP BAR
STOP BAR TO BE INSTALLED

TRAFFIC SIGNAL

- INSTALL 3-SECTION TRAFFIC SIGNAL (1-WAY SHOWN)
INSTALL 3-SECTION TRAFFIC SIGNAL WITH SALVAGED HEADS (2-WAY SHOWN)
REMOVE 3-SECTION TRAFFIC SIGNAL (3-WAY SHOWN)
EXISTING 3-SECTION TRAFFIC SIGNAL (4-WAY SHOWN)
INSTALL 3-SECTION 300mm(12")TRAFFIC SIGNAL (2-WAY SHOWN)
EXISTING 1 OR 2-SECTION 300mm(12")TRAFFIC SIGNAL FLASHERS
INSTALL 1 OR 2-SECTION 300mm(12")TRAFFIC SIGNAL FLASHERS
INSTALL TWO-WAY ILLUMINATED CASE SIGN
INSTALL TWO-WAY ILLUMINATED CASE SIGN (SALVAGED)
REMOVE TWO-WAY ILLUMINATED CASE SIGN
EXISTING TWO-WAY ILLUMINATED CASE SIGN
INSTALL FOUR-WAY ILLUMINATED CASE SIGN
INSTALL FOUR-WAY ILLUMINATED CASE SIGN (SALVAGED)
REMOVE FOUR-WAY ILLUMINATED CASE SIGN
EXISTING FOUR-WAY ILLUMINATED CASE SIGN
INSTALL 2-SECTION, 300mm(12")PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (2-WAY SHOWN)
INSTALL 2-SECTION, 300mm(12")PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL WITH SALVAGED HEAD (2-WAY SHOWN)
REMOVE 2-SECTION, PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
EXISTING 2-SECTION, 300mm(12")PEDESTRIAN (WALK-DON'T WALK) TRAFFIC SIGNAL (1-WAY SHOWN)
INSTALL TRAFFIC SIGNAL CONTROLLER (NEW OR SALVAGED AS SHOWN) (EXCEPT AS OTHERWISE NOTED).
INSTALL MAST ARM STD. & MAST ARM ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
INSTALL TRAFFIC SIGNAL PEDESTAL ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).
INSTALL 9.14m(30') ANCHOR BASE STEEL STRAIN POLE ON NEW FOUNDATION (EXCEPT AS OTHERWISE NOTED).(USE 400mm[16"] BOLT CIRCLE FOR ALL NEW STRAIN POLES).
EXISTING TRAFFIC SIGNAL CONTROLLER
EXISTING MAST ARM STANDARD
EXISTING PEDESTAL
EXISTING STEEL STRAIN POLE
INSTALL OVERHEAD PLASTIC JACKETED CABLE (P.J.)
EXISTING OVERHEAD PLASTIC JACKETED CABLE (P.J.)
REMOVE OVERHEAD PLASTIC JACKETED CABLE (P.J.)
INSTALL JUNCTION BOX (J.B.)
INSTALL SALVAGED JUNCTION BOX (J.B.)
REMOVE JUNCTION BOX (J.B.)
EXISTING JUNCTION BOX (J.B.)
EXISTING LOOP DETECTOR
INSTALL LOOP DETECTOR

CONTRACTOR TO FURNISH AND INSTALL ALL MATERIALS

Table with columns for Date, Description, Chkd. by, Job No. (49717A), MANSELL ASSOCIATES INC. logo and address, PUBLIC LIGHTING DEPARTMENT, and Sheet No. (27-1104, 21, 02-11-05).

GENERAL INFORMATION

1. CALL MISS DIG (313) (647-7344) 3 WORKING DAYS PRIOR TO ANY EXCAVATION FOR THE LOCATIONS OF UNDERGROUND UTILITIES.
2. A MINIMUM CLEARANCE OF 1.07m (3.5') HORIZONTAL & .3048m(1.0') VERTICAL MUST BE MAINTAINED BETWEEN PROPOSED P.L.D. FACILITIES & EXISTING U.G. WATER FACILITIES.
3. CONTRACTOR TO NOTIFY MICHIGAN CONSOLIDATED GAS CO. AT (313) 491-6301 IF PROTECTIVE COATED GAS MAIN IS EXPOSED OR DAMAGED.
4. CONTRACTOR TO NOTIFY D.E. CO., AT (313) 237-9564 IF PROTECTIVE COATING OF ANY D.E.CO. HIGH VOLTAGE UNDERGROUND LINE IS EXPOSED OR DAMAGED.
5. ALL EXISTING P.L.D. LIGHTING, TRAFFIC SIGNAL, PRIMARY, TRANSMISSION ETC. CIRCUITS SHALL ALWAYS BE MAINTAINED IN AN OPERATIONAL CONDITION (EXCEPT WHERE OTHERWISE NOTED). NOTIFY P.L.D. SYSTEM OPERATOR AT (313) 224-0500 48 HOURS PRIOR TO BEGINNING WORK ON P.L.D. CIRCUITS & KEEP HIM INFORMED ON A DAILY BASIS.
6. EXISTING OVERHEAD & TRAFFIC SIGNAL FACILITIES ARE NOT NECESSARILY SHOWN ON PLANS.
7. CROSSARMS SHALL BE REMOVED AFTER ALL CONTACTS ARE REMOVED. (INCLUDED WITH THE REMOVAL OF OVERHEAD LINES).
8. ALL OVERHEAD WIRES & UNDERGROUND CABLES SHALL CONSIST OF COPPER CONDUCTORS AS PER SPECIFICATIONS.
9. ALL REMOVED WOOD POLES & CROSSARMS SHALL BE DISPOSAL BY P.L.D. THE CONTRACTOR AT A PROPER SITE.
10. ALL NEW ANCHOR GUYS SHALL BE INSTALLED ON A 1:1 RATIO OR AS NEARLY AS POSSIBLE (EXCEPT WHERE OTHERWISE NOTED). (STRUT GUYS ARE EXCEPTED).
11. ARM GUYS SHALL BE SIEMENS-MARTIN GRADE. ANCHOR AND POLE GUYS SHALL BE EXTRA HIGH STRENGTH GRADE.
12. INSTALL WOOD POLES SO AS NOT TO INTERFERE WITH TRAFFIC OR FUTURE CONSTRUCTION STAGES.
13. ALL SALVAGED WOOD POLES DIRECTED TO BE INSTALLED SHALL BE POLES PREVIOUSLY INSTALLED NEW ON THIS CONTRACT.
14. ALL TRANSFORMER POLES AND CABLE POLES SHALL BE FITTED UP WITH 3.048m (120") ARMS (EXCEPT WHERE OTHERWISE INDICATED).
15. INSTALLATION OF ARMS FOR EQUIPMENT, CUTOOTS, POTHEADS, TRANSFORMER, ETC. NOT SHOWN ON NEW CABLE AND TRANSFORMER POLES SHALL BE INSTALLED AS PER THE DETAIL DRWG. REQUIREMENT AND SHALL BE INCLUDED IN THE FITTING-UP OF THE CABLE AND/OR TRANSFORMER POLE.
16. ALL POTHEADS ON PRIMARY DISTRIBUTION CABLE POLES SHALL BE FLAT DIVERGENT DISCONNECTING TYPE.
17. WHERE A P.L.D. WOOD POLE WITH OTHER UTILITY CONTACTS IS TO BE REMOVED THE P.L.D. INSPECTOR WILL INDICATE IF THE POLE IS IN FACT TO BE REMOVED.
18. ALL TRAFFIC STREET SIGNS SUCH AS "NO PARKING", "NO STANDING" ETC. SHALL BE TRANSFERRED FROM OLD STD. OR POLE TO NEW STD. OR POLE AT SAME LOCATION OR IN CLOSE PROXIMITY BY D.D.O.T.
19. ALL TRAFFIC SIGNALS SHALL BE MOUNTED WITH NEW STANDARD TRAFFIC SIGNAL BRACKETS & FITTINGS.
20. ALL TRAFFIC SIGNAL ITEMS, AS CALLED FOR ON PLANS, SHALL INCLUDE AS INCIDENTAL TO THE TRAFFIC SIGNAL ALL CABLES FROM THE CONTROLLER TO THE TRAFFIC SIGNALS & FOUNDATIONS AS INDICATED.
21. WHEN ENTERING PROPOSED CONDUIT INTO EXISTING MANHOLES & HANDHOLES EXERCISE CAUTION NOT TO DISTURB EXISTING CABLES. WALLS SHALL BE CORE DRILLED ONLY FOR ENTRANCE OF CONDUITS. NEW CONDUITS SHALL NOT INTERFERE WITH RACKING AND / OR TRAINING OF CABLES.
22. ALL SALVAGED TRAFFIC SIGNALS DIRECTED TO BE INSTALLED SHALL BE TRAFFIC SIGNALS PREVIOUSLY INSTALLED NEW ON THIS CONTRACT. (EXCEPT AS OTHERWISE INDICATED).
23. FOR TRAFFIC SIGNAL SPAN WIRE USE 10mm (3/8") EXTRA HIGH STRENGTH GRADE AS PER SPECIFICATIONS.
24. SIDEWALK RAMPS OF THE TYPE & LOCATION AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE CONSTRUCTED.
25. SEAL-END OF CABLE WHERE COILING OF CABLE IS CALLED FOR ON PLANS. (CONTRACTOR SHALL RECEIVE PAYMENT FOR COILED-UP CABLES).
26. CONTRACTOR SHALL DELIVER WHERE REQUIRED TO THE PUBLIC LIGHTING DEPARTMENT THE T.S. CONTROLLER FOR TIMING. CONTRACTOR SHALL PICK-UP CONTROLLER FROM P.L.D. WHEN READY FOR INSTALLATION.
27. PROPOSED T.S. SHALL BE PUT INTO OPERATION AT TIME OF REMOVAL OF EXISTING T.S. FACILITIES. CONTRACTOR SHALL NOTIFY THE P.L.D. INSPECTION IF HE IS UNABLE TO MAINTAIN T.S. IN AN OPERABLE CONDITION AT ALL TIMES.
28. THE CANDLEPOWER DISTRIBUTION FOR ALL MERCURY VAPOR & SODIUM VAPOR ST. LTG. LUMINAIRES SHALL BE SEMI-CUTOFF, MEDIUM DISTRIBUTION OF TYPE AS INDICATED ON THE PLANS.
29. ALL LUMINAIRES SHALL BE PROVIDED WITH 240V. INTERNAL BALLASTS AS CALLED FOR ON PLANS. (EXCEPT WHERE OTHERWISE INDICATED)
30. WHERE REMOVAL OF LUMINAIRES IS CALLED FOR ON PLANS THE ASSOCIATED O.H. SERIES COIL SHALL BE REMOVED BY THE CONTRACTOR. (REMOVE O.H. COIL IS INCLUDED WITH THE REMOVAL OF LUMINAIRE).
31. WHERE INSTALLATION OF NEW MANHOLES OR HANDHOLES OVER EXISTING CONDUITS (TO ACCOMMODATE NEW & EXISTING CONDUITS) IS CALLED FOR ON PLANS, CONTRACTOR SHALL CAREFULLY & SO AS NOT TO DAMAGE EXIST. CABLES, REMOVE THE EXISTING CONDUITS & ENCASEMENT WITHIN HOLES. EXIST. CABLES SHALL BE EXTENDED & PROPERLY TRAINED, RACKED & SUPPORTED.
32. WHERE ABANDONING OF U.G. CABLES IS CALLED FOR ON PLANS OR DIAGRAMS, CONTRACTOR SHALL CUT & REMOVE CABLES WITHIN MANHOLES & HANDHOLES.
33. FOR LOCATIONS OF P.L.D. INSTALLATIONS ON STRUCTURES SUCH AS CONDUITS HANDHOLES, CONDUIT SLEEVES, GALVANIZED STEEL CONDUITS & STREET LIGHTING STANDARD ANCHOR BOLTS SEE STRUCTURE PLANS.
34. PAVEMENT, SIDEWALK, CURB REMOVAL, REPLACEMENT AND EXCAVATION & BACKFILL SHALL BE DONE ACCORDING TO CITY OF DETROIT SPECIFICATIONS.
35. UNDERGROUND CABLE QUANTITIES ARE ITEMIZED ON GENERAL PLANS. ALL CABLES SHALL BE TAGGED IN ALL M.H.'S & H.H.'S. THIS INCLUDES EXIST. CABLES THAT ARE CONVERTED TO MULTIPLE, RECONNECTED TO OTHER CIRCUITS OR RENDERED DEAD.
36. ALL NEW SALVAGED & CONVERTED STEEL STREET LIGHTING STANDARDS SHALL BE PAINTED.
37. ALL ST. LTG. UNITS INSTALLED ON THIS CONTRACT AND EXIST. STREET LIGHTING UNITS CONVERTED OR RE-CONNECTED TO OTHER CIRCUITS SHALL BE STENCILLED OR RE-STENCILLED AS SHOWN ON PLANS. (INCLUDED TO STREET LIGHTING UNITS)
38. STENCILLING SHALL BE ON THE CURB SIDE OF THE POLE, LOCATED BETWEEN 1.219m (4') AND 1.524m (5') ABOVE GRADE. ALL LETTERS AND NUMBERS SHALL BE 50.8mm (2") IN HEIGHT. THE STENCILLING SHALL BE DONE WITH A WEATHER-RESISTANT ENAMEL: BLACK ENAMEL ON GRAY COLORED OR ALUMINUM POLES, AND YELLOW OR WHITE ENAMEL ON BLACK OR BRONZE COLORED POLES.
39. WHERE UNDERGROUND UTILITIES INTERFERE WITH THE INSTALLATION OF A NEW FOUNDATION, INSTALL THE SPECIAL FOUNDATION OF PARTICULAR DIMENSIONS AS INDICATED ON THE DETAIL DRWG. TO SUIT THE FIELD CONDITION. THERE WILL BE NO EXTRA PAYMENT FOR THE SPECIAL FOUNDATION. IT WILL BE PAID FOR AS A NORMAL FOUNDATION.
40. ALL NEW CONDUIT RUNS SHALL BE BUILT STRAIGHT AS POSSIBLE. BENDS SHALL HAVE NO LESS THAN 7.925m (26') RADIUS AND NO REVERSE OR "S" BENDS.
41. WHERE TRIMMING OF TREES ON CITY PROPERTY IS CALLED FOR ON PLANS THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE RECREATION DEPT. OF THE CITY OF DETROIT AND SHALL HAVE SUCH WORK DONE BY A LICENSED TREE SERVICE CONTRACTOR. CALL (313) (931-3950).
42. ALL TREE TRIMMING REQUIRED TO CLEAR NEW OR SALVAGED STREET LIGHTING & TRAFFIC SIGNAL STD.'S AND O.H. ST. LTG. & TRAFFIC SIGNAL UNITS & O.H. WIRES SHALL BE INCLUDED WITH THE PAY-ITEM & NO EXTRA PAYMENT SHALL BE MADE.
43. WHERE IT IS SHOWN ON PLANS TO HAND DIG FOUNDATION, EXCAVATE BY HAND TOOLS ENTIRE DEPTH OF FOUNDATION. NO MECHANICAL EQUIPMENT SHALL BE USED.
44. CONTRACTOR SHALL NOTIFY THE P.L.D. SYSTEM OPERATION AT (313) (224-0500) & THE D.D.O.T. AFTER COMPLETION OF WORK AT ANY TRAFFIC SIGNAL INTERSECTION.
45. ALL CABLES SHALL BE TRAINED & PROPERLY RACKED IN ALL EXISTING MANHOLES & HANDHOLES. RACKS ARE TO BE INSTALLED WHERE NECESSARY & ARE INCLUDED IN THE INSTALLATION OF UNDERGROUND CABLE.
46. ALL CONDUITS NOT TERMINATING IN STRUCTURES SUCH AS MANHOLES, HANDHOLES OR FOUNDATIONS SHALL EXTEND .914m (3') BEYOND PAVEMENT LIMIT (EXCEPT AS OTHERWISE INDICATED). ALL UNOCCUPIED CONDUITS SHALL BE PLUGGED.
47. ALL NEW UNDERGROUND-FED STREET LIGHTING UNITS SHALL BE INSTALLED .762m (2.5') BACK OF FACE OF CURB UNLESS OTHERWISE INDICATED ON PLANS. VERIFY WITH P.L.D.
48. D.S.R. STREETCAR RAILS AND FOUNDATIONS (TRACKS) ARE SHOWN ON THE PLANS IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. EXACT LOCATIONS WITHIN THE STREETS & INTERSECTIONS ARE NOT KNOWN. SOME RAILS MAY BE REMOVED.
49. THE "FINAL" CONDUIT MUST BE TRIMMED FLUSH WITH MANHOLE WALL, HAVE END BELLS AND SPACERS AND BE TUCK POINTED. DO NOT ENCASE FINAL CONDUIT WITHOUT INSPECTION BY THE P.L.D. UNDERGROUND INSPECTION DEPARTMENT.
50. INSTALL 5mm (3/16") DIAMETER YELLOW POLYPROPYLENE ROPE IN ALL "FINAL" CONDUIT. (INCLUDE IN PAY ITEM FOR "CONDUIT")

HAND DIG ENTIRE DEPTH OF ALL STEEL STRAIN POLE & MAST ARM STANDARD FOUNDATIONS.

ALL REMOVED TRAFFIC SIGNAL AND STREET LIGHTING EQUIPMENT SHALL BE SALVAGED IN REUSABLE CONDITION AND SHALL BECOME PROPERTY OF PLD. ALL REMOVED MATERIAL WILL BE STORED ON SITE FOR PICK-UP BY PLD. ALL MATERIAL LEFT FOR THE CONTRACTOR WILL BECOME THE RESPONSIBILITY OF THE CONTRACTOR FOR DISPOSAL AWAY FROM THE SITE.

CONTRACTOR SHALL BE RESPONSIBLE FOR CUTTING AND SPLICING OF CABLES AS SPECIFIED ON PLANS. ALL MATERIAL AND LABOR REQUIRED FOR CUTTING, SEALING, SPLICING (INCLUDING SPLICE KITS), RACKING, AND TAGGING OF CABLES SHALL BE INCLUDED IN THE INSTALLATION OF EACH RESPECTIVE CABLE. CONTRACTOR SHALL CONTACT THE P.L.D. SYSTEMS OPERATOR AT (313) 224-0500 PRIOR TO WORKING ON CABLES FOR COORDINATION AND INSPECTION.

REV.	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

GENERAL INFORMATION

Job No.
49717A

MANSSELL ASSOCIATES INC.

ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn M.A.I.	Scale
Checked	No Scale
Drwg. No. 2 OF 25	Checked by
File No. M4044	Approved by

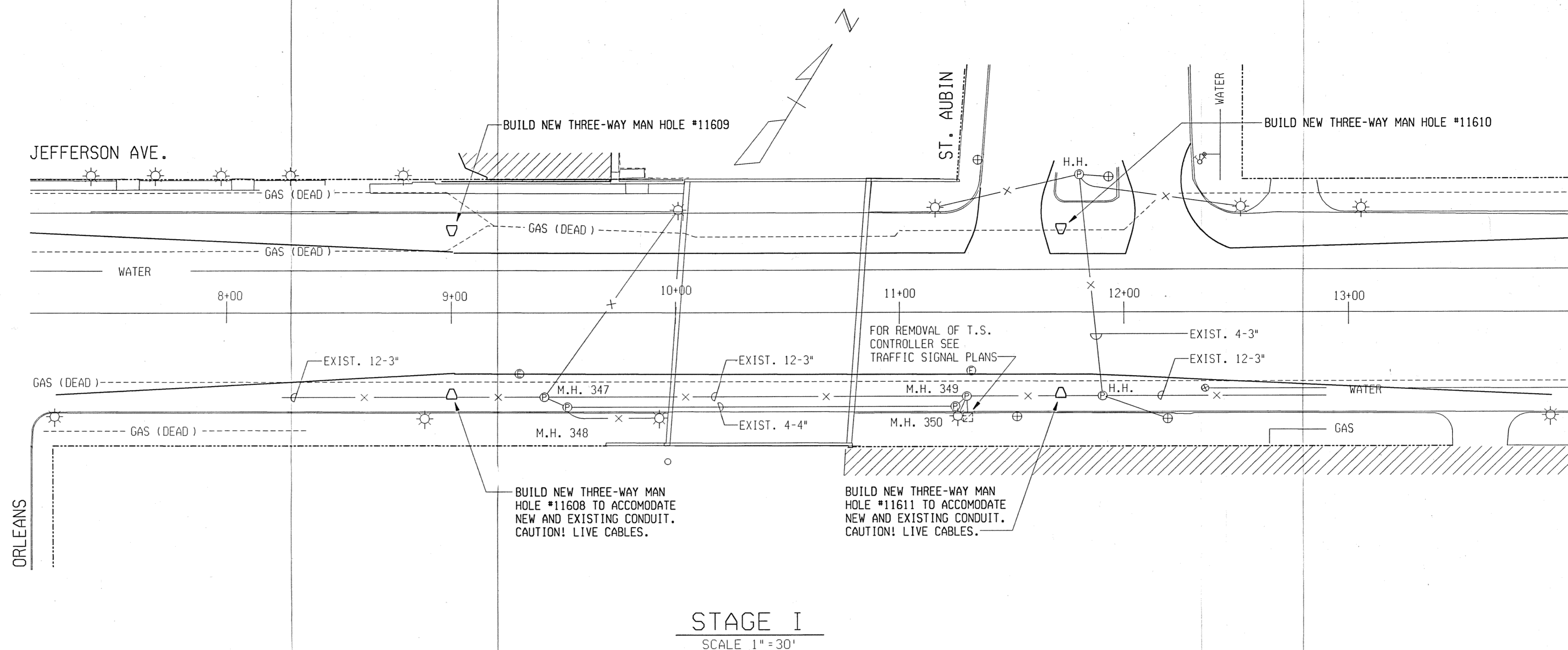
PUBLIC LIGHTING DEPARTMENT

CITY OF DETROIT

003

27-1104
Sheet No.
22
Date
02-11-05

SHEET NO.
JOB NO.
CONTRACT SECTION



STAGE I
SCALE 1" = 30'

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
1	Manhole, Three Way	4 Ea

STAGE CONSTRUCTION SHEET

JEFFERSON AVE OVER DEQUINDRE CUP

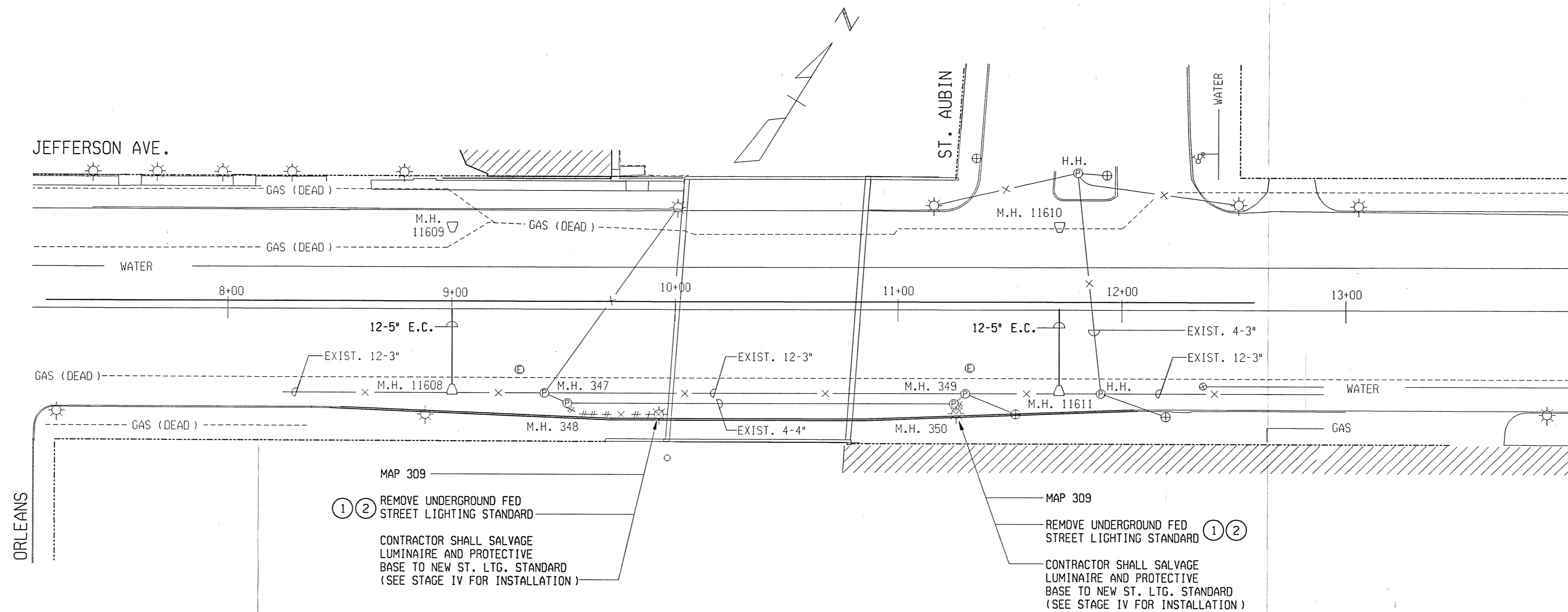
PLD STREET LIGHTING AND UTILITIES

PLAN PREPARED BY
MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River Farmington, MI 48335
(248) 473-7070

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CHECKED
FILE NO. M4044S1



DATE	PLD FILE NO.	JOB NO.	DESIGN UNIT	SHEET
02-11-05	27-1104	49717A		23



MAP 309
 ① ② REMOVE UNDERGROUND FED STREET LIGHTING STANDARD
 CONTRACTOR SHALL SALVAGE LUMINAIRE AND PROTECTIVE BASE TO NEW ST. LTG. STANDARD (SEE STAGE IV FOR INSTALLATION)

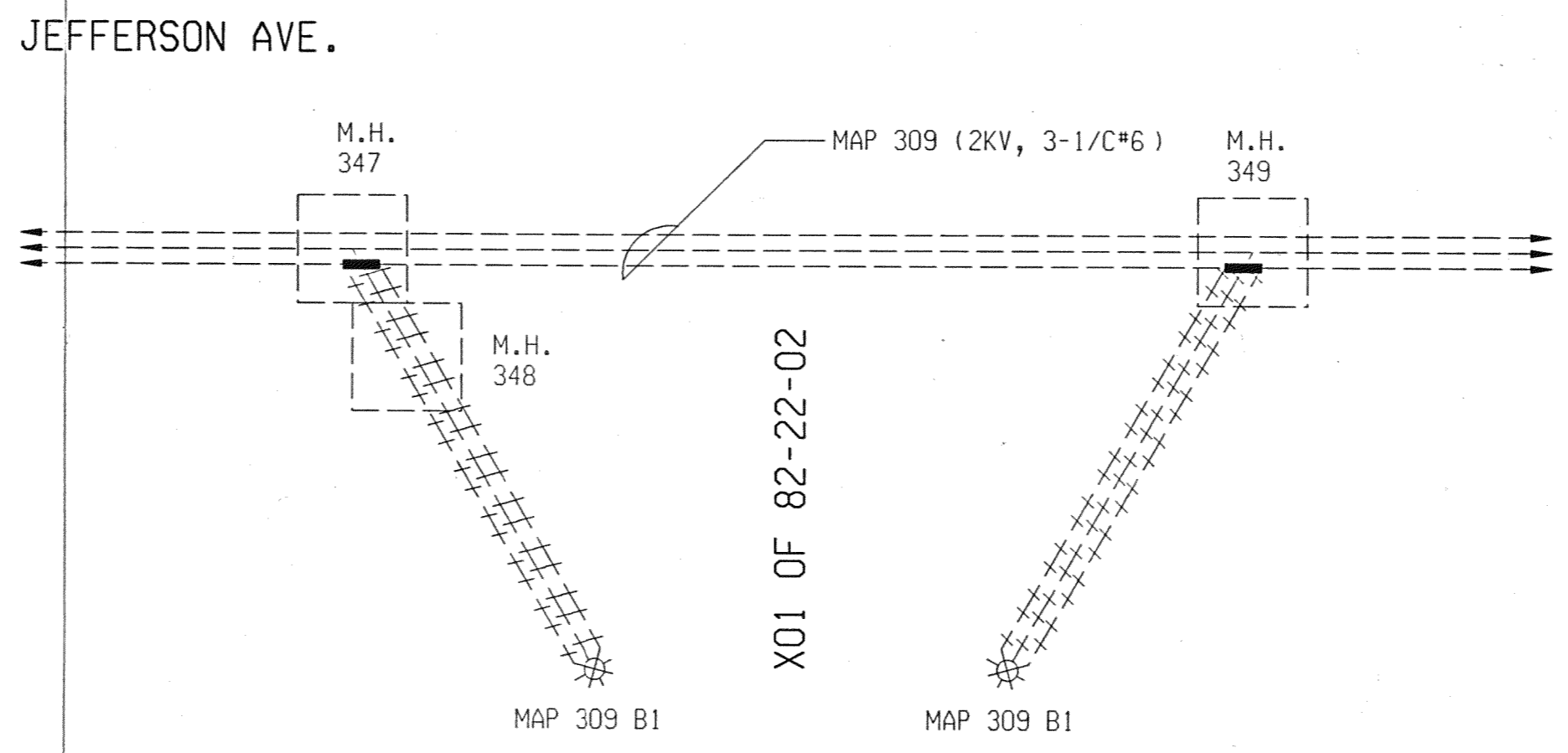
MAP 309
 REMOVE UNDERGROUND FED STREET LIGHTING STANDARD ① ②
 CONTRACTOR SHALL SALVAGE LUMINAIRE AND PROTECTIVE BASE TO NEW ST. LTG. STANDARD (SEE STAGE IV FOR INSTALLATION)

STAGE II
 SCALE 1" = 30'

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Fdn, Rem	2 Ea
②	Underground Fed St Ltg Unit, Rem	2 Ea
○	Conduit, Encased, 12, 5 inch, Modified	80 Ft

NOTES:

1. CONDUIT BANK ENCASEMENT MUST BE FORMED WITH SUITABLE MATERIAL.
2. CONDUIT MUST ENTER MANHOLE FLUSH AND BE TRIMMED, HAVE END BELLS, AND BE SPACED APART.
3. CONTRACTOR SHALL MAKE ALL CUTS AND SPLICES TO P.L.D. CABLES AS SPECIFIED ON PLANS. THE CONTRACTOR SHALL NOTIFY MR. JOHN MILLER (313) 267-8155 72 HOURS PRIOR FOR COORDINATION AND INSPECTION. PAYMENT INCLUDED IN THE AFFECTED PAYITEMS.



MULT. ST. LTG. DIAGRAM
 480/960V. MAP 309

STAGE CONSTRUCTION SHEET

JEFFERSON AVE OVER DEQUINDRE CUT

PLD STREET LIGHTING AND UTILITIES

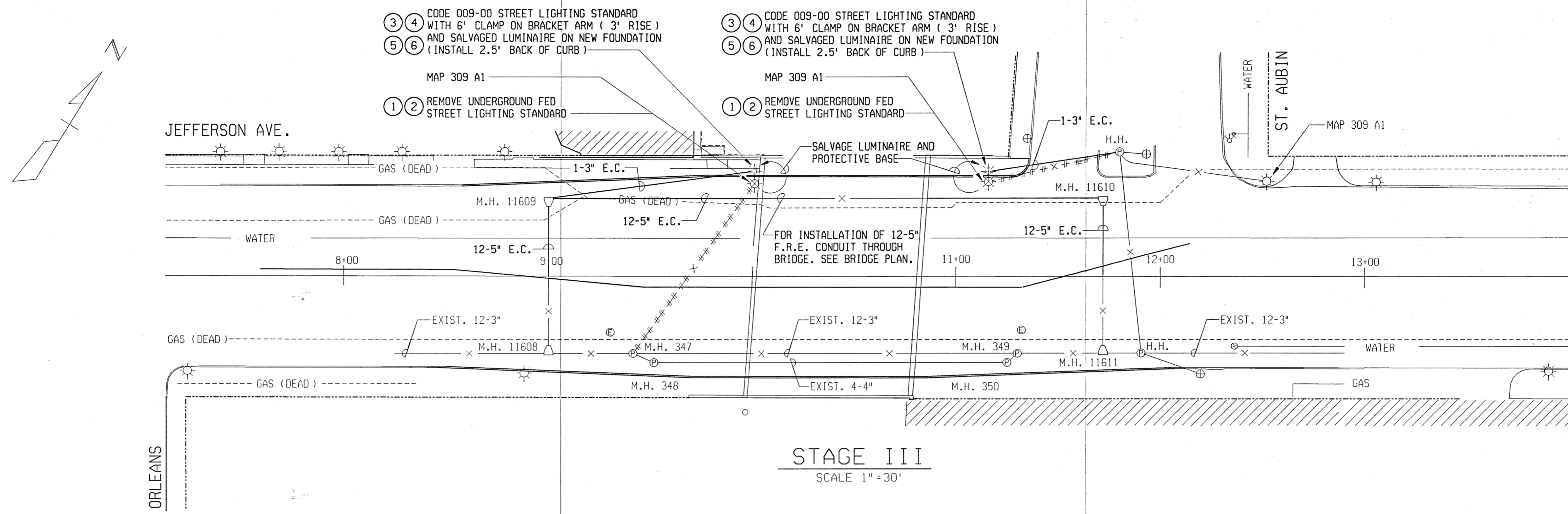
PLAN PREPARED BY
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 Farmington, MI 48335
 (248) 473-7070

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 CHECKED
 FILE NO. M4044S2



DATE	PLD FILE NO.	JOB NO.	DESIGN UNIT	SHEET
02-11-05	27-1104	49717A		24

SHEET NO. 25
JOB NO. 49717A
CONTRACT SECTION

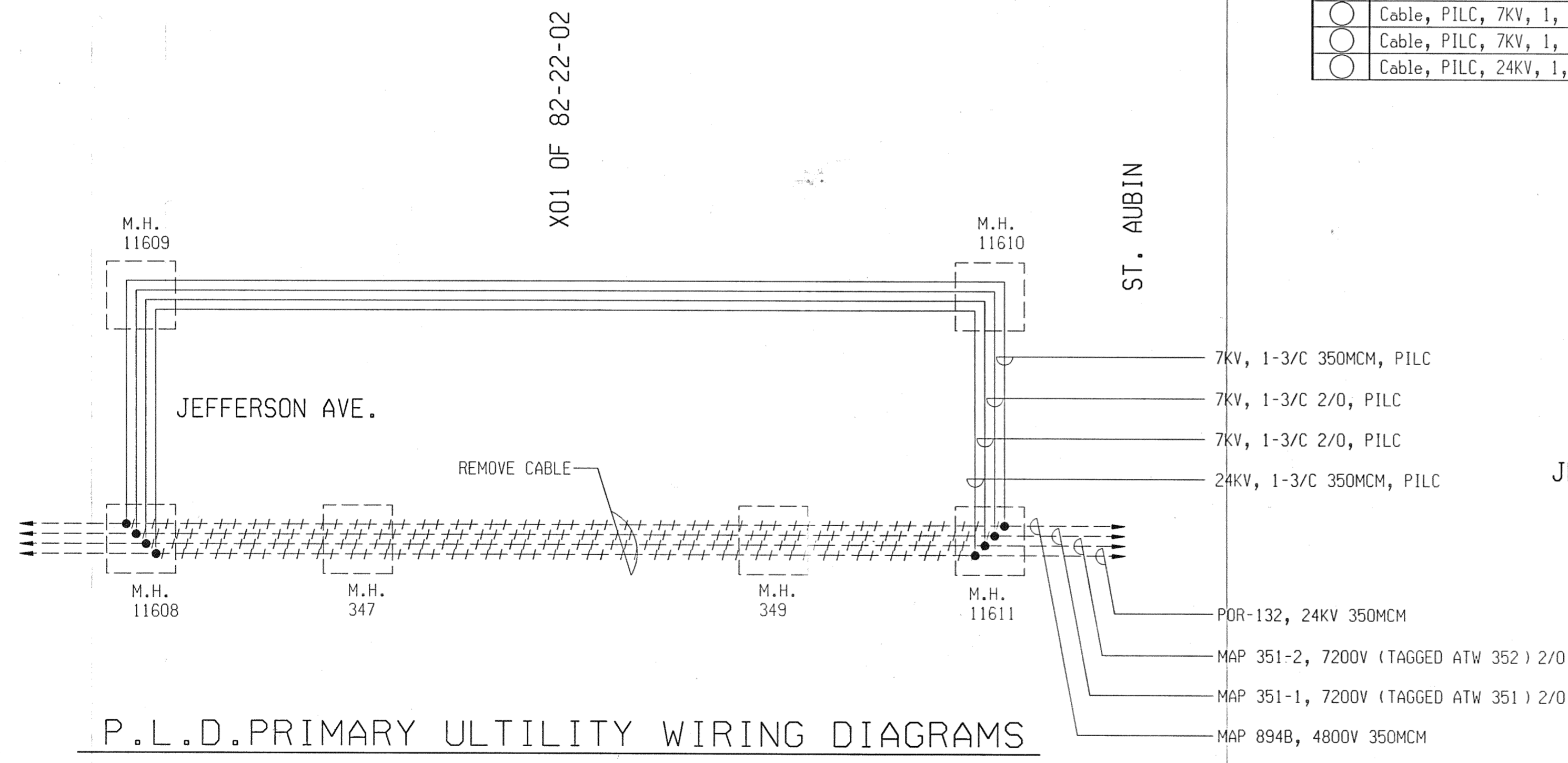


STAGE III
SCALE 1" = 30'

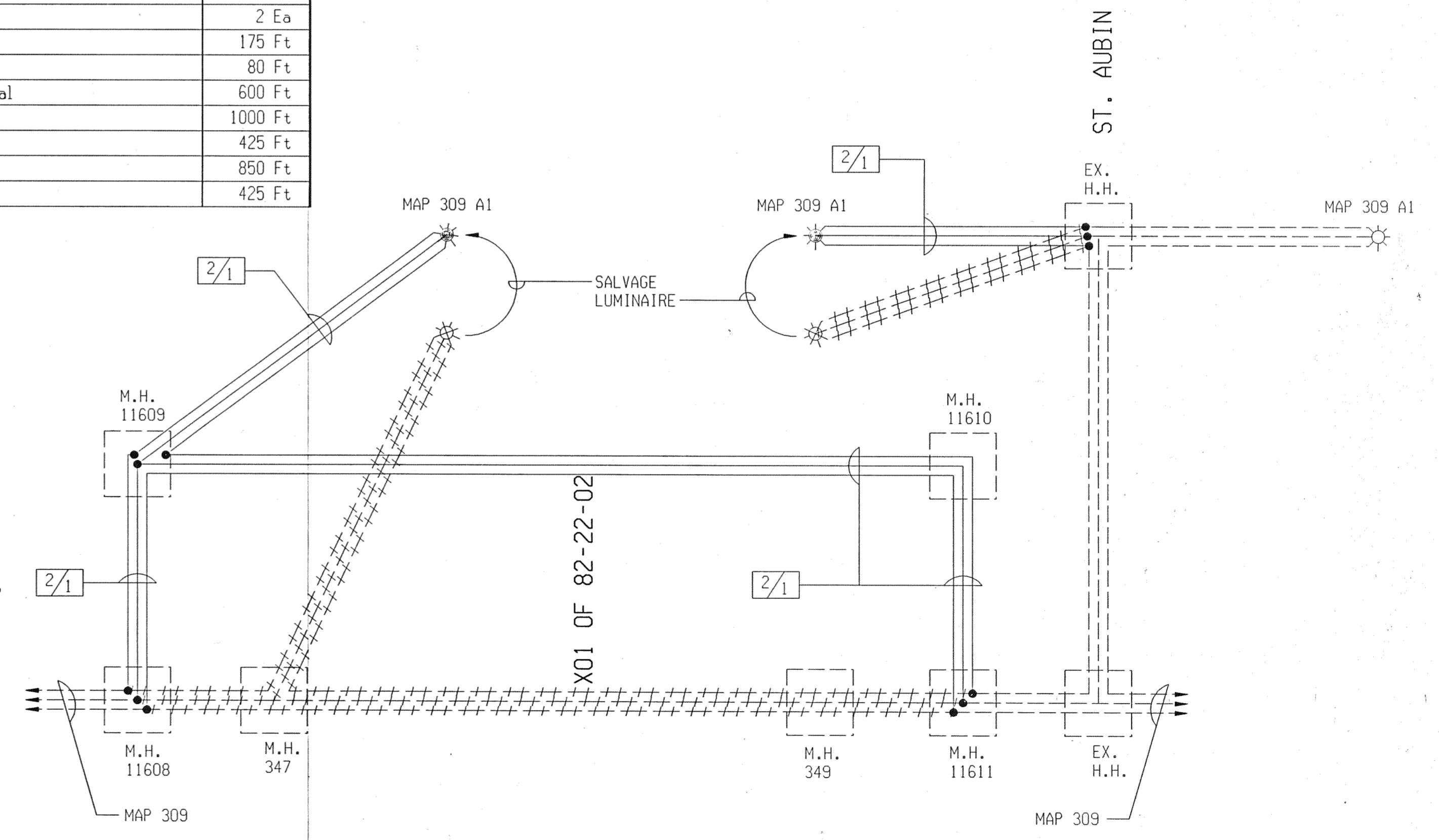
SALVAGING OF THE PROTECTIVE BASES TO THE NEW STREET LIGHTING STANDARDS SHALL BE INCLUDED IN THE PAYITEM "Luminaire, Salv"

ALL STREET LIGHTING STANDARDS INSTALLED ON THIS PROJECT SHALL BE PAINTED GREEN. PAYMENT INCLUDED IN THE COST OF CODE 009-00 STREET LIGHTING STANDARD. CONTRACTOR SHALL MATCH GREEN TO THE EXISTING POLES IN AREA OR AS DIRECTED BY THE P.L.D.

NO.	ITEM	QUANTITIES
①	Fdn, Rem	2 Ea
②	Underground Fed St Ltg Unit, Rem	2 Ea
③	Code 009-00 Anchor Base St Ltg Standard	2 Ea
④	Light Std Fdn	2 Ea
⑤	Bracket Arm, Clamp On, 6 foot, 3 foot Rise	2 Ea
⑥	Luminaire, Salv	2 Ea
○	Conduit, Encased, 1, 3 inch, Modified	175 Ft
○	Conduit, Encased, 12, 5 inch, Modified	80 Ft
○	St Ltg Cable, 2kv, 2, 1/C*6 & 1, *6 Neutral	600 Ft
○	Cable, Rem	1000 Ft
○	Cable, PILC, 7KV, 1, 3/C 350 MCM	425 Ft
○	Cable, PILC, 7KV, 1, 3/C 2/0	850 Ft
○	Cable, PILC, 24KV, 1, 3/C 350 MCM	425 Ft



P.L.D. PRIMARY UTILITY WIRING DIAGRAMS



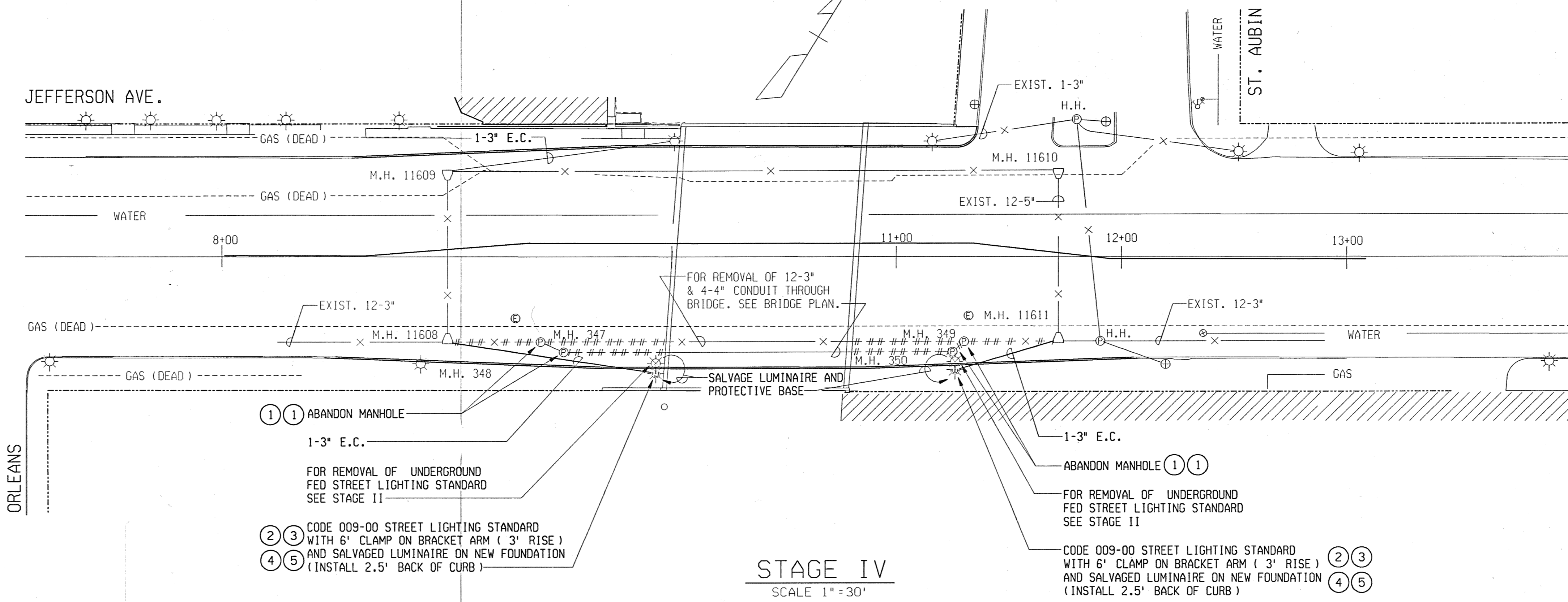
MULT. ST. LTG. DIAGRAM
480/960V. MAP 309

STAGE CONSTRUCTION SHEET

JEFFERSON AVE OVER DEQUINDRE CUT

PLD STREET LIGHTING AND UTILITIES

PLAN PREPARED BY MANSSELL ASSOCIATES INC. ENGINEERING CONSULTANTS 33608 Grand River Farmington, MI 48335 (248) 473-7070	DRAWN MAI		DATE 02-11-05	PLD FILE NO. 27-1104	JOB NO. 49717A	DESIGN UNIT	SHEET 25
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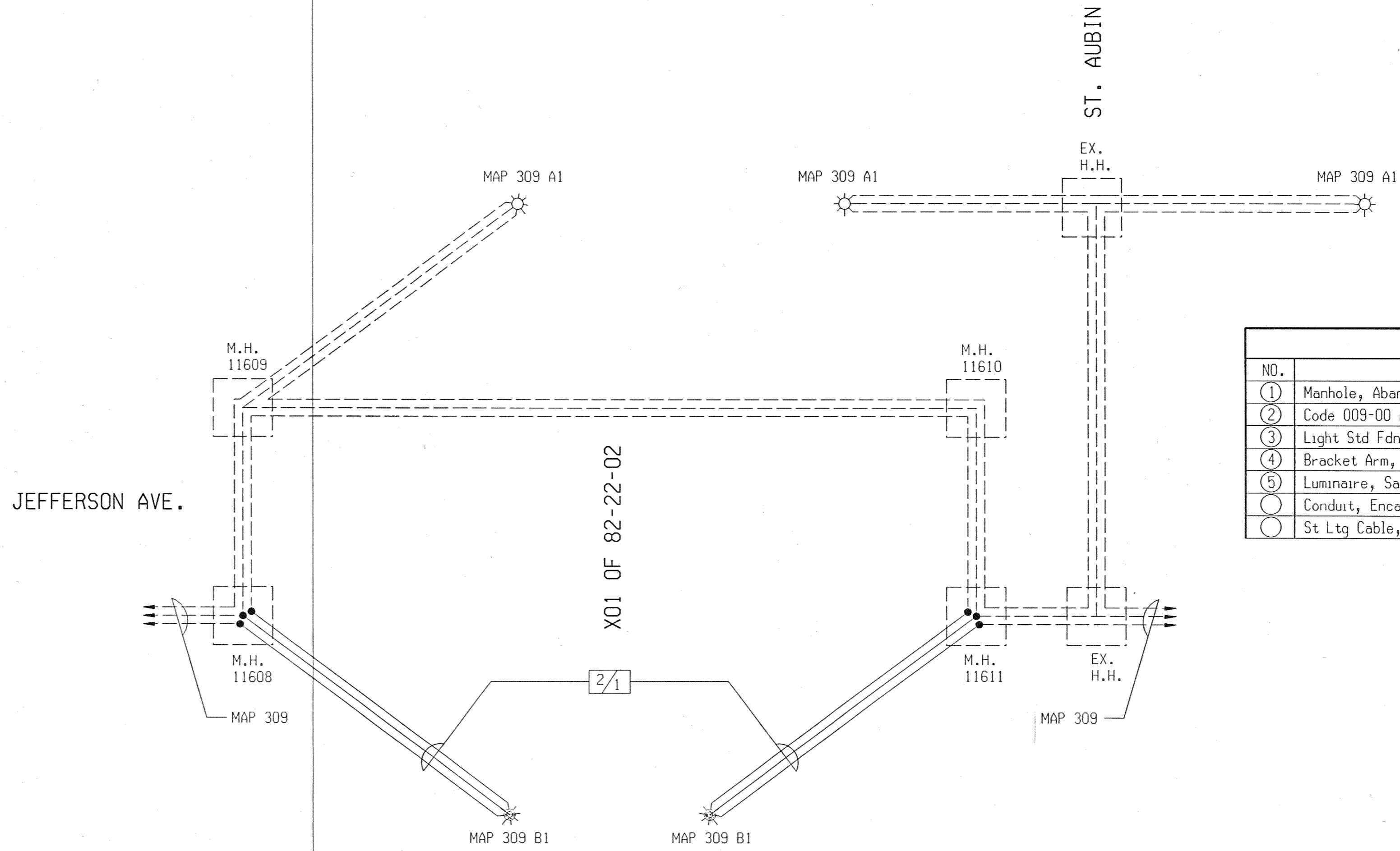


STAGE IV
SCALE 1" = 30'

- ① ABANDON MANHOLE
1-3" E.C.
FOR REMOVAL OF UNDERGROUND
FED STREET LIGHTING STANDARD
SEE STAGE II
- ② ③ CODE 009-00 STREET LIGHTING STANDARD
WITH 6" CLAMP ON BRACKET ARM (3' RISE)
AND SALVAGED LUMINAIRE ON NEW FOUNDATION
(INSTALL 2.5' BACK OF CURB)
- ④ ⑤

SALVAGING OF THE PROTECTIVE BASES TO THE NEW STREET LIGHTING STANDARDS SHALL BE INCLUDED IN THE PAYITEM "Luminaire, Salv"

ALL STREET LIGHTING STANDARDS INSTALLED ON THIS PROJECT SHALL BE PAINTED GREEN. PAYMENT INCLUDED IN THE COST OF CODE 009-00 STREET LIGHTING STANDARD. CONTRACTOR SHALL MATCH GREEN TO THE EXISTING POLES IN AREA.



MULT. ST. LTG. DIAGRAM
480/960V. MAP 309

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Manhole, Abandon	4 Ea
②	Code 009-00 Anchor Base St Ltg Standard	2 Ea
③	Light Std Fdn	2 Ea
④	Bracket Arm, Clamp On, 6 foot, 3 foot Rise	2 Ea
⑤	Luminaire, Salv	2 Ea
○	Conduit, Encased, 1, 3 inch, Modified	145 Ft
○	St Ltg Cable, 2Kv, 2, 1/C#6 & 1, #6 Neutral	150 Ft

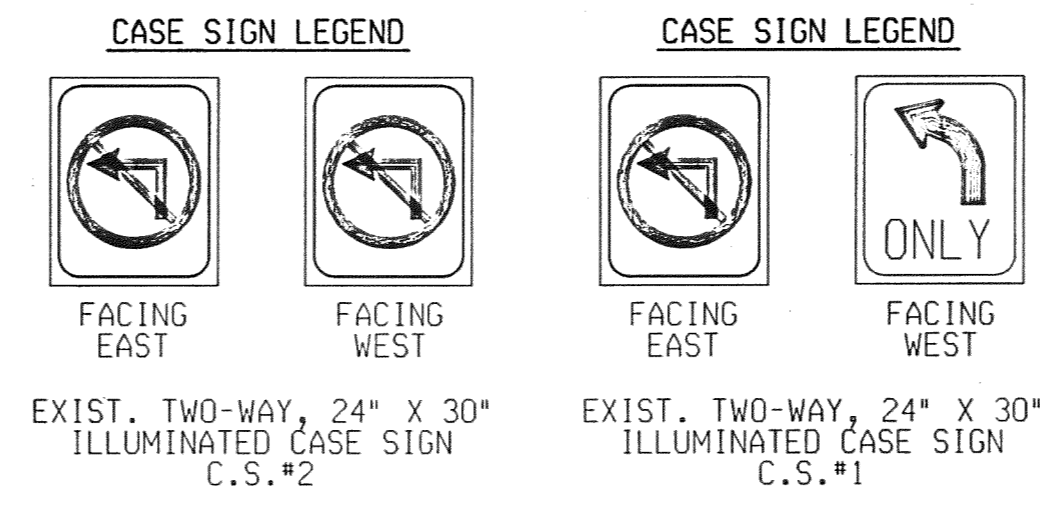
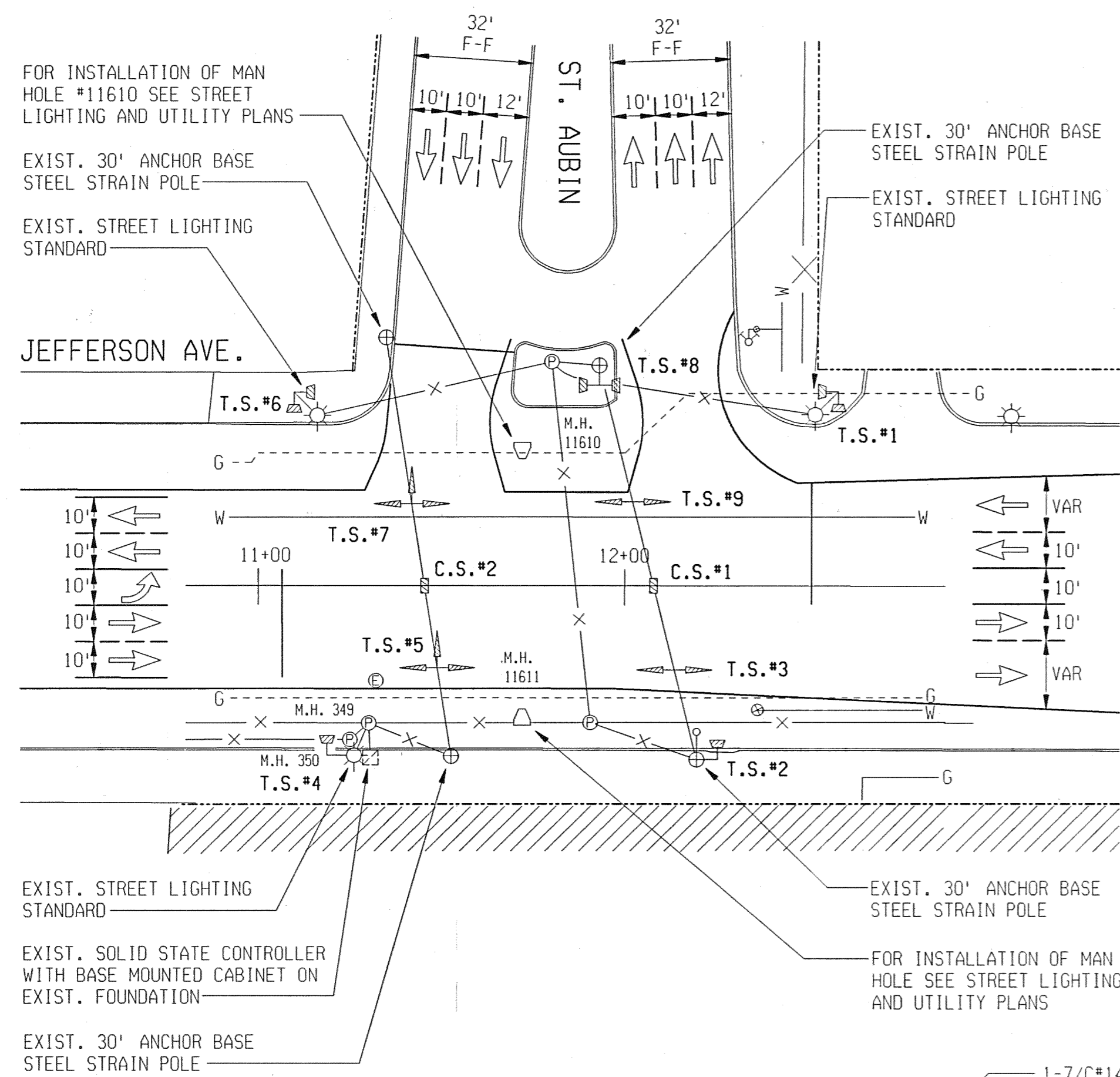
STAGE CONSTRUCTION SHEET
JEFFERSON AVE OVER DEQUINDRE CUT
PLD STREET LIGHTING AND UTILITIES

PLAN PREPARED BY
MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI 48335
(248) 473-7070

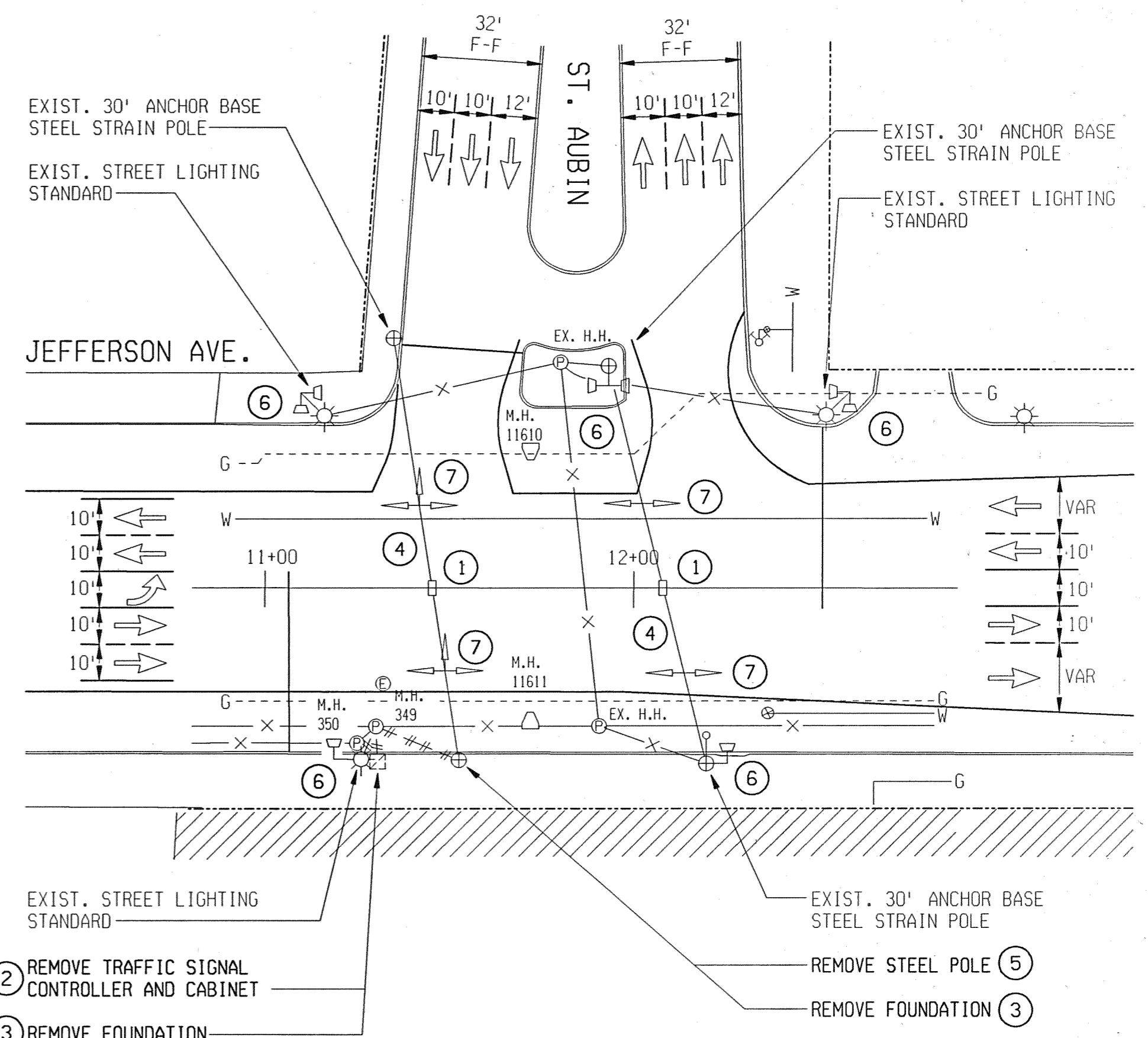
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DATE	PLD FILE NO.	JOB NO.	DESIGN UNIT	SHEET
02-11-05	27-1104	49717A		26

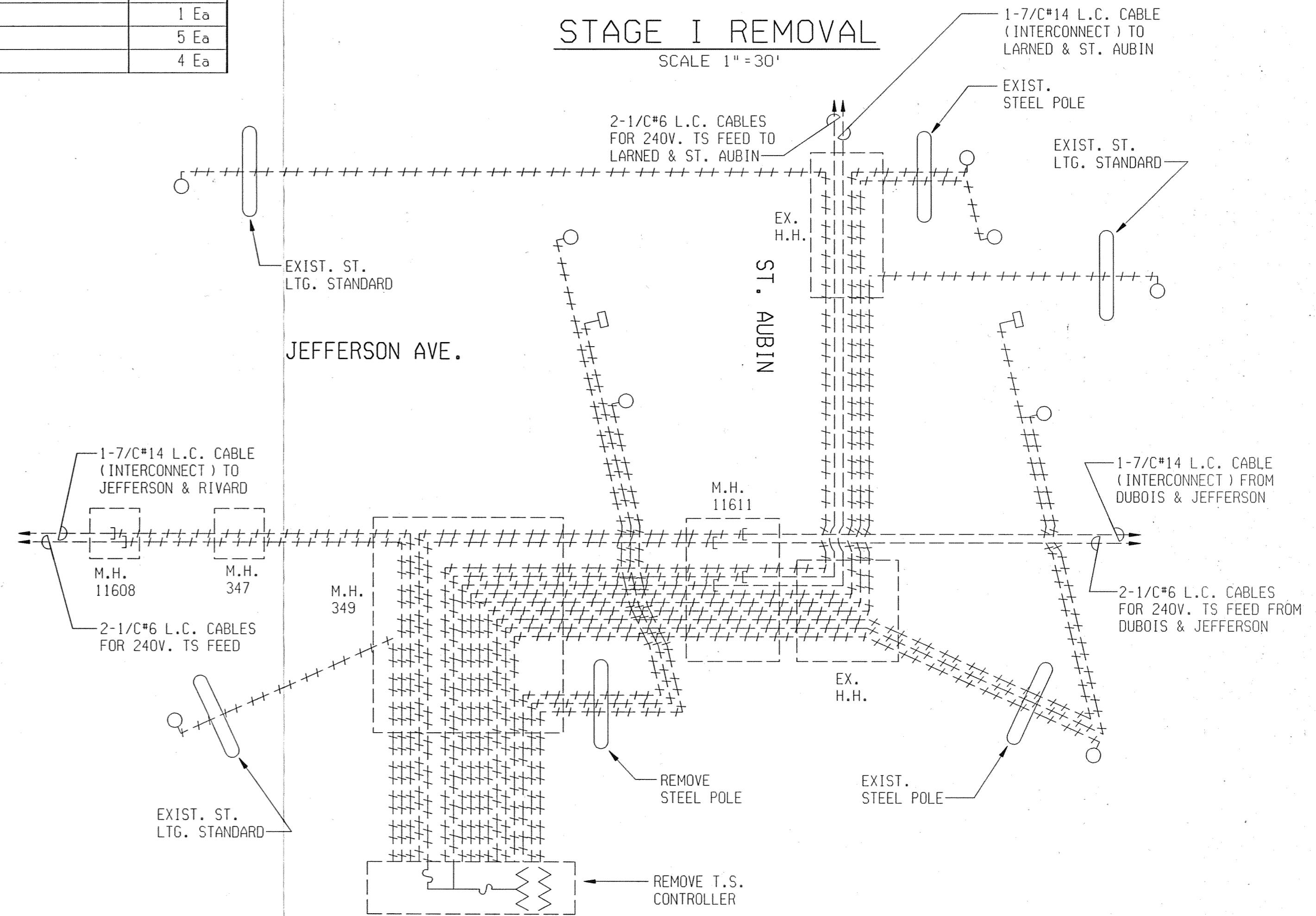
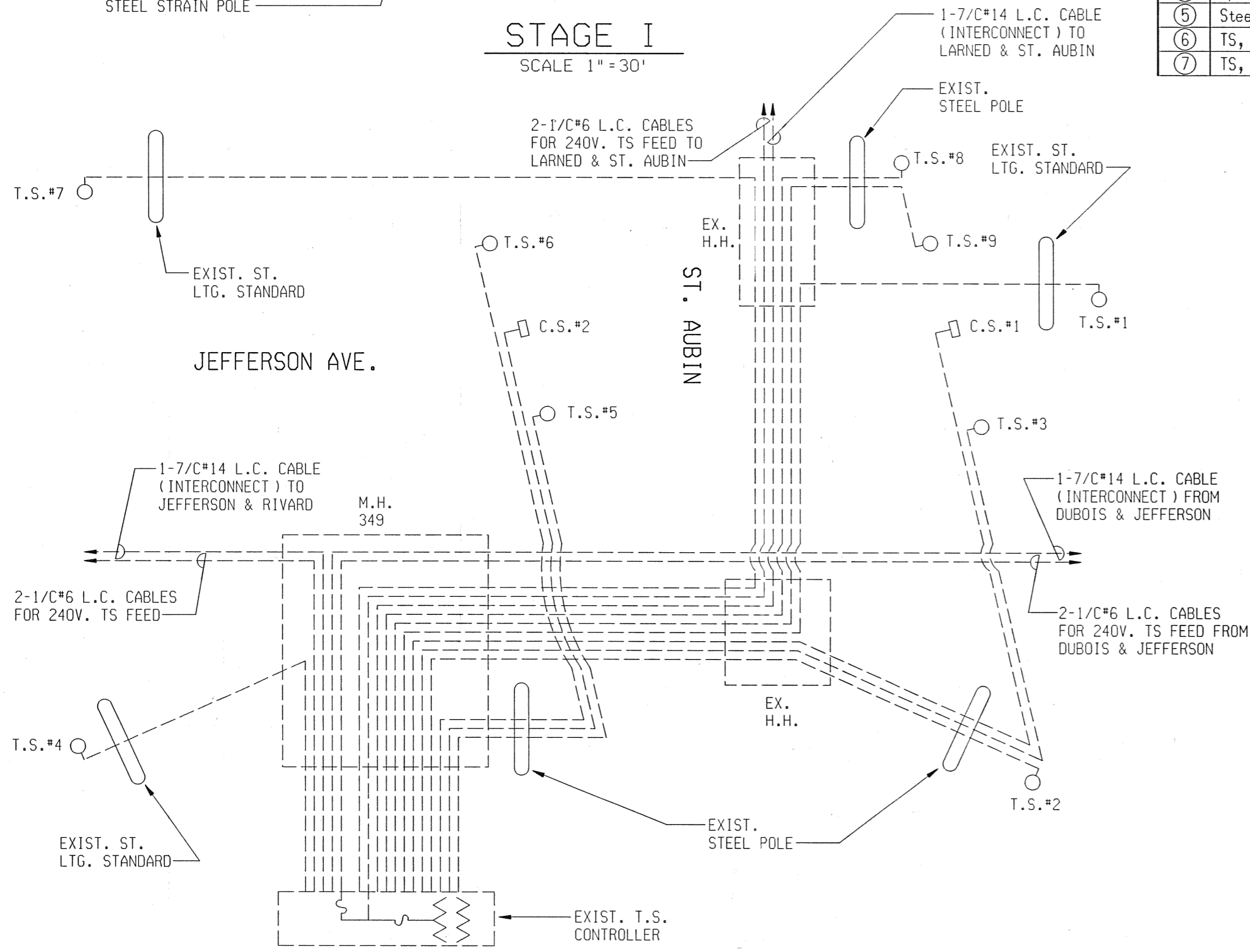


LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Case Sign, Rem	2 Ea
②	Controller and Cabinet, Rem	1 Ea
③	Fdn, Rem	2 Ea
④	Span Wire, Rem	2 Ea
⑤	Steel Pole, Rem	1 Ea
⑥	TS, Pedestrian, Bracket Arm Mtd, Rem	5 Ea
⑦	TS, Span Wire Mtd, Rem	4 Ea



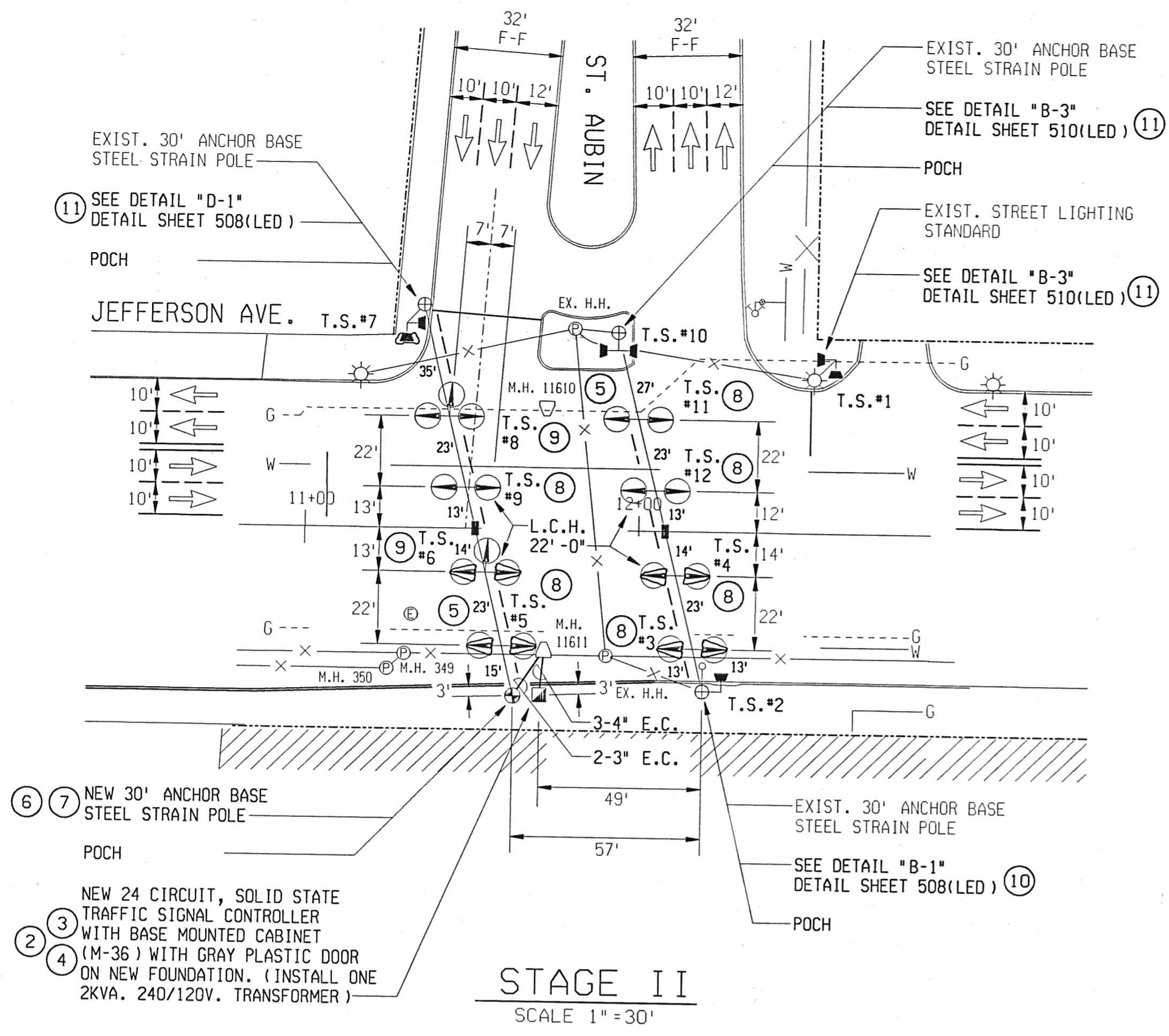
STAGE I
SCALE 1" = 30'

STAGE I REMOVAL
SCALE 1" = 30'

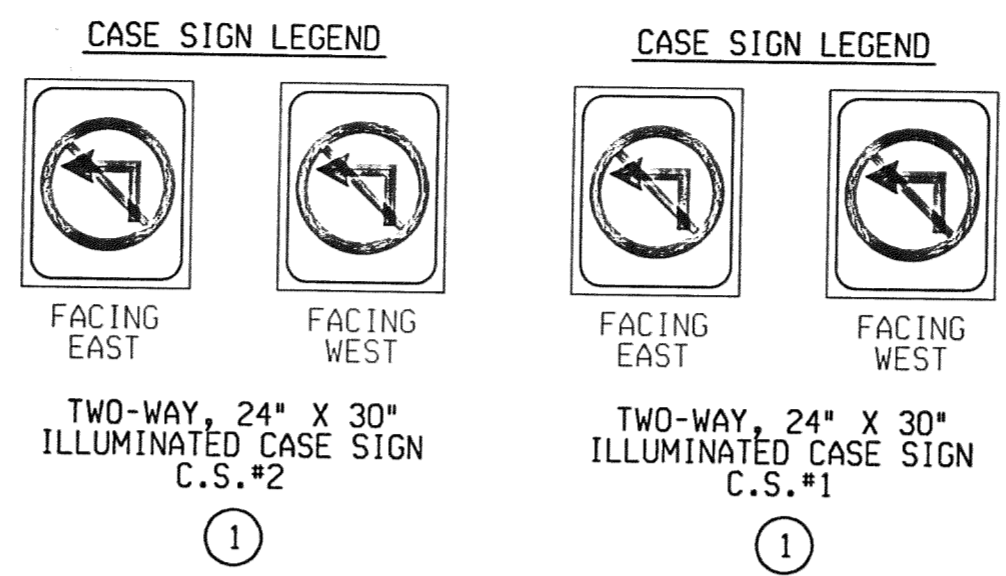


STAGE I WIRING DIAGRAM

STAGE I REMOVAL WIRING DIAGRAM

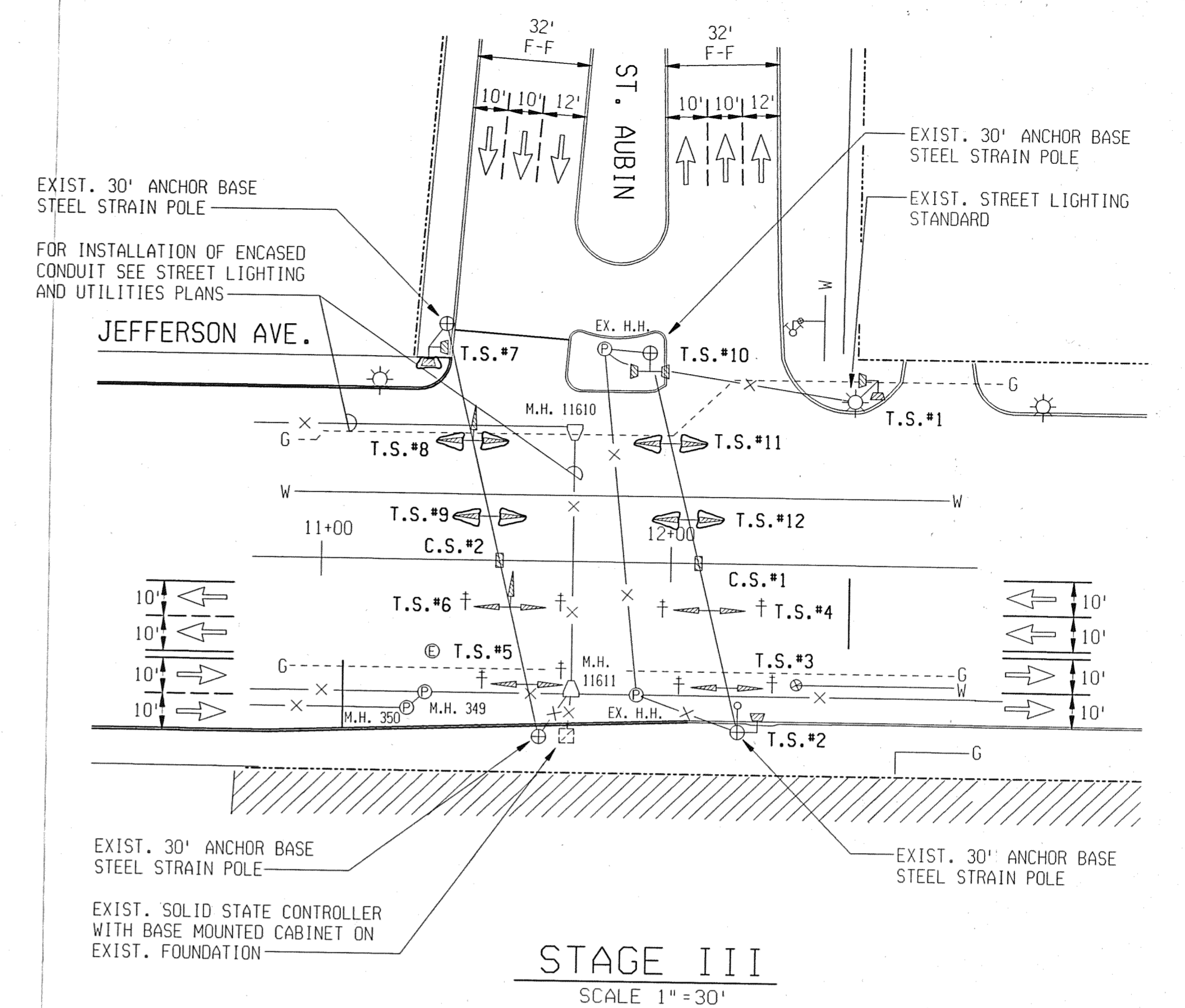


STAGE II
SCALE 1" = 30'

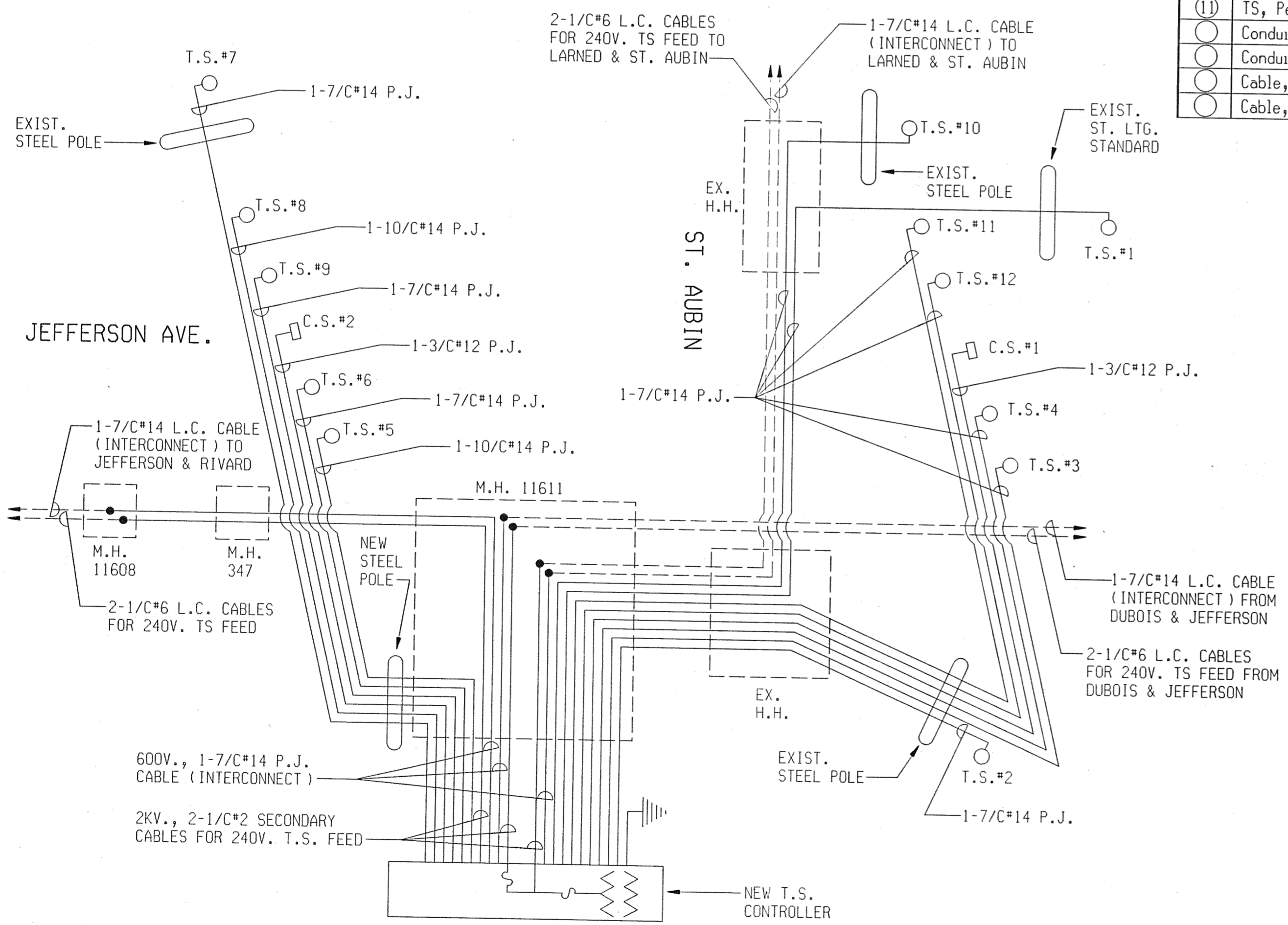


BAGGING & UNBAGGING OF TRAFFIC SIGNALS SHALL BE AS DIRECTED BY THE ENGINEER.

LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Case Sign, Two Way, 24 inch by 30 inch	2 Ea
②	Controller and Cabinet, Solid State, TBC	1 Ea
③	Controller and Cabinet, Solid State, TBC, Delivered	1 Ea
④	Controller Fdn, Base Mount	1 Ea
⑤	Span Wire	2 Ea
⑥	Strain Pole, Steel, Anchor Base, 30 foot	1 Ea
⑦	Strain Pole, Steel, Anchor Fdn	1 Ea
⑧	TS, Two Way Span Wire Mtd (LED)	6 Ea
⑨	TS, Three Way Span Wire Mtd (LED)	2 Ea
⑩	TS, Pedestrian, One Way Bracket Arm Mtd (LED)	1 Ea
⑪	TS, Pedestrian, Two Way Bracket Arm Mtd (LED)	3 Ea
○	Conduit, Encased, 2, 3 inch, Modified	20 Ft
○	Conduit, Encased, 3, 4 inch, Modified	15 Ft
○	Cable, Sec, 2Kv, 2, 1/C#2	750 Ft
○	Cable, P.J., 600V, 1, 7/C#14, Intercon	750 Ft

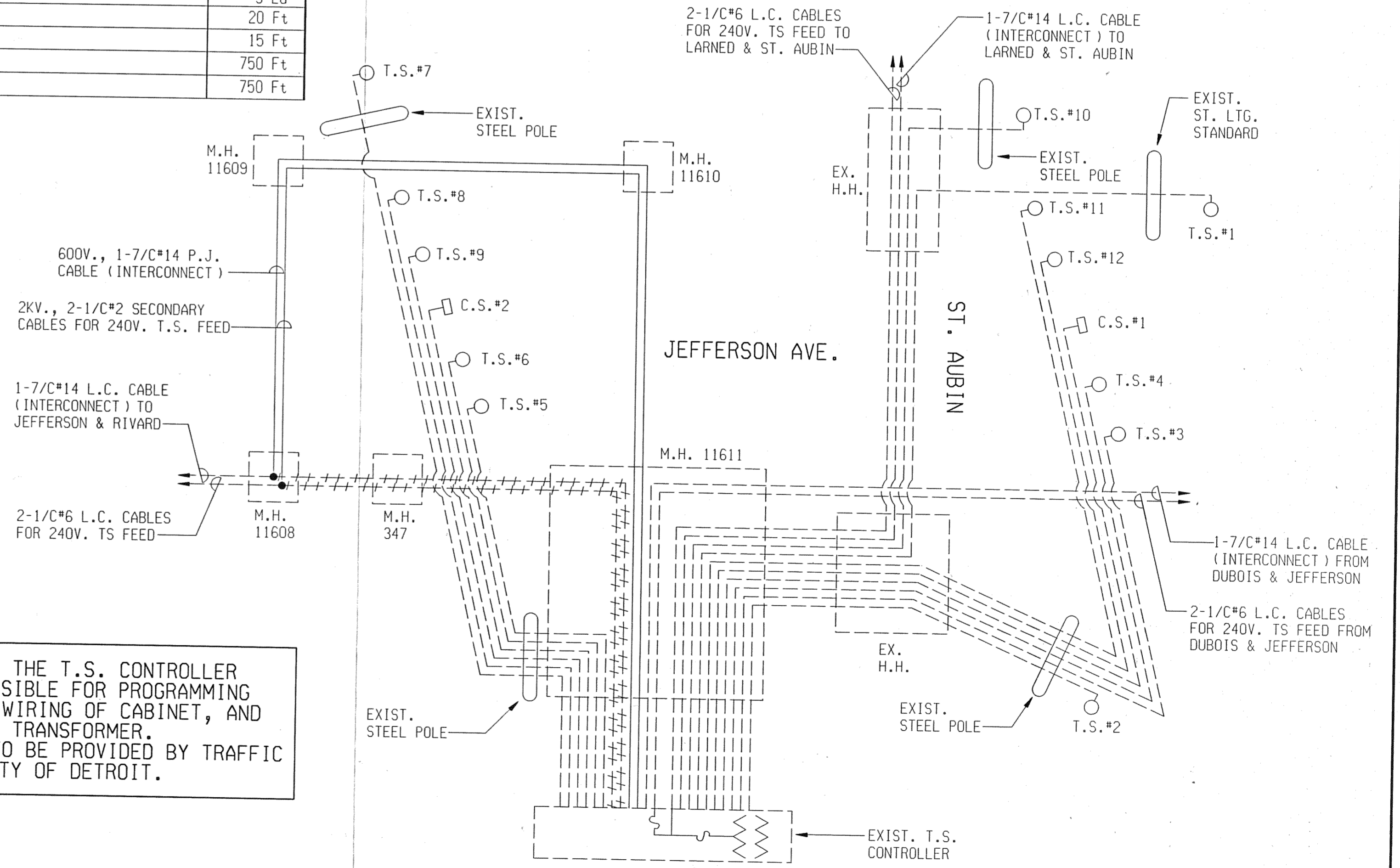


STAGE III
SCALE 1" = 30'

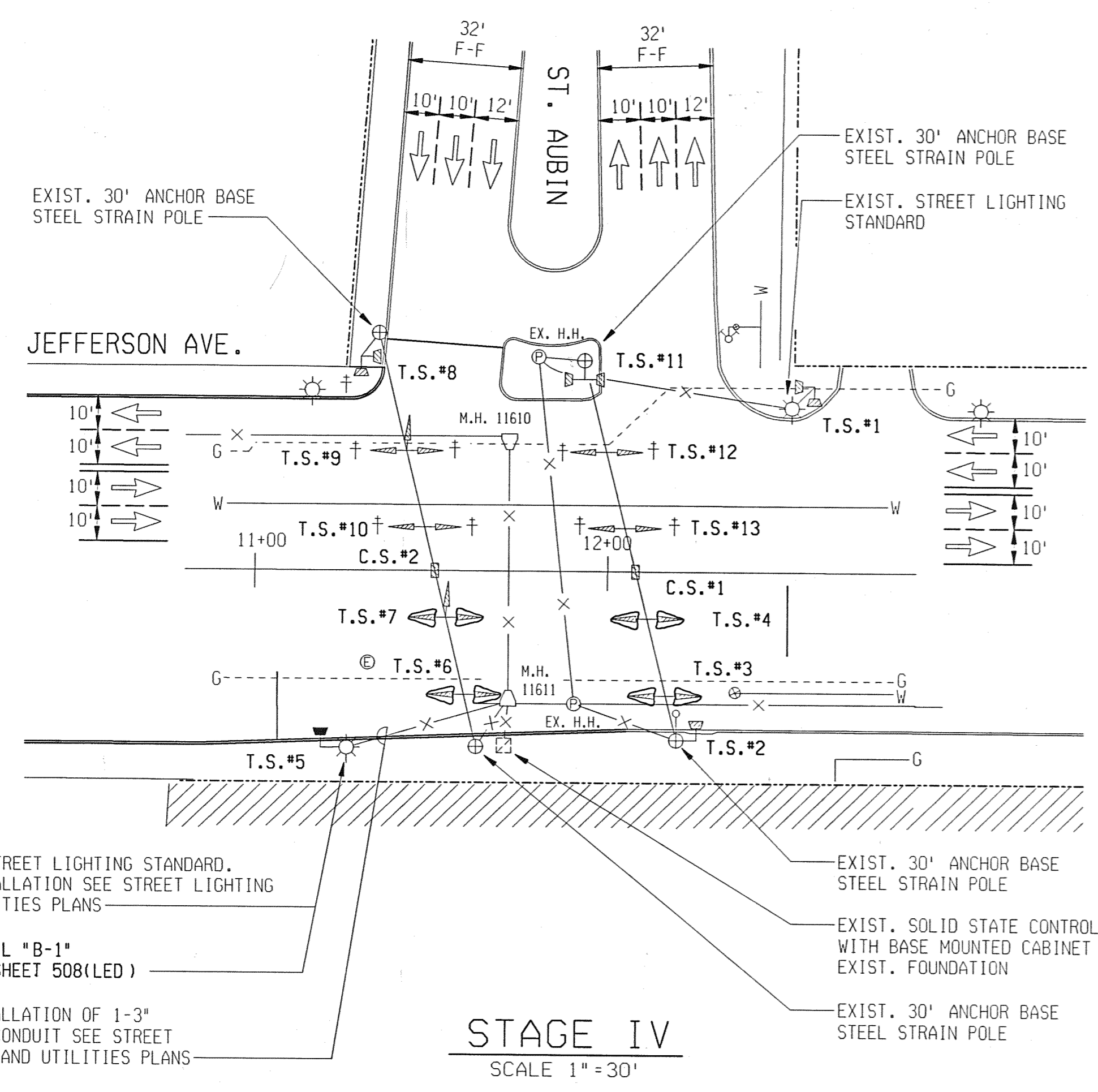


STAGE II WIRING DIAGRAM

THE SUPPLIER OF THE T.S. CONTROLLER SHALL BE RESPONSIBLE FOR PROGRAMMING OF CONTROLLER, WIRING OF CABINET, AND INSTALLATION OF TRANSFORMER. TIMING PERMIT TO BE PROVIDED BY TRAFFIC ENGINEERING, CITY OF DETROIT.



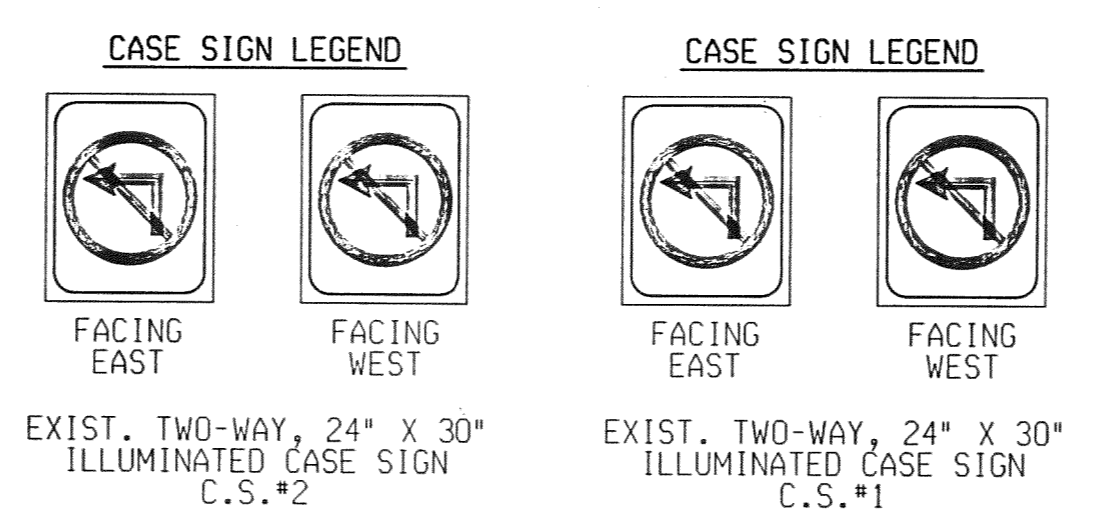
STAGE III WIRING DIAGRAM



SEE DETAIL "B-1" DETAILS SHEET 508(LED)

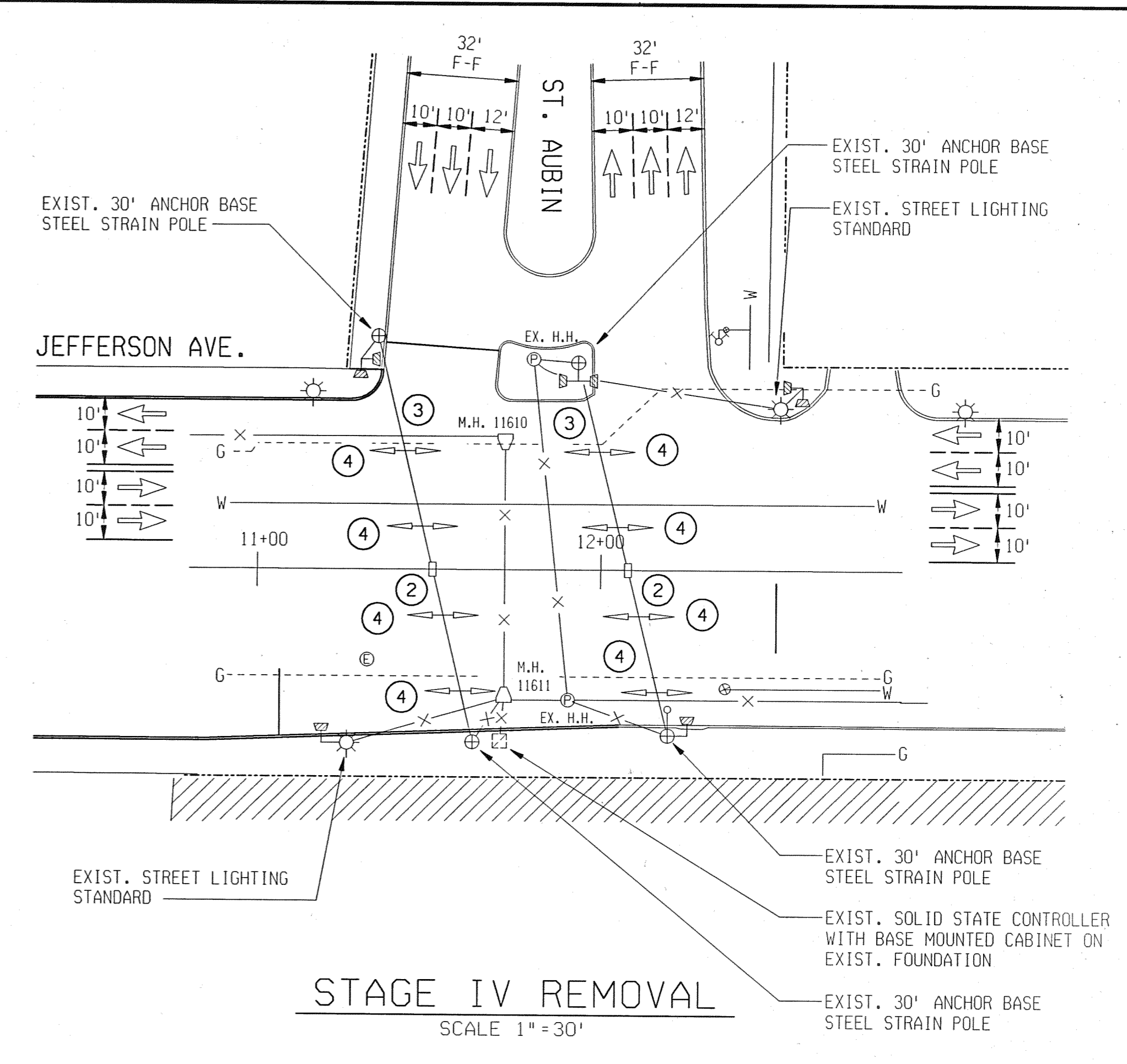
FOR INSTALLATION OF 1-3" ENCASED CONDUIT SEE STREET LIGHTING AND UTILITIES PLANS

STAGE IV
SCALE 1" = 30'

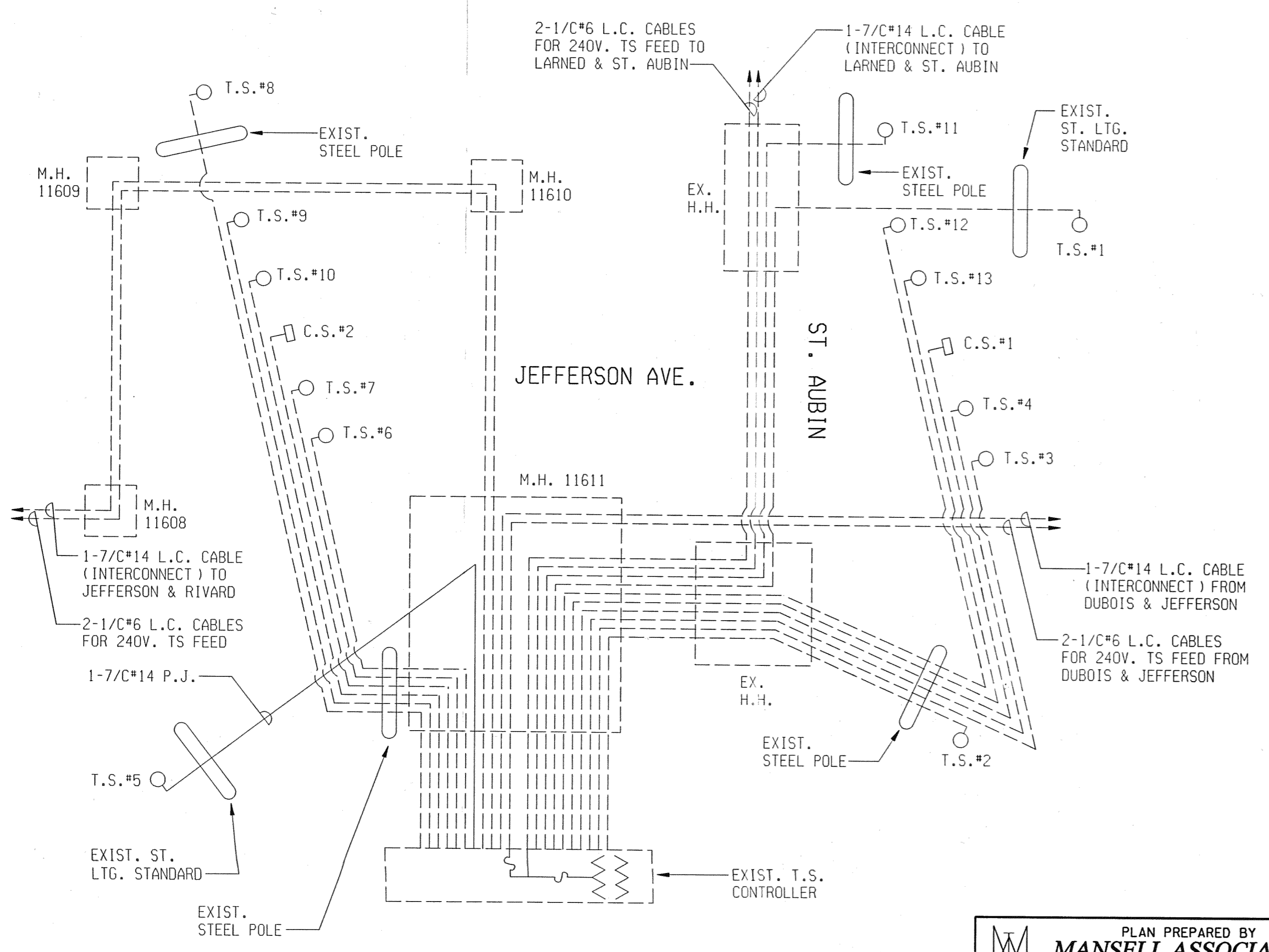


BAGGING & UNBAGGING OF TRAFFIC SIGNALS SHALL BE AS DIRECTED BY THE ENGINEER.

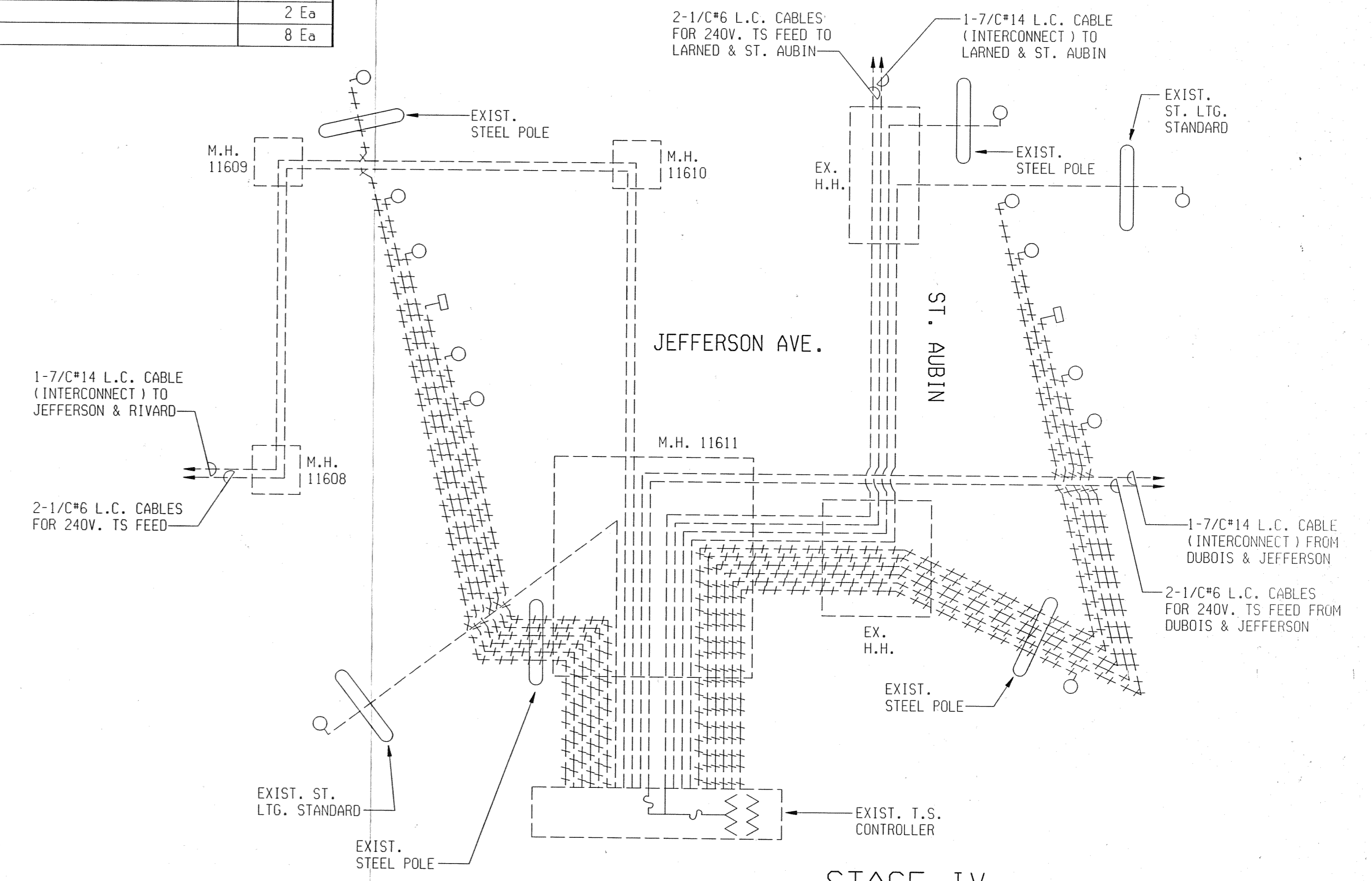
LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	TS, Pedestrian, One Way Bracket Arm Mtd (LED)	1 Ea
②	Case Sign, Rem	2 Ea
③	Span Wire, Rem	2 Ea
④	TS, Span Wire Mtd, Rem	8 Ea



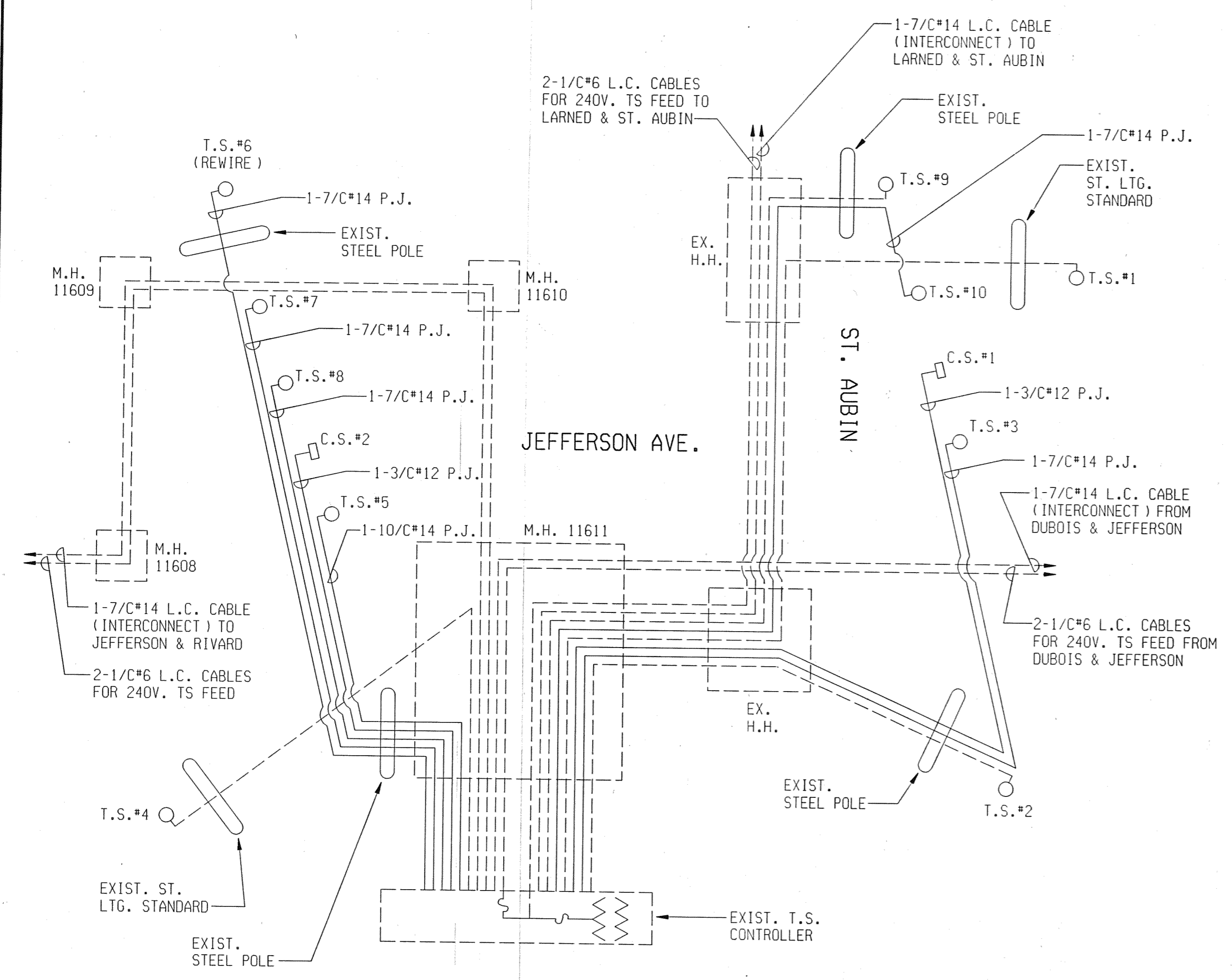
STAGE IV REMOVAL
SCALE 1" = 30'



STAGE IV WIRING DIAGRAM

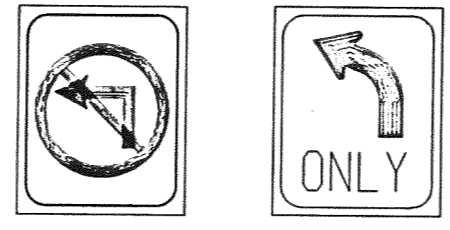


STAGE IV REMOVAL WIRING DIAGRAM



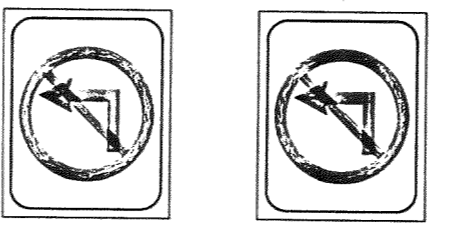
FINAL WIRING DIAGRAM

CASE SIGN LEGEND



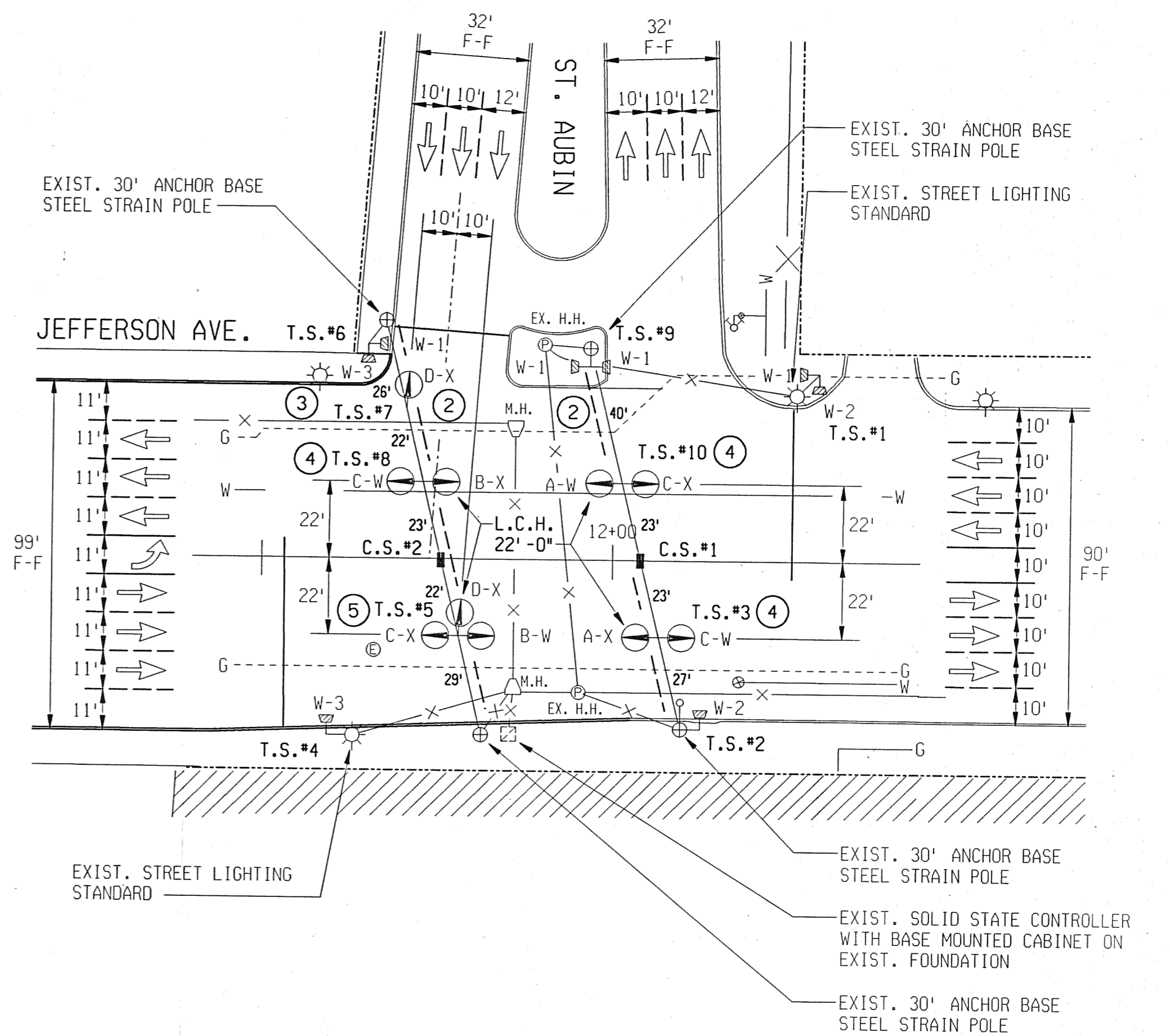
TWO-WAY, 24" X 30" ILLUMINATED CASE SIGN C.S.#1

CASE SIGN LEGEND

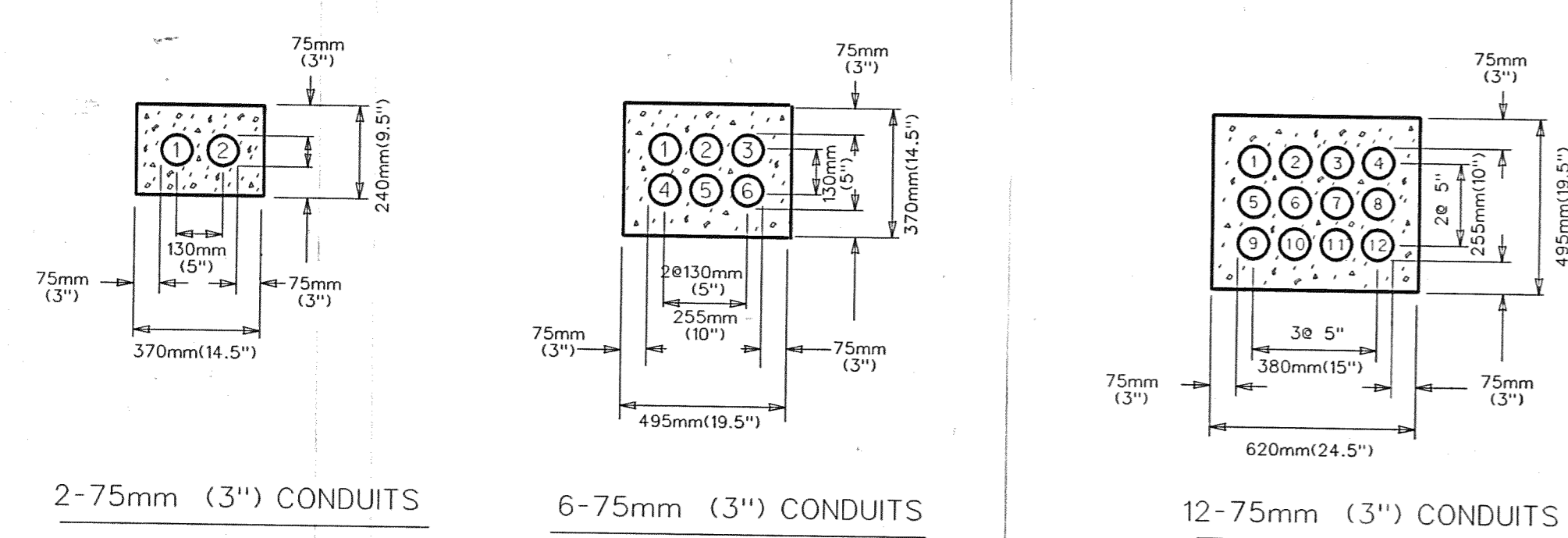
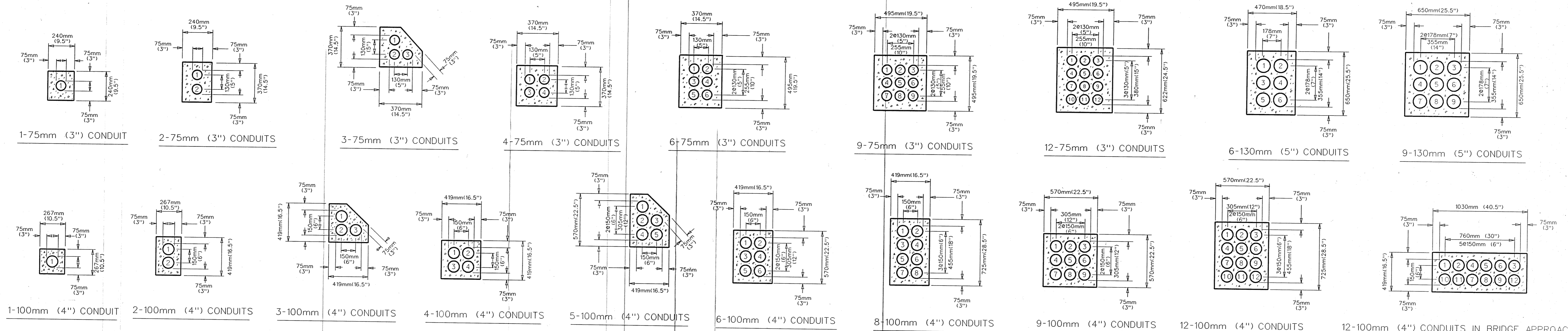


TWO-WAY, 24" X 30" ILLUMINATED CASE SIGN C.S.#2

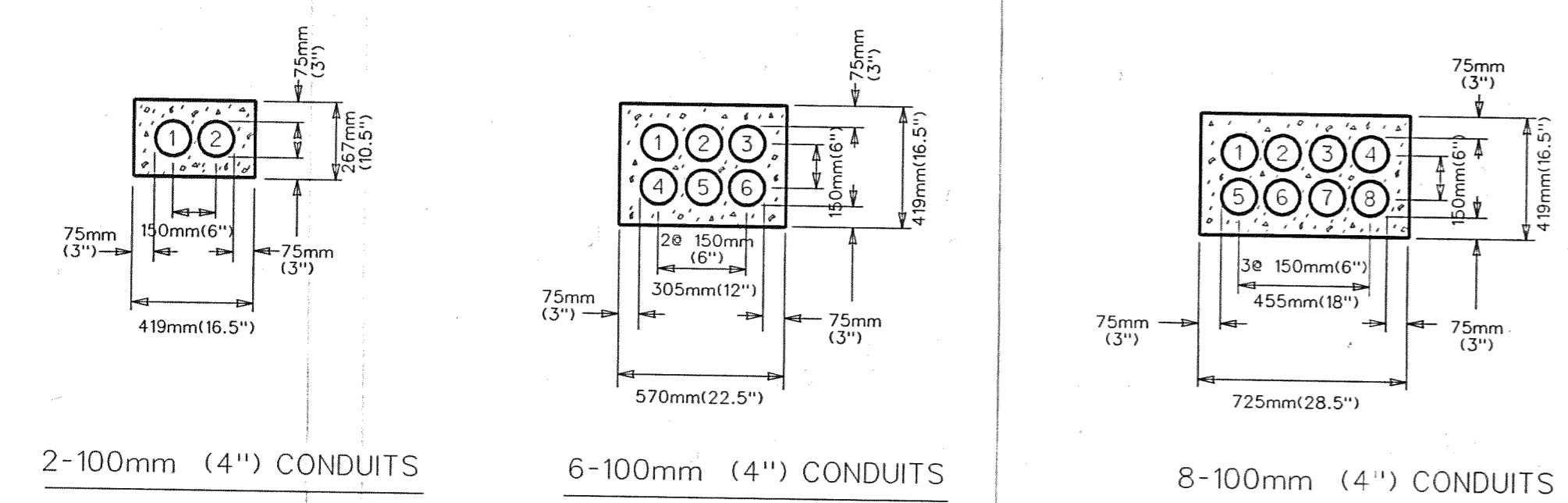
LIST OF MATERIAL		
NO.	ITEM	QUANTITIES
①	Case Sign, Two Way, 24 inch by 30 inch	2 Ea
②	Span Wire	2 Ea
③	TS, One Way Span Wire Mtd (LED)	1 Ea
④	TS, Two Way Span Wire Mtd (LED)	3 Ea
⑤	TS, Three Way Span Wire Mtd (LED)	1 Ea
○	Cable, P.J. 600V, 1, 7/C*14	225 Ft



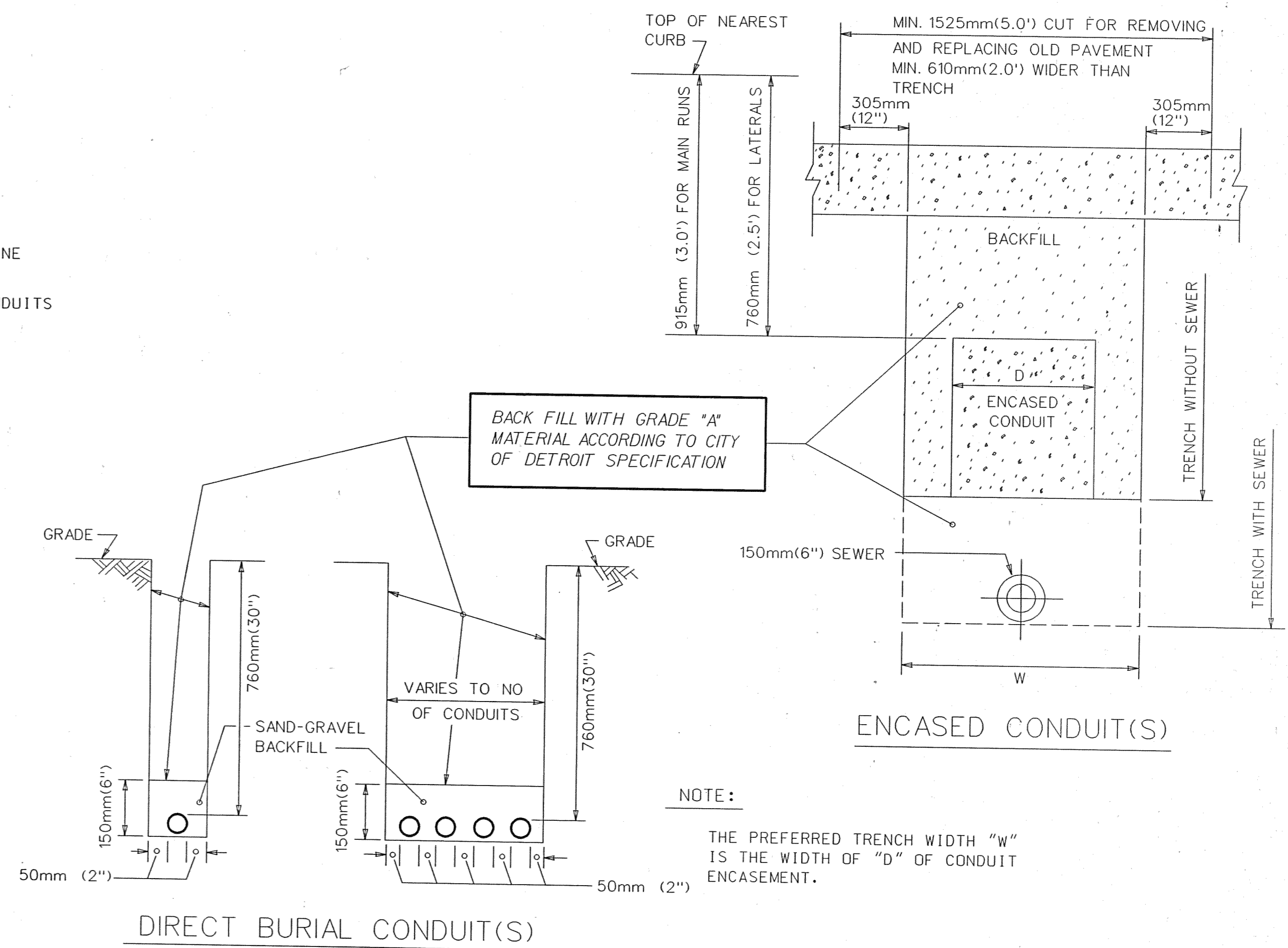
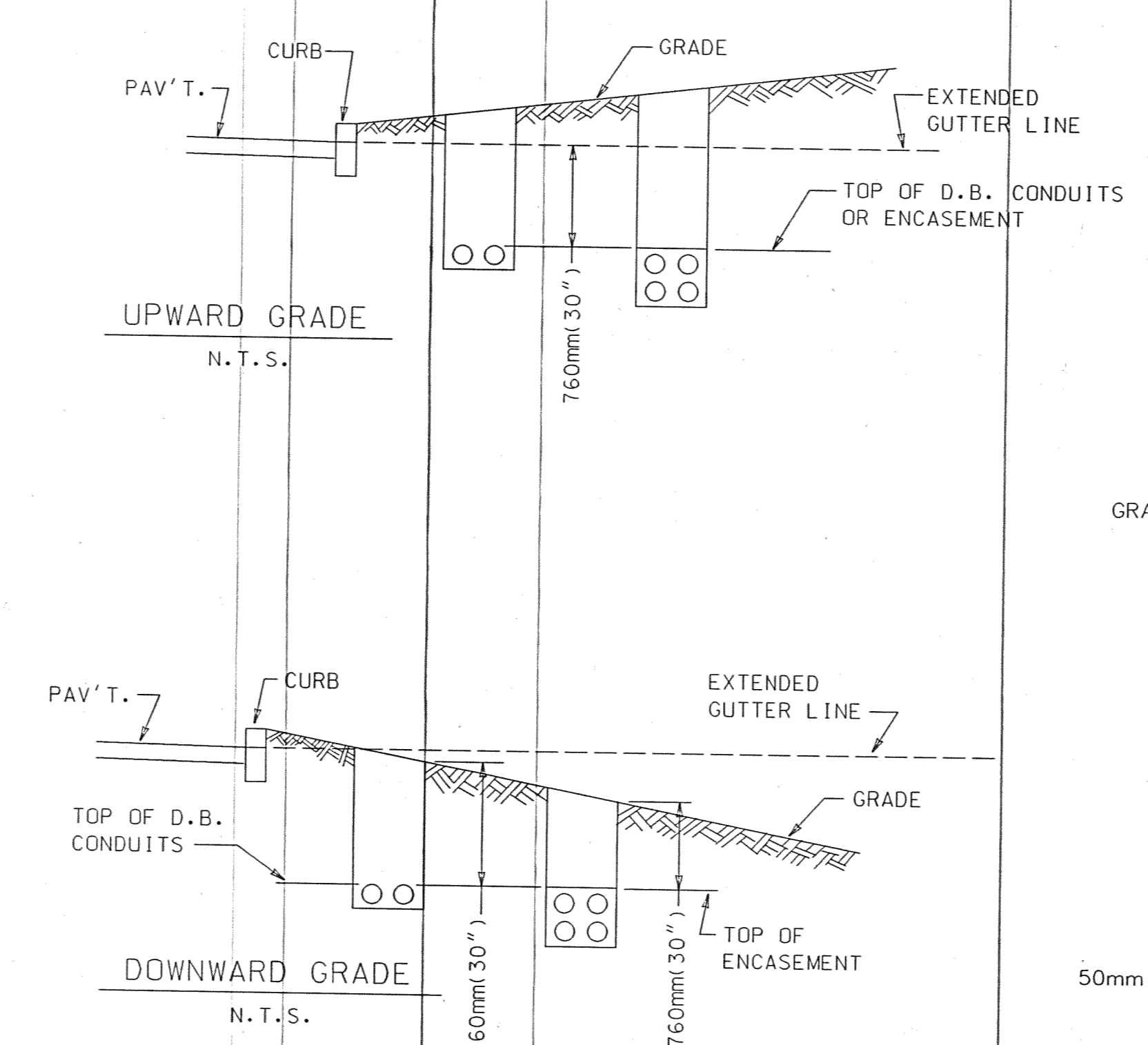
PLAN
 SCALE 1" = 30'



ALTERNATE ARRANGEMENT OF 75mm (3") CONDUIT
(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



ALTERNATE ARRANGEMENT OF 100mm (4") CONDUIT
(TO SUIT FIELD CONDITIONS)
(TO BE APPROVED BY THE ENGINEER)



NOTE:
THE PREFERRED TRENCH WIDTH "W"
IS THE WIDTH OF "D" OF CONDUIT
ENCASUREMENT.

DISK FILE: 101PLDM.MTR

Date	Description	Chkd. by

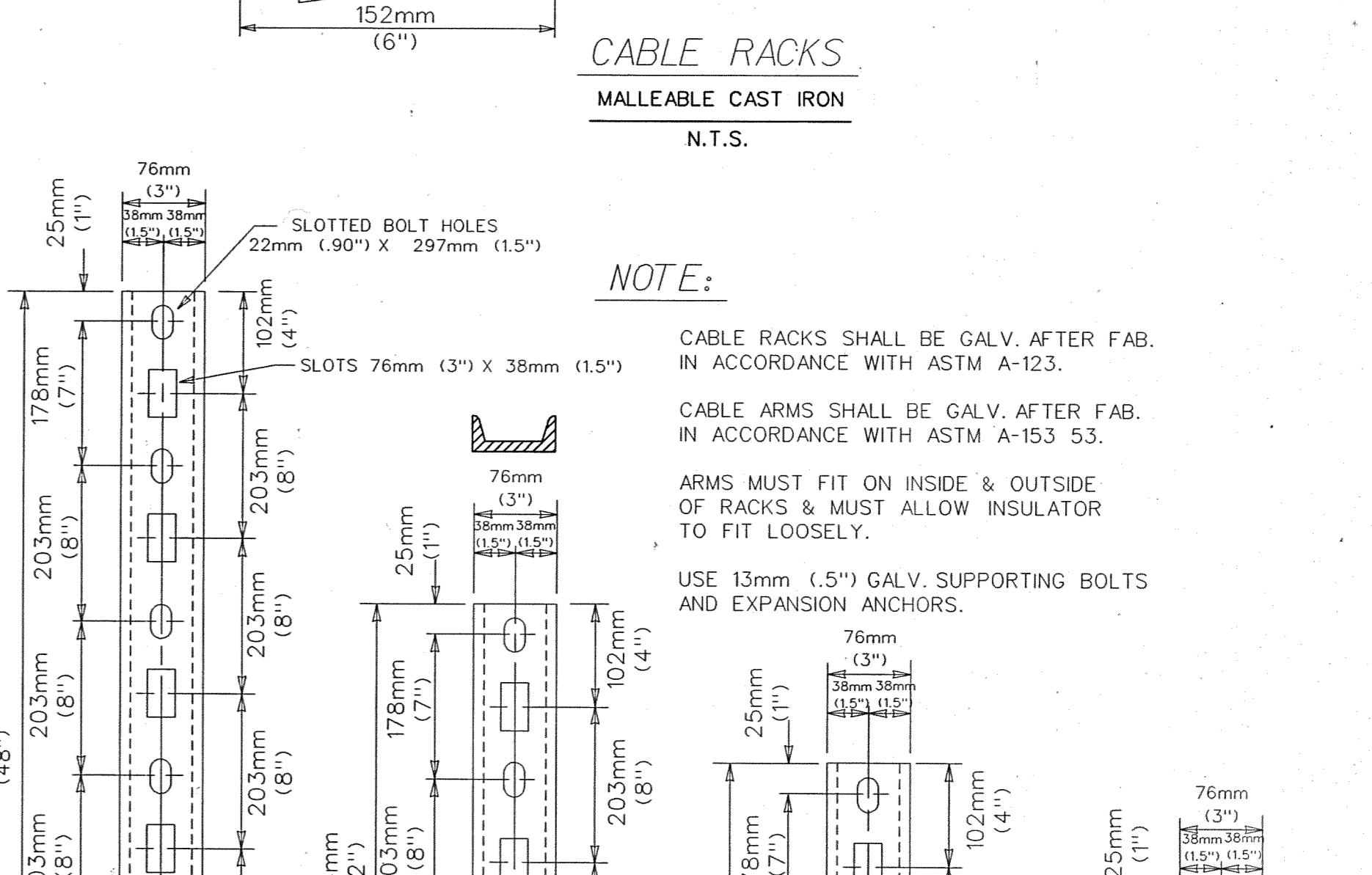
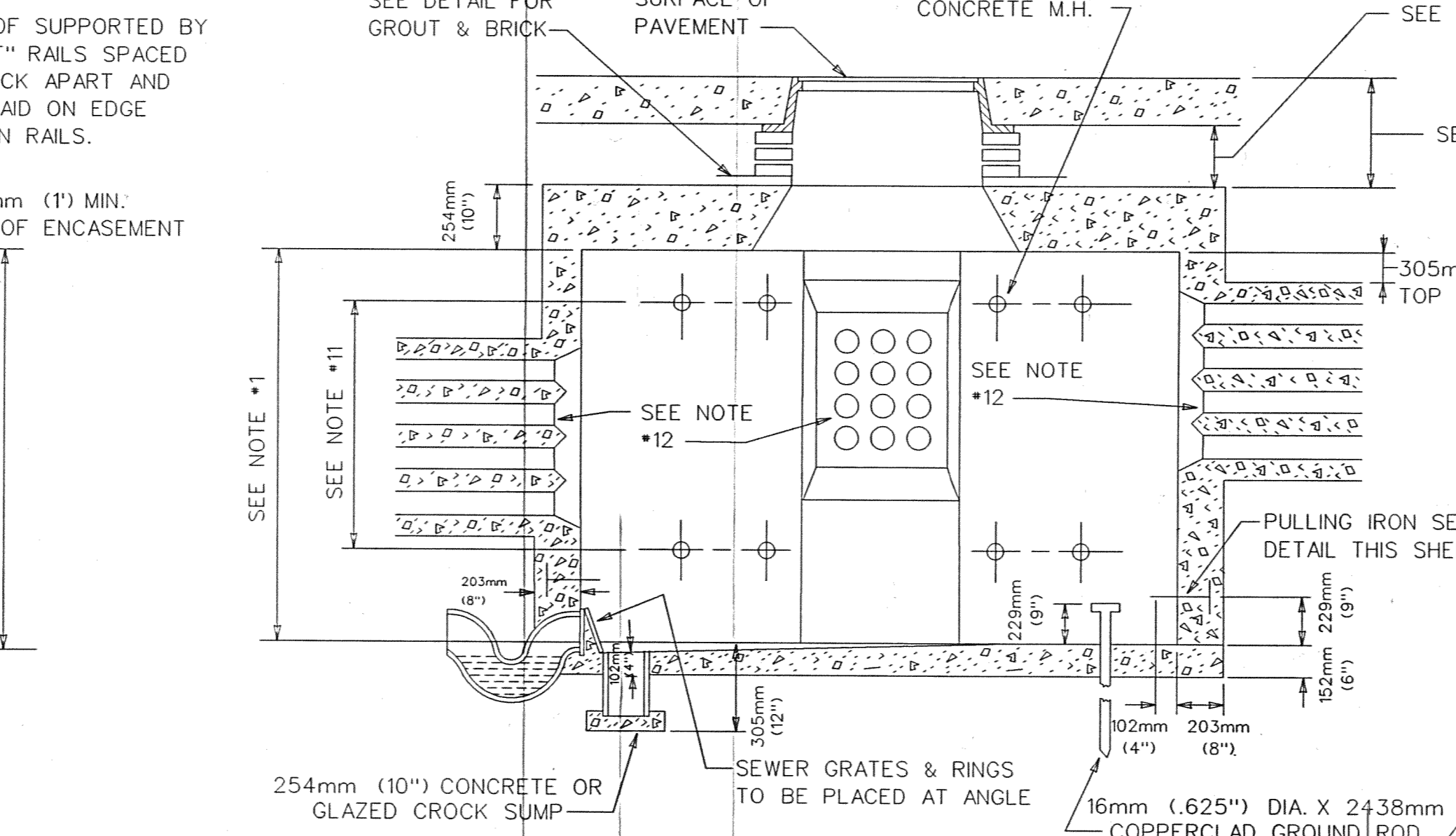
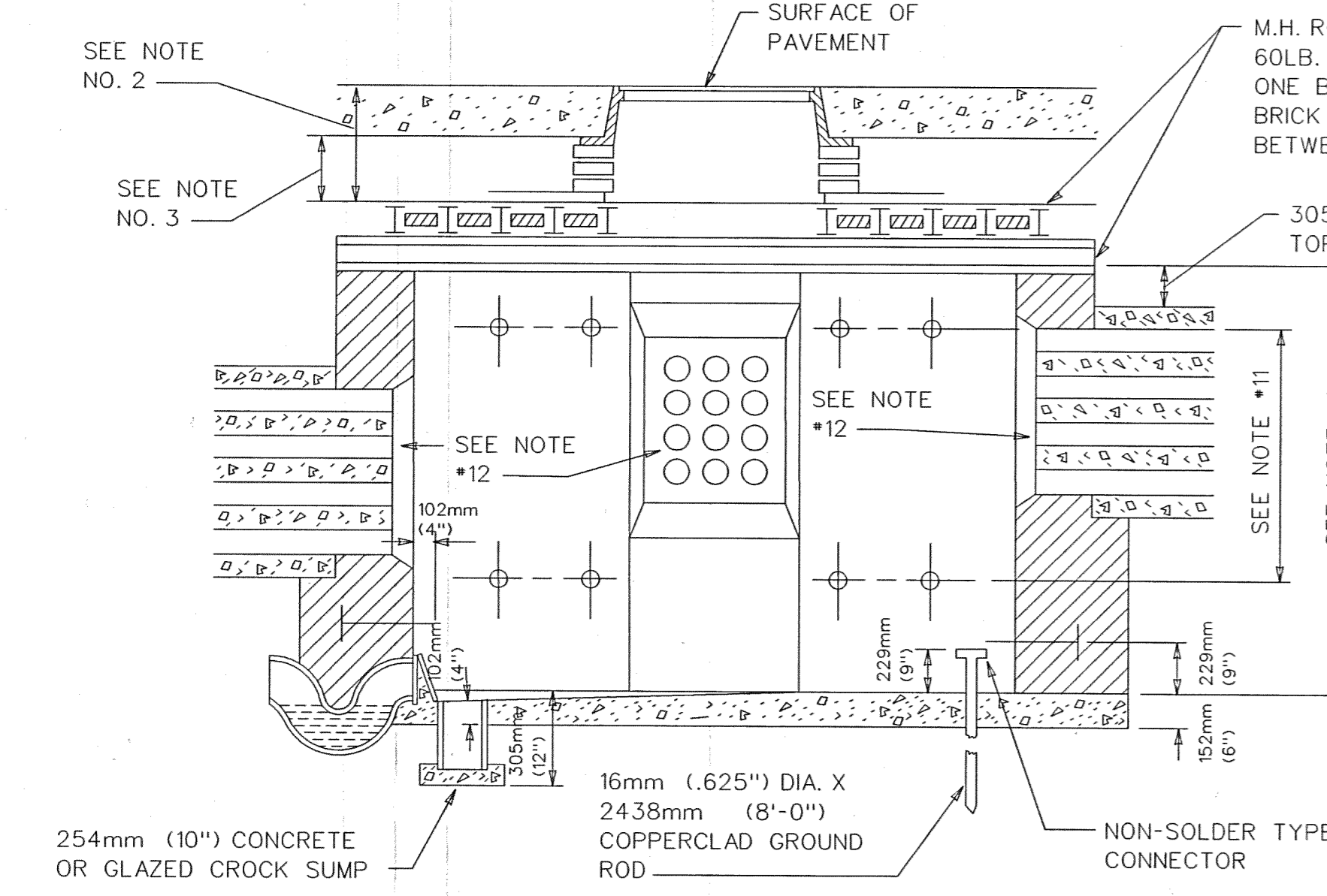
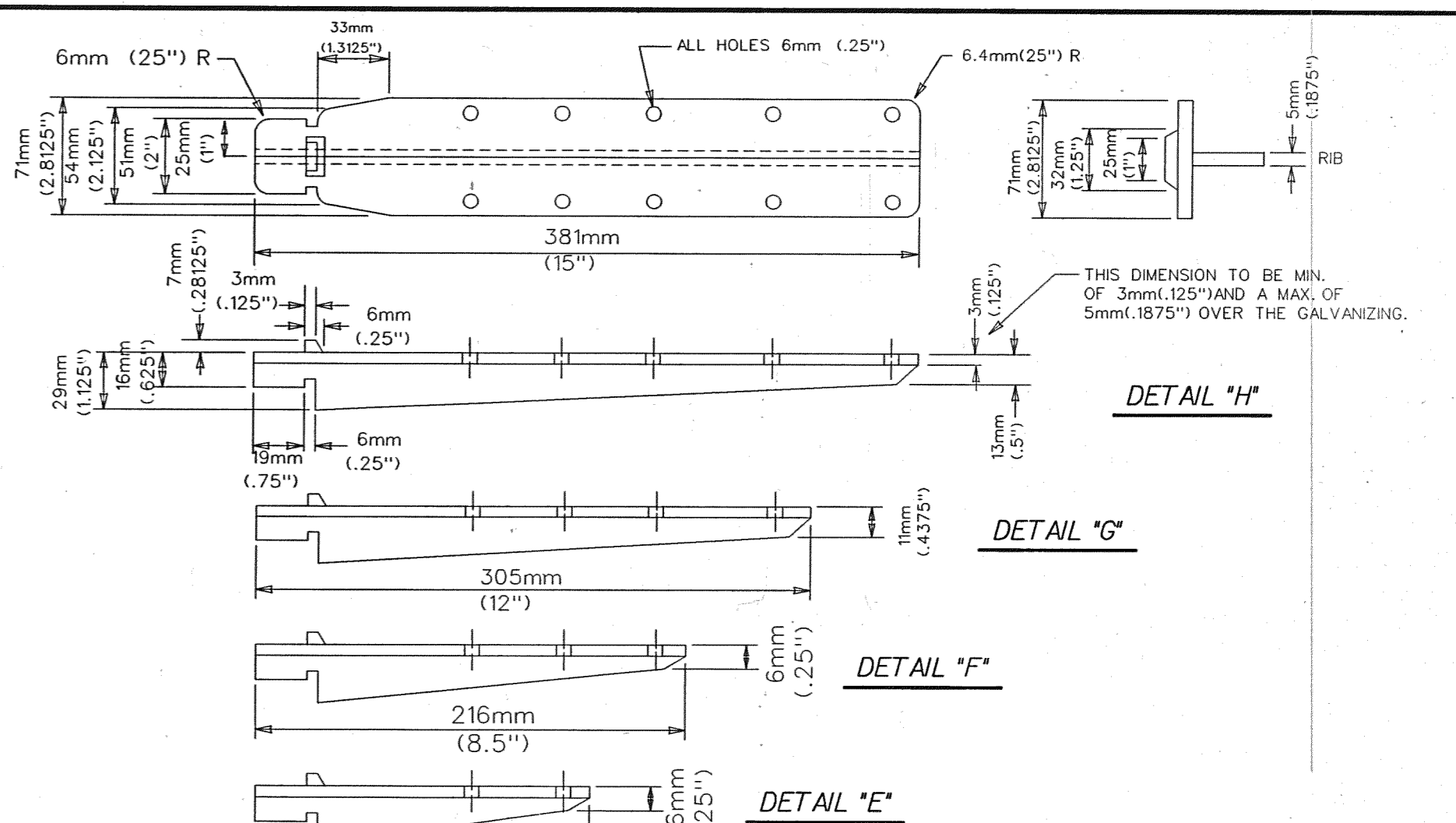
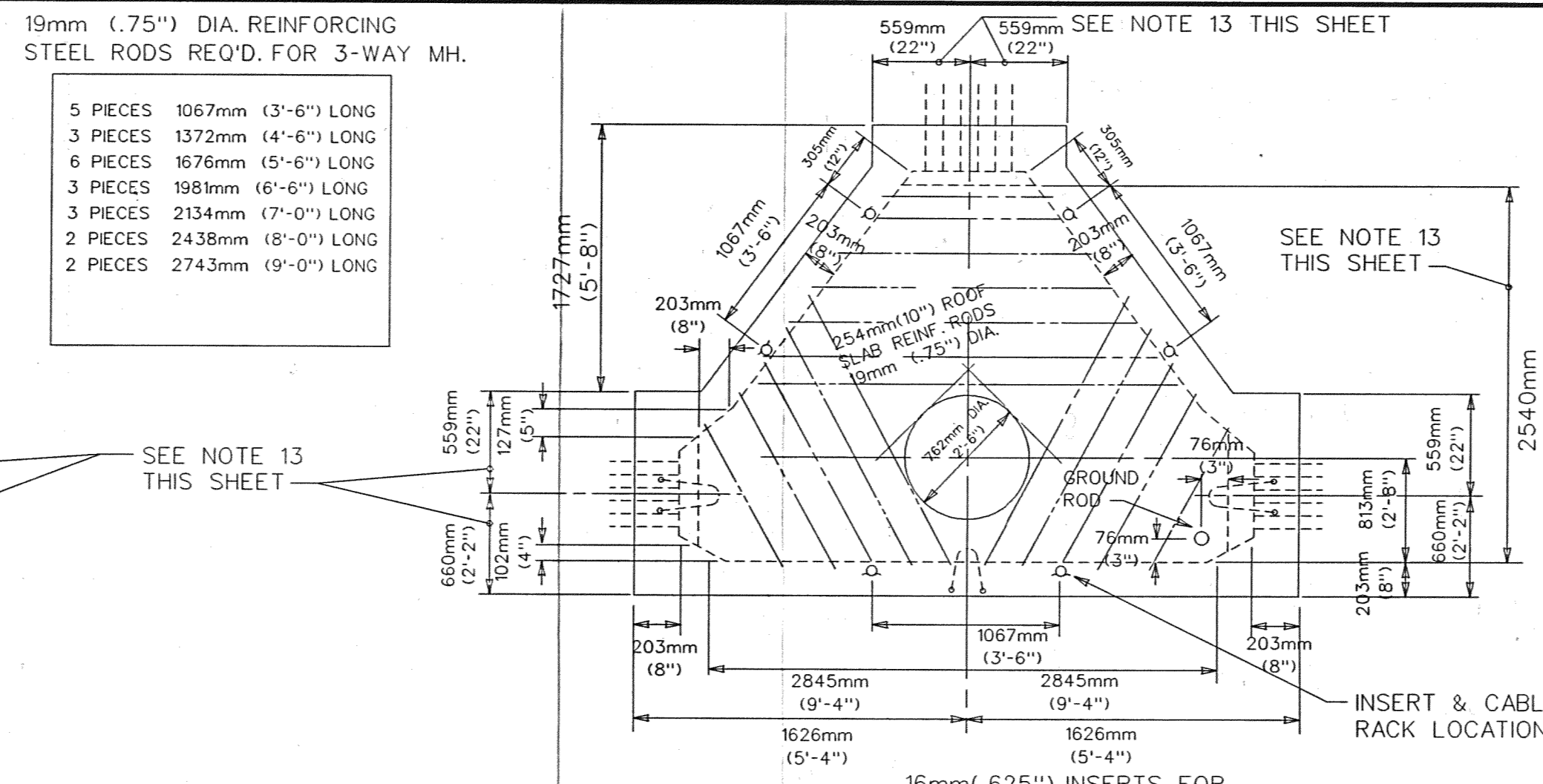
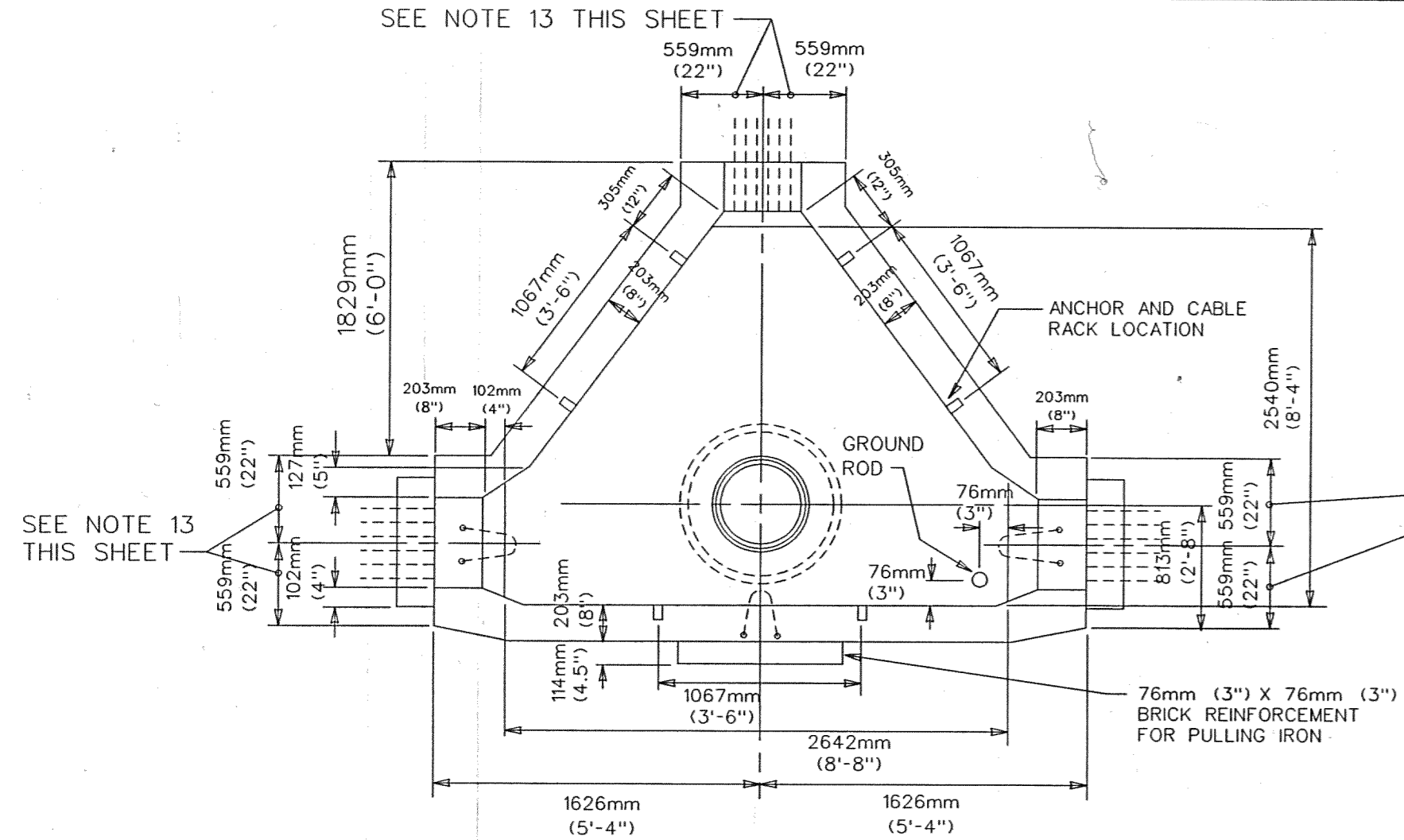
JEFFERSON AVE OVER DEQUINDRE CUT
MISCELLANEOUS CONDUIT SECTIONS

MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn: M.A.I.
Checked: []
Drwg. No.: 11 OF 25
File No.: M4044

Scale: No Scale
Checked by: []
Approved by: []
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

101
27-1104
Sheet No. 31
Date 02-11-05

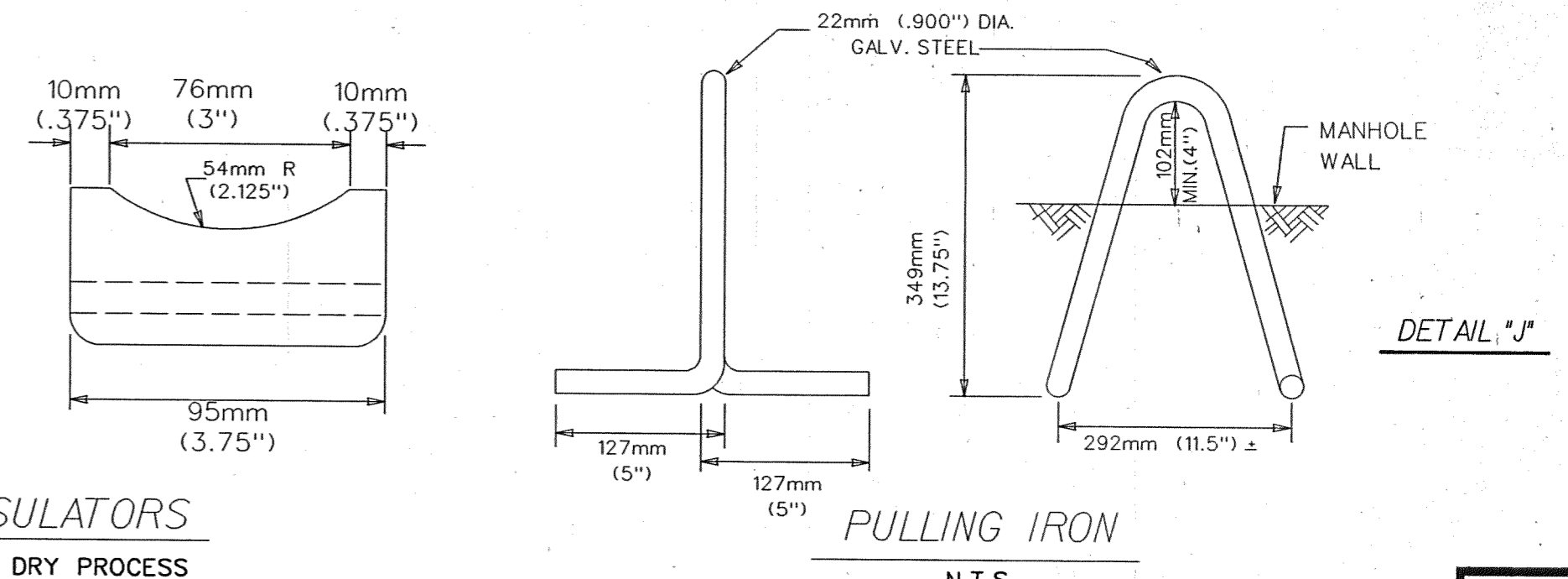
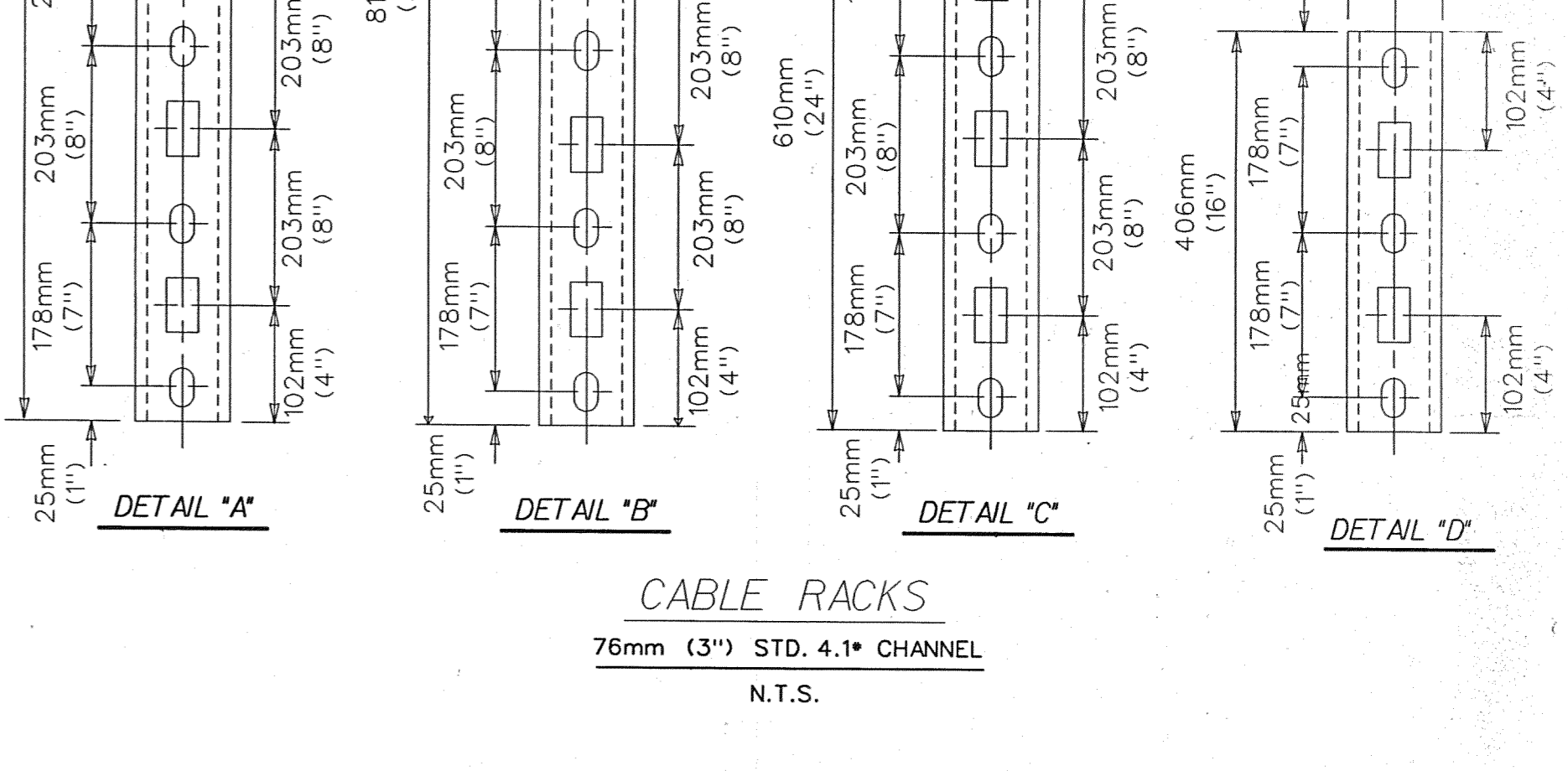
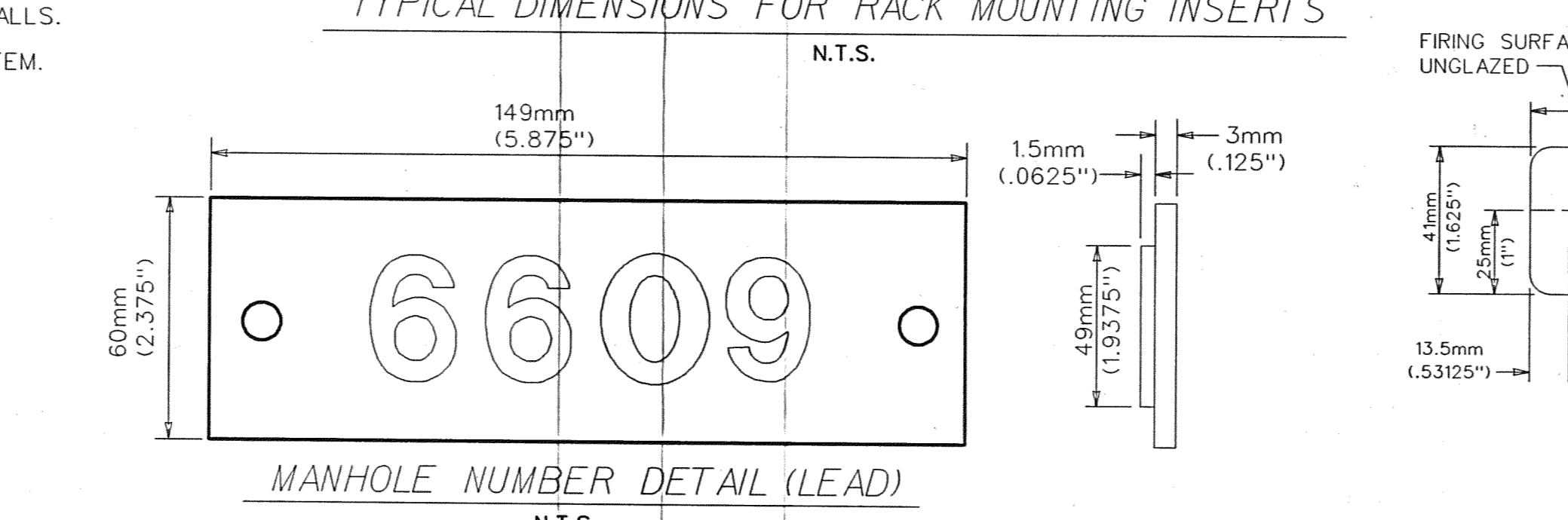
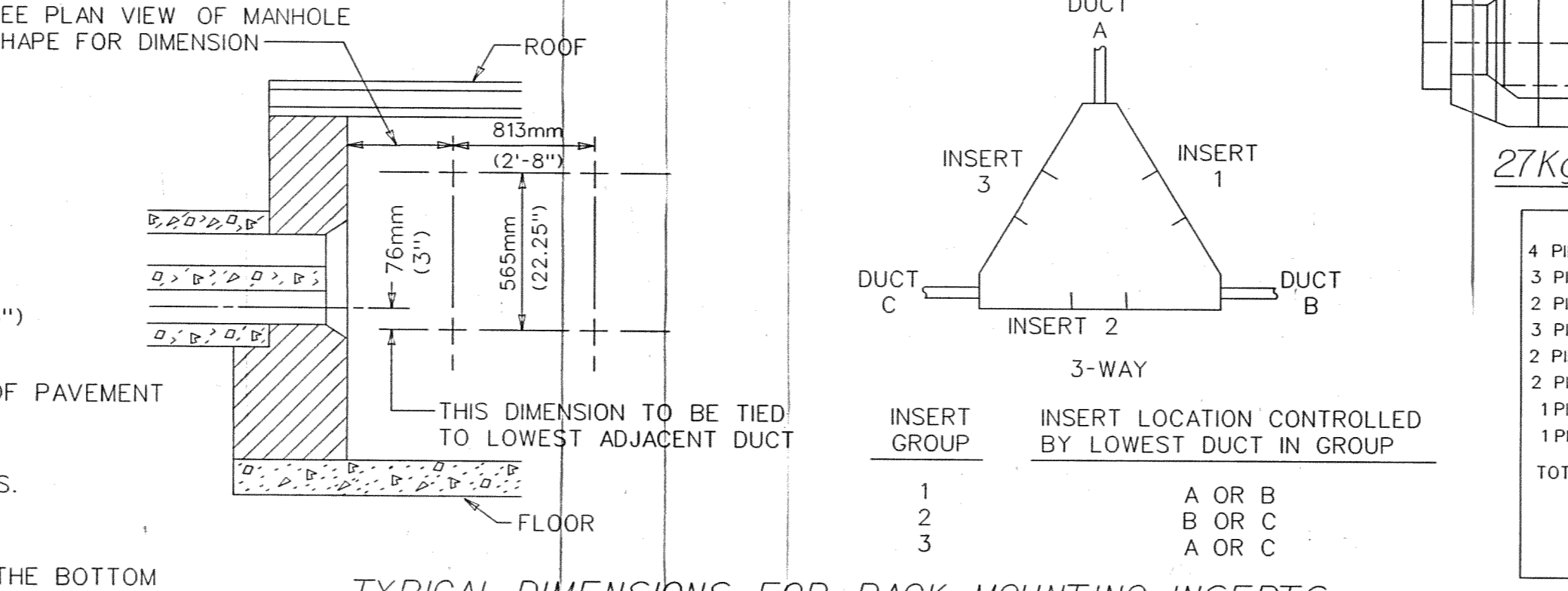


BRICK-THREE WAY MANHOLE
N.T.S.

CONCRETE-THREE WAY MANHOLE
N.T.S.

CABLE RACKS
MALLEABLE CAST IRON
N.T.S.

- NOTE:**
1. THIS DIMENSION NORMALLY 1981mm. (6.5') SEE SPECIFICATIONS FOR UNUSUAL CONDITIONS.
 2. WHERE M.H.'S ARE LOCATED BACK OF CURBS, TOP OF M.H. ROOF MUST BE BUILT .660m (26") BELOW CURB GRADE TO PROVIDE FOR FUTURE PAVEMENT.
 3. IN EXISTING PAVEMENT, PROVIDE AT LEAST .203m (8") BETWEEN TOP OF ROOF AND BASE OF PAVEMENT
 4. BOLTS, RACKS & PULLING IRONS TO BE HOT-DIP GALV.
 5. C OF RAILS & UNDER M.H. FRAME FLANGE TO BE APPROX. .457m (18") FROM C'S OF FRAMES.
 6. M.H. NUMBER TO BE INSTALLED ON MANHOLE WALL IN CONSPICUOUS PLACE.
 7. MOUNTING HEIGHT FOR LOWER BOLTS OF CABLE RACK SHALL BE THE AVERAGE HEIGHT OF THE BOTTOM OF THE LOWEST DUCTS IN MAIN CONDUITS. INSTALL MIN. (2) 1.22m (48") LONG RACKS ON WALLS.
 8. 203mm (8") THICK CHIMNEYS WHERE SPECIFIED SHALL BE INCIDENTAL TO APPLICABLE M.H. ITEM.
 9. EXCAVATION LIMITS FOR PUBLIC LIGHTING DEPARTMENT MANHOLES SHALL BE ON VERTICAL PLANES ON THE FOOTING OUTLINE.
 10. 13mm (.5") PLASTER OUTSIDE WALLS OF BRICK MANHOLES.
 11. SPACING OF INSERTS AS REQUIRED TO ACCOMMODATE CABLE RACK
 12. BELL ENDS ARE REQUIRED ON EACH CONDUIT ENTERING MANHOLE. (TYPE AND SIZE SHALL BE IDENTICAL TO CONDUIT TYPE AND SIZE)
 13. THIS IS A MINIMUM DIMENSION & IS EXPANDABLE TO ACCOMMODATE MAIN DUCT WINDOW.
 14. FOUR HEAVY 1219mm (48") CABLE RACKS, 8.381m(15") CABLE ARMS INSULATORS REQUIRED PER MANHOLE, UNLESS SPECIFIED OTHERWISE.
 15. CONTRACTOR IS TO INSTALL MANHOLE NO. TAG FURNISHED BY P.L.D. MANHOLE SHALL NOT BE CONSIDERED COMPLETE. WITHOUT MANHOLE NO. TAG INSTALLED.



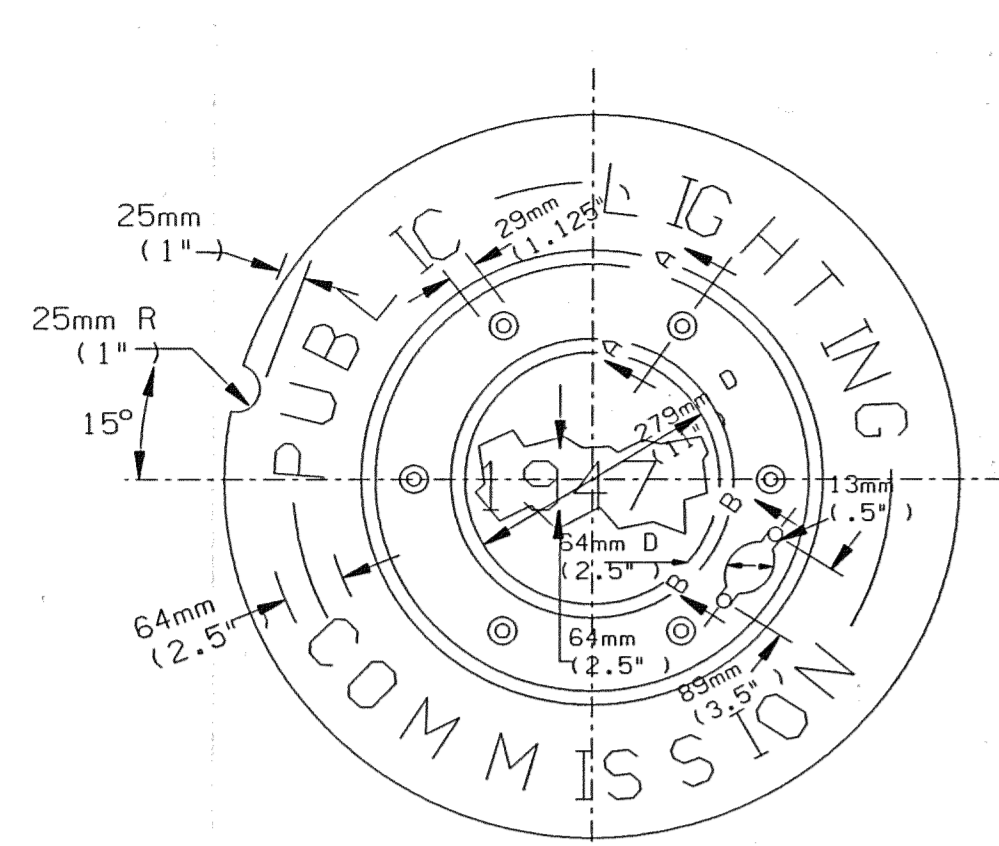
Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT
THREE-WAY MANHOLE

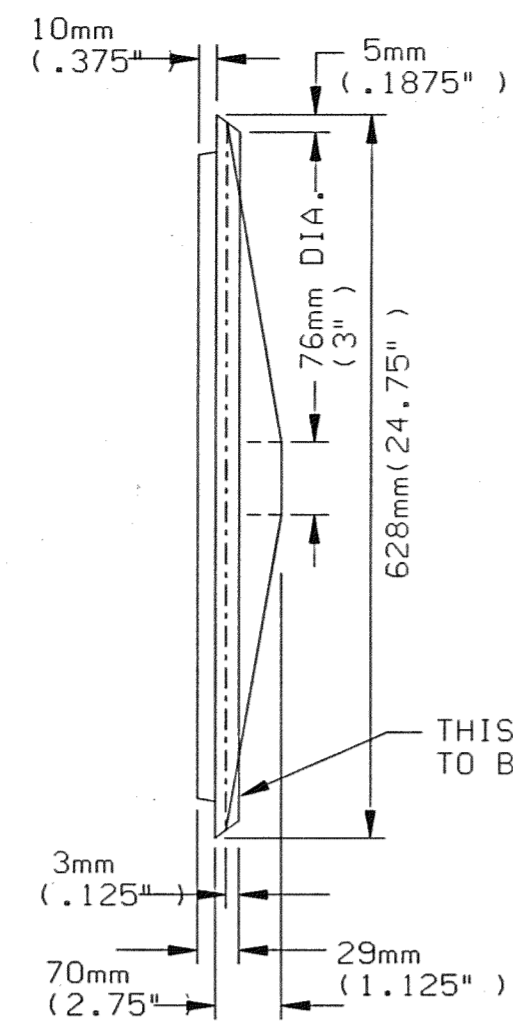
MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn M.A.I.
Checked
Drwg. No. 12 OF 25
File No. M4044

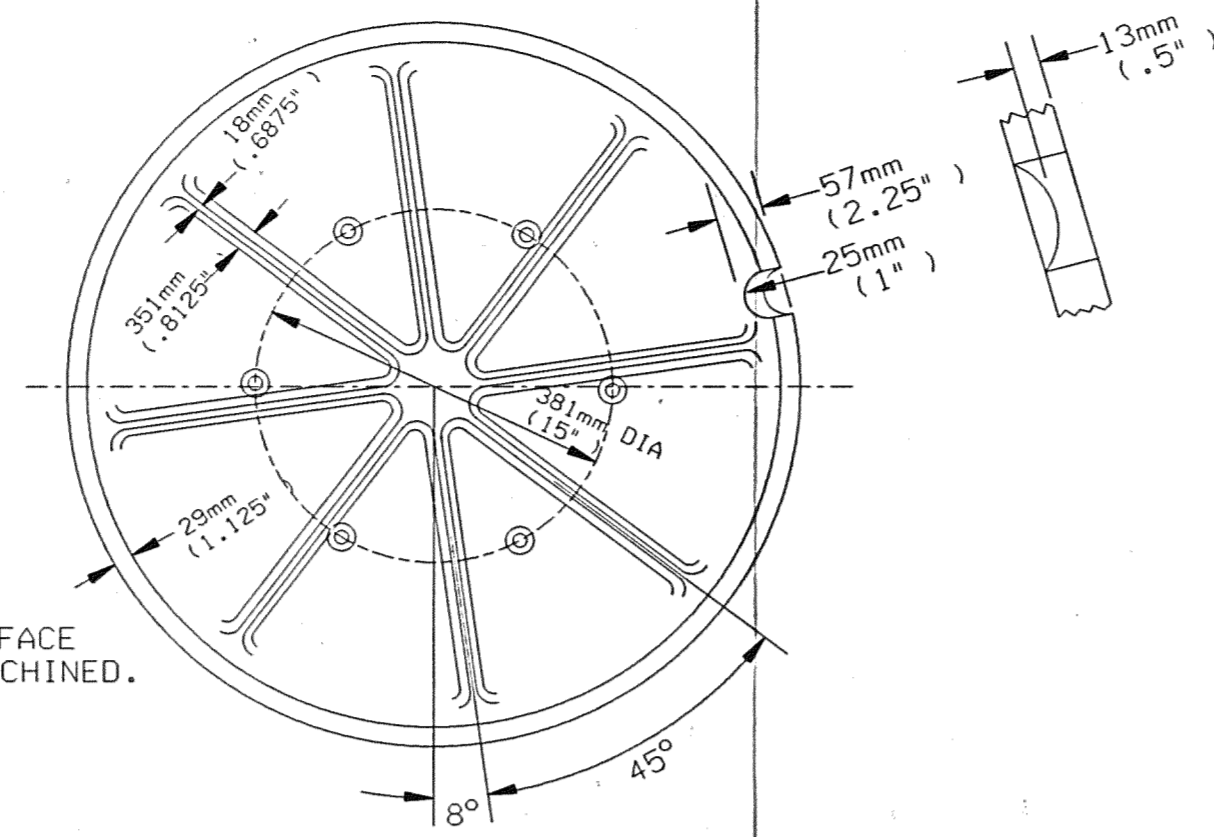
PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT



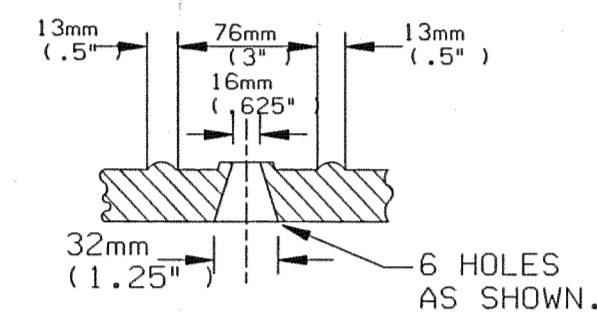
LETTERING & BEAD RAISED 10mm (.375") ABOVE FACE.
YEAR ON COVER TO BE YEAR OF CASTING.
CONTRACTOR TO CHANGE PATTERN IF REQUIRED.



THIS SURFACE TO BE MACHINED.

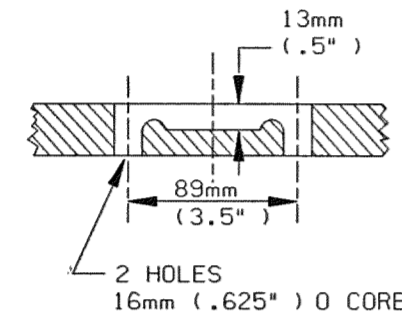


A.S.T.M. CLASS 30 GREY IRON
P.L.C. PATT. NO. 418 APPROX.
WT. 111kg(245lb)



SECTION A-A

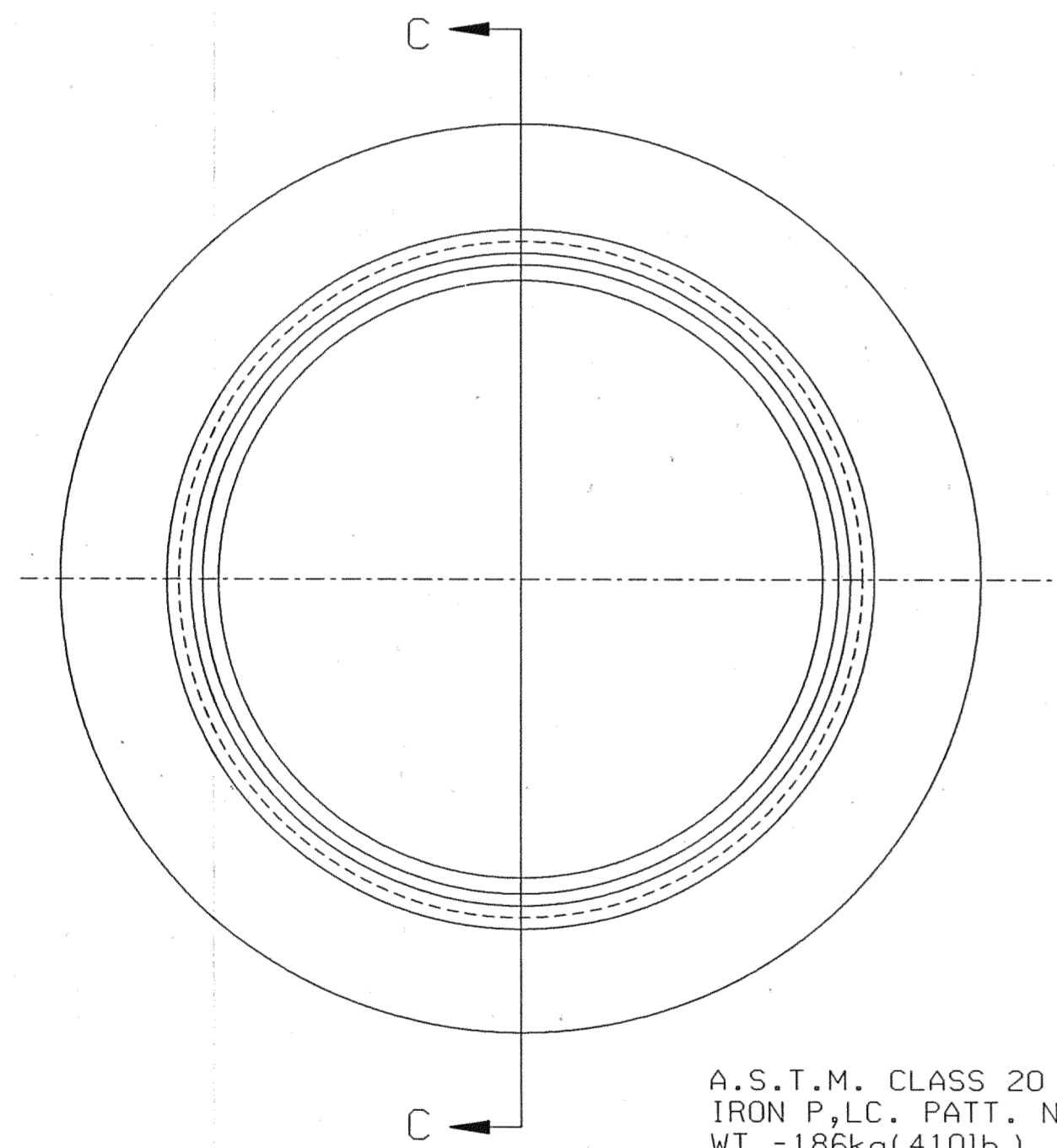
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SECTION B-B

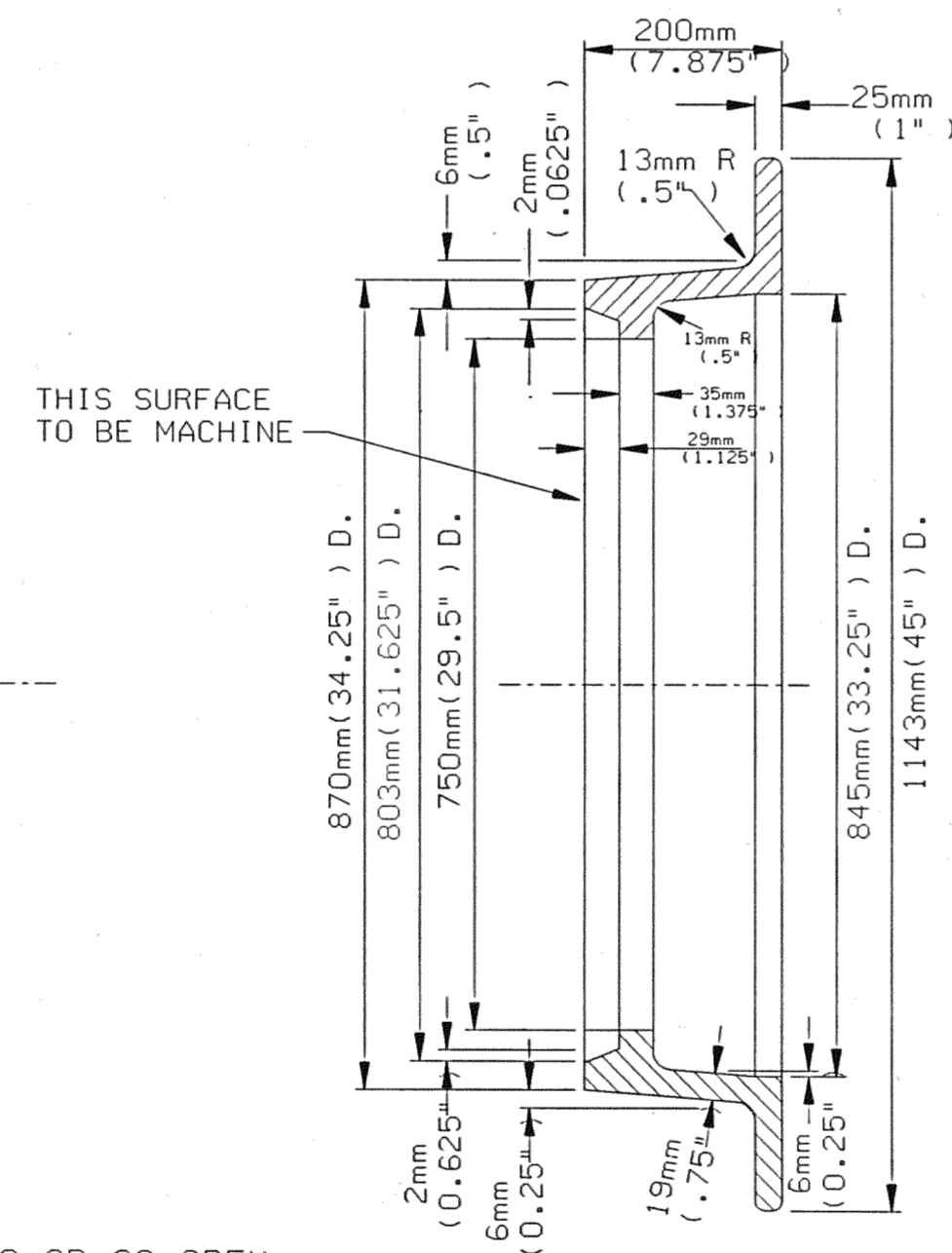
N.T.S.

MANHOLE COVER
N.T.S.



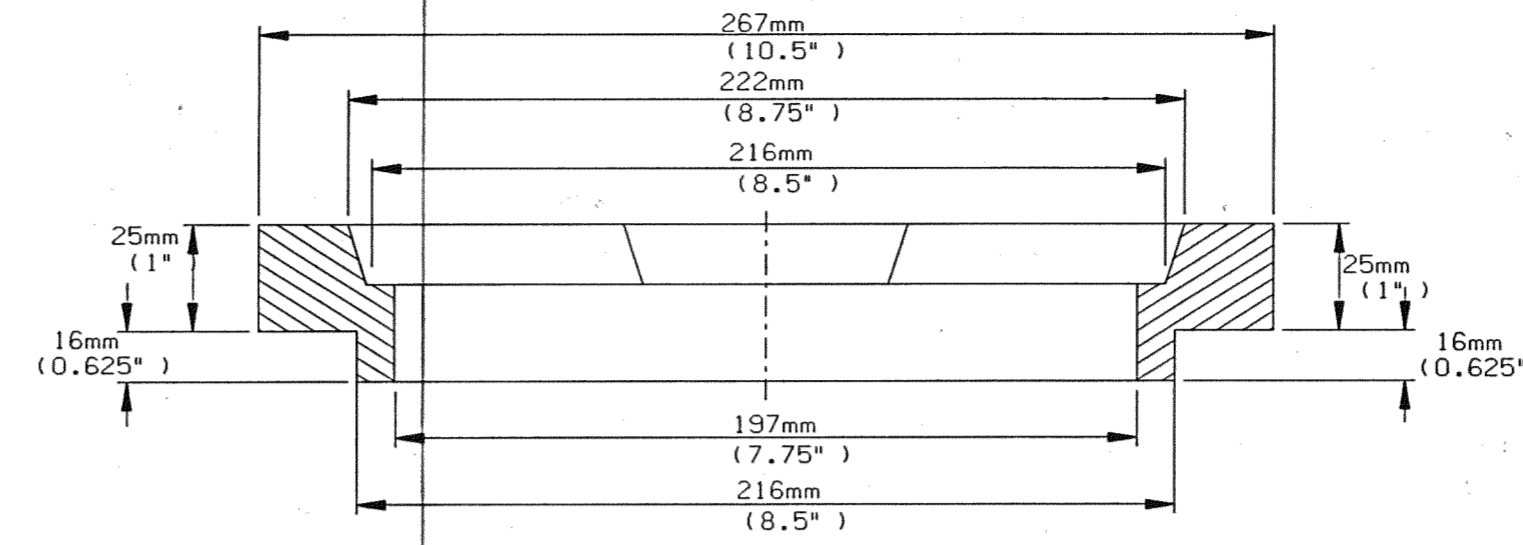
A.S.T.M. CLASS 20 OR 30 GREY
IRON P.L.C. PATT. NO. 417 APPROX.
WT. -186kg(410lb)

MANHOLE FRAME
N.T.S.



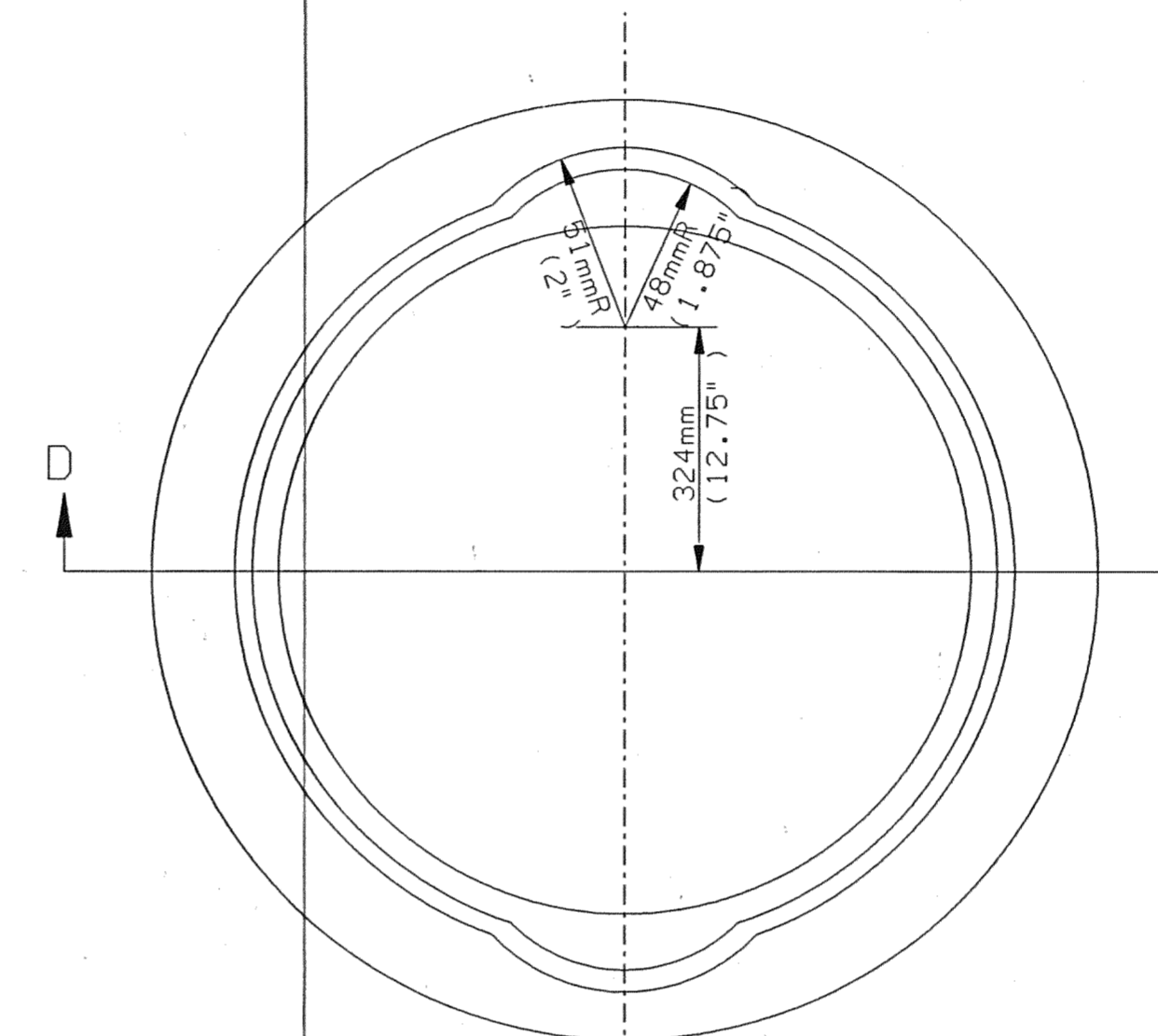
SECTION "C-C"

N.T.S.



SECTION D-D

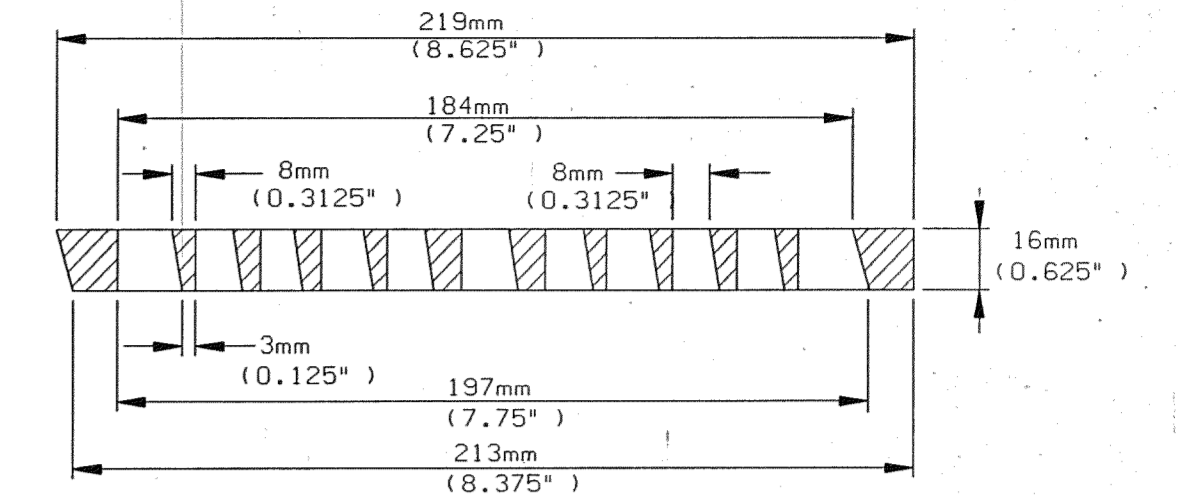
N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY
IRON P.L.C. PATT. NO. 318-A
APPROX WT-4.08lb(9lb)

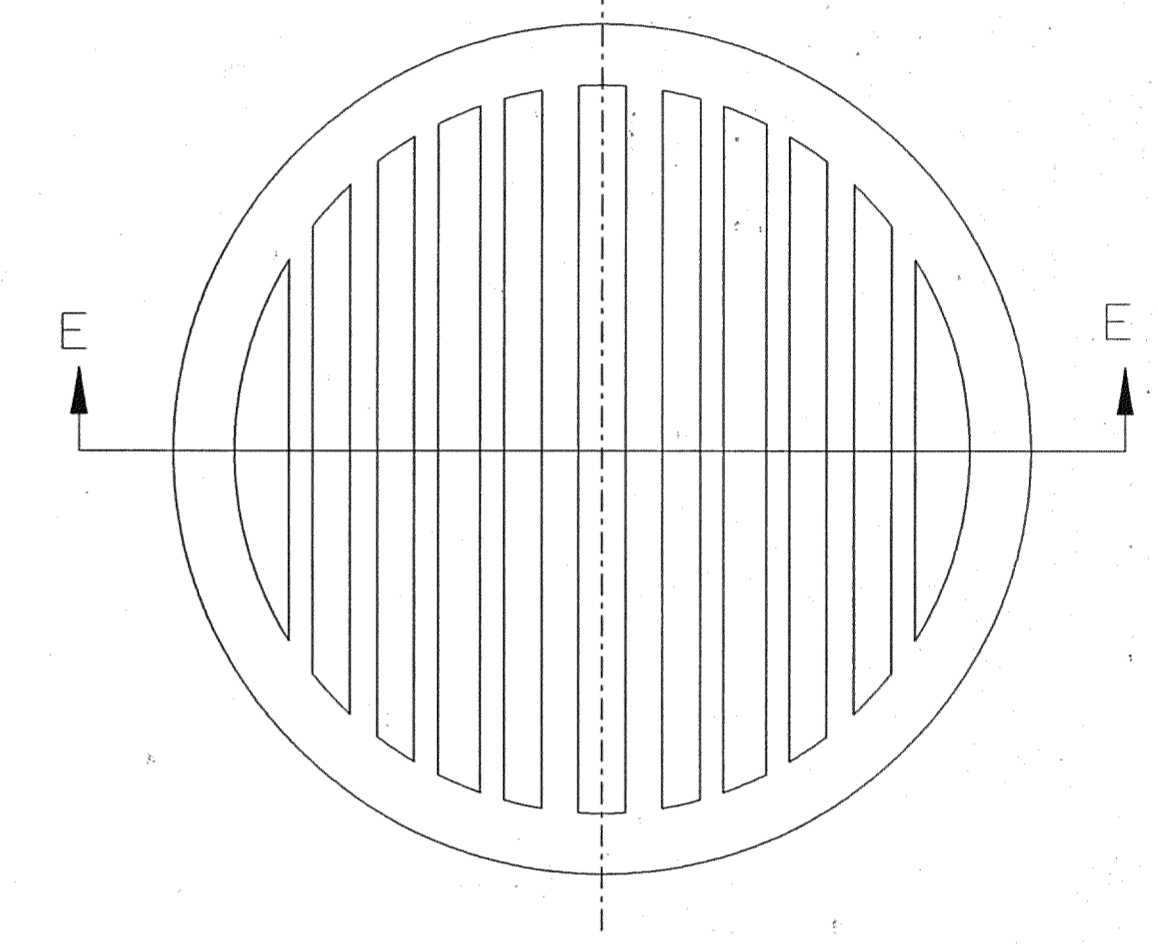
SEWER RING

N.T.S.



SECTION E-E

N.T.S.



A.S.T.M. CLASS 20 OR 30 GREY
IRON P.L.C. PATT. NO. 318
APPROX WT-2.04lb(4.5lb)

SEWER GRATE

N.T.S.

DISK FILE: 108PLDMTR

REV	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

MANHOLE FRAMES & COVERS - SEWER GRATE & RING

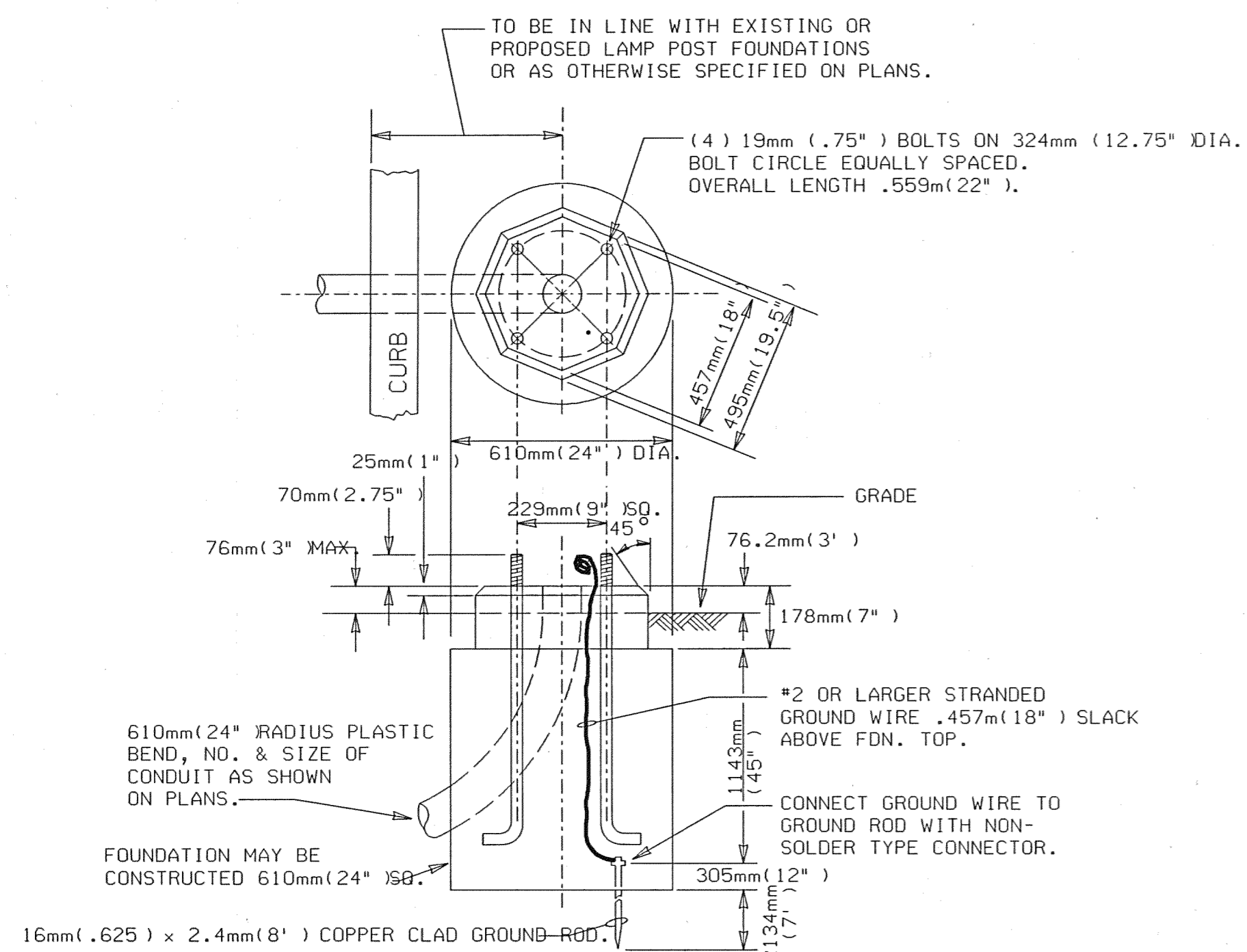
Job No.
49717A

MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

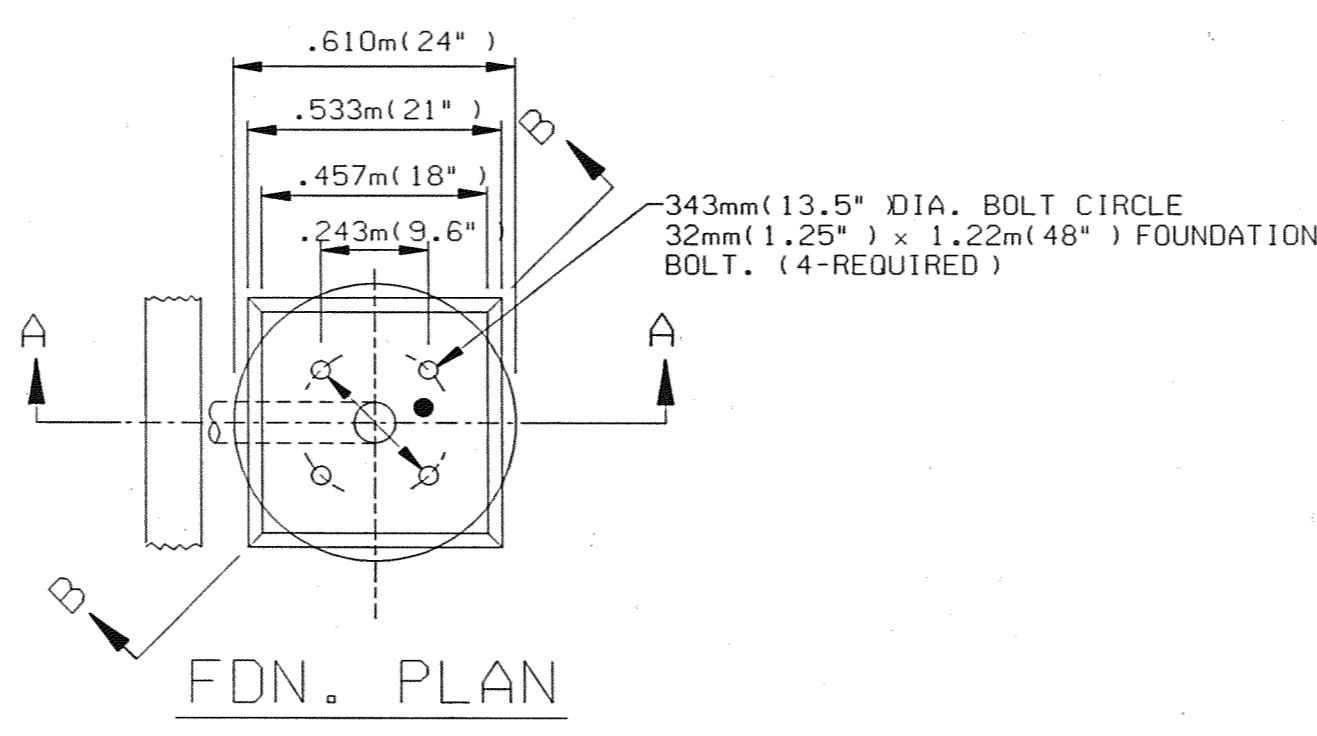
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Checked by	13 OF 25	Checked by
File No.	M4044	Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

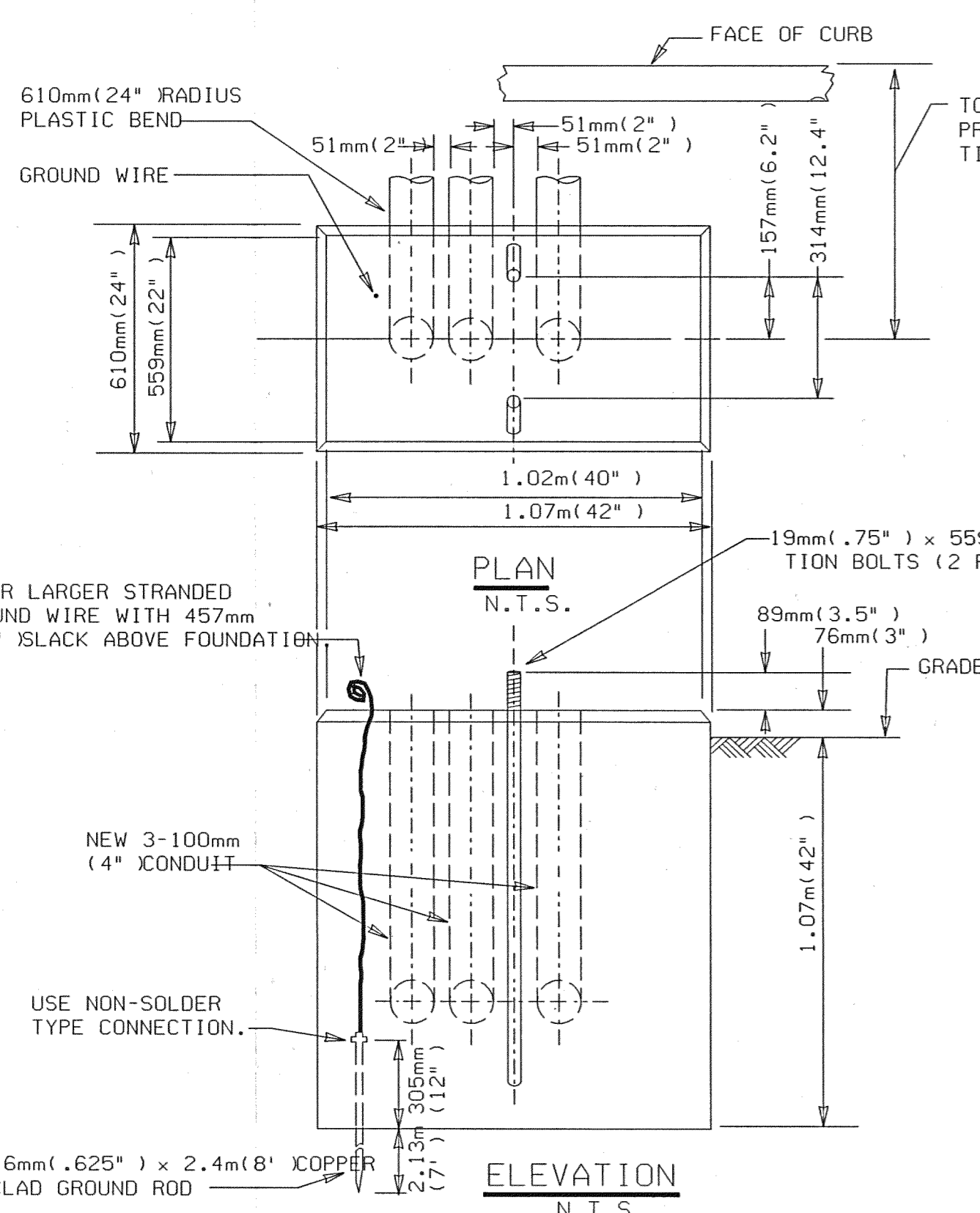
108
27-1104
Sheet No.
33
Date
02-11-05



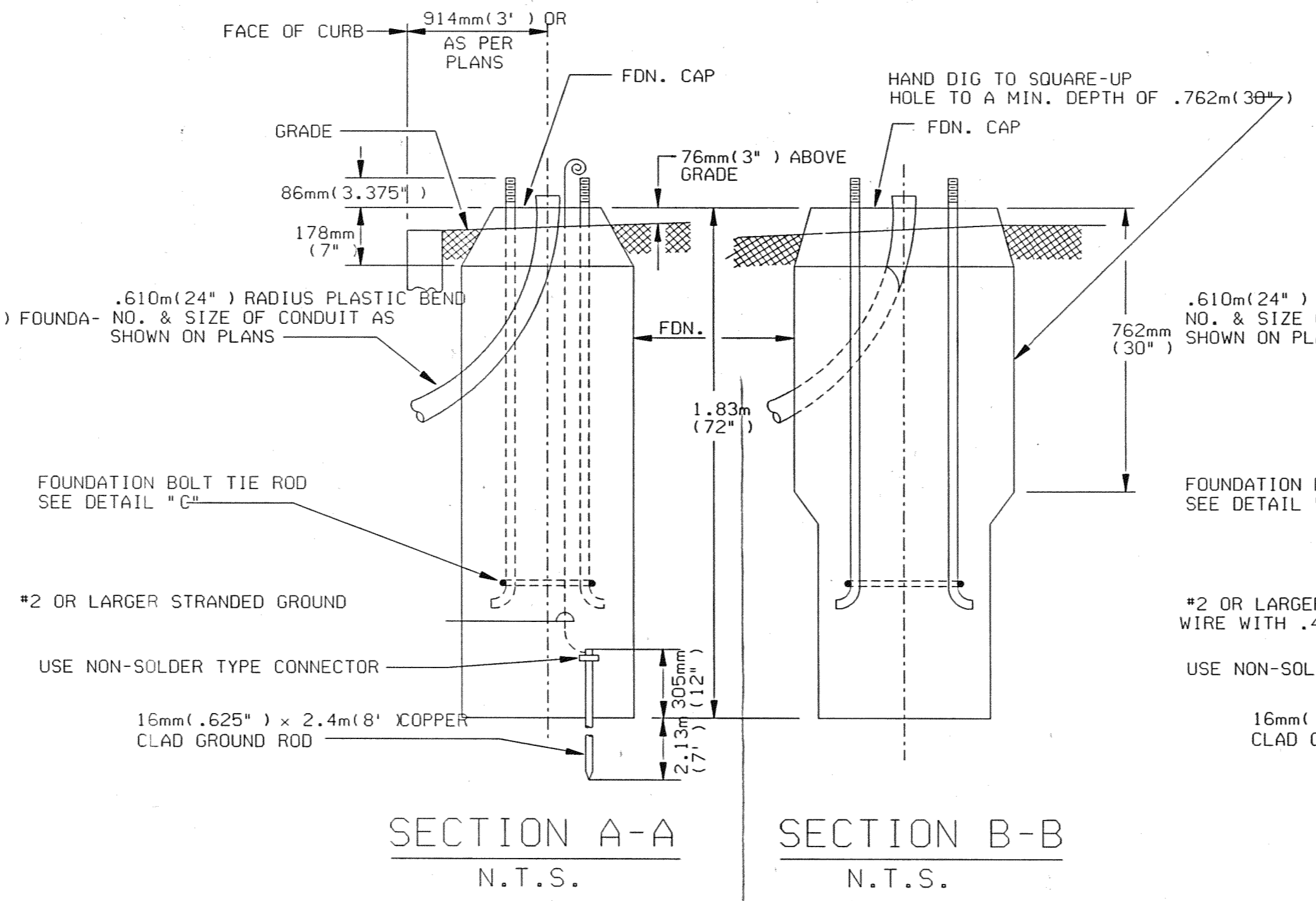
FDN. FOR OCTAGON BASE PEDESTAL FOR TRAFFIC SIGNALS OR CONTROLLER
N.T.S.



FDN. PLAN

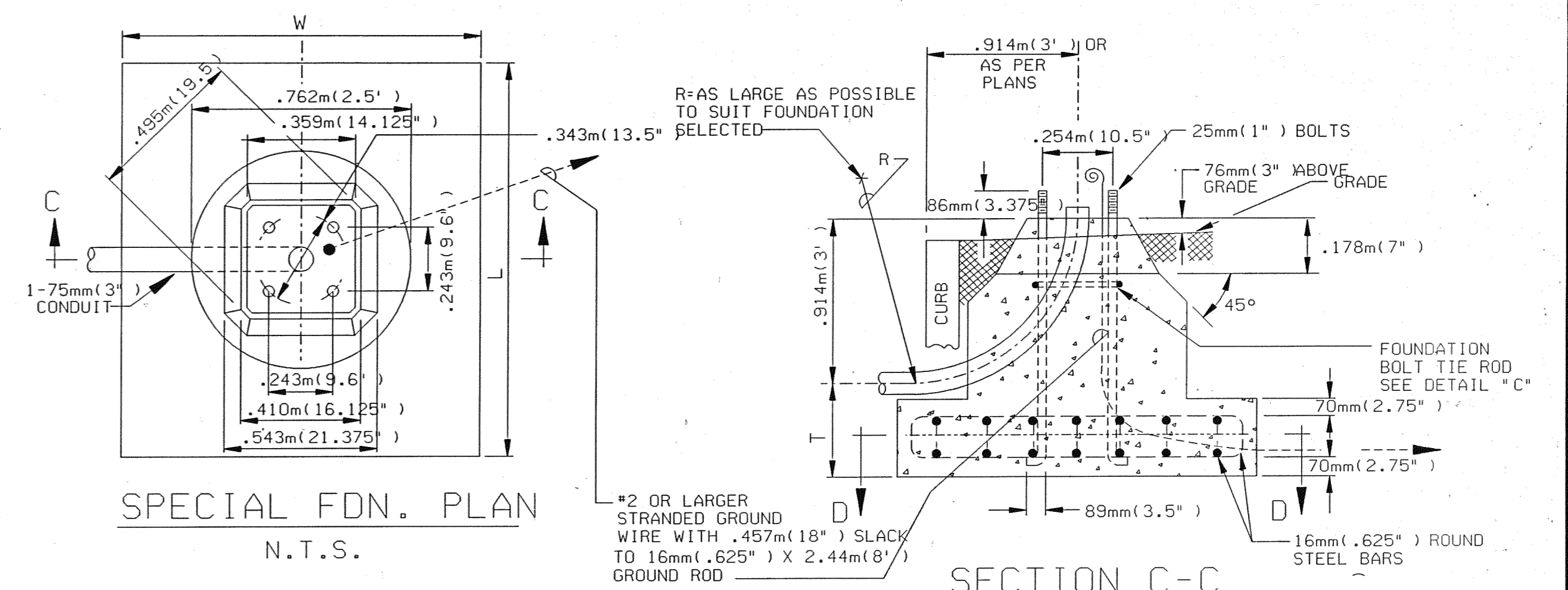


FOUNDATION FOR BASE MOUNTED T.S. CONTROLLER & CABINET (M-36)
N.T.S.



SECTION A-A SECTION B-B
N.T.S. N.T.S.

ANCHOR BASE STD. FOUNDATION
CODE 118-06, 119-06, 117-10-10

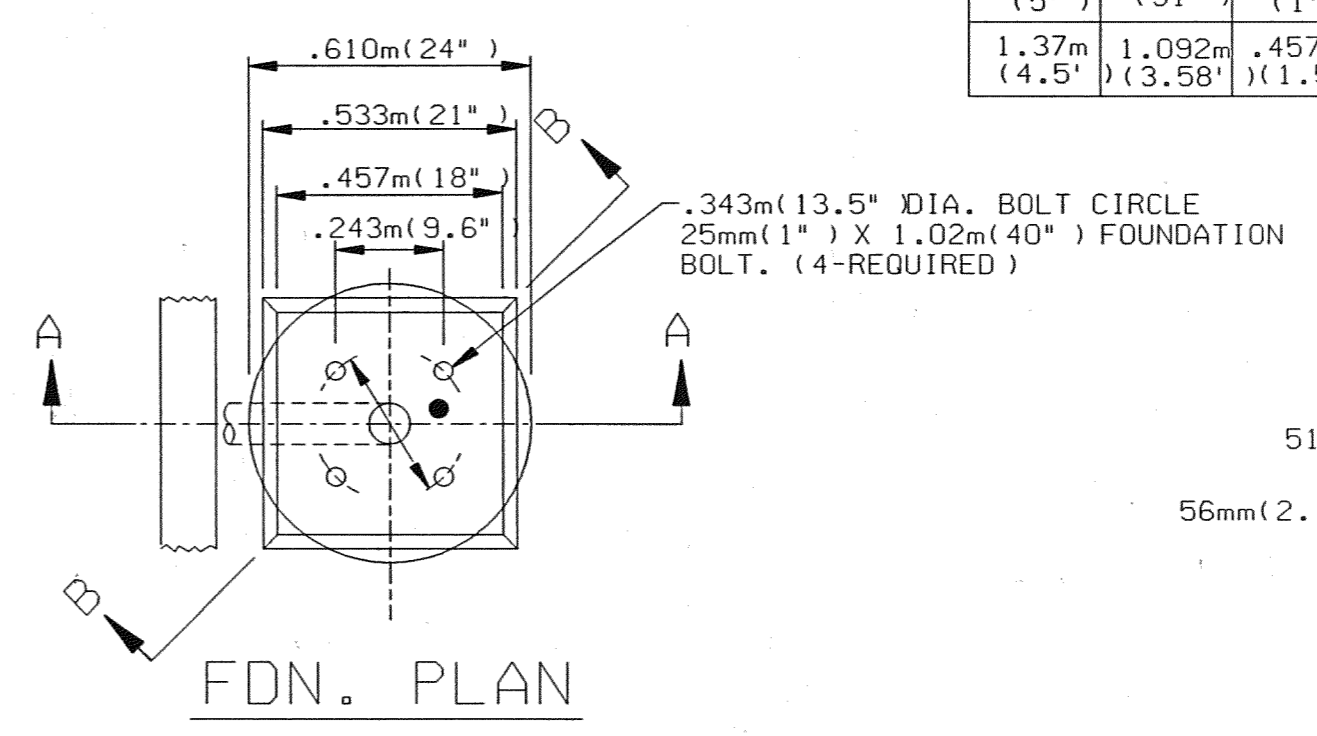


SPECIAL FDN. PLAN
N.T.S.

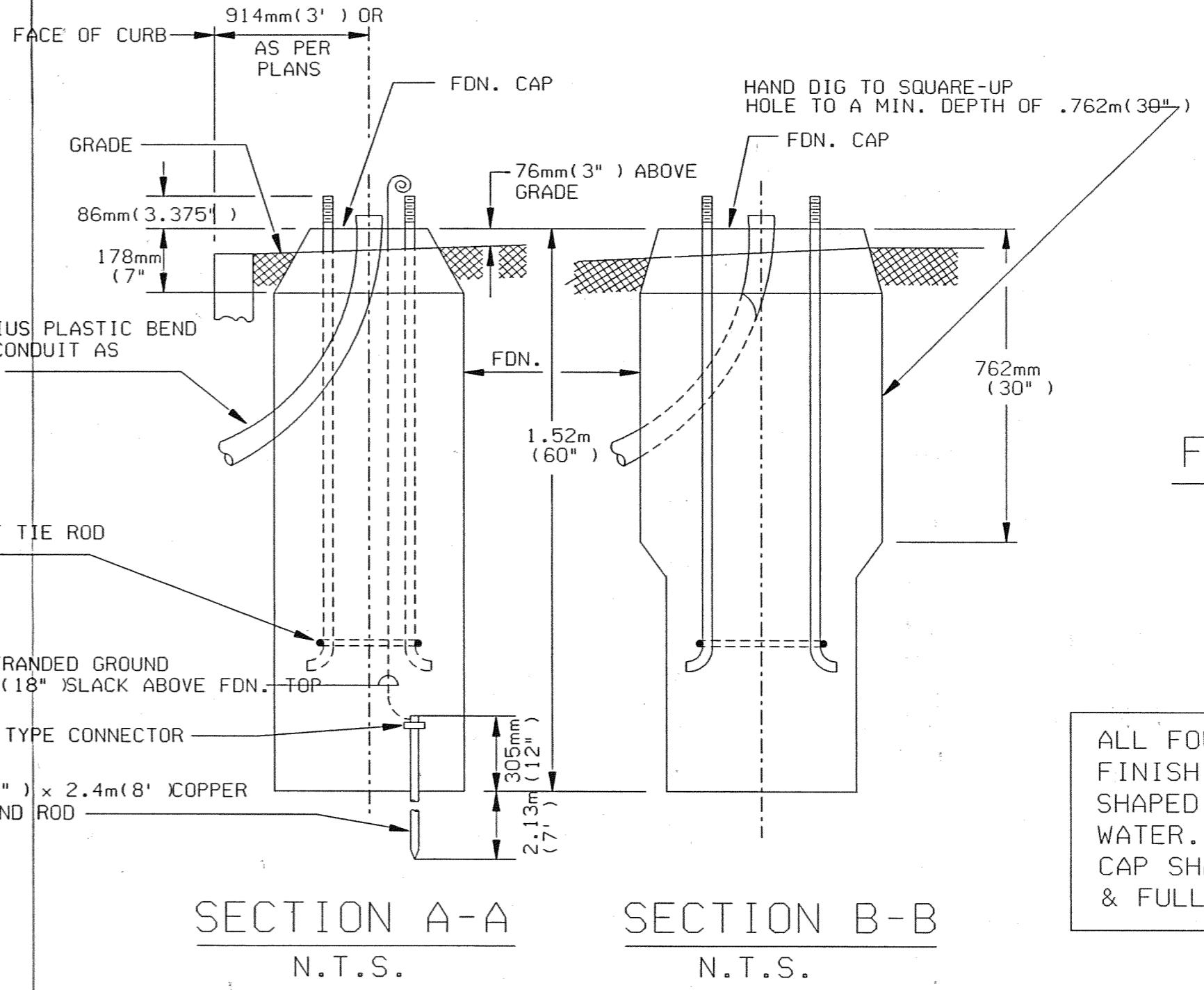
SPECIAL FOUNDATION

THERE SHALL BE NO EXTRA PAYMENT FOR SPECIAL FDN.
(TO BE PAID FOR AS A NORMAL ST. LTG. STD. FDN. INSTALLATION)

L	W	T
1.52m (5')	1.3m (51')	.305m (1')
1.37m (4.5')	1.092m (3.58')	.457m (1.5')

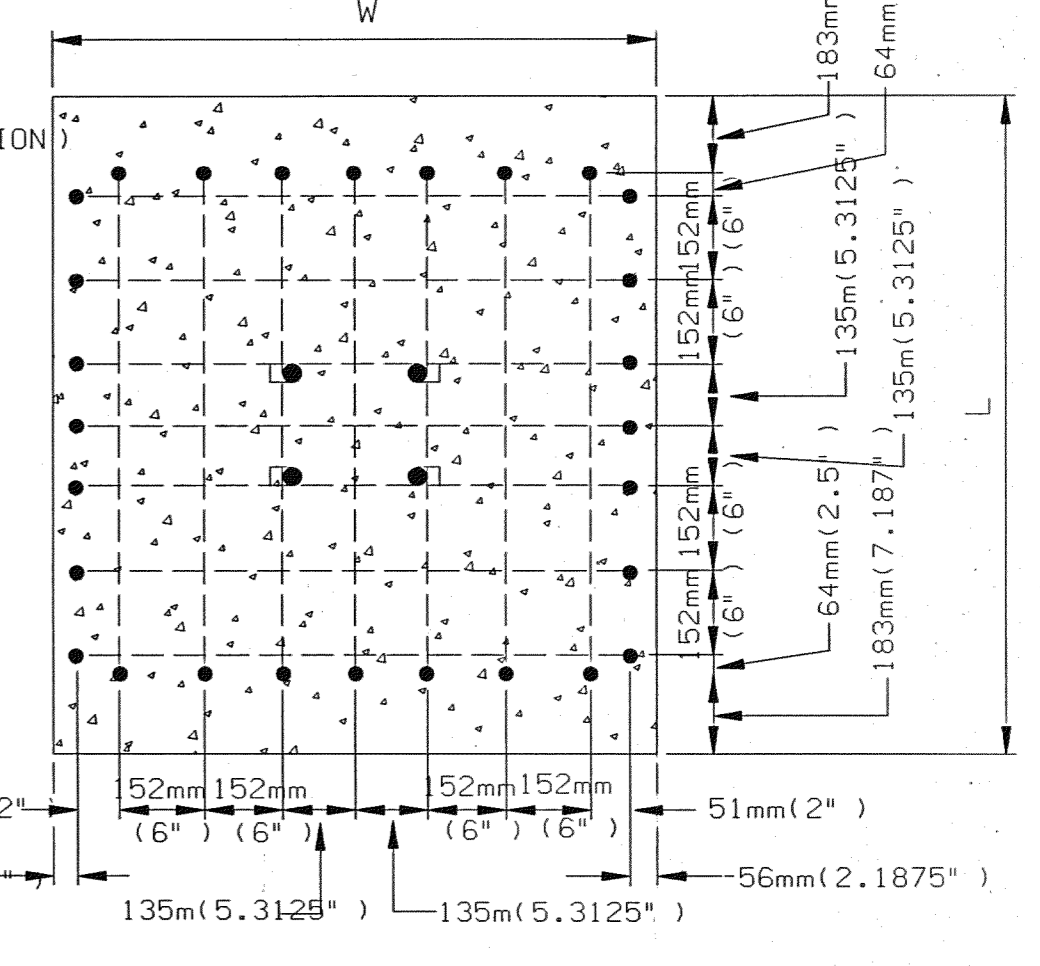


FDN. PLAN

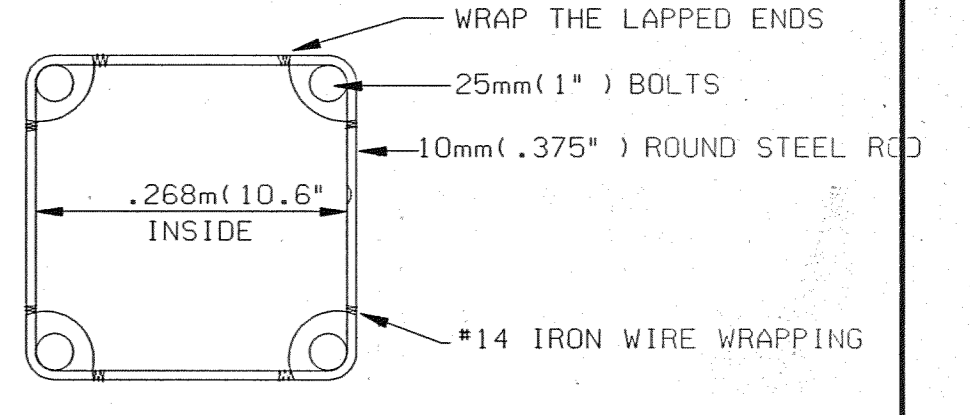


SECTION A-A SECTION B-B
N.T.S. N.T.S.

ANCHOR BASE STD. FOUNDATION
CODE 009-00, 010-06, 116-02



SECTION D-D
N.T.S.



DETAIL "C"
FDN. BOLT TIE ROD
N.T.S.

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.

DISK FILE: 109PLDM.MTR

REVISIONS	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

FOUNDATIONS

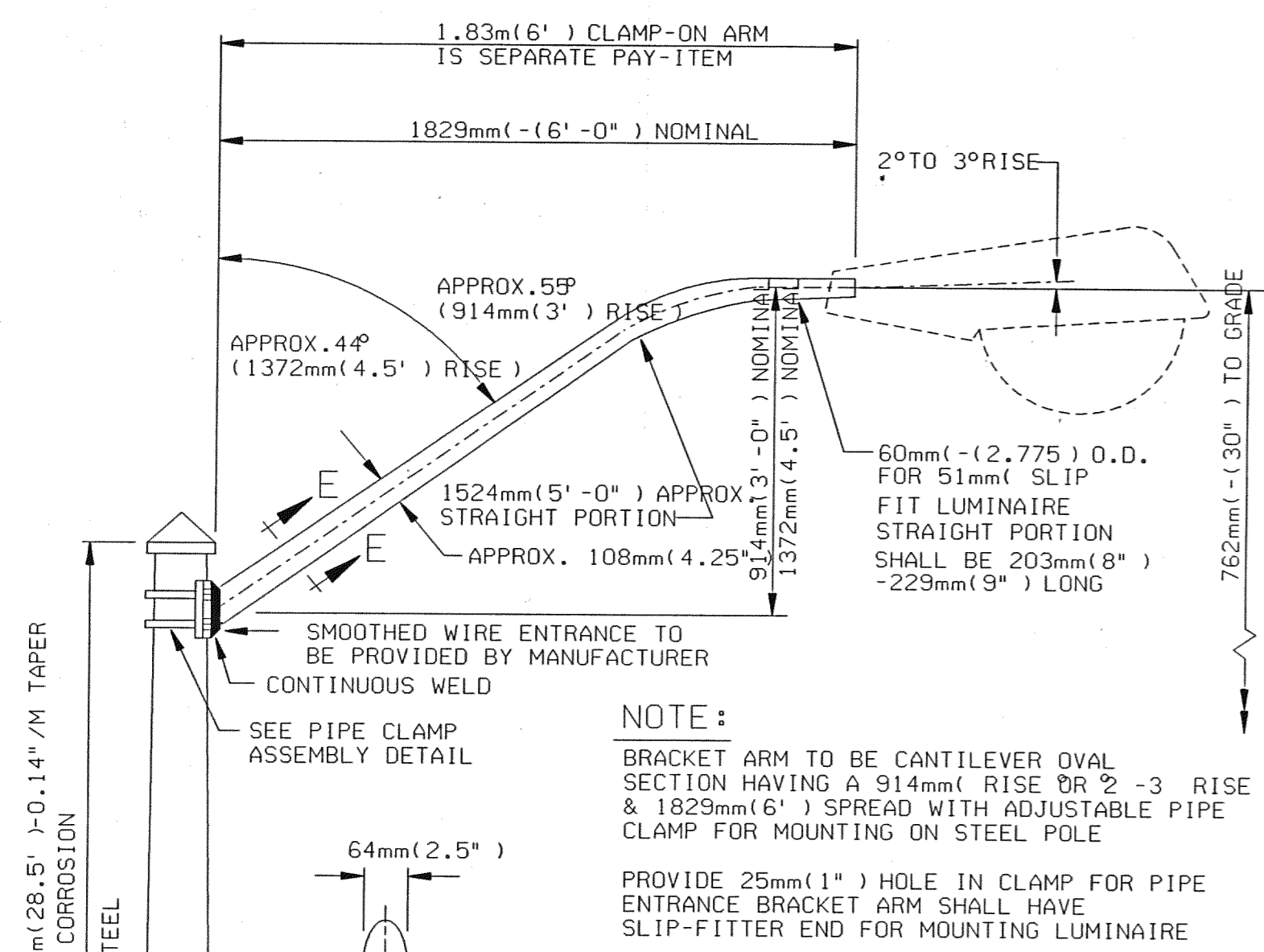
MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Job No.
49717A

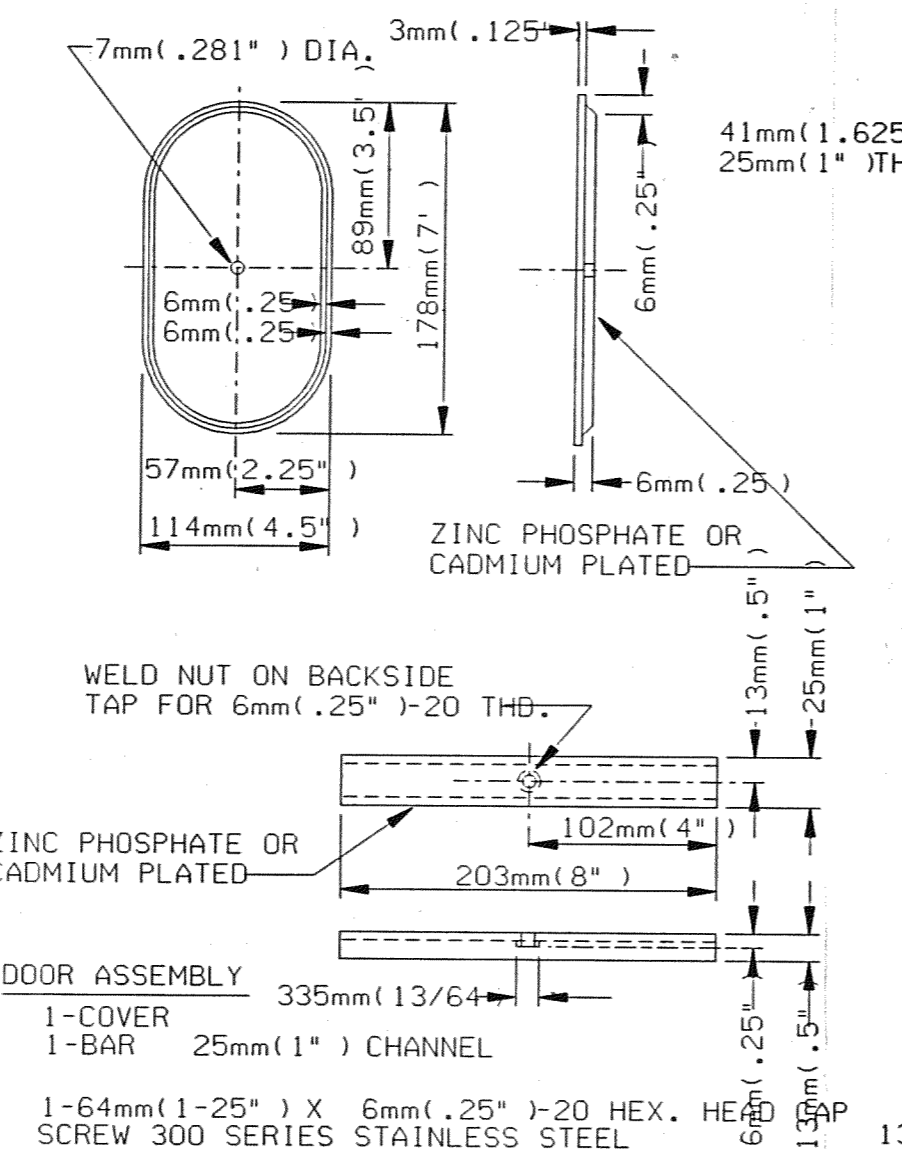
Drawn M.A.I.	Scale
Checked	No Scale
Dwg. No.	Checked by
14 OF 25	Approved by
File No.	
M4044	

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

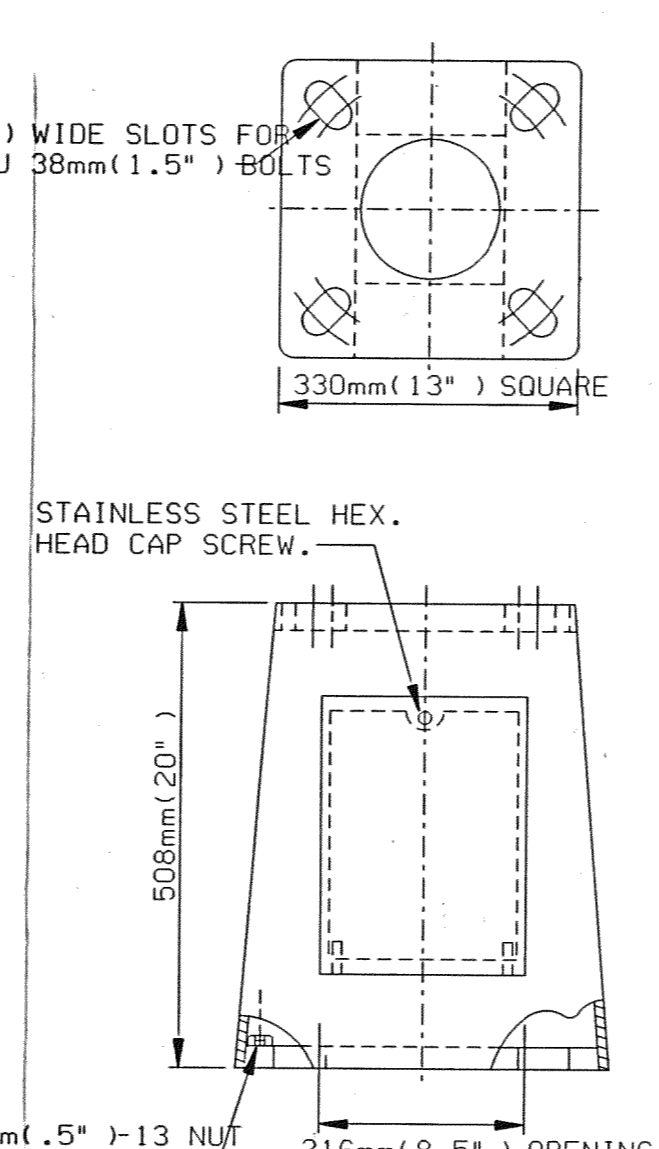
27-1104
Sheet No.
34
Date
02-11-05



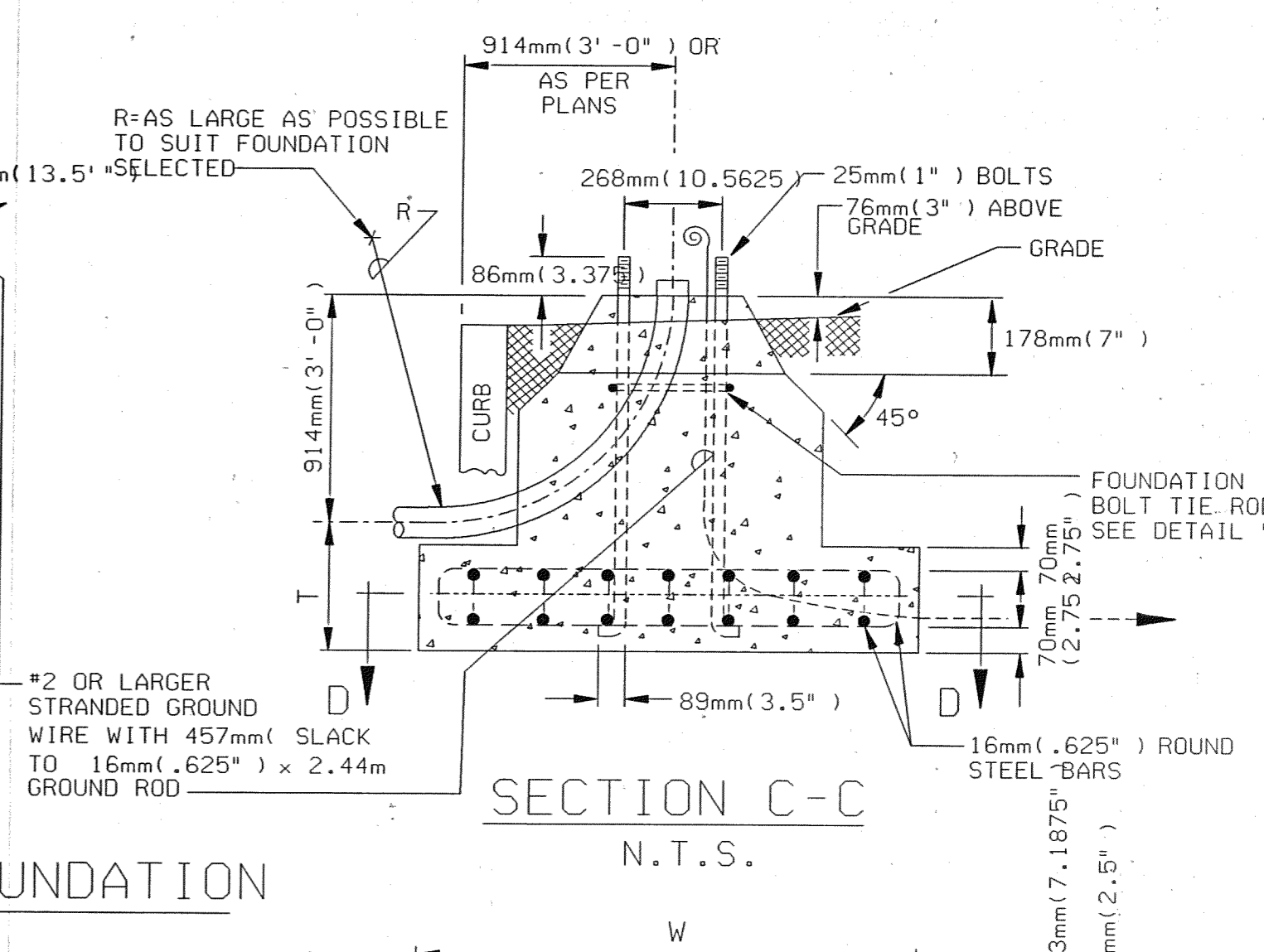
6 FT. CLAMP-ON BRACKET ARM
N.T.S.



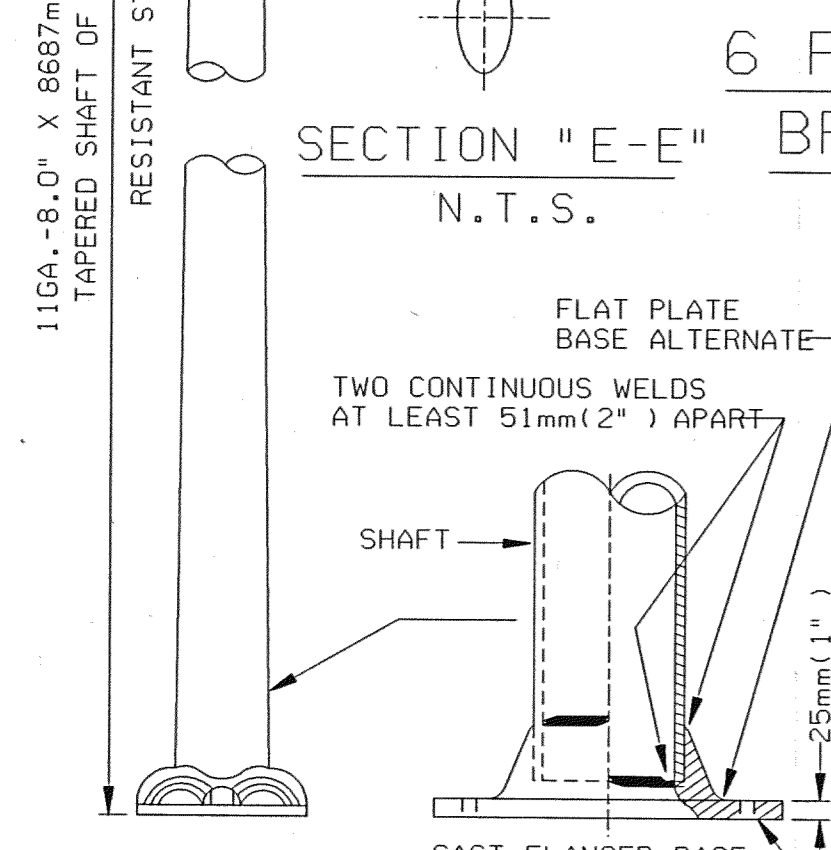
HANDHOLE COVER DETAIL
N.T.S.



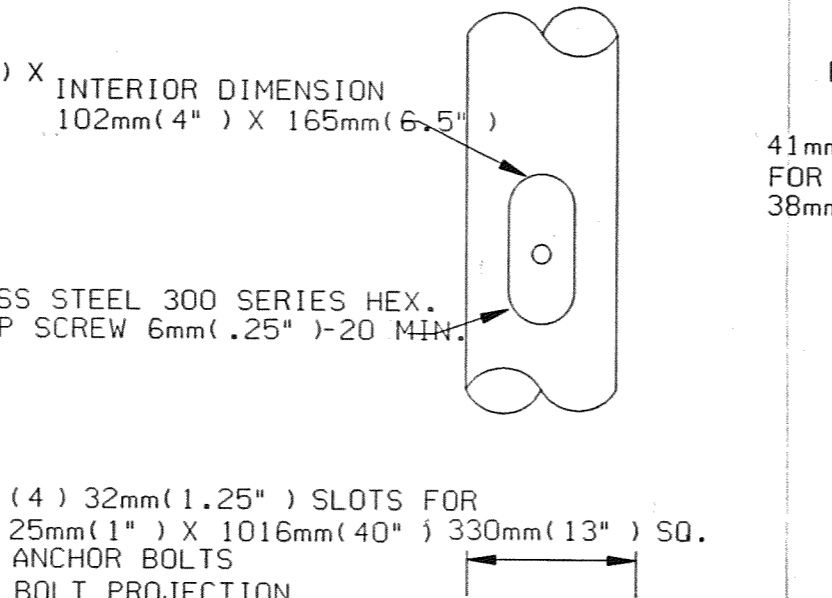
SPECIAL FDN. PLAN
N.T.S.



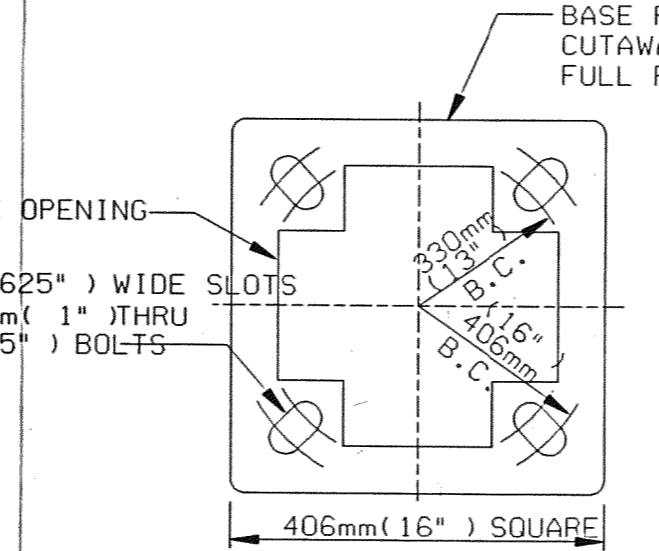
SECTION C-C
N.T.S.



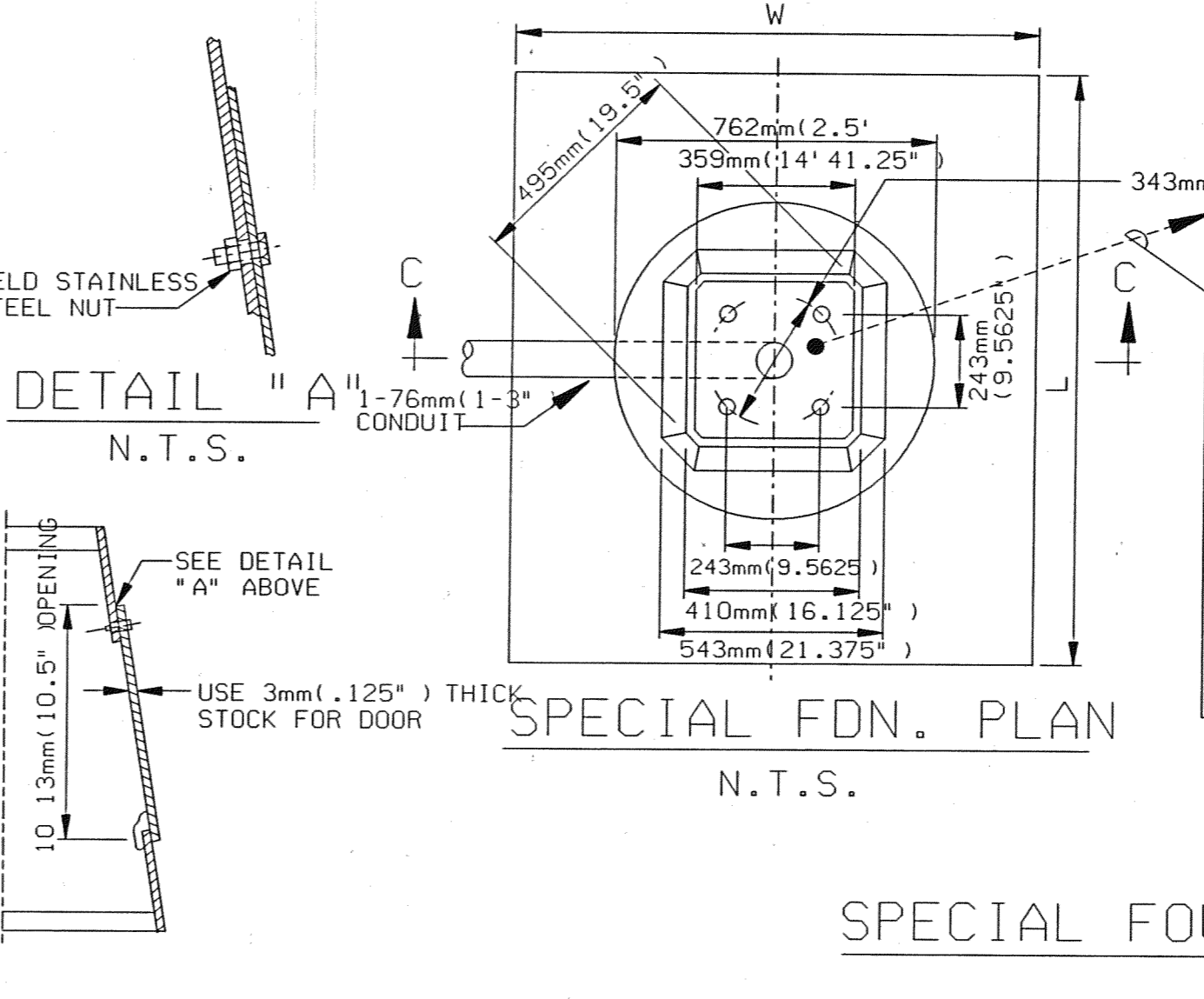
SHAFT MODIFICATION
N.T.S.



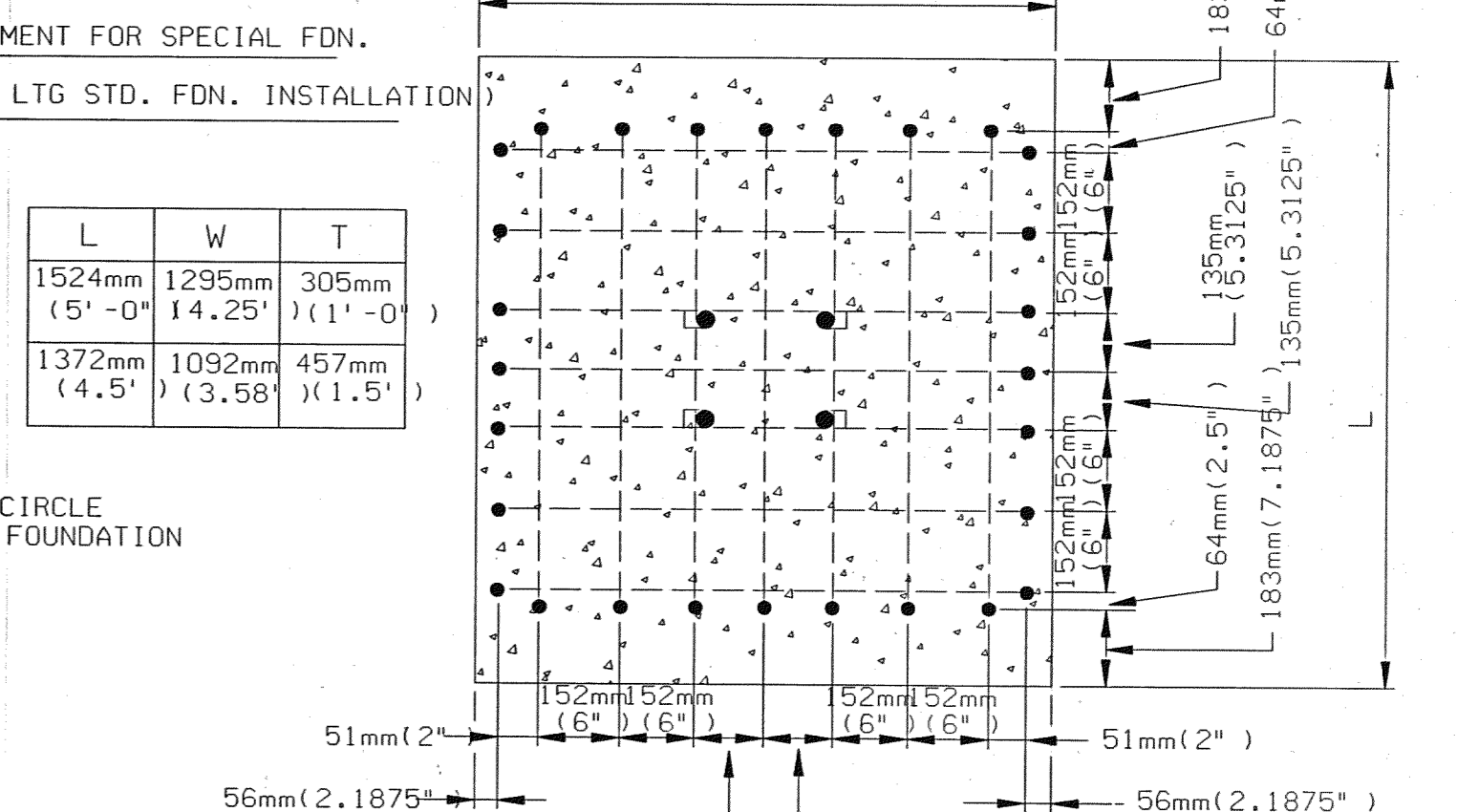
BASE PLATE PLAN
N.T.S.



P.L.D. UNIVERSAL STEEL TRANSFORMER BASE
N.T.S.

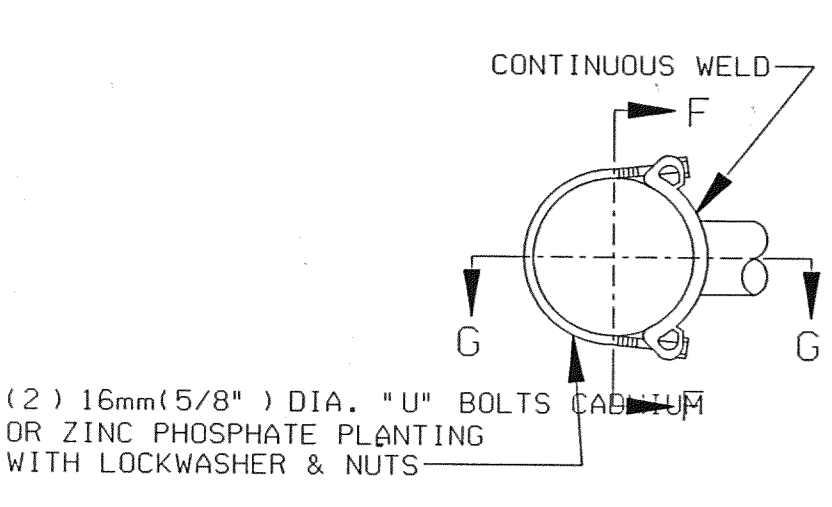


SPECIAL FOUNDATION
N.T.S.



SECTION D-D
N.T.S.

CODE 009-00
STREET LIGHTING STANDARD
N.T.S.



SECTION "G-G"
N.T.S.

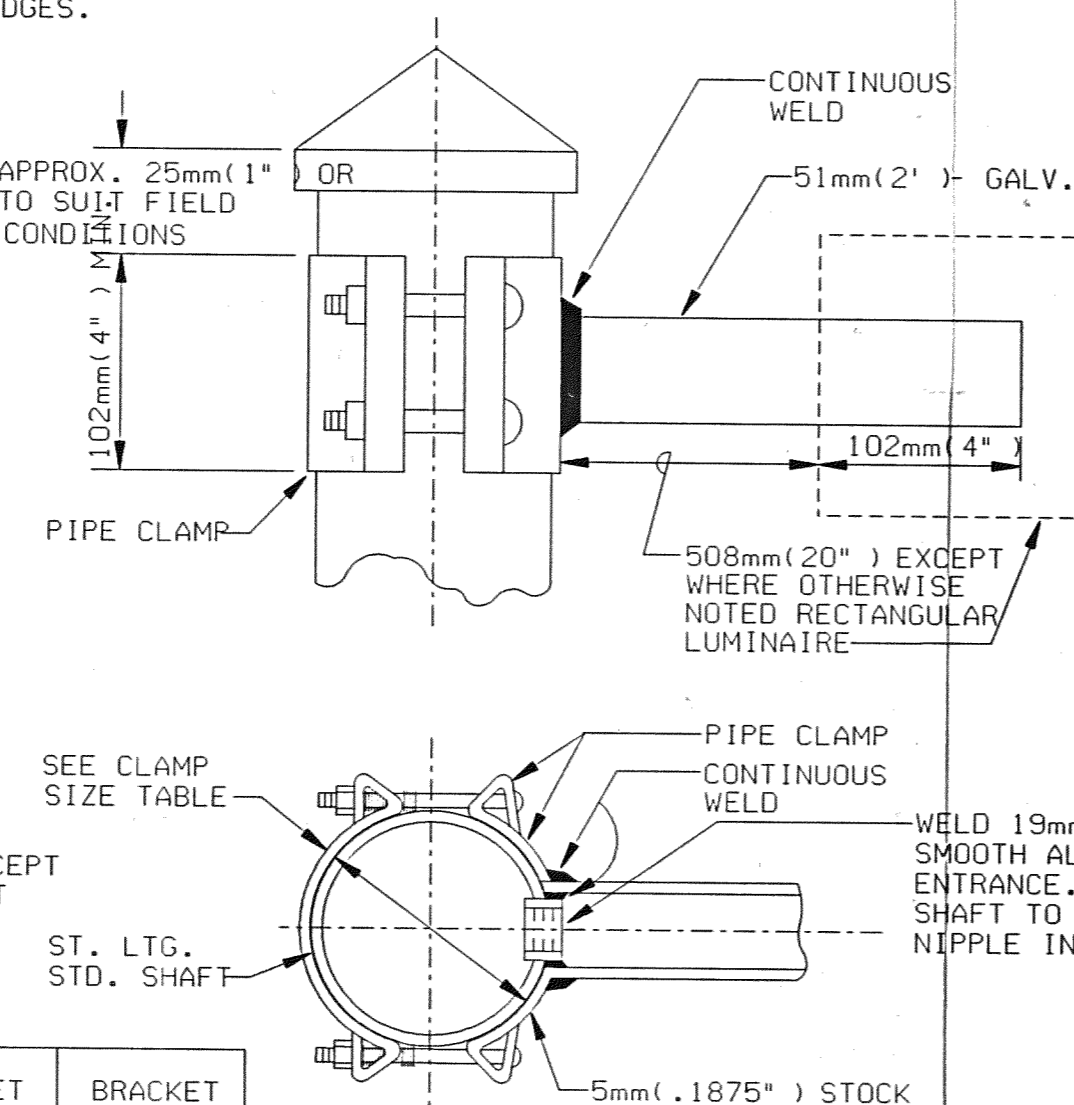
SEE CLAMP SIZE TABLE BELOW

TYPE	POLE DIAMETER
A	91mm (3.6") - (4.5")
B	155mm (6.1") - (6.9")
C	191mm (7.5") - (8.5")

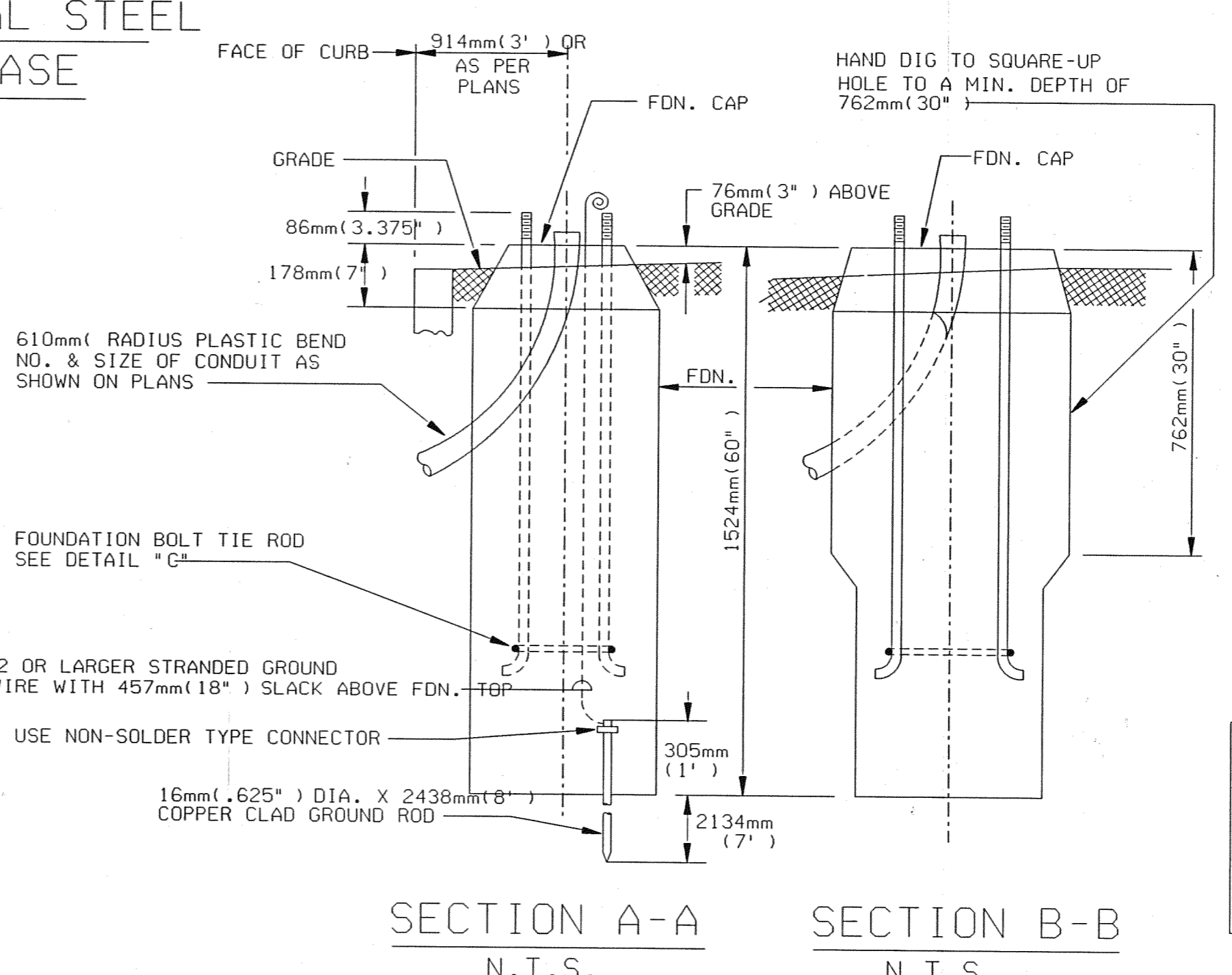
CLAMP SIZE TABLE

PIPE CLAMP DETAILS
N.T.S.

SECTION "F-F"
N.T.S.

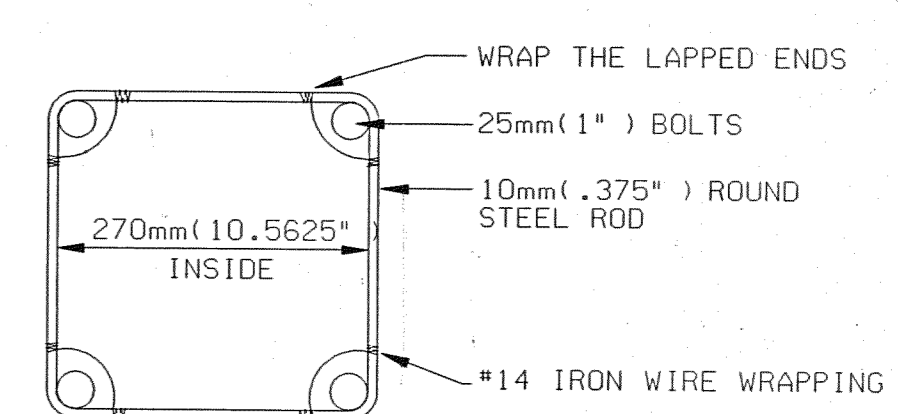


CLAMP-ON BRACKET & RECTANGULAR LUMINAIRE
N.T.S.



SECTION A-A SECTION B-B
N.T.S. N.T.S.

ANCHOR BASE STD. FOUNDATION



DETAIL "C"
N.T.S.

FDN. BOLT TIE ROD
N.T.S.

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.

STD. CODE NO.	SHAFT LENGTH	SHAFT DEFLECTION	MINIMUM LOAD	ANCHOR BOLT CIRCLE Ø	ANCHOR BOLT Ø & O.A.	HANDHOLE	LUMINAIRE MOUNTING HEIGHT	BRACKET FITTERS REQ'D	BRACKET LENGTH
009-00	8687mm (28.5')	74mm (2.9")	880*	343mm (13.5")	25mm (1") x 1016mm (40")	1165mm (6.5')	14m (30')	—	1.83m (6')

* SHAFT DEFLECTION: SHAFT DEFLECTION MEASURED IN INCHES AT TOP, SHALL NOT BE GREATER THAN THAT SHOWN, FOR A HORIZONTAL LOAD OF 100 LBS. APPLIED 18 INCHES BELOW TOP OF SHAFT.

** SHAFT LOADING: SHAFTS SHALL WITHSTAND, AT THE GUARANTEED MINIMUM YIELD STRENGTH OF THE SHAFT MATERIAL, THE LOADS SHOWN IN THIS TABLE, THE LOAD SHALL BE APPLIED IN A SINGLE HORIZONTAL DIRECTION ANYWHERE AROUND THE CIRCUMFERENCE OF SHAFT 18 INCHES FROM THE TOP.

DISK FILE: HSPDLDM.MTR

REV.	Date	Description	Chkd. by

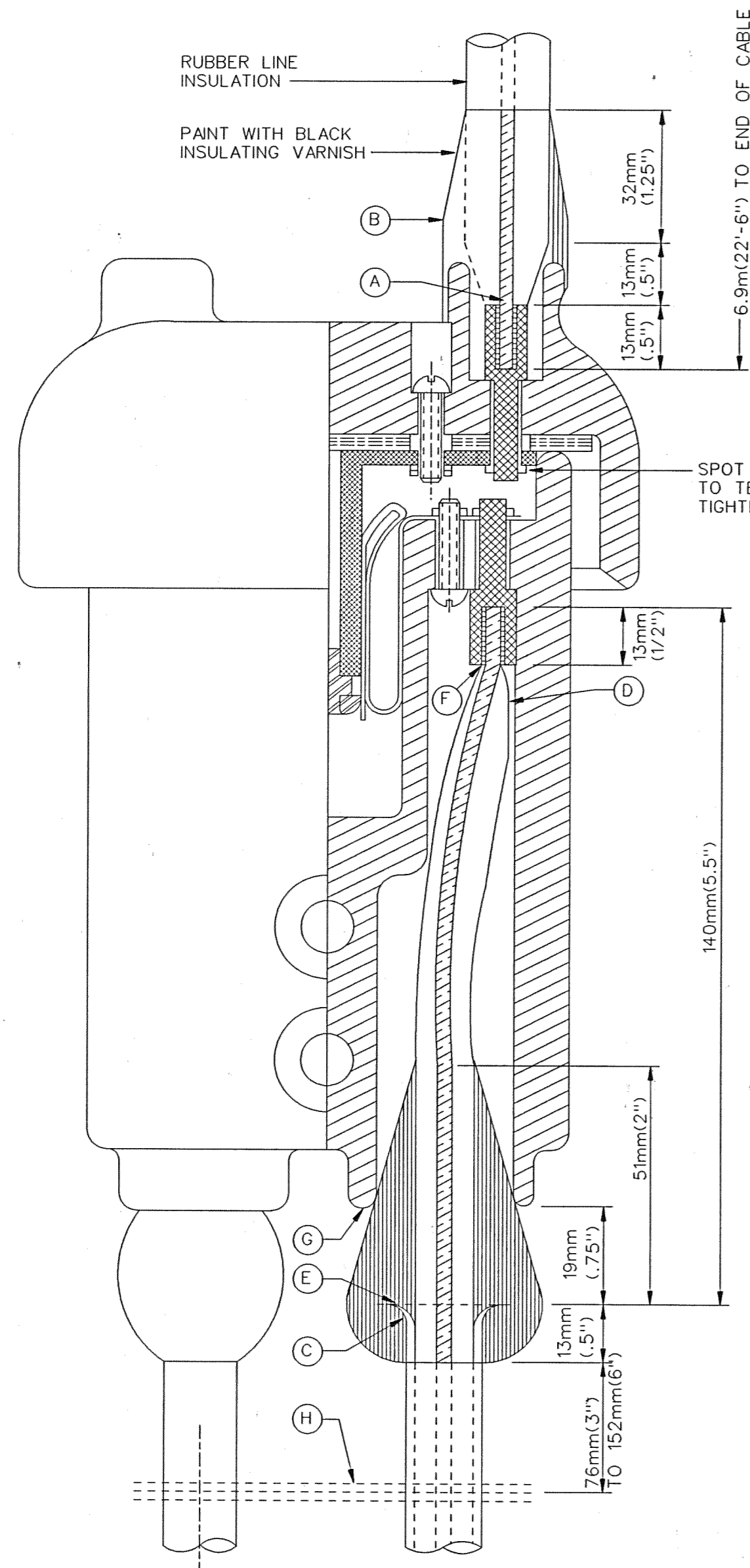
JEFFERSON AVE OVER DEQUINDRE CUT
ANCHOR BASE ST.LTG.STD. (CODE 009-00)

MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn M.A.I.
Checked
Drwg. No. 15 OF 25
File No. M4044

Scale No Scale
Checked by
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

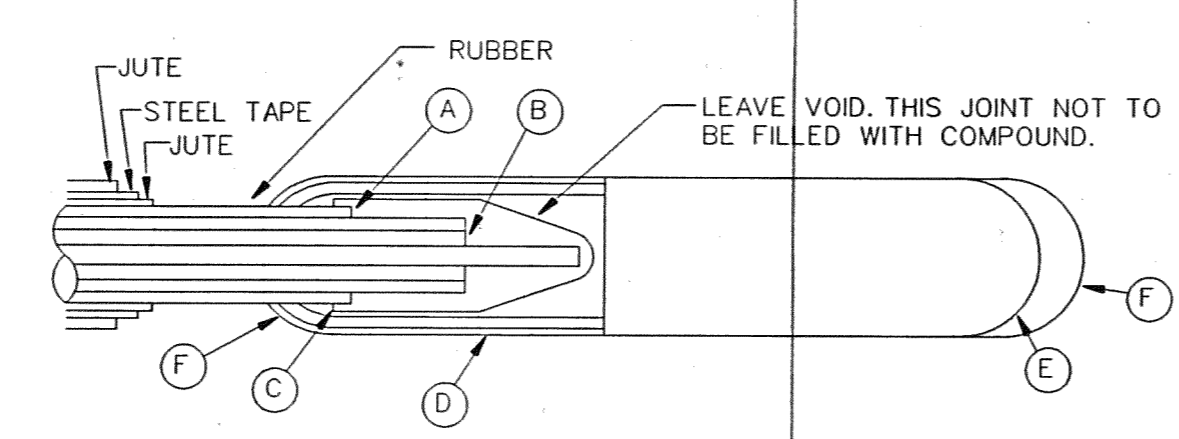
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27-1104
Sheet No. 35
Date 02-11-05



CONNECTION FOR SERIES CUTOUT
N.T.S.

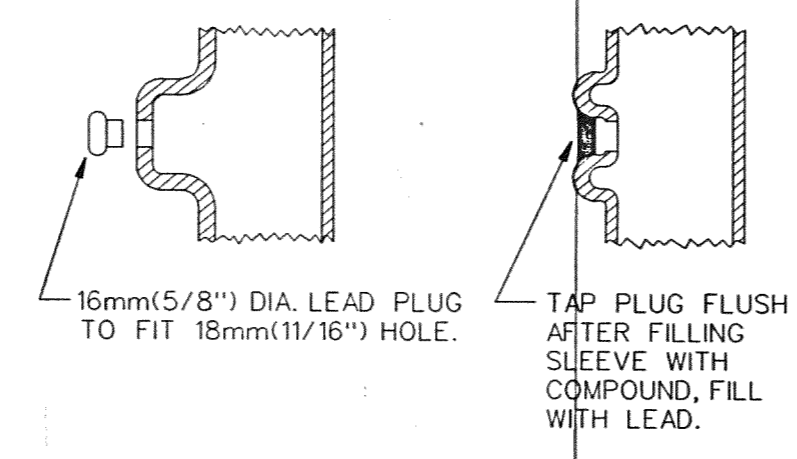
- A - SWEAT TERMINAL & PENCIL RUBBER INSULATION TO FIT SNUGLY IN PORCELAIN CAP OPENING SO THAT THE CONNECTOR NUT IS TIGHTENED, THE OPENING IS COMPLETELY & TIGHTLY FILLED.
- B - BUILD UP WITH #1 TAPE AS SHOWN, & COVER WITH 2 LAYERS, HALF LAP, WITH #2 TAPE. PAINT WITH ONE COAT OF BLACK INSULATING VARNISH.
- C - USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- D - CUT INSULATION & PENCIL SMOOTHLY FOR CONNECTION.
- E - BELL LEAD SHEATH, REMOVE TAPE COMPLETELY, INCLUDING AS MUCH AS CAN BE REMOVED INSIDE OF BELL. FILL SHEATH CAVITY WITH RUBBER CEMENT.
- F - SWEAT CONDUCTOR INTO TERMINAL.
- G - APPLY TAPE #1 OVER BELL AS SHOWN TO FORM A TIGHT FIT BETWEEN INSULATION AND PORCELAIN AT "G" WHEN NUT IS TIGHTENED. COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 APPROX. 19mm (.75") FROM END OF TAPE #1.
- H - #18 SERVICE WIRE OR BRAID 4 WRAPS BETWEEN CABLES & SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE.

NOTE:
1. FOR PARKWAY CABLE, STRIP JUTE & STEEL TAPE DOWNWARD TO DUCT ENTRANCE.
2. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR THE APPLICATION AS SHOWN ON THE DRAWINGS.



#8 LIGHTING CABLE DEAD END CAP

- A - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- B - CUT INSULATION TO EXPOSE 25mm (1") BARE COPPER.
- C - OVERLAP WITH TAPE #2 APPROXIMATELY 6mm (1/4") FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- D - 32mm (1.25") x 203mm (8") x 3mm (1/8") LEAD SLEEVE.
- E - SHAPE AND BEAT LEAD SLEEVE TO FORM A CLOSED END.
- F - CADMIUM ALLOY WIPING METAL. DO NOT POUR METAL FOR WIPE, USE TORCH AND FINGER WIPE MINIMUM OF HEAT.

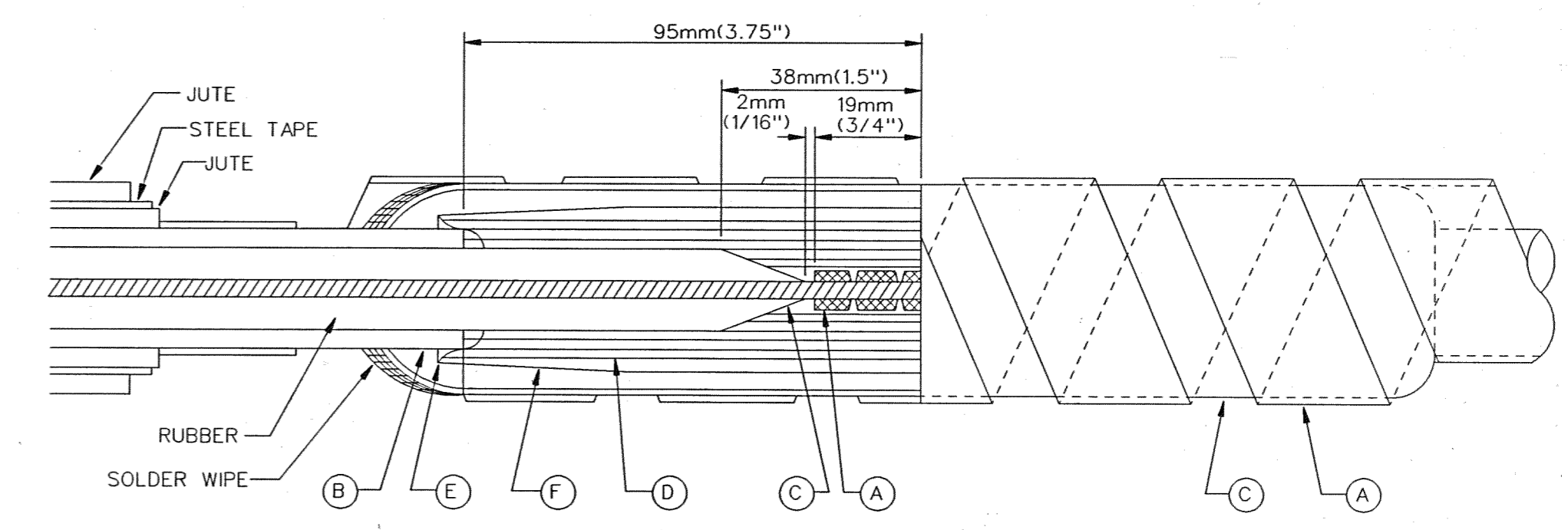
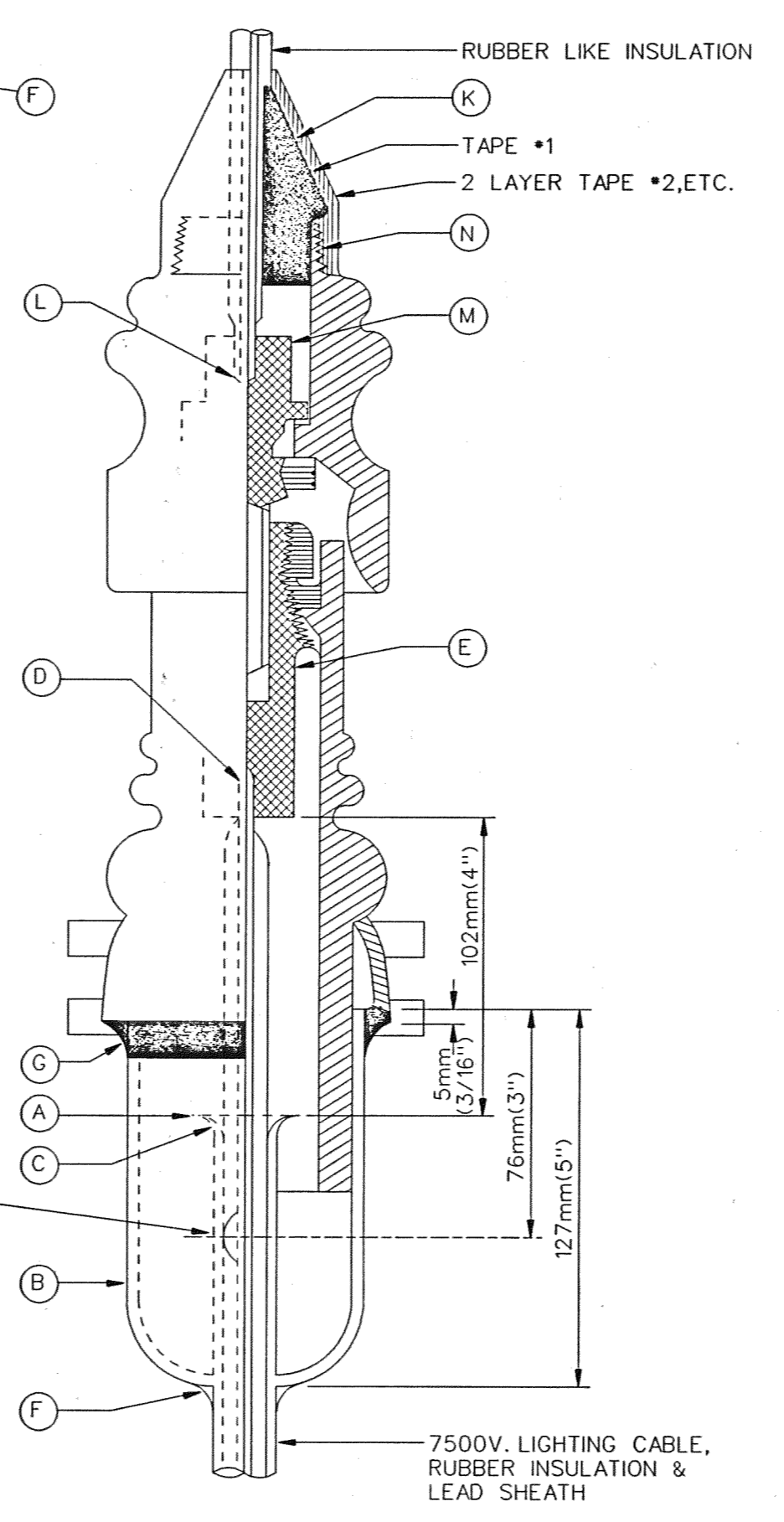


CONNECTIONS FOR 1/C 7500V. POTHEAD
N.T.S.

- A - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 102mm (4") OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
- B - FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE, HOLE IN FRONT.
- C - BELL LEAD SHEATH, REMOVE TAPE FROM INSULATION, INCLUDING AS MUCH AS POSSIBLE FROM WITHIN BELLED SHEATH.
- D - SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 19mm (3/4")
- E - MOUNT TERMINAL FIRMLY INTO PORCELAIN.
- F - PUSH SLEEVE INTO CAST IRON COLLAR AND WIPER SMOOTHLY TO LEAD SHEATH.
- G - INVERT & FILL JOINT BETWEEN IRON COLLAR AND SLEEVE WITH EPOXY RESIN.
- H - LAY POTHEAD HORIZONTAL & FILL COMPLETELY WITH APPROVED COMPOUND.
- I - INSERT LEAD PLUG INTO EMBOSSED HOLE, TAP FLUSH & FILL WITH LEAD
- J - TRAIN CABLE & MOUNT POTHEAD ON CROSS ARM.
- K - SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE RISER.
- L - SWEAT CONDUCTOR INTO TERMINAL FIRMLY INTO POTHEAD CAP.
- M - MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
- N - BUILD UP WITH TAPE #1 AND CARRY 2 LAYERS OVER THE CAP TO POINT "N" AS SHOWN. COVER WITH 2 LAYERS TAPE #2 - HALF LAP. PAINT WITH APPROVED BLACK INSULATING VARNISH.

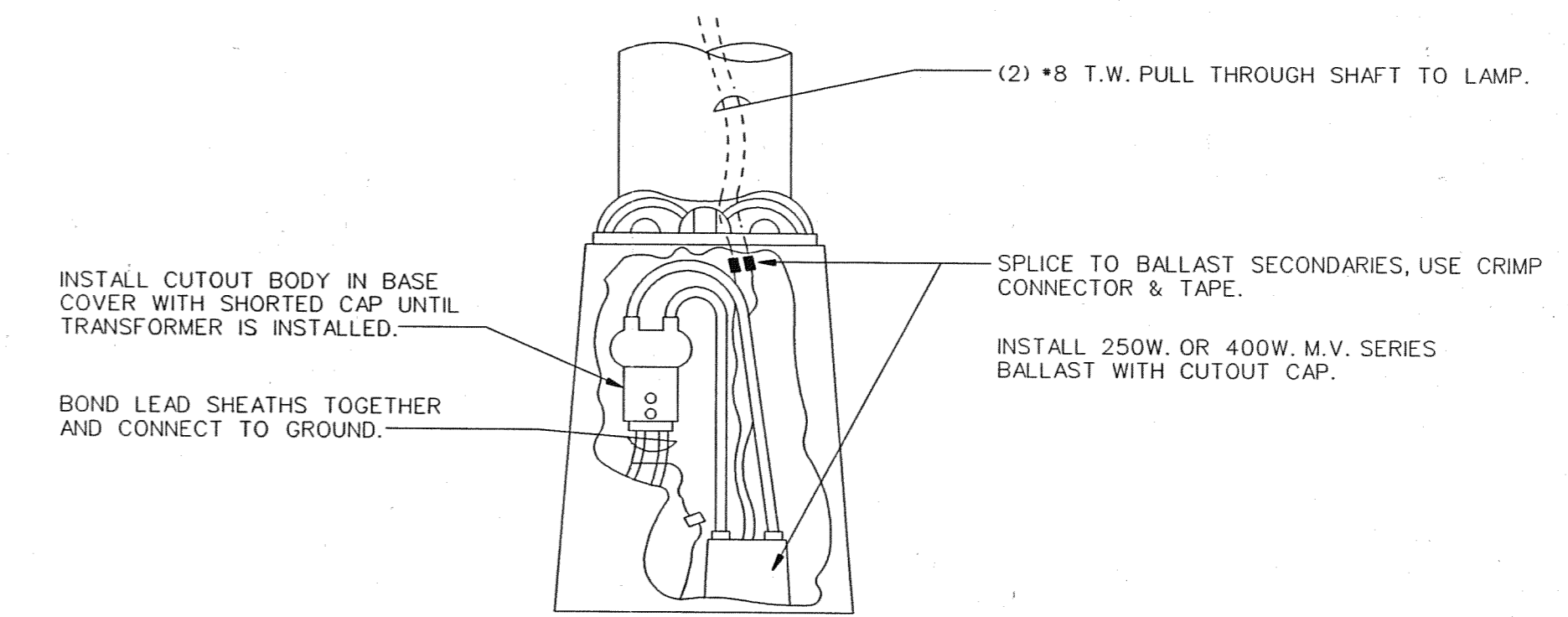
MATERIAL TYPES

TAPE #1 - CORONA RESISTING HIGH VOLTAGE RUBBER TAPE ONLY.
TAPE #2 - BLACK PLASTIC ELECTRICAL TAPE.



#8 LIGHTING CABLE JOINT
N.T.S.

- A - 38mm (1.5") #8 TINNED COPPER SLEEVE, 2 CIRCUMFERENTIAL CRIMPS ON EACH END.
- B - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- C - CUT INSULATION & PENCIL SMOOTHLY AS SHOWN, AFTER REMOVING TAPE.
- D - APPLY TAPE #1 APPROXIMATELY 25mm (1") DIAMETER OVERALL.
- E - OVERLAP WITH TAPE #1 APPROXIMATELY 6mm (1/4") FROM END OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- F - TWO LAYERS OF TAPE #2 APPLIED HALF LAP.
- G - 32mm (1.25") x 203 (8") x 3mm (1/8") LEAD SLEEVE.
- H - TWO LAYERS OF TAPE #2 HALF LAP, ON ARMORED PARKWAY CABLE ONLY.



INCANDESCENT TO MERCURY CONVERSION
N.T.S.

DISK FILE: 20PLDMMTR

REV.	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT
RUBBER INSULATED LEAD SHEATHED SPLICE & CONNECTIONS

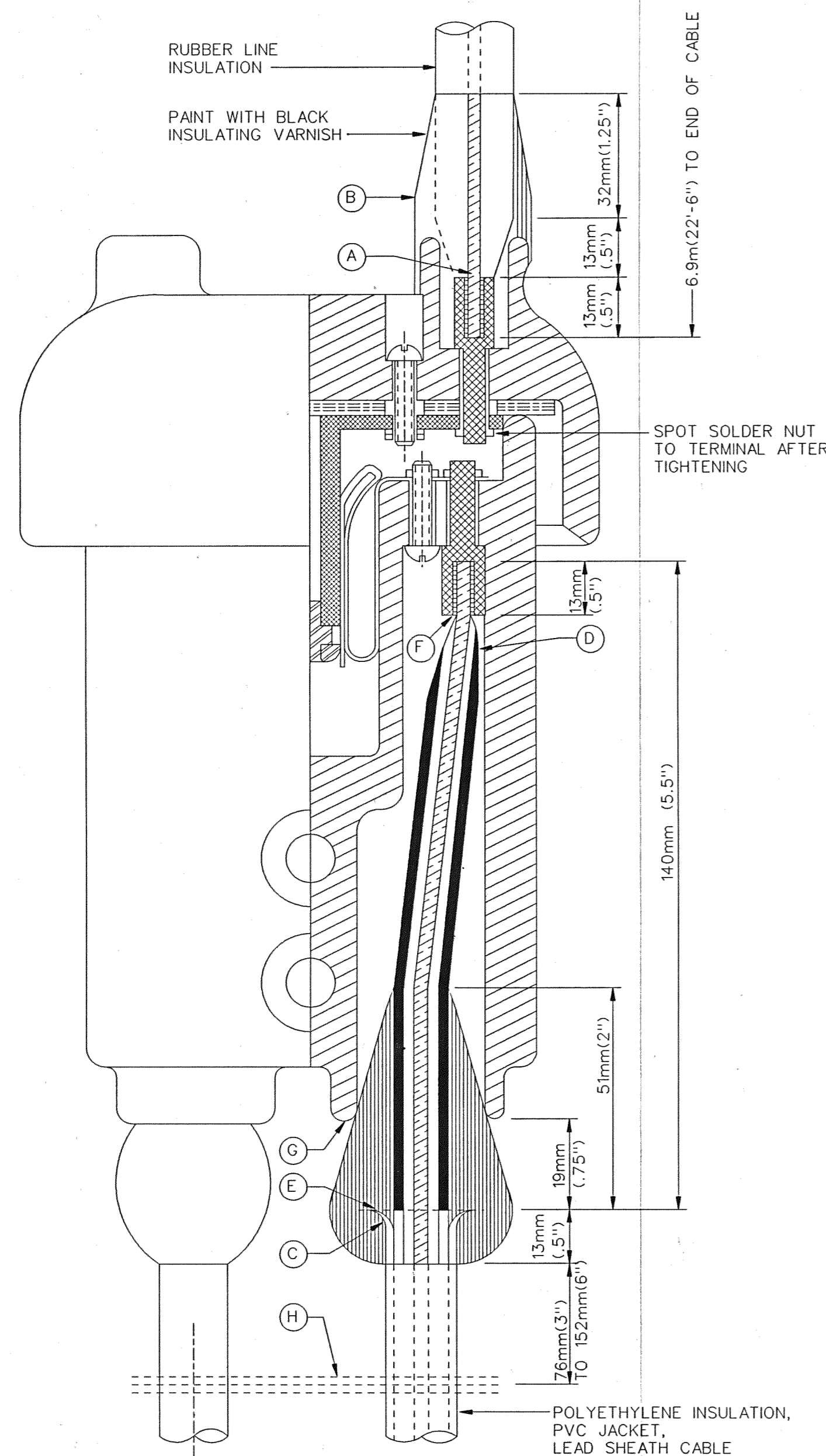
Job No.
49717A

MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
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Farmington, MI. 48335
(248) 473-7070

Drawn M.A.I.	Scale
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Drwg. No.	Checked by
16 OF 25	Approved by
File No.	M4044

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

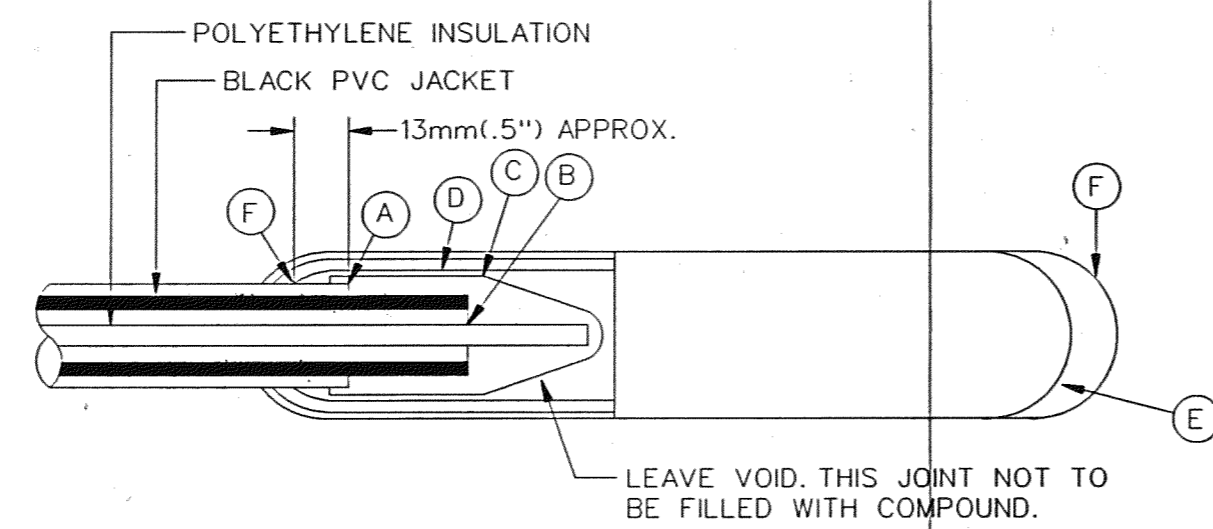
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27-1104
Sheet No.
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Date
02-11-05



CONNECTION FOR SERIES CUTOUT

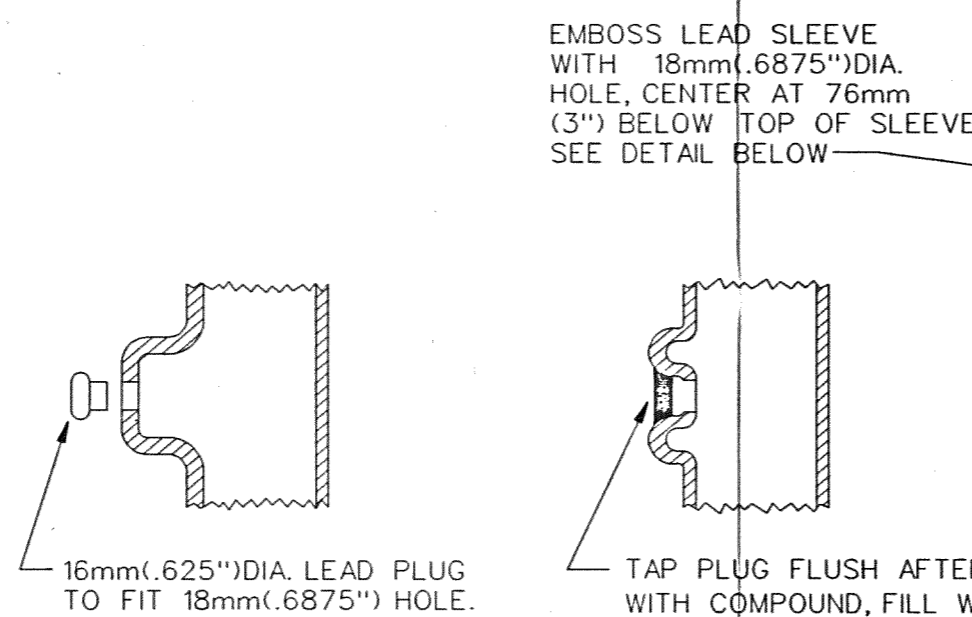
N.T.S.

- A - SWEAT TERMINAL & PENCIL INSULATION TO FIT SNUGLY IN PORCELAIN OPENING SO THAT AS NUT IS DRAWN UP TIGHT THE OPENING IS COMPLETELY AND TIGHTLY FILLED.
- B - BUILD UP WITH #3 TAPE AS SHOWN, & COVER WITH 2 LAYERS, HALF LAP, WITH #2 TAPE AS NOTED.
- C - USE TUBE CUTTER TO SCORE LEAD SHEATH & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- D - CUT INSULATION & PENCIL SMOOTHLY FOR CONNECTION.
- E - BELL LEAD SHEATH AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.
- F - SWEAT CONDUCTOR INTO TERMINAL.
- G - APPLY TAPE #1 OVER BELL SUFFICIENTLY TO FORM A TIGHT FIT BETWEEN CABLE AND PORCELAIN AT #1 COVER TAPE #1 WITH 2 LAYERS OF TAPE #2 TO ABOUT 19mm(.75") FROM END OF TAPE #1.
- H - #18 SERVICE WIRE OR BRAID 4 WRAPS BETWEEN CABLES & SWEATED TO LEAD SHEATH FOR BOND TIE TO GROUND WIRE.



#8 LIGHTING CABLE DEAD END CAP

- A - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- B - CUT INSULATION TO EXPOSE 25mm(1") OF BARE COPPER.
- C - OVERLAP WITH TAPE #2 APPROXIMATELY 6mm(.25") FROM END OF LEAD OF LEAD SHEATH, AT LEAST 2 LAYERS OF TAPE AT THIS POINT.
- D - 32mm(1.25") x 203mm(8") x 3mm(.125") LEAD SLEEVE.
- E - SHAPE AND BEAT LEAD SLEEVE TO FORM A CLOSED END.
- F - CADMIUM ALLOY WIPING METAL. DO NOT POUR METAL FOR WIPE. USE TORCH AND FINGER WIPE WITH MINIMUM OF HEAT.



CONNECTIONS FOR 1/C 7500V. POTHEAD

N.T.S.

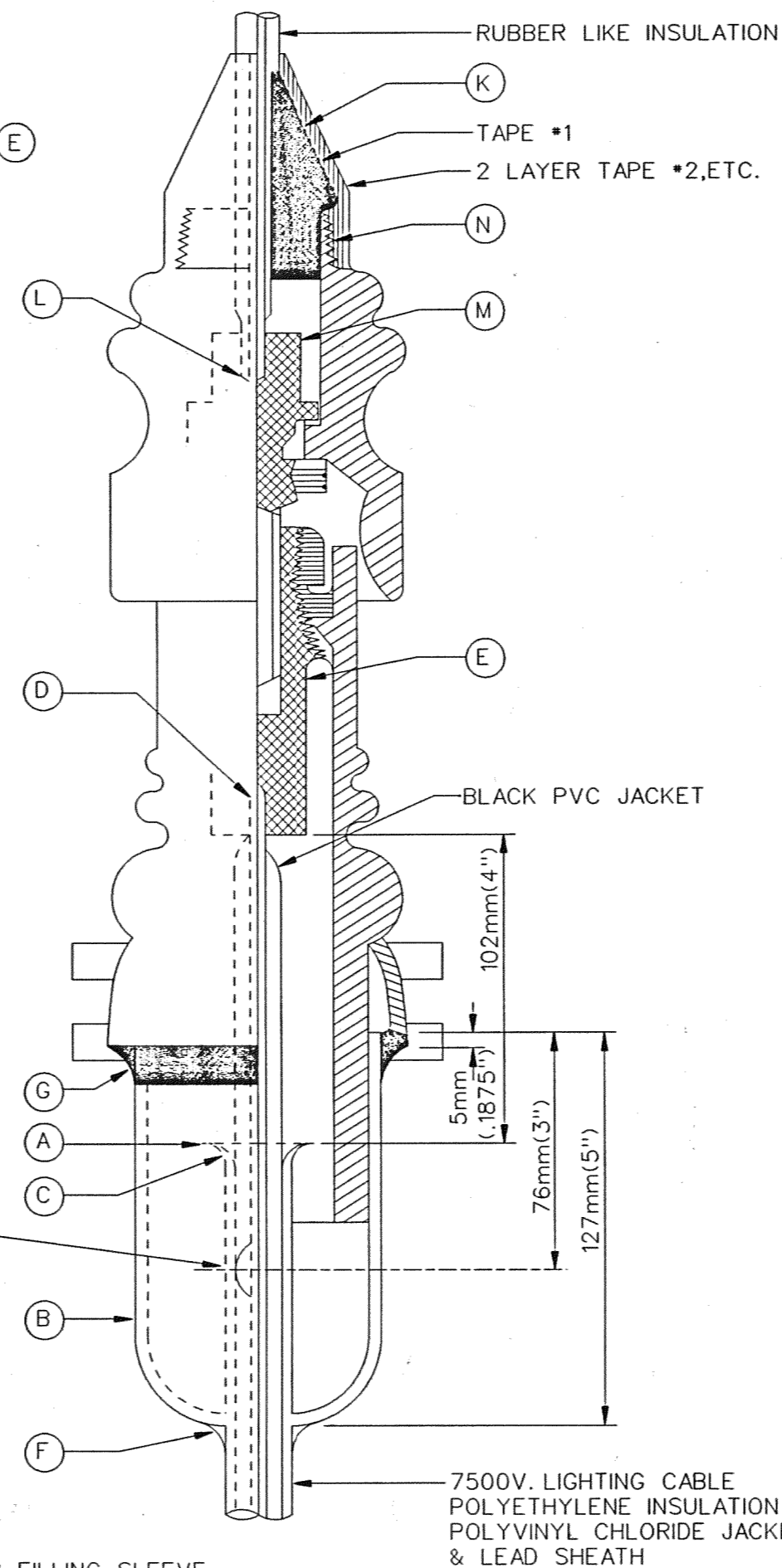
- A - USE TUBE CUTTER TO SCORE LEAD SHEATH AND CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING. 102mm(4") OF INSULATION TO REMAIN, NOT INCLUDING BARED CONDUCTOR.
- B - FORM BOTTOM OF EMBOSSED SLEEVE & SLIP OVER CABLE, HOLE IN FRONT.
- C - BELL LEAD SHEATH.
- D - SWEAT CONDUCTOR INTO TERMINAL & PENCIL INSULATION SMOOTHLY FOR 19mm(.75")
- E - MOUNT TERMINAL FIRMLY INTO PORCELAIN HOUSING.
- F - PUSH SLEEVE INTO CAST IRON COLLAR AND FINGER WIPE TO CABLE SHEATH WITH LOW TEMPERATURE CADMIUM ALLOY. USE MINIMUM OF HEAT. DO NOT POUR METAL.
- G - INVERT & FILL JOINT BETWEEN IRON COLLAR AND LEAD SLEEVE WITH APPROVED EPOXY RESIN.
- H - LAY POTHEAD HORIZONTAL & FILL WITH APPROVED COMPOUND. DO NOT HEAT COMPOUND MORE THAN NECESSARY FOR POURING.
- I - INSERT 16mm(.625") DIA. LEAD PLUG INTO SLEEVE HOLE, TAP FLUSH & FILL WITH SOLDER.
- J - TRAIL THE CABLE AND MOUNT POTHEAD ON CROSS ARM.
- K - SLIP THE CONE SHAPED RUBBER BUSHING ON THE RUBBER INSULATED CABLE RISER.
- L - SWEAT CONDUCTOR INTO TERMINAL "L" AND PENCIL INSULATION AS SHOWN.
- M - MOUNT THE TERMINAL FIRMLY INTO THE POTHEAD CAP.
- N - BUILD UP WITH TAPE #3 AND CARRY 2 LAYERS OVER END OF THE CAP TO POINT "N" AS SHOWN. COVER WITH 2 LAYERS TAPE #2-HALF LAP. PAINT WITH APPROVED BLACK INSULATING VARNISH.

MATERIAL & SPECIAL PRECAUTIONS

- 1. TAPE #1: CLEAR POLYETHYLENE TAPE, 1mm(.02") THICK x 19mm(.75") WIDE
TAPE #3: APPROVED A.S.T.M. RUBBER TAPE.
FILLING COMPOUND: APPROVED COMPOUND.
- 2. USE SMALL HAND TORCH FOR WIPING JOINTS, AT MINIMUM TEMPERATURE.
- 3. WHEN IT IS NECESSARY TO SPLICE POLYETHYLENE INSULATED CABLE TO RUBBER CABLE, USE ABOVE MATERIALS.
- 4. APPLY ADHESIVE INSIDE BELLED SHEATH CAVITY ONLY. APPLY TAPE AFTER ADHESIVE HAS BECOME TACKY.

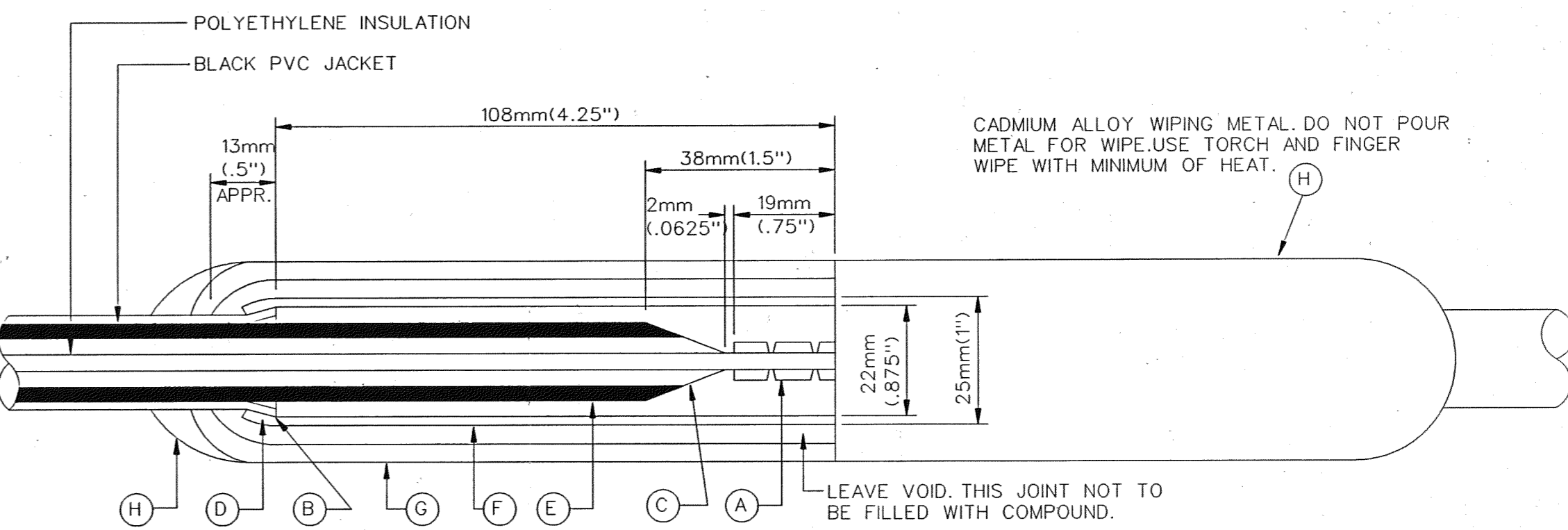
NOTE:

THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A LIST OF ALL SPLICING MATERIALS HE PROPOSES TO USE WITH SUPPORTING DATA THAT THE MATERIAL IS SUITABLE FOR APPLICATION AS SHOWN ON THE DRAWINGS.

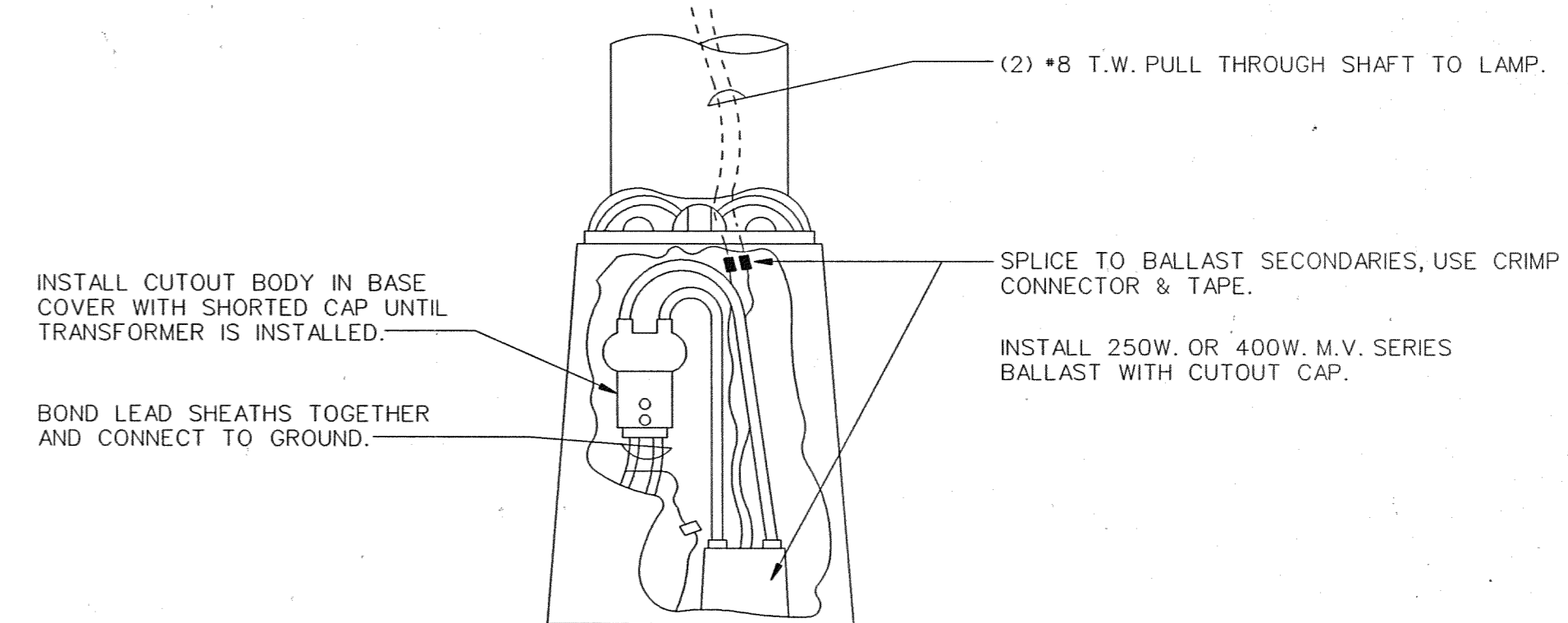


#8 LIGHTING CABLE JOINT

N.T.S.



- A - 38mm(1.5") #8 TINNED COPPER SLEEVE, 2 CIRCUMFERENTIAL CRIMPS ON EACH END.
- B - SCORE LEAD SHEATH WITH TUBE CUTTER & CHIP OFF WITH CHIPPING IRON. DO NOT BREAK OFF BY BENDING.
- C - CUT INSULATION & PENCIL SMOOTHLY AS SHOWN.
- D - BELL LEAD SHEATH TO DIAMETER SHOWN AND FILL SHEATH CAVITY WITH APPROVED ADHESIVE.
- E - APPLY TAPE #1 OVER PVC JACKET AND BELLED SHEATH TO A DIA. OF 25mm(1").
- F - OVERLAP BELLED SHEATH WITH TAPE APPROX. 6mm(.25")
- G - TWO LAYERS OF TAPE #2 APPLIED HALF LAP.
- H - LEAD SLEEVE 254mm(10") LONG, 3mm(.125") WALL, 32mm(1.25") INSIDE DIAMETER.



INCANDESCENT TO MERCURY CONVERSION

N.T.S.

DISK FILE: 202P.LDM.MTR

DATE	DESCRIPTION	CHKD. BY

JEFFERSON AVE OVER DEQUINDRE CUT
POLYETHYLENE INSUL., P.J. LEAD SHEATHED SPLICE & CONN.

MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

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Drwg. No. 17 OF 25	Checked by
File No. M4044	Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

202
27-1104
Sheet No. 37
Date 02-11-05

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JEFFERSON AVE OVER DEQUINDRE CUT
CABLE & WIRE SPECIFICATIONS, DETAILS

Job No. 49717A

MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

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Checked
Dwg. No. 18 OF 25
File No. M4044

Scale No Scale
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

Job No. 27-1104
Sheet No. 38
Date 02-11-05

USE	VOLT RATING	ITEM NO.	CONDUCTOR	SYNTHETIC RUBBER	IMPREG-NATED PAPER	POLYETHYLENE	POLYVINYL-CHLORIDE	SHIELD OVER INSULATED CONDUCTOR	TAPE OVER INSULATED CONDUCTORS	IMPREG-NATED PAPER BELT	JACKET	LEAD SHEATH	COVERING OVER LEAD	STEEL TAPE ARMOR	COVERING OVER STEEL TAPE	COVERING OVER CONDUCTOR		
OVERHEAD LINE WIRE	2000V.	1	#2-#6 AWG. H.D., UNCOATED SOLID COPPER A.S.T.M. B1													1.2mm (.047") BLACK NEOPRENE		
		2	#4/0-#2/0 AWG. M.H.D., UNCOATED 7/STR. COPPER A.S.T.M. B1														1.6mm (.063") BLACK NEOPRENE	
		3	#2- AWG. H.D., UNCOATED SOLID COPPER A.S.T.M. B1															.6mm (.032") BLACK POLYETHYLENE
		4	#2- AWG., H.D., UNCOATED SOLID COPPER A.S.T.M. B1															1.2mm (.047") BLACK POLYETHYLENE
		5	#4/0-#2/0 AWG. M.H.D., UNCOATED 7/STR. COPPER A.S.T.M. B8															1.6mm (.063") BLACK POLYETHYLENE
SPECIAL EVENT FEEDER,	2000V.	6																
MULT. ST. LTC.	2000V.	7																
TRAFFIC SIGNAL SECOND-ARY	2000V.	8																
RECEPTACLE BRACKET & LAMP POST WIRE	600V.	9	#8 AWG. 1/2 UNCOATED, SOFT 7/STR. COPPER A.S.T.M. B8				1.6mm (.062") 75°C BLACK, (167 F) OR WHITE AS REQ'D. MATERIALS MUST BE PRINTED IN CONSTRUCTION											
2/C AERIAL SERVICE	600V.	10	2/C#8 AWG. UNCOATED SOFT 7/STR. COPPER A.S.T.M. B8															
DISTRIBUTION CABLES	5000V. BELTED	11	3/C 350 MCM UNCOATED COPPER AEIC							11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)		2.4mm (.095") COPPER BEARING LEAD	2.3mm (.090") HEAT LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH					
		12	3/C#2 AWG. UNCOATED COPPER AEIC							11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)		2.2mm (.085") COPPER BEARING LEAD	2mm (.08") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH					
		13	3/C#2 AWG. ROUND UNCOATED COPPER AEIC								11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)		2mm (.08") COPPER BEARING LEAD	2mm (.08") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH				
		14	3/C 350 MCM UNCOATED COPPER AEIC								11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)		2.4mm (.095") COPPER BEARING LEAD	2.3mm (.090") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH				
		15	3/C#2 AWG. UNCOATED COPPER AEIC								11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)		2.2mm (.085") COPPER BEARING LEAD	2mm (.08") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH				
SERIES ST. LTG. CABLE, IN DUCT	7500V. BELTED	16	3/C 350 MCM UNCOATED COPPER AEIC															
		17	1/C#8 AWG. UNCOATED COPPER ASTM B3					4.6mm (.188") HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER CONDUCTOR										
		18	1/C#8 AWG. UNCOATED COPPER ASTM B3					4.6mm (.188") HIGH MOLE-CULAR WEIGHT POLYETHYLENE OVER CONDUCTOR										
		19	3/C 350 MCM UNCOATED COPPER * AEIC															
TRANS-MISSION CABLES	24000V. SHIELDED	20	3/C 350 MCM UNCOATED COPPER * AEIC															
		21	3/C #2/0 AWG. UNCOATED COPPER * AEIC															
		22	#14 AWG. UNCOATED COPPER, NO. 22 AS REQ'D. ASTM B3															
MULTI-CONDUCTOR SIGNAL CABLE, IN DUCT	7500V.	23	#14 AWG. UNCOATED COPPER, NO. 23 AS REQ'D. ASTM B3															
		24	8/C#8 AWG. UNCOATED COPPER															
OVERHEAD FLEXIBLE WIRE (SHIELDED)		25	1/C#2 AWG. & LARGER CLASS 'G' OR H STANDING TINNED COPPER														1.6mm (.063") COPPER BEARING LEAD	

COLOR CODED AS FOLLOWS:
RED - A CIRCUIT
BLACK - B CIRCUIT
WHITE - NEUTRAL

ALL MULTIPLE STREET LIGHTING, TRAFFIC SIGNAL SECONDARY AND SPECIAL EVENT CABLES INSTALLED IN CONDUIT SHALL BE AS PER THE FOLLOWING:
CONDUCTORS: COATED, STRANDED COPPER CONDUCTOR PER ASTM B-8 AND B-189. INSULATION: MEETS OR EXCEEDS ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC 8 FOR ETHYLENE-PROPYLENE RUBBER INSULATION AND ASTM D2802-78 AND UL STANDARD 44. JACKET: MEETS OR EXCEEDS ALL REQUIREMENTS OF LATEST EDITION OF ICEA S-68-516, NEMA WC8 FOR HEAVY DUTY CHLOROSULFONATED-POLYETHYLENE. LISTED BY UNDERWRITER'S LABORATORIES INC. AS TYPE RHH OR RHW.

NOTE: PRIOR TO PLACING ORDER FOR PURCHASE OF THIS CABLE, A SAMPLE LENGTH OF CABLE MUST FIRST BE SUBMITTED TO P.L.D. FOR THEIR APPROVAL.

1.6mm (.062") 75°C BLACK, (167 F) OR WHITE AS REQ'D. MATERIALS MUST BE PRINTED IN CONSTRUCTION

11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)

2.3mm (.090") HEAT LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH

2.2mm (.085") COPPER BEARING LEAD

11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)

2.3mm (.090") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH

2.4mm (.095") COPPER BEARING LEAD

11.4mm (.45") OVERALL OIL VISCOSITY AT 100°C (212 F)

2.3mm (.090") HEAT & LIGHT STABILIZED COPPER WEIGHT POLYETHYLENE OVER LEAD SHEATH

2.2mm (.085") COPPER BEARING LEAD

ACCORDING TO SPECIFICATIONS

SPECIAL INSTRUCTION
1.6mm (.063") OF 30% HEAVY RUBBER AND ONE LAYER OF LAPPED FILLED COTTON TAPE OVER EACH CONDUCTOR CENTRAL CONDUCTOR HAS ADDITIONAL 4.3mm (.17") VARNISHED CAMBRIC TAPE REMAINING 7 CONDUCTORS EACH HAVE ADDITIONAL 2.4mm (.094") VARNISHED CAMBRIC TAPE ONE OF 7 OUTSIDE CONDUCTORS WRAPPED WITH WHITE PAPER FOR IDENTIFICATION ALL CONDUCTORS CABLED WITH PARAFFINED JUTE (OUTSIDE FILLER).
2.4mm (.094") BELT OF OIL SATURATED PAPER OVERALL (2.9mm x 0.115 INCH COPPER BEARING LEAD BENEATH OVERALL).

SEMI-CONDUCTING COTTON TAPE OVER CONDUCTOR & FLEXIBLE WIRE (SHIELDED)

* BINDER TAPE OVER SHIELDED INSULATED CONDUCTOR AND FILLERS TO BE COPPER OR BRONZE TAPE INTERCALATED WITH PAPER TAPE OR (2) METALIZED PAPER TAPES

1. DISTRIBUTION AND TRANSMISSION CABLES

ALL TRANSMISSION CABLES, (24 KV., ITEMS 11-16 INCLUSIVE) ARE FOR CIRCUITS WITH GROUNDED NEUTRAL, AND SHALL CONFORM STRICTLY WITH THE LATEST REVISION OF THE A.E.I.C. "SPECIFICATION FOR IMPREGNATED PAPER INSULATED, LEAD COVERED SOLID TYPE CABLE", 9TH EDITION, DATED APRIL, 1954, AND CONSTRUCTION OPTIONS AS NOTED IN SHEET 1.

ALL DISTRIBUTION CABLES, (7 & 5 KV, ITEMS 19 & 21 INCLUSIVE) ARE FOR CIRCUITS WITH UNDERGROUND NEUTRAL AND SHALL ALSO CONFORM WITH THE ABOVE SPECIFICATION, WITH CONSTRUCTION OPTIONS AS NOTED IN TABLE 1.

2. OVERHEAD LINE WIRE

OVERHEAD LINE WIRE SHALL BE IN ACCORDANCE WITH LATEST REVISION OF ASA C8.34 (NEOPRENE COVERING) OR THE LATEST REVISION OF ASA C8.35 (POLYETHYLENE COVERING).

3. 8/C, #8AWG, STREET LIGHTING CABLE, 7500 V.

THIS IS A SPECIAL CONSTRUCTION AND SHALL BE MADE STRICTLY IN ACCORDANCE WITH THE DESCRIPTION IN TABLE 1. APPLICABLE REFERENCE SPECIFICATIONS SHOWN BELOW:

4. OTHER RUBBER OR THERMOPLASTIC INSULATED CABLES, LEADED & NON-LEADED

WIRE SIZE, INSULATION TYPE AND NORMAL THICKNESSES, OTHER CONSTRUCTION FEATURES SHALL BE AS SHOWN IN TABLE 1, AND APPLICABLE REFERENCE SPECIFICATIONS SHOWN BELOW:

		POLYVINYL-CHLORIDE 60° C (140° F)	POLYVINYL-CHLORIDE 75° C (167° F)	HIGH MOLECULAR WEIGHT NATURAL POLYETHYLENE	SYNTHETIC RUBBER 75° C (167° F) HEAT & MOISTURE RESISTANT	MOZONE RESISTING BUTYL RUBBER
ORIGINAL	TENSILE STRENGTH PSI	2300, MIN.	2300, MIN.	1400, MIN.	700, MIN.	600, MIN.
	ELONGATION AT RUPTURE, PERCENT	250, MIN.	250, MIN.	250, MIN.	300, MIN. & 13mm(.5") SET, MAX.	350, MIN. & 13mm(.5") SET, MAX.
AIR OVEN TEST TIME & TEMP, AS NOTED	TENSILE STRENGTH % OF ORIGINAL	65, MIN. 168 HRS., 100° C (212± 1.8° F)	120, MAX. 80, MIN. 168 HRS., 120° C (248± 1.8° F)	75, MIN. 48 HRS., 100° C (212± 1.8° F)	—	60, MIN. 168 HRS., 100° C (212± 1.8° F)
	ELONGATION % OF ORIGINAL	* 65, MIN. 168 HRS., 100° C (212± 1.8° F)	** 75, MIN. 168 HRS., 120° C (248± 1.8° F)	75, MIN. 48 HRS., 100° C (212± 1.8° F)	—	60, MIN. 168 HRS., 100° C (212± 1.8° F)
OXYGEN PRESSURE TEST	TENSILE STRENGTH % OF ORIGINAL	—	—	—	50, MIN. 168 HRS., 80° C (176± 1.8° F)	—
	ELONGATION % OF ORIGINAL	—	—	—	50, MIN. 168 HRS., 80° C (176± 1.8° F)	—
AIR PRESSURE HEAT TEST	TENSILE STRENGTH % OF ORIGINAL	—	—	—	50, MIN. 20 HRS., 127° C (260± 1.8° F)	50, MIN. 40 HRS., 127° C (260± 1.8° F)
	ELONGATION % OF ORIGINAL	—	—	—	50, MIN. 20 HRS., 127° C (260± 1.8° F)	50, MIN. 40 HRS., 127° C (260± 1.8° F)
HEAT DISTORTION 12± 1° C (250± 1.8° F)	% OF ORIGINAL	50, MAX.	25, MAX.	—	—	—
OIL IMMERSION 4 HRS., 70° 1° C (158± 1.8° F)	TENSILE STRENGTH % OF ORIGINAL	* 85, MIN.	** 85, MIN.	—	—	—
	ELONGATION % OF ORIGINAL	* 85, MIN.	** 85, MIN.	—	—	—
HEAT SHOCK 12± 1° C (250± 1.8° F)	—	NO CRACKS	NO CRACKS	—	—	—
COLD BEND	—	NO CRACKS -30 ± 1° C (-22± 1.8° F)	NO CRACKS -30 ± 1° C (-22± 1.8° F)	NO CRACKS -55 ± 1° C (-67± 1.8° F)	—	—
INSULATION RESISTANCE CONSTANT AT 15.0° C (60± 1.8° F)	—	1,000 MIN.	2,000 MIN.	50,000 MIN.	4,000 MIN.	20,000 MIN.
FLAME RESISTANCE PROPERTIES	—	SECT. 6.5 IPCEA S-61-402	SECT. 6.5 IPCEA S-61-402	—	—	—
	—	—	—	—	—	—
ACCELERATED WATER ABSORPTION REQUIREMENT	ELECTRIC METHOD	DIELECTRIC CONSTANT, 1 DAY	10, MAX.	10, MAX.	—	5, MAX.
		% CAPACITANCE INCREASE	1-14 DAYS-10, MAX. 7-14 DAYS-5, MAX.	1-14 DAYS-4.0, MAX. 7-14 DAYS-2.0, MAX.	—	1-14 DAYS-10.0, MAX. 7-14 DAYS-4.0, MAX.
	OR GRAVIMETRIC METHOD	TEMP.	50 ± 1° C (122± 1.8° F)	75 ± 1° C (167± 1.8° F)	—	75 ± 1° C (167± 1.8° F)
		MILLIGRAMS PER SQ. 25.4mm(1") MAX.	10	10	—	20
TEST IN ACCORDANCE WITH LATEST REVISION OF:		IPCEA S-61-402 (EXCEPTIONS ARE NOTED ABOVE)		IPCEA S-61-402	IPCEA S-19-81 (EXCEPTIONS ARE NOTED ABOVE)	IPCEA S-19-81

FOR #6 AWG AND LARGER, USING BUFFED DIE-CUT SPECIMENS, THE FOLLOWING VALUES SHALL APPLY:

- * ELONGATION AFTER AIR OVEN TEST 45% MIN.
- ** ELONGATION AFTER AIR OVEN TEST 50% MIN.
- * OR ** TENSILE STRENGTH AFTER OIL IMMERSION 80% MIN.
- * OR ** ELONGATION AFTER OIL IMMERSION 60% MIN.

INSULATIONS

THE MINIMUM INSULATION THICKNESS OF ANY OF THESE CABLES SHALL BE LESS THAN 90% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

THE PHYSICAL AND AGING PROPERTIES OF THERMOPLASTIC AND RUBBER INSULATIONS SHALL BE AS FOLLOWS:

CONDUCTORS

ALL CONDUCTORS SHALL BE COPPER, COMPLYING WITH THE LATEST REVISIONS OF ASTM SPECIFICATIONS, AS FOLLOWS:

- SOFT OR ANNEALED, BARE COPPER WIRE ASTM B3
- MEDIUM HARD DRAWN COPPER WIRE ASTM B2
- HARD DRAWN COPPER WIRE ASTM B1
- CONCENTRIC-LAY-STRANDED COPPER CONDUCTORS, HARD, MEDIUM HARD OR SOFT, COATED OR UNCOATED, AS REQUIRED. ASTM B8
- ROPE-LAY-STRANDED, SOFT, COPPER CONDUCTORS, COATED OR UNCOATED, AS REQUIRED. ASTM B173
- SOFT, SOLID COPPER CONDUCTORS, TINNED ASTM B33
- SOFT, SOLID COPPER CONDUCTORS, LEAD OR LEAD ALLOY COATED ASTM B189

JACKETS

THE MINIMUM JACKET THICKNESS SHALL NOT BE LESS THAN 80% OF THE NOMINAL THICKNESS SHOWN ON TABLE 1.

		NEOPRENE BLACK, HEAVY DUTY	NEOPRENE BLACK GENERAL PURPOSE	POLYVINYL-CHLORIDE, BLACK	HEAT & LIGHT STABILIZED BLACK POLYETHYLENE COVER'G OVER LEAD SHEATH
ORIGINAL	TENSILE STRENGTH PSI	1800, MIN.	1500, MIN.	1500, MIN.	1400, MIN.
	ELONGATION AT RUPTURE, %	300, MIN. & 10mm(.375") MAX. SET	250, MIN. & 10mm(.375") MAX. SET	100, MIN.	350, MIN.
AIR OVEN TEST, TIME & TEMP, AS NOTED	TENSILE STRENGTH % OF ORIGINAL	—	—	75 MIN. 120 HRS. 121± 1° C (250± 1.8° F)	75, MIN.
	ELONGATION % OF ORIGINAL	—	—	60 MIN. 120 HRS. 121± 1° C (250± 1.8° F)	75, MIN.
OXYGEN PRESSURE TEST	TENSILE STRENGTH % OF ORIGINAL	50, MIN.	50, MIN.	—	—
AIR PRESSURE HEAT TEST	TENSILE STRENGTH % OF ORIGINAL	50, MIN.	50, MIN.	—	—
	ELONGATION % OF ORIGINAL	50, MIN.	50, MIN.	—	—
OIL IMMERSION TEST, TIME & TEMP. AS NOTED	TENSILE STRENGTH % OF ORIGINAL	60 MIN. 18 HRS 121± 1° C (250± 1.8° F)	60 MIN. 18 HRS 121± 1° C (250± 1.8° F)	60 MIN. 18 HRS 70 ± 1° C (158 ± 1.8° F)	—
	ELONGATION % OF ORIGINAL	60 MIN. 18 HRS 121± 1° C (250± 1.8° F)	60 MIN. 18 HRS 121± 1° C (250± 1.8° F)	60 MIN. 18 HRS 70 ± 1° C (158 ± 1.8° F)	—
HEAT DISTORTION UNAGED VALUE	—	—	—	50, MAX. 90 ± 1° C (194± 1.8° F)	25, MAX. 90 ± 1° C (194± 1.8° F)
HEAT SHOCK	—	—	—	NO CRACKS	—
COLD BEND TEST	—	—	—	NO CRACKS	NO CRACKS
ENVIRONMENTAL CRACKING	—	—	—	—	NO CRACKS
LIGHT ABSORPTIVITY	—	—	—	—	24,000, MIN.
TEST IN ACCORDANCE WITH LATEST REVISION OF:		IPCEA S-19-82	IPCEA S-61-402	IPCEA S-61-402	IPCEA INTERIM REVISION #1 PUB. S-54-401 SEPT. 1959

JEFFERSON AVE OVER DEQUINDRE CUT

CABLE & WIRE SPECIFICATIONS

MANSELL ASSOCIATES INC.

ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn M.A.I.
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File No. M4044
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Checked by
Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

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Date 02-11-05

CERTIFIED TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR VARIOUS ITEMS OF WIRE AND CABLE SHOWN ON SHEET 1 SHALL CONTAIN THE FOLLOWING TEST RESULTS:

ITEMS 1 - 5 INCLUSIVE - OVERHEAD LINE WIRE

1. CONDUCTOR CONTINUITY, RESISTANCE, TENSILE STRENGTH AND ELONGATION TESTS.
2. COVERING THICKNESS, PHYSICAL AND AGING TESTS.
3. WEIGHT OF FINISHED WIRE.

ALL TESTS IN ACCORDANCE WITH THE LATEST REVISION OF ASA 8.34 (NEOPRENE COVERING) OR ASA 8.35 (POLYETHYLENE COVERING).

ITEMS 6 - 10 INCLUSIVE

1. CONDUCTOR CONTINUITY, RESISTANCE, TENSILE STRENGTH, AND ELONGATION TESTS IN ACCORDANCE WITH THE LATEST REVISIONS OF ASTM B8, B33 OR B189.
2. THE PHYSICAL AND OTHER TESTS FOR THE SPECIFIED INSULATION SHOWN ON SHEET 2.
3. INSULATION THICKNESS MEASUREMENTS.
4. THE ALTERNATING-CURRENT VOLTAGE TEST IN ACCORDANCE WITH THE LATEST REVISION OF IPCEA S-61-402.
5. INSULATION RESISTANCE TEST. INSULATION RESISTANCE CONSTANT AS SHOWN ON SHEET 2.
6. (CABLE ITEM 8 ONLY) MINIMUM, MAXIMUM AND AVERAGE LEAD THICKNESS MEASUREMENTS SHALL ALSO BE INCLUDED.
7. (CABLE ITEM 10 ONLY) A RIP TEST SHALL ALSO BE INCLUDED AS FOLLOWS:
A 1.83m SAMPLE OF THE COMPLETED 2 CONDUCTOR WIRE WITH CLEANLY CUT ENDS SHALL BE SUBJECTED TO A TEMPERATURE OF (-23° C.) ±10 F FOR ONE HOUR, WHILE STILL COLD, THE TWO INSULATED CONDUCTORS SHALL BE SEPARATED AT ONE END FOR A DISTANCE OF APPROXIMATELY (76mm) 3 INCHES AND THEN SHALL BE TORN APART WITH STEADY PULL AT A RATE OF (838mm) 33 INCHES IN ONE SECOND OR LESS. THERE SHALL BE NO DAMAGE TO THE INSULATION.

ITEMS 11 - 16 INCLUSIVE - DISTRIBUTION CABLES UNDER 10KV. RATING

1. CONDUCTOR RESISTANCE.
2. SHEATH THICKNESS MEASUREMENTS.
3. HIGH VOLTAGE TEST.
4. MECHANICAL INTEGRITY TEST.
5. BENDING TEST.
6. SPARK TEST ON COVERING OVER LEAD SHEATH ON EACH LENGTH IF COVERING IS SPECIFIED.

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID TYPE IMPREGNATED-PAPER-INSULATED LEAD-COVERED CABLE SPECIFICATION" PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 17 - 18 INCLUSIVE - SERIES STREET LIGHTING CABLE

1. CONDUCTOR RESISTANCE AND CONTINUITY, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. THE PHYSICAL AND OTHER TESTS FOR HIGH MOLECULAR WEIGHT POLYETHYLENE INSULATION AS SHOWN ON SHEET 2.
3. THE PHYSICAL AND OTHER TESTS FOR 60 C (140 F) POLYVINYL-CHLORIDE INSULATION AS SHOWN ON SHEET 2.
4. THE FOLLOWING TESTS SHALL ALSO BE MADE AND REPORTED:
HIGH VOLTAGE TEST-AFTER NOT LESS THAN SIX(6) HOURS IMMERSION IN WATER AT (15.6 C°) (60 F) AND WHILE STILL IMMersed, EACH REEL OF INSULATION CABLE WITHOUT LEAD, SHALL WITHSTAND A 60 CYCLE POTENTIAL OF 30,000 VOLTS FOR A PERIOD OF FIVE (5) MINUTES.

INSULATION RESISTANCE TEST-THE INSULATION RESISTANCE SHALL NOT BE LESS THAN 28,500 MEGOHMS PER THOUSAND FEET AT (15°6 C) ± 60 F THIS TEST SHALL BE CONDUCTED UPON COMPLETION OF THE HIGH VOLTAGE TEST.

SHORT-TIME DIELECTRIC STRENGTH TEST - A (3.05m) (TEN(10) FT.) SAMPLE OF THE FINISHED CABLE WITH ONLY THE LEAD REMOVED, AFTER TWELVE (2) HOURS SUBMERSION IN WATER AND WHILE STILL IMMersed, SHALL WITHSTAND A VOLTAGE TEST OF 60,000 VOLTS 60 CYCLE A.C. FOR FIVE (5) MINUTES. ON COMPLETION OF THIS TEST, THE VOLTAGE WILL BE GRADUALLY RAISED IN ACCORDANCE WITH I.P.C.E.A. SPECIFICATIONS, UNTIL THE INSULATION IS PUNCTURED. THIS VOLTAGE SHALL BE RECORDED AND SHALL BE NOT LESS THAN 72,000 VOLTS.

EXTERNAL CORONA TEST-THIS TEST SHALL BE CONDUCTED ON ONE(1) SAMPLE PER 10,000 FT. OF COMPLETED CABLE EIGHTEEN(18) INCHES LONG WITH ONLY THE LEAD SHEATH REMOVED, AFTER WHICH SHALL BE WIPED WITH A CLEAN DRY CLOTH. THESE SAMPLES SHALL BE BENT AND MAINTAINED IN A "U-SHAPE" HAVING A BENDING DIAMETER EQUAL TO FIVE TIMES THE INSULATED CABLE DIAMETER. THE BENT SAMPLES SHALL THEN BE PLACED IN A VERTICAL POSITION ON A FLAT METALLIC GROUNDED PLATE AND 60 CYCLE A.C. VOLTAGE SHALL BE GRADUALLY APPLIED WITH A CORONA-LEVEL TEST APPARATUS OF THE FILTER-CIRCUIT TYPE, MAINTAINING SUFFICIENT AMPLIFICATION TO INDICATE THE EXISTENCE OF CORONA DISCHARGE. THIS VOLTAGE SHALL BE RAISED UNTIL CORONA IS INDICATED, AND SHALL NOT BE LESS THAN 8,200 VOLTS RMS.

THE VOLTAGE SHALL THEN BE RAISED TO 25,000 VOLTS AND MAINTAINED FOR SIX(6) HOURS WITHOUT FAILURE OF THE INSULATION. THE VOLTAGE SHALL NOT BE RAISED IN 10% STEPS AT TEN(10) MINUTE INTERVALS UNTIL FAILURE OF THE INSULATION OR FLASHOVER OCCURS.

INTERNAL-CORONA-LEVEL-EACH LENGTH OF COMPLETED CABLE SHALL BE TESTED IN ACCORDANCE WITH SECTION 6.13 OF THE LATEST REVISION OF I.P.C.E.A. STANDARD S-61-402, EXCEPT THAT THE MINIMUM CORONA LEVEL SHALL BE 8,200 VOLTS.

ITEMS 19 - 21 INCLUSIVE - TRANSMISSION CABLES.

1. CONDUCTOR RESISTANCE
2. SHEATH THICKNESS MEASUREMENT
3. HIGH VOLTAGE TEST
4. MECHANICAL INTEGRITY TEST
5. BENDING TEST
6. IONIZATION TEST) ONE TEST PER ORDER OR
7. HIGH VOLTAGE-TIME TEST) THERE IS A QUANTITY LIMITATION OF
8. DIELECTRIC POWER TEST) 7.62m (25') ON THESE TESTS PER AEC
9. POWER FACTOR TEST
10. SPARK TEST ON COVERING OVERHEAD SHEATH ON EACH LENGTH

ALL TESTS SHALL BE IN ACCORDANCE WITH THE LATEST REVISION OF "SOLID-TYPE IMPREGNATED-PAPER-INSULATED LEAD-COVERED CABLE SPECIFICATION," PUBLISHED BY THE ASSOCIATION OF EDISON ILLUMINATING COMPANIES.

ITEMS 22 -23 INCLUSIVE - MULTI-CONDUCTOR TRAFFIC SIGNAL CABLE

1. INDIVIDUAL CONDUCTOR RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B3.
2. INSULATION THICKNESS MEASUREMENTS.
3. INSULATION PHYSICAL AND OTHER TESTS FOR 60 C (140 F) POLYVINYL CHLORIDE 15 SHOWN ON SHEET 2.
4. ALTERNATING CURRENT VOLTAGE TEST.
5. INSULATION RESISTANCE TEST INSULATION RESISTANCE CONSTANT AS SHOWN ON SHEET 2.

6. (CABLE ITEM 23 ONLY)
 - a. POLYVINYL CHLORIDE JACKET PHYSICAL AND OTHER TESTS SHOWN ON SHEET 2.
 - b. JACKET THICKNESS MEASUREMENTS.
7. (CABLE ITEM 22 ONLY), LEAD SHEATH THICKNESS MEASUREMENTS.

TESTS NO. 4-7, INCLUSIVE, SHALL BE MADE IN ACCORDANCE WITH THE LATEST REVISION OF I.P.C.E.A. S-61-402, EXCEPT THAT THE INSULATION RESISTANCE CONSTANT SHALL BE 1000 AT 15°6 C (60 F).

ITEM 24 - B/C SERIES STREET LIGHTING CABLE

1. CONDUCTOR CONTINUITY AND RESISTANCE IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-33.
2. LEAD SHEATH THICKNESS MEASUREMENTS.
3. A HIGH VOLTAGE TEST CONSISTING OF 22,500 VOLTS, 60 CYCLES A.C. FOR A DURATION OF 5 MINUTES, BETWEEN CONDUCTORS AND FROM EACH CONDUCTOR TO THE LEAD SHEATH.

ITEM 25 - FLEXIBLE OVERHEAD TRAINER WIRE

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-173.
2. INSULATION PHYSICAL AND OTHER TESTS SHOWN ON SHEET-2.
3. ADDITIONAL INSULATION TESTS IN ACCORDANCE WITH THE LATEST REVISION OF I.P.C.E.A. S-19-81 AS FOLLOWS:
 - a. ALTERNATING-CURRENT VOLTAGE TEST.
 - b. INSULATION RESISTANCE TEST.
 - c. DIRECT-CURRENT VOLTAGE TEST.
 - d. CORONA LEVEL TEST.
 - e. SHORT-TIME DIELECTRIC STRENGTH TEST.
 - f. COLD-BENDING AND LONG-TIME DIELECTRIC STRENGTH TEST.
 - g. CAPACITY AND POWER FACTOR TEST.
 - h. OZONE RESISTANCE TEST.

PHYSICAL AND OTHER TESTS ON THE NEOPRENE JACKET (GENERAL PURPOSE OR HEAVY DUTY), AS SHOWN ON SHEET 2.

ITEM 26 - SUPERVISORY CONTROL CABLE (MULTI-CONDUCTOR)

1. CONDUCTOR RESISTANCE, TENSILE STRENGTH AND ELONGATION, IN ACCORDANCE WITH THE LATEST REVISION OF ASTM B-3.
2. INSULATION PHYSICAL FOR 60 C (140 F) PVC INSULATION AND OTHER TESTS SHOWN ON SHEET 2.
3. INSULATION RESISTANCE TESTS.
4. VOLTAGE TESTS PER IPCEA S-61-402.
5. INSULATION THICKNESS.
6. LEAD SHEATH THICKNESS.
7. THICKNESS OF COVERING OVER LEAD SHEATH.
8. SPARK TEST ON COVER LEAD SHEATH ON EACH LENGTH.

ITEM 27 - INTEGRAL MESSENGER COMMUNICATIONS CABLE (MULTI-PAIR)

ITEM 28 - COMMUNICATIONS CABLE

ITEM 29 - COMMUNICATIONS CABLE, LEAD SHEATH

ITEM 30 - COMMUNICATIONS CABLE, LEAD SHEATH, DIRECT BURIAL

MULTI-PAIR COMMUNICATION CABLES (Maximum Mutual Capacities = 90 nf per mile) (ALSO FOR TRAFFIC SIGNAL CHRONOPLAN) AND SUPERVISORY

ITEM NO.	USE AND RATING	CONDUCTOR	INSULATION (b)	TAPE OVER INSULATION CONDUCTORS	INNER BELT	SHIELD OVER TAPE OR BELT	JACKET OR SHEATH	COVERING OVER SHEATH
27	AERIAL 600V. (a)						BLACK POLYETHYLENE (ASTM D 2308). THICKNESSES OVER CORE AND MESSENGER AND WEB DIMENSIONS IN ACCORDANCE WITH REA SPECIFICATION PE-38.	
28	IN DUCT 600V.	*6 OR *19 AWG, SOLID, UNCOATED COPPER (ASTM B 33)-NUMBER OF PAIRS AS REQUIRED	.635mm (.024") CLASS B POLYETHYLENE (ASTM D 1351)			CORRUGATED, LONGITUDINAL, ANNEALED, (.004") COPPER	BLACK POLYETHYLENE (ASTM D 2308). THICKNESSES IN ACCORDANCE WITH PARAGRAPH 3.6.7, 3.7 AND TABLE IV OF FED. SPEC. J.C.111.	
29	IN DUCT 600V.						LEAD-ANTIMONY THICKNESS PER ITEM 26 EXCEPT 1.6mm (.063") MIN. THICKNESS	
30	DIRECT BURIAL 600V.	*6 OR *19 AWG, SOLID, TINNED COPPER (ASTM B 33)-NUMBER OF PAIRS AS REQUIRED	.79mm (.031") DIOCTYL PHTHALATE PLASTICIZED PVC (ASTM D 2219)	12.5 PERCENT MINIMUM LAP, POLYETHYLENE TEREPHTHALATE			COMMERCIAALLY PURE LEAD, THICKNESS PER ITEMS 22 & 23.	ASPHALTUM-SATURATED JUTE STEEL ARMOR PER ITEMS 17 & 18.

TEST REPORTS

SHIPMENTS OF WIRE AND CABLE SHALL NOT BE CONSIDERED COMPLETE UNTIL CERTIFIED TEST REPORTS ARE RECEIVED AND APPROVED. TEST REPORTS FOR THE VARIOUS ITEMS ABOVE SHALL SHOW COMPLIANCE WITH CITED SPECIFICATIONS, LISTING TEST RESULTS, AS WELL AS THE FOLLOWING TESTS:

1. CONDUCTOR RESISTANCE OF EACH LENGTH OF EACH CONDUCTOR IN OHMS PER 304.80m (1000')
2. CERTIFICATION OF MUTUAL CAPACITANCE OF ALL CABLES AND OF NON-INJURIOUS EFFECT OF FLOODING COMPOUND ON ITEM 27.

(a) *FIGURE .203m (8") CONSTRUCTION. MESSENGER SHALL BE 7 STRAND EHS GALVANIZED, CLASS A, 6mm (.25") NORMAL DIAM. (ASTM A 475) AND SHALL BE FULL FLOODED.
(b) COLOR CODED PER FEDERAL SPECIFICATION J-C-111.
(c) NOMINAL THICKNESS, mm (INCHES).

REVISIONS	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

CABLE & WIRE SPECIFICATIONS

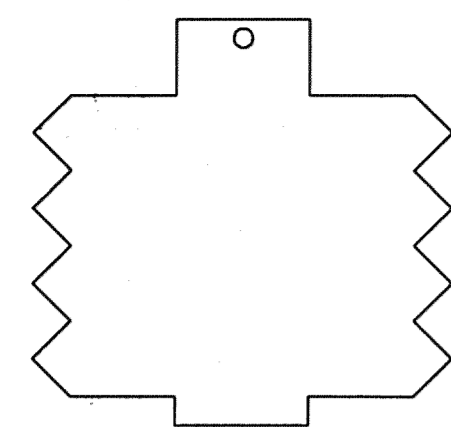
MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070



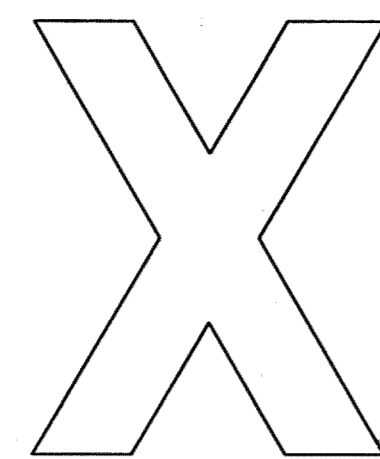
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PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

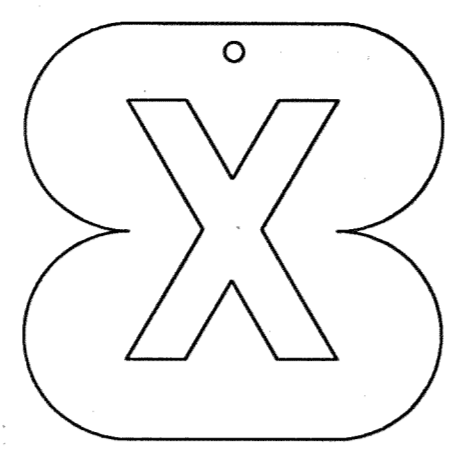
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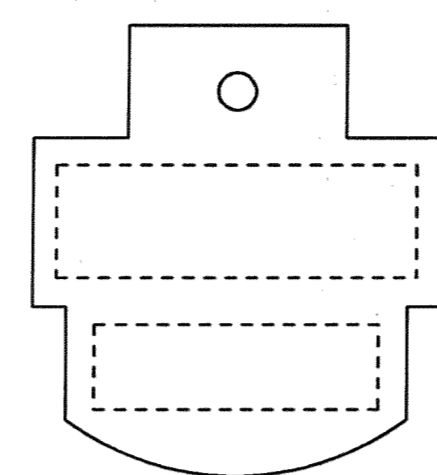
24,000 VOLT TRUNK LINE



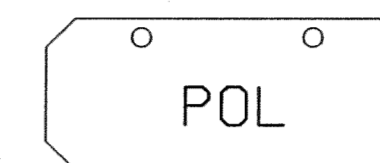
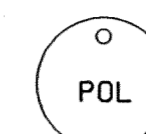
O.H. LINE PHASE TAG



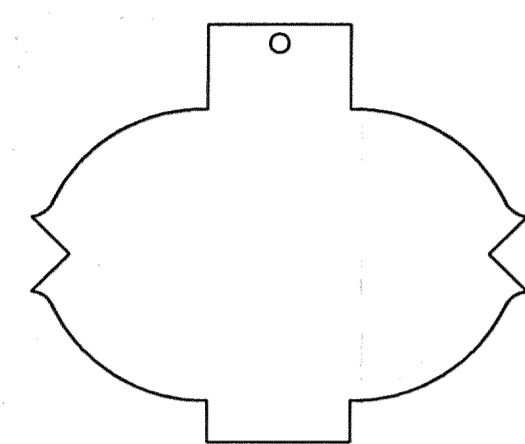
O.H. LINE OR POTHEAD PHASE TAG



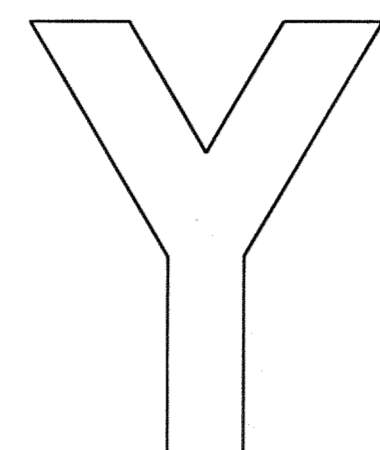
MULTIPLE STREET LIGHTING ALL VOLTAGES



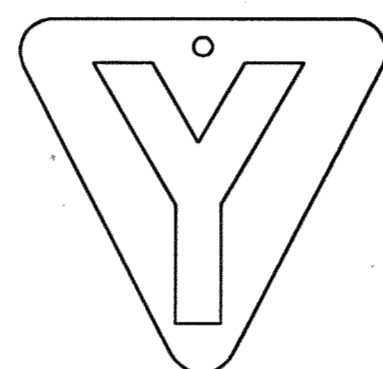
COMMUNICATION



24,000 VOLT FEEDER



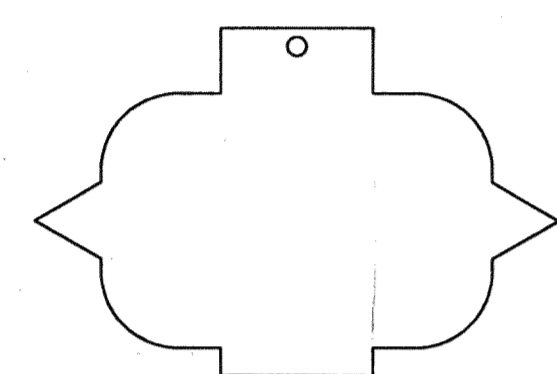
O.H. LINE PHASE TAG



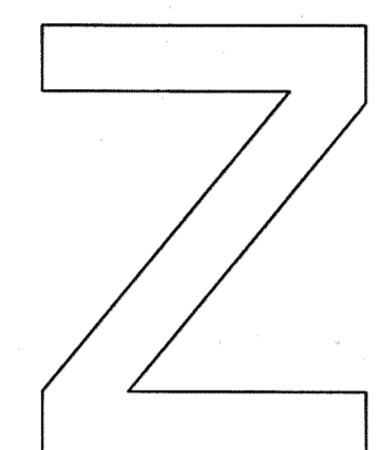
O.H. LINE OR POTHEAD PHASE TAG



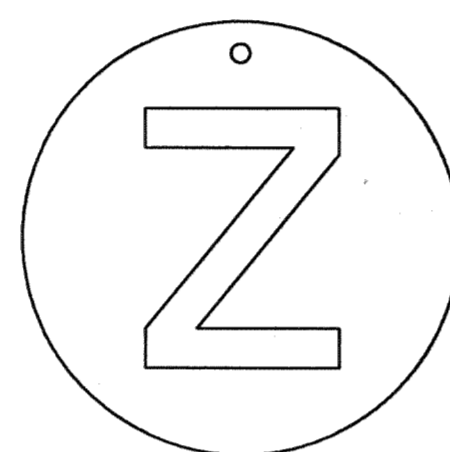
MULTIPLE INC. LTG.



13200 VOLT FEEDER



O.H. LINE PHASE TAG



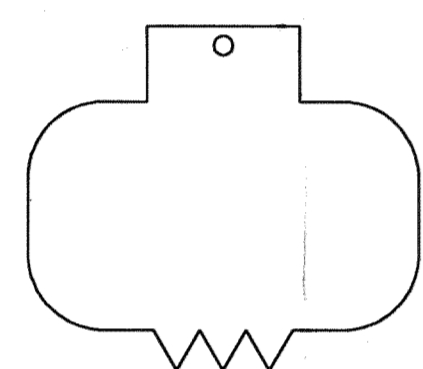
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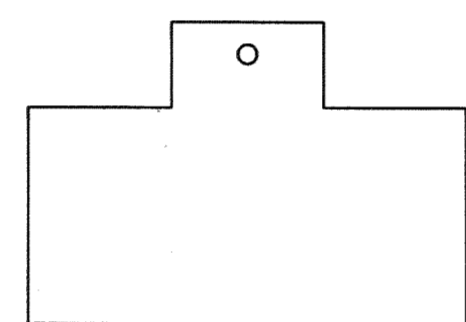
TRAFFIC SIGNALS

SUBSTATION & CIRCUIT ABBREVIATIONS ON IDENTIFICATION TAGS SHALL BE SPELLED AS FOLLOWS

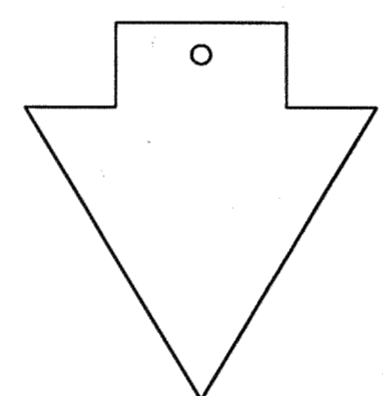
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| CUS. | MAP. | TRI. |
| GRF. | MCC. | TUR. |
| HUD. | MON. | WAL. |
| JSC. | PAL. | WSU. |
| JOY. | PHI. | JEF. |



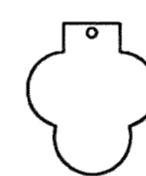
7200 VOLT FEEDER



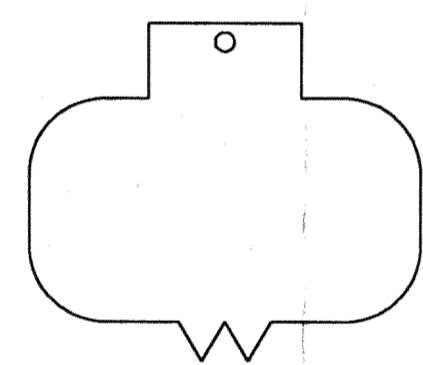
SUPERVISORY CONTROL



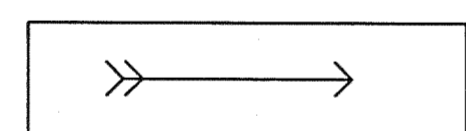
DEAD CABLE



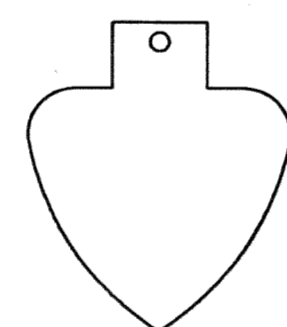
SECONDARY POWER TO SAFETY ISLANDS & TRAFFIC SIGNALS



4800 & 5500 VOLT FEEDER



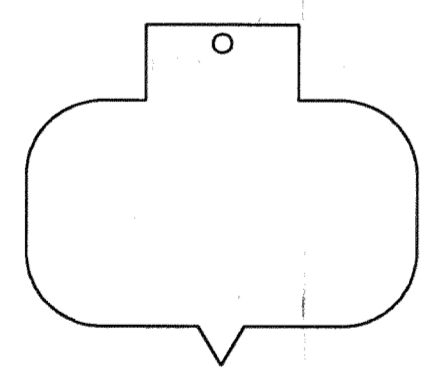
CIRCUIT DIRECTION



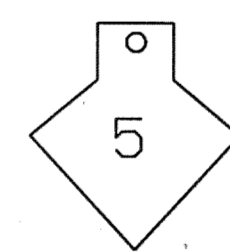
8/C COND. CABLE



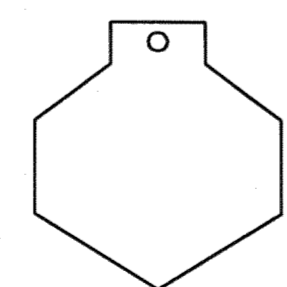
TRAFFIC SIGNAL CHRONOLIZER



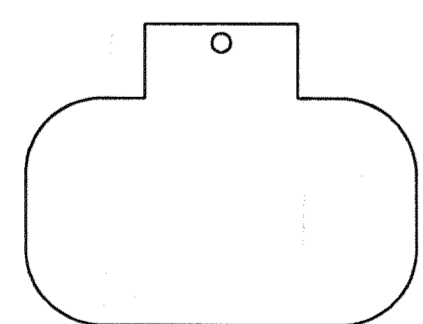
2400 VOLT FEEDER



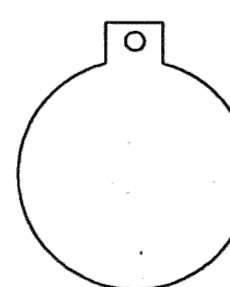
ST. LTG. COND. NO. (FROM 8/C CABLE)



MULTIPLE LTG, CONTROL



MISCELLANEOUS



ST. LTG. CIRC. NUMBER

NOTE:

LEAD CABLE IDENTIFICATION TAGS WILL BE FURNISHED TO CONTRACTOR BY P.L.D. CABLE TAG MARKINGS SUCH AS SUBSTATION OR CABLE MARKINGS WILL BE AS SHOWN ON PLANS OR WILL BE FURNISHED BY P.L.D.

IDENTIFICATION TAGS

MATERIAL : LEAD

JEFFERSON AVE OVER DEQUINDRE CUT

CABLE TAGS DETAILS

MANSELL ASSOCIATES INC.



ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

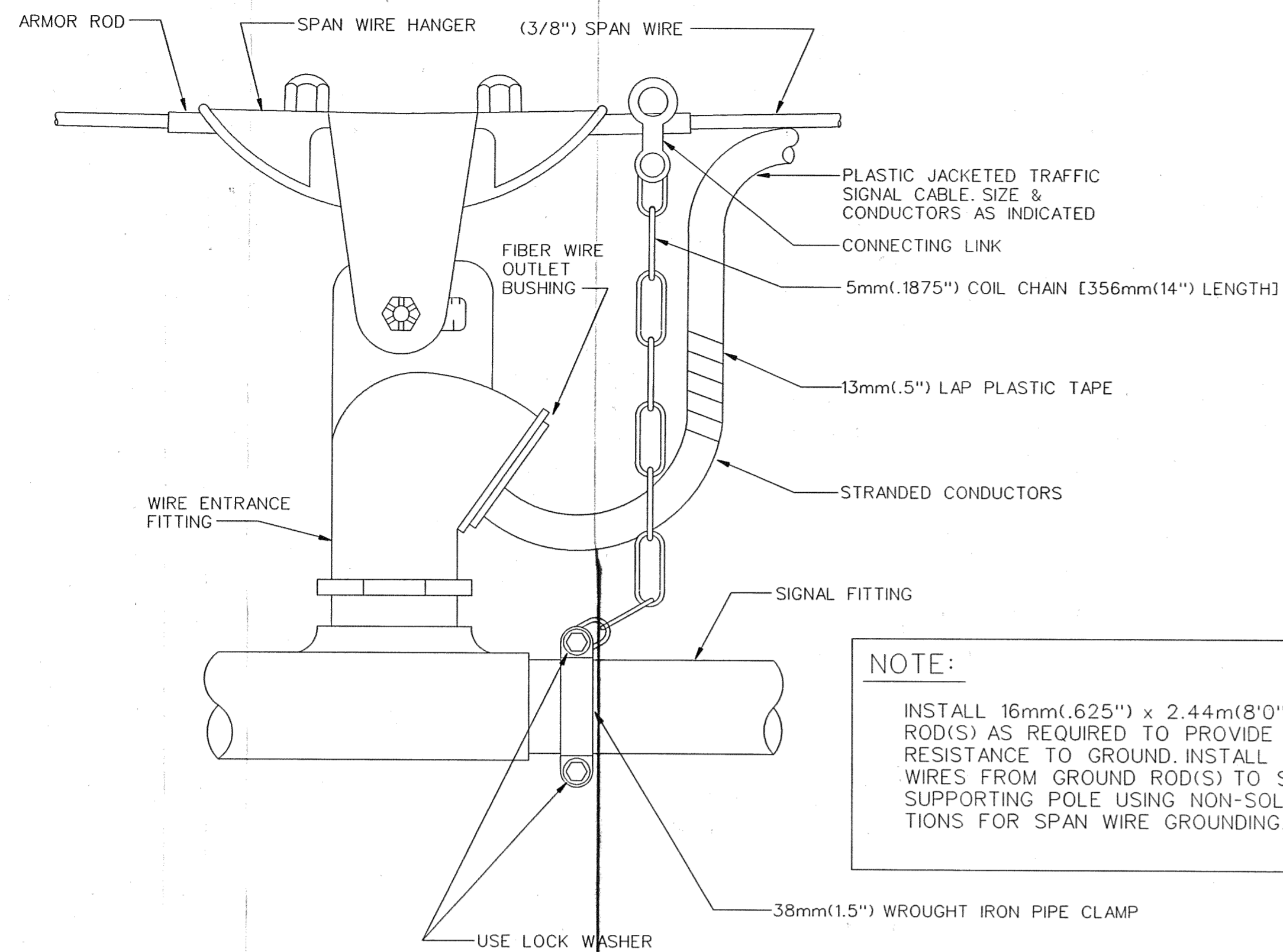
Drawn M.A.I.
Checked
Drwg. No. 21 OF 25
File No. M4044

Scale No Scale
Checked by
Approved by

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

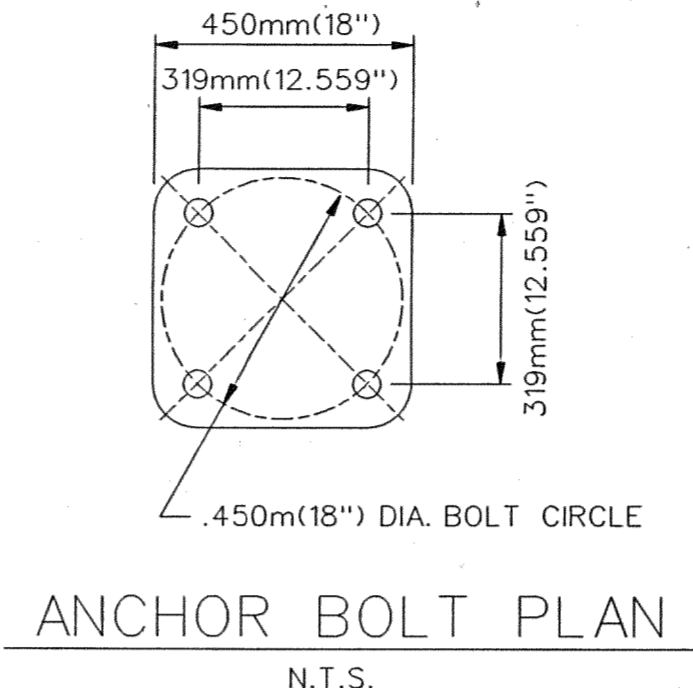
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27-1104
Sheet No. 41
Date 02-11-05

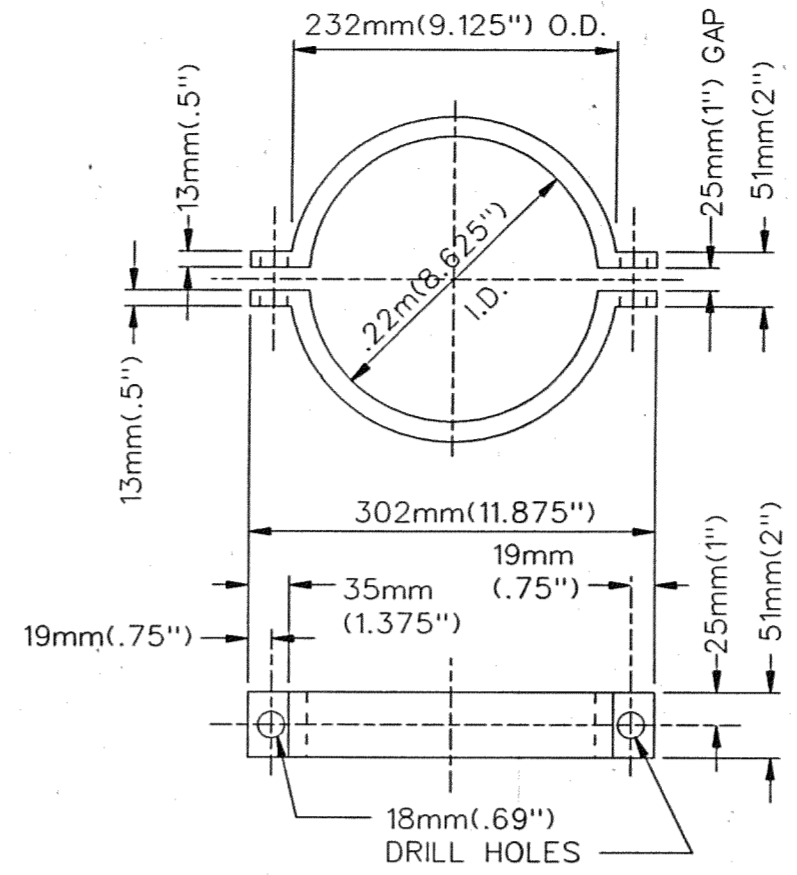


SPAN WIRE FITTING & WEATHER CAP
N.T.S.

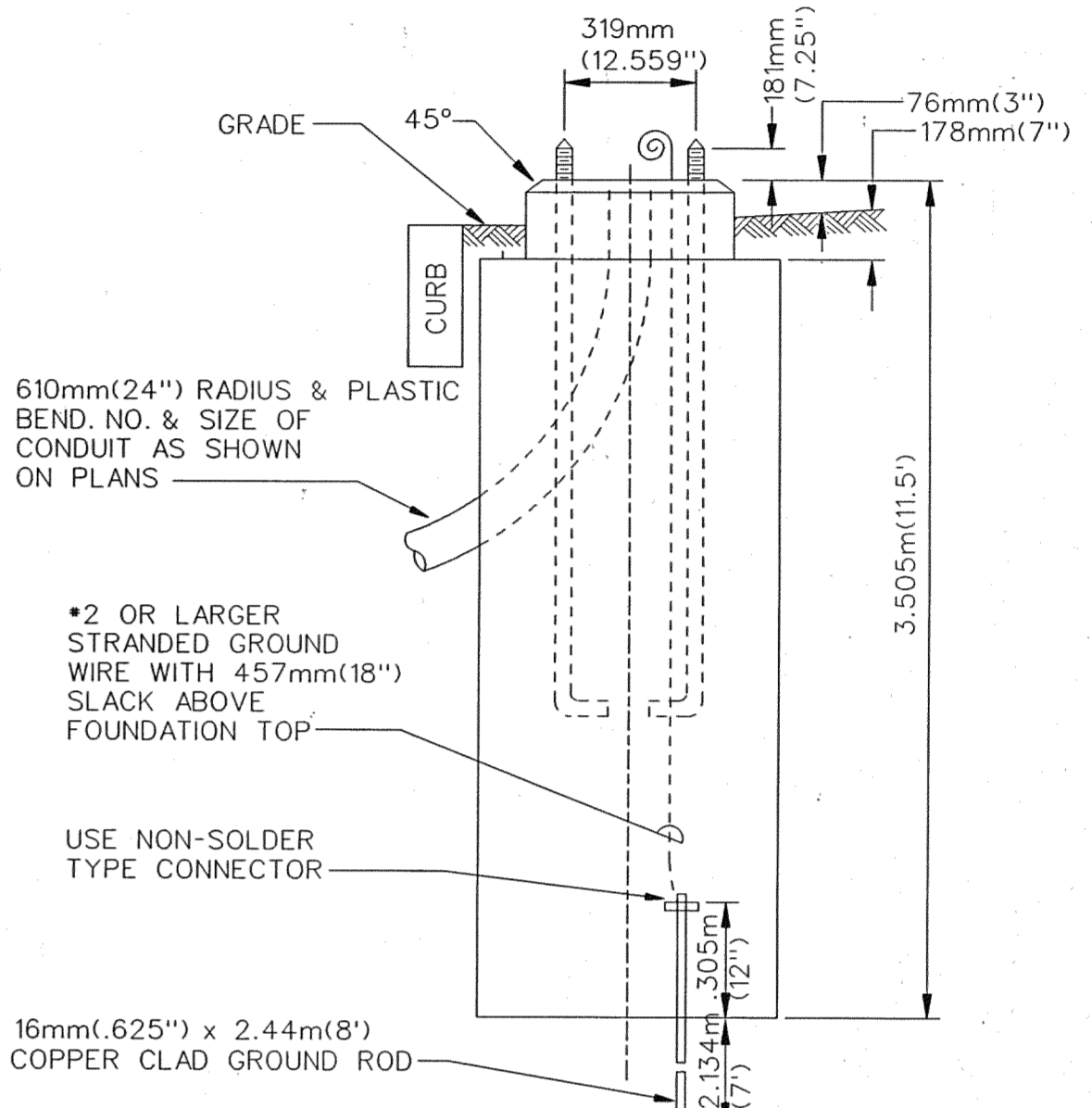
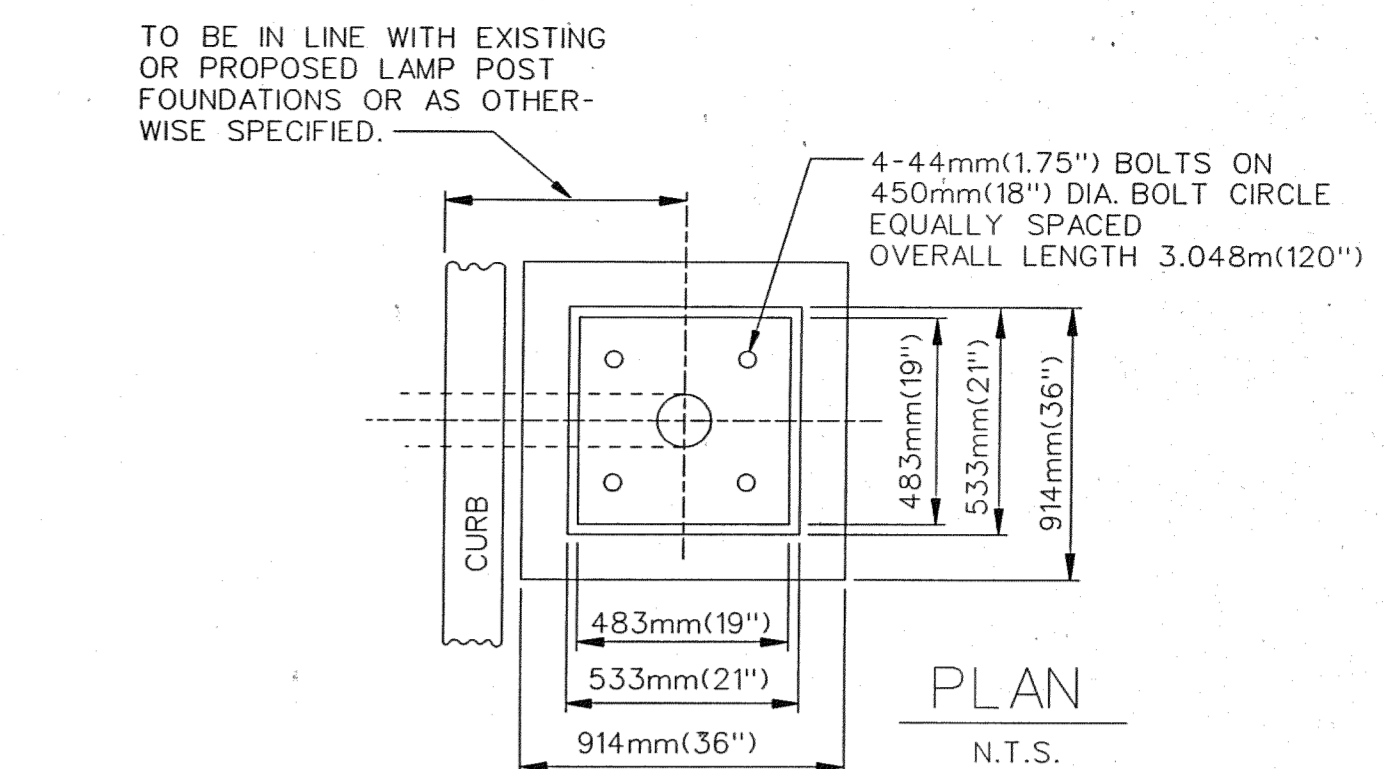
NOTE:
INSTALL 16mm(.625") x 2.44m(8'0") COPPER CLAD GROUND ROD(S) AS REQUIRED TO PROVIDE LESS THAN 10 OHM RESISTANCE TO GROUND. INSTALL #2 COPPER GROUND WIRES FROM GROUND ROD(S) TO SPAN WIRE AT EACH SUPPORTING POLE USING NON-SOLDER TYPE CONNECTIONS FOR SPAN WIRE GROUNDING.



ANCHOR BOLT PLAN
N.T.S.

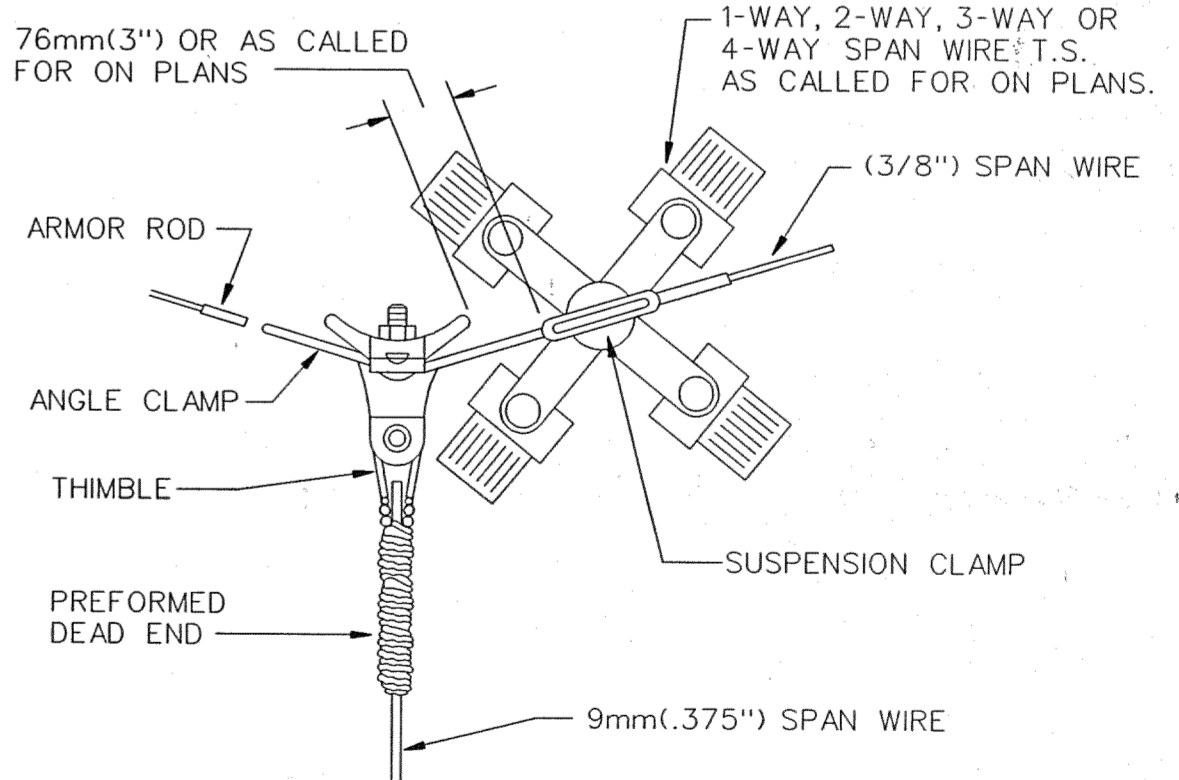


SPAN WIRE CLAMP
N.T.S.
MATERIAL: 13mm(.5") x 13mm(.5") GALVANIZED STEEL

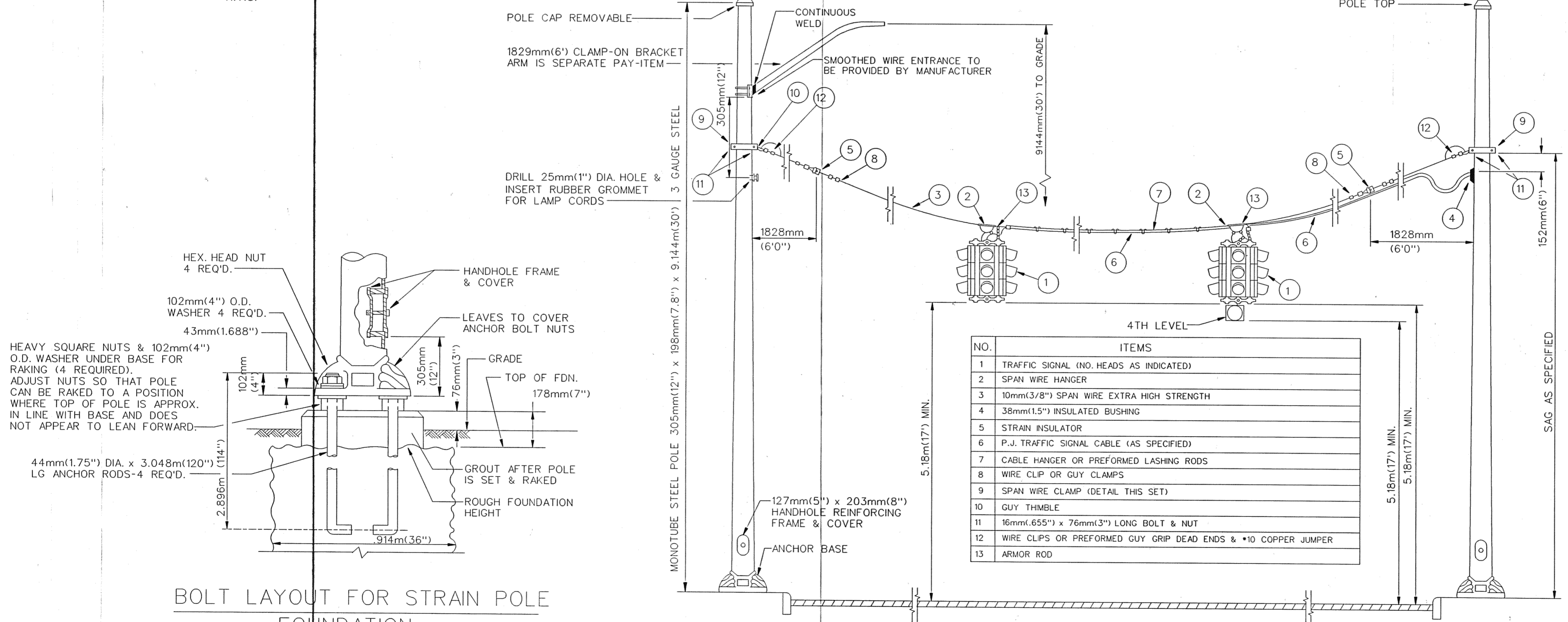


SPAN WIRE STEEL POLE FOUNDATION
N.T.S.

ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTIONS ABOVE CAP SHALL BE CLEANED OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.

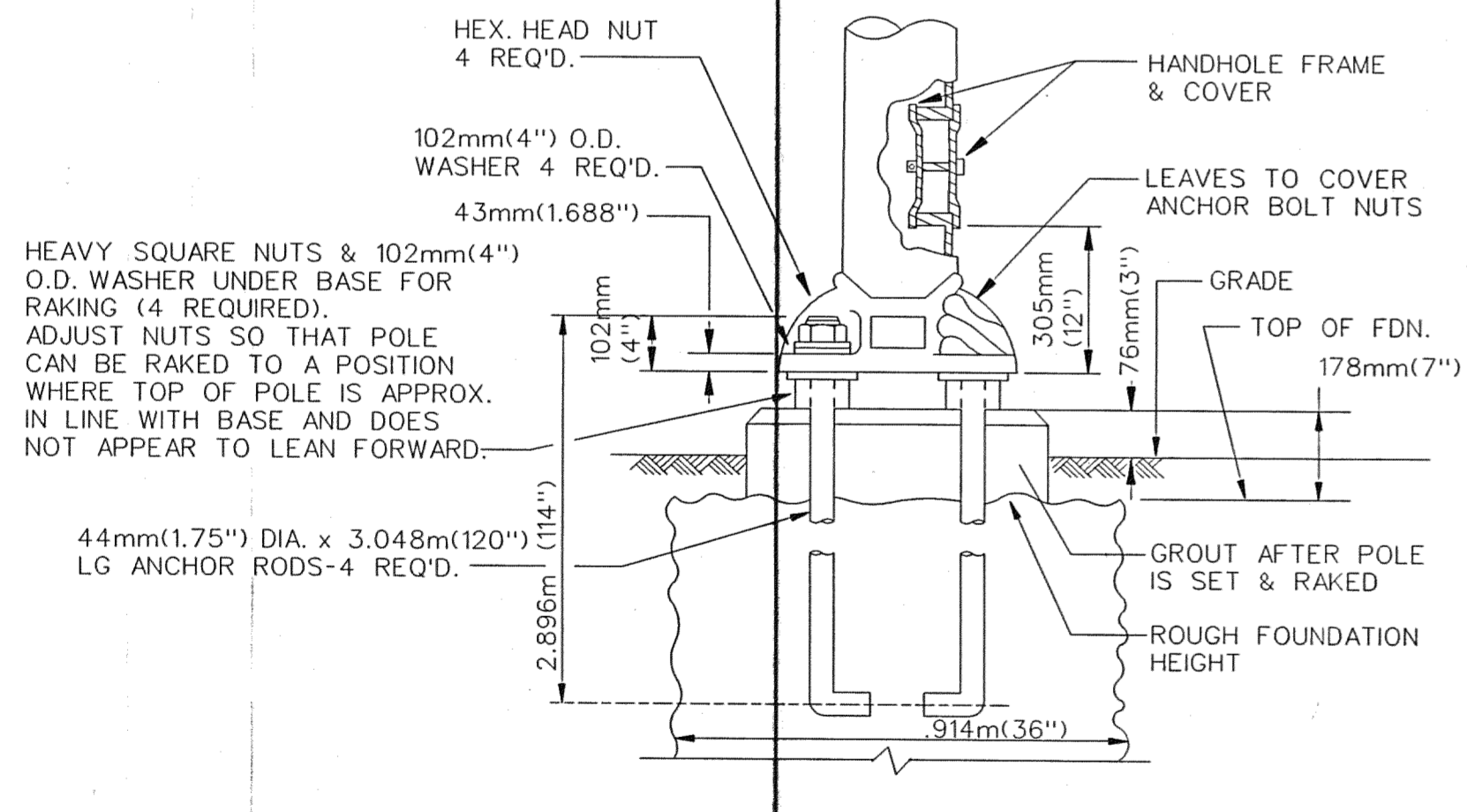


PULL-OFF CONNECTION FOR 3-WAY SUSPENSION



ELEVATION
N.T.S.

NO.	ITEMS
1	TRAFFIC SIGNAL (NO. HEADS AS INDICATED)
2	SPAN WIRE HANGER
3	10mm(3/8") SPAN WIRE EXTRA HIGH STRENGTH
4	38mm(1.5") INSULATED BUSHING
5	STRAN INSULATOR
6	P.J. TRAFFIC SIGNAL CABLE (AS SPECIFIED)
7	CABLE HANGER OR PREFORMED LASHING RODS
8	WIRE CLIP OR GUY CLAMPS
9	SPAN WIRE CLAMP (DETAL THIS SET)
10	GUY THIMBLE
11	16mm(.655") x 76mm(3") LONG BOLT & NUT
12	WIRE CLIPS OR PREFORMED GUY GRIP DEAD ENDS & #10 COPPER JUMPER
13	ARMOR ROD



BOLT LAYOUT FOR STRAIN POLE FOUNDATION
N.T.S.

JEFFERSON AVE OVER DEQUINDRE CUT
STEEL POLE T.S.SPAN WIRE INSTALLATION (CODE 113-00)

MANSSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

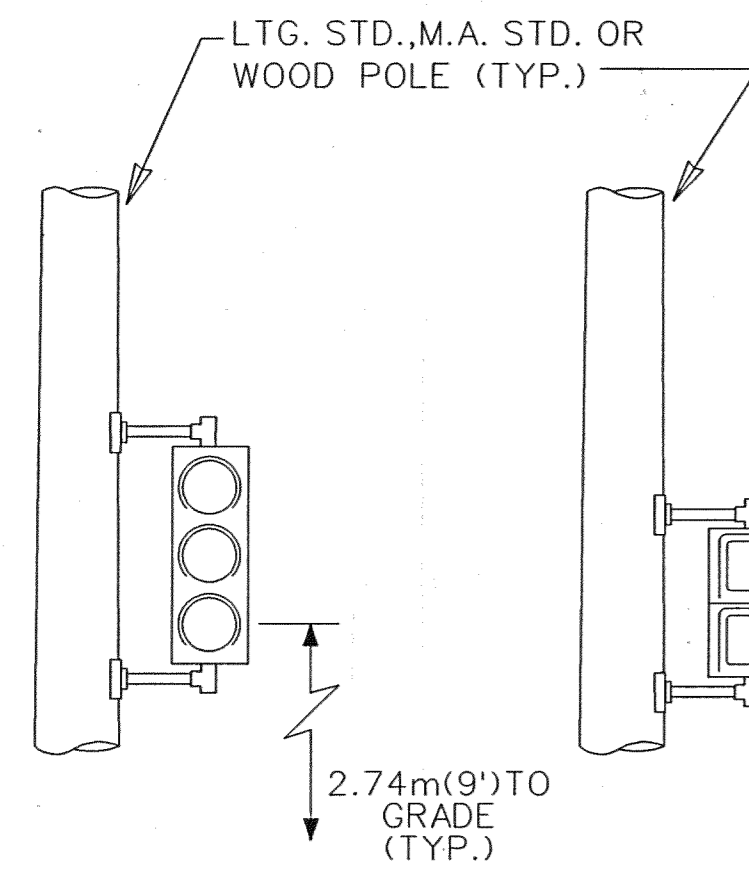
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Checked: No Scale
Drwg. No. 22 OF 25
File No. M4044

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

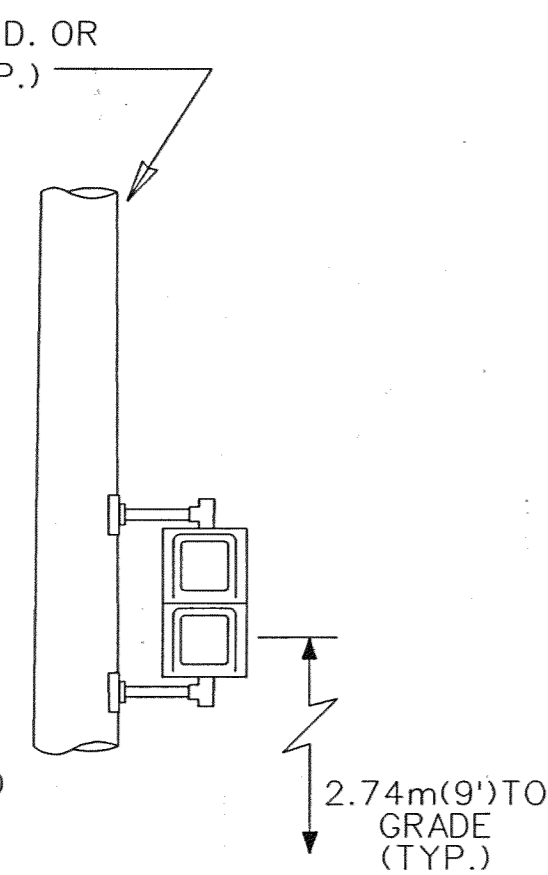
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27-1104
Sheet No. 42
Date 02-11-05

DISK FILE: 507PLDLM.MFR

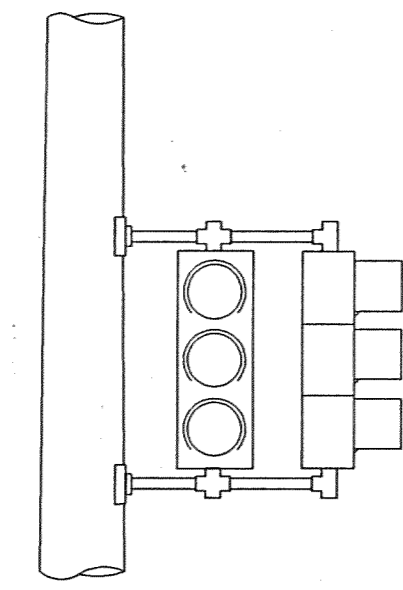
REV	Date	Description	Chkd. by



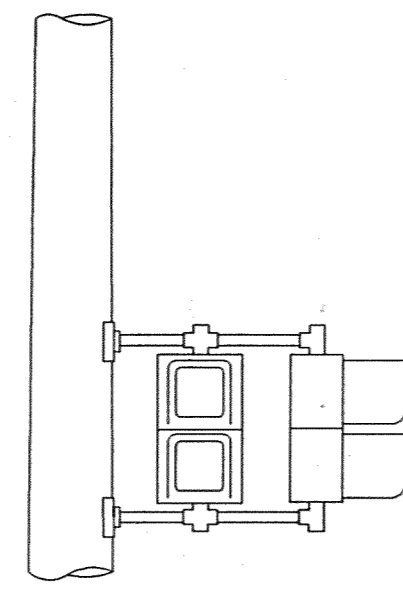
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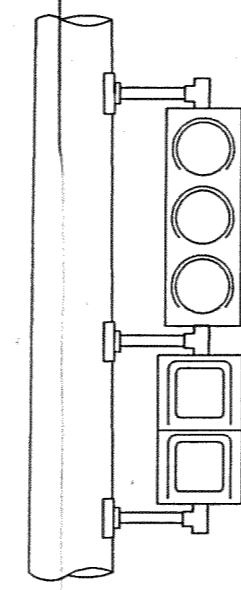
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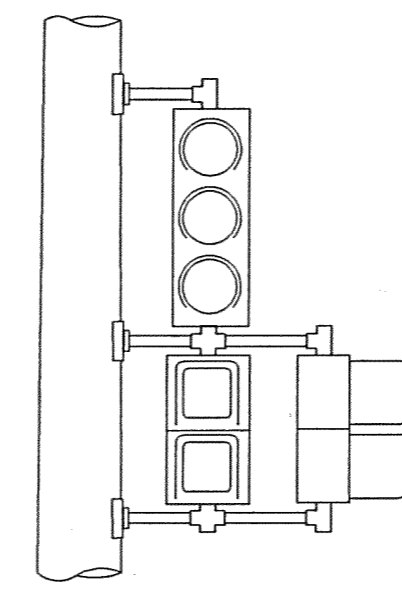
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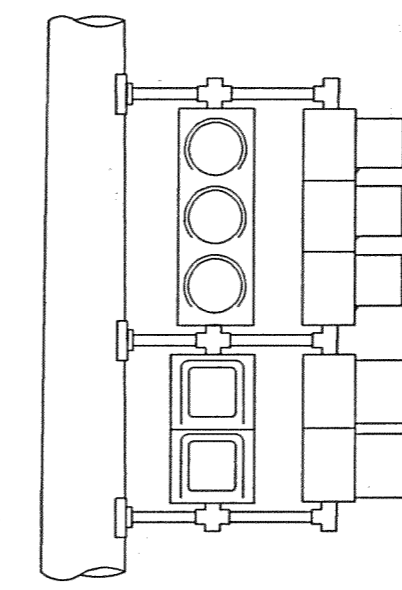
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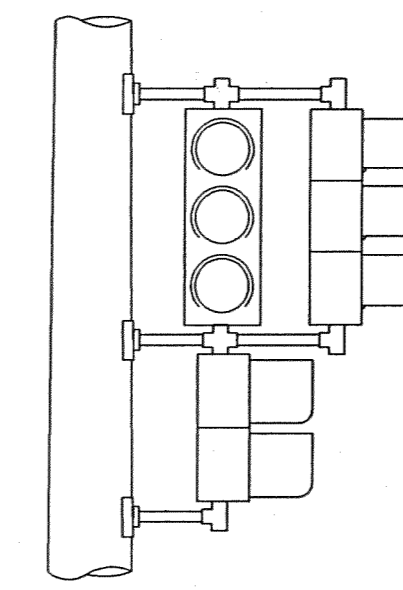
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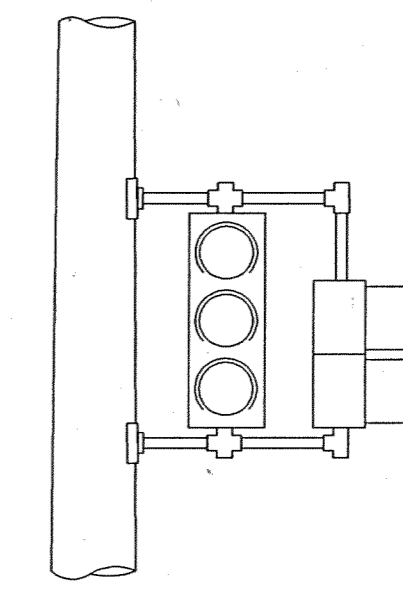
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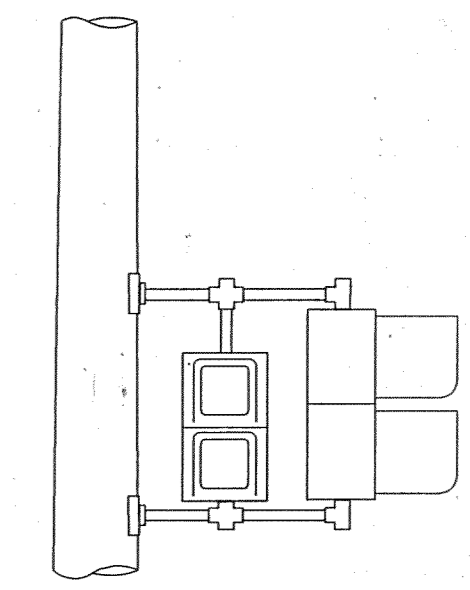
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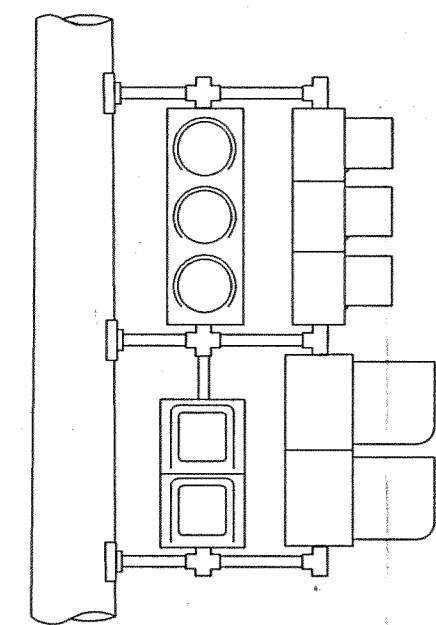
DETAIL "H-I"



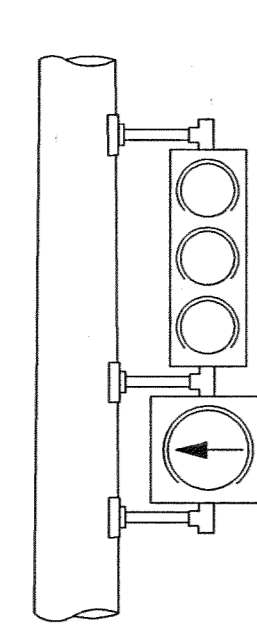
DETAIL "J-I"



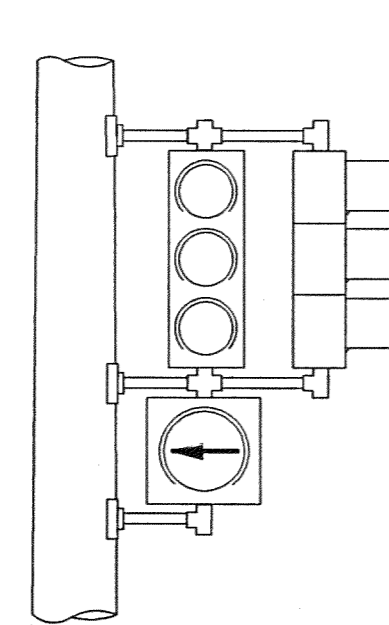
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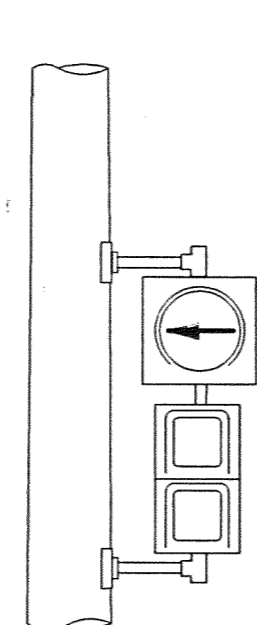
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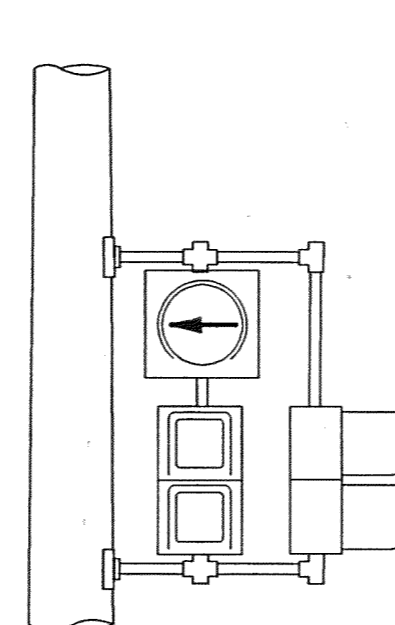
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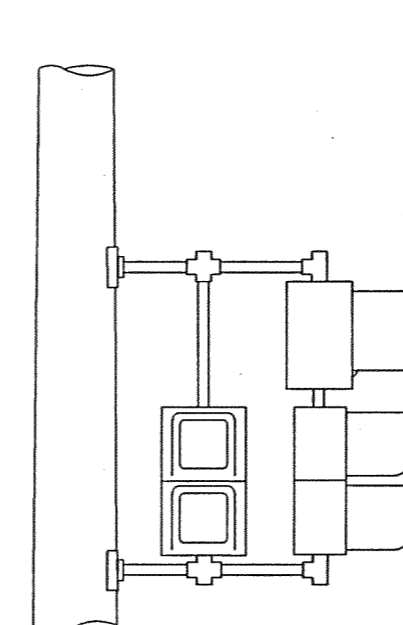
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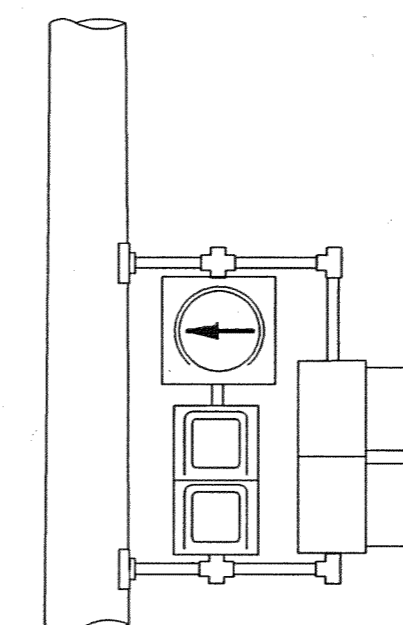
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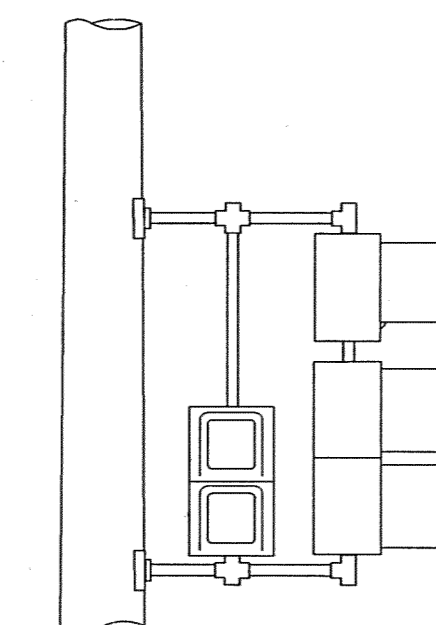
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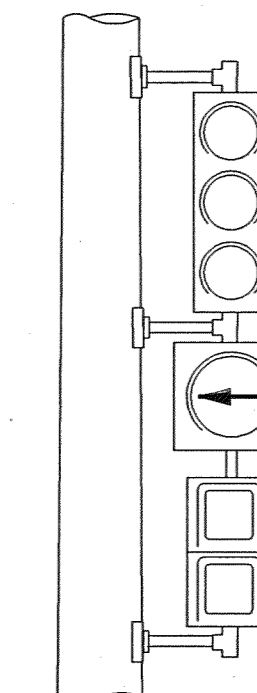
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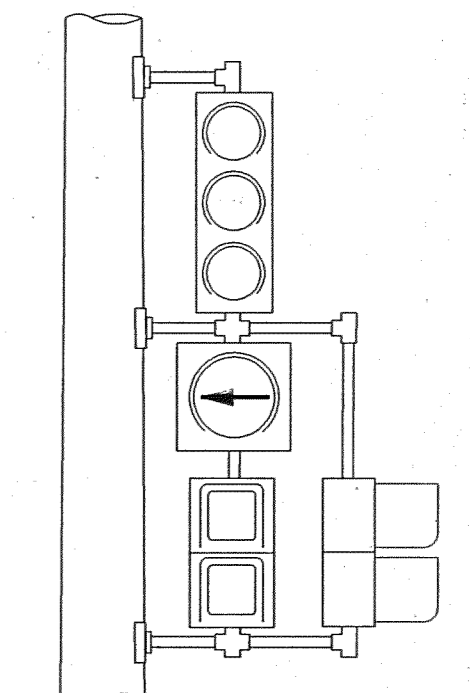
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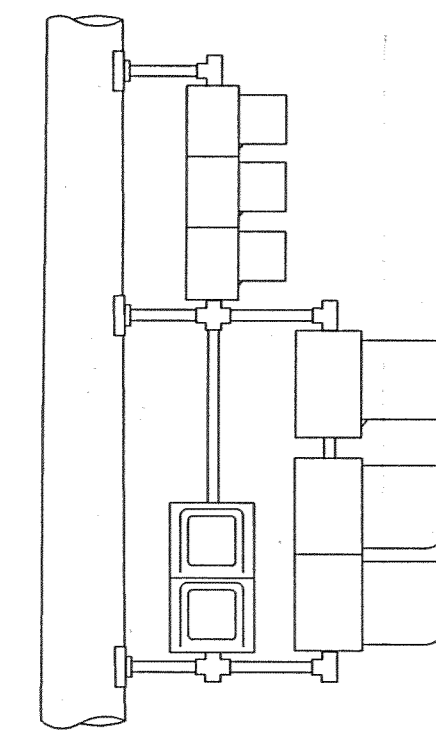
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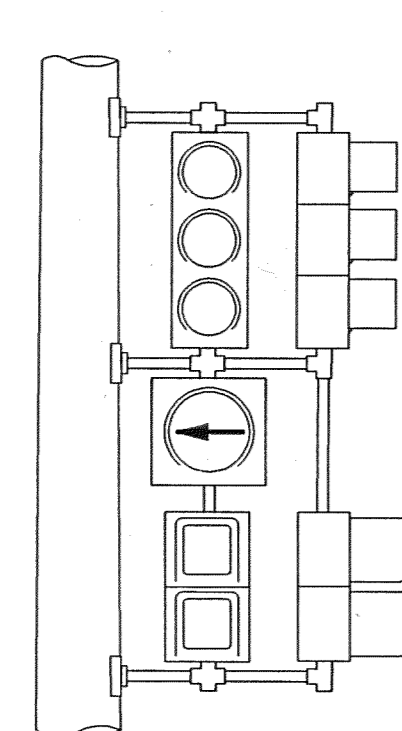
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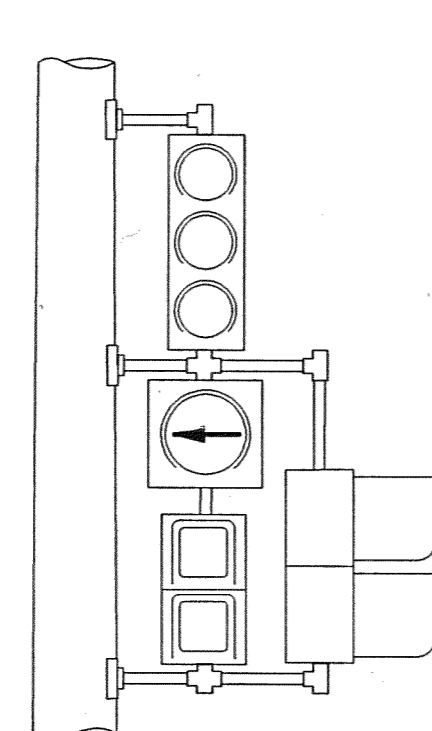
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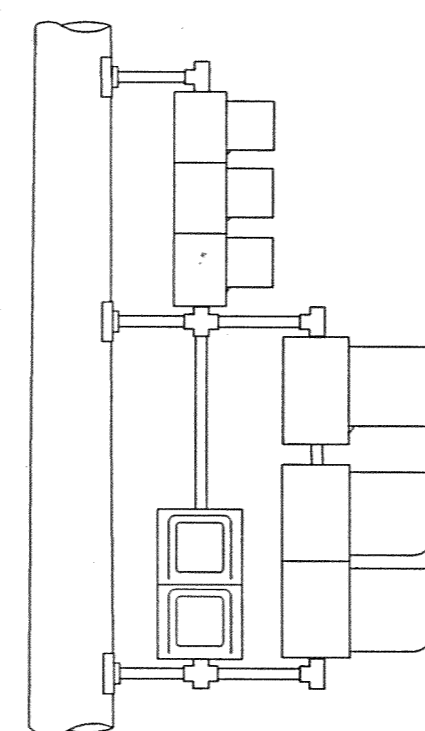
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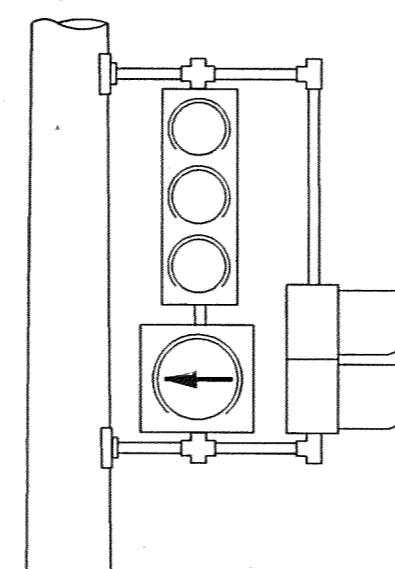
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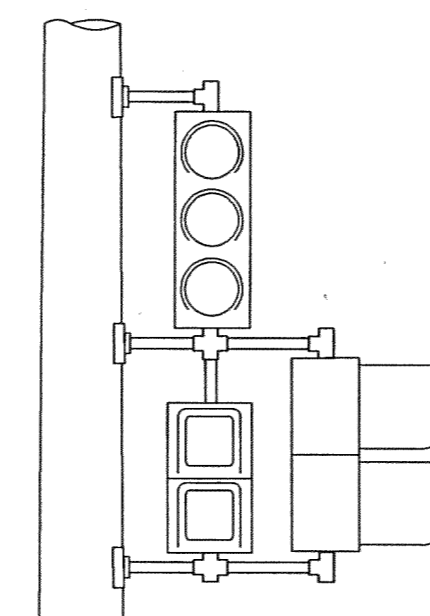
DETAIL "Y-I"



DETAIL "Z-I"



DETAIL "A-A-I"



DETAIL "B-B-I"

NOTE:
THE RELATIVE POSITION OF 2-WAY T.S. & PEDESTRIAN BRACKET ARM SIGNALS WITHIN THE BRACKET ASSEMBLY SHALL BE REVERSED (I.E. THE SIGNAL NEAREST THE POLE GOES TO THE OUTSIDE OF THE BRACKET ASSEMBLY & THE OUTSIDE SIGNAL GOES INBOARD OR NEAREST TO POLE) ACCORDING TO THE PLAN VIEW TO PROVIDE CLEAR VEHICULAR AND PEDESTRIAN VIEWING.

NOTE:
PIPE ASSEMBLY SHALL BE OF SUCH LENGTH AND HEIGHT AS TO ACCOMMODATE TRAFFIC SIGNALS AND PEDESTRIAN SIGNALS FOR PROPER MAINTENANCE AND CLEAR VEHICULAR AND PEDESTRIAN VIEWING.

DISK FILE: 508PLDM.MTR

Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

T.S. BRACKET ARM ASSEMBLY DETAILS

Job No.
49717A

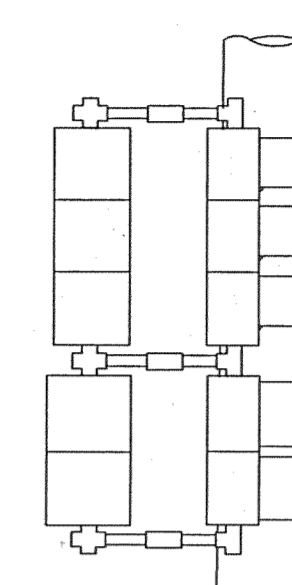
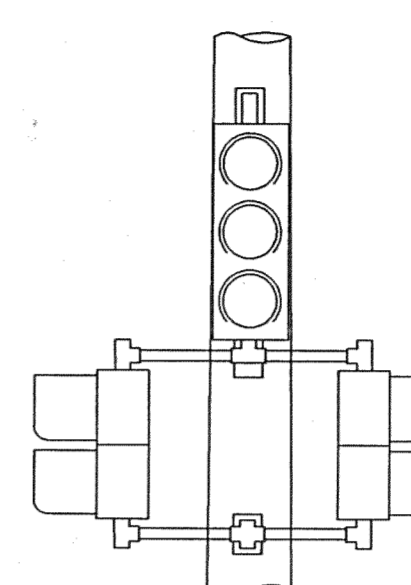
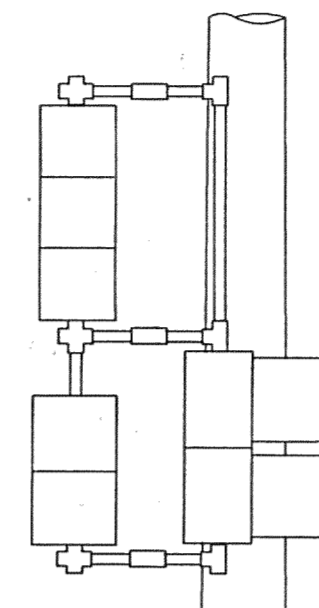
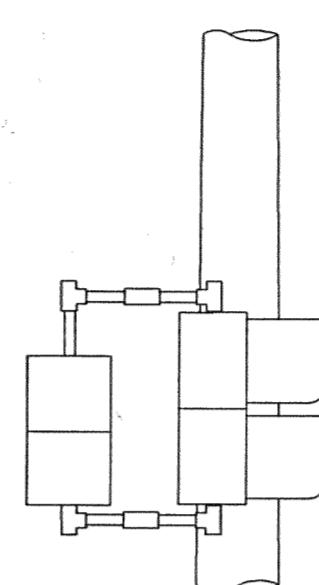
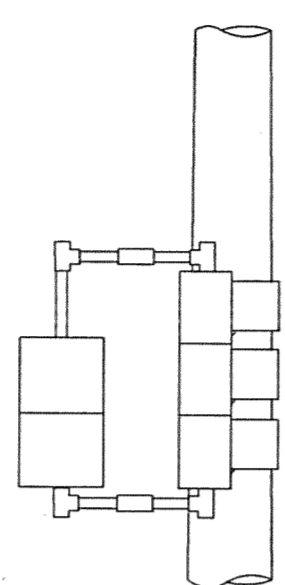
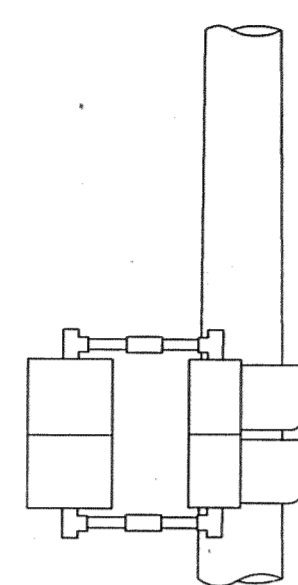
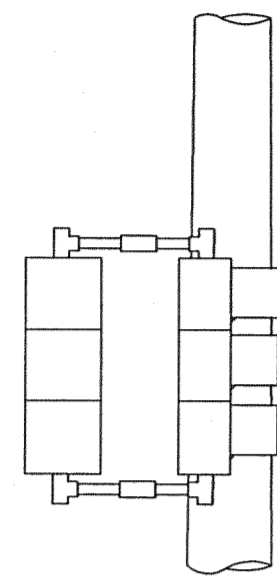
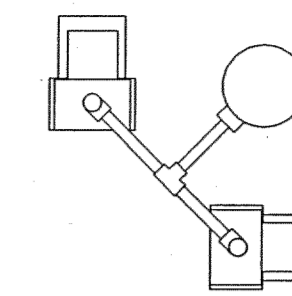
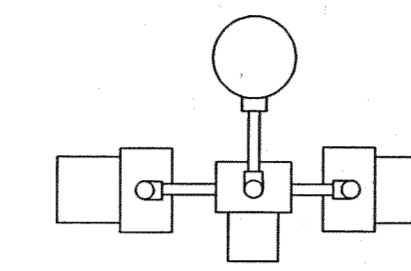
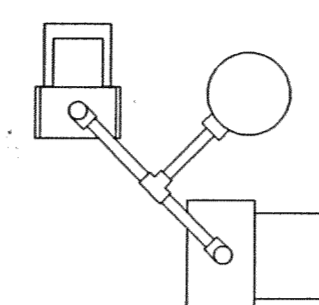
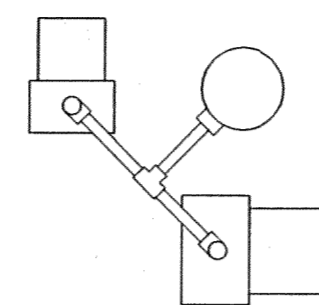
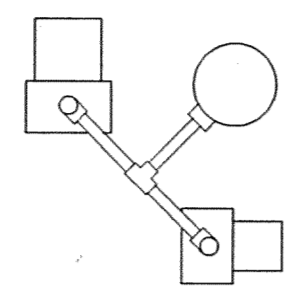
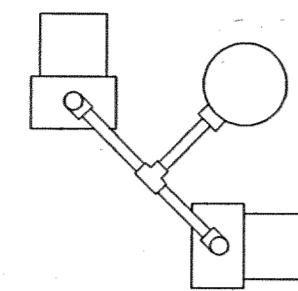
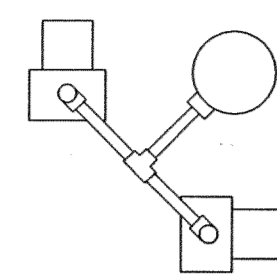
MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn: M.A.I.
Checked: _____
Drwg. No. 23 OF 25
File No. M4044

Scale: No Scale
Checked by: _____
Approved by: _____

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

508
27-1104
Sheet No. 43
Date 02-11-05



DETAIL "A-3"

DETAIL "B-3"

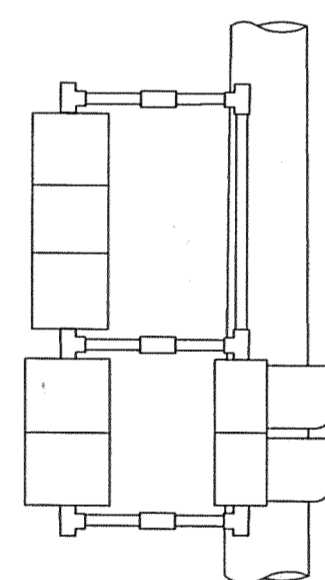
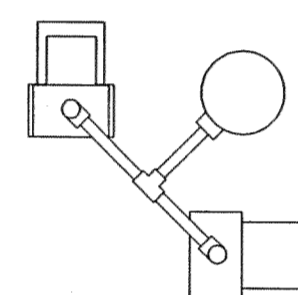
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DETAIL "D-3"

DETAIL "E-3"

DETAIL "F-3"

DETAIL "G-3"



DETAIL "H-3"

NOTE:

THE RELATIVE POSITION OF 2-WAY T.S. & PEDESTRIAN BRACKET ARM SIGNALS WITHIN THE BRACKET ASSEMBLY SHALL BE REVERSED (I.E. THE SIGNAL NEAREST THE POLE GOES TO THE OUTSIDE OF THE BRACKET ASSEMBLY & THE OUTSIDE SIGNAL GOES INBOARD OR NEAREST TO POLE) ACCORDING TO THE PLAN VIEW TO PROVIDE CLEAR VEHICULAR AND PEDESTRIAN VIEWING.

NOTE:

PIPE ASSEMBLY SHALL BE OF SUCH LENGTH AND HEIGHT AS TO ACCOMMODATE TRAFFIC SIGNALS AND PEDESTRIAN SIGNALS FOR PROPER MAINTENANCE AND CLEAR VEHICULAR AND PEDESTRIAN VIEWING.

REVISIONS	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT

T.S. BRACKET ARM ASSEMBLY DETAILS

Job No.
49717A

MANSSELL ASSOCIATES INC.



ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Drawn	M.A.I.
Checked	
Drwg. No.	24 OF 25
File No.	M4044

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Checked by	
Approved by	

PUBLIC LIGHTING DEPARTMENT
CITY OF DETROIT

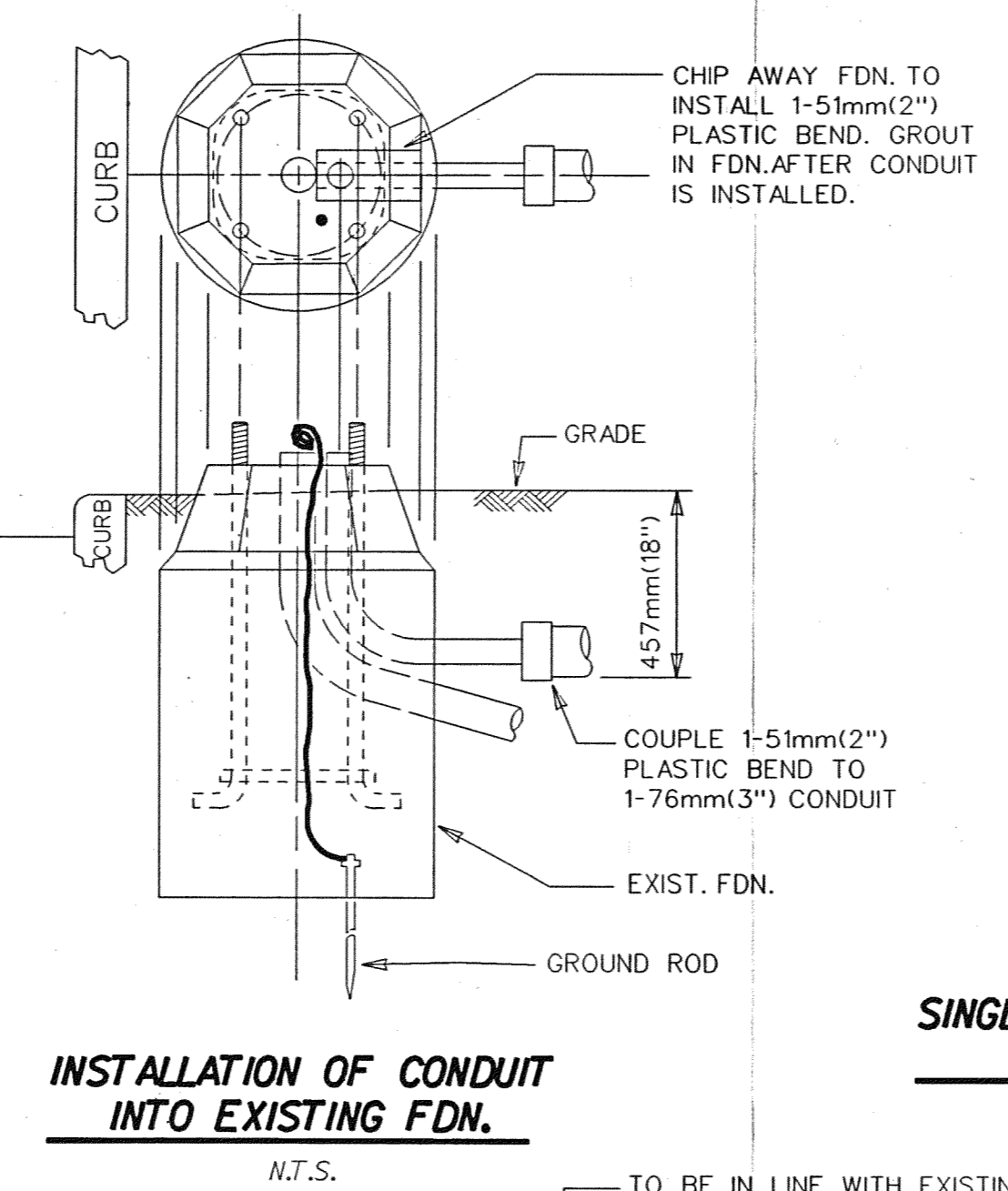
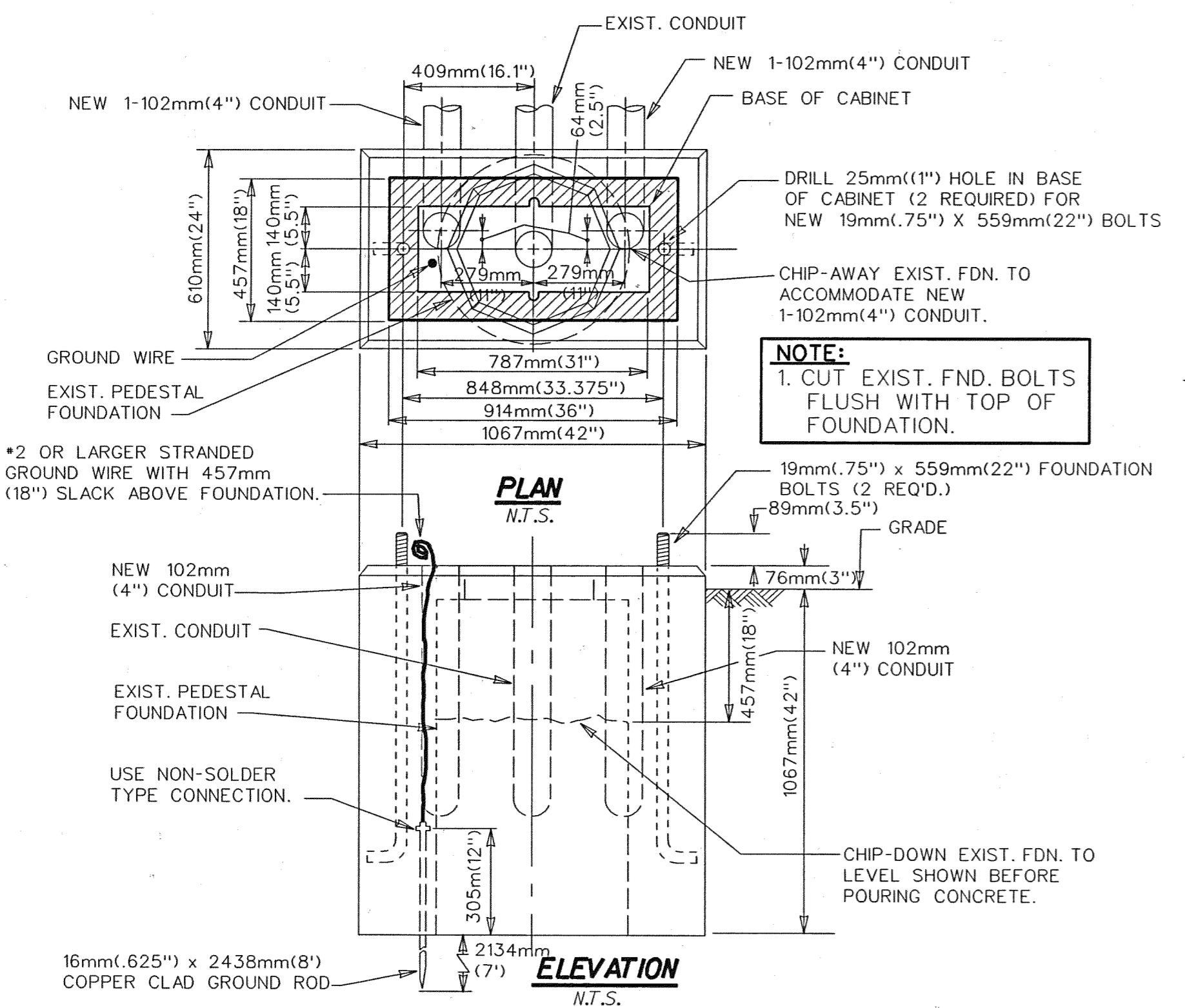
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27-1104

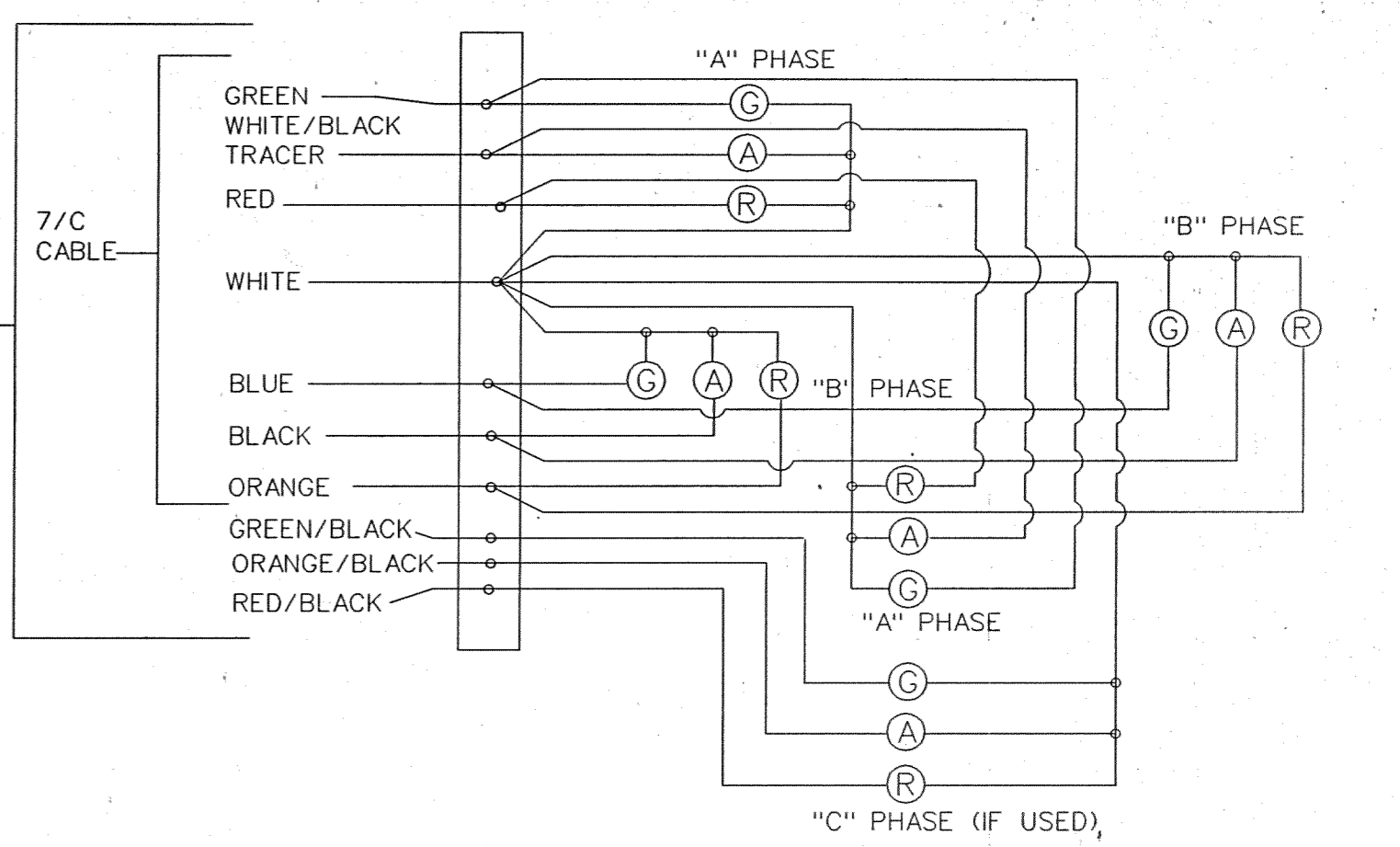
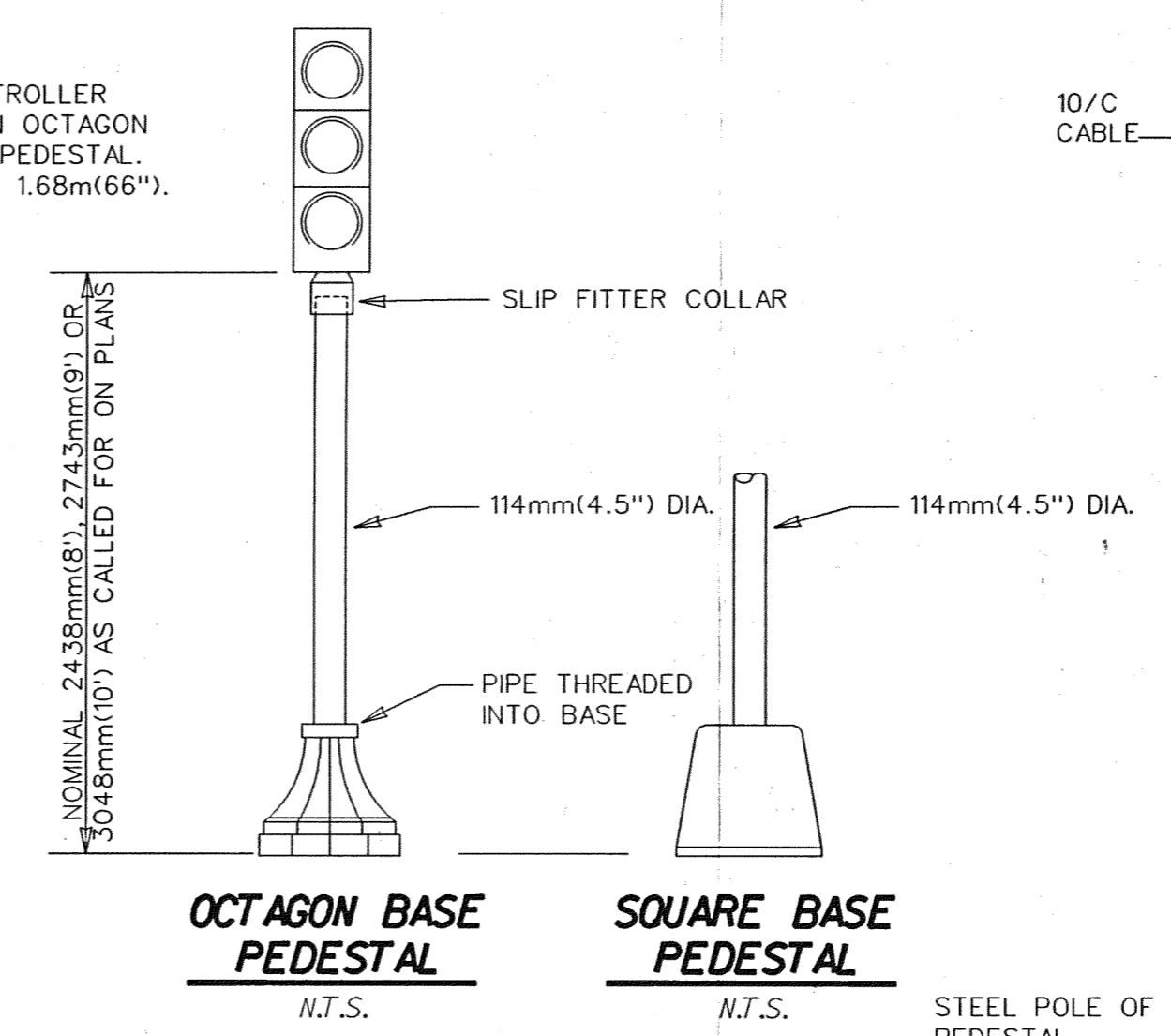
Sheet No.
44

Date
02-11-05

NOTE:
GROUNDING SYSTEM SHALL MEASURE
10 OHM OR LESS TO GROUND.

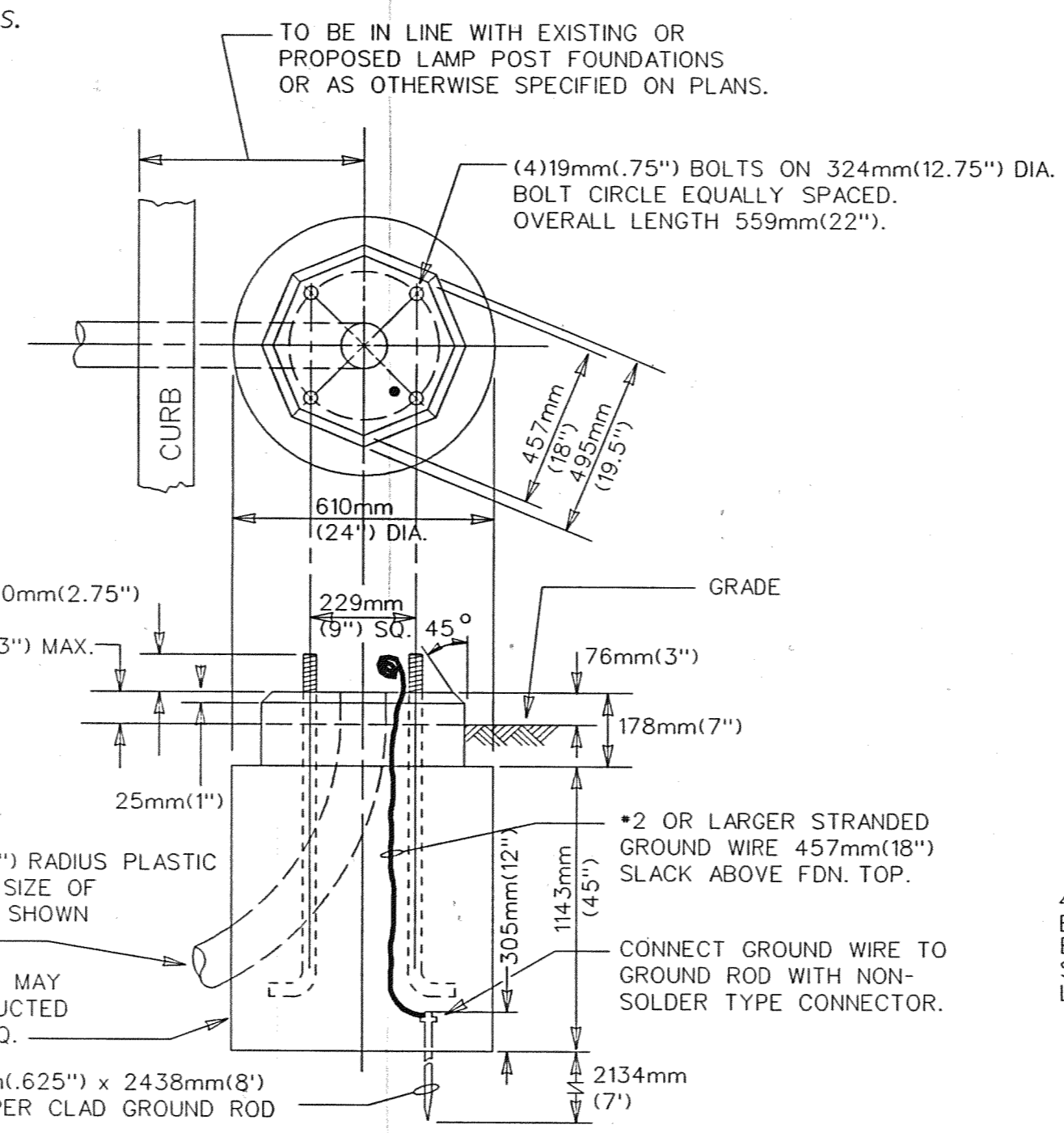


**SINGLE CABINET CONTROLLER
OCTAGON BASE**
N.T.S.

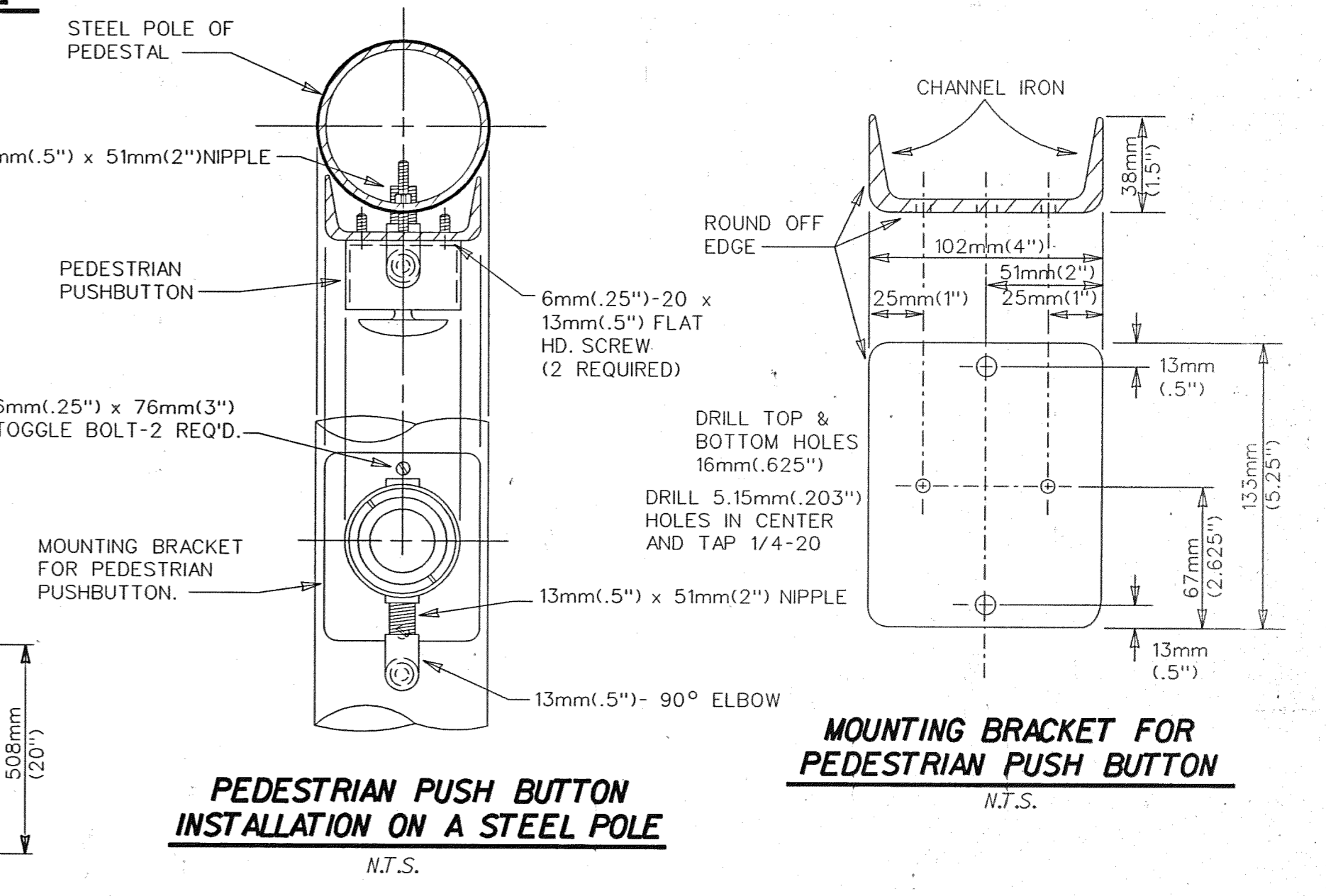
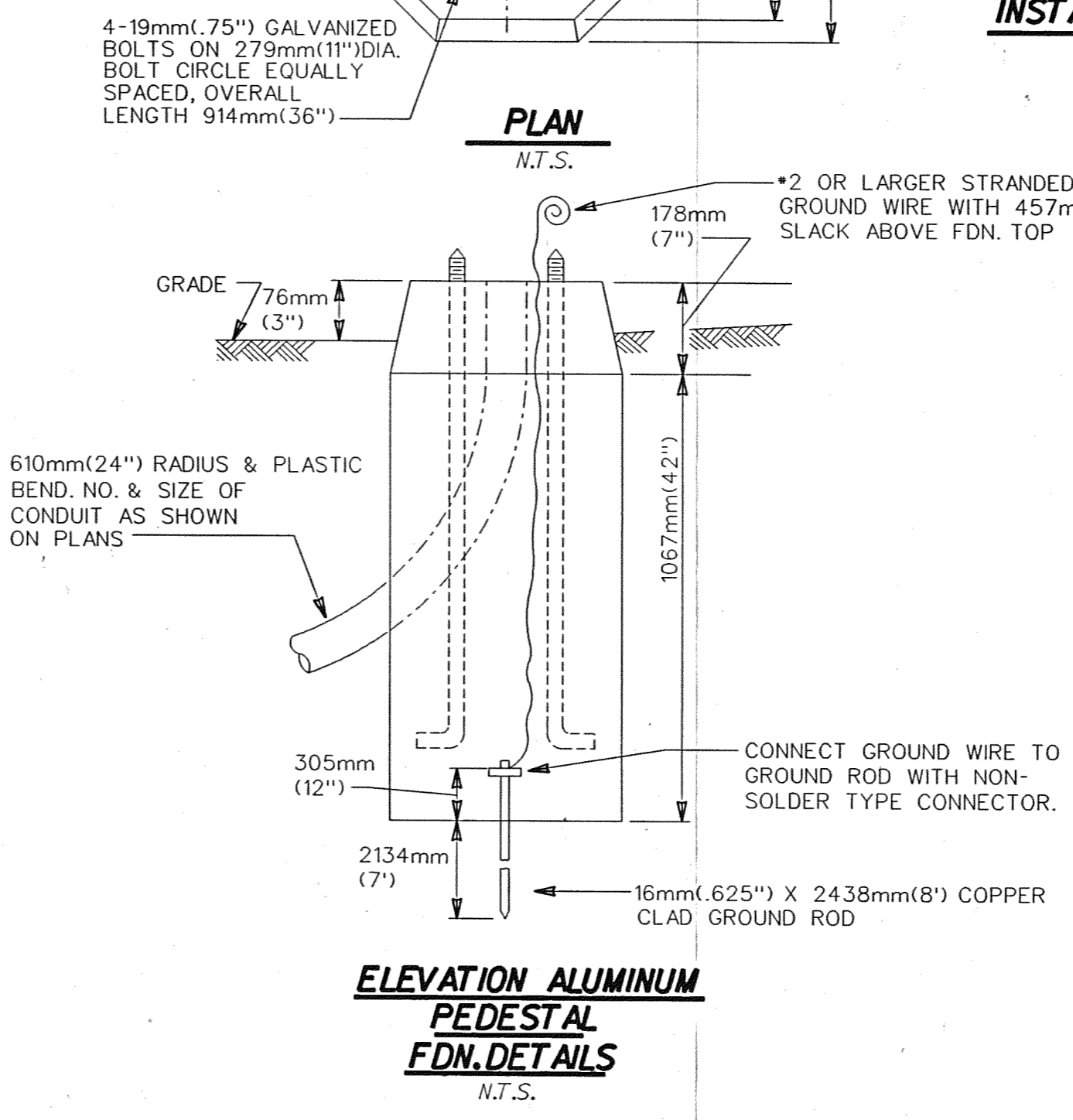
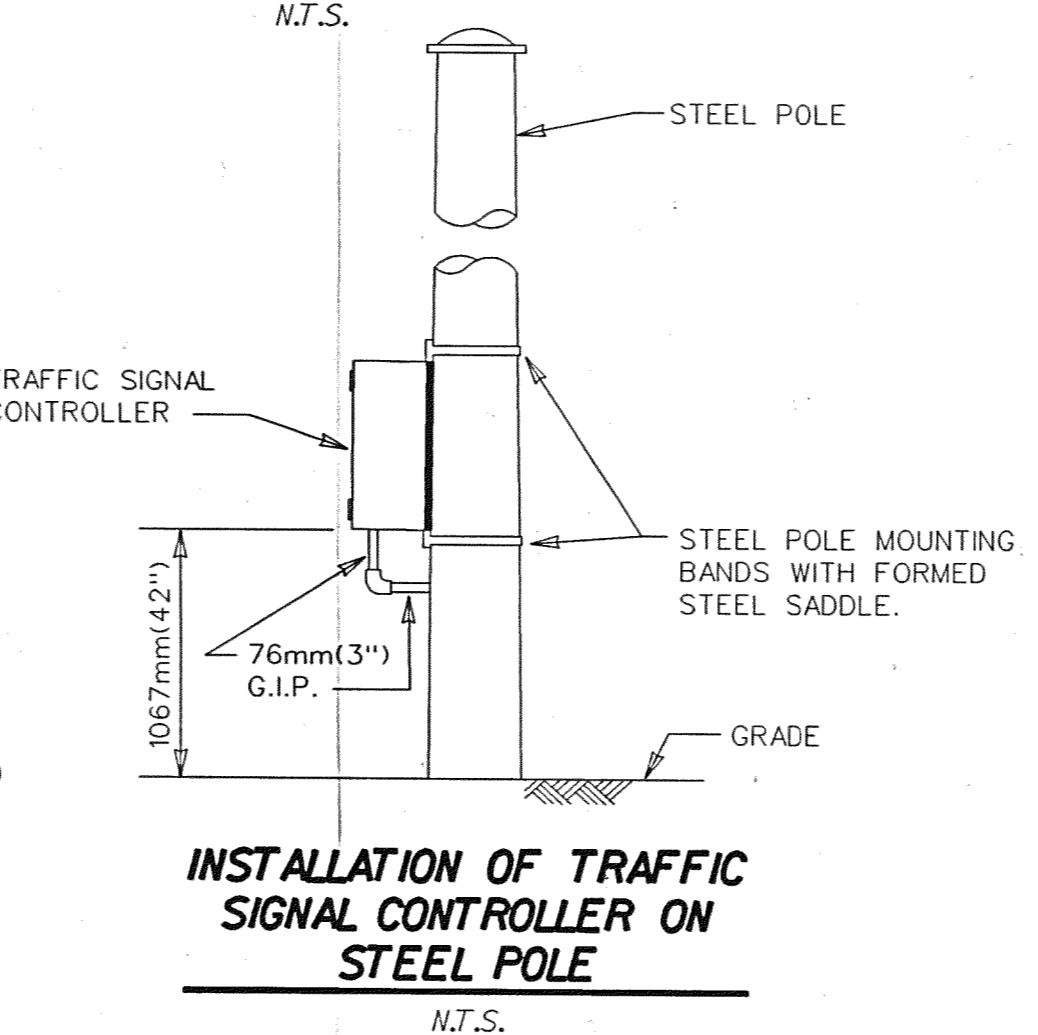


THE INCOMING CABLE FROM THE CONTROLLER IS TO BE CONNECTED TO THE TERMINAL BLOCK IN ONE FACE OF THE SIGNAL ASSEMBLY. THE OTHER FACES IN THE ASSEMBLY ARE TO BE CONNECTED TO THIS TERMINAL BLOCK BY #14 TW WIRES THROUGH THE ASSEMBLY FRAMEWORK.

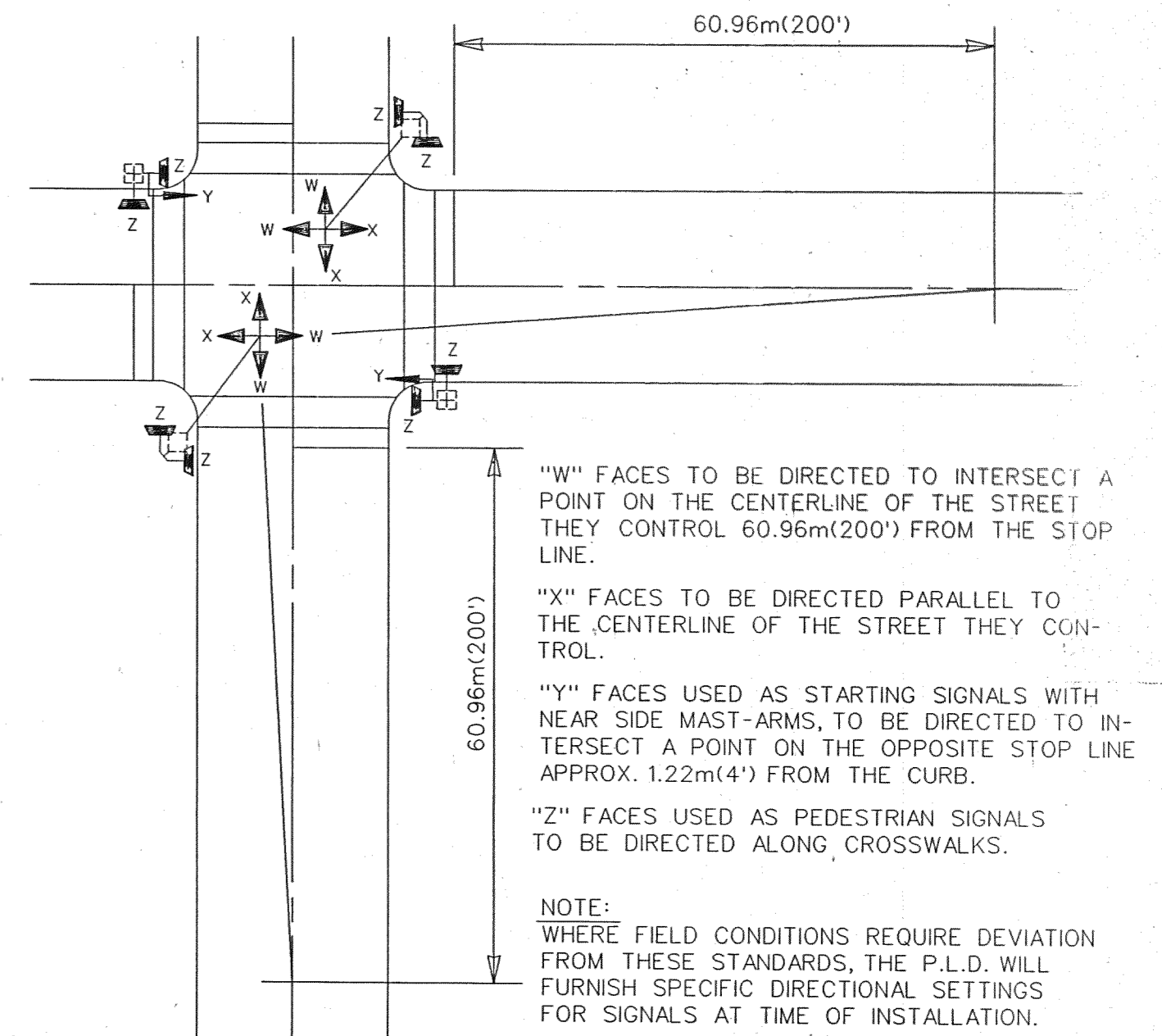
ALL FOUNDATION CAPS SHALL HAVE A SMOOTH FINISH WITH BEVELED EDGES & SHALL BE SHAPED TO ALLOW COMPLETE DRAINAGE OF WATER. ANCHOR BOLT PROJECTION ABOVE CAP SHALL BE CLEAN OF ALL CONCRETE & FULLY USABLE THEIR FULL LENGTH.



**INSTALLATION OF TRAFFIC
SIGNAL CONTROLLER
ON
STEEL POLE**
N.T.S.



**MOUNTING BRACKET FOR
PEDESTRIAN PUSH BUTTON**
N.T.S.



REVISION	Date	Description	Chkd. by

JEFFERSON AVE OVER DEQUINDRE CUT
MISCELLANEOUS TRAFFIC SIGNAL DETAILS

MANSELL ASSOCIATES INC.
ENGINEERING CONSULTANTS
33608 Grand River
Farmington, MI. 48335
(248) 473-7070

Checked	No Scale
Checked by	Checked by
Drwg. No. 25 OF 25	Approved by
File No. M4044	

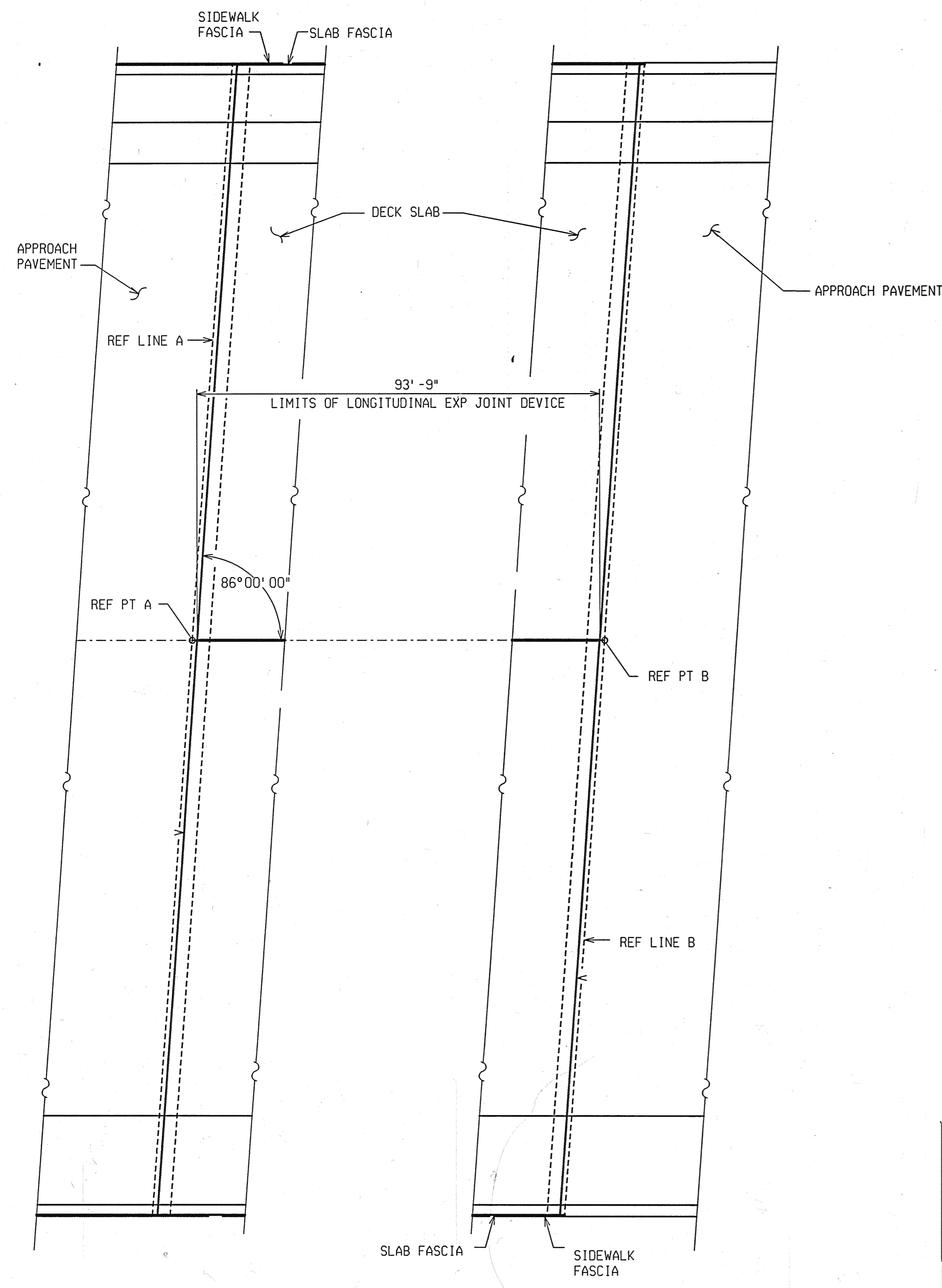
**PUBLIC LIGHTING
DEPARTMENT**
CITY OF DETROIT

511
27-1104
Sheet No.
45
Date
02-11-05

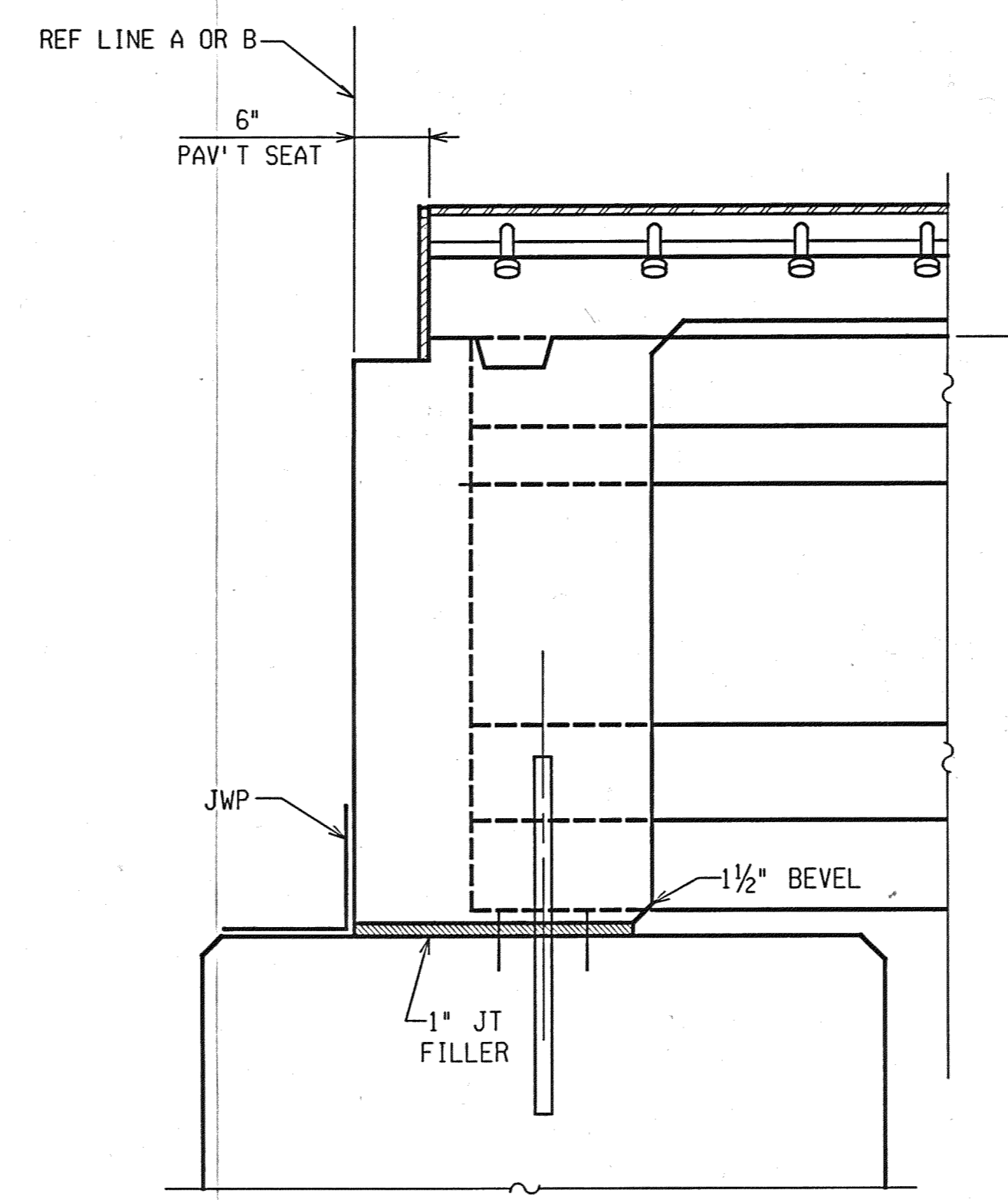
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN OF LONDIGTUDINAL EXPANSION JOINT



TYPICAL SECTION THRU BACKWALL

NOTES:

JOINT TYPES

THE EXPANSION JOINT DEVICE SHALL BE OF A TYPE THAT INCLUDES A CONTINUOUS NEOPRENE (OR EQUIVALENT) SEAL ACROSS THE DECK. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR HAS THE OPTION OF USING ANY OF THE DEVICES LISTED BELOW:

DEVICE	MANUFACTURER
WABO STRIP SEAL - TYPE M	WATSON-BOWMAN & ACME, INC.
WABO STRIP SEAL - TYPE A	WATSON-BOWMAN & ACME, INC.
STEEFLFLEX-SSA2	D.S. BROWN
STEEFLFLEX-SSCM	D.S. BROWN
ONFLEX 40 SS	STRUCTURAL RUBBER PRODUCTS CO.

THE MODEL OF THE JOINT TYPE SELECTED SHALL BE SUITABLE TO ACCOMMODATE THE TOTAL MOVEMENT NOTED ON THE PLANS.

COMPLETE WORKING DRAWINGS OF ALL DETAILS OF FABRICATION OF THE EXPANSION JOINT DEVICE SHALL BE SUBMITTED FOR REVIEW IN ACCORDANCE WITH STANDARD SPECIFICATION 104.02. THIS REQUIREMENT IS WAIVED FOR EXPANSION JOINT DEVICES FOR WHICH A SET OF STANDARD INSTALLATION DETAILS HAS BEEN APPROVED. STANDARD INSTALLATION DETAILS CAN BE OBTAINED FROM THE DESIGN DIVISION.

FABRICATION AND INSTALLATION

THE EXPANSION JOINT SHALL BE SHOP FABRICATED TO CONFORM TO THE CONTOUR OF THE BRIDGE DECK, BARRIERS, ETC. IT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS SUBJECT TO NOTES HEREIN AND THE APPROVAL OF THE ENGINEER.

THE TOP OF THE EXPANSION JOINT DEVICE SHALL BE SET 1/8" - 1/4" BELOW THE CONCRETE SLAB (PAVEMENT) WITH A TOLERANCE OF ± 1/8".

THE STEEL ANCHORAGE FOR STRIP SEAL GLANDS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH SUBSECTION 707.03C.16 OF THE STANDARD SPECIFICATIONS.

THE AREA OF THE STEEL ANCHORAGE AND SEALING GLAND WHICH WILL BE IN CONTACT WITH A SEALANT, OR LUBRICANT-ADHESIVE SHALL BE CLEANED WITH TOLUENE OR OTHER APPROVED SOLVENT.

WHERE THE SEALING GLAND IS LOCKED INTO A STEEL ANCHORAGE, A LUBRICANT-ADHESIVE CONFORMING TO STANDARD SPECIFICATION 914.04D SHALL BE REQUIRED BETWEEN THE SEAL AND STEEL ANCHORAGE.

IN THE EVENT THAT THE CONSTRUCTION SEQUENCE REQUIRES SPLICING THE SEALING GLAND, IT SHALL BE SPLICED BY AN APPROVED METHOD (SUCH AS COLD VULCANIZATION) BY A TRAINED REPRESENTATIVE OF THE MANUFACTURER.

DETAILS AT CURBS OR BARRIERS

THE DETAILS ON THIS SHEET SHOW AN APPROVED MEANS OF TERMINATING THE EXPANSION JOINT DEVICE AT CURBS OR BARRIERS. VARIATIONS OR ALTERNATIVE SCHEMES WILL BE CONSIDERED AND MAY BE USED IF APPROVED BY THE ENGINEER.

MATERIALS

THE COST OF ALL MATERIALS AND LABOR REQUIRED FOR PROPER INSTALLATION OF THE EXPANSION JOINT AND THE TERMINAL ASSEMBLIES AT THE CURBS, SIDEWALKS, OR BARRIERS IS INCLUDED IN THE PAYMENT FOR THE EXPANSION JOINT DEVICE.

STRUCTURE NUMBER	ANGLE OF CROSSING TO NEAREST 10°	LOCATION OF JOINT	MIN. TOT. TRAVEL TRANSVERSERS TO € OF BRIDGE	REQUIRED LENGTH OF EXPANSION JOINT DEVICE
S01 OF 82-22-02	90°	LONGIT @ BRIDGE €	1"	94'

MISCELLANEOUS QUANTITIES

94 Ft Expansion Joint Device



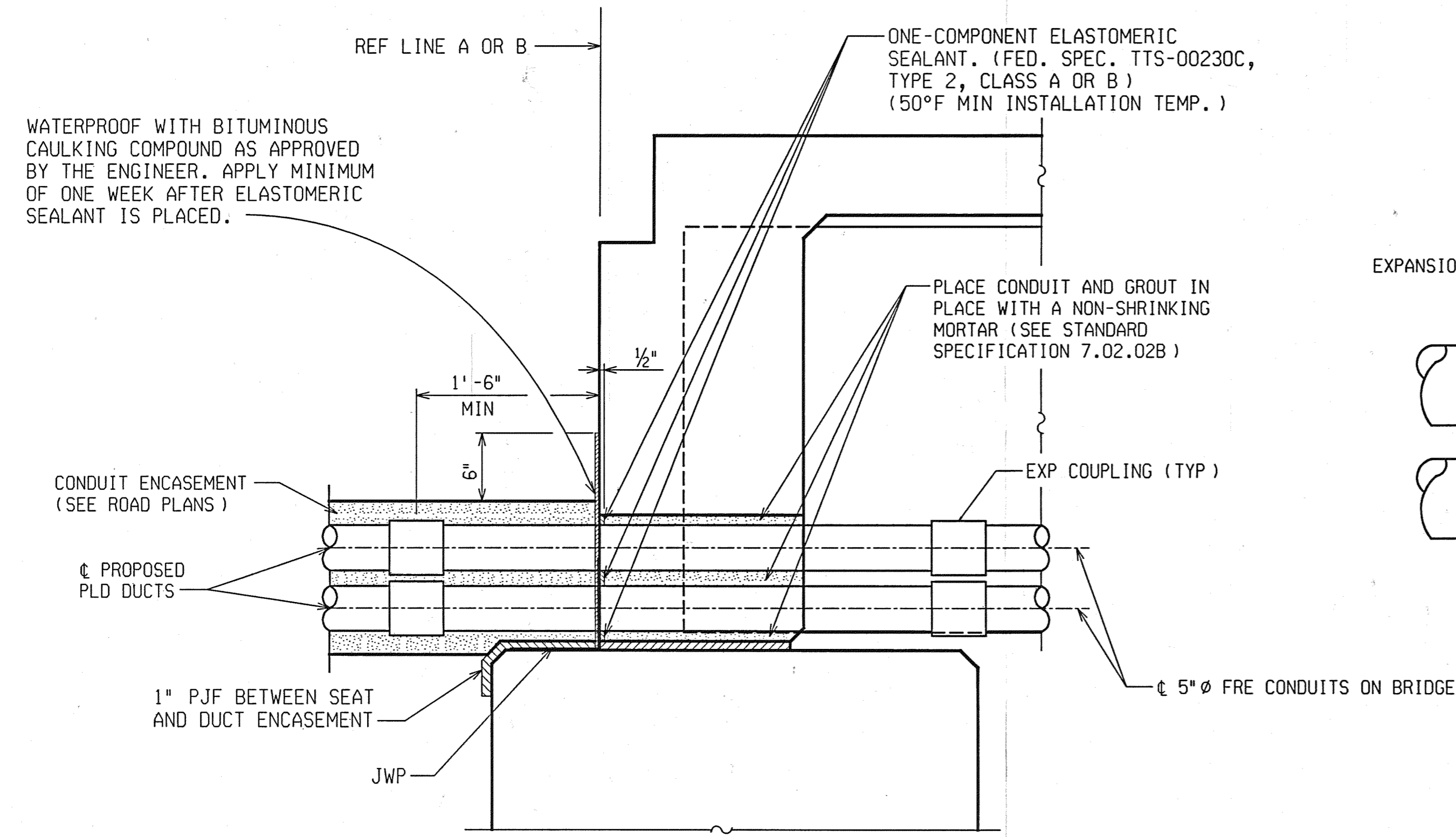
PB PARSONS BRINCKERHOFF, INC.
 635 Griswold Street
 Buhl Building, Suite 1525
 Detroit, MI 48226
 313-963-5760

CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERING DIVISION

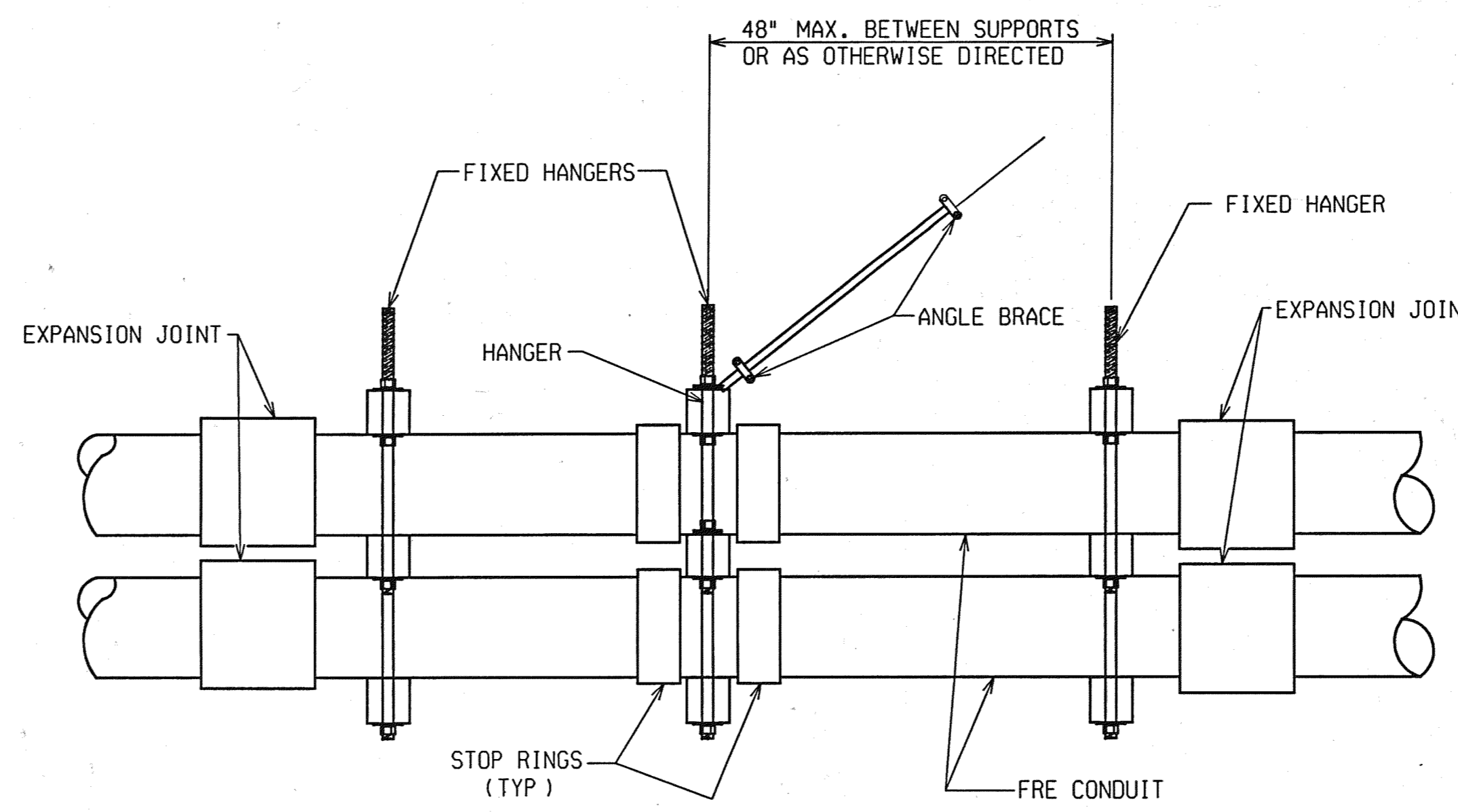
EXPANSION JOINT DETAILS JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	46 OF 80

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REVISIONS			
NO.	DESCRIPTION	DATE	BY

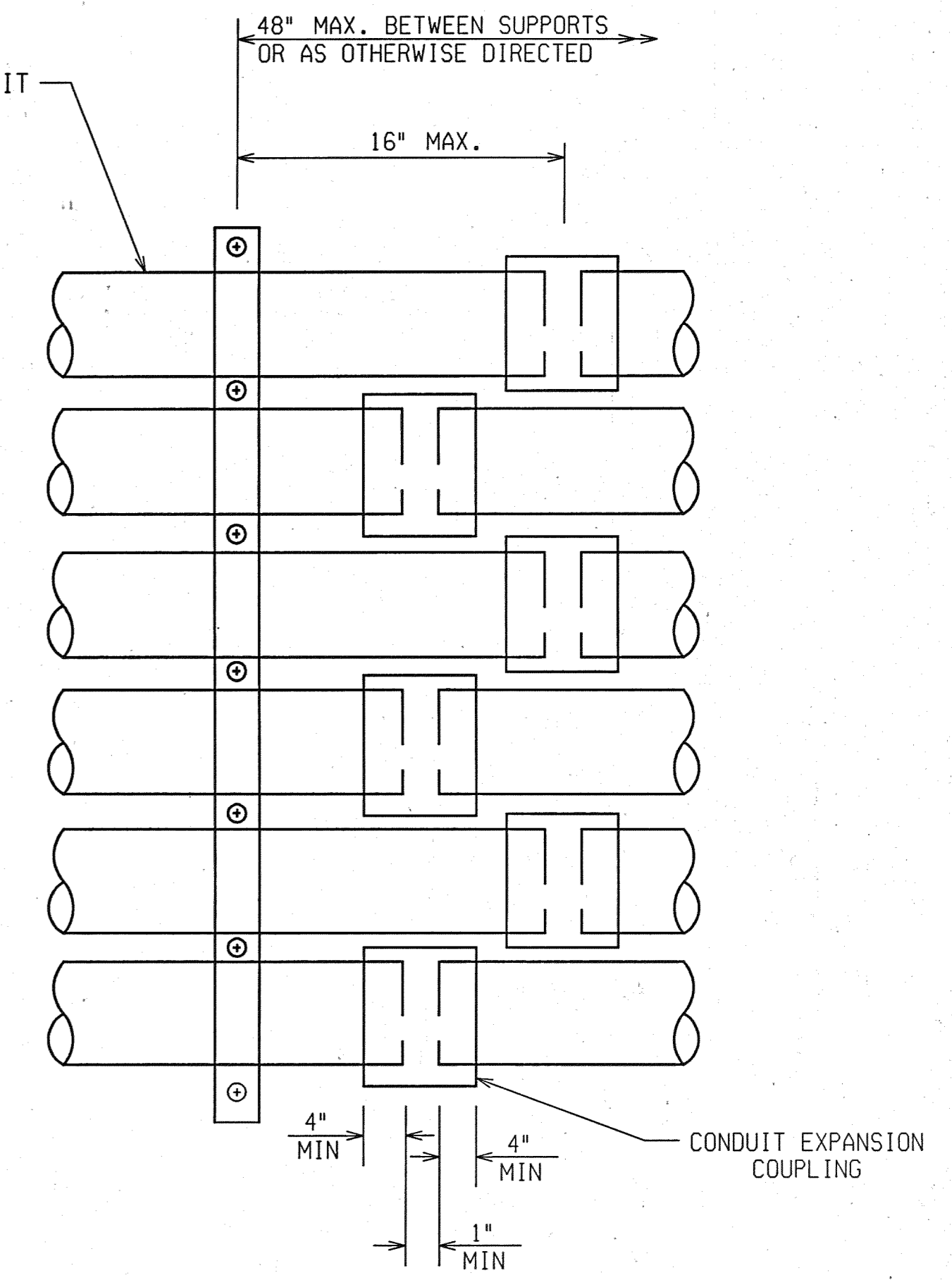


PLD CONDUIT INSTALLATION THRU BACKWALL
(ABUT A SHOWN; ABUT B SIMILAR)

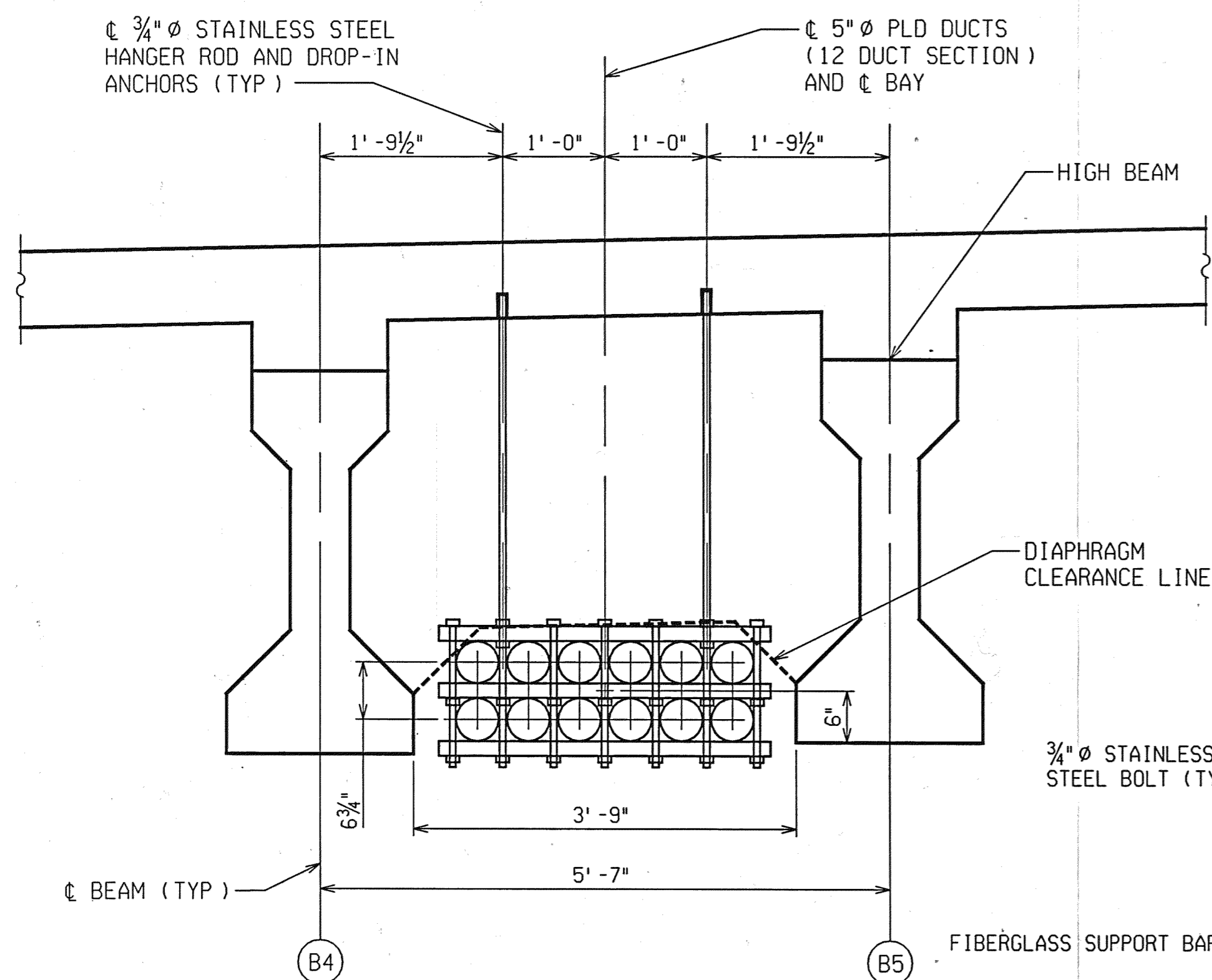


ANCHOR POINT ELEVATION
SUPPORT BETWEEN TWO EXPANSION JOINTS

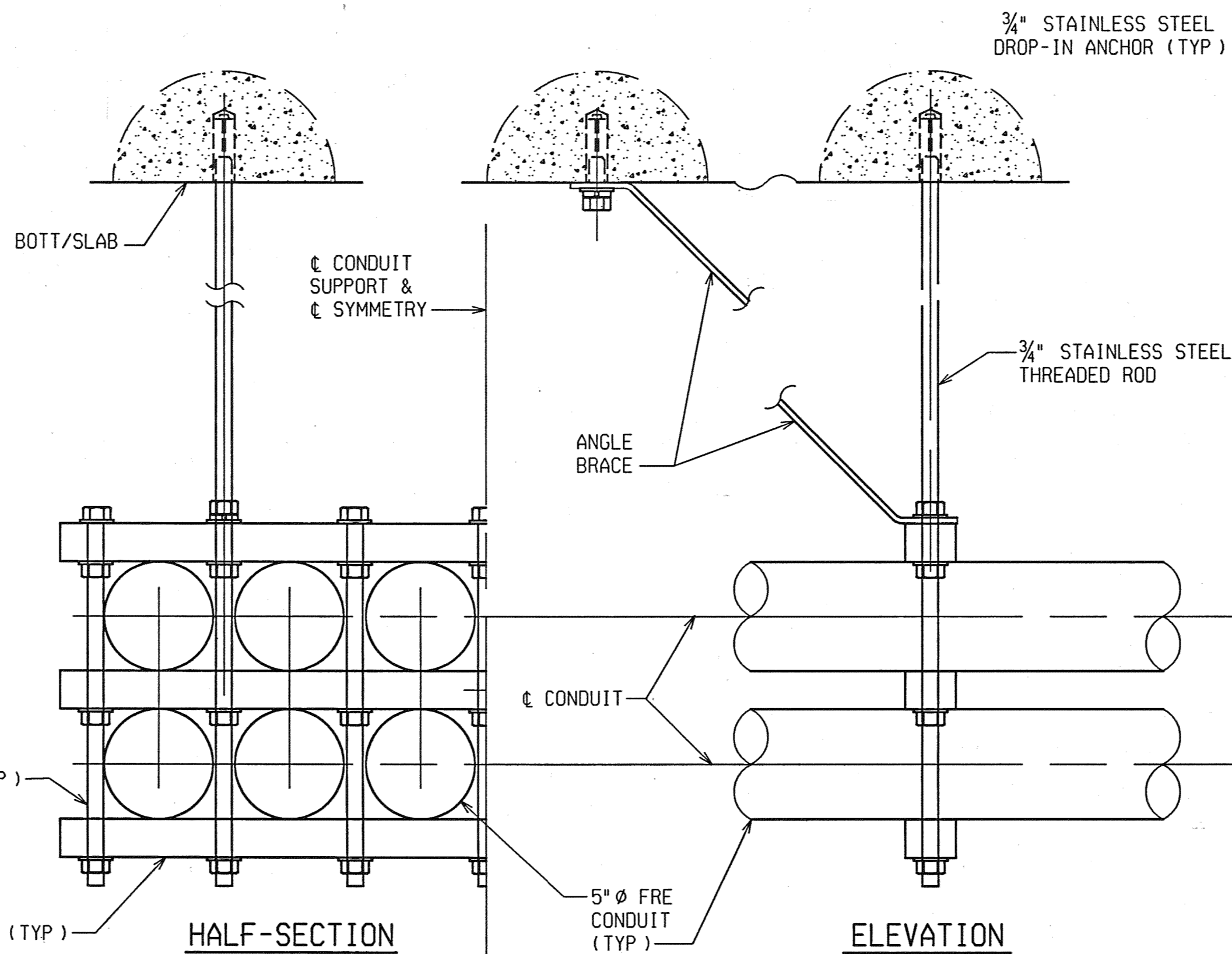
NOTE: ONE EXPANSION JOINT IS REQUIRED AT EACH END OF THE BRIDGE WITHIN 10 FEET OF THE BACKWALL.
ONE SET OF STOP RINGS IS REQUIRED AT THE CENTER OF THE BRIDGE BETWEEN THE TWO EXPANSION JOINTS.



EXPANSION JOINT PLAN VIEW



TYPICAL SECTION THRU I-BEAMS
SHOWING PLD CONDUIT LOCATION



5\"/>

MISCELLANEOUS QUANTITIES	
98 Ft	Conduit, FRE - Heavy Wall on Bridge, 12 @ 5 inch

NOTES:

SEE SPECIAL PROVISION FOR PLD CONDUITS ON BRIDGE.

A COUPLING SHALL BE PLACED ON THE ENDS OF ALL CONDUIT TERMINATIONS AND PLUGGED WITH A SUITABLE REMOVABLE PLUG. A POLYPROPYLENE PULL ROPE SHALL BE INSTALLED IN ALL CONDUITS FOR PULLING CABLE AT A LATER TIME. PULL ROPE SHALL BE INCLUDED IN THE PAY ITEM "Conduit, FRE - Heavy Wall on Bridge, 12 @ 5\"/>

SMOOTH SURFACE CONDUIT ONLY IS ALLOWED ON THIS JOB.

ANCHOR BOLTS, NUTS, AND WASHERS SHALL BE IN ACCORDANCE WITH THE MDOT STANDARD SPECIFICATIONS FOR CONSTRUCTION AND THE SPECIAL PROVISION FOR PLD CONDUITS ON BRIDGE.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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2/18/2005
CHECKED BY: RJO DATE: 2/18/2005
DRAWN BY: DCP DATE: 2/18/2005
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<p>PARSONS BRINCKERHOFF, INC. 535 Griswold Street Suite 1525 Detroit, MI 48226 313-963-5760</p>	<p>CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION</p>	<p>PLD CONDUIT DETAILS JEFFERSON AVE OVER DEQUINDRE CUT</p>				
		DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
<p>3 WORKING DAYS EXCLUDING SATURDAY, SUNDAY & HOLIDAYS BEFORE YOU DIG CALL MISS DIG 1-800-482-7171 TOLL FREE</p>	02-11-05	SO1 OF 82-22-02	BRT 82022	49717A	47 OF 80	

UTILITIES

COMCAST CABLEVISION OF DETROIT
12775 LYNDON
DETROIT, MICHIGAN 48227
ATTN.: RUSTY KEMPER
PHONE No.: (313) 934-2600 X540

DETOIT EDISON COMPANY
2000 SECOND AVE., RM 518 SB
DETROIT, MICHIGAN 48226
ATTN.: ROBERT PETROFF
PHONE No.: (313) 235-6515

METROMEDIA FIBER NETWORK SERVICES
810 JORIE BOULEVARD, STE 110
OAK BROOK, ILLINOIS 60523
ATTN.: JOHN FISK
PHONE No.: (630) 371-0700

CITY OF DETROIT (PUBLIC LIGHTING DEPT.)
9449 GRINNEL AVE
DETROIT, MICHIGAN 48213
ATTN.: STAN TOPOLEWSKI
PHONE No.: (313) 267-7228

CITY OF DETROIT (DWSO)
DETROIT DESIGN SECTION,
1420 WASHINGTON BLVD, 5TH FLOOR.
DETROIT, MICHIGAN 48226
ATTN.: DALJIT SINGH
PHONE No.: (313) 964-8889

SBC AMERITECH
31100 PLYMOUTH ROAD, RM 301
LIVONIA, MICHIGAN 48150
ATTN.: DENNIS LEWIS
PHONE No.: (734) 523-6891

MICHIGAN CONSOLIDATED GAS CO.
3200 HOBSON
DETROIT, MICHIGAN 48201
ATTN.: LEE CUMMINGS
PHONE No.: (313) 577-7327

BENCH MARK

B.M. 200 ELEV. 599.45
CHISELED X ON SOUTH BOLT OF LIGHT/PEDESTRIAN
WALK POLE BASE IN NORTHEAST QUADRANT OF
ST. AUBIN AND JEFFERSON AVE. INTERSECTION
STA. 12+51.40 OFFSET 47.10' LT

B.M. 203 ELEV. 600.84
CHISELED X TOP BOLT EAST SIDE LIGHT POLE BASE
1' NORTH OF BACK OF CURB FROM JEFFERSON AVE.
86° SOUTHWEST OF JEFFERSON AVE. BRIDGE
STA. 8+90.23 OFFSET 46.61' LT

B.M. BM 38-352 ELEV. 605.07
STANDARD CITY OF DETROIT BENCHMARK FOUND AT
THE INTERSECTION OF LAFAYETTE ST. AND
ORLEANS ST.
STA. N/A OFFSET N/A

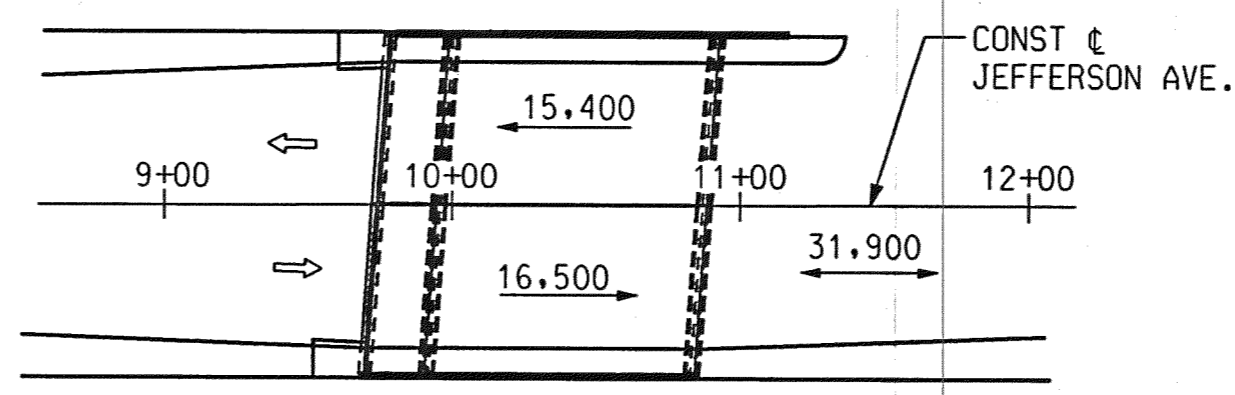
WITNESSES

WITNESS TO CP6; P.O.B. - FOUND PK NAIL ON SURVEY € NORTHING: 32692.897 EASTING: 32452.920 STA. 6+26.23 OFFSET 0.0' LT	WITNESS TO CP3; P.O.T. - FOUND PK NAIL ON SURVEY € NORTHING: 32883.228 EASTING: 33038.700 STA. 12+42.15 OFFSET 0.0' LT
S 15° E BACK OF CURB 45.0'	S 74° W LIGHT POLE 86.4'
N 16° W BACK OF CURB 45.0'	S 27° E METAL SIGN POST 49.0'
S 64° E CATCH BASIN (642) 63.5'	S 05° W METAL SIGN POST 52.9'
N 30° E STORM MANHOLE 91.4'	S 45° W LIGHT POLE 104.2'
WITNESS TO CP5; P.O.T. - FOUND PK NAIL ON SURVEY € NORTHING: 32751.713 EASTING: 32633.939 STA. 8+16.56 OFFSET 0.0' LT	WITNESS TO CP4; P.O.E. - FOUND PK NAIL ON SURVEY € NORTHING: 32959.619 EASTING: 33273.808 STA. 14+89.36 OFFSET 0.0'
N 57° W LIGHT POLE 78.6'	S 17° E BACK OF CURB 45.0'
N 35° E LIGHT POLE 79.1'	N 10° W BACK OF CURB 45.0'
S 70° E LIGHT POLE 75.6'	S 35° W FIRE HYDRANT 79.0'
S 07° W LIGHT POLE 52.6'	N 60° W METAL SIGN POST 76.4'

REVISIONS			
NO.	DESCRIPTION	DATE	BY

EXISTING STRUCTURE

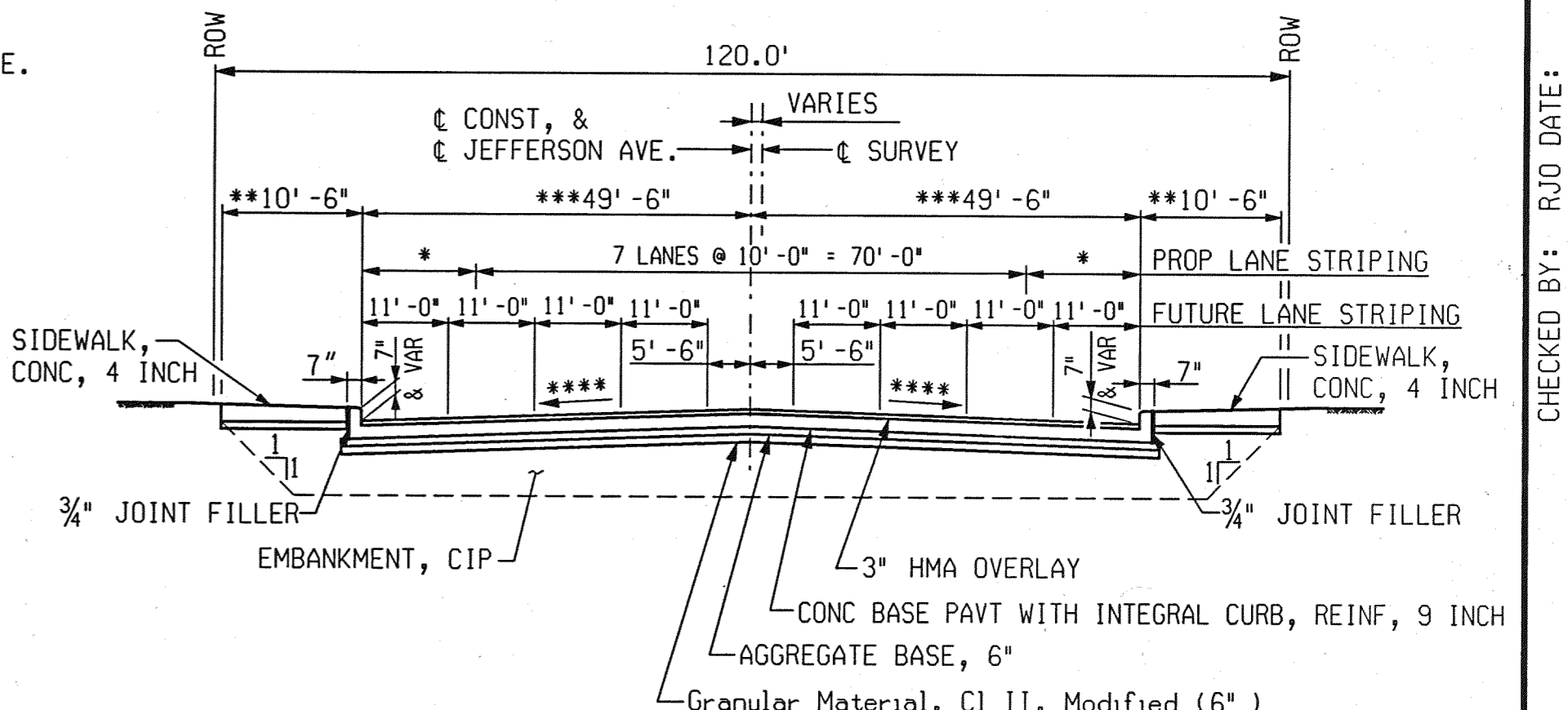
THREE SPAN CONCRETE ENCASED STEEL BEAM
STRUCTURE MEASURING 84.0 FEET BETWEEN
REFERENCE LINES. CONCRETE ABUTMENTS
AND PIERS ON WOOD PILES. BUILT IN 1923.
90 FEET CLEAR ROADWAY WIDTH.



2024 ESTIMATED TRAFFIC DISTRIBUTION

LEGEND
OOO ADT
AVERAGE DAILY TRAFFIC
→ DIRECTIONAL TRAFFIC
← DIRECTIONAL TRAFFIC
TOTAL TRAFFIC

POSTED SPEED: 35 MPH
DESIGN SPEED: 40 MPH
DESIGN LOAD: HS 25



TYPICAL APPROACH SECTION

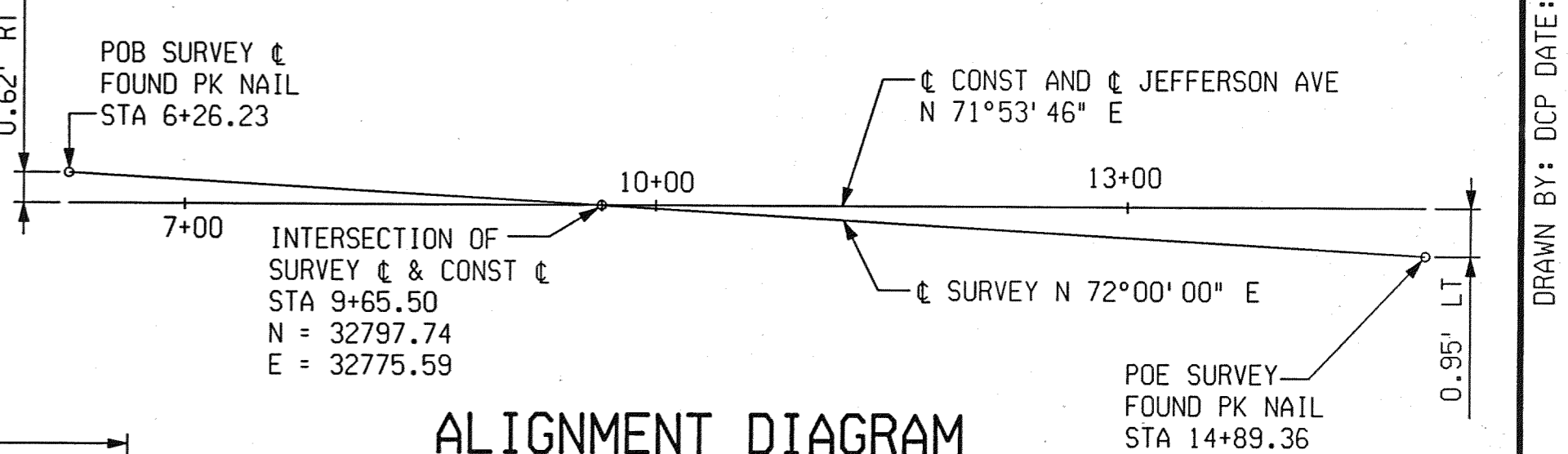
- * 10'-0" AND VARIES TO 14'-6" ALONG TAPER
- ** 10'-6" AND VARIES TO 15'-0" ALONG TAPER
- *** 49'-6" AND VARIES TO 45'-0" ALONG TAPER
- **** 2% AND VARIES TO PARABOLIC CROSS-SECTION

EROSION AND SEDIMENTATION CONTROL

KEY	TOTAL	ITEM
(28)	120 Ft	Erosion Control, Silt Fence

TEMPORARY STORED EXCAVATED FOUNDATION MATERIAL SHALL BE PROTECTED WITH GEOTEXTILE SILT FENCE

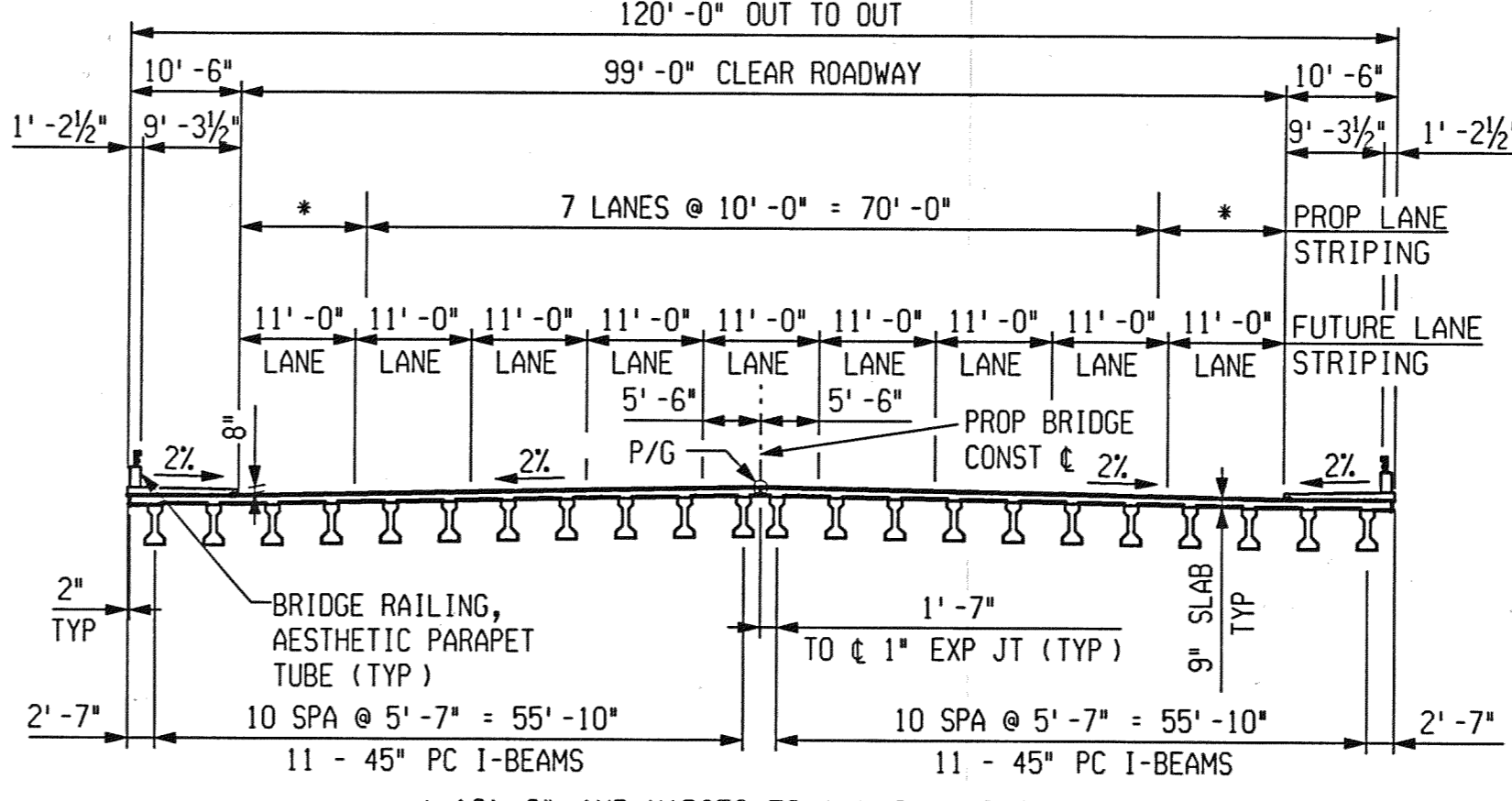
NOTE:
LANE WIDTHS SHOWN ON PROPOSED BRIDGE AND TYPICAL APPROACH SECTION ARE FOR FUTURE ROAD USE. LANES SHALL BE STRIPED TO MATCH EXISTING FOR THE IMMEDIATE USE OF THE STRUCTURE. (APPLIES TO APPROACH ROADWAY ALSO.)



ALIGNMENT DIAGRAM

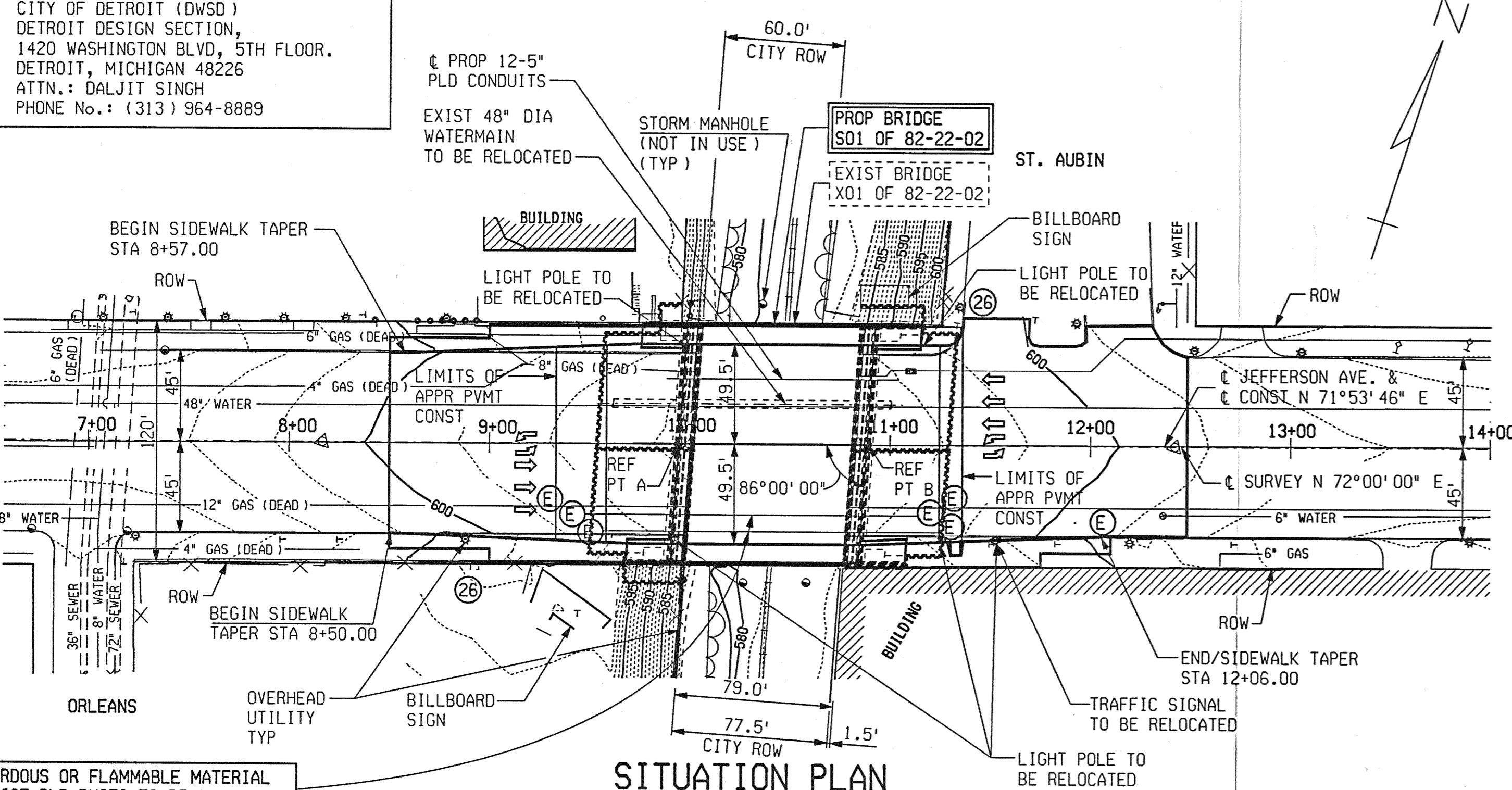
NOTES:

- THE WORK COVERED BY THESE PLANS INCLUDES MAINTAINING TRAFFIC, REMOVAL OF EXISTING BRIDGE, CONSTRUCTION OF THE PROPOSED BRIDGE AND APPROACH WORK.
- THE CONTRACTOR SHALL LOCATE ALL ACTIVE UNDERGROUND UTILITIES PRIOR TO STARTING WORK AND SHALL CONDUCT HIS OPERATIONS IN SUCH A MANNER AS TO ENSURE THAT THOSE UTILITIES NOT REQUIRING RELOCATION WILL NOT BE DISTURBED.
- TWO LANES OF JEFFERSON AVENUE TRAFFIC, IN EACH DIRECTION, IS TO BE MAINTAINED OVER THE BRIDGE BY PART-WIDTH CONSTRUCTION
- PLAN ELEVATIONS REFER TO CITY OF DETROIT DATUM.
- THE GROUND ADJACENT TO THE TRACKS AND STRUCTURE SHALL BE GRADED BY THE CONTRACTOR TO PROVIDE DRAINAGE, AFTER THE REMOVAL OF THE TWO PIERS.



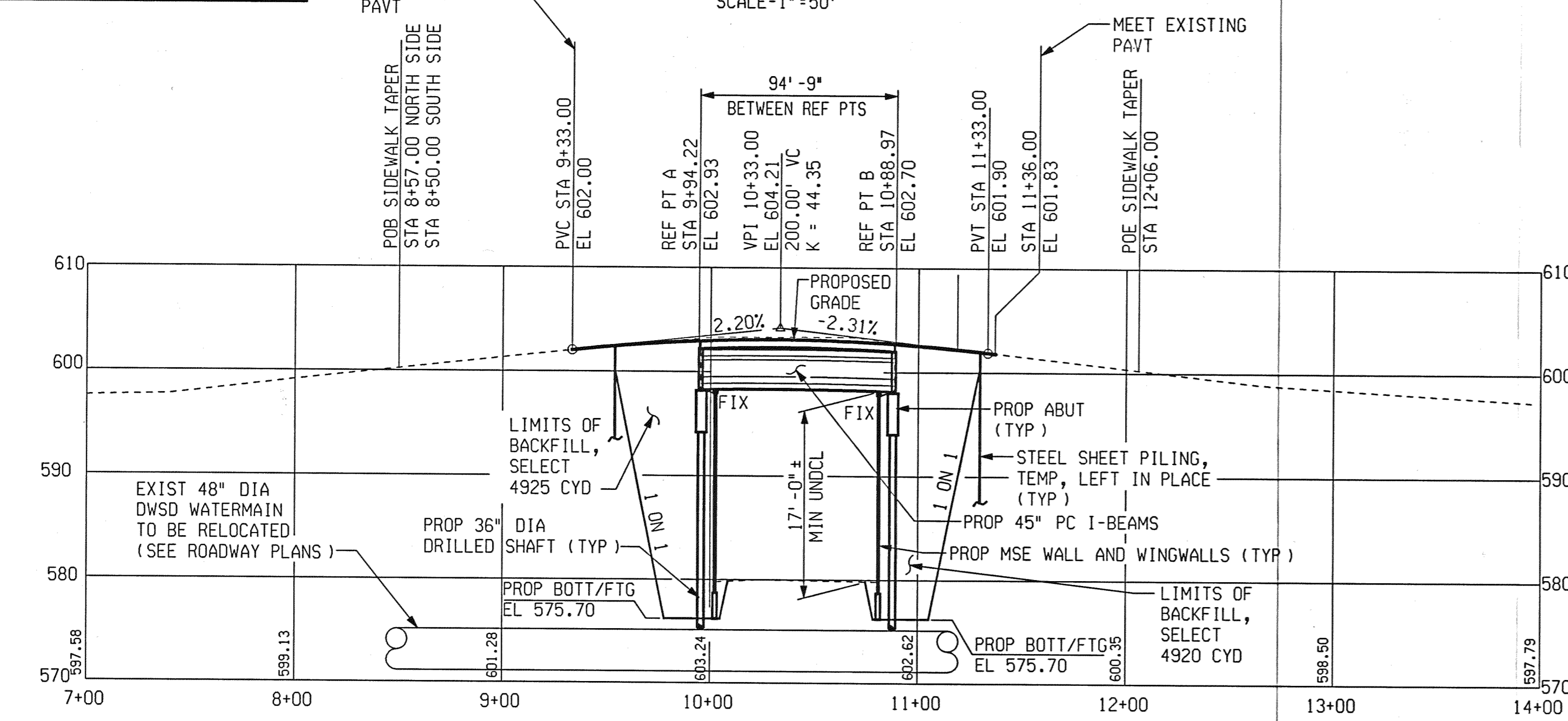
PROPOSED BRIDGE CROSS SECTION

LOOKING EAST



SITUATION PLAN

SCALE=1"=50'



PROFILE ALONG JEFFERSON AVE.

VERT. SCALE=1"=10'
HOR. SCALE=1"=50'

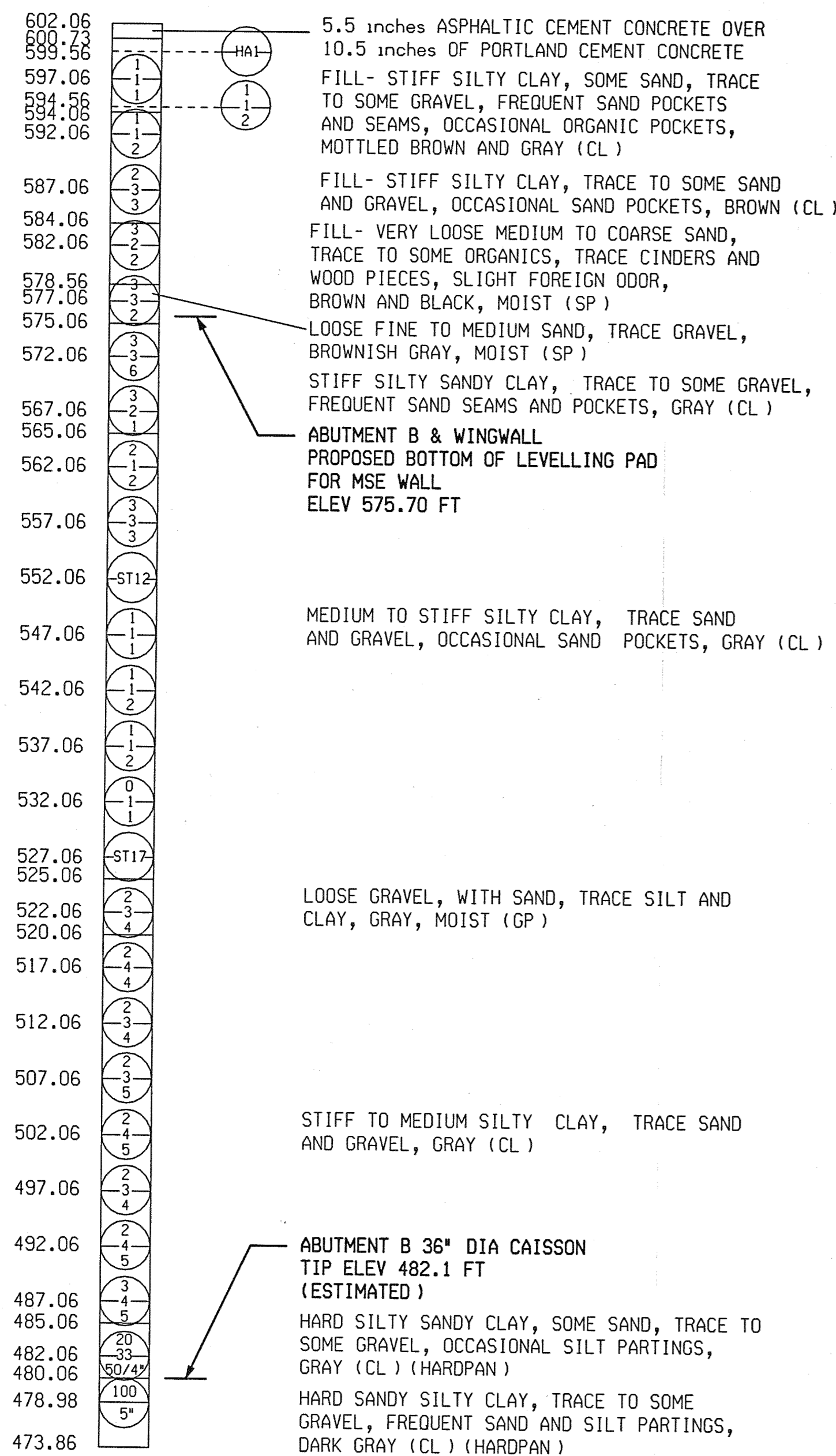


PB PARSONS BRINCKERHOFF, INC.
535 Griswold Street
Buhl Building, Suite 1525
Detroit, MI 48226
313-963-5700

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

GENERAL PLAN OF SITE				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	48 OF 80

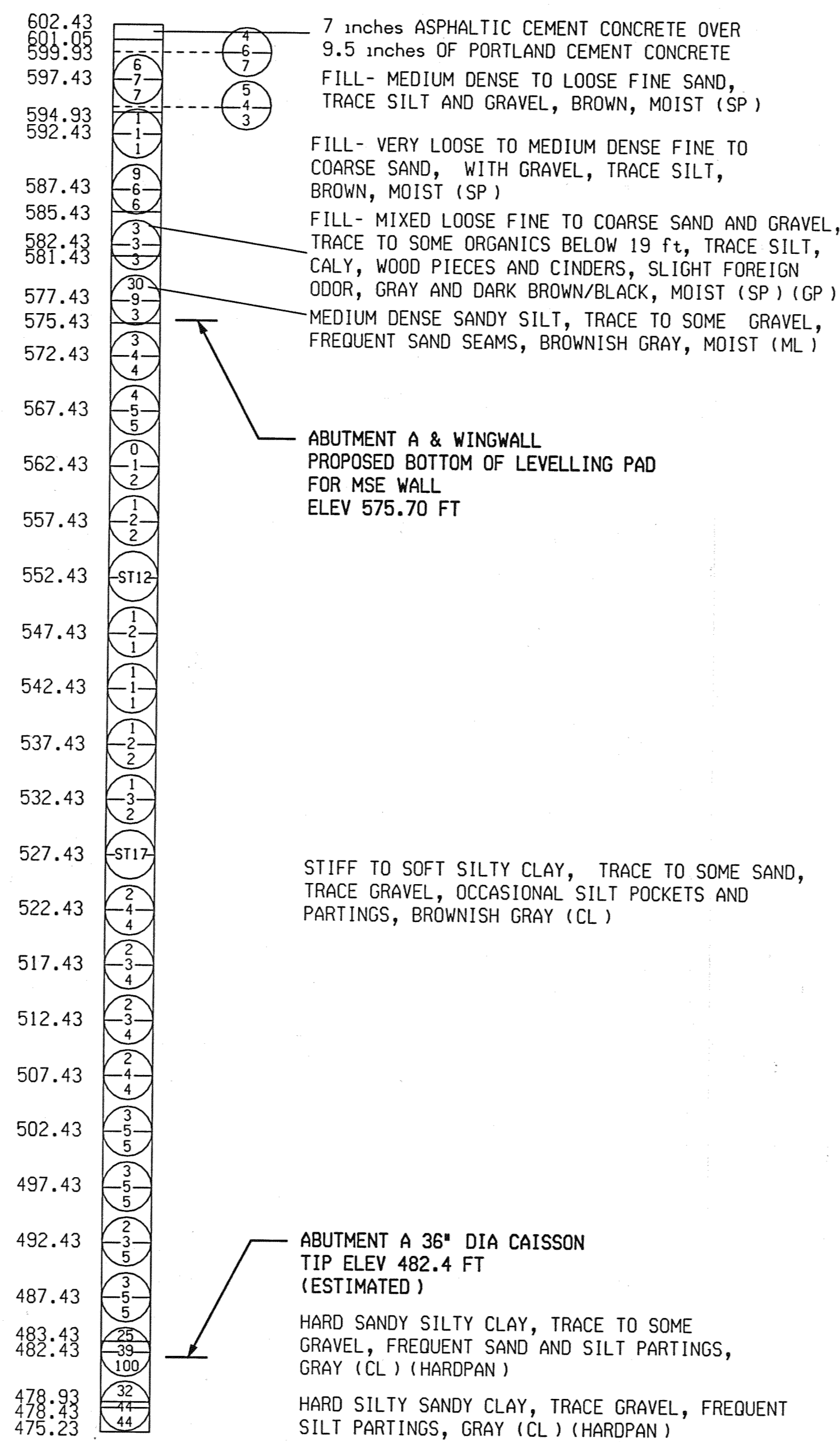
TEST HOLE NO. B-1
GROUND SURFACE EL : 602.06
N: 32798.1728
E: 32908.1338



END OF BORING 128.2 ft (ROCK ENCOUNTERED)

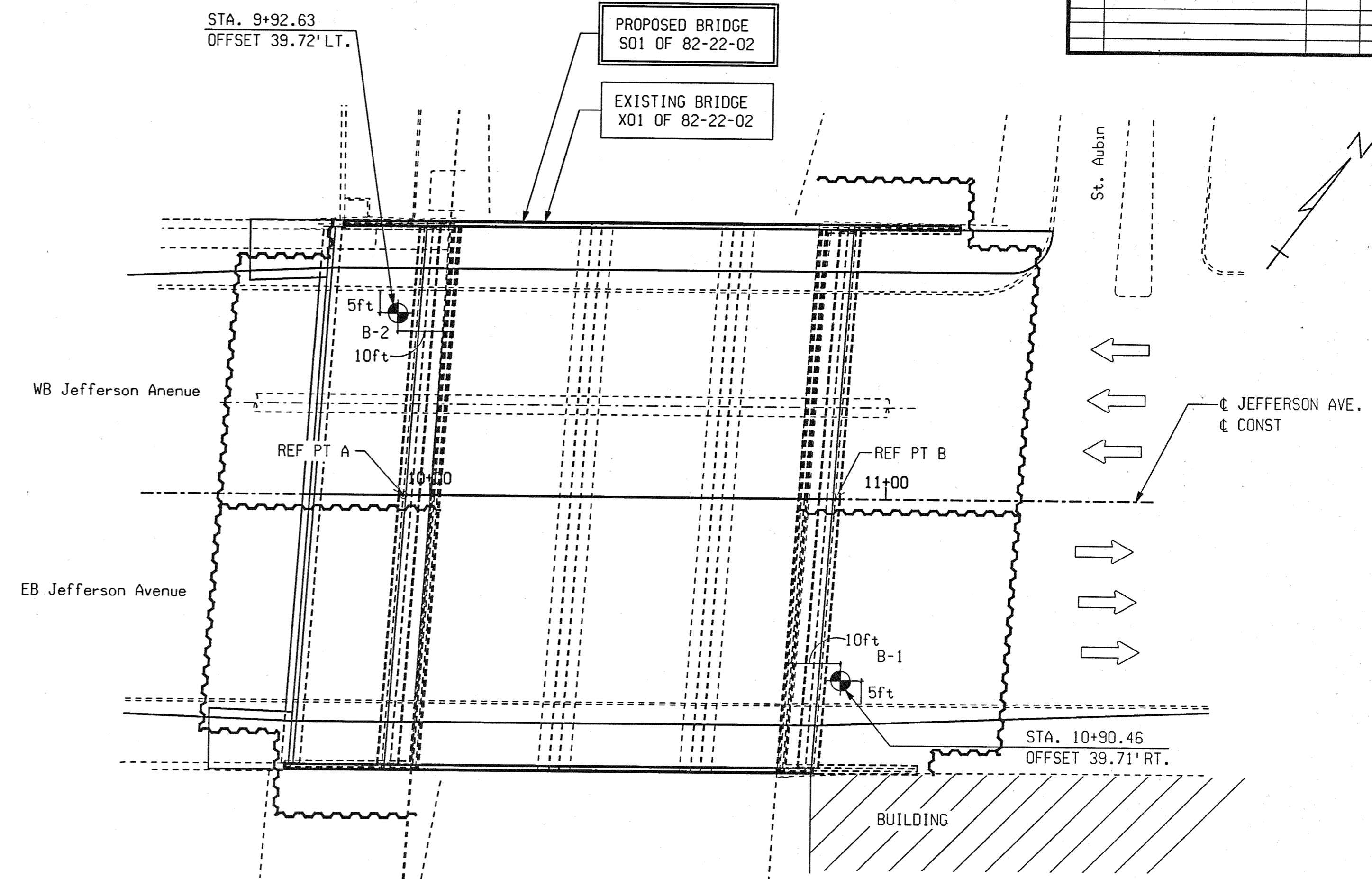
BORING DATE: 5-14-03 TO 5-16-03
NO GROUNDWATER ENCOUNTERED DURING DRILLING
NO GROUNDWATER REPORTED UPON COMPLETION OF DRILLING
DUE TO WASH ROTARY METHOD OF DRILLING

TEST HOLE NO. B-2
GROUND SURFACE EL : 602.43
N: 32844.7473
E: 32790.4664



END OF BORING 127.2 ft (ROCK ENCOUNTERED)

BORING DATE: 4-30-03 TO 5-02-03
NO GROUNDWATER ENCOUNTERED DURING DRILLING
NO GROUNDWATER REPORTED UPON COMPLETION OF DRILLING
DUE TO WASH ROTARY METHOD OF DRILLING



LEGEND

SOIL BORING LOCATION

GENERAL NOTES

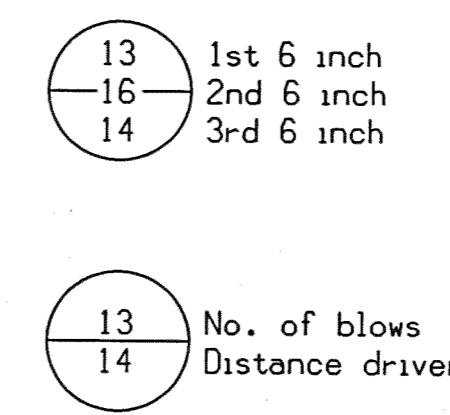
NUMBERS IN CIRCLES DENOTE NUMBER OF BLOWS REQUIRED TO DRIVE A 2 inch OD (1.5 inch ID) SPLIT SPOON SAMPLER 3 SUCCESSIVE 6 inch INCREMENTS USING A 140 lb HAMMER FALLING 30 inches.

(WHERE THE SAMPLER IS DRIVEN DISTANCES OTHER THAN 18 inches, THE DISTANCE IS SHOWN IN THE CIRCLE WITH THE NUMBER OF BLOWS IN THE FORM OF A FRACTION.) (DISTANCE IS IN INCHES).

CONSISTENCY WAS DETERMINED BY INSPECTION OF SAMPLES AND SUBSTANTIATED BY SOIL RESISTANCE TO DRILLING TOOLS.

THE SOIL BORING LOGS REPRESENT POINT INFORMATION. PRESENTATION OF THIS INFORMATION IN NO WAY IMPLIES THAT THE SUBSURFACE CONDITIONS ARE THE SAME AT LOCATIONS OTHER THAN THE EXACT LOCATION OF THE BORING.

GROUNDWATER LEVELS MAY FLUCTUATE AND MAY BE DIFFERENT AT THE TIME OF CONSTRUCTION.



PARSONS BRINCKERHOFF, INC.
535 Grewald Street
Buhl Building, Suite 1526
Detroit, MI 48226
313-963-6700

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

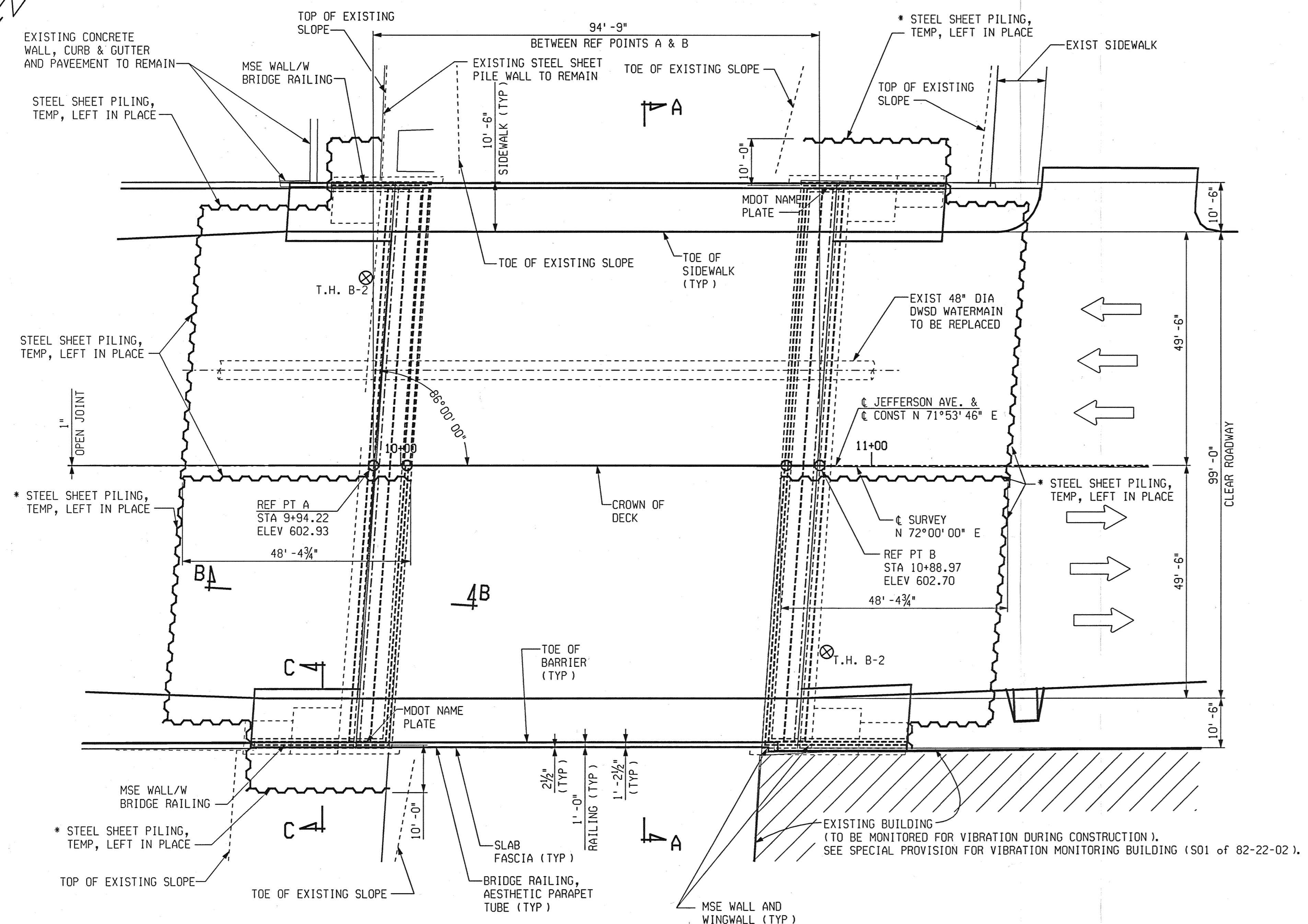
LOG OF BORINGS
JEFFERSON AVE OVER DEQUINDRE CUT

DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	49 OF 80

DRAWN BY: DCP DATE: 2/10/2005 CHECKED BY: RJO DATE: 2/10/2005 FILE NAME: G:\35458d\Struct\CADD\jeff_bips.dgn

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CHECKED BY: RJJ DATE: 2/10/2005
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN

MISCELLANEOUS QUANTITIES

1	LS	Structures, Rem (S01 of 82-22-02)
440	Cyd	Backfill, Structure, CIP
9,900	Cyd	Backfill, Select
200	Cyd	Embankment, CIP
11,000	Cyd	Excavation, Fdn
12,000	Sft	Steel Sheet Piling, Temp, Left in Place
1	LS	Conc Surface Coating (S01 of 82-22-02)
380	Ft	Underdrain, Fdn, 6 inch
727	Cyd	Conc Quality Assurance, Structure
727	Dir	Conc Quality Initiative
1	LS	Vibration Monitoring Building (S01 of 82-22-02)

NOTES:

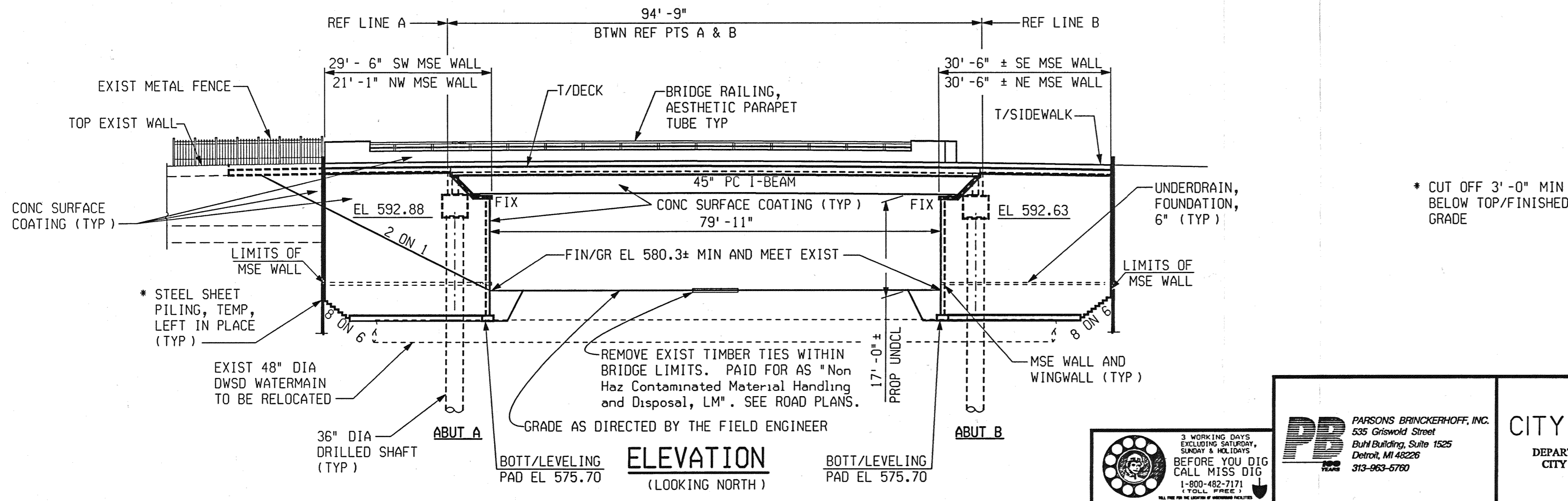
THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES HS25 AND ALTERNATE MILITARY LOADING. LIVE LOAD PLUS IMPACT DEFLECTION DOES NOT EXCEED 1/800 OF SPAN LENGTH. THE LOAD FACTOR METHOD OF DESIGN WAS USED FOR THIS STRUCTURE.

THE CONTRACTOR WILL BE FURNISHED WITH PLANS OF THE EXISTING STRUCTURE UPON REQUEST.

MAXIMUM ALLOWABLE SOIL BEARING PRESSURE FOR MSE WALL IS 3,000 PSF.

PLACEMENT OF TEMPORARY BARRIER SHALL BE ACCORDING TO STANDARD PLAN R-126-SERIES OR AS APPROVED BY THE ENGINEER.

CONC SURFACE COATING SHALL BE APPLIED TO THE EXPOSED PORTIONS OF THE EXISTING BRIDGE RETAINING WALLS TO REMAIN IN PLACE, MSE WALLS AND COPING, BRIDGE RAILING, DECK FASCIA CONTINUING UNDER THE DECK TO THE BEAM AND THE BEAM FASCIA. THE ESTIMATED AREA OF CONC SURFACE COATING IS 10,000 SQUARE FEET.



ELEVATION
(LOOKING NORTH)



PB PARSONS BRINCKERHOFF, INC.
535 Griswold Street
Burt Building, Suite 1525
Detroit, MI 48226
313-963-5700

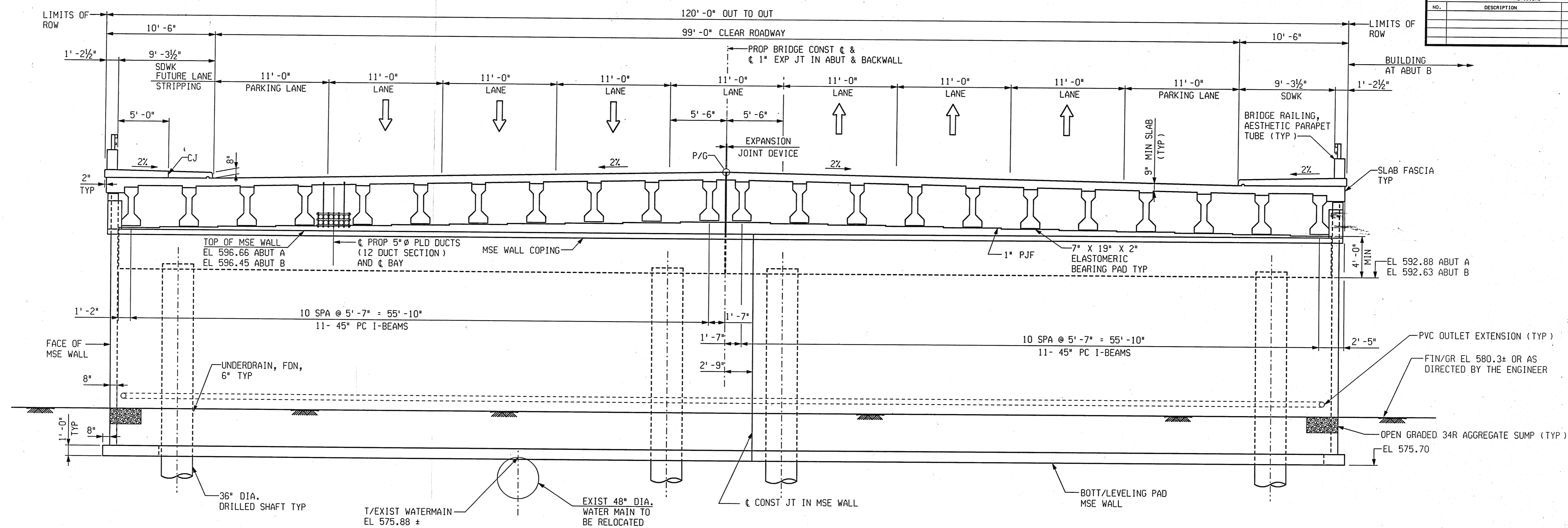
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

GENERAL PLAN OF STRUCTURE JEFFERSON AVE OVER DEQUINDRE CUT

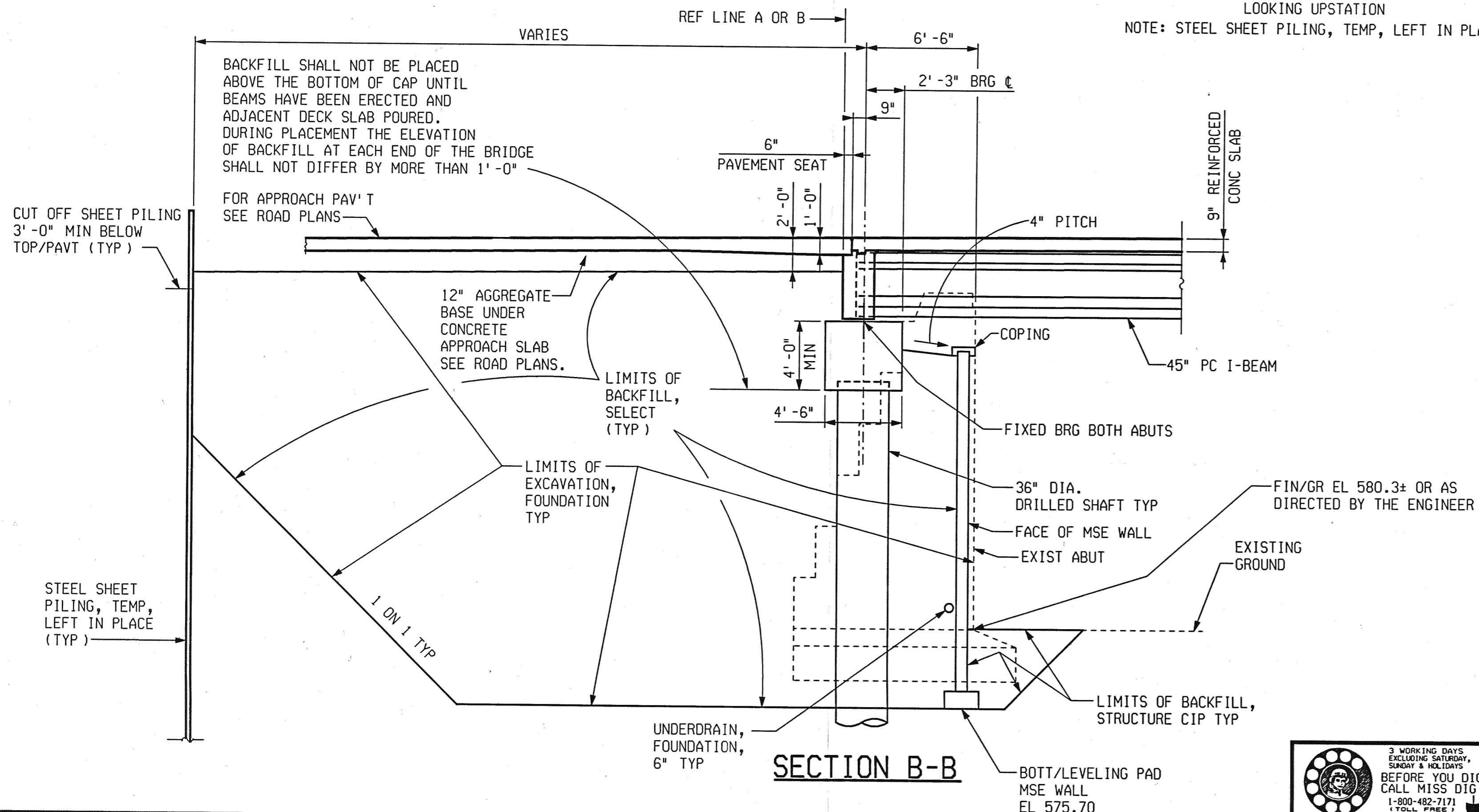
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	50 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

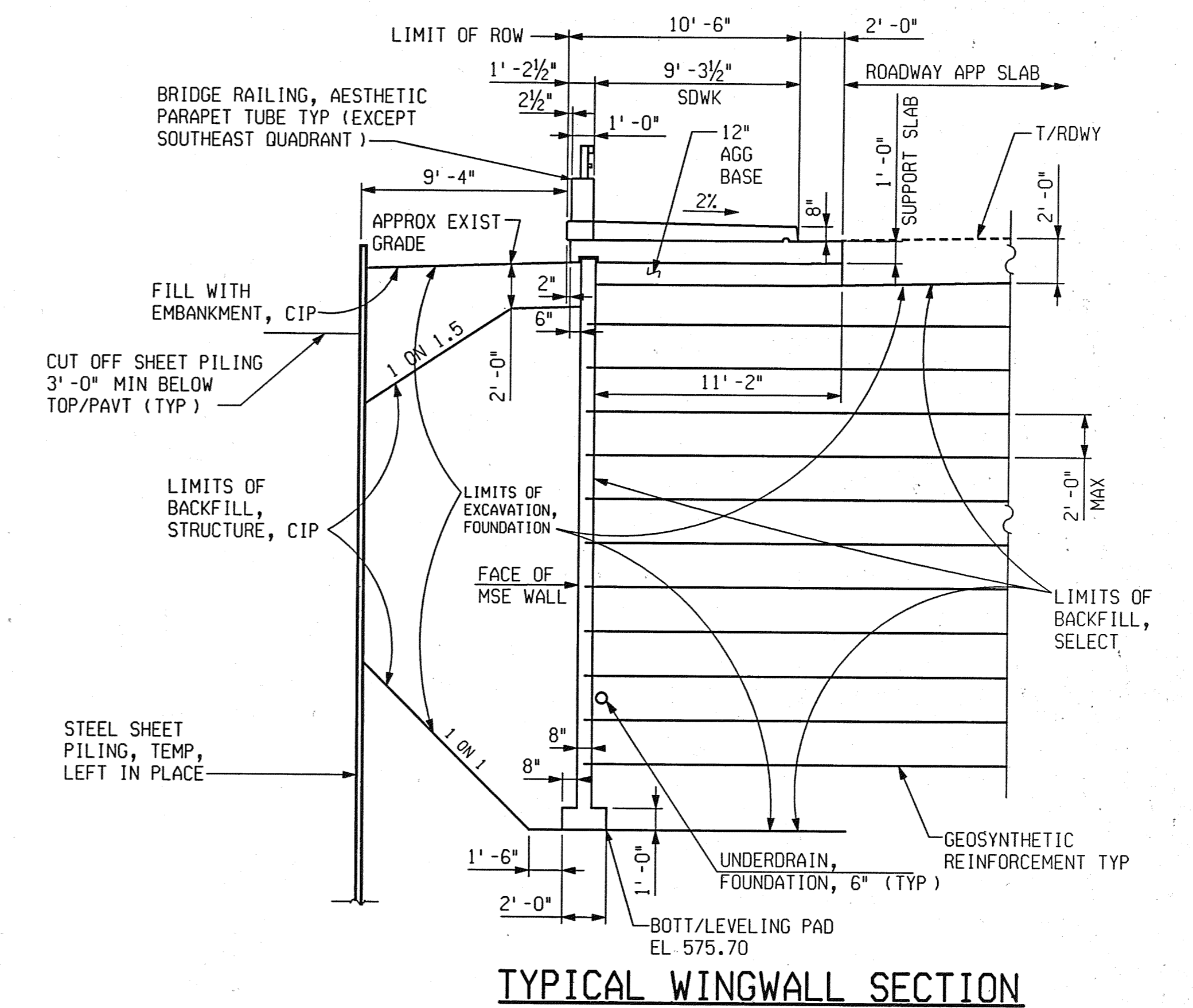
REVISIONS			
NO.	DESCRIPTION	DATE	BY



SECTION A-A
LOOKING UPSTATION
NOTE: STEEL SHEET PILING, TEMP, LEFT IN PLACE NOT SHOWN.



SECTION B-B
BOTT/LEVELING PAD MSE WALL EL 575.70



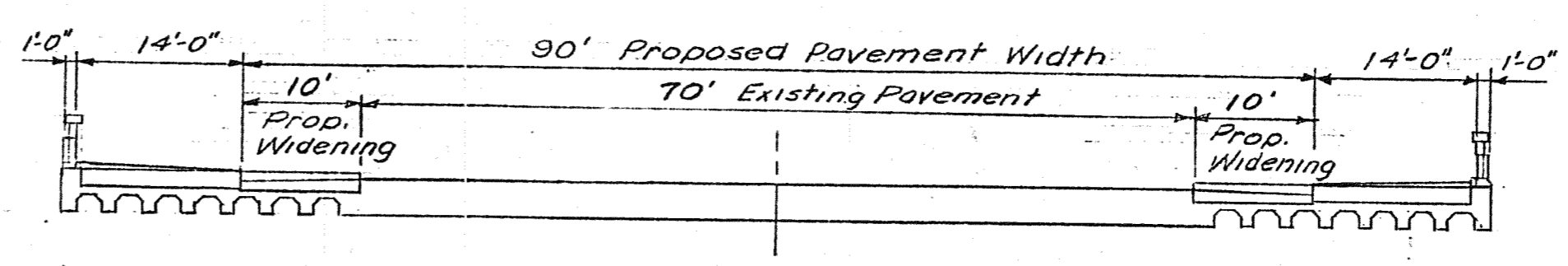
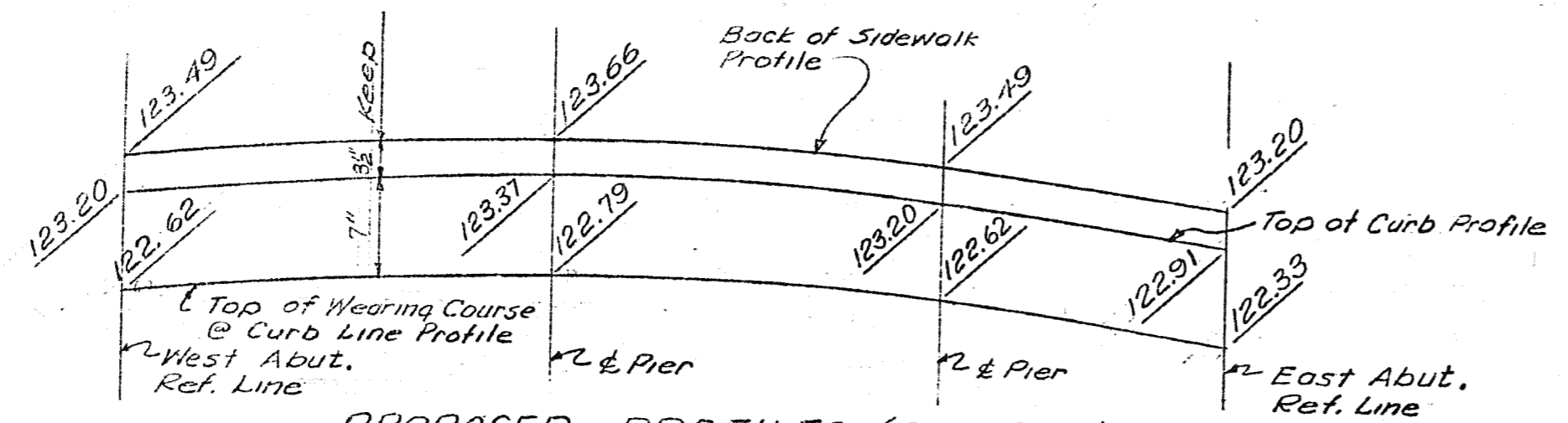
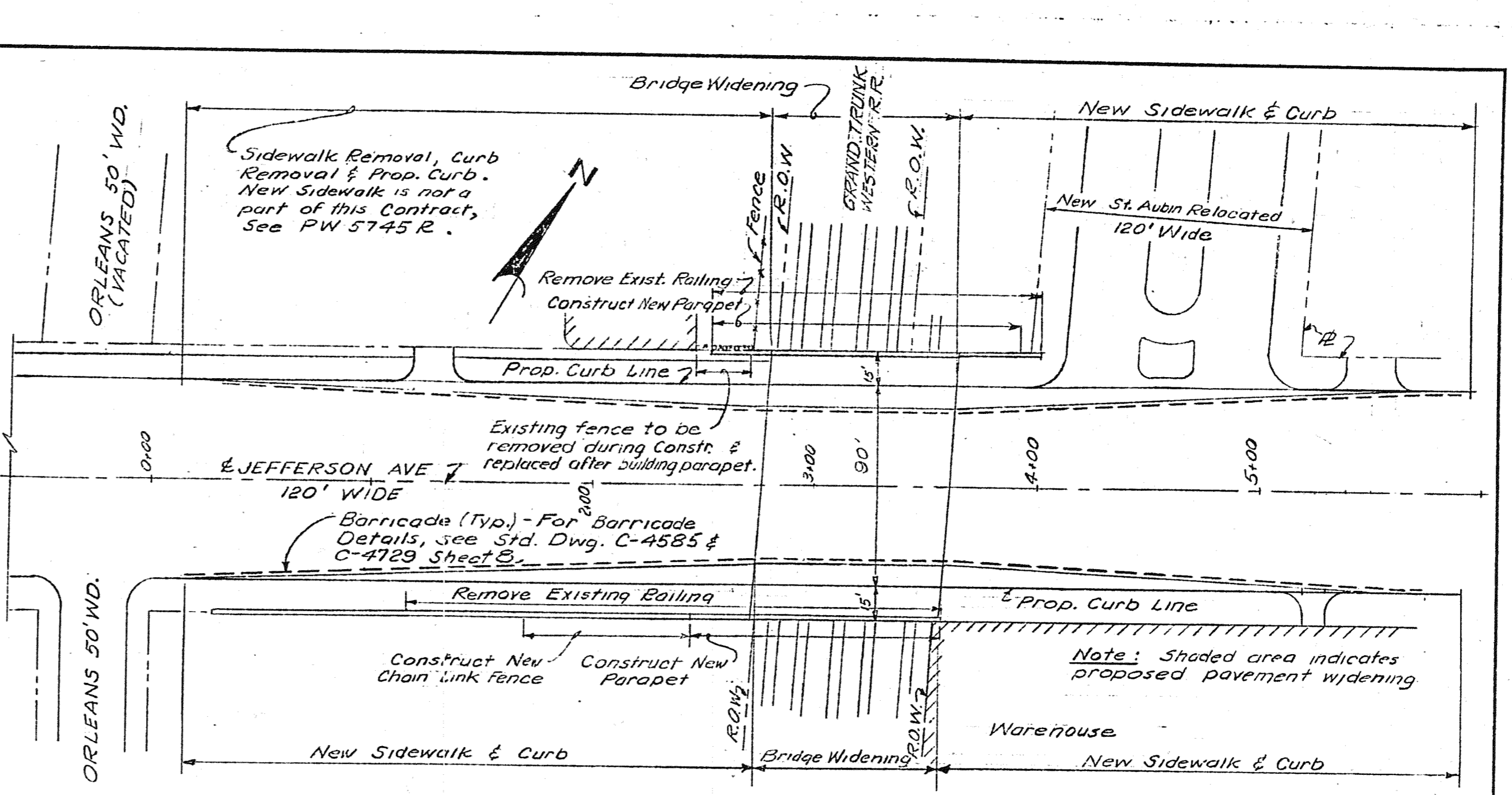
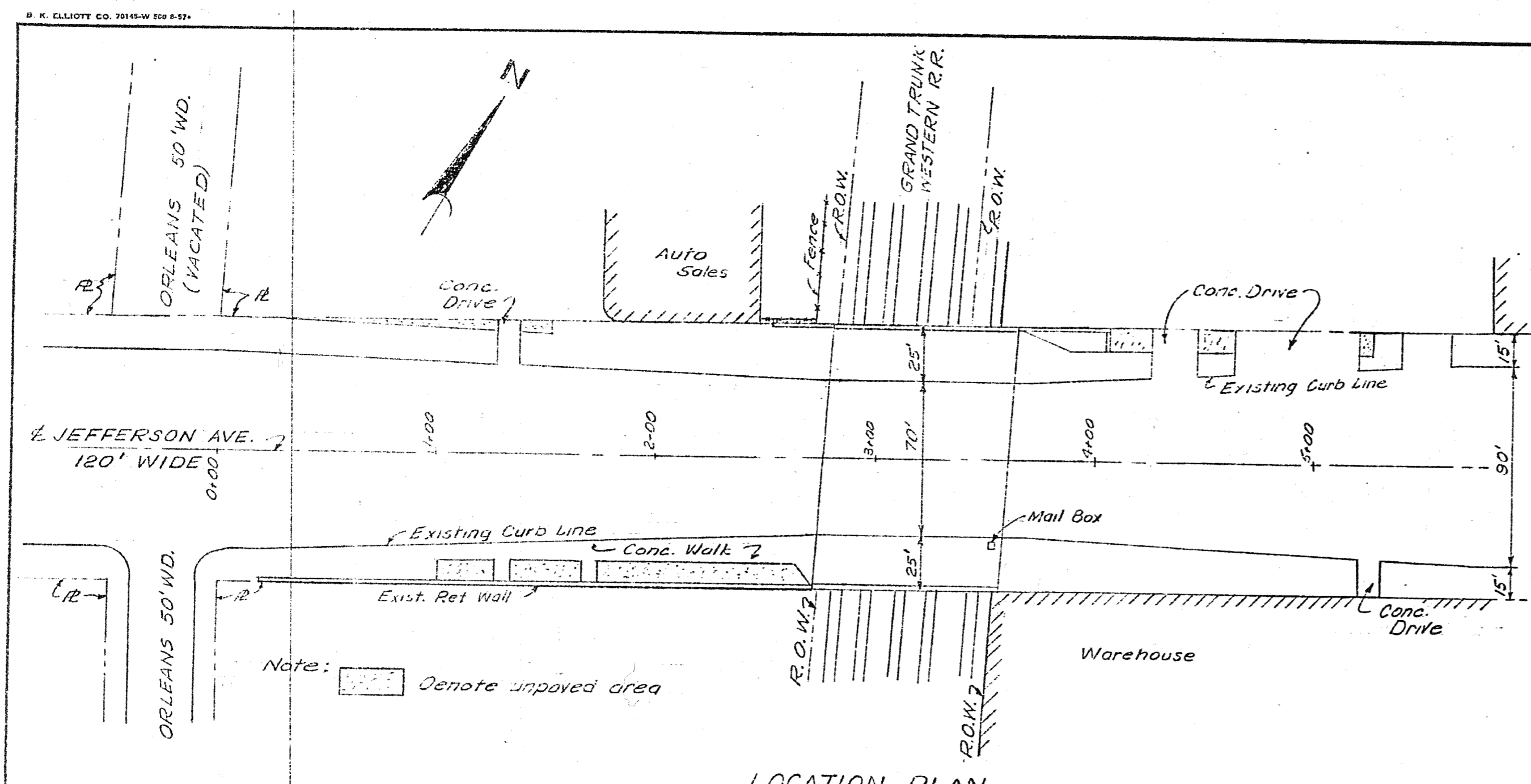
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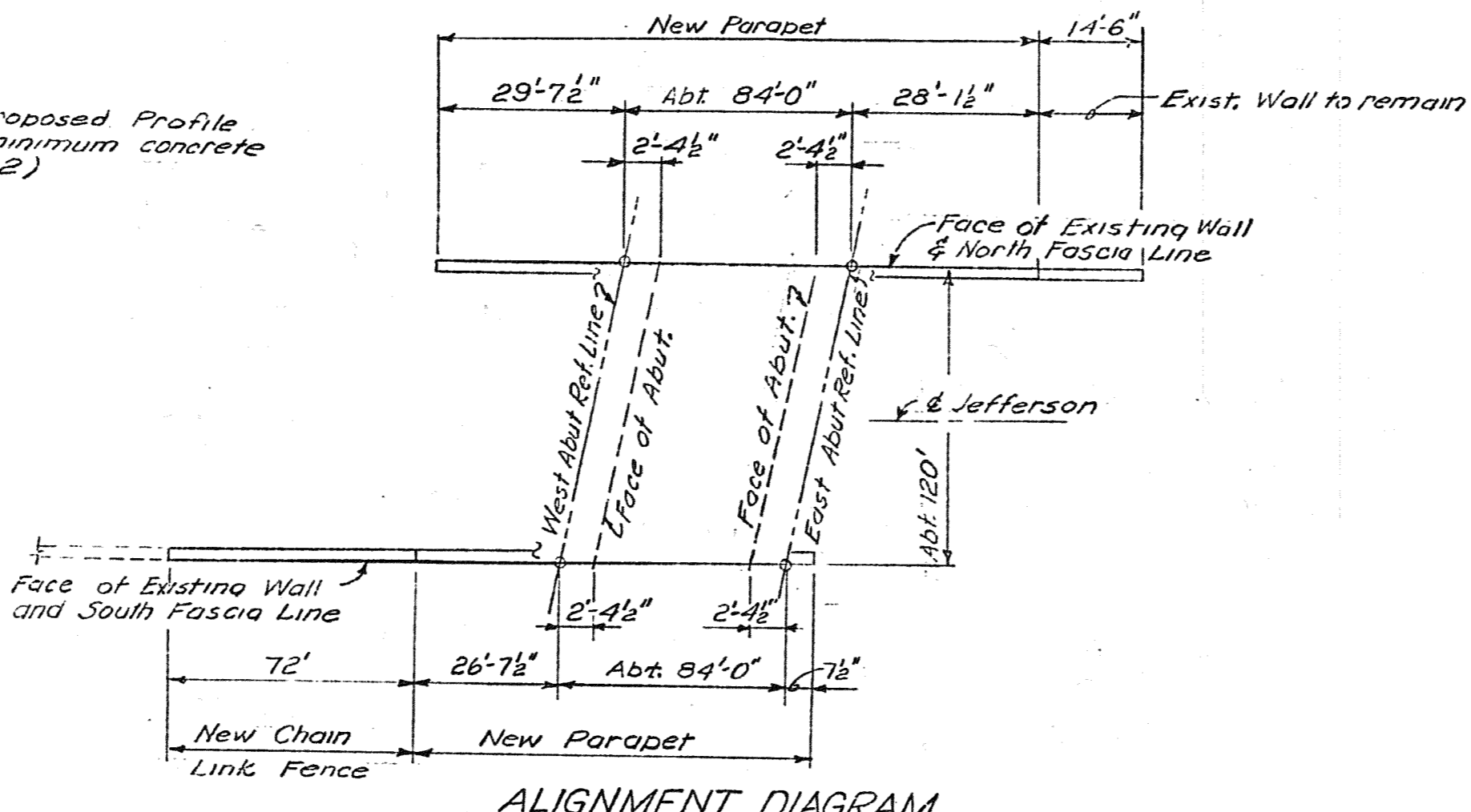
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PARSONS BRINCKERHOFF, INC. 535 Griswold Street 30th Floor, Suite 1525 Detroit, MI 48226 313-963-5760	CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION	GENERAL PLAN OF STRUCTURE JEFFERSON AVE OVER DEQUINDRE CUT				
		DATE 02-11-05	STRUCTURE NO. S01 OF 82-22-02	CONT. SEC. BRT 82022	JOB NO. 49717A	SHEET 51 OF 80

REVISIONS			
NO.	DESCRIPTION	DATE	BY



Note: The Engineer shall field-adjust Proposed Profile elevations if required to keep 5" minimum concrete slab. (See Section 8-B sheet 2)



DESIGNED BY	Locher
DRAWN BY	Locher
TRACED BY	
CHECKED BY	STURM

APPROVED
C. P. ...
STRUCTURAL ENGINEER
P. ...
ASSOCIATE CITY ENGINEER

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
HIGHWAY & EXPRESSWAY DIVISION
BRIDGE WIDENING

JEFFERSON AVE BRIDGE X068
OVER
G.T.W.R.R.
GENERAL PLAN OF SITE

SHEET	1	OF	9	SHEETS
JOB No.	PW 5752			
DRWG No.	C-101			
DATE	OCT 1966			

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3 WORKING DAYS EXCLUDING SATURDAY, SUNDAY & HOLIDAYS
BEFORE YOU DIG CALL MISS DIG
1-800-482-7171
TOLLS FREE

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Bulld Building, Suite 1525
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313-963-6780

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

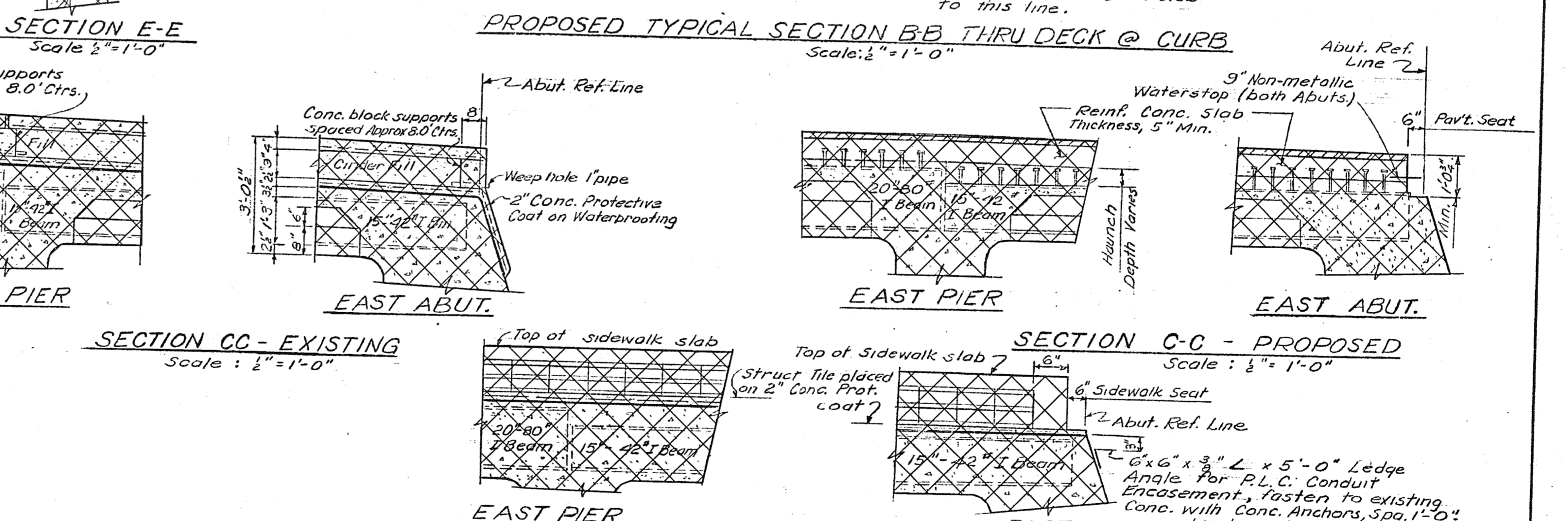
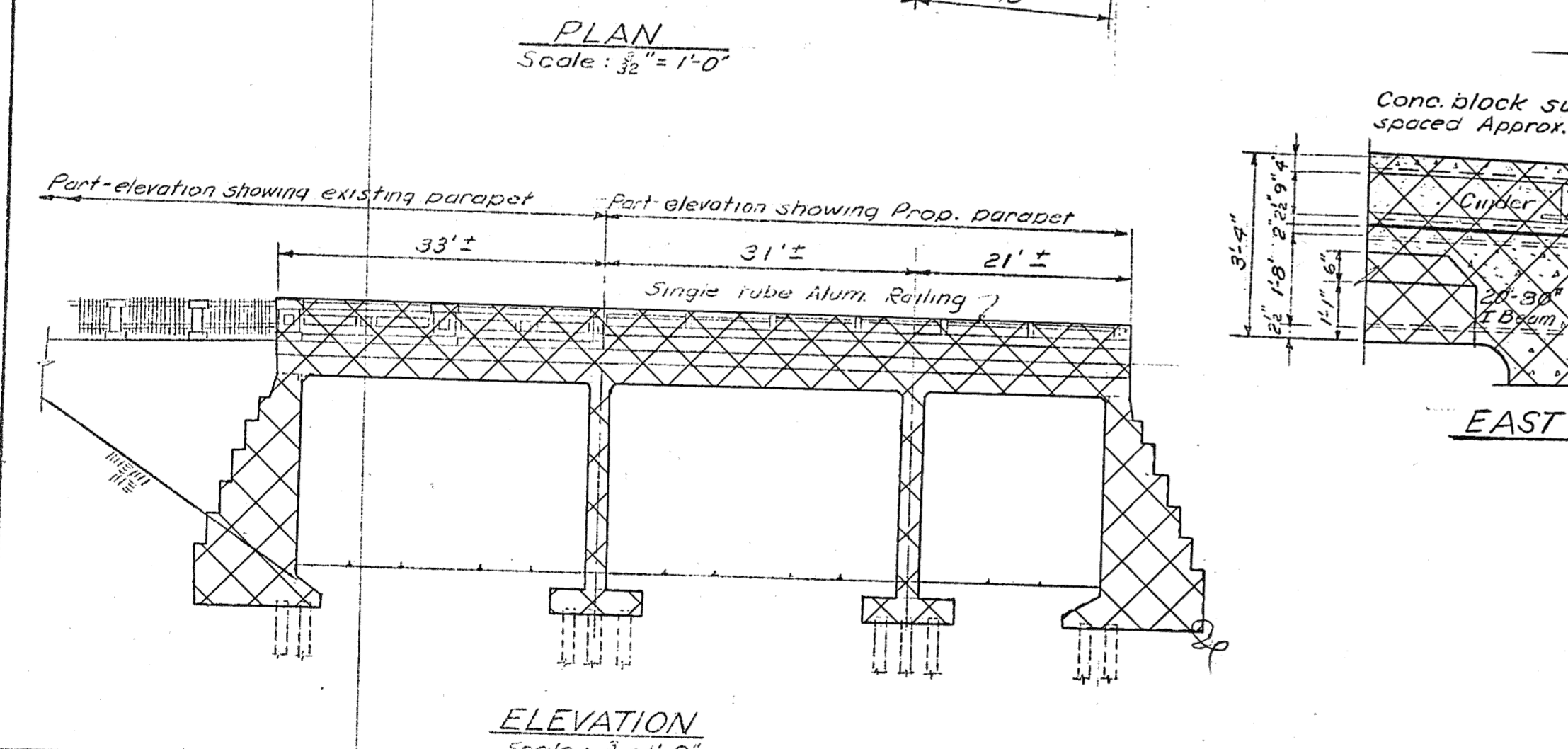
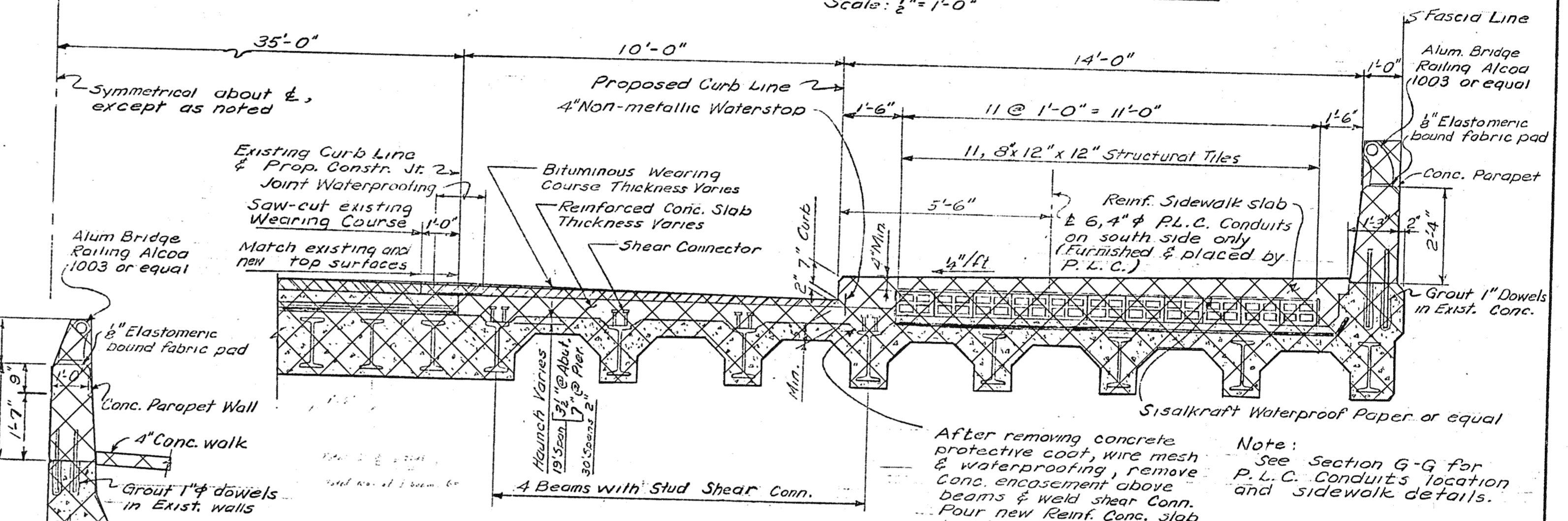
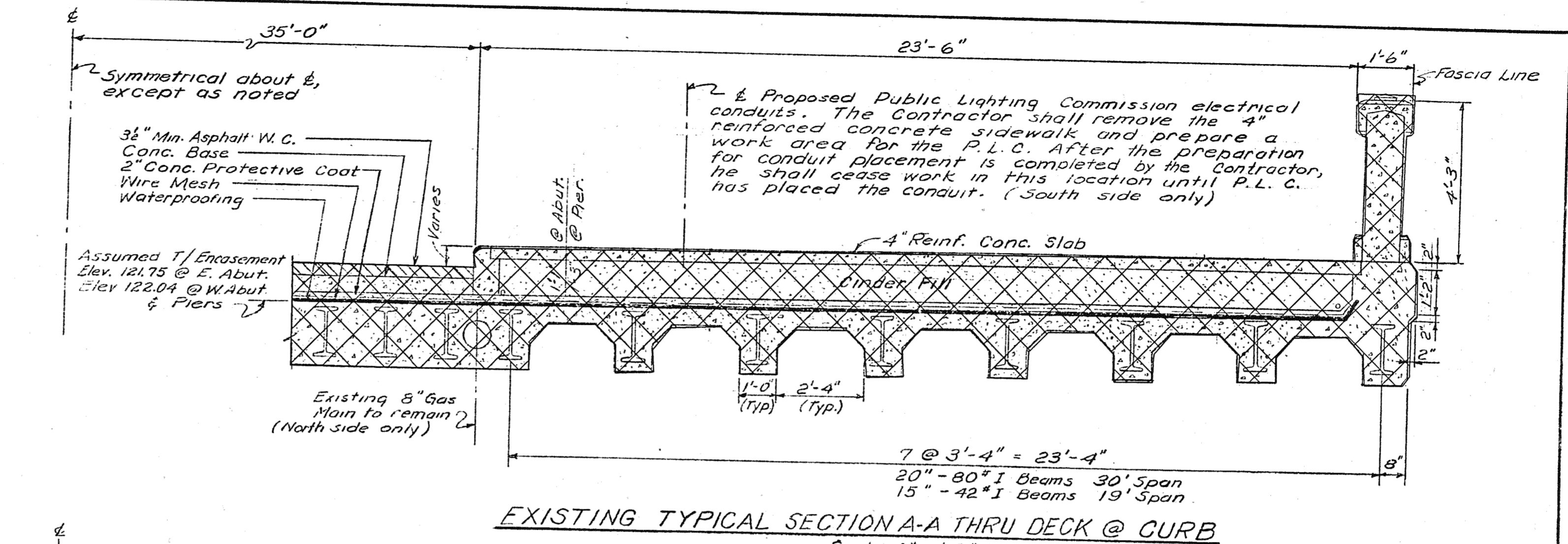
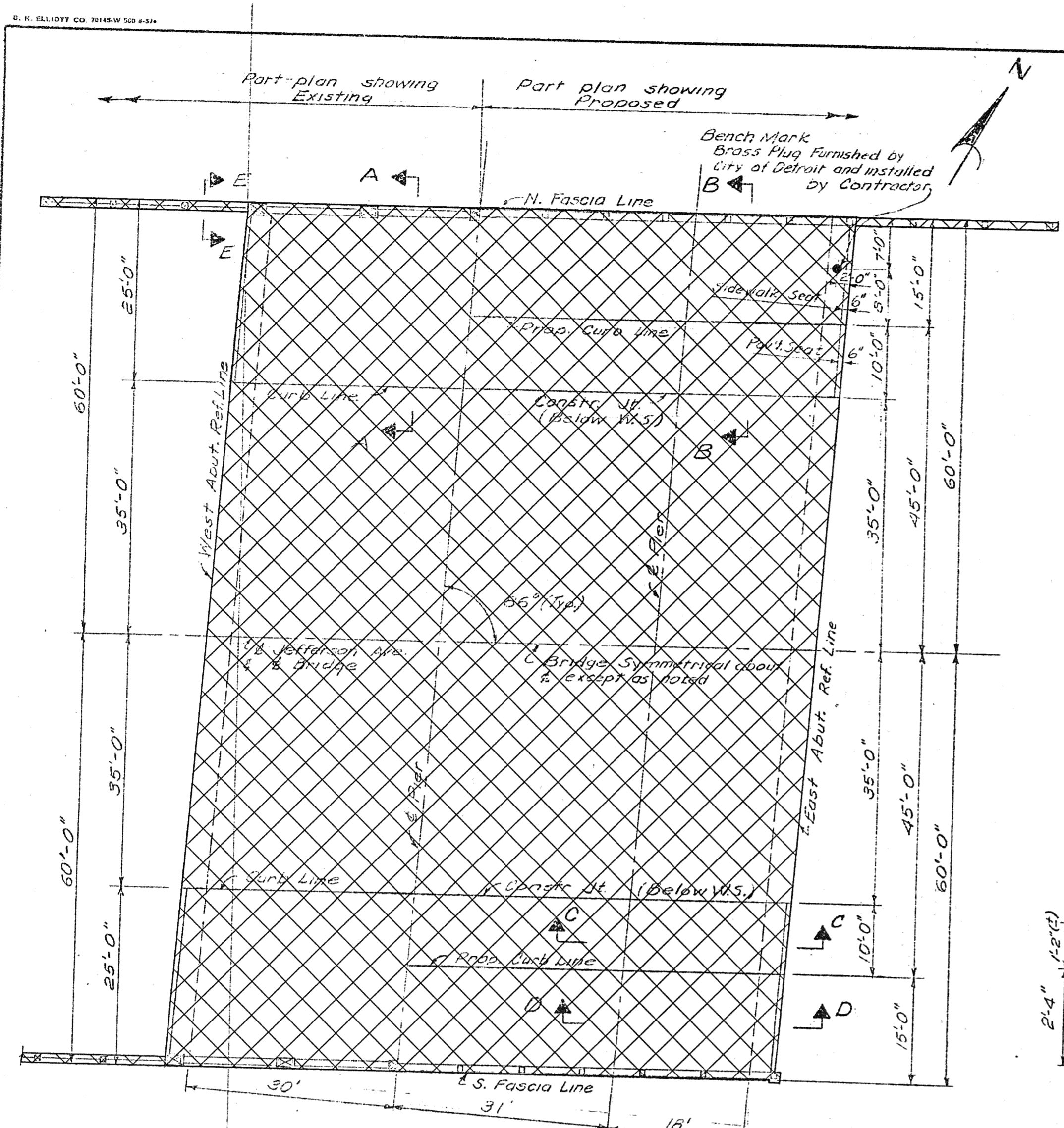
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DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	52 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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REVISIONS			
NO.	DESCRIPTION	DATE	BY



DESIGNER	Locher	APPROVED	<i>C. C. Calder</i>
DRAWN BY	Locher	STRUCTURAL ENGINEER	
TRACED BY		ASSOCIATE CITY ENGINEER	<i>Joseph Brundage</i>
CHECKED	Stuenkel	CITY ENGINEER	

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
HIGHWAY & EXPRESSWAY DIVISION
BRIDGE WIDENING

JEFFERSON AVE. BRIDGE X068
G.M.R.

GENERAL PLAN OF STRUCTURE

SHEET 2 OF 8 SHEETS
JOB No. PW 5752
DRWG No. C-102
DATE OCT 1965

JOB NO. 79717A

DENOTES WORK IN THIS PROJECT
 DENOTES REMOVAL PORTIONS

JOB NO. 49717A

NOTE:
THE ENTIRE EXISTING STRUCTURE SHALL BE REMOVED. PAID FOR AS "Structure, Rem". (S01 OF 82-22-02)

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CITY ENGINEERING DIVISION

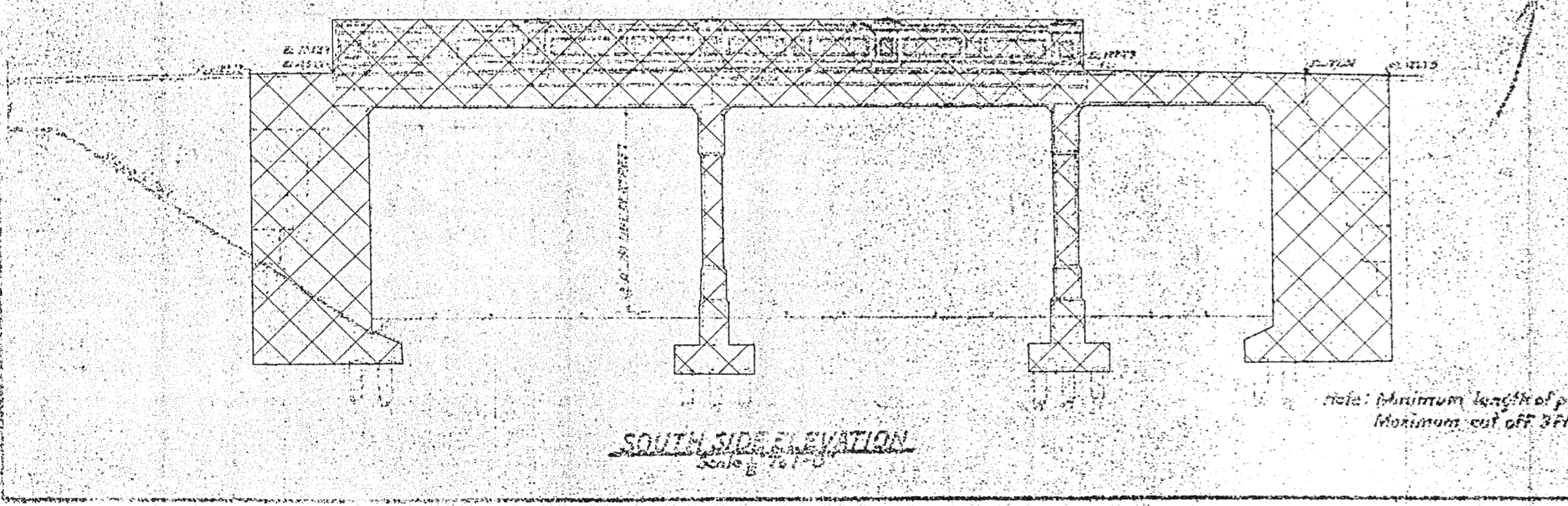
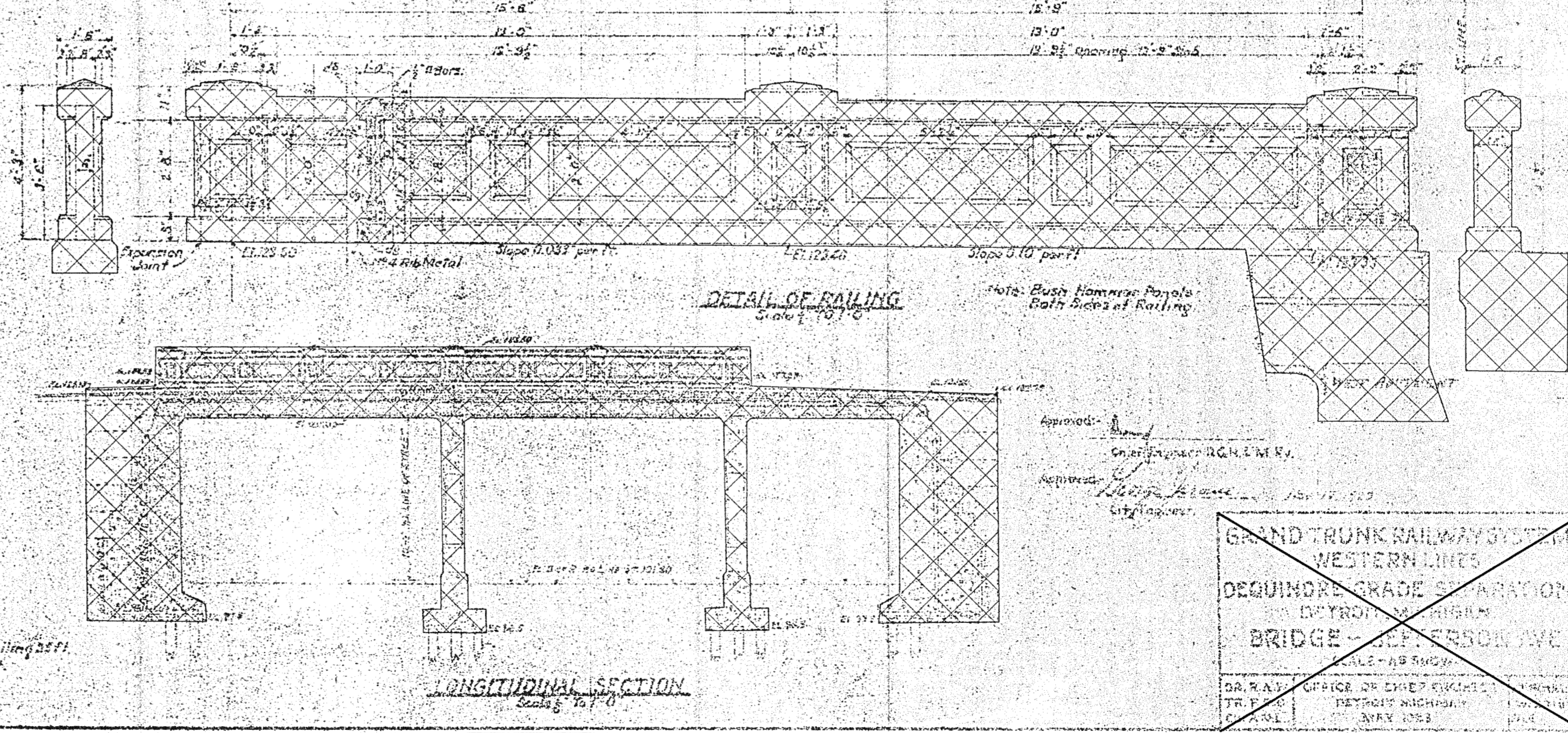
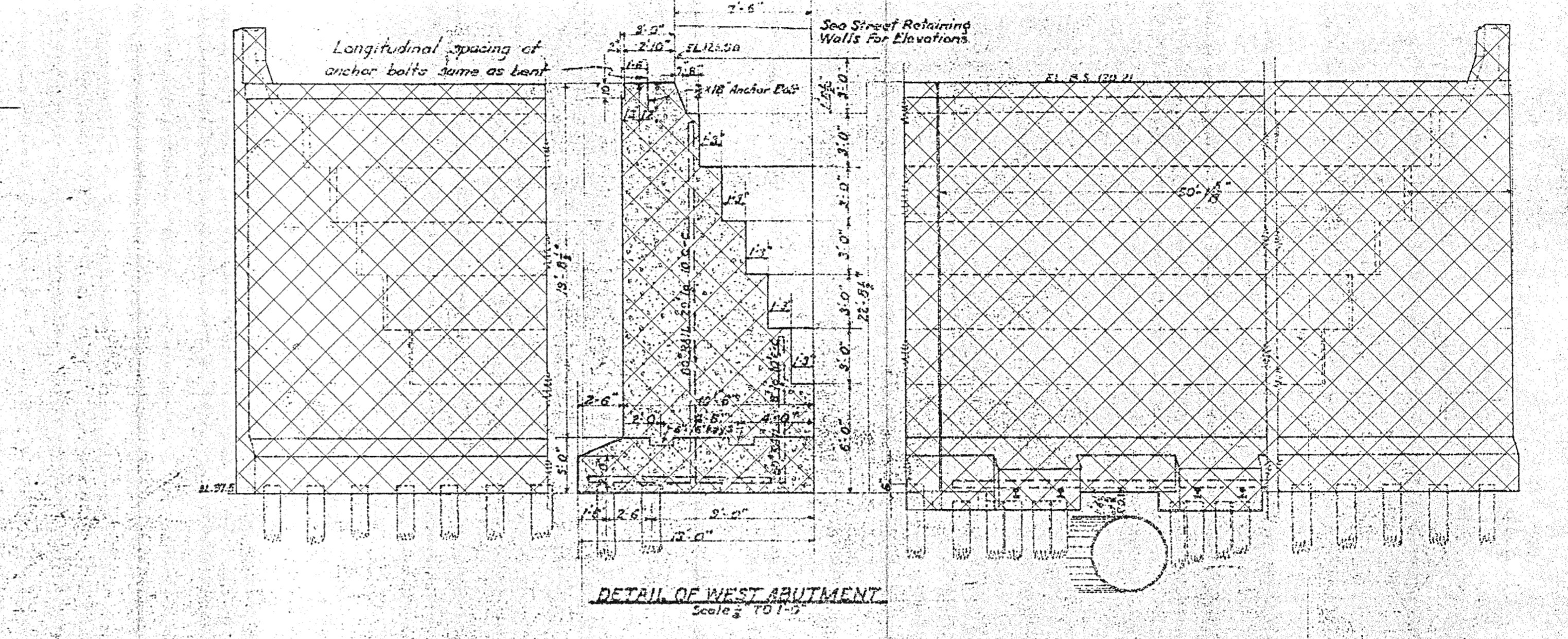
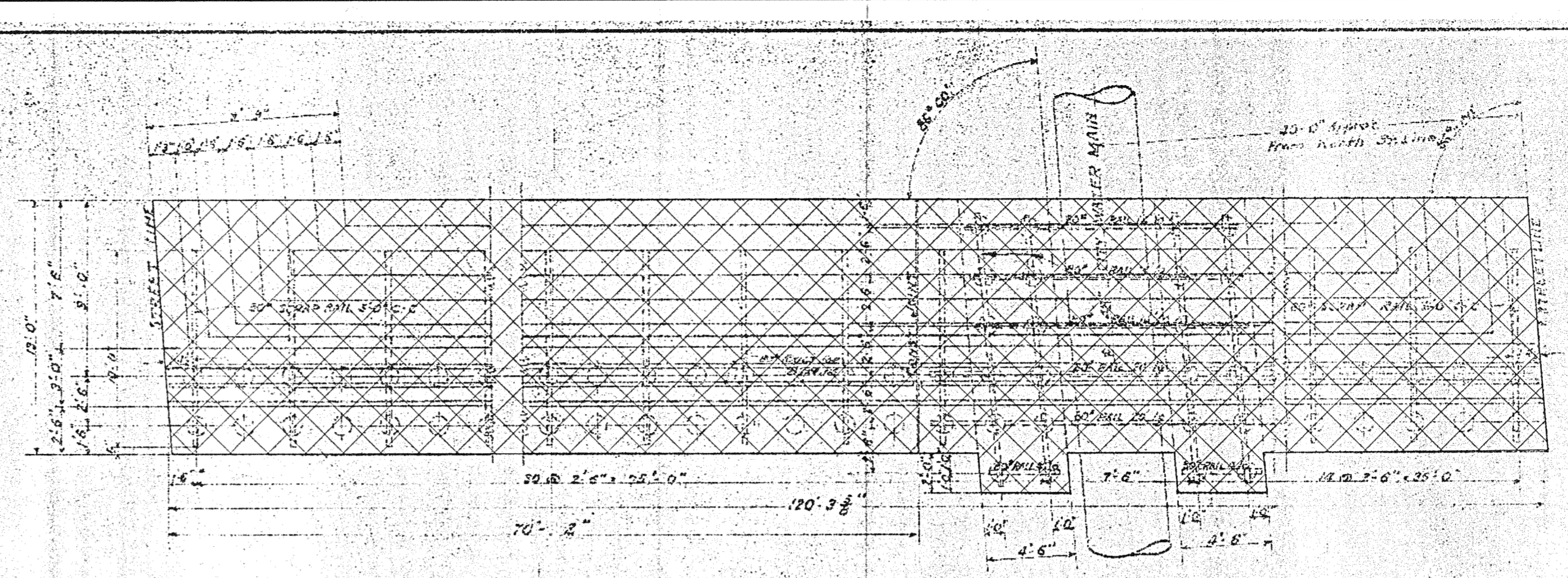
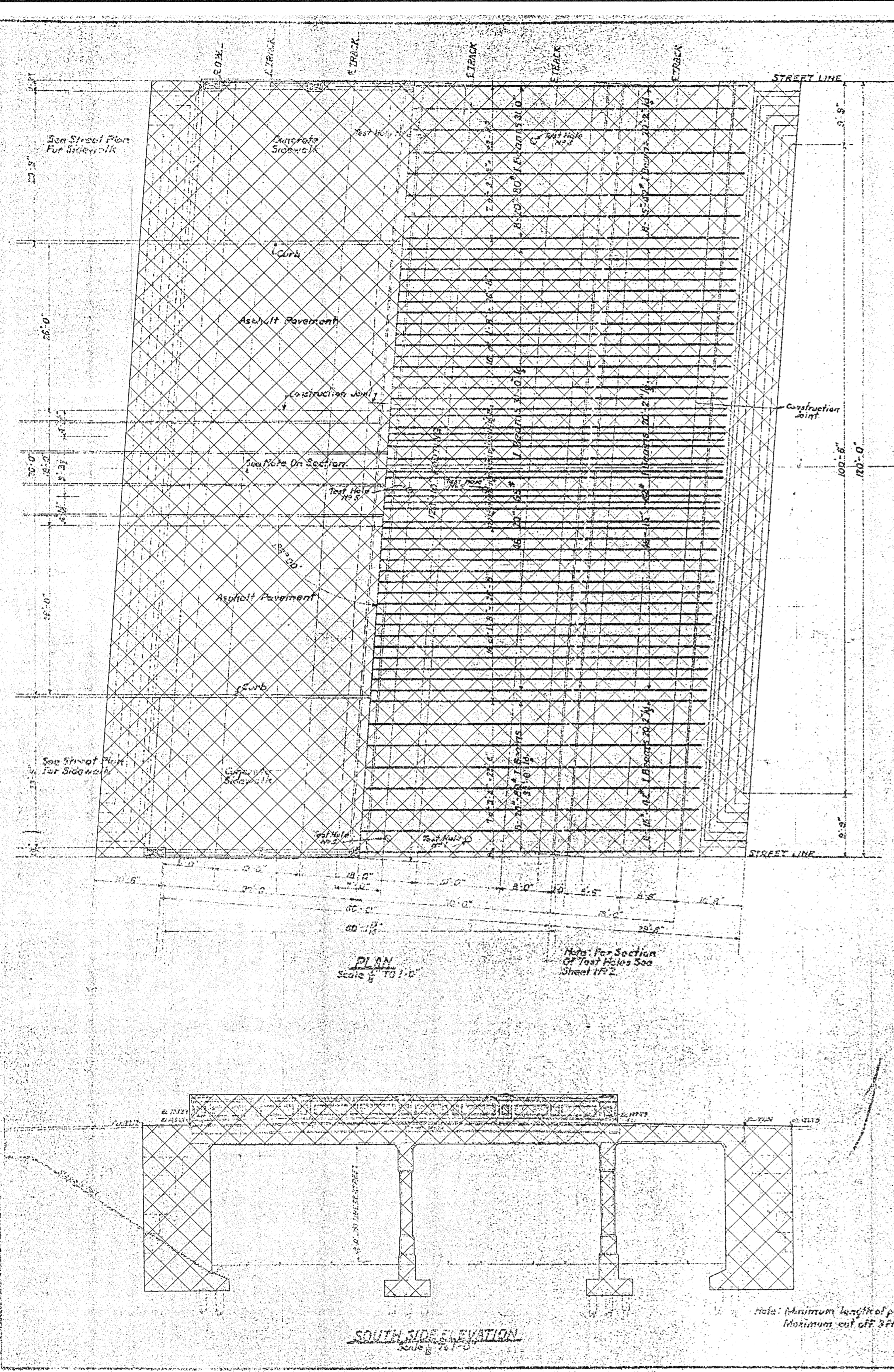
EXISTING GENERAL PLAN OF STRUCTURE (REMOVAL)
JEFFERSON AVE OVER DEQUINDRE CUT

DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	53 OF 80

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**GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
BY TRON MERRILL
BRIDGE - JEFFERSON AVE**

SCALE - AS SHOWN
D.A.R.A. OFFICE OF ENGINEERING
DETROIT, MICHIGAN

JOB NO. 49717A

DENOTES WORK IN THIS PROJECT
 DENOTES REMOVAL PORTIONS



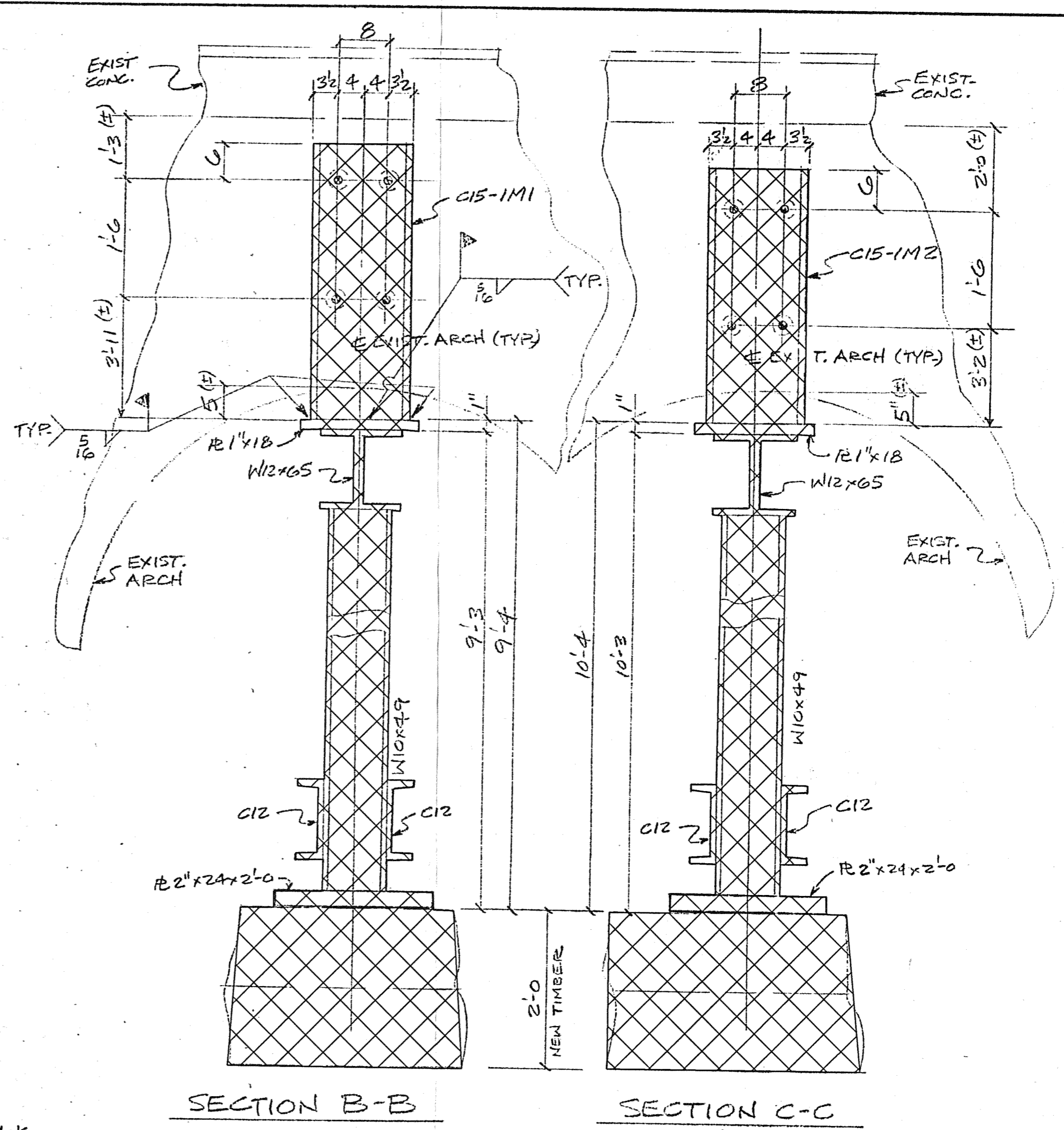
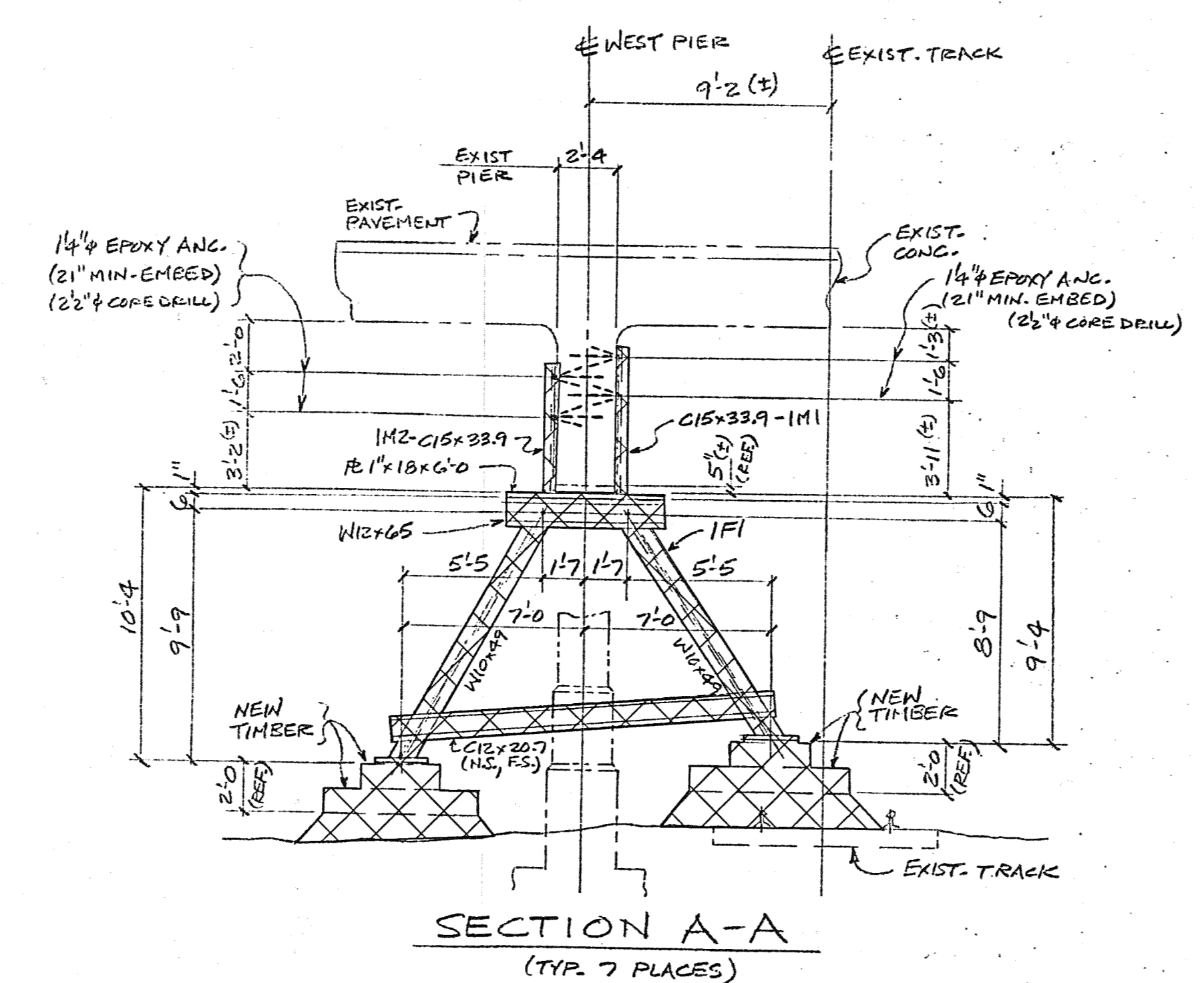
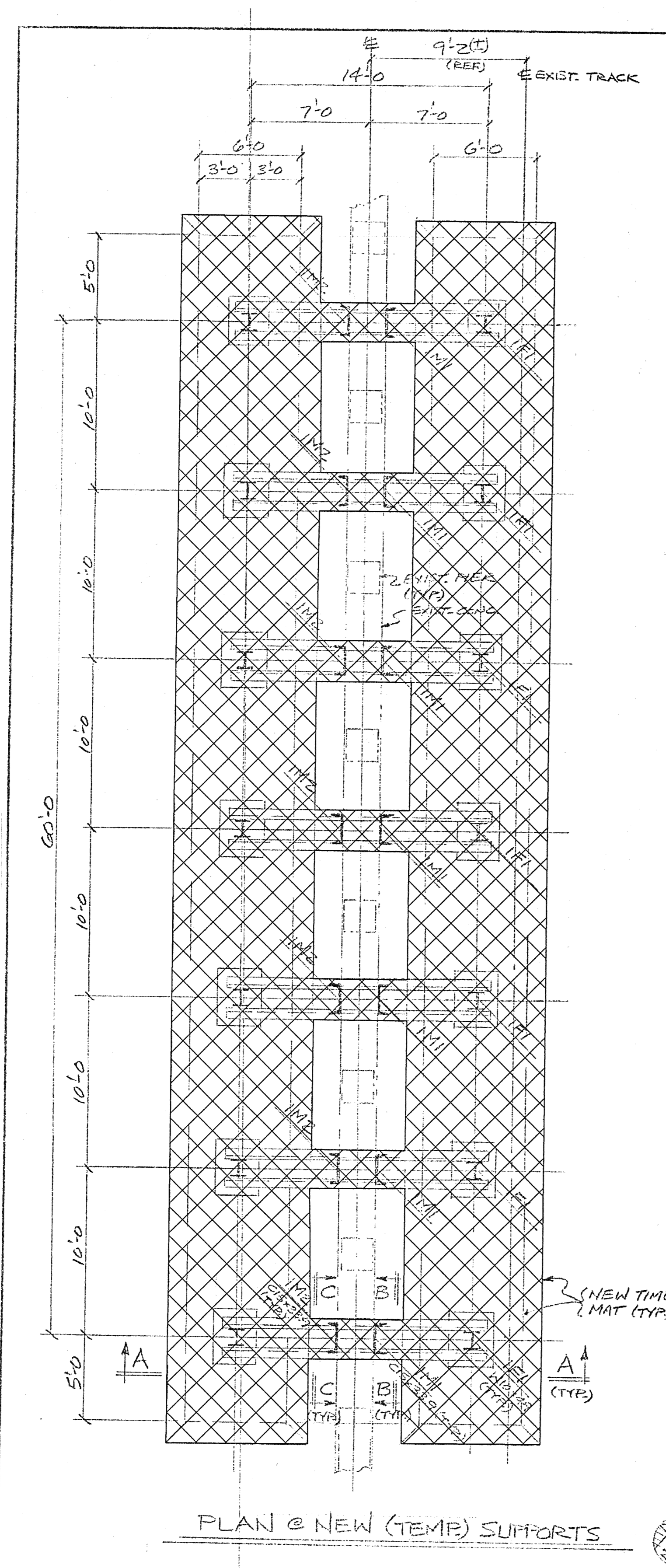
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535 Griswold Street
Detroit Building, Suite 1525
Detroit, MI 48226
313-463-6700

CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

EXISTING GENERAL PLAN OF STRUCTURE (REMOVAL) JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	SO1 OF 82-22-02	BRT 82022	49717A	54 OF 80

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REVISION	DATE	BY	REMARKS
1			
2			
3			
4			
5			

DELTA IRON WORKS
1801 MELDRUM AVE
DETROIT MICH. 48207
313-579-1445

CUSTOMER: CITY OF DETROIT
ARCHITECT: TUCKER, YOUNG & JACOBS, TULL INC.
JOB: JEFFERSON AVE BRIDGE OVER GTWRR
DETAILS OF: PLANS & SECTIONS

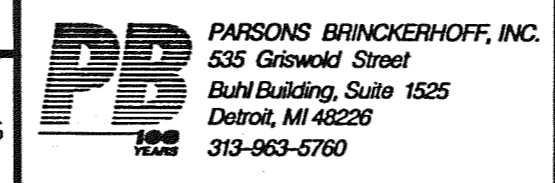
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CHECKED BY: SLS DATE: 8/24/97 SHEET E1 OF

JOB NO. 49717A

NOTE:
REMOVAL OF THE EXISTING TEMPORARY SUPPORT SHALL BE CONSISTENT WITH CONSTRUCTION STAGING.

JOB NO. 49717A

□ DENOTES WORK IN THIS PROJECT
▨ DENOTES REMOVAL PORTIONS



CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

EXISTING STRUCTURE SUPPORT (REMOVAL)
JEFFERSON AVE OVER DEQUINDRE CUT

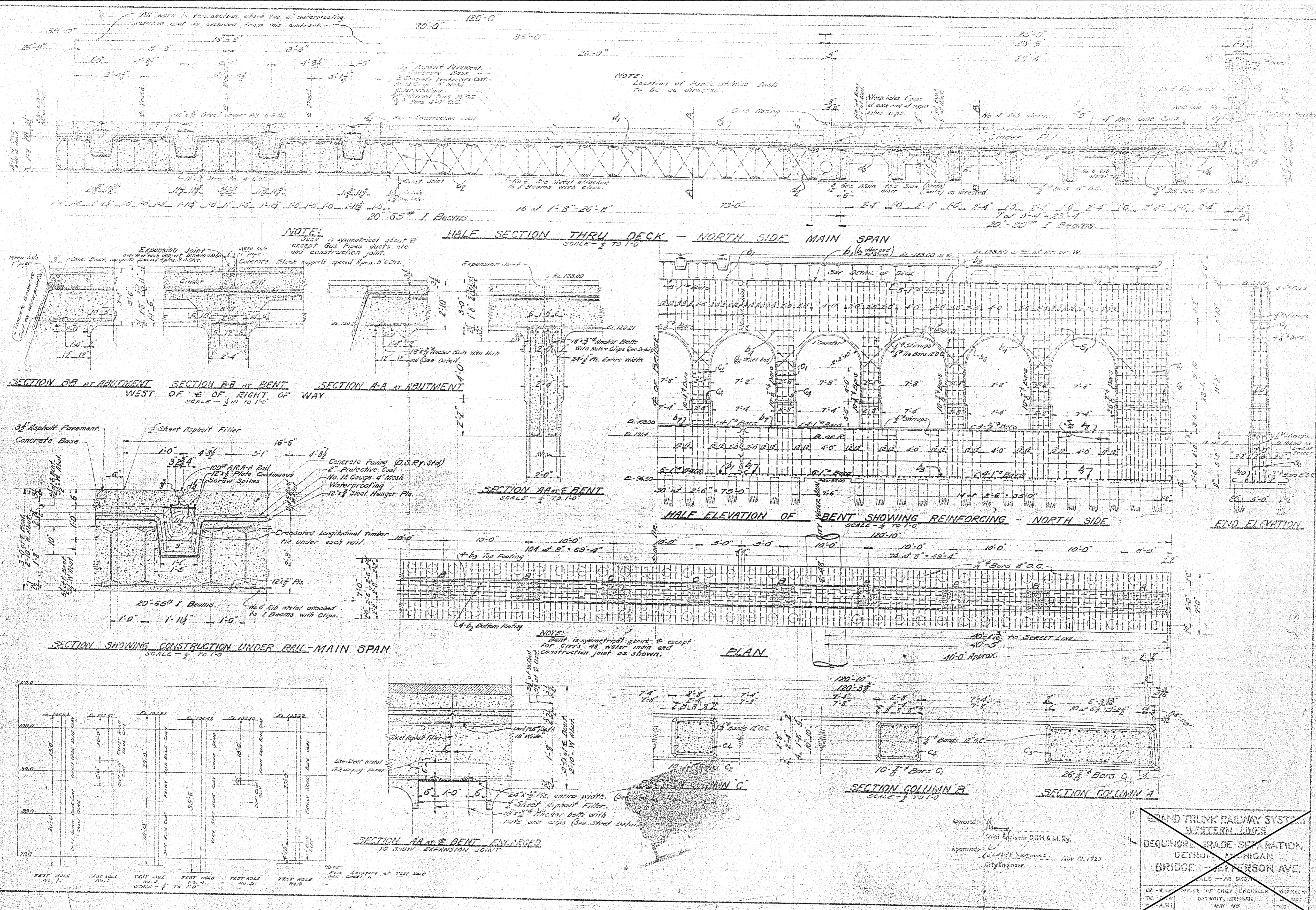
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02-11-05	S01 OF 82-22-02	BRT 82022	49717A	55 OF 80

REVISIONS			
NO.	DESCRIPTION	DATE	BY

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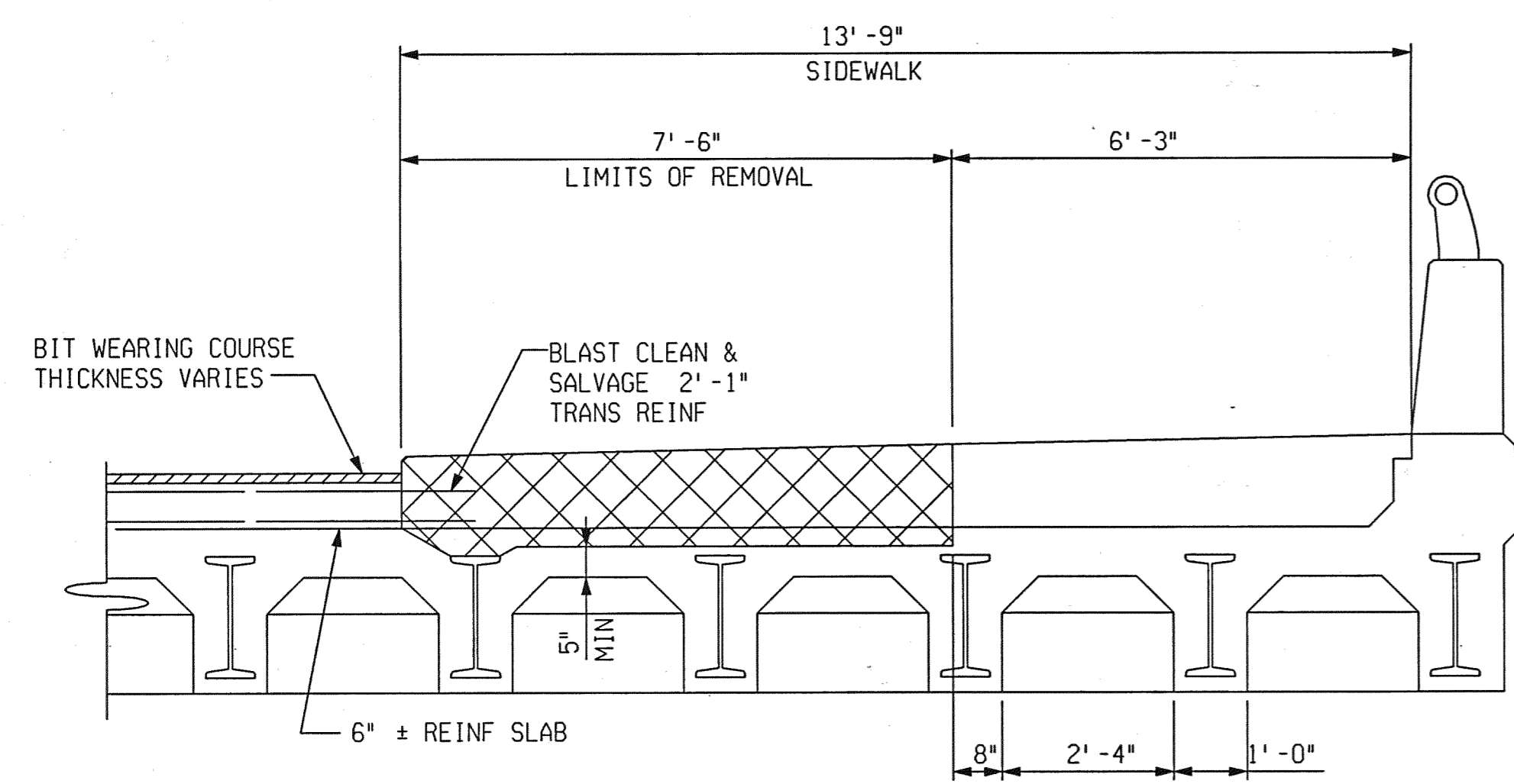
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DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

GRAND TRUNK RAILWAY SYSTEM
WESTERN LINES
DEQUINDRE GRADE SEPARATION
DETROIT, MICHIGAN
BRIDGE - JEFFERSON AVE.
SCALE - AS SHOWN
DR - ENGINEER
DETROIT, MICHIGAN

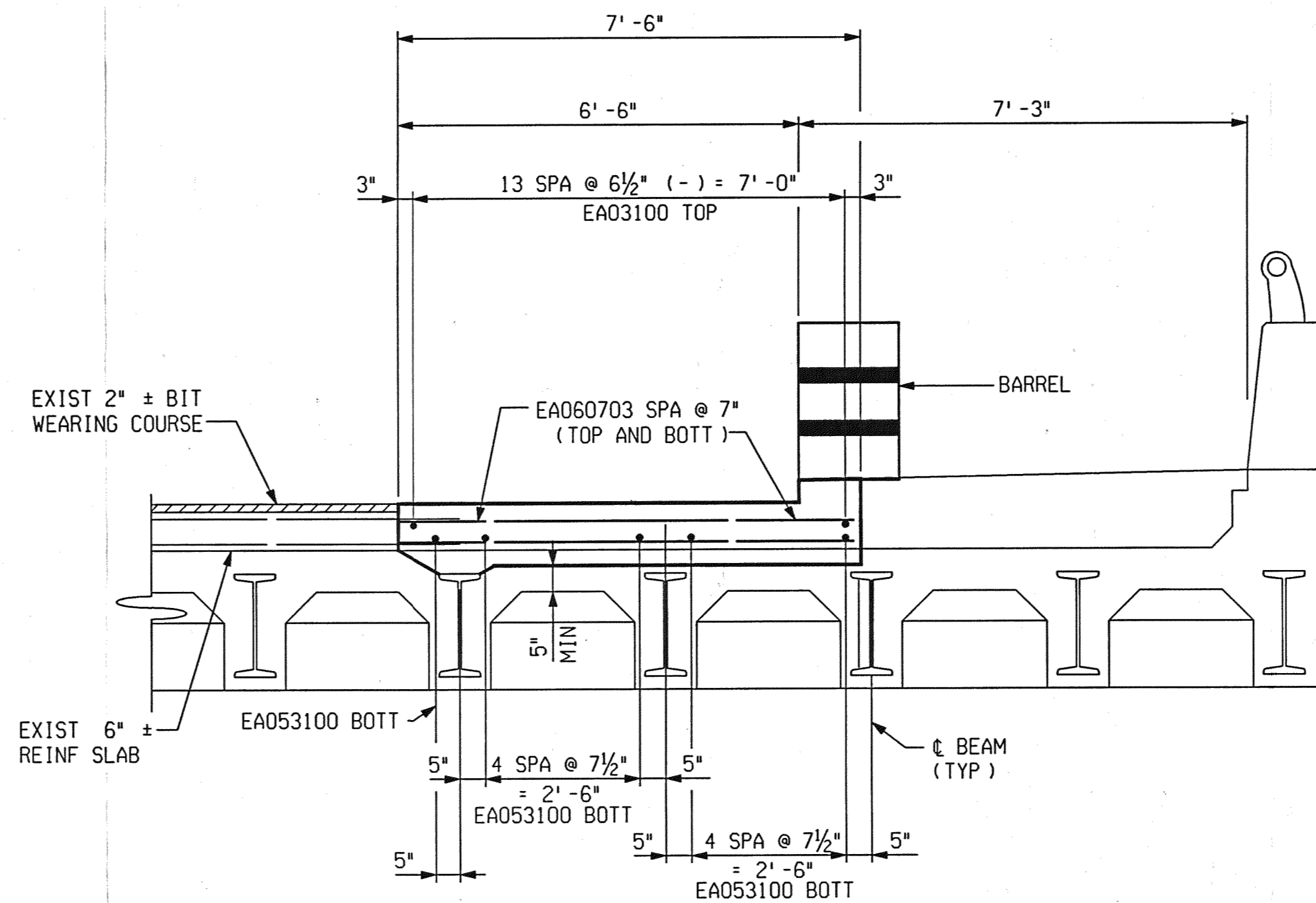
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JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	56 OF 80

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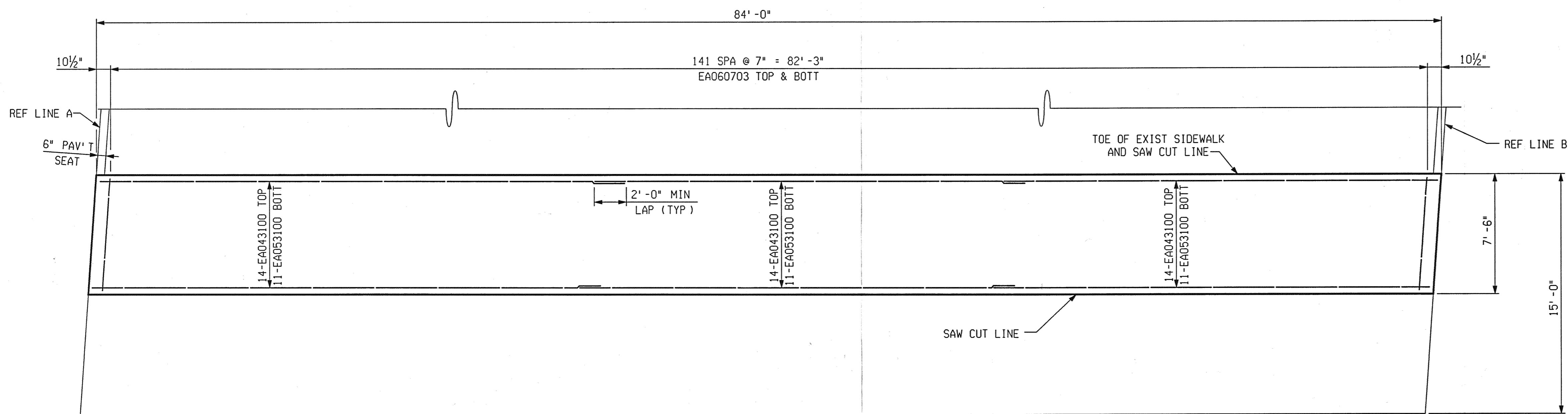


STAGE II REMOVAL
(SECTION THRU EXIST EAST SIDEWALK)



STAGE II CONSTRUCTION
(SHOWING TEMPORARY DECK WIDENING)

MISCELLANEOUS QUANTITIES		
12	Cyd	Superstructure Conc



PLAN OF TEMPORARY DECK REPLACEMENT

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

2/24/05 2/10/2005 2/10/2005 2/10/2005
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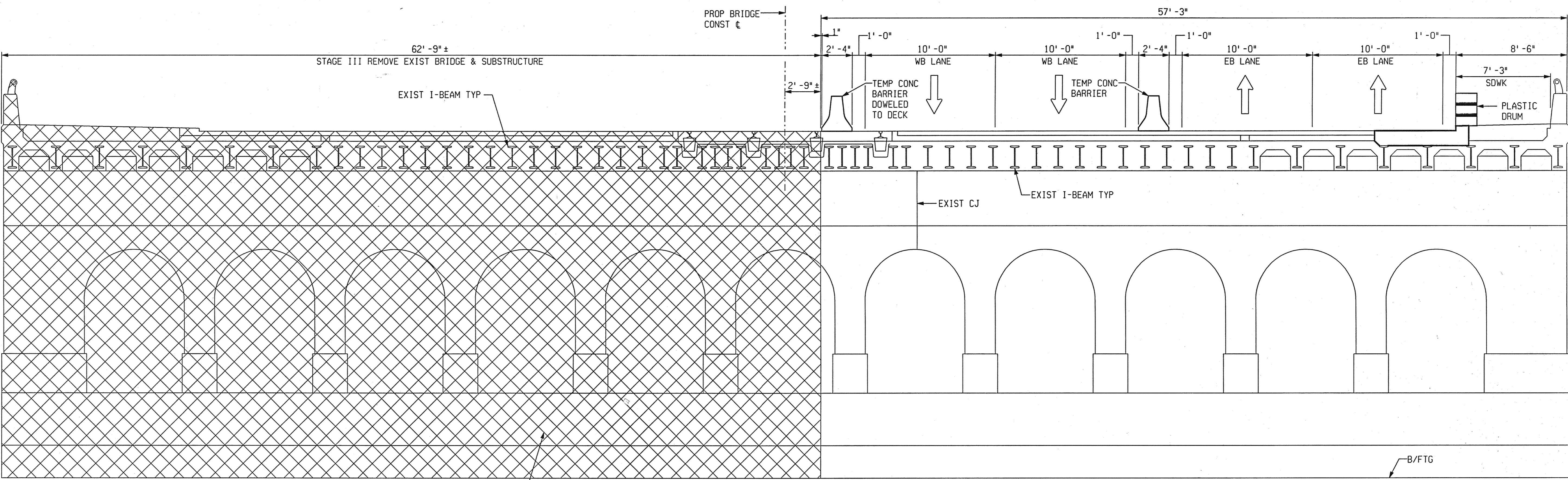
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

CONSTRUCTION STAGING
JEFFERSON AVE OVER DEQUINDRE CUT

DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	57 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

REVISIONS			
NO.	DESCRIPTION	DATE	BY

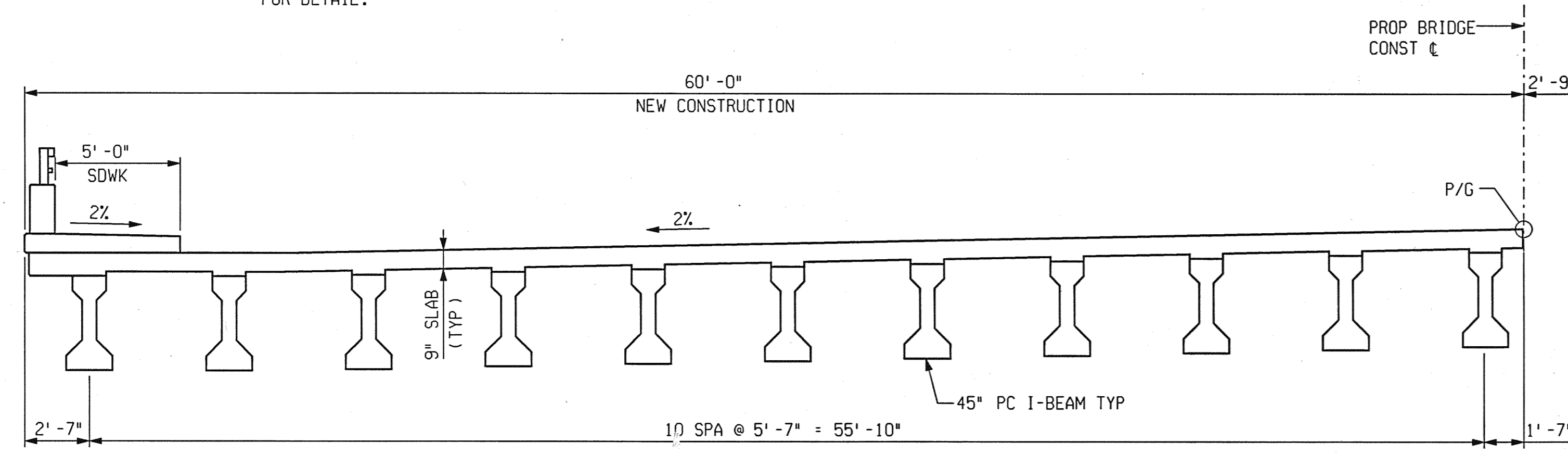


NOTE:
EXISTING BRACING/SHORING TO BE REMOVED. SEE NEXT SHEET FOR DETAIL.

2 PIERS
2 ABUTMENTS

PIER SHOWN
ABUTMENT BEHIND

STAGE III REMOVAL
LOOKING UPSTATION



NOTES:
PLACEMENT OF TEMPORARY CONCRETE BARRIER SHALL BE IN ACCORDANCE WITH STANDARD PLAN R-126-A
JEFFERSON AVENUE TRAFFIC IS TO BE MAINTAINED OVER THE STRUCTURE BY PART WIDTH CONSTRUCTION

STAGE III:
SET UP TEMPORARY CONCRETE BARRIER ON EB JEFFERSON AVENUE. SHIFT EB TRAFFIC TO EB OUTSIDE LANES. SHIFT WB TRAFFIC INSIDE TO EB LANES. CLOSE WB LANES TO TRAFFIC AT BRIDGE. CLOSE ST. AUBIN AT LARNED ST. AVENUE (SEE DETOUR PLANS). CLOSE NB ORLEANS ST. TO THRU TRAFFIC AT JEFFERSON AVENUE. REMOVE NORTH HALF OF EXISTING BRIDGE. CONSTRUCT NORTH HALF OF BRIDGE. CONSTRUCT REMAINDER OF DUCTS FOR PLD CONDUITS TO MANHOLES ON WESTBOUND SIDE OF ROADWAY. ONLY FIVE FEET OF SIDEWALK SHALL BE CONSTRUCTED DURING THIS STAGE.

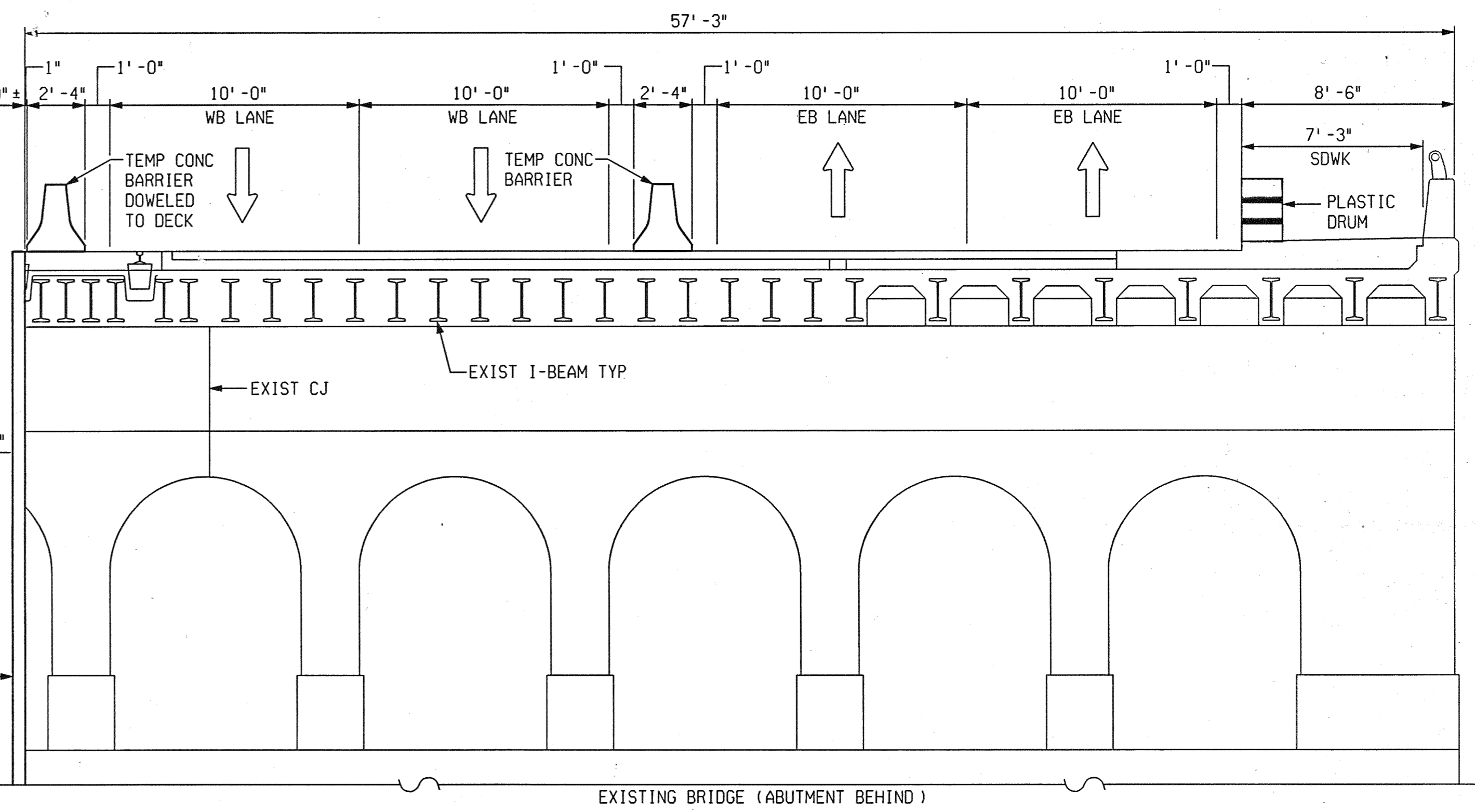
STAGE IVA:
PLACE TEMPORARY CONCRETE BARRIER ON COMPLETED NORTH HALF OF BRIDGE. SHIFT WB TRAFFIC OUTER WB LANES. SHIFT EB TRAFFIC TO INSIDE WB LANES. CLOSE EB LANES TO TRAFFIC AT BRIDGE. CLOSE OUTSIDE LANE ON SOUTHBOUND ST. AUBIN. BAG TRAFFIC SIGNALS AT ST. AUBIN AND PROHIBIT LEFT TURNS FROM JEFFERSON AVENUE TO ST. AUBIN. REMOVE AND CONSTRUCT SOUTH HALF OF BRIDGE.

STAGE IVB:
REMOVE TEMPORARY CONCRETE BARRIER AND OPEN BRIDGE TO WB AND EB TRAFFIC. CLOSE OUTERMOST WB LANE. CONSTRUCT REMAINDER OF WB SIDEWALK. COLD MILL AND OVERLAY CENTER LANE

PROPOSED BRIDGE

STEEL SHEET
PILING TEMP
AT ABUTMENTS

STAGE III CONSTRUCTION
LOOKING UPSTATION



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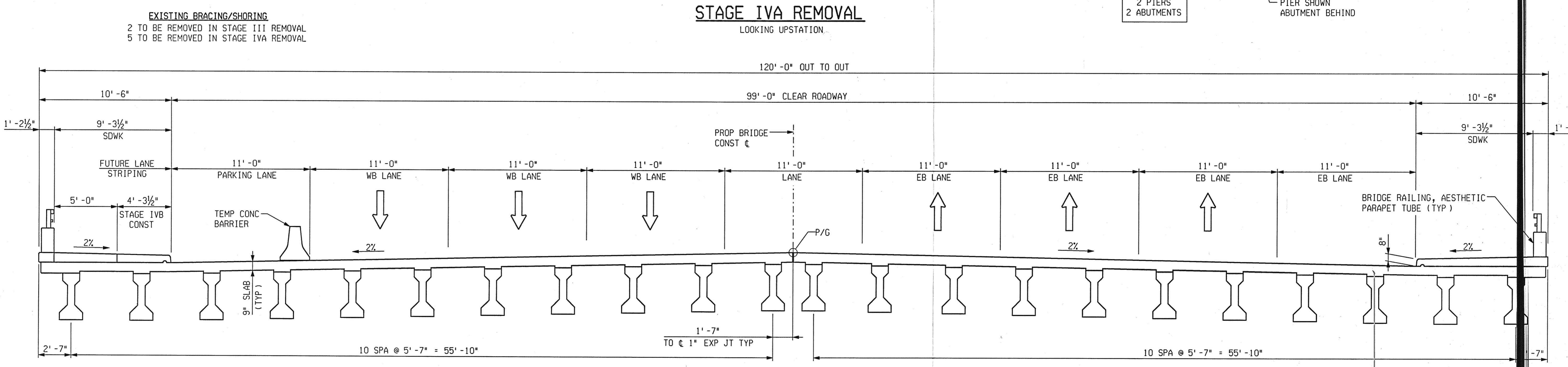
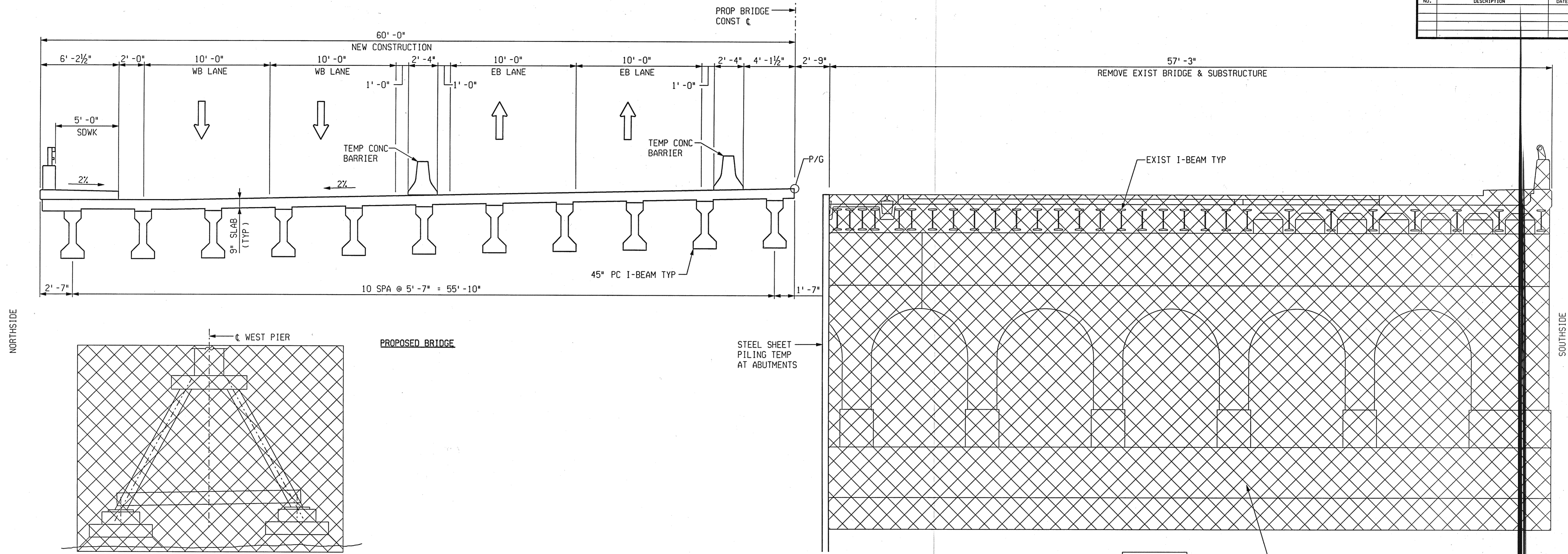
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

CONSTRUCTION STAGING JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	58 OF 80

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REVISIONS			
NO.	DESCRIPTION	DATE	BY



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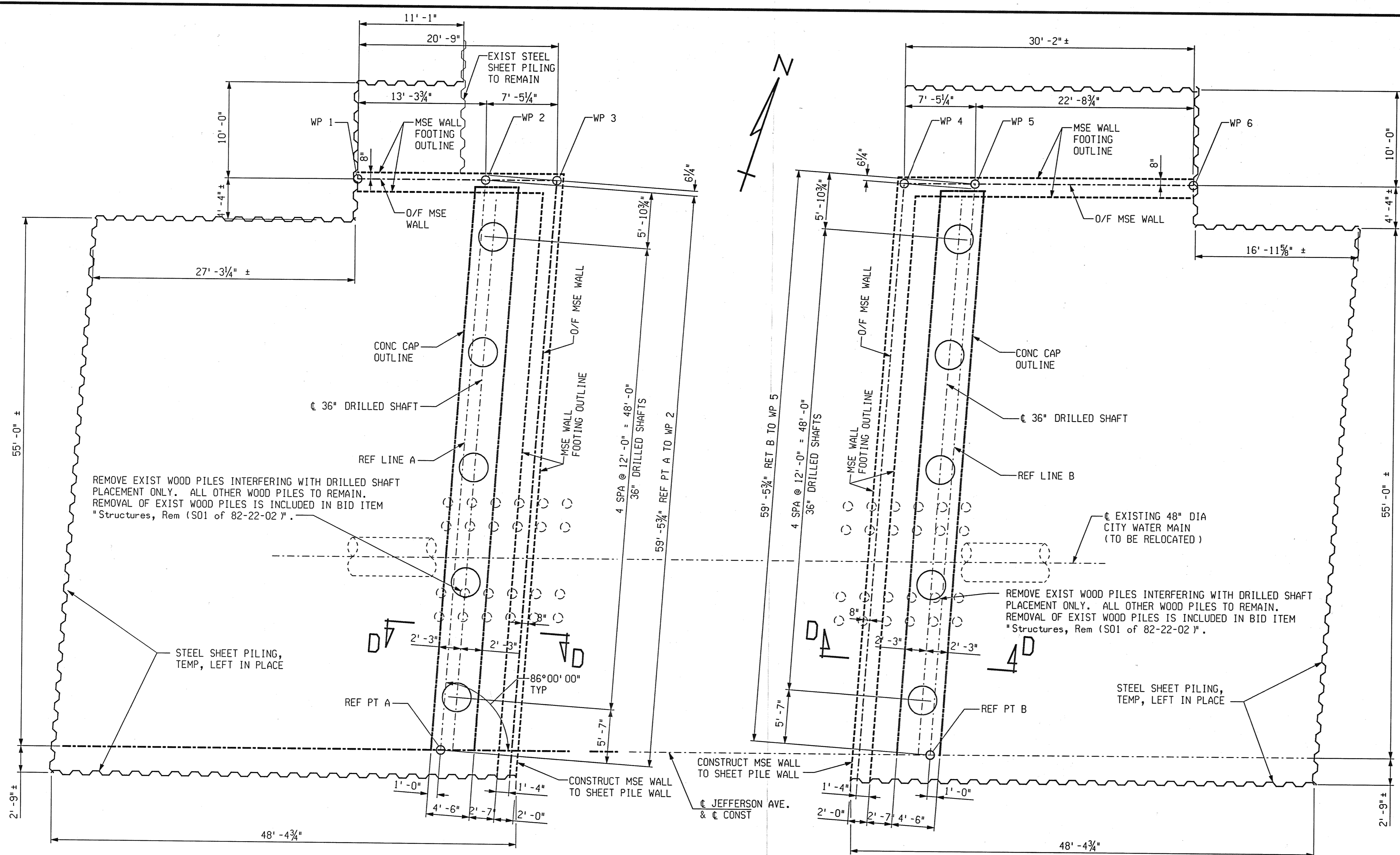
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

CONSTRUCTION STAGING				
JEFFERSON AVE OVER DEQUINDRE C				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	497	59 OF 80

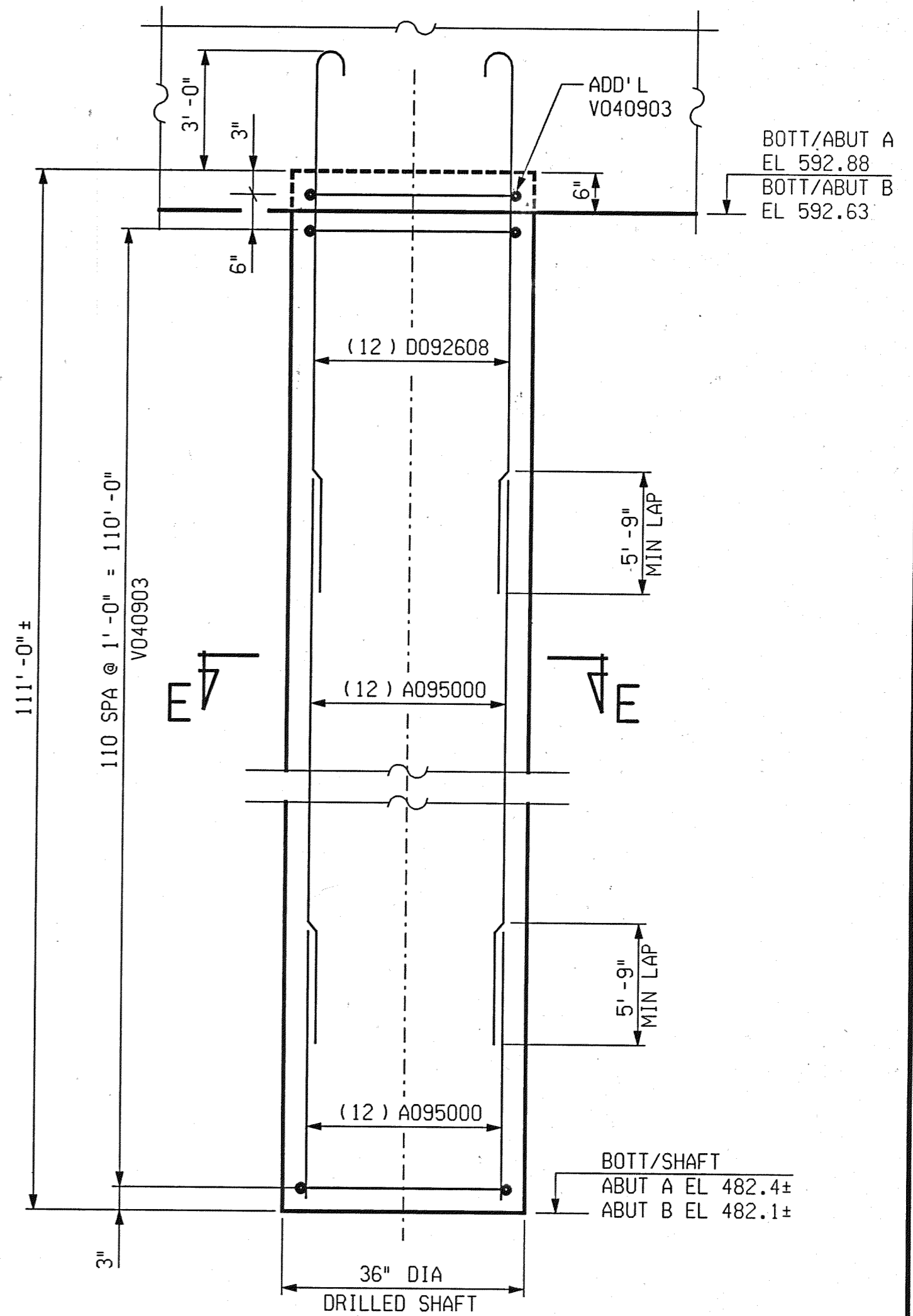
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



ABUTMENT A
 ABUTMENT B
 PLAN OF DRILLED SHAFT LAYOUT
 STAGE III



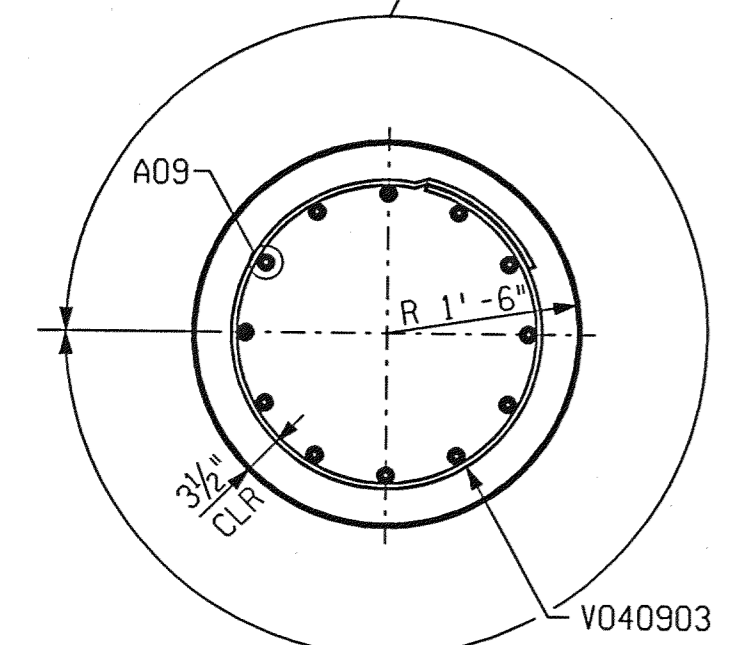
SHAFT ELEVATION

MISCELLANEOUS QUANTITIES			
1	LS	Drilled Shaft Equipment, Furnished (S01 of 82-22-02)	
2,220	Ft	Drilled Shaft	
1,870	Ft	Drilled Shaft Excavation	

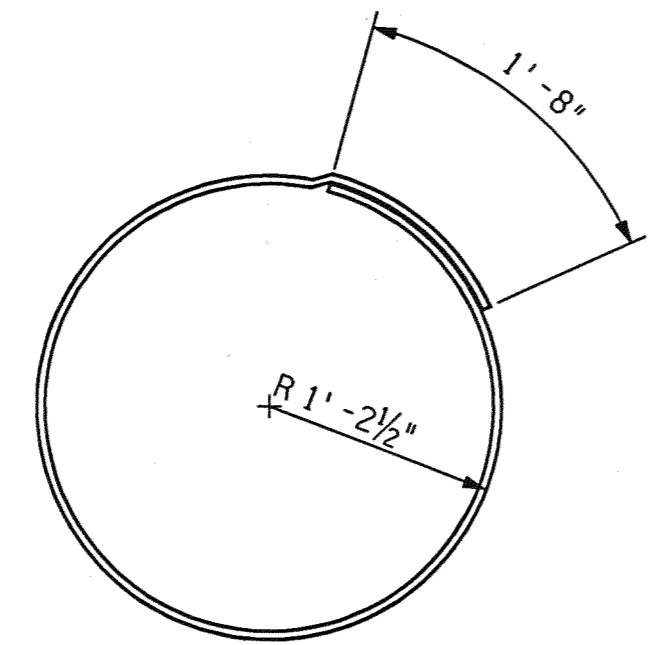
WP NO.	JEFFERSON AVE. & CONST STA	OFFSET LEFT	TOP/WALL ELEV	BOTT/WALL ELEV
1	9+85.04	59.33	601.03	575.70
2	9+98.37	59.33	601.14	575.70
3	10+05.81	59.33	596.66	575.70
4	10+85.68	59.33	596.45	575.70
5	10+93.12	59.33	600.82	575.70
6	11+15.85	59.33	600.44	581.20

NOTES:
 DRILLED SHAFTS AT ABUTMENT A AND B SHALL BE 36" DIA.
 SEE SPECIAL PROVISION FOR DRILLED SHAFT.

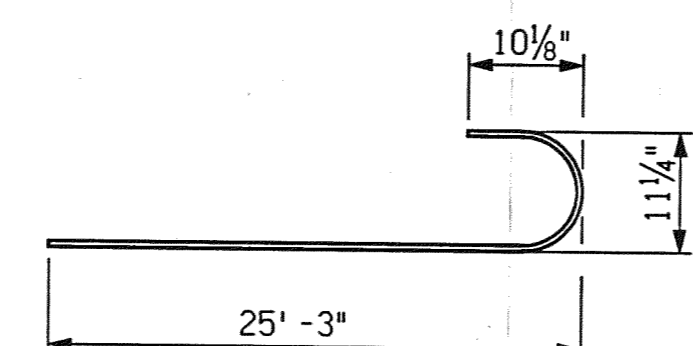
12 EQUAL SPACES
 LAP D092700 W/ A095000



SECTION E-E



V040903



D092608

ABUTMENTS-STAGE III

LOCATION	NO. OF DRILLED SHAFT	ESTIMATED LENGTH		CUT-OFF ELEV.
		EACH LFT	TOTAL LFT	
ABUT A	5	111	555	593.38
ABUT B	5	111	555	593.13
TOTAL	10	---	1110	---



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 Buhl Building, Suite 1525
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 313-963-5760

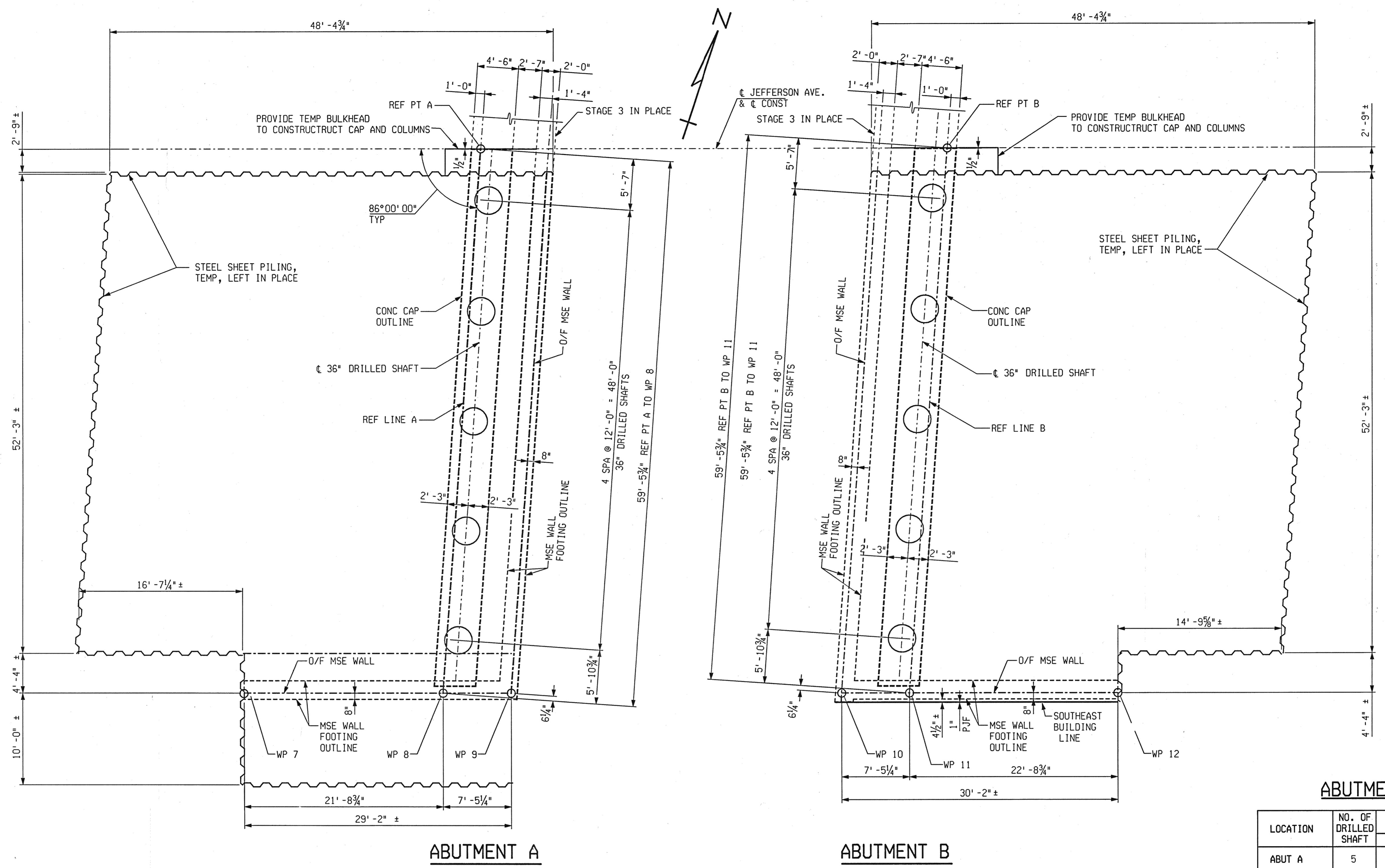
CITY OF DETROIT
 DEPARTMENT OF PUBLIC WORKS
 CITY ENGINEERING DIVISION

DRILLED SHAFT DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	60 OF 80

CHECKED BY: RJO DATE: 2/10/2005
 DRAWN BY: DCP DATE: 2/10/2005
 FILE NAME: G:\35458d\Struct\CADD\jeff_p01.dgn

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REVISIONS			
NO.	DESCRIPTION	DATE	BY



PLAN OF DRILLED SHAFT LAYOUT
STAGE IVA

ABUTMENTS-STAGE IVA

LOCATION	NO. OF DRILLED SHAFT	ESTIMATED LENGTH		CUT-OFF ELEV.
		EACH LFT	TOTAL LFT	
ABUT A	5	111	555	593.38
ABUT B	5	111	555	593.13
TOTAL	10	---	1110	

WP NO.	JEFFERSON AVE. & CONST	OFFSET RIGHT	TOP/WALL ELEV	BOTT/WALL ELEV
7	9+68.34	59.33	600.82	580.70
8	9+90.07	59.33	601.07	575.70
9	9+97.51	59.33	596.66	575.70
10	10+77.38	59.33	596.45	575.70
11	10+84.82	59.33	600.93	575.70
12	11+07.55	59.33	600.59	581.20



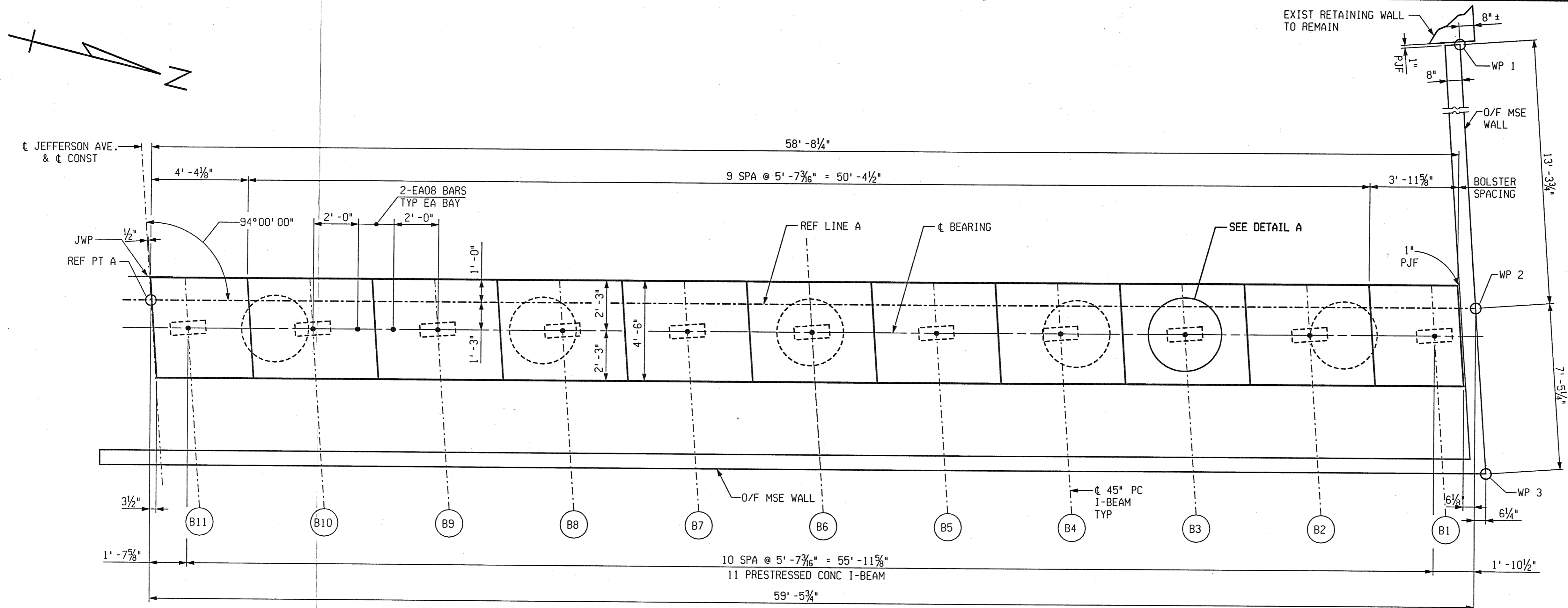
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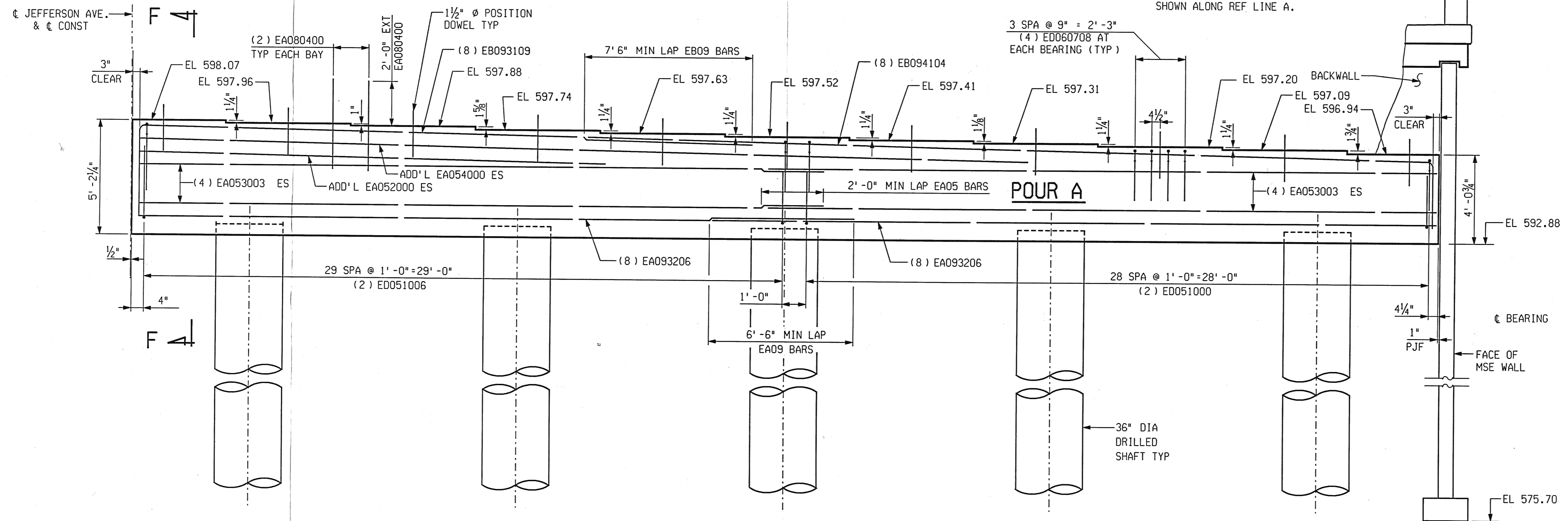
DRILLED SHAFT DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	61 OF 80

FILE NAME: G:\35456d\Struct\CADD\jeff_p02.dgn
DRAWN BY: DCP DATE: 2/10/2005
CHECKED BY: RJO DATE: 2/10/2005
2:23:52 PM

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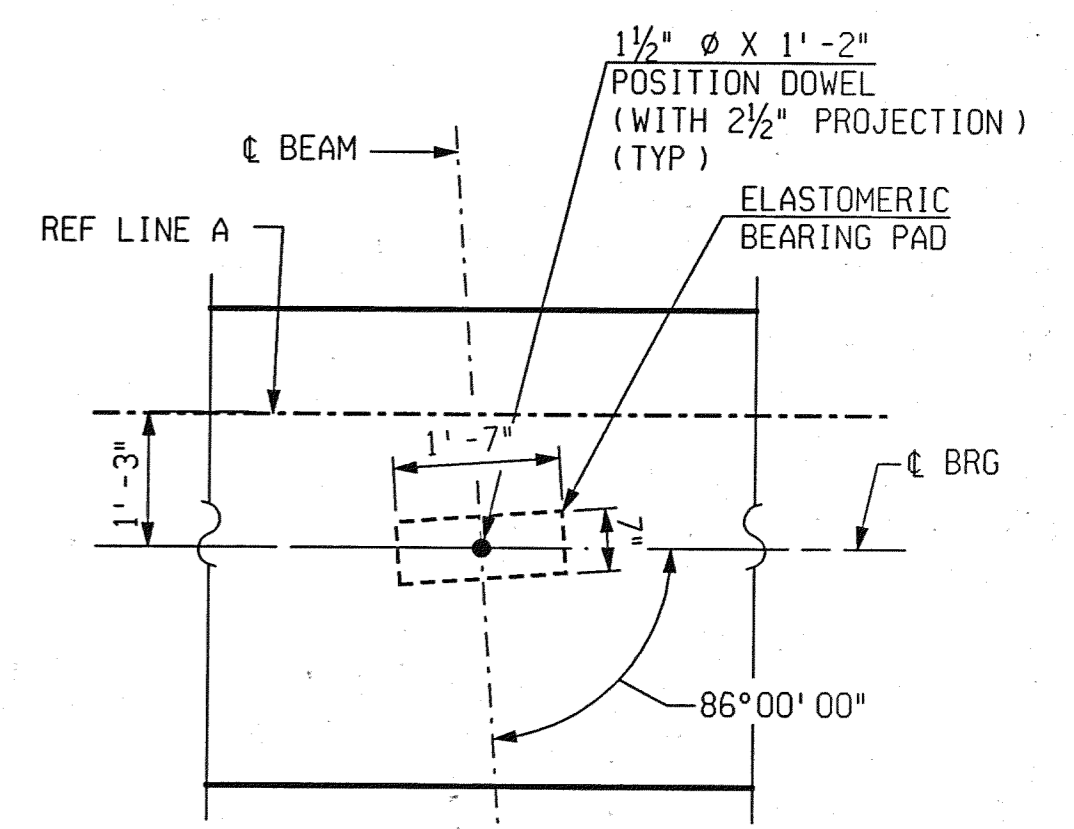


TOP PLAN STAGE-III
ABUTMENT A



ELEVATION STAGE-III
ABUTMENT A LOOKING WEST

REVISIONS			
NO.	DESCRIPTION	DATE	BY



DETAIL A

MISCELLANEOUS QUANTITIES

182	Cyd	Conc, Grade D
7300	Sft	MSE Wall, Furnished
7300	Sft	MSE Wall, Installed
350	Ft	Leveling Pad, Concrete
275	Ft	MSE Wall Coping
1130	Sft	Joint Waterproofing

CONC, GRADE D				
POUR	A	B	C	D
ABUT A & B (CY)	45.5	45.3	45.1	45.7

NOTES:

- ALL SUBSTRUCTURE CONCRETE TO BE GRADE D.
- EJWP DENOTES JOINT WATERPROOFING, EXPANSION
- JWP DENOTES JOINT WATERPROOFING
- NS DENOTES NEAR SIDE
- FS DENOTES FAR SIDE
- ES DENOTES EACH SIDE
- O/F DENOTES OUTSIDE FACE
- I/F DENOTES INSIDE FACE
- LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03 J. OF THE 2003 STANDARD SPECIFICATIONS FOR CONSTRUCTION LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEM "Conc, Grade D".
- DRILLING HOLES FOR POSITION DOWELS SHALL NOT BE PERMITTED.
- FOR BEVEL AND MOLDING DETAILS SEE STANDARD PLAN B-103 SERIES
- AT NO TIME PRIOR TO ERECTING THE BEAMS SHALL THE HEIGHT OF THE BACKFILL ON THE BACKSIDE OF THE ABUTMENT BE HIGHER THAN THE BACKFILL ON THE FRONT SIDE
- FOR DRILLED SHAFT QUANTITIES, LAYOUT AND NOTES SEE DRILLED SHAFT DETAIL SHEETS



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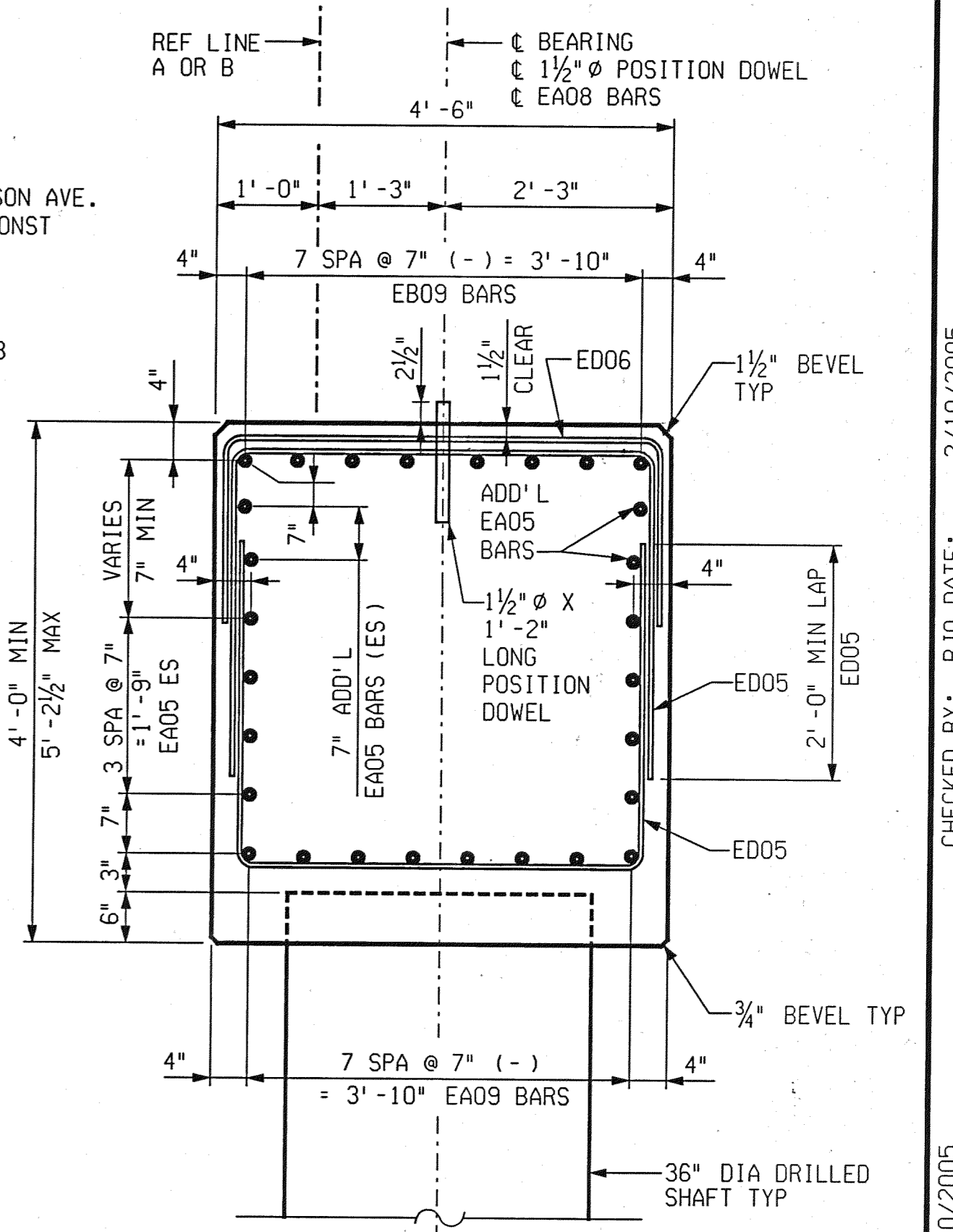
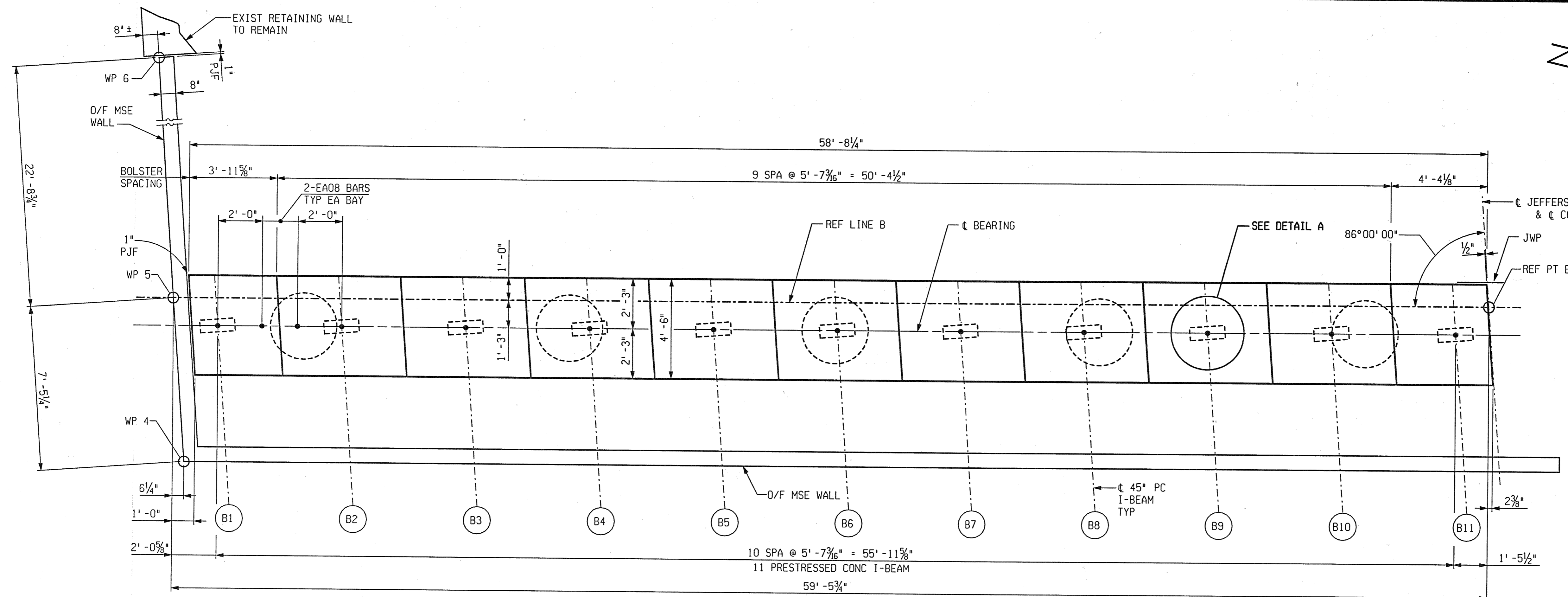
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ABUTMENT DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	62 OF 80

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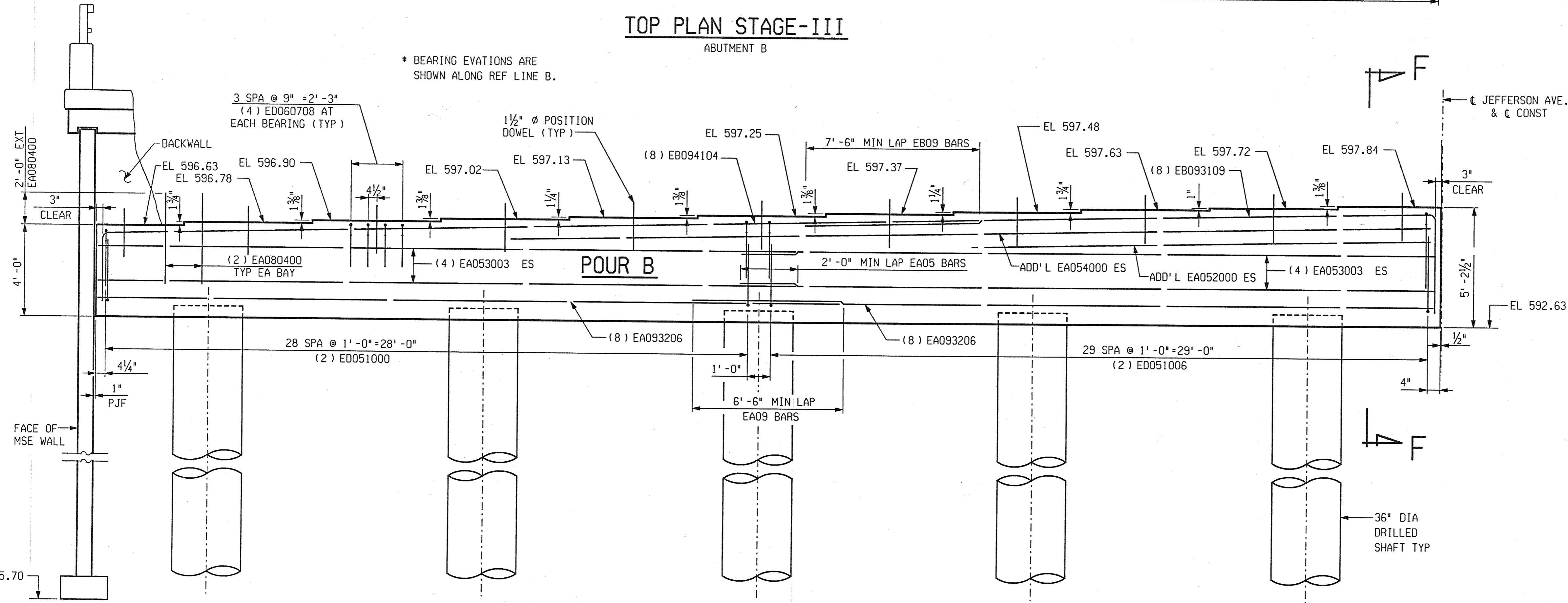
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



TOP PLAN STAGE-III
ABUTMENT B

SECTION F-F



ELEVATION STAGE-III
ABUTMENT B LOOKING EAST

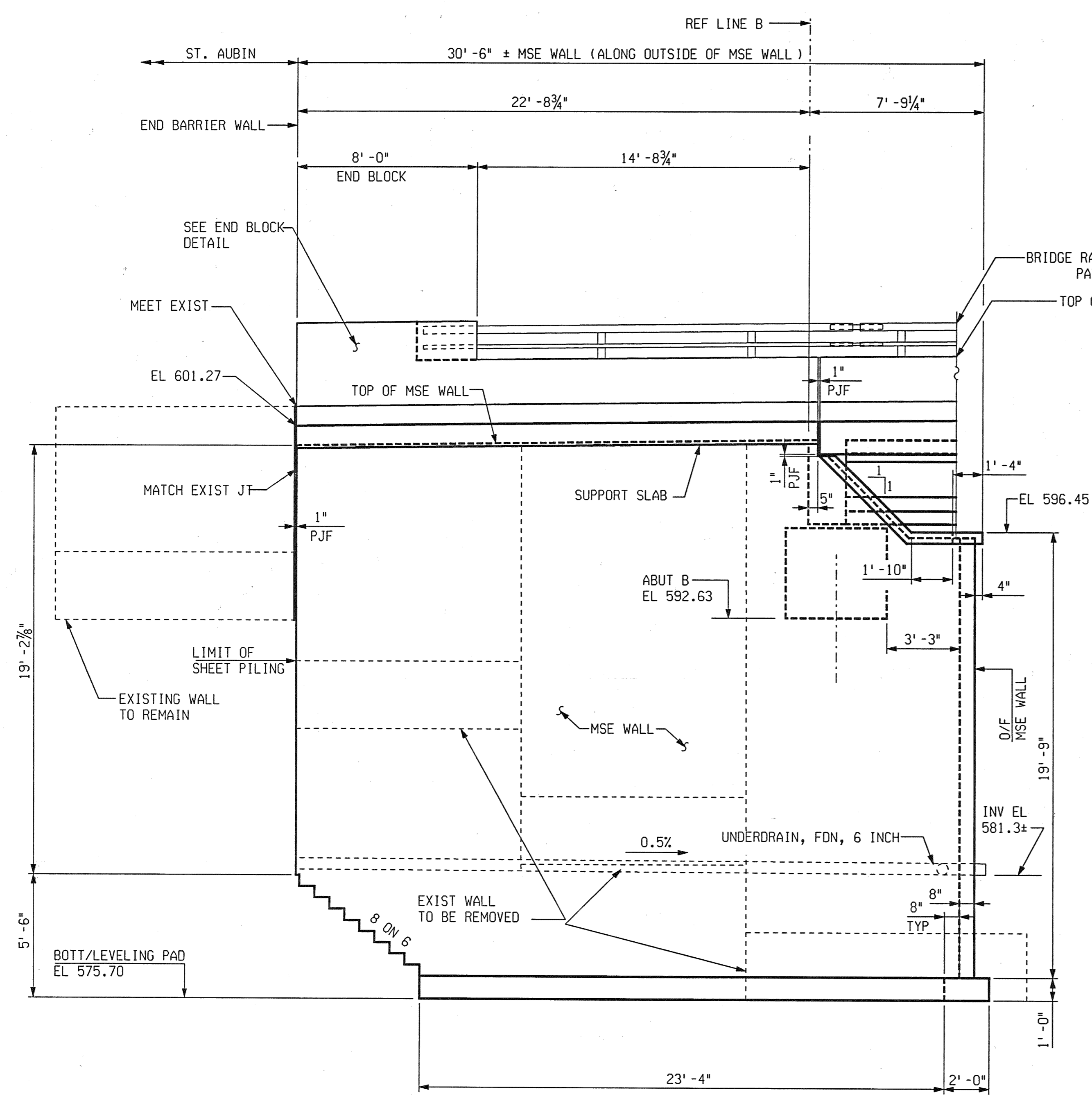


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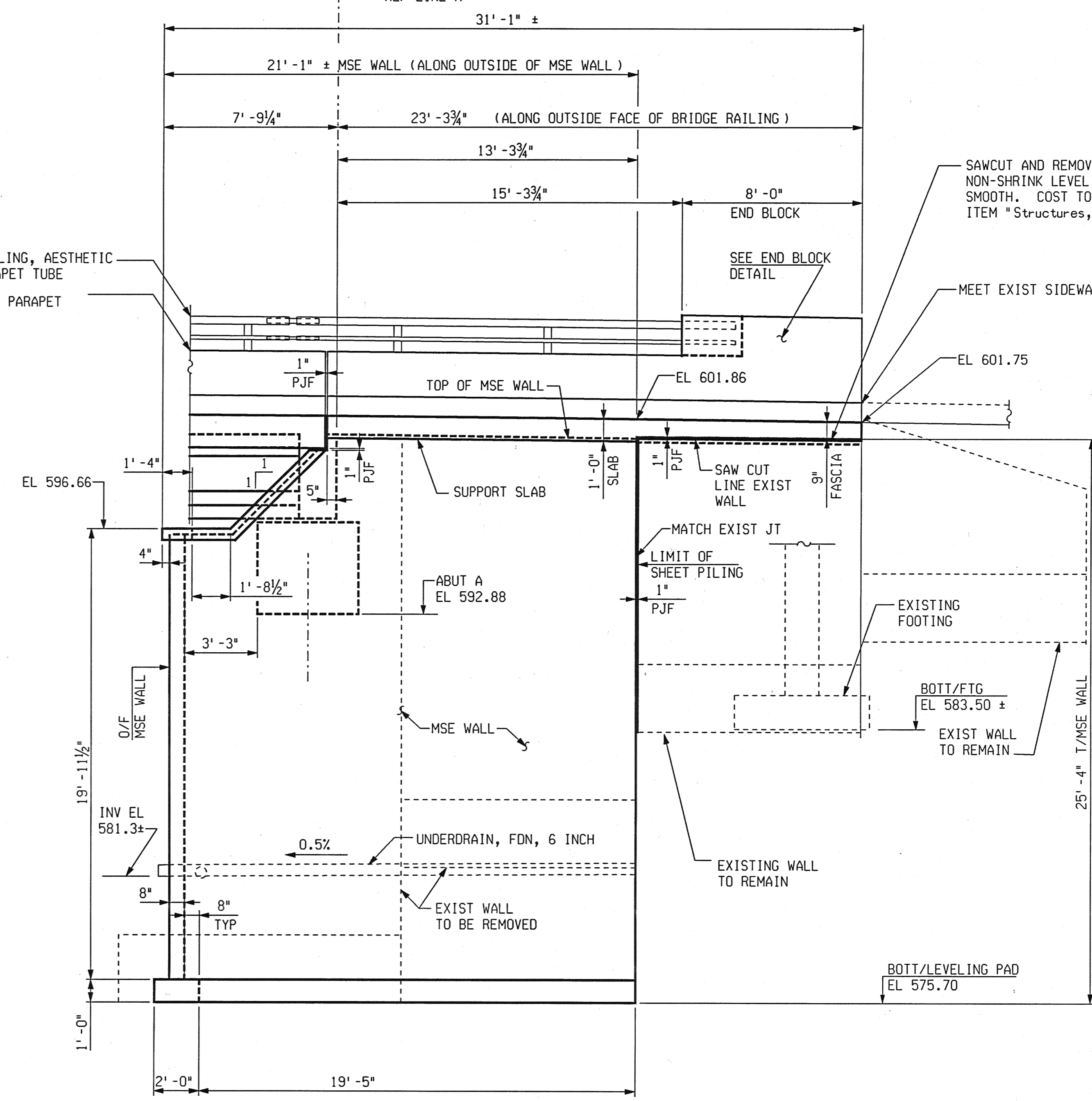
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02-11-05	S01 OF 82-22-02	BRT 82022	49717A	63 OF 80

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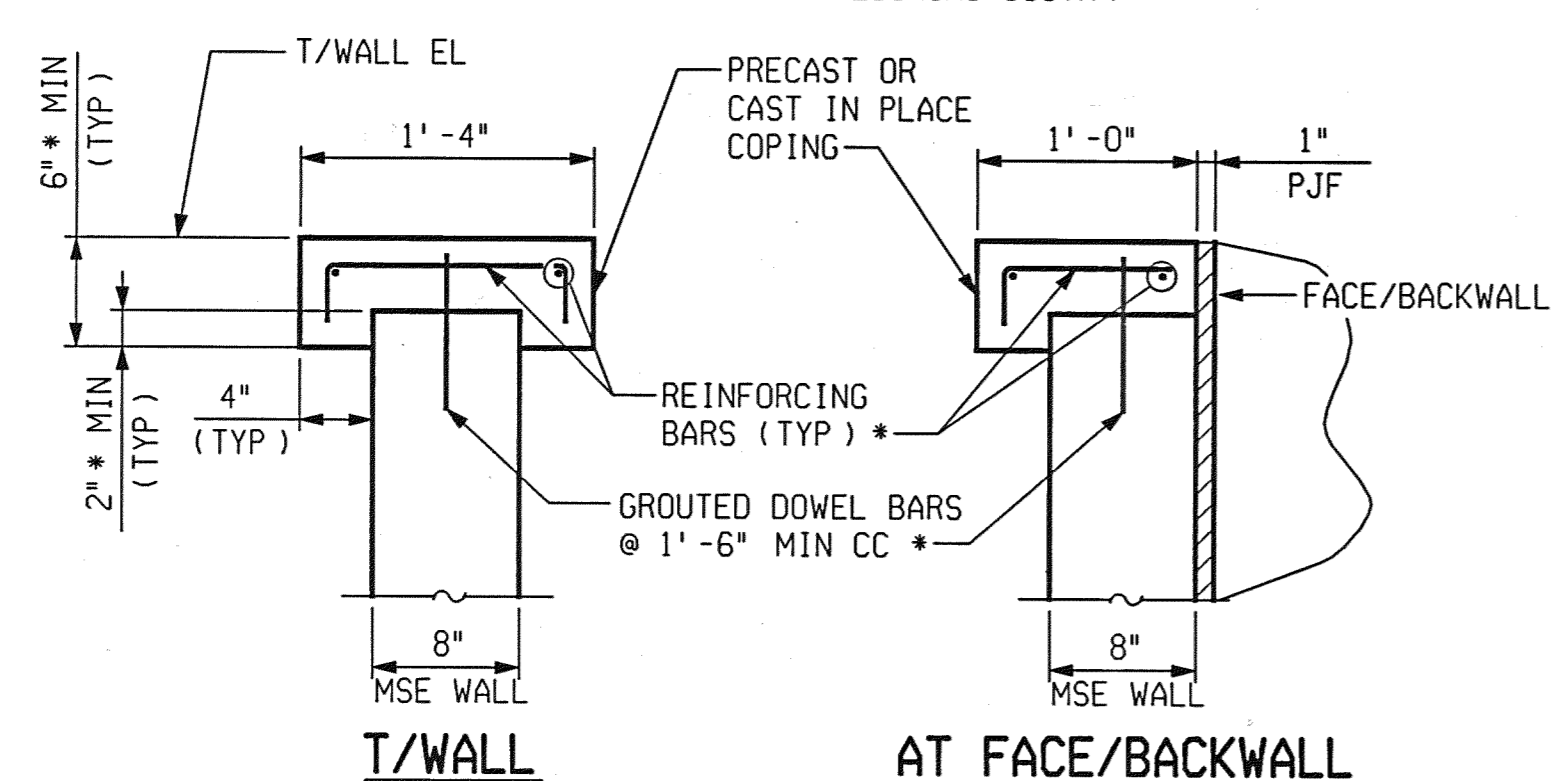
REVISIONS			
NO.	DESCRIPTION	DATE	BY



NORTHEAST WALL ELEVATION
(LOOKING SOUTH)



NORTHWEST WALL ELEVATION
(LOOKING SOUTH)



TYPICAL COPING DETAILS

* NOTE: DIMENSIONS, BARS SIZES AND SPACING TO BE AS RECOMMENDED BY MSE WALL MANUFACTURER

MSE WALL STAGE IIIB (NORTH SIDE)



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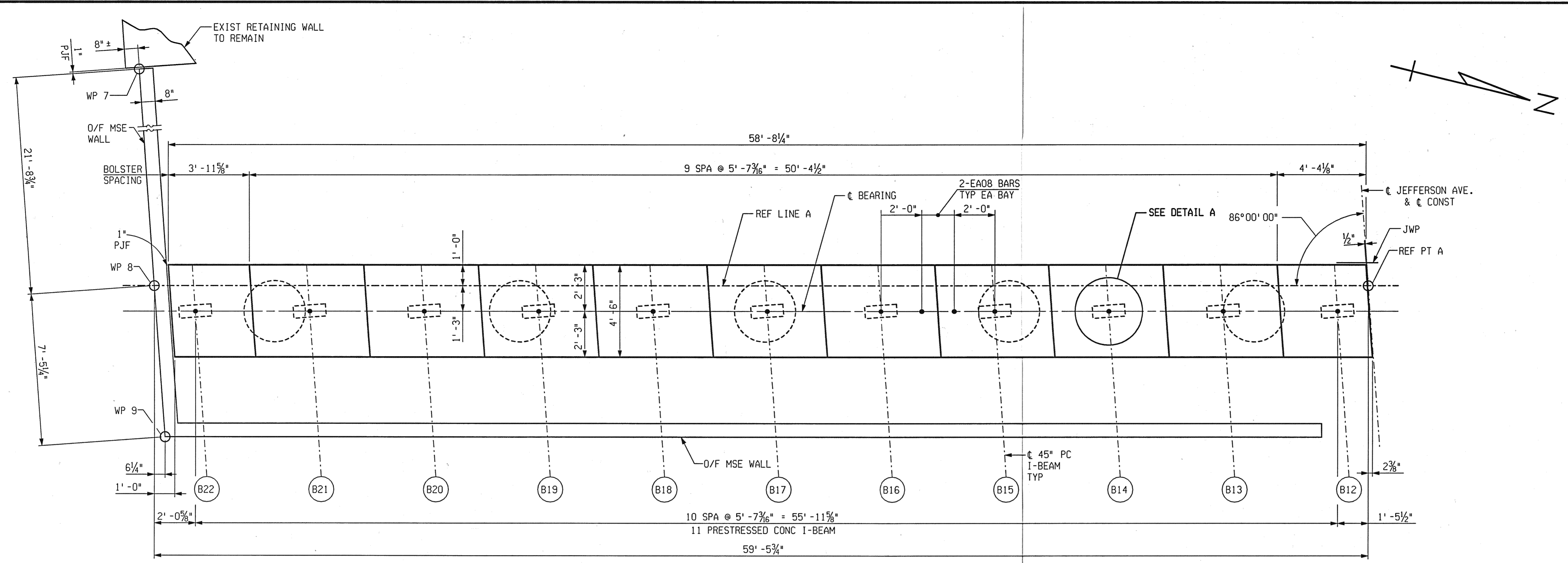
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DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	64 OF 80

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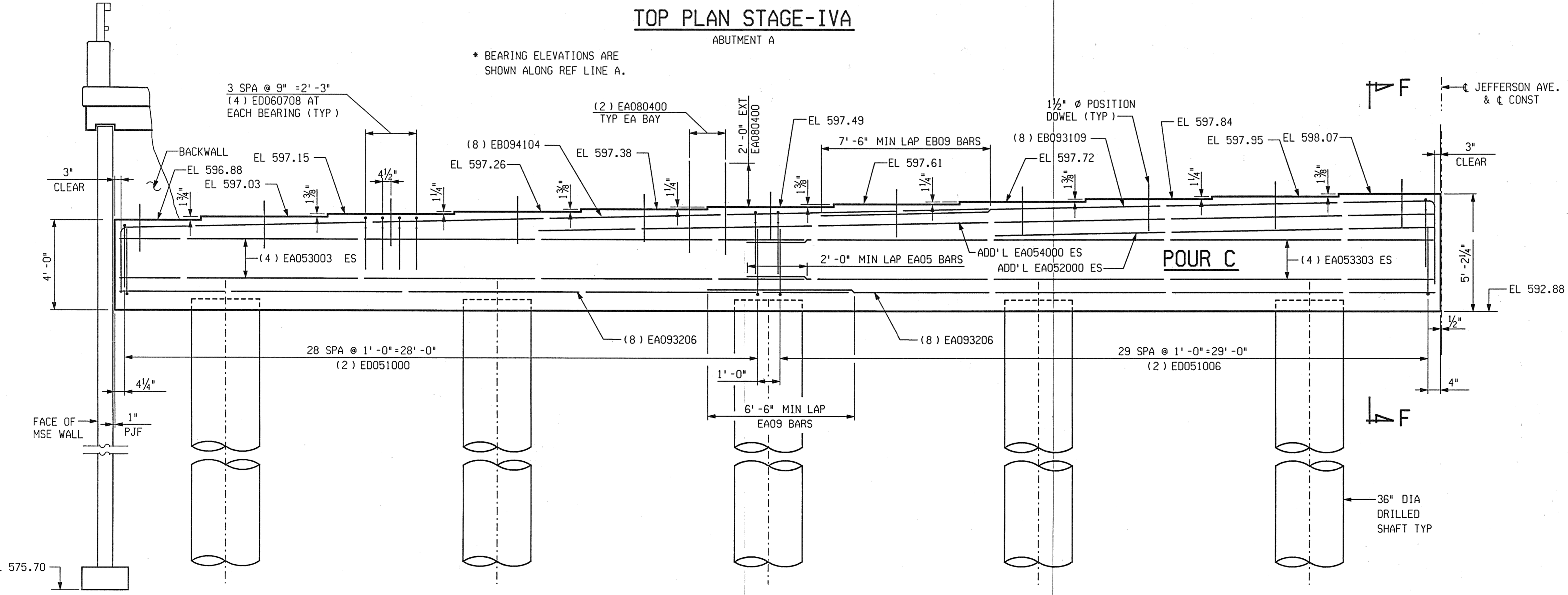
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



TOP PLAN STAGE-IVA
ABUTMENT A



ELEVATION STAGE-IVA
ABUTMENT A LOOKING WEST



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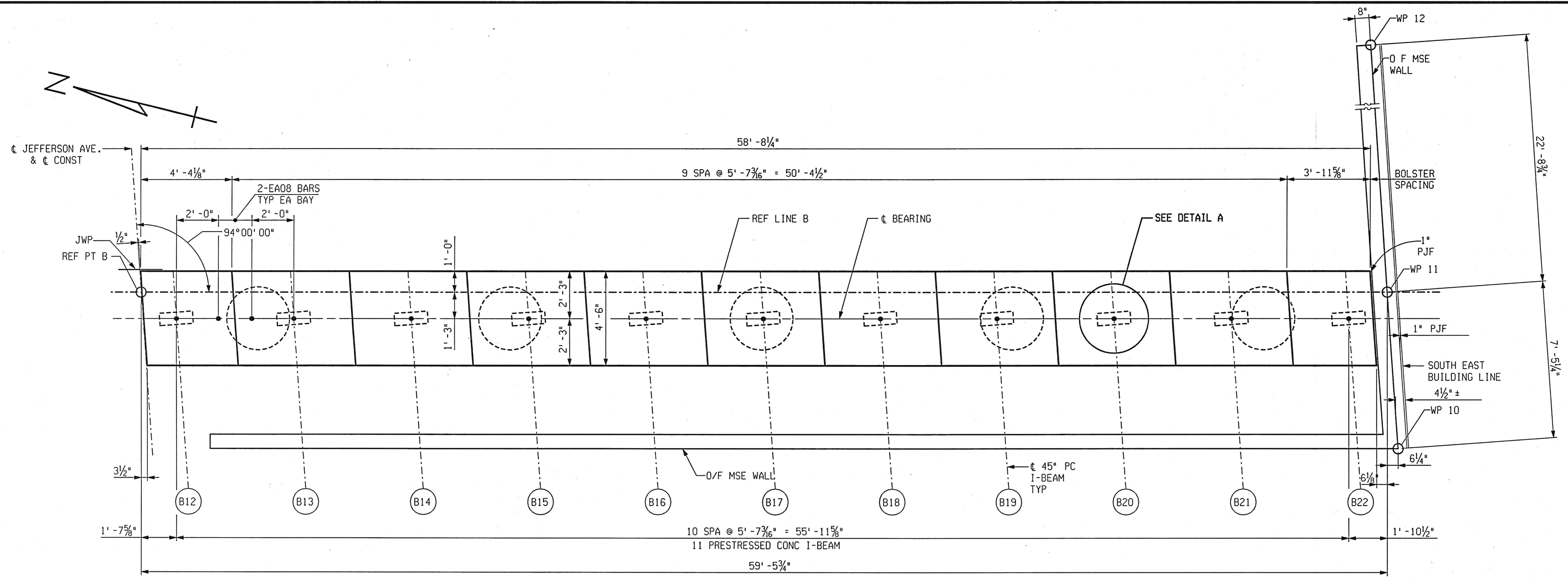
CITY OF DETROIT
DEPARTMENT OF PUBLIC WORKS
CITY ENGINEERING DIVISION

ABUTMENT DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	65 OF 80

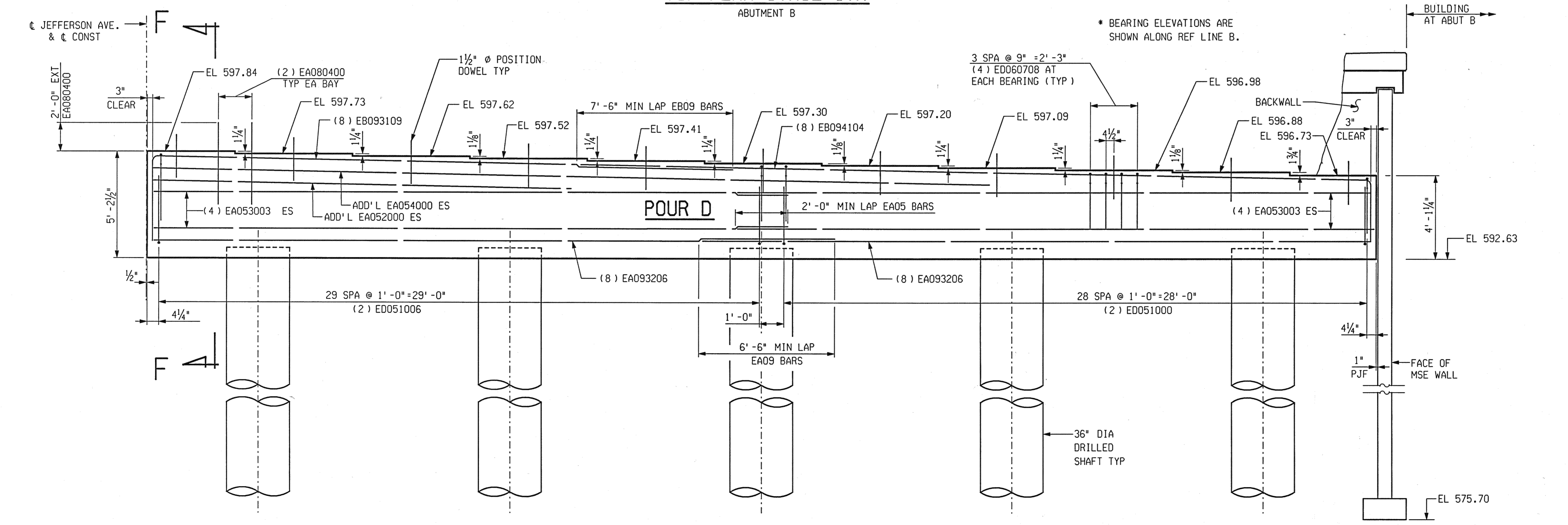
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



TOP PLAN STAGE-IVA
ABUTMENT B



ELEVATION STAGE-IVA
ABUTMENT B LOOKING EAST

* BEARING ELEVATIONS ARE SHOWN ALONG REF LINE B.



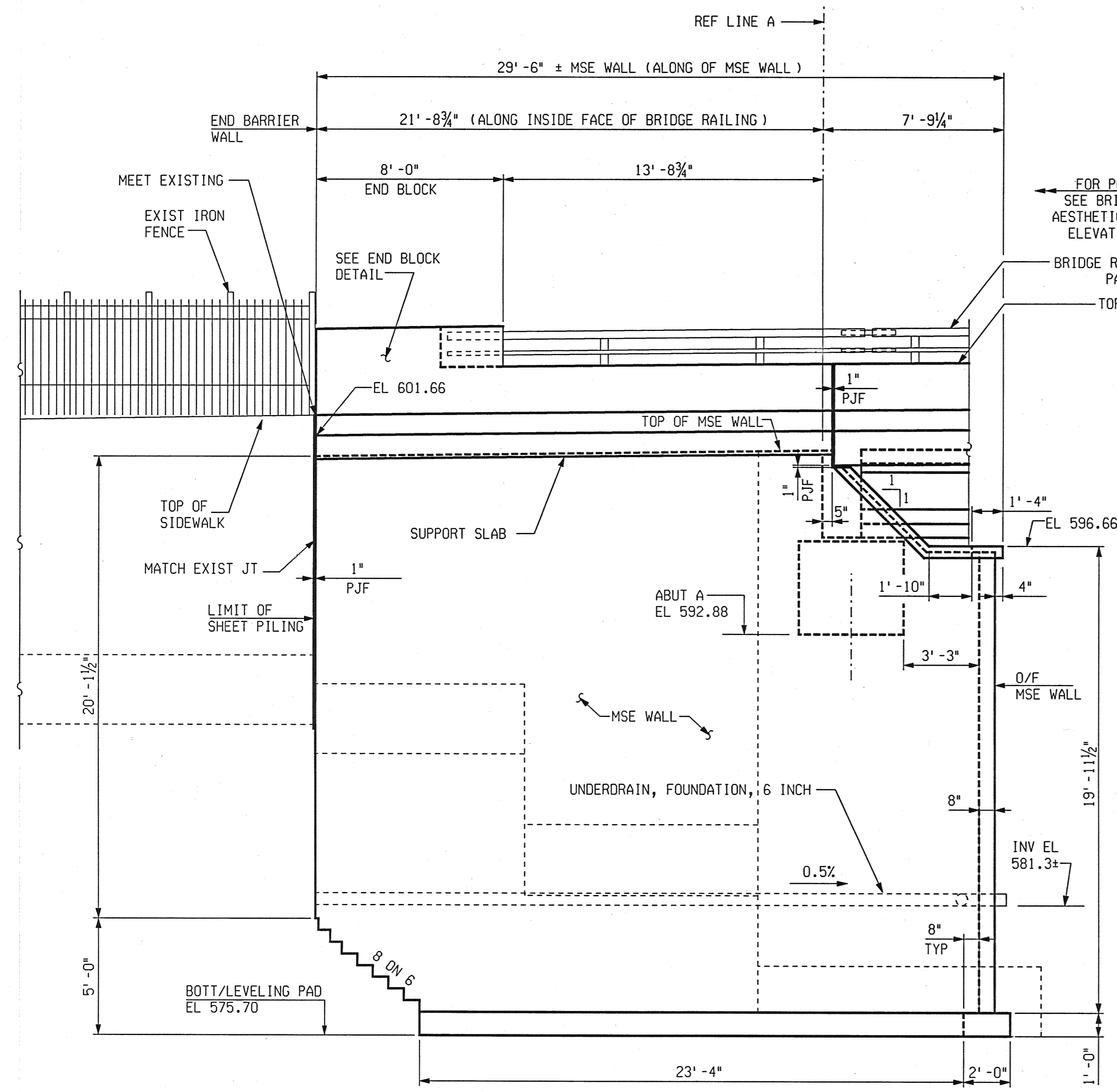
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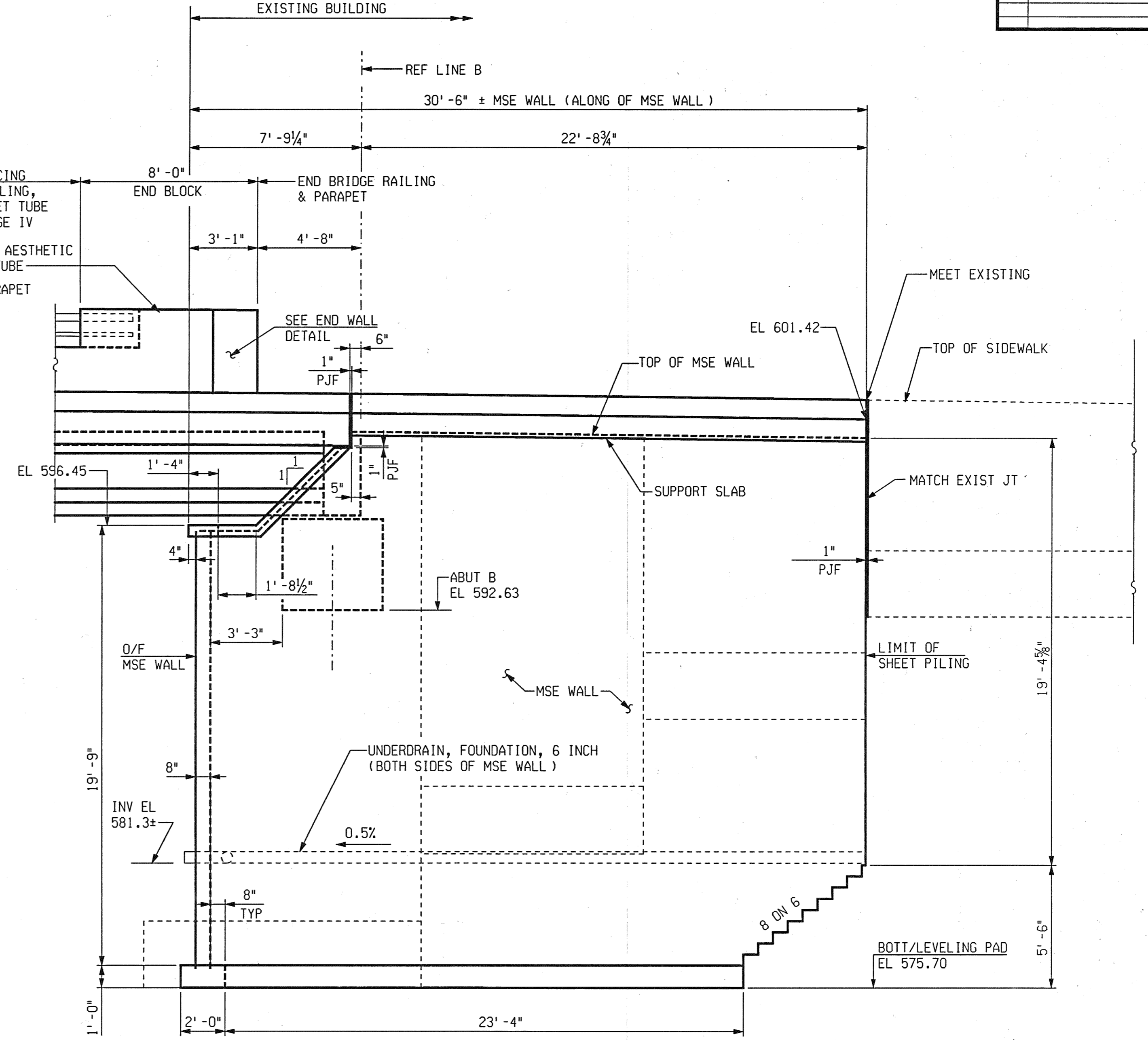
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DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	66 OF 80

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NO.	DESCRIPTION	DATE	BY

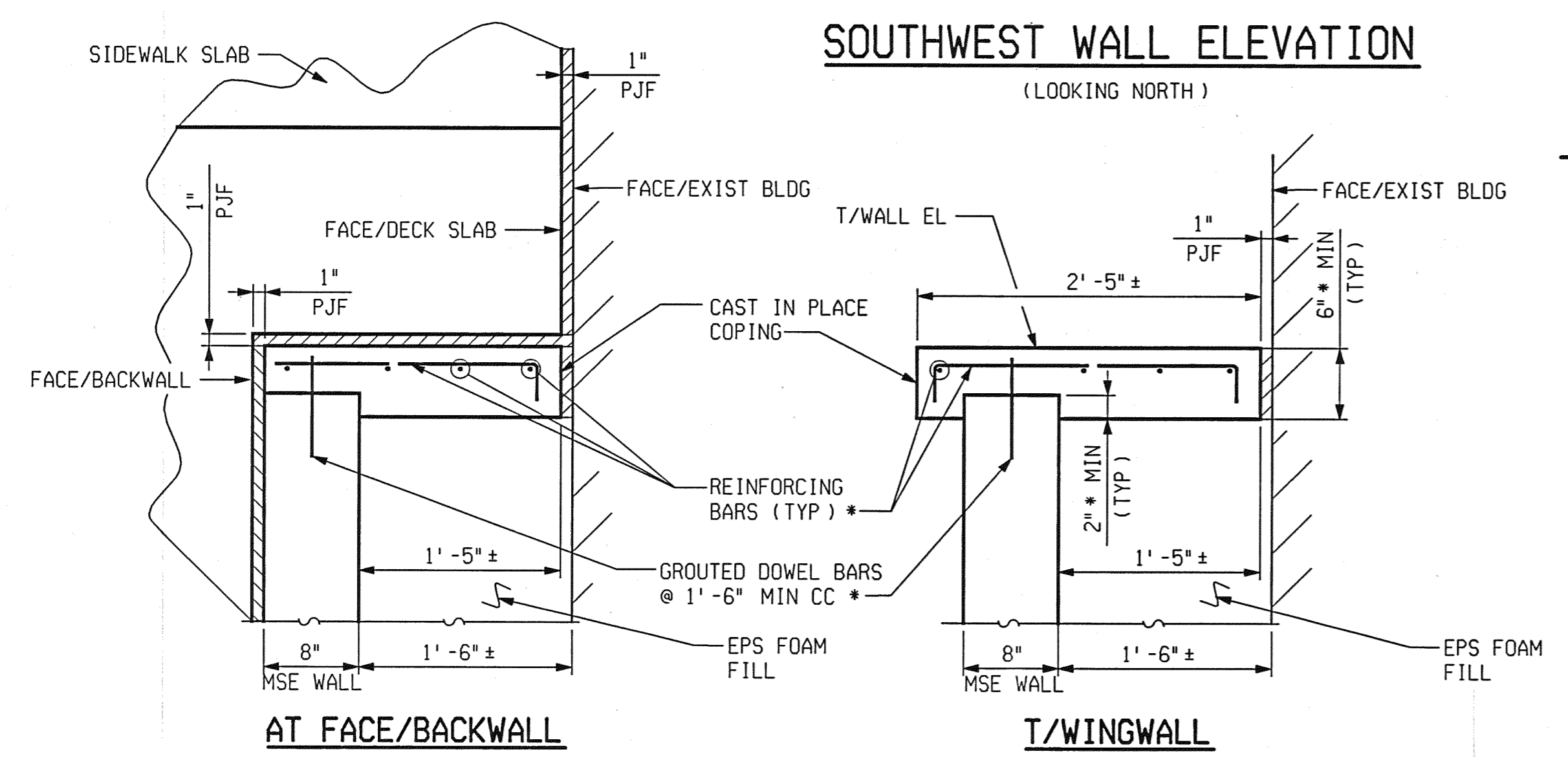


SOUTHWEST WALL ELEVATION
(LOOKING NORTH)



SOUTHEAST WALL ELEVATION
(LOOKING NORTH)

MSE WALL STAGE IV (SOUTH SIDE)



COPING DETAIL SOUTHEAST WINGWALL

* NOTE: DIMENSIONS, BARS SIZES AND SPACING TO BE AS RECOMMENDED BY MSE WALL MANUFACTURER



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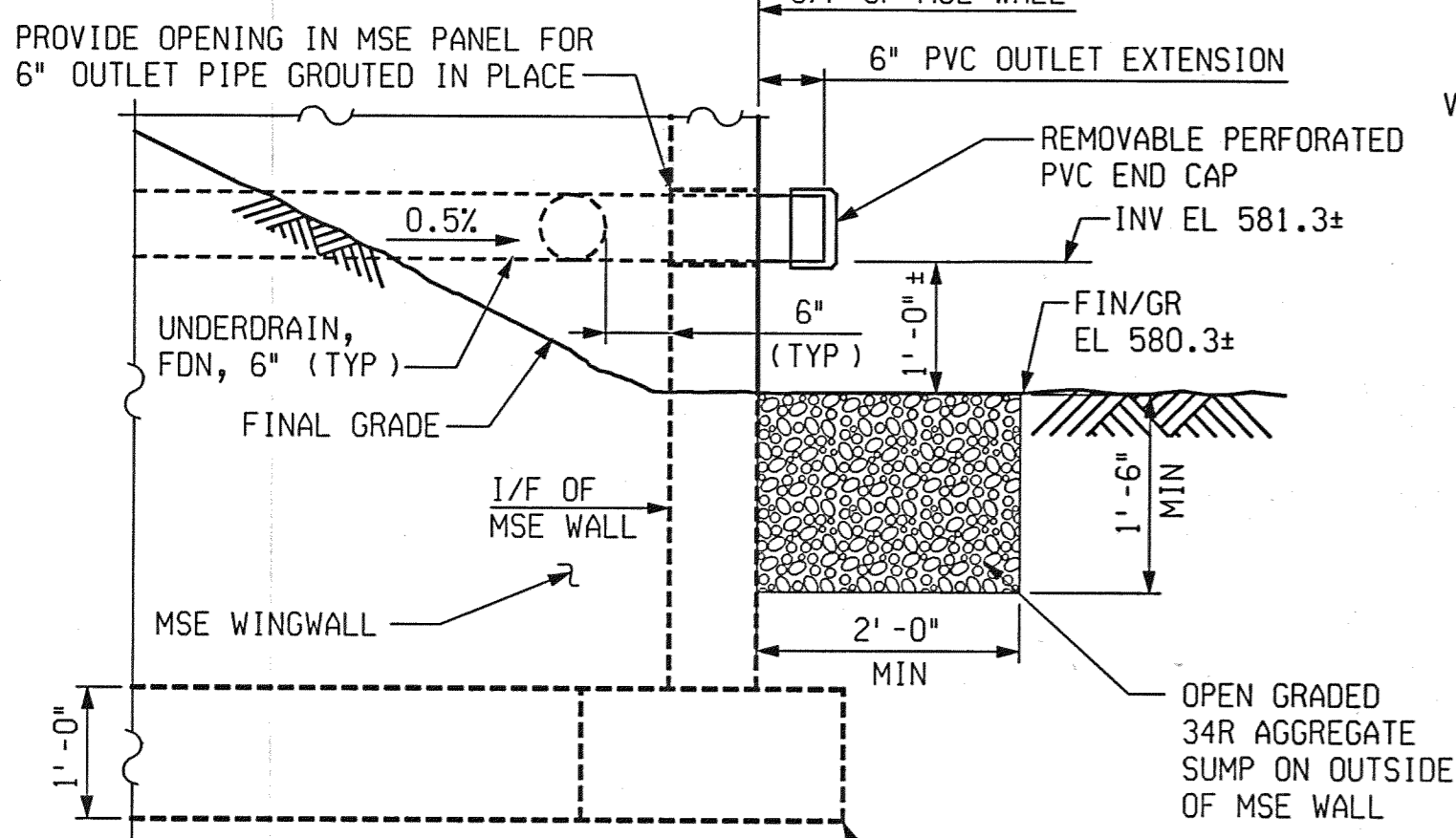
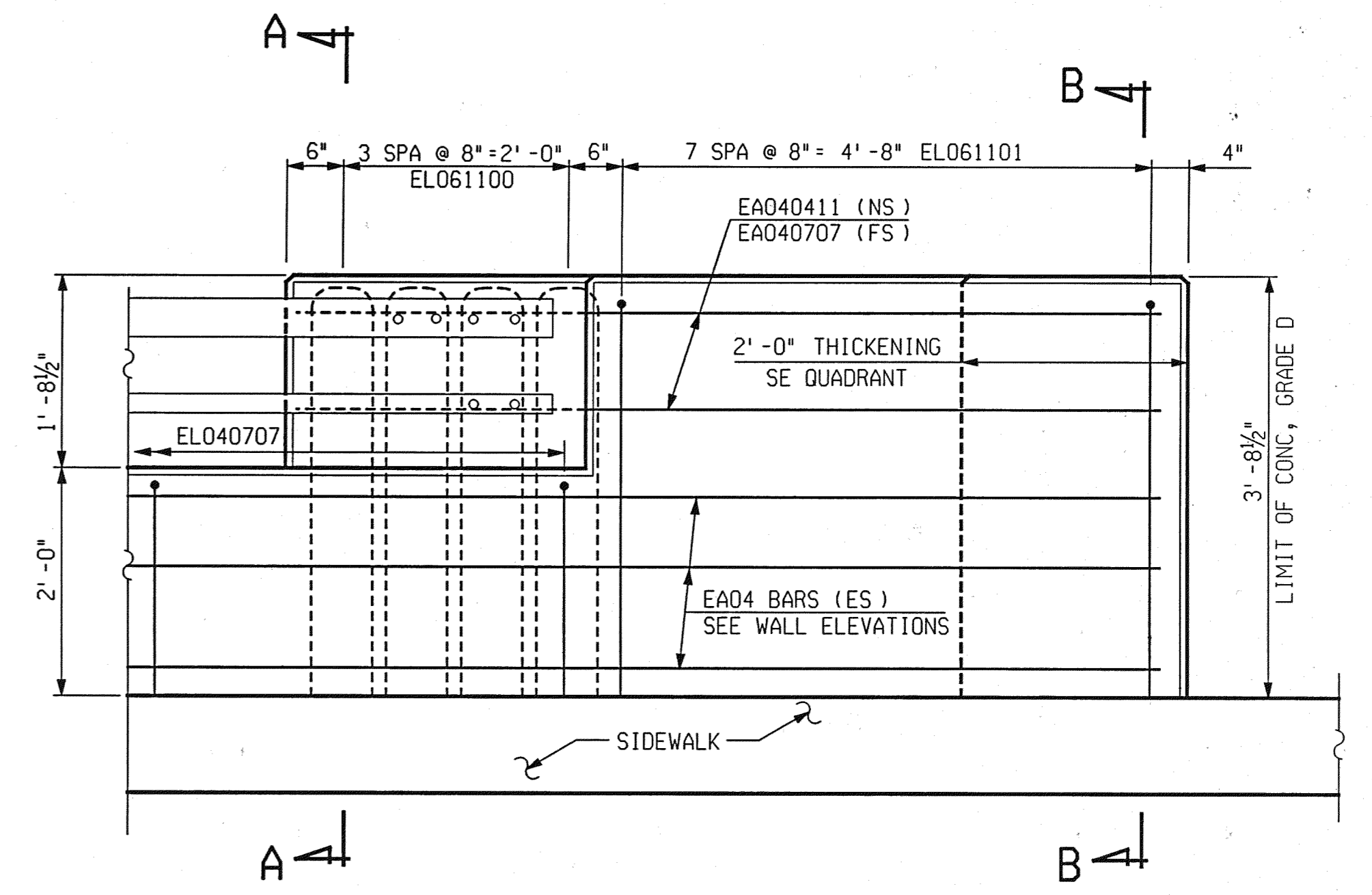
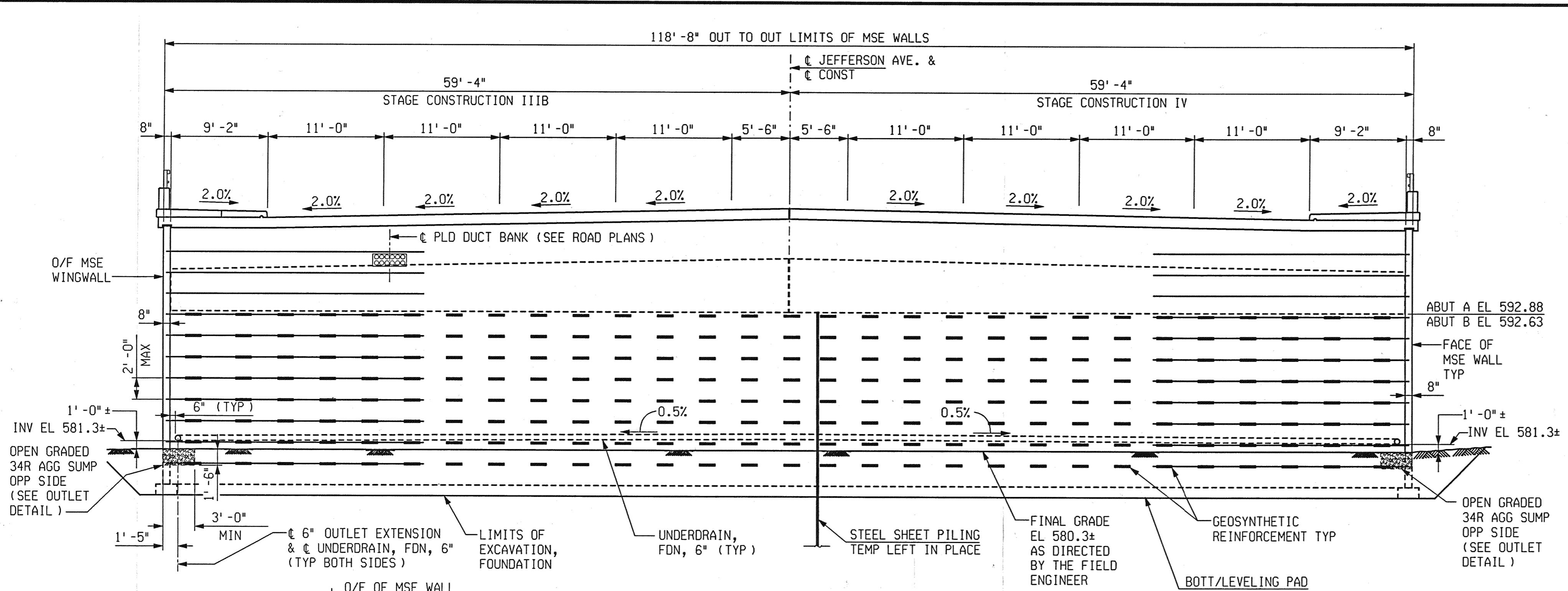
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JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	67 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

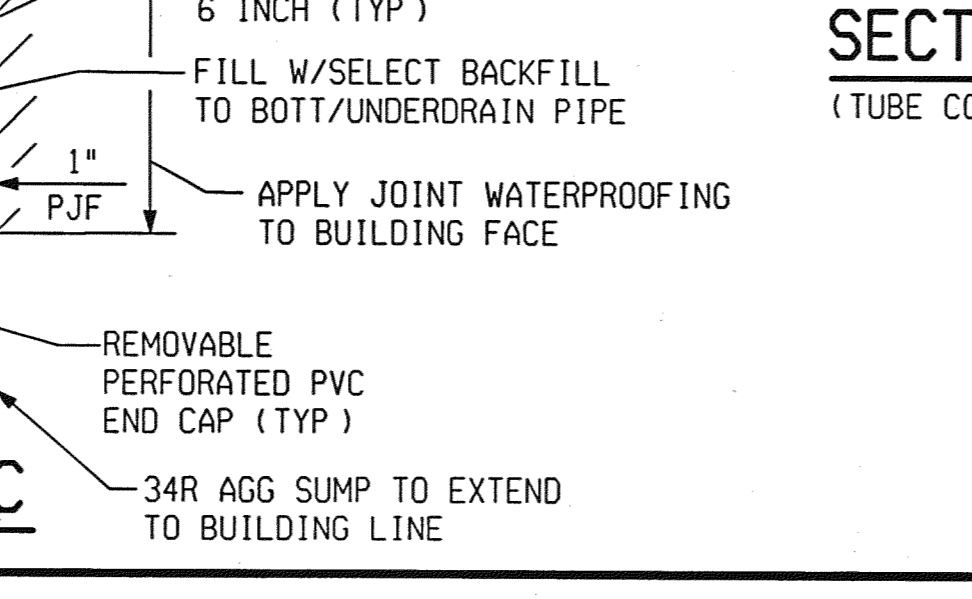
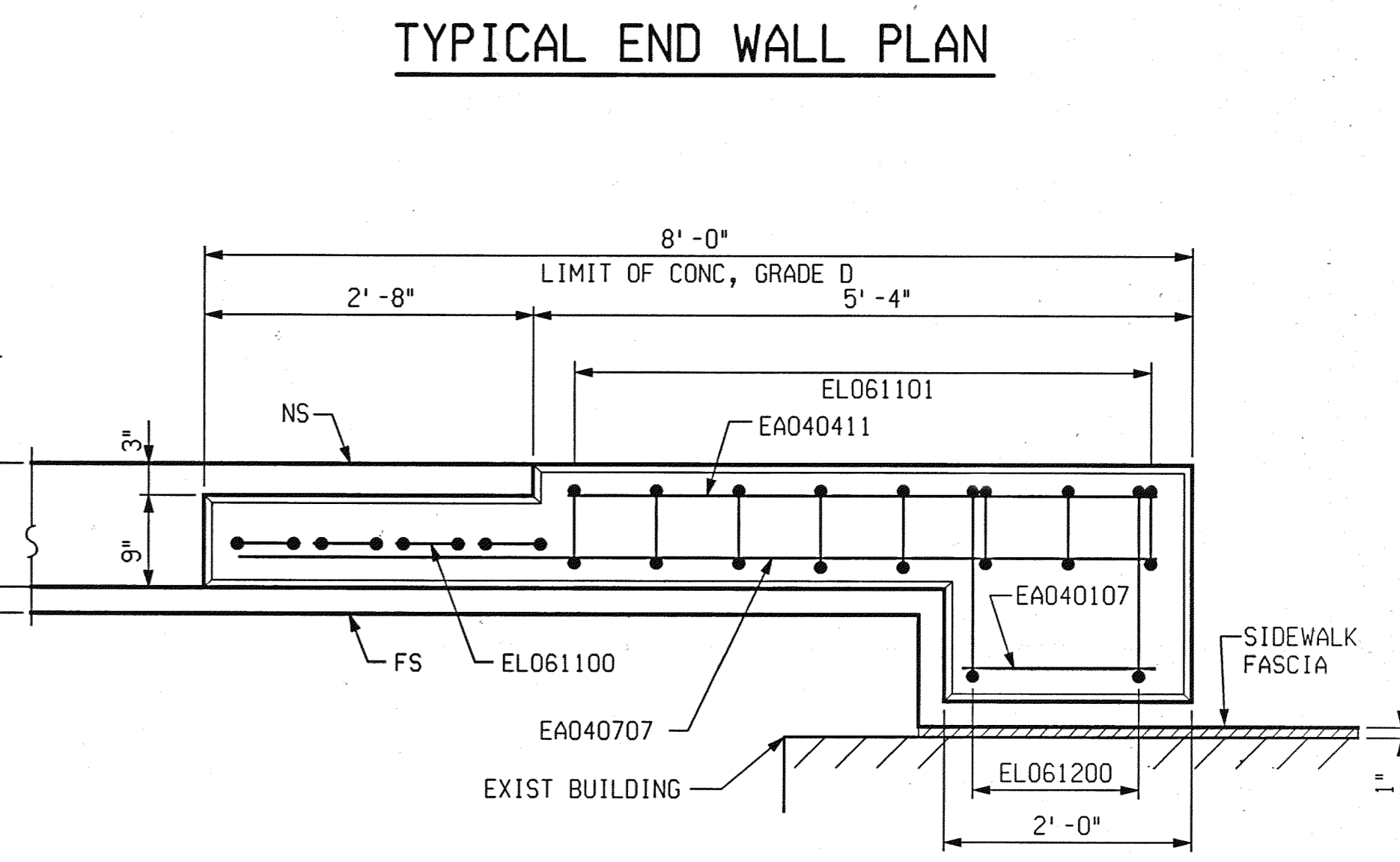
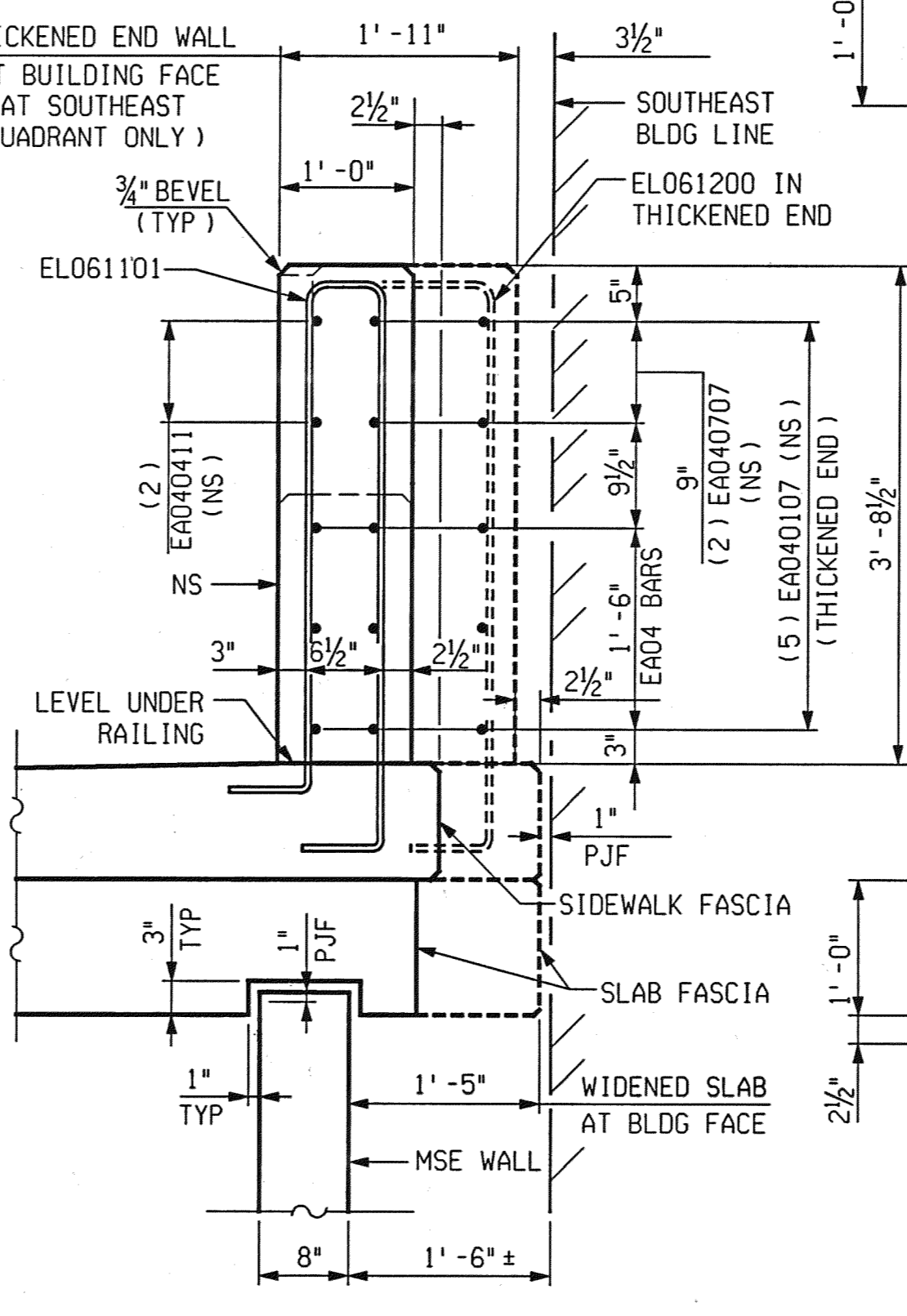
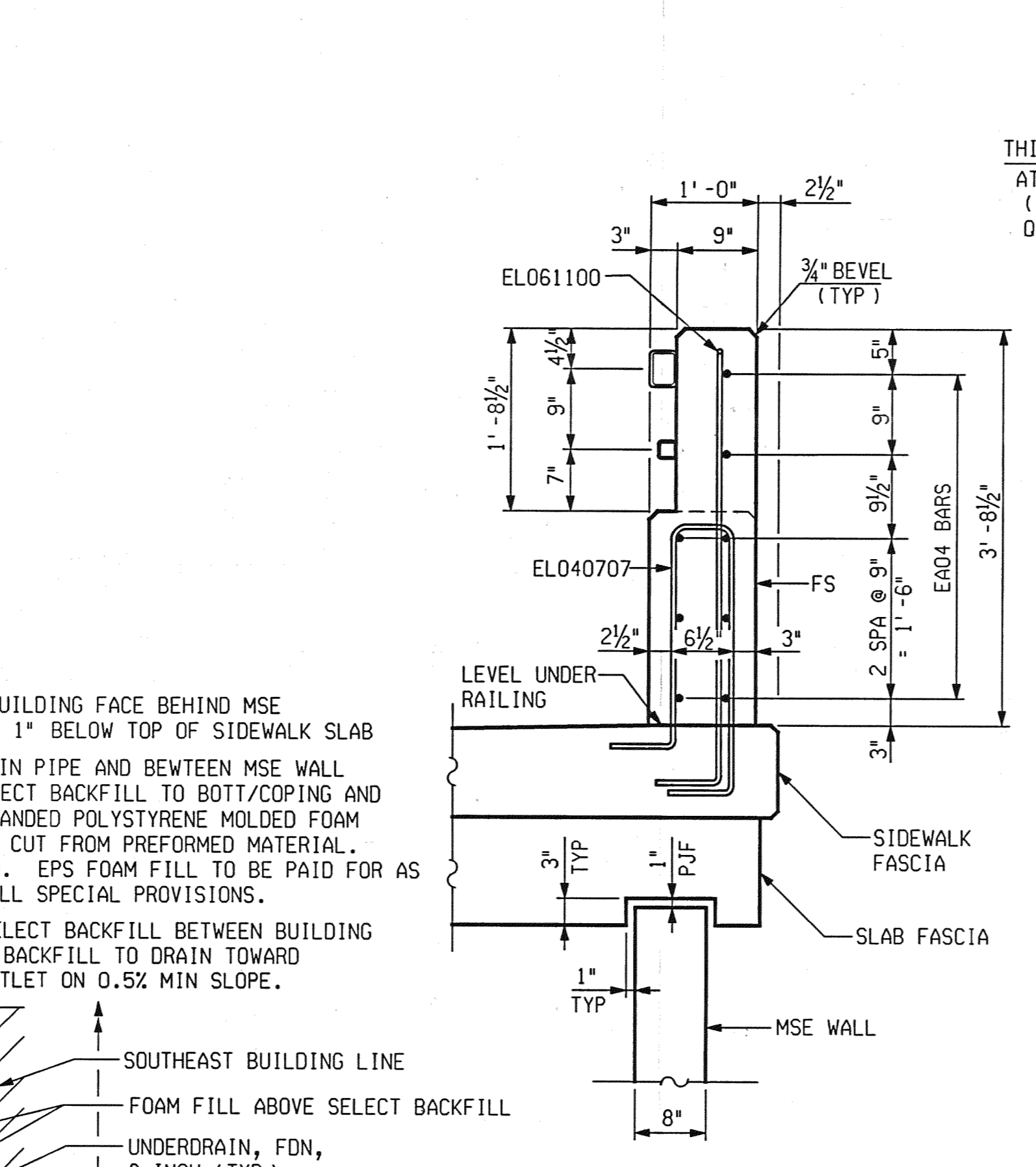
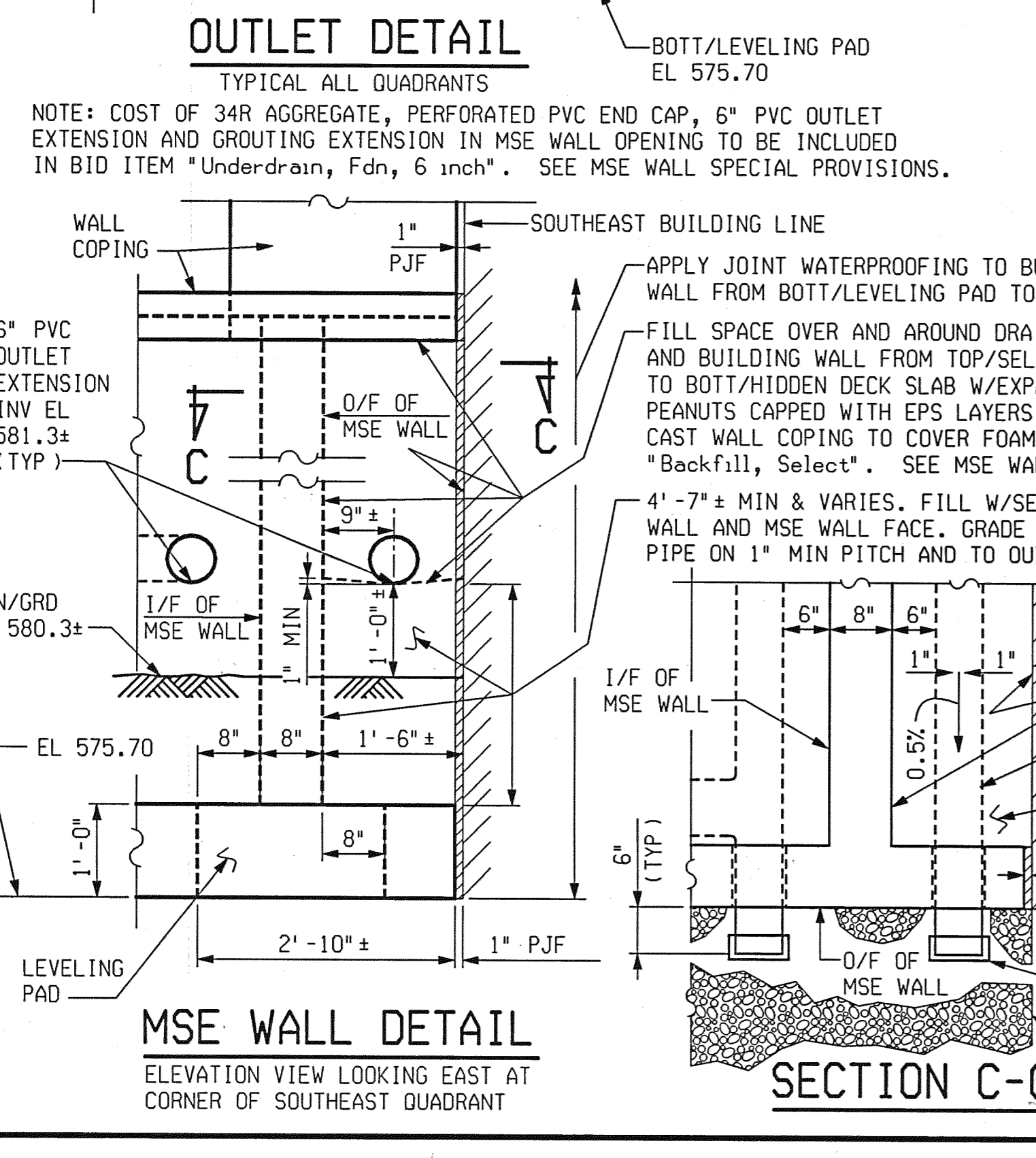
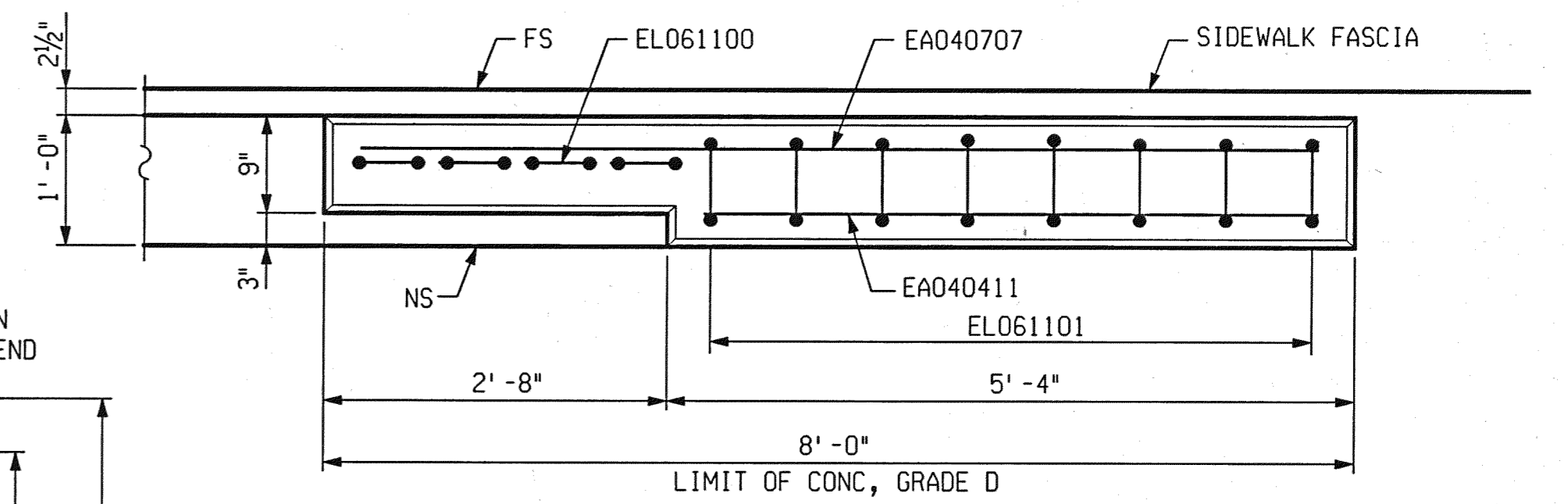
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REVISIONS			
NO.	DESCRIPTION	DATE	BY



MSE WALL TYPICAL SECTION
VIEW FROM BACKSIDE OF ABUTMENT A LOOKING UPSTATION



SECTION A-A
(TUBE CONNECTION AREA)

SECTION B-B
(FULL CONCRETE AREA)

END WALL PLAN AT SOUTHEAST QUADRANT



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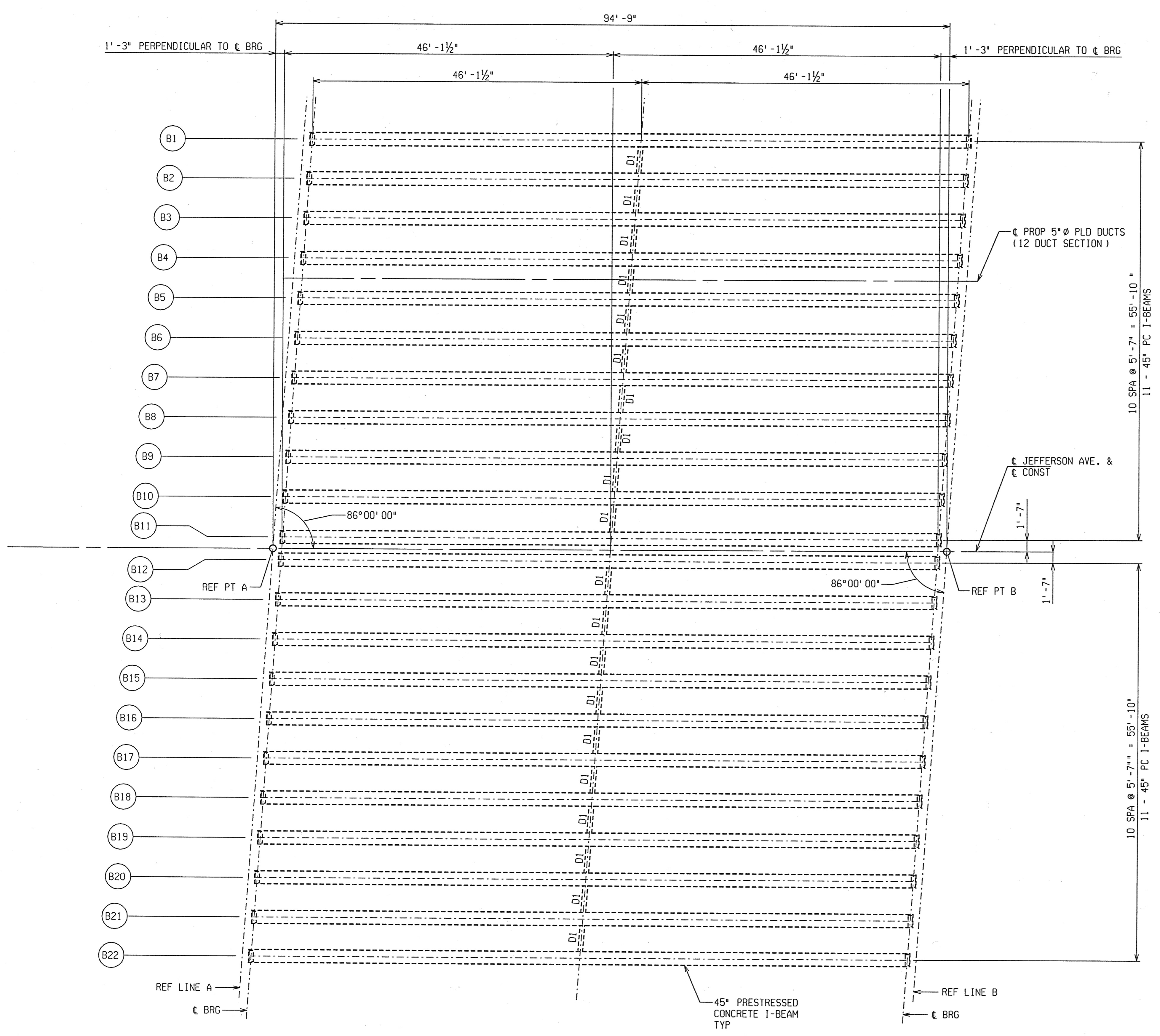
CITY OF DETROIT
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ABUTMENT DETAILS JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	68 OF 80

DRAWN BY: DCP DATE: 2/10/2005 CHECKED BY: RJO DATE: 2/10/2005 FILE NAME: G:\35458d\Struct\CADD\jeff-ab07.dgn

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REVISIONS			
NO.	DESCRIPTION	DATE	BY



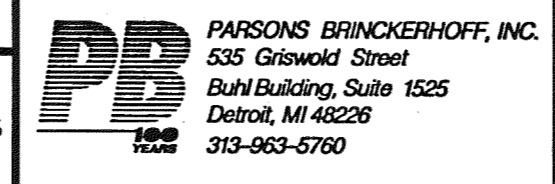
ERECTION DIAGRAM

MISCELLANEOUS QUANTITIES		
41	Sft	Bearing, Elastomeric, 2 inch
2046	Ft	Prest Conc I Beam, Furn, 45 inch
2046	Ft	Prest Conc I Beam, Erect, 45 inch

NOTES:

- PRESTRESSING STRANDS SHALL BE 0.6" NOMINAL DIAMETER MEETING THE REQUIREMENTS OF AASHTO M203 (ASTM A416), GRADE 270, LOW RELAXATION STRAND.
- PRESTRESSING STRANDS SHALL BE GIVEN AN INITIAL PRESTRESS OF 44,000 LBS.
- CONCRETE INSERTS SHALL BE 3/4" DIAMETER; RICHMOND, TYPE T2 OR TYPE TL2F; DAYTON SUPERIOR, TYPE B-1 HEAVY OR TYPE B-18; WILLIAMS, TYPE C 12 OR TYPE C-19; MEADOW STEEL, TYPE CT-2 OR TYPE CX-4; OR EQUAL. INSERTS SHALL BE CAST WITH THE BEAMS. FIELD INSTALLATION OF INSERTS IS NOT ALLOWED.
- END BLOCKS ARE OPTIONAL.
- TOTAL ESTIMATED CHANGE OF LENGTH OF BOTTOM FLANGE AT TRANSFER OF PRESTRESSED FORCE IS 3/4".
- THE ESTIMATED BEAM CAMBER AT RELEASE IS 2 1/4". THIS CAMBER IS DUE TO PRESTRESSED AND DEAD LOAD OF THE BEAM ONLY AND IS MEASURED IN THE ERECTED POSITION.
- THREADING OF REINFORCEMENT AND INSTALLATION INTO CONCRETE INSERTS IS INCLUDED IN THE BID ITEM "Prest Conc I-Beam, Furn, 45 inch".
- LIFTING DEVICES SHALL BE REMOVED AFTER BEAMS ARE ERECTED. REMOVAL IS INCLUDED IN THE BID ITEM "Prest Conc I-Beam, Erect, 45 inch".
- POSITION DOWELS SHALL BE HOT-DIP GALVANIZED ACCORDING TO AASHTO M232. POSITION DOWELS ARE INCLUDED IN PAYMENT FOR PRESTRESSED CONCRETE BEAMS.
- BEAMS IN SPAN 1 MAY BE Laterally UNSTABLE. PRECAUTIONS SHALL BE TAKEN TO INSURE THAT BEAMS ARE NOT DAMAGED DURING HANDLING AND TRANSPORTATION.

\$\$\$DGN\$\$\$



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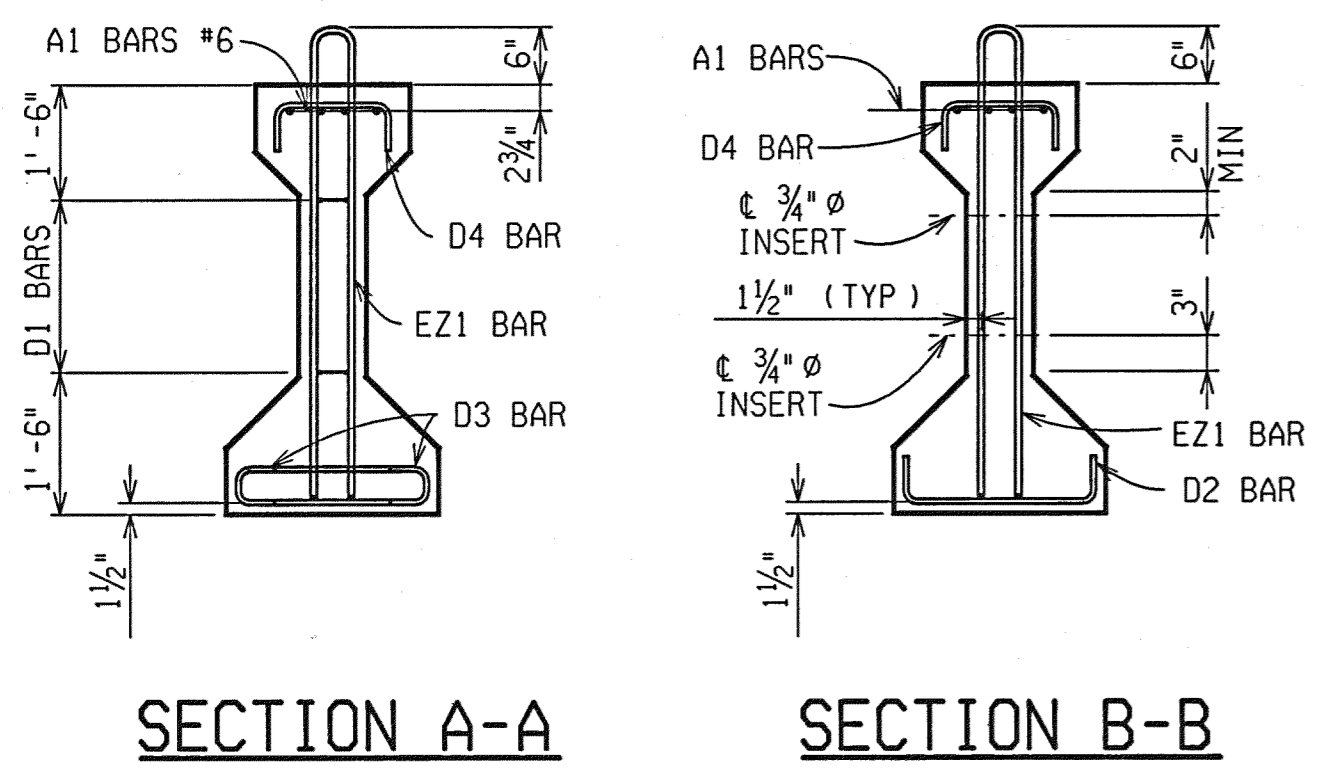
PRESTRESSED CONCRETE I-BEAM DETAILS JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	69 OF 80

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REVISIONS			
NO.	DESCRIPTION	DATE	BY



BAR DIMENSIONS		
BAR	DIM.	BEAM TYPE
A1*6	A	Y-3"
D1*4	A	4'-9"
D2*4	A	5"
D3*3	A	1'-7 1/2"
D4*4	A	5"
EZ1*4	A	4'-1 1/2"
	B	4 3/4"

*"E" INDICATES EPOXY COATED BAR.

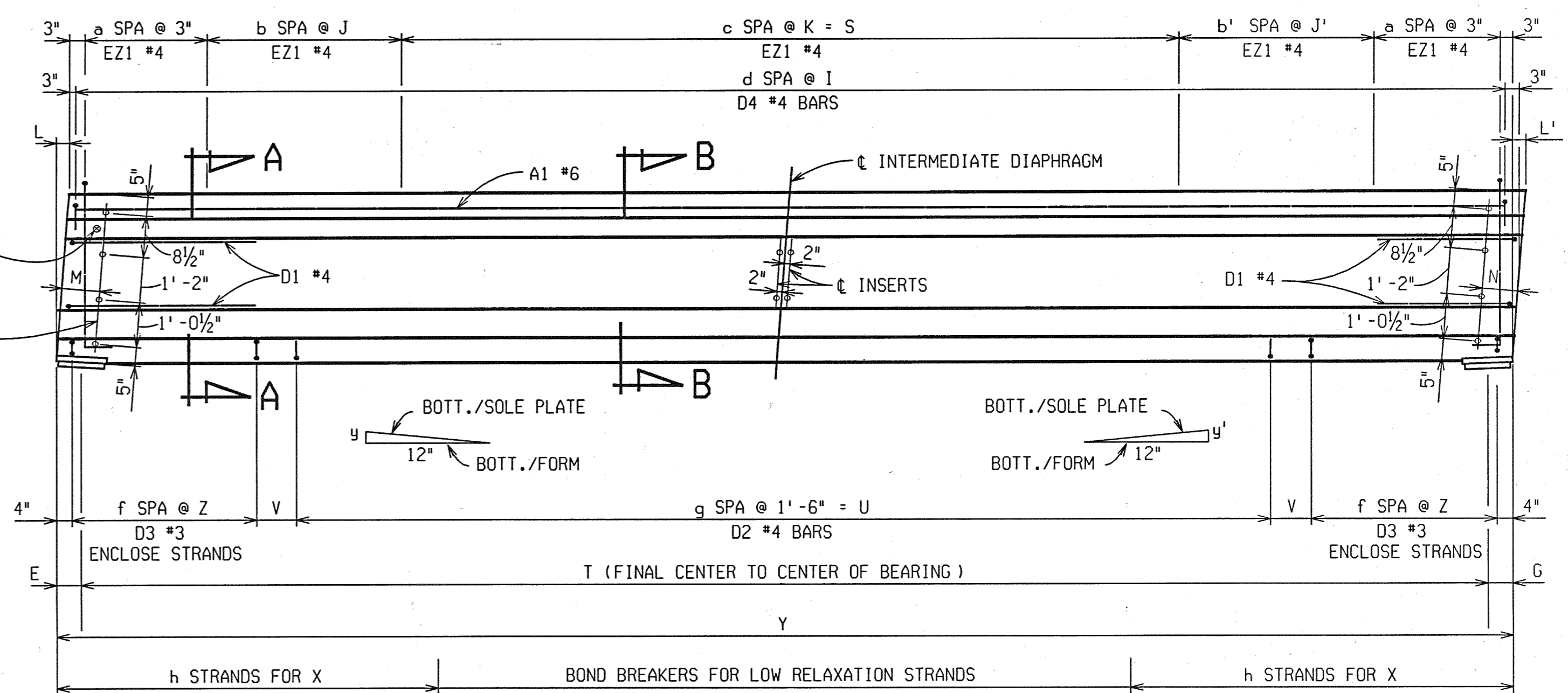
BEAM DIMENSIONS	
SPAN	1
TYPE	III
NO. REQ.	22
a	6
b	3
b'	3
c	68
d	74
E	4 1/2"
f	5
g	53
G	4 1/2"
I	1'-3"
J	9"
J'	9"
K	1'-3"
L	0
L'	0
M †	9"
N †	9"
P	OPTIONAL
S	85'-0"
T	92'-3"
U	79'-6"
V	1'-5"
Y	93'-0"
Z	1'-0"
APPROX. WEIGHT	27.1 TONS

† MEASURED ALONG BEAM C-C

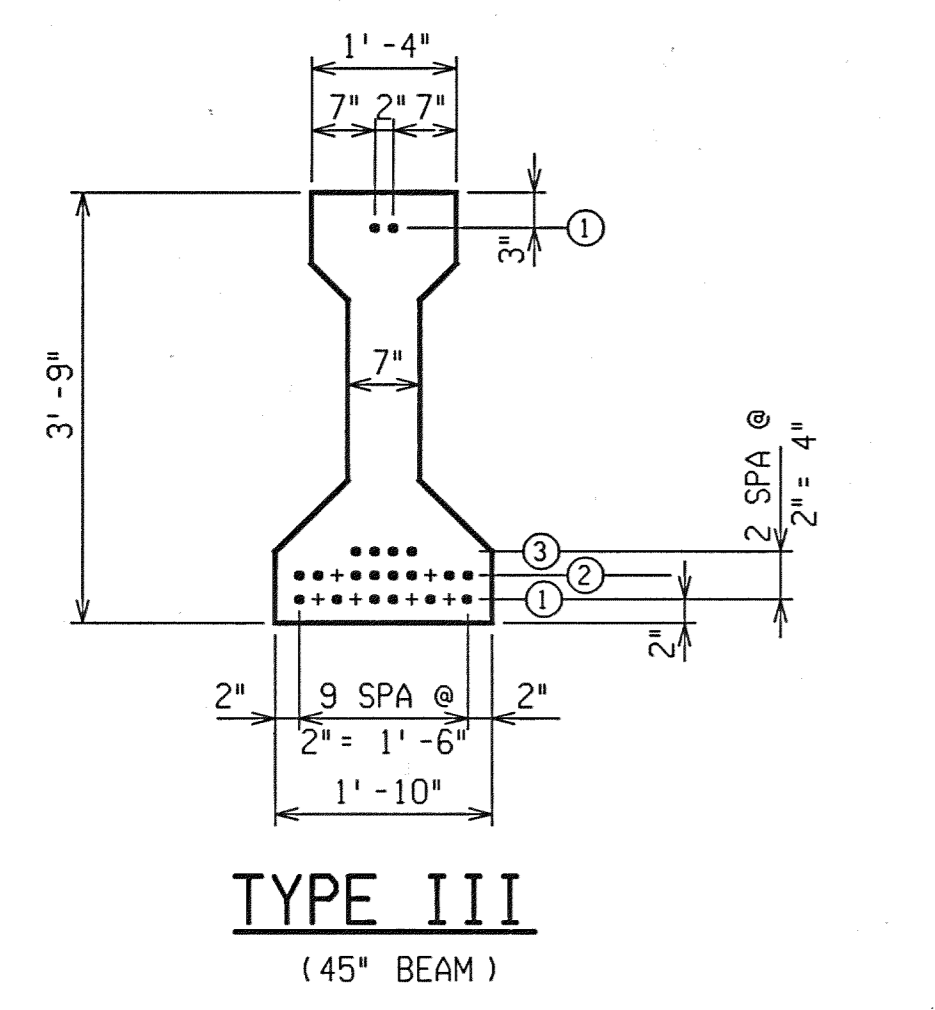
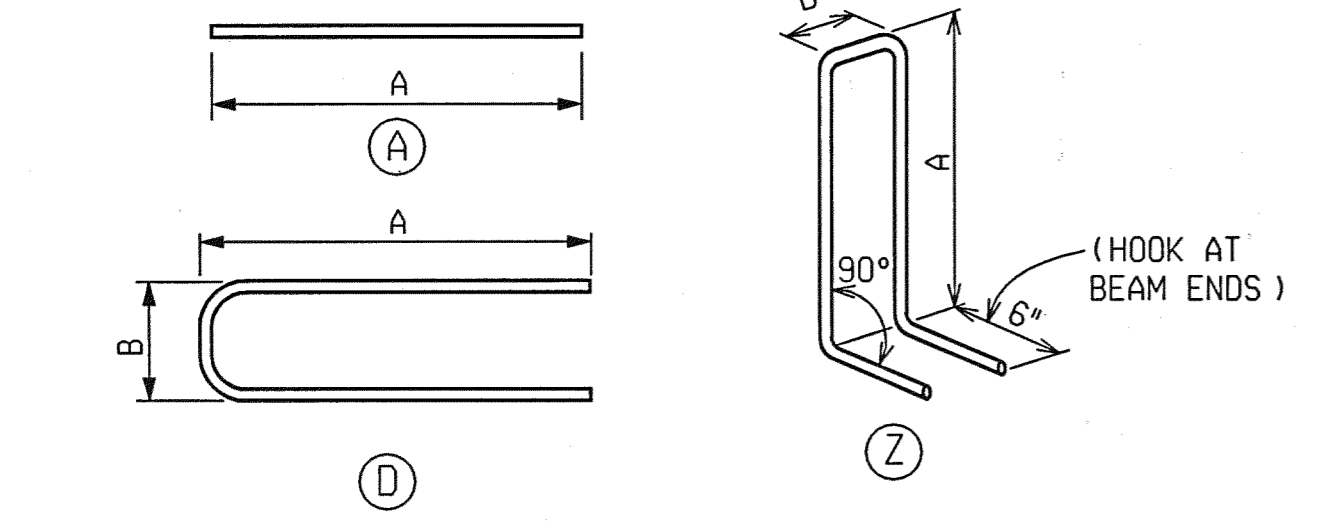
BOND BREAKERS			
SPAN	ROW	h	X
1	1	2	8'-0"
	1	2	18'-0"
	2	2	2'-0"

SOLE PLATE TILT TABLE	
SPAN 1	
ABUT A	ABUT B
y	y'
0	0

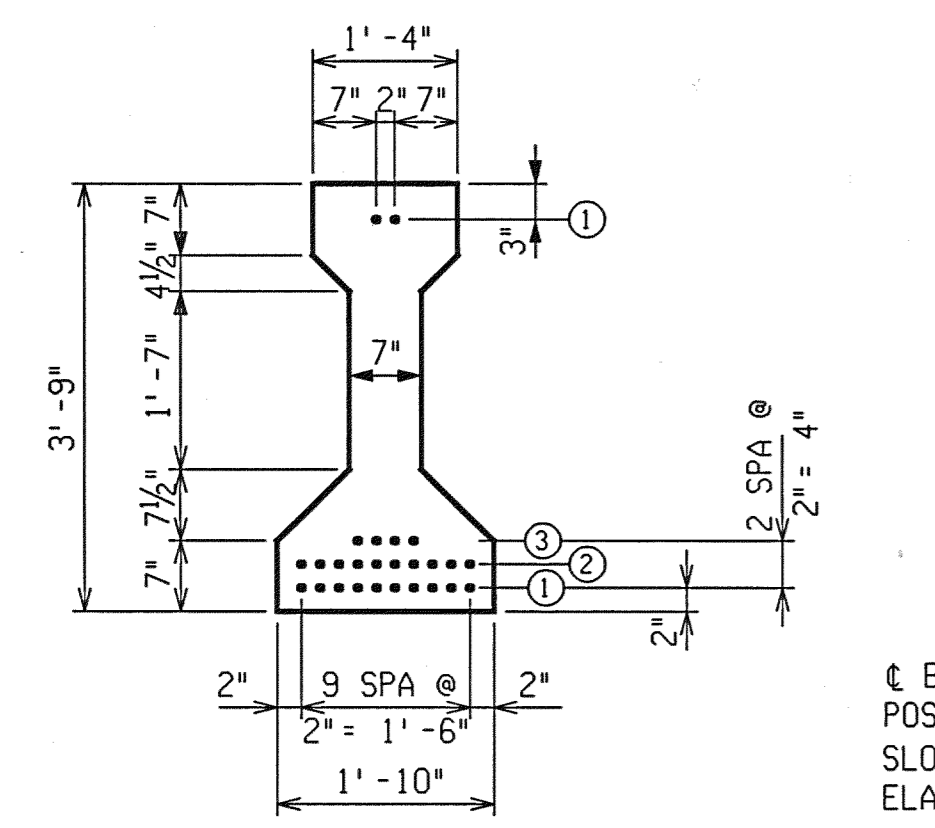
*"y" AND "y'" ARE TYPICAL ALL BEAMS.



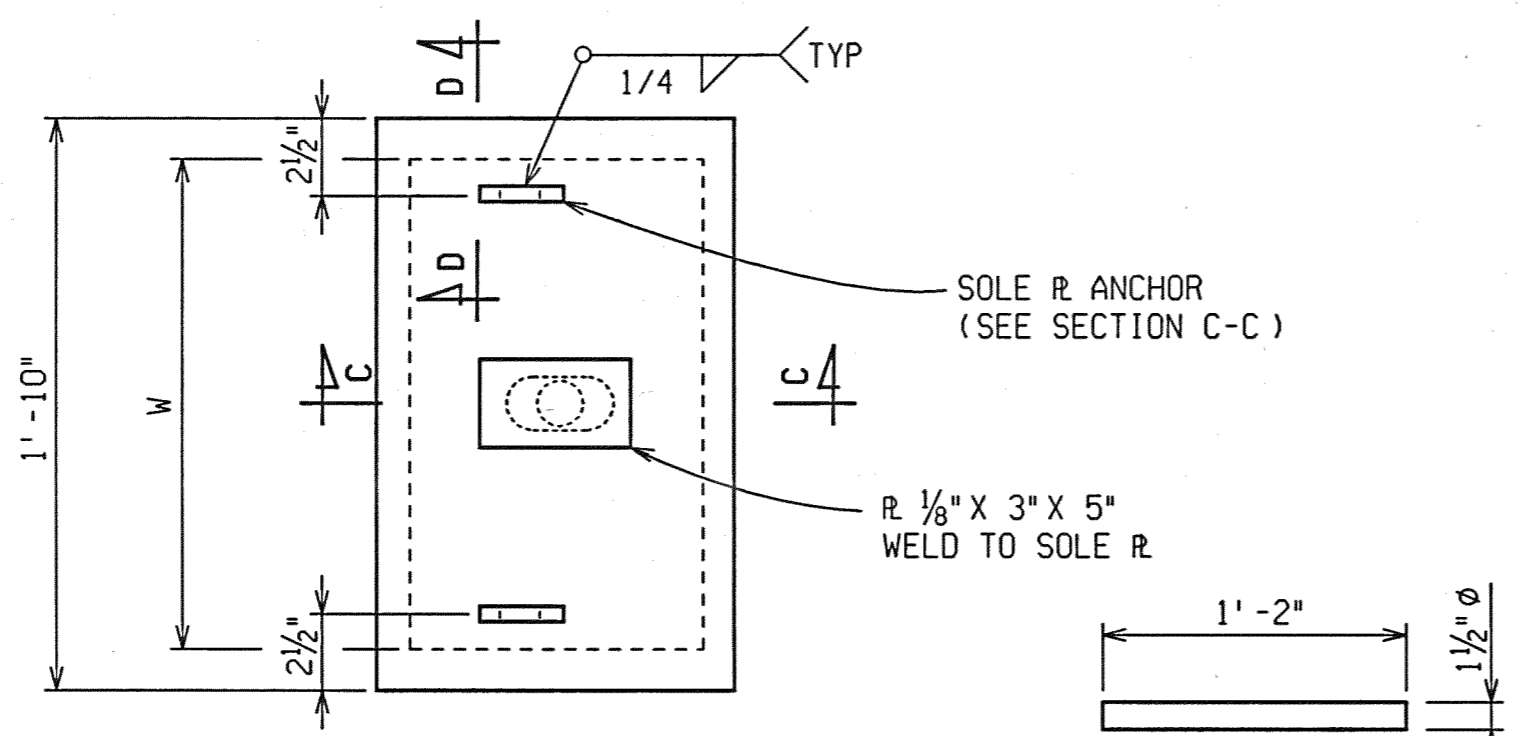
ELEVATION
L AND L' SHOWN ARE POSITIVE



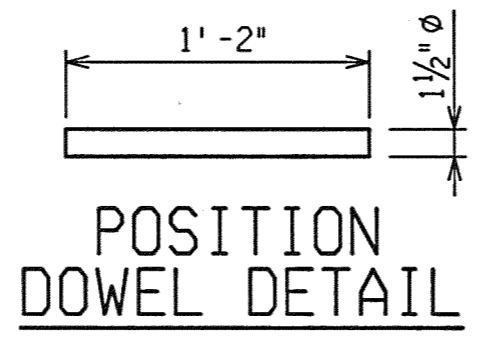
SECTION A-A
SHOWING STRAND ARRANGEMENT AT END FACE
● LOW RELAXATION STRAND LOCATION
+ DEBONDED STRAND FOR LOW RELAXATION STRAND



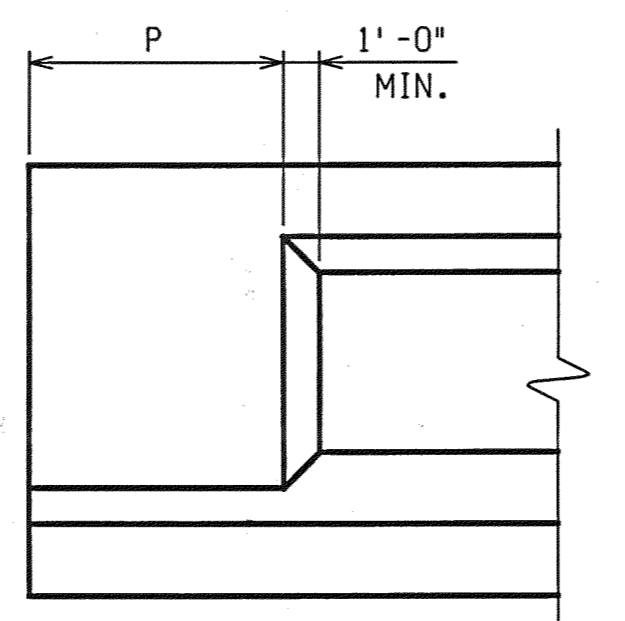
SECTION B-B
SHOWING STRAND ARRANGEMENT AT MIDSPAN
● LOW RELAXATION STRAND LOCATION



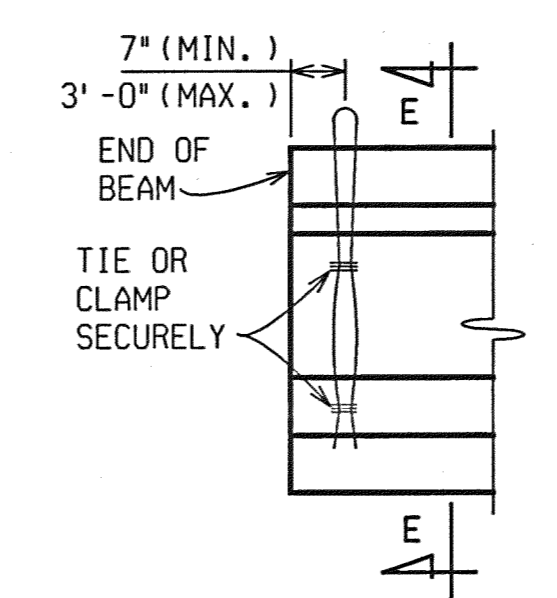
PLAN BEARING DETAILS



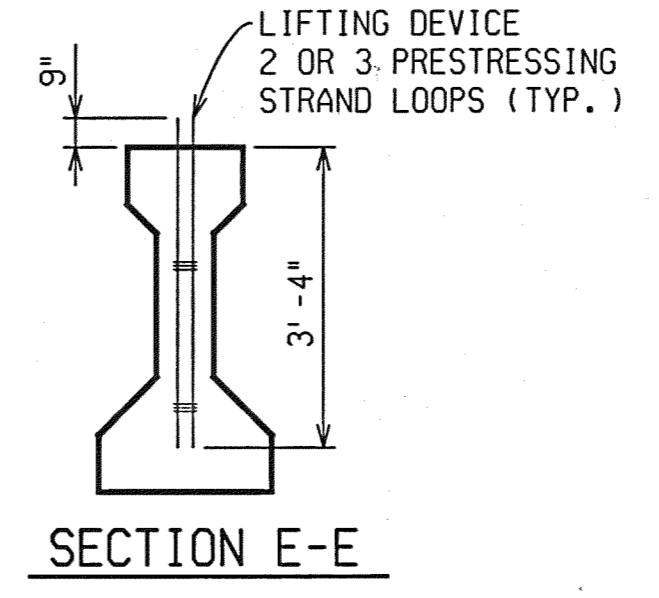
POSITION DOWEL DETAIL



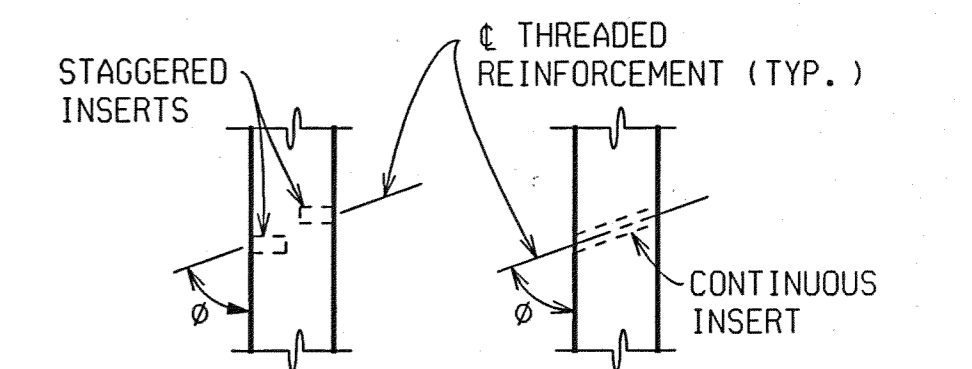
END BLOCK DETAIL
MAXIMUM LENGTH "P" FOR OPTIONAL END BLOCK IS 3'-0"



LIFTING DEVICE



SECTION E-E



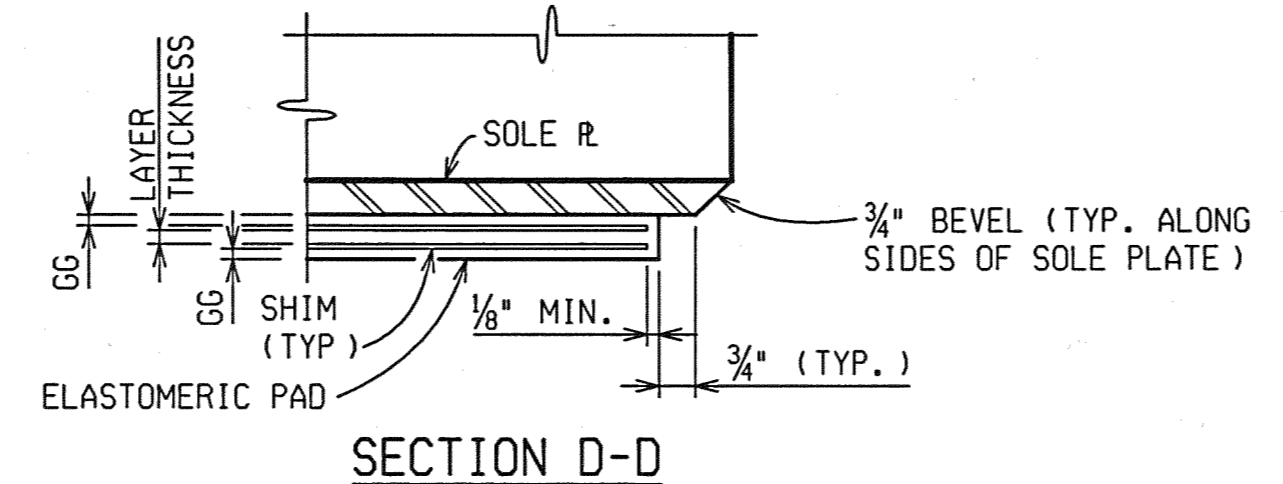
CONCRETE INSERT DETAILS

CONCRETE INSERTS AT ENDS OF BEAM SHALL BE STAGGERED AND AT MIDSPAN MAY BE CONTINUOUS OR STAGGERED. THREADED REINFORCEMENT FOR STAGGERED INSERTS SHALL BE BENT TO THE REQUIRED ϕ ANGLE PRIOR TO INSTALLATION. BENT REINFORCEMENT MAY REQUIRE INSTALLATION BEFORE BEAM IS ERECTED. OMIT INSERTS ON OUTSIDE OF FASCIA BEAMS EXCEPT AT ABUTMENTS WITH DEPENDENT BACKWALLS.

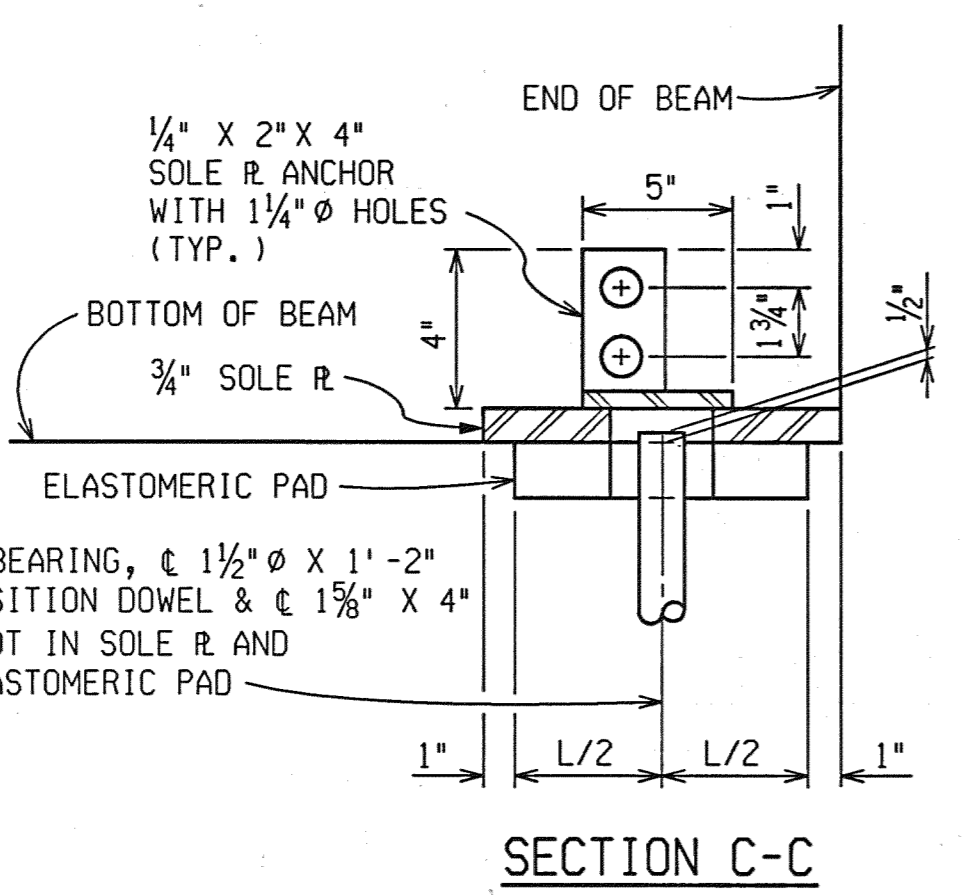
PRESTRESSING STRAND LIFT DEVICE CAPACITY		
STRAND SIZE	NO. OF STRANDS	ALLOWABLE BEAM WT.
3/8"	2	20 TONS
7/16"	2	27 TONS
1/2"	2	36 TONS
3/8"	3	30 TONS
7/16"	3	40.5 TONS
1/2"	3	54 TONS

ELASTOMERIC PAD AND SHIM DIMENSIONS	SPAN 1	
	ABUT A	ABUT B
NOMINAL THICKNESS (L) PARALLEL TO BEAM	2"	2"
(W) PERPENDIC. TO BEAM	7"	7"
GG	3/16"	3/16"
LAYER	4 @ 1/4"	4 @ 1/4"
SHIMS	5 @ 1/8"	5 @ 1/8"

SPAN	TYPE	STRAND LOCATION TABLE										TOTAL NUMBER	REQUIRED CONCRETE COMPRESSIVE STRENGTH (PSI)				
		MIDSPAN (SECTION B-B)					END FACE (SECTION A-A)						28 DAY	AT RELEASE			
		1	2	3	4	5	1	2	3	4	5						
1	III	10	10	4	0	0	2	0	0	10	10	4	0	0	26	7000	5500



SECTION D-D



SECTION C-C

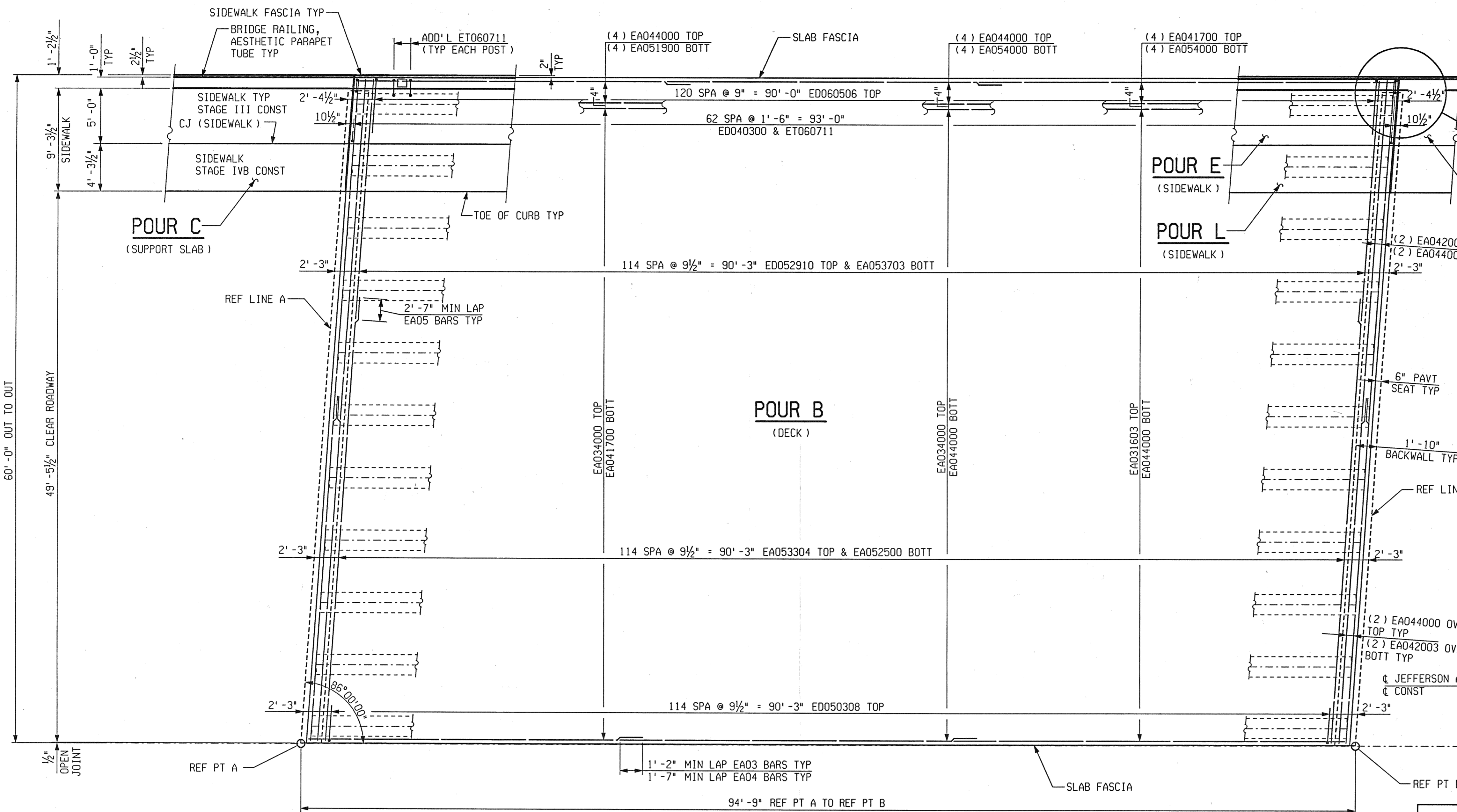


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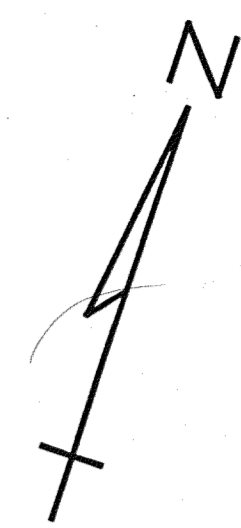
PRESTRESSED CONCRETE I-BEAM DETAILS JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	70 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63



POUR A BACKWALL & DIAPHRAGMS
STAGE III CONST

REVISIONS			
NO.	DESCRIPTION	DATE	BY



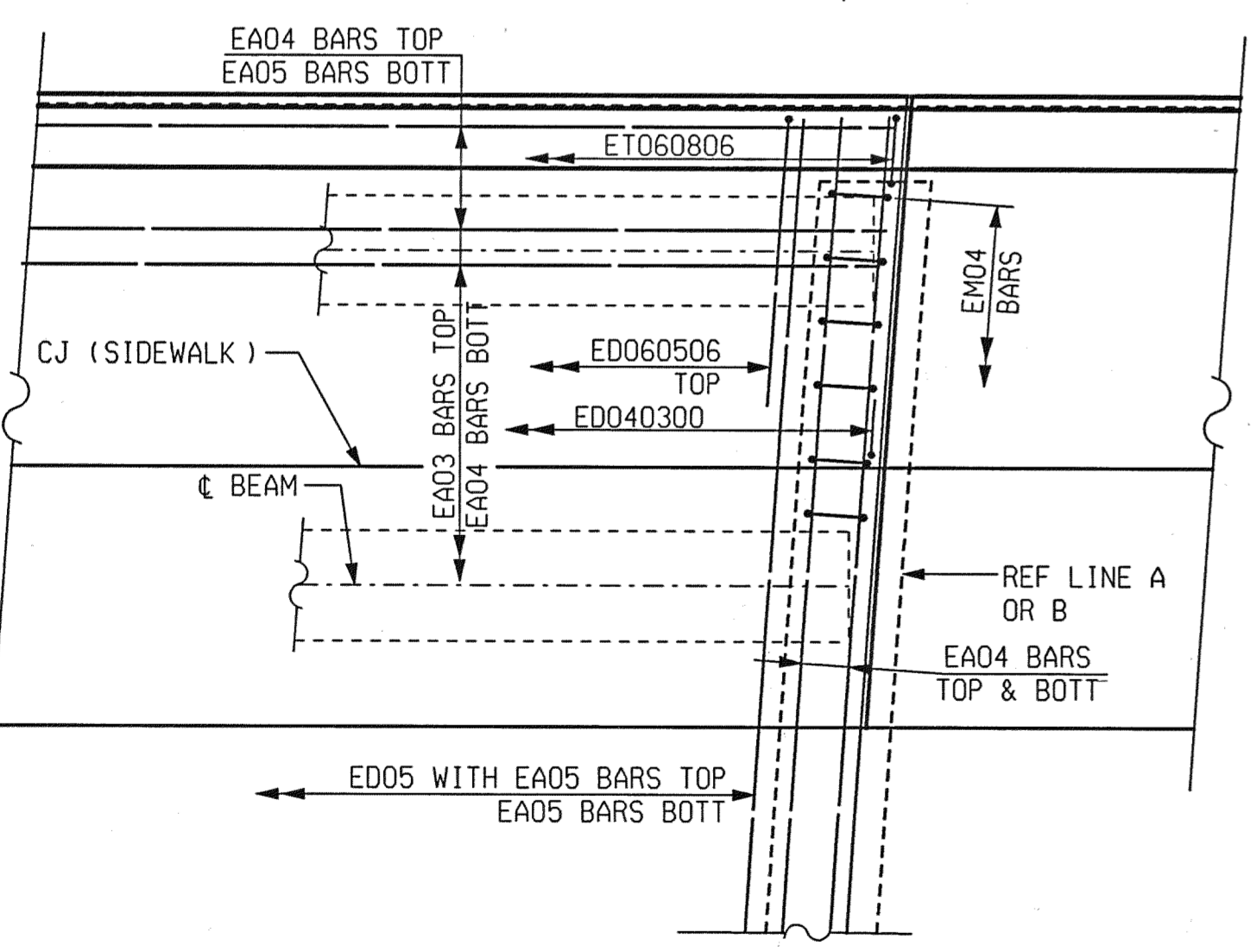
PLAN OF DECK STAGE-III & IVB

MISCELLANEOUS QUANTITIES		
342	Cyd	Superstructure Conc, Night Casting
186	Cyd	Superstructure Conc
5	Cyd	Conc, Grade D
1	LS	Superstructure Conc, Form, Finish, and Cure (S01 of 82-22-02)
1	LS	Superstructure Conc, Form, Finish, and Cure, Night Casting (S01 of 82-22-02)
342	Cyd	Bridge Ltg, Oper and Maintain
1	LS	Bridge Ltg, Furn and Rem (S01 of 82-22-02)
231	Ft	Bridge Railing, Aesthetic Parapet Tube
360	Sft	Joint Waterproofing
141	Ea	Reinforcement, Mechanical Splice
141	Ea	Adhesive Anchoring of Vertical Bar, 1/2 inch

NOTES:

I/F DENOTES INSIDE FACE
 O/F DENOTES OUTSIDE FACE
 EJWP DENOTES JOINT WATERPROOFING, EXPANSION.
 JWP DENOTES JOINT WATERPROOFING.
 FOR DETAILS OF NAME PLATES, MOLDING AND BEVELS, SEE STANDARD PLAN B-103 SERIES.
 ALPHABETICAL DESIGNATION OF DECK POURS IS NOT TO BE CONSTRUED AS A POUR SEQUENCE.
 LOW TEMPERATURE PROTECTION OF CONCRETE SHALL BE APPLIED ACCORDING TO SECTION 706.03 J OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE WILL NOT BE PAID FOR SEPARATELY, BUT WILL BE INCLUDED IN THE BID ITEMS "Superstructure Conc, Night Casting" AND "Superstructure Conc".
 DO NOT POUR DECK CONCRETE UNTIL DIAPHRAGM CONCRETE ATTAINS A COMPRESSIVE STRENGTH OF 3000 PSI.
 THE DECK POURS ARE DESIGNATED AS NIGHT POURS AND THEREFORE SUBJECT TO THE RESTRICTIONS OF SECTION 706.03 I OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION.
 THE CONTRACTOR MAY USE METAL STAY IN PLACE FORMS. IF USED, ELIMINATING THE POLYSTYRENE AND FILLING THE CORRUGATIONS WITH CONCRETE IS PROHIBITED.
 FOR NAME PLATE LOCATION, SEE GENERAL PLAN OF STRUCTURE SHEET.

SLIP FORMING OF BRIDGE RAILING, AESTHETIC PARAPET TUBE WILL NOT BE ALLOWED.
 THE CONTRACTOR IS TO PROVIDE A SAWED JOINT 1/2" DEEP BY 1/8" WIDE (MINIMUM) IN THE TOP OF SLAB AT TRANSVERSE CONSTRUCTION JOINT. THE JOINT IS TO BE SAWED WITHIN 4 HOURS OF REMOVING THE CURING AND IS TO BE FILLED WITH HOT-POURED JOINT SEALANT OR COLD-APPLIED JOINT SEALANT, SINGLE COMPONENT TYPE IN ACCORDANCE WITH STANDARD SPECIFICATION SUBSECTION 914.04. INCLUDED IN THE BID ITEM "Superstructure Conc, Form, Finish, and Cure, Night Casting".
 POUR APPROACH SLABS FROM EXPANSION LOCATION TOWARD REFERENCE LINE.
 SEE STANDARD PLAN B-25 SERIES FOR RAILING DETAILS NOT SHOWN.
 POST SPACING MEASURED ALONG INSIDE FACE OF BRIDGE RAILING.
 "EDGE" OR "GROOVE" DENOTES EDGING OR GROOVING WITH AN APPROVED TOOL.



TYPICAL CORNER DETAIL
SHOWING SIDEWALK

STAGE-III & IVB

SUPERSTRUCTURE CONC, NIGHT CAST		SUPERSTRUCTURE CONC	
POUR	CUBIC YARDS	POUR	CUBIC YARDS
B	171.0	A	29.2
		C	10.9
		D	10.6
		E	26.4
		L	15.9



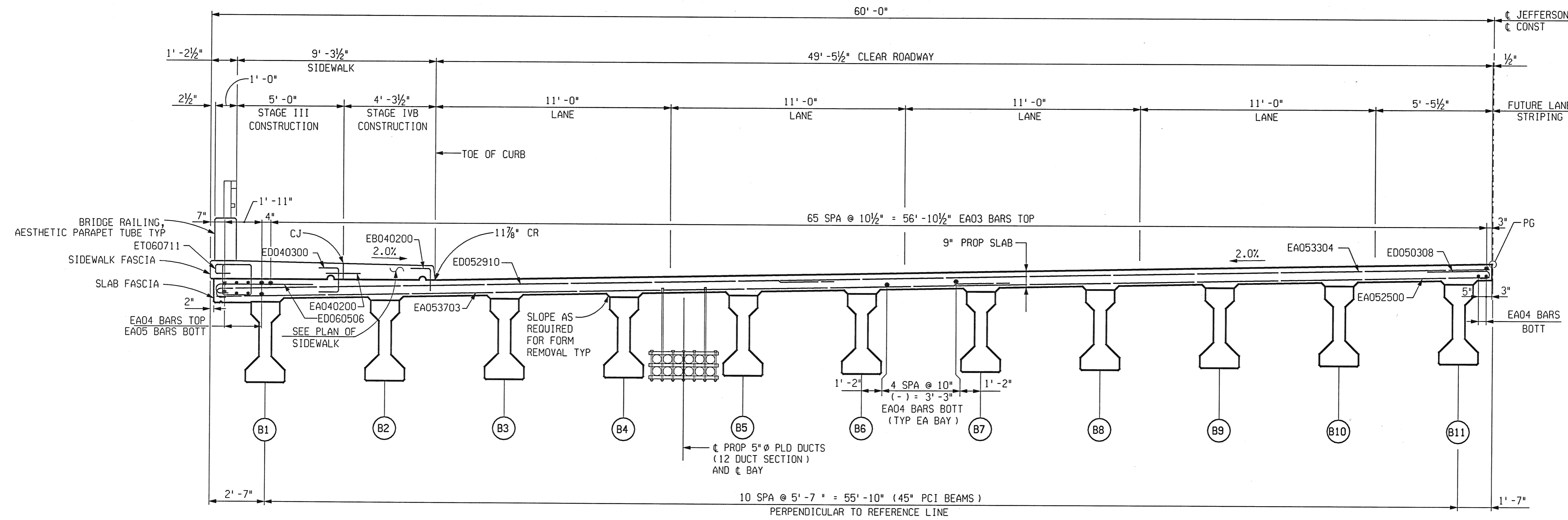
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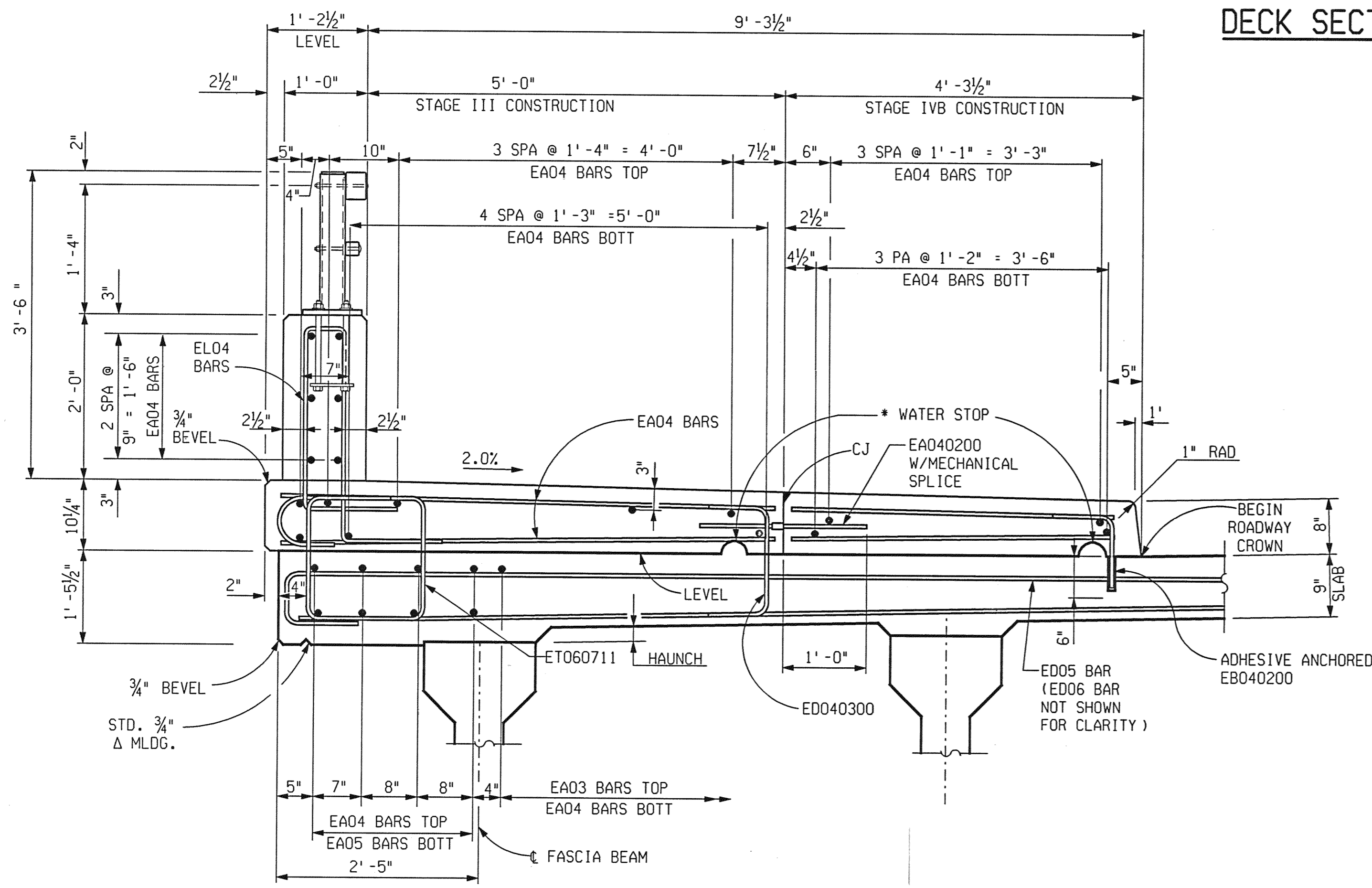
SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	71 OF 80

DRAWN BY: DCP DATE: 2/10/2005 CHECKED BY: RJO DATE: 2/10/2005 FILE NAME: G:\35456a\Struct\CADD\jeff-dk01.dgn

REVISIONS			
NO.	DESCRIPTION	DATE	BY



DECK SECTION STAGE III & IVB
LOOKING UPSTATION



BRIDGE RAILING, AESTHETIC PARAPET TUBE TYP

SHOWING NORTH SIDEWALK

* 2" HIGH 4" LONG (±). FORMING NOT REQUIRED.



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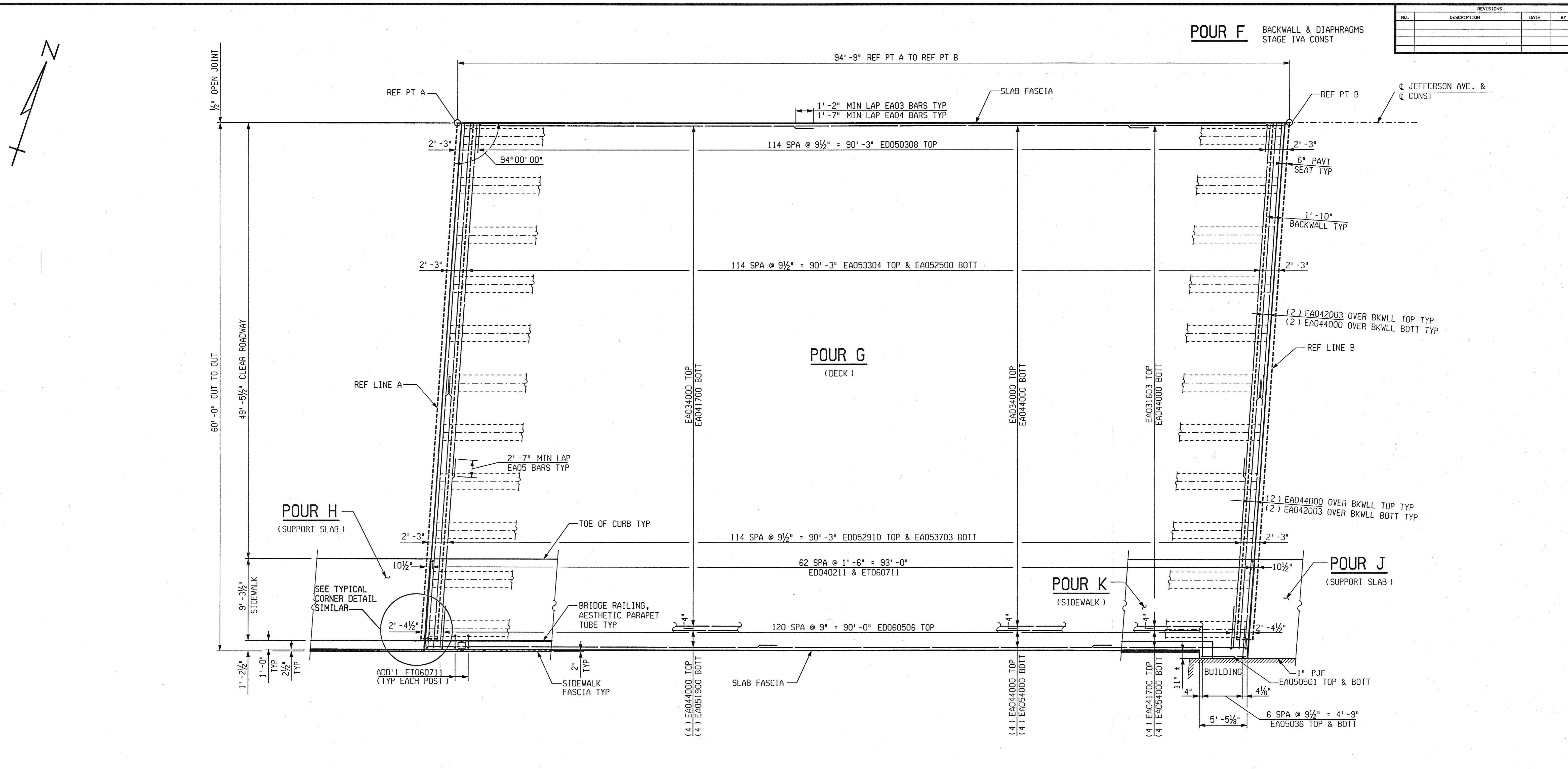
CITY OF DETROIT
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SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	72 OF 80

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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REVISIONS			
NO.	DESCRIPTION	DATE	BY

PLAN OF DECK STAGE-IVA

STAGE-IVA

SUPERSTRUCTURE CONC, NIGHT CAST		SUPERSTRUCTURE CONC	
POUR	CUBIC YARDS	POUR	CUBIC YARDS
G	171.0	F	29.2
		H	10.2
		J	11.8
		K	41.8



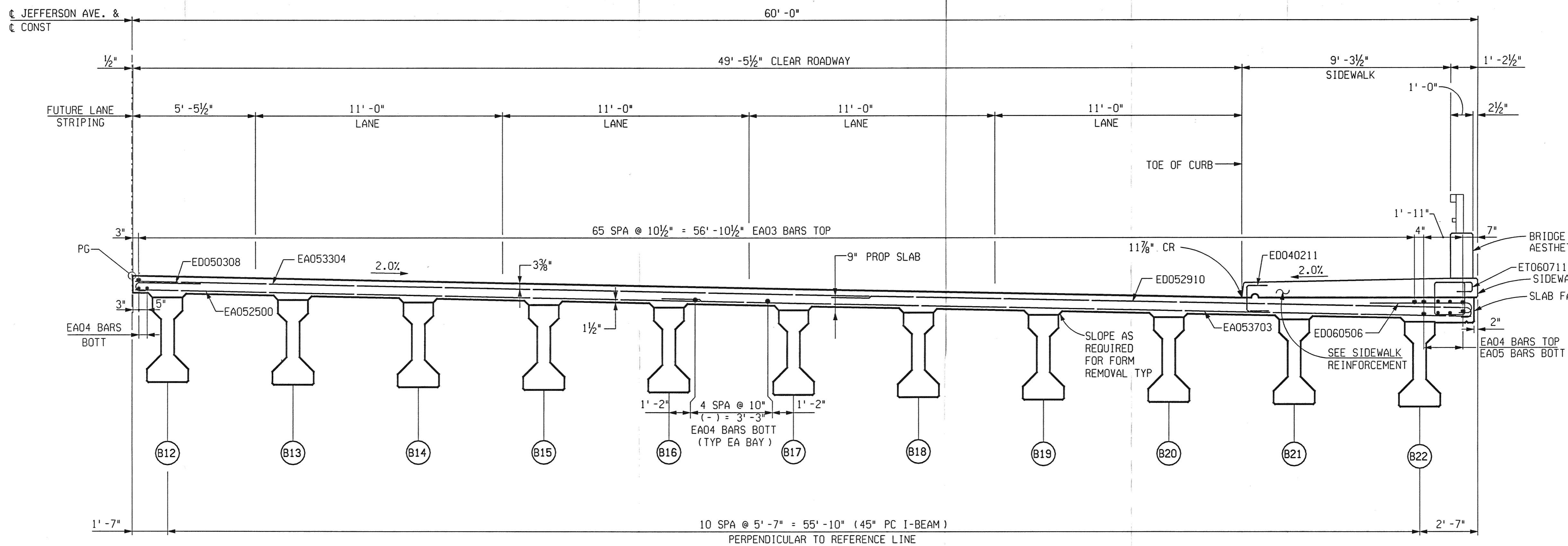
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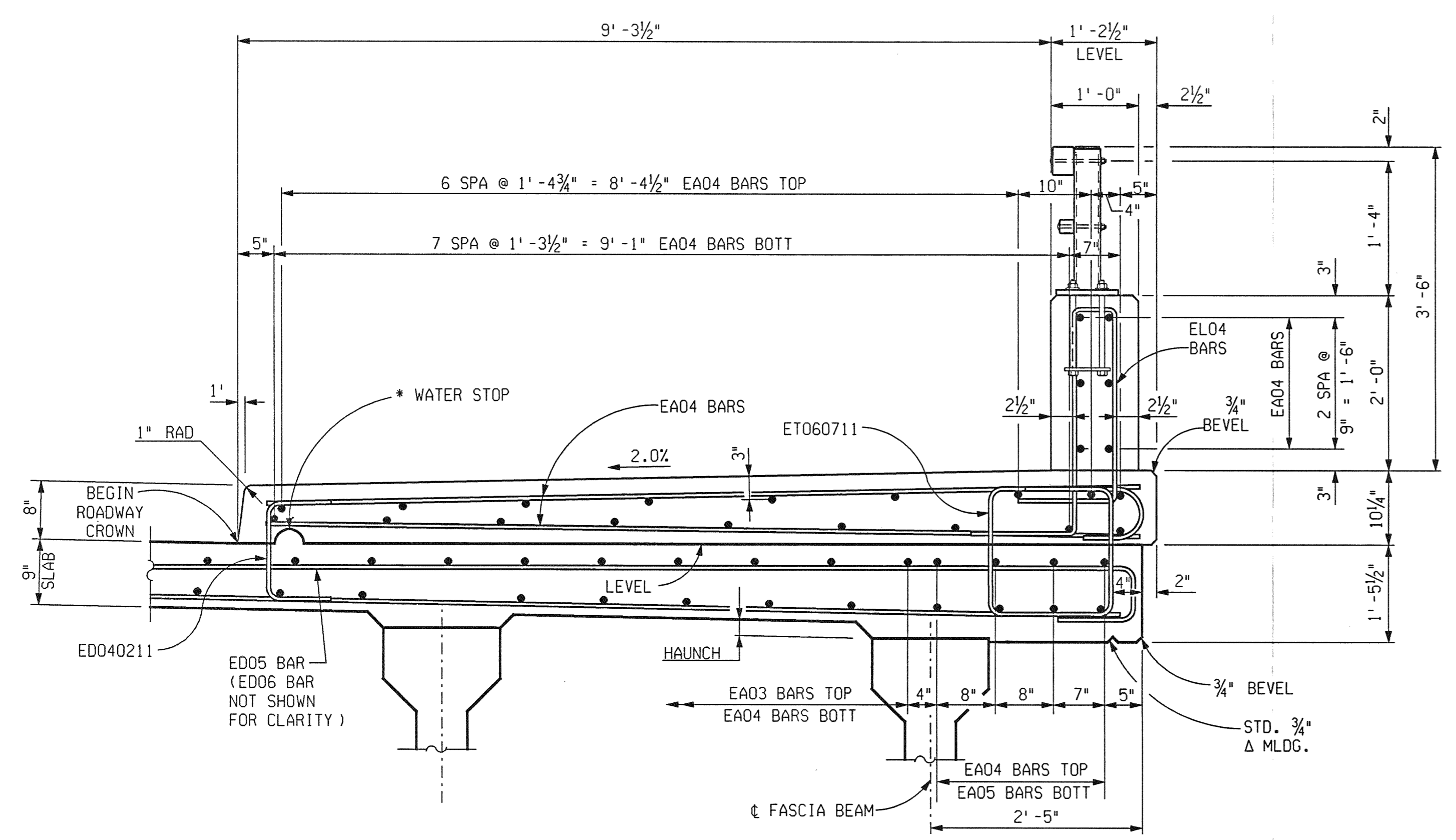
SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	73 OF 80

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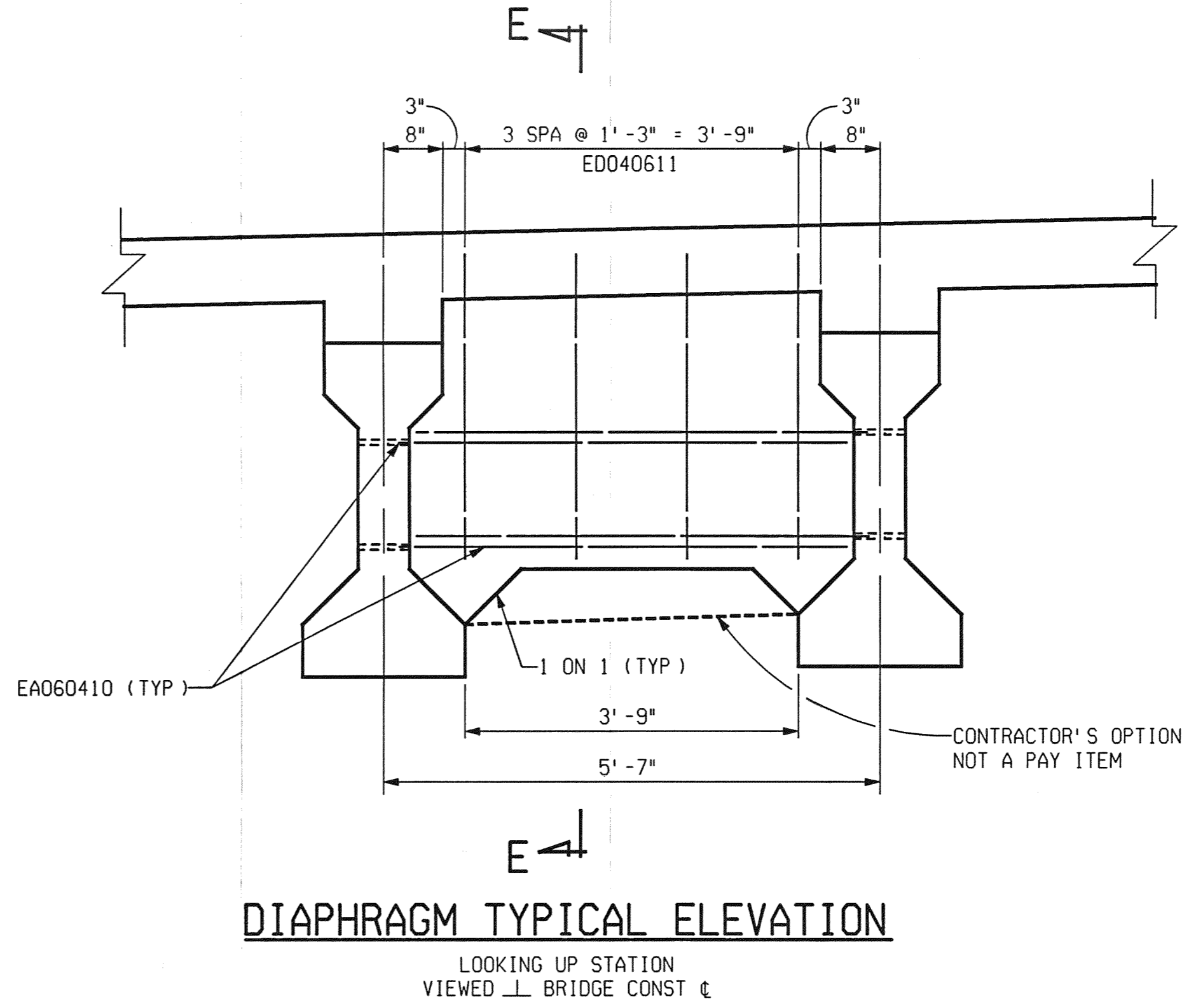
REVISIONS			
NO.	DESCRIPTION	DATE	BY



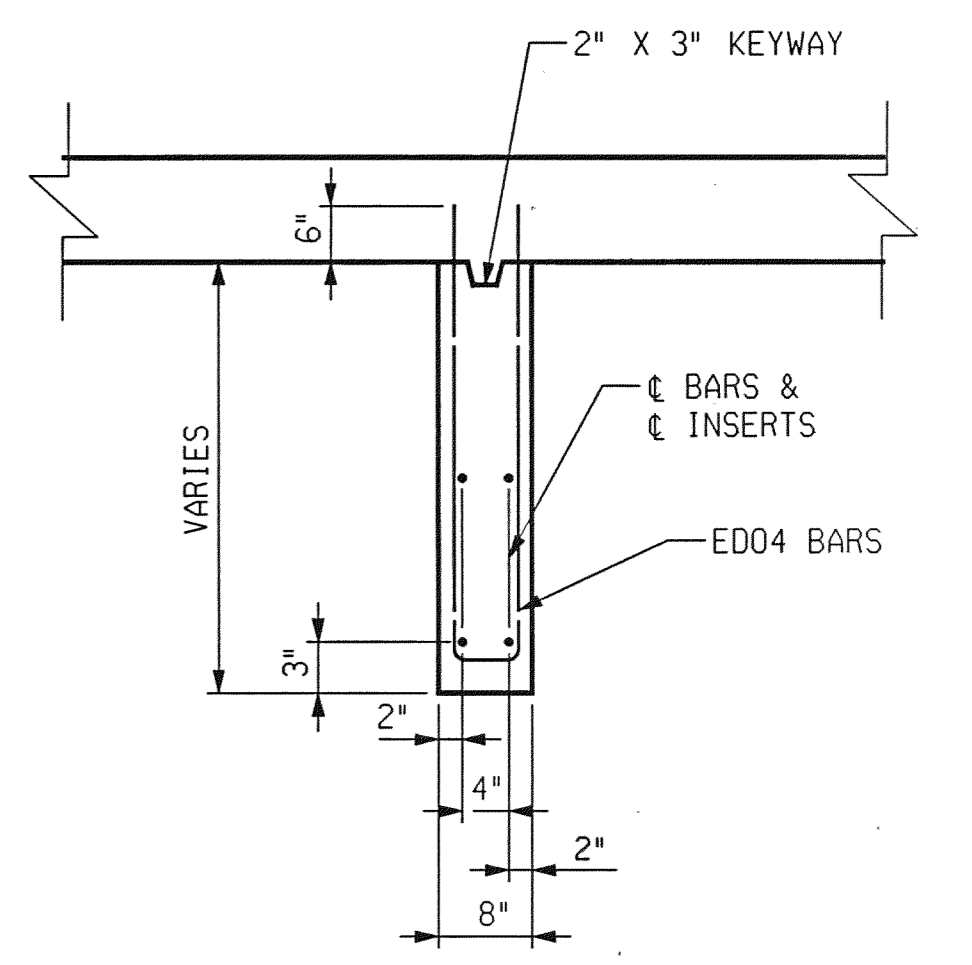
DECK SECTION STAGE IVA
LOOKING UPSTATION



BRIDGE RAILING, AESTHETIC PARAPET TUBE TYP
SHOWING SOUTH SIDEWALK



DIAPHRAGM TYPICAL ELEVATION
LOOKING UP STATION
VIEWED ⊥ BRIDGE CONST



SECTION E-E

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

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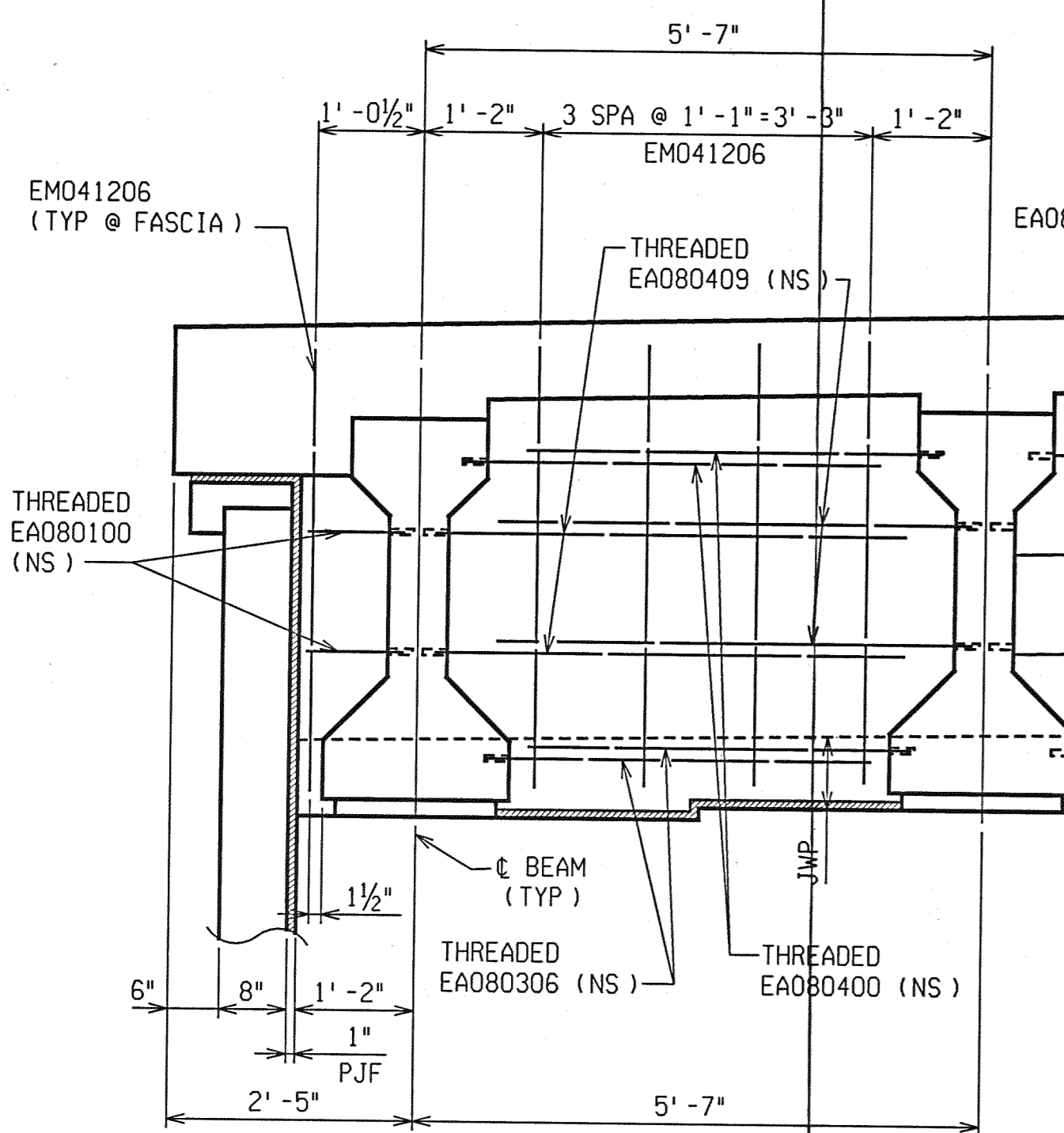


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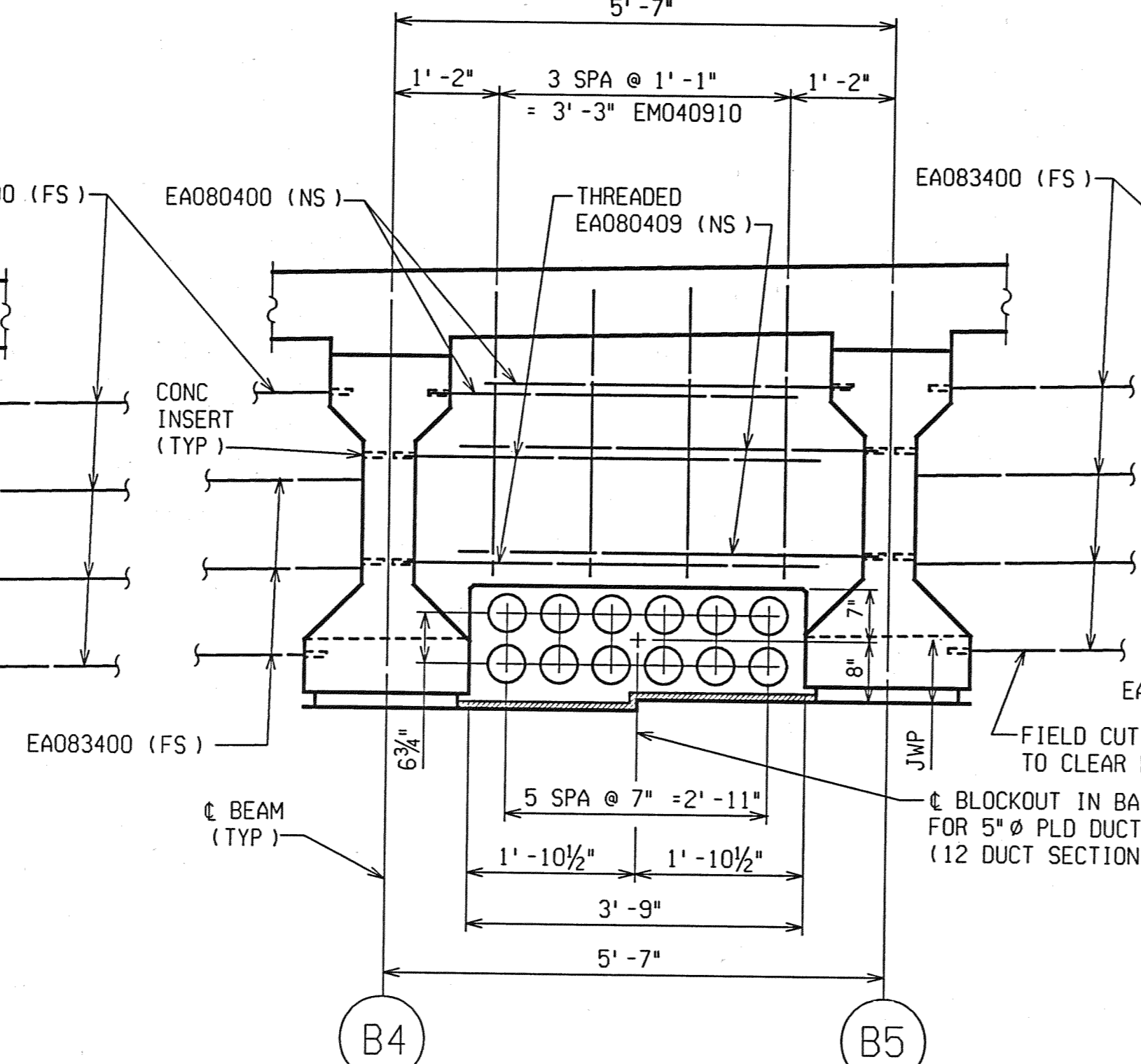
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SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	74 OF 80

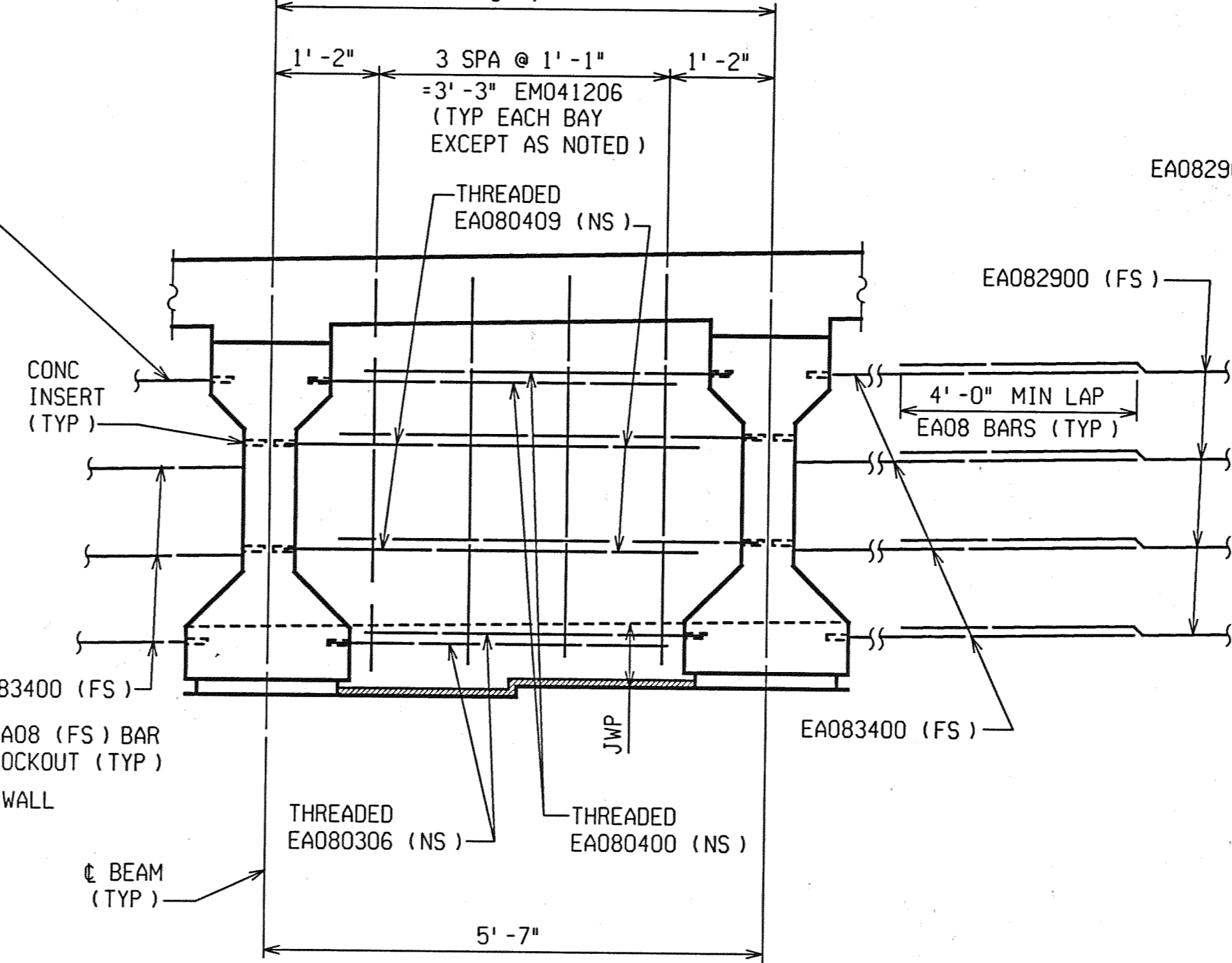
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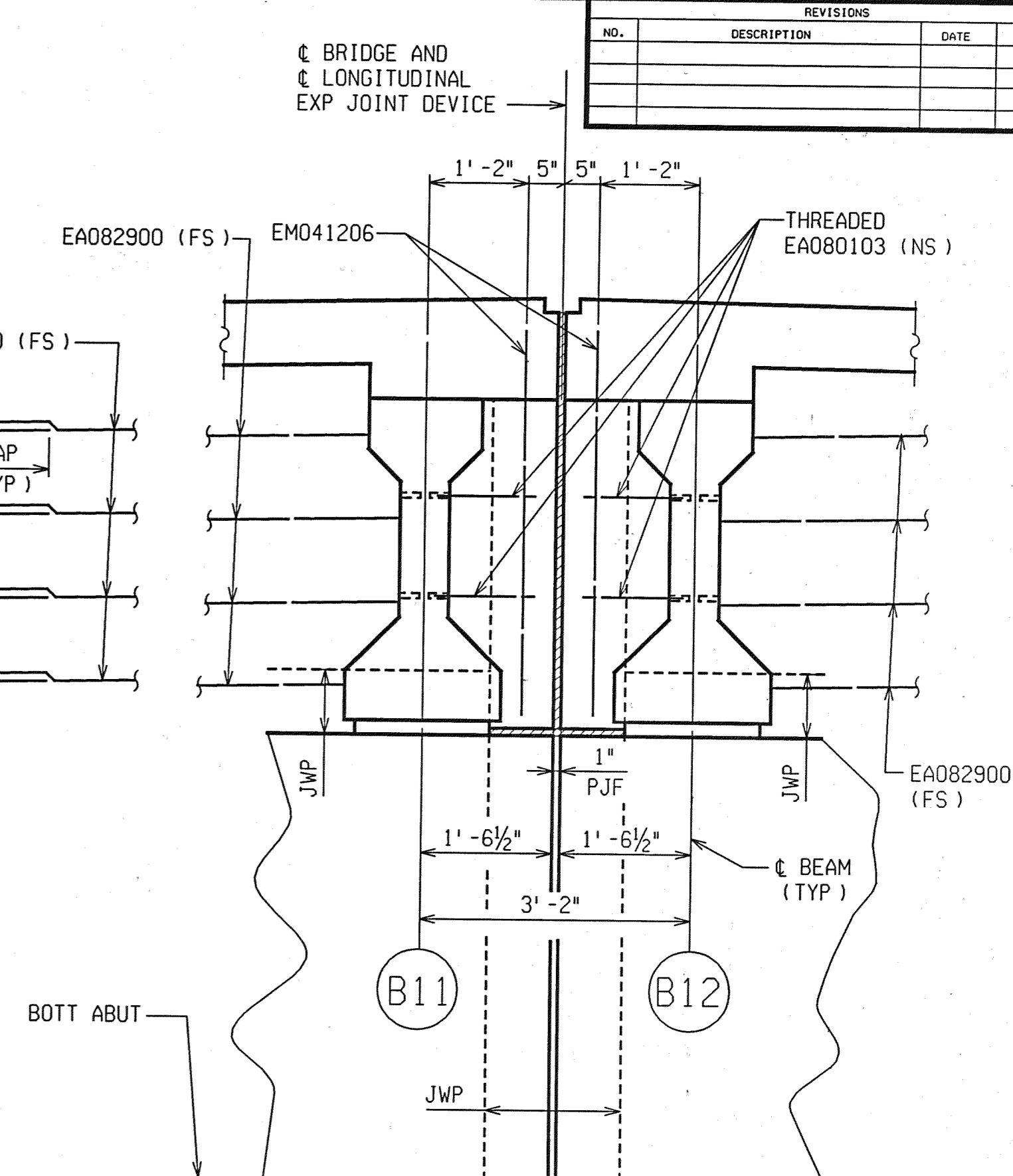
PARTIAL BACKWALL ELEVATION
(TYPICAL AT EXTERIOR FASCIA BAYS)



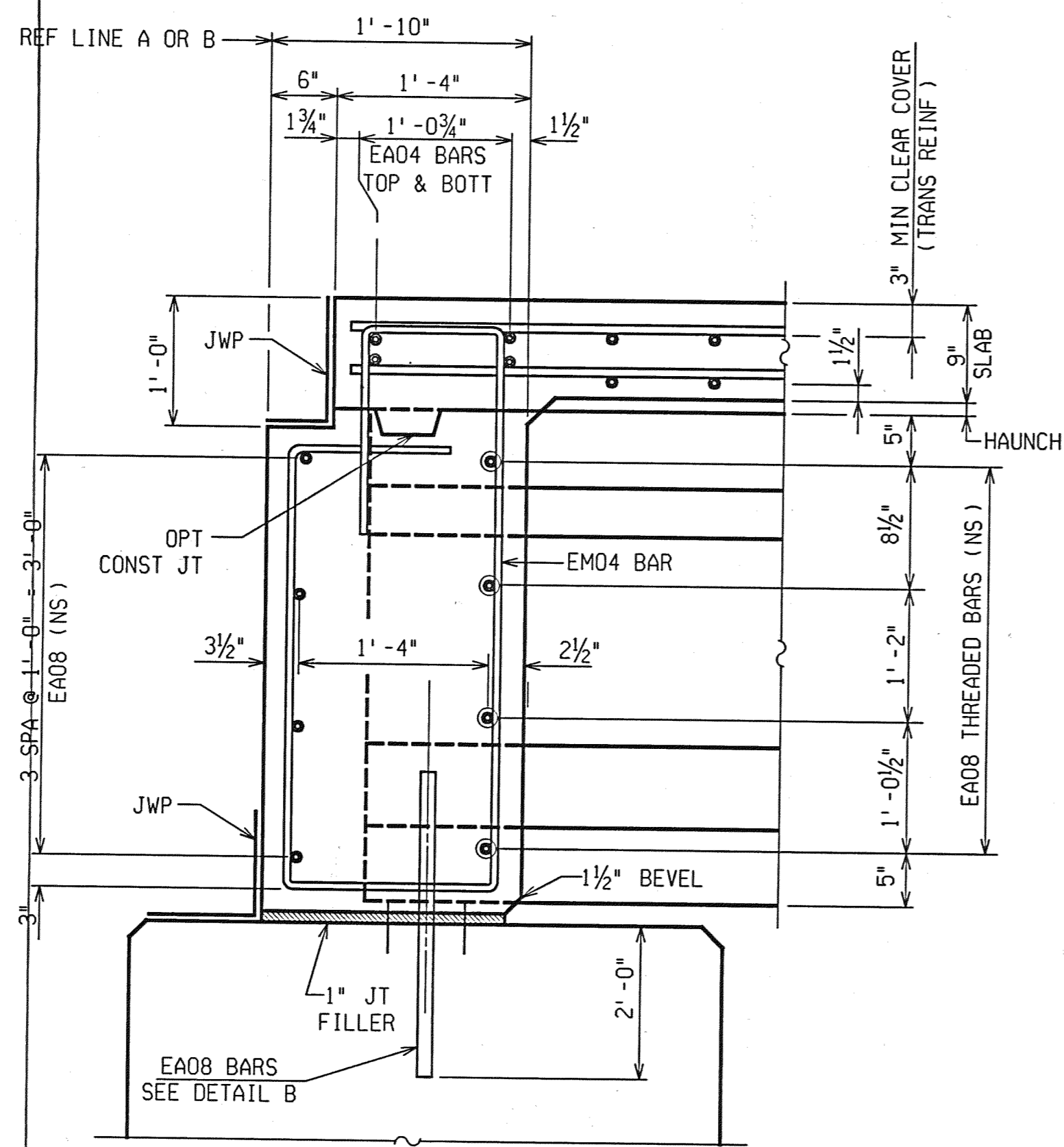
PARTIAL BACKWALL ELEVATION
(TYPICAL AT BAY 4 ONLY)



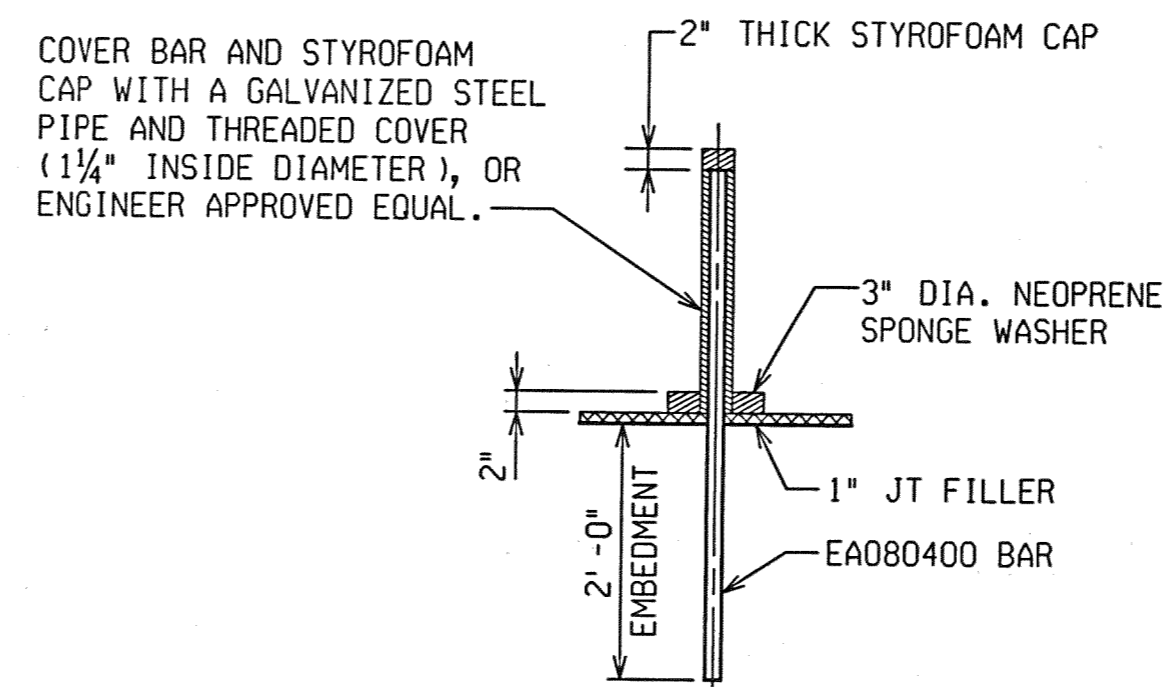
PARTIAL BACKWALL ELEVATION
(TYPICAL AT INTERIOR BAYS)



PARTIAL BACKWALL ELEVATION
(TYPICAL AT INTERIOR FASCIA BAY)



TYPICAL SECTION THRU BACKWALL



DETAIL B

ALL WORK AND MATERIAL FOR THE STYROFOAM CAP, METAL SLEEVE AND NEOPRENE SPONGE WASHER SHALL BE INCLUDED IN THE BID ITEM *SUPERSTRUCTURE CONCRETE, NIGHT CASTING.*

REVISIONS			
NO.	DESCRIPTION	DATE	BY

BRIDGE AND LONGITUDINAL EXP JOINT DEVICE

2/18/04 PM

CHECKED BY: RJO DATE: 2/10/2005

DRAWN BY: DCP DATE: 2/10/2005

FILE NAME: G:\35458d\Struct\CADD\jeff_dk08.dgn



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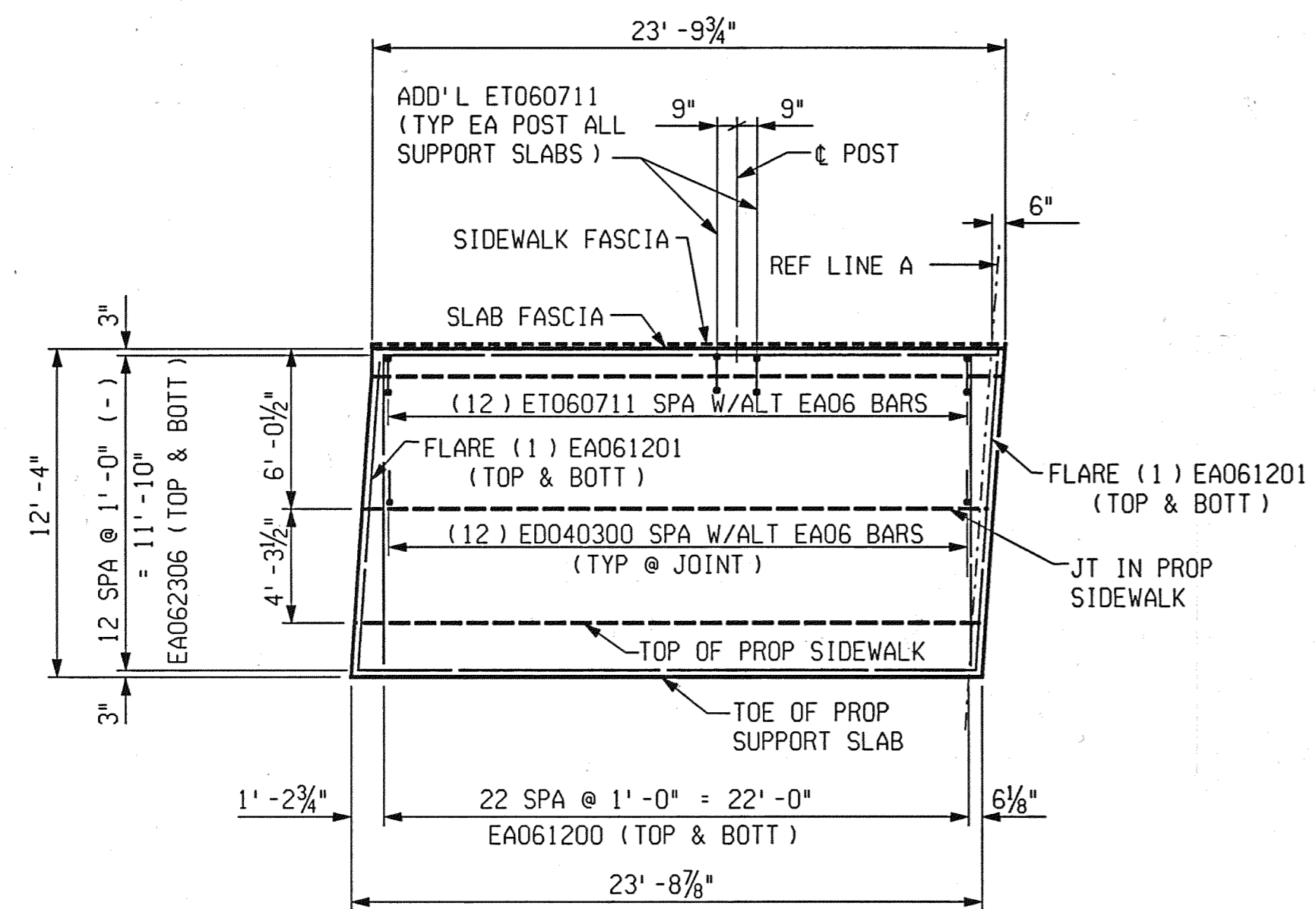
CITY OF DETROIT
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CITY ENGINEERING DIVISION

SUPERSTRUCTURE DETAILS
JEFFERSON AVE OVER DEQUINDRE CUT

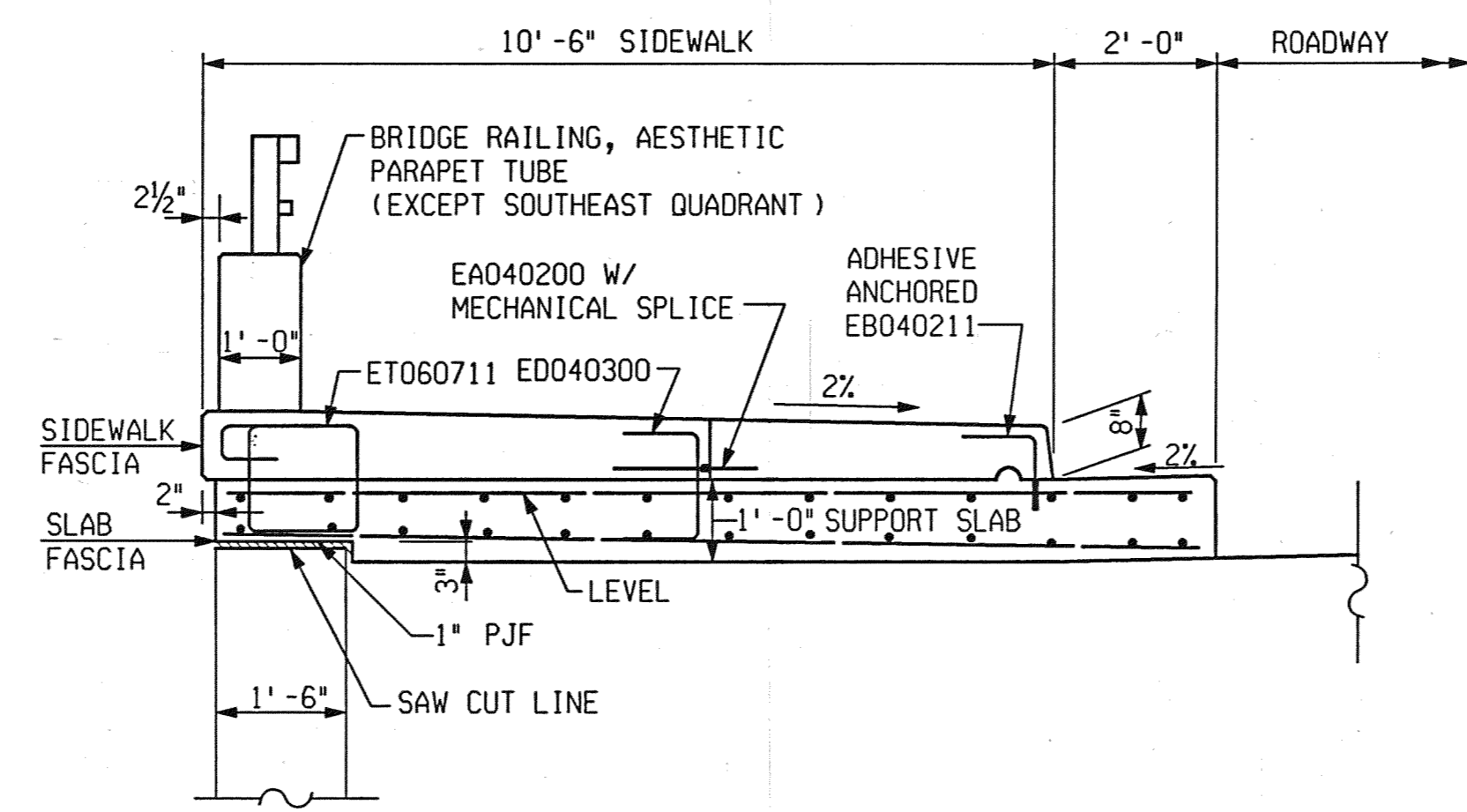
DATE 02-11-05	STRUCTURE NO. S01 OF 82-22-02	CONT. SEC. BRT 82022	JOB NO. 49717A	SHEET 75 OF 80
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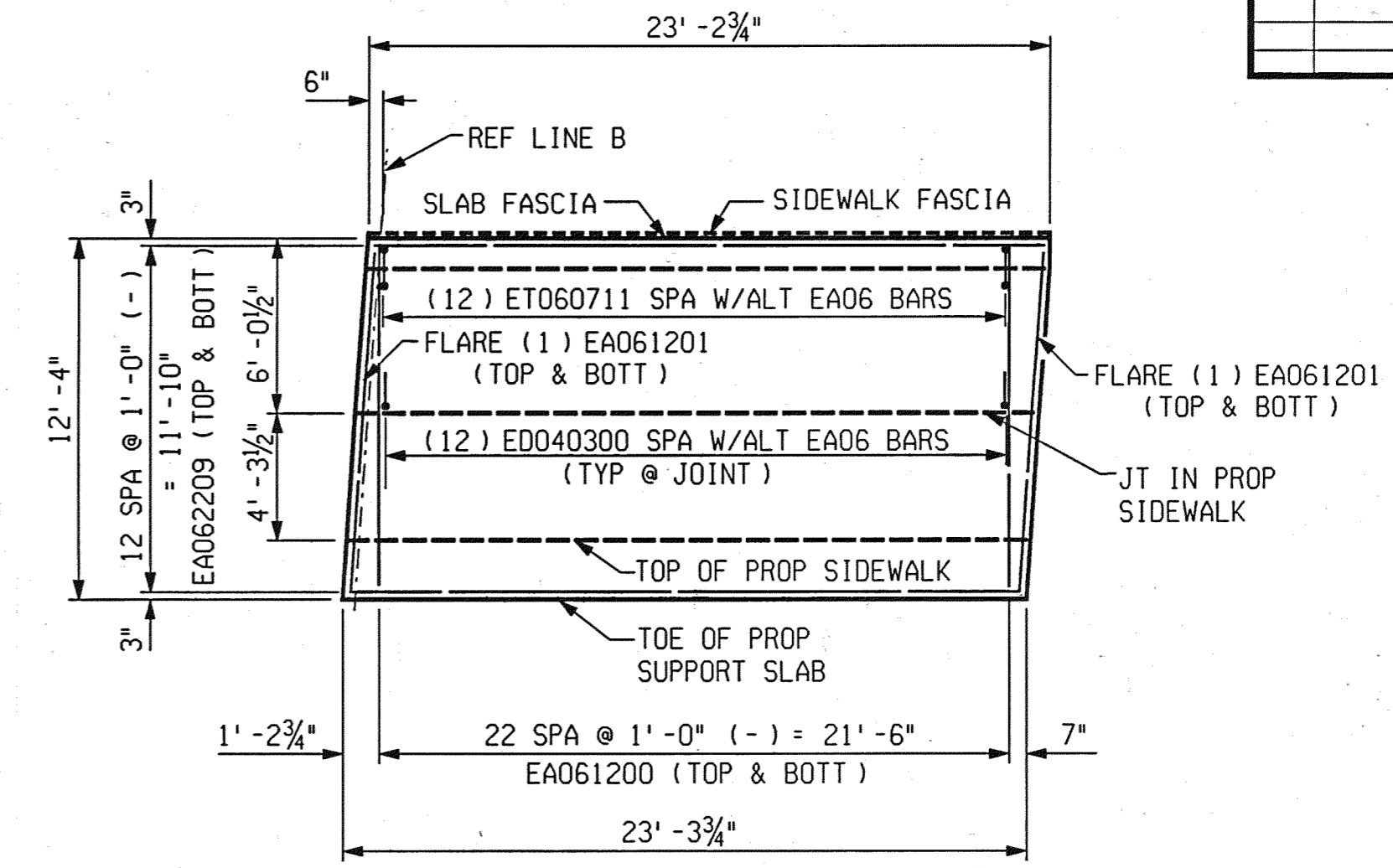
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NO.	DESCRIPTION	DATE	BY



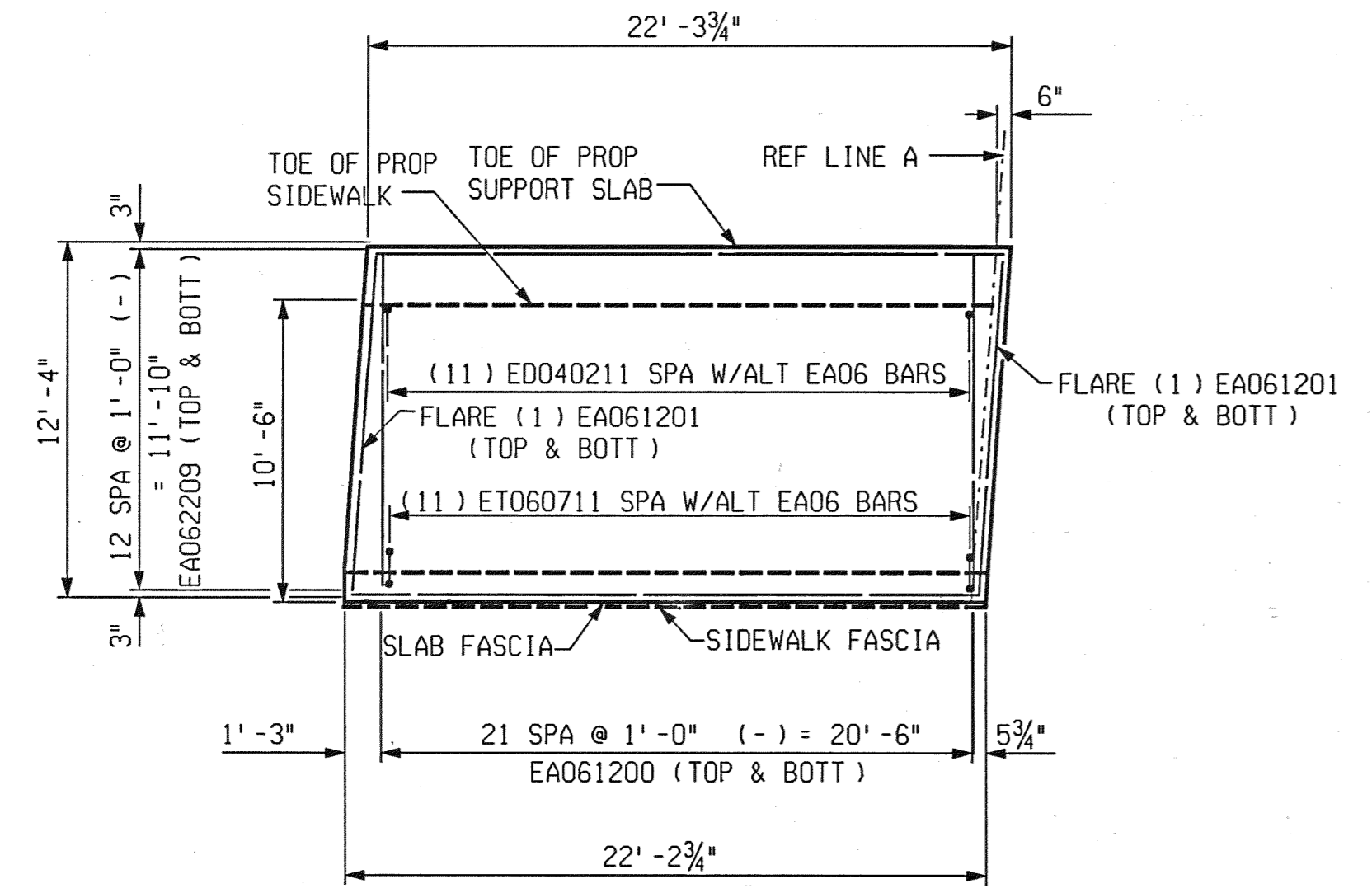
NW SUPPORT SLAB DETAIL



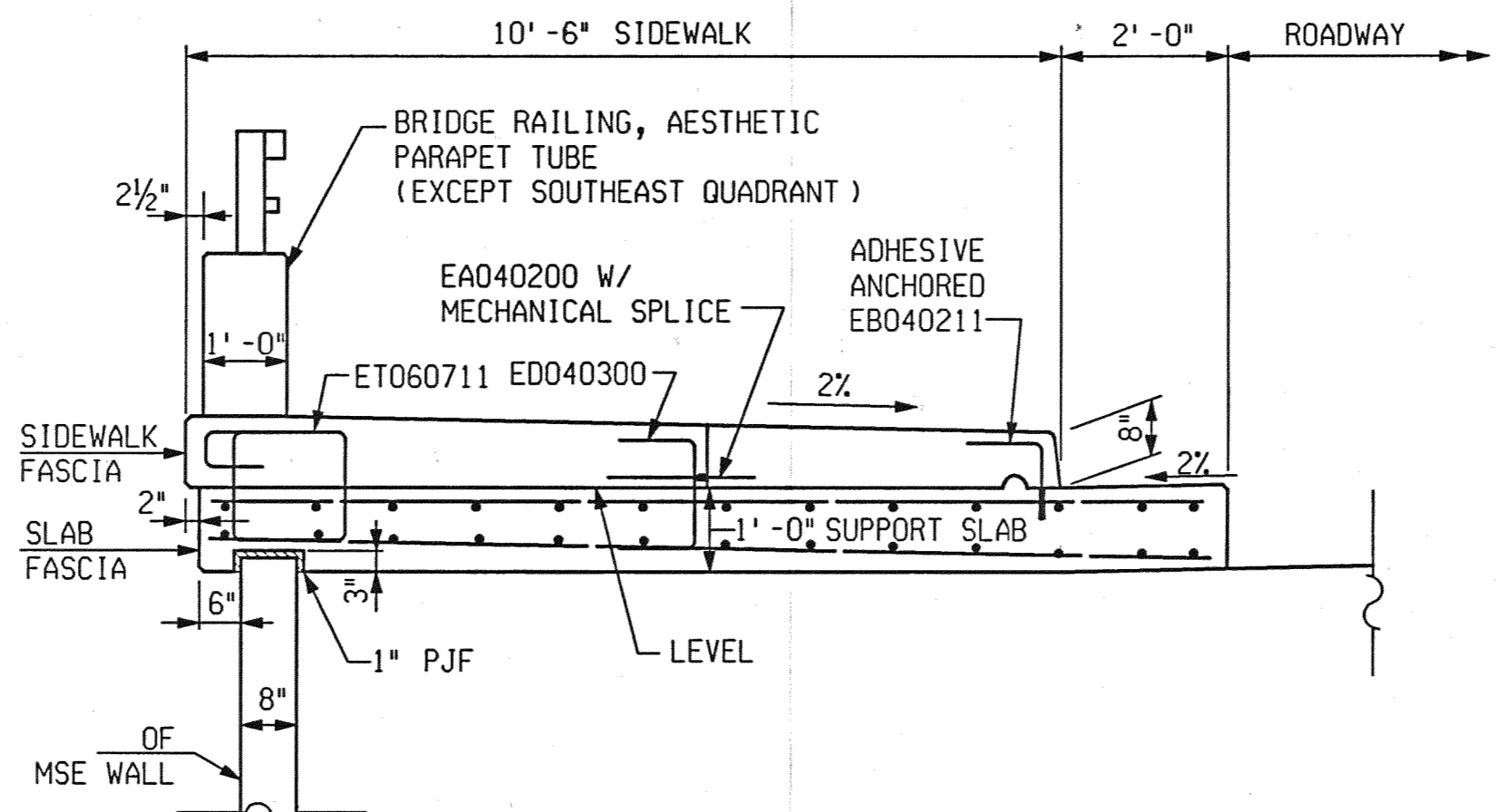
TYPICAL SECTION THRU NW SUPPORT SLAB (SHOWING SECTION OVER EXISTING RETAINING WALL)



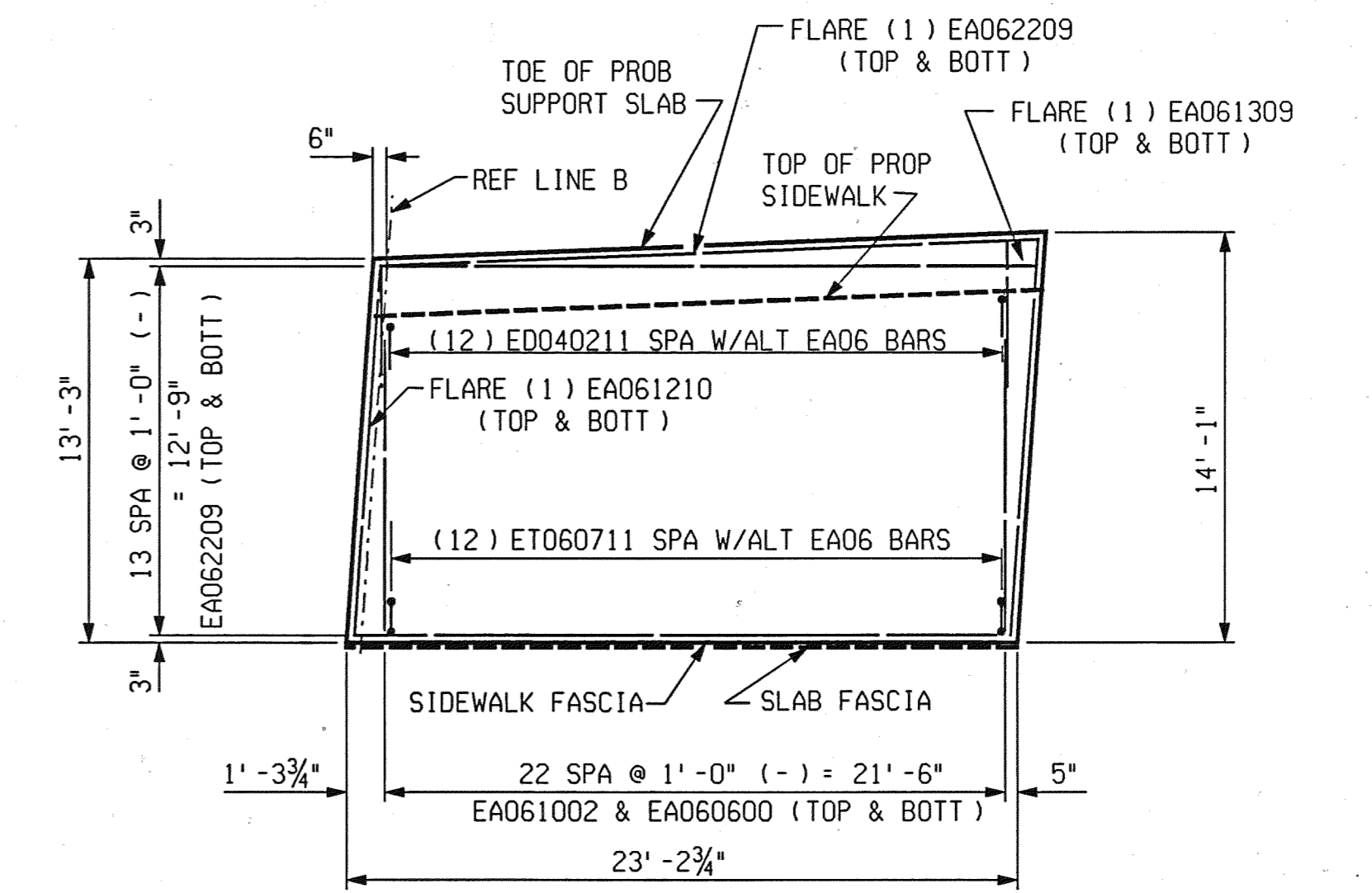
NE SUPPORT SLAB DETAIL



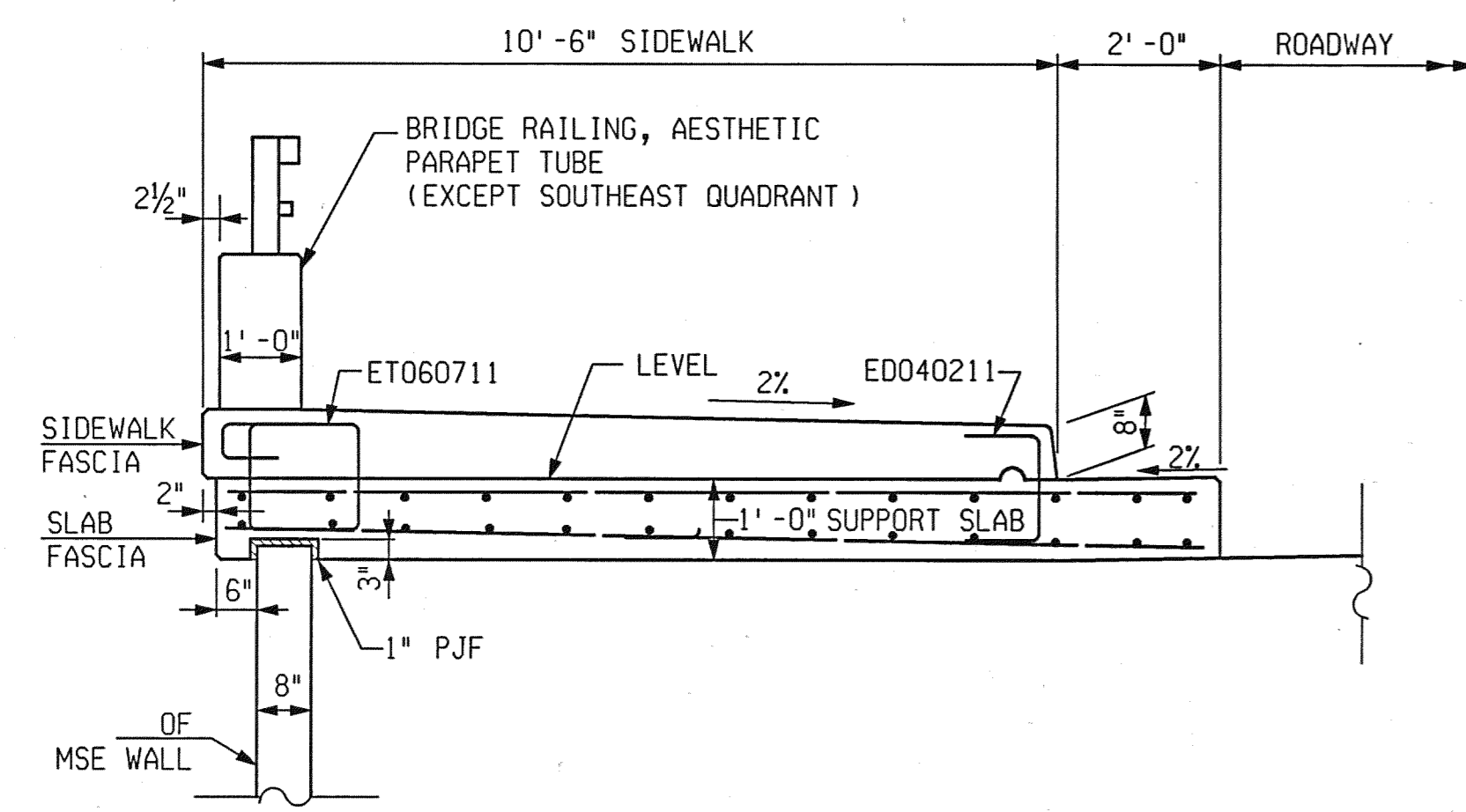
SW SUPPORT SLAB DETAIL



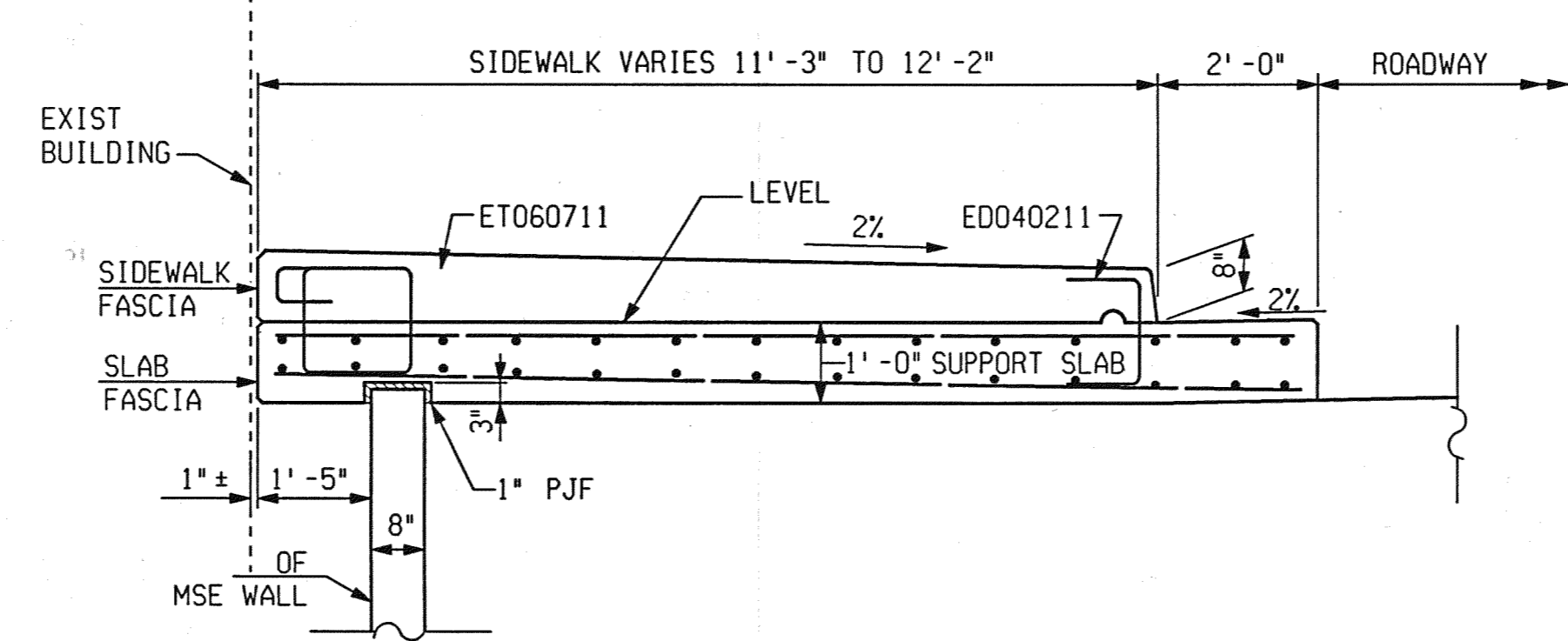
TYPICAL SECTION THRU NE & NW SUPPORT SLAB



SE SUPPORT SLAB DETAIL



TYPICAL SECTION THRU SW SUPPORT SLAB



TYPICAL SECTION THRU SOUTHEAST SUPPORT SLAB



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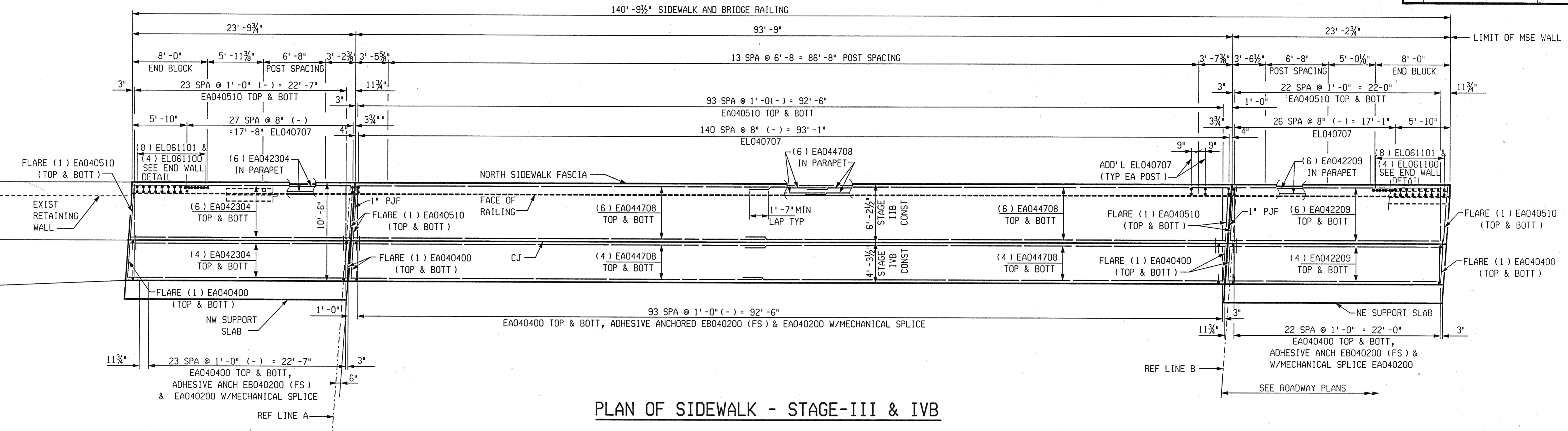
CITY OF DETROIT
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 CITY ENGINEERING DIVISION

SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	76 OF 80

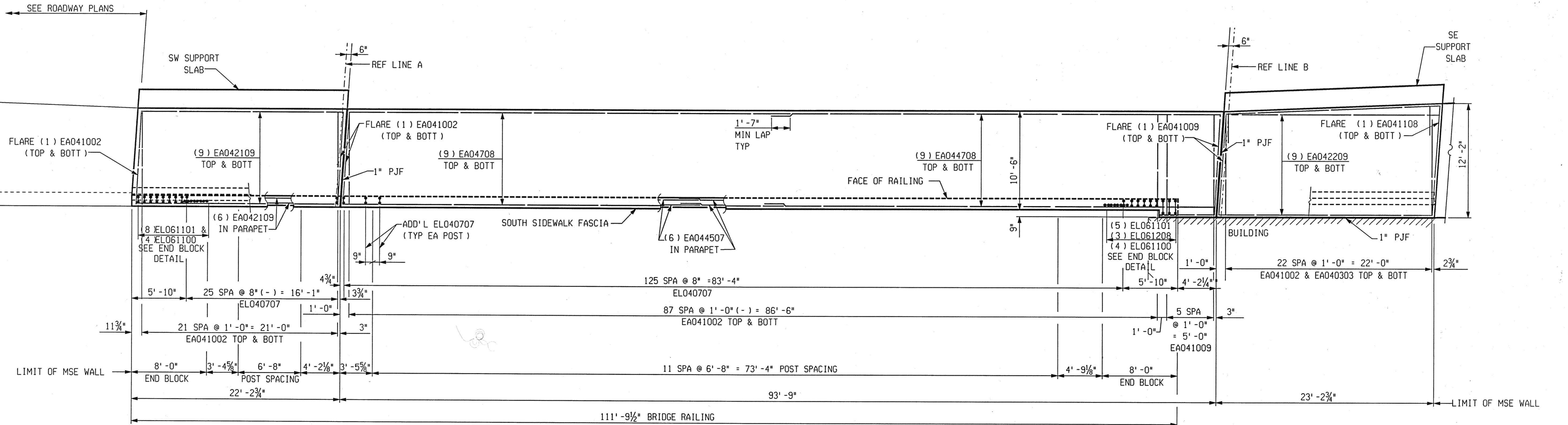
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REVISIONS			
NO.	DESCRIPTION	DATE	BY

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PLAN OF SIDEWALK - STAGE-III & IVB



PLAN OF SIDEWALK - STAGE-IVA



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SUPERSTRUCTURE DETAILS				
JEFFERSON AVE OVER DEQUINDRE CUT				
DATE	STRUCTURE NO.	CONT. SEC.	JOB NO.	SHEET
02-11-05	S01 OF 82-22-02	BRT 82022	49717A	77 OF 80

DRAWN BY: DCP DATE: 2/10/2005 CHECKED BY: RJO DATE: 2/10/2005 FILE NAME: G:\35458A\Struct\CADD\jeff_ak05.dgn

STAGE IVA CONSTRUCTION

Table with 4 columns: NO., REVISIONS, DESCRIPTION, DATE, BY

Main table with columns: Bar, Dimensions (a-p), No. Req'd, Total Wt., Bar, Dimensions (a-p), No. Req'd, Total Wt. Includes sub-headers for ABUTS, BKWL, DIA, and DECK.

EPOXY COATED REINFORCEMENT STEEL 9909

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63

CHECKED BY: RJO DATE: 2/10/2005 DRAWN BY: DCP DATE: 2/10/2005 FILE NAME: G:\35458d\Struct\CADD\jeff_rs02.dgn



CITY OF DETROIT DEPARTMENT OF PUBLIC WORKS CITY ENGINEERING DIVISION

STEEL REINFORCEMENT DETAILS JEFFERSON AVE OVER DEQUINDRE CUT

Table with 5 columns: DATE, STRUCTURE NO., CONT. SEC., JOB NO., SHEET. Values: 10/08/04, S01 OF 82-22-02, BRT 82022, 49717A, 80 OF 80