

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BOSTON EXTENSION

JOHN T. DRISCOLL, CHAIRMAN

PHILIP A. GRAHAM, VICE-CHAIRMAN

ALBERT P. MANZI, MEMBER

PHILIP H. KITFIELD, CHIEF ENGINEER

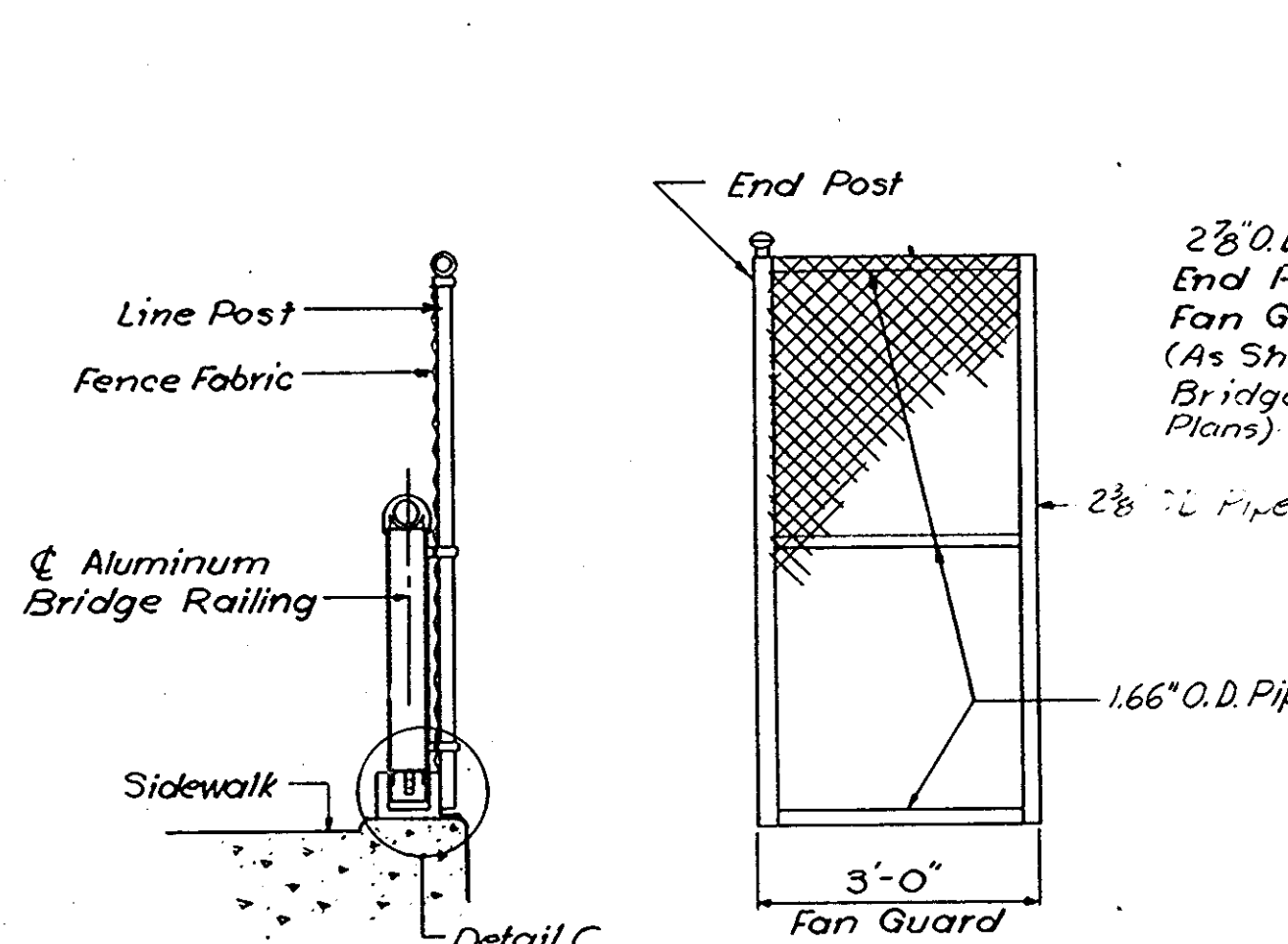
CONTRACT NO. 551-0031

FOR

CHAIN LINK FENCE ON 25 BRIDGES
IN NEWTON, BOSTON AND BROOKLINE, MASSACHUSETTS

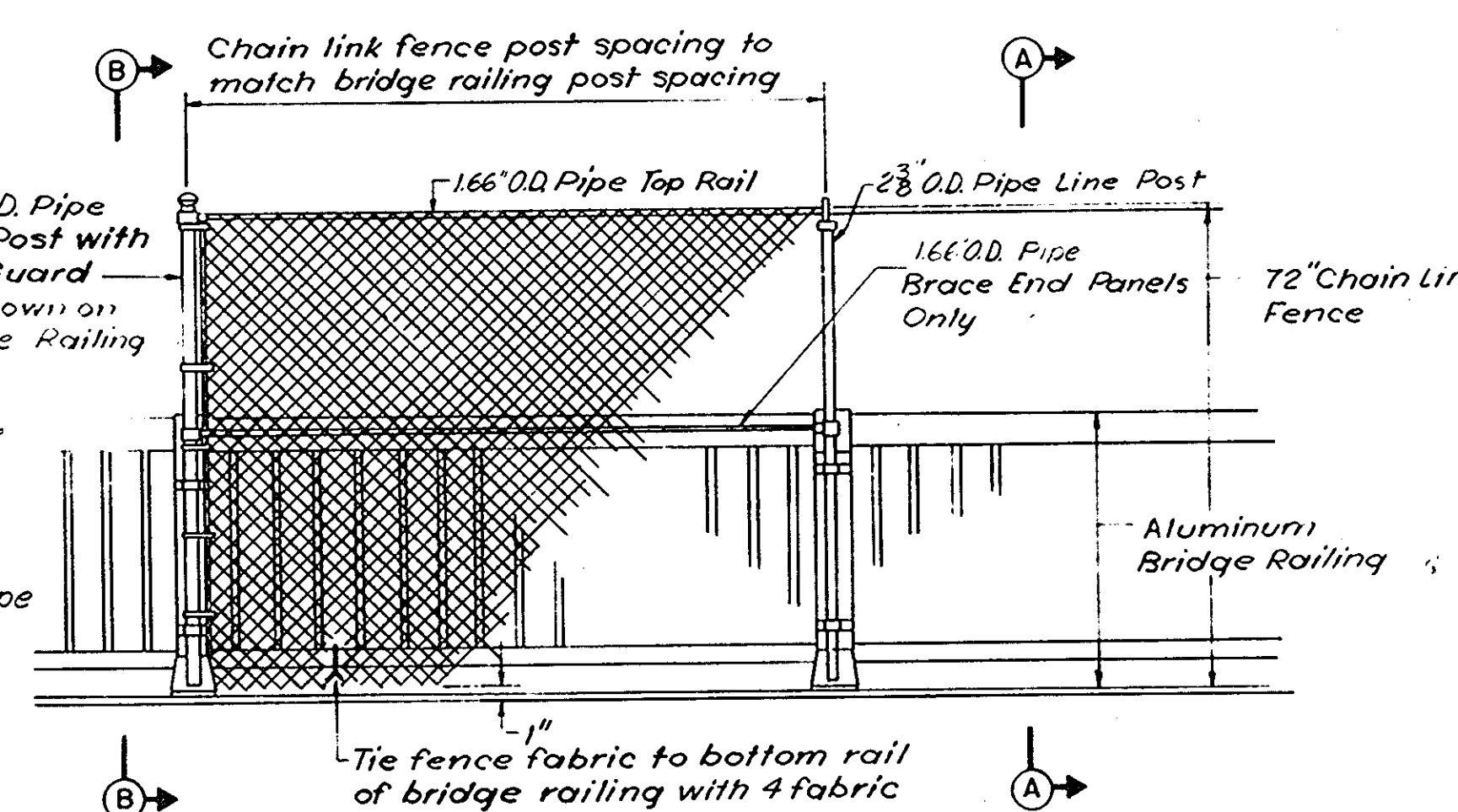
RECOMMENDED BY Umlachter DATE 2-18-69
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

APPROVED BY PH Kitfield DATE 2-19-69
FOR THE MASSACHUSETTS TURNPIKE AUTHORITY

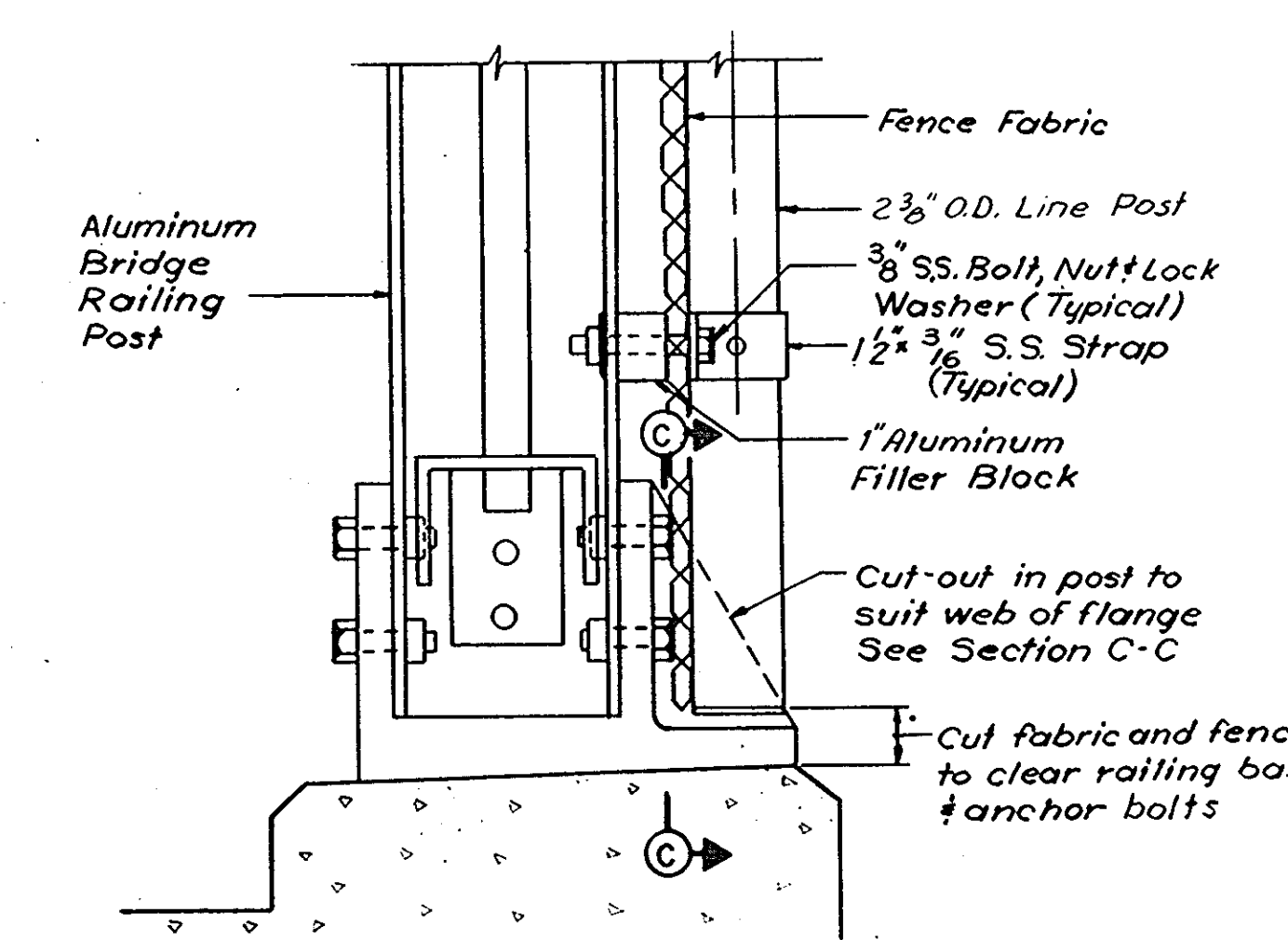


SECTION A-A
1/2" = 1'-0"

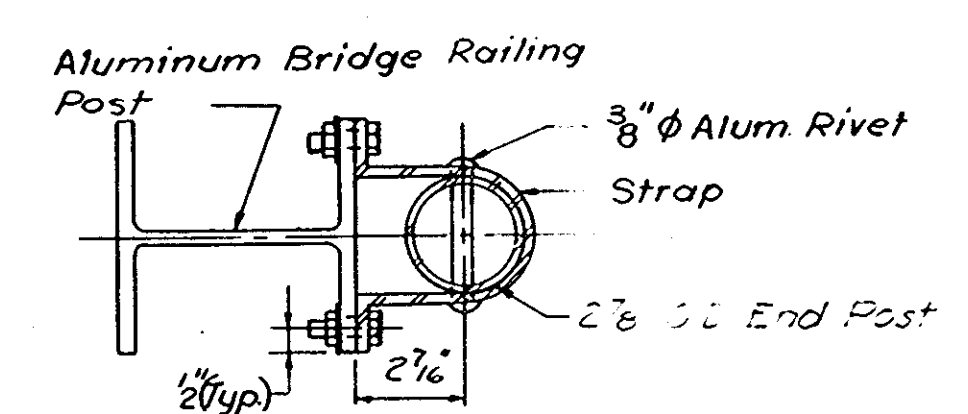
SECTION B-B
1/2" = 1'-0"



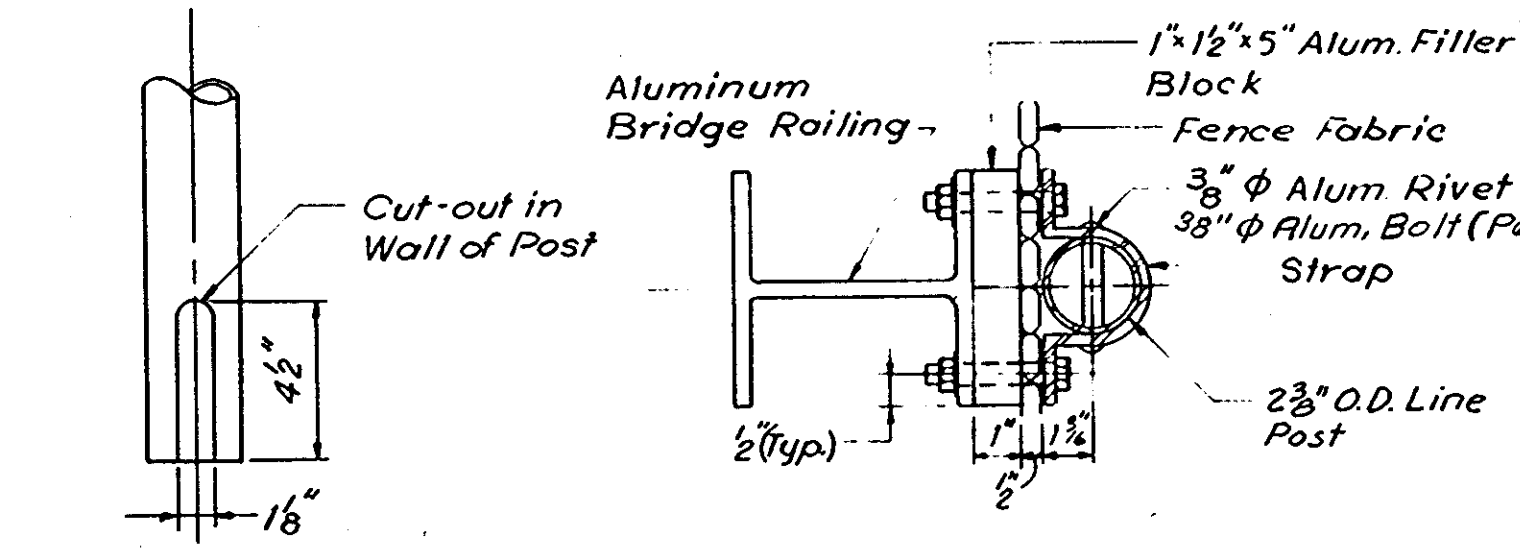
BRIDGE CHAIN LINK FENCE - TYPE A
1/2" = 1'-0"



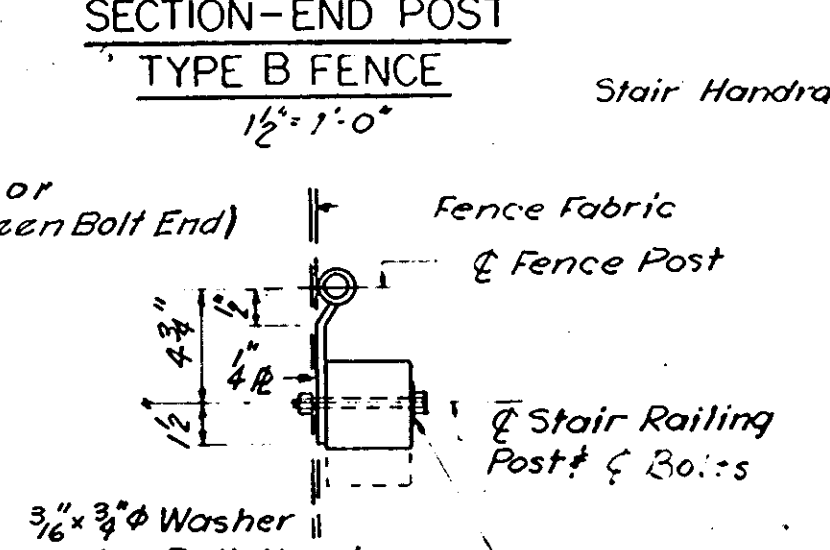
DETAIL C
3" = 1'-0"
Detail of end post similar



SECTION - END POST - TYPE A FENCE
3" = 1'-0"

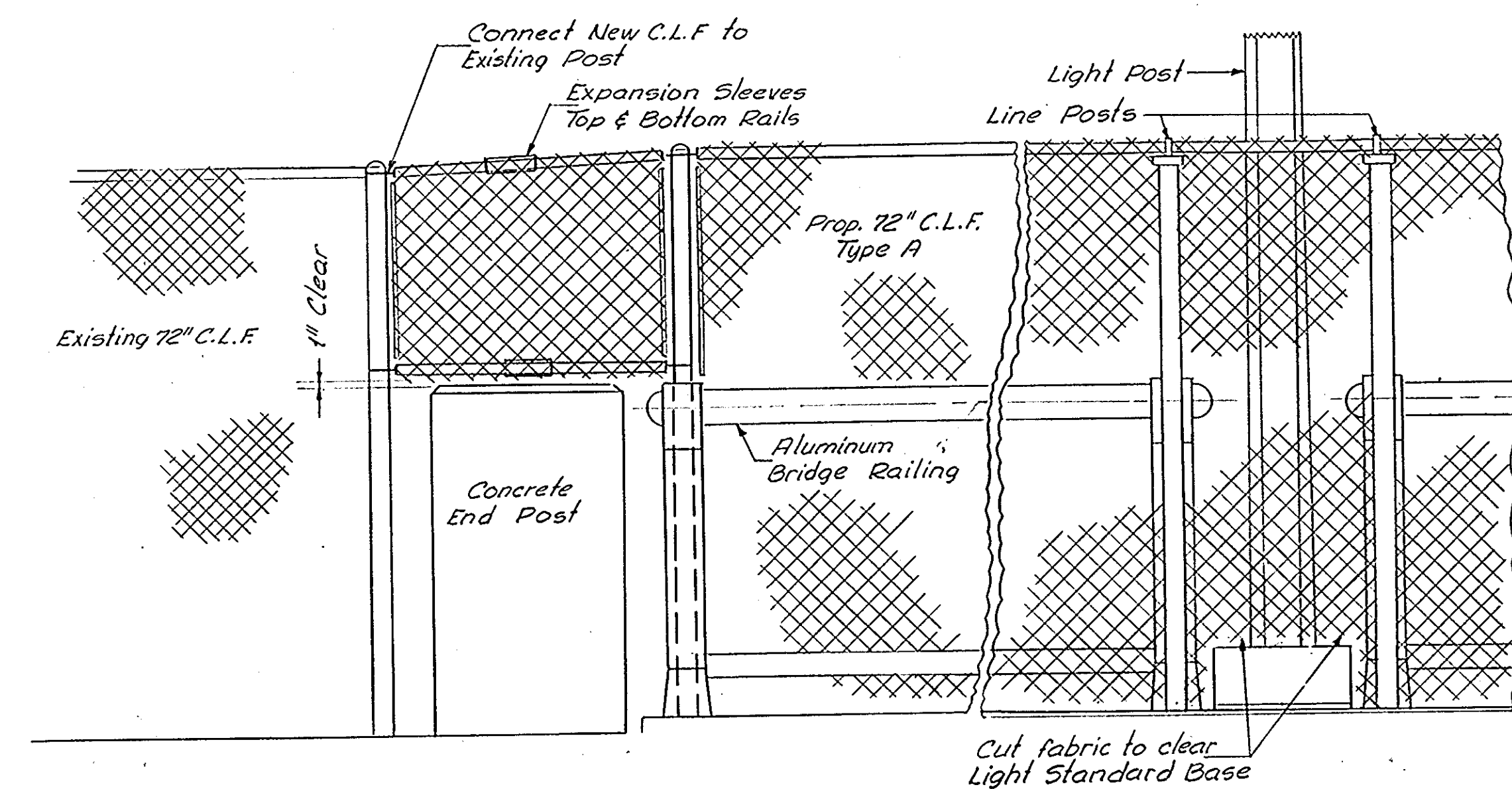


SECTION - LINE POST - TYPE A FENCE
3" = 1'-0"



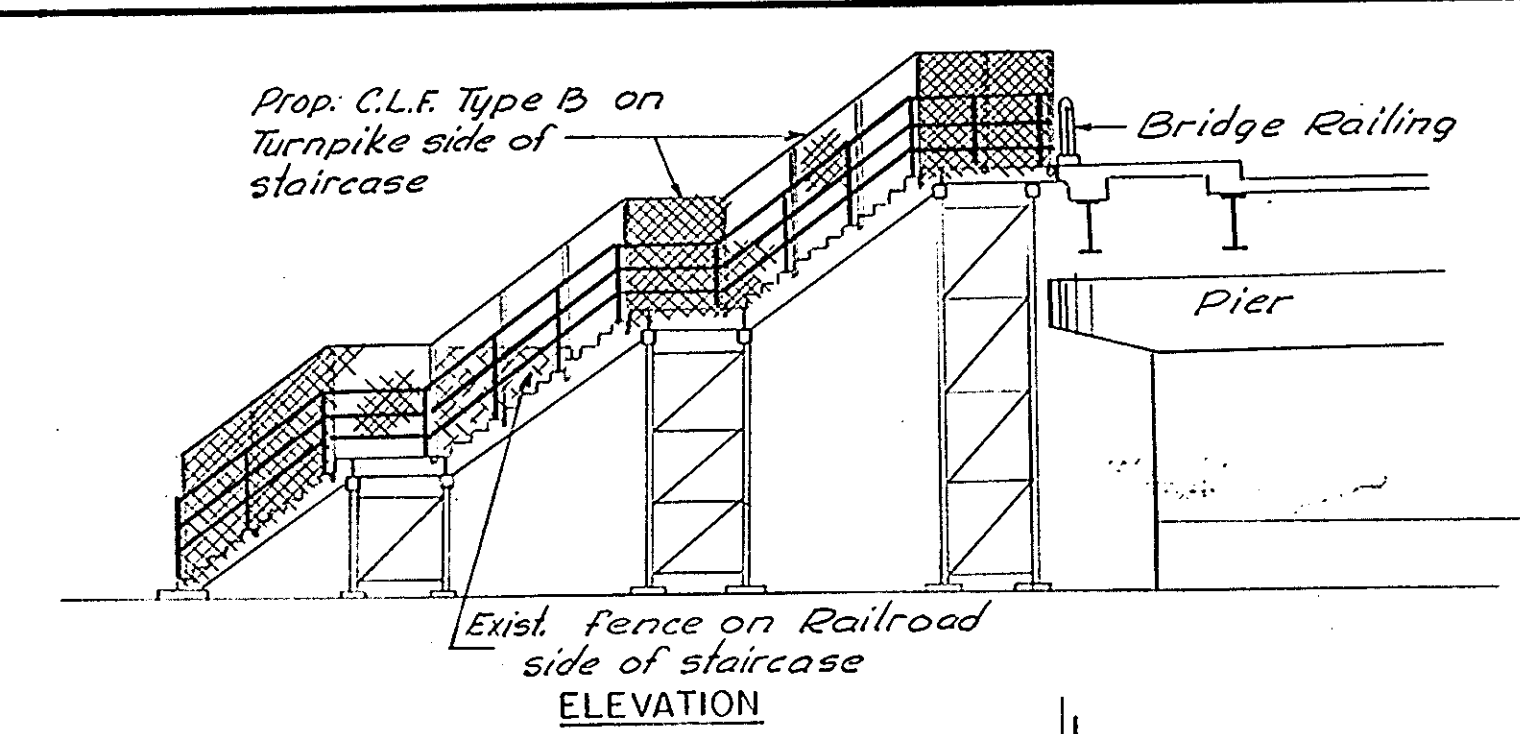
SECTION - END POST
TYPE B FENCE
1 1/2" = 1'-0"

SECTION - LINE POST
TYPE B FENCE
1 1/2" = 1'-0"

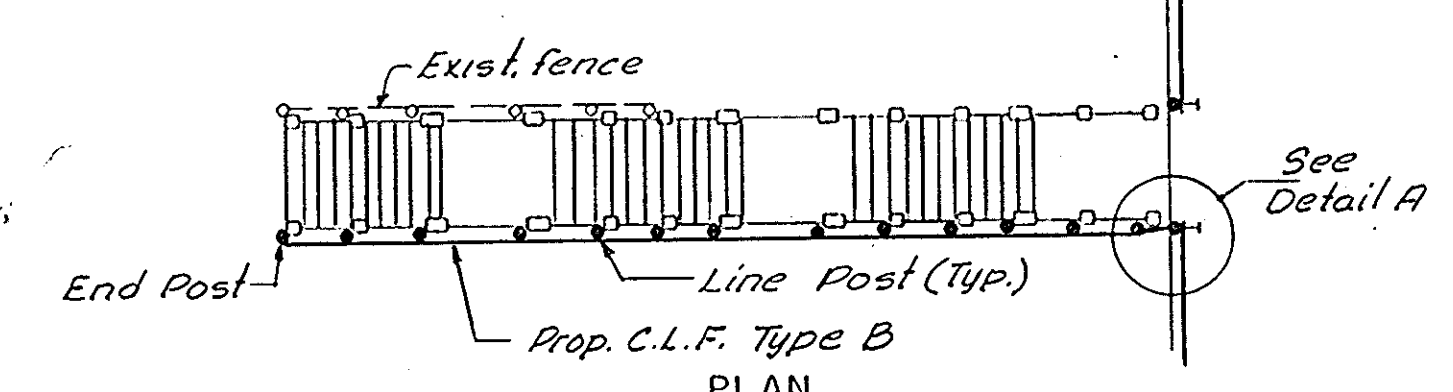


TYPICAL ELEVATION AT END POSTS
3/4" = 1'-0"

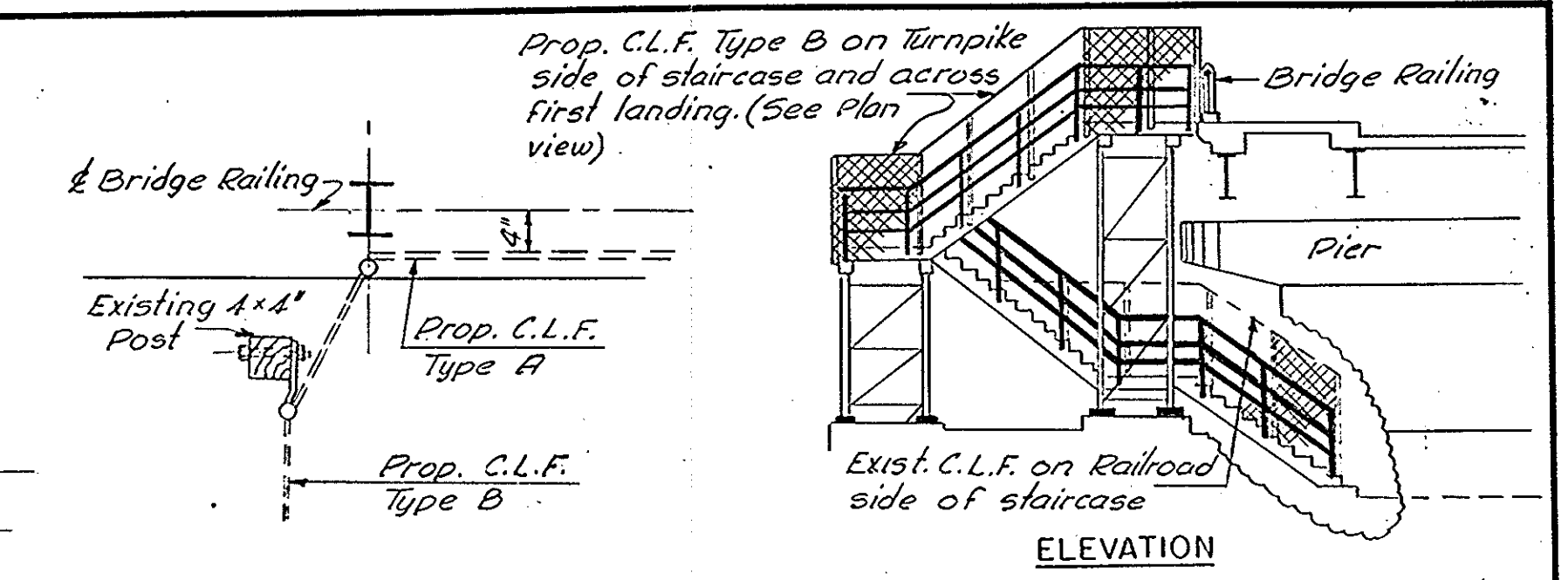
TYPICAL ELEVATION AT LIGHT STANDARDS
3/4" = 1'-0"



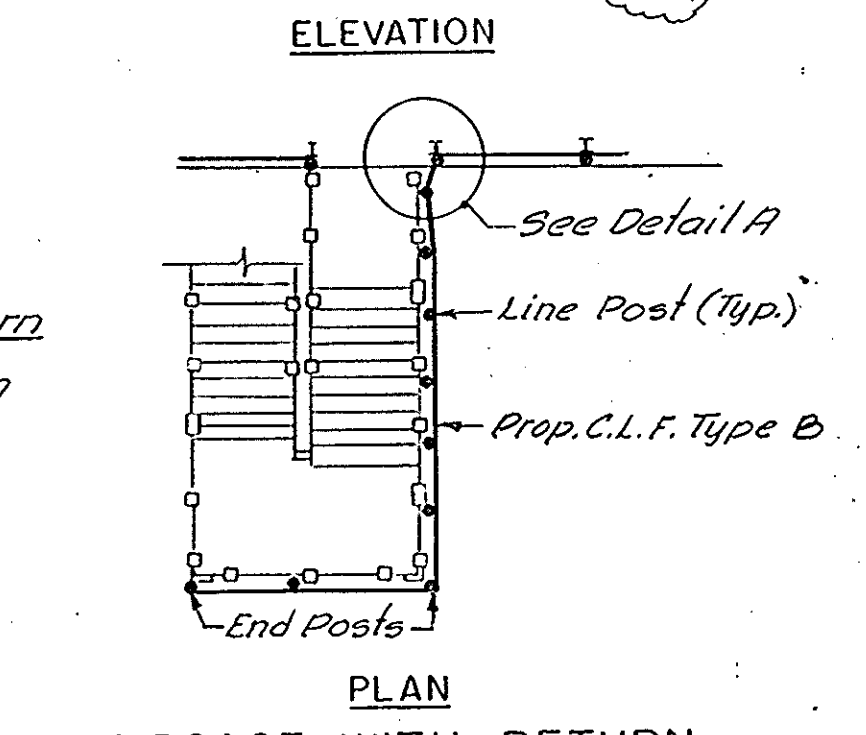
ELEVATION



PLAN
STRAIGHT STAIRCASE
1" = 10'

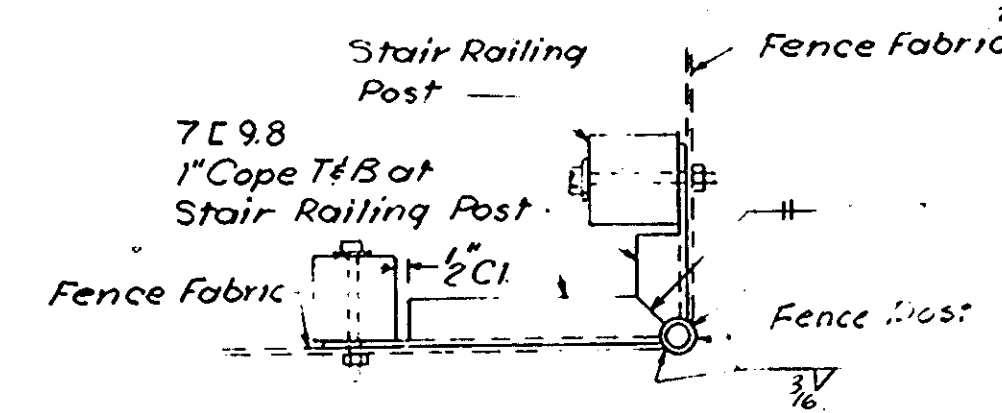


DETAIL A
3/4" = 1'-0"

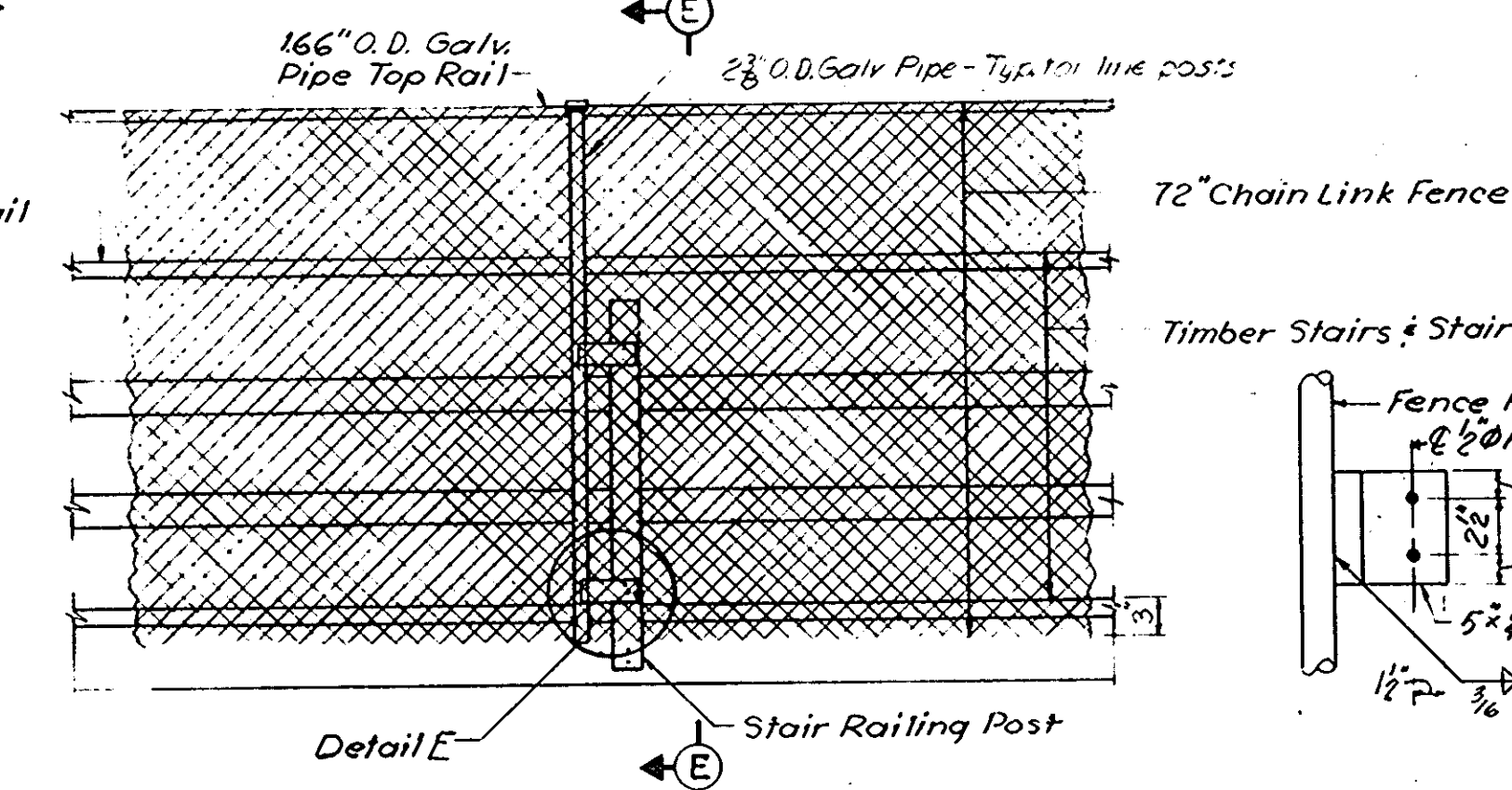


PLAN
STAIRCASE WITH RETURN
1" = 10'

DETAILS AT RAILROAD STAIRCASES

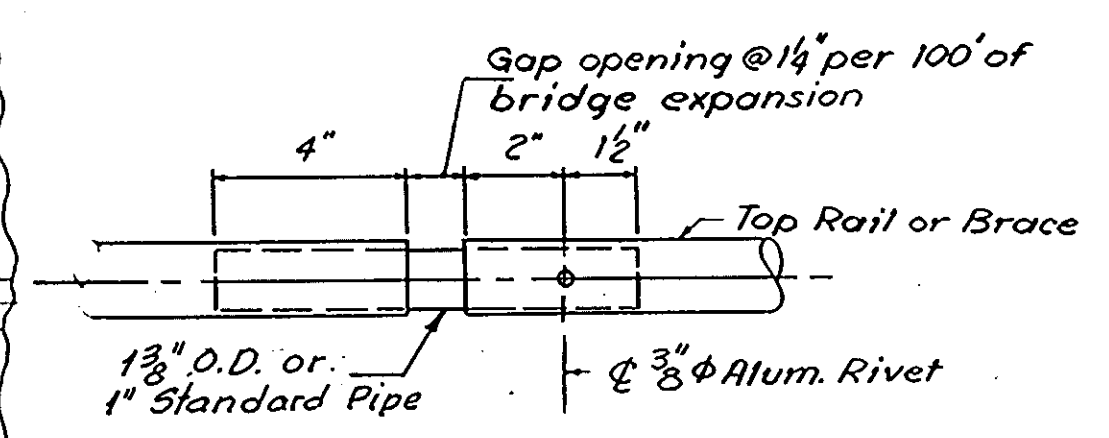


SECTION - END POST
TYPE B FENCE
1 1/2" = 1'-0"



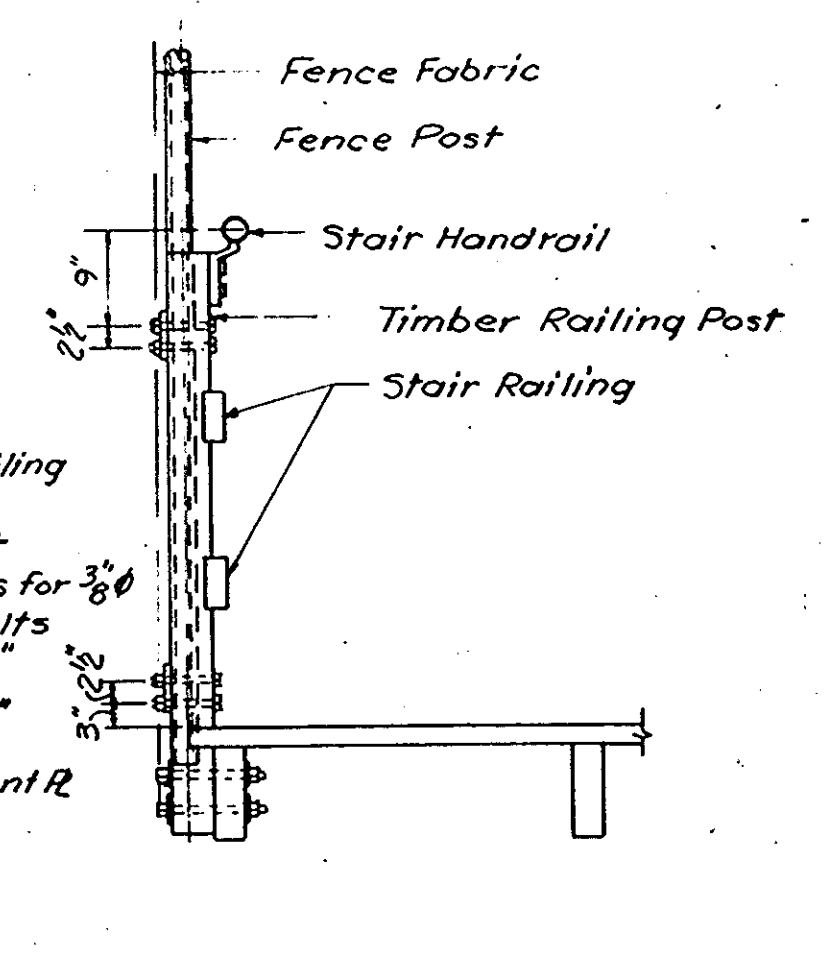
CHAIN LINK FENCE - TYPE B
1 1/2" = 1'-0"

Fence fabric shall have knuckled selvage top and barbed selvage bottom.
Pipe supporting members and connections shall be galvanized steel.



SLEEVE DETAIL
FOR BRIDGE CHAIN LINK FENCE
3" = 1'-0"

Sleeves shall be located in the top rail or brace in panels spanning bridge expansion joints.



SECTION E-E
3/4" = 1'-0"

DETAIL E
Note: Detail of End Posts Similar
1 1/2" = 1'-0"

1. Material designations for chain link fence material shall be as specified in the Special Provisions.
2. Pipe supporting members and hardware for fences shall be aluminum unless otherwise noted.
3. Fence fabric shall be 11-gauge aluminum coated steel wire with knuckled selvage top & bottom unless otherwise noted.
Sizes of connecting hardware shall be as follows:
Fabric Ties: 0.149" dia.
Stretcher Bars: 3/8" x 1/4"
Brace & Stretcher Bands: 7/8" x 1/8"
4. Holes in aluminum material shall be accurately located & drilled to a size that will provide a tight fit for connection bolts.
5. For Bridge Railing Plans and location of fan guards, see Sheets 2-13.

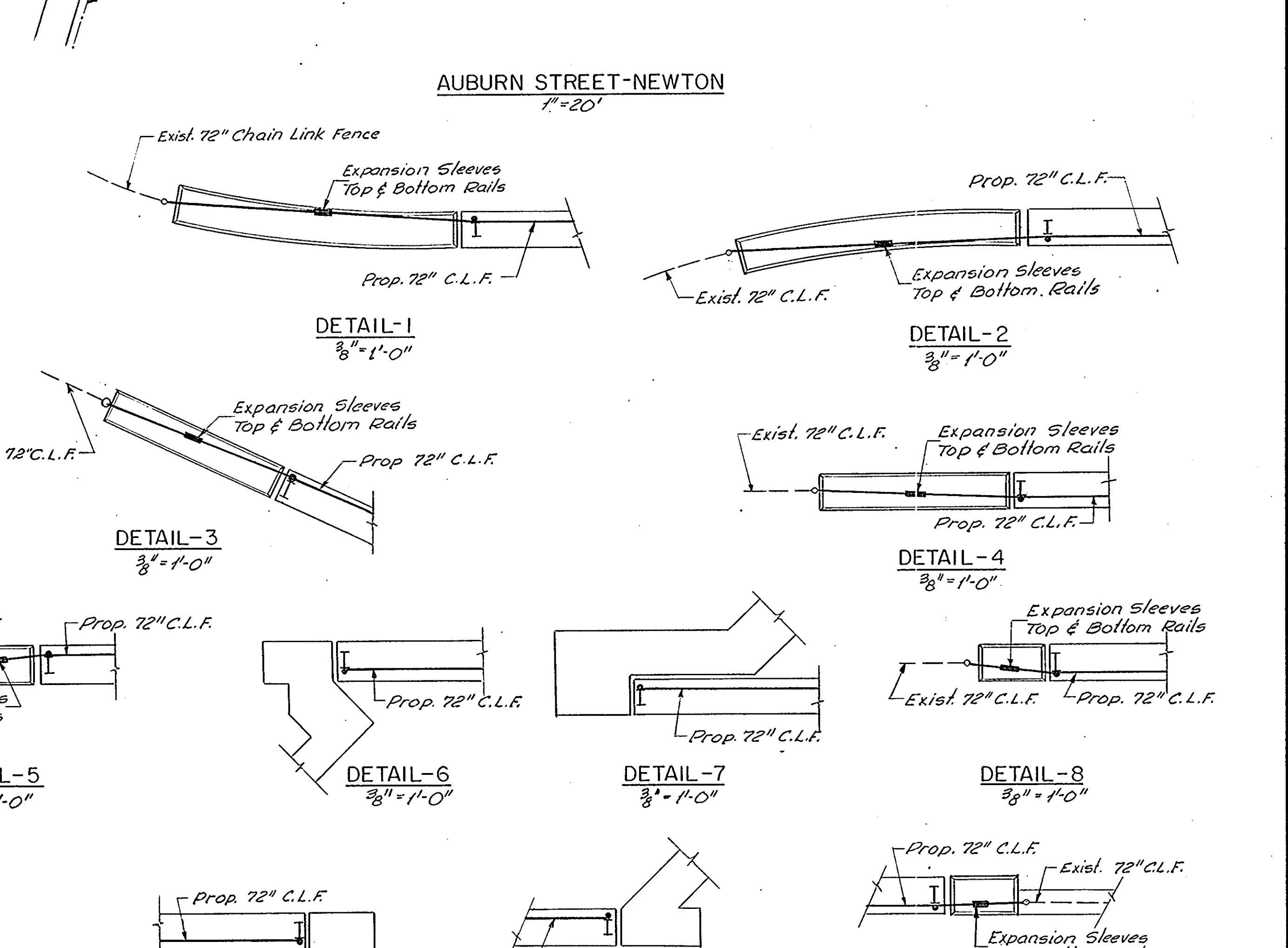
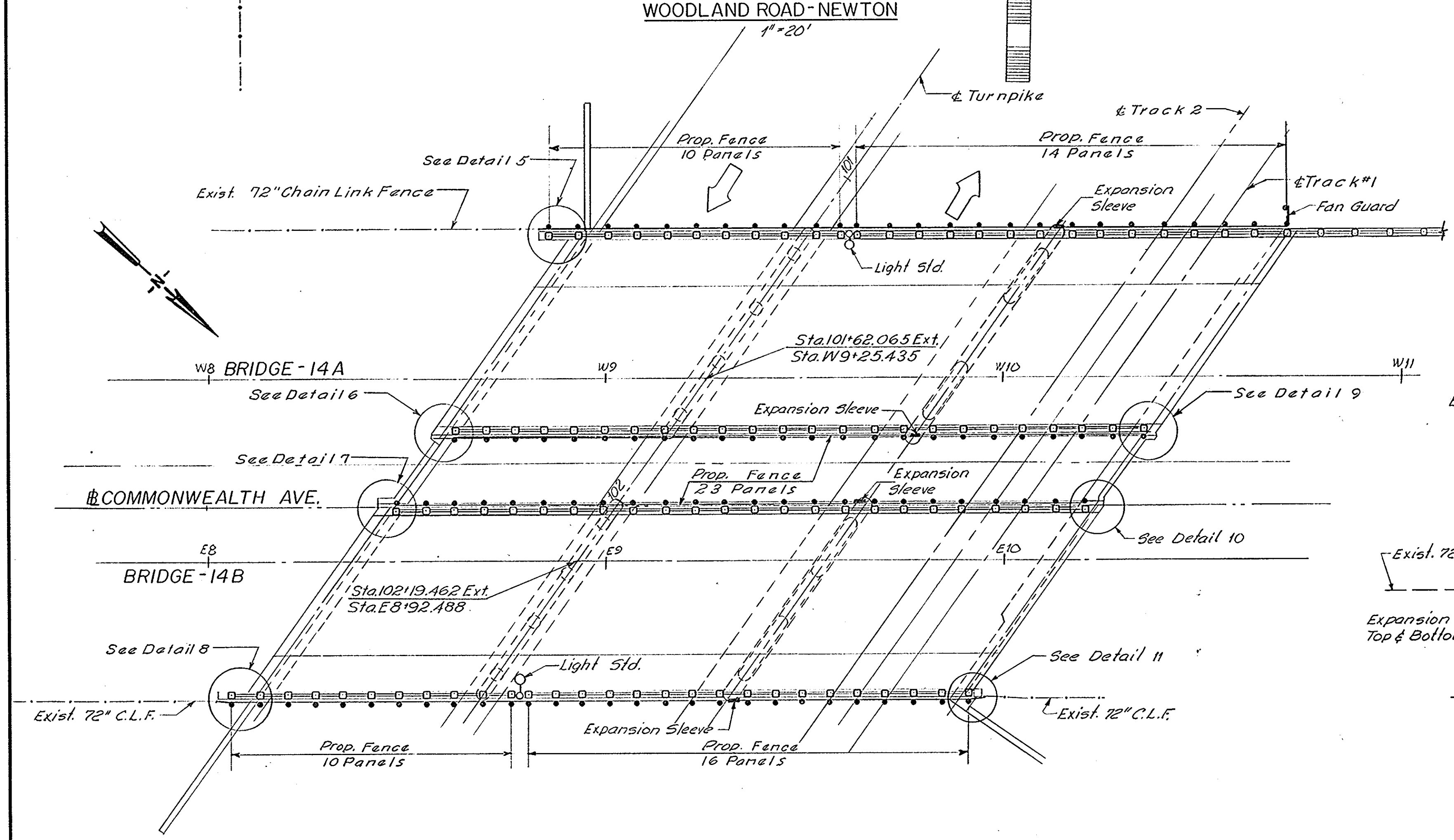
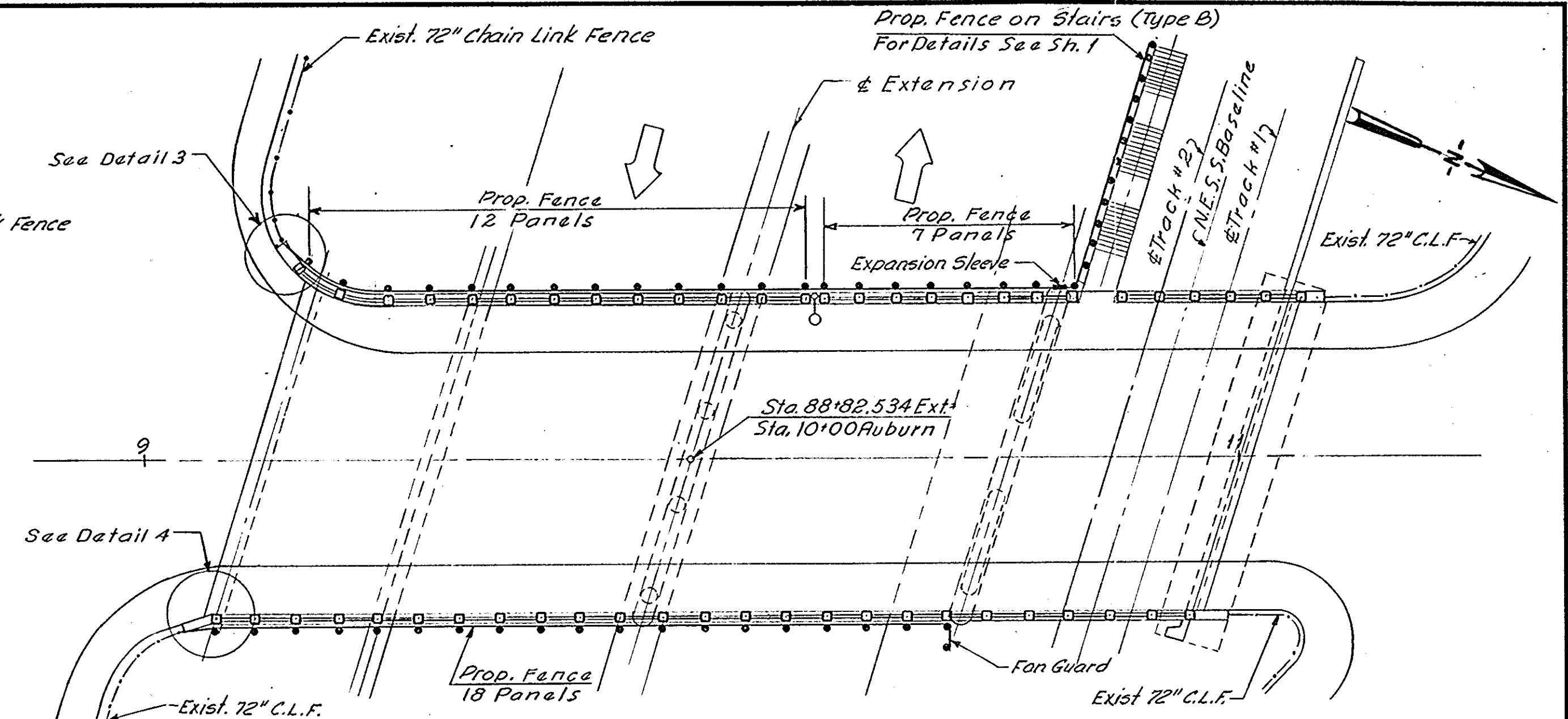
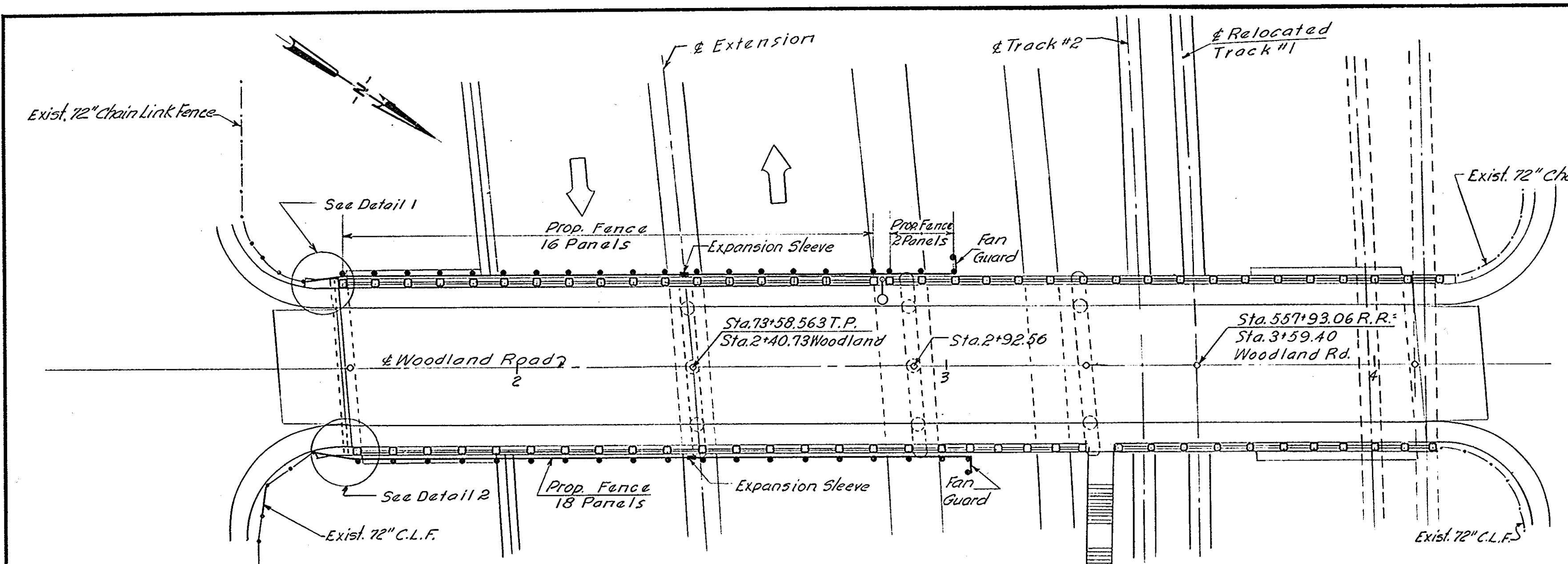
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		IN CHARGE OF	J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
TYPICAL DETAILS

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SCALE: AS NOTED
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SHEET NO. 1 of 13



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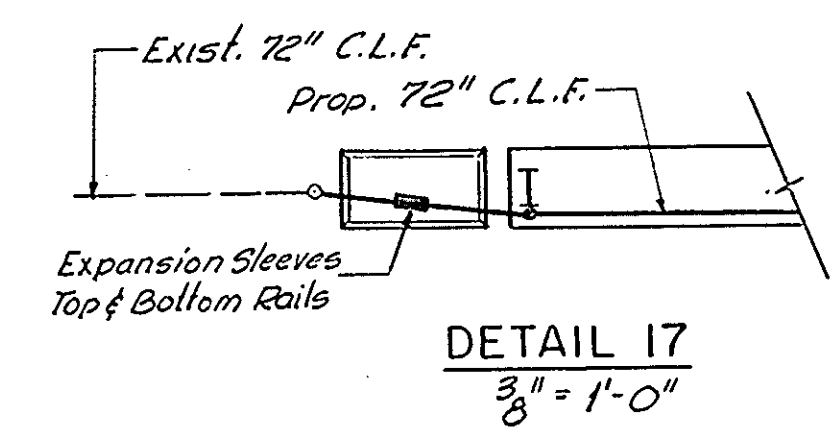
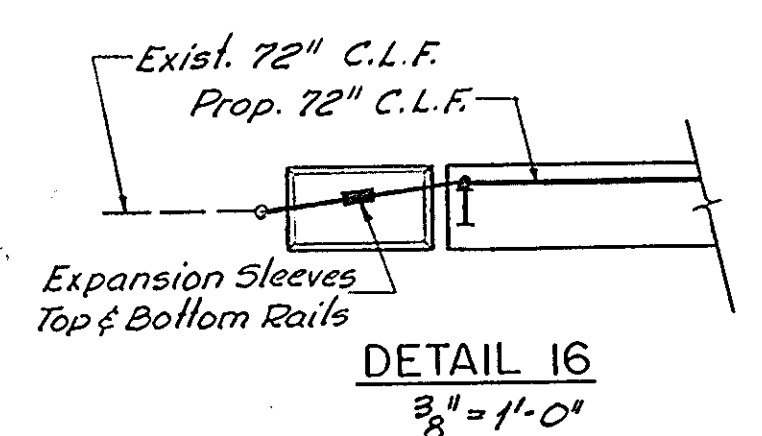
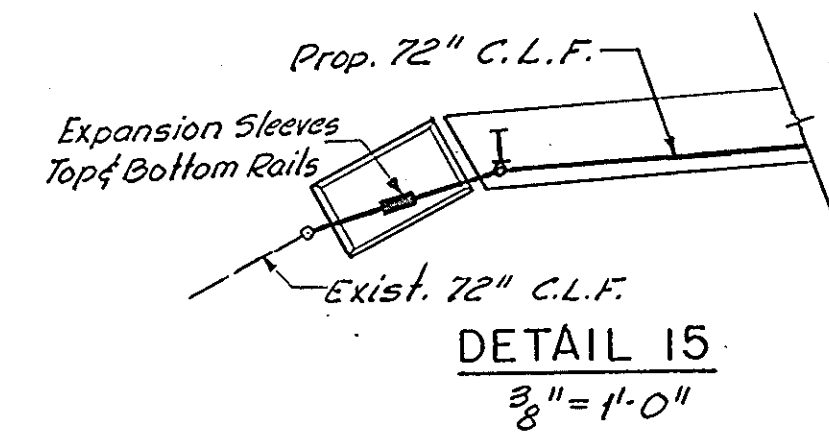
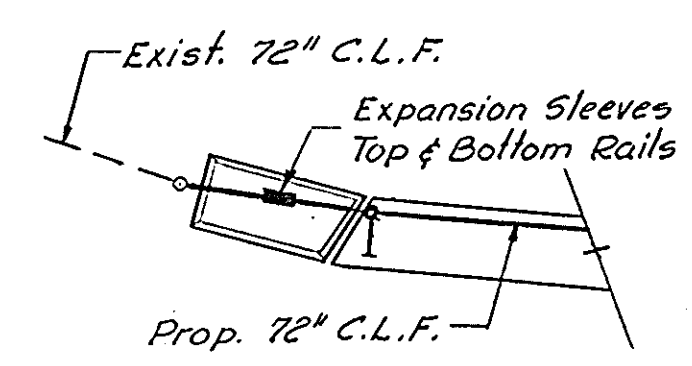
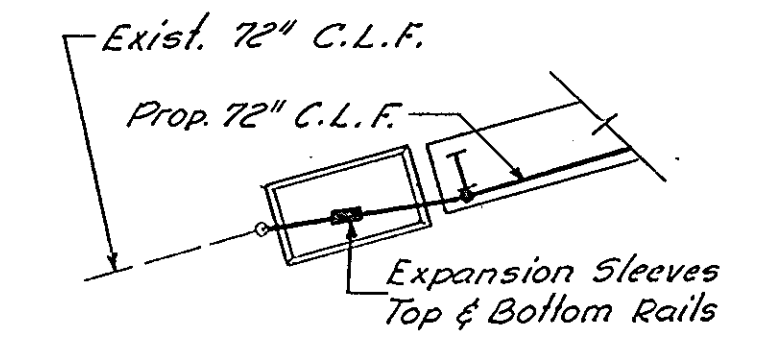
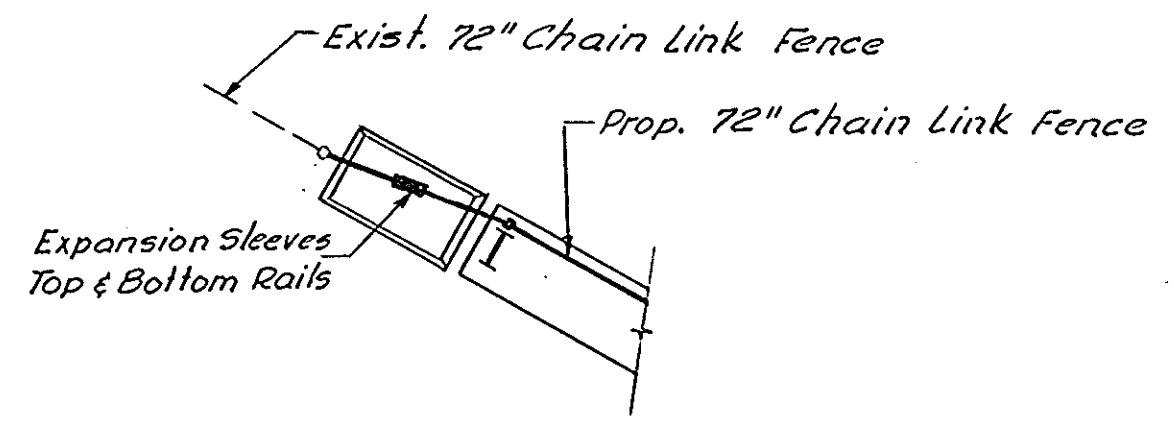
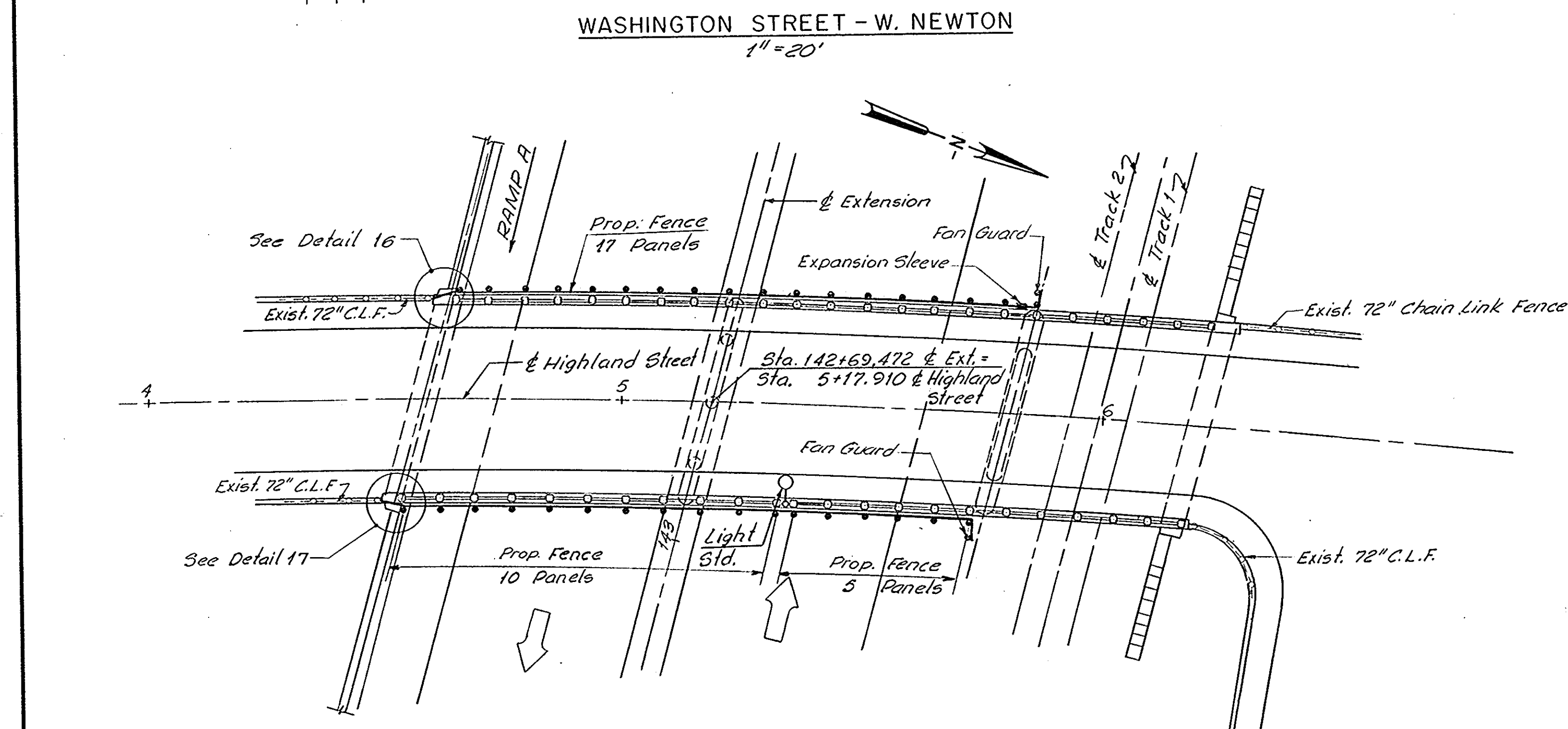
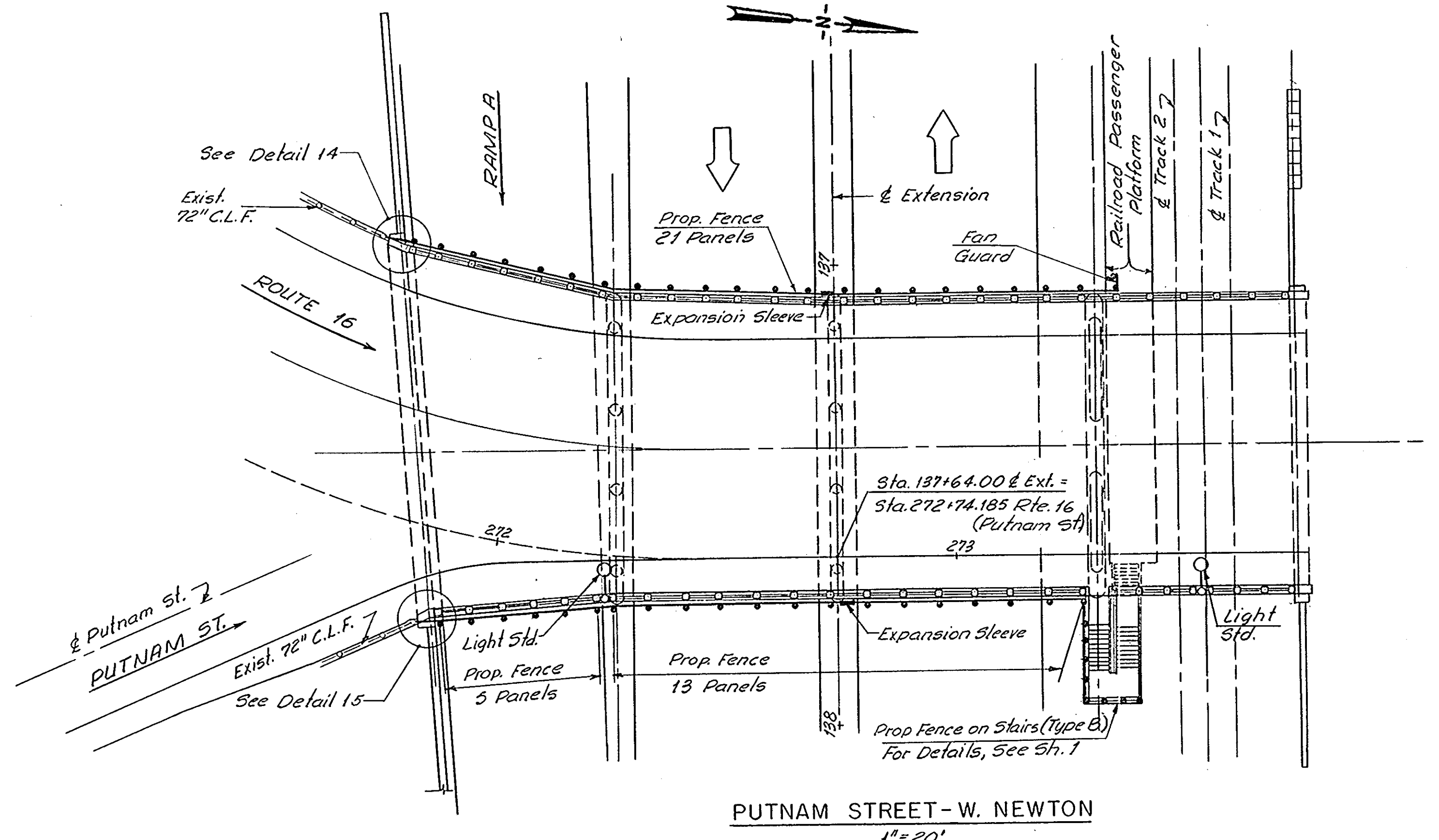
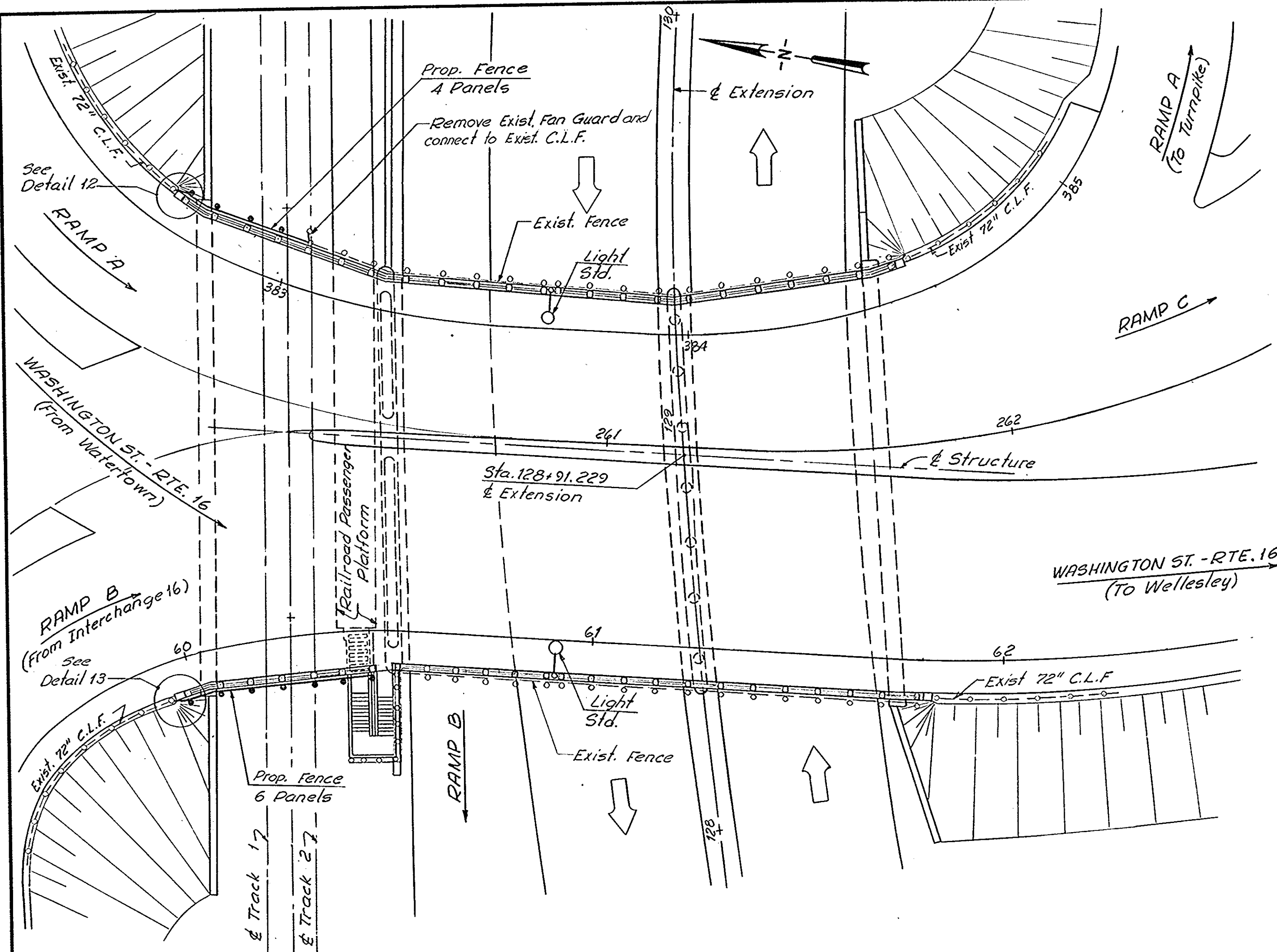
NOTE: For General Notes, Typical Sections and Details see Sheet No. 1.

MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
 WOODLAND RD.-NEWTON AUBURN ST.-NEWTON
 COMMONWEALTH AVE.-NEWTON

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SCALE: AS NOTED
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NOTE
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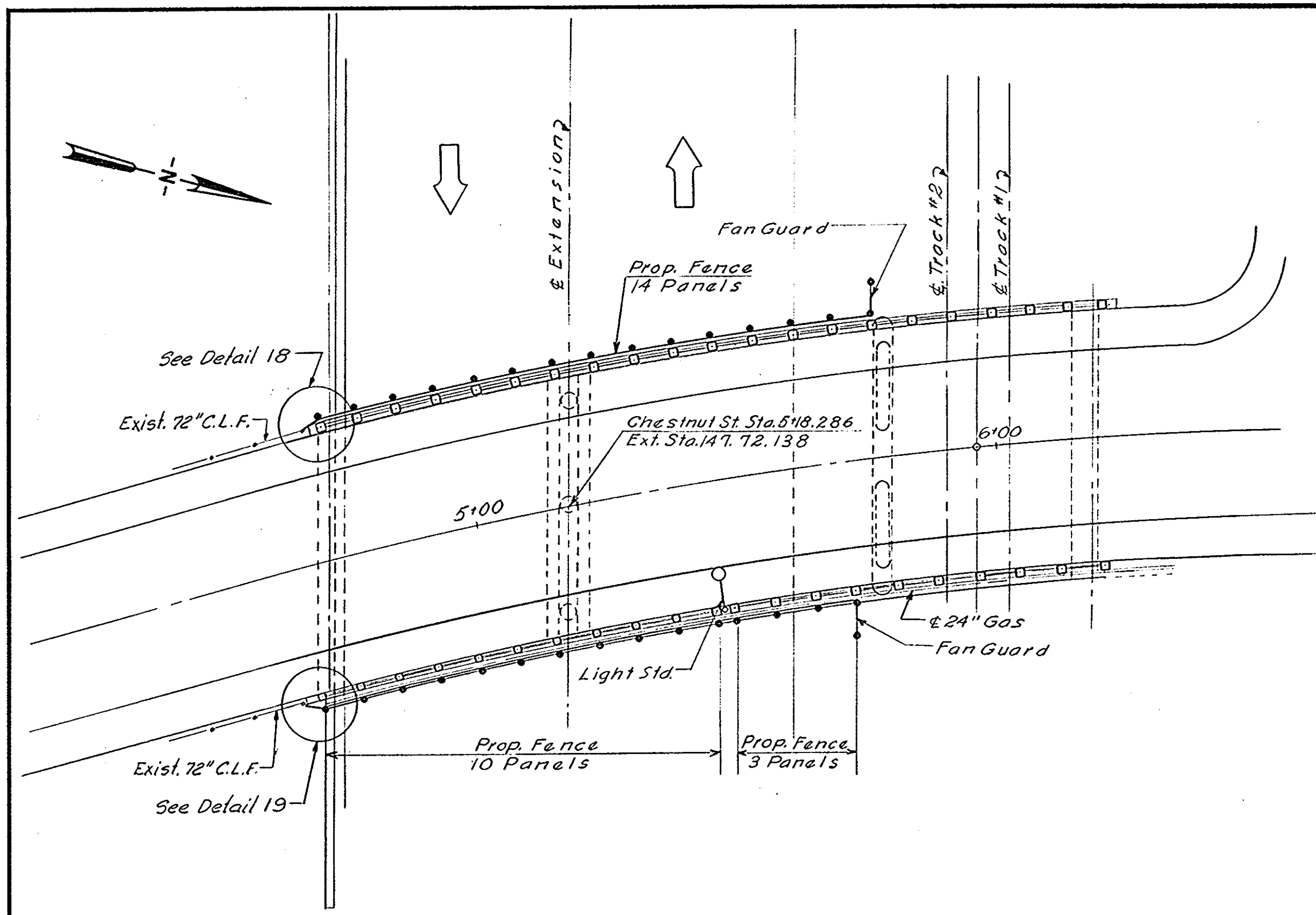
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MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

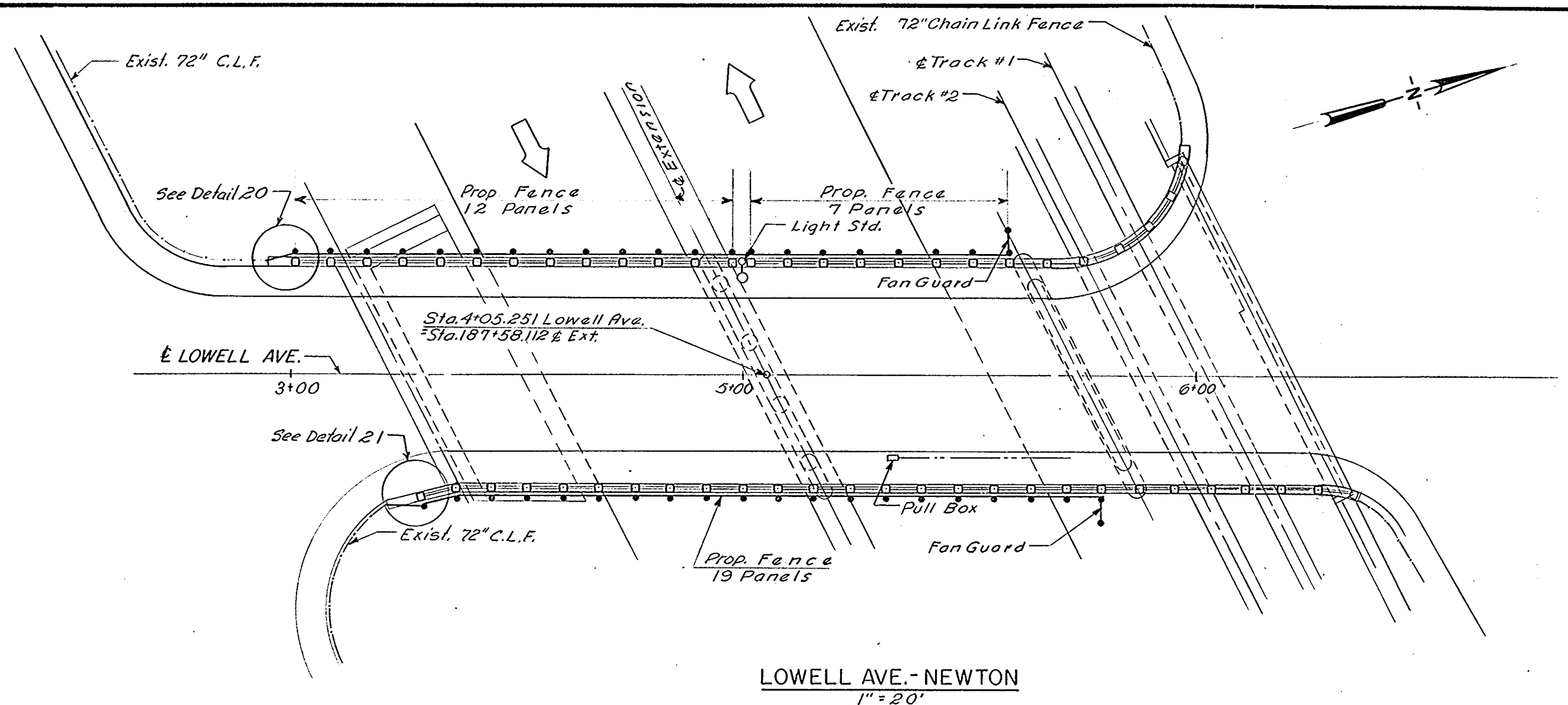
CHAIN LINK FENCE ON BRIDGES
WASHINGTON ST.-W. NEWTON | PUTNAM ST.-W. NEWTON
HIGHLAND ST.-NEWTON

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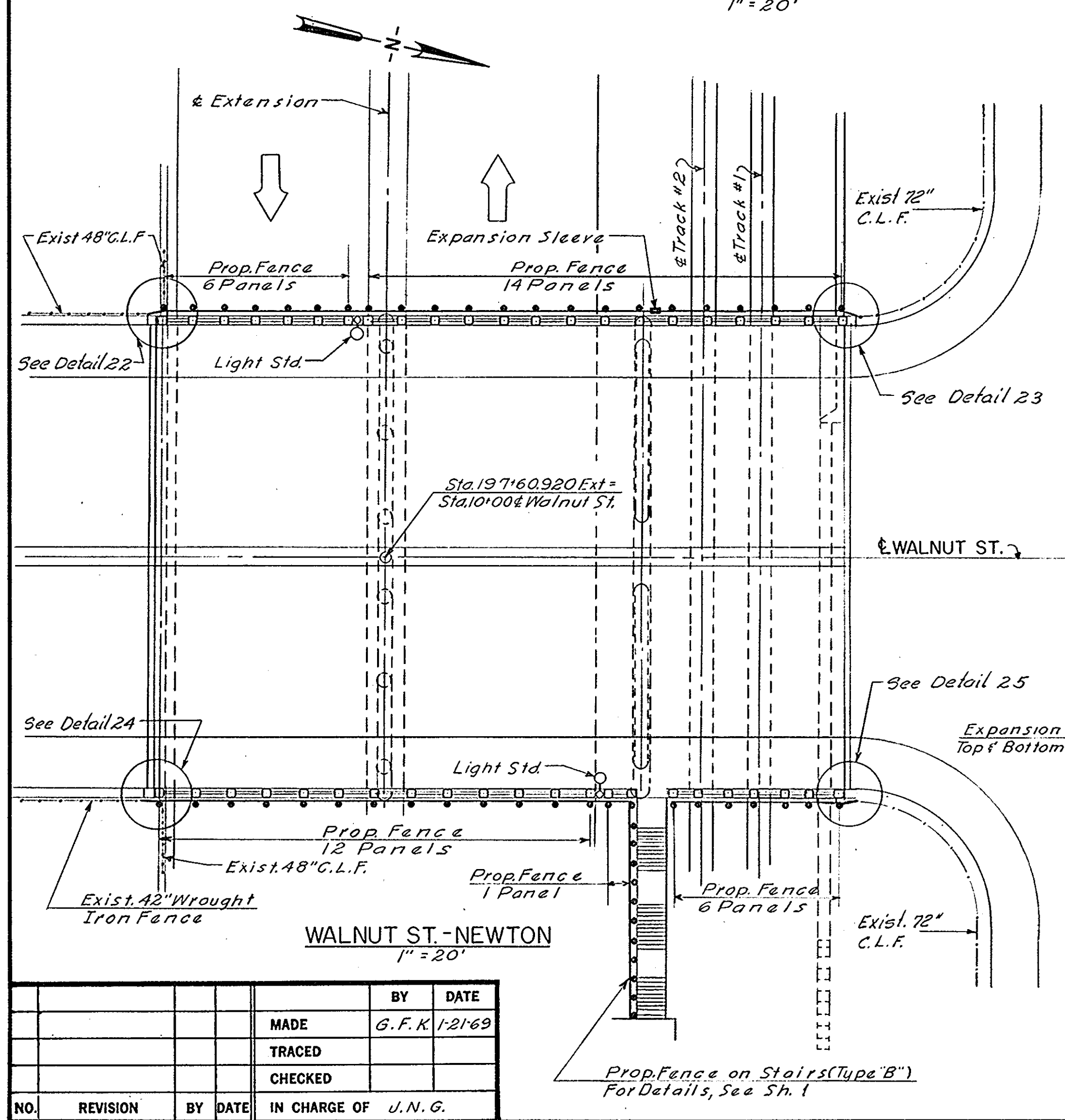
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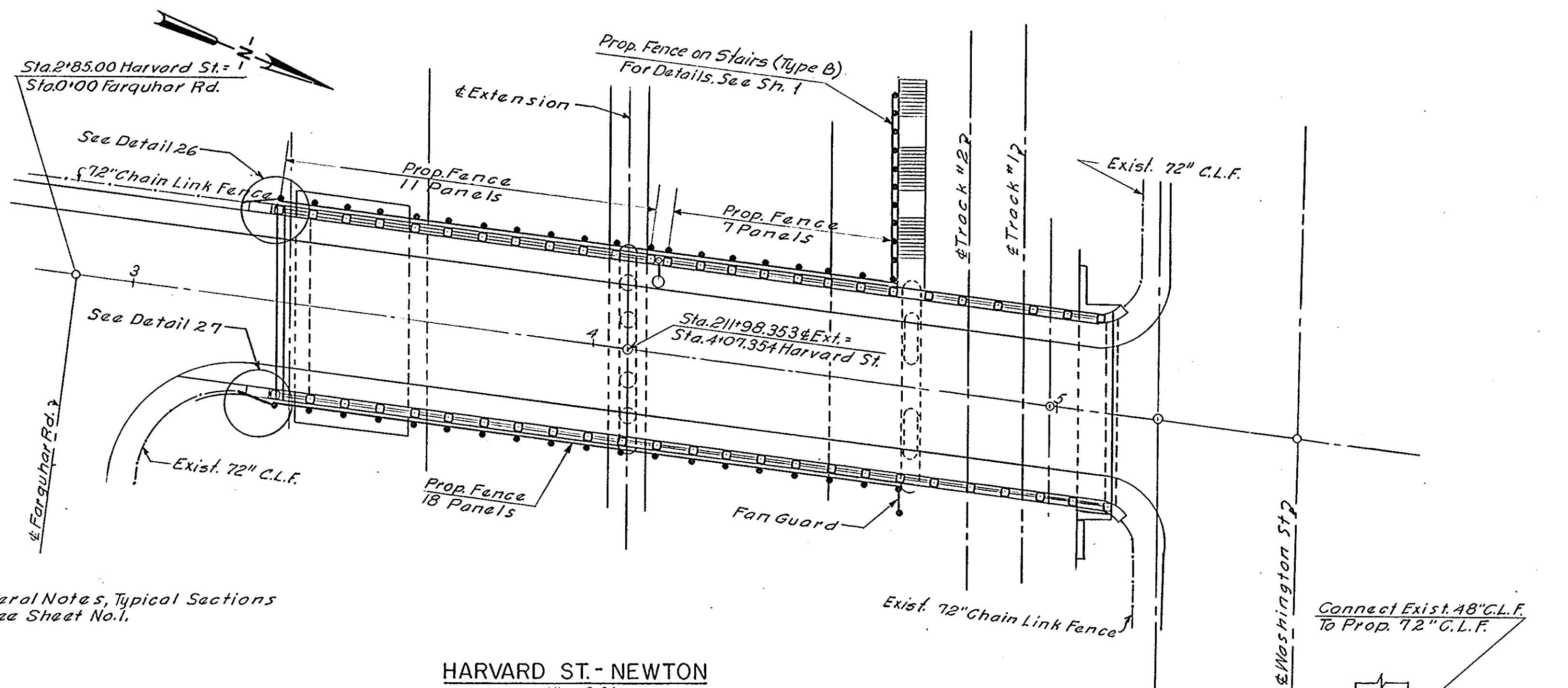
CHESTNUT ST.-NEWTON
1" = 20'



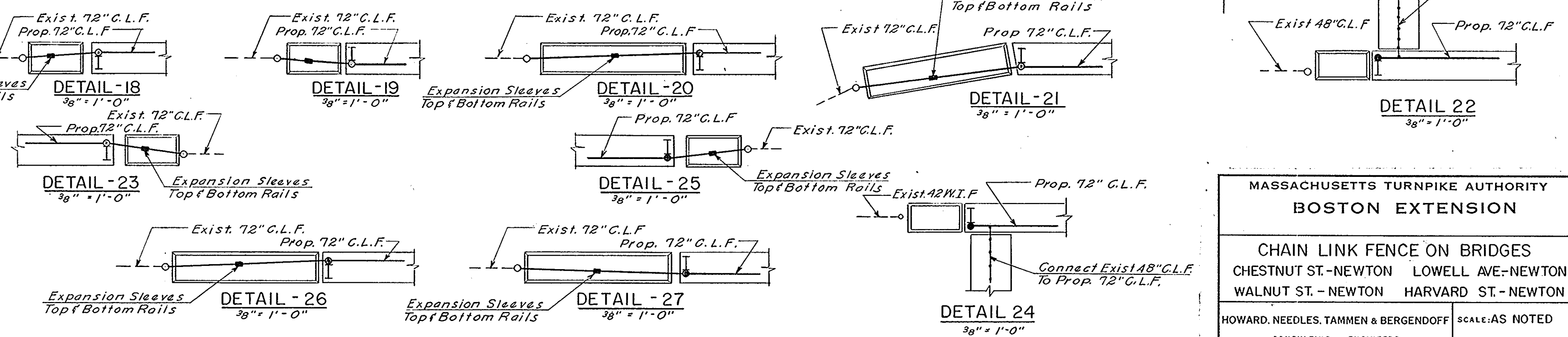
LOWELL AVE.-NEWTON
1" = 20'



WALNUT ST.-NEWTON
1" = 20'



HARVARD ST.-NEWTON
1" = 20'



NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

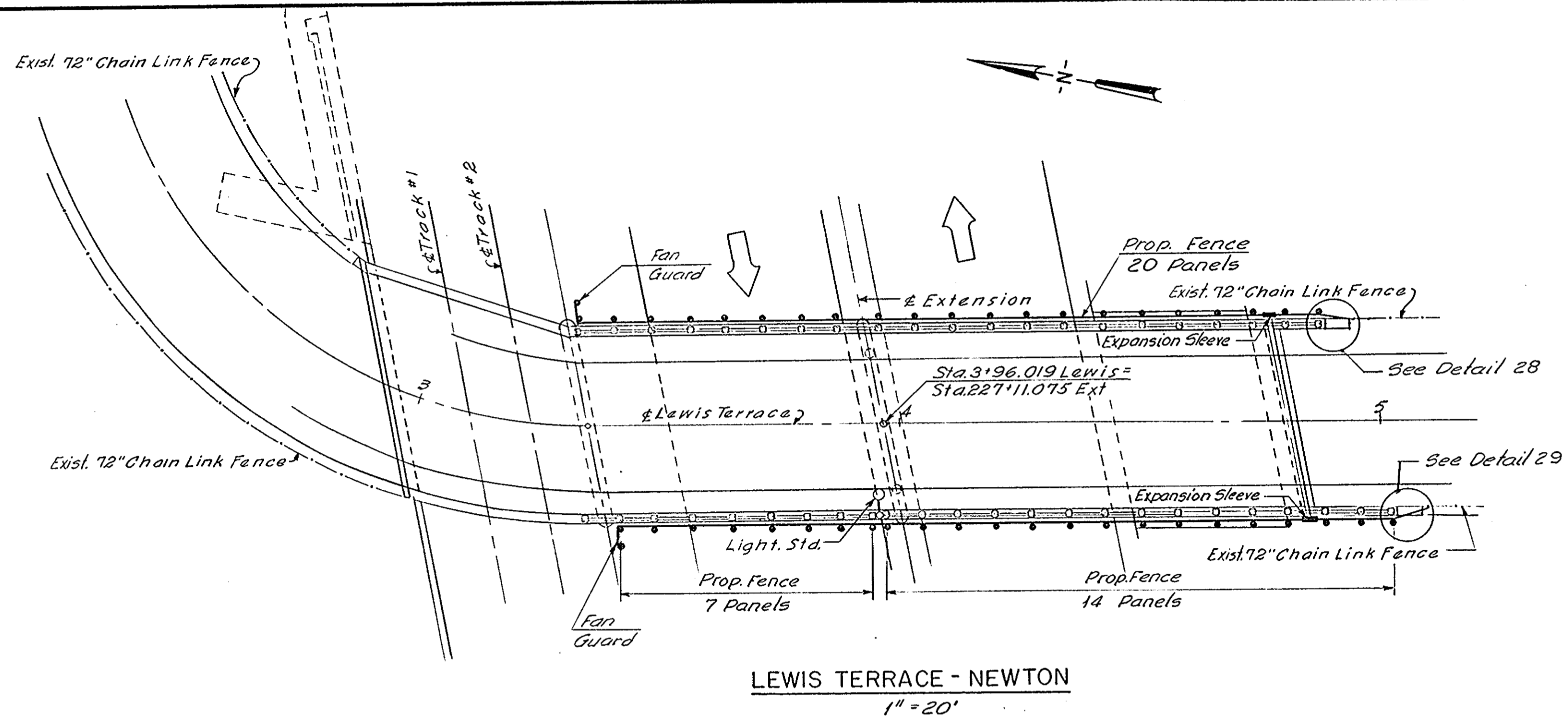
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MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

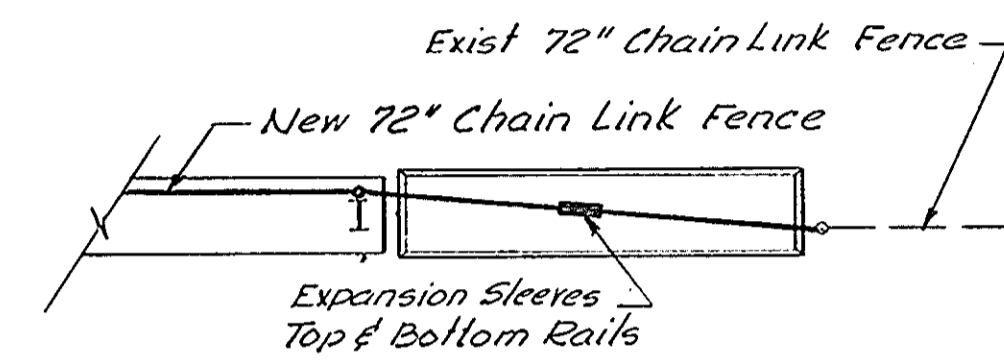
CHAIN LINK FENCE ON BRIDGES
CHESTNUT ST.-NEWTON LOWELL AVE.-NEWTON
WALNUT ST.-NEWTON HARVARD ST.-NEWTON

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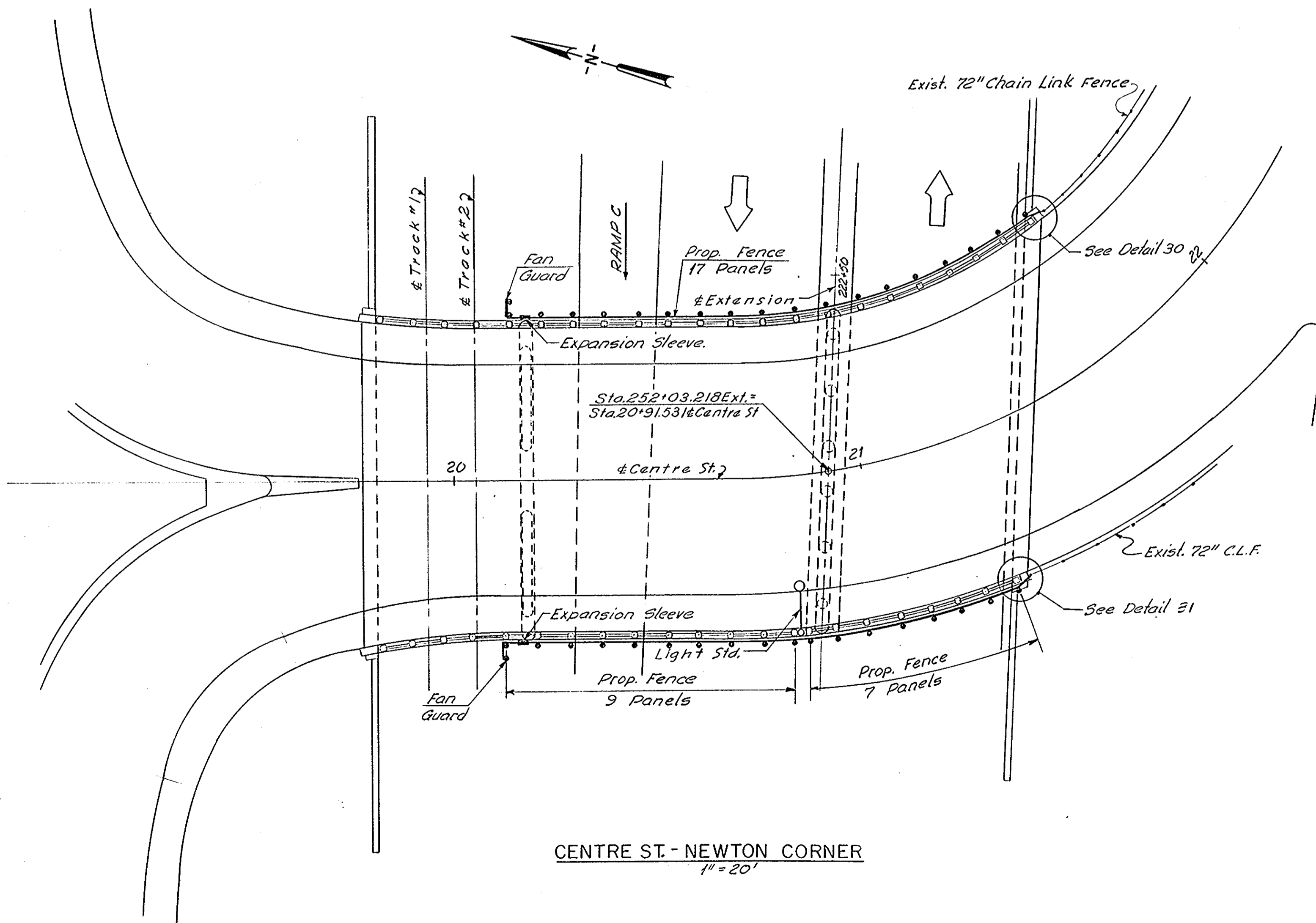
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CONT. NO. 551-0031
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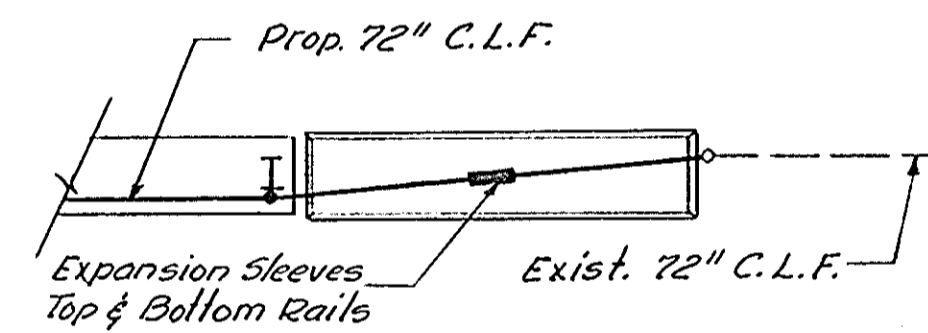
LEWIS TERRACE - NEWTON
1" = 20'



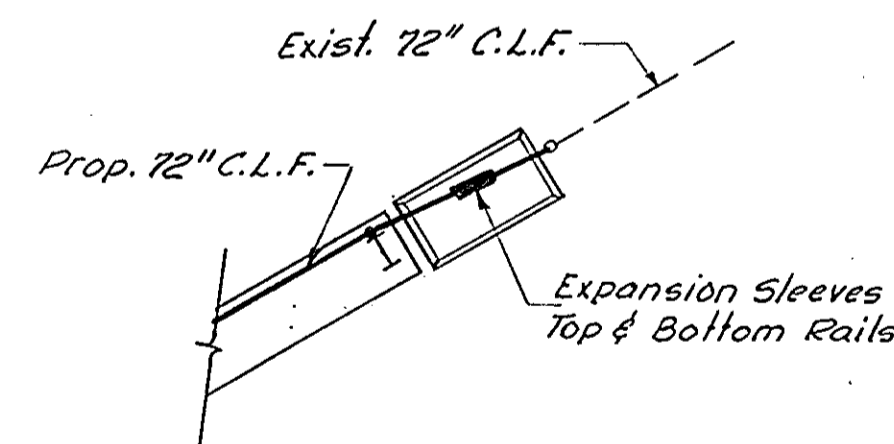
DETAIL 28
3/8" = 1'-0"



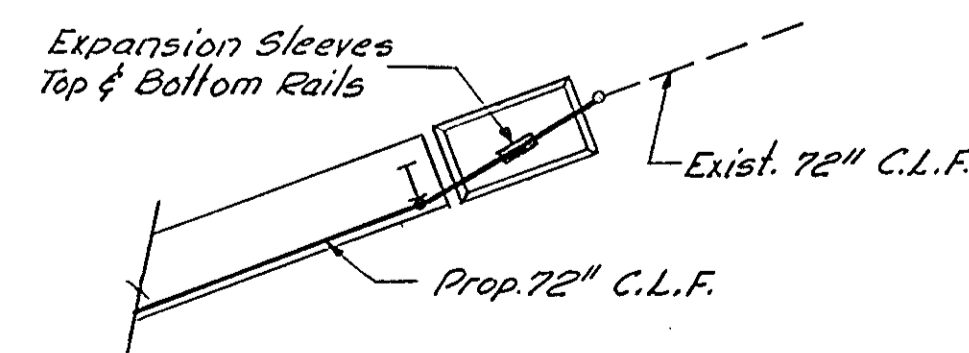
CENTRE ST. - NEWTON CORNER
1" = 20'



DETAIL 29
3/8" = 1'-0"



DETAIL 30
3/8" = 1'-0"

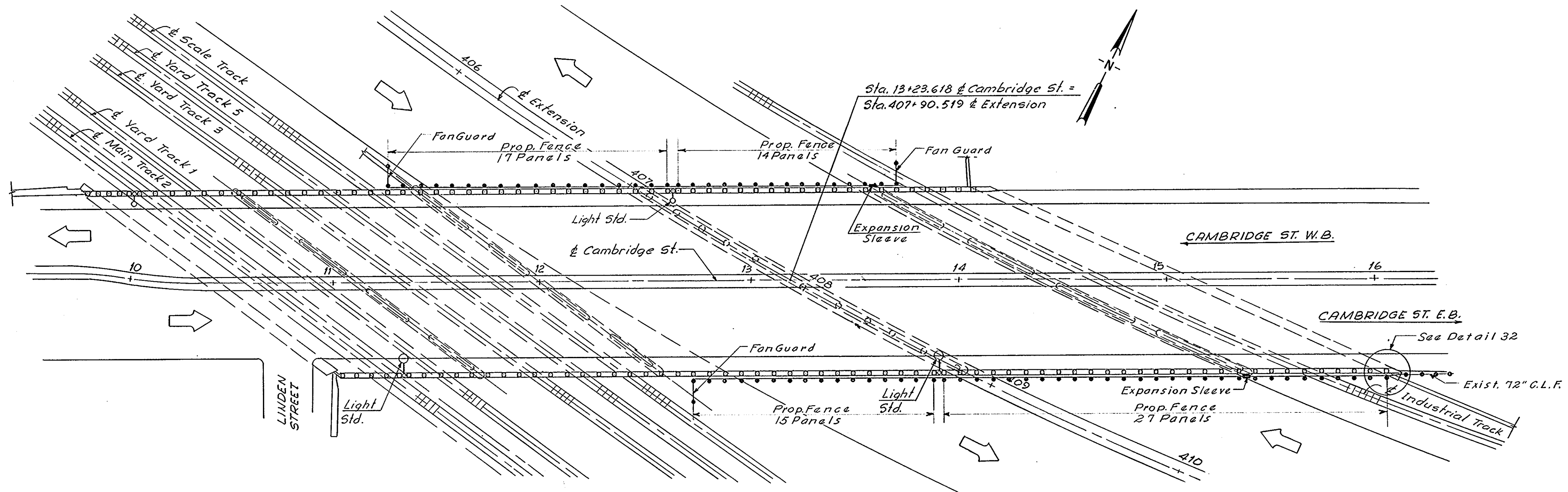


DETAIL 31
3/8" = 1'-0"

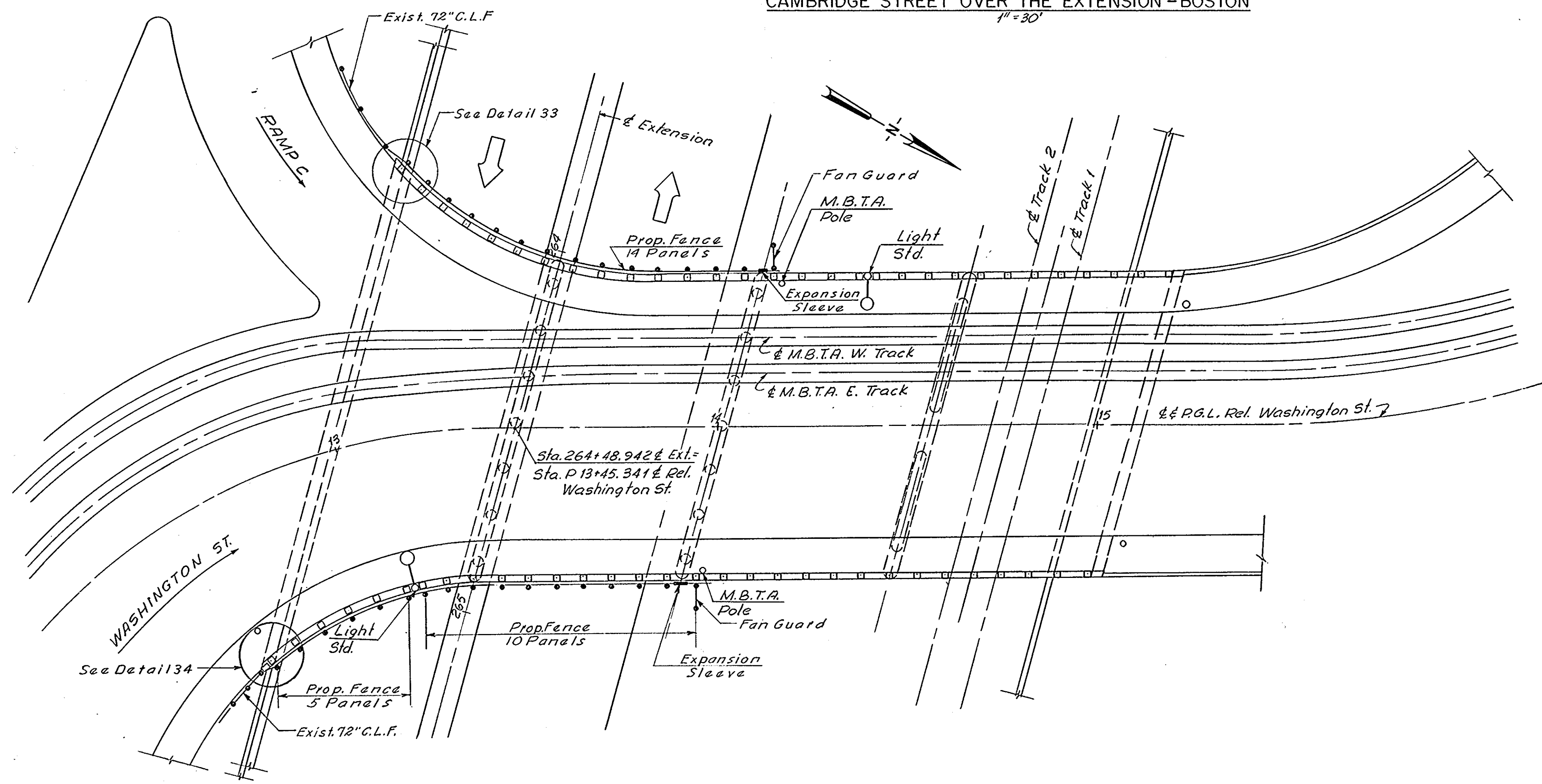
NOTE
For General Notes, Typical Sections and Details, see Sheet No. 1.

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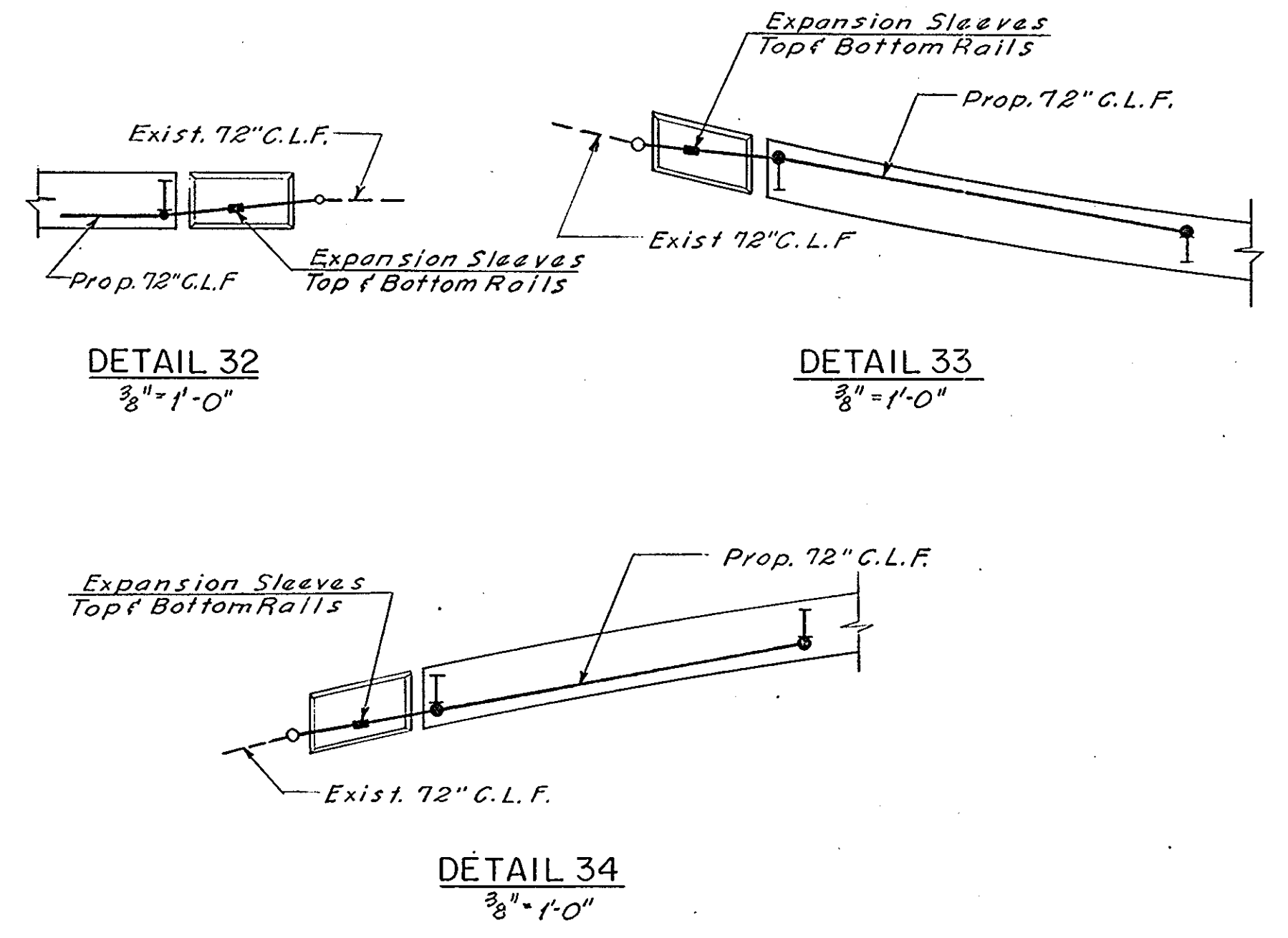
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES LEWIS TERRACE - NEWTON CENTRE ST. - NEWTON CORNER	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 5 of 13 KANSAS CITY



CAMBRIDGE STREET OVER THE EXTENSION - BOSTON
1" = 30'



WASHINGTON STREET - NEWTON CORNER
1" = 20'



DETAIL 32
3/8" = 1'-0"

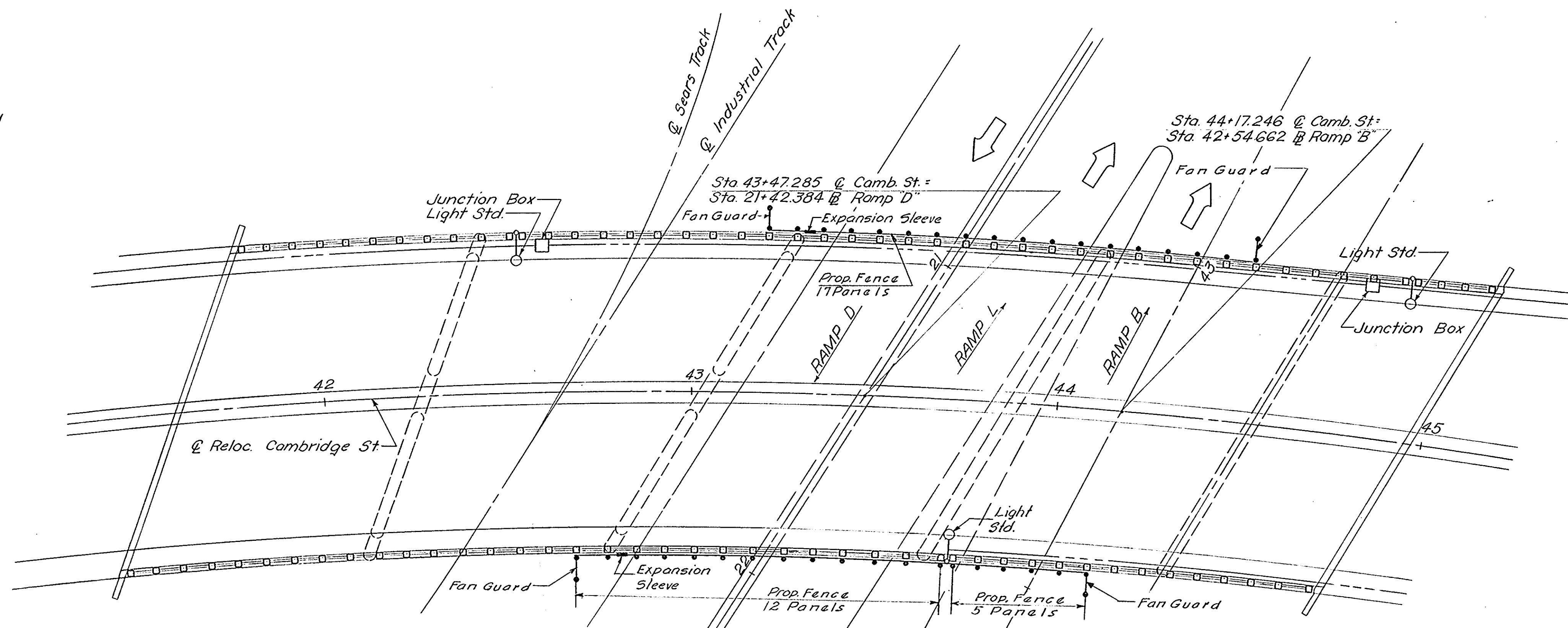
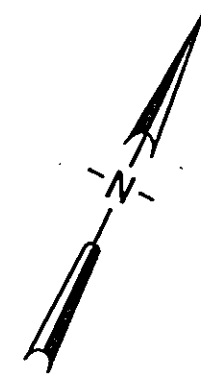
DETAIL 33
3/8" = 1'-0"

DETAIL 34
3/8" = 1'-0"

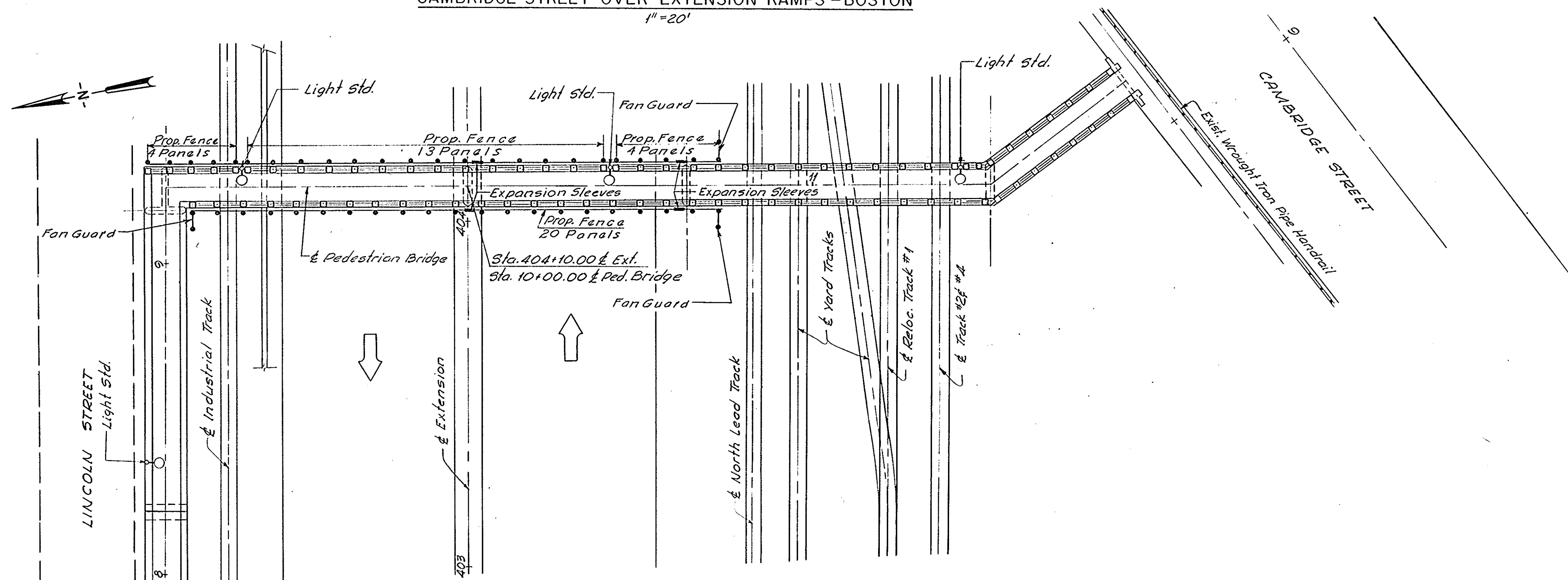
NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

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				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES CAMBRIDGE ST. OVER THE EXTENSION - BOSTON WASHINGTON ST. - NEWTON CORNER	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK KANSAS CITY	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 6 of 13



CAMBRIDGE STREET OVER EXTENSION RAMP - BOSTON
1" = 20'



PEDESTRIAN BRIDGE AT CAMBRIDGE STREET - BOSTON
1" = 20'

NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

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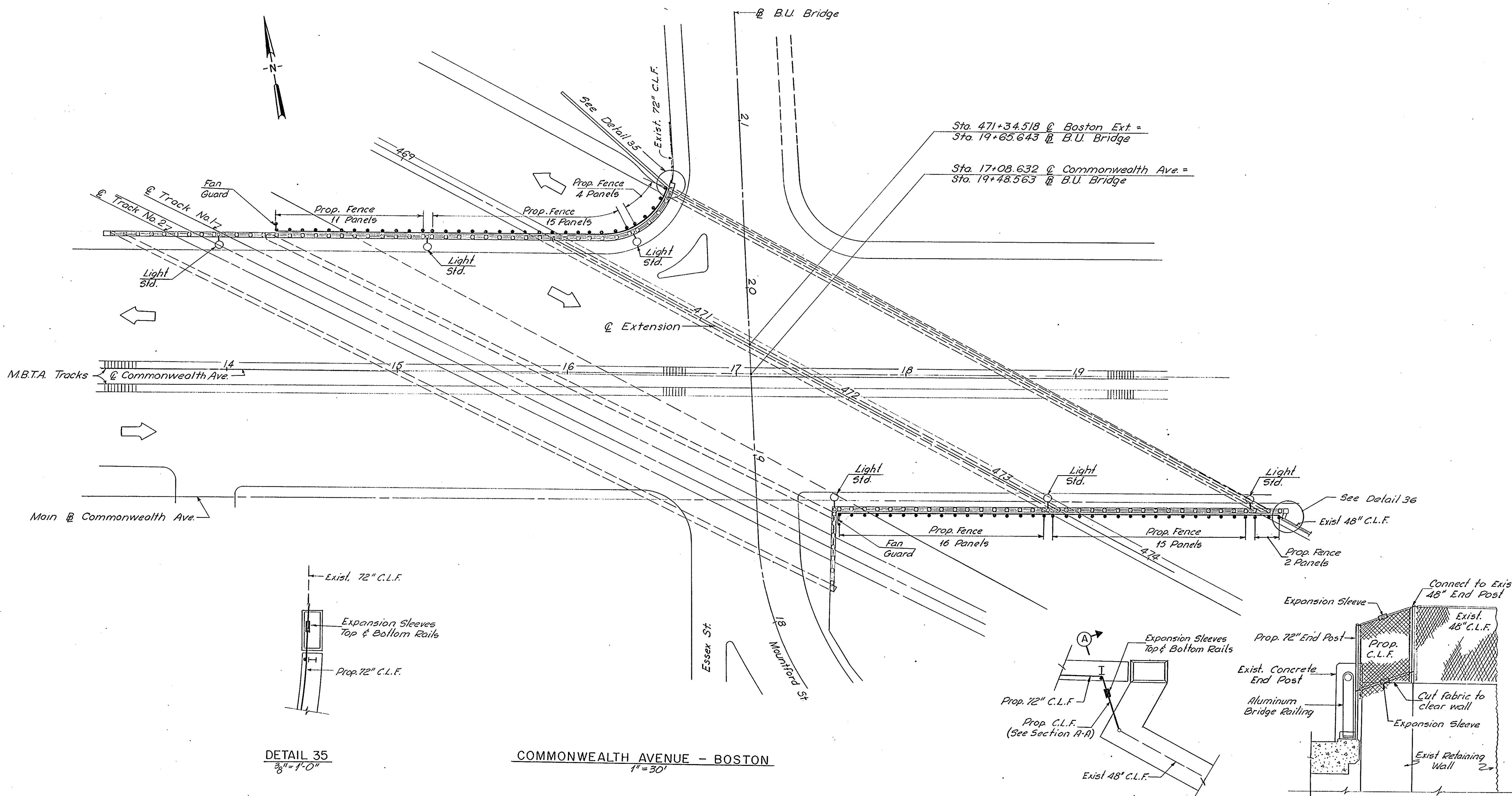
Concrete Landing
Exist. 72" C.L.F.
Gravity Wall

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

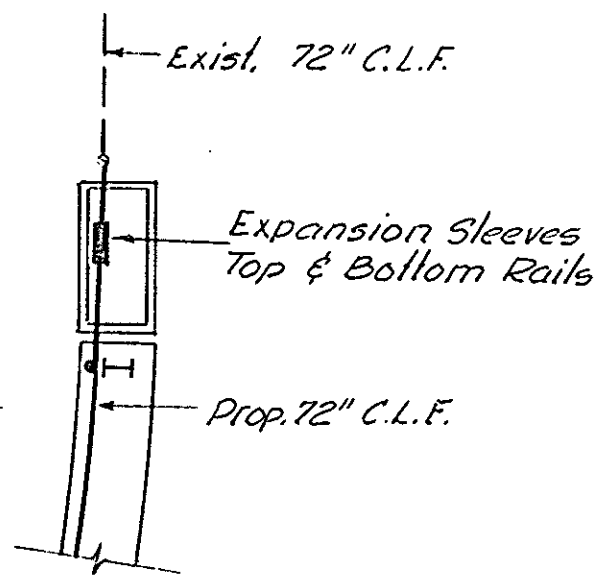
CHAIN LINK FENCE ON BRIDGES
CAMBRIDGE ST. OVER EXTENSION RAMP - BOSTON
PEDESTRIAN BRIDGE AT CAMBRIDGE ST. - BOSTON

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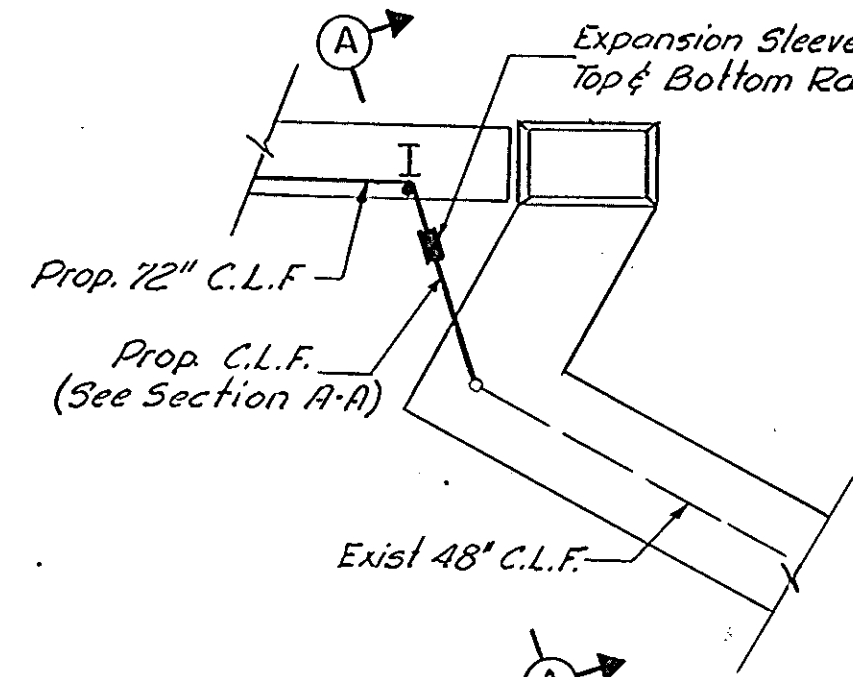
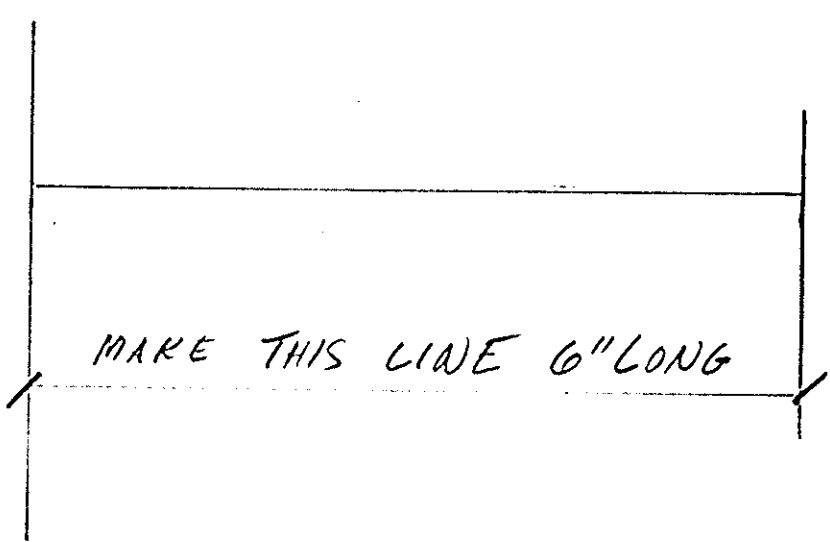
SCALE: AS NOTED
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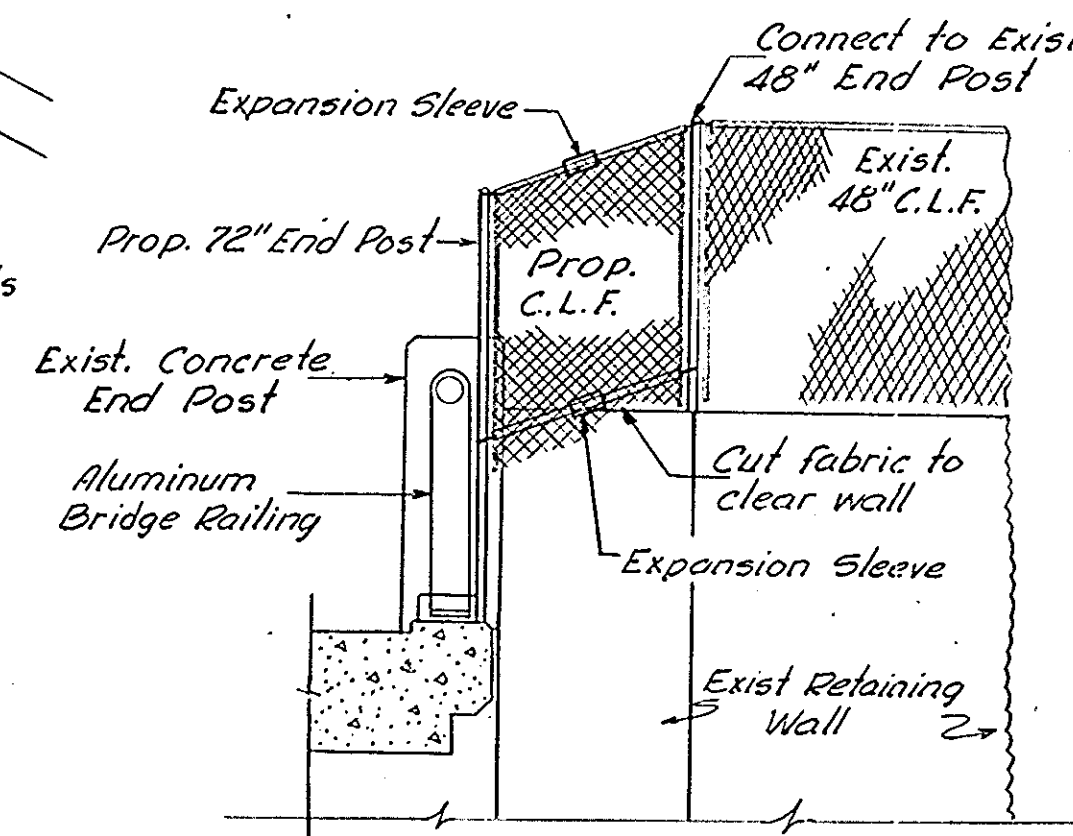
DETAIL 35
3/8" = 1'-0"



COMMONWEALTH AVENUE - BOSTON
1" = 30'



DETAIL 36
3/8" = 1'-0"



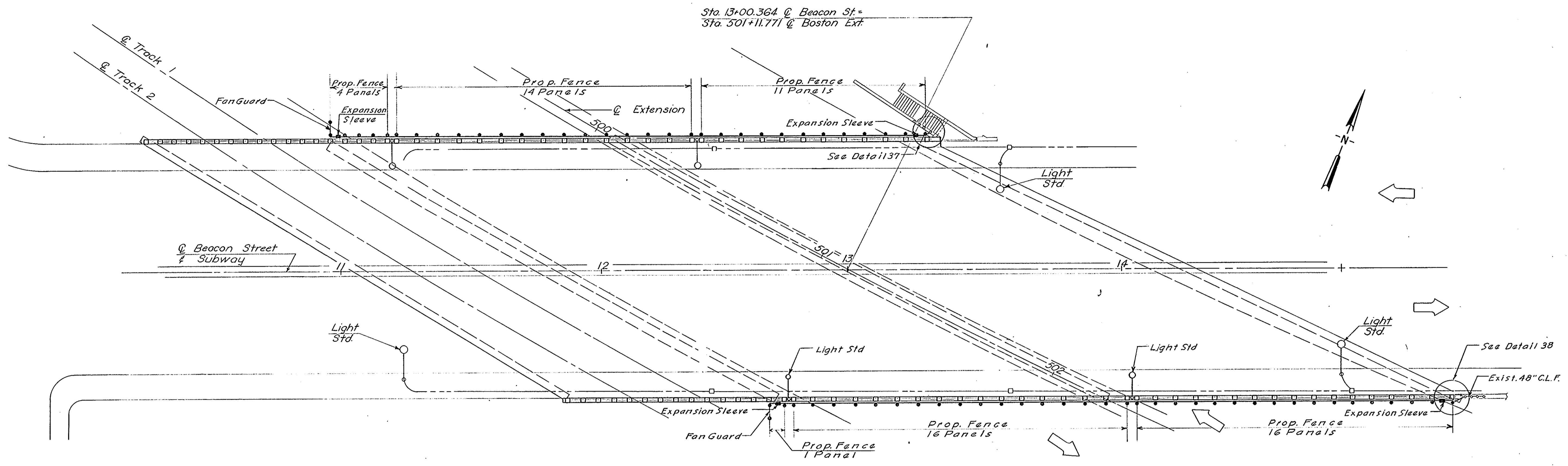
SECTION A-A
3/8" = 1'-0"

NOTE
For General Notes, Typical Sections
and Details See Sheet No. 1

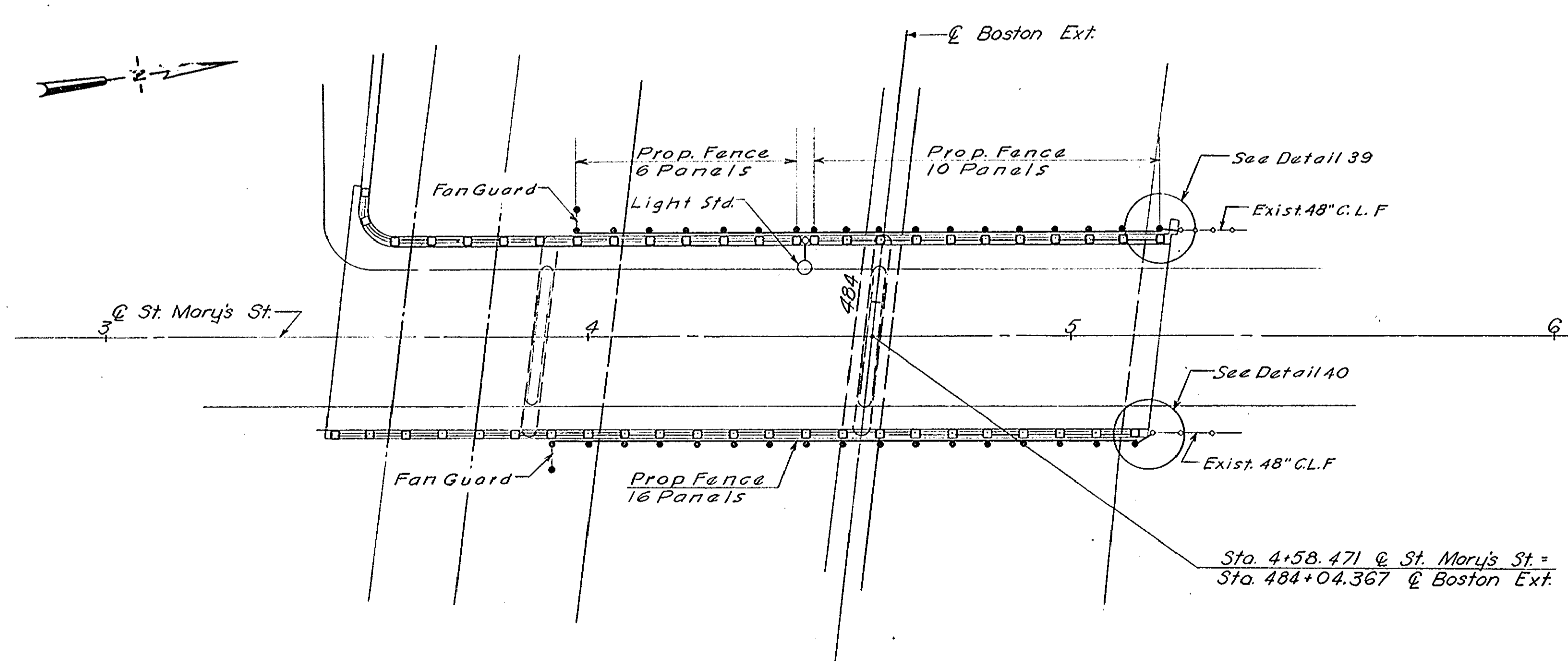
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		MADE	F.C.T.	1-21-69
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		CHECKED		
				J.N.G.

1" = 30'

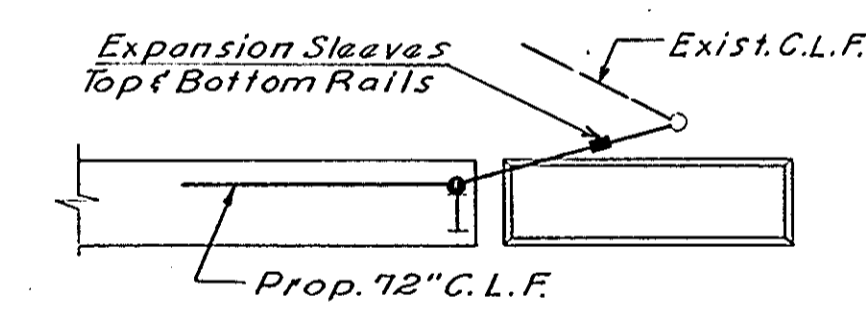
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES COMMONWEALTH AVE. - BOSTON	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 8 OF 13 KANSAS CITY



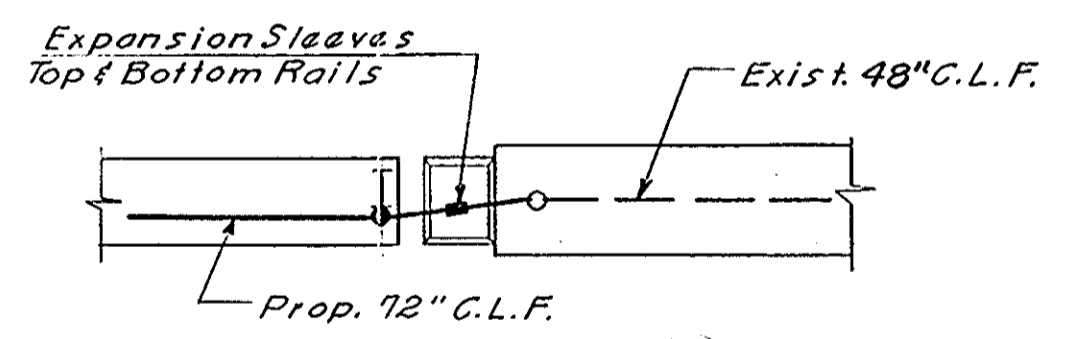
BEACON STREET - BOSTON
1" = 20'



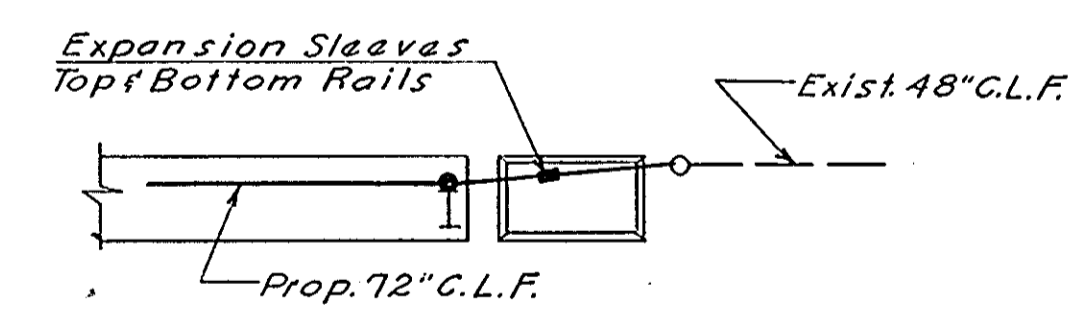
ST. MARY'S STREET - BROOKLINE
1" = 20'



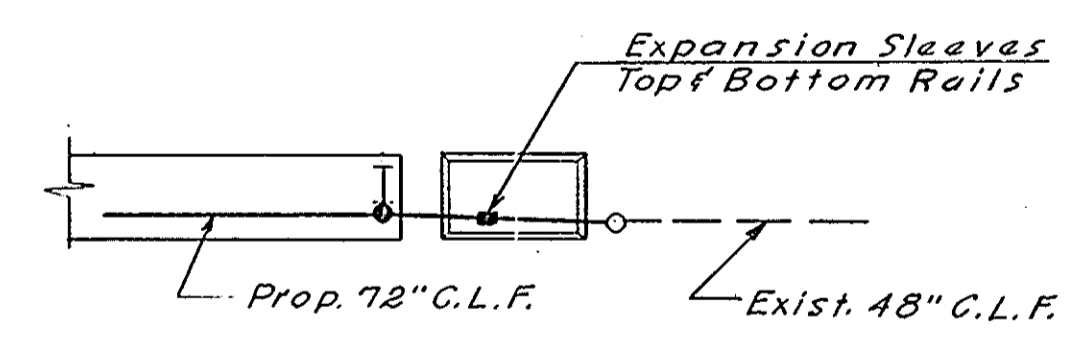
DETAIL-37
3/8" = 1'-0"



DETAIL-38
3/8" = 1'-0"



DETAIL-39
3/8" = 1'-0"



DETAIL-40
3/8" = 1'-0"

NOTE:
For General Notes, Typical Sections and Details see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
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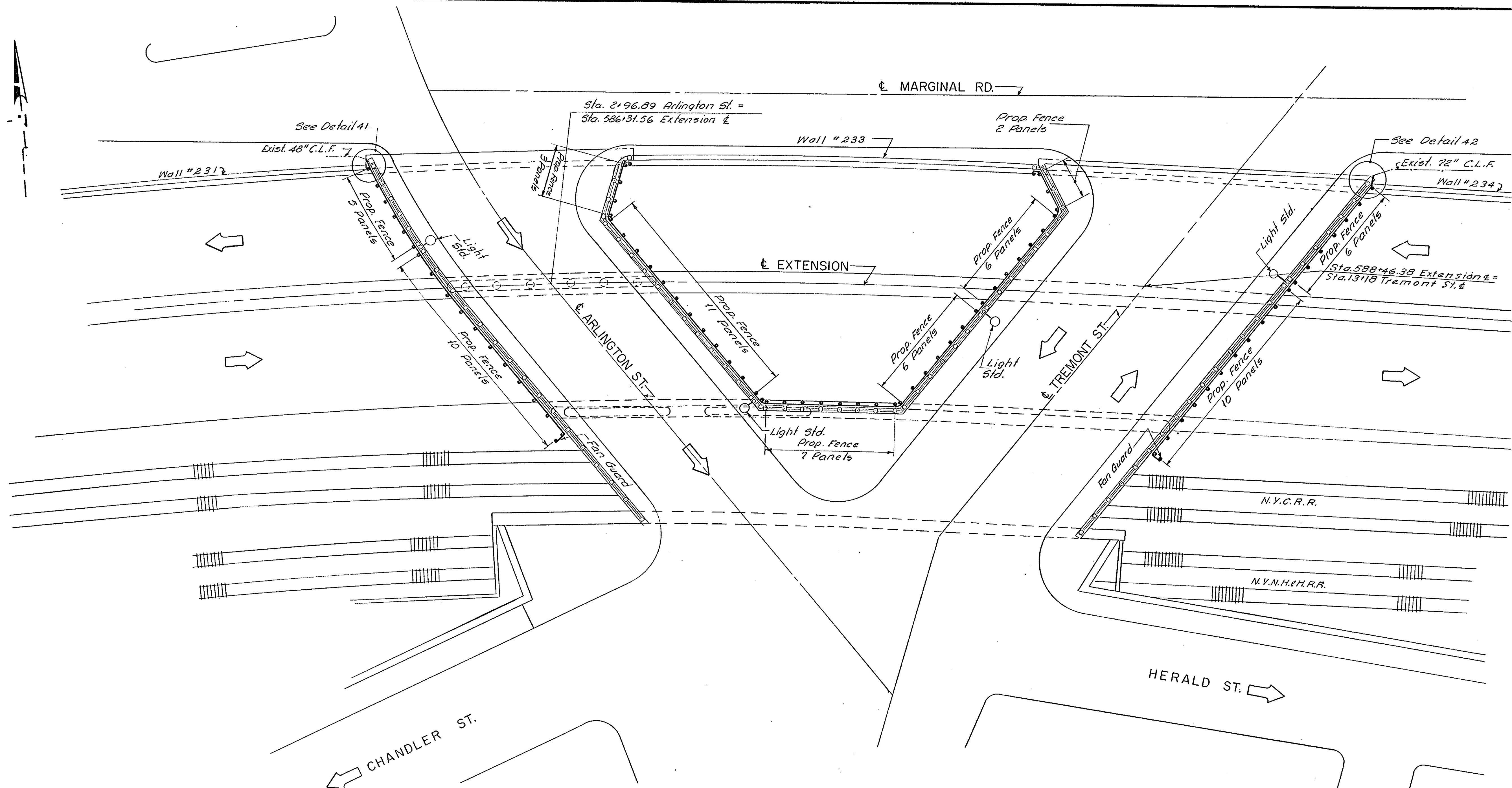
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
BEACON ST.-BOSTON
ST. MARY'S ST.-BROOKLINE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

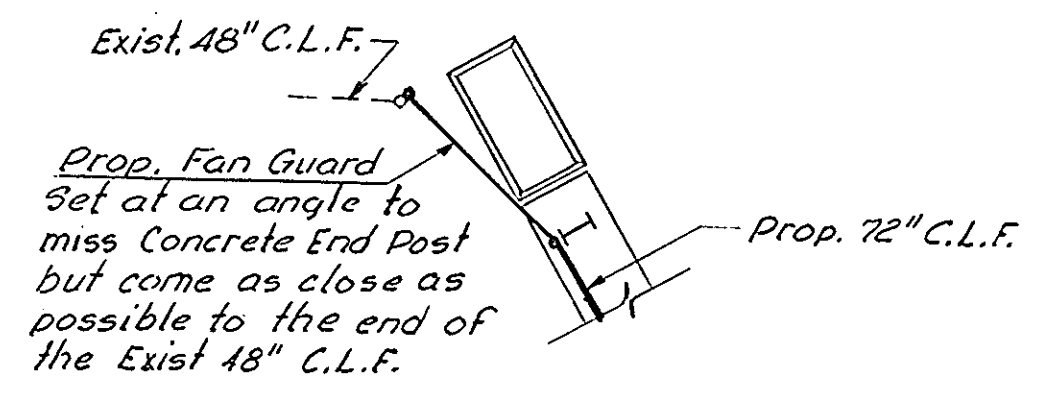
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SHEET NO. 9 of 13

09857 99-11

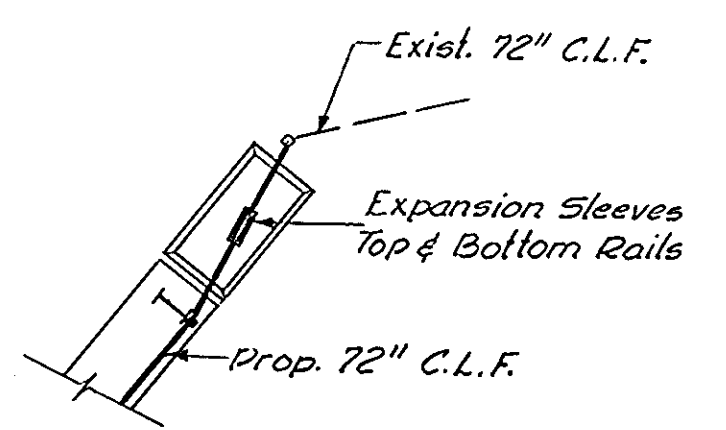


ARLINGTON ST. & TREMONT ST.
BOSTON
1" = 20'

NOTE:
For General Notes, Typical Sections
and Details see Sheet No. 1.



DETAIL - 41
3/8" = 1'-0"

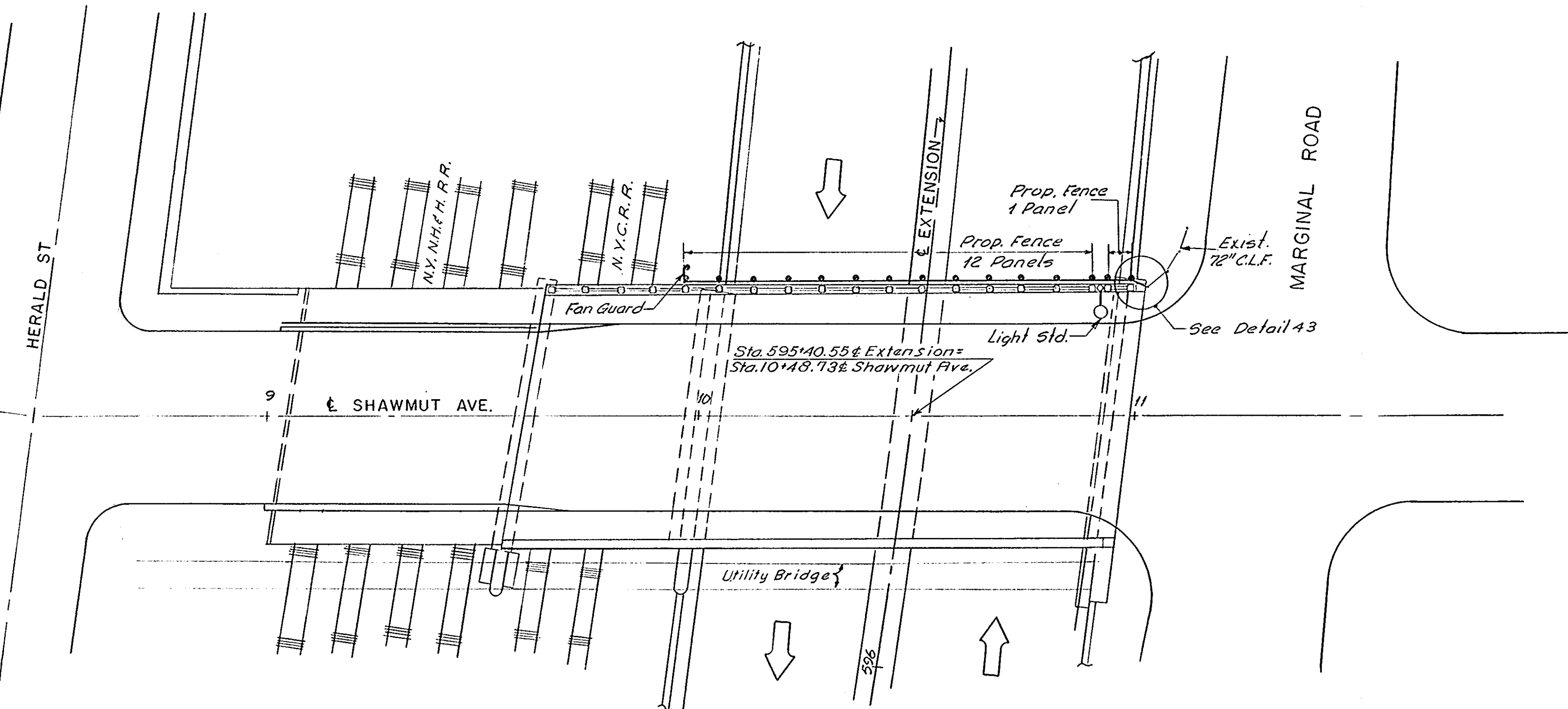
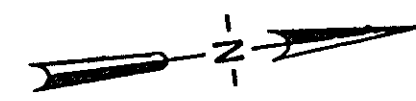


DETAILS - 42
3/8" = 1'-0"

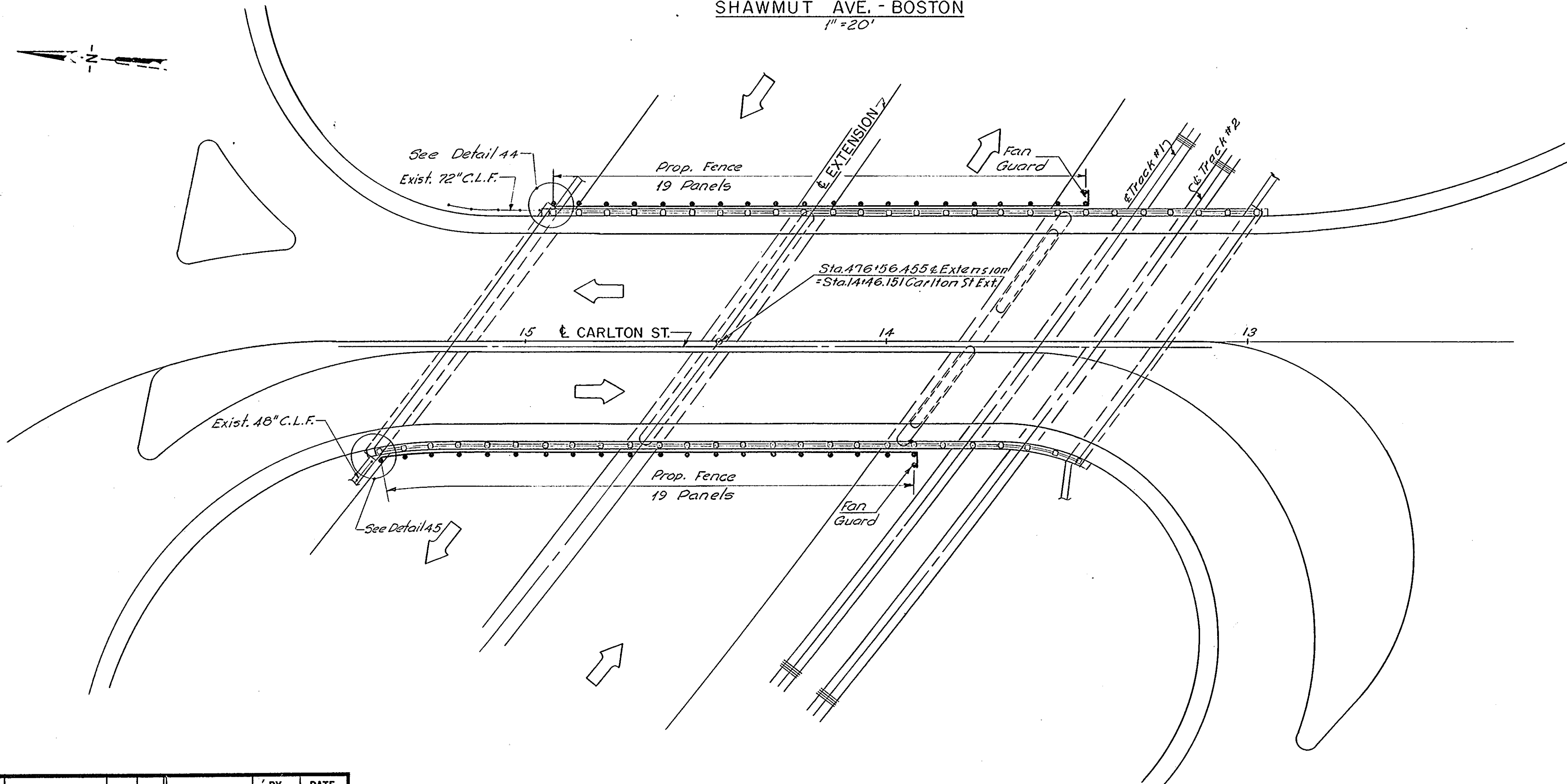
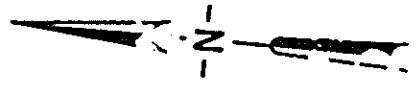
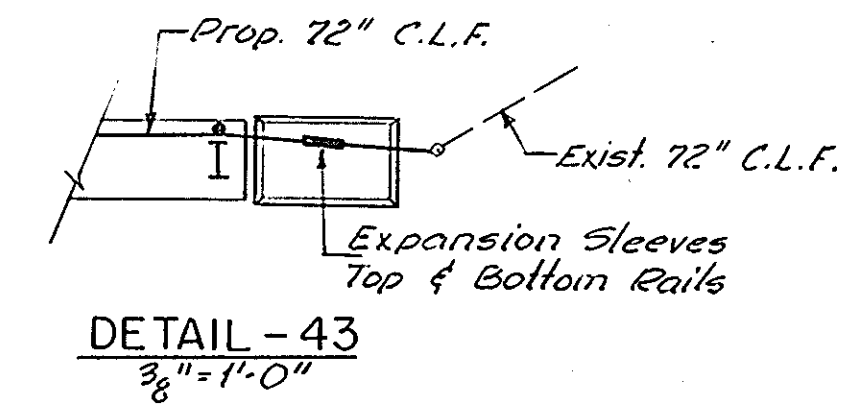
NO.	REVISION	BY	DATE	IN CHARGE OF
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		TRACED		
		CHECKED		
				J.N.G.

Traced on New Sheet

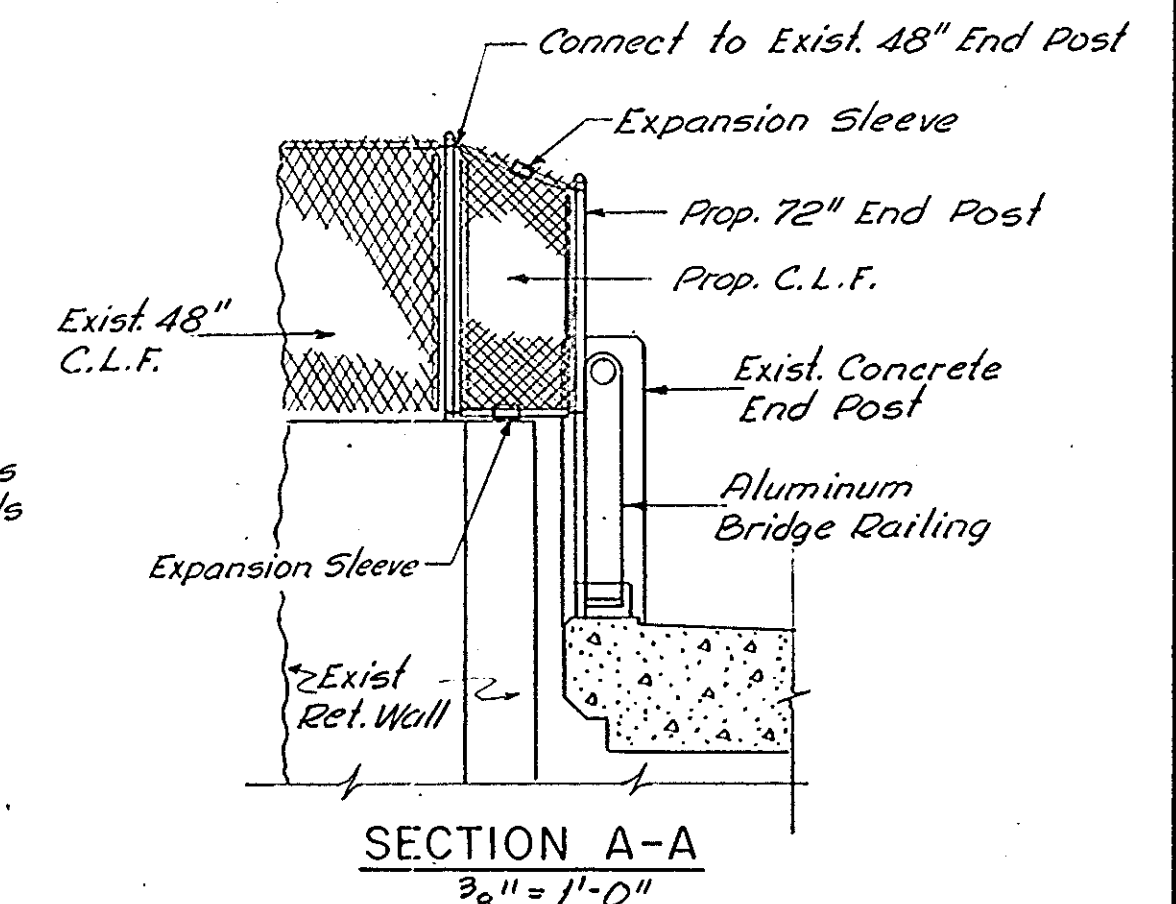
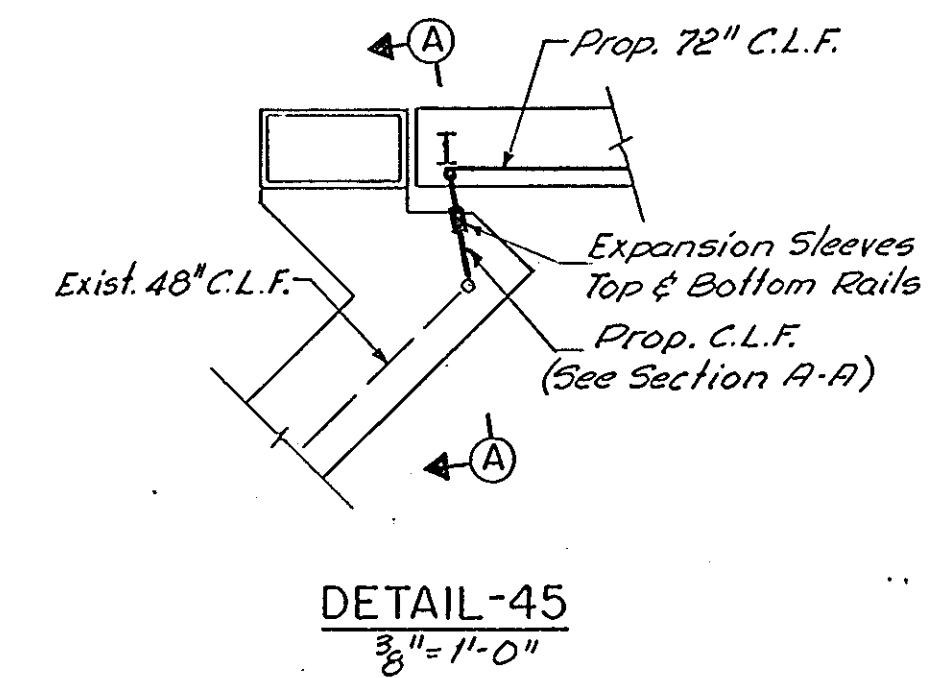
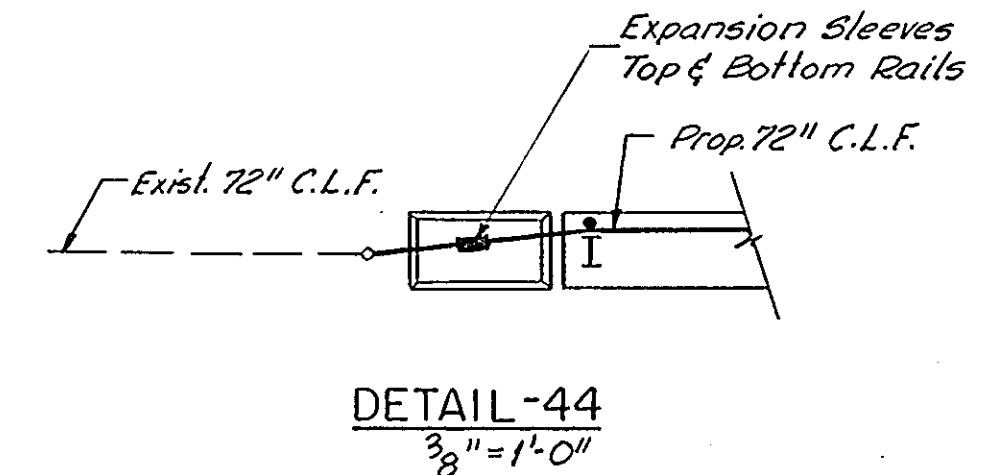
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES ARLINGTON ST.-BOSTON TREMONT ST.-BOSTON	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 10 of 13 KANSAS CITY



SHAWMUT AVE. - BOSTON
1" = 20'



CARLTON ST. - BROOKLINE
1" = 20'



NOTE:
For General Notes, Typical Sections
and Details see Sheet No. 1.

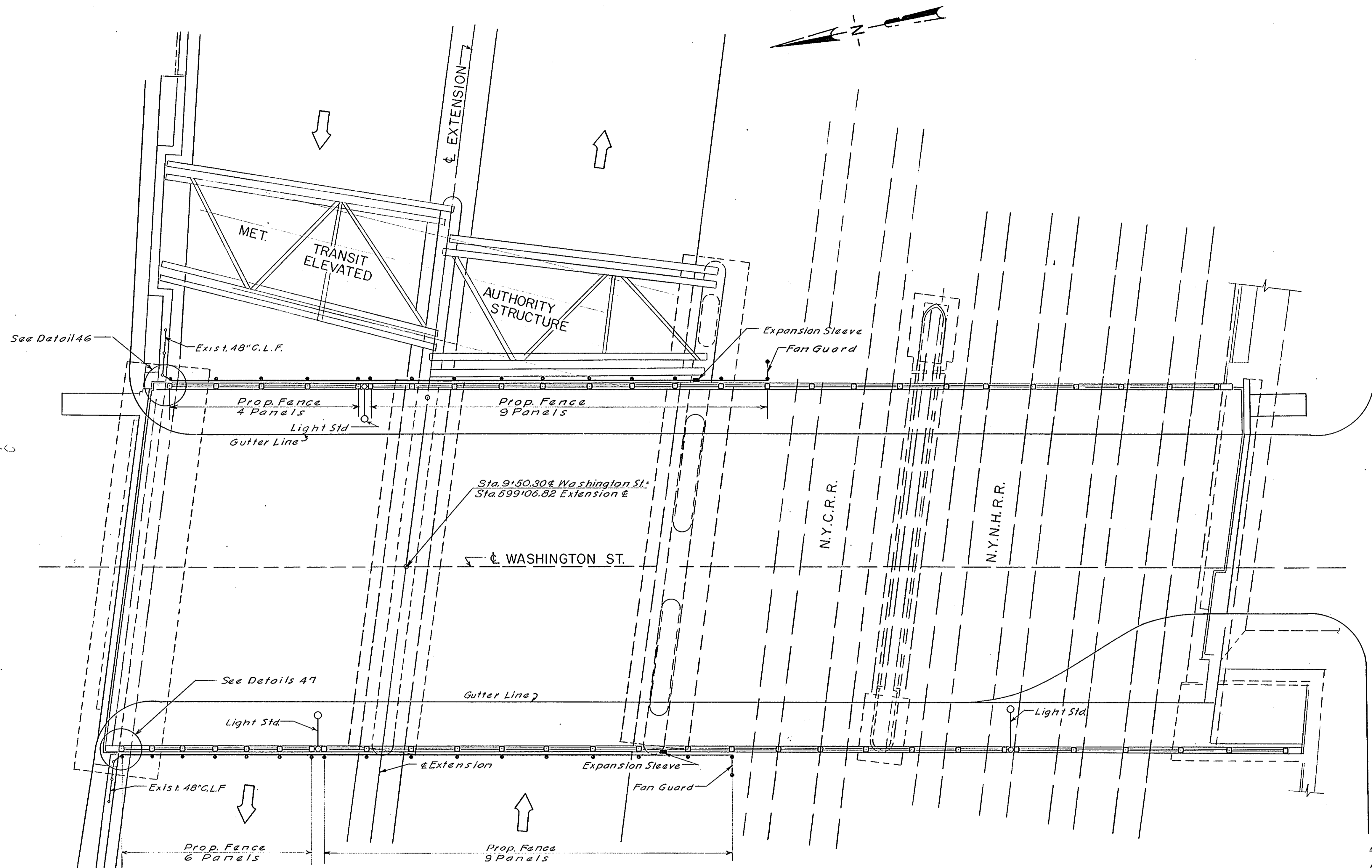
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		MADE	R.C.M.	2-5-69
		TRACED		
		CHECKED		
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
SHAWMUT AVE. - BOSTON
CARLTON ST. - BROOKLINE

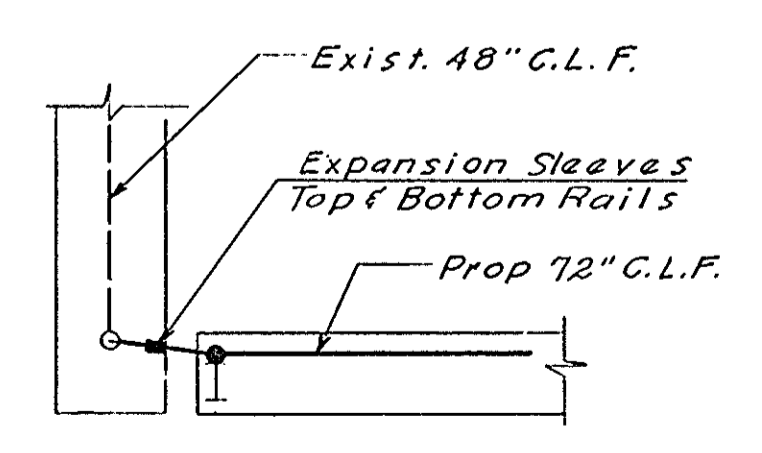
HOWARD, NEELES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 11 of 13

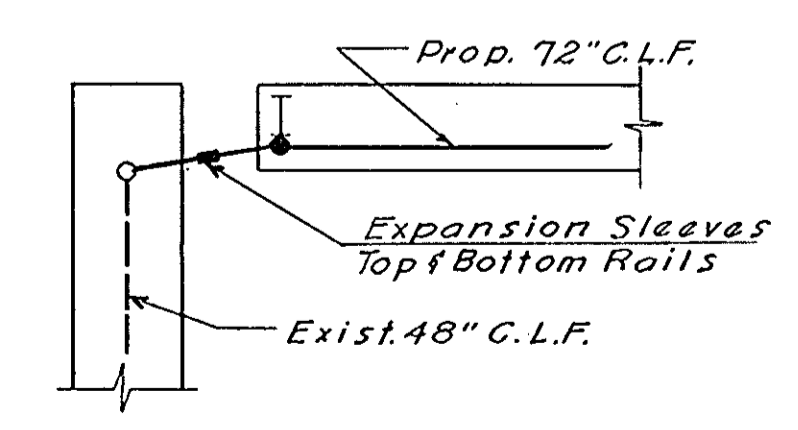


NOTE:
For General Notes, Typical Sections and
Details, see Sheet No. 1.

WASHINGTON ST. - BOSTON



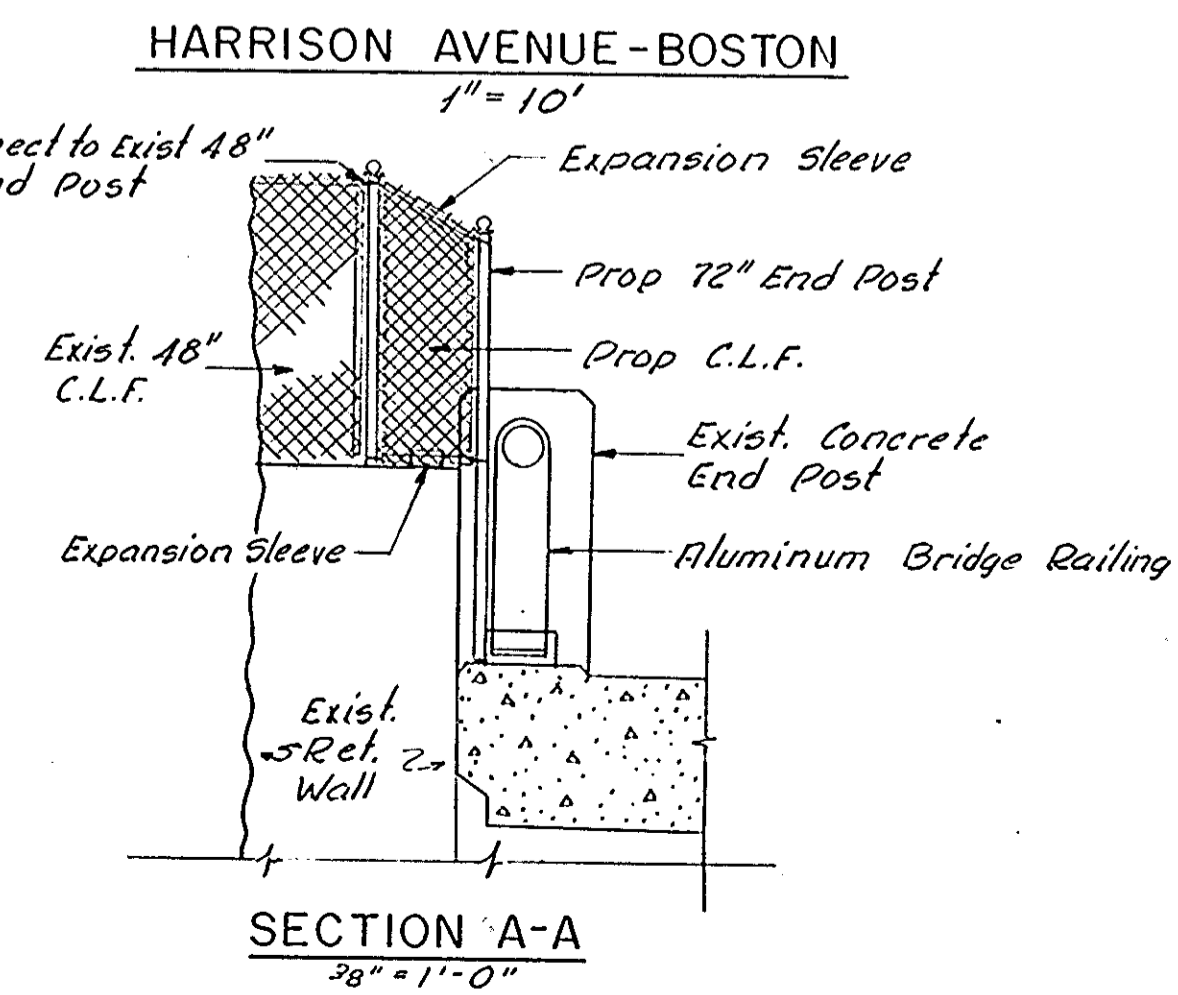
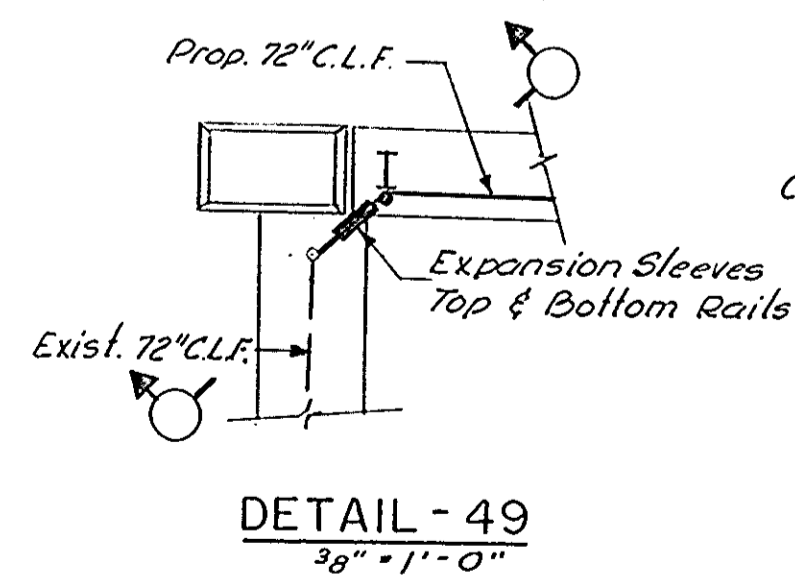
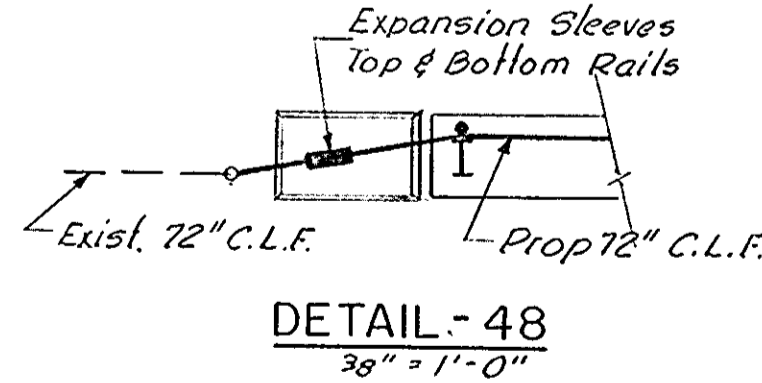
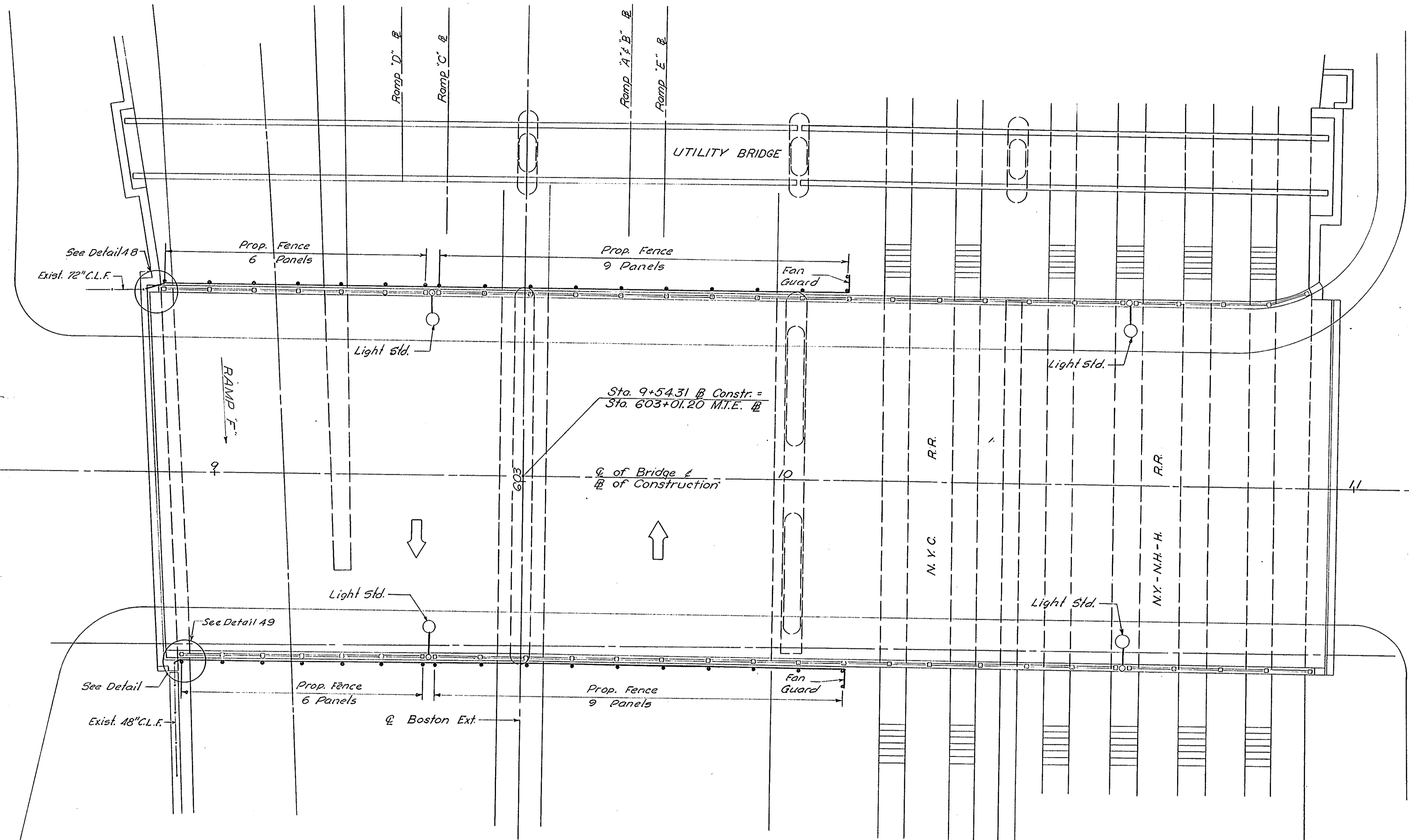
DETAIL - 46
3/8" = 1'-0"



DETAIL - 47
3/8" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	G.F.K. 2-6-60	
		TRACED		
		CHECKED		
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES WASHINGTON ST. - BOSTON	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK KANSAS CITY	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 12 of 13



NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

NO.	REVISION	BY	DATE
		MADE	G.F.K. 7-8-68
		TRACED	
		CHECKED	
		IN CHARGE OF	J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
HARRISON AVE. - BOSTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 13 of 13

MASSACHUSETTS TURNPIKE AUTHORITY

MASSACHUSETTS TURNPIKE

ALLAN R. McKINNON CHAIRMAN
 ANN M. HERSHFANG VICE-CHAIRWOMAN
 THOMAS J. CURLEY, JR. MEMBER

JOHN J. JUDGE DIRECTOR OF OPERATIONS
 J. BRUCE GRIMALDI CHIEF ENGINEER

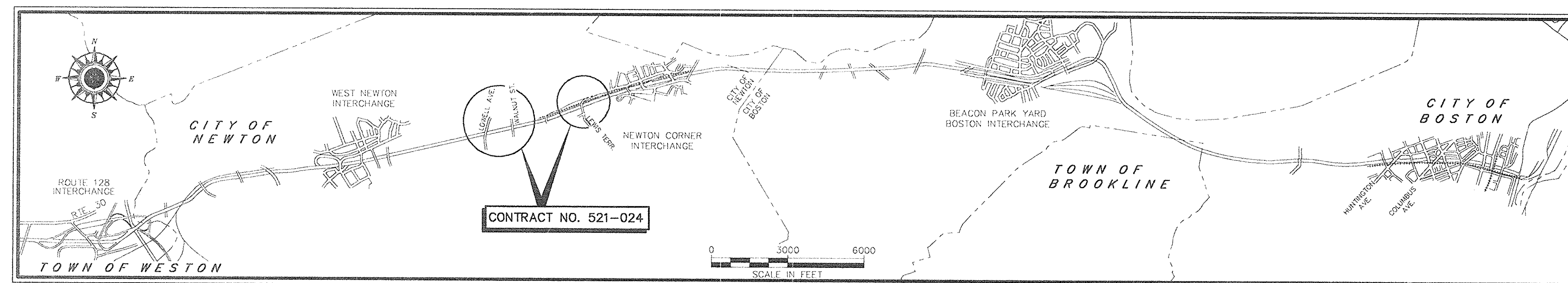
BRIDGE DECK RECONSTRUCTION

LEWIS TERRACE (STR. NO. S-25) MILE 127.0
 WALNUT STREET (STR. NO. S-23) MILE 126.4
 LOWELL AVENUE (STR. NO. S-22) MILE 126.2

IN THE CITY OF
 NEWTON

CONTRACT NO. 521-024

AS BUILT

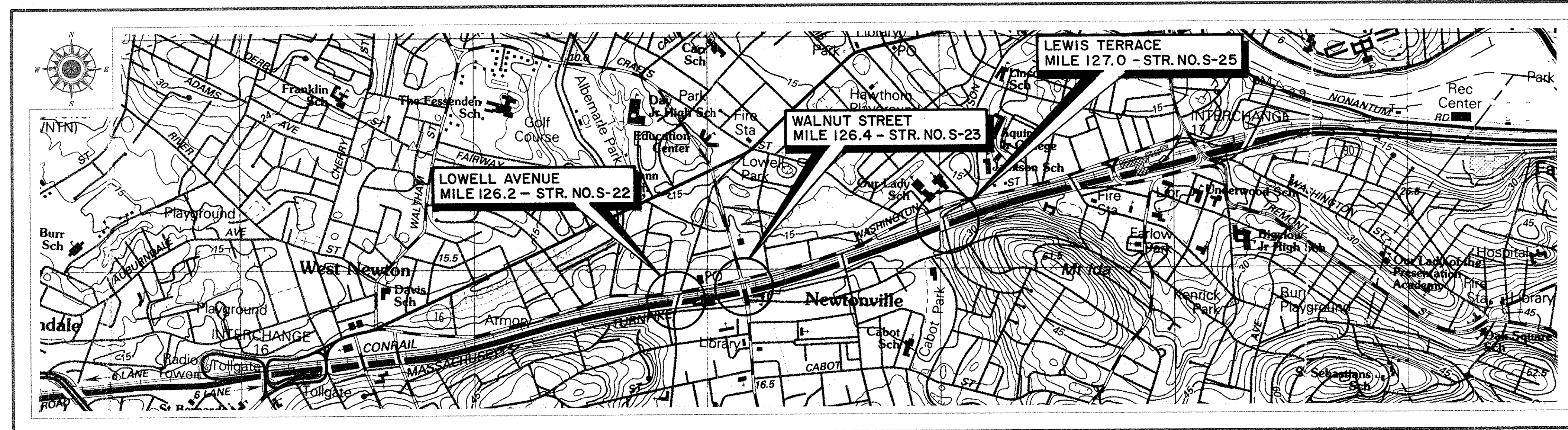


LOCATION PLAN

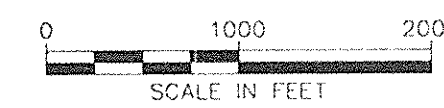
EDWARDS AND KELCEY, INC.
 DESIGNED:
Gregory T. Stefano DATE 12/29/93

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 RECOMMENDED:
Carl Miller DATE 12/23/93

MASSACHUSETTS TURNPIKE AUTHORITY
 APPROVED:
John J. Judge DATE 12/21/93
 CHIEF ENGINEER



LOCATION PLAN




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SHEET	TITLE
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2	LOCATION PLAN/INDEX
LEWIS TERRACE (STR. NO. S-25)	
3	EXISTING PLAN AND PROFILE
4	FRAMING PLAN
5	PROPOSED DECK PLAN
6	DECK PLAN AND DETAILS
7	CONCRETE PLACING SEQUENCE
8	DECK SECTIONS SPAN 1
9	DECK SECTIONS AND DETAILS SPANS 2 & 3
10	SIDEWALK AND LIGHT POLE SUPPORT DETAILS
11	JOINT DETAILS AT NORTH ABUTMENT
12	JOINT DETAILS AT PIER 1
13	JOINT DETAILS AT PIER 2
14	JOINT DETAILS AT SOUTH ABUTMENT
15	SUBSTRUCTURE CONCRETE REPAIRS - NORTH ABUTMENT
16	SUBSTRUCTURE CONCRETE REPAIRS - PIERS 1 & 2
17	SUBSTRUCTURE CONCRETE REPAIRS - SOUTH ABUTMENT
18	MISCELLANEOUS SUBSTRUCTURE AND END POST DETAILS
19	PAVEMENT PLAN

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21	SEQUENCE OF CONSTRUCTION SPAN 1
22	SEQUENCE OF CONSTRUCTION SPANS 2 & 3
23	TRAFFIC PHASING PLAN
24	TRAFFIC AND SIGNING PLAN PART 1
25	TRAFFIC AND SIGNING PLAN PART 2
WALNUT STREET (STR. NO. S-23)	
26	EXISTING PLAN AND PROFILE
27	FRAMING PLAN
28	PROPOSED DECK PLAN
29	DECK PLAN AND DETAILS
30	CONCRETE PLACING SEQUENCE
31	TYPICAL CROSS SECTIONS
32	SIDEWALK & DECK DETAILS
33	END POST DETAILS
34	JOINT DETAILS AT PIERS 1 AND 2
35	JOINT DETAILS AT NORTH ABUTMENT
36	JOINT DETAILS AT SOUTH ABUTMENT AND MISCELLANEOUS STEEL DETAILS
37	SUBSTRUCTURE CONCRETE REPAIRS SOUTH & NORTH ABUTMENTS
38	SUBSTRUCTURE CONCRETE REPAIRS PIER NO. 1 & PIER NO. 2

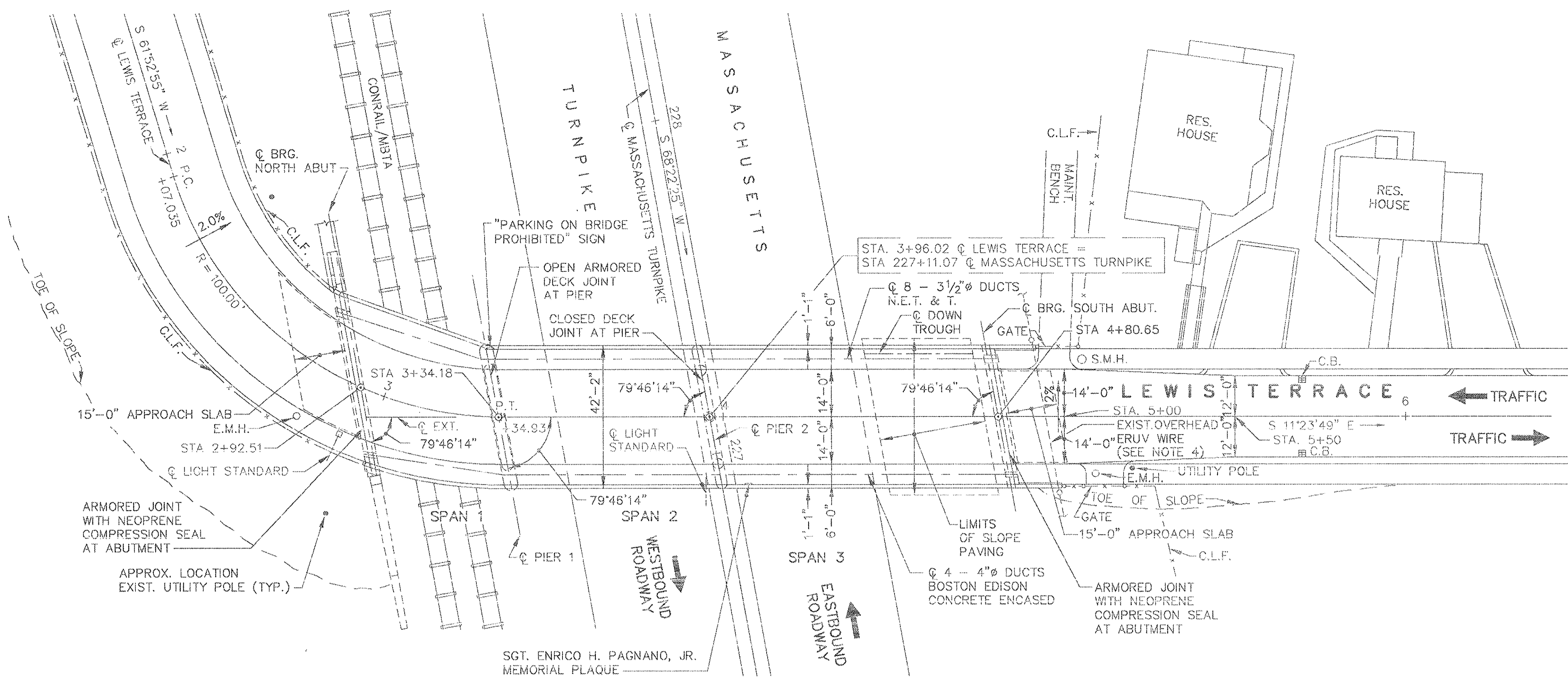
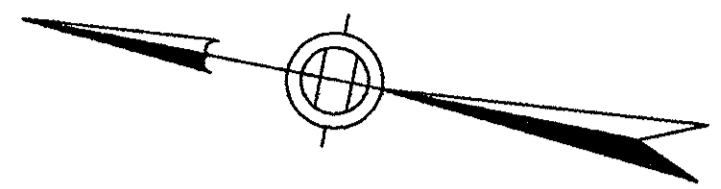
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SHEET	TITLE
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40	PAVEMENT STRIPING DETAILS
41	SEQUENCE OF CONSTRUCTION
42	TRAFFIC PHASING PLAN
43	DETOUR PLAN AND SIGNING
LOWELL AVENUE (STR. NO. S-22)	
44	EXISTING PLAN AND PROFILE
45	FRAMING PLAN
46	PROPOSED DECK PLAN
47	DECK PLAN AND DETAILS
48	CONCRETE PLACING SEQUENCE
49	SECTIONS AND DETAILS SPANS 1 & 2
50	DECK DETAILS AT LIGHT POLE SPAN 2
51	SECTIONS AND DETAILS - SPAN 3
52	ADDITIONAL DECK DETAILS - SPAN 3
53	JOINT DETAILS AT PIER 1
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55	JOINT DETAILS AT SOUTH ABUTMENT
56	JOINT DETAILS AT NORTH ABUTMENT
57	SUBSTRUCTURE CONCRETE REPAIR PIERS 1 & 2
58	SUBSTRUCTURE CONCRETE REPAIRS NORTH & SOUTH ABUTMENTS
59	NORTH ABUTMENT ENDWALL DETAILS

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61	PAVEMENT DETAILS
62	SEQUENCE OF CONSTRUCTION
63	TRAFFIC PHASING PLAN
64	TRAFFIC DETOUR PLAN AND SIGNING
STANDARD DETAILS	
65	BRIDGE CURB & TEMPORARY CONCRETE BARRIER DETAILS
66	STRUCTURAL STEEL DETAILS
67	SUBSTRUCTURE CONCRETE REPAIRS DETAILS (BOSTON EXTENSION)
68	TYPICAL WINGWALL AND END POST DETAILS (LOCAL ROAD)
69	ALUMINUM BRIDGE RAILING DETAILS
70	CHAIN LINK FENCE FOR BRIDGES DETAILS I
71	CHAIN LINK FENCE FOR BRIDGES DETAILS II
72	DETAILS I W BEAM HIGHWAY GUARD
73	DETAILS II W BEAM HIGHWAY GUARD
74	CHAIN LINK FENCE DETAILS
75	SLOPE PAVEMENT REPAIR DETAILS

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION STRUCTURE NOS. S-25, S-23 AND S-22 LOCATION PLAN/INDEX	
Scale: AS NOTED	Contract No. 521-024
 EDWARDS AND KELCEY, INC. <small>The Schreffelt Center 229 Main Street Boston, Massachusetts 02129</small>	
Sheet No. 2	

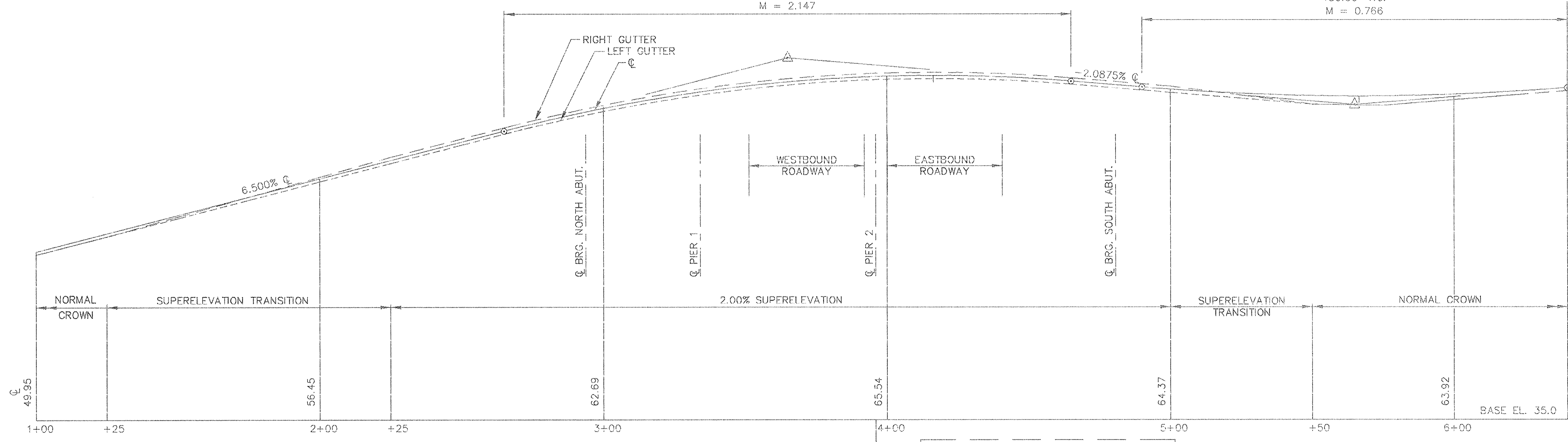
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	KMC	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	GTS	12/93	



EXISTING PLAN
SCALE: 1"=20'

P.V.I. STA = 3+65
P.V.I. ELEV = 67.17
200.00' V.C.
M = 2.147

P.V.I. STA = 5+65
P.V.I. ELEV = 63.00
150.00' V.C.
M = 0.766



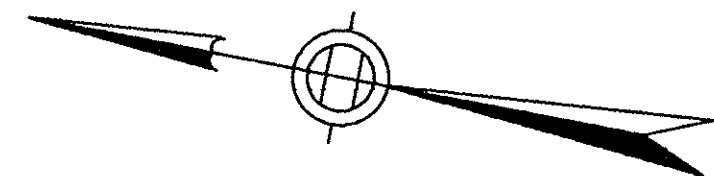
PROFILE - LEWIS TERRACE
SCALE: HORIZ. 1"=20'
VERT. 1"=5'

- NOTES:**
1. DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILTS AND ARE NOT GUARANTEED TO BE CORRECT.
 2. ELEVATIONS BASED ON U.S.C.&G.S. MEAN SEA LEVEL DATUM OF 1929 AND ARE NOT GUARANTEED TO BE CORRECT.
 3. PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
 4. EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

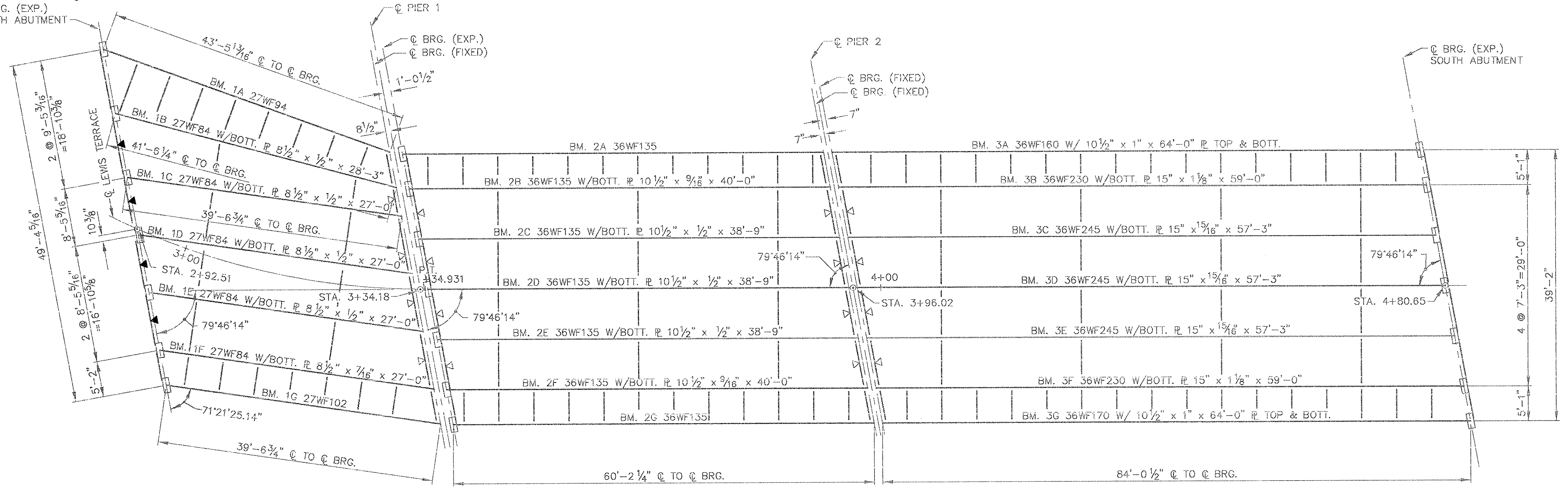
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	KMC	12/93
		DRAWN:	KMC	12/93
		CHECKED:	GTS	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) EXISTING PLAN AND PROFILE	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 3	



☉ BRG. (EXP.)
NORTH ABUTMENT



SPAN 1

SPAN 2

SPAN 3

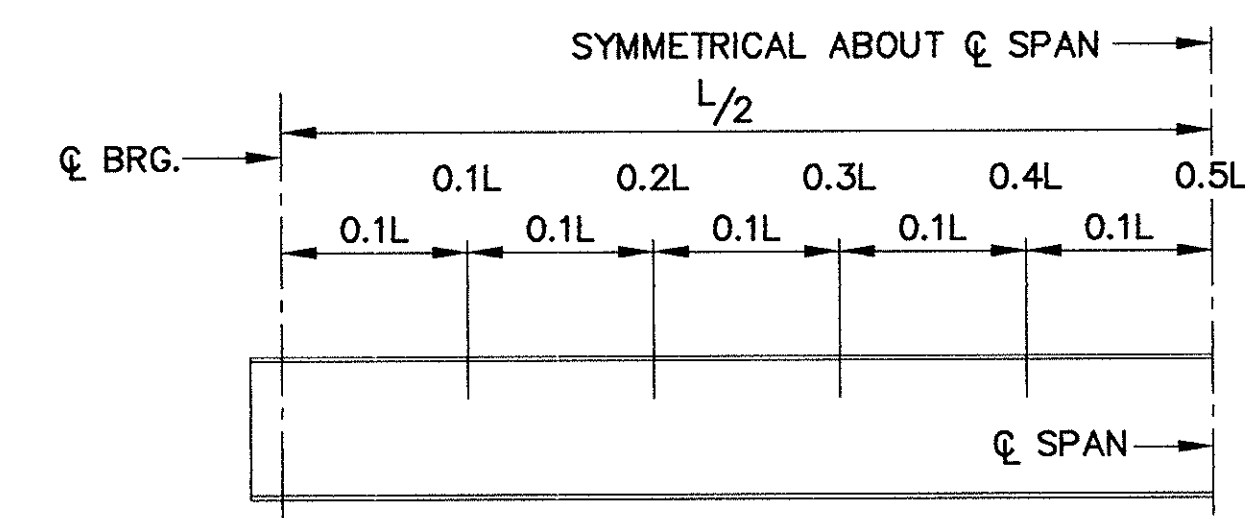
FRAMING PLAN
SCALE: 1/8"=1'-0"

LEGEND:

- ☐ - EXISTING EXPANSION BEARING
- △ - EXISTING DIAPHRAGM WITH SHEAR CONNECTORS
(7/8"Ø x 4" HIGH EACH @ 8"± O.C.)
- ▲ - EXISTING DIAPHRAGM
(PROP. 7/8"Ø x 4" HIGH SHEAR CONNECTORS @ 8" O.C.)

NOTES:

1. DIMENSIONS FOR THE FRAMING PLAN ARE FROM THE 'AS-BUILT' DRAWINGS. ACCURACY IS NOT GUARANTEED
2. SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.



EXISTING STUD SHEAR CONNECTOR SCHEDULE								
SPAN	BEAM NO.	STUDS/ROW	STUD HEIGHT	SPACING OF 7/8"Ø STUDS				
				0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L
1	1A & 1G	2	6"	12"	12"	12"	12"	12"
	1B THRU 1F	2	4"	5 1/2"	6 1/2"	8 1/2"	10 1/2"	13"
2	2A & 2G	2	6"	12"	12"	12"	12"	12"
	2B THRU 2F	2	4"	6 1/2"	7 1/2"	9 1/2"	12"	17"
3	3A & 3G	2	6"	12"	12"	12"	12"	12"
	3B THRU 3F	2	6"	6"	7 1/2"	9 1/2"	12"	17"

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS

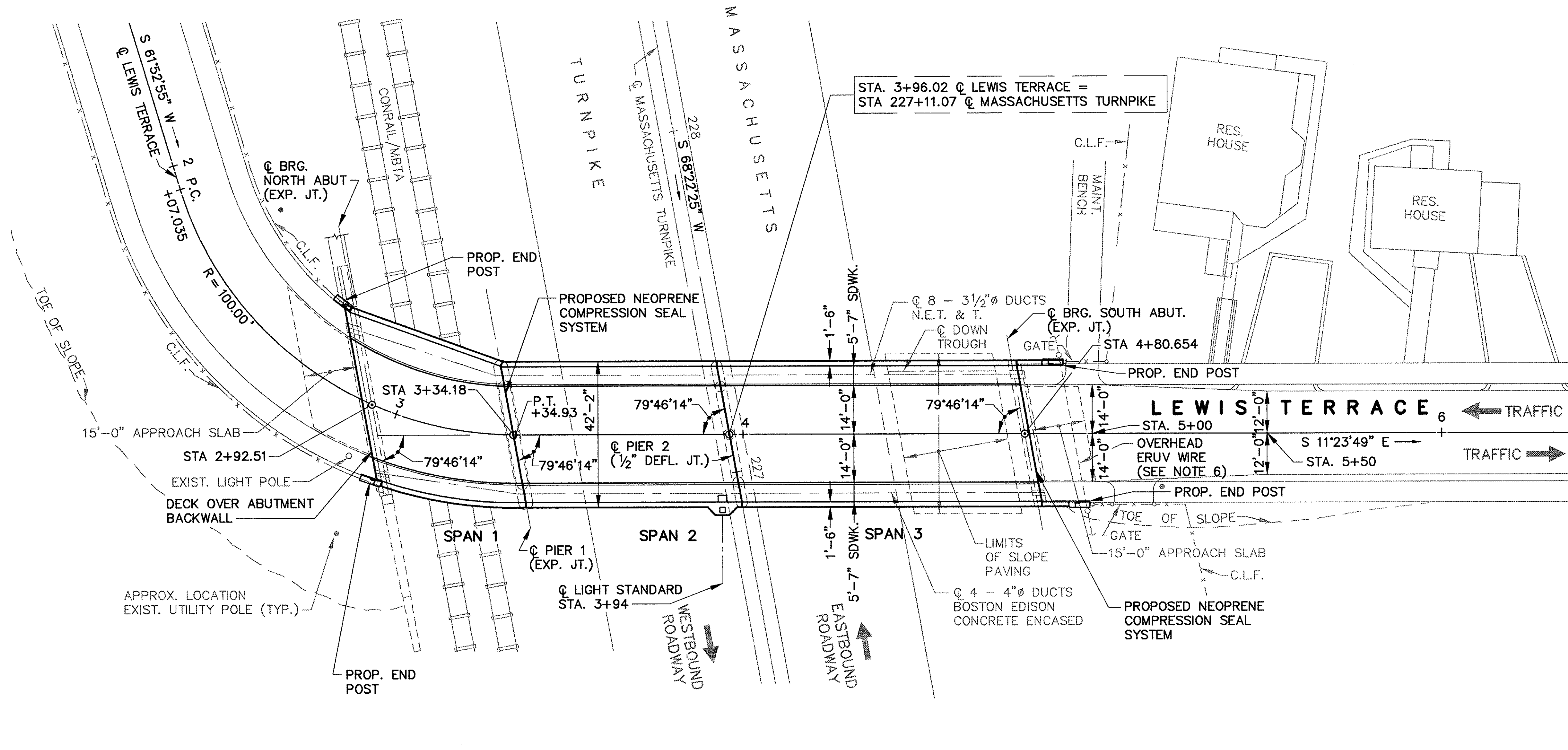
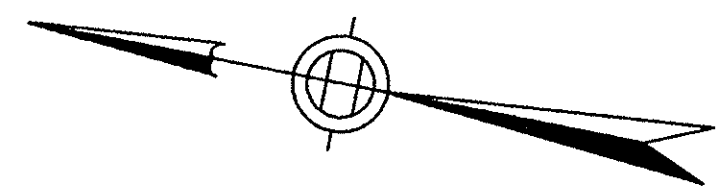
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

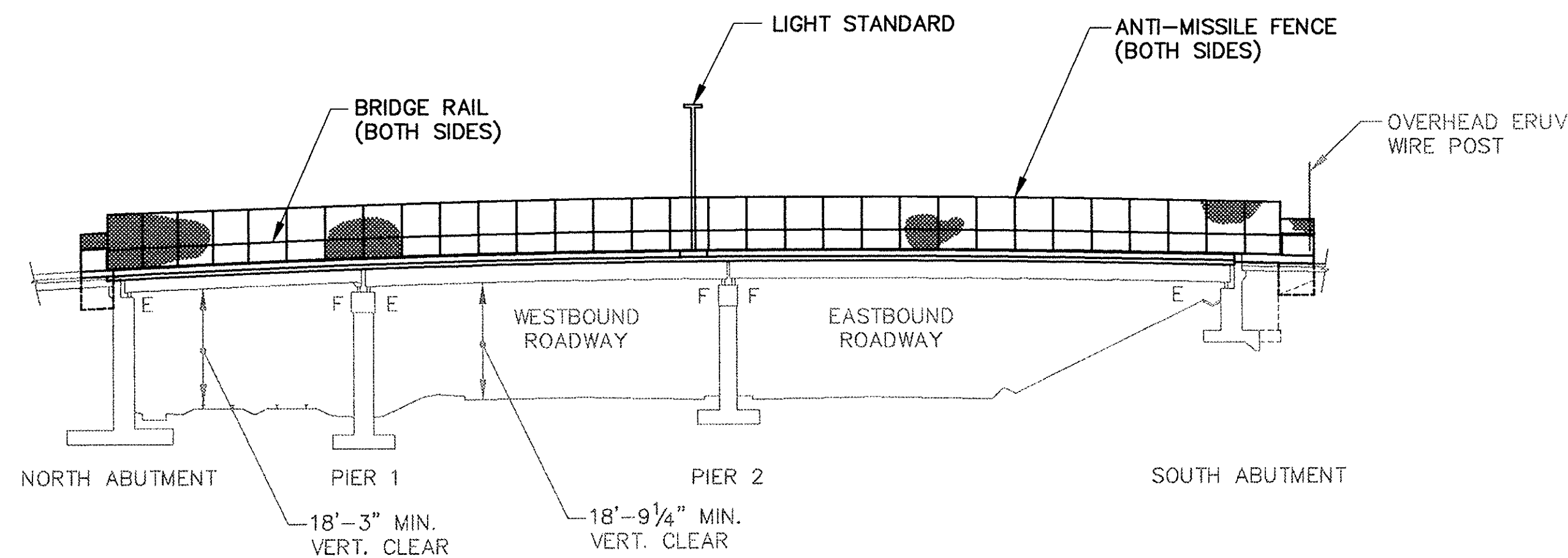
BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO. S-25)
FRAMING PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 4
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129



PROPOSED DECK PLAN
SCALE: 1"=20'



ELEVATION
SCALE: 1"=20'

GENERAL NOTES:

- DESIGN LOADING:**
A.A.S.H.T.O. LOADING H20-44.
- MATERIALS:**
1. CONCRETE FOR DECK SLAB, SIDEWALKS, WINGWALL MODIFICATIONS AND END POSTS SHALL BE CLASS 'D' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c=4500$ PSI.
 2. CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c=5000$ PSI.
 3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
 4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
 5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
 6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

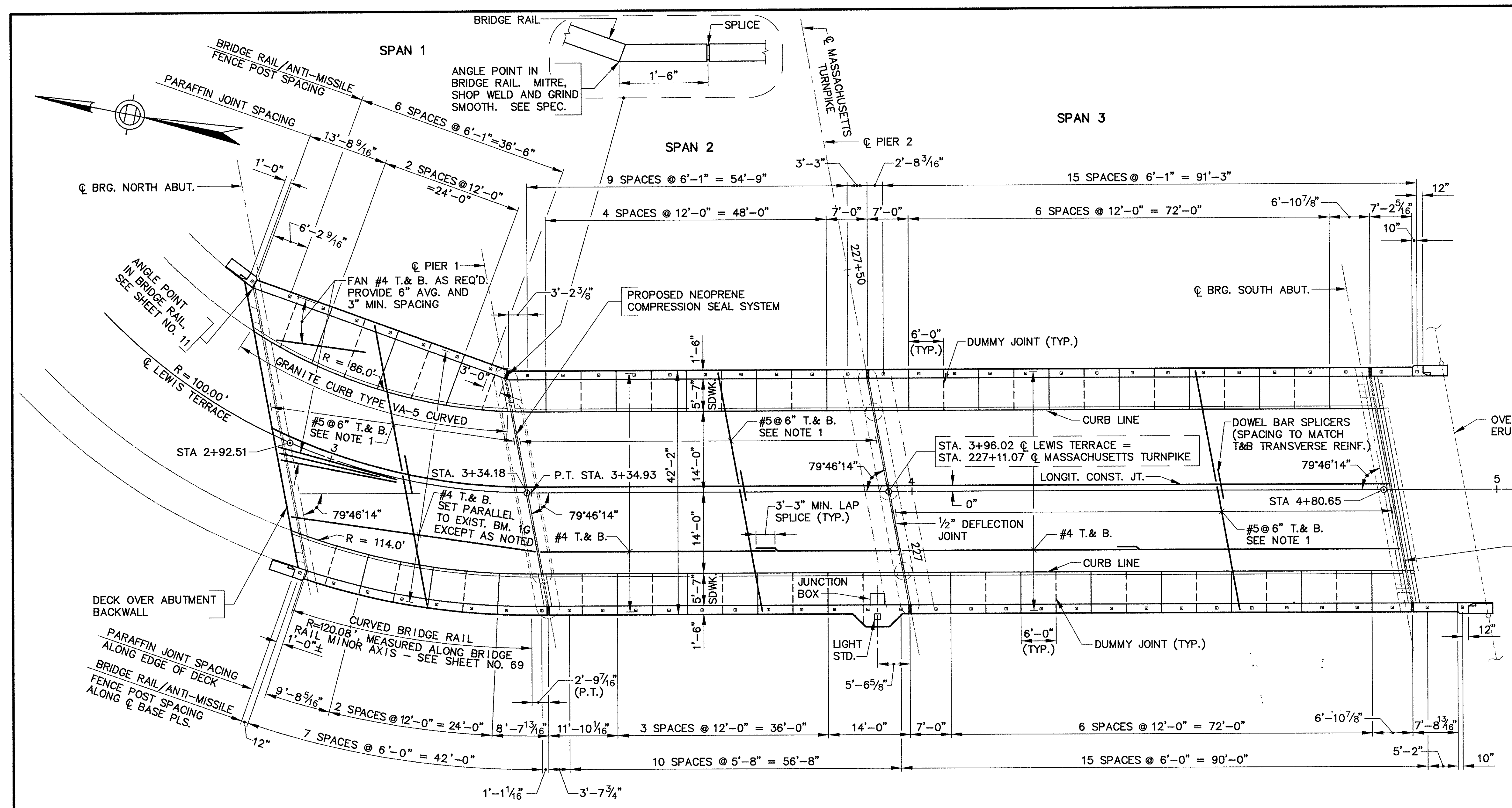
NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
2. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SECTION C25A OF THE SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1a.
3. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
4. E DENOTES EXPANSION BEARING.
F DENOTES FIXED BEARING.
5. FOR END POST DETAILS, SEE SHEET NOS. 18 & 68.
6. EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GTS	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	FMK	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) PROPOSED DECK PLAN	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 5

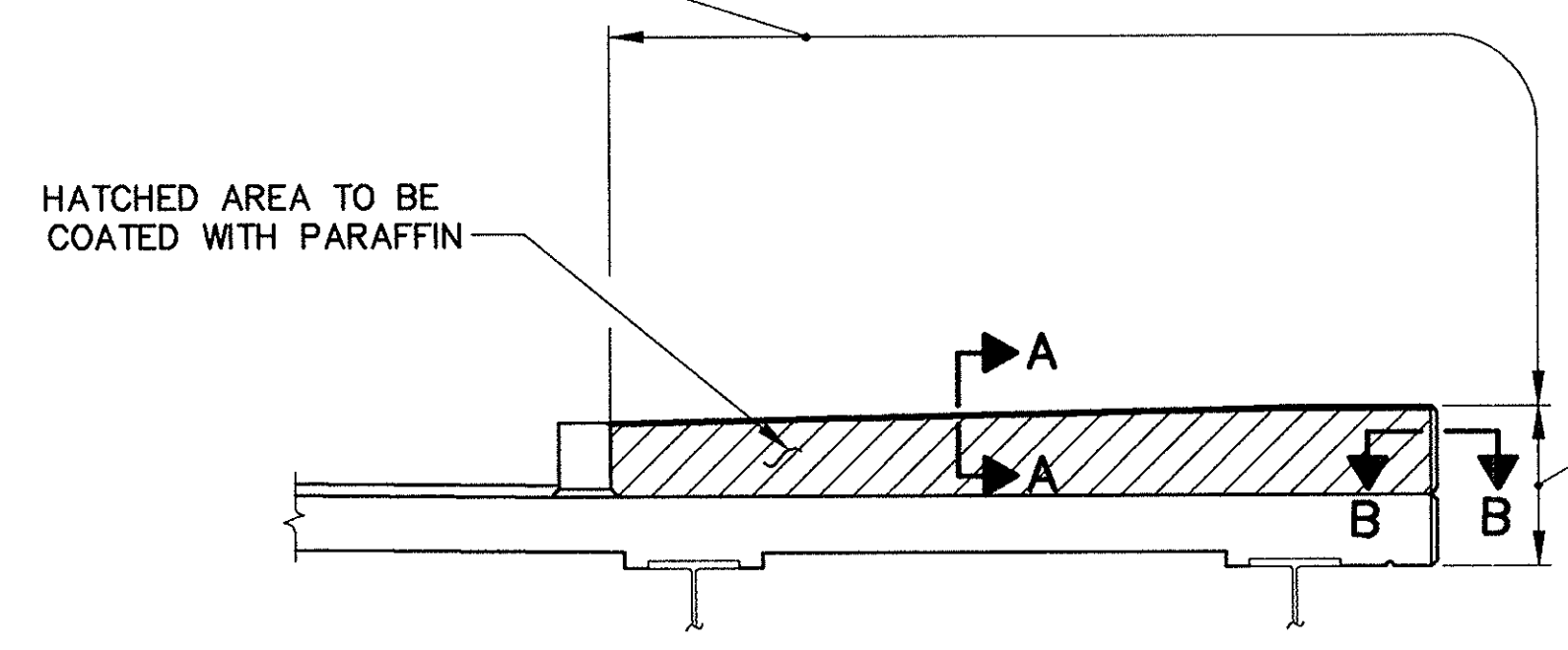


- NOTES:**
1. TRANSVERSE REINFORCEMENT SHALL BE SET PARALLEL TO ABUTMENTS AND PIERS.
 2. FOR LIMITS OF GRANITE CURB AT ROADWAY JOINTS SEE SHEET NOS. 11 THRU 14.
 3. FOR SPACING OF REINFORCING STEEL NOT SHOWN, SEE SHEET NOS. 8 AND 9.
 4. BRIDGE RAIL/ANTI-MISSILE FENCE POST SPACING SHALL CLEAR PARAFFIN JOINTS BY 12" MINIMUM.
 5. P.V.C. DRAINS (SEE SHEET NO. 10) LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED SO THAT THEY DO NOT DRAIN ONTO THE TRAVELLED WAY.
 6. FOR SIDEWALK AND LIGHT POLE SUPPORT DETAILS, SEE SHEET NO. 10.
 7. FINISH FOR POLYMER MODIFIED CONCRETE WEARING SURFACE SHALL BE SAWCUT TRANSVERSE GROOVES, FOR DETAIL SEE SHEET NO. 8.

PARAFFIN AND DUMMY JOINT NOTES:

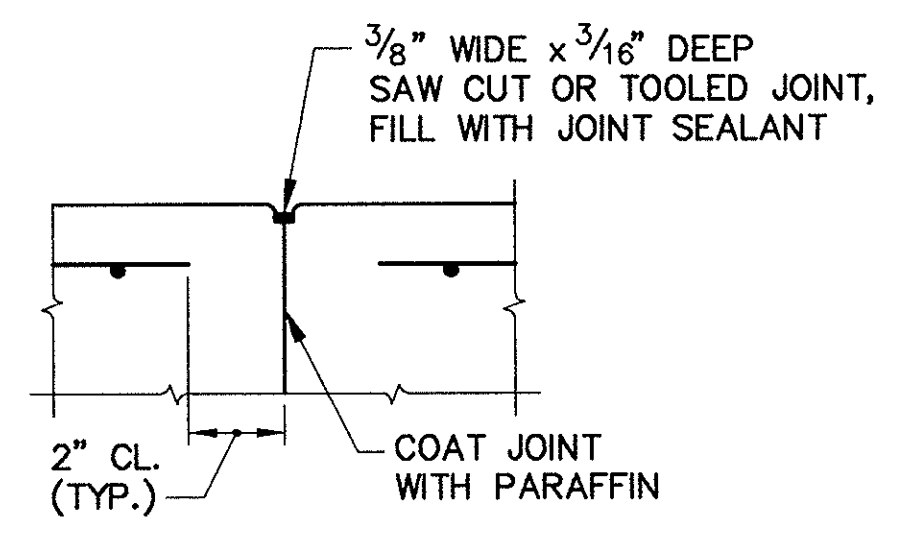
1. ALL CONCRETE CONSTRUCTION ABOVE SLAB SHALL BE POURED IN ALTERNATE SECTIONS AND SHALL HAVE A CURING PERIOD OF NOT LESS THAN 3 DAYS BETWEEN POURS.
2. A MORTARED JOINT IN THE CURB SHALL BE PLACED AT EACH PARAFFIN AND DUMMY JOINT.
3. JOINT SEALER TO BE SAME COLOR AS CONCRETE.
4. JOINTS TO BE SQUARE TO FACE OF CURB.

LIMITS OF U-GROOVE
3/8" WIDE x 3/16" DEEP
(SAW CUT OR TOOLED)

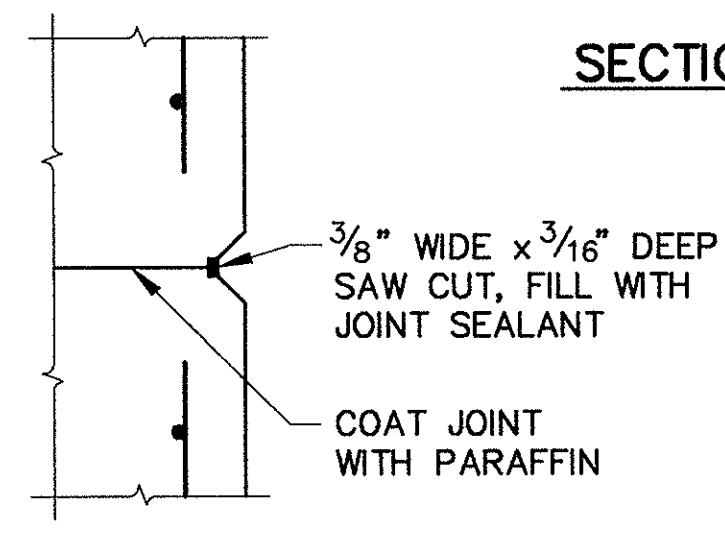


PARAFFIN JOINT DETAIL
NOT TO SCALE

DECK PLAN
SCALE: 1"=10'

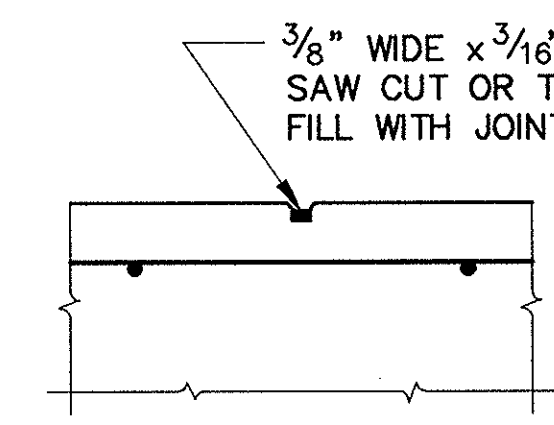


SECTION A-A

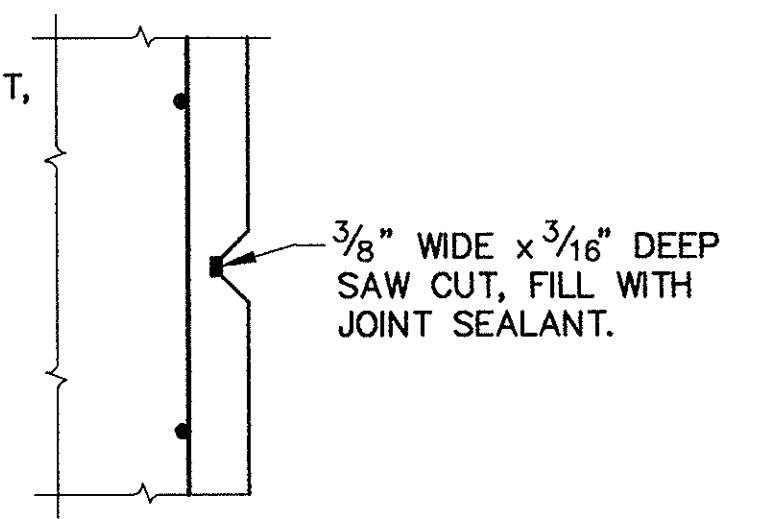


SECTION B-B

PARAFFIN JOINT
SCALE: 3" = 1'-0"



SECTION A-A



SECTION B-B

DUMMY JOINT
SCALE: 3" = 1'-0" AS BUILT

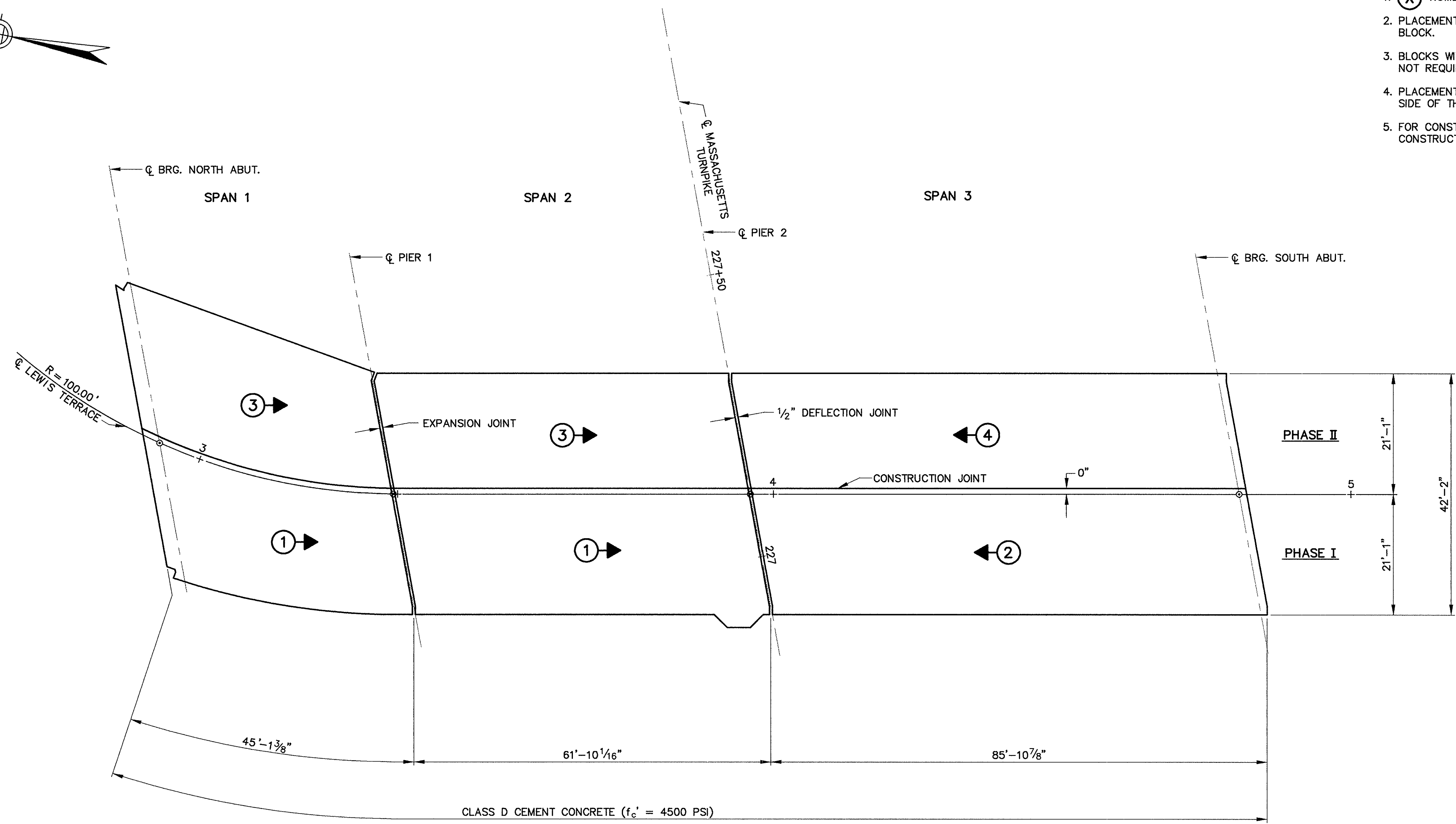
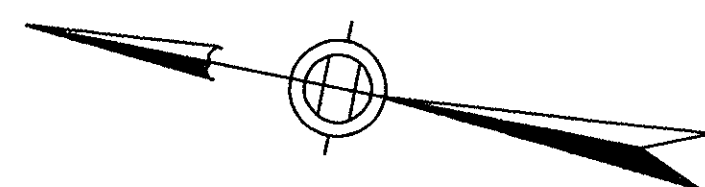
NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					GTS	12/93
					KMC	12/93
					FMK	12/93

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO. S-25)
DECK PLAN AND DETAILS

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. **6**
529 Main Street
Boston, Massachusetts 02129



- PLACING SEQUENCE NOTES:**
1. (X) NUMBERS INDICATE SEQUENCE OF PLACEMENT.
 2. PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
 3. BLOCKS WITH SAME SEQUENCE NUMBER DO NOT REQUIRE SAME DAY PLACING.
 4. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
 5. FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEET NOS. 21 & 22.

PLACING SEQUENCE FOR CONCRETE DECK
SCALE: 1" = 10'

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
				DESIGNED:	GTS 12/93
				DRAWN:	KMC 12/93
				CHECKED:	FMK 12/93

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

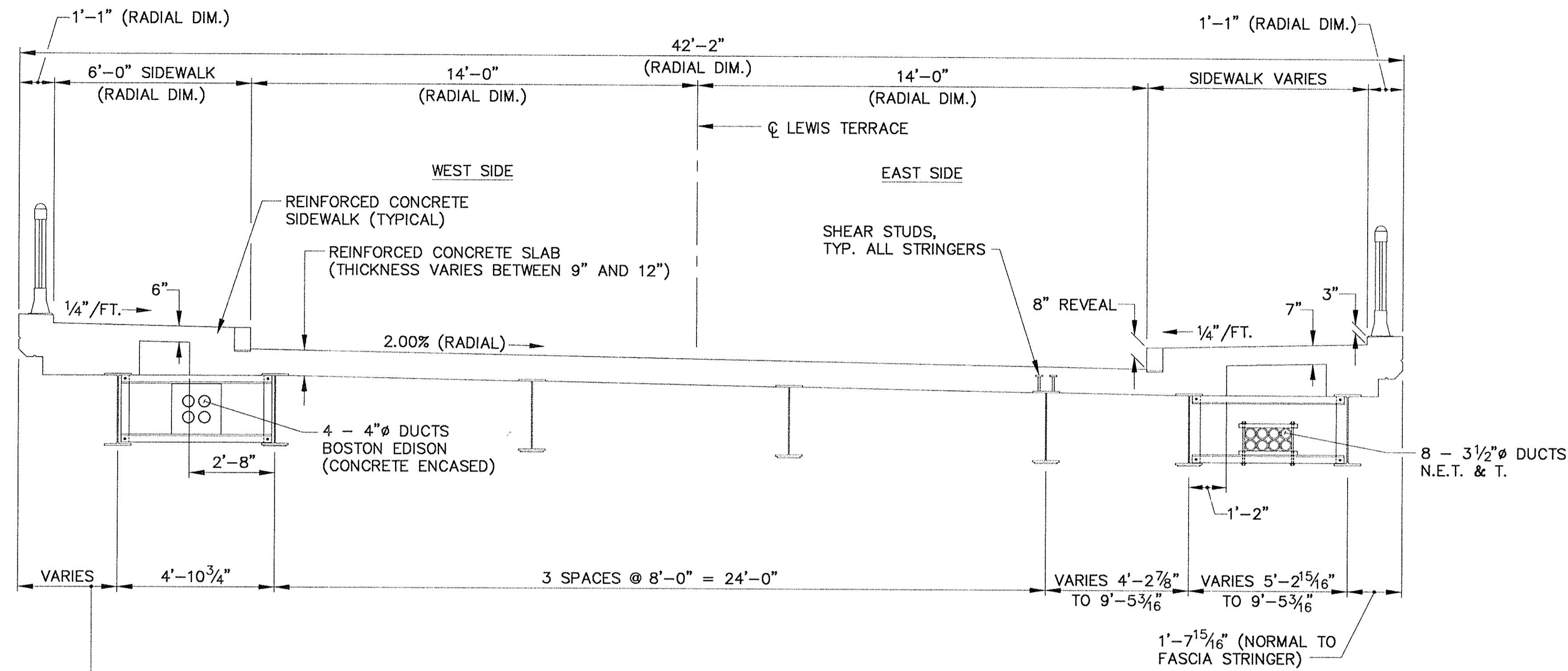
BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
CONCRETE PLACING SEQUENCE

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 7
The Schreffl Center
 529 Main Street
 Boston, Massachusetts 02129

NOTES:

1. ALL REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
2. TOP AND BOTTOM MAT OF THE REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
3. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
4. SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE. ($f_c = 4500$ PSI)
5. FOR GENERAL NOTES, SEE SHEET NO. 5.

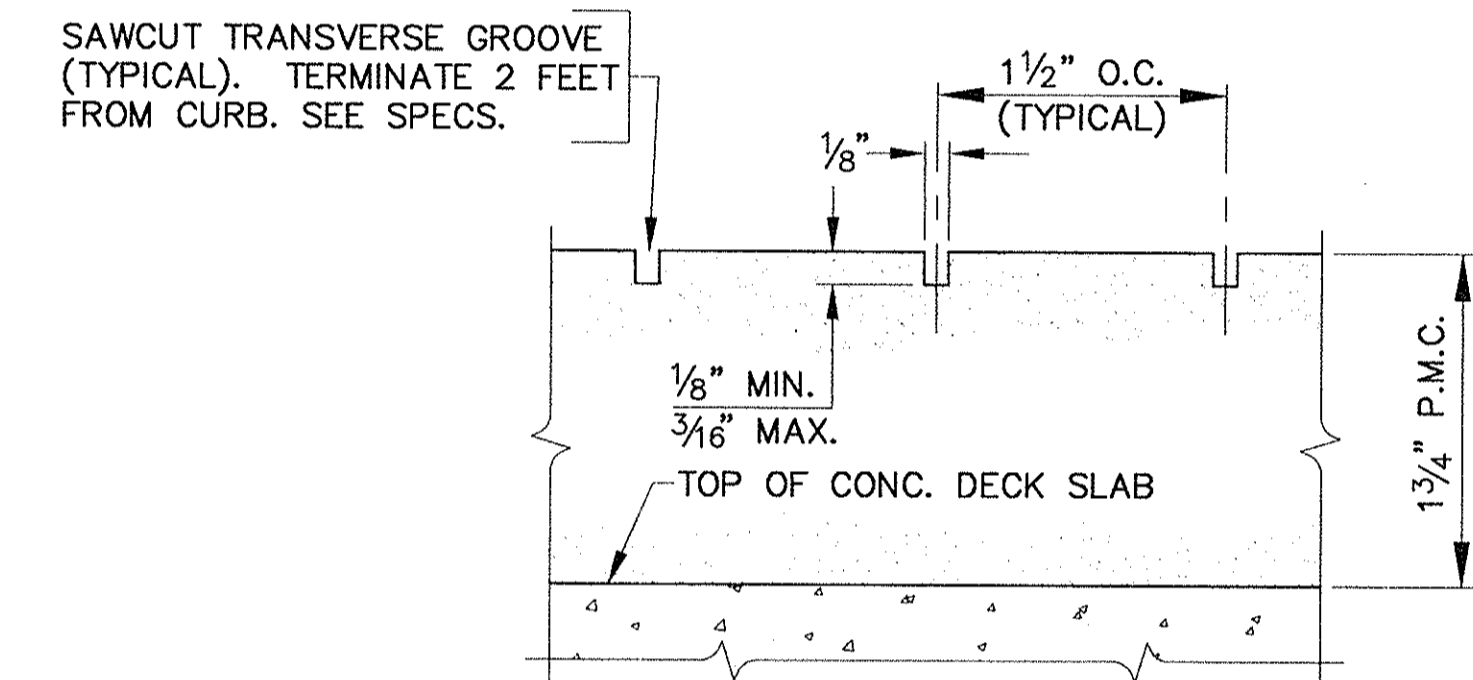


EXISTING TYPICAL CROSS SECTION - SPAN 1

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"

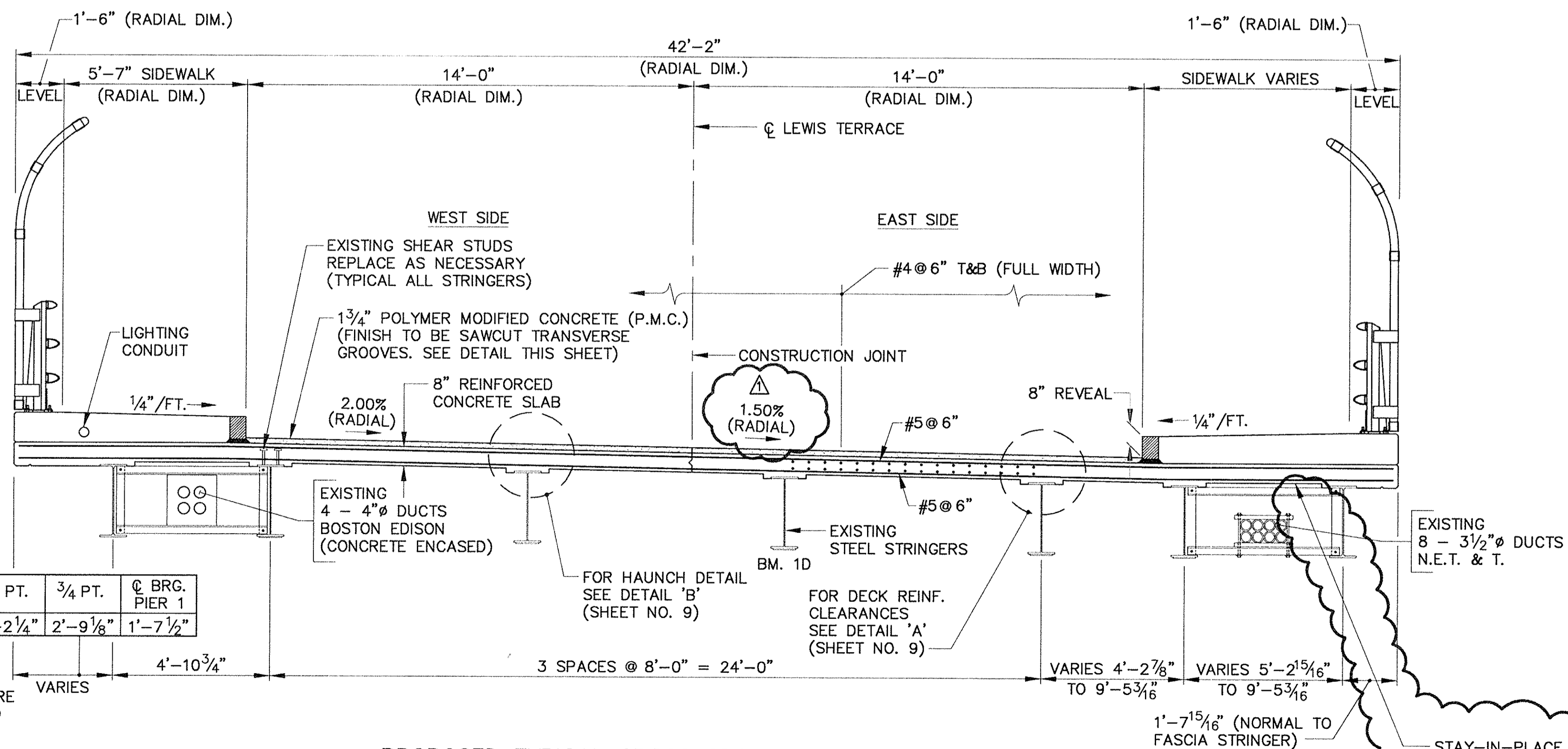
☉ BRG. N. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	☉ BRG. PIER 1
1'-6 1/4"	2'-9 5/16"	3'-2 1/4"	2'-9 1/8"	1'-7 1/2"

ALL DIMENSIONS ARE PERPENDICULAR TO ☉ OF STRINGER



P.M.C. SAWCUT TRANSVERSE GROOVES DETAIL

SCALE: FULL SIZE



PROPOSED TYPICAL CROSS SECTION - SPAN 1

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"

☉ BRG. N. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	☉ BRG. PIER 1
1'-6 1/4"	2'-9 5/16"	3'-2 1/4"	2'-9 1/8"	1'-7 1/2"

ALL DIMENSIONS ARE PERPENDICULAR TO ☉ OF STRINGER

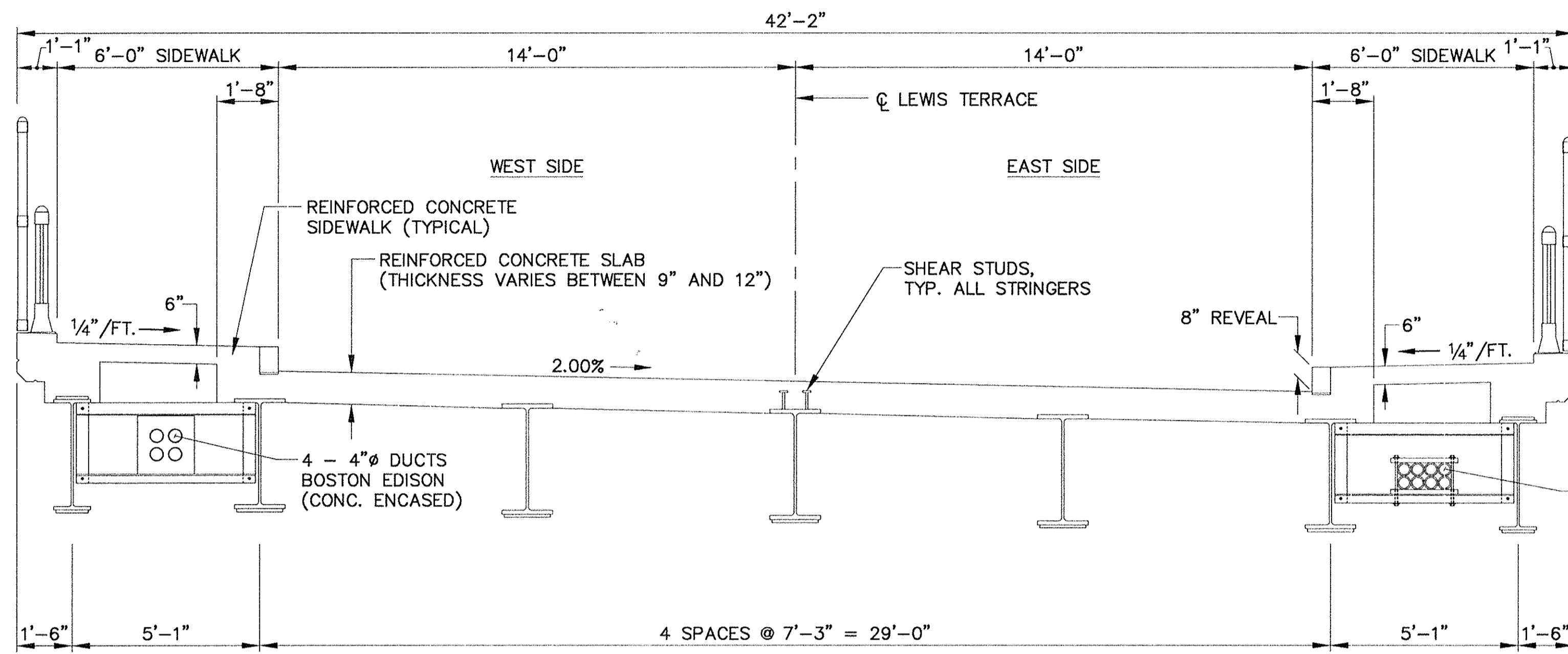
NOTES:

1. FOR SIDEWALK DETAILS, SEE SHEET NO. 10.
2. FOR DECK DETAILS, SEE SHEET NO. 9.

AS BUILT

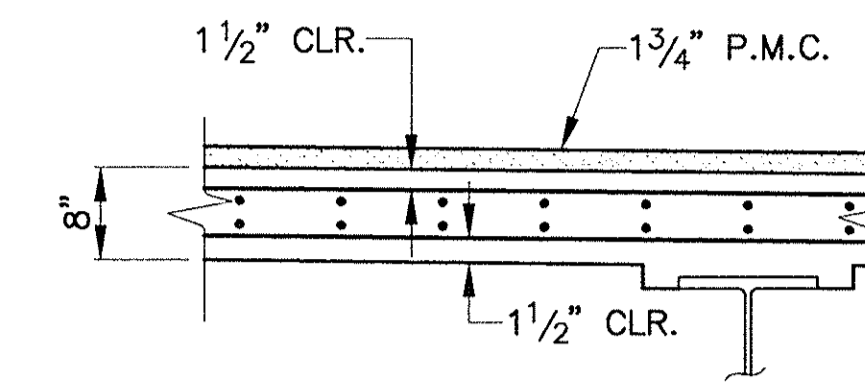
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) DECK SECTIONS SPAN 1	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schieffelin Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 8

DESIGNED:	GTS	DATE	12/93
DRAWN:	KMC	DATE	12/93
CHECKED:	FMK	DATE	12/93
NO.	REVISION	BY	DATE

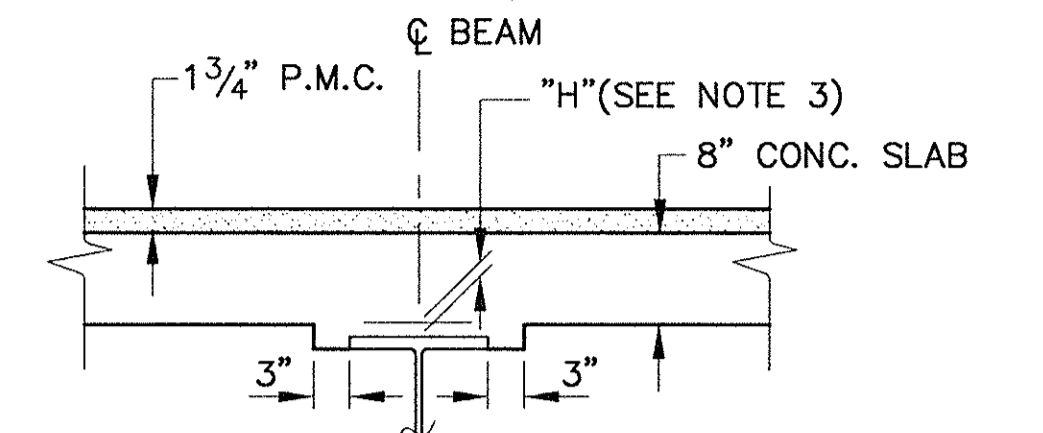


EXISTING TYPICAL CROSS SECTION - SPANS 2 & 3

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"



DETAIL 'A'
SCALE: 3/4" = 1'-0"

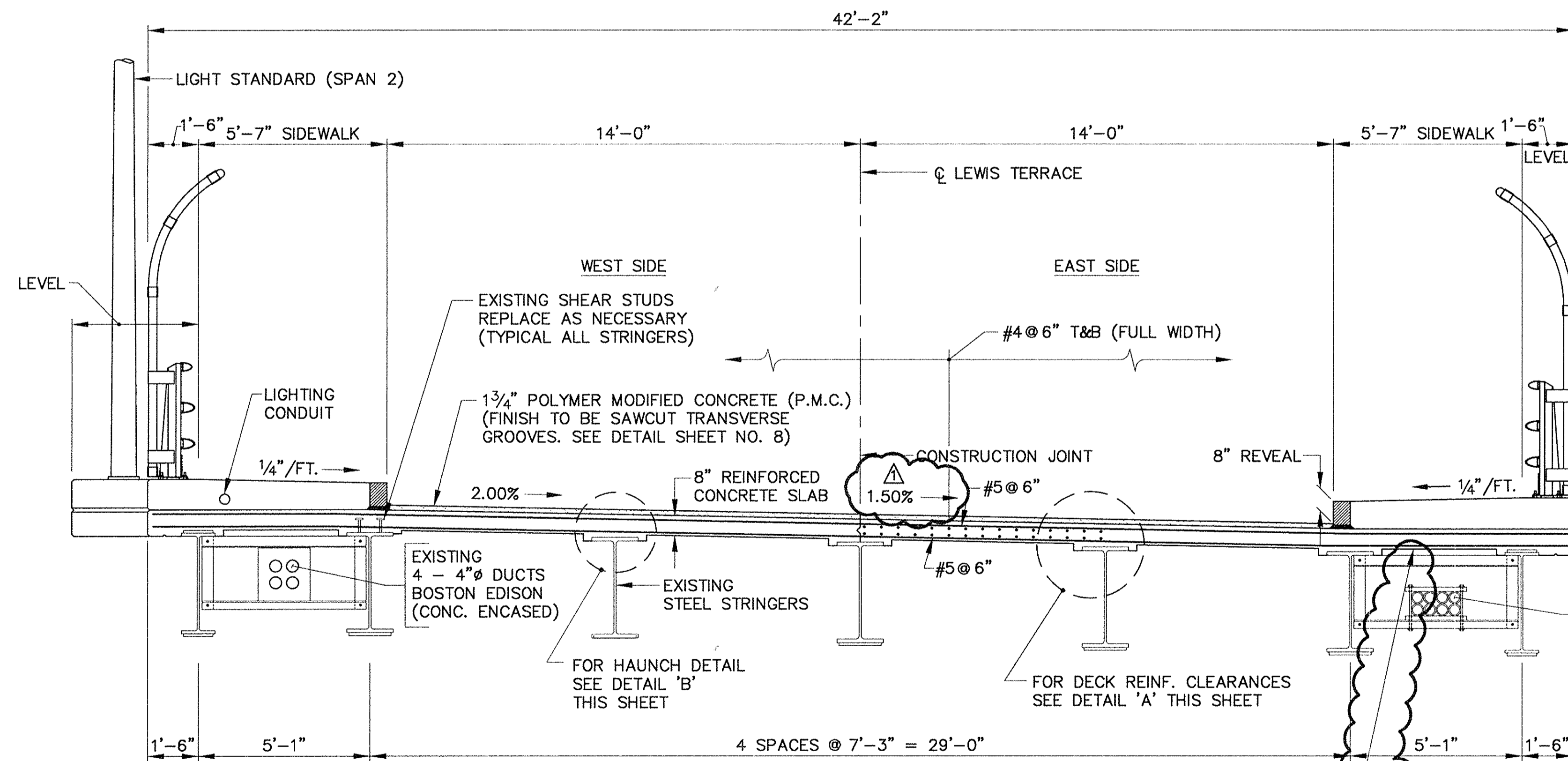


DETAIL 'B'
SCALE: 3/4" = 1'-0"

NOTE:
WHEN "H" IS GREATER THAN 3", SEE EXTRA DEPTH HAUNCH DETAIL THIS SHEET.

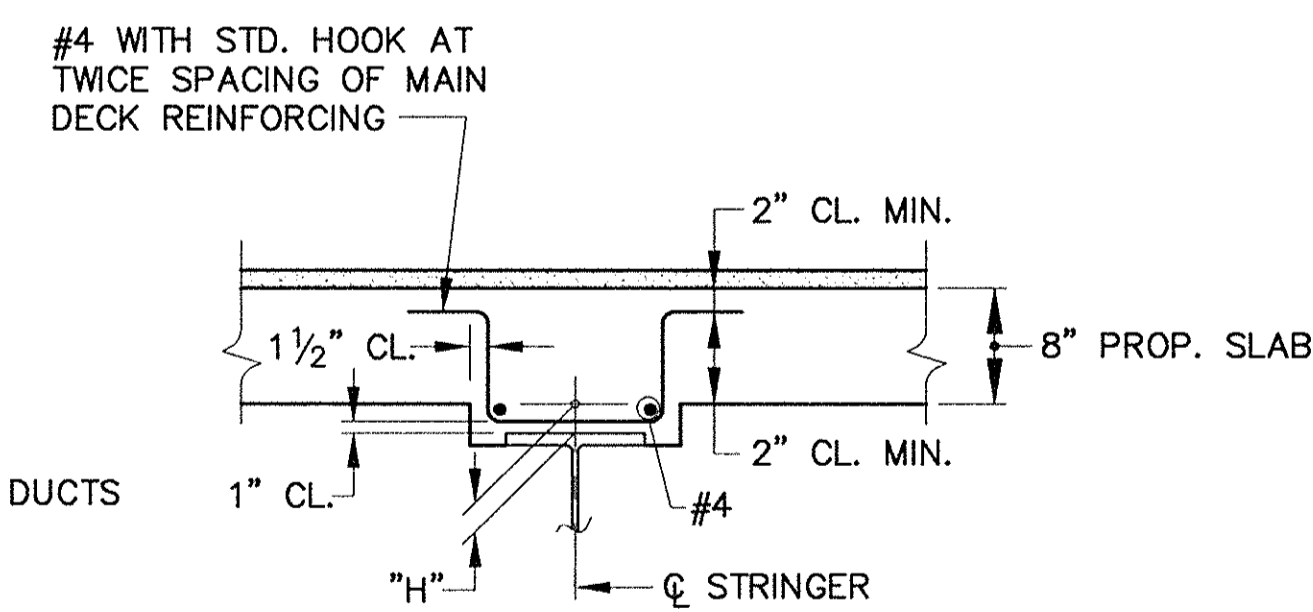
HAUNCH DEPTH "H" (INCHES) FOR SETTING TOP OF FORMS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE

BEAM NO.	INCREASING STATIONS →								CL. BRG.	
	CL. BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.		
SPAN 1	1A									
	1B									
	1C									
	1D									
	1E									
	1G									
SPAN 2	2A									
	2B									
	2C									
	2D									
	2E									
	2G									
SPAN 3	3A									
	3B									
	3C									
	3D									
	3E									
	3G									



PROPOSED TYPICAL CROSS SECTION - SPANS 2 & 3

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"



NOTE:
THIS DETAIL APPLIES ONLY WHEN "H" IS GREATER THAN 3".

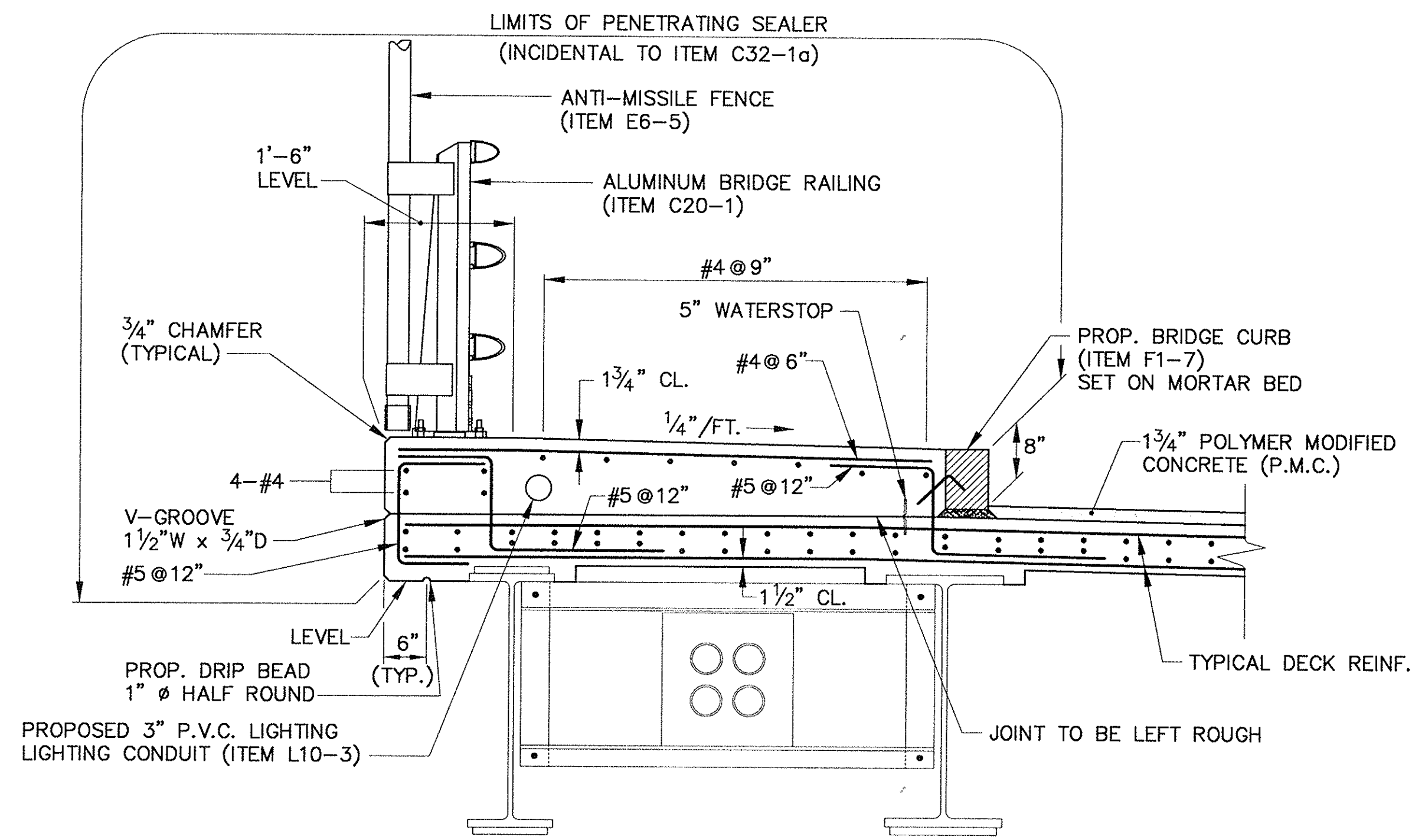
EXTRA DEPTH HAUNCH DETAIL
(ITEM C32-2)
NOT TO SCALE

- NOTES:
- FOR NOTES, SEE SHEET NO. 8.
 - FOR SIDEWALK AND LIGHT POLE SUPPORT DETAILS, SEE SHEET NO. 10.
 - HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY, AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG CL. STRINGERS PRIOR TO CONCRETE REMOVAL AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED. SEE SPECIAL PROVISIONS SECTION C1-D.
 - THE CONTRACTOR SHOULD NOTE THAT THE EXISTING BRIDGE DECK MAY VARY BETWEEN 9" AND 12" THICK.
 - FOR LONGITUDINAL CONSTRUCTION JOINT DETAIL, SEE SHEET NO. 21.

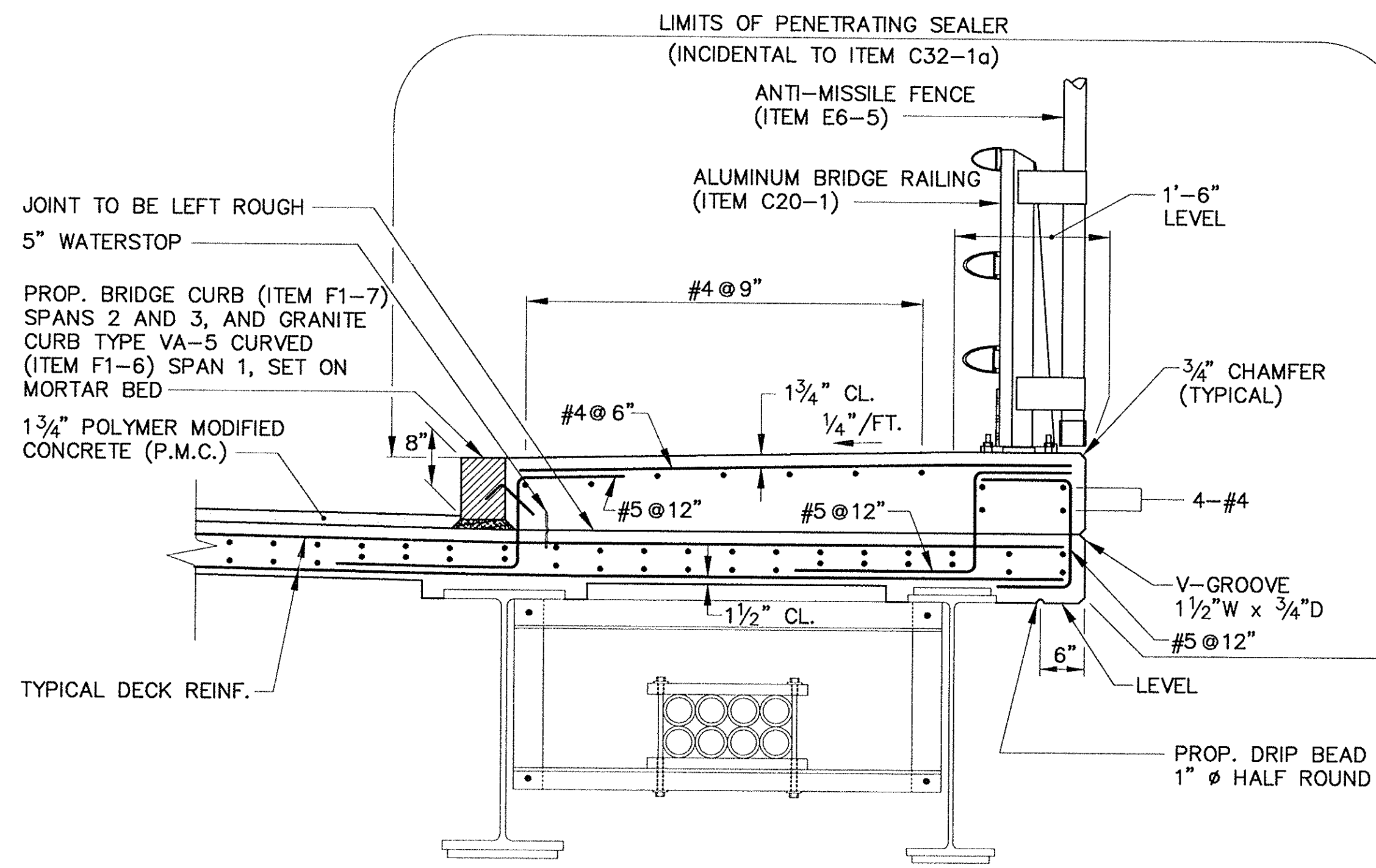
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
	AS-BUILT	GTS	10/95	CHECKED: FMK	12/93
				DESIGNED: GTS	12/93
				DRAWN: KMC	12/93

AS BUILT

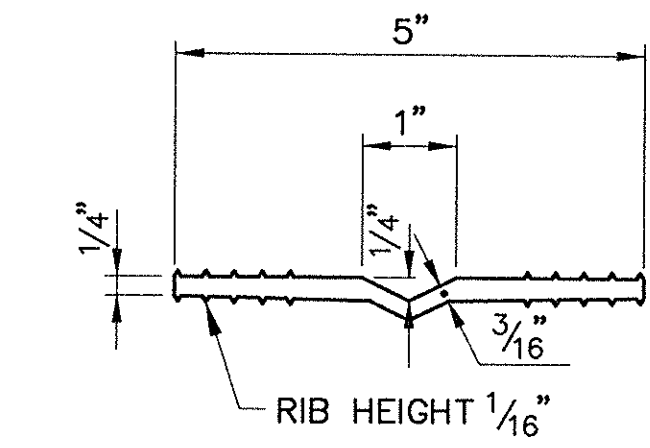
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
DECK SECTIONS AND DETAILS
SPANS 2 & 3
 Scale: AS NOTED Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 9
 The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129



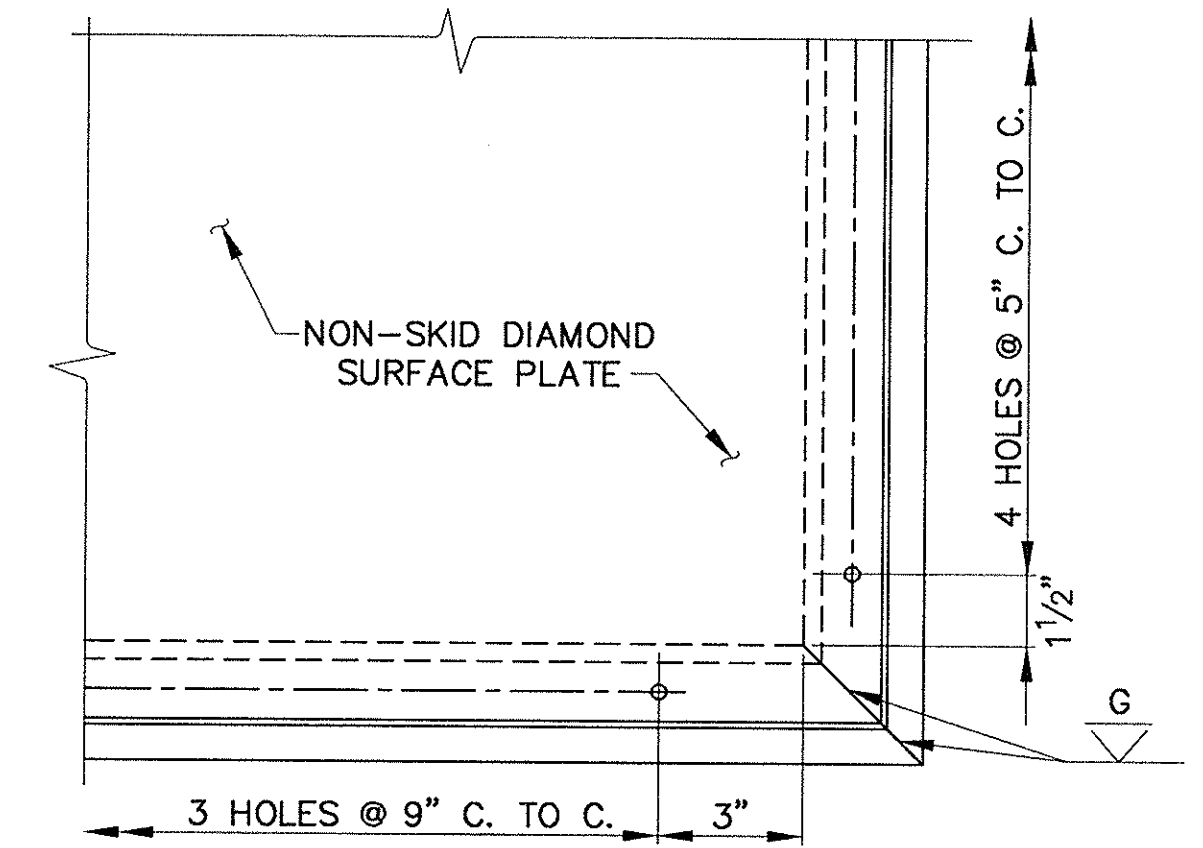
SIDEWALK DETAIL - WEST SIDE
SCALE: 3/4" = 1'-0"



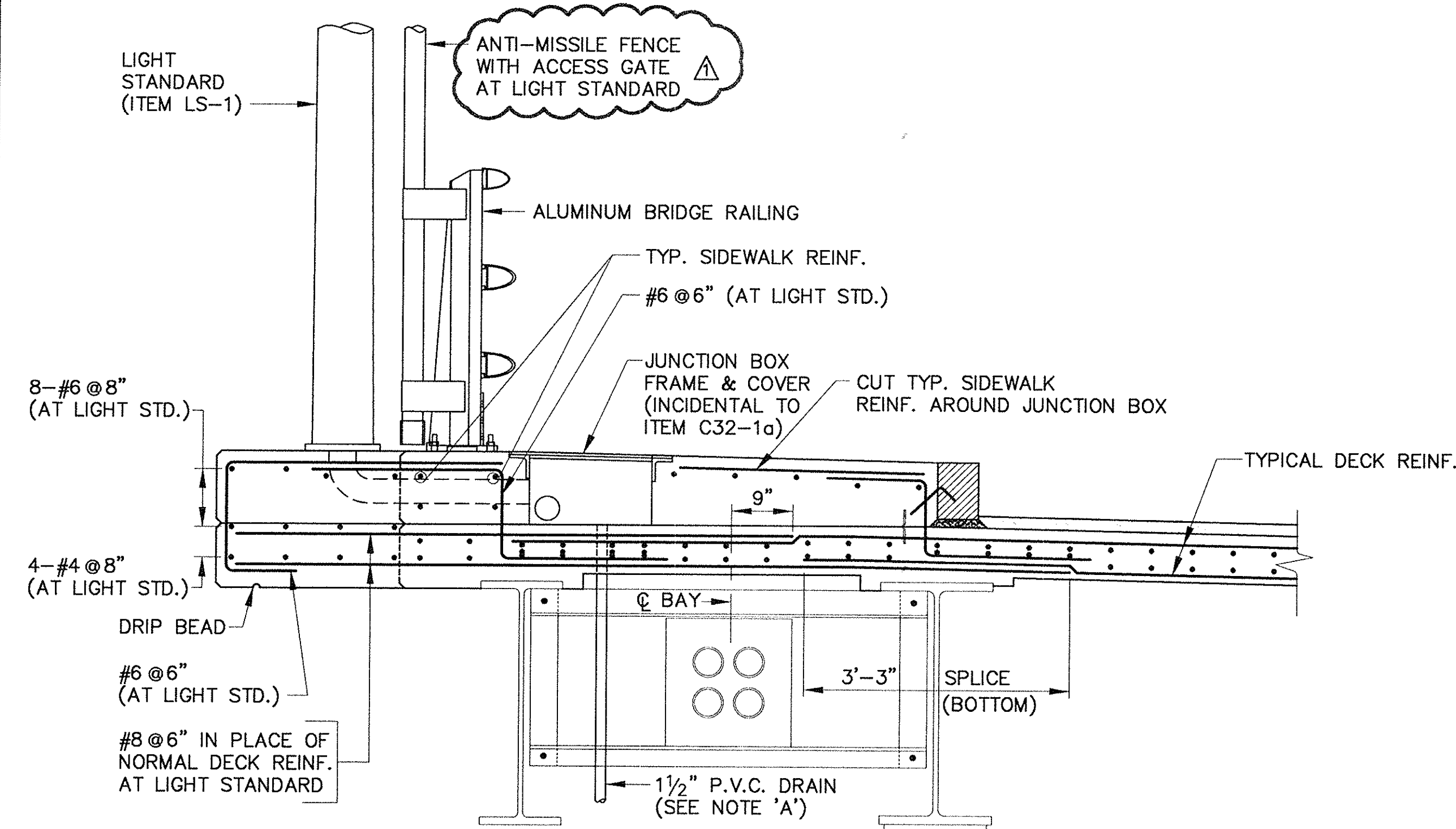
SIDEWALK DETAIL - EAST SIDE
SCALE: 3/4" = 1'-0"



5\"/>

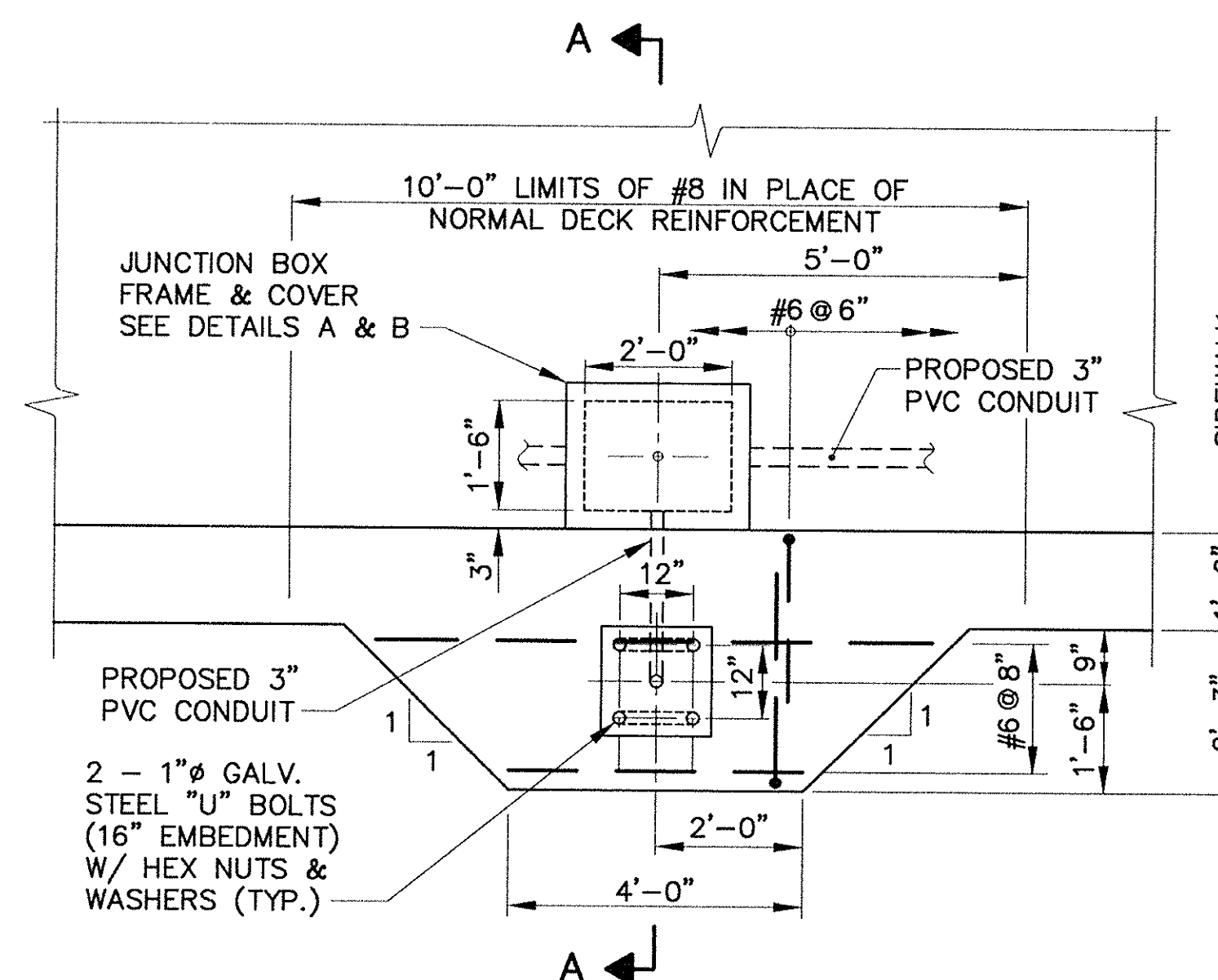


DETAIL A
SCALE: 3\"/>

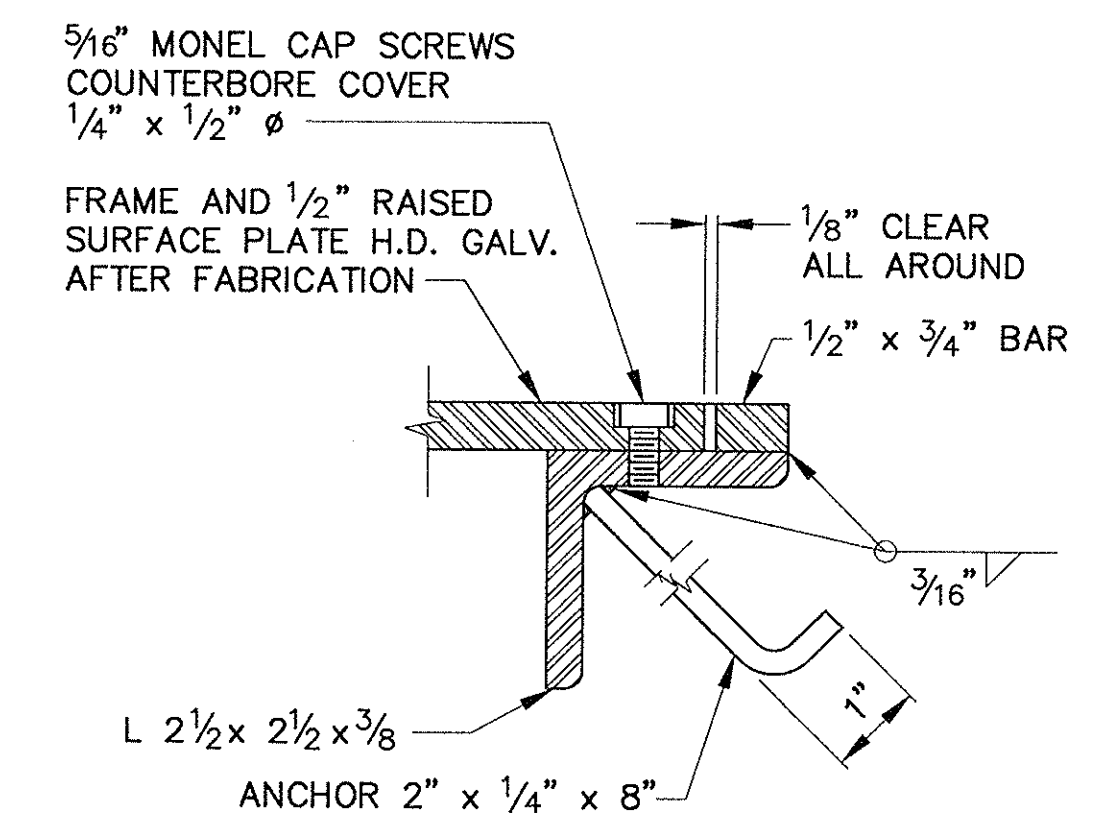


SECTION A-A
SCALE: 3/4" = 1'-0"

NOTE 'A'
P.V.C. DRAINS LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED NOT TO DRAIN ONTO THE TRAVELED WAY.



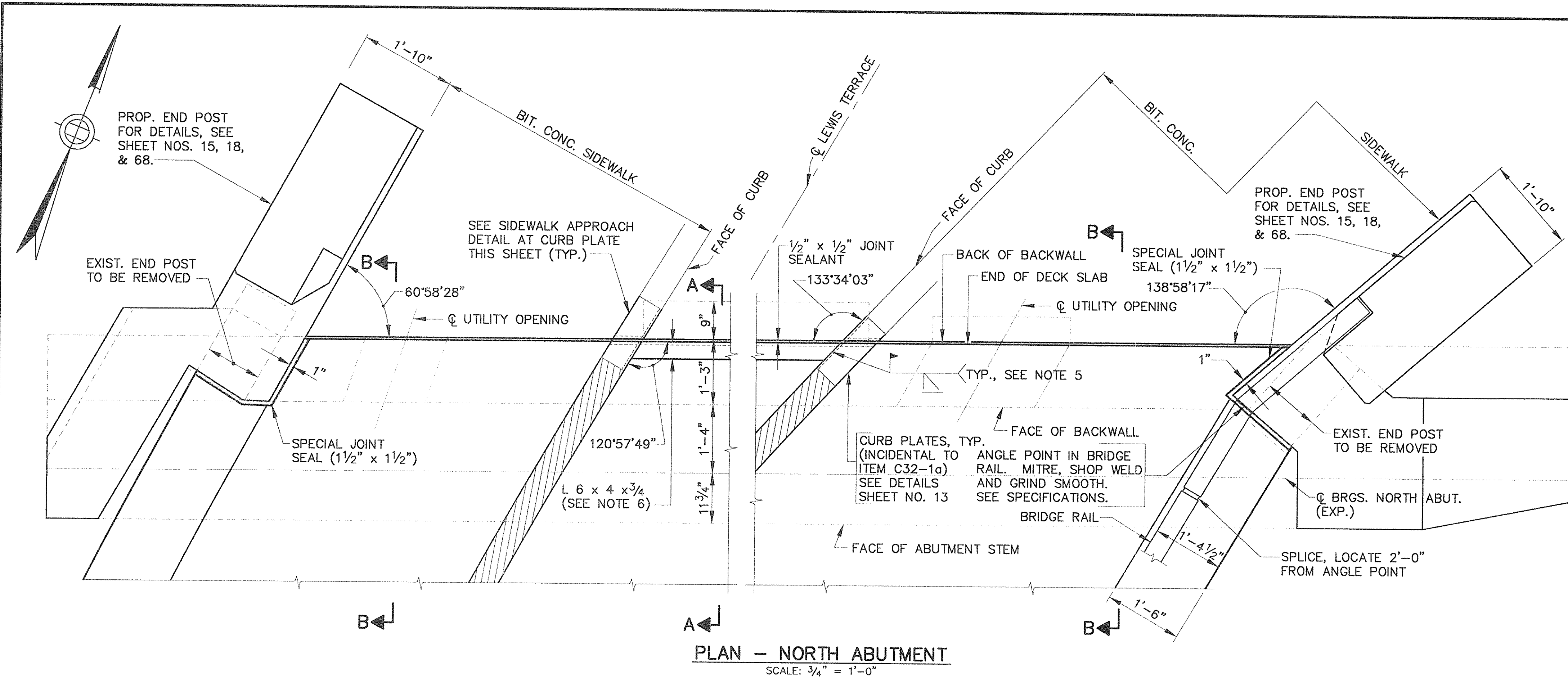
PLAN PROPOSED LIGHT POLE SUPPORT (WEST SIDE)
NOT TO SCALE



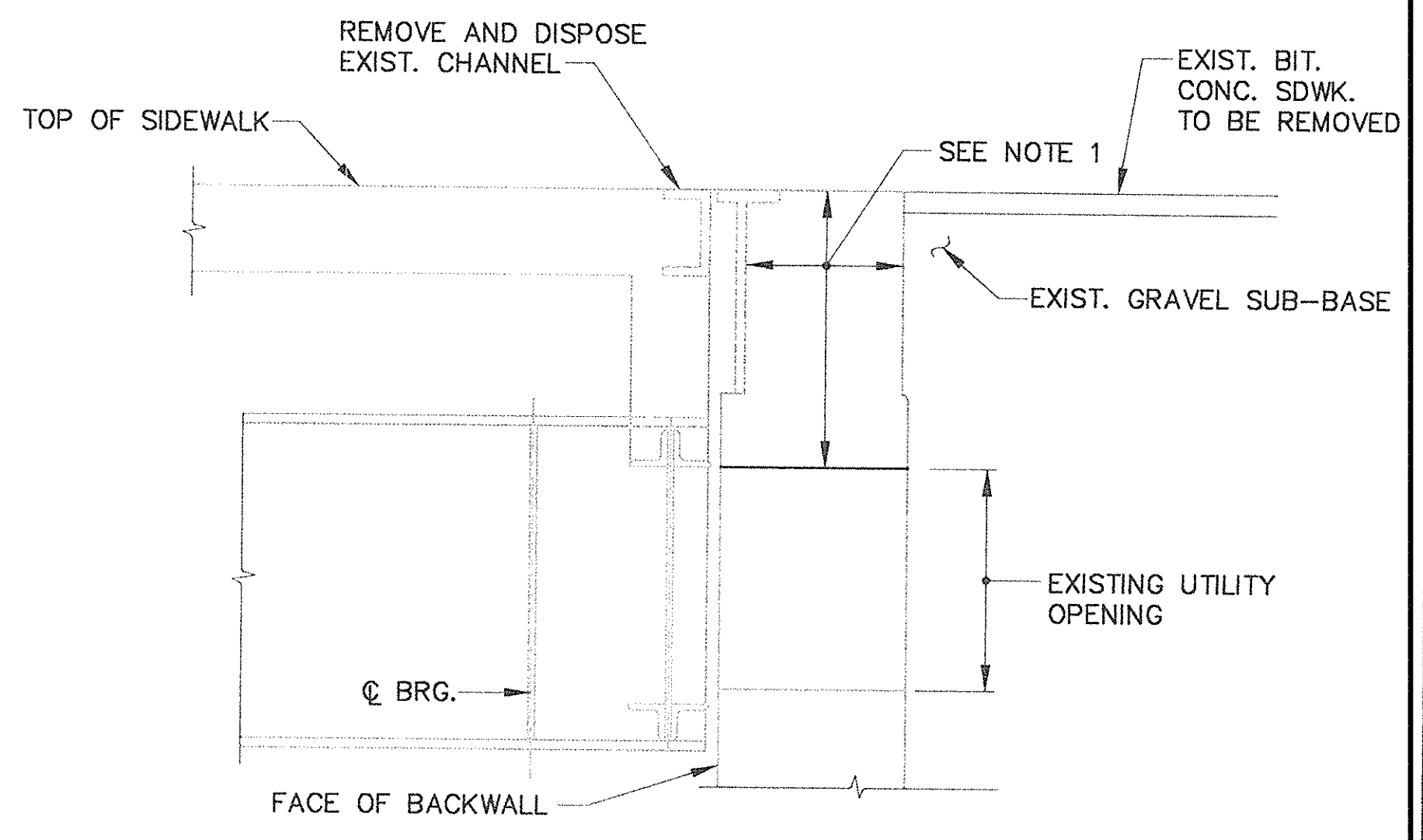
DETAIL B
SCALE: HALF SIZE
AS BUILT

NO.	REVISION	BY	DATE	CHECKED	IN CHARGE OF
		GTS	10/95	FMK	GTS
		GTS	12/93	KMC	GTS
		GTS	12/93	FMK	GTS

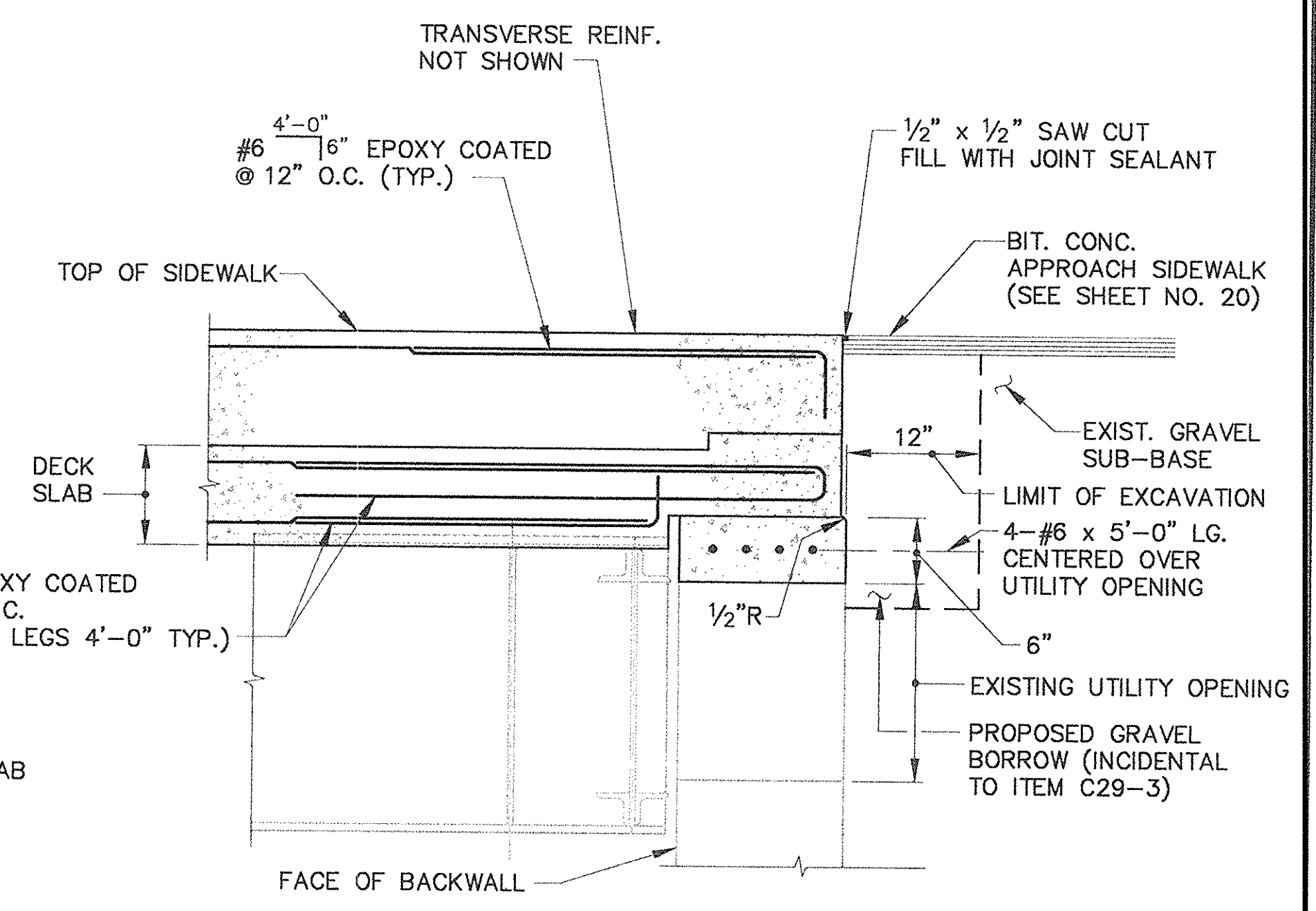
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) SIDEWALK AND LIGHT POLE SUPPORT DETAILS	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. <small>The Schreffl Center 329 Main Street Boston, Massachusetts 02129</small>	Sheet No. 10



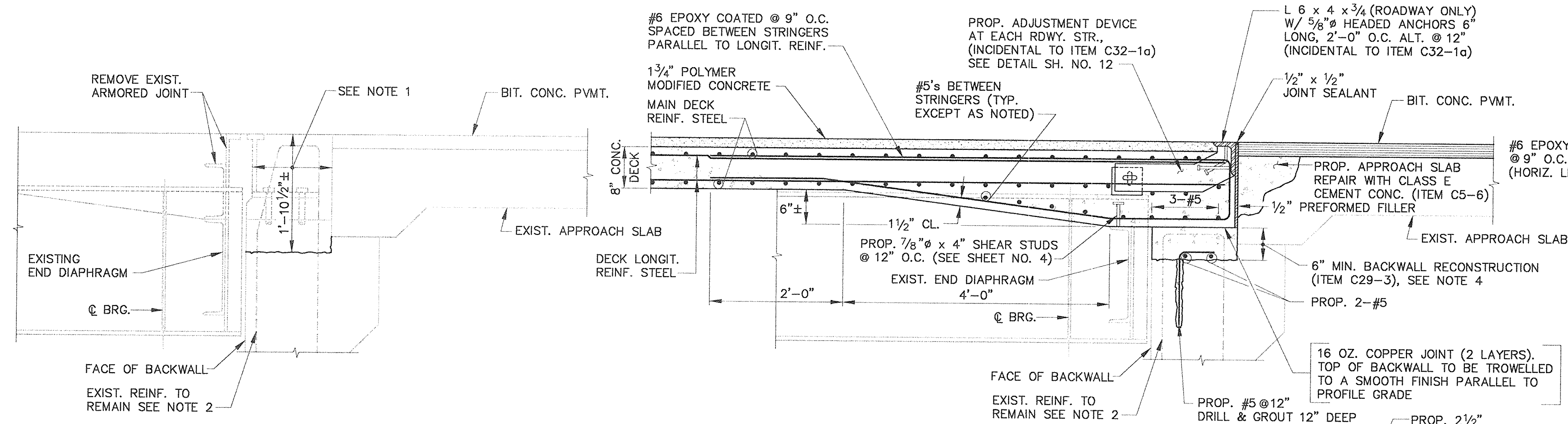
PLAN - NORTH ABUTMENT
SCALE: 3/4" = 1'-0"



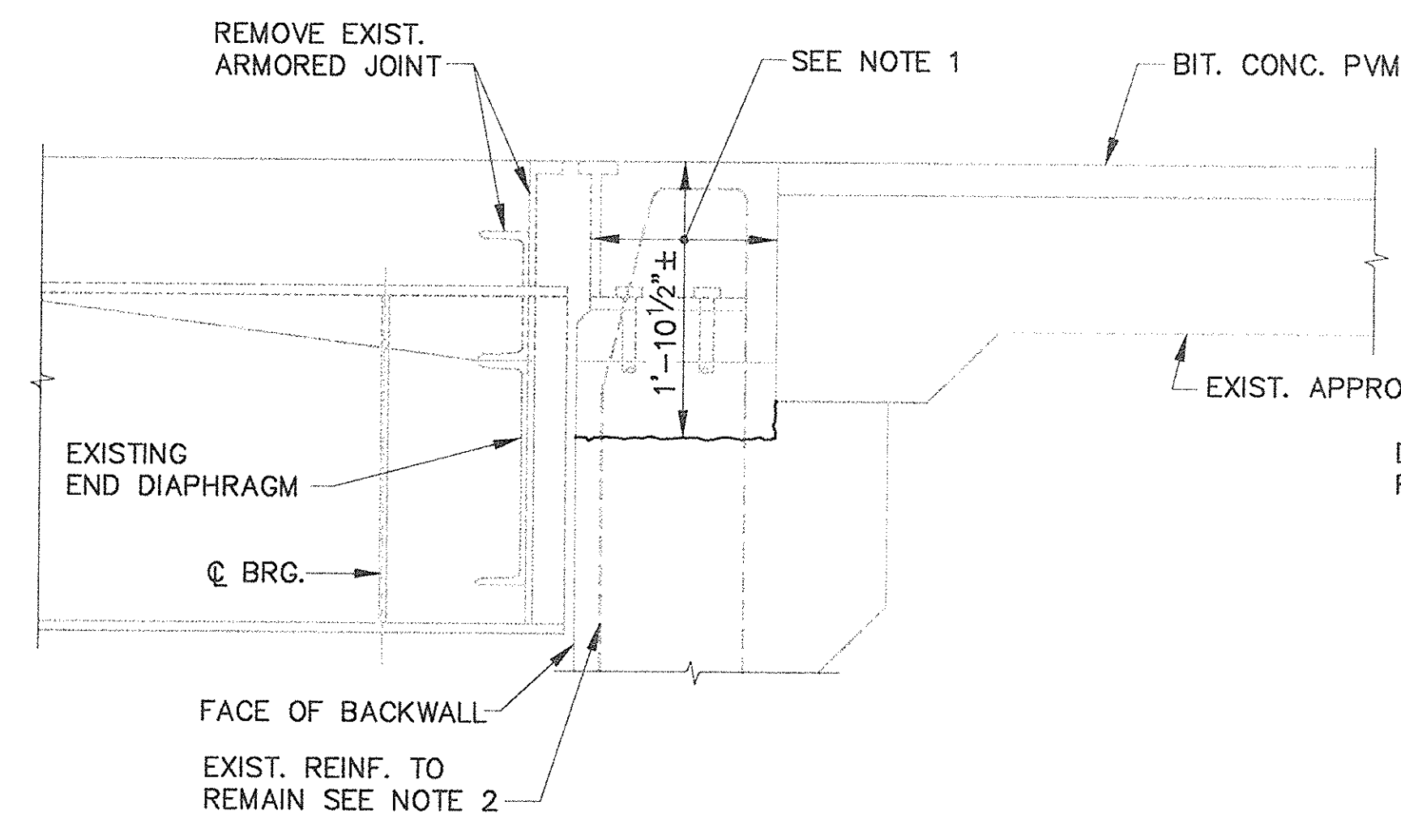
SECTION B-B (EXISTING)
SCALE: 1" = 1'-0"



SECTION B-B (PROPOSED)
SCALE: 1" = 1'-0"



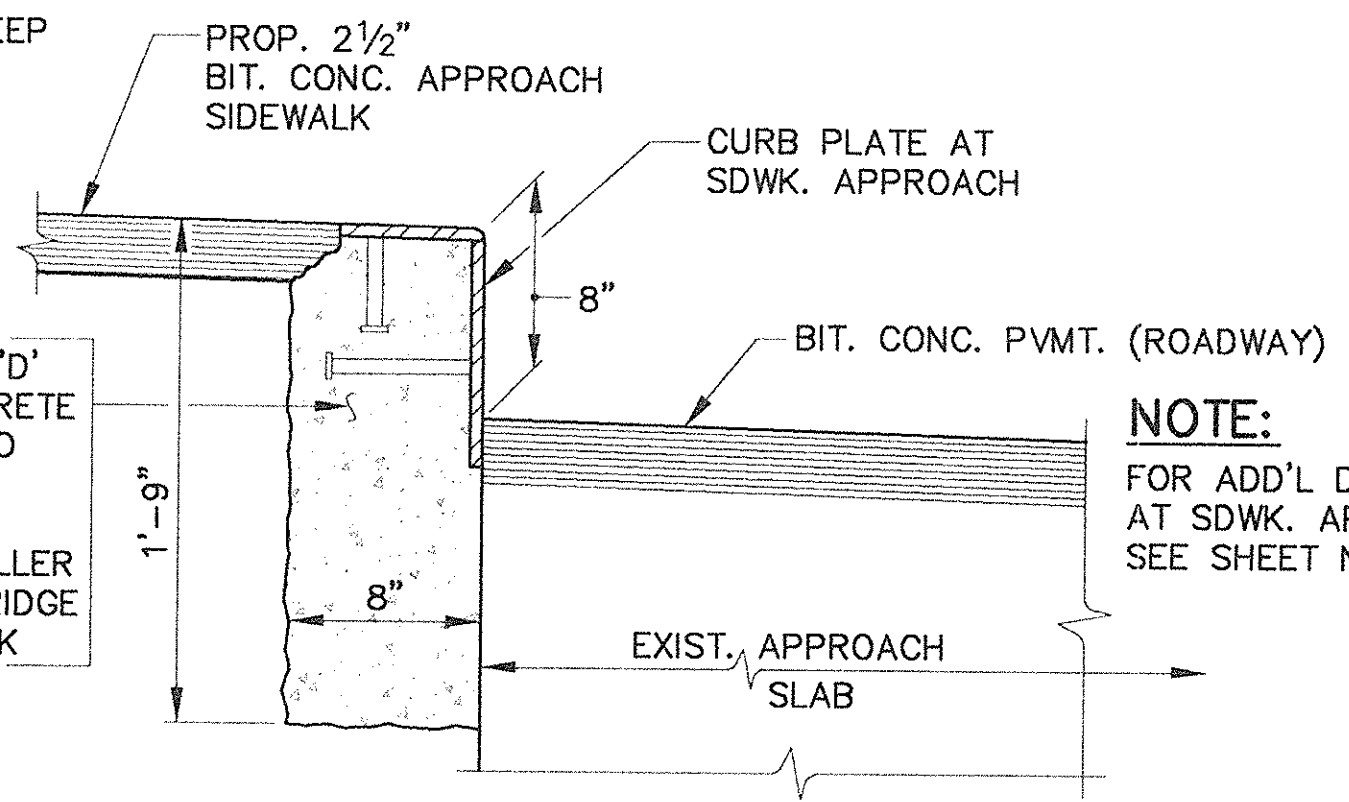
SECTION A-A (PROPOSED)
SCALE: 1" = 1'-0"



SECTION A-A (EXISTING)
SCALE: 1" = 1'-0"

NOTES:

1. REMOVE EXISTING BACKWALL, ARMORED JOINT AND ANCHOR BOLTS TO 4"± BELOW THE APPROACH SLAB SEAT AND TO TOP OF UTILITY OPENING AS SHOWN (ITEM C1D-1a). CUT, CLEAN AND BEND EXIST. REINFORCING STEEL TO PROVIDE 2" CLEARANCE.
2. THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO DECK RECONSTRUCTION ITEM C32-1a.
3. FOR ADDITIONAL END POST AND BACKWALL MODIFICATION DETAILS SEE SHEET NOS. 18 & 68.
4. CONCRETE FOR BACKWALL RECONSTRUCTION SHALL BE CLASS 'E' CEMENT CONCRETE (f_c=5000 PSI) AND FOR END POSTS AND END POSTS, SHALL BE CLASS 'D' CEMENT CONCRETE (f_c=4500 PSI).
5. AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
6. PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2" BEYOND CONSTRUCTION JOINT AT @ LEWIS TERRACE. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPliced USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE.



SIDEWALK APPROACH DETAIL AT CURB PLATE
SCALE: 1 1/2" = 1'-0"

AS BUILT

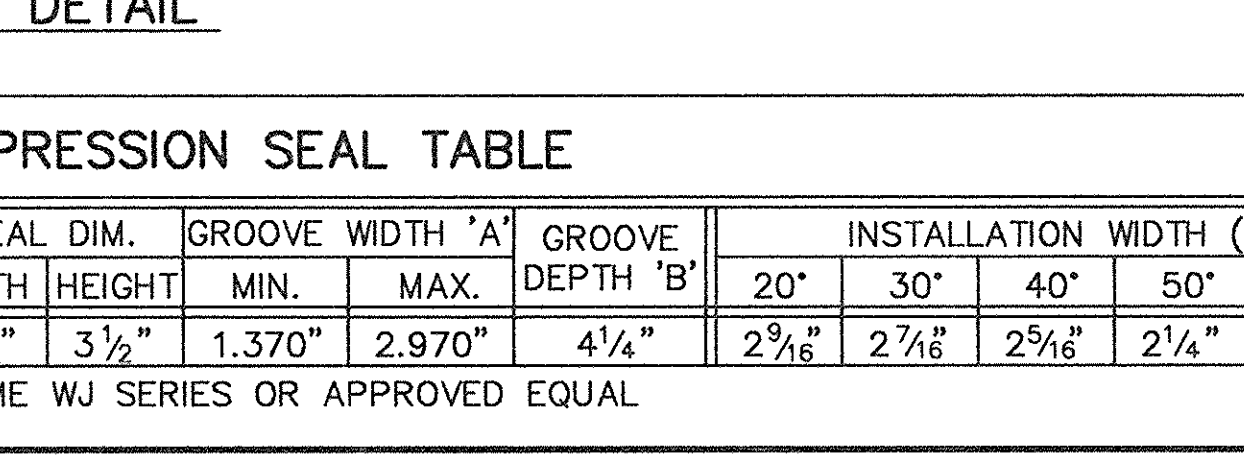
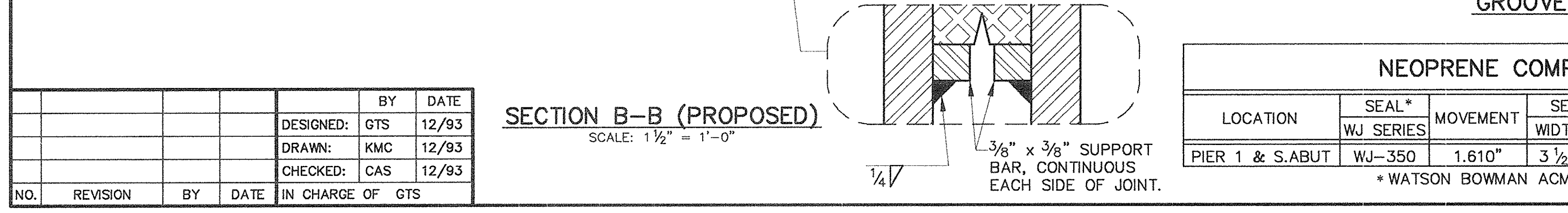
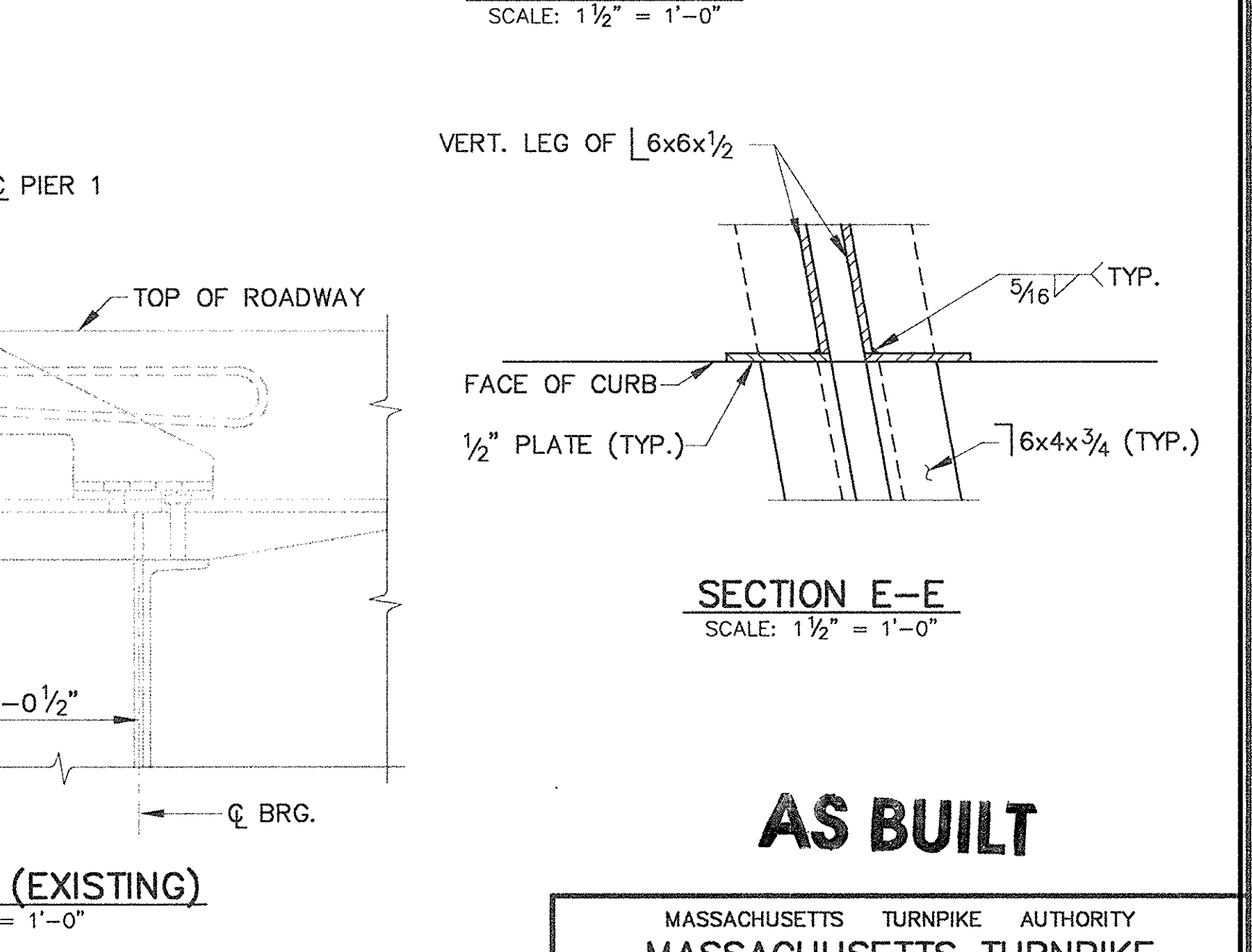
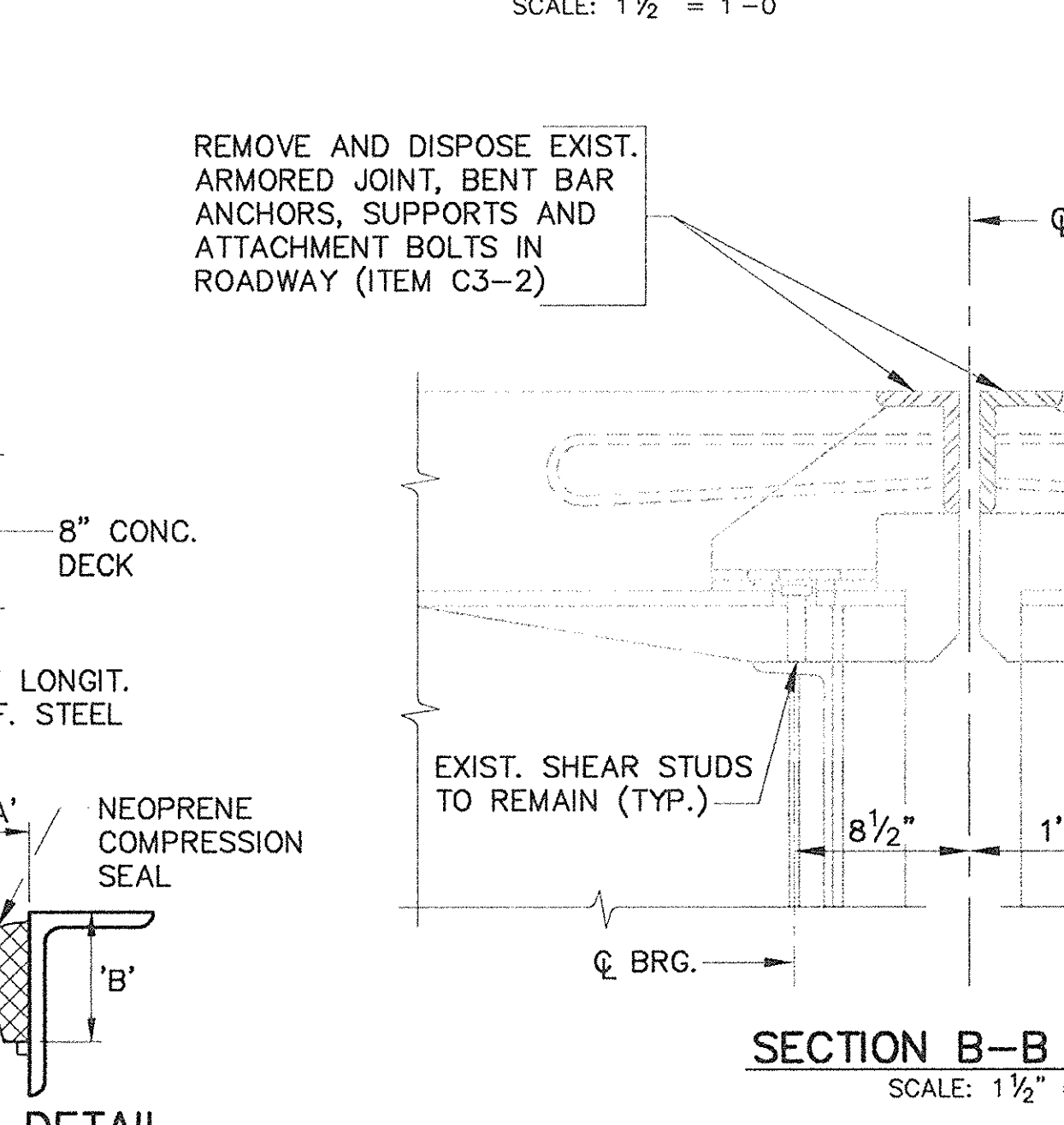
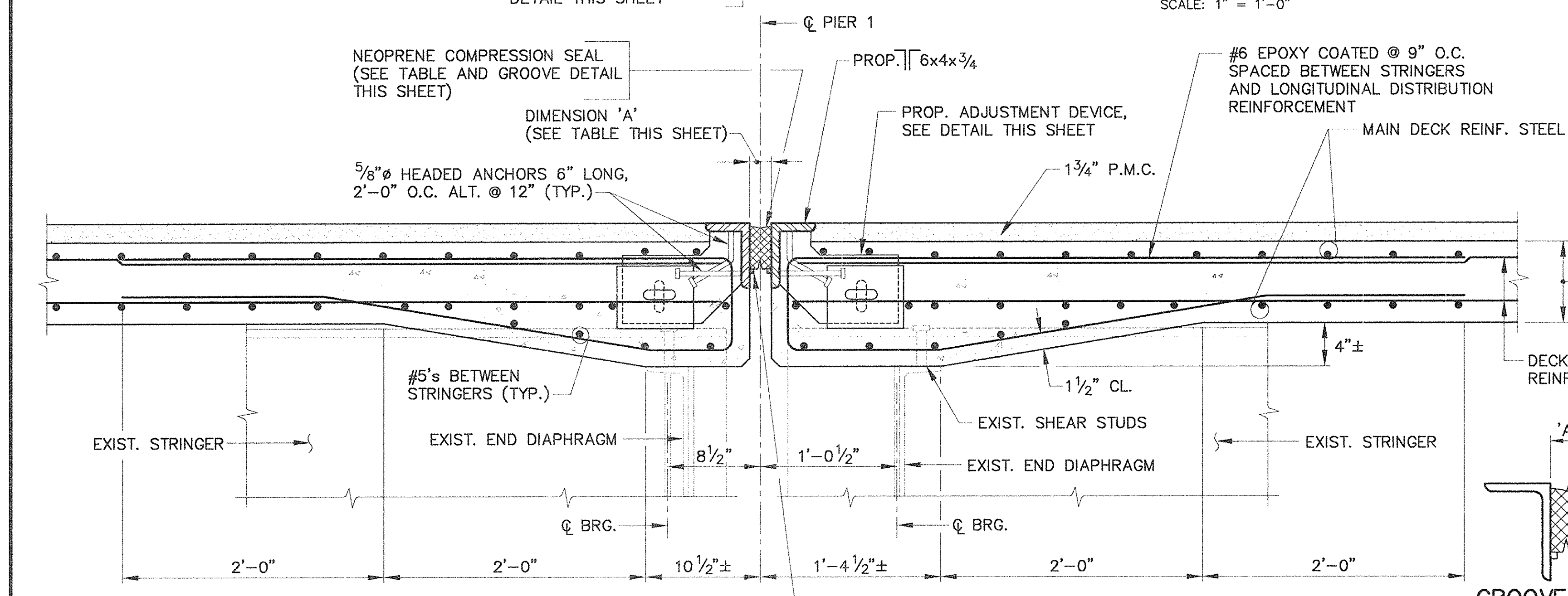
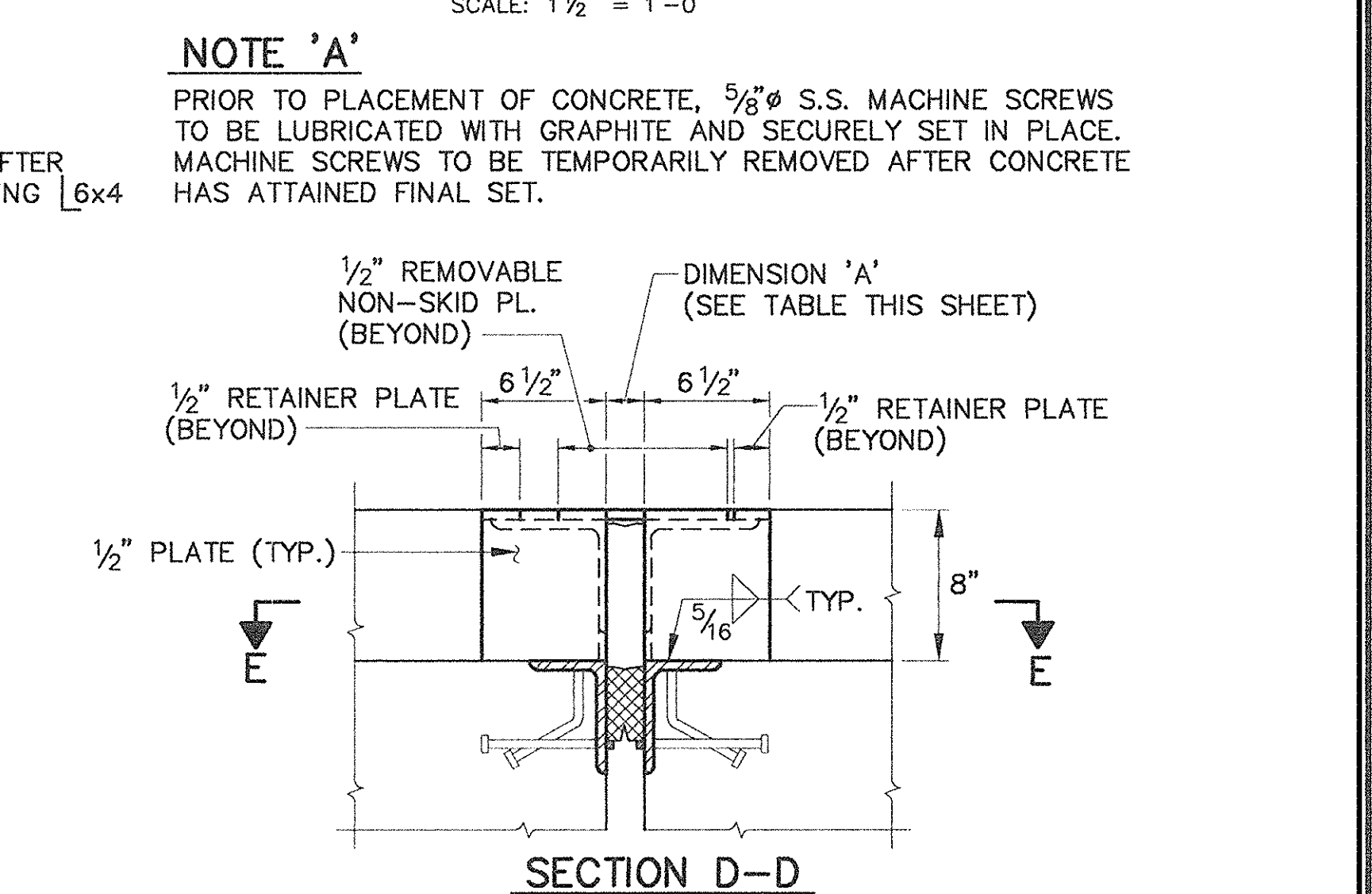
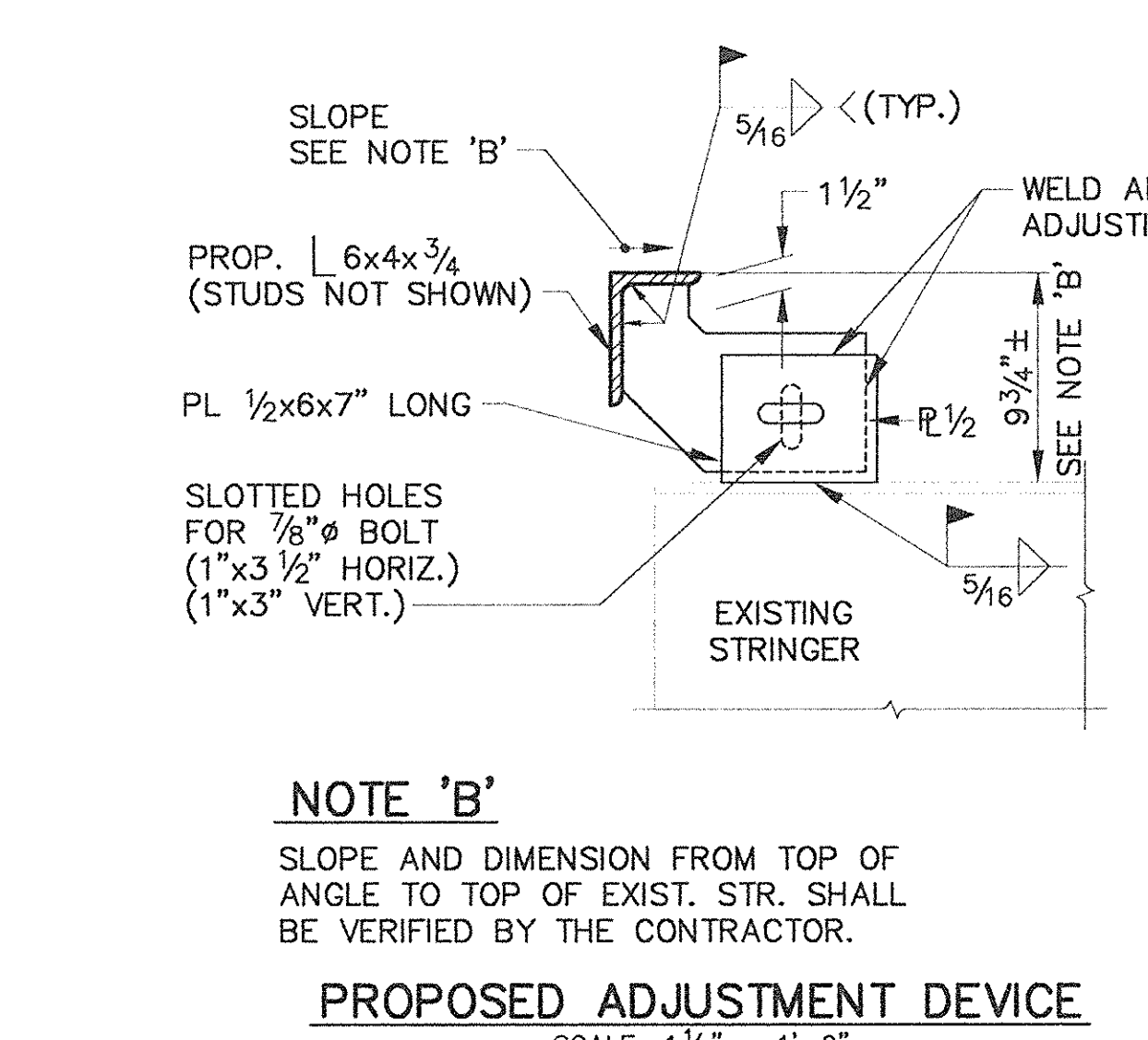
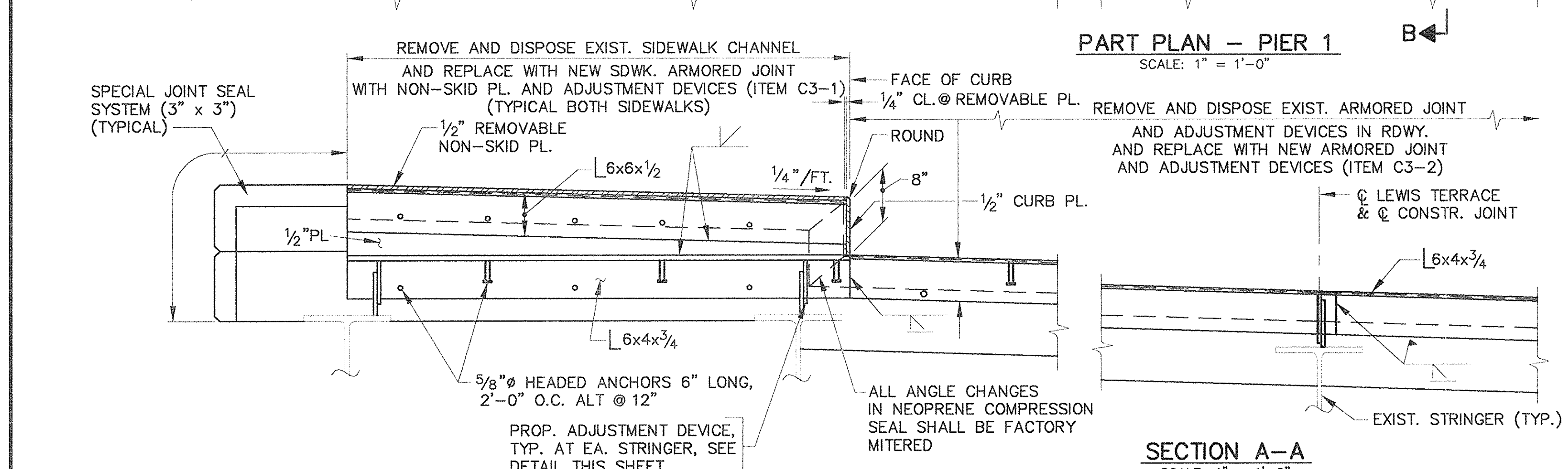
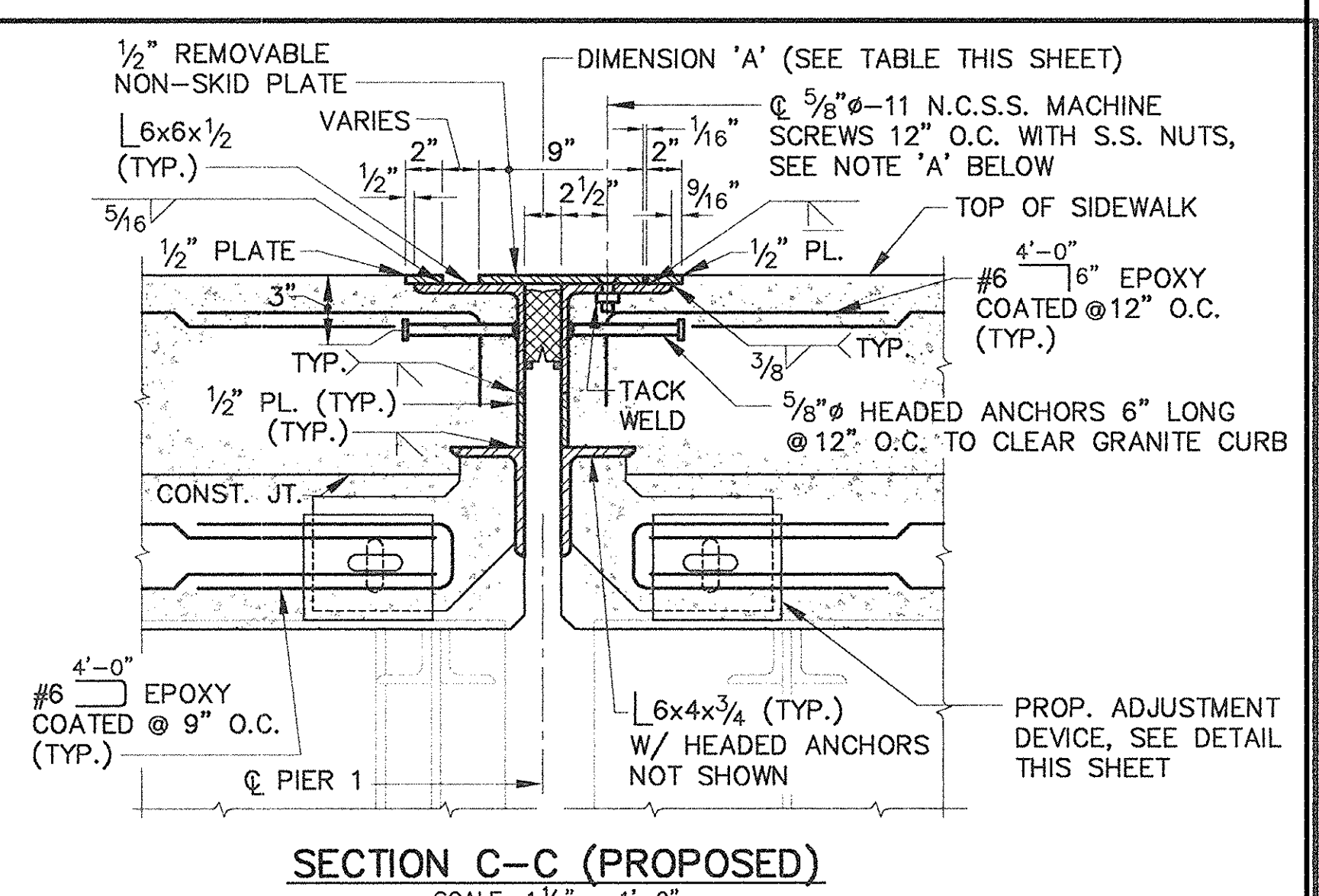
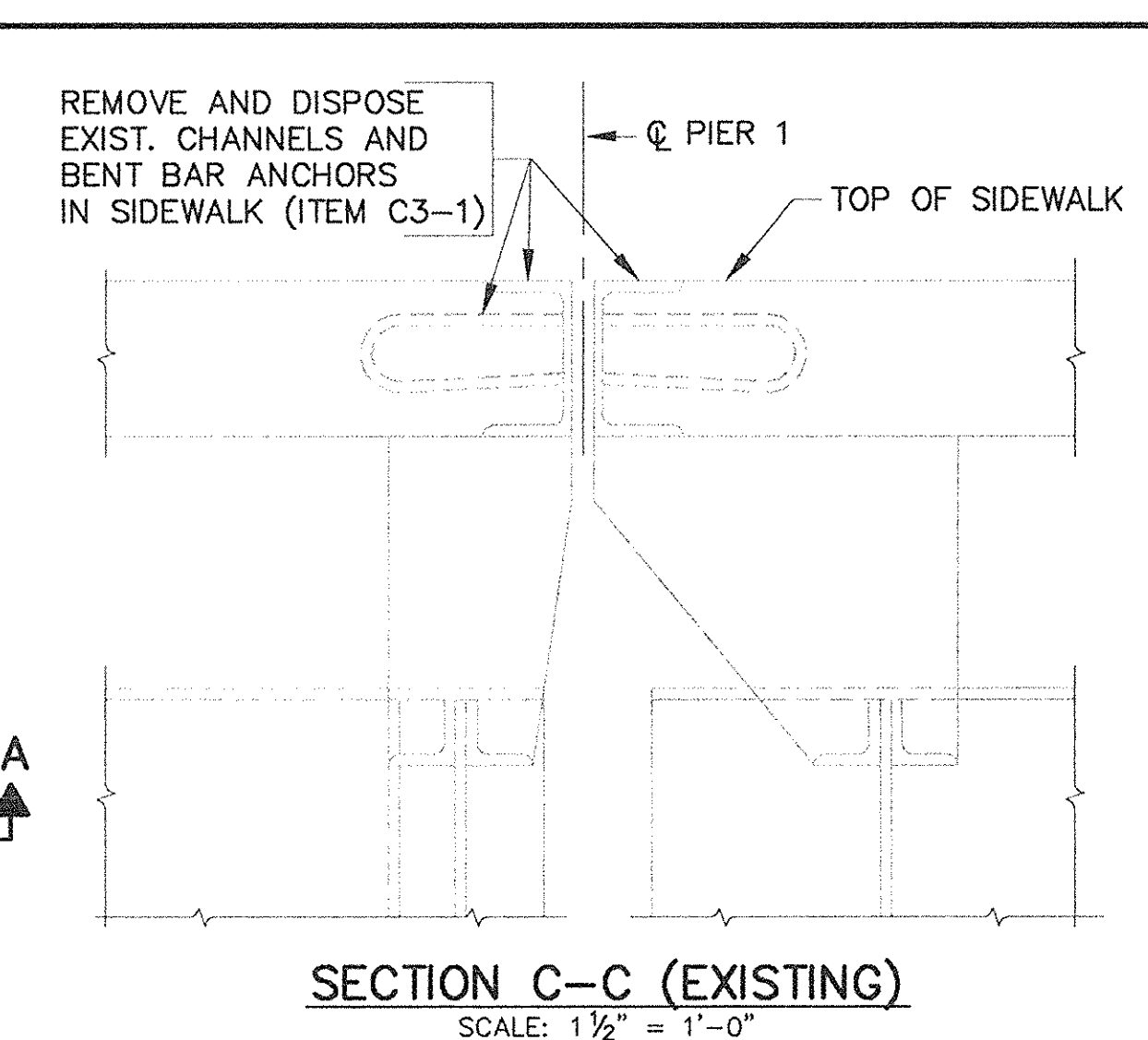
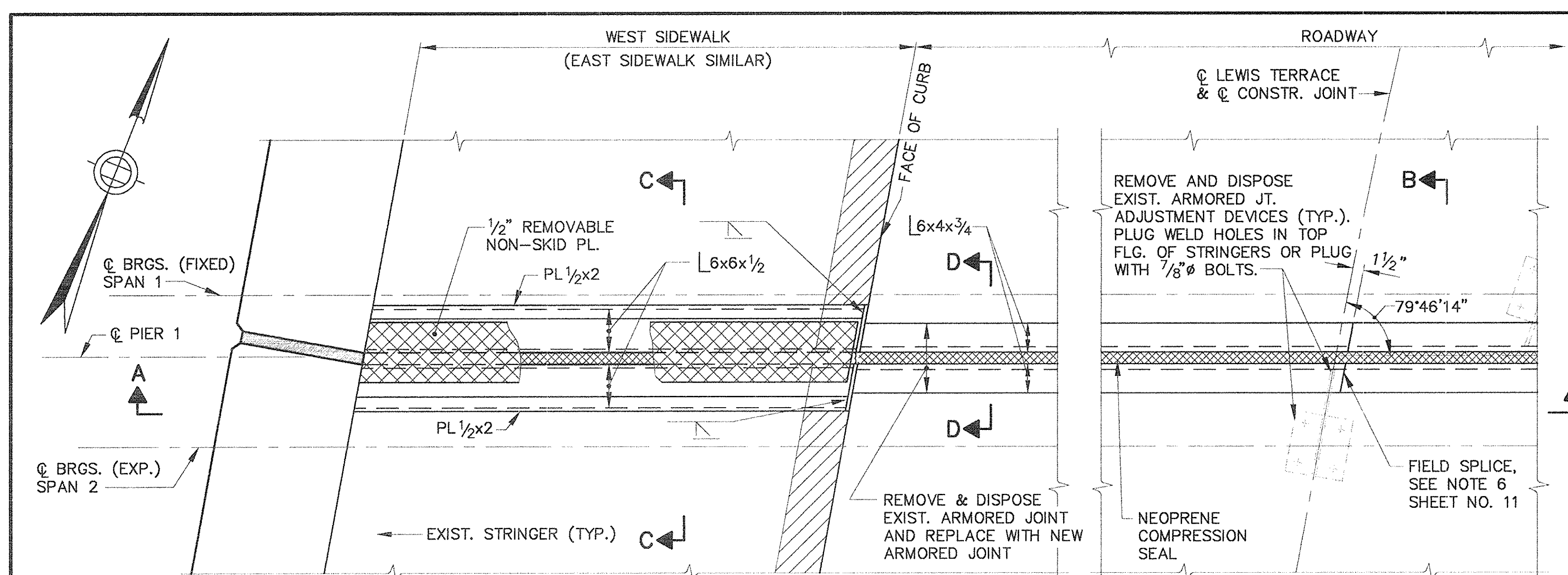
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
JOINT DETAILS AT NORTH ABUTMENT

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
 529 Main Street
 Boston, Massachusetts 02129

Sheet No. **11**

NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					DESIGNED:	GTS 12/93
					DRAWN:	KMC 12/93
					CHECKED:	FMK 12/93



NEOPRENE COMPRESSION SEAL TABLE																	
LOCATION	SEAL* WJ SERIES	MOVEMENT	SEAL DIM.		GROOVE WIDTH 'A'		GROOVE DEPTH 'B'	INSTALLATION WIDTH ('A') INCHES AT TEMPERATURE (F°)									
			WIDTH	HEIGHT	MIN.	MAX.		20°	30°	40°	50°	60°	70°	80°	90°	100°	
PIER 1 & S.ABUT	WJ-350	1.610"	3 1/2"	3 1/2"	1.370"	2.970"	4 1/4"	2 9/16"	2 1/8"	2 3/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 1/16"	

* WATSON BOWMAN ACME WJ SERIES OR APPROVED EQUAL

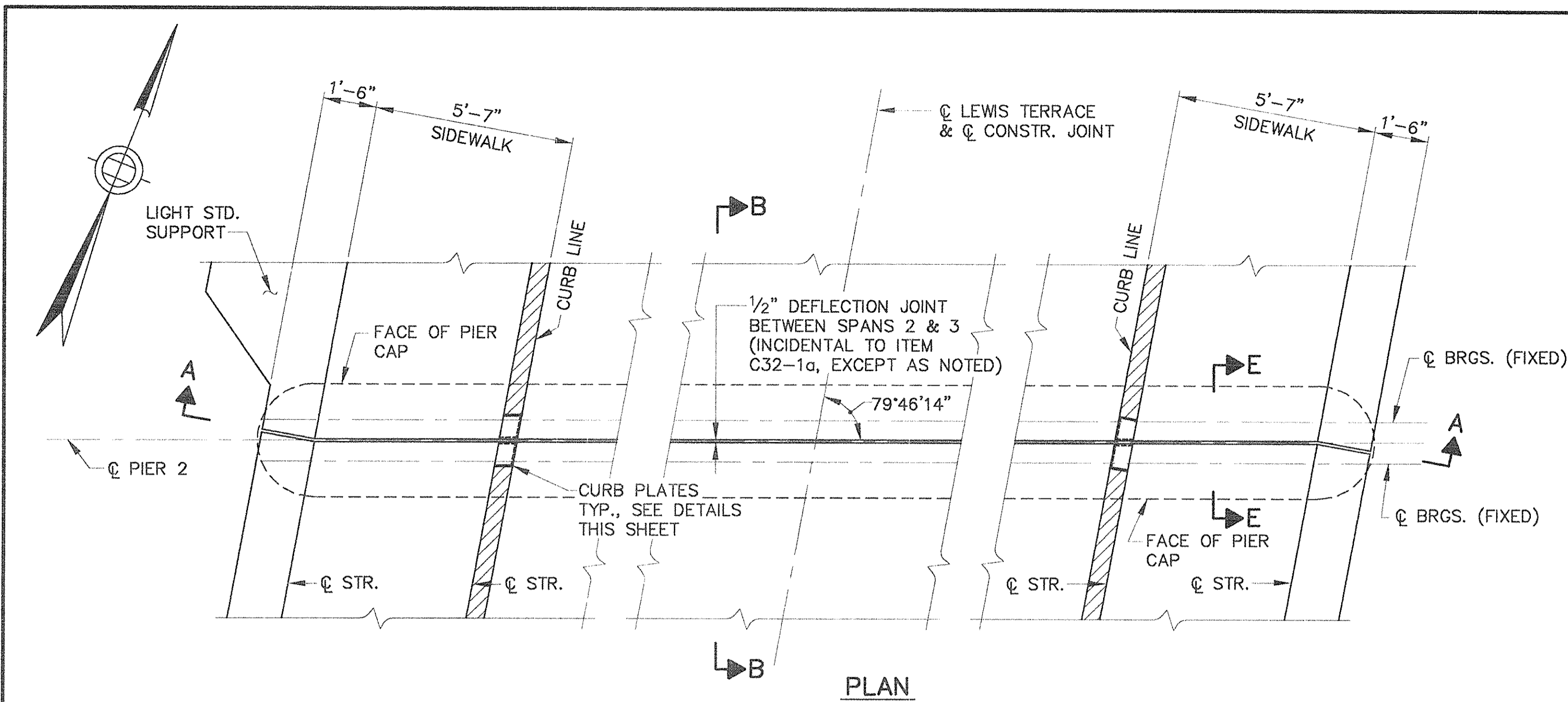
DESIGNED:	GTS	DATE:	12/93
DRAWN:	KMC	DATE:	12/93
CHECKED:	CAS	DATE:	12/93
NO.	REVISION	BY	DATE

AS BUILT

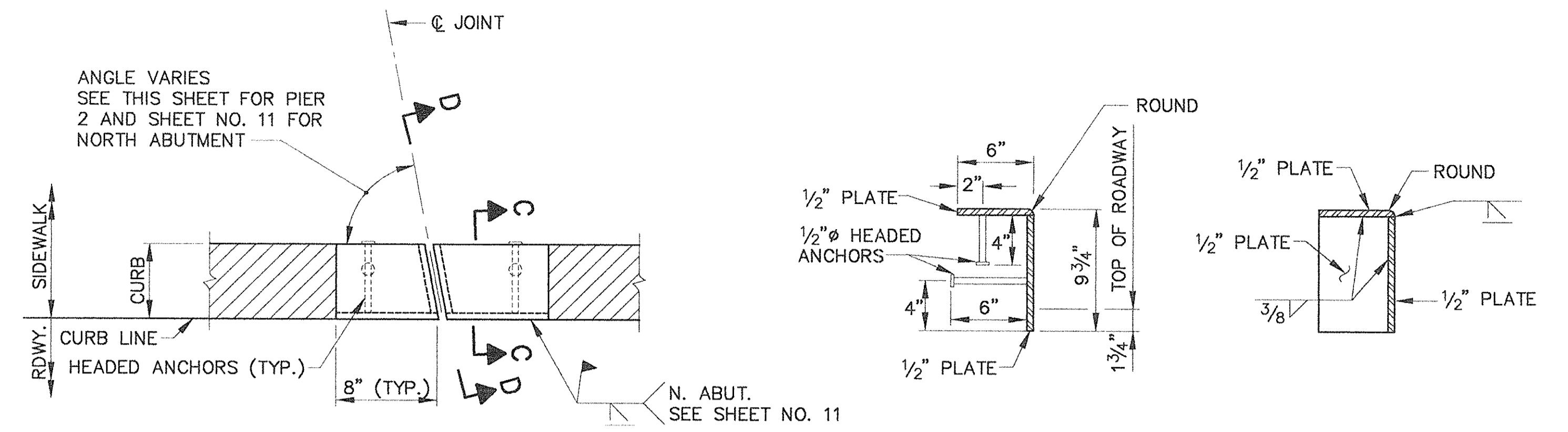
MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
 JOINT DETAILS AT
 PIER 1

Scale: AS NOTED Contract No. 521-024

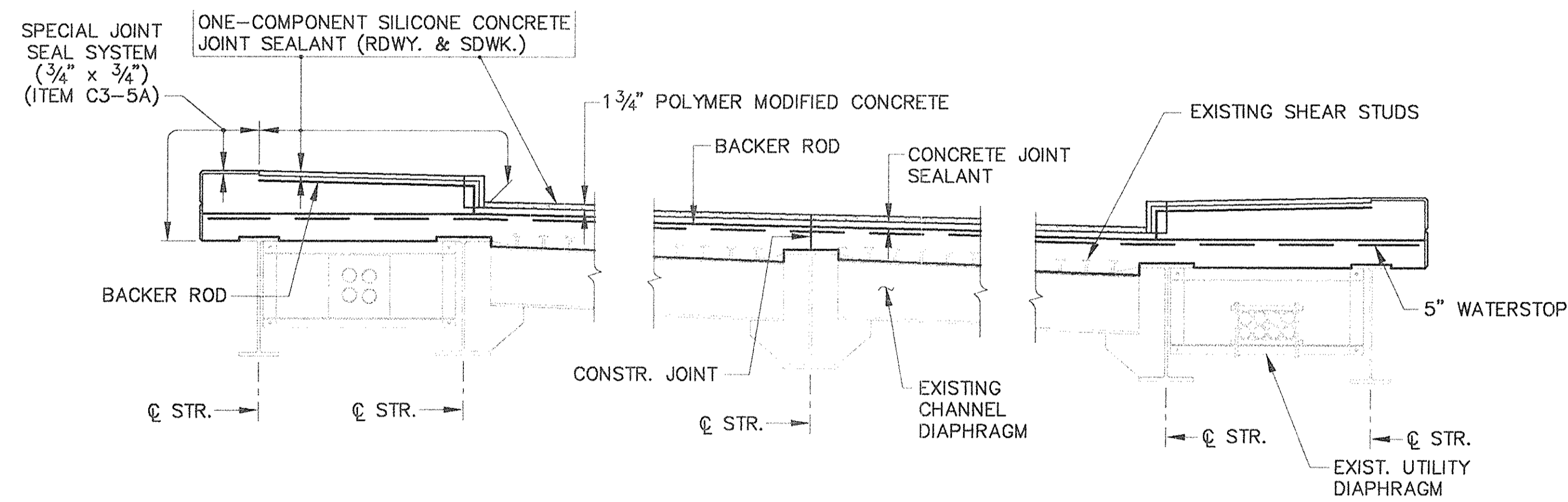
EDWARDS AND KELCEY, INC. Sheet No. 12



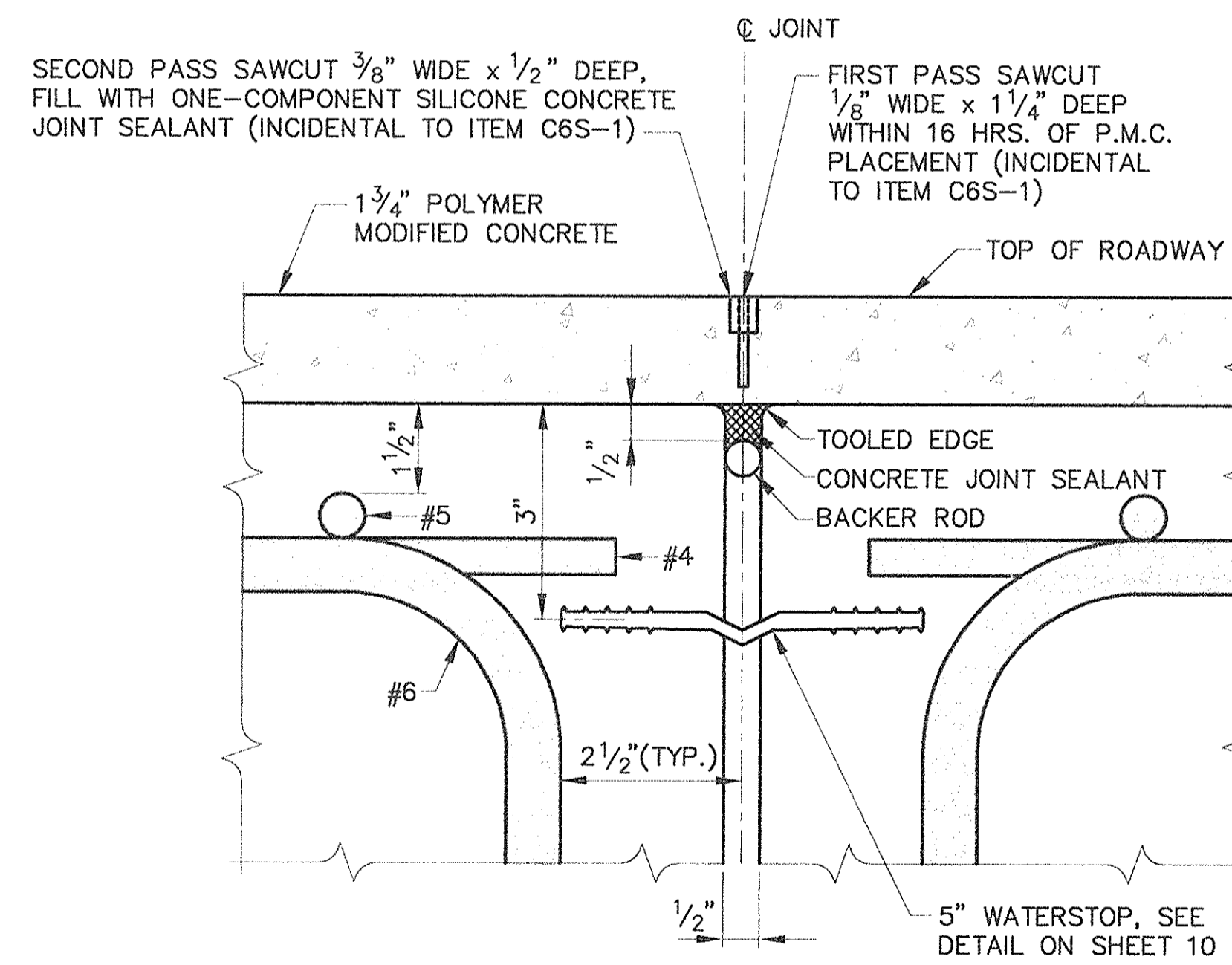
DEFLECTION JOINT OVER PIER 2
SCALE: 3/8" = 1'-0"



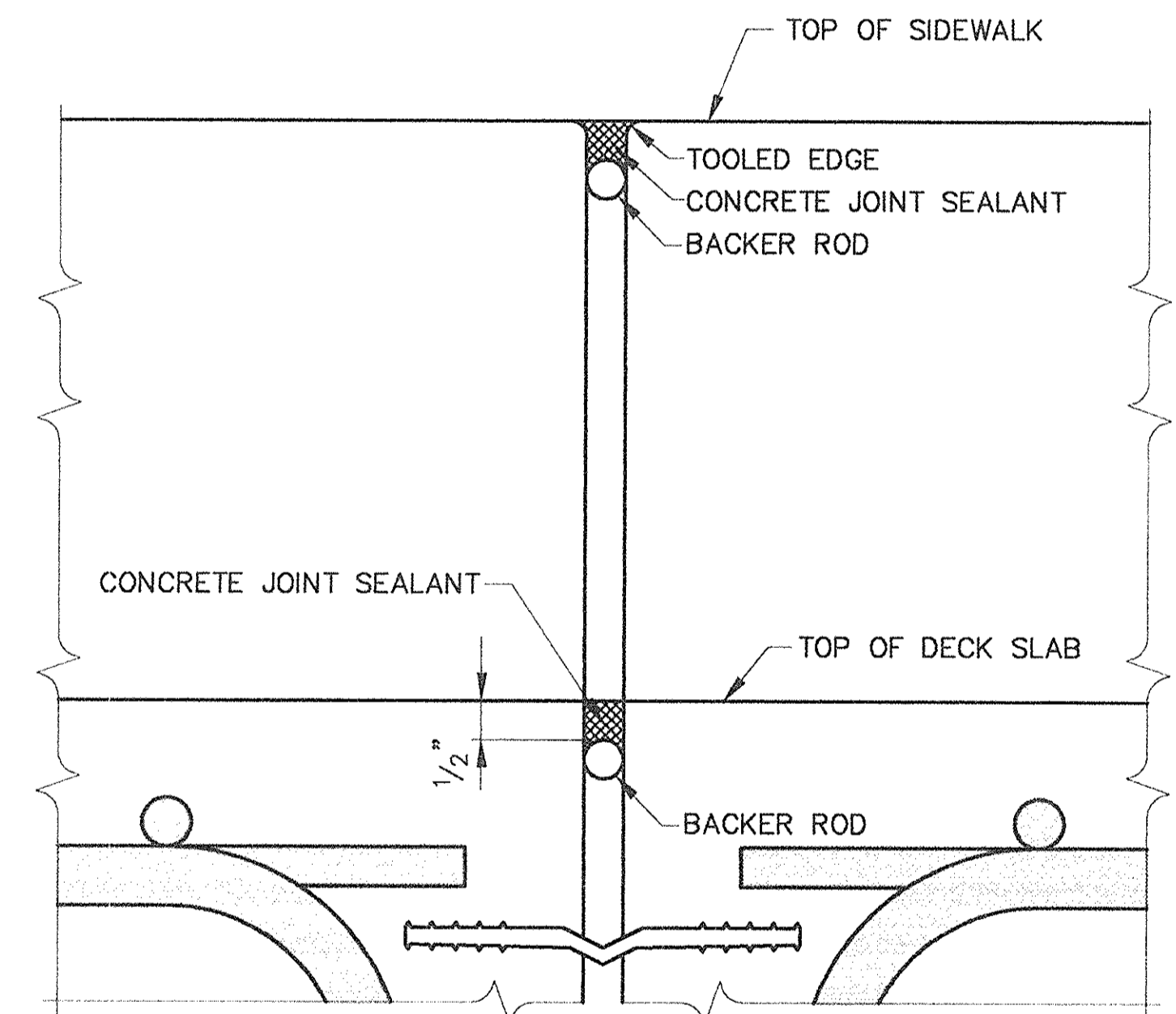
PROPOSED CURB PLATE DETAILS (INCIDENTAL TO ITEM C32-1a)
SCALE: 1 1/2" = 1'-0"



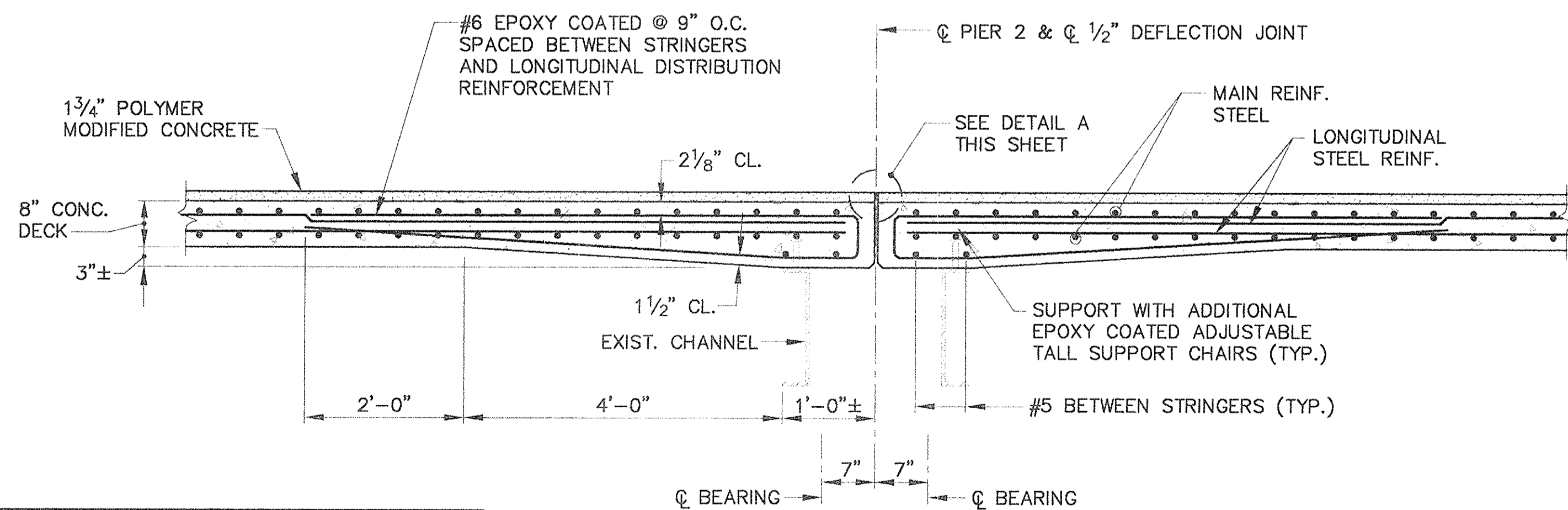
SECTION A-A
SCALE: 3/8" = 1'-0"



DETAIL A
NOT TO SCALE



SECTION E-E
NOT TO SCALE

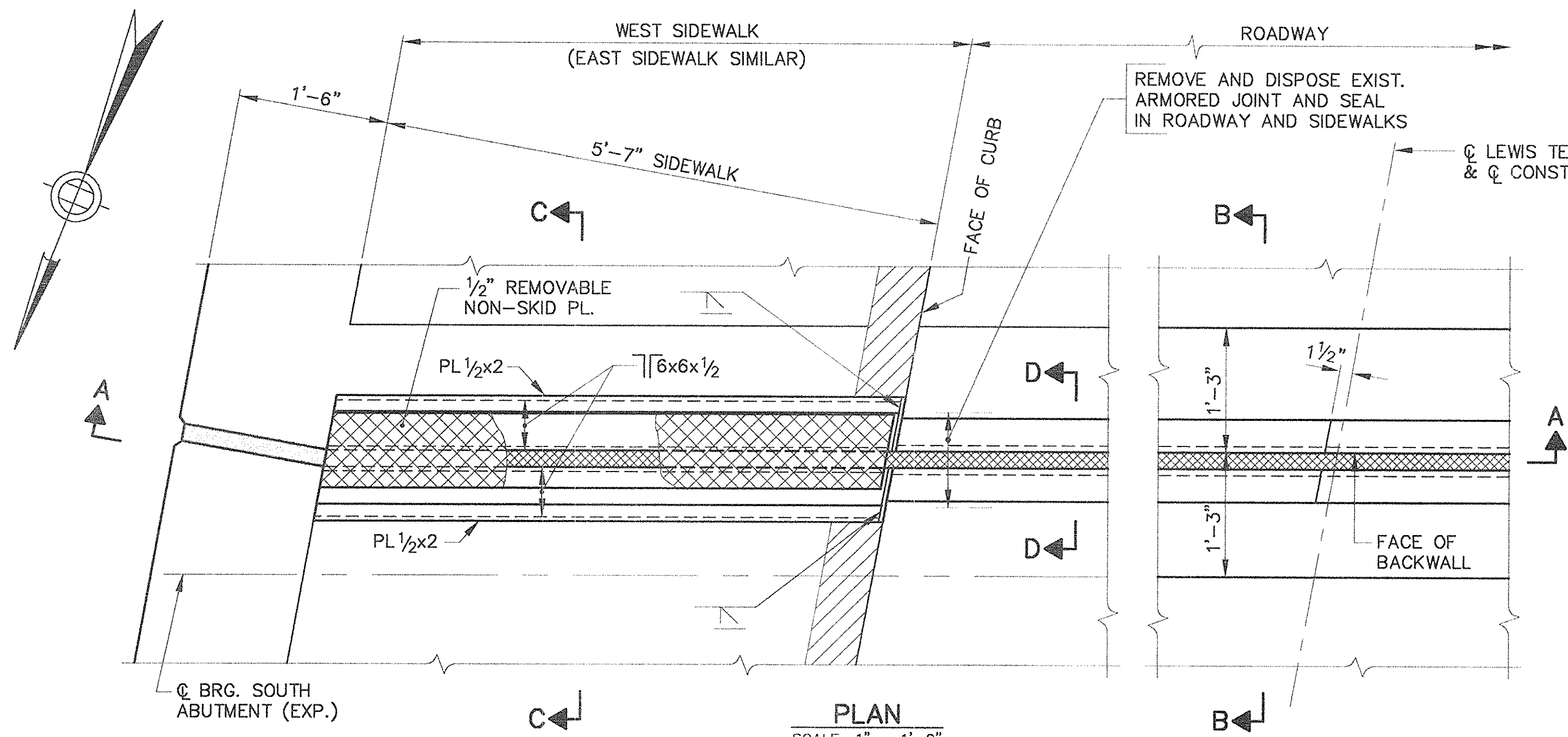


SECTION B-B
SCALE: 3/4" = 1'-0"

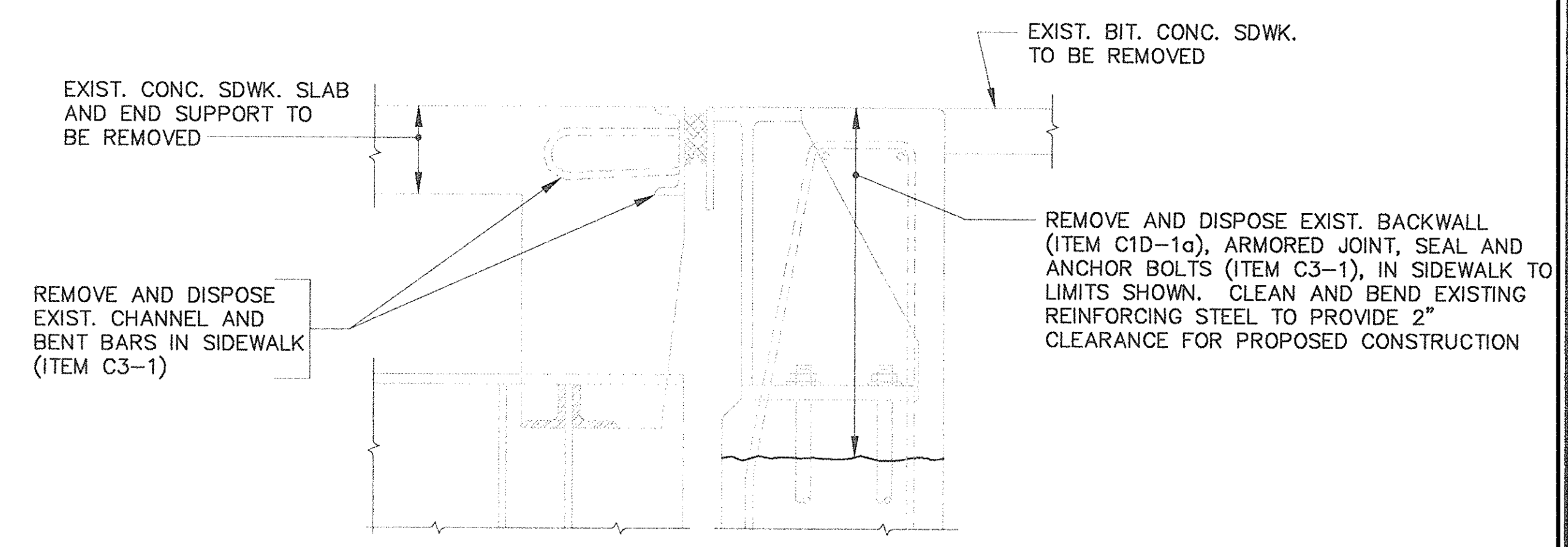
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25)	
JOINT DETAILS AT PIER 2	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 13	

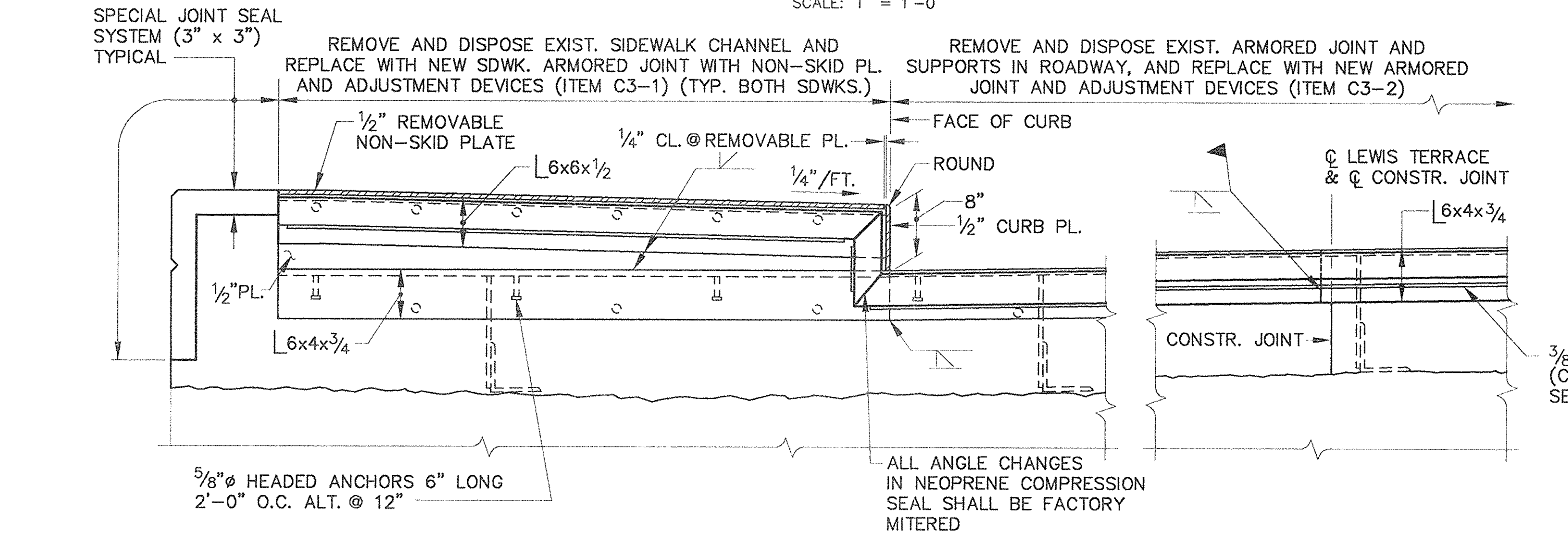
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: GTS	12/93	
		DRAWN: KMC	12/93	
		CHECKED: CAS	12/93	
		BY	DATE	



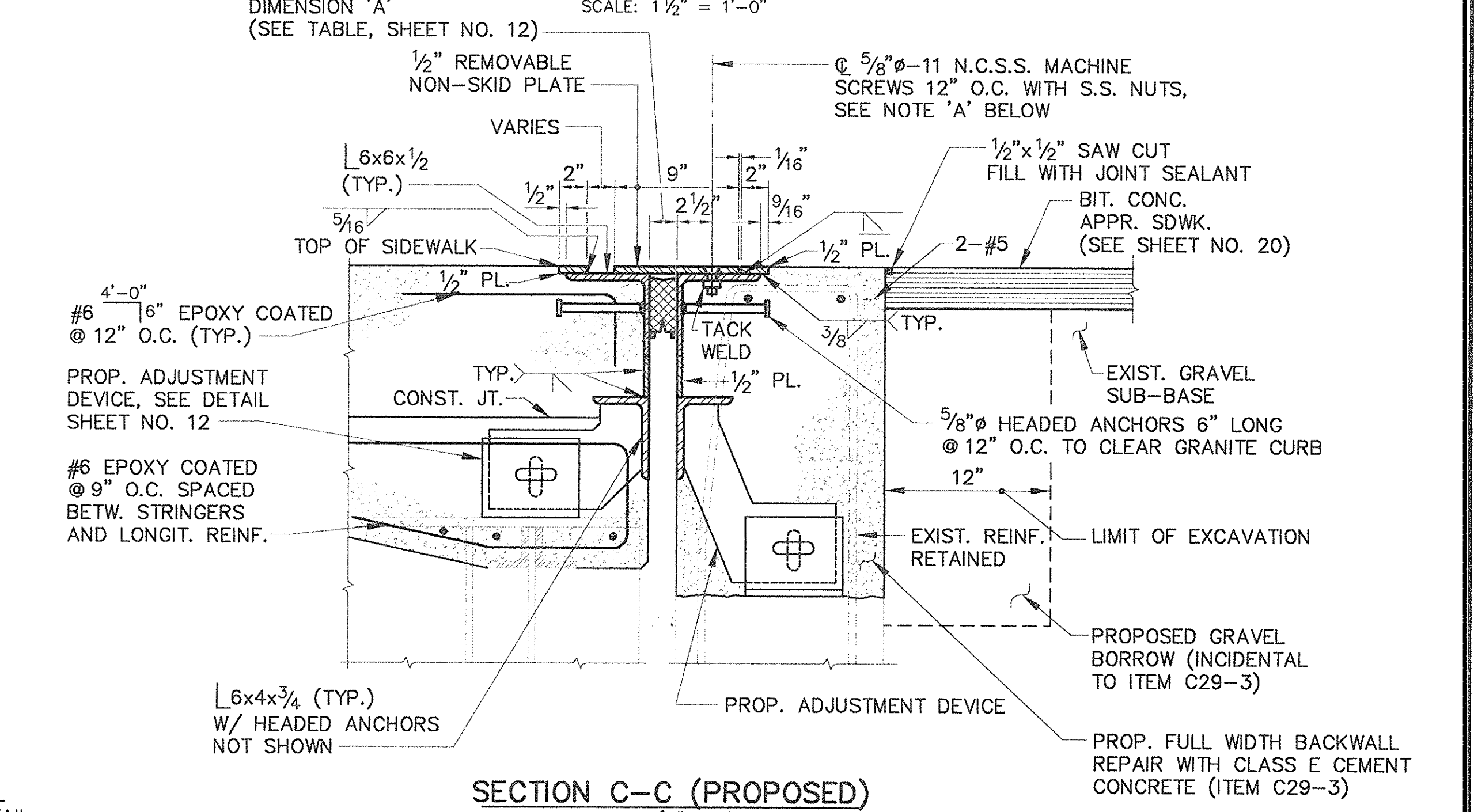
PLAN
SCALE: 1" = 1'-0"



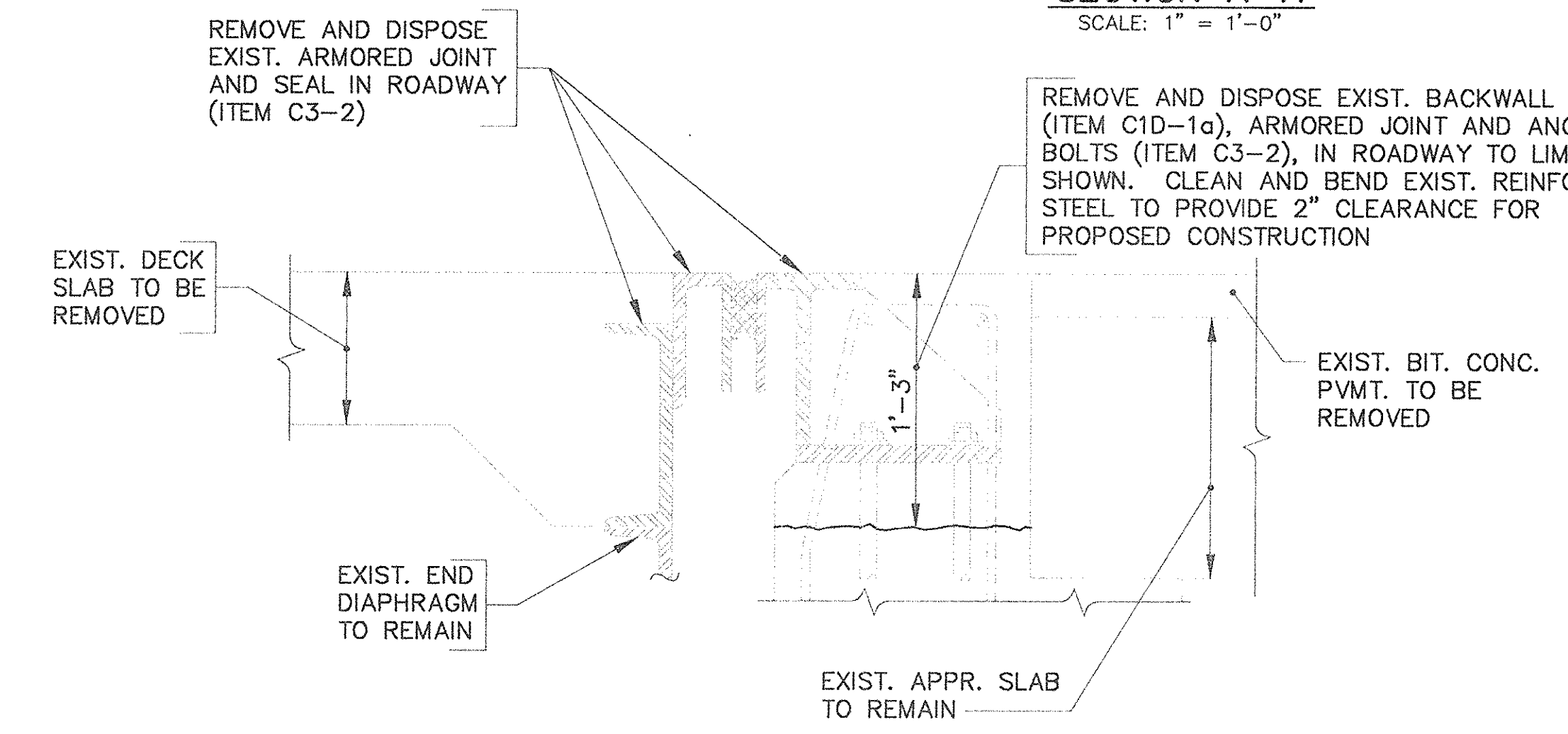
SECTION C-C (EXISTING)
SCALE: 1 1/2" = 1'-0"



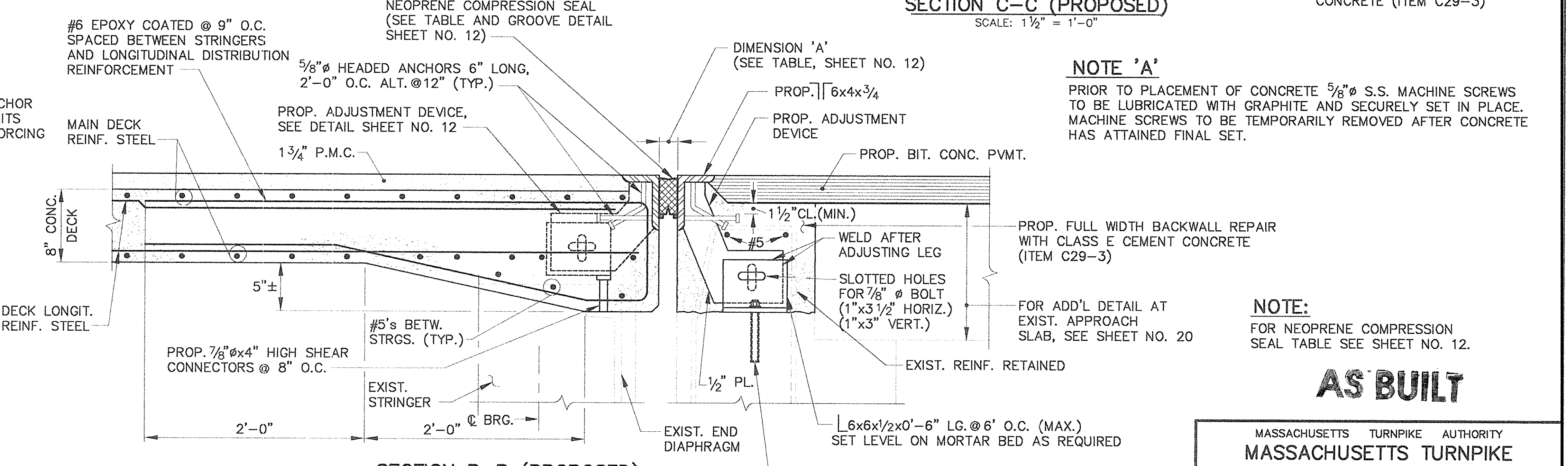
SECTION A-A
SCALE: 1" = 1'-0"



SECTION C-C (PROPOSED)
SCALE: 1 1/2" = 1'-0"



SECTION B-B (EXISTING)
SCALE: 1 1/2" = 1'-0"



SECTION B-B (PROPOSED)
SCALE: 1 1/2" = 1'-0"

NOTE:
FOR SECTION D-D SEE SHEET NO. 12

NOTE 'A'
PRIOR TO PLACEMENT OF CONCRETE 5/8" S.S. MACHINE SCREWS TO BE LUBRICATED WITH GRAPHITE AND SECURELY SET IN PLACE. MACHINE SCREWS TO BE TEMPORARILY REMOVED AFTER CONCRETE HAS ATTAINED FINAL SET.

NOTE:
FOR NEOPRENE COMPRESSION SEAL TABLE SEE SHEET NO. 12.

AS BUILT

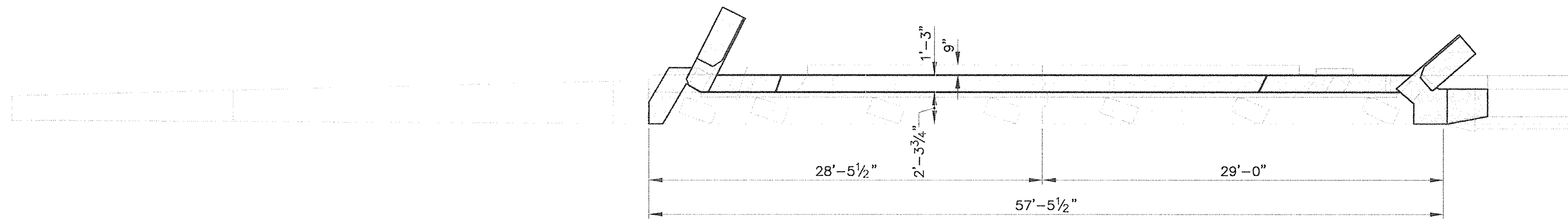
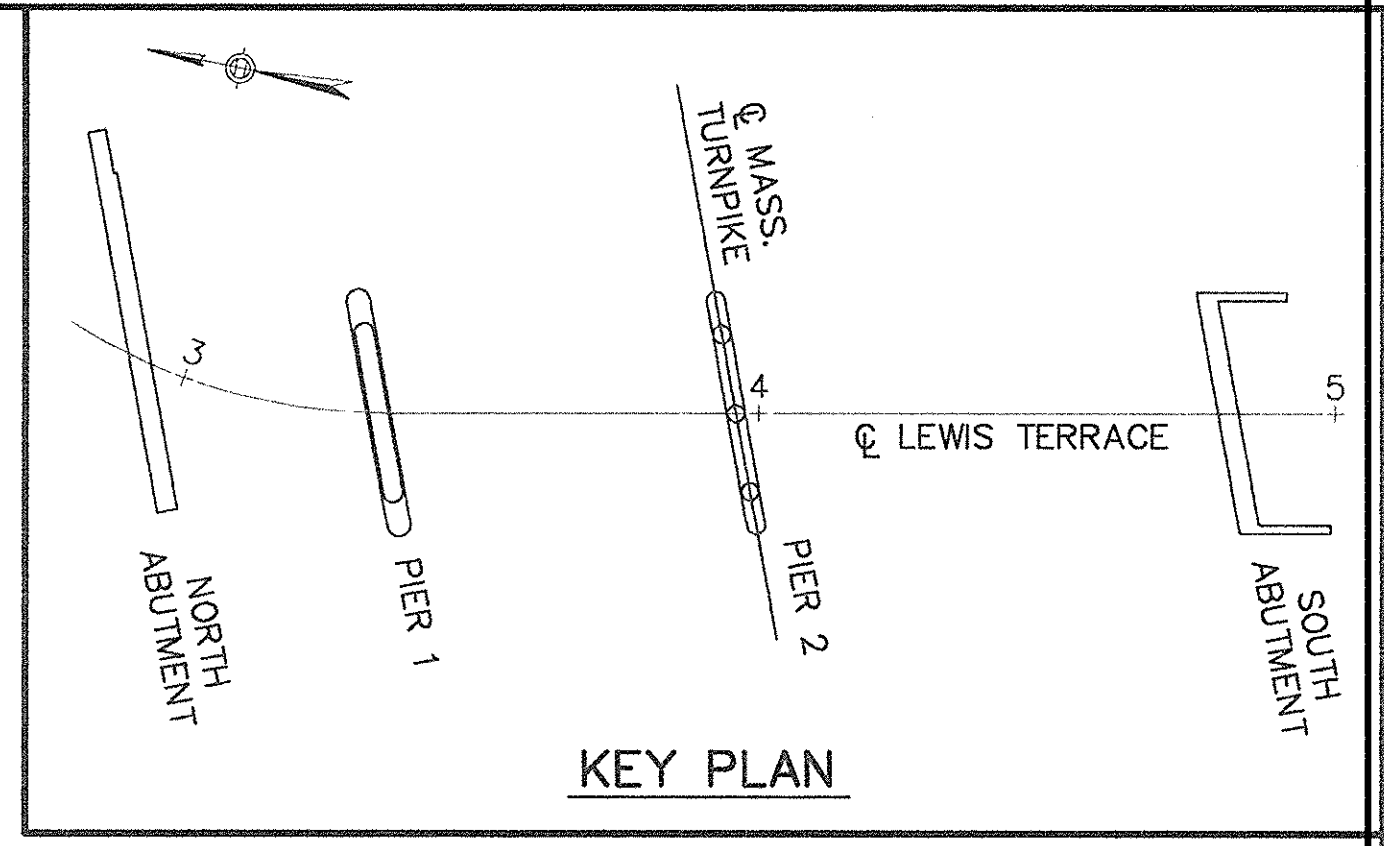
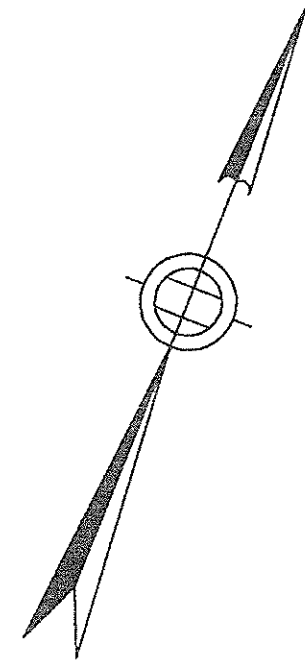
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
JOINT DETAILS AT SOUTH ABUTMENT

Scale: AS NOTED Contract No. 521-024

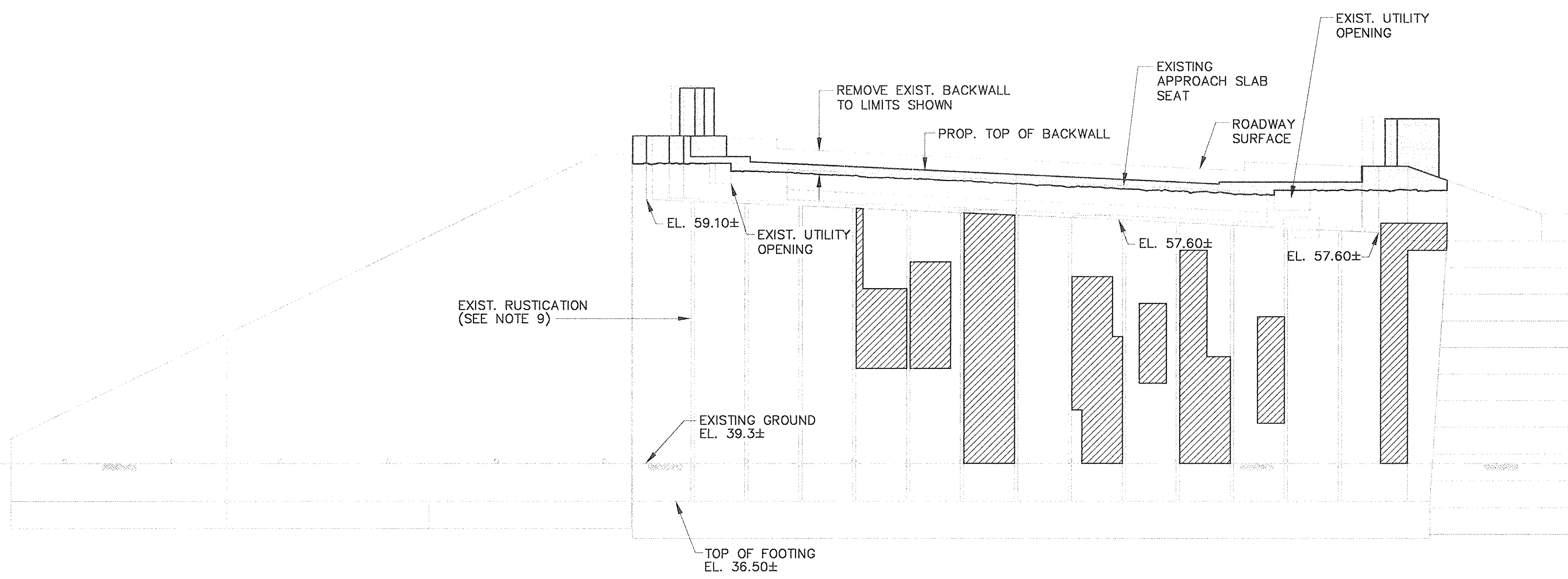
EDWARDS AND KELCEY, INC. The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129

Sheet No. **14**

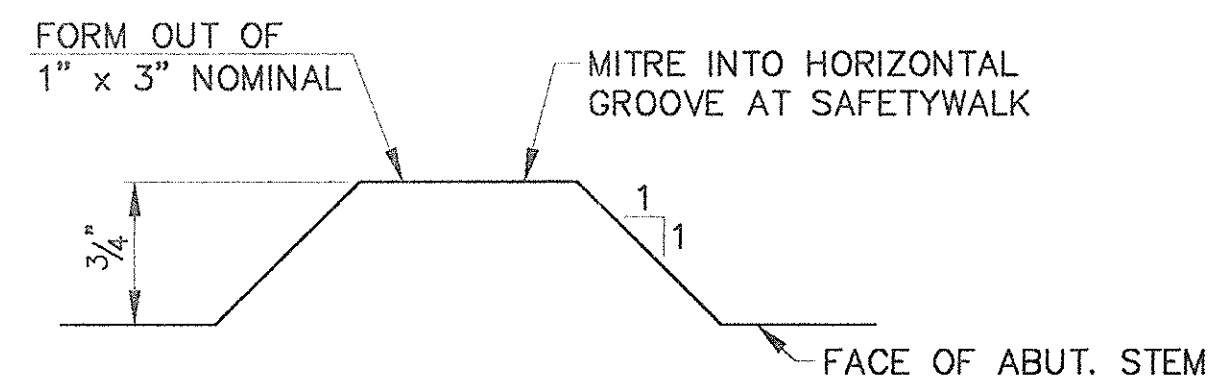
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	GTS	12/93
		DRAWN:	KMC	12/93
		CHECKED:	CAS	12/93
		BY	DATE	



PLAN



ELEVATION



RUSTICATION DETAIL
(FROM "AS-BUILT" DRAWINGS)
SCALE: FULL SIZE

NORTH ABUTMENT (LOOKING NORTH)

NOTE:
FOR ADDITIONAL DETAILS AT AREAS OF RECONSTRUCTION, SEE SHEET NOS. 11, 18 & 68.

LEGEND:

- APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
- AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1a AS APPLICABLE)

REPAIR AREA (NORTH ABUTMENT) = 290 S.F.±

- NOTES:**
1. AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
 2. ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 3. CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER. FOR DETAIL SEE SHEET NO. 16.
 4. FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEET 67.
 5. SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
 6. ELEVATIONS AND DIMENSIONS ARE TAKEN FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
 7. THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
 8. ALL PIER CAPS, BEAM SEATS, AND DRAINAGE TROUGHS SHALL BE CLEARED OF DEBRIS (ROCKS, STICKS, LEAVES AND TRASH) AND DISPOSED OF BY CONTRACTOR.
 9. THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE. SEE DETAIL THIS SHEET.
 10. IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).

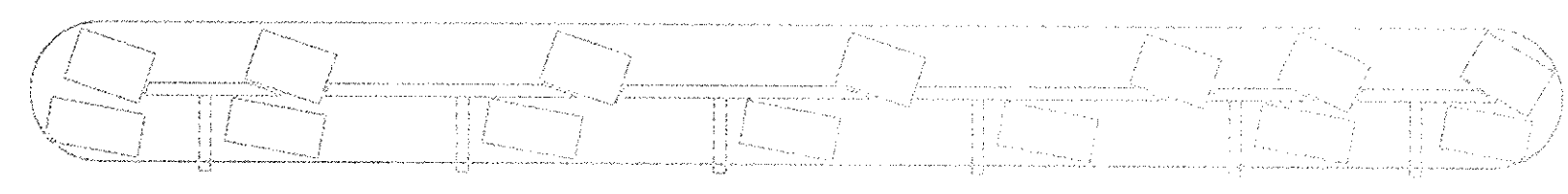
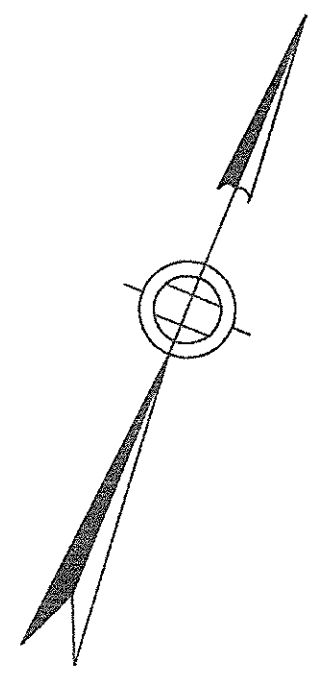
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					DESIGNED: GTS	12/93
					DRAWN: KMC	12/93
					CHECKED: FMK	12/93

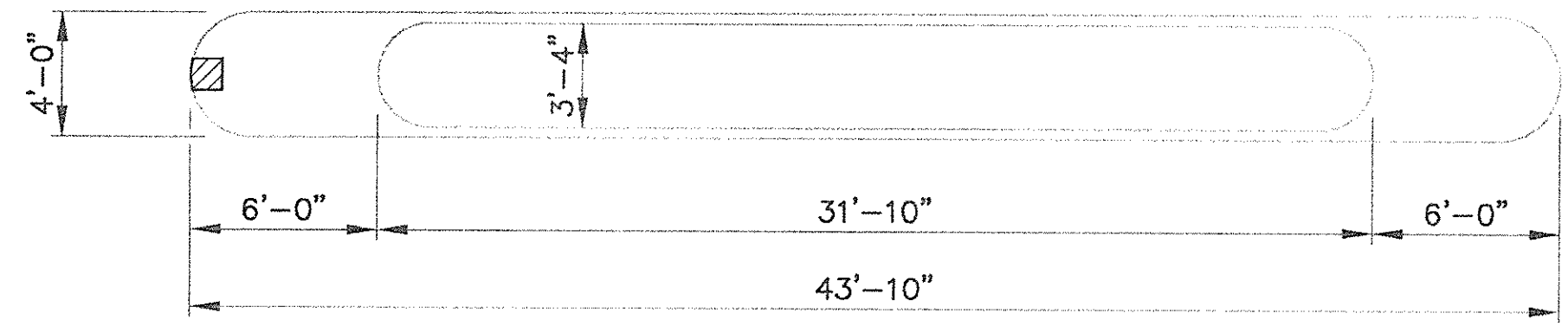
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
SUBSTRUCTURE CONCRETE REPAIRS - NORTH ABUTMENT

Scale: NOT TO SCALE Contract No. 521-024

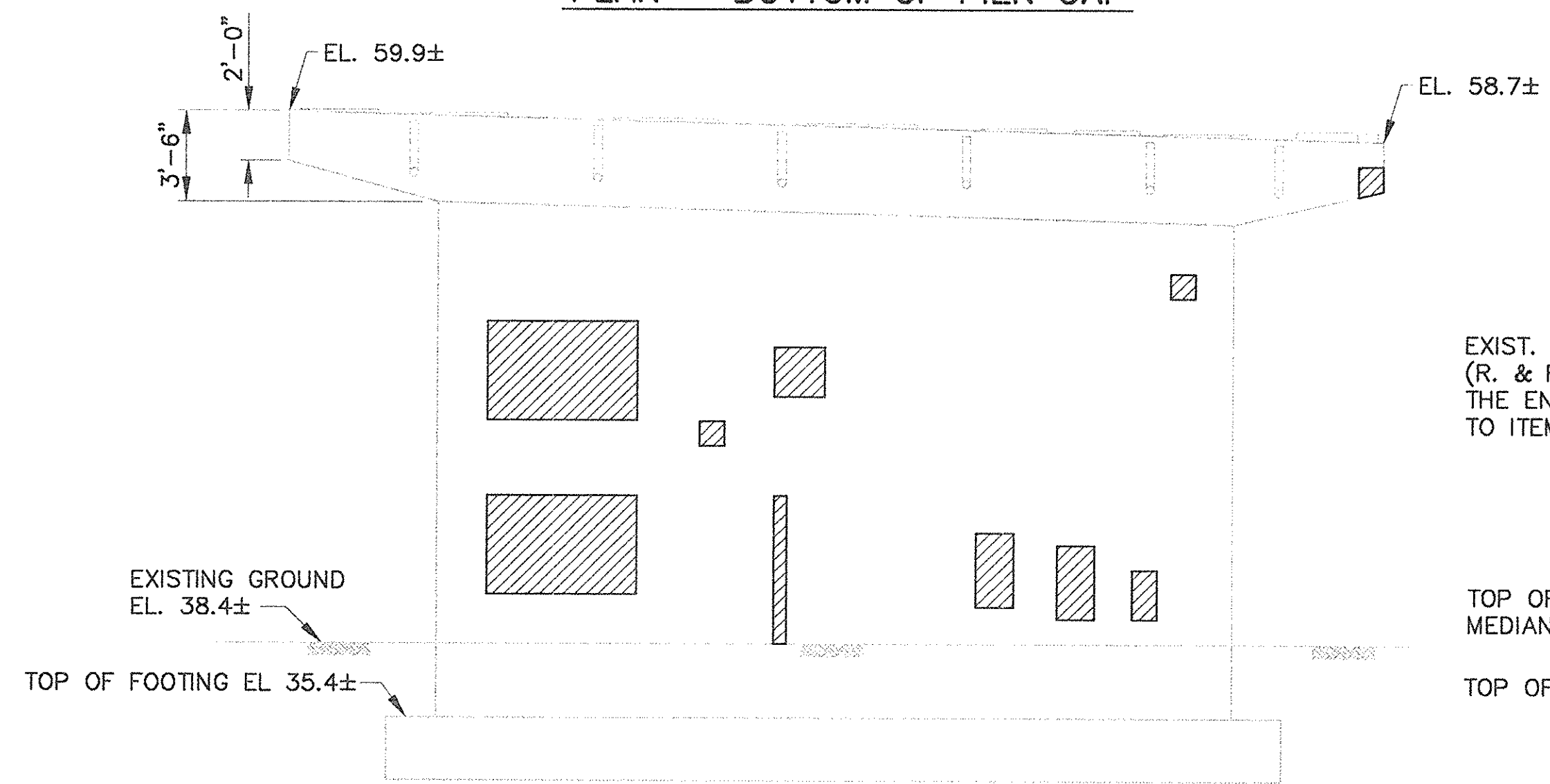
EDWARDS AND KELCEY, INC. Sheet No. 15
The Schwett Center
 529 Main Street
 Boston, Massachusetts 02129



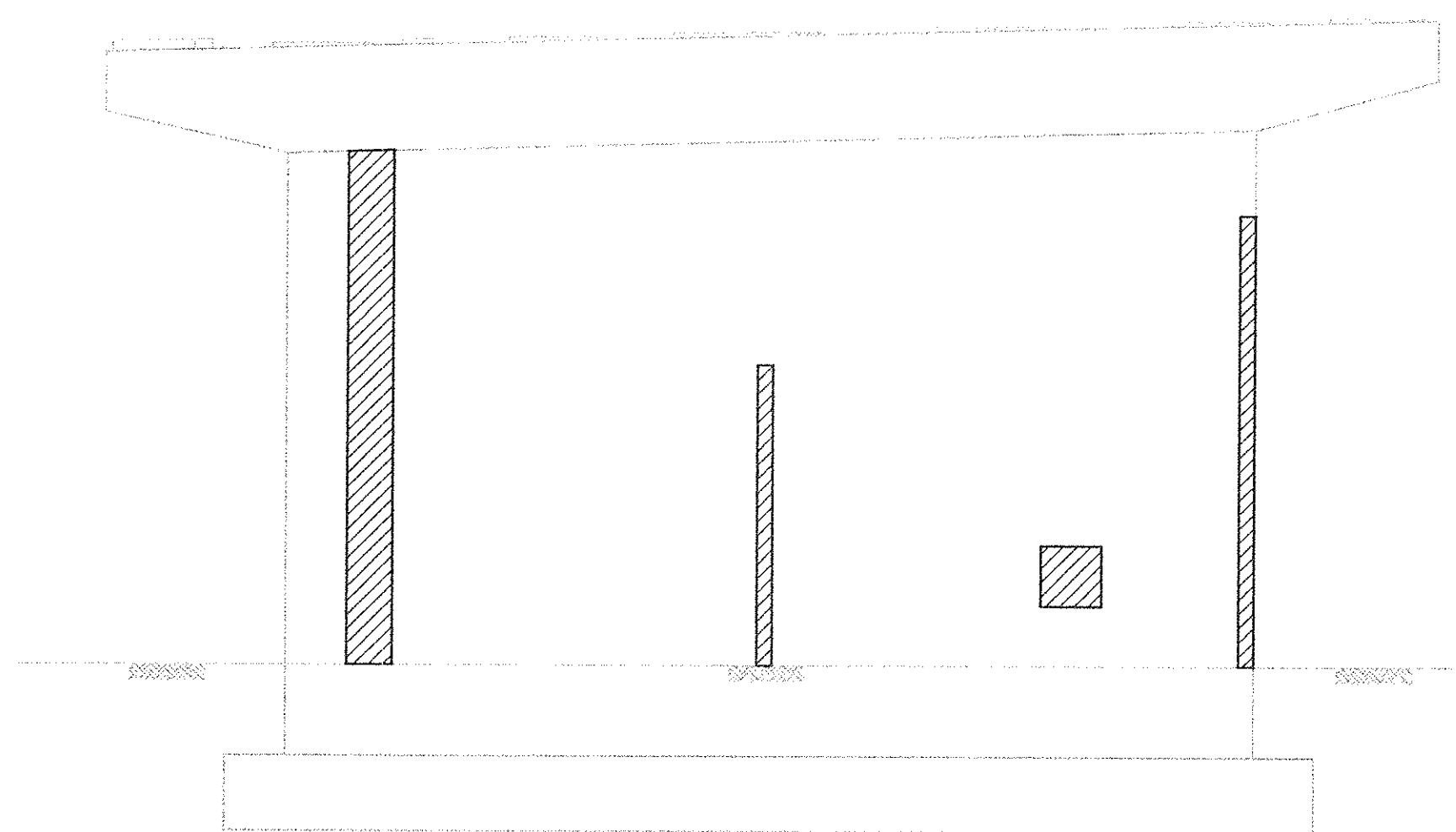
PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP

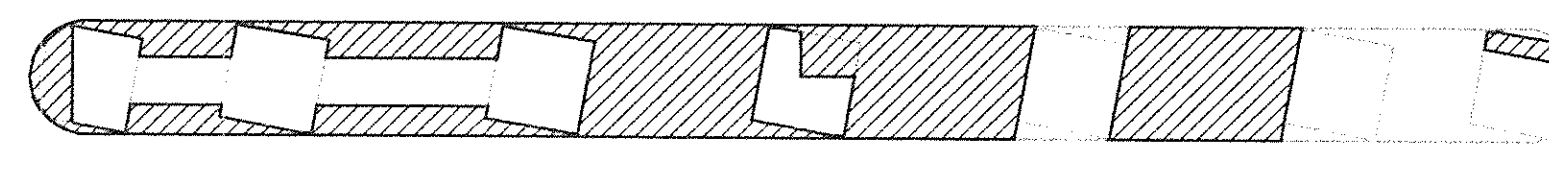


SOUTH ELEVATION (TURNPIKE SIDE)

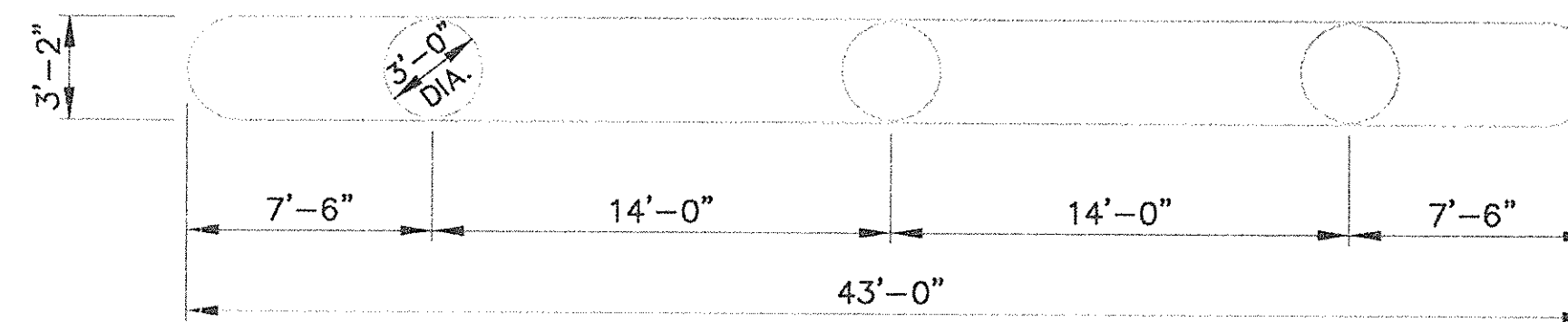


NORTH ELEVATION (RAILROAD SIDE)

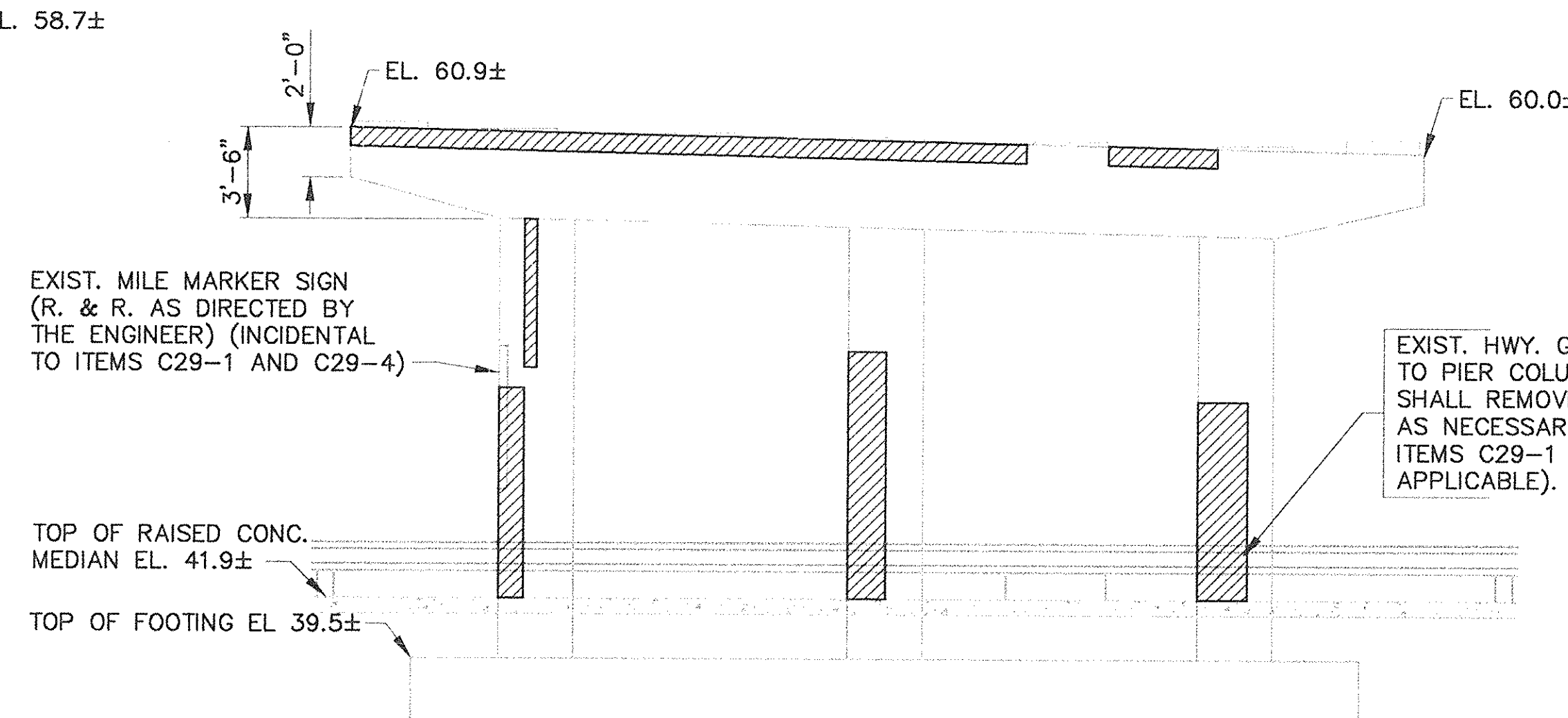
PIER 1



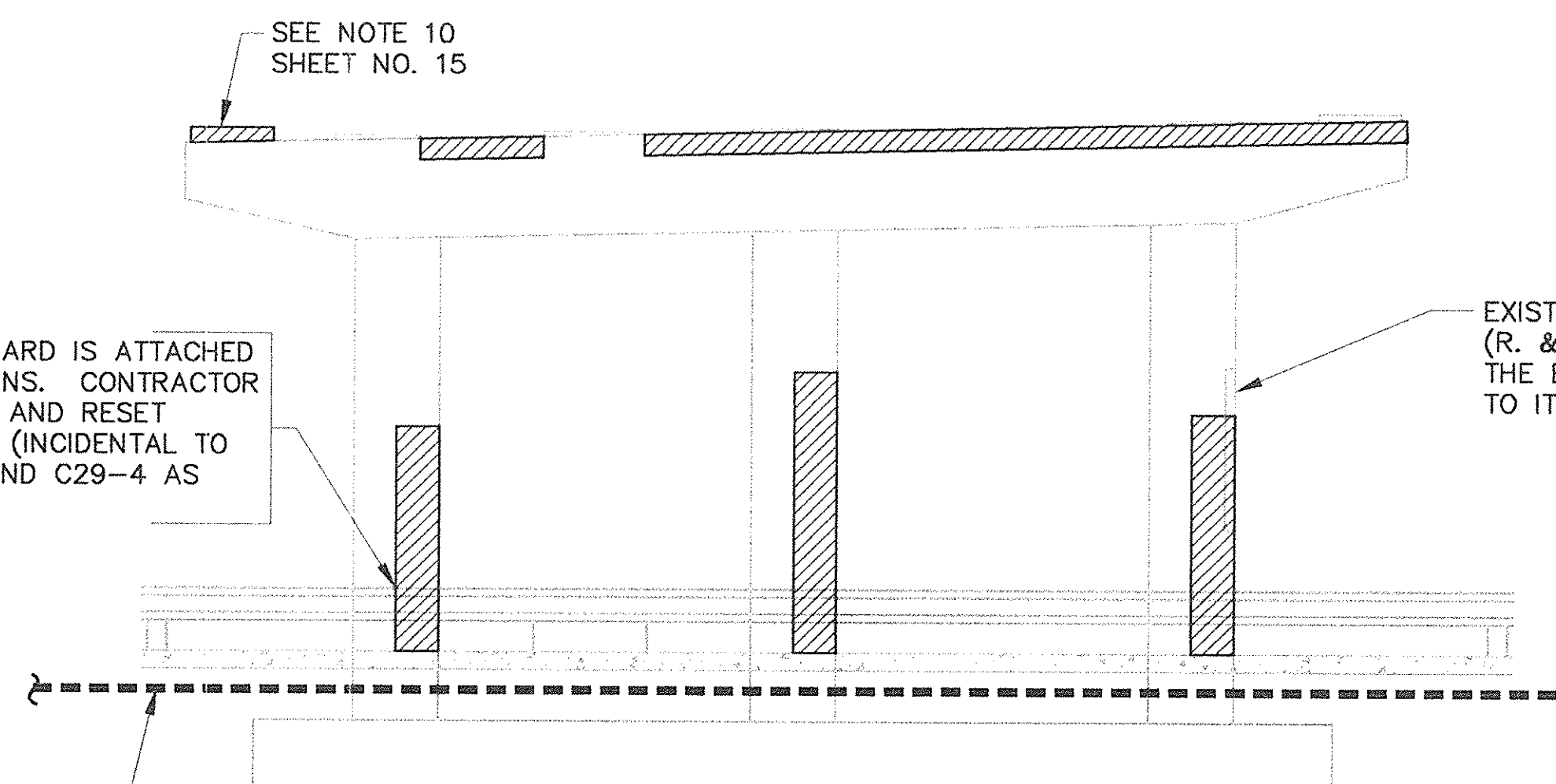
PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP



SOUTH ELEVATION (TURNPIKE EAST BOUND SIDE)



NORTH ELEVATION (TURNPIKE WEST BOUND SIDE)

PIER 2

REMOVE AND REPLACE RAISED MEDIAN CONCRETE AT PIER 2 AS DIRECTED BY THE ENGINEER. LIMITS LONGITUDINALLY SHALL BE SAWCUT 1/2" DEEP FROM BACK OF CURB TO FACE OF PIER PRIOR TO CONCRETE REMOVAL.

EXISTING GRADE AT PIER/ABUT. OR TOP OF RAISED MEDIAN AT PIER 2

EXISTING GRANITE CURB AT RAISED MEDIAN (PIER 2)

TOP OF RDWY.

PROP. EPOXY COATED 4x4-W2.9xW2.9 WWF (LAP 12" WITH EXIST.)

PROP. GRAVEL SUB-BASE (INCIDENTAL)

PROP. 4" CLASS 'E' CEM CONC. WALK AT PIER 2 ONLY

FACE OF PIER/ABUT.

4" MIN. LIMIT OF SUBSTR. REPAIR

DETAIL AT SUBSTRUCTURE REPAIRS BELOW GRADE

(INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE)

SCALE: 3/4" = 1'-0"

EXIST. HWY. GUARD IS ATTACHED TO PIER COLUMNS. CONTRACTOR SHALL REMOVE AND RESET AS NECESSARY (INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE).

LEGEND:

- APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

TOTAL REPAIR AREA FOR PIERS 1 & 2 = 320 S.F.±

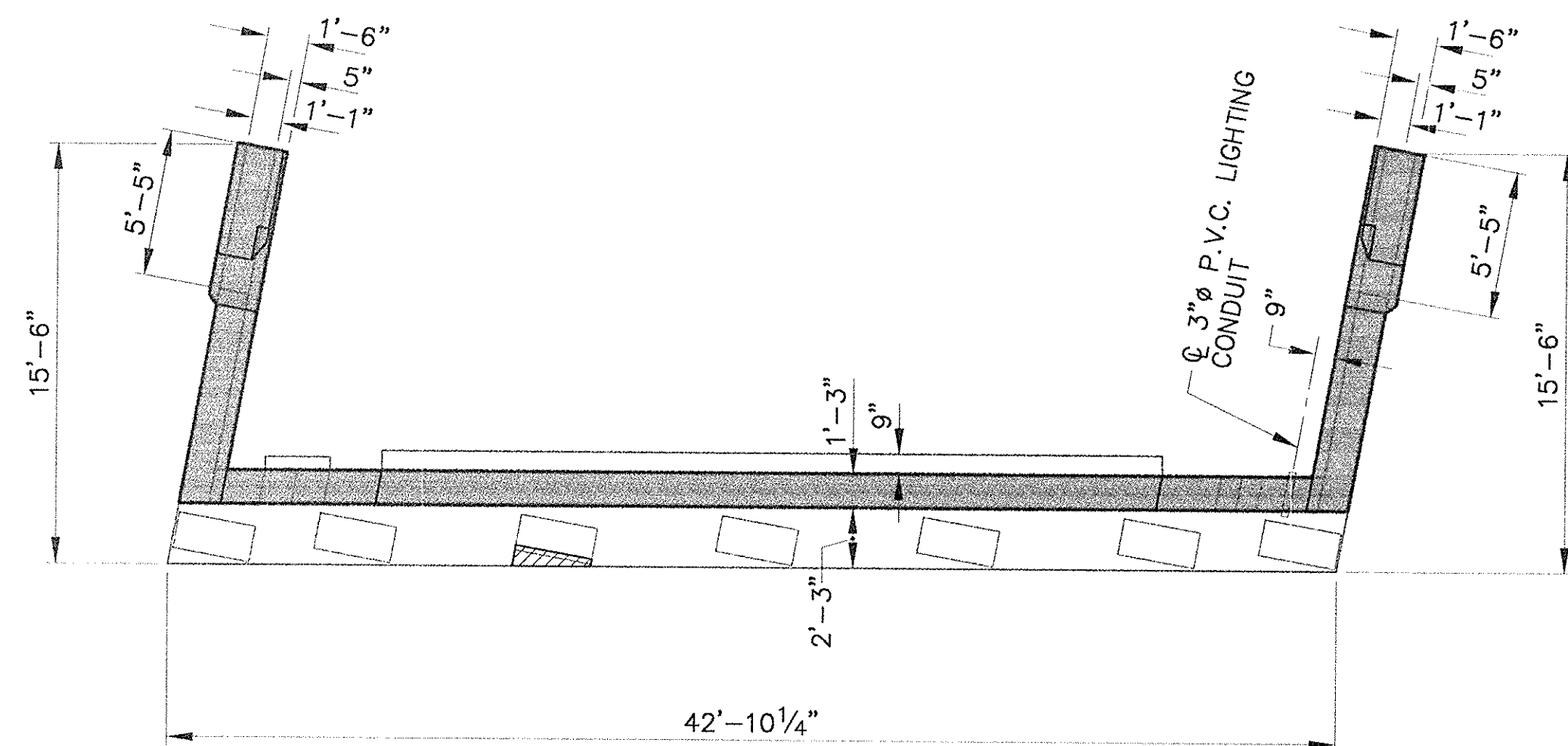
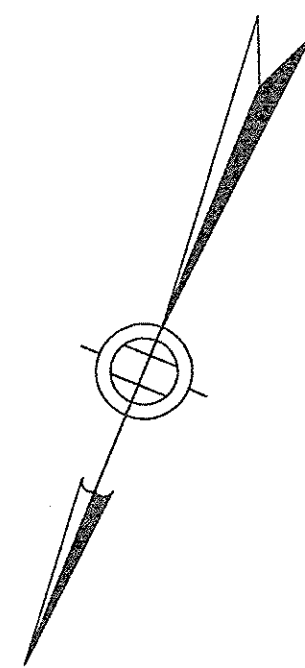
NOTES:

FOR NOTES, SEE SHEET 15.

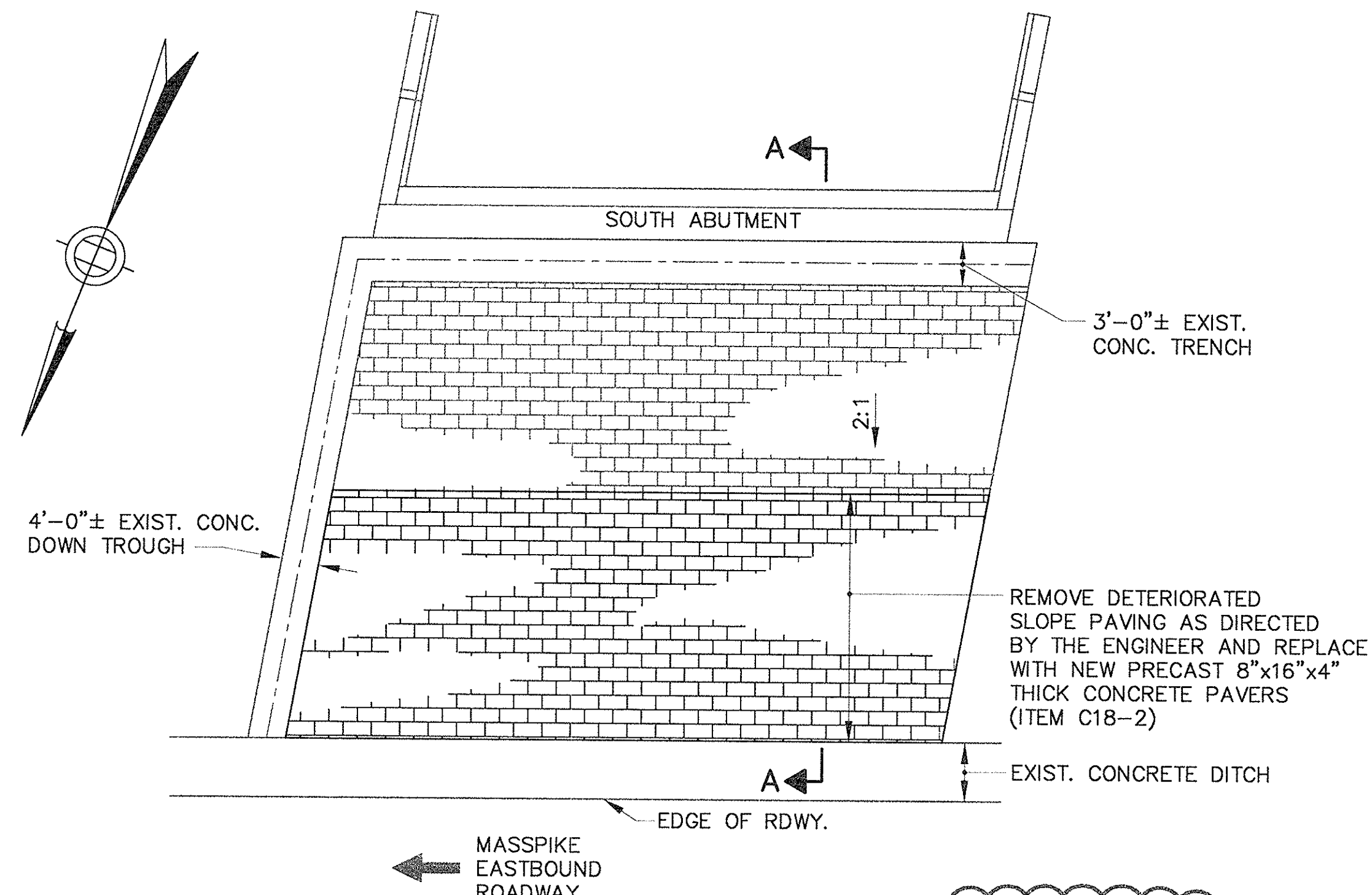
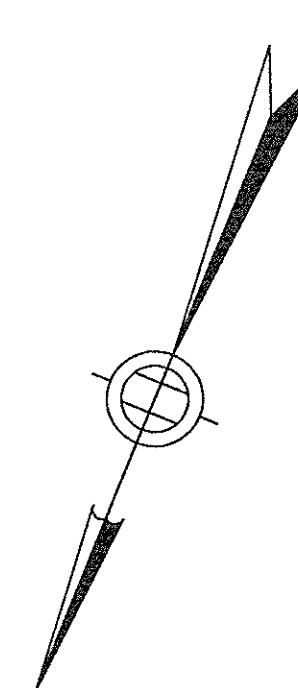
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25)	
SUBSTRUCTURE CONCRETE REPAIRS - PIERS 1 & 2	
Scale: NOT TO SCALE	Contract No. 521-024
EDWARDS AND KELCEY, INC.	Sheet No. 16

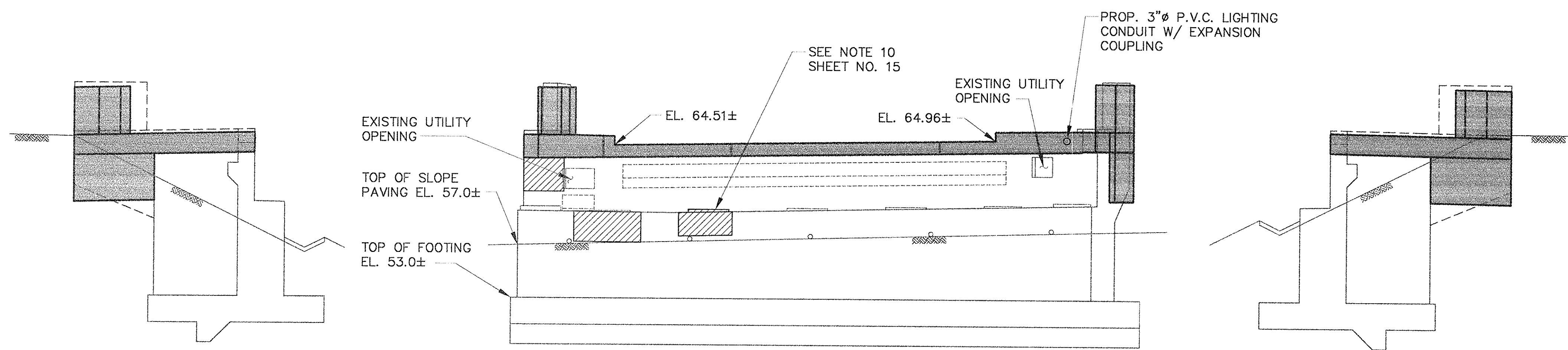
NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					DESIGNED: GTS	12/93
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					CHECKED: FMK	12/93



PLAN

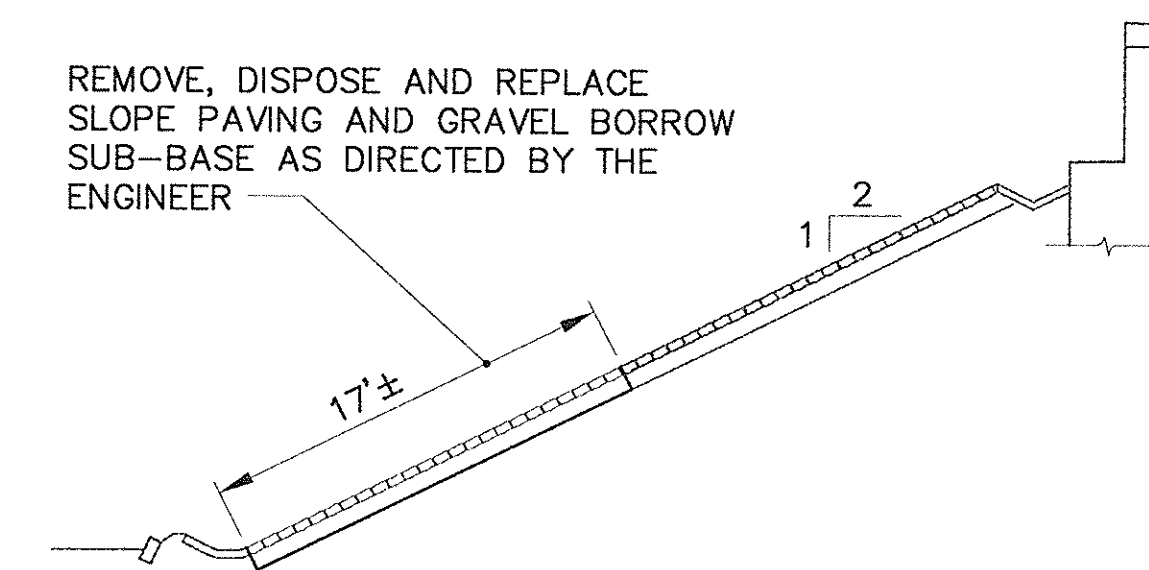


PLAN



ELEVATION

SOUTH ABUTMENT (LOOKING SOUTH)



SECTION A-A

SLOPE PAVING DETAILS AT SOUTH ABUTMENT

NOTES:

1. FOR NOTES, SEE SHEET NO. 15.
2. FOR ADDITIONAL DETAILS AT AREAS OF RECONSTRUCTION, SEE SHEET NOS. 14 & 68.
3. DIMENSIONS SHOWN ARE EXISTING.
4. FOR ADDITIONAL DETAILS OF SLOPE PAVING, SEE SHEET NO. 75.

LEGEND:

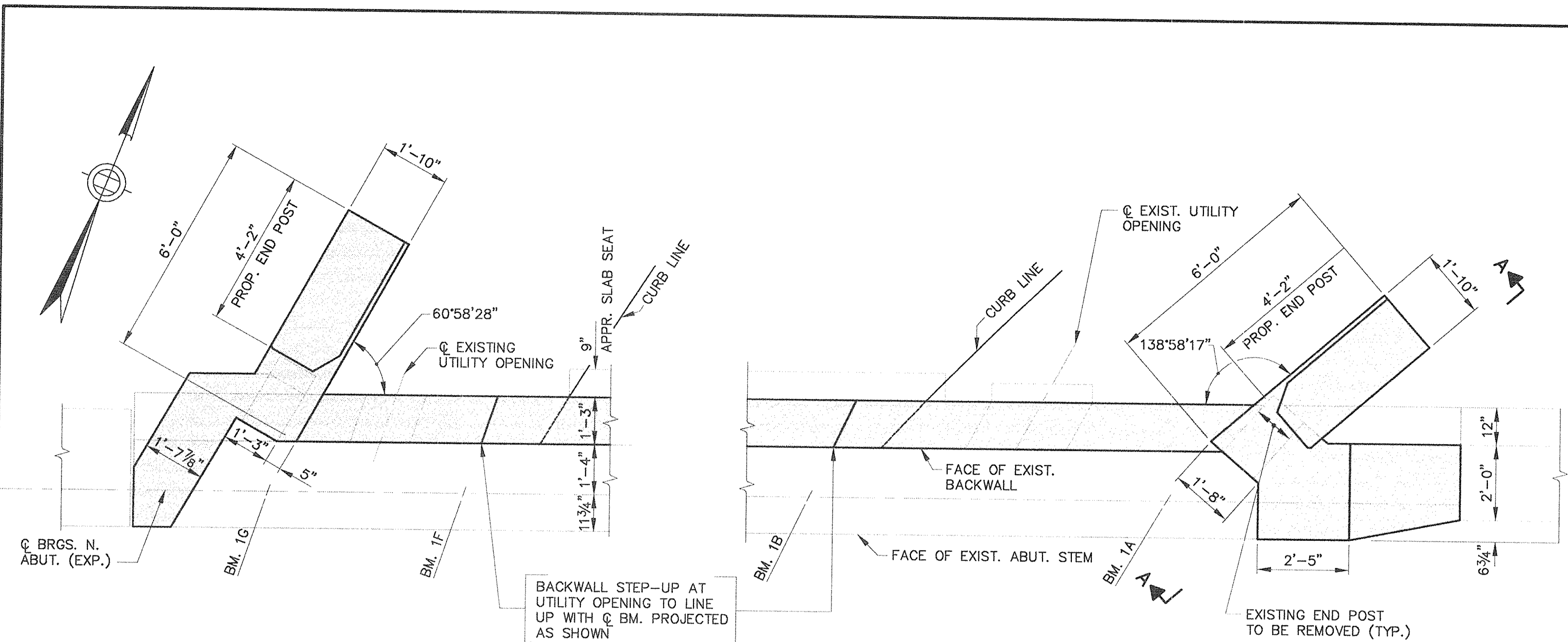
- APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
- AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1a AS APPLICABLE)

REPAIR AREA (SOUTH ABUTMENT) = 30 S.F.±

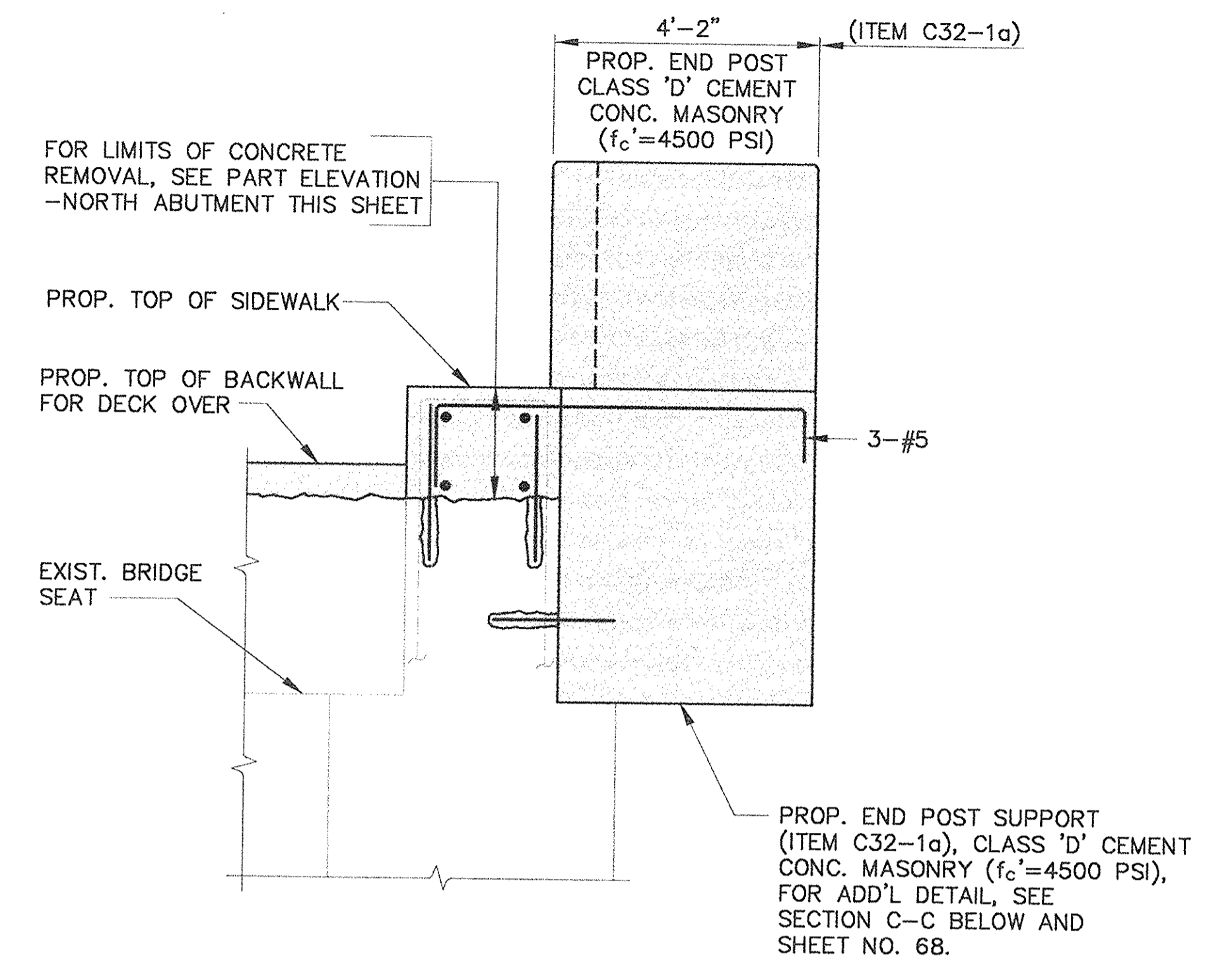
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
	AS-BUILT	GTS	10/95	CHECKED:	FMK
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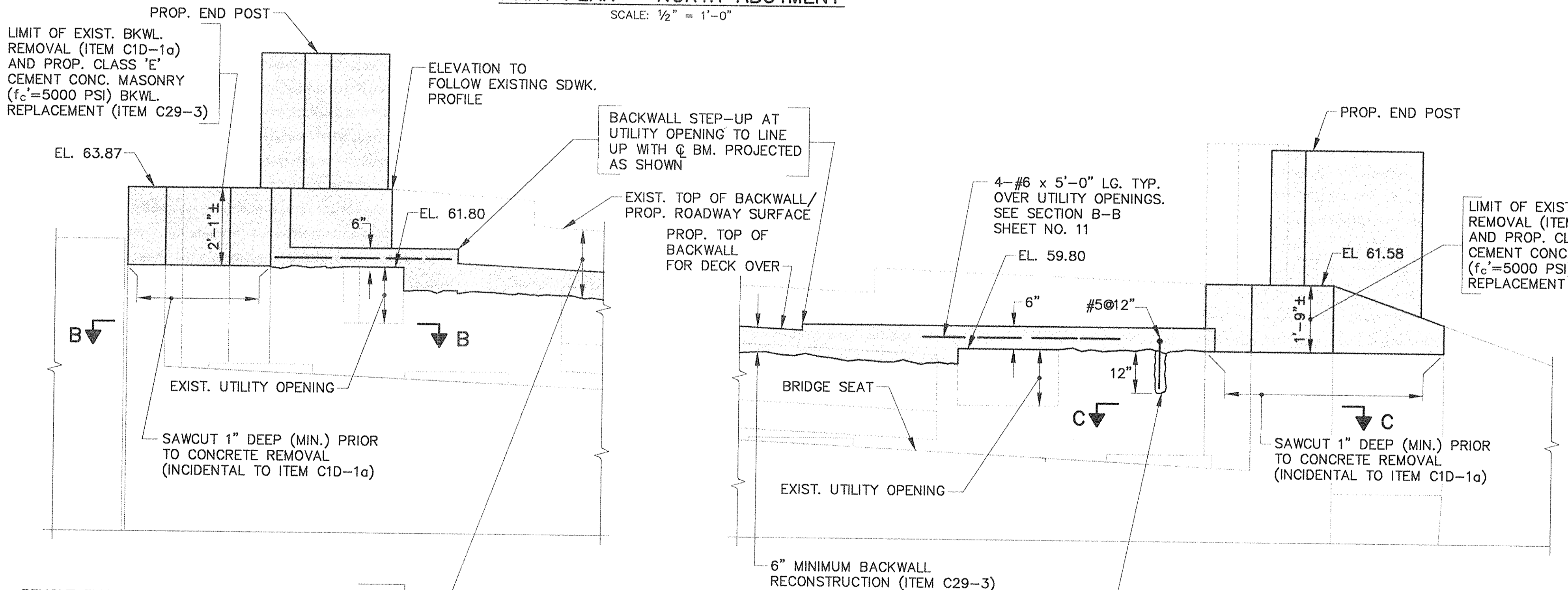
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) SUBSTRUCTURE CONCRETE REPAIRS - SOUTH ABUTMENT	
Scale: NOT TO SCALE	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schmitt Center 329 Main Street Boston, Massachusetts 02129	
Sheet No.	17



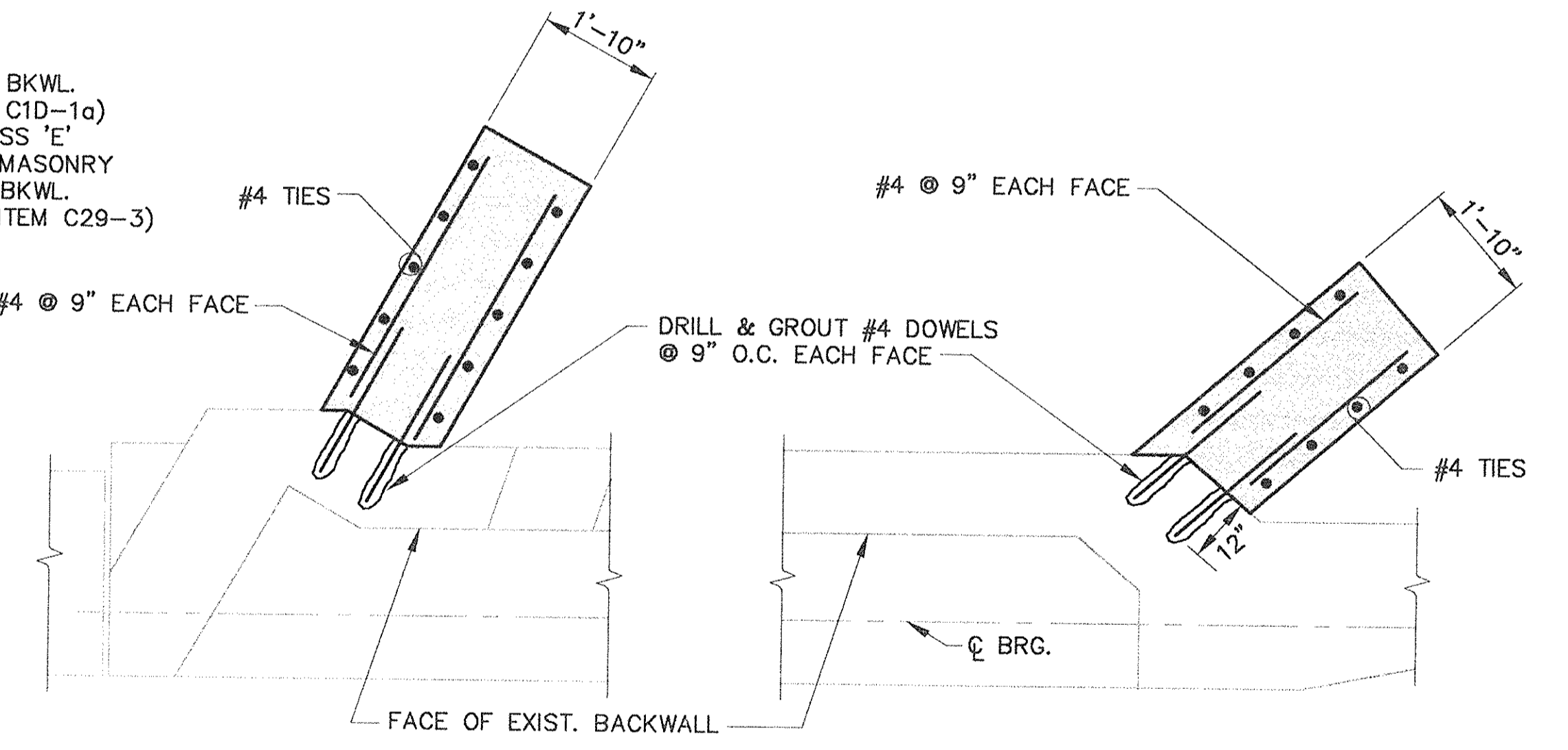
PART PLAN - NORTH ABUTMENT
SCALE: 1/2" = 1'-0"



SECTION A-A (N.E. SHOWN, N.W. SIMILAR)
SCALE: 1/2" = 1'-0"



PART ELEVATION - NORTH ABUTMENT
SCALE: 1/2" = 1'-0"



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

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

THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO THE DECK RECONSTRUCTION (ITEM C32-1a)

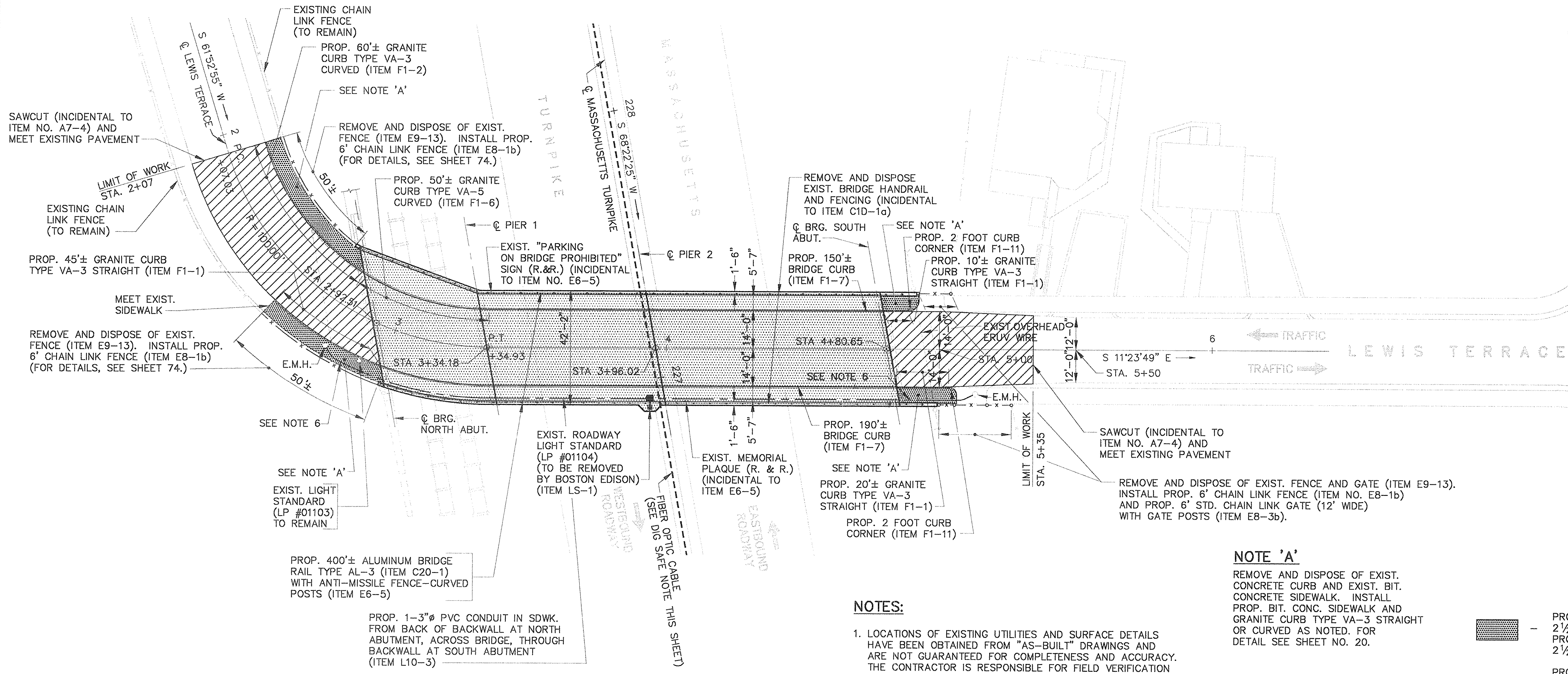
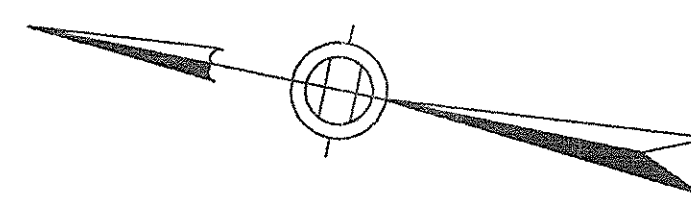
REMOVE EXISTING BACKWALL, ARMORED JOINT AND ANCHOR BOLTS TO 4"± BELOW THE APPROACH SLAB SEAT AND TO TOP OF UTILITY OPENINGS AS SHOWN (ITEM C1D-1a). EXISTING REINFORCING TO REMAIN. CUT, CLEAN AND BEND EXIST. REINFORCING TO PROVIDE 2" CLEARANCE. SEE SECTIONS A-A & B-B SHEET NO. 11.

NOTE:
ELEVATIONS SHOWN ARE FROM 'AS-BUILTS' AND MUST BE VERIFIED BY THE CONTRACTOR.

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		DRAWN:	KMC	12/93	
		CHECKED:	FMK	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
**MISCELLANEOUS SUBSTRUCTURE
 AND END POST DETAILS**
 Scale: AS NOTED Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 18
 229 Main Street
 Boston, Massachusetts 02129

AS BUILT



PAVEMENT PLAN
SCALE: 1" = 20'

DIG SAFE NOTE
THE CONTRACTOR SHALL NOTE THAT A FIBER OPTIC CONDUIT AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844, WLTCL AT 1-800-446-2658 AND AT&T AT 1-800-252-1133.

NOTES:

1. LOCATIONS OF EXISTING UTILITIES AND SURFACE DETAILS HAVE BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED FOR COMPLETENESS AND ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND DETAILS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES PRIOR TO CONSTRUCTION AND COORDINATE ALL ASSOCIATED WORK WITH THEM THROUGHOUT CONSTRUCTION.
3. ALL JOINTS IN BITUMINOUS CONCRETE PAVEMENT SHALL BE COATED WITH HOT POURED RUBBERIZED ASPHALT. FED. SPEC. SS-S-1401C.
4. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
5. LIGHT STANDARD SHALL BE REMOVED AND REPLACED BY BOSTON EDISON. THE CONTRACTOR SHALL NOTIFY BOSTON EDISON'S WALTHAM SERVICE CENTER (617-652-6300) TWO (2) WEEKS IN ADVANCE OF DEMOLITION.
6. THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND ANCHOR BOLTS FOR LIGHT STANDARD AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT AT ABUTMENT BACKWALLS. BOSTON EDISON WILL FURNISH AND INSTALL CONDUCTORS FROM FEED TO LIGHT STANDARD.

NOTE 'A'

REMOVE AND DISPOSE OF EXIST. CONCRETE CURB AND EXIST. BIT. CONCRETE SIDEWALK. INSTALL PROP. BIT. CONC. SIDEWALK AND GRANITE CURB TYPE VA-3 STRAIGHT OR CURVED AS NOTED. FOR DETAIL SEE SHEET NO. 20.

LEGEND

- PROPOSED SDWK. PAVEMENT SURFACE REMOVAL 2 1/2"± (INCIDENTAL TO ITEM C1D-1a)
- PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
- PROPOSED BRIDGE DECK RECONSTRUCTION (ITEM C32-1a)
- PROPOSED 1 3/4" POLYMER MODIFIED CONCRETE (P.M.C.) OVERLAY (ITEM NO. C6S-1)
- PROPOSED LIGHT STANDARD TO BE INSTALLED BY BOSTON EDISON (ITEM LS-1)
- PROPOSED JUNCTION BOX FRAME AND COVER (INCIDENTAL TO ITEM L10-3)

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		DESIGNED:	GTS	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	CAS	12/93	

AS BUILT

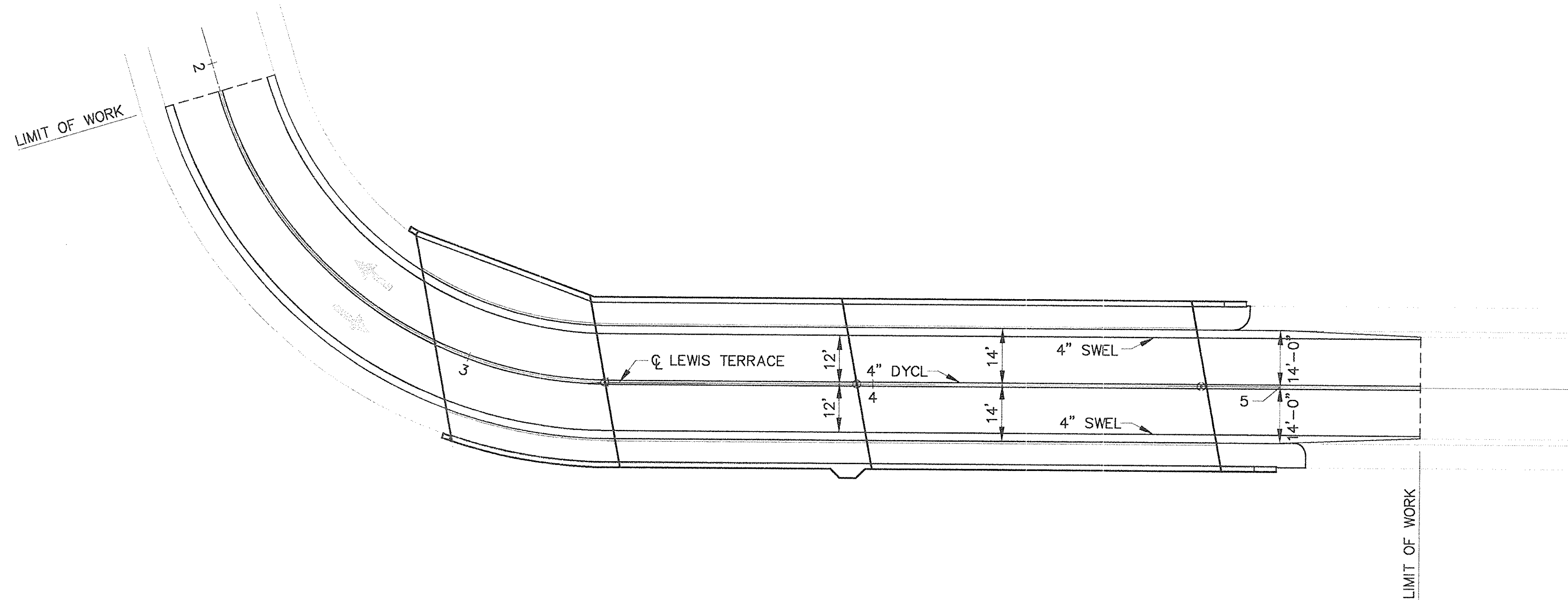
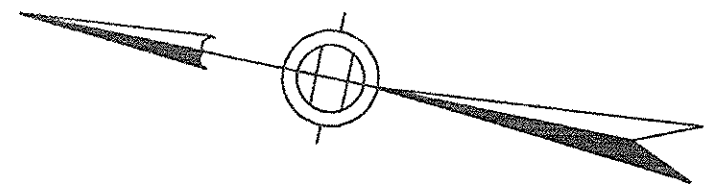
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO. S-25)
PAVEMENT PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

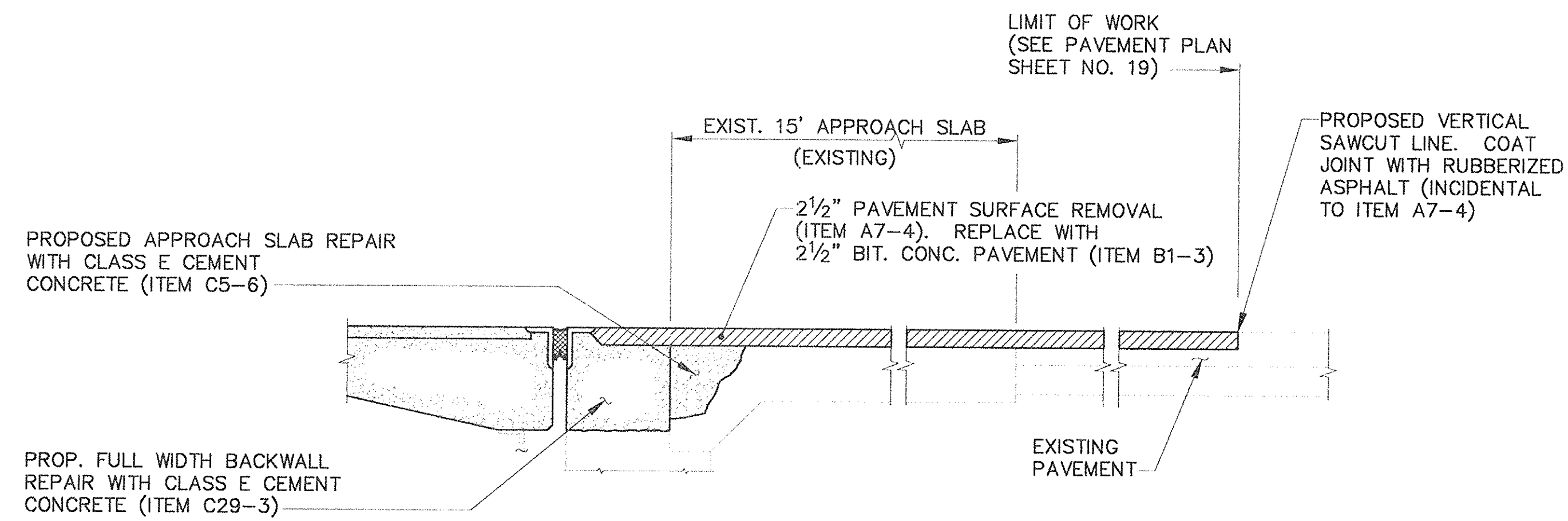
Sheet No. **19**



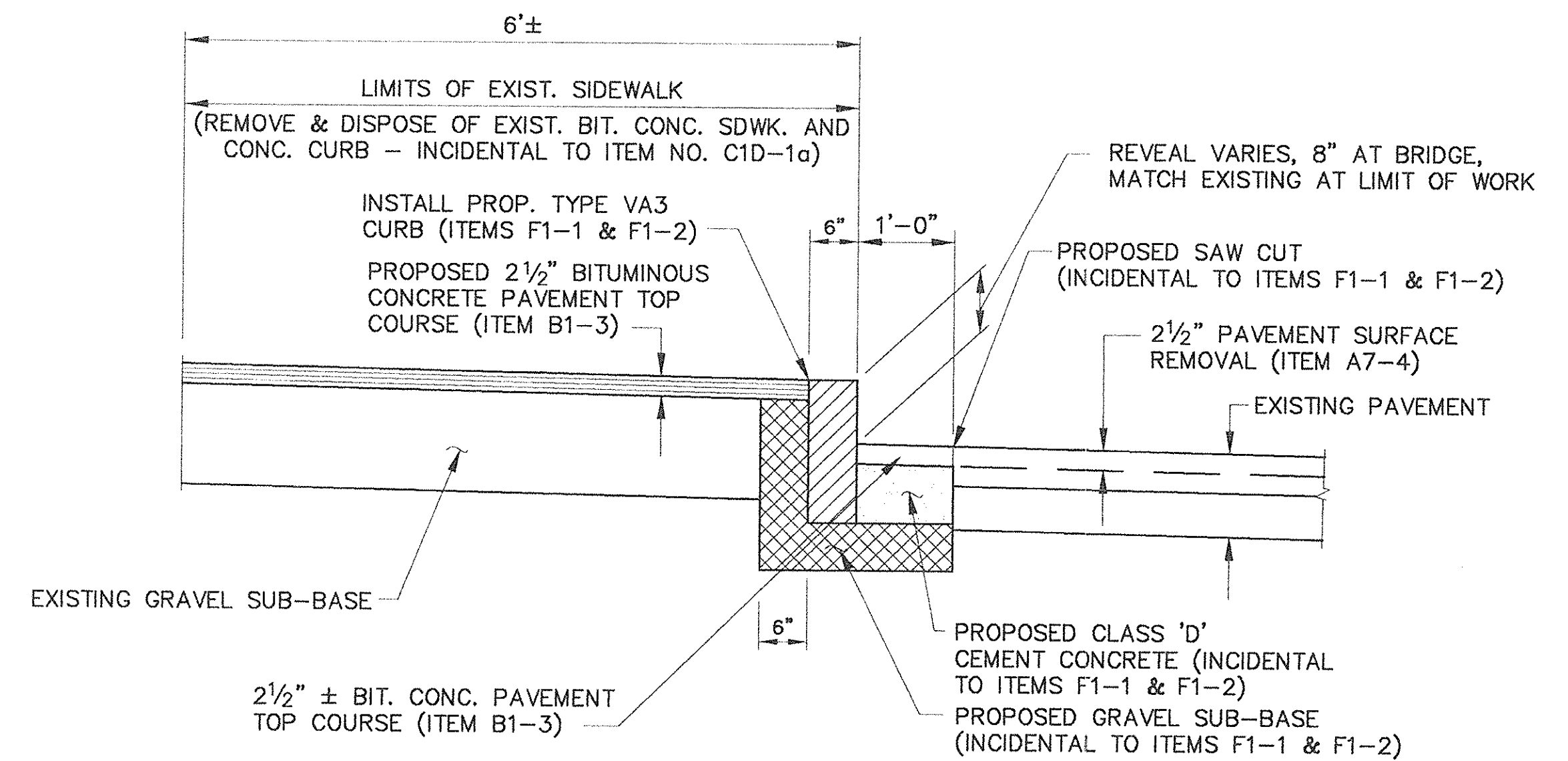
LEGEND

- SWEL - SOLID WHITE EDGE LINE
4" REFLECTORIZED THERMOPLASTIC WHITE LINE
(ITEM NO. G8-1)
- DYCL - DOUBLE YELLOW CENTER LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
(ITEM NO. G8-2)

FINAL PAVEMENT MARKING DETAIL
SCALE: 1"=20'



APPROACH PAVEMENT TRANSITION AT SOUTH ABUTMENT
SCALE: 3/4"=1'-0"

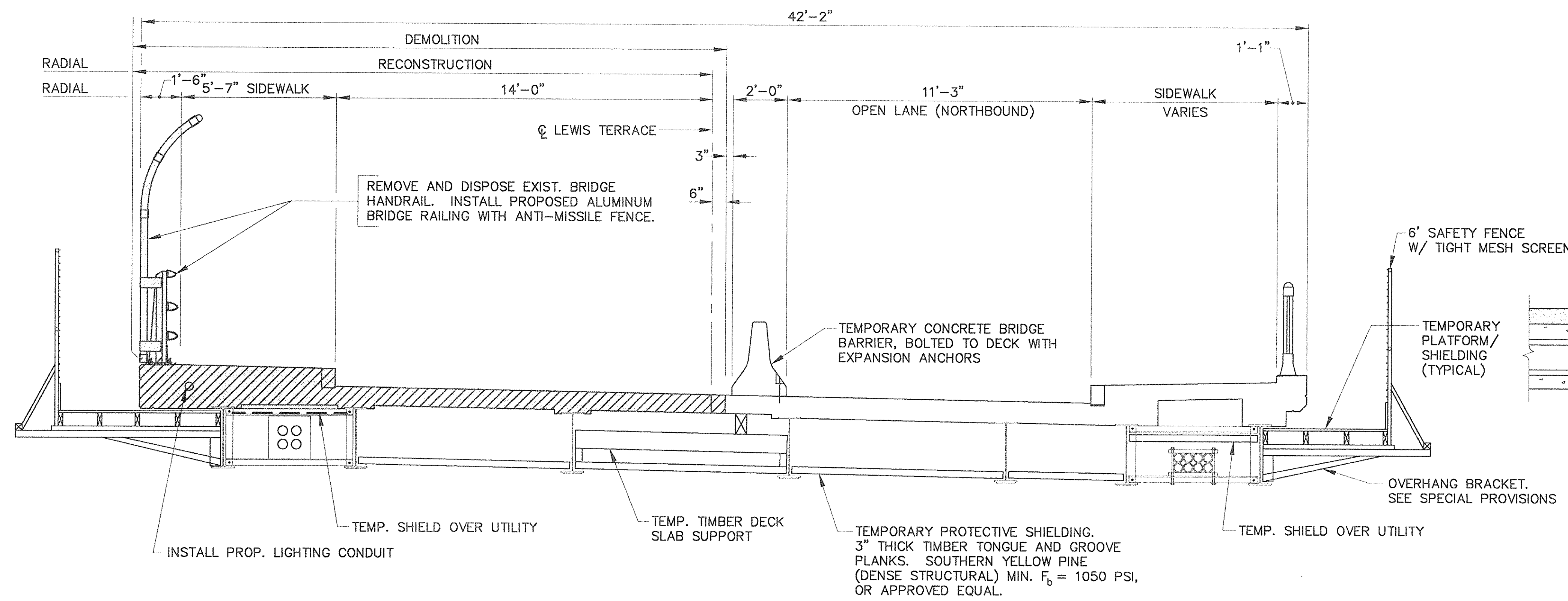


APPROACH GRANITE CURB AND SIDEWALK DETAIL
SCALE: 3/4"=1'-0"

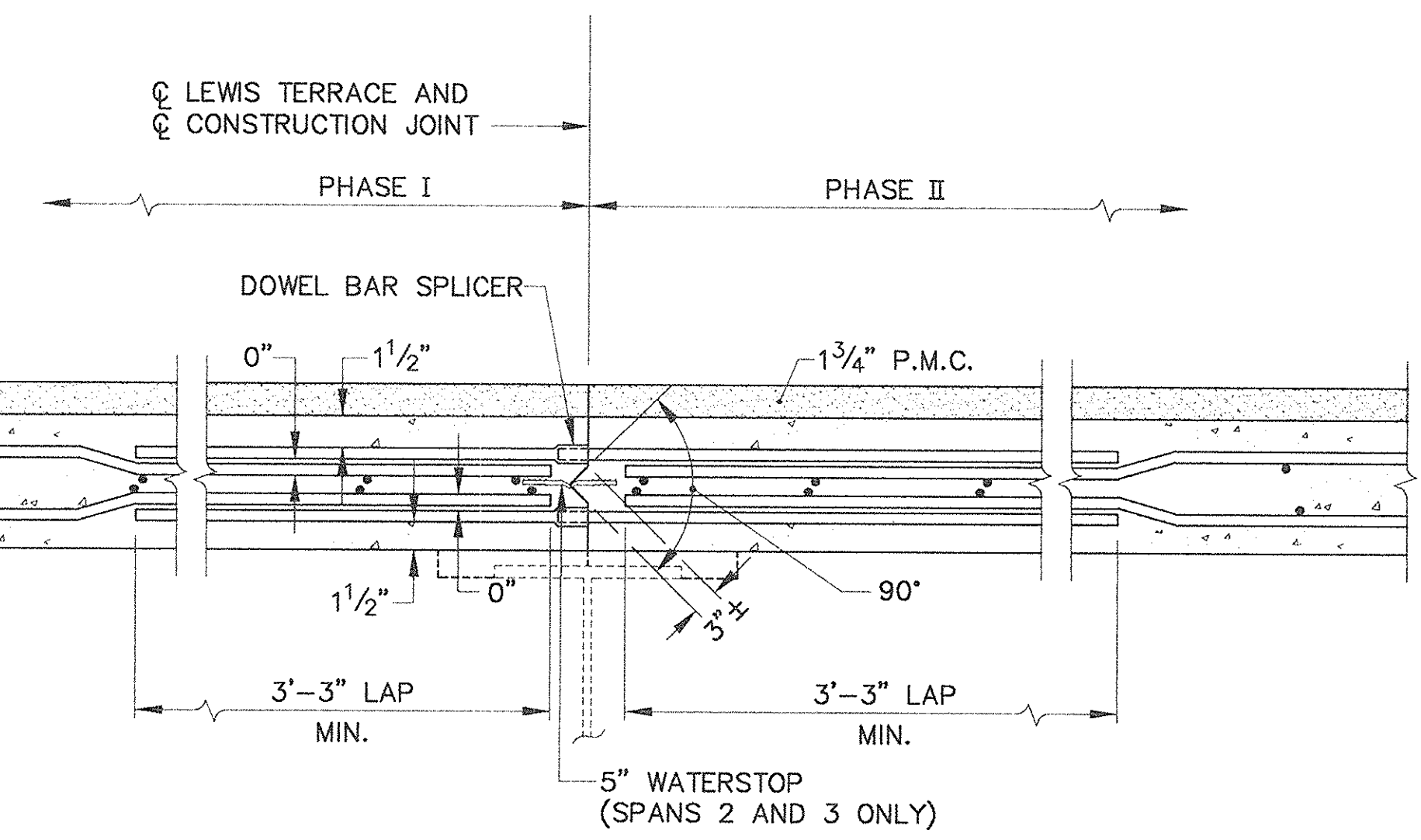
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	GTS 12/93	
		DRAWN:	KMC 12/93	
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				GTS

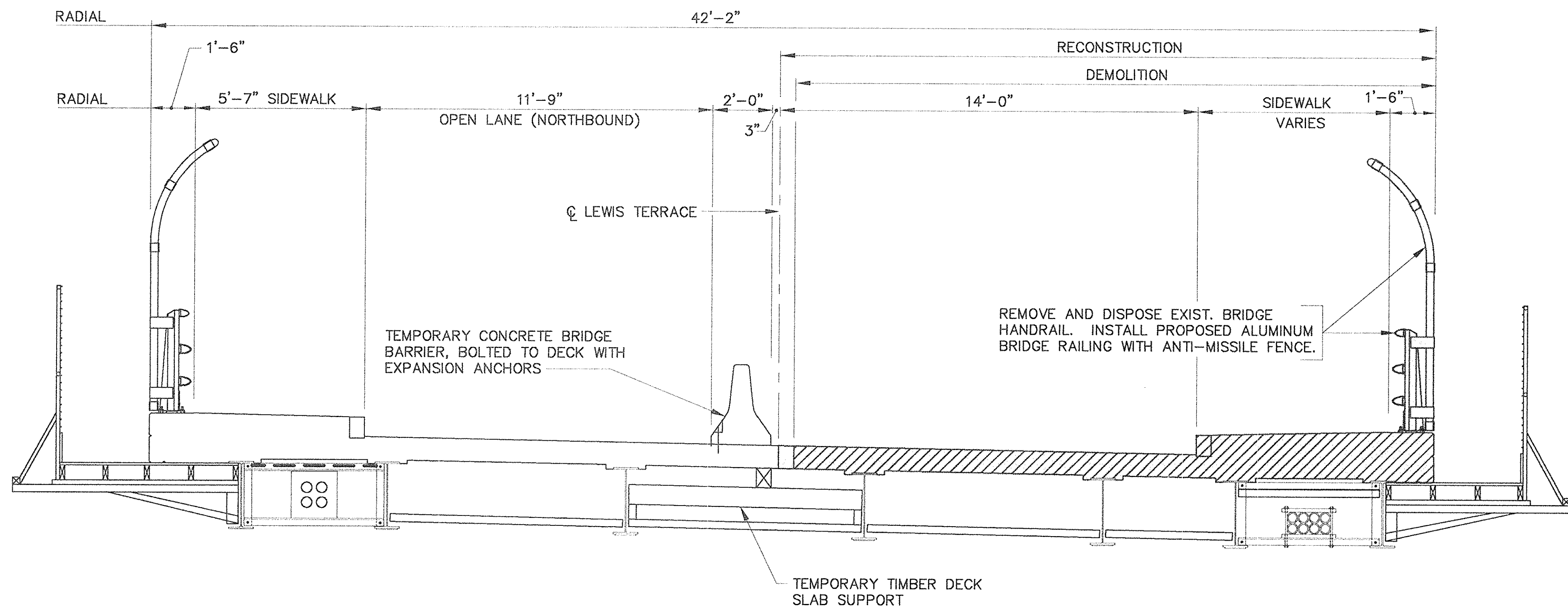
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) PAVEMENT DETAILS	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schreffl Center 529 Main Street Boston, Massachusetts 02129	
	Sheet No. 20



PHASE I
SCALE: 3/8" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



PHASE II
SCALE: 3/8" = 1'-0"

- NOTES:**
1. SECTIONS TAKEN LOOKING TOWARDS THE NORTH ABUTMENT.
 2. TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN ALL STRINGERS, AROUND FASCIAS, AND OVER THE EXISTING UTILITIES PRIOR TO ANY DEMOLITION WORK.
 3. TEMPORARY CONCRETE BRIDGE AND ROADWAY BARRIERS WILL BE PROVIDED BY THE TURNPIKE AUTHORITY, AND TRANSPORTED AND PLACED BY THE CONTRACTOR.
 4. LIGHT STANDARD SHALL BE REMOVED AND REPLACED BY BOSTON EDISON.
 5. TEMPORARY TIMBER DECK SLAB SUPPORTS SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN (INCIDENTAL TO ITEM C32-1a). (SEE SPECIFICATIONS)

LEGEND

	- DEMOLITION
	- RECONSTRUCTION

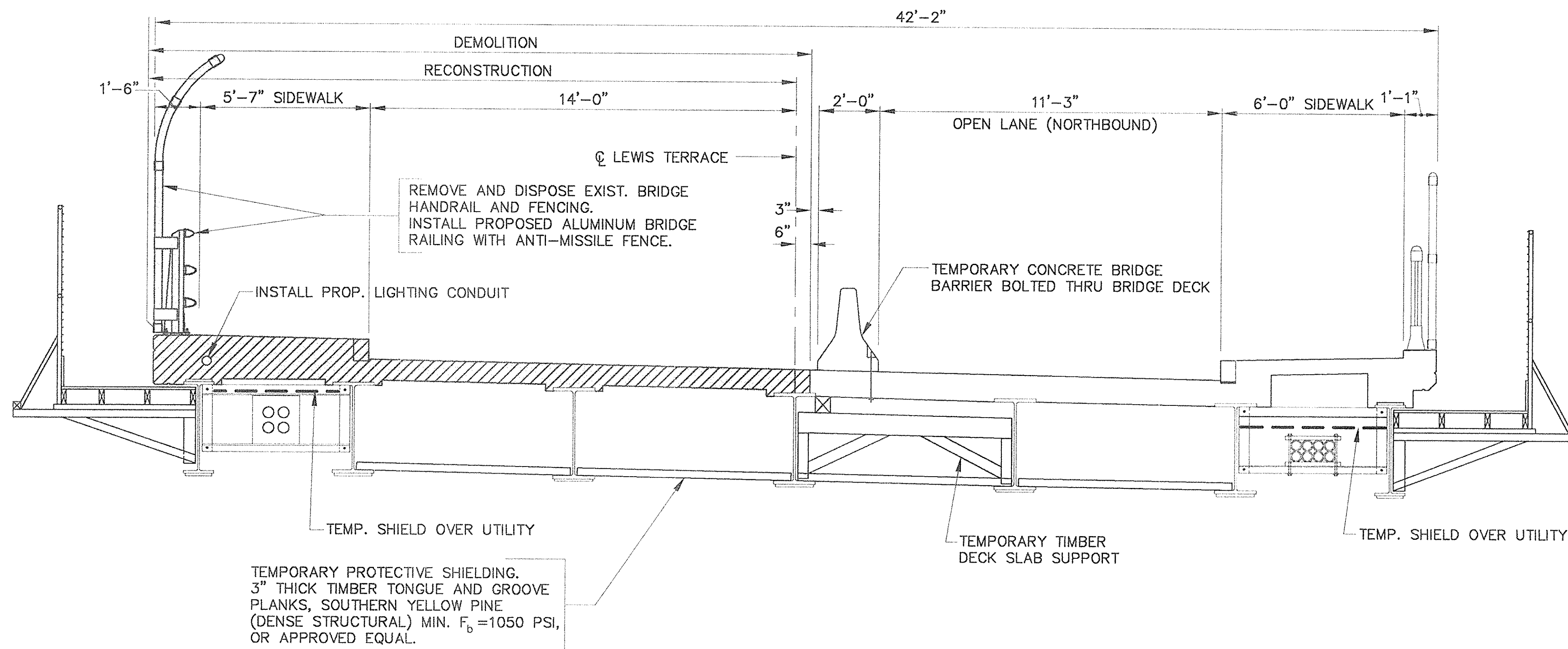
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
 SEQUENCE OF CONSTRUCTION
 SPAN 1

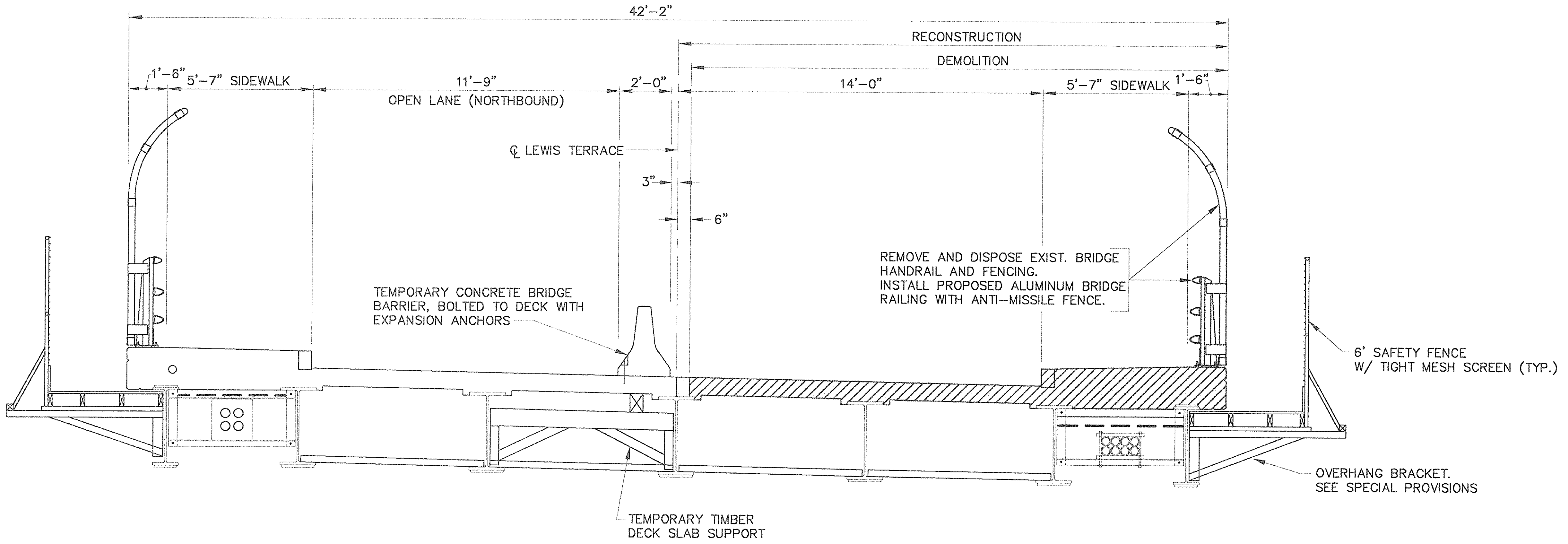
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 21
The Schmidt Center
 529 Main Street
 Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
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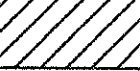



PHASE I
SCALE: 3/8" = 1'-0"




PHASE II
SCALE: 3/8" = 1'-0"

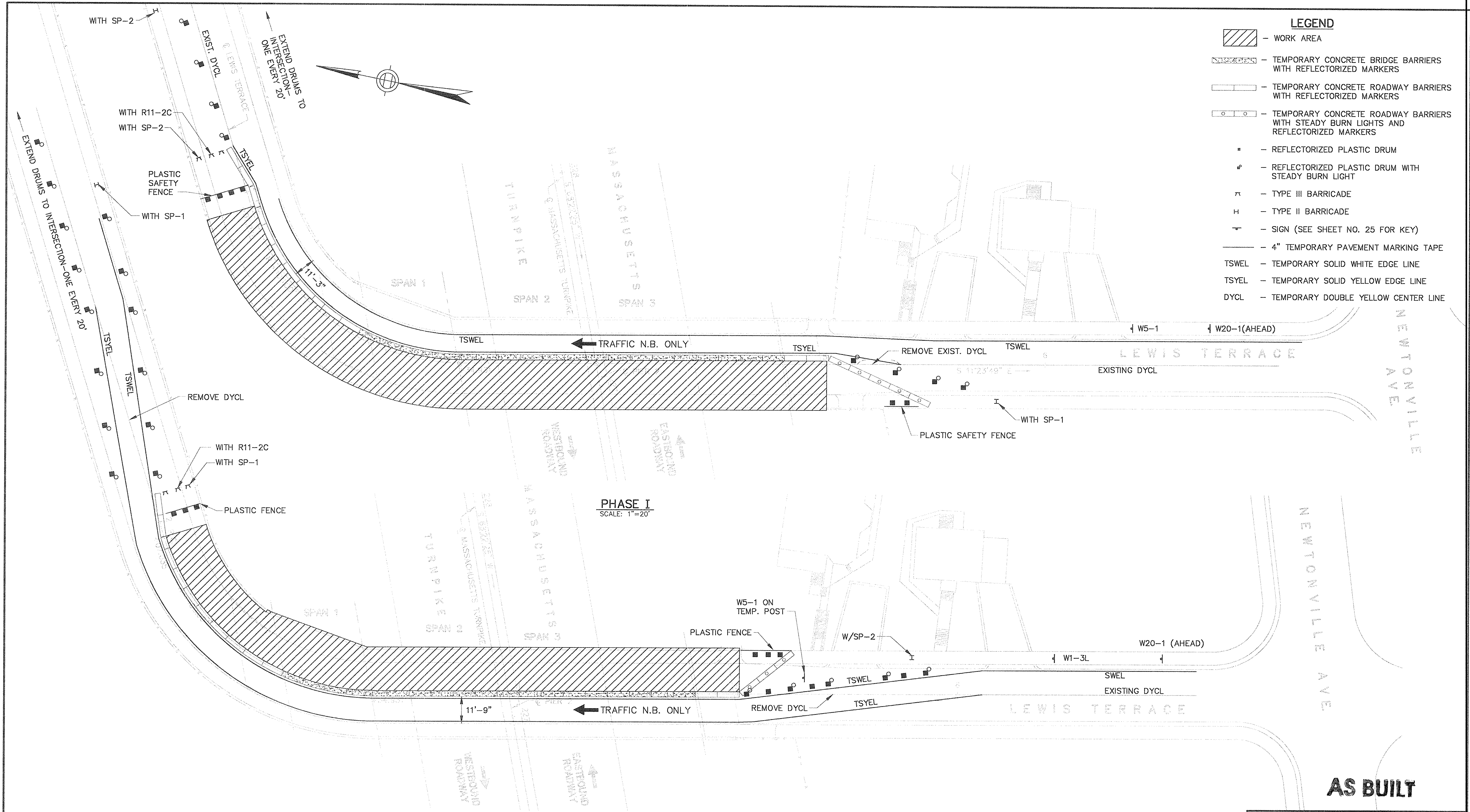
NOTE:
1. FOR NOTES AND LONGITUDINAL CONSTRUCTION JOINT DETAIL, SEE SHEET NO. 21.

LEGEND
 - DEMOLITION
 - RECONSTRUCTION

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION	
LEWIS TERRACE (STR. NO. S-25)	
SEQUENCE OF CONSTRUCTION	
SPANS 2 & 3	
Scale: AS NOTED	Contract No. 521-024
 EDWARDS AND KELCEY, INC. The Schmitt Center 229 Main Street Boston, Massachusetts 02129	Sheet No. 22

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	CAS	12/93	



- LEGEND**
- WORK AREA
 - TEMPORARY CONCRETE BRIDGE BARRIERS WITH REFLECTORIZED MARKERS
 - TEMPORARY CONCRETE ROADWAY BARRIERS WITH REFLECTORIZED MARKERS
 - TEMPORARY CONCRETE ROADWAY BARRIERS WITH STEADY BURN LIGHTS AND REFLECTORIZED MARKERS
 - REFLECTORIZED PLASTIC DRUM
 - REFLECTORIZED PLASTIC DRUM WITH STEADY BURN LIGHT
 - TYPE III BARRICADE
 - TYPE II BARRICADE
 - SIGN (SEE SHEET NO. 25 FOR KEY)
 - 4" TEMPORARY PAVEMENT MARKING TAPE
 - TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 - TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
 - DYCL - TEMPORARY DOUBLE YELLOW CENTER LINE

PHASE I
SCALE: 1"=20'

PHASE II
SCALE: 1"=20'

NOTE:
FOR SIGNS, SEE SHEET NO. 25.

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	GTS	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

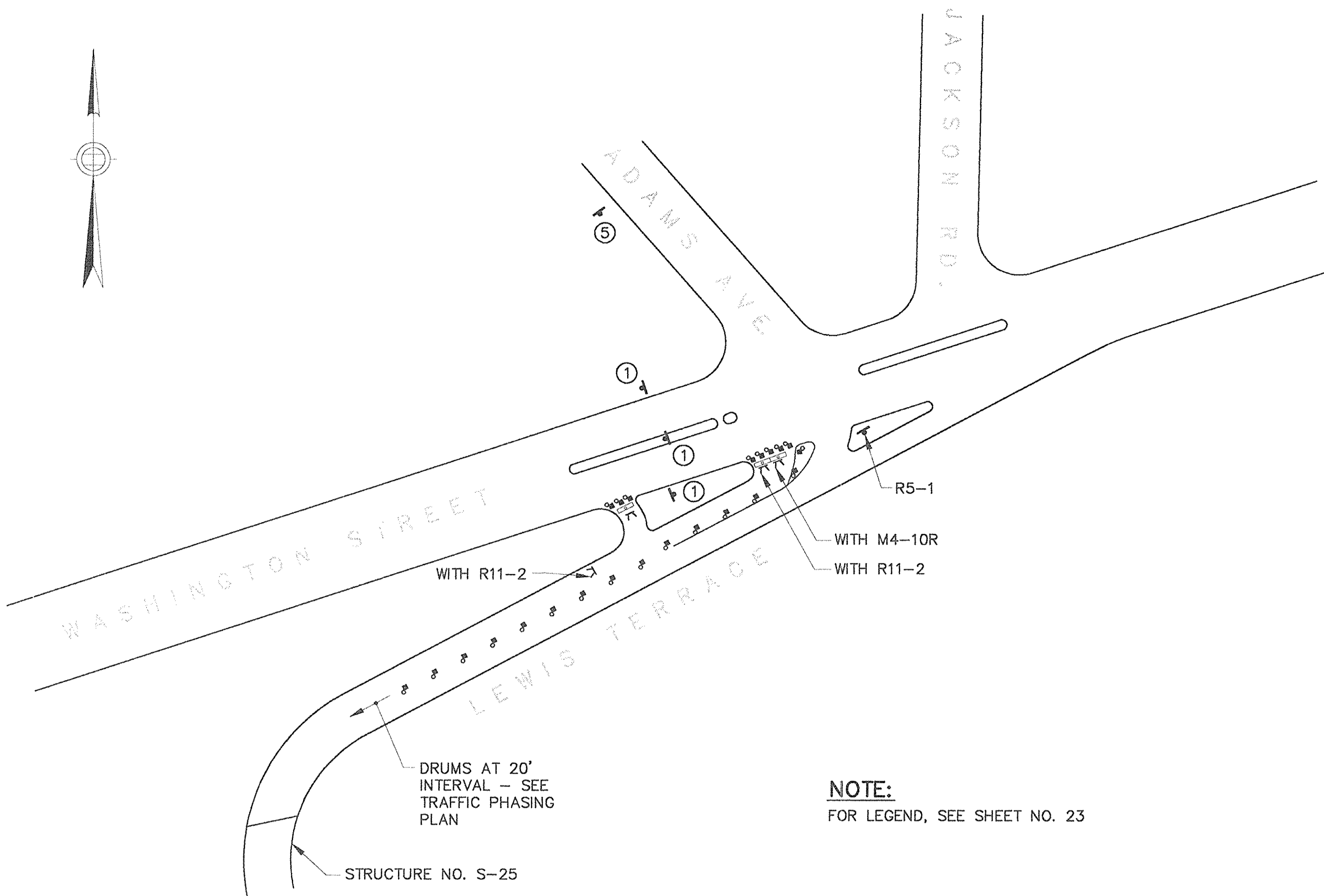
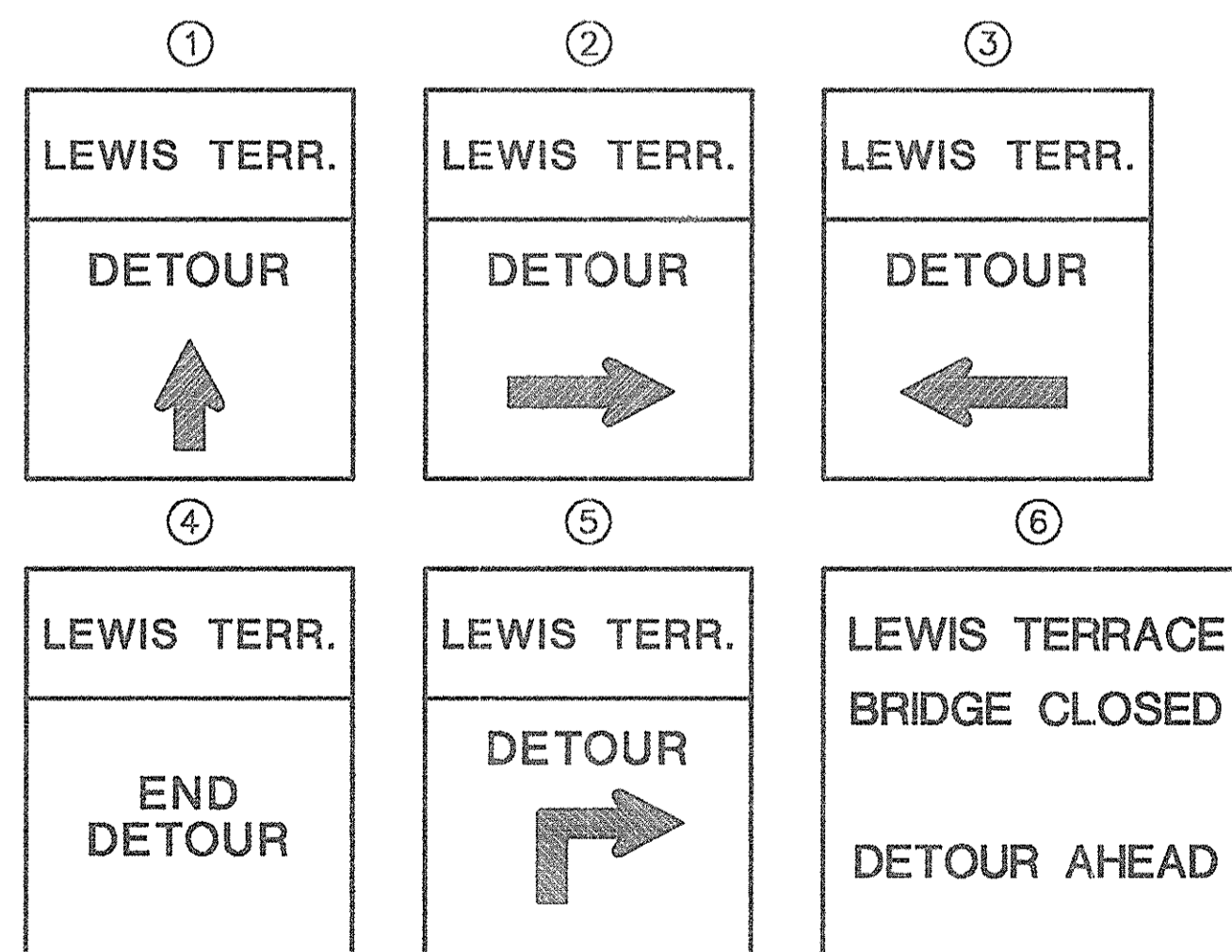
BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO. S-25)
TRAFFIC PHASING PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 23
The Schwartz Center
529 Main Street
Boston, Massachusetts 02129



DETOUR PLAN
NOT TO SCALE



NOTE:
FOR LEGEND, SEE SHEET NO. 23

DETAIL 'A'
NOT TO SCALE

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	GTS	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO S-25)
TRAFFIC AND SIGNING PLAN
PART 1

Scale: NOT TO SCALE Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 24
The Schreffelt Center
529 Main Street
Boston, Massachusetts 02129

IDENTIFICATION NUMBER	SIZE OF SHEET		TEXT	TEXT DIMENSIONS			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN MOUNTING
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
R5-1	30"	30"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			1	SEE M.U.T.C.D. 1988			P5 1	1-POST
R11-2	48"	30"		↓	↓	↓	3	↓	↓	↓	—	MOUNT ON TYPE III BARRICADE
R11-2C	48"	30"		8"-D 8"-D	5" 4" 5"		1	WHITE	BLACK	BLACK	—	MOUNT ON TYPE III BARRICADE
W1-3L	36"	36"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			1	SEE M.U.T.C.D. 1988			P5 1	PHASE II 1-POST
W1-3R	36"	36"					1				TEMPORARY HIGH LEVEL STAND 1	PHASE II TEMPORARY HIGH LEVEL STAND
W5-1	36"	36"					1				TEMPORARY HIGH LEVEL STAND 1	PHASE I 1-PS POST PHASE II TEMPORARY HIGH LEVEL STAND
W20-1 (AHEAD)	36"	36"					1				P5 1	1-POST
W20-4 (AHEAD)	36"	36"					2				TEMPORARY STAND 2	1 PER TEMPORARY STAND
W20-7a	36"	36"					2				TEMPORARY STAND 2	1 PER TEMPORARY STAND
M4-8a	24"	18"					2				—	MOUNT WITH SP-3
M4-9L	30"	24"					3				—	MOUNT WITH SP-3
M4-9R	30"	24"					5				—	MOUNT WITH SP-3
M4-9V	30"	24"		5"-D 11" ARROWHEAD	4" 2" 3"	4 1/2" STEM	5	WHITE	BLACK	BLACK	—	MOUNT WITH SP-3
MV-9AR	30"	24"		5"-D 10" ARROWHEAD	3" 2" 3"	3 1/2" STEM	1	WHITE	BLACK	BLACK	—	MOUNT WITH SP-3

IDENTIFICATION NUMBER	SIZE OF SHEET		TEXT	TEXT DIMENSIONS			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR			POST SIZE AND NUMBER REQUIRED	SIGN MOUNTING
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW		BACK-GROUND	LEGEND	BORDER		
M4-10R	48"	18"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			1	SEE M.U.T.C.D. 1988			—	MOUNT ON TYPE III BARRICADE
SP-1	24"	18"		2"-C 2"-C 2"-C	2" 1" 1"		2	WHITE	BLACK	BLACK	—	MOUNT ON TYPE II BARRICADE
SP-2	24"	18"		2"-C 2"-C 2"-C	2" 1" 1"		2	WHITE	BLACK	BLACK	—	MOUNT ON TYPE II BARRICADE
SP-3	30"	12"		5"-B	3" 4"		16	ORANGE	BLACK	BLACK	P5 16	1-POST
SP-4	60"	60"		6"-C 6"-C 6"-C	15" 3" 9" 15"		3	ORANGE	BLACK	BLACK	4" x 4" 6	2-POST

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS

BY	DATE
DESIGNED: GHB	12/93
DRAWN: KMC	12/93
CHECKED: GTS	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
 TRAFFIC AND SIGNING PLAN
PART 2

Scale: NOT TO SCALE Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 25
 The Schrott Center
 529 Main Street
 Boston, Massachusetts 02129

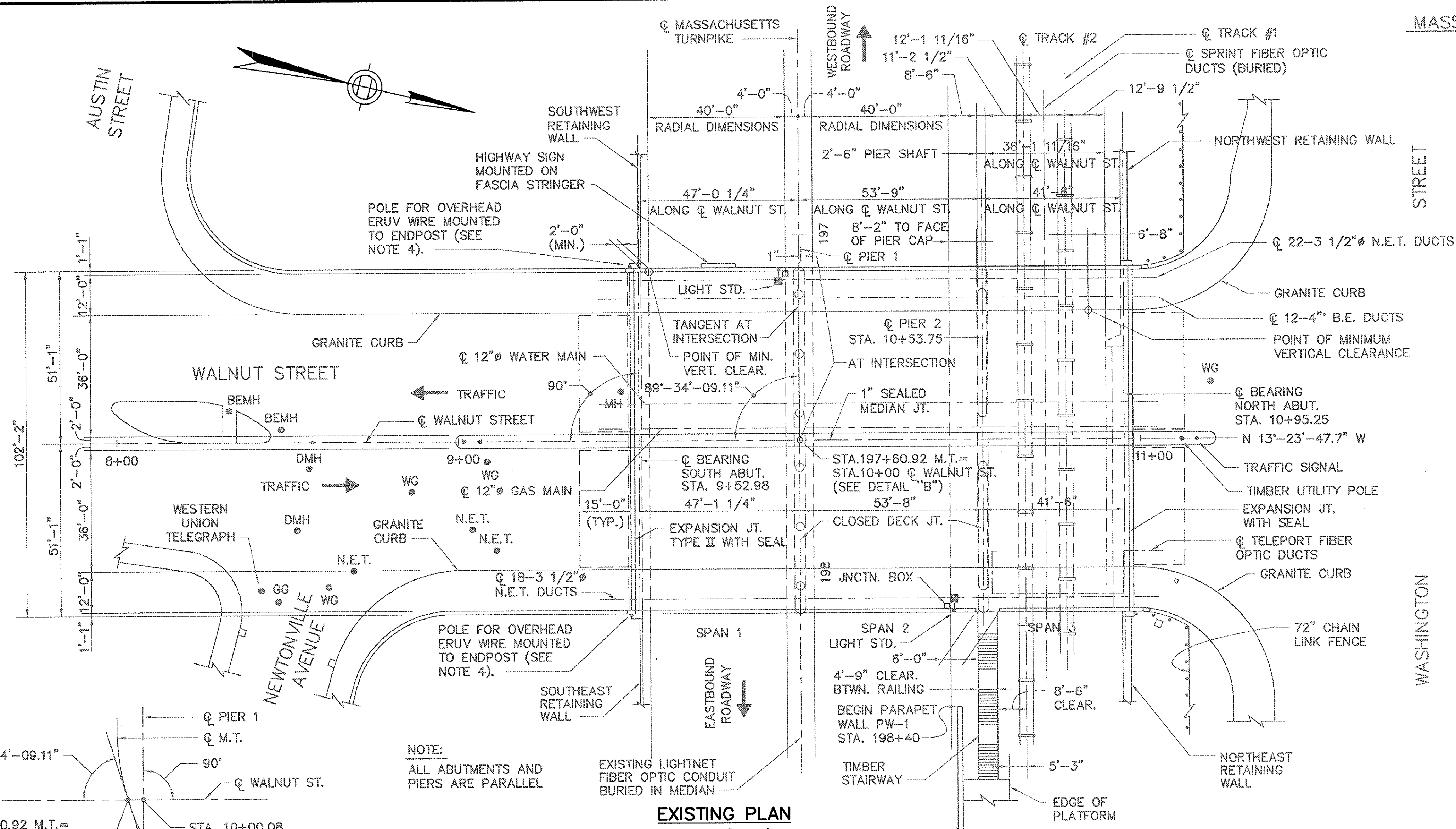
MASSACHUSETTS TURNPIKE

CURVE DATA

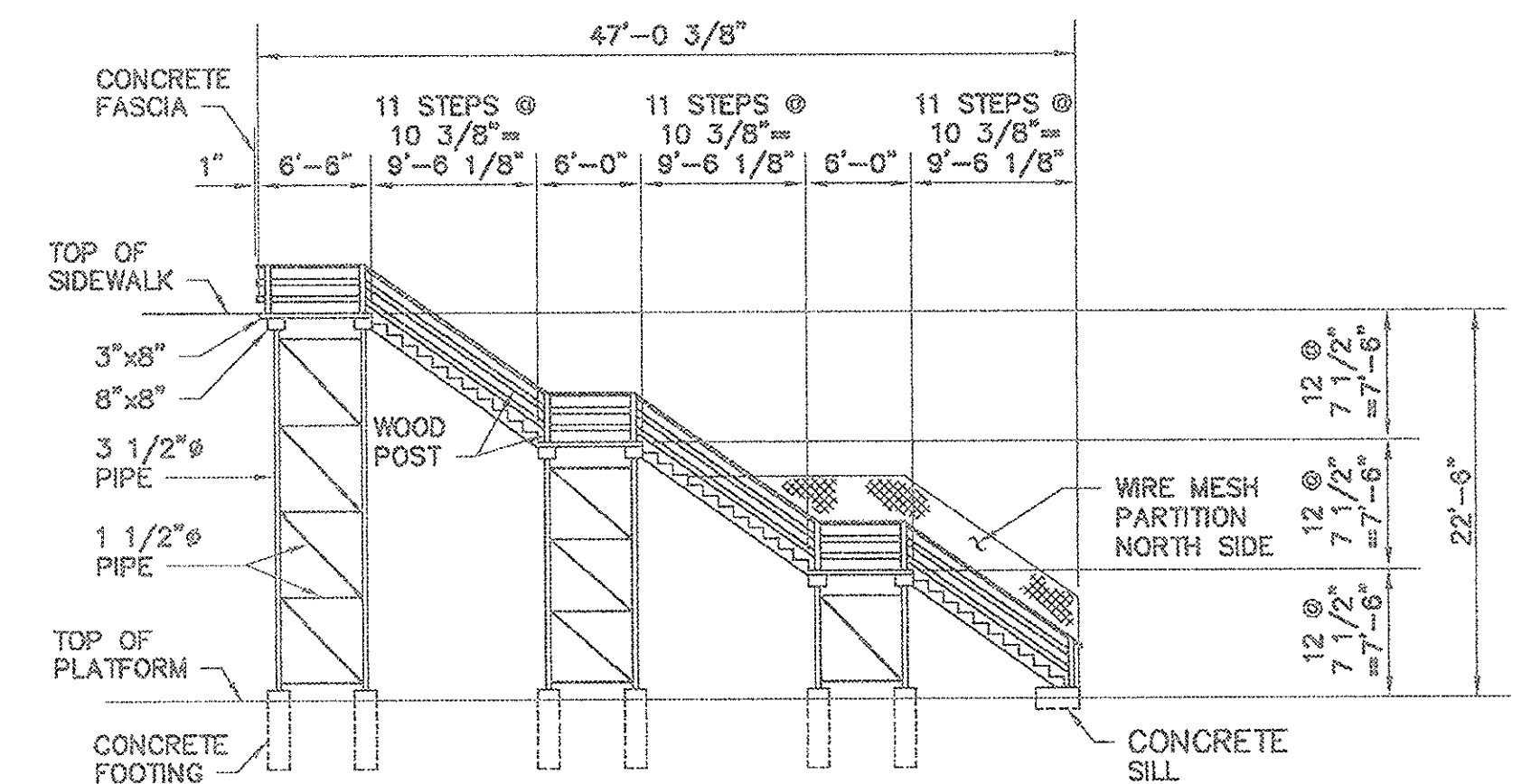
$\Delta = 11^{\circ}-16'-54.6''$
 $R = 10,800'$
 $T = 1066.737'$
 $L = 2126.575'$
 P.C. STA. 191+09.451

NOTES

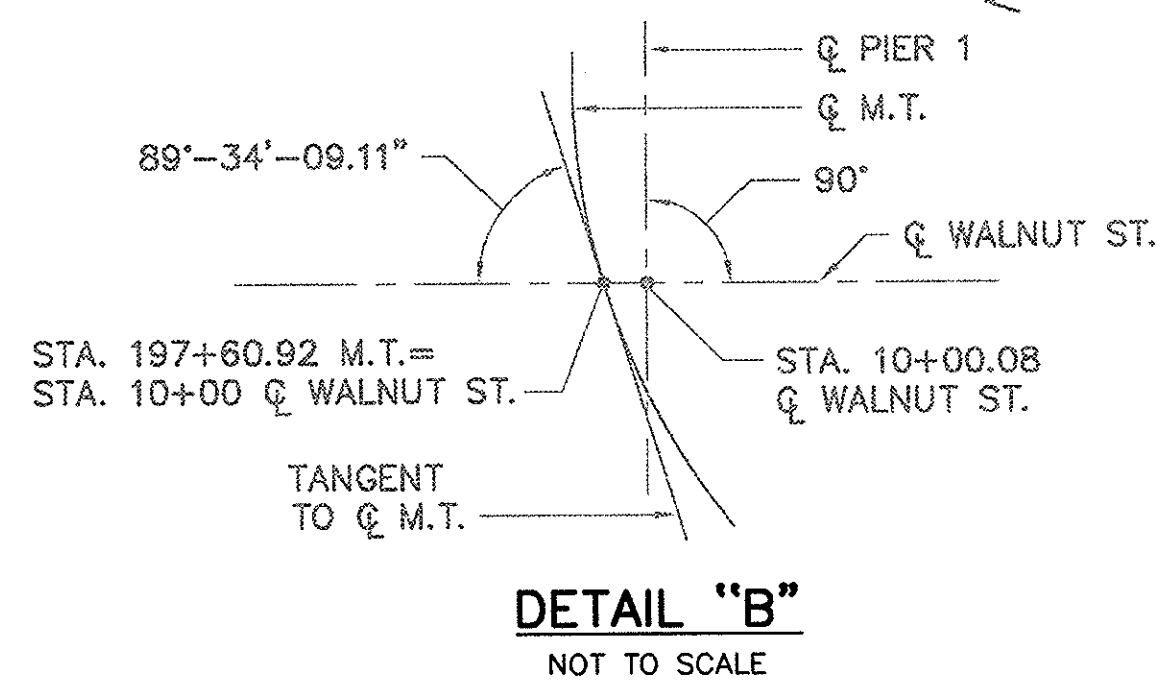
- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILT PLANS AND ARE NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS ARE BASED ON U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



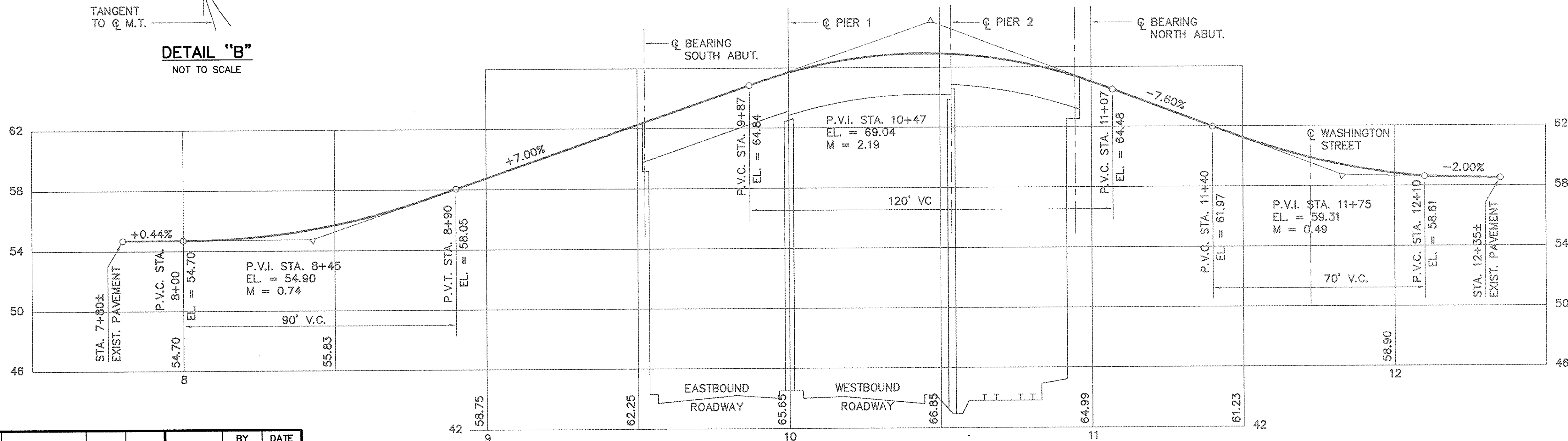
EXISTING PLAN
SCALE: 1" = 20'



ELEVATION
TIMBER STAIRWAY
SCALE: 1" = 10'



DETAIL "B"
NOT TO SCALE



PROFILE-WALNUT STREET

PROFILE SCALE
1" = 20' H
1" = 4' V

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: SAS	12/93	
		CHECKED: EMM	12/93	

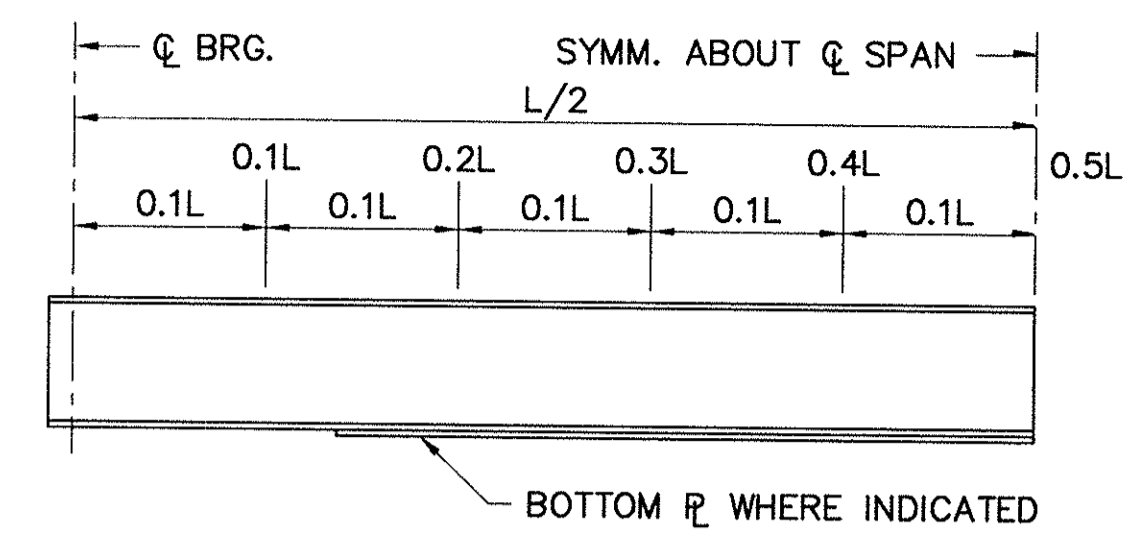
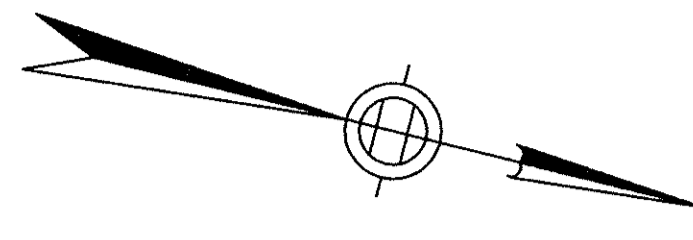
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
EXISTING PLAN & PROFILE

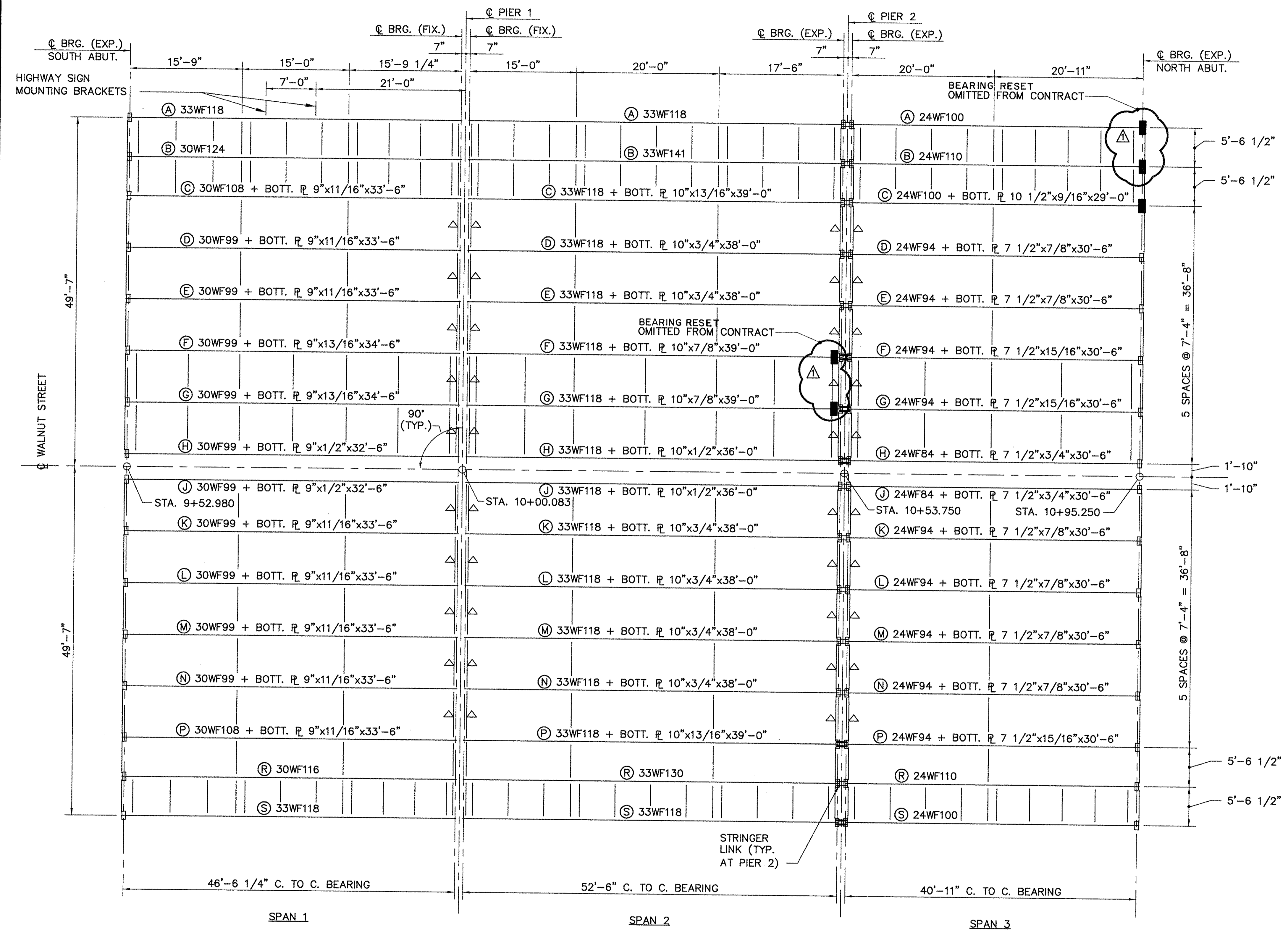
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 26



EXISTING STUD SHEAR CONNECTOR SCHEDULE

SPAN	STRINGER	0.0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	STUDS PER ROW	HEIGHT
1,2,3	(A) (B) (R) (S)	12"	12"	12"	12"	12"	2-3/4"	6"
1&3	(C) (P)	4"	5"	6 1/2"	8"	10"	2-7/8"	4"
1&3	(D) (E) (F) (G) (K) (L) (M) (N)	4 1/2"	5 1/2"	7"	8 1/2"	10 1/2"	2-7/8"	4"
1&3	(H) (J)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(C) (P)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(D) (E) (H) (J) (K) (L) (M) (N)	6"	7"	8 1/2"	10"	12"	2-7/8"	4"
2	(F) (G)	5 1/2"	6 1/2"	8"	9 1/2"	12"	2-7/8"	4"



FRAMING PLAN
SCALE: 1/8" = 1'-0"

- LEGEND**
- - EXISTING EXPANSION SHOE ROCKER BEARING
 - △ - EXISTING DIAPHRAGM WITH 7/8" x 4" HIGH SHEAR CONNECTORS @ 8" O.C. CONTRACTOR SHALL REPLACE CONNECTORS IF MISSING OR DAMAGED.
 - - LINK TO BE REMOVED, DISPOSED AND REPLACED
 - - EXPANSION BEARING TO BE RESET

- NOTES:**
- DIMENSIONS FOR FRAMING PLAN ARE FROM THE "AS-BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
 - SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.
 - FOR LINK AND BEARING DETAILS SEE SHEET NOS. 36 AND 66.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
FRAMING PLAN

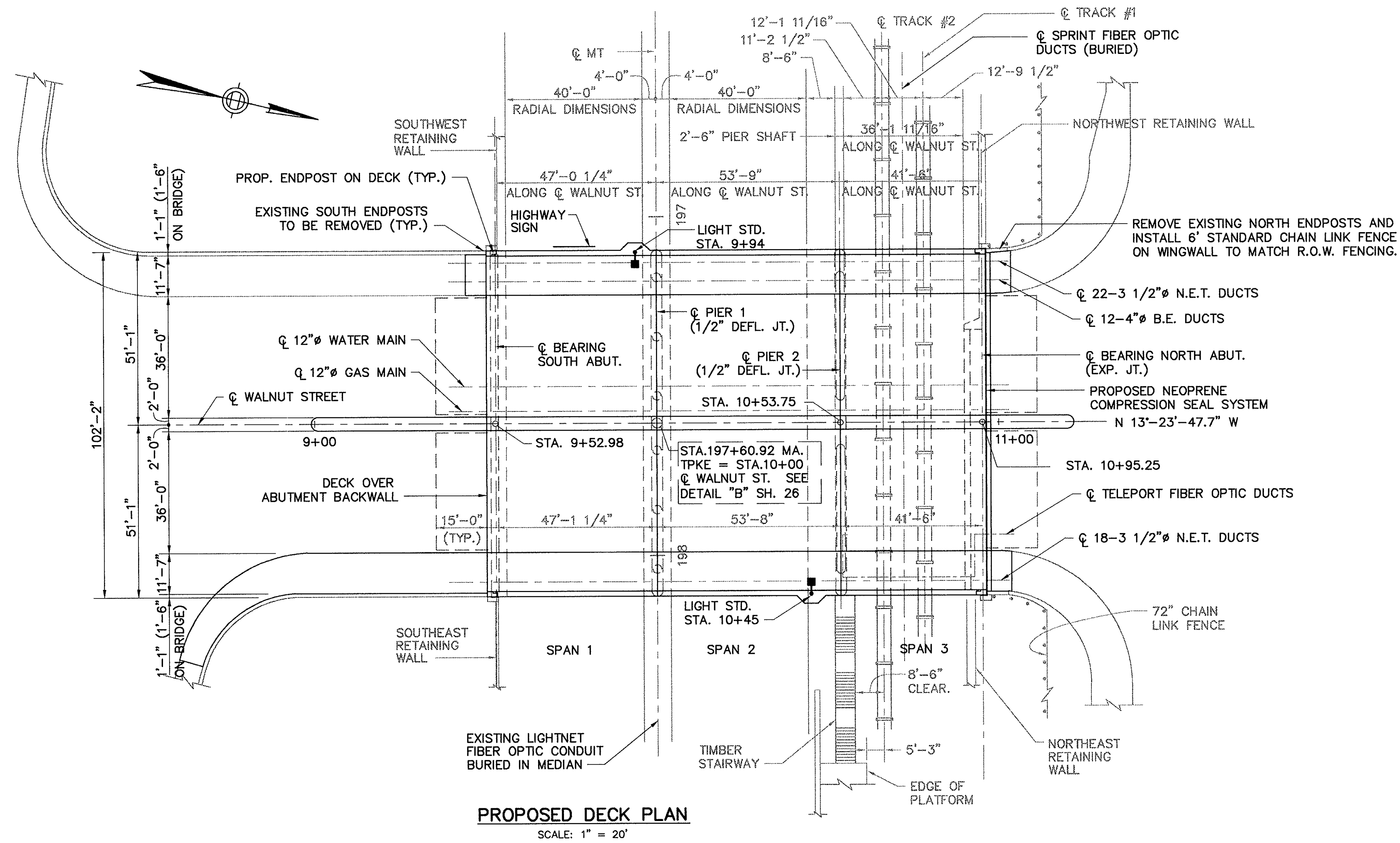
Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

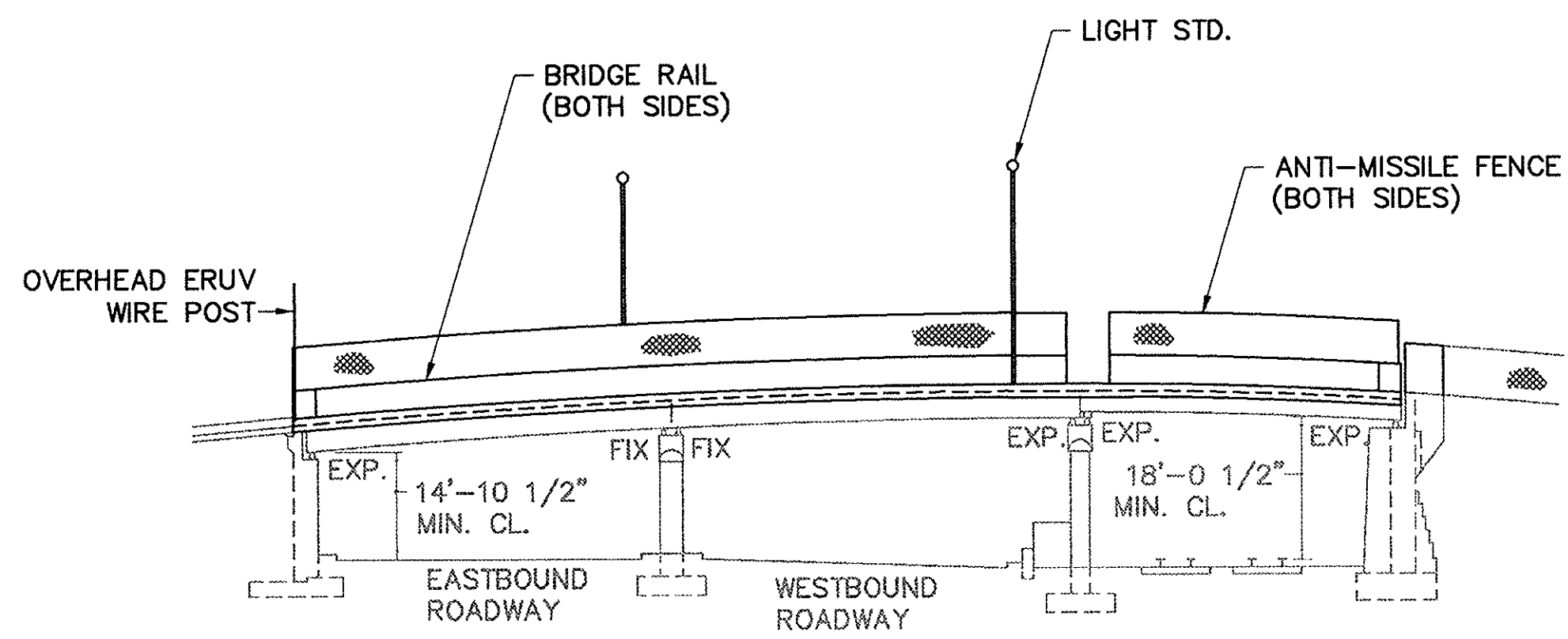
EDWARDS AND KELCEY, INC.
529 Main Street
Boston, Massachusetts 02129

Sheet No. **27**

NO.	REVISION	BY	DATE	IN CHARGE OF	DESIGNED BY	DATE
					RRS	12/93
					SAS	12/93
					EMM	12/93
△	AS-BUILT	GTS	10/95			



PROPOSED DECK PLAN
SCALE: 1" = 20'



ELEVATION (EAST)
SCALE: 1" = 20'

GENERAL NOTES:

DESIGN LOADING:

A.A.S.H.T.O. LOADING HS20-44

MATERIALS:

1. CONCRETE FOR DECK SLAB, SIDEWALKS, MEDIANS, AND END POSTS SHALL BE CLASS "D" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4500$ PSI.
2. CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS "E" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=5000$ PSI.
3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
2. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SECTION C25A OF THE SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1b.
3. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
4. FOR END POST DETAILS, SEE SHEET NO. 33.
5. EXISTING OVERHEAD "ERUV" WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		BY	DATE	
		DESIGNED: GRI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	

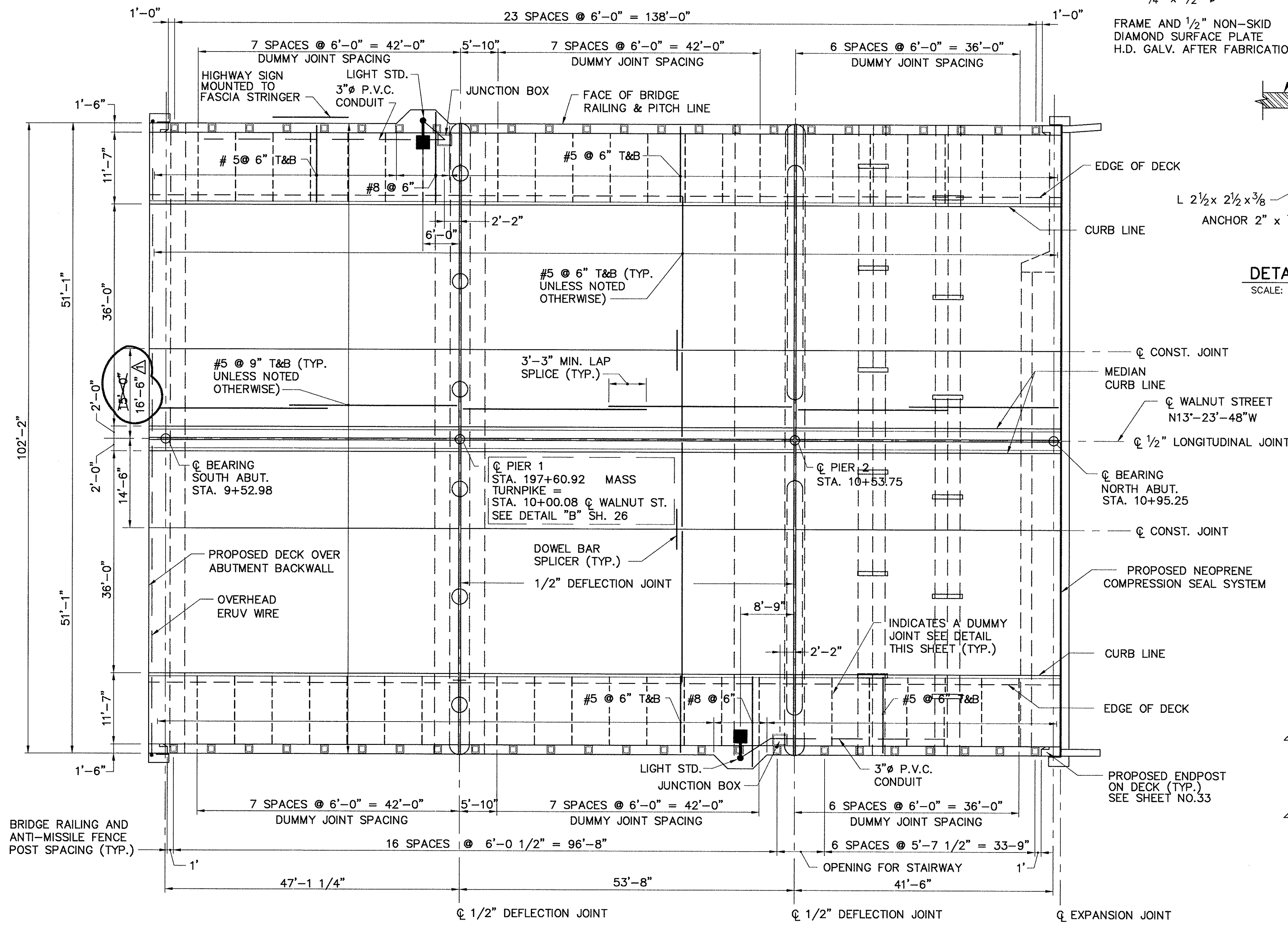
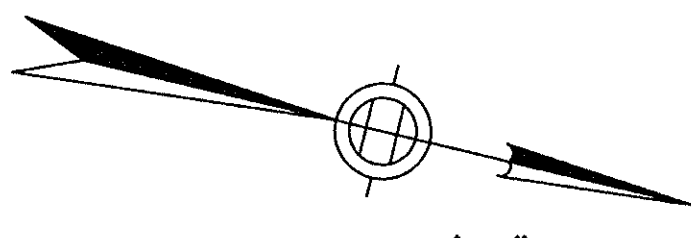
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

AS-BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
PROPOSED DECK PLAN

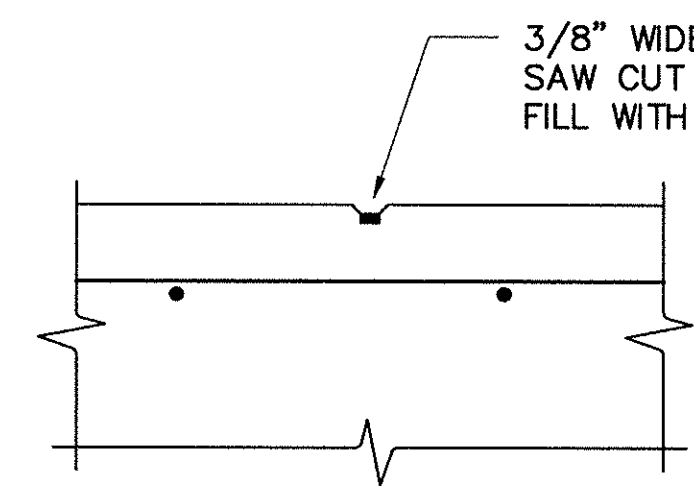
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 28



PROPOSED DECK PLAN
SCALE: 1" = 10'

DUMMY JOINT NOTES:

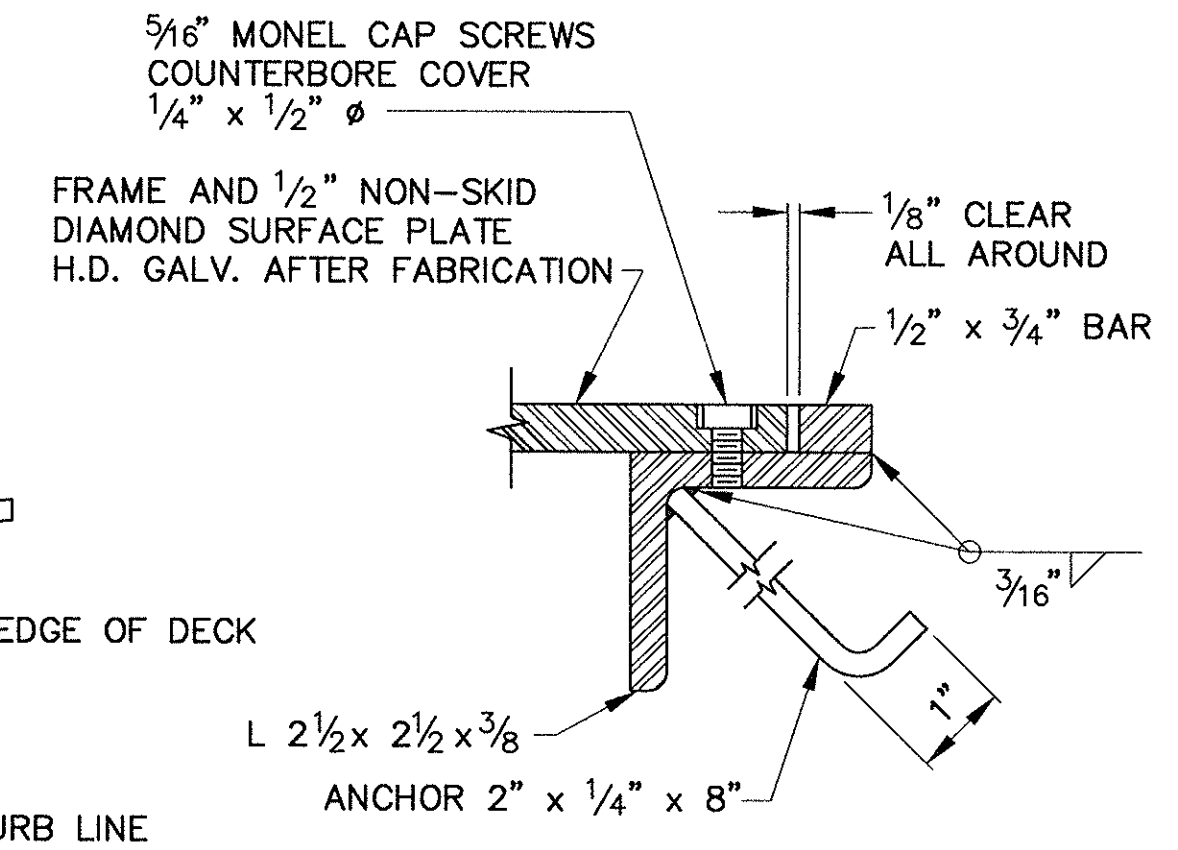
1. A MORTARED JOINT IN THE CURB SHALL BE PLACED AT EACH DUMMY JOINT.
2. JOINT SEALER TO BE SAME COLOR AS CONCRETE.
3. JOINTS TO BE SQUARE TO FACE OF CURB.



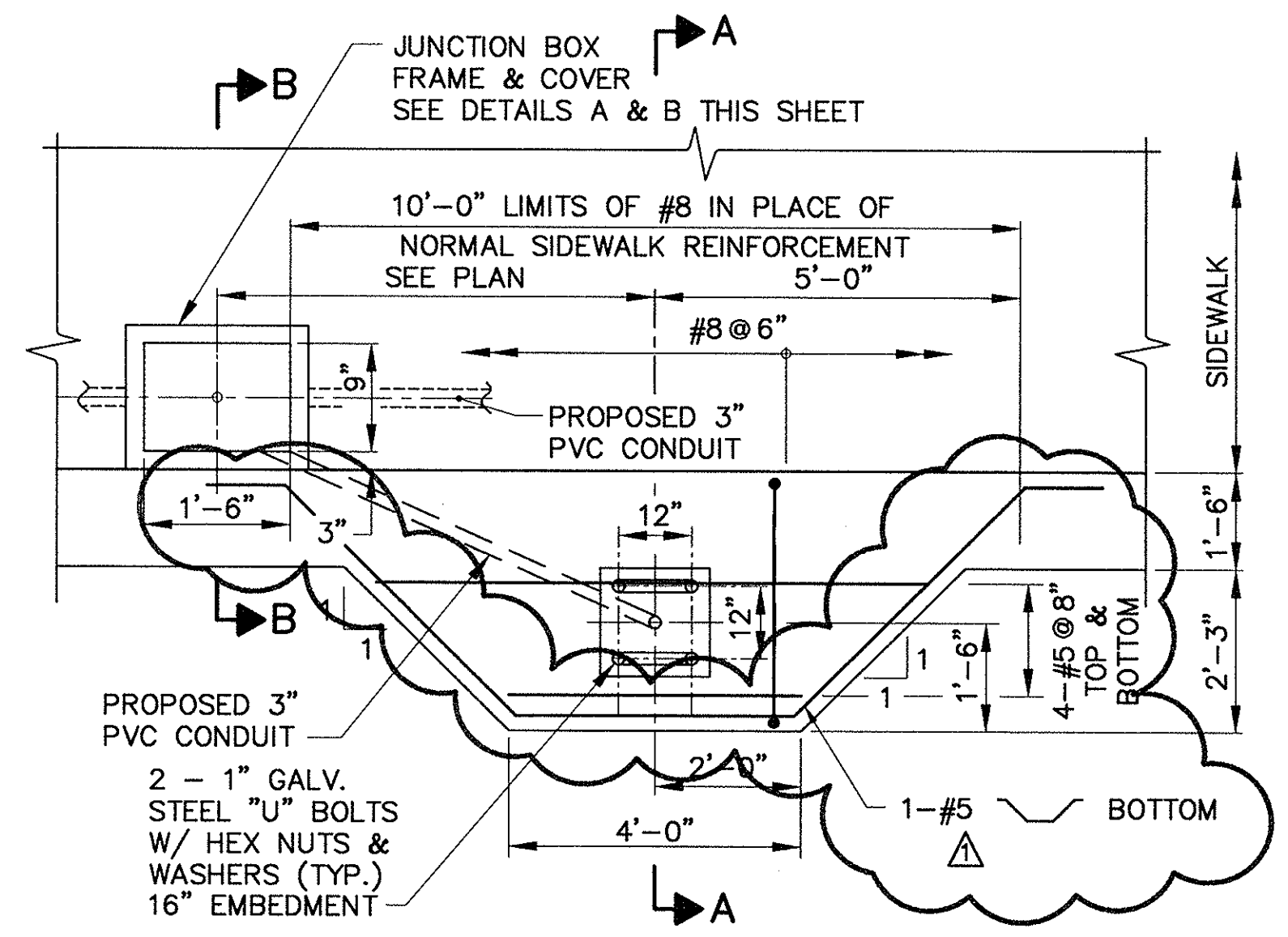
DUMMY JOINT DETAIL
SCALE: 3" = 1'-0"

NOTES:

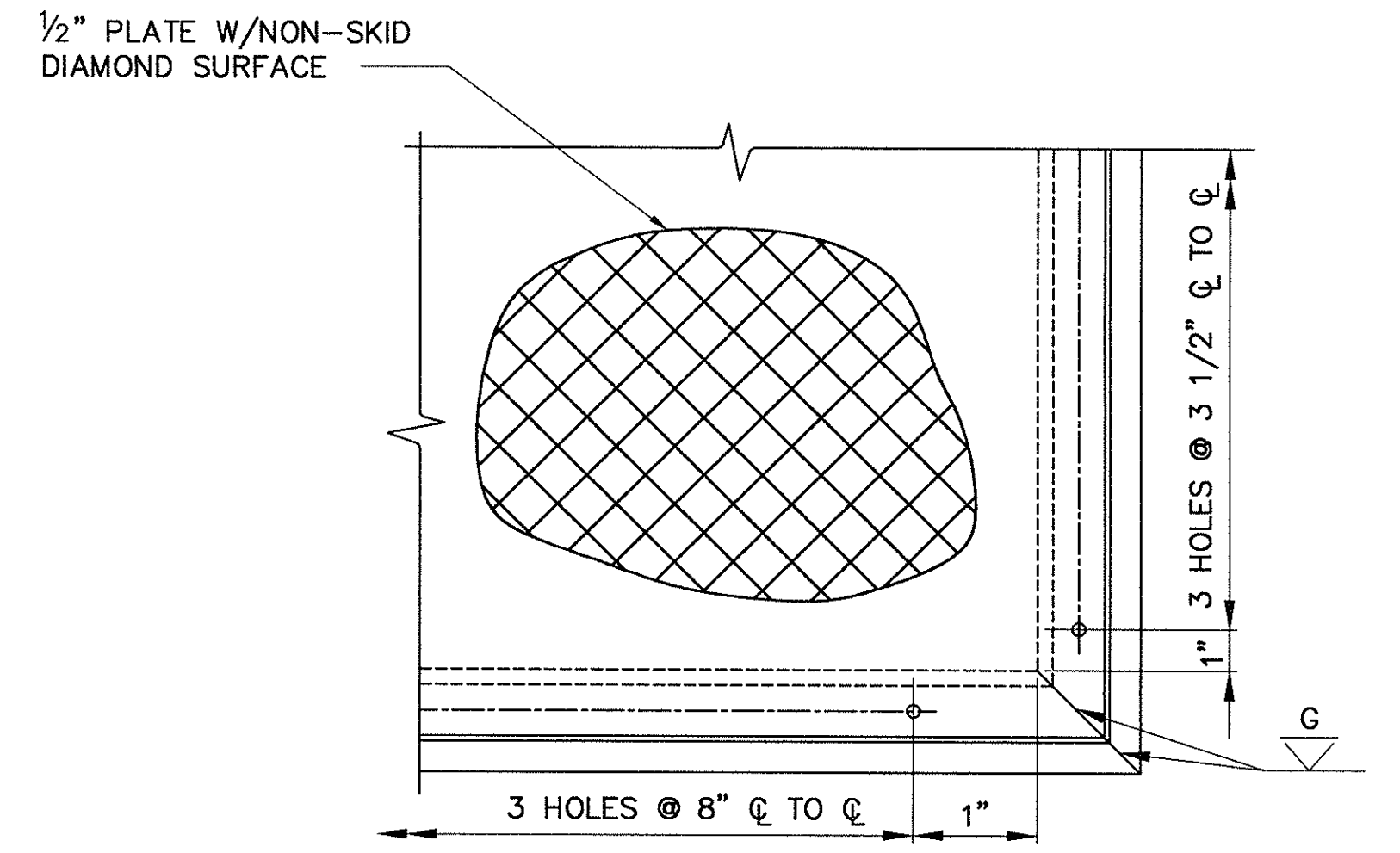
1. TRANSVERSE REINFORCEMENT SHALL BE PERPENDICULAR TO THE STRINGERS.
2. FOR REINFORCING NOT SHOWN SEE SHEET NOS. 32, 34, 35.
3. FOR LIMITS OF GRANITE CURB AT ROADWAY JOINTS SEE SHEET NO. 34, 35.
4. PVC DRAINS (SEE SHEET NO. 32) LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED SO THAT THEY DO NOT DRAIN ON TO THE TRAVELLED WAY.
5. FINISH FOR POLYMER MODIFIED CONCRETE WEARING SURFACE SHALL BE SAWCUT TRANSVERSE GROOVES, FOR DETAIL SEE SHEET NO. 39
6. SECTIONS A-A & B-B ARE SHOWN ON SHEET NO. 32



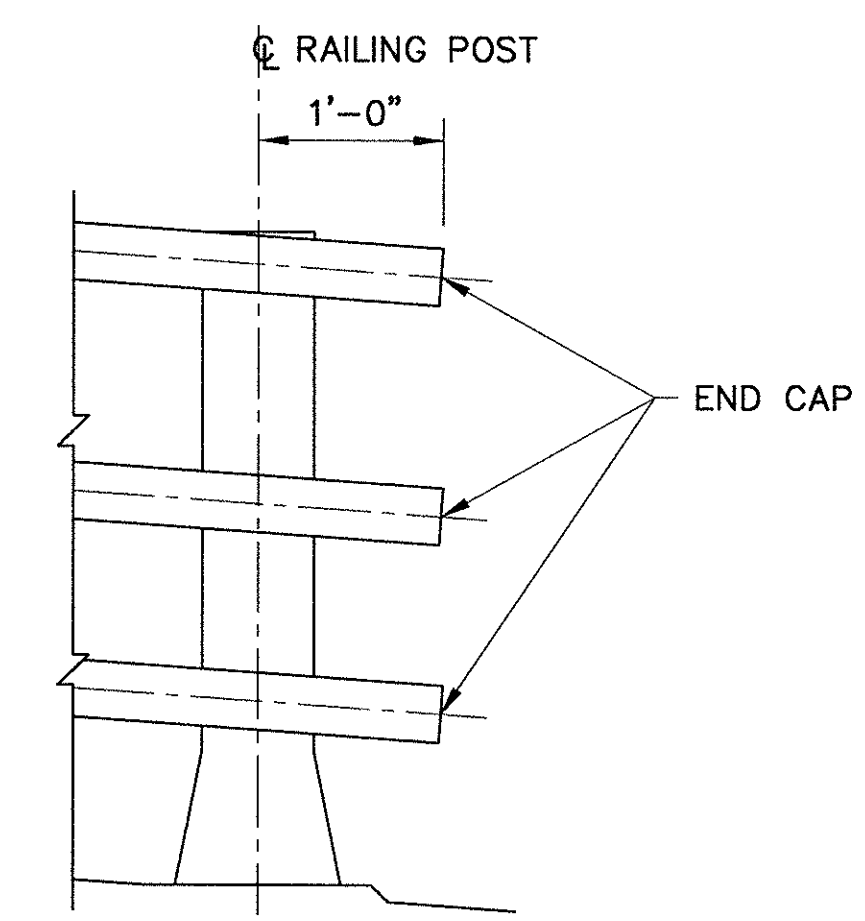
DETAIL "B"
SCALE: 6" = 1'-0"



PLAN PROPOSED LIGHT POLE SUPPORT
NOT TO SCALE



DETAIL "A"
SCALE: 3" = 1'-0"



END DETAIL AT STAIR OPENING
SCALE: 1" = 1'-0"

CAST ALUMINUM - DRIVE FIT

RAIL CAP
NOT TO SCALE **AS BUILT**

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GRI	12/93	
		DRAWN:	JNC	12/93	
		CHECKED:	EMM	12/93	
		BY	GTS	10/95	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

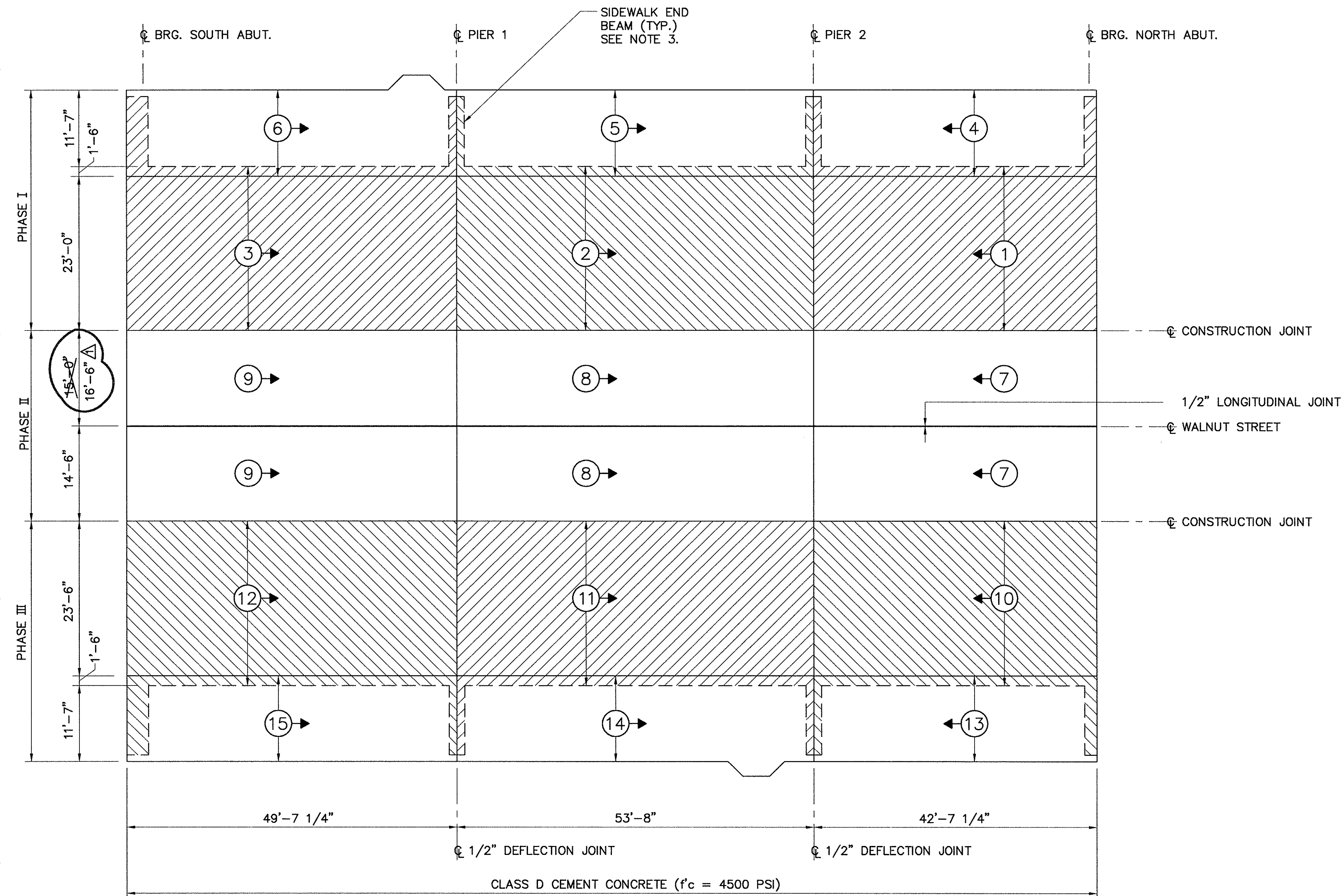
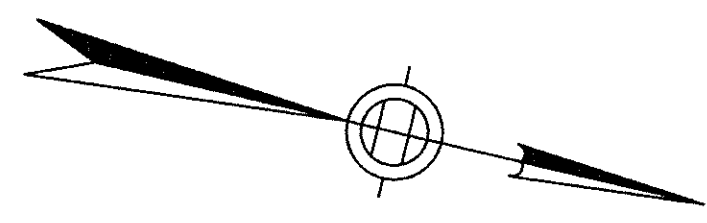
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
DECK PLAN AND DETAILS

Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
The Schwartz Center
629 Main Street
Boston, Massachusetts 02129

Sheet No. **29**



PLACING SEQUENCE FOR CONCRETE DECK

SCALE 1" = 10'

PLACING SEQUENCE NOTES:

1. (3) ETC. INDICATES SEQUENCE OF PLACEMENT.
2. PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
3. SIDEWALK END BEAMS AT PIERS AND ABUTMENTS SHALL BE PLACED CONTINUOUSLY WITH THE ROADWAY DECK SLAB SEE DETAIL SHEET NOS. 34 AND 35.
4. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
5. FOR CONSTRUCTION PHASING SEE SEQUENCE OF CONSTRUCTION SHEET NO. 41.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	

BEAM	INCREASING STATIONS →								
	CL. BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	CL. BRG.
SPAN 1									
A									
B									
C									
D									
E									
F									
G									
H									
J									
K									
L									
M									
N									
P									
R									
S									
SPAN 2									
A									
B									
C									
D									
E									
F									
G									
H									
J									
K									
L									
M									
N									
P									
R									
S									
SPAN 3									
A									
B									
C									
D									
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AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

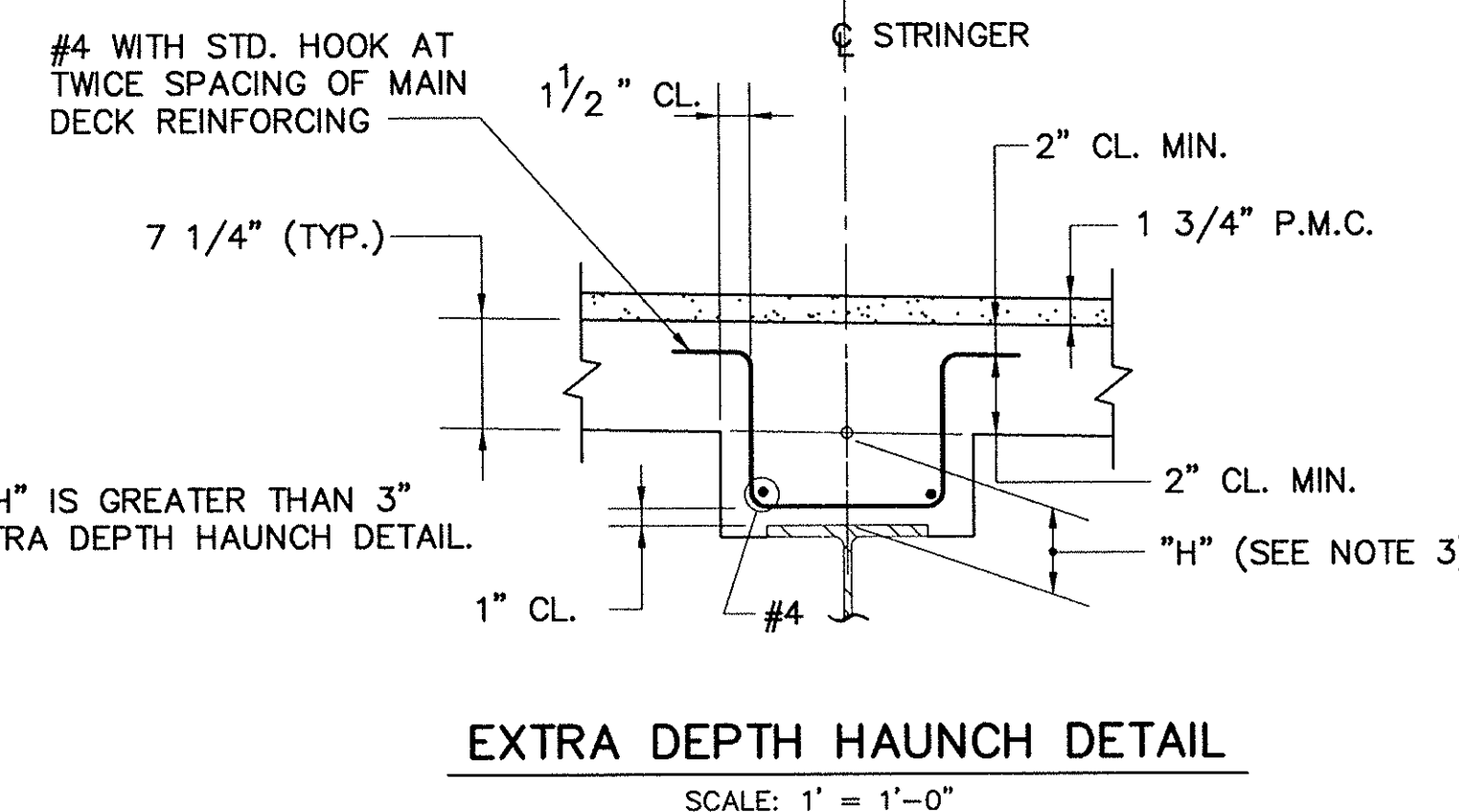
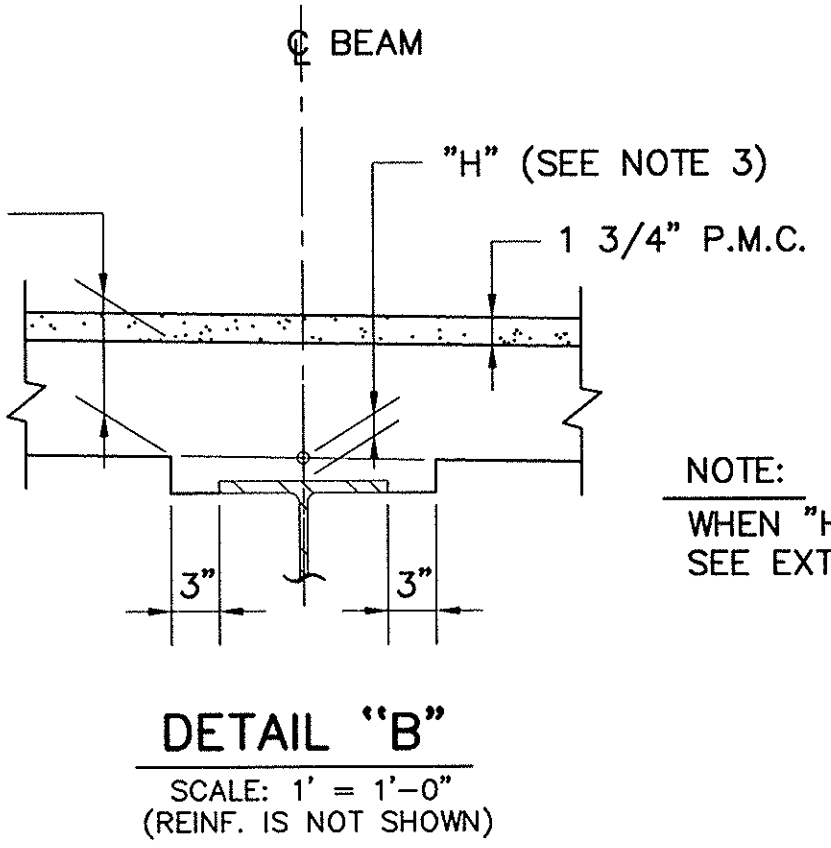
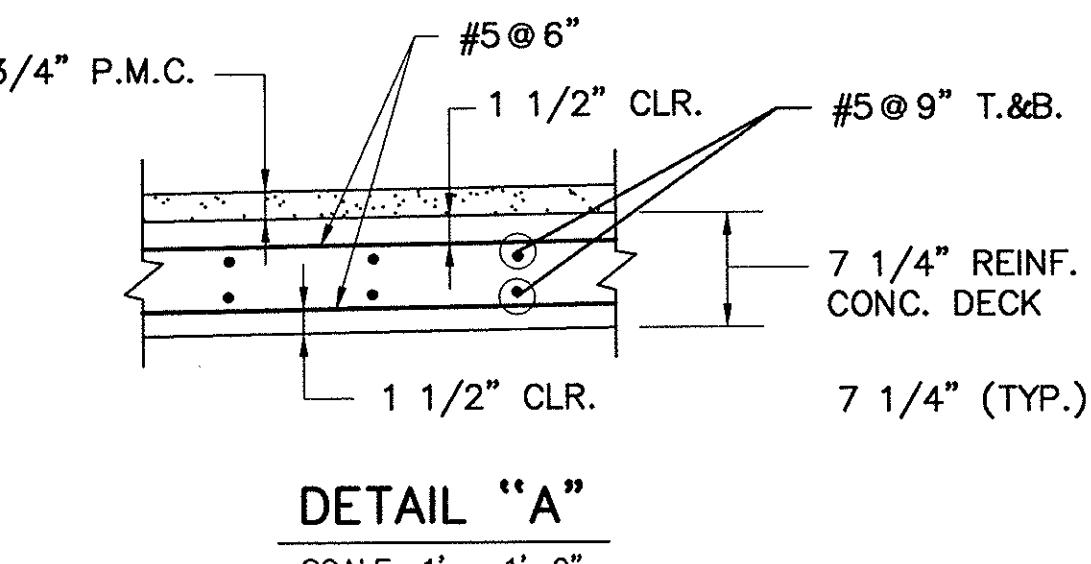
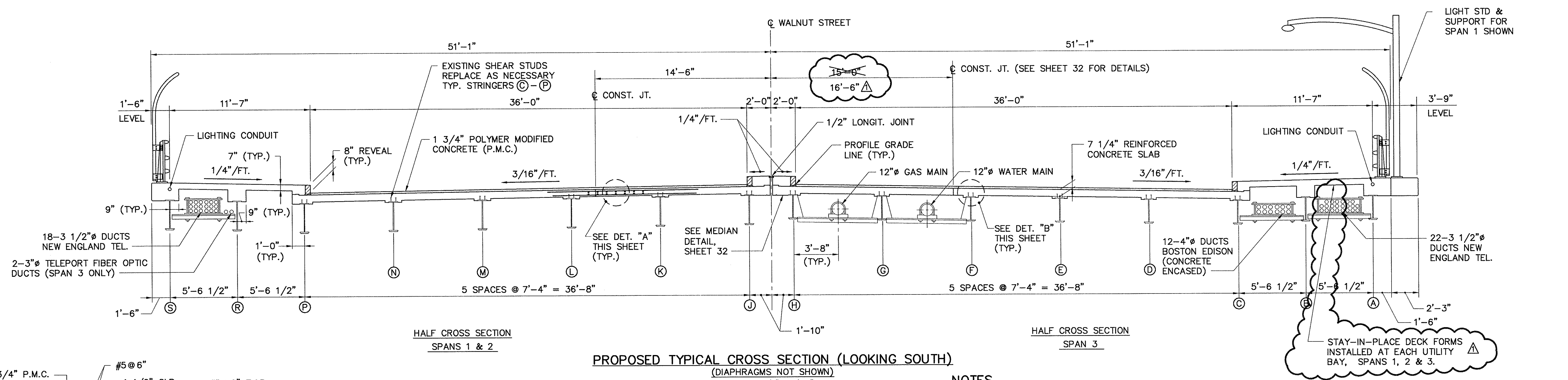
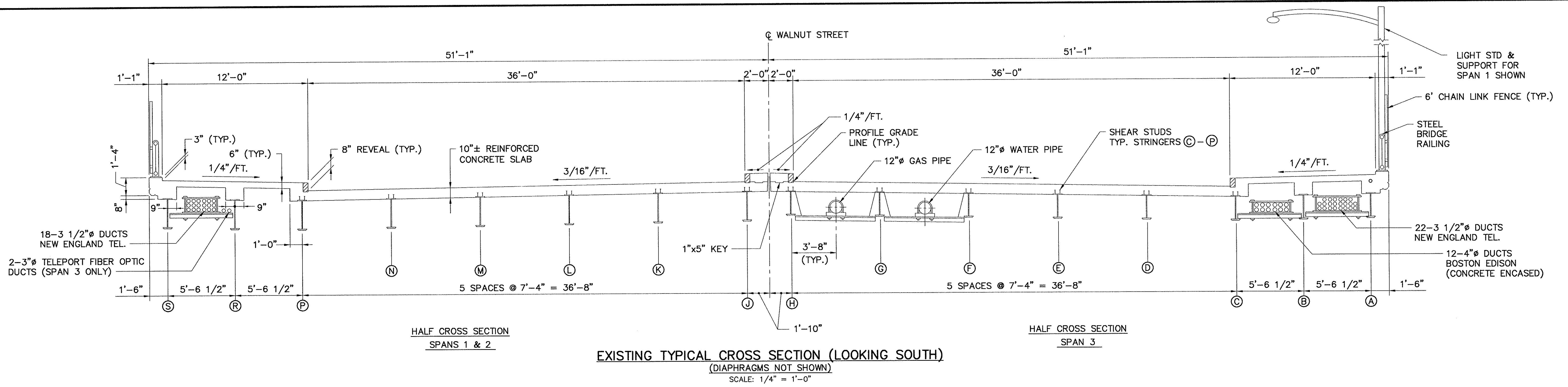
BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR. NO. S-23)
CONCRETE PLACING SEQUENCE

Scale: 1" = 10' Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
 80 Boylston Street
 Boston, MA 02116

EDWARDS AND KELCEY, INC.
 The Schraft Center
 329 Main Street
 Boston, Massachusetts 02129

Sheet No. **30**



NOTES

1. FOR TYPICAL SIDEWALK DETAILS, SEE SHEET NO. 32.
2. FOR MEDIAN DETAIL, SEE SHEET NO. 32.
3. HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG Q STRINGERS PRIOR TO CONCRETE REMOVAL, AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED, SEE SPECIAL PROVISIONS SECTION C1-D.
4. FOR HAUNCH DEPTH SETTING CHART SEE SHEET NO. 30.
5. THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
6. THE TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
7. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
8. SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE. (f'c = 4500 PSI).

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI	12/93
		DRAWN:	SAS	12/93
		CHECKED:	EMM	12/93
AS-BUILT	GTS	10/95		

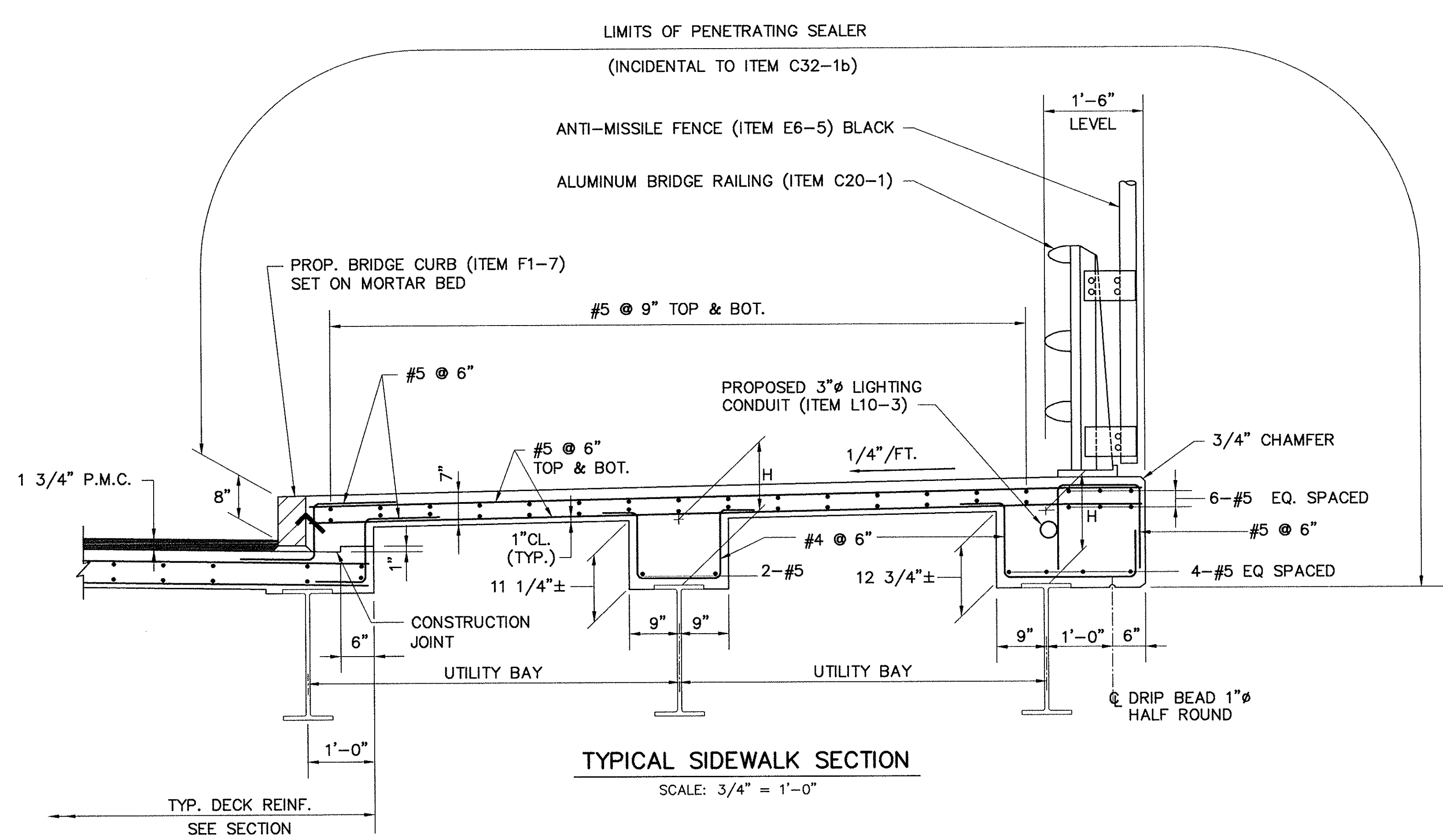
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
TYPICAL CROSS SECTIONS

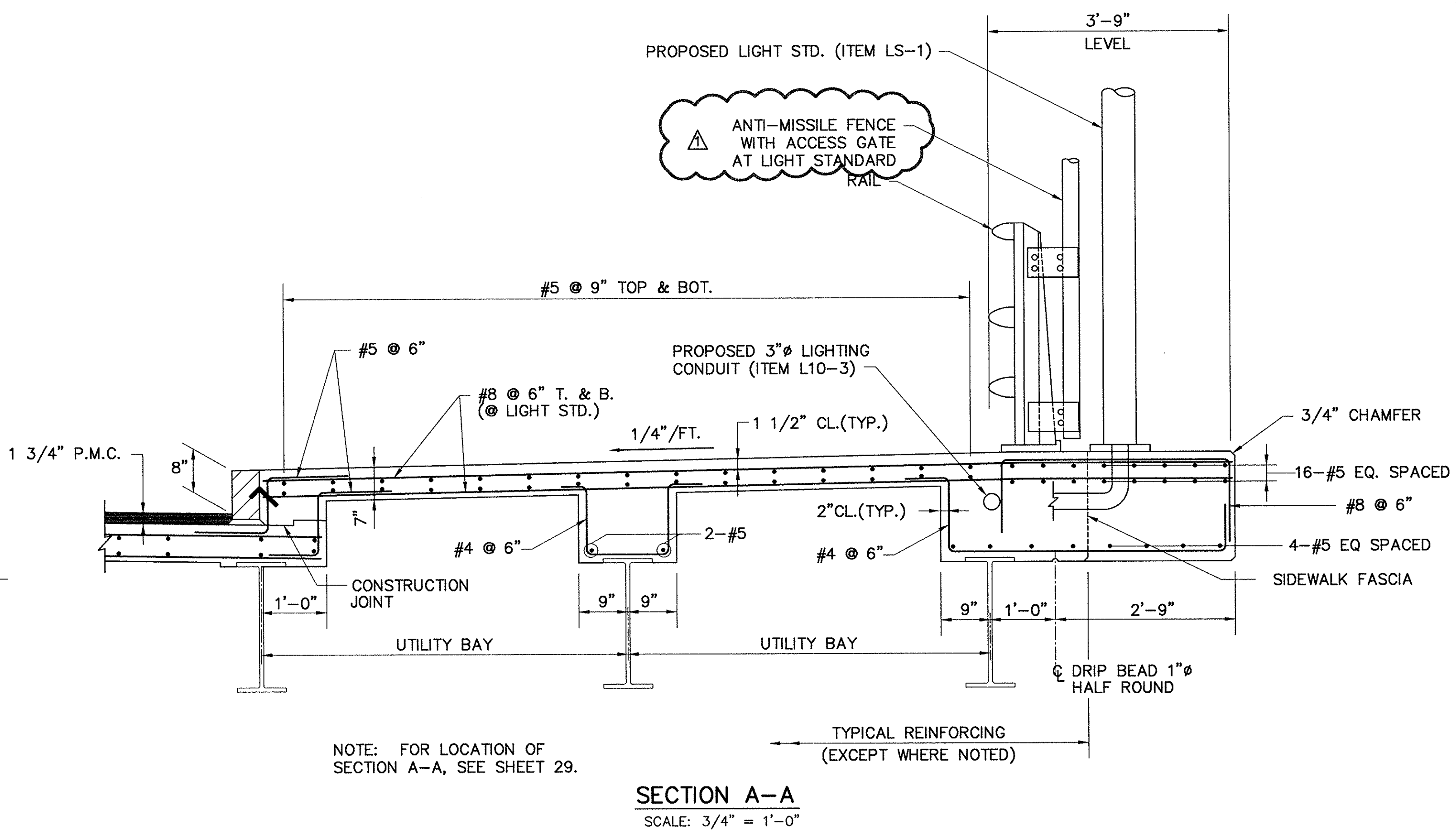
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

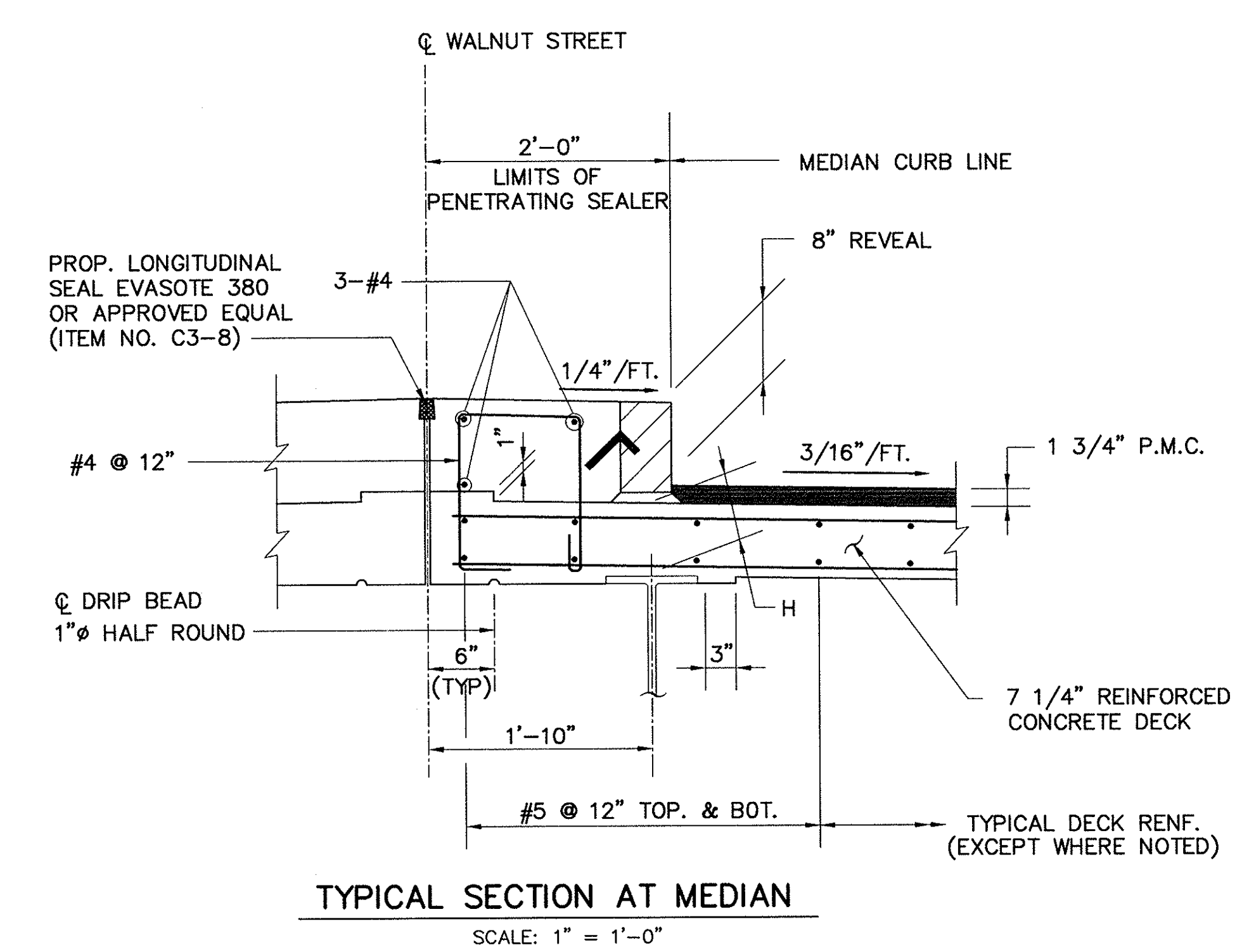
Sheet No. **31**



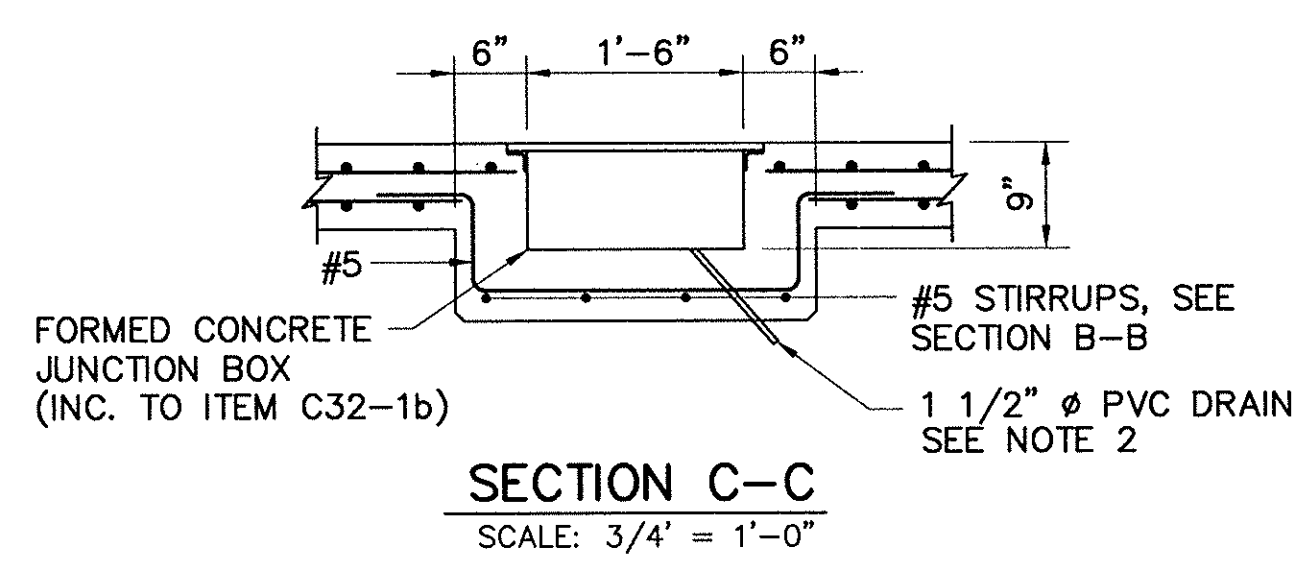
TYPICAL SIDEWALK SECTION
SCALE: 3/4" = 1'-0"



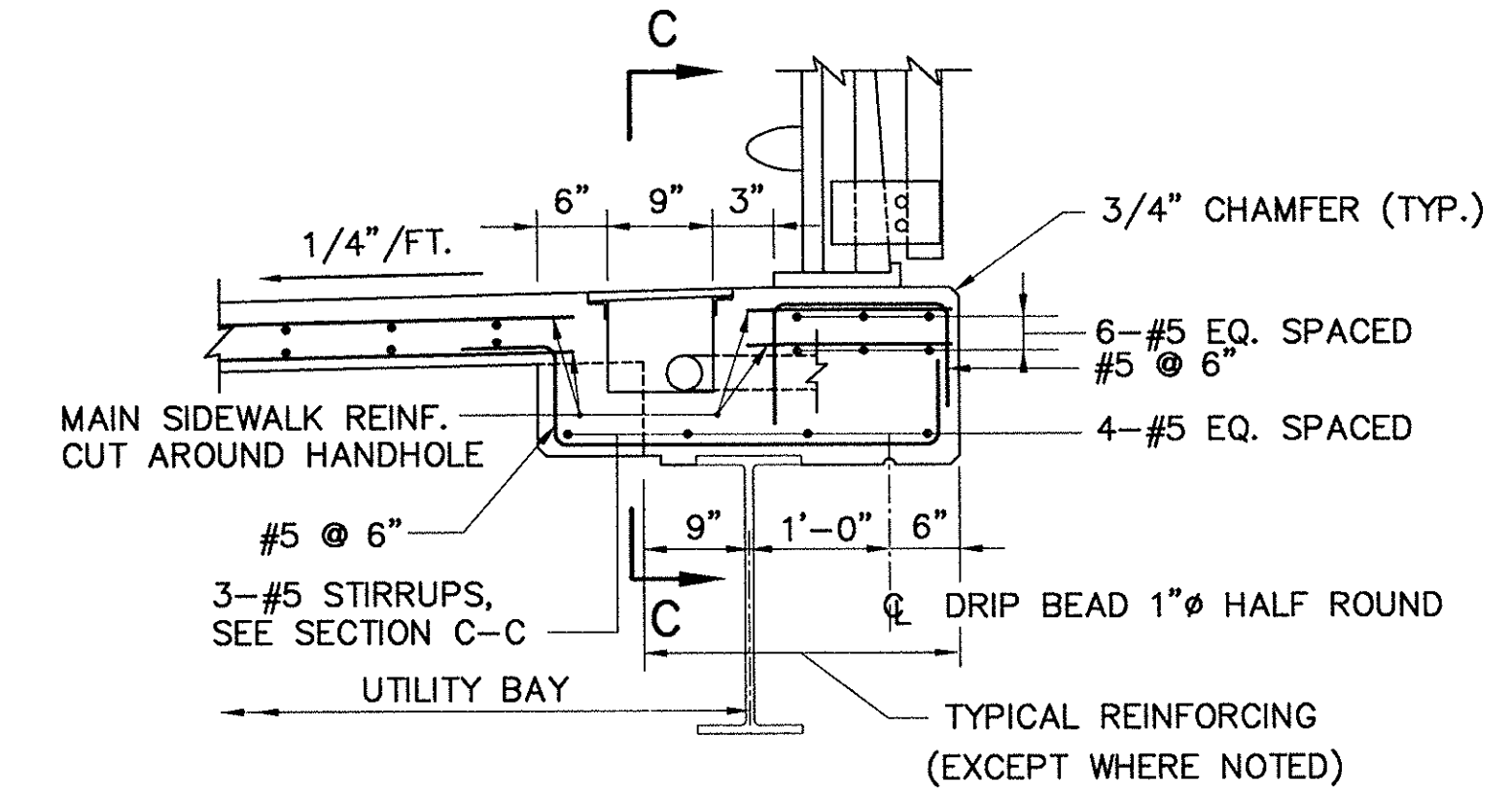
SECTION A-A
SCALE: 3/4" = 1'-0"



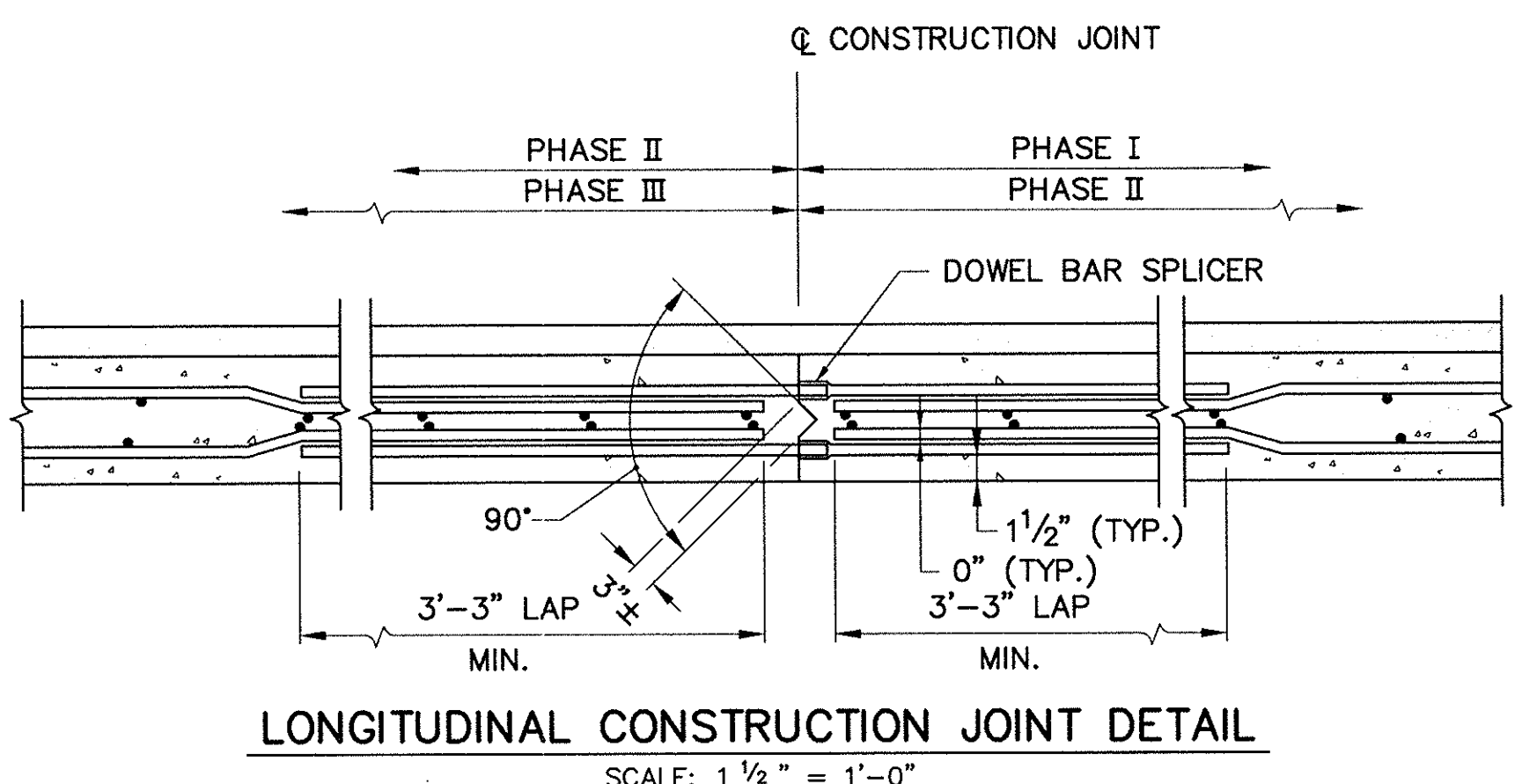
TYPICAL SECTION AT MEDIAN
SCALE: 1" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"

- NOTES:**
1. LOCATION OF SECTIONS A-A & B-B ARE SHOWN ON SHEET 29.
 2. P.V.C. DRAINS LOCATED ABOVE THE TURNPIKE SHALL BE POSITIONED NOT TO DRAIN ONTO THE TRAVELED WAY AND SHALL EXTEND BELOW UTILITIES.
 3. FOR JUNCTION BOX FRAME DETAILS SEE SHT. NO. 29.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI	12/93
		DRAWN:	WC	12/93
		CHECKED:	EMM	12/93
		BY	GTS	10/95

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

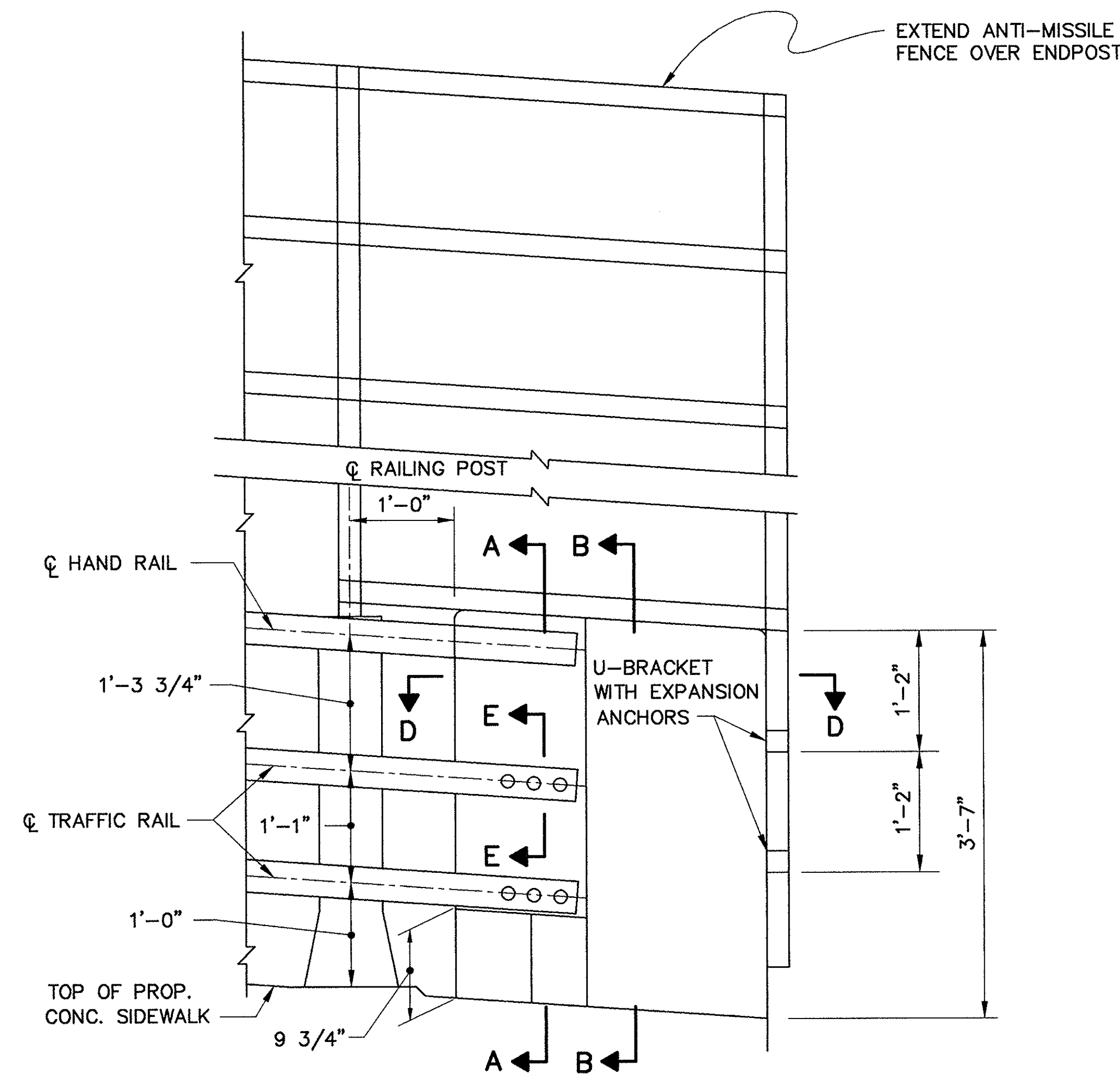
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

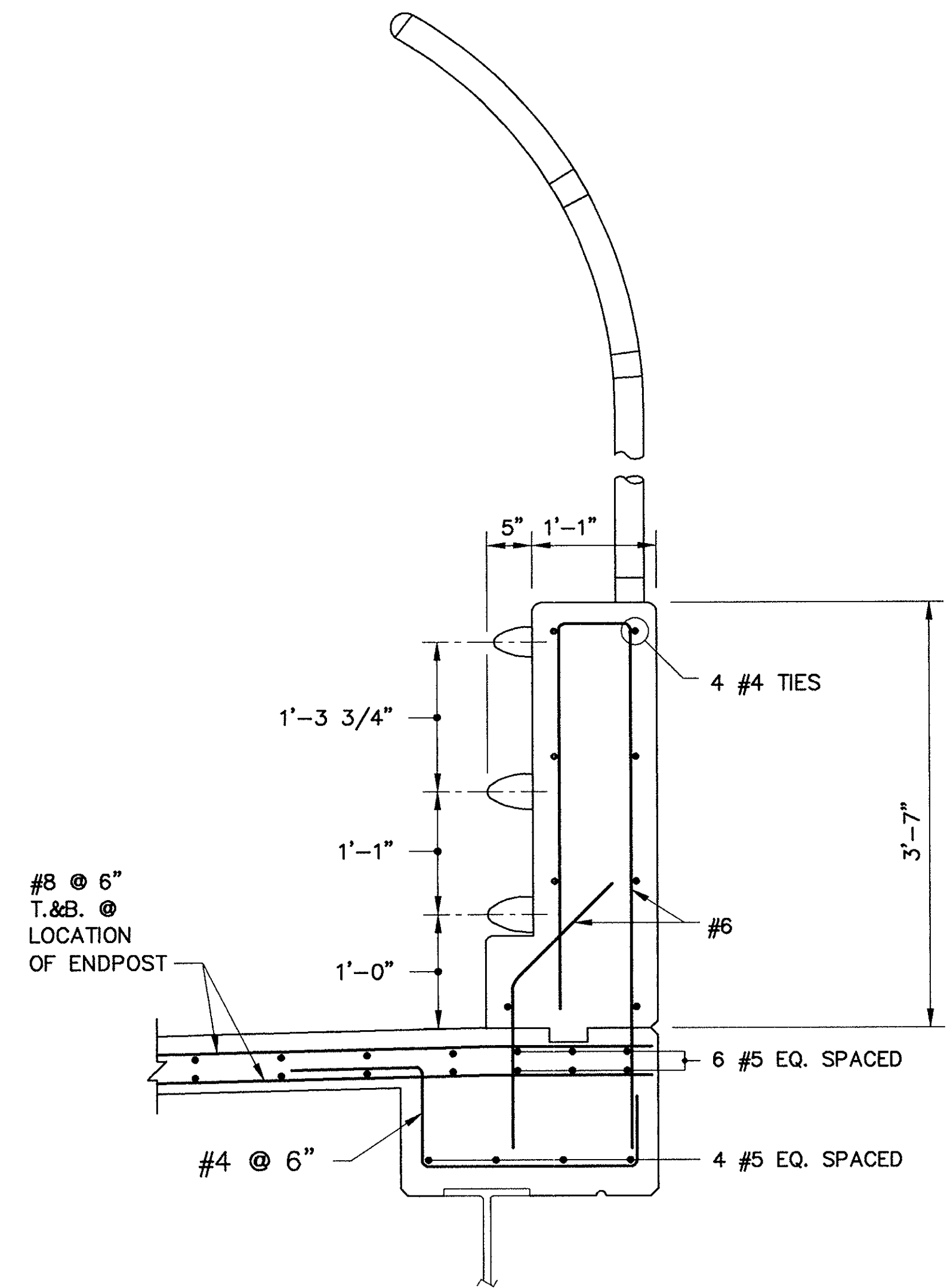
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
SIDEWALK & DECK DETAILS

Scale: AS NOTED Contract No. 521-024

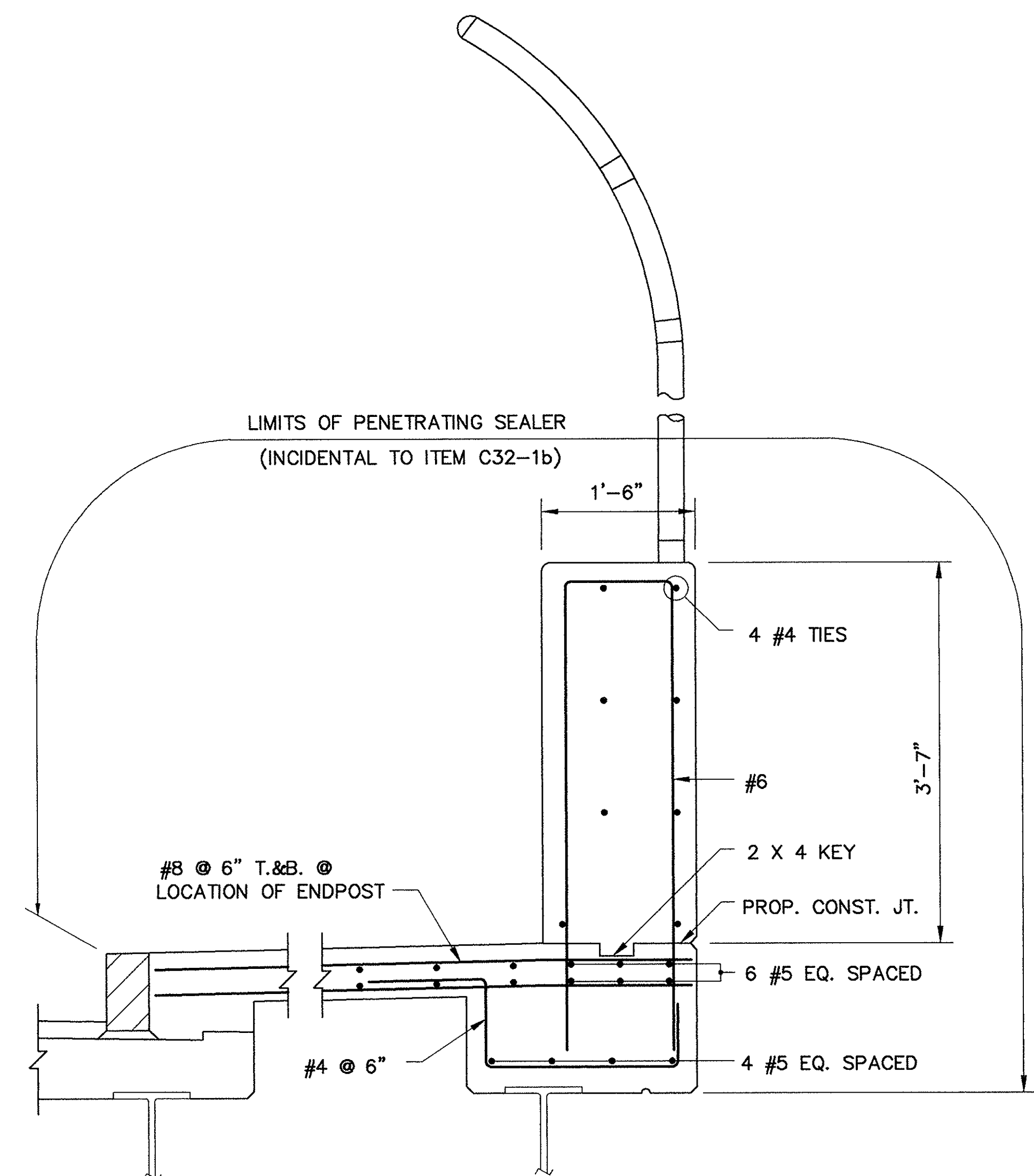
EDWARDS AND KELCEY, INC. Sheet No. 32



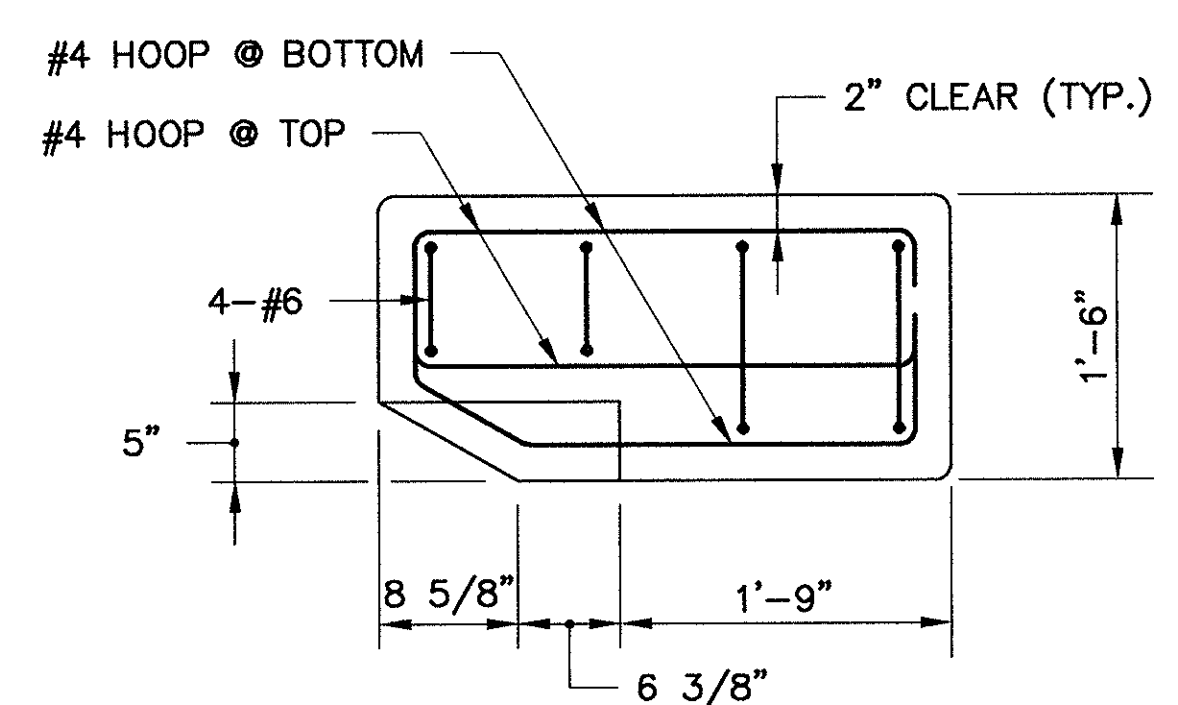
ELEVATION
SCALE: 1" = 1'-0"



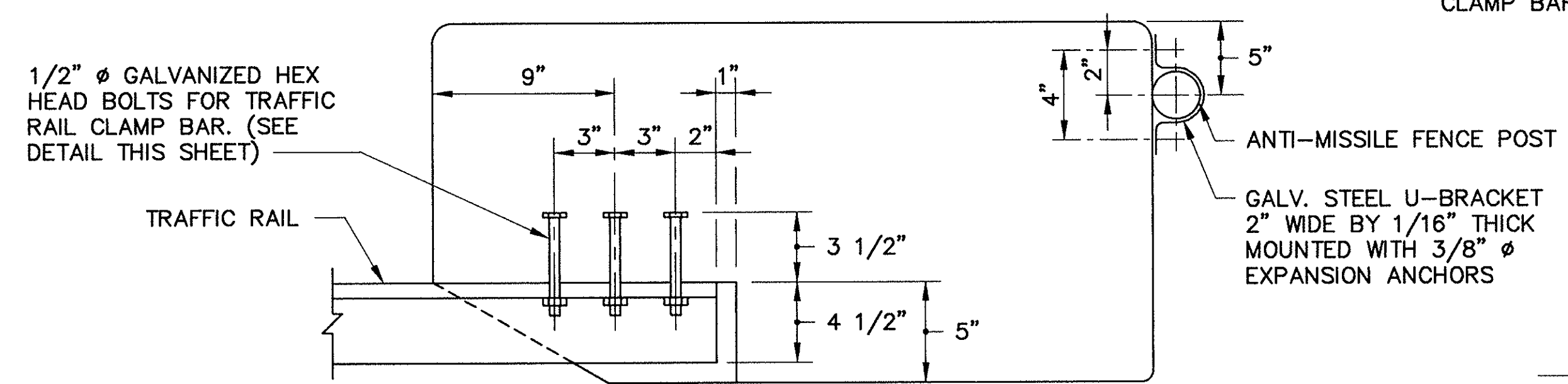
SECTION A-A
SCALE: 1" = 1'-0"



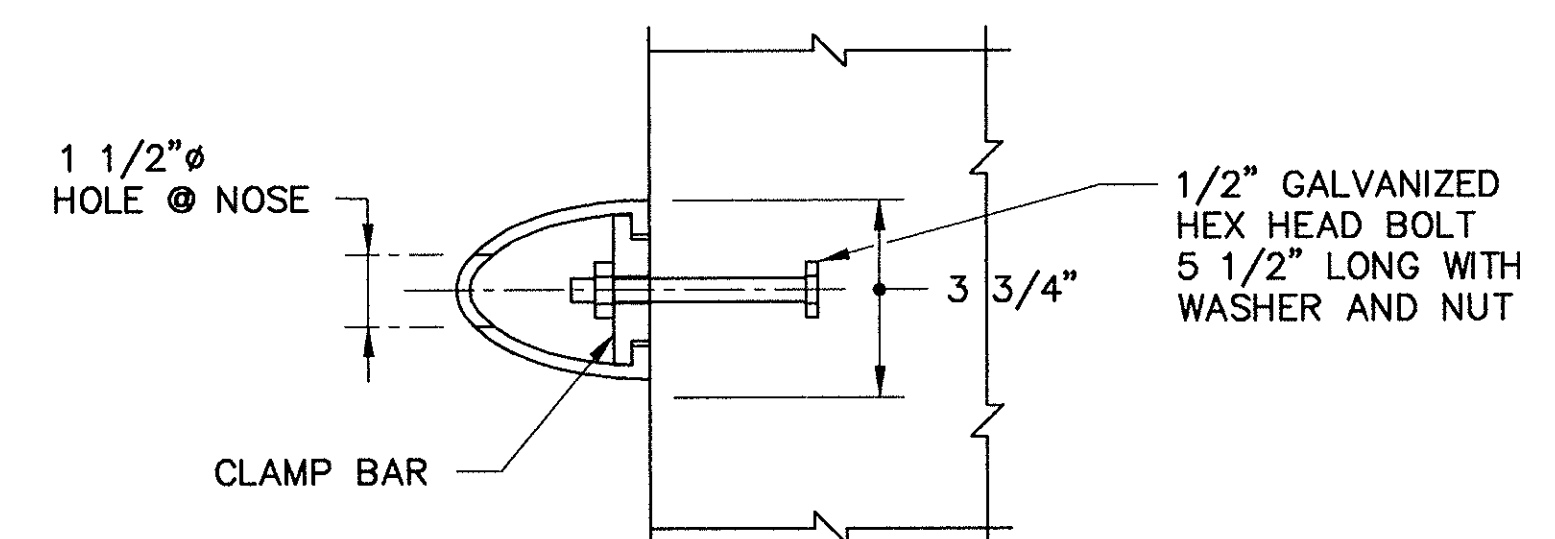
SECTION B-B
SCALE: 1" = 1'-0"



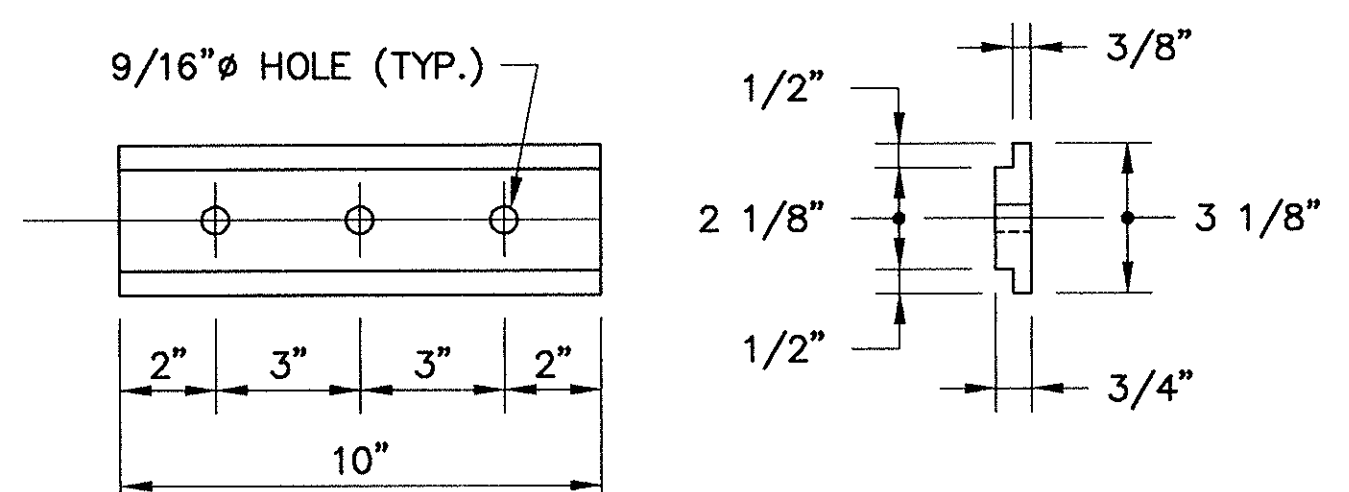
SECTION D-D
SCALE: 1" = 1'-0"



TRAFFIC RAIL ANCHOR BOLT DETAIL
SCALE: 2" = 1'-0"



SECTION E-E
SCALE: 3" = 1'-0"



CLAMP BAR DETAIL
SCALE: 3" = 1'-0"

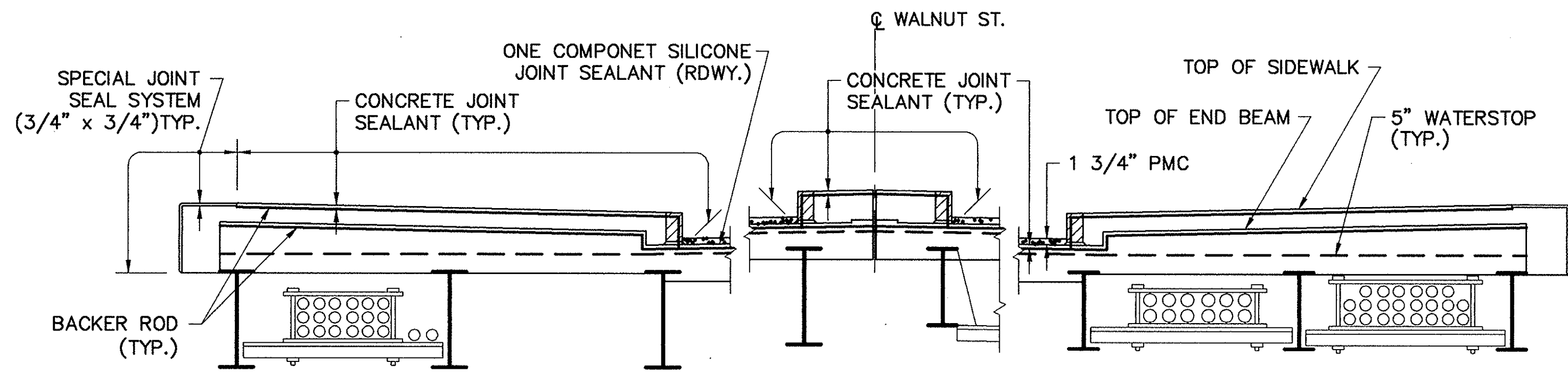
NOTES:

- EXISTING NORTH ABUTMENT ENDPOSTS TO BE REMOVED TO TOP OF WINGWALLS. CHAIN LINK FENCE TO BE INSTALLED ON TOP OF WINGWALL FROM THE FACE OF ABUTMENT TO MATCH EXISTING R.O.W. FENCING.
- CONTRACTOR SHALL PROVIDE FENCE CLOSURE BETWEEN PROPOSED BRIDGE FENCE AND EXISTING R.O.W. FENCING IN ACCORDANCE WITH ENGINEERS INSTRUCTIONS.

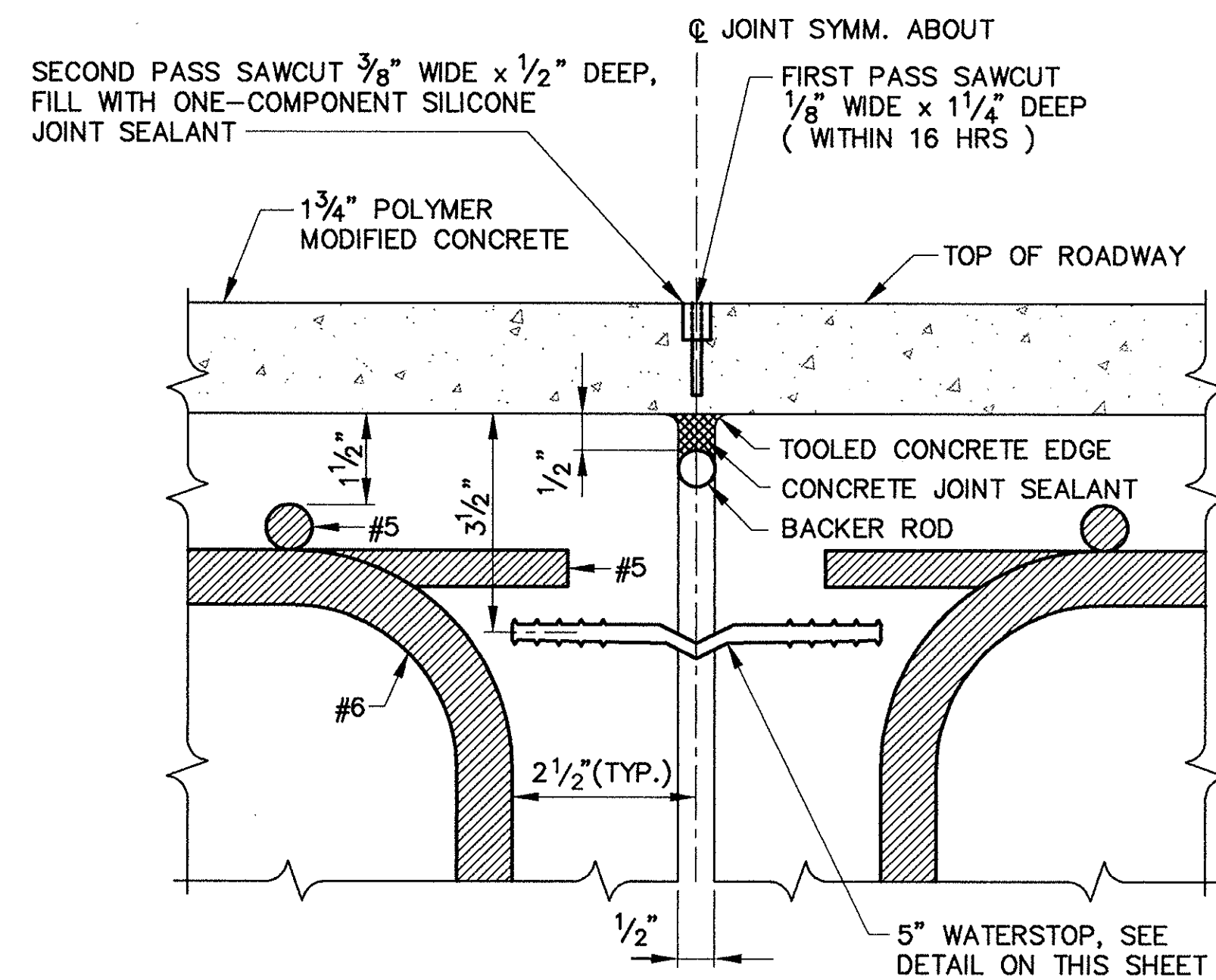
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR. NO. S-23) ENDPOST DETAILS	
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116	EDWARDS AND KELCEY, INC. Sheet No. 33 The Schufft Center 529 Main Street Boston, Massachusetts 02129

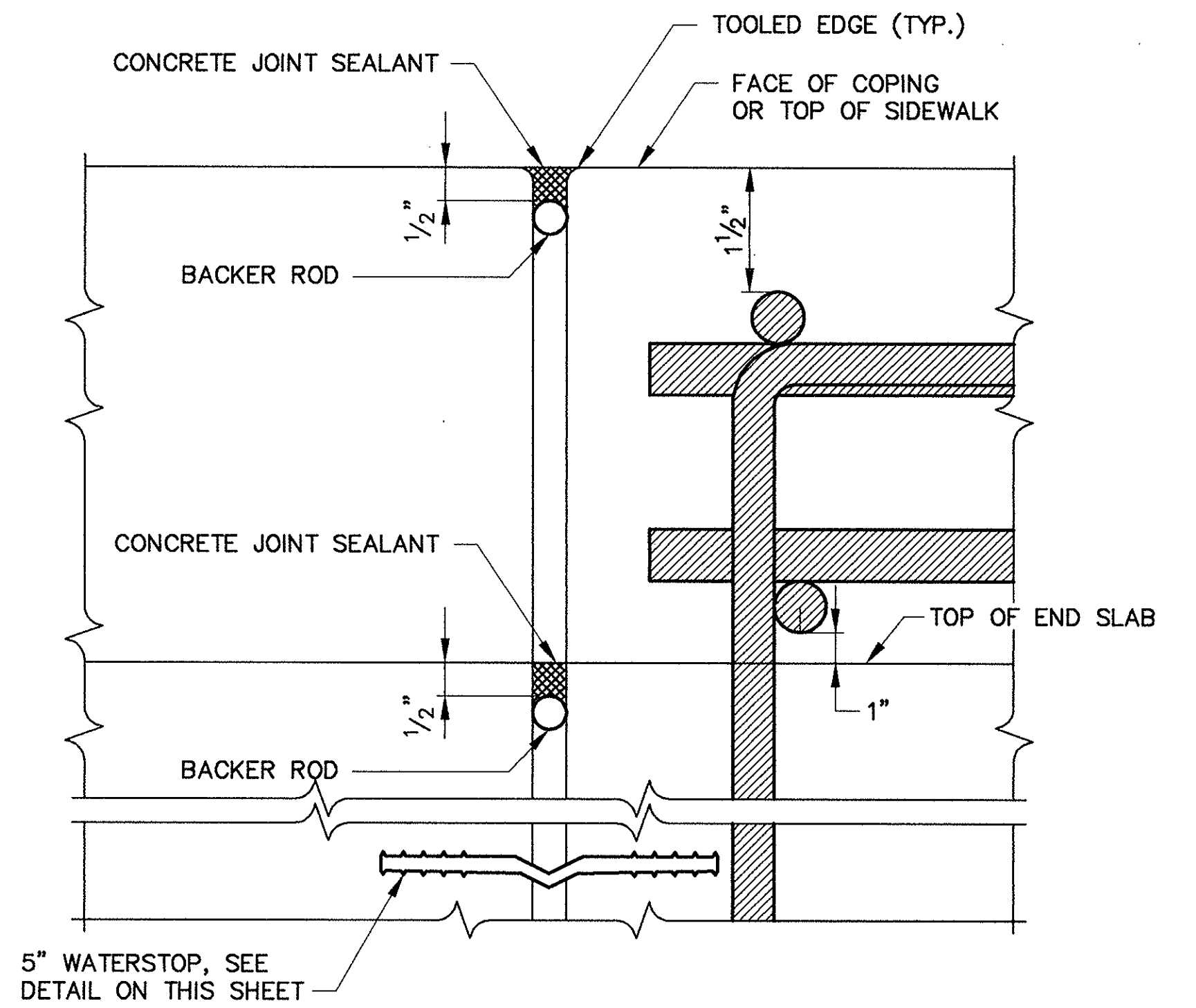
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GRI	12/93	
		DRAWN:	JNC	12/93	
		CHECKED:	EMM	12/93	



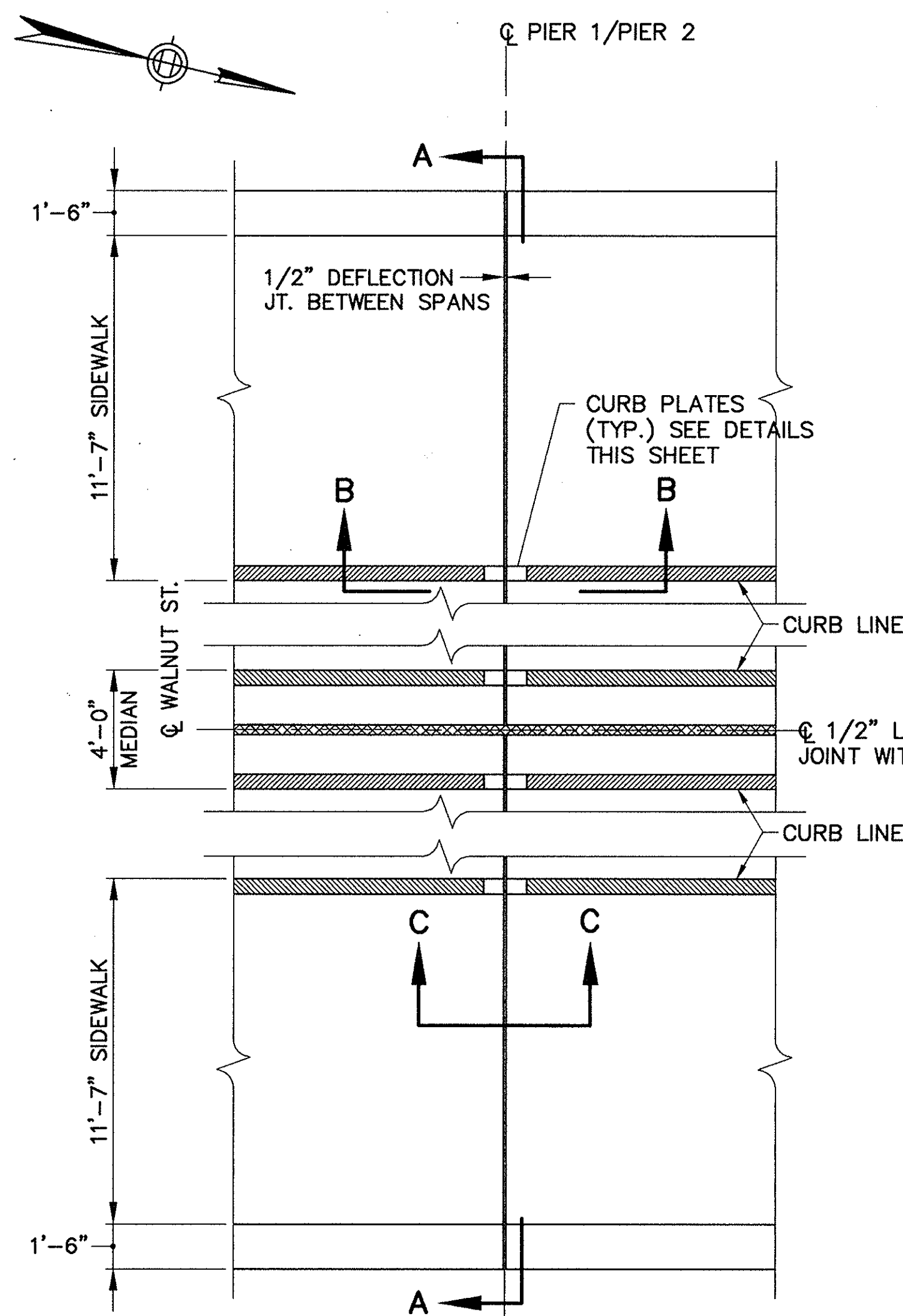
SECTION A-A
SCALE: 3/8" = 1'-0"



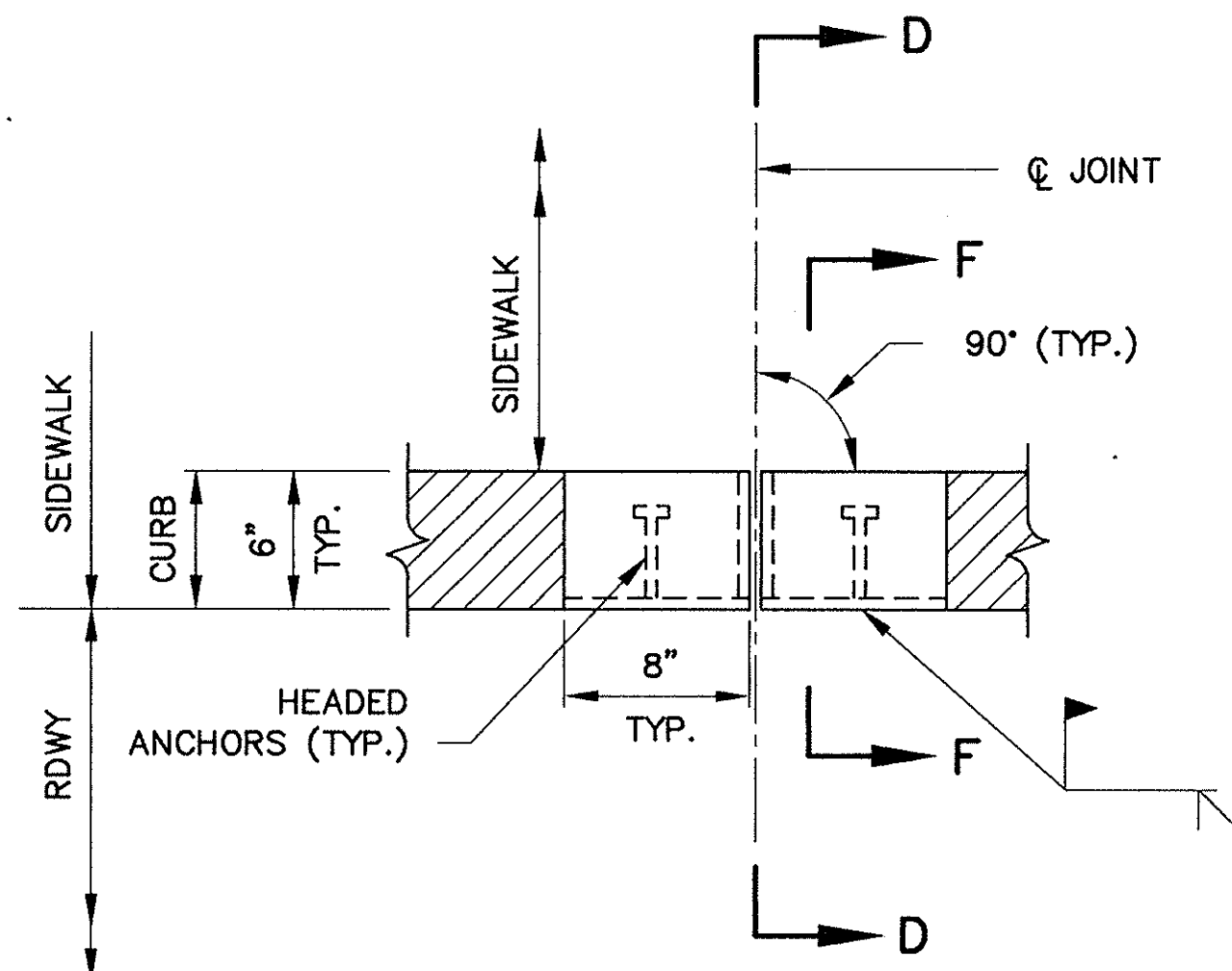
DETAIL "A"
NOT TO SCALE



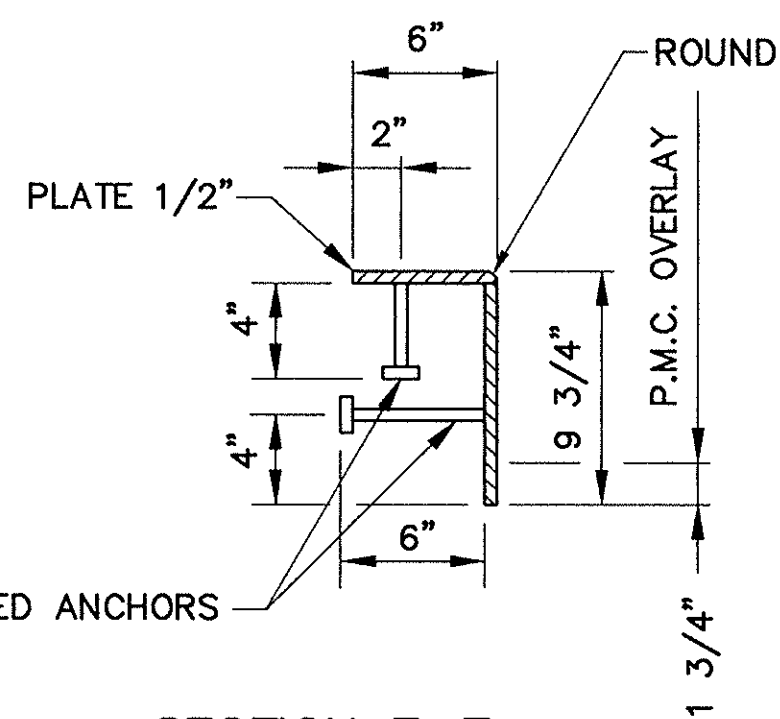
DETAIL "B"
NOT TO SCALE



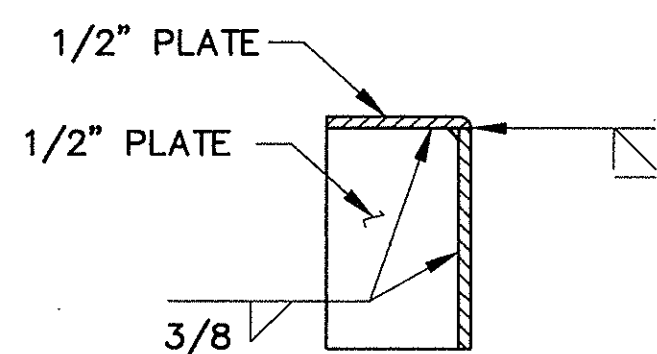
DEFLECTION JOINT OVER PIERS 1 AND 2
SCALE: 1/4" = 1'-0"



PLAN



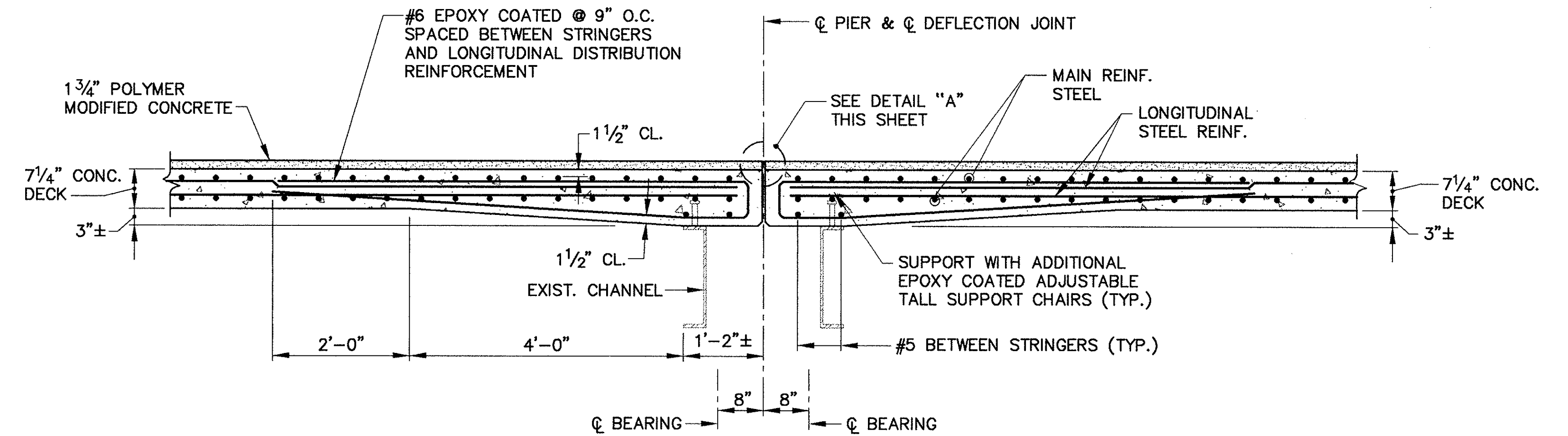
SECTION F-F
(PROPOSED CURB PLATE USED AT PIERS 1, 2 & SOUTH ABUTMENT)



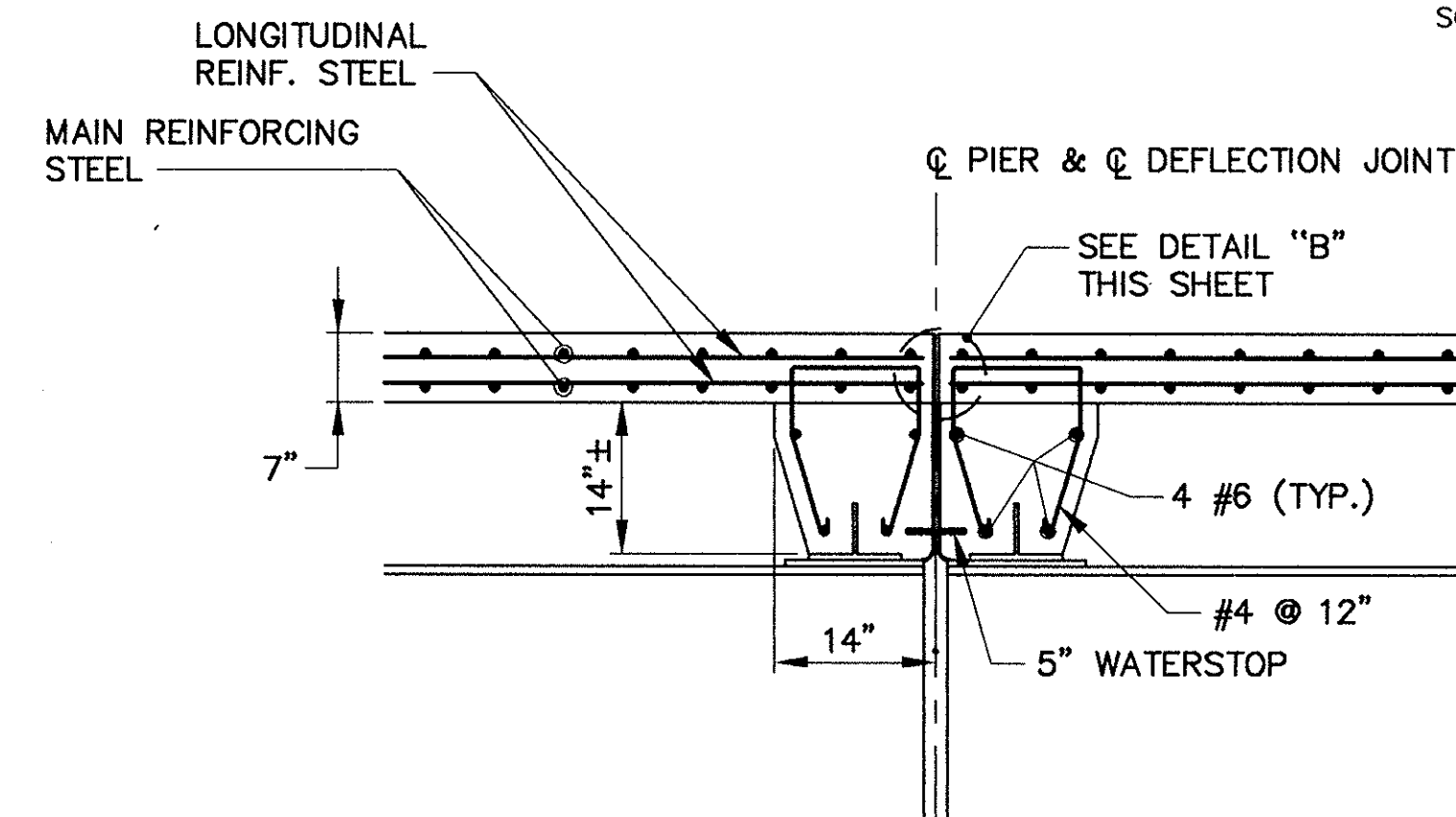
SECTION D-D

PROPOSED CURB PLATE DETAILS

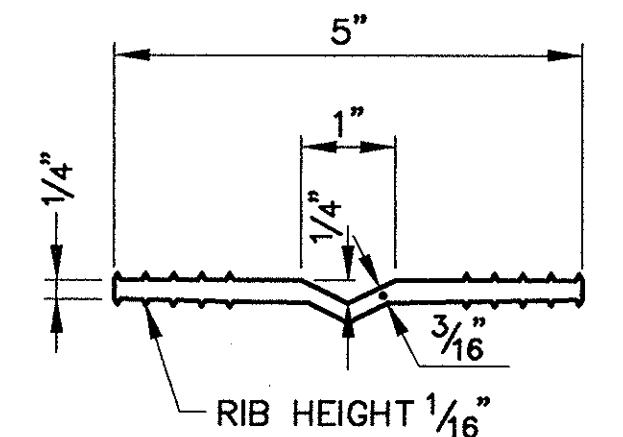
SCALE: 1 1/2" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



5" WATERSTOP
NOT TO SCALE

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED: GRI	12/93		
		DRAWN: TJC	12/93		
		CHECKED: EMM	12/93		

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DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

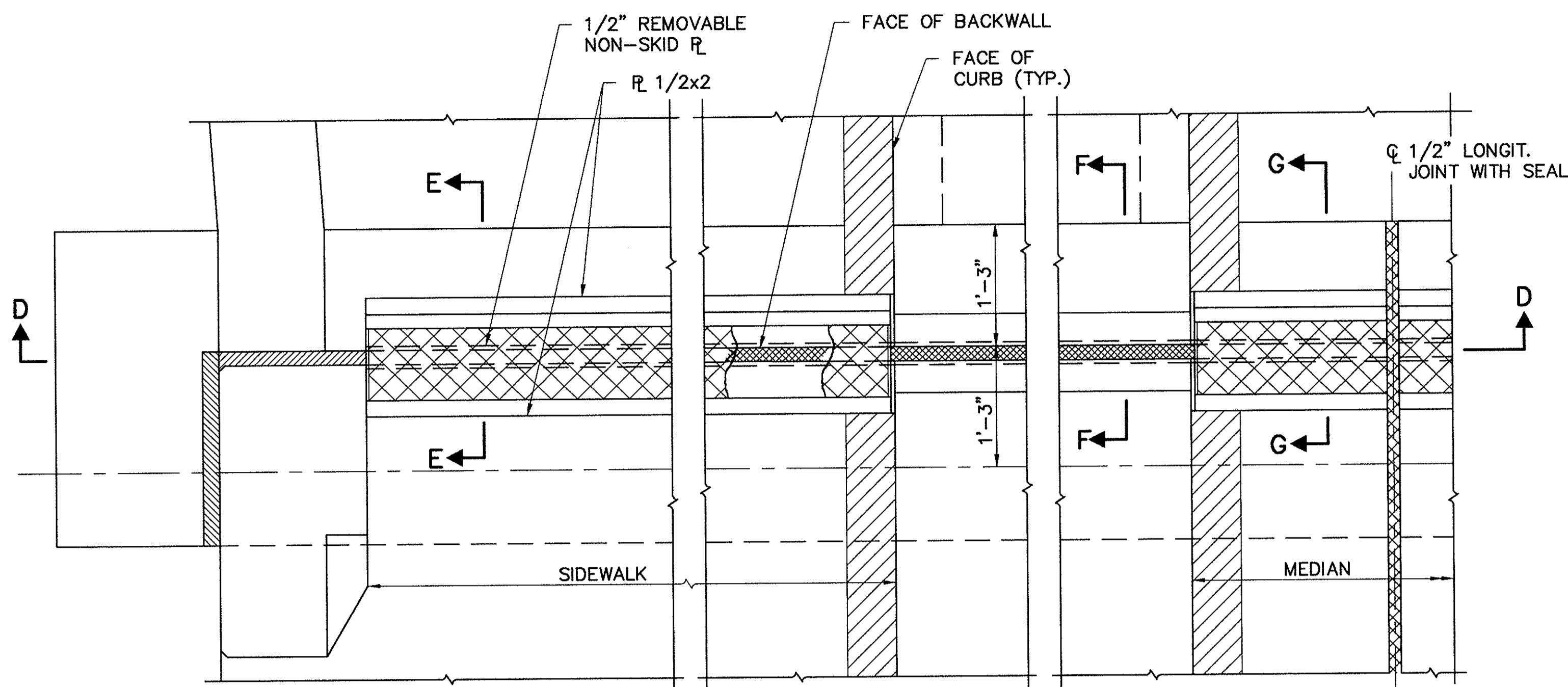
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT PIERS 1 AND 2

Scale: AS NOTED Contract No. 521-024

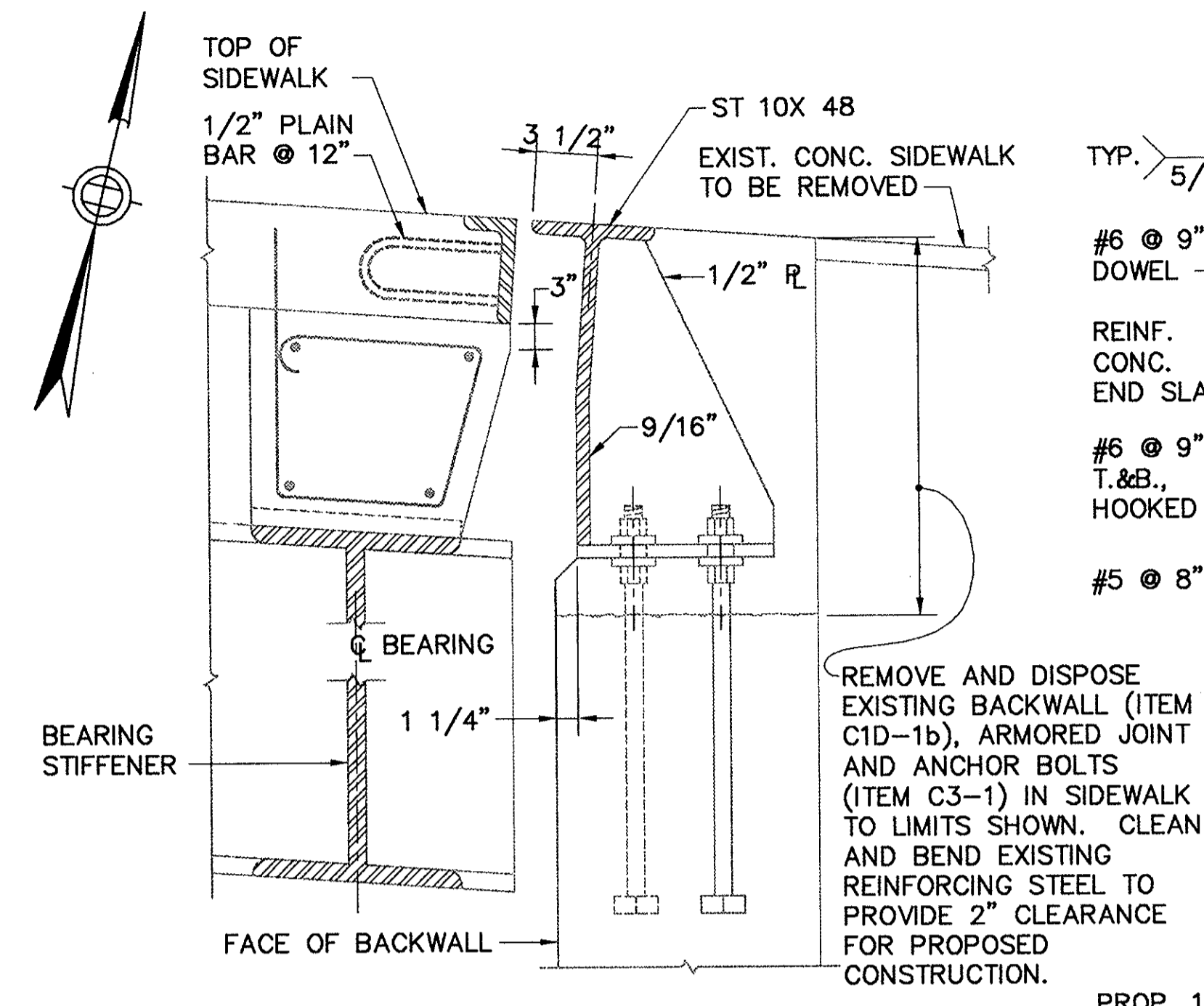
EDWARDS AND KELCEY, INC.
The Schraft Center
529 Main Street
Boston, Massachusetts 02129

Sheet No. **34**



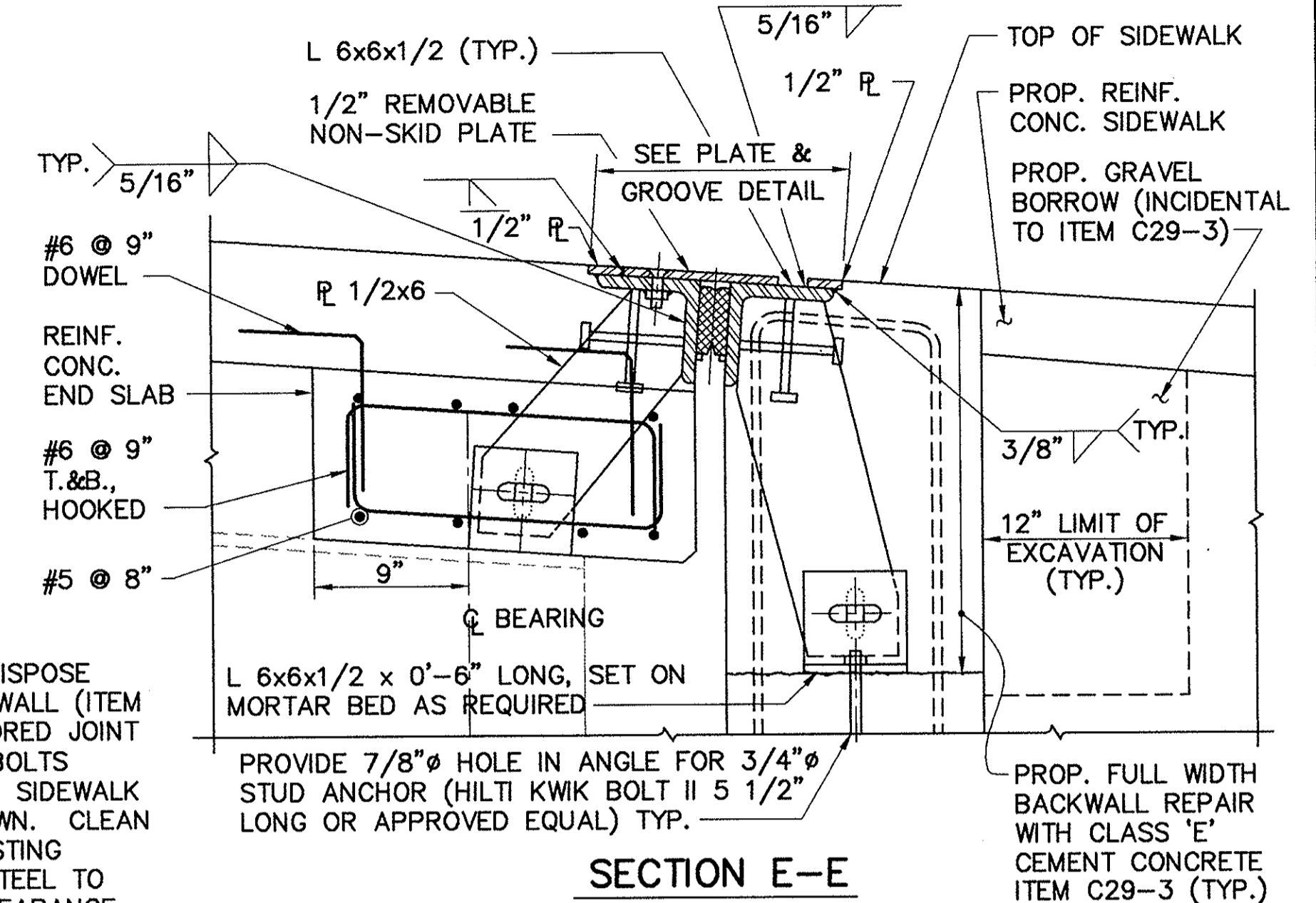
PLAN - NORTH ABUTMENT

SCALE: 1" = 1'-0"



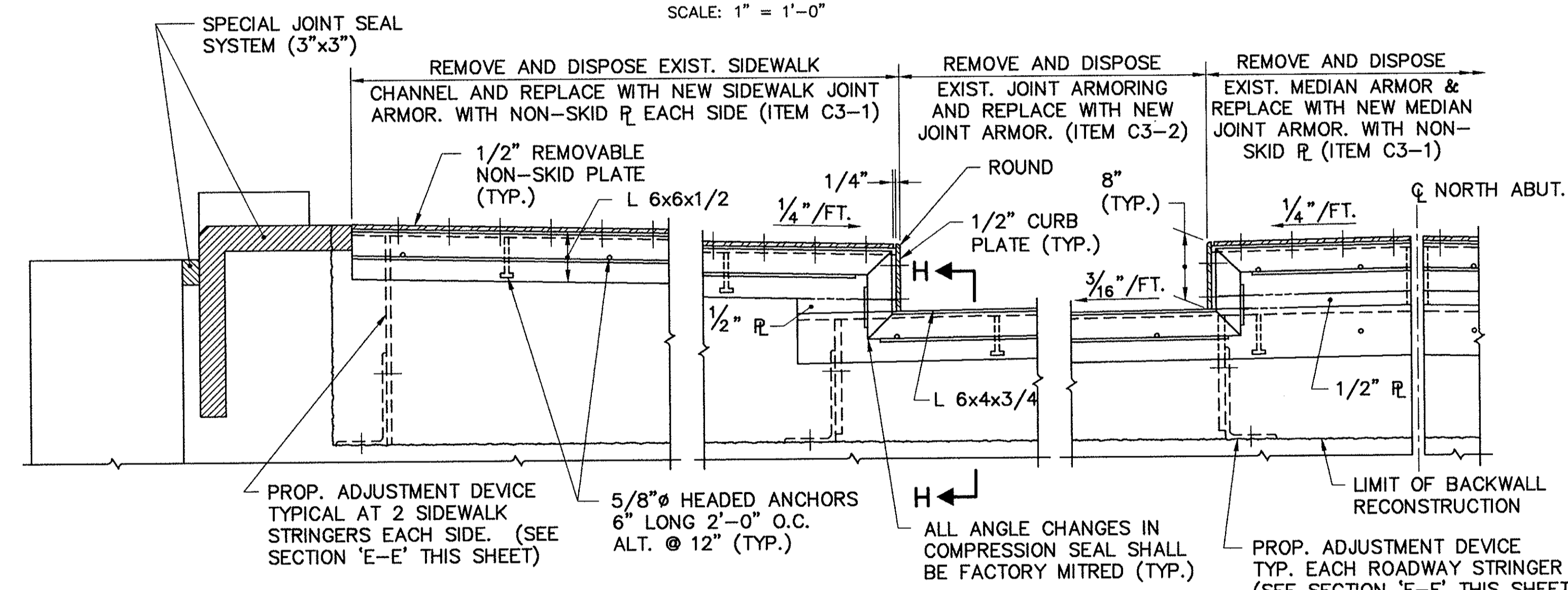
SECTION E-E, EXISTING SIDEWALK

SCALE: 1 1/2" = 1'-0"
(SECTION A-A ON SHEET 36 IS SIMILAR)



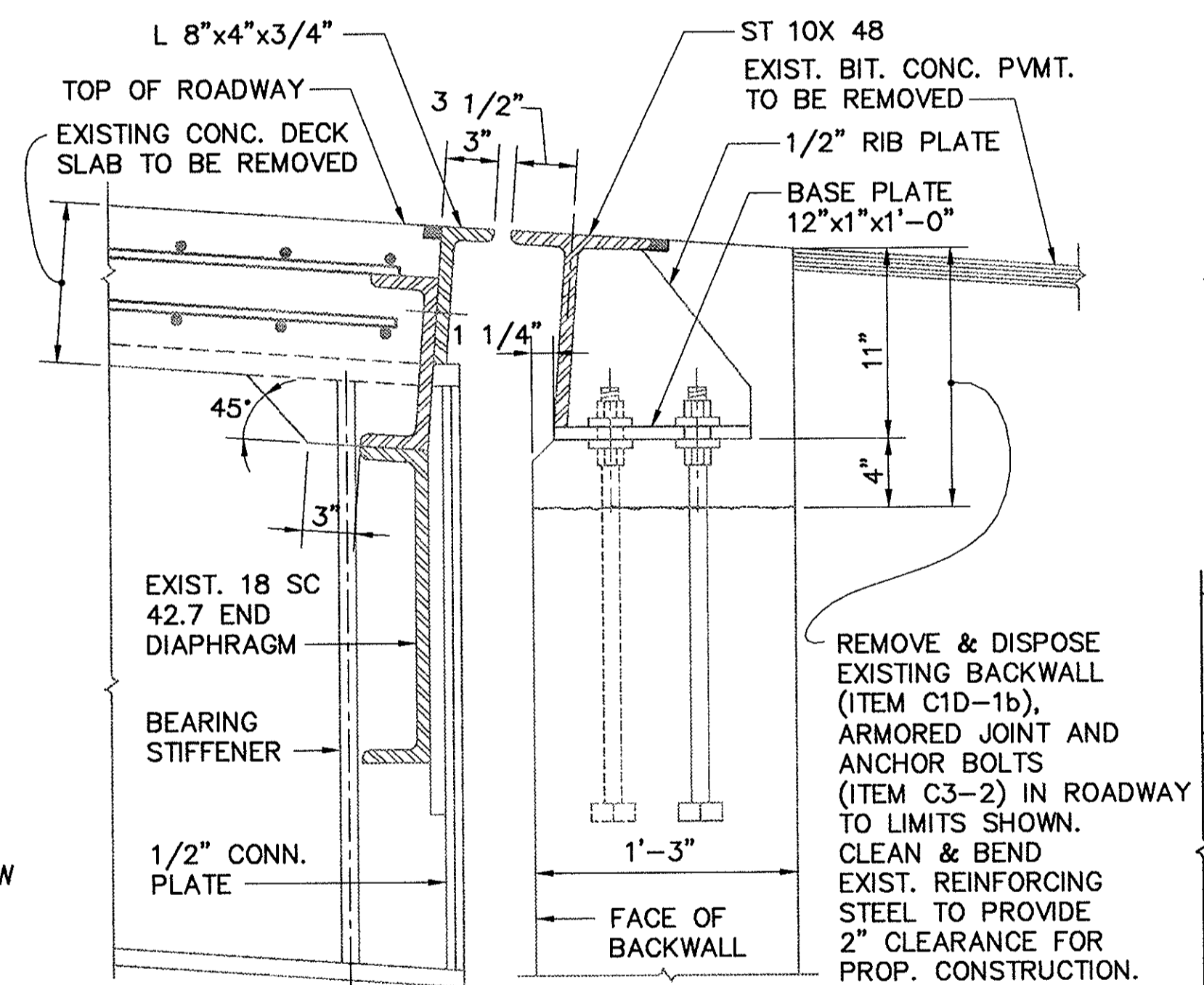
SECTION E-E
PROPOSED SIDEWALK

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



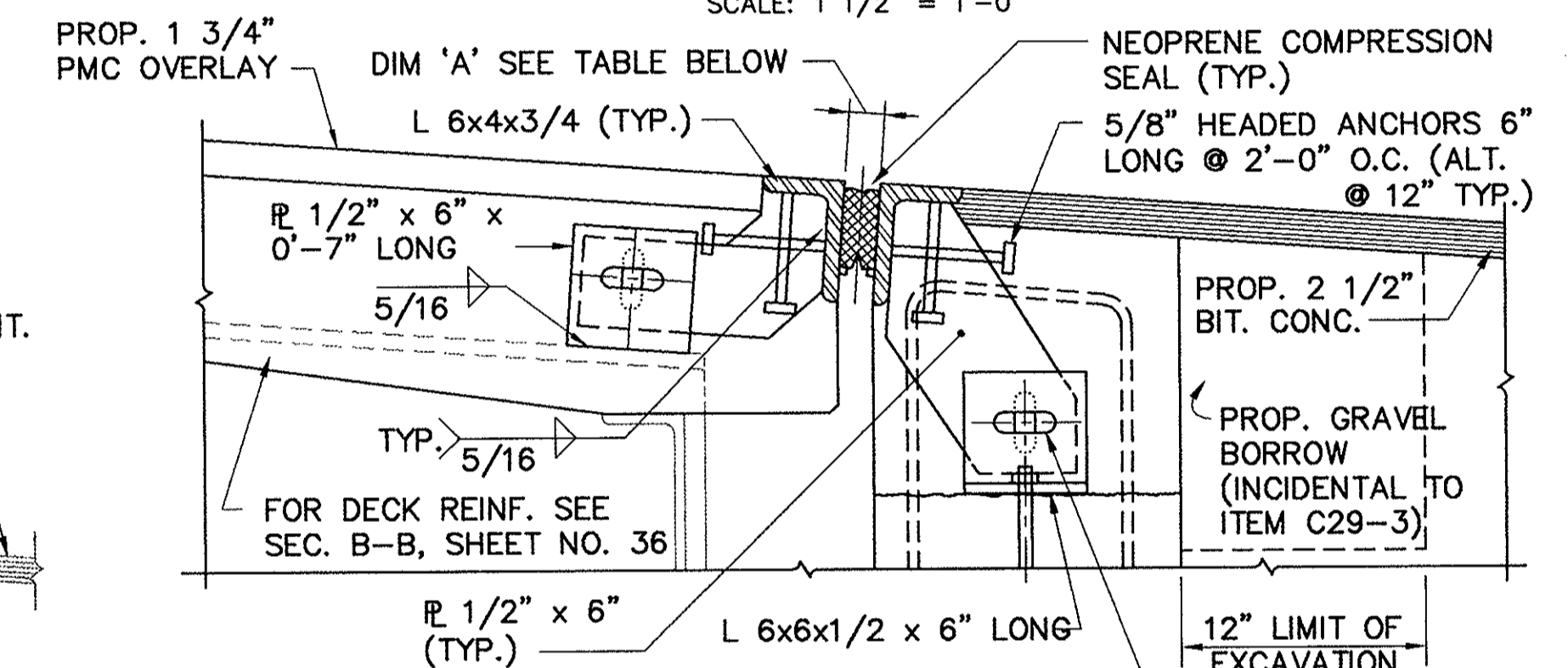
SECTION D-D

SCALE: 1" = 1'-0"



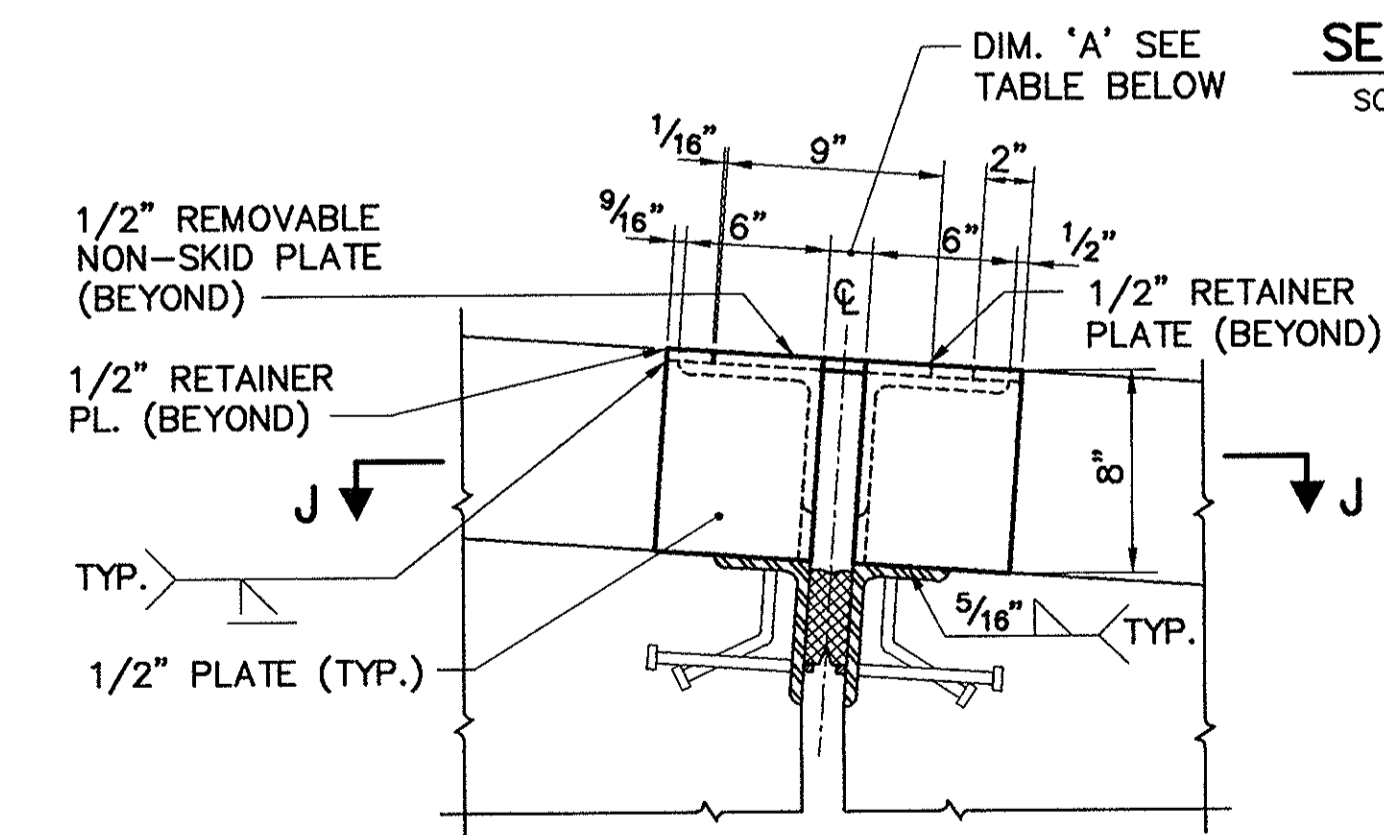
SECTION F-F
EXISTING ROADWAY

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



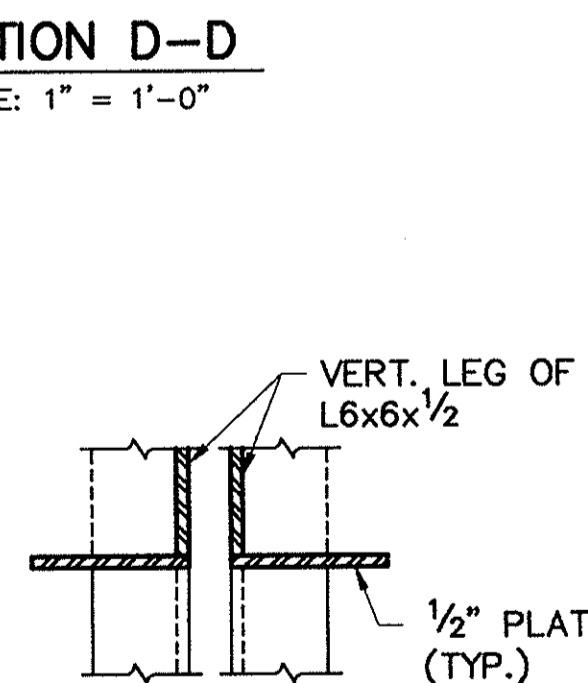
SECTION F-F
PROPOSED ROADWAY

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



SECTION H-H
CURB PLATES

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



SECTION J-J

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

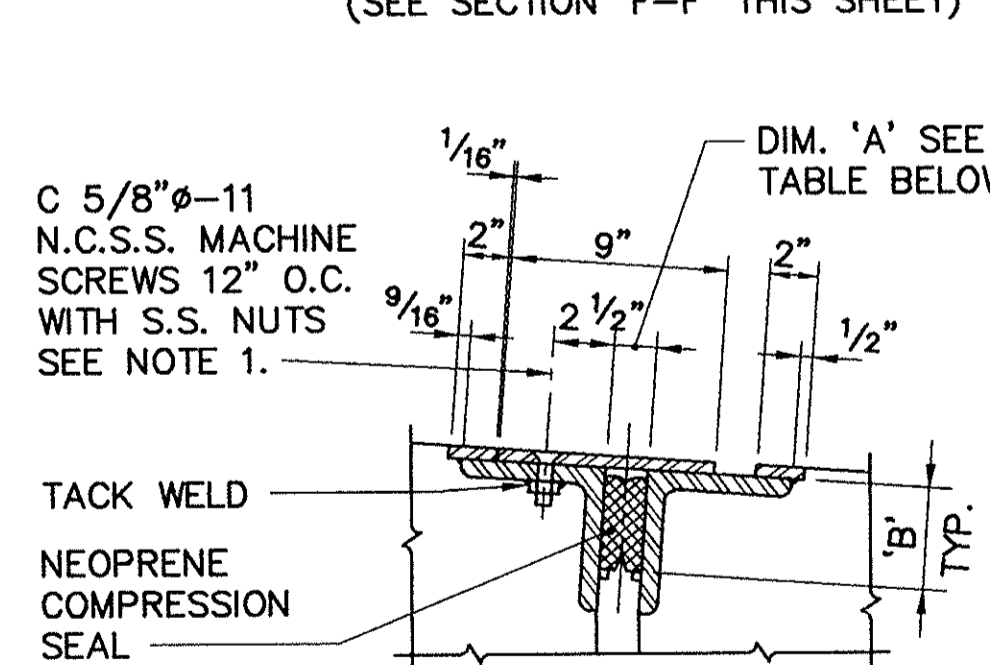


PLATE & GROOVE DETAIL

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

NOTE:

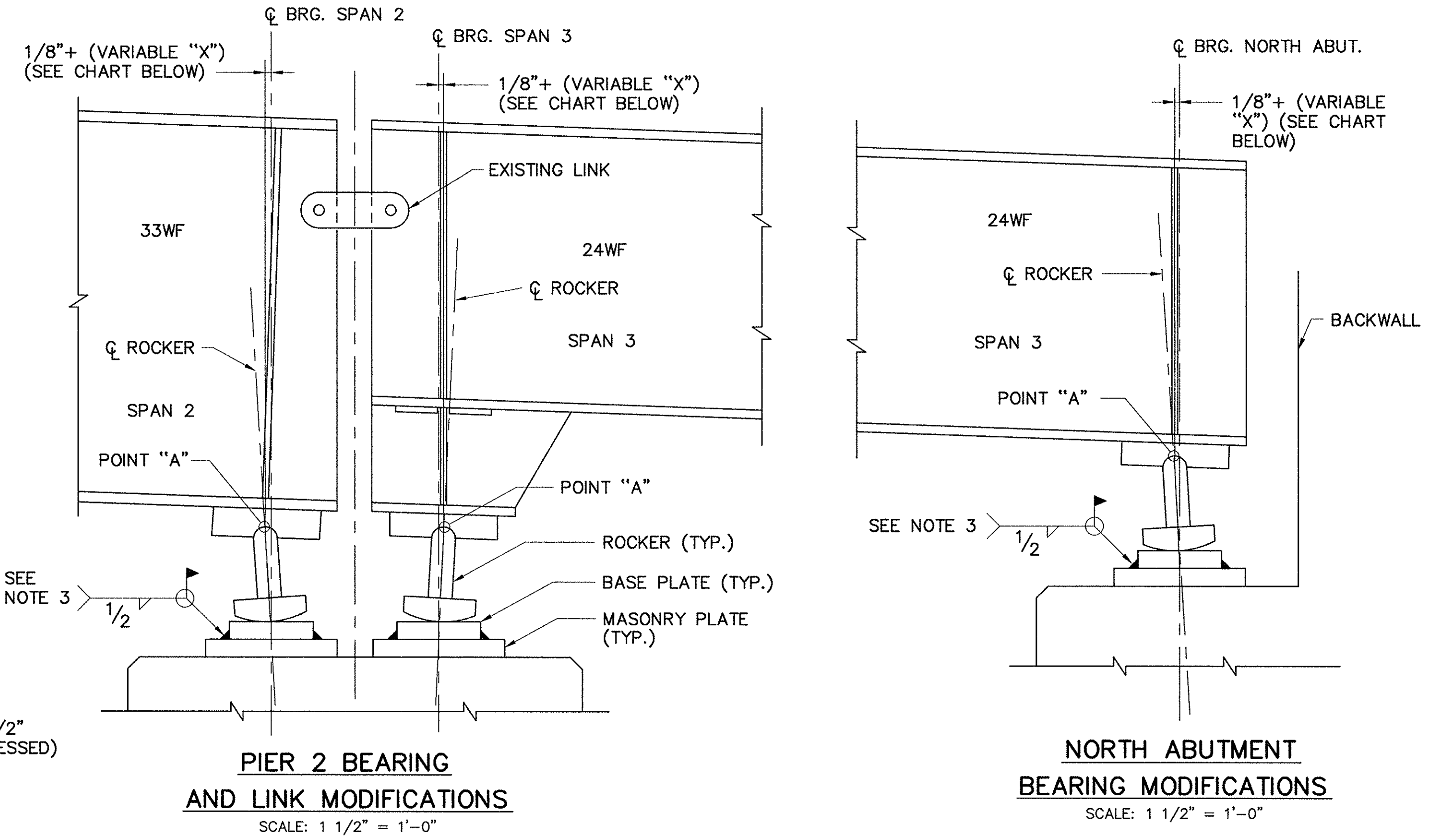
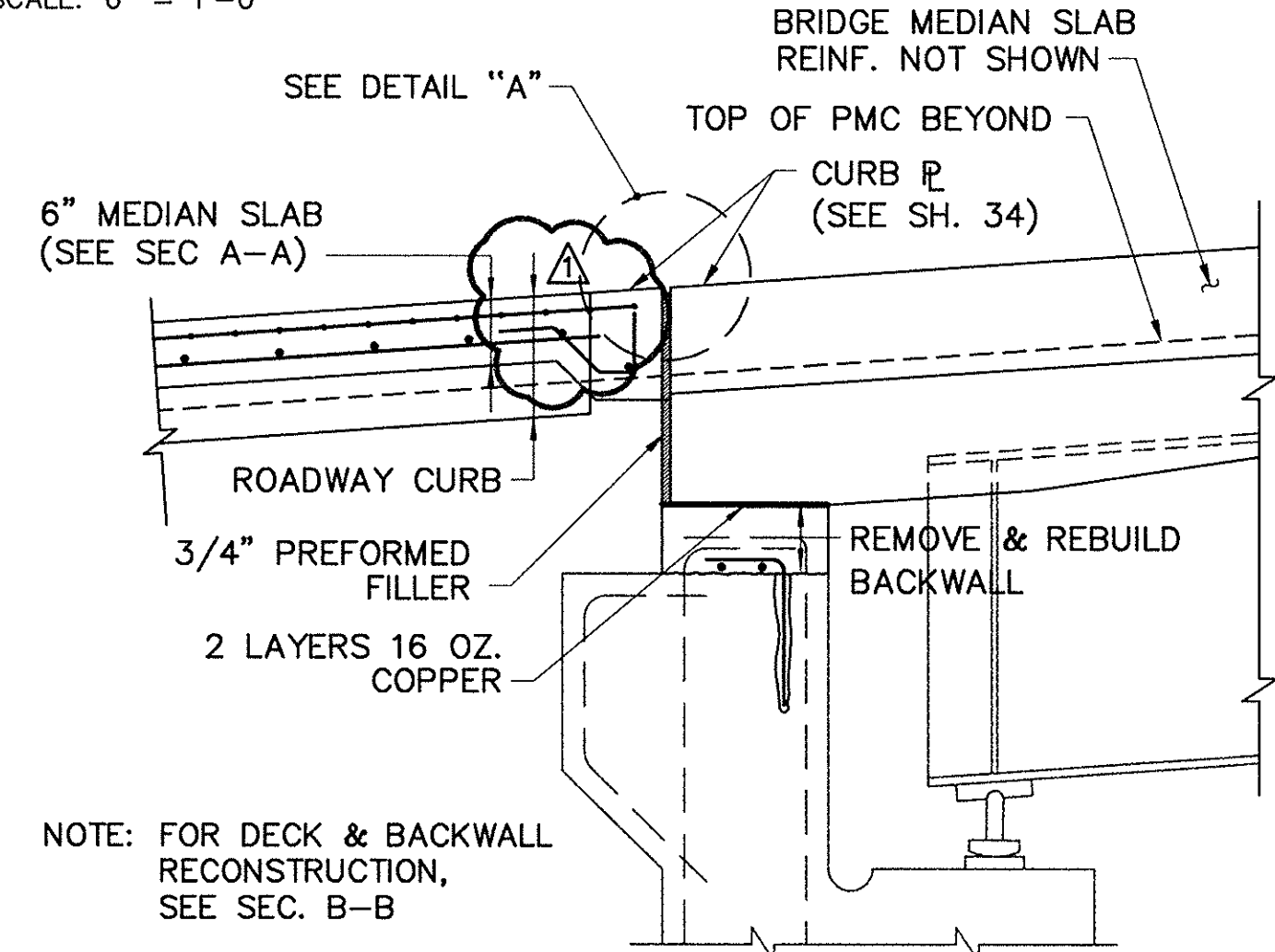
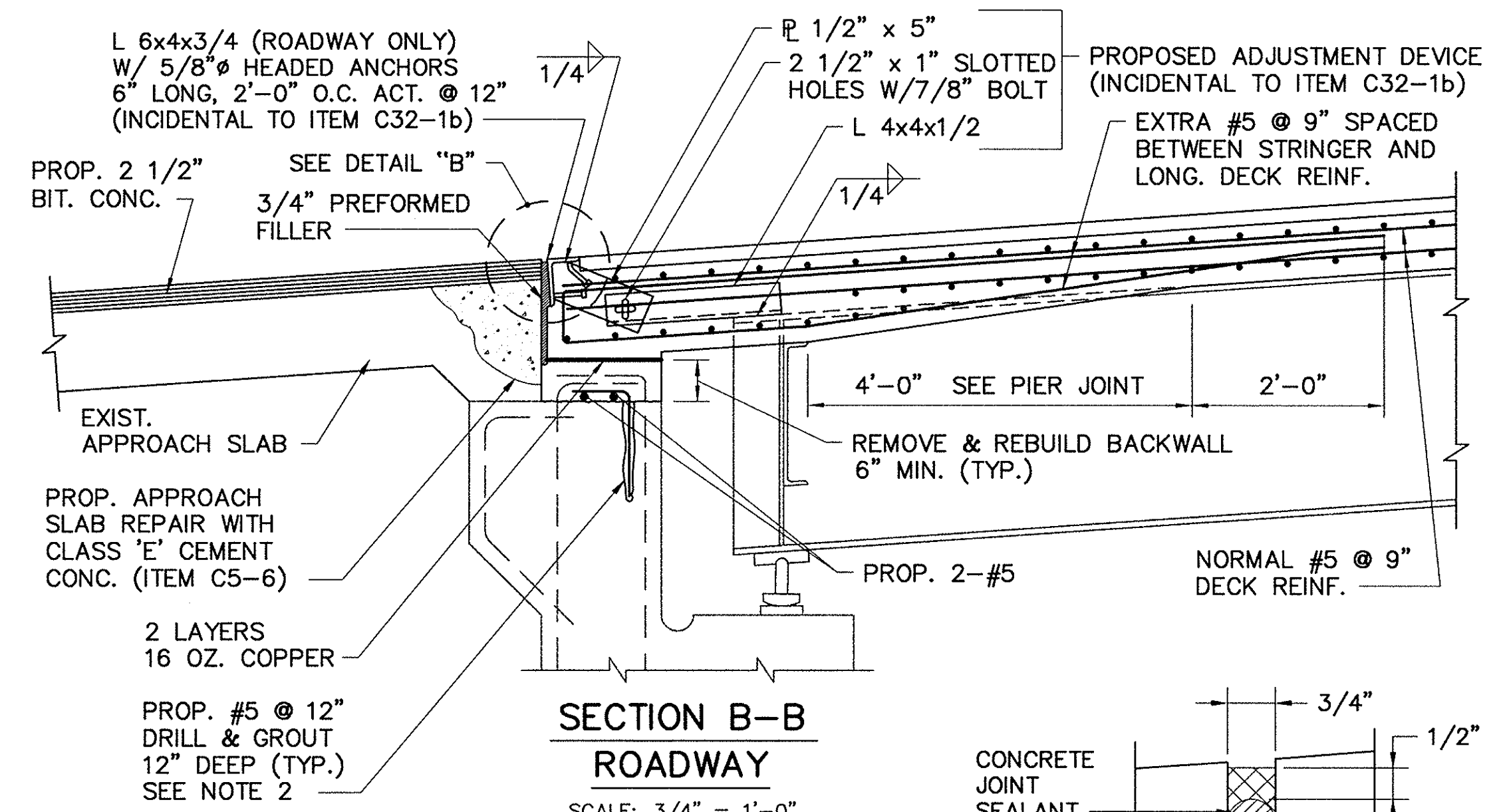
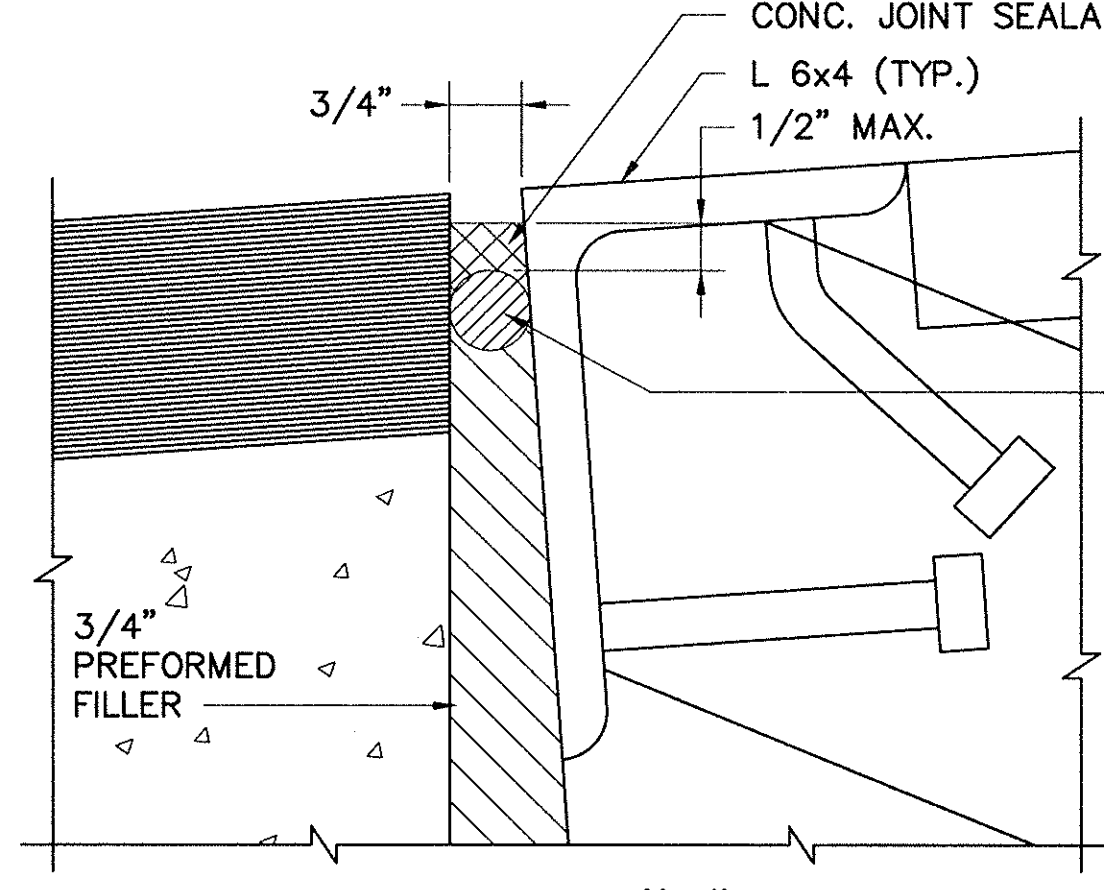
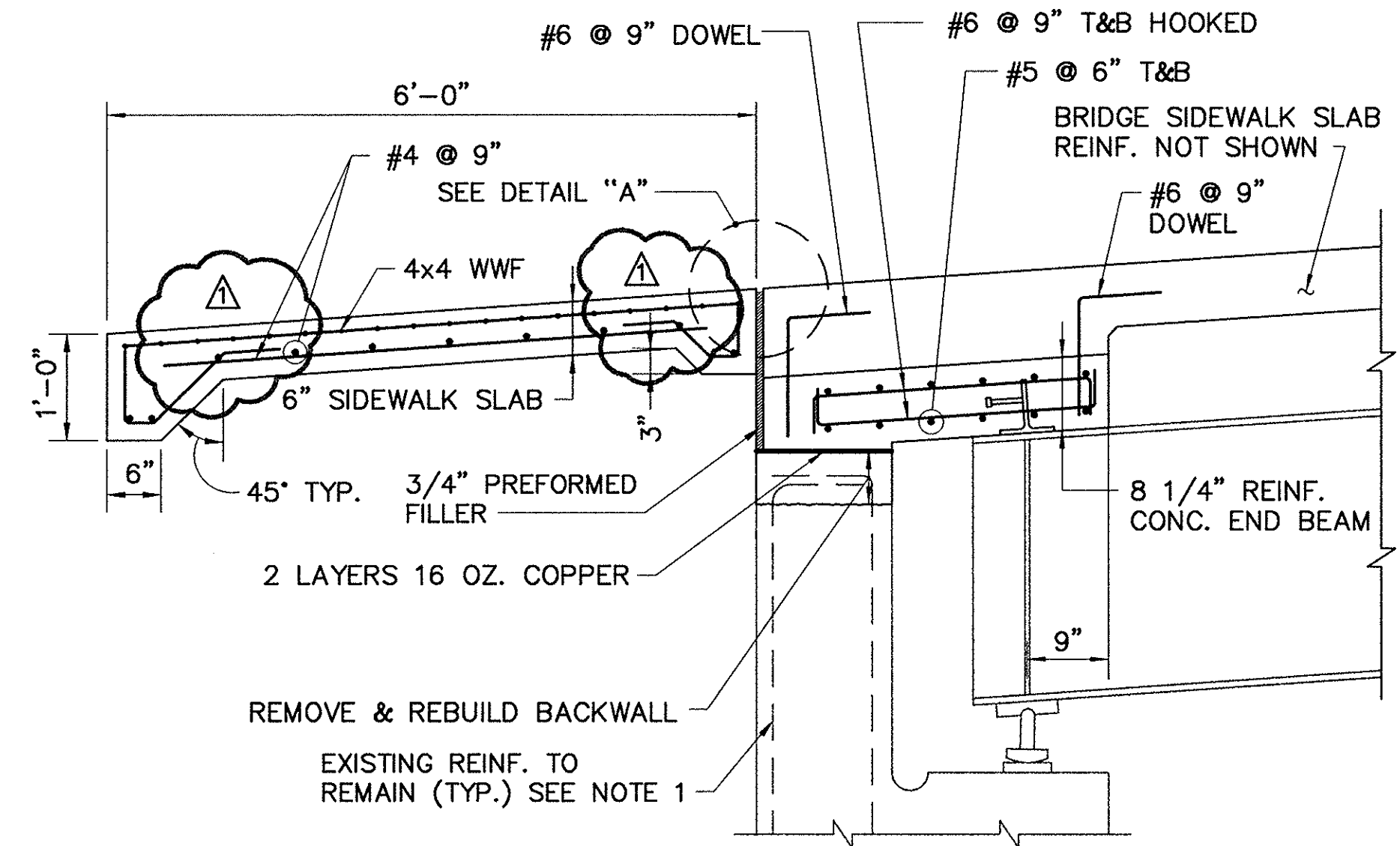
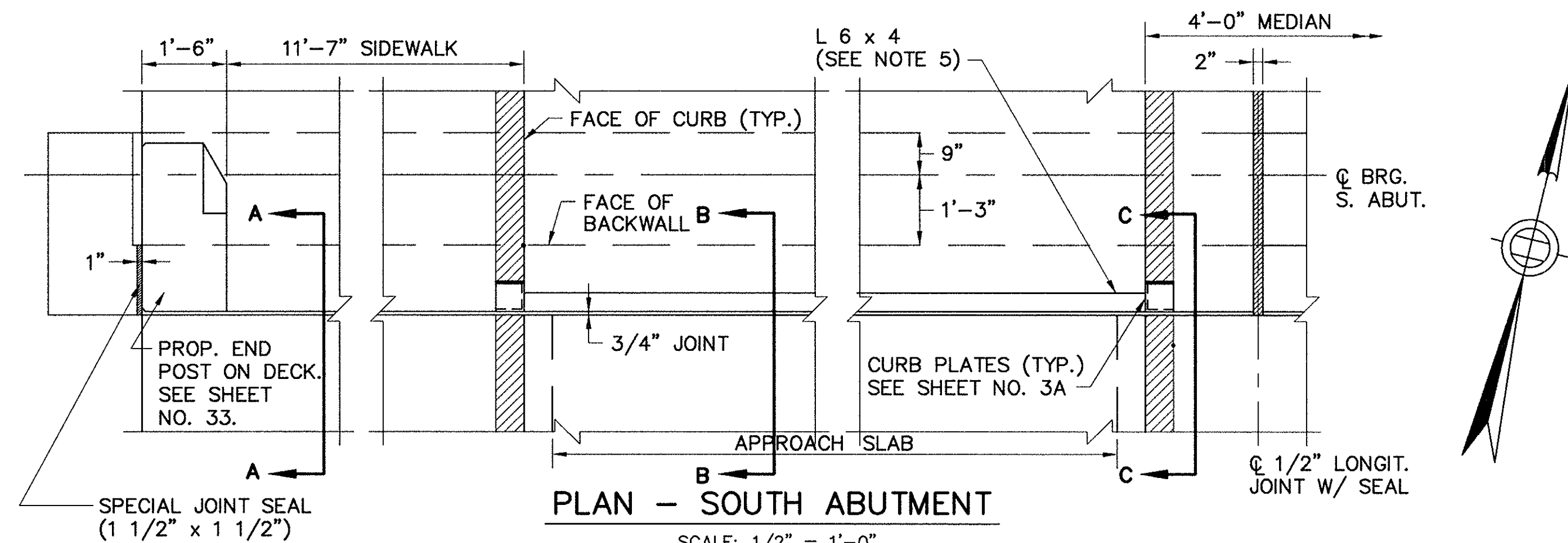
1. PRIOR TO PLACEMENT OF CONCRETE, 5/8" S.S. MACHINE SCREWS TO BE LUBRICATED WITH GRAPHITE AND SECURELY SET IN PLACE. MACHINE SCREW TO BE TEMPORARILY REMOVED AFTER CONCRETE HAS ATTAINED FINAL SET.

LOCATION	SEAL * WJ SERIES	MOVEMENT	SEAL DIM.		GROOVE WIDTH 'A'		GROOVE DEPTH 'B'	INSTALLATION WIDTH ('A') INCHES AT TEMPERATURE (°F)										
			WIDTH	HEIGHT	MIN.	MAX.		20°	30°	40°	50°	60°	70°	80°	90°	100°		
NORTH ABUTMENT	WJ-300	1.42"	3"	3 1/16"	1.13"	2.55"	4 1/4"	2 1/8"	2 1/16"	2"	1 7/8"	1 13/16"	1 3/4"	1 11/16"	1 5/8"	1 1/2"		

* WATSON BOWMAN ACME WJ SERIES OR APPROVED EQUAL

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: RS	12/93	
		DRAWN: JNC/SAM	12/93	
		CHECKED: EMM	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT NORTH ABUTMENT
Scale: AS NOTED Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116
EDWARDS AND KELCEY, INC. The Schmitt Center 329 Main Street Boston, Massachusetts 02129
Sheet No. 35



EXPANSION BEARING RESETTING NOTES

1. THE CONTRACTOR SHALL MEASURE THE AMOUNT THAT EACH EXPANSION ROCKER, INDICATED FOR RESETTING, IS OUT OF PLUMB. THIS DISTANCE SHALL BE MEASURED FROM A VERTICAL PLANE, THROUGH THE C OF BRG. TO POINT "A" AT THE TOP OF THE ROCKER. THESE DIMENSIONS SHALL BE TAKEN AFTER FULL SLAB DEAD LOAD HAS BEEN REMOVED AND ONLY STRUCTURAL STEEL DEAD LOADS ARE IN PLACE.
2. BASED ON THE CONTRACTOR'S MEASUREMENTS, THE ENGINEER SHALL DIRECT THE CONTRACTOR AS TO WHICH BEARING SHALL BE RESET.
3. BEARING POSITION CORRECTIONS ARE TO BE ACCOMPLISHED BY TEMPORARILY RELIEVING THE LOAD ON THE BEARING AND RESETTING THE ROCKER BY CHIPPING OUT THE EXISTING WELD CONNECTING THE BASE PLATE TO THE MASONRY PLATE, REPOSITION THE BASE PLATE AND FIELD WELD THE BASE PLATE TO THE MASONRY PLATE.
4. THE INDICATED ROCKER TILT DIMENSIONS ARE BASED ON THE ORIGINAL SHOP DRAWINGS (ERECTION SHEET E202). TEMPERATURE ADJUSTMENTS CORRESPOND TO 1/16" PER 15' F., FOR BEARINGS AT PIER 2 AND 1/16" PER 8' F., FOR BEARINGS AT THE NORTH ABUTMENT.

EXPANSION BEARING SETTING CHART

LOCATION	VARIABLE "X" (TEMP. IN FARENHEIT DEGREES)										
	0°	15°	30°	45°	60°	68°	75°	90°	105°	120°	
PIER 2, SPAN 2	+ 9/32"	+ 7/32"	+ 5/32"	+ 3/32"	+ 1/32"	0"	- 1/32"	- 3/32"	- 5/32"	- 7/32"	
PIER 2, SPAN 3	- 9/32"	- 7/32"	- 5/32"	- 3/32"	- 1/32"	0"	+ 1/32"	+ 3/32"	+ 5/32"	+ 7/32"	
NORTH ABUT.	+ 17/32"	+ 13/32"	+ 9/32"	+ 3/16"	+ 1/16"	0"	- 1/16"	- 5/32"	- 9/32"	- 13/32"	

AS BUILT

NOTES:

1. REMOVE EXISTING BACKWALL, ARMORED JOINT AND ANCHOR BOLTS TO THE APPROACH SLAB SEAT GRADE AND TO TOP OF UTILITY OPENING. CUT, CLEAN AND BEND EXISTING REINFORCING STEEL TO PROVIDE 2" CLEARANCE. (ITEMS C1D-1b AND C29-3 AS APPLICABLE)
2. THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO DECK RECONSTRUCTION ITEM C32-1b.
3. CONCRETE FOR BACKWALL RECONSTRUCTION SHALL BE CLASS 'E' CEMENT CONCRETE (f' = 5000 PSI). BACKWALL RECONSTRUCTION WILL BE PAID FOR AS FULL WIDTH BACKWALL REPAIR (ITEM C29-3).

4. AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
5. PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2" BEYOND PHASE I/PHASE II CONSTRUCTION JOINT. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPLICED USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE. SIMILAR PROCEDURE SHALL BE FOLLOWED FOR PHASE II/PHASE III.
6. FOR EXISTING CONDITIONS AT SECTIONS B-B AND A-A, SEE SHEET NO. 35.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT SOUTH
ABUTMENT AND MISCELLANEOUS
STEEL DETAILS

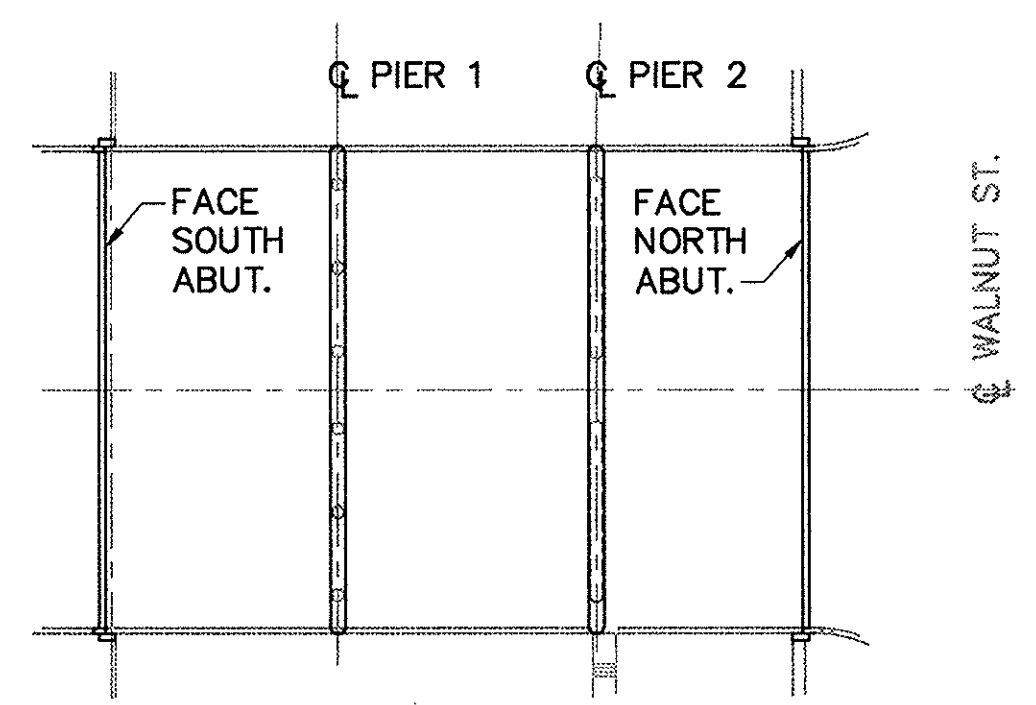
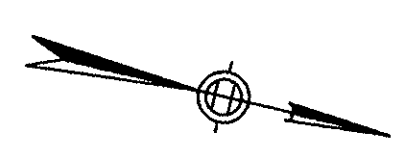
Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
The Schreffelt Center
529 Main Street
Boston, Massachusetts 02129

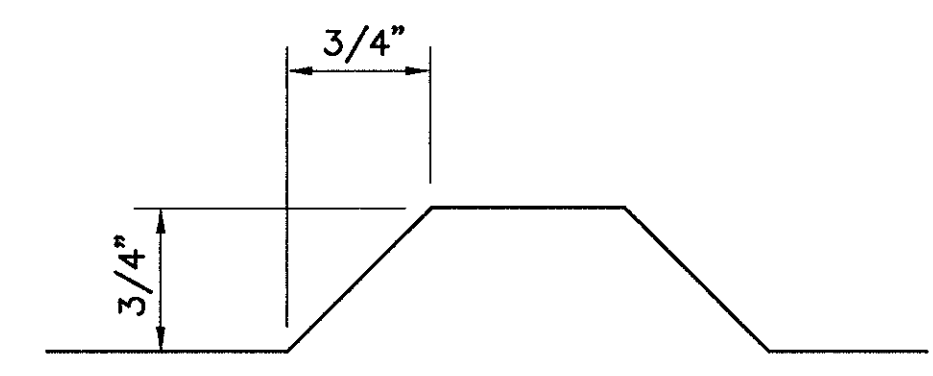
Sheet No. **36**

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	RRS	12/93	
		DRAWN:	TJC	12/93	
		CHECKED:	EMM	12/93	
		BY	GTS	10/95	

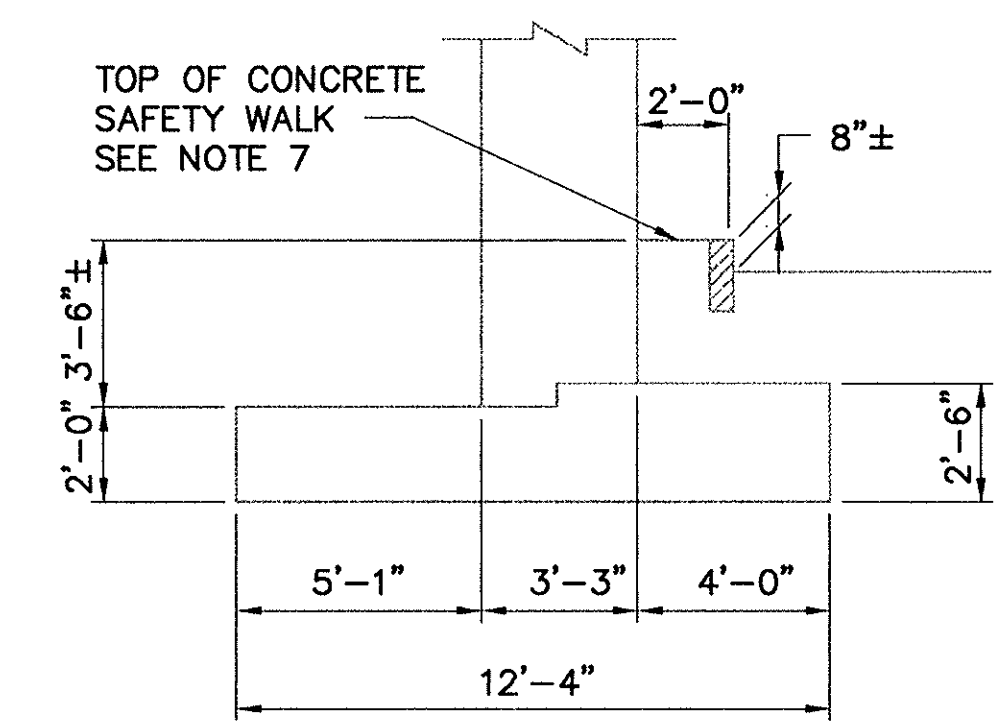


KEY PLAN

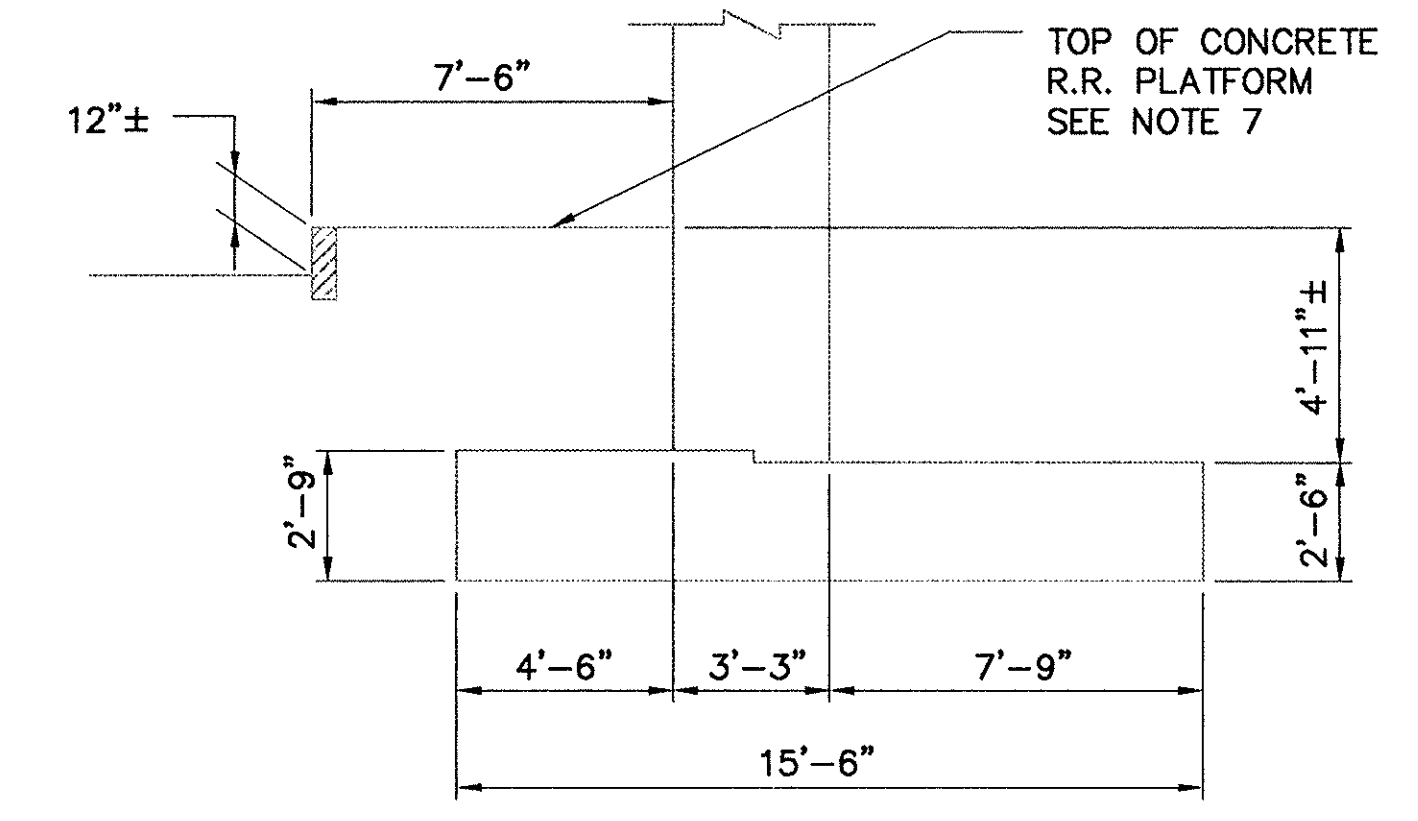
NOTE: FORM WITH 1" x 3" NOMINAL BOARD



RUSTICATION DETAIL
SCALE: FULL SCALE



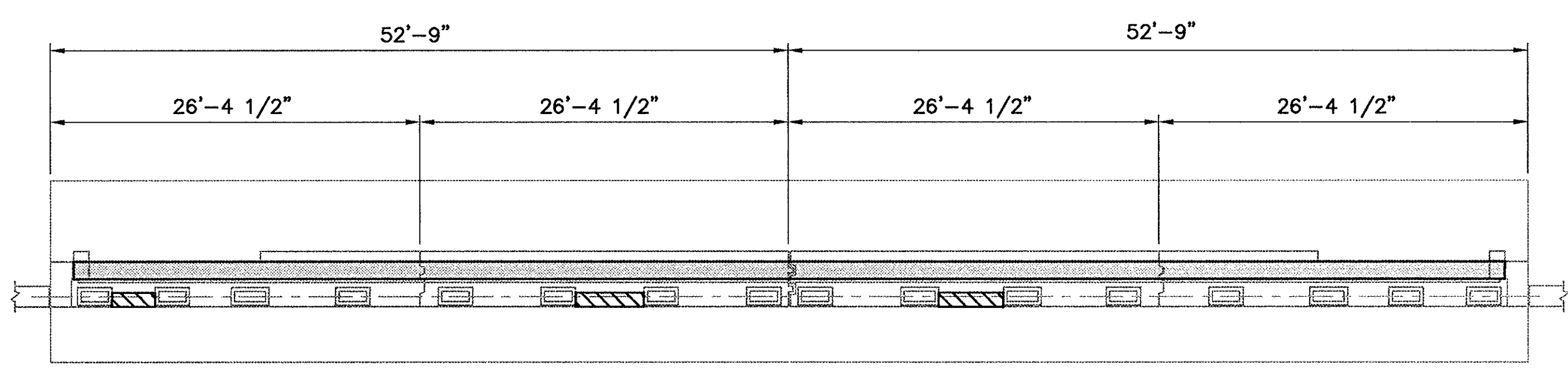
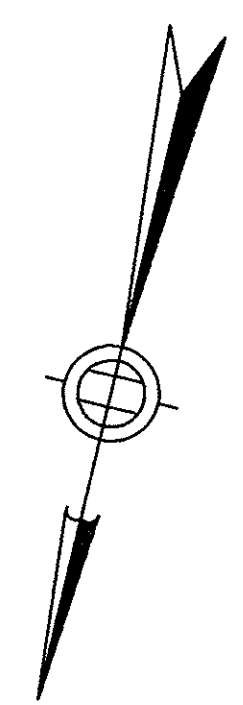
SECTION A-A
SCALE: 1/4" = 1'-0"



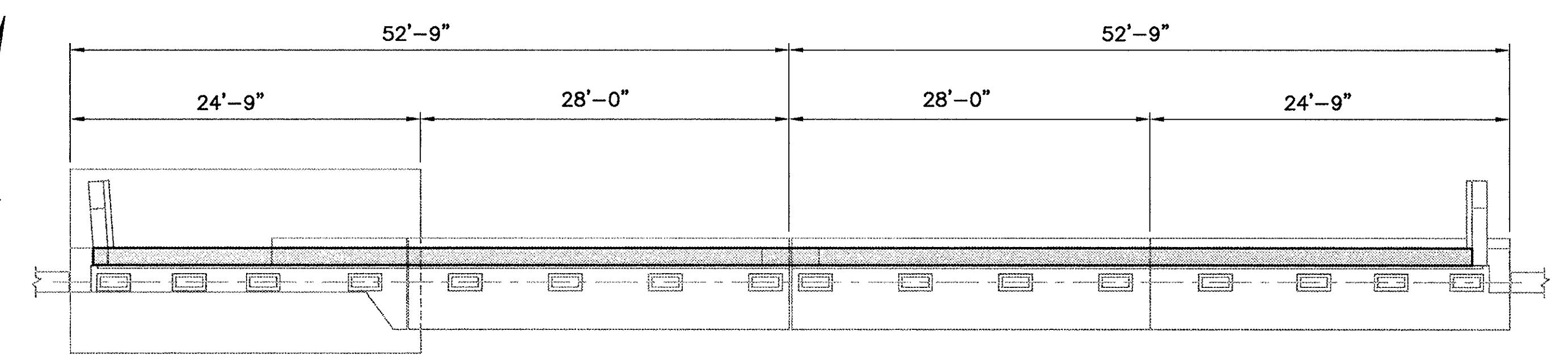
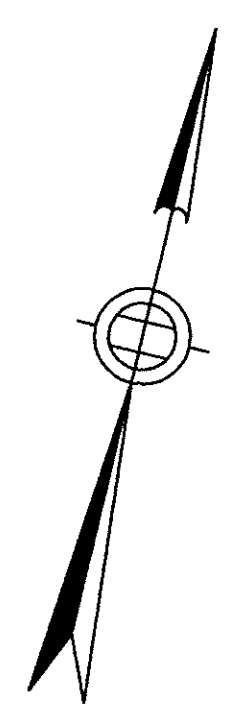
SECTION B-B
SCALE: 1/4" = 1'-0"

NOTES:

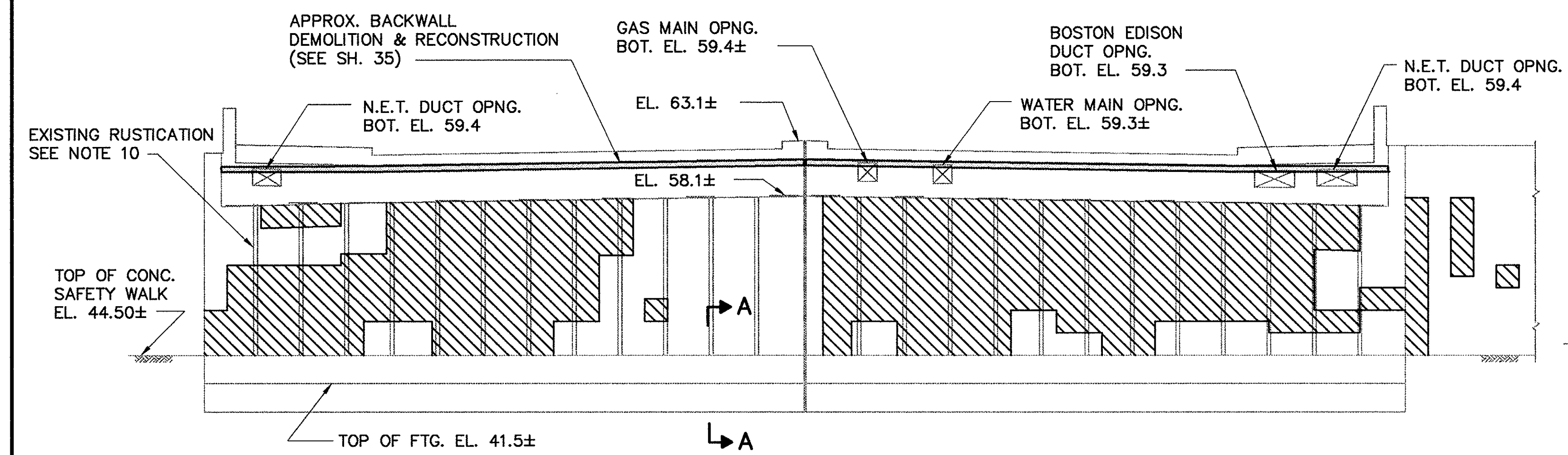
- AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
- ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEET 67.
- SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND CRASHWALLS, ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
- ELEVATIONS AND DIMENSIONS ARE TAKEN FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
- THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
- CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER. FOR DETAIL, SEE SHEET NO. 16.
- ALL PIER CAPS, BEAM SEATS AND DRAINAGE TROUGHS SHALL BE CLEARED OF DEBRIS (ROCKS, STICKS, LEAVES AND TRASH) AND DISPOSED OF BY THE CONTRACTOR.
- FOR DIG SAFE REQUIREMENTS, SEE SHEET NO. 39.
- THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE.
- IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).



PLAN

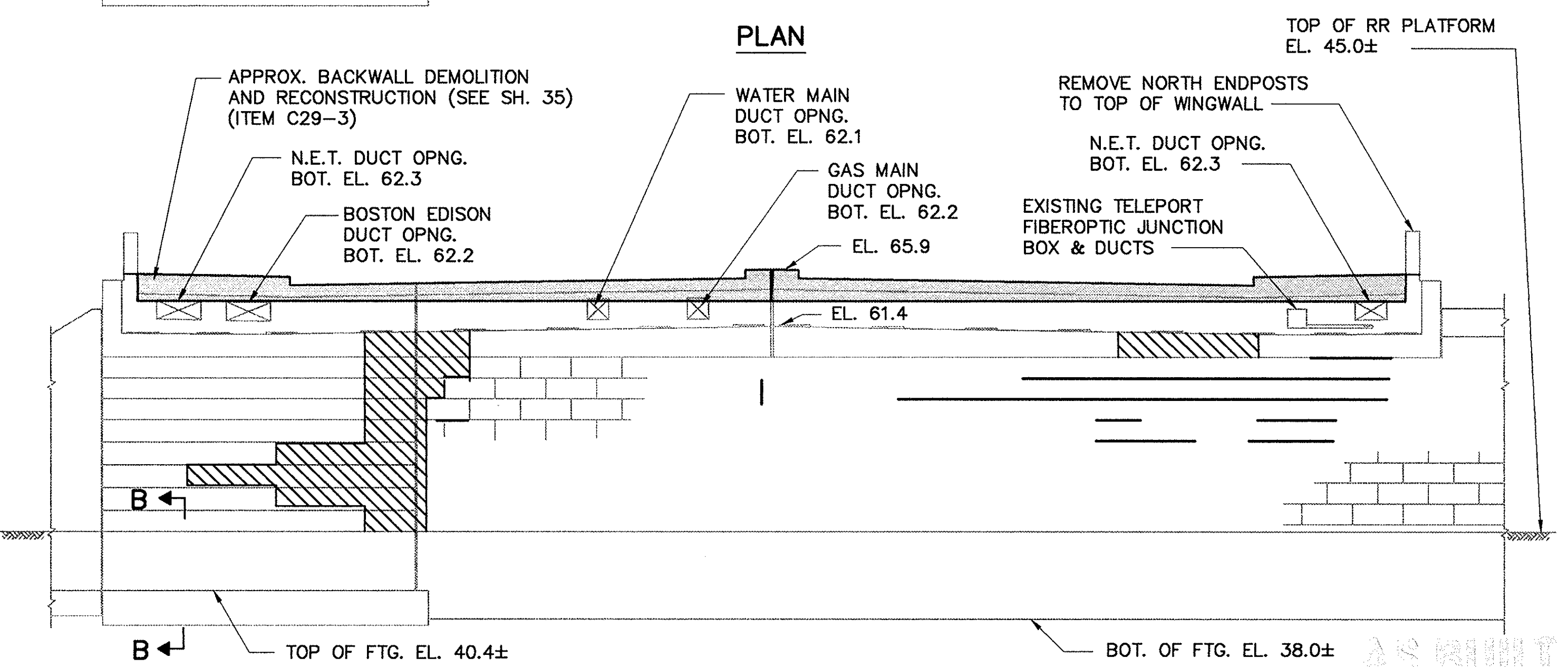


PLAN



ELEVATION - (LOOKING SOUTH)

SOUTH ABUTMENT
REPAIR AREA = 980 S.F.±
SCALE: 1/8" = 1'-0"



ELEVATION - (LOOKING NORTH)

NORTH ABUTMENT
REPAIR AREA = 120 S.F.±
REPOINTING QUANTITY = 130 L.F.±
SCALE: 1/8" = 1'-0"

LEGEND

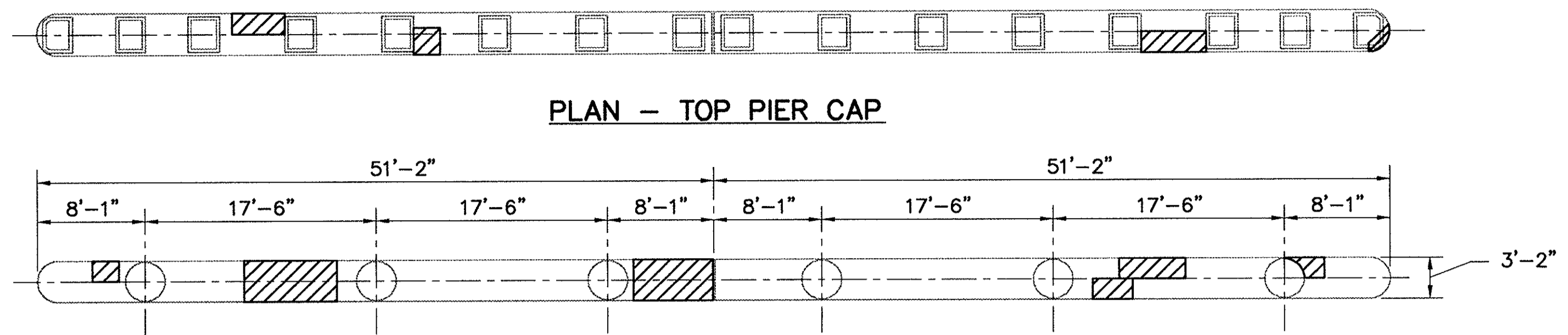
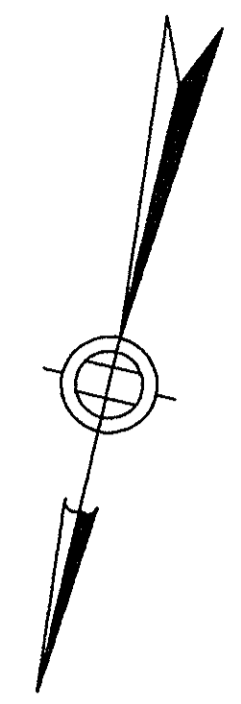
- APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
- APPROXIMATE AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1b AS APPLICABLE)
- APPROXIMATE AREA OF REPOINTING (ITEM C29-6)

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	ORI	12/93
		DRAWN:	SAS	12/93
		CHECKED:	EMM	12/93
			GTS	

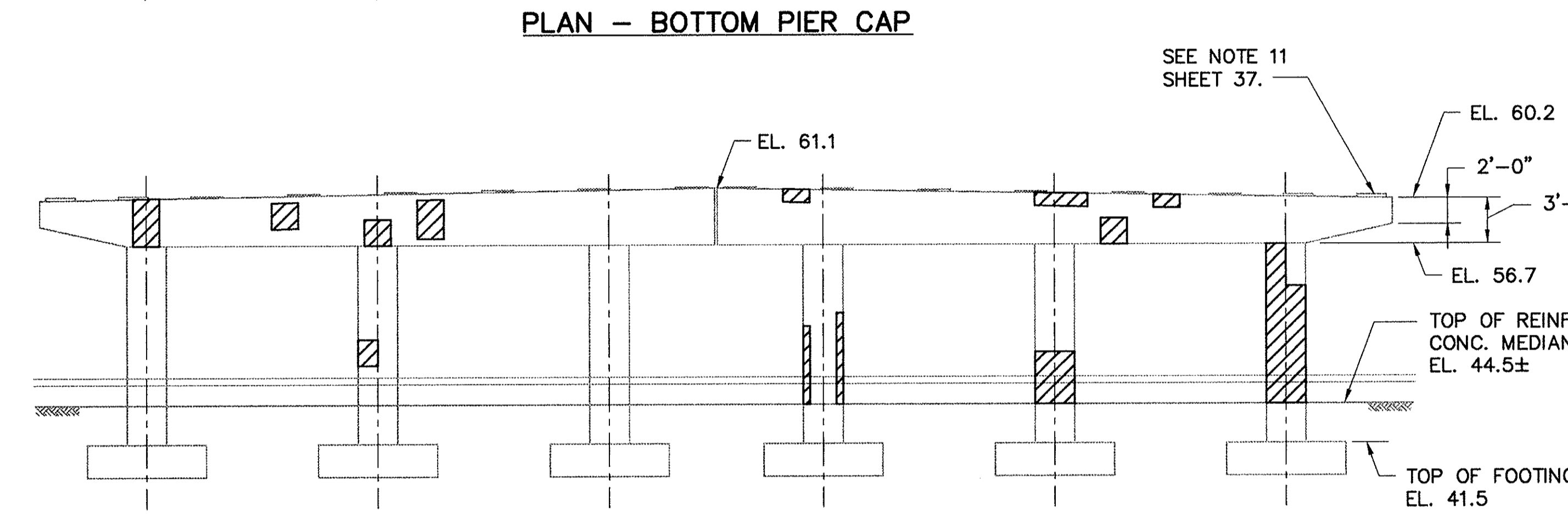
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR NO. S-23)
**SUBSTRUCTURE CONCRETE REPAIRS
 SOUTH & NORTH ABUTMENTS**

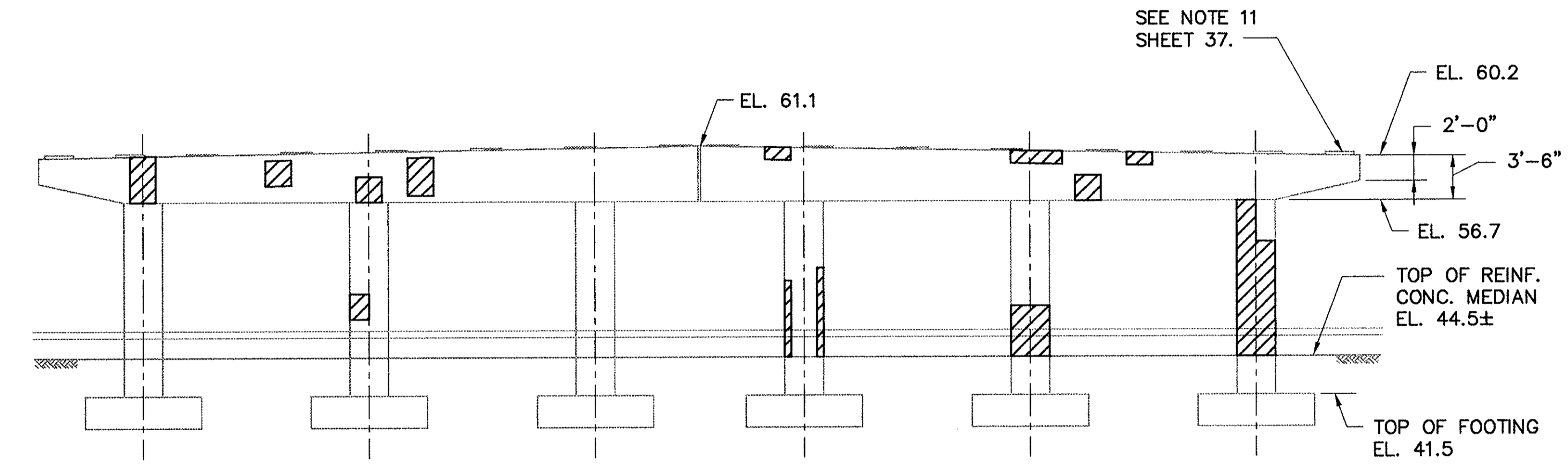
Scale: AS NOTED Contract No. 521-024
 EDWARDS AND KELCEY, INC.
 The Schreffel Center
 829 Main Street
 Boston, Massachusetts 02129
 Sheet No. **37**



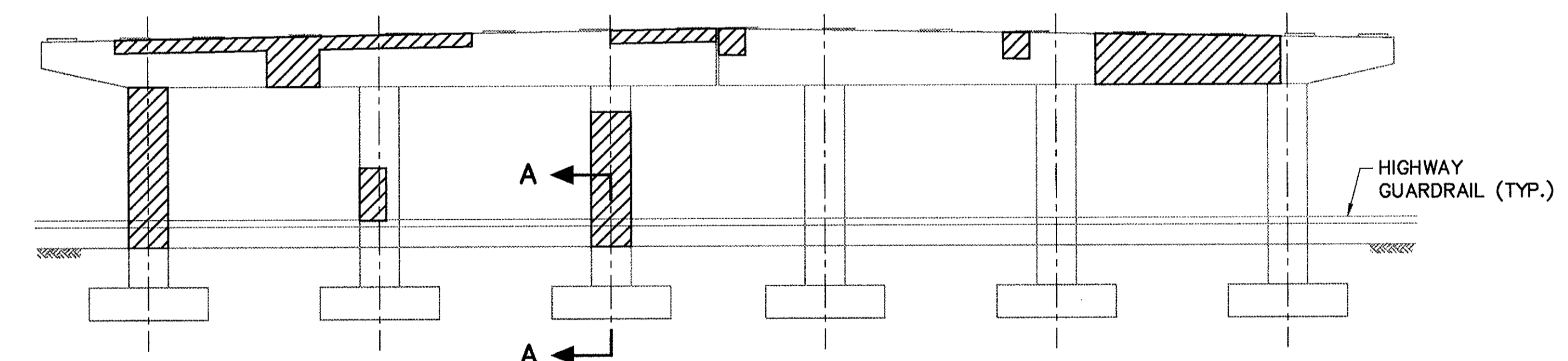
PLAN - TOP PIER CAP



PLAN - BOTTOM PIER CAP



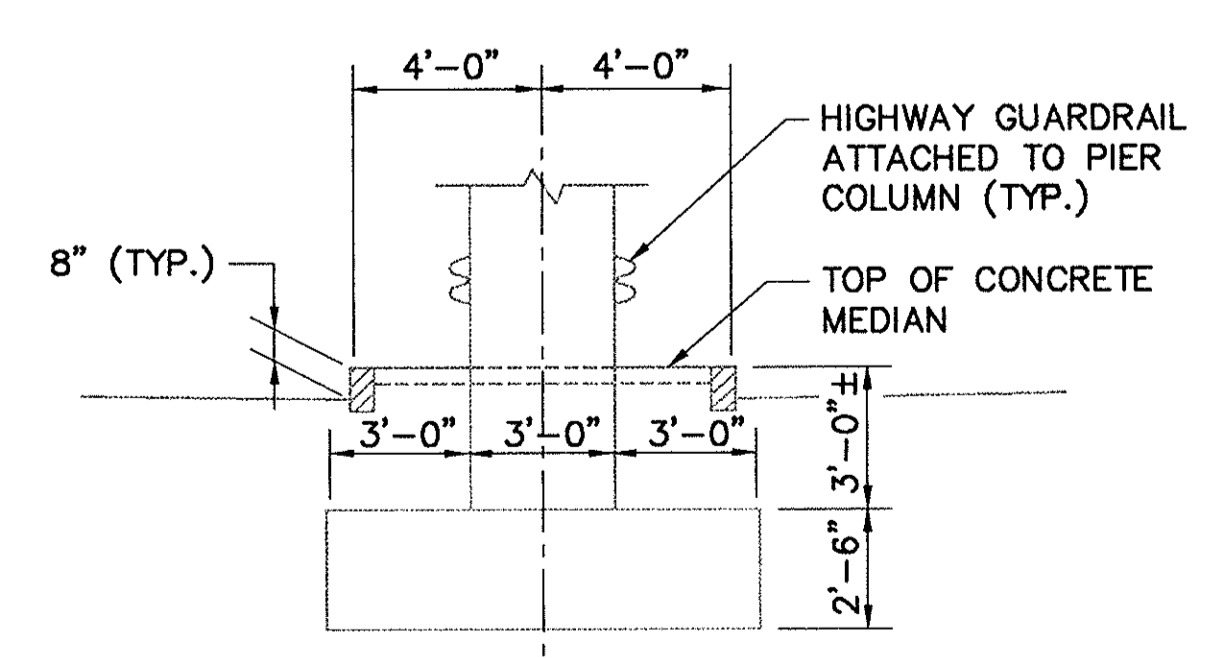
NORTH ELEVATION (TURNPIKE WESTBOUND SIDE)



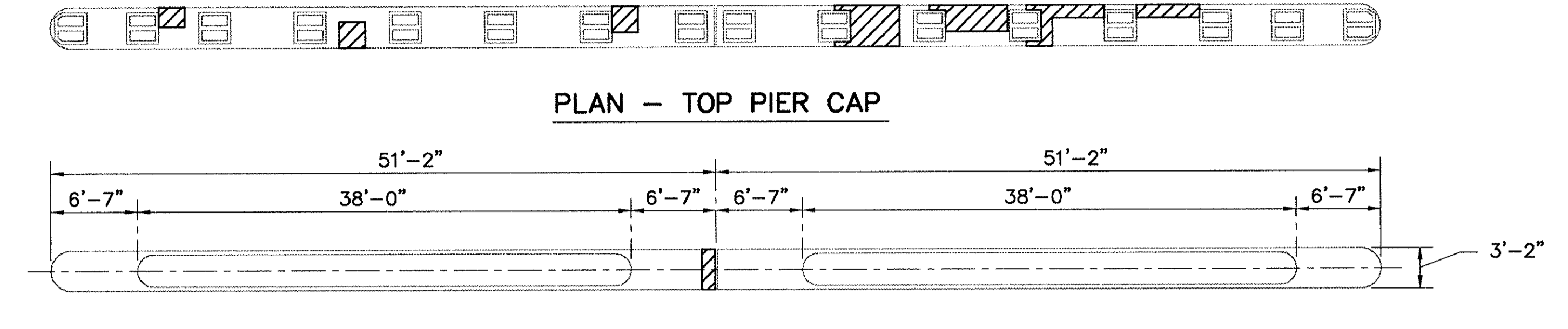
SOUTH ELEVATION (TURNPIKE EASTBOUND SIDE)

PIER NO. 1
REPAIR AREA = 430 S.F.±
SCALE: 1/8" = 1'-0"

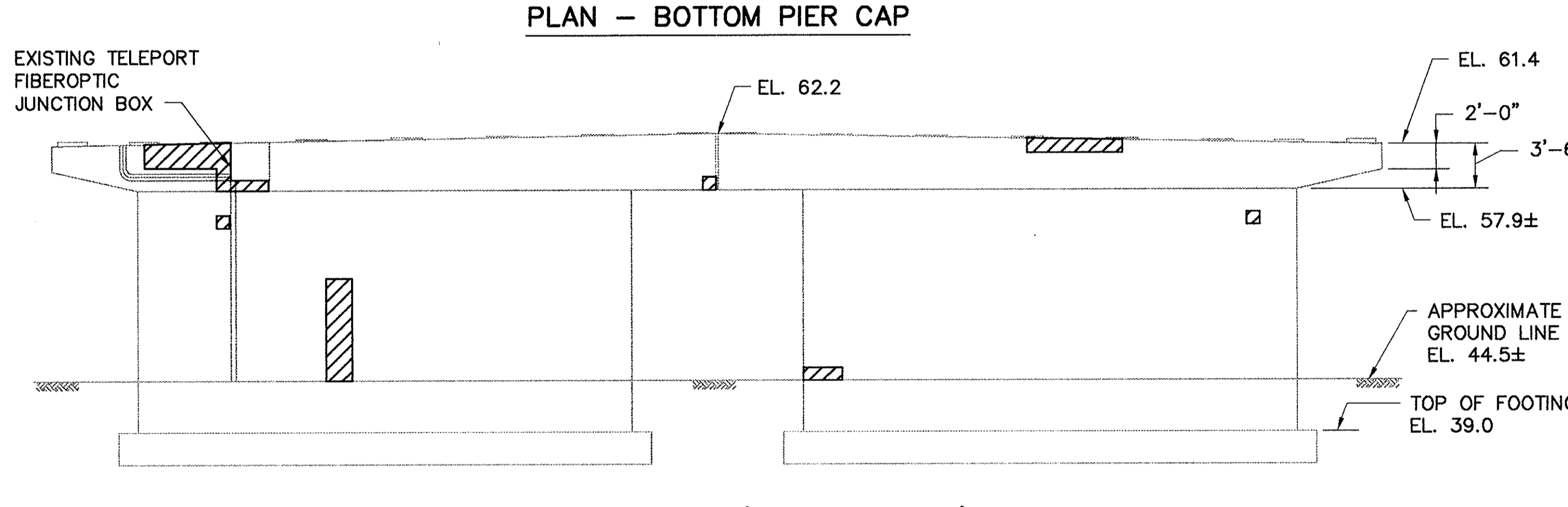
DIG SAFE NOTE
THE CONTRACTOR SHALL NOTE THAT SEVERAL FIBER OPTIC CONDUITS AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN, THE BRIDGE APPROACHES AND ON PIERS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-(800)-322-4844, WILTEL AT 1-(800)-448-2658 AND AT&T AT 1-(800)-252-1133.



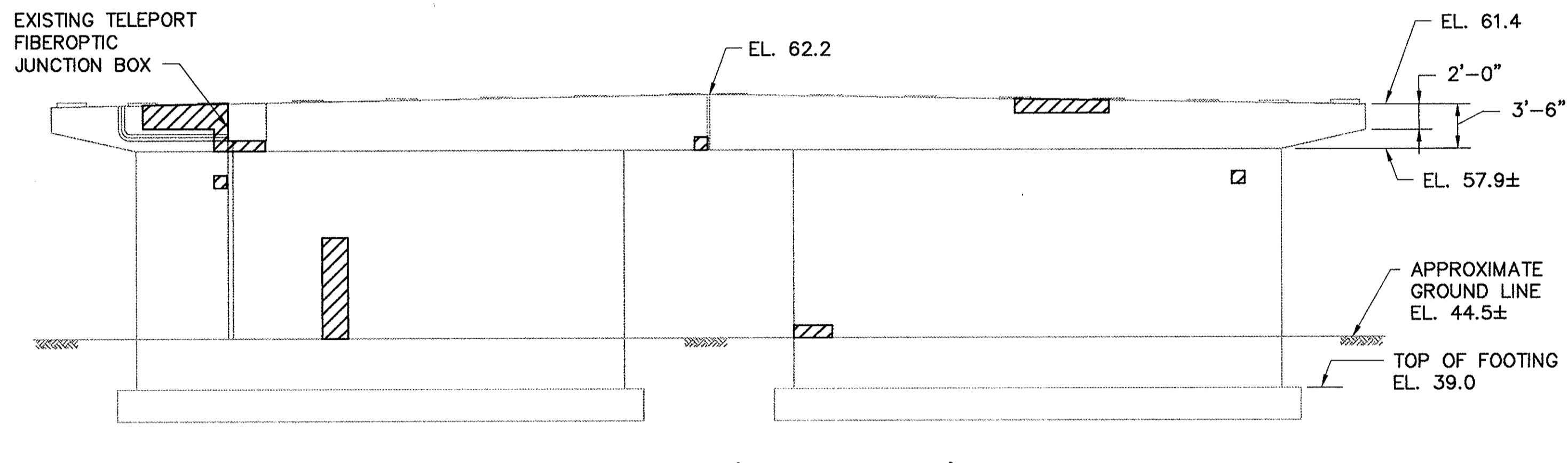
SECTION A-A
SCALE: 1/4" = 1'-0"



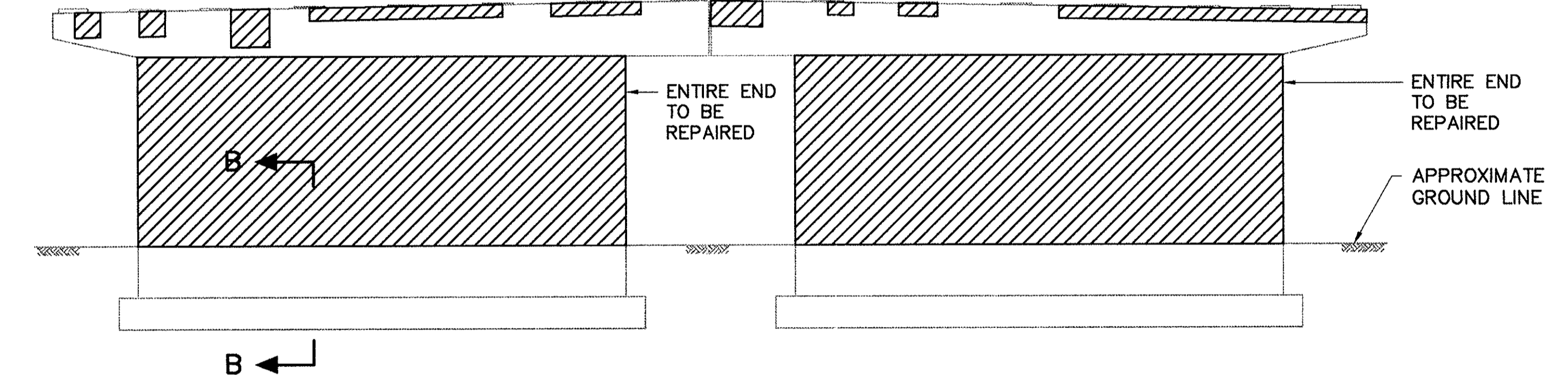
PLAN - TOP PIER CAP



PLAN - BOTTOM PIER CAP

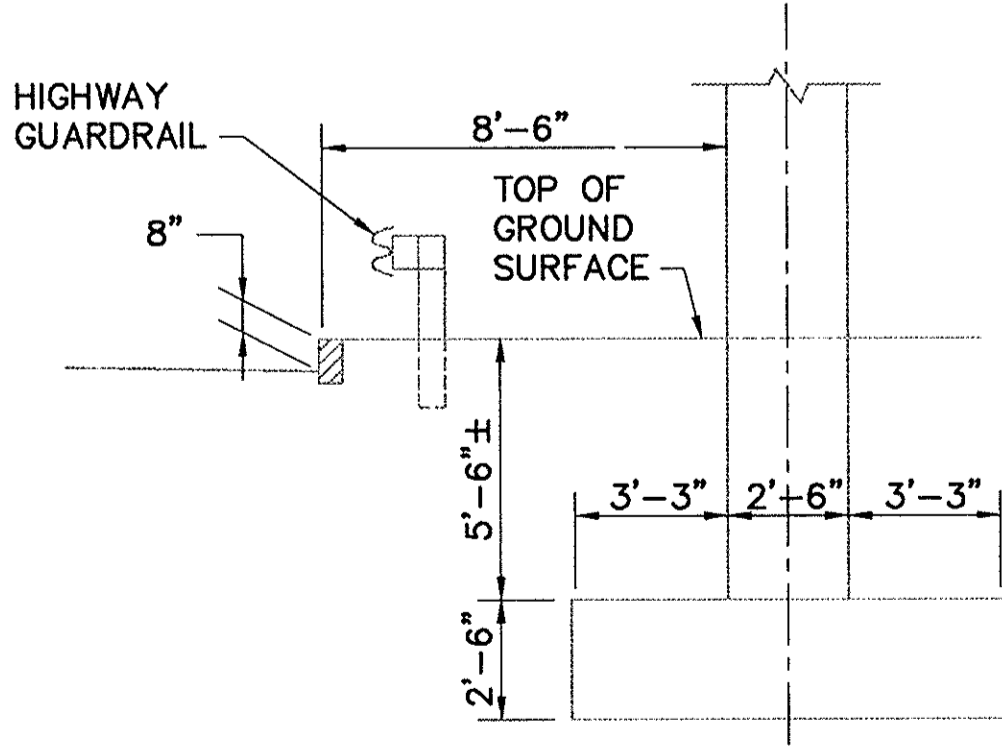


NORTH ELEVATION (RAILROAD SIDE)



SOUTH ELEVATION (TURNPIKE SIDE)

PIER NO. 2
REPAIR AREA = 1,385 S.F.±
SCALE: 1/8" = 1'-0"



SECTION B-B
SCALE: 1/4" = 1'-0"

NOTE:
REMOVE AND RESET HIGHWAY GUARDRAIL AS NECESSARY FOR REPAIRS AND AS DIRECTED BY THE ENGINEER (INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE)

NOTE:
FOR REPAIR NOTES SEE SHEET NO. 37.

LEGEND
[Hatched box symbol] APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

AS BUILT

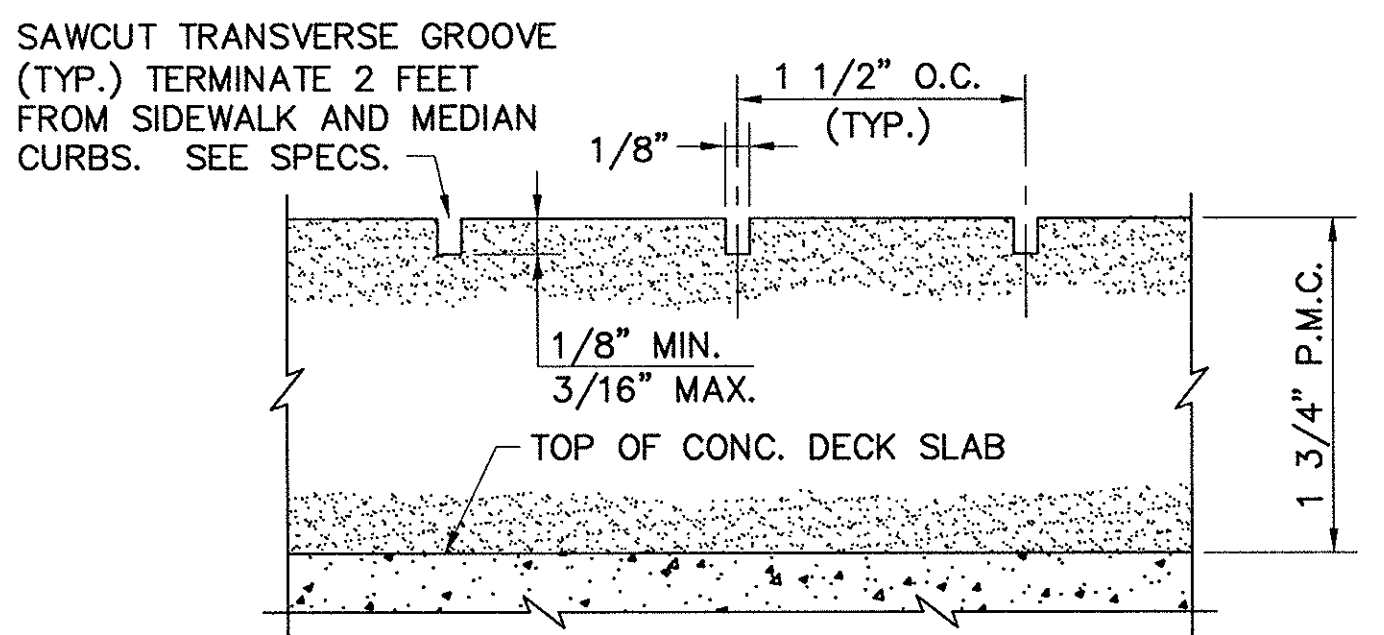
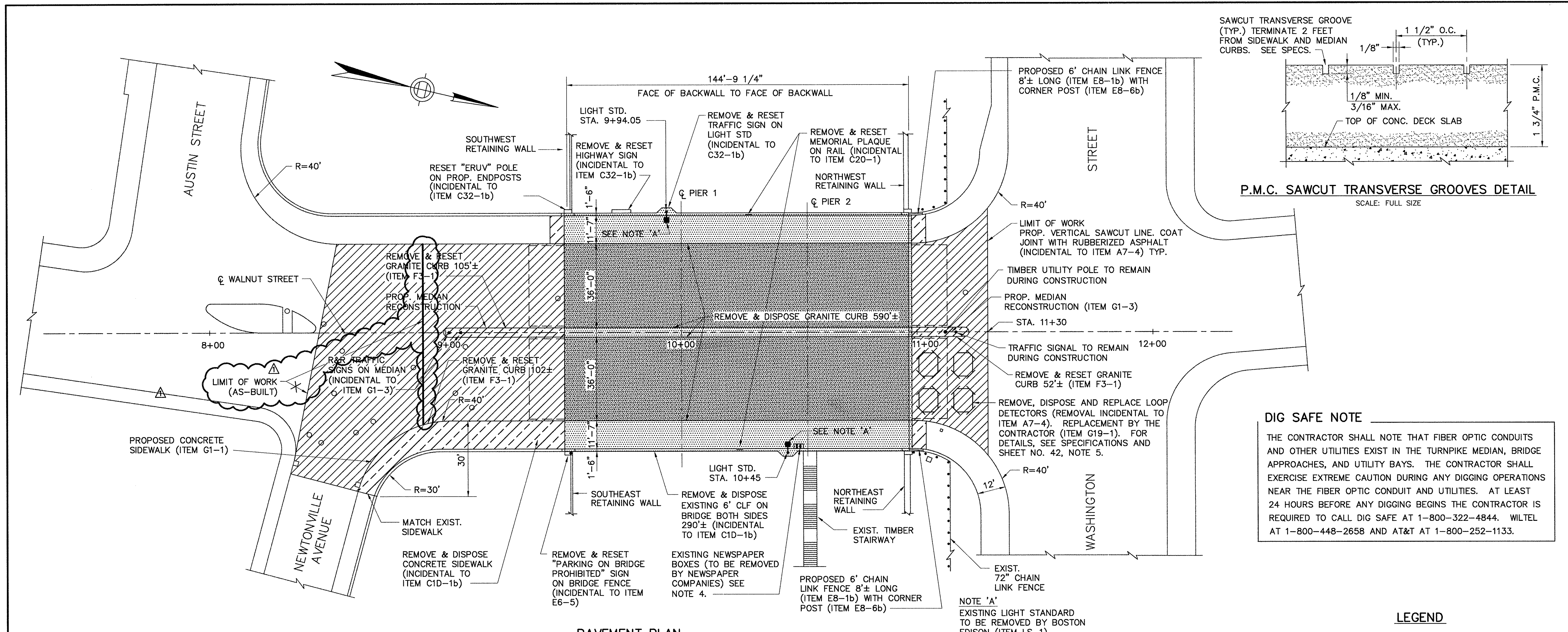
NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI 12/93	
		DRAWN:	SAS 12/93	
		CHECKED:	EMM 12/93	

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR NO. S-23)
SUBSTRUCTURE CONCRETE REPAIRS
PIER NO. 1 & PIER NO. 2

Scale: AS NOTED 521-024

EDWARDS AND KELCEY, INC. Sheet No. 38

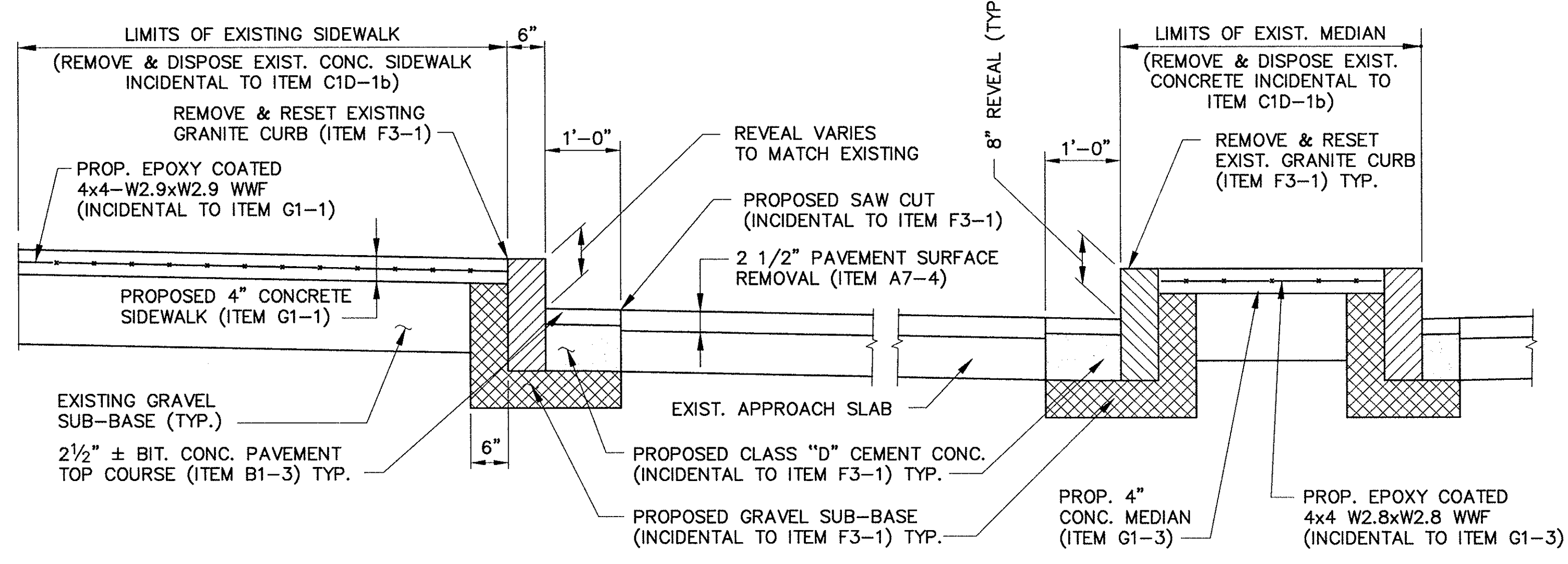


DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT FIBER OPTIC CONDUITS AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN, BRIDGE APPROACHES, AND UTILITY BAYS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844. WILTEL AT 1-800-448-2658 AND AT&T AT 1-800-252-1133.

- NOTES**
- SOUTH APPROACH MEDIAN TO BE REMOVED & REPLACED WITH TEMP. BIT. CONC. PAVEMENT PRIOR TO START OF PHASE 1. MEDIAN RECONSTRUCTION NECESSARY FOR BRIDGE JOINT RECONSTRUCTION IS TO BE COMPLETED IN PHASE II. THE REMAINDER TO BE COMPLETED AT THE END OF PHASE III.
 - LOCATIONS OF EXISTING UTILITIES AND SURFACE DETAILS HAVE BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED FOR COMPLETENESS & ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND DETAILS.
 - IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES PRIOR TO CONSTRUCTION & COORDINATE ALL ASSOCIATED WORK WITH THEM THROUGHOUT CONSTRUCTION.
 - THE CONTRACTOR SHALL COORDINATE WITH THE NEWSPAPER COMPANIES 2 WEEKS PRIOR TO PHASE III FOR REMOVAL OF THE BOXES (SEE SPECIFICATIONS).
 - ALL JOINTS IN BITUMINOUS CONCRETE ROADWAY PAVEMENT SHALL BE COATED WITH HOT POURED RUBBERIZED ASPHALT. FED. SPEC. SS-S-1401.C
 - AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
 - LIGHT STANDARD SHALL BE REMOVED & REPLACED BY BOSTON EDISON. THE CONTRACTOR SHALL NOTIFY BOSTON EDISON WALTHAM SERVICE CENTER (617-652-6300) TWO (2) WEEKS IN ADVANCE OF DEMOLITION.
 - THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND ANCHOR BOLTS FOR LIGHT STANDARD AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT AT ABUTMENT BACKWALLS. BOSTON EDISON WILL FURNISH AND INSTALL CONDUCTORS FROM FEED TO TO LIGHT STANDARD.

PAVEMENT PLAN
SCALE: 1" = 20'

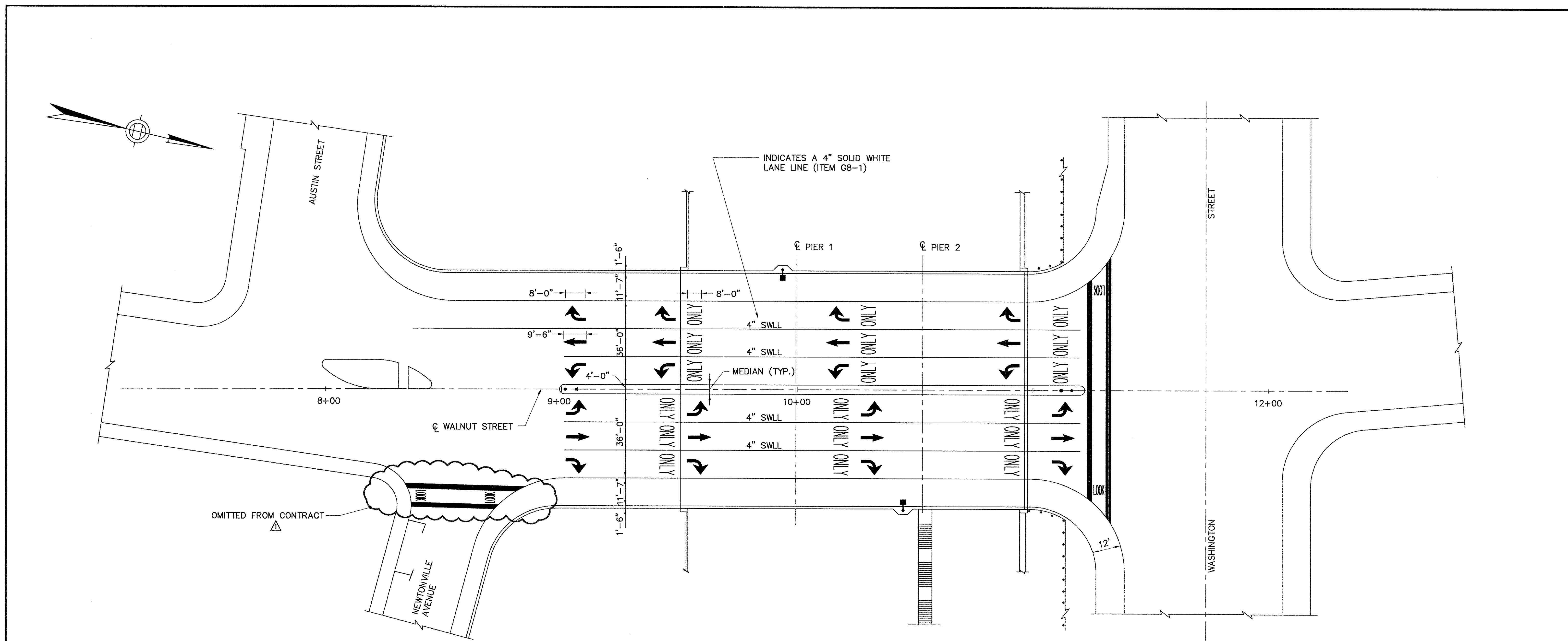


APPROACH GRANITE CURB, SIDEWALK AND MEDIAN DETAIL
SCALE: 3/4" = 1'-0"

- LEGEND**
- PROPOSED DECK AND SIDEWALK SLAB RECONSTRUCTION (ITEM C32-1b)
 - PROPOSED 1 3/4" P.M.C. OVERLAY (ITEM C6S-1)
 - PROPOSED BITUMINOUS CONCRETE REMOVAL 2 1/2"± (ITEM A7-4)
 - PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
 - REMOVE EXISTING CONCRETE SDWK./MEDIAN (INCIDENTAL TO C1D-1b OR C29-3 AS APPLICABLE)
 - PROPOSED CONCRETE SIDEWALK/MEDIAN (ITEM G1-1 / ITEM G1-3)
 - UTILITY MANHOLE
 - DROP INLET
 - PROPOSED LIGHT STANDARD TO BE INSTALLED BY BOSTON EDISON (ITEM LS-1)

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI	12/93
		DRAWN:	GK	12/93
		CHECKED:	EMM	12/93
		BY	GTS	10/95



PAVEMENT STRIPING DETAILS

SCALE: 1" = 20'

NOTES:

1. SIZES FOR ARROWS, CROSSWALKS AND LEGENDS SHALL BE IN ACCORDANCE WITH "MASSACHUSETTS MANUAL ON TRAFFIC CONTROL DEVICES" AND "STANDARD ALPHABETS ON HIGHWAY SIGNS AND OTHER PAVEMENT MARKINGS" FROM THE FHWA.
2. ARROWS, CROSSWALKS AND LEGENDS SHALL BE PAID FOR AS ITEM G7-11, REFLECTORIZED PATTERNS.
3. LOCATION OF ARROWS, LEGENDS, AND CROSSWALKS SHALL BE COORDINATED AND APPROVED BY THE CITY OF NEWTON.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
PAVEMENT STRIPING DETAILS

Scale: AS NOTED Contract No. 521-024

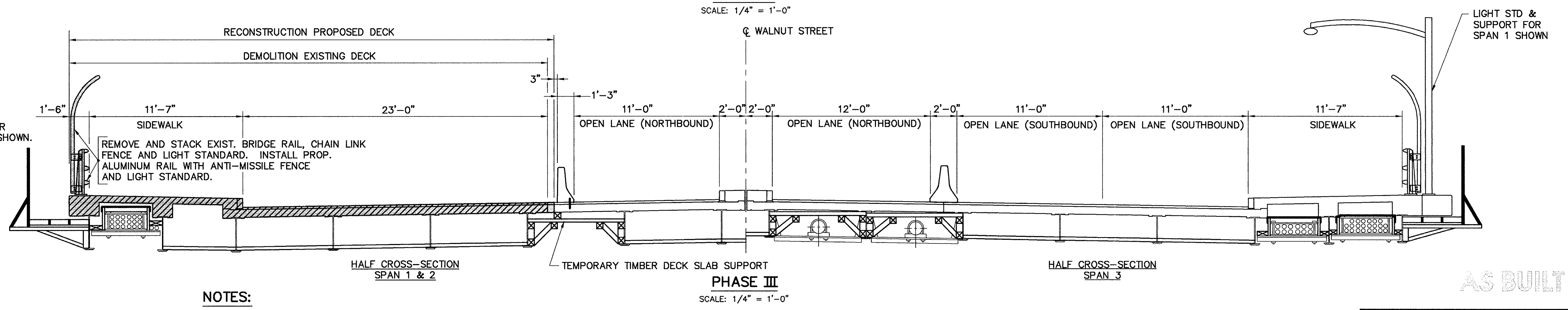
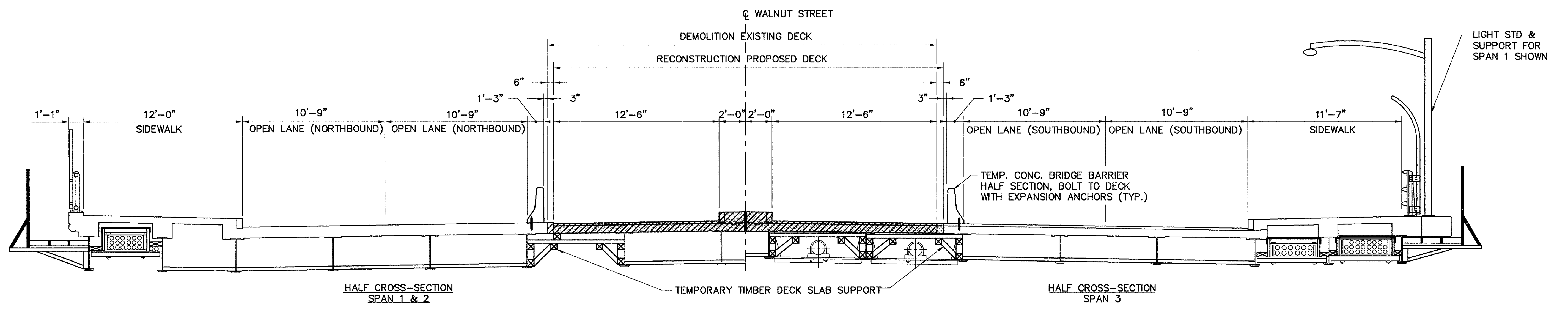
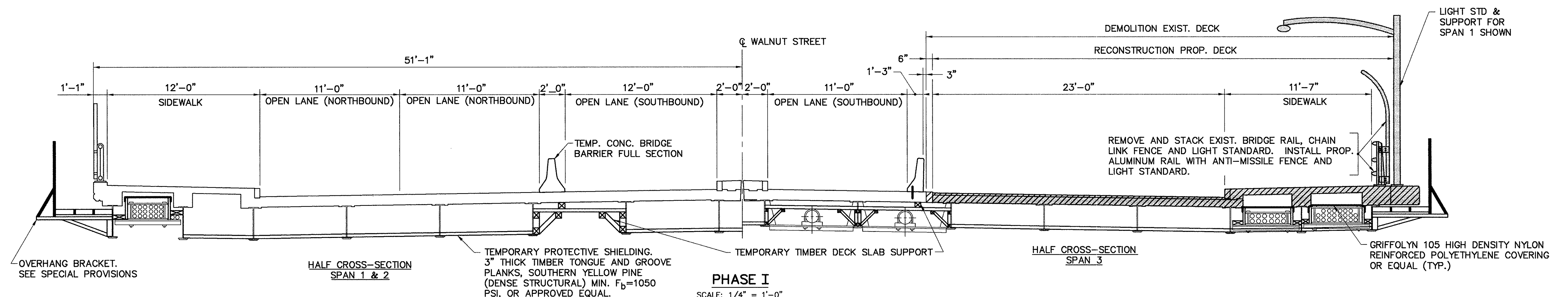
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
The Schreffl Center
229 Main Street
Boston, Massachusetts 02129

Sheet No.
40

NO.	REVISION	BY	DATE	IN CHARGE OF GTS

BY	DATE
DESIGNED: GRI	12/93
DRAWN: GK	12/93
CHECKED: EMM	12/93



NOTES:

1. ALL SECTIONS TAKEN LOOKING SOUTH.
2. TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN ALL STRINGERS, AROUND FASCIAS AND OVER THE EXISTING UTILITIES PRIOR TO ANY DEMOLITION WORK.
3. TEMP. CONC. BRIDGE & ROADWAY BARRIERS WILL BE PROVIDED BY THE AUTHORITY, AND TRANSPORTED AND PLACED BY THE CONTRACTOR.
4. LIGHT STANDARDS SHALL BE REMOVED AND REPLACED BY BOSTON EDISON.
5. A TIMBER DECK SLAB SUPPORT SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN. (SEE SPECIFICATIONS FOR DETAILS.)
6. SOUTH APPROACH MEDIAN SHALL BE REMOVED PRIOR TO START OF PHASE I AND REPLACED WITH PROPOSED APPROACH MEDIAN FOLLOWING COMPLETION OF PHASE III (SEE SPECIFICATIONS FOR DETAILS.)
7. FOR DECK SLAB CONSTRUCTION JOINT DETAIL SEE SHEET NO. 32.

LEGEND

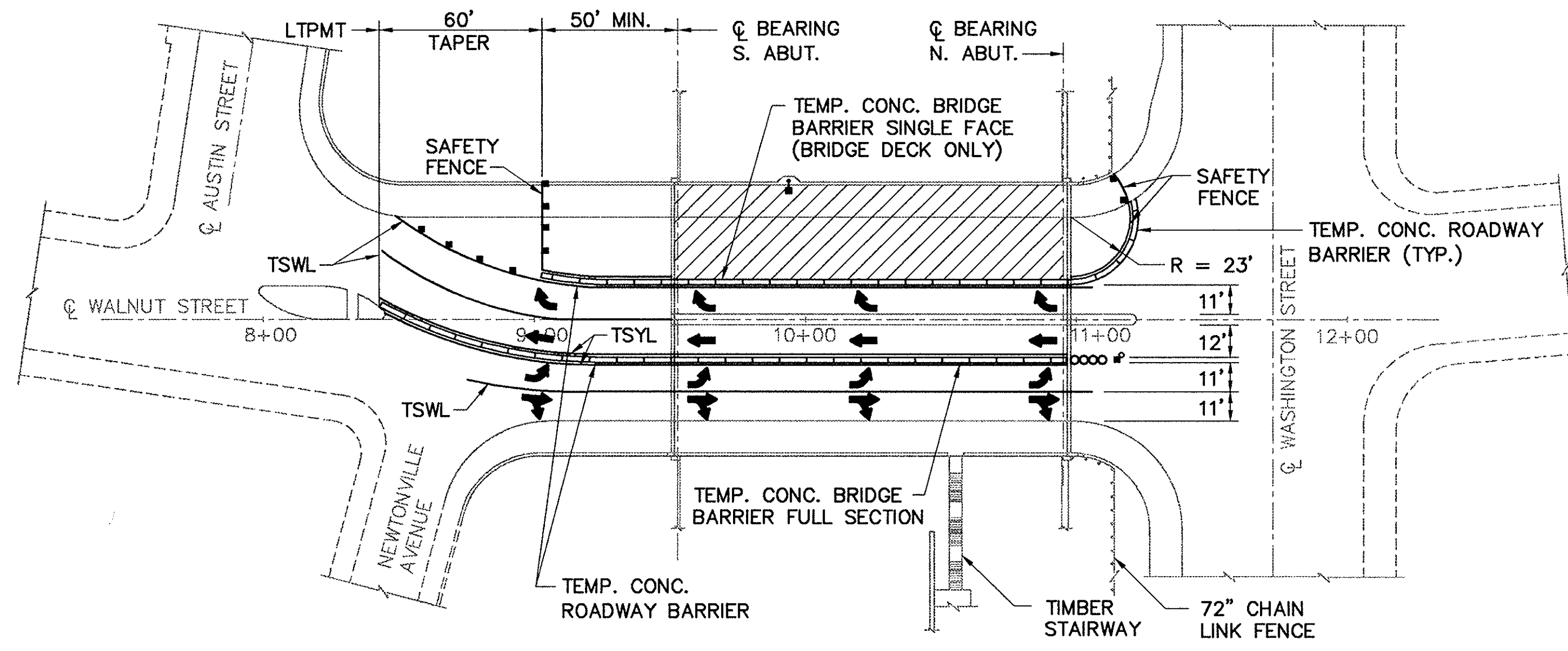
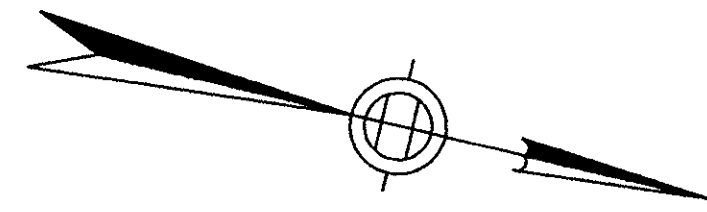
	DEMOLITION
	RECONSTRUCTION

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: ORI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	

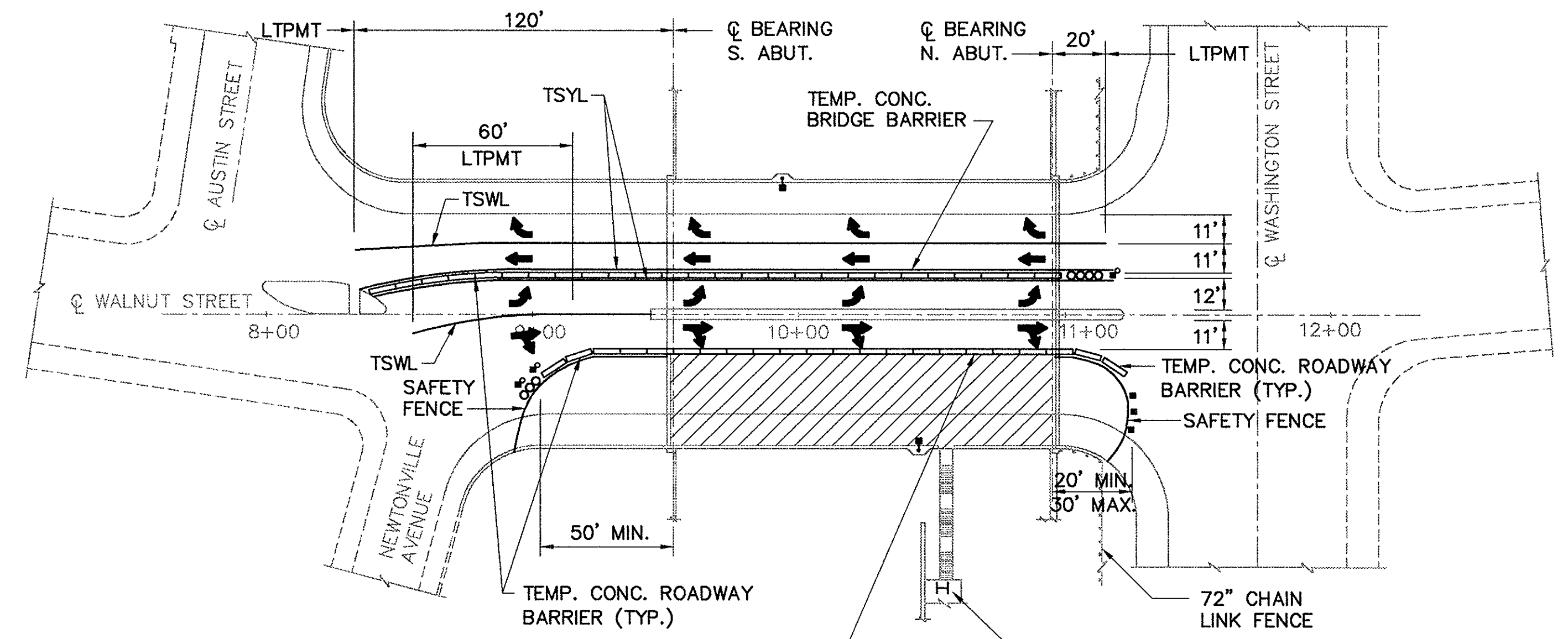
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

AS BUILT

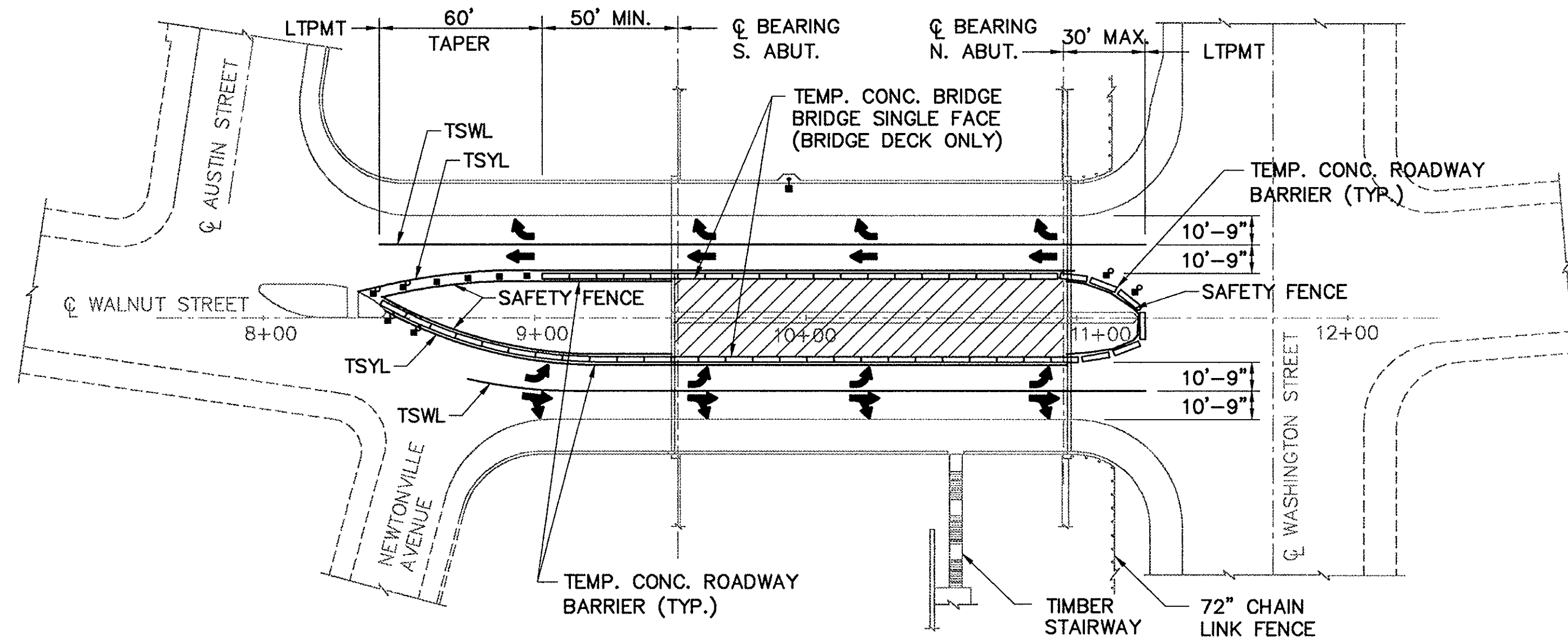
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR NO. S-23)	
SEQUENCE OF CONSTRUCTION	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schreff Center 629 Main Street Boston, Massachusetts 02129	Sheet No. 41



PHASE I
SCALE: 1" = 40'



PHASE III
SCALE: 1" = 40'



PHASE II
SCALE: 1" = 40'

NOTES:

1. SPACE BARRELS FOR SAFETY FENCE AT 8 FEET MAXIMUM.
2. ARROWS INDICATE DIRECTION OF TRAFFIC FLOW AND NOT ACTUAL SIGNING.
3. DURING PHASE III, PEDESTRIANS SHALL BE DIRECTED TO HARVARD STREET FOR ACCESS TO THE COMMUTER RAIL STATION. WALNUT STREET ACCESS SHALL BE CLOSED DURING PHASE III.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING UNAUTHORIZED ACCESS TO THE WORK AREA. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESIGN FOR A SAFETY FENCE TO BE CONSTRUCTED TO THE LIMITS OF THIS PLAN.
5. THE CONTRACTOR SHALL NOTIFY THE CITY OF NEWTON ONE WEEK BEFORE REMOVING THE TRAFFIC SIGNAL LOOP DETECTORS. TRAFFIC SIGNAL TIMING SHALL BE ADJUSTED IN ACCORDANCE WITH THE CITY OF NEWTON REQUIREMENTS.
6. SOUTH APPROACH MEDIAN TO BE REMOVED AND REPLACED WITH TEMP. BIT. CONC. PAVEMENT PRIOR TO START OF PHASE I. MEDIAN RECONSTRUCTION NECESSARY FOR BRIDGE JOINT RECONSTRUCTION IS TO BE COMPLETED IN PHASE II. THE REMAINDER TO BE COMPLETED AT THE END OF PHASE III.

LEGEND

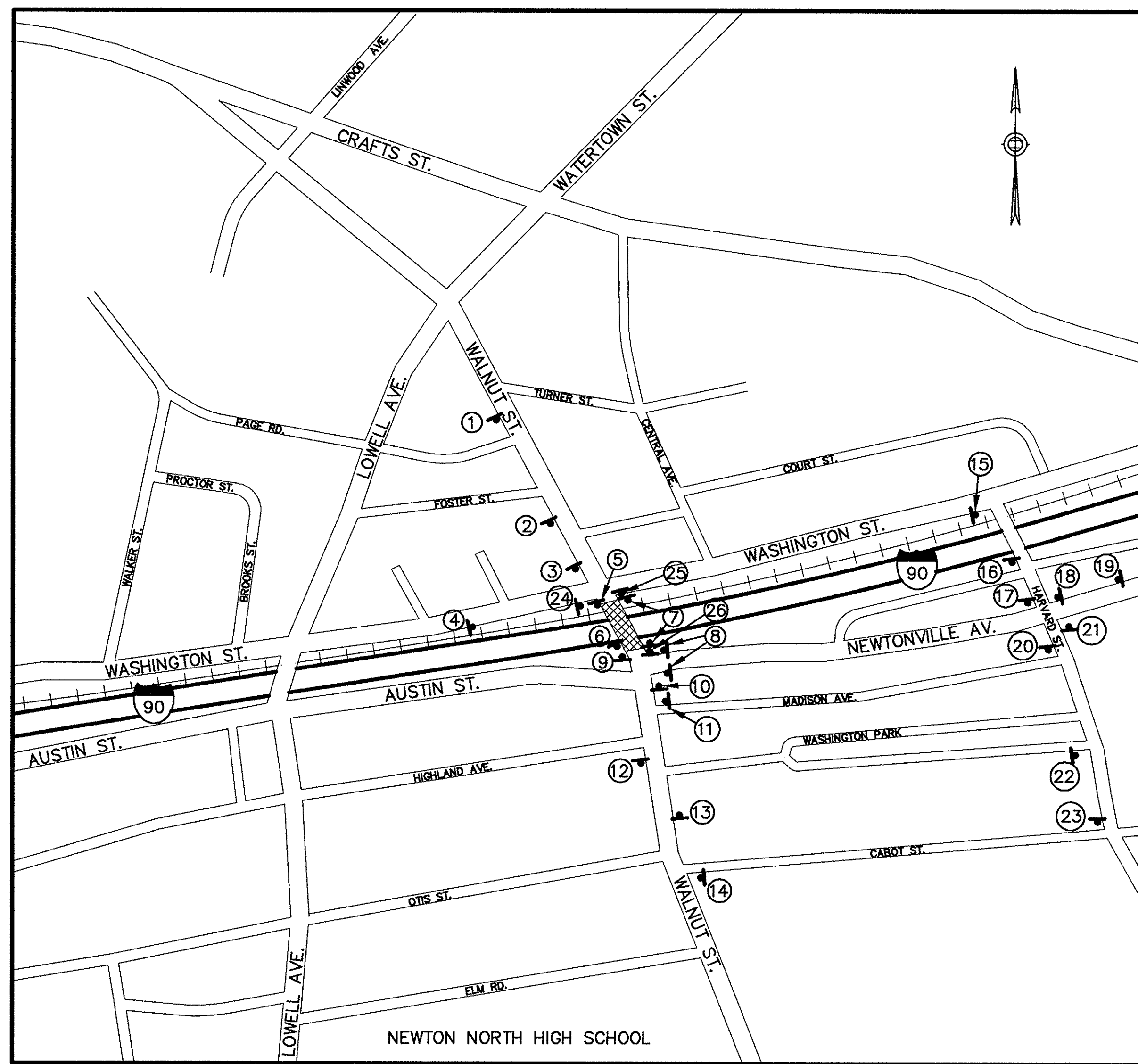
- AREA OF BRIDGE UNDER CONSTRUCTION
- TEMPORARY CONCRETE BRIDGE OR ROADWAY BARRIERS WITH REFLECTORIZED MARKERS
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM WITH STEADY BURN LIGHT
- INERTIAL BARRIER SYSTEM
- TYPE II BARRICADE
- DIRECTION OF TRAFFIC FLOW
- 4" TEMPORARY PAVEMENT MARKING TAPE
- LIMIT OF TEMPORARY PAVEMENT MARKING TAPE
- TEMPORARY SOLID YELLOW LINE
- TEMPORARY SOLID WHITE LINE

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: SAS	12/93	
		CHECKED: EMM	12/93	

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR. NO. S-23) TRAFFIC PHASING PLAN	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schoff Center 629 Main Street Boston, Massachusetts 02129	Sheet No. 42



ADVANCE WARNING & DETOUR SIGN PLAN
NOT TO SCALE

CONSTRUCTION SIGN LOCATION SCHEDULE

LOCATION NO.	SIGNS REQUIRED	LOCATION NO.	SIGNS REQUIRED
1	W20-1 (AHEAD)	14	M4-8a (PHASE 1 ONLY)
2	CS-2	15	CS-1a, M4-10R (PHASE 1 ONLY)
3	W1-3L	16	CS-3
4	CS-1 (PHASE 1 ONLY)	17	CS-3a
5	CS-7 (PHASE 1 ONLY)	18	CS-3b, M4-10L
6	R3-2, CS-2a	19	CS-3
7	CS-4 (PHASE 3 ONLY)	20	CS-3b, M4-10R
8	R3-2	21	M4-8a
9	CS-6 (PHASE 1 ONLY)	22	CS-2b, M4-10L
10	W1-3L (PHASE 3 ONLY)	23	CS-1a, M4-10R (PHASE 1 ONLY)
11	CS-3c, M4-10R	24	CS-5 (PHASE 1 ONLY)
12	CS-2b, M4-10L	25	CS-6 (PHASE 3 ONLY)
13	W20-1 (AHEAD)	26	CS-7 (PHASE 3 ONLY)

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
R3-2	24"	24"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			3	SEE FHWA STANDARD HIGHWAY SIGNS 1979		
W1-3L	36"	36"					2			
W20-1 (AHEAD)	36"	36"					2			
M4-10R M4-10L	48"	18"					7			
M4-8a	24"	18"					2			
CS-1	72"	30"		5" C 5" C 5" C	3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-1a	48"	48"		6" C 6" C	4" 4"		2	ORANGE	BLACK	BLACK
CS-2	72"	30"		5" C 5" C 5" C	3" 3"		1	ORANGE	BLACK	BLACK
CS-2a	72"	24"		5" C 5" C	3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-2b	72"	24"		5" C 5" C	3"		2	ORANGE	BLACK	BLACK
CS-3	72"	36"		5" C 5" C 5" C 5" C	3" 3" 3" 3"		2	ORANGE	BLACK	BLACK
CS-3a	72"	30"		5" C 5" C 5" C 5" C	3" 3" 3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-3b	72"	24"		5" C 5" C	3"		2	ORANGE	BLACK	BLACK
CS-3c	48"	48"		6" C 6" C	4"		1	ORANGE	BLACK	BLACK
CS-4	72"	30"		5" C 5" C 5" C	3" 3"		1	ORANGE	BLACK	BLACK
CS-5	48"	48"		6" C 6" C 6" C	4" 4"		2	ORANGE	BLACK	BLACK
CS-6	72"	30"		5" C 5" C	3"	6" X 10" @ 180°	2	ORANGE	BLACK	BLACK
CS-7	72"	30"		5" C 5" C	3"	6" X 10" @ 0°	2	ORANGE	BLACK	BLACK

GENERAL NOTE:
ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PART VI AND "STANDARD HIGHWAY SIGNS", CURRENT EDITION.

- NOTES:
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - ALL DETOUR SIGNING TO BE PLACED PRIOR TO PHASE 1 AND MAINTAINED BY THE CONTRACTOR UNTIL THE PROJECT IS COMPLETED.
 - MISSING OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT NO COST TO THE AUTHORITY.

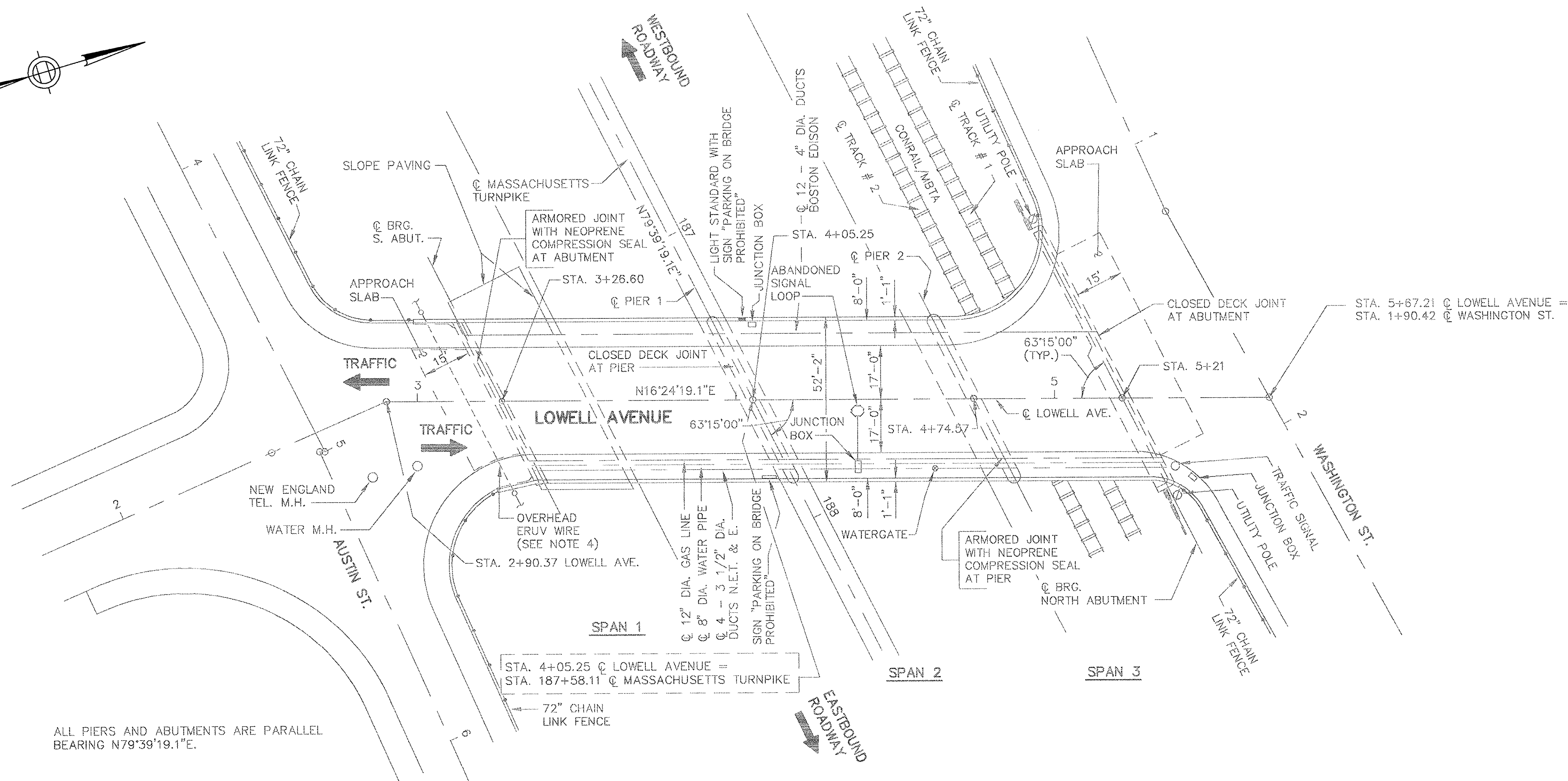
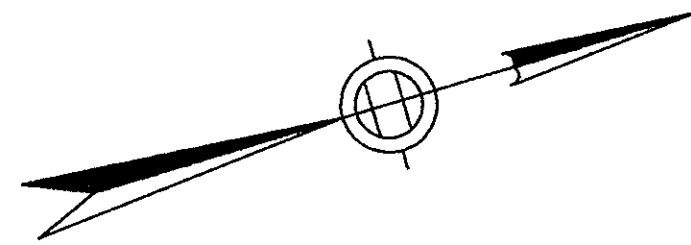
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.

BY	DATE
DESIGNED: T.A.Z.	12/93
DRAWN: S.B.S.	12/93
CHECKED: L.M.B.	12/93

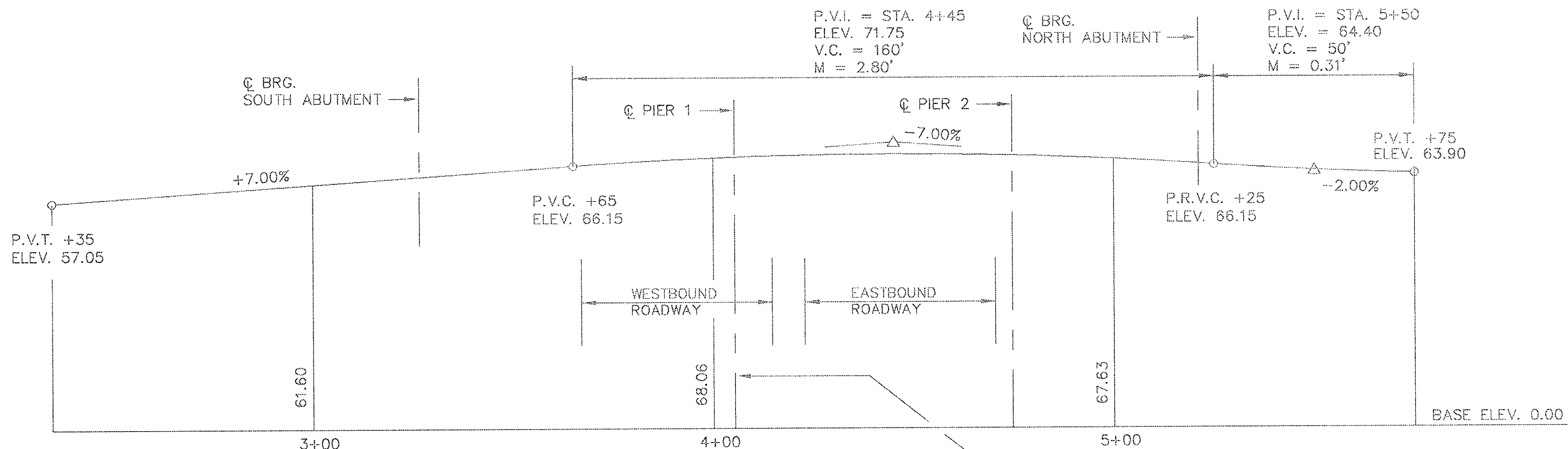
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR. NO. S-23)
TRAFFIC DETOUR PLAN AND SIGNING
 Scale: NOT TO SCALE Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 43
 The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129



ALL PIERS AND ABUTMENTS ARE PARALLEL BEARING N79°39'19.1\"/>

EXISTING PLAN
SCALE: 1" = 20'



PROFILE - LOWELL AVENUE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 20'

STA. 4+05.25 @ LOWELL AVENUE =
STA. 187+58.11 @ MASSACHUSETTS TURNPIKE

NOTES

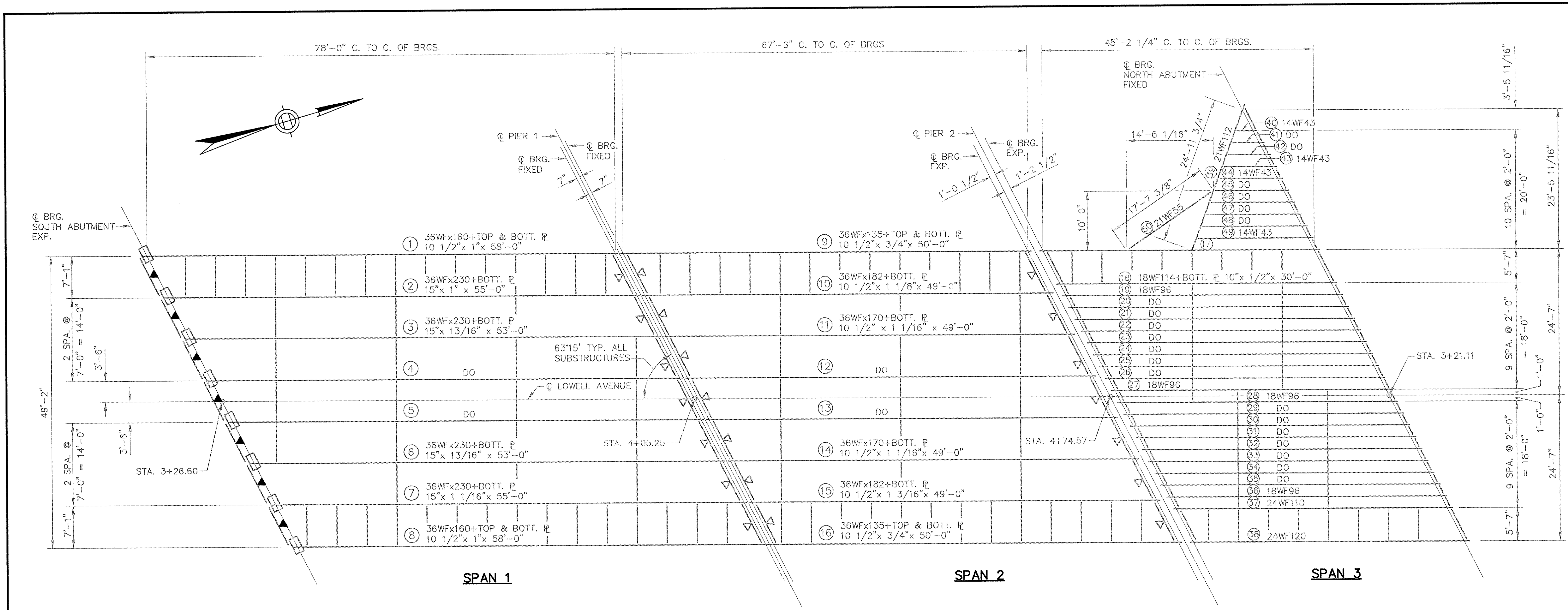
- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILTS AND NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS BASED ON USC & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LOWELL AVENUE (STR. NO. S-22)	
EXISTING PLAN AND PROFILE	
Scale: 1" = 20'	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schraft Center 525 Main Street Boston, Massachusetts 02129	Sheet No. 44

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



FRAMING PLAN
SCALE: 1/8" = 1'-0"

LEGEND

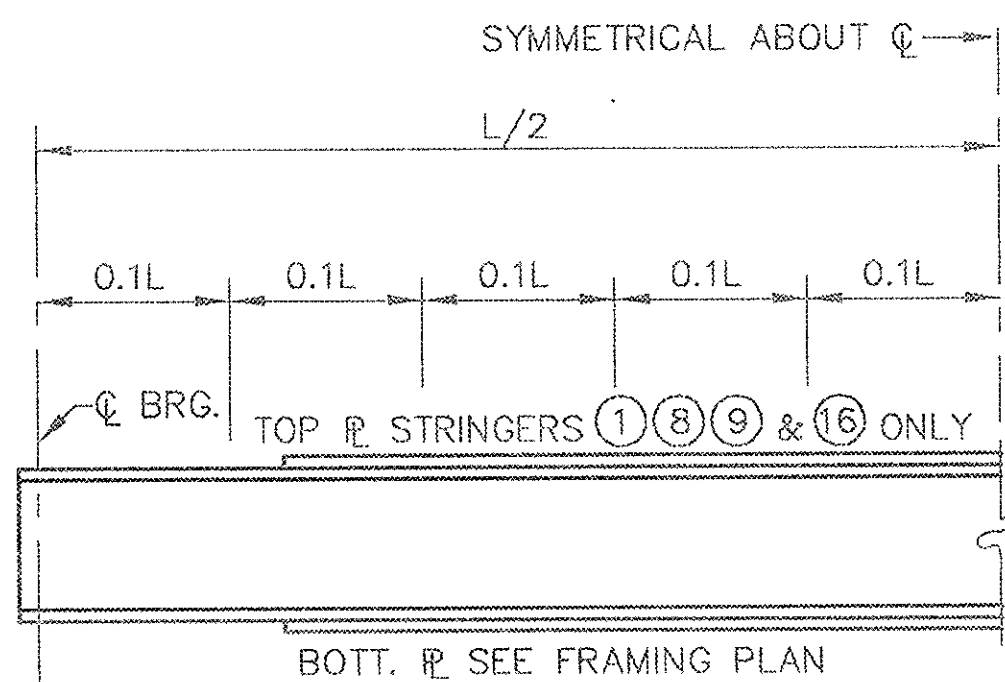
- 1. DENOTES EXISTING EXPANSION BEARING.
- 2. DIAPHRAGM WITH EXISTING SHEAR CONNECTORS (7/8" DIA. x 4" @ 8" CENTERS)
- 2. EXISTING DIAPHRAGM (PROPOSED 7/8" DIA. x 4" HIGH SHEAR STUD CONNECTORS @ 8" O.C.)

NOTES

- 1. DIMENSIONS FOR THE FRAMING PLAN ARE FROM THE "AS BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
- 2. SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.

EXISTING SHEAR CONNECTOR SCHEDULE

STRINGER NO.	0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	NO. OF 3/4" DIA. STUDS/ROW	HEIGHT
① ⑧ ⑨ ⑬	12"	12"	12"	12"	12"	2	6"
② ⑦	6"	7"	6"	11"	15"	3	4"
③ THRU ⑥ & ⑪ THRU ⑭	7 1/2"	9"	11"	12 1/2"	16"	3	4"
⑩ & ⑮	5 1/2"	6 1/2"	8 1/2"	10 1/2"	15"	3	4"
⑲ THRU ⑳	12"	12"	12"	12"	12"	2	3"
⑳	9"	10"	12 1/2"	15 1/2"	19"	2	4"
⑲ THRU ⑳	17"	20"	24"	24"	24"	2	3"
⑲ ⑳ ⑳ ⑳	12"	12"	12"	12"	12"	2	4"

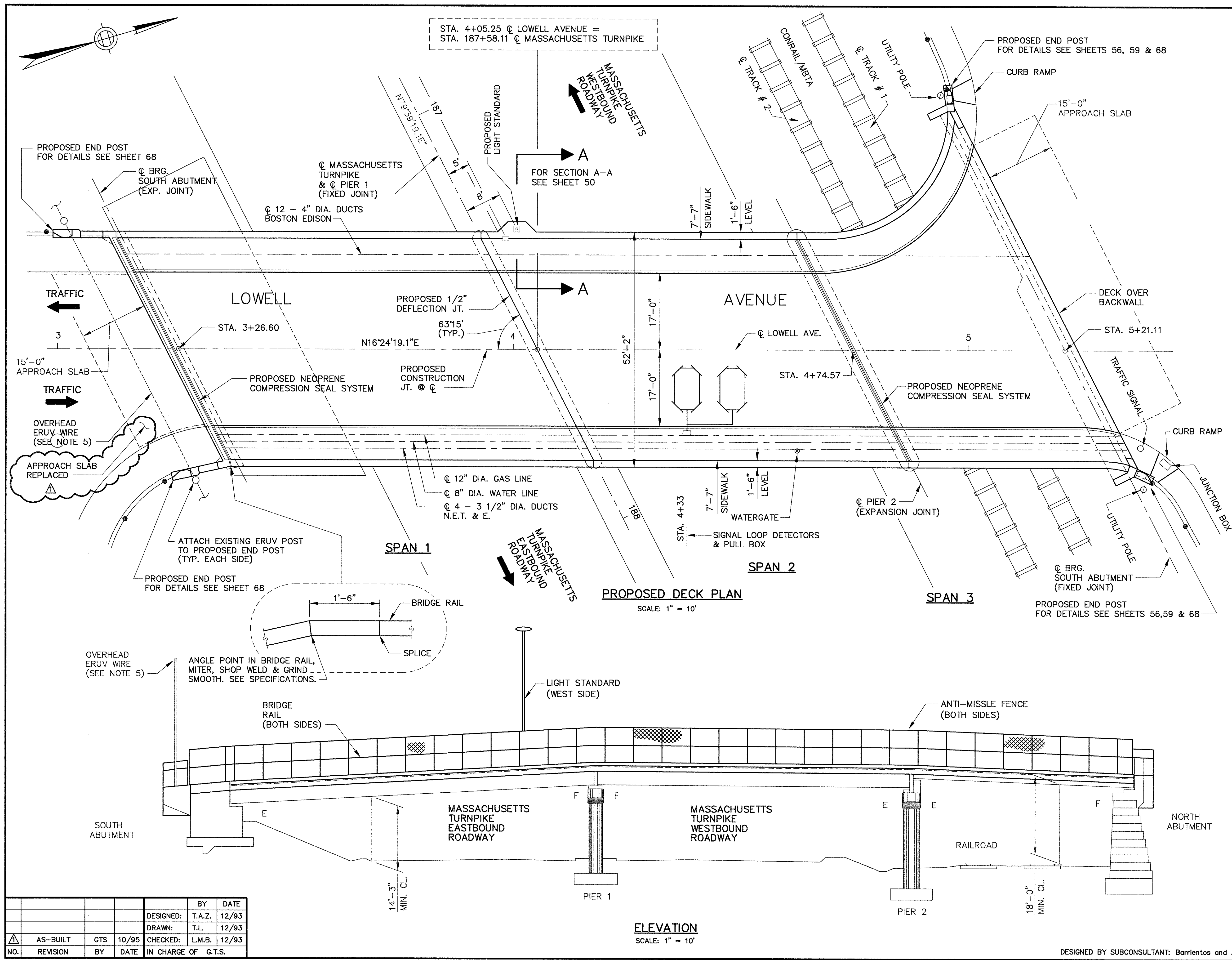


AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
FRAMING PLAN
 Scale: AS SHOWN Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 45
 523 Main Street
 Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



GENERAL NOTES

- DESIGN LOADING:**
A.A.S.H.T.O. LOADING HS20-44.
- MATERIALS:**
- SPAN 3 DECK SLAB SHALL BE COMPOSED OF POLYMER MODIFIED CONCRETE (PMC) (ITEM C6S-4). CONCRETE FOR DECK SLAB, SIDEWALKS & END POSTS SHALL BE CLASS 'D' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4500$ PSI.
 - CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=5000$ PSI.
 - ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
 - ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
 - ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
 - FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR, TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
- STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SPECIFICATIONS SECTION C25A OF SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1c.
- TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
- E DENOTES EXPANSION BEARING. F DENOTES FIXED BEARING.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- POLYMER MODIFIED CONCRETE (PMC) FOR SPAN 3 SHALL BE PAID FOR ON A LUMP SUM BASIS IN ITEM C6S-4.
- CONCRETE SIDEWALK IN SPAN 3 SHALL BE INCLUDED IN ITEM C6S-4.
- STEEL BAR REINFORCING ON SPAN 3 IS INCLUDED IN ITEM C6S-4.

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	T.A.Z.	12/93
		DRAWN:	T.L.	12/93
		CHECKED:	L.M.B.	12/93
		BY	G.T.S.	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
PROPOSED DECK PLAN

Scale: AS SHOWN Contract No. 521-024

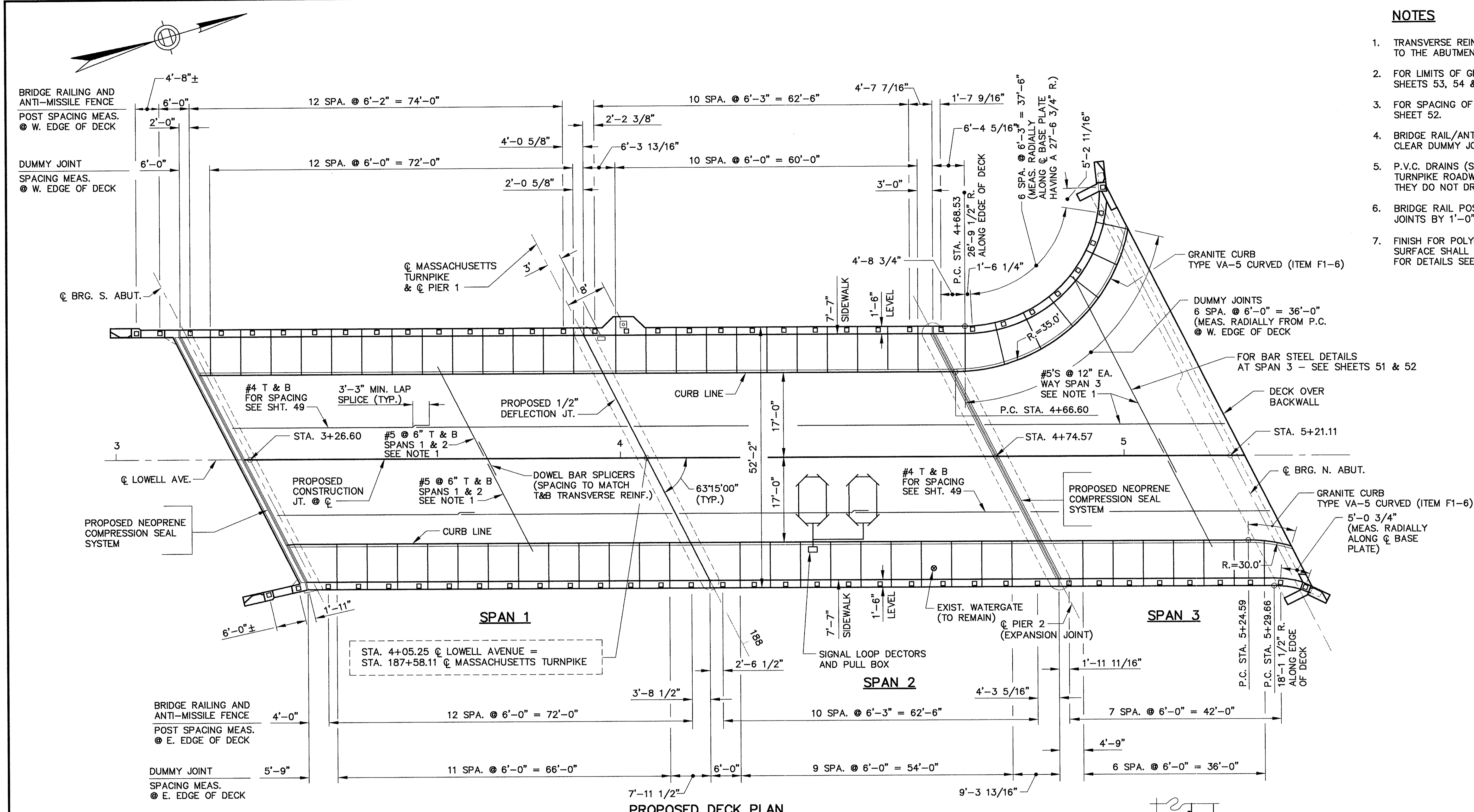
EDWARDS AND KELCEY, INC.
The Schreffel Center
229 Main Street
Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

Sheet No. 46

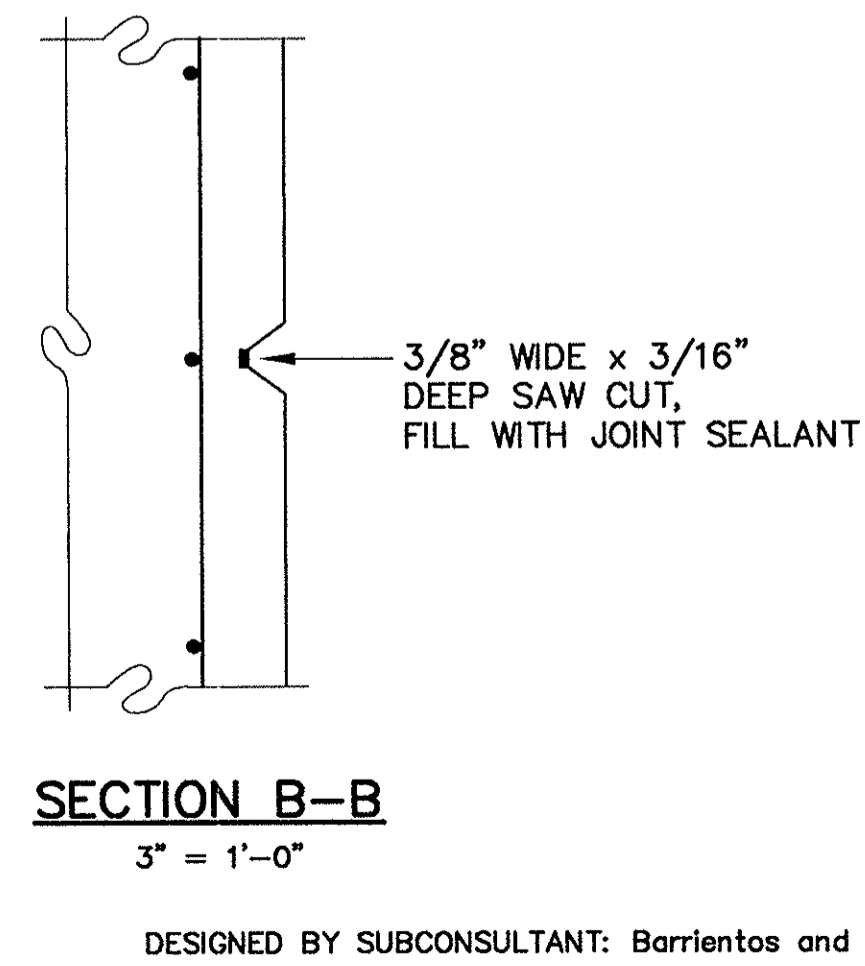
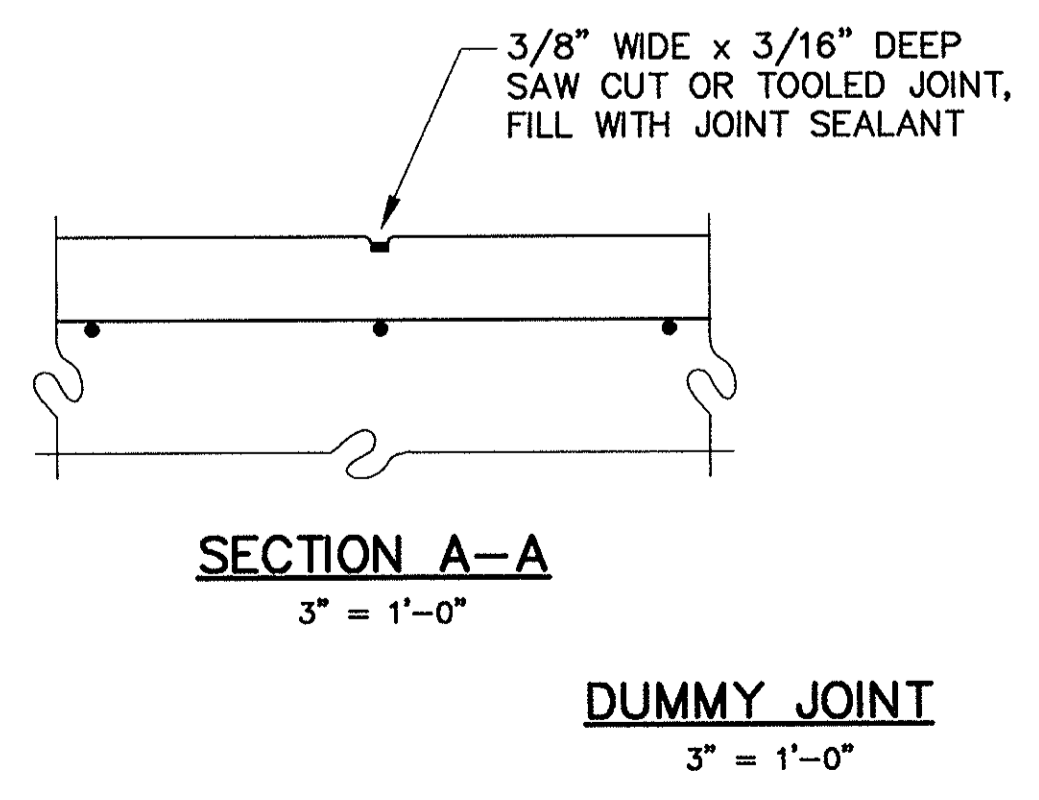
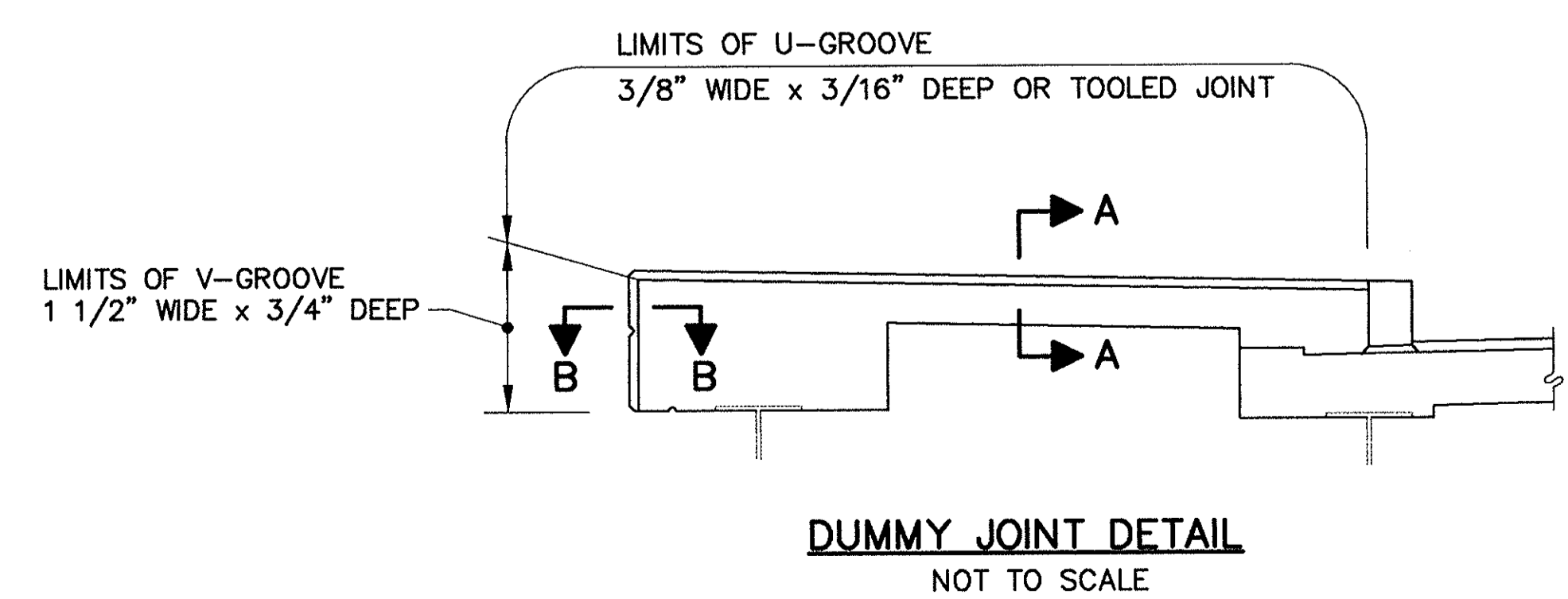
NOTES

1. TRANSVERSE REINFORCEMENT SHALL BE PARALLEL TO THE ABUTMENTS AND PIERS.
2. FOR LIMITS OF GRANITE CURB AT ROADWAY JOINTS SEE SHEETS 53, 54 & 55.
3. FOR SPACING OF REINFORCING STEEL NOT SHOWN, SEE SHEET 52.
4. BRIDGE RAIL/ANTI-MISSILE FENCE POST SPACING SHALL CLEAR DUMMY JOINTS BY 12" MINIMUM.
5. P.V.C. DRAINS (SEE SHEET 50) LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED SO THAT THEY DO NOT DRAIN ONTO THE TRAVELED WAY.
6. BRIDGE RAIL POST SPACING SHALL CLEAR DUMMY JOINTS BY 1'-0" MINIMUM.
7. FINISH FOR POLYMER MODIFIED CONCRETE WEARING SURFACE SHALL BE SAWCUT TRANSVERSE GROOVES. FOR DETAILS SEE SHEET 49.



DUMMY JOINT NOTES

1. A MORTARED JOINT IN THE CURB SHALL BE PLACED AT EACH DUMMY JOINT.
2. JOINT SEALER TO BE SAME COLOR AS CONCRETE.
3. JOINTS TO BE SQUARE TO FACE OF CURB.



AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	T.A.Z. 12/93	
		DRAWN:	T.L. 12/93	
		CHECKED:	L.M.B. 12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
DECK PLAN AND DETAILS

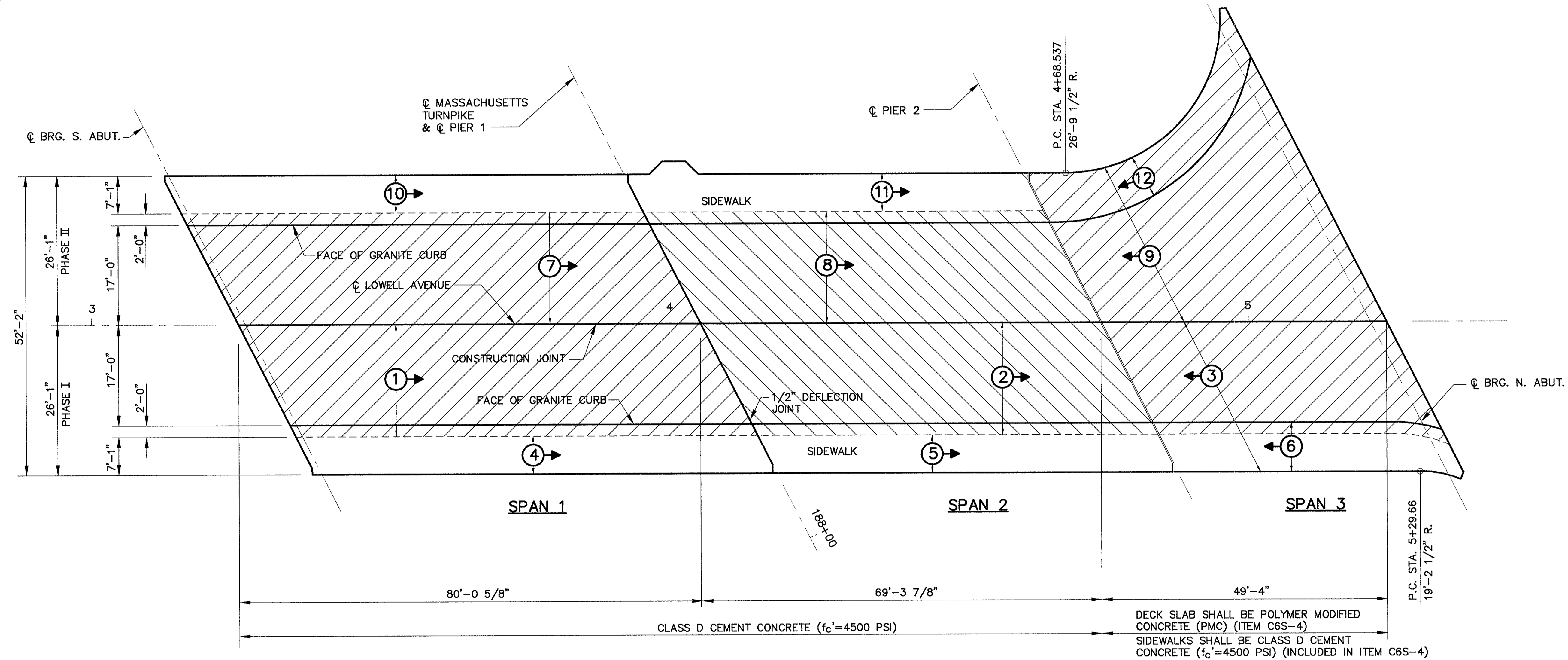
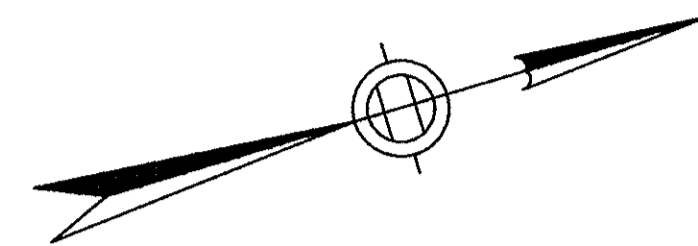
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 47

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

NOTES

1. (X) NUMBERS INDICATE SEQUENCE OF PLACEMENT.
2. PLACEMENT SHALL BE CONTINUOUS FOR EACH PLACING BLOCK.
3. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
4. FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEET 62.



PLACING SEQUENCE FOR CONCRETE DECK

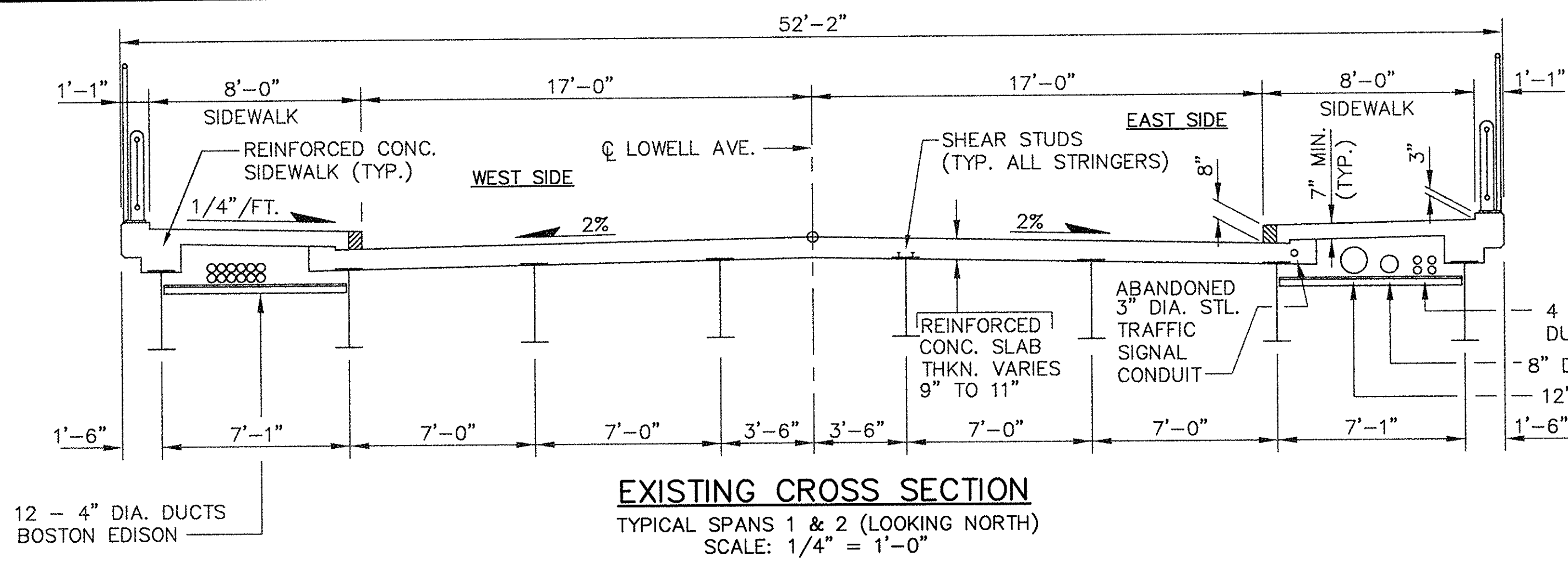
SCALE: 1" = 10'

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

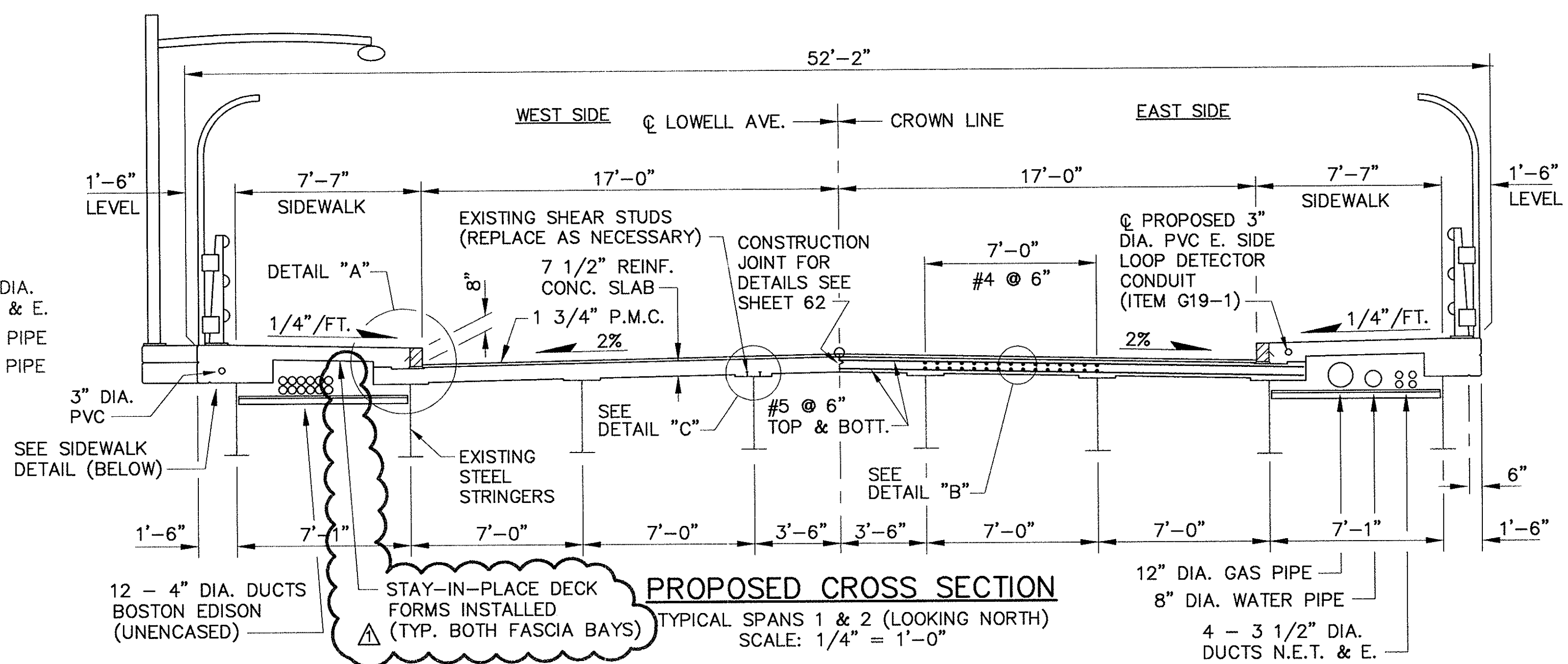
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LOWELL AVENUE (STR. NO. S-22) CONCRETE PLACING SEQUENCE	
Scale: AS SHOWN	Contract No. 521-024
EDWARDS AND KELCEY, INC. <small>The Schrafft Center 329 Main Street Boston, Massachusetts 02129</small>	
	Sheet No. 48

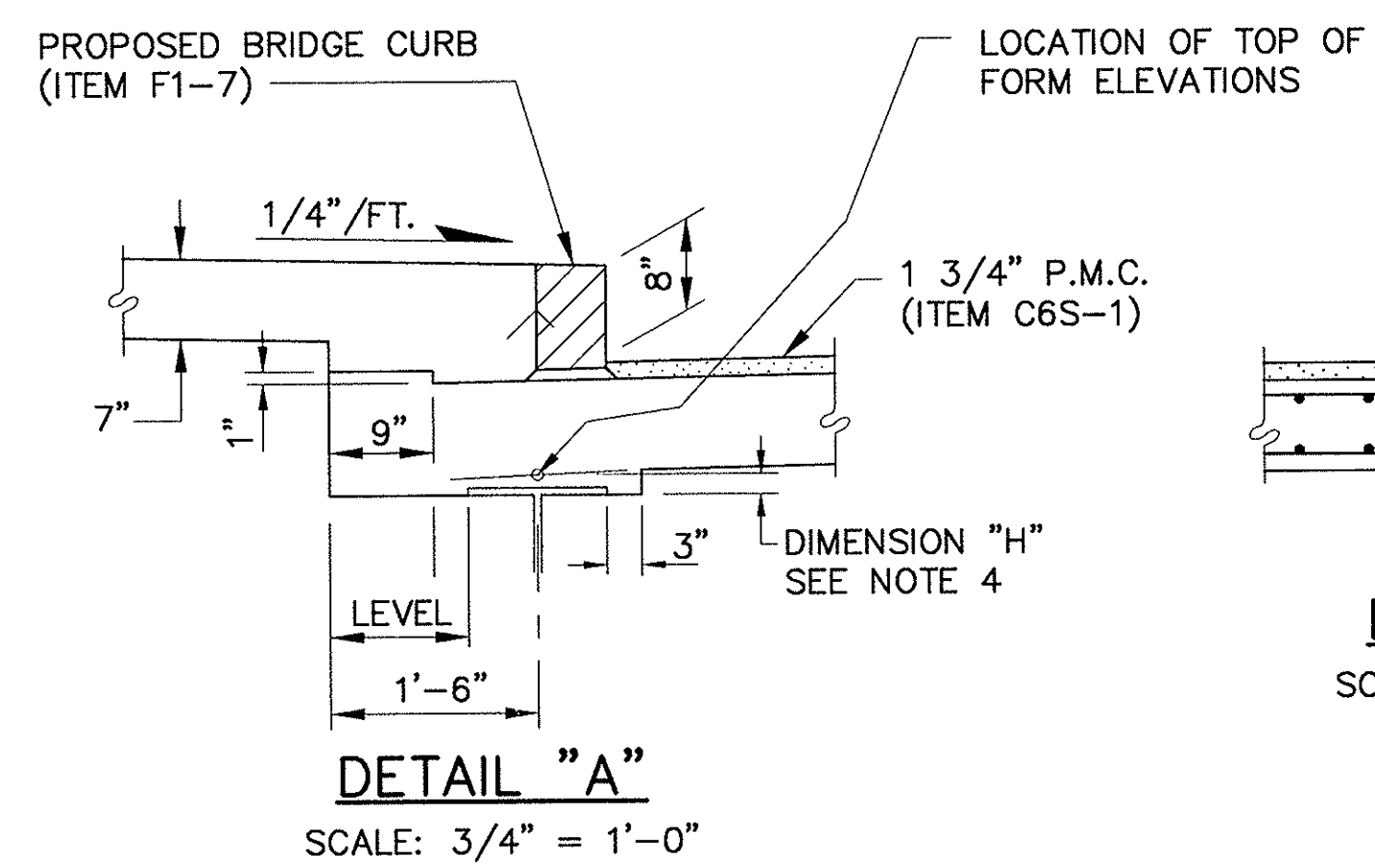
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



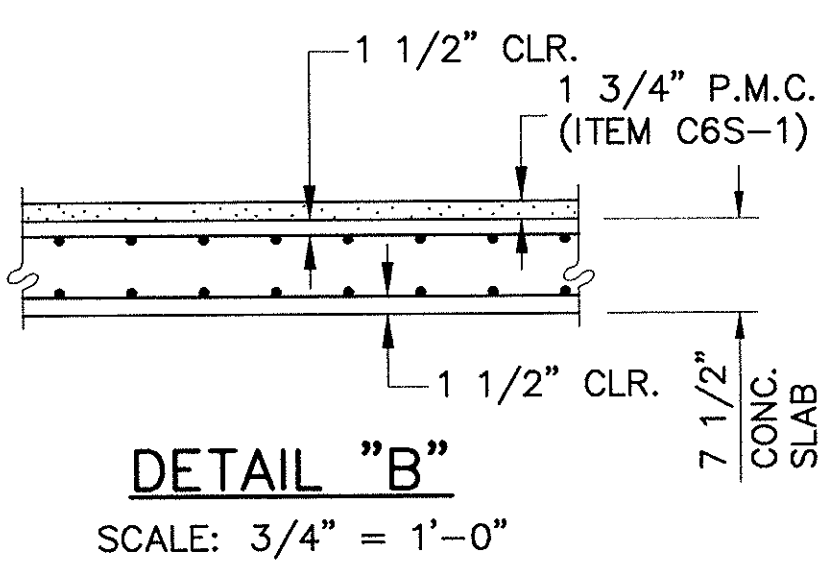
EXISTING CROSS SECTION
TYPICAL SPANS 1 & 2 (LOOKING NORTH)
SCALE: 1/4" = 1'-0"



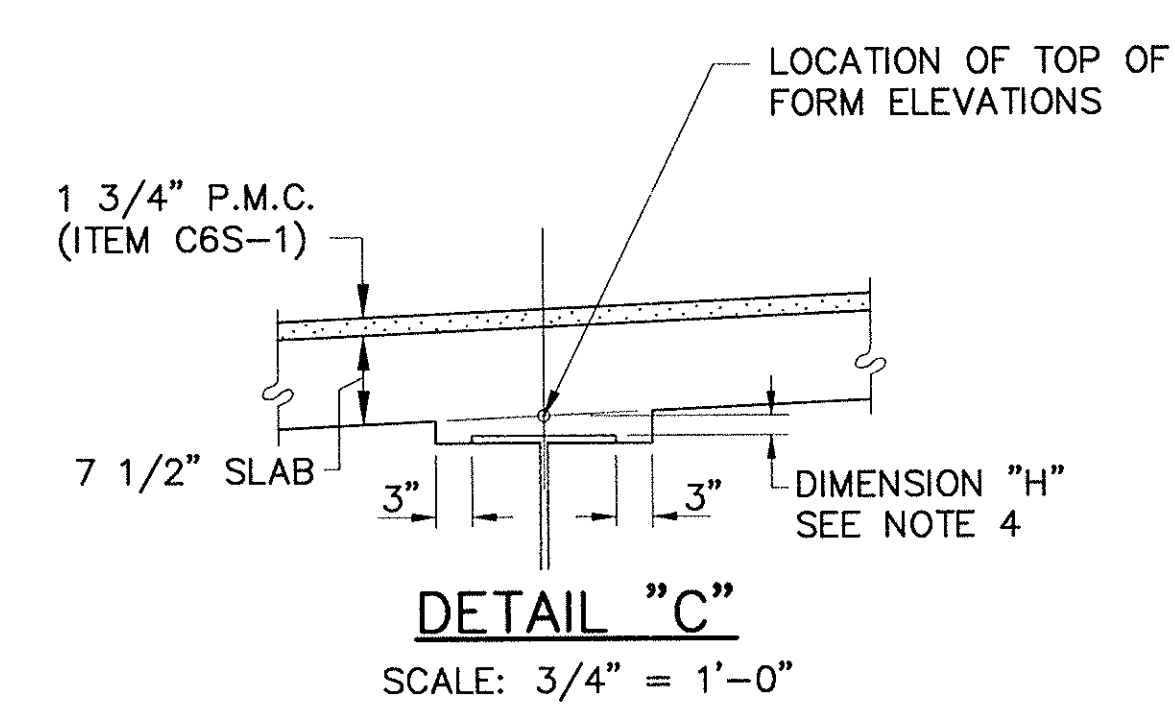
PROPOSED CROSS SECTION
TYPICAL SPANS 1 & 2 (LOOKING NORTH)
SCALE: 1/4" = 1'-0"



DETAIL "A"
SCALE: 3/4" = 1'-0"



DETAIL "B"
SCALE: 3/4" = 1'-0"

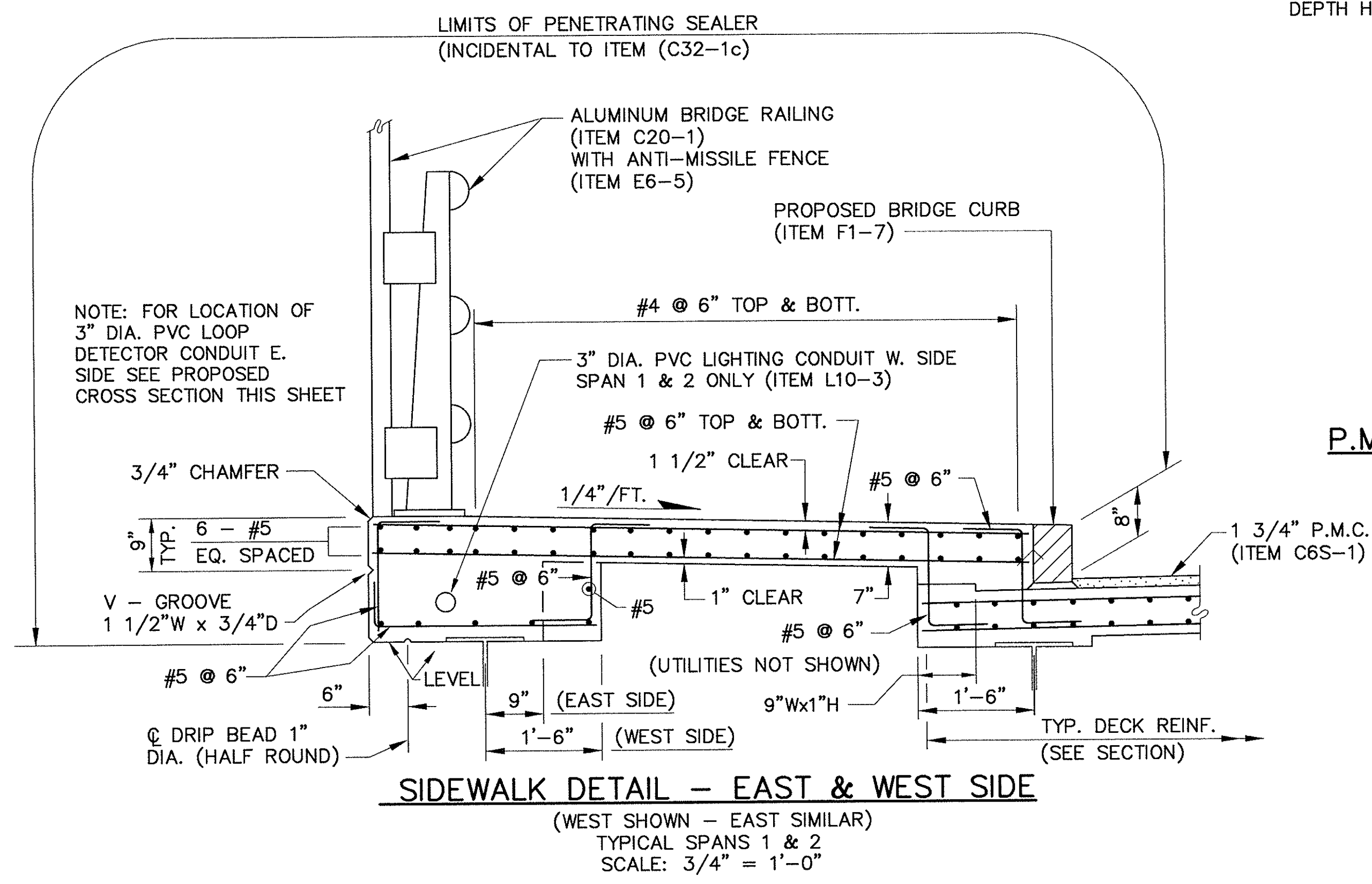


DETAIL "C"
SCALE: 3/4" = 1'-0"

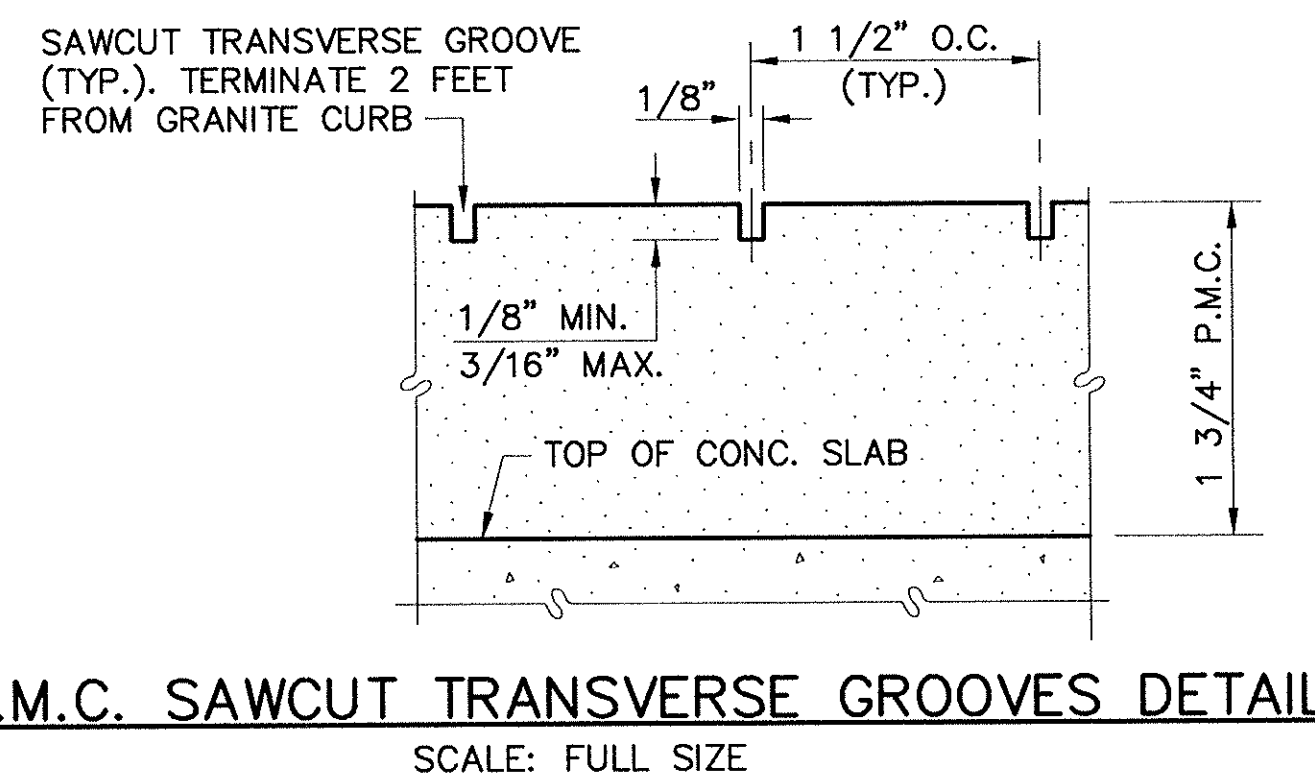
* FOR LOCATION OF TOP OF FORM ELEVATIONS SEE DETAILS "A" AND "C"

* HAUNCH DEPTH "H" (INCHES) FOR SETTING TOP OF FORMS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE

BEAM NO.	INCREASING STATIONS								
	¢ BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	¢ BRG.
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									



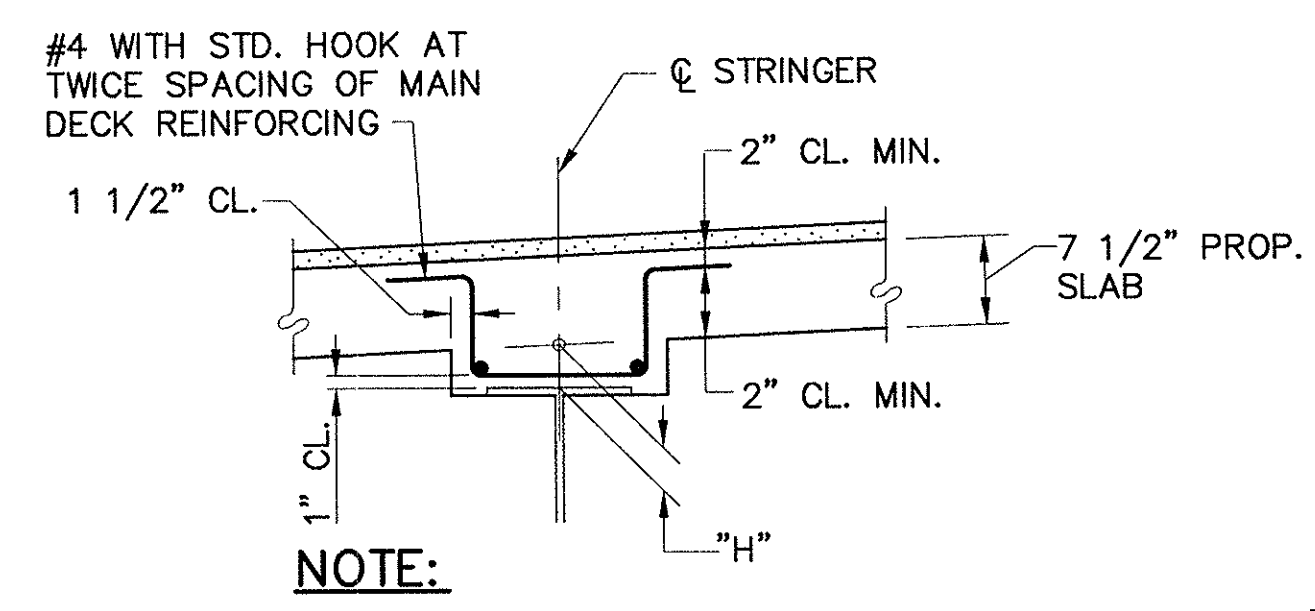
SIDEWALK DETAIL - EAST & WEST SIDE
(WEST SHOWN - EAST SIMILAR)
TYPICAL SPANS 1 & 2
SCALE: 3/4" = 1'-0"



P.M.C. SAWCUT TRANSVERSE GROOVES DETAIL
SCALE: FULL SIZE

NOTES (SPANS 1 & 2):

- ALL REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK AND SAFETY WALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
- TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
- CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG CENTERLINE STRINGERS PRIOR TO CONCRETE REMOVAL, AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED. SEE SPECIAL PROVISIONS C1-D.
- SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE ($f_c = 4500$ PSI).



EXTRA DEPTH HAUNCH DETAIL
NOT TO SCALE
(ITEM C32-2)

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	
		BY	DATE		

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

AS BUILT

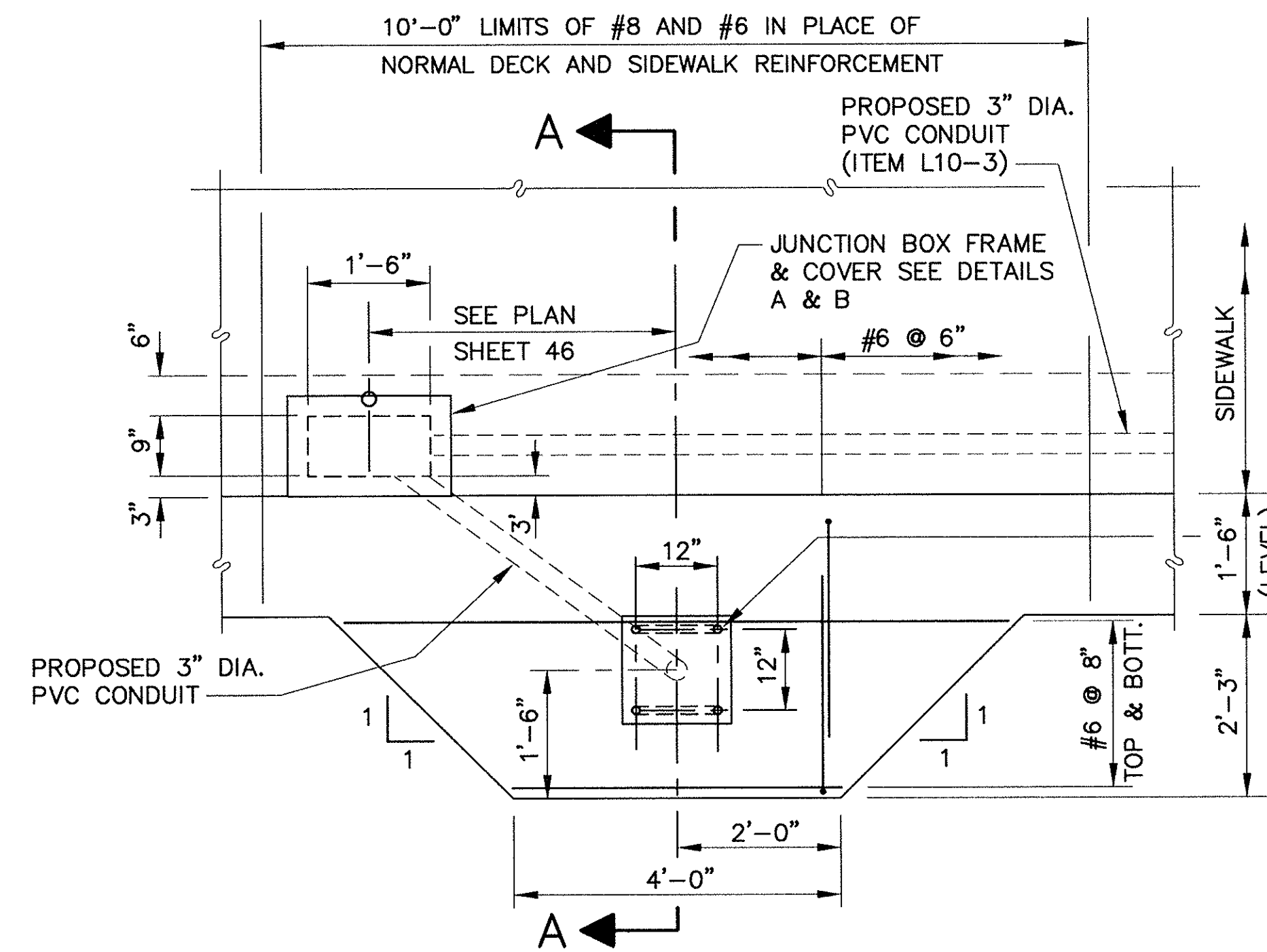
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SECTIONS AND DETAILS
SPANS 1 & 2

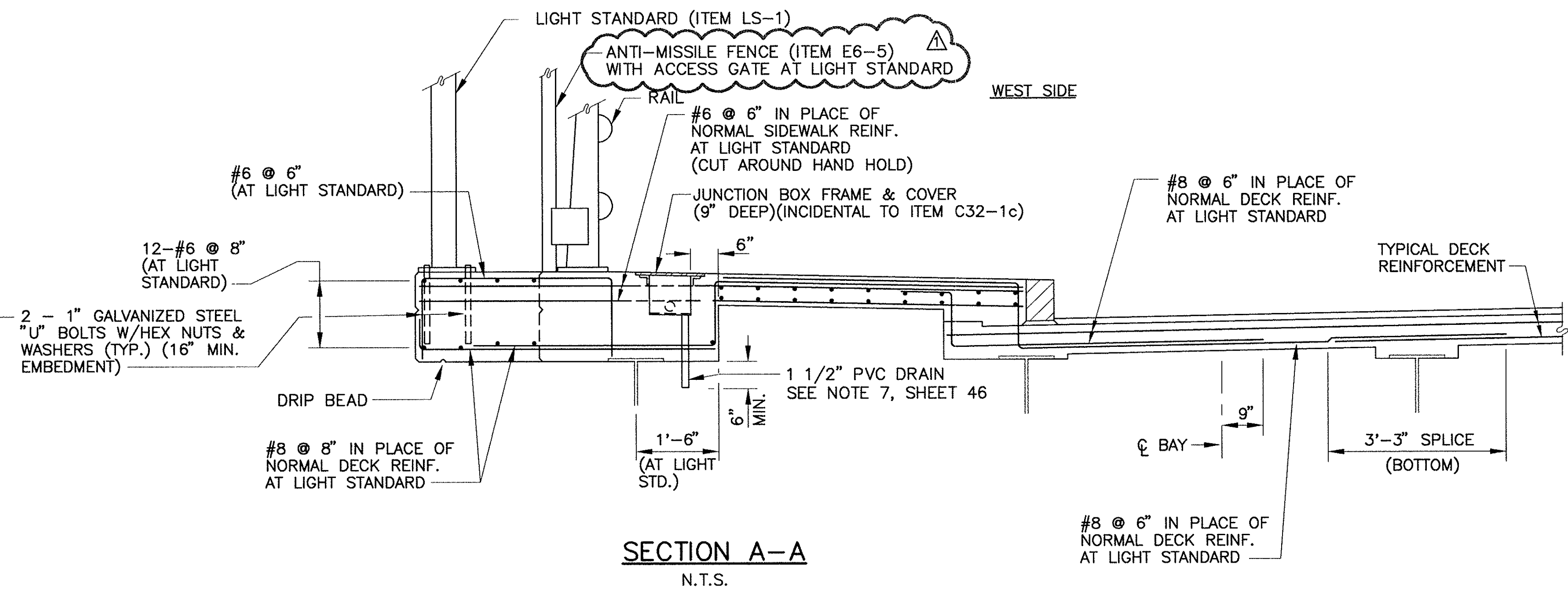
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 49

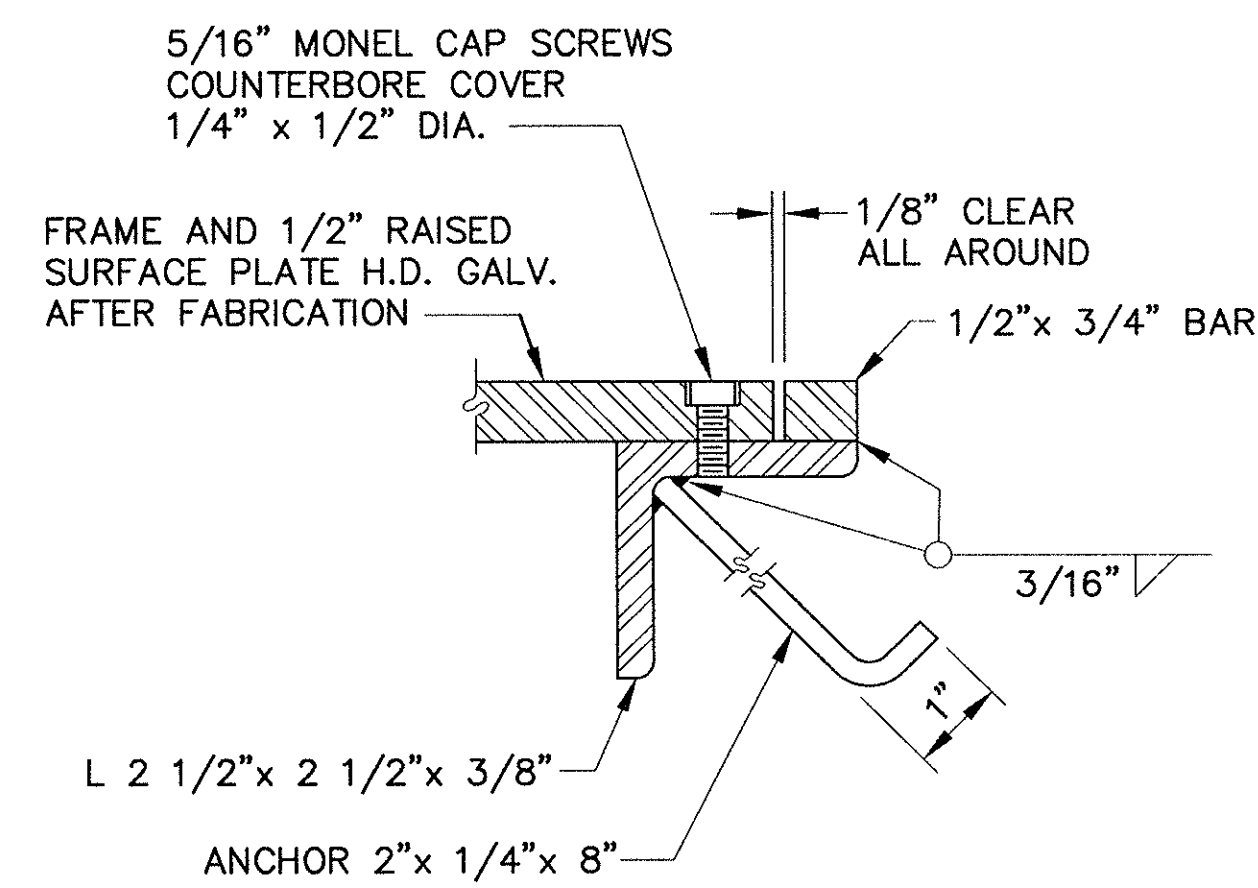
529 Main Street
Boston, Massachusetts 02129



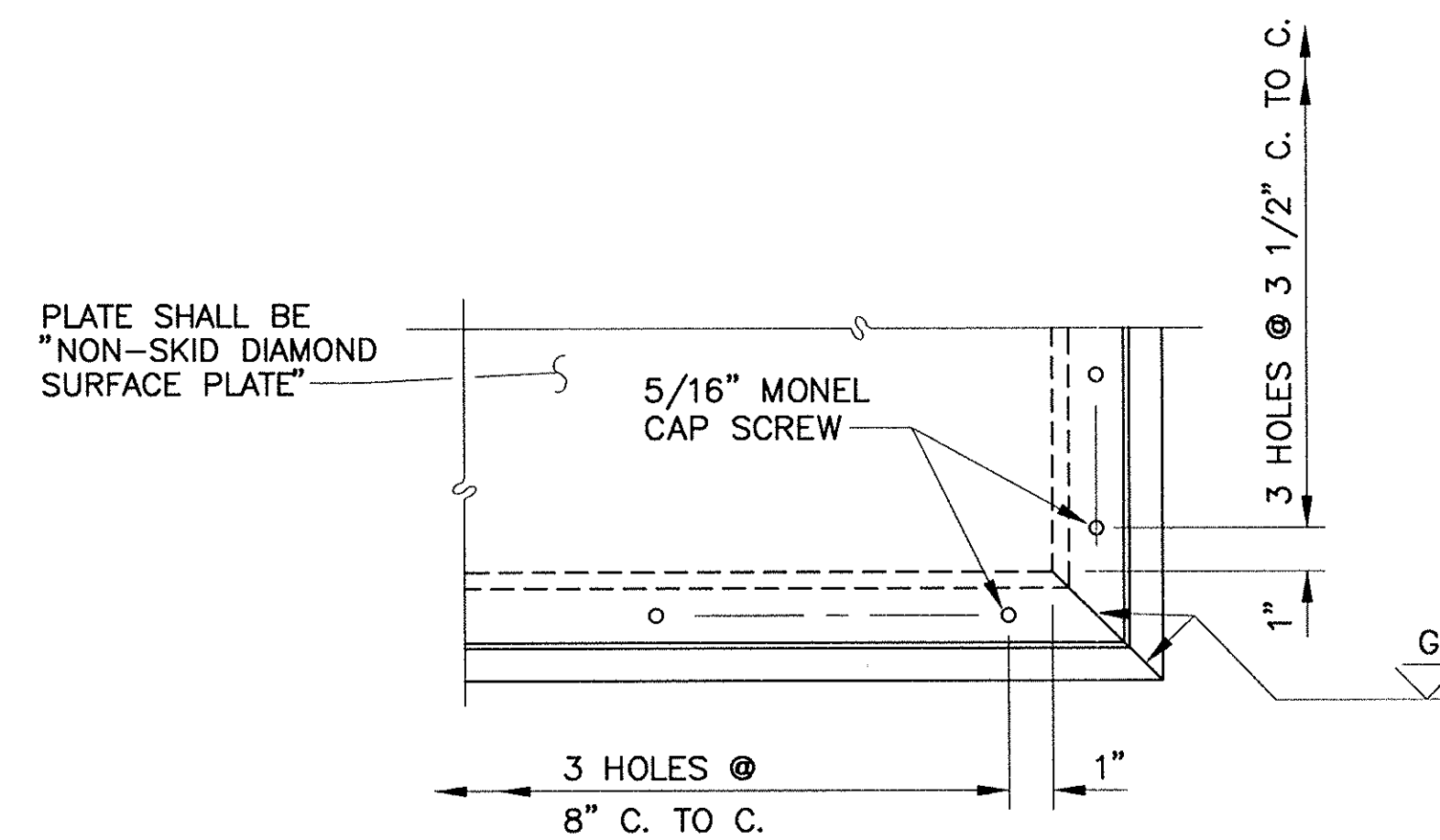
PLAN PROPOSED LIGHT POLE SUPPORT (WEST SIDE)
N.T.S.



SECTION A-A
N.T.S.



DETAIL B
SCALE: HALF SIZE



DETAIL A
SCALE: 3" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	
		BY	GTS	10/95	
		IN CHARGE OF	G.T.S.		

AS BUILT

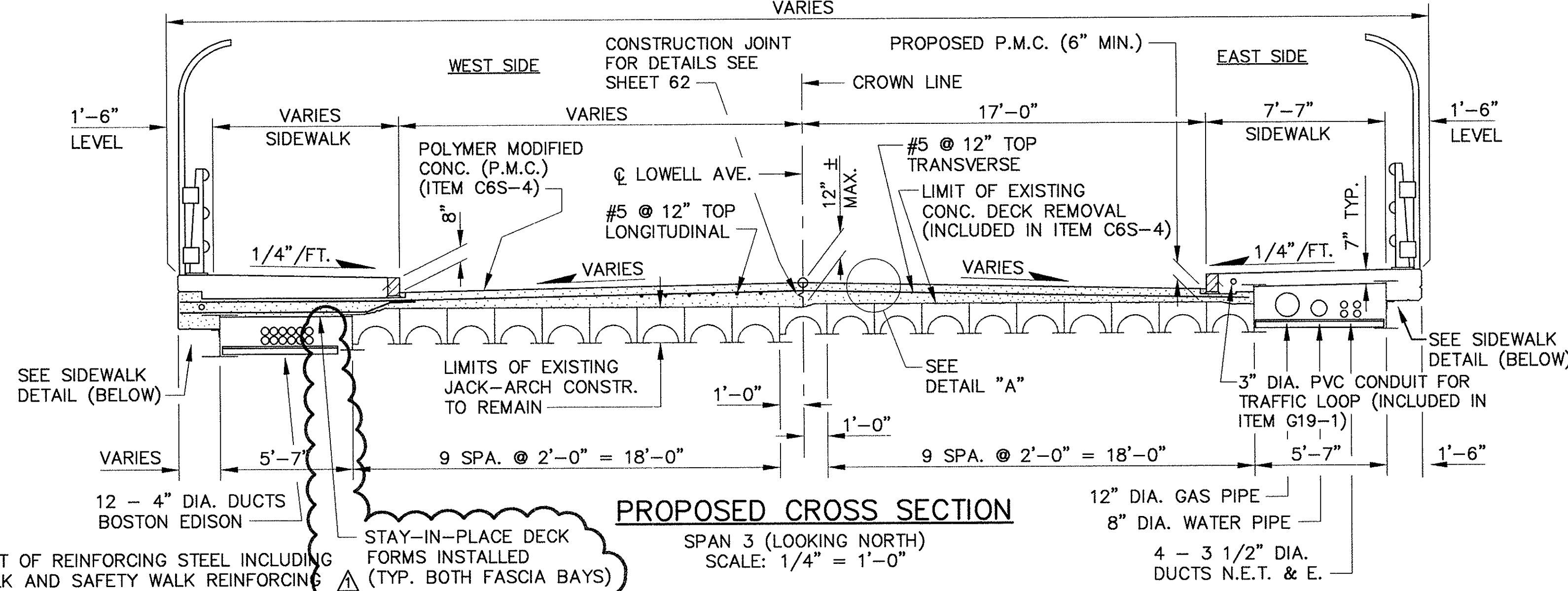
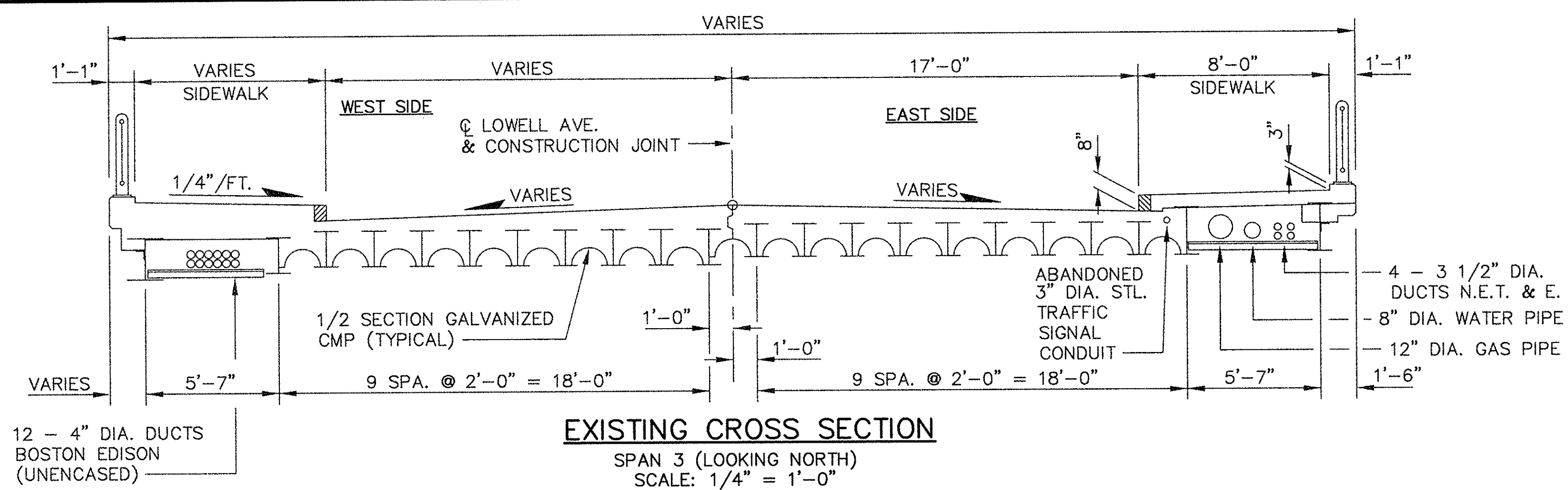
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
**DECK DETAILS AT LIGHT POLE
 SPAN 2**

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 50
The Schwitt Center
 229 Main Street
 Boston, Massachusetts 02129

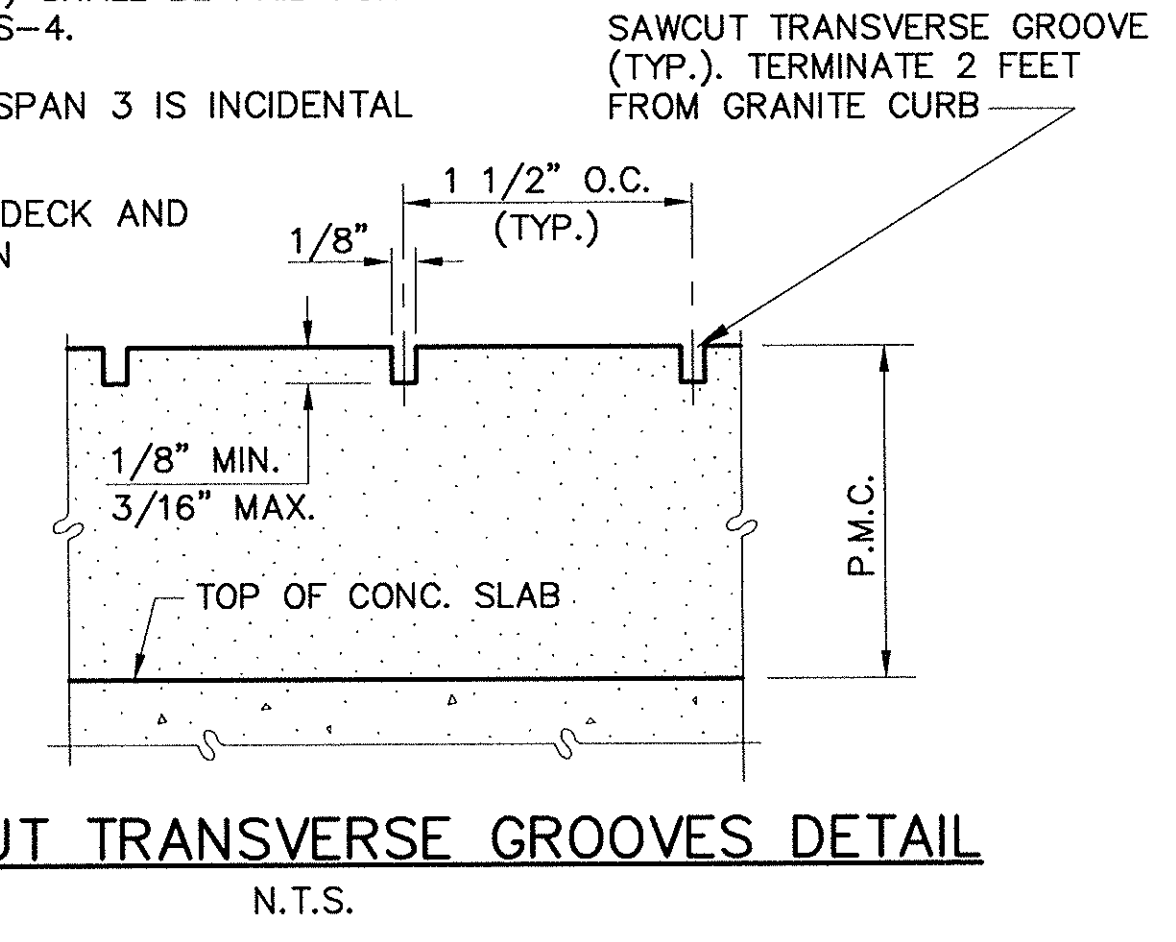
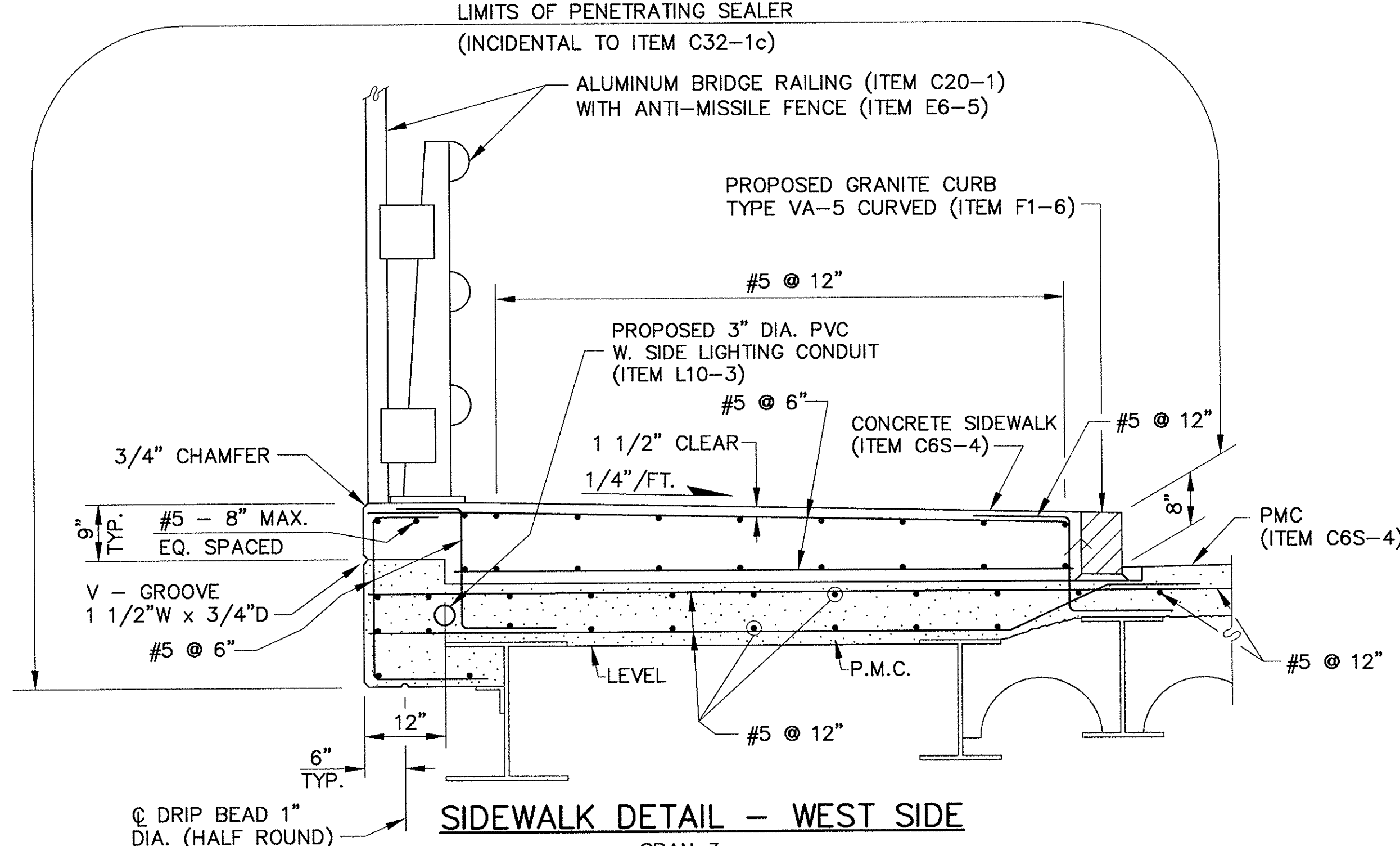
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NOTES:

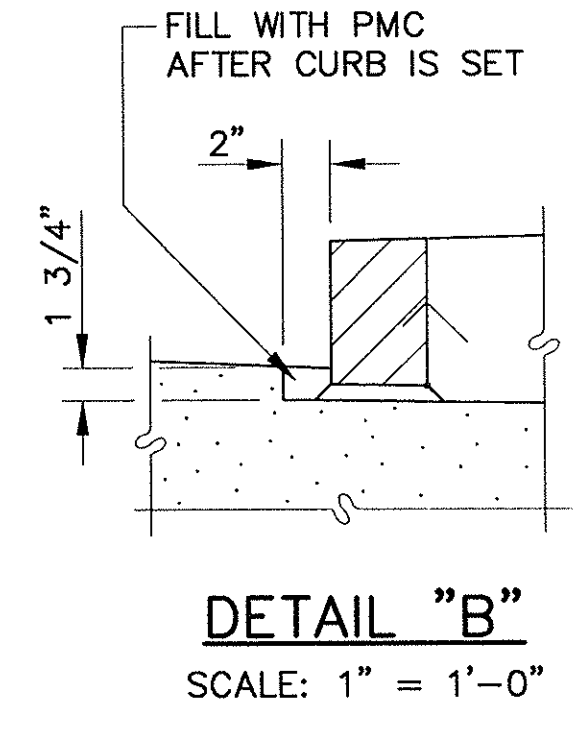
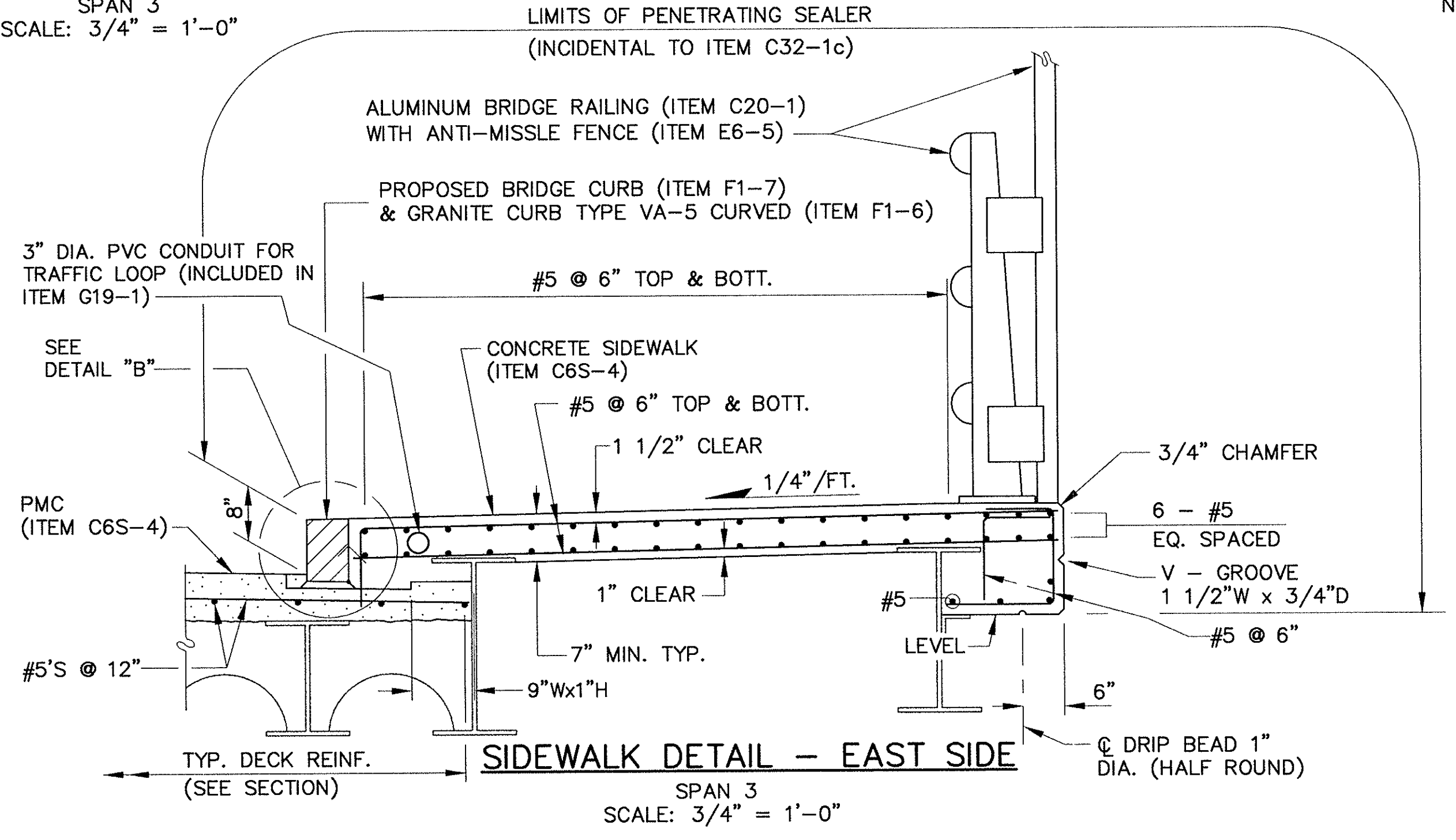
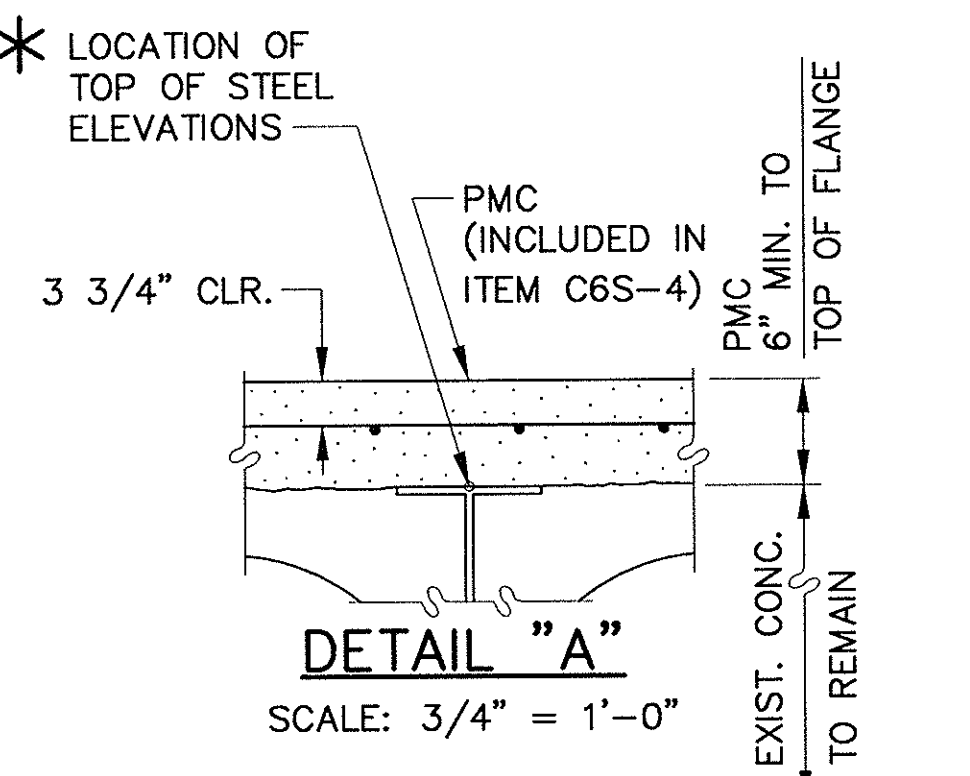
1. THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK AND SAFETY WALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
2. TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
3. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
4. SIDEWALK CONCRETE TO BE CLASS D CEMENT CONCRETE ($f'_c = 4500$ PSI) INCLUDED IN ITEM C6S-4.
5. POLYMER MODIFIED CONCRETE (PMC) SHALL BE PAID FOR AT A LUMP SUM PRICE IN ITEM C6S-4.
6. STEEL BAR REINFORCEMENT FOR SPAN 3 IS INCIDENTAL TO ITEM C6S-4.
7. DEMOLITION OF EXIST. CONCRETE DECK AND SIDEWALKS SHALL BE INCLUDED IN ITEM C6S-4.

STAY-IN-PLACE DECK FORMS INSTALLED (TYP. BOTH FASCIA BAYS)



*** ELEVATION OF TOP OF STEEL PRIOR TO PLACEMENT OF CONCRETE**

BEAM NO.	INCREASING STATIONS							
	Q BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT. Q BRG.
17								
18								
19								
20								
21								
22								
23								
24								
25								
26								
27								
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42								
43								
44								
45								
46								
47								
48								
49								
50								



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	
		BY	DATE		

AS BUILT

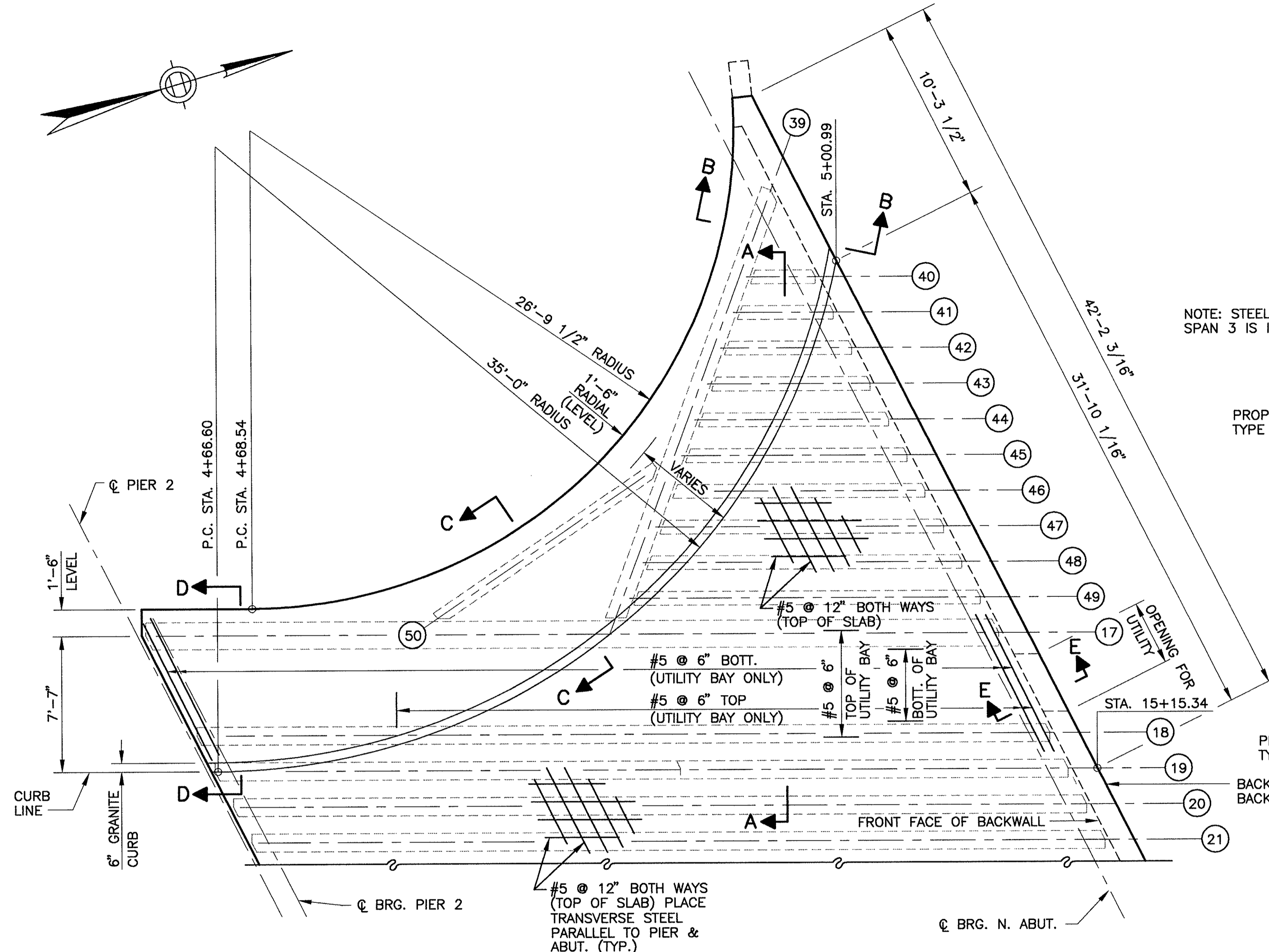
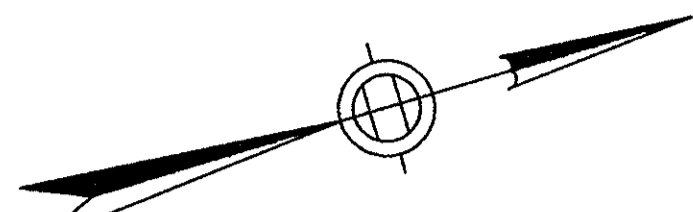
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SECTIONS AND DETAILS - SPAN 3

Scale: AS SHOWN Contract No. 521-024

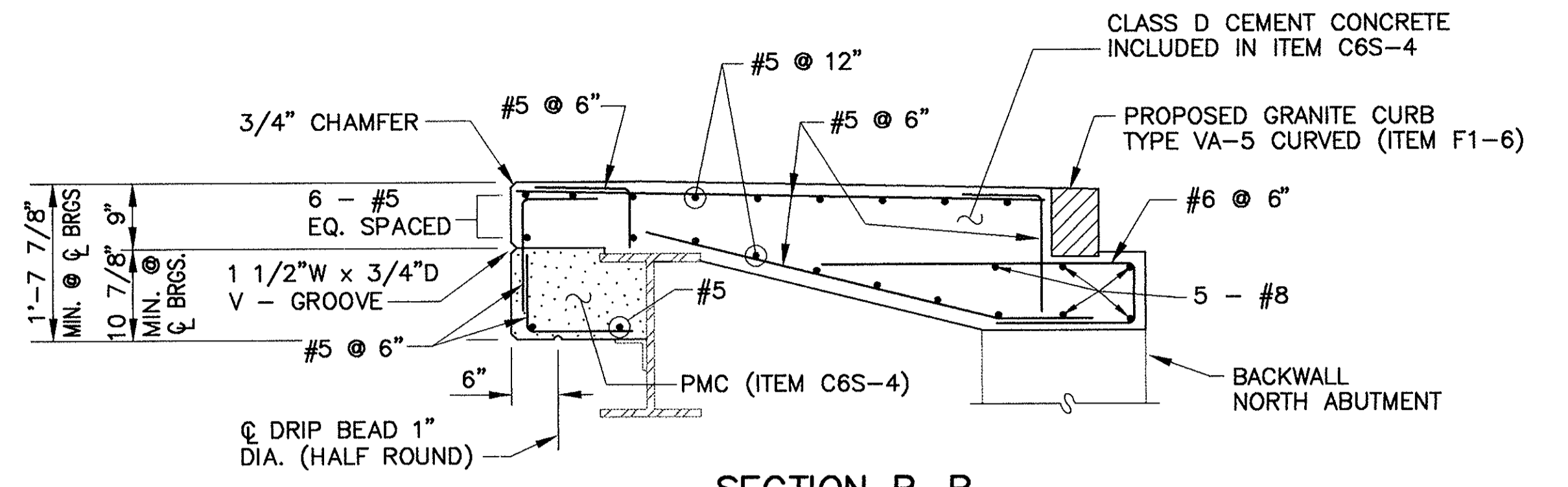
EDWARDS AND KELCEY, INC. Sheet No. 51

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



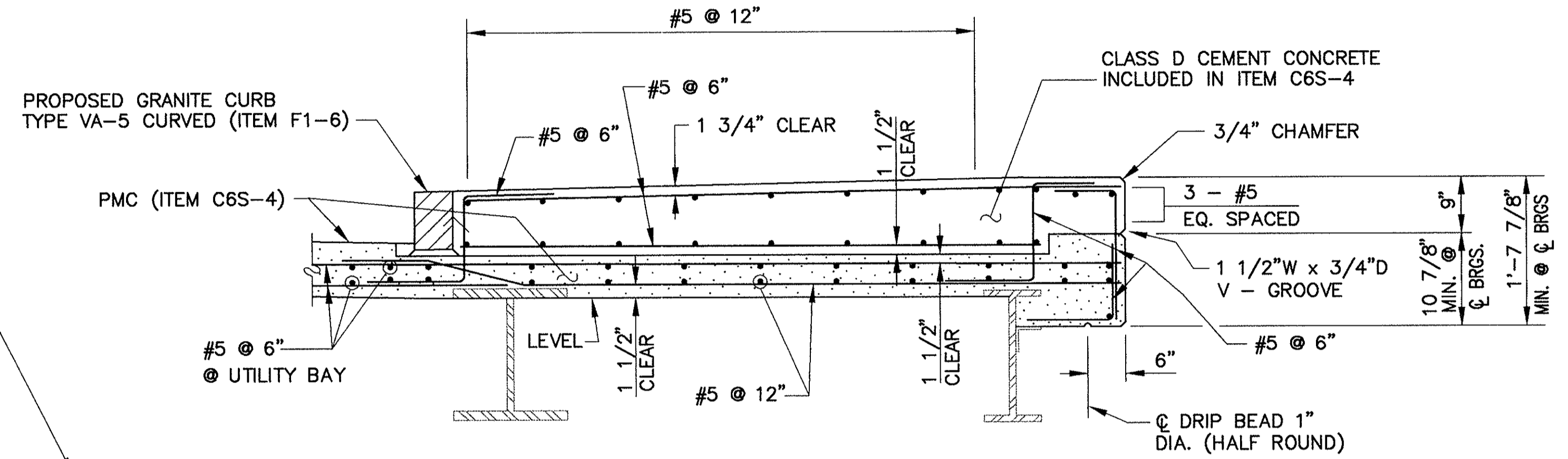
DECK PLAN AT NORTHWEST CORNER

SPAN 3
SCALE 1/4" = 1'-0"

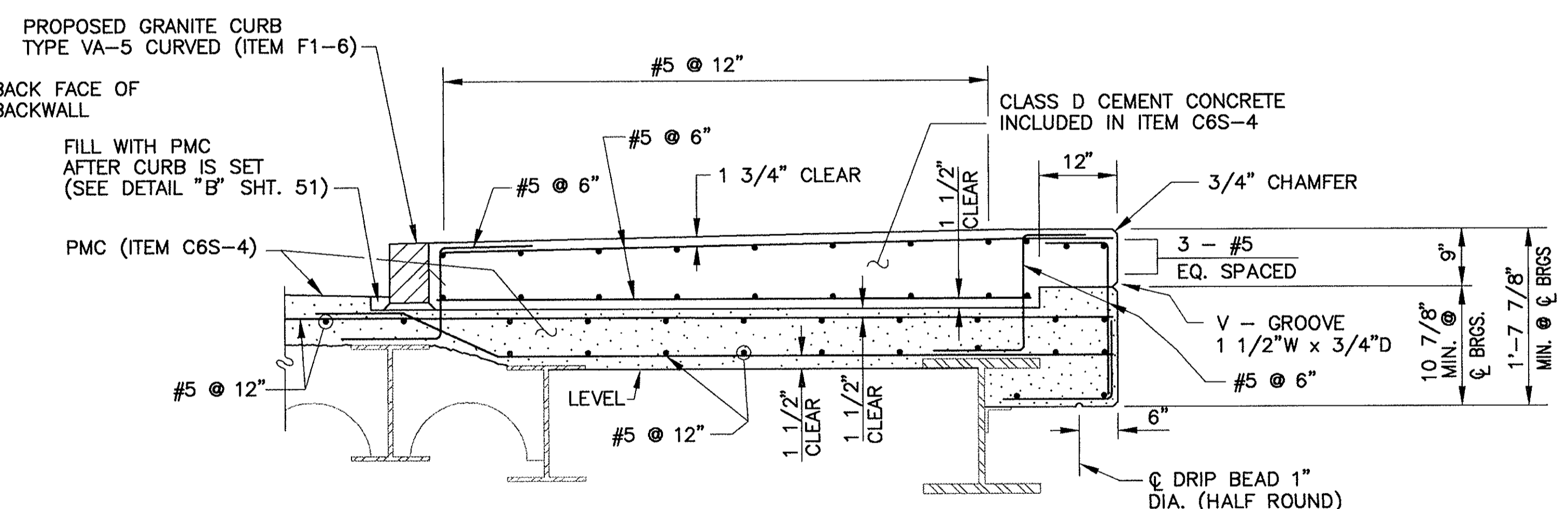


SECTION B-B
SCALE: 3/4" = 1'-0"

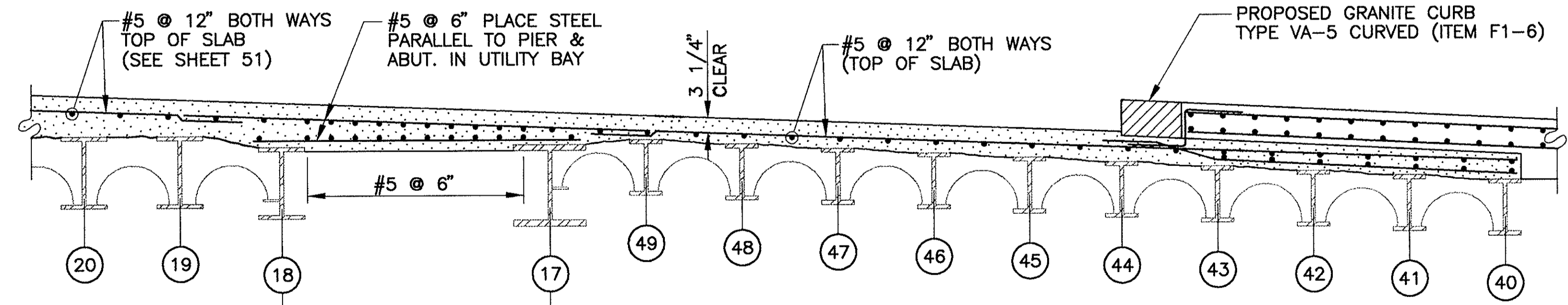
NOTE: STEEL BAR REINFORCEMENT FOR SPAN 3 IS INCIDENTAL TO ITEM C6S-4.



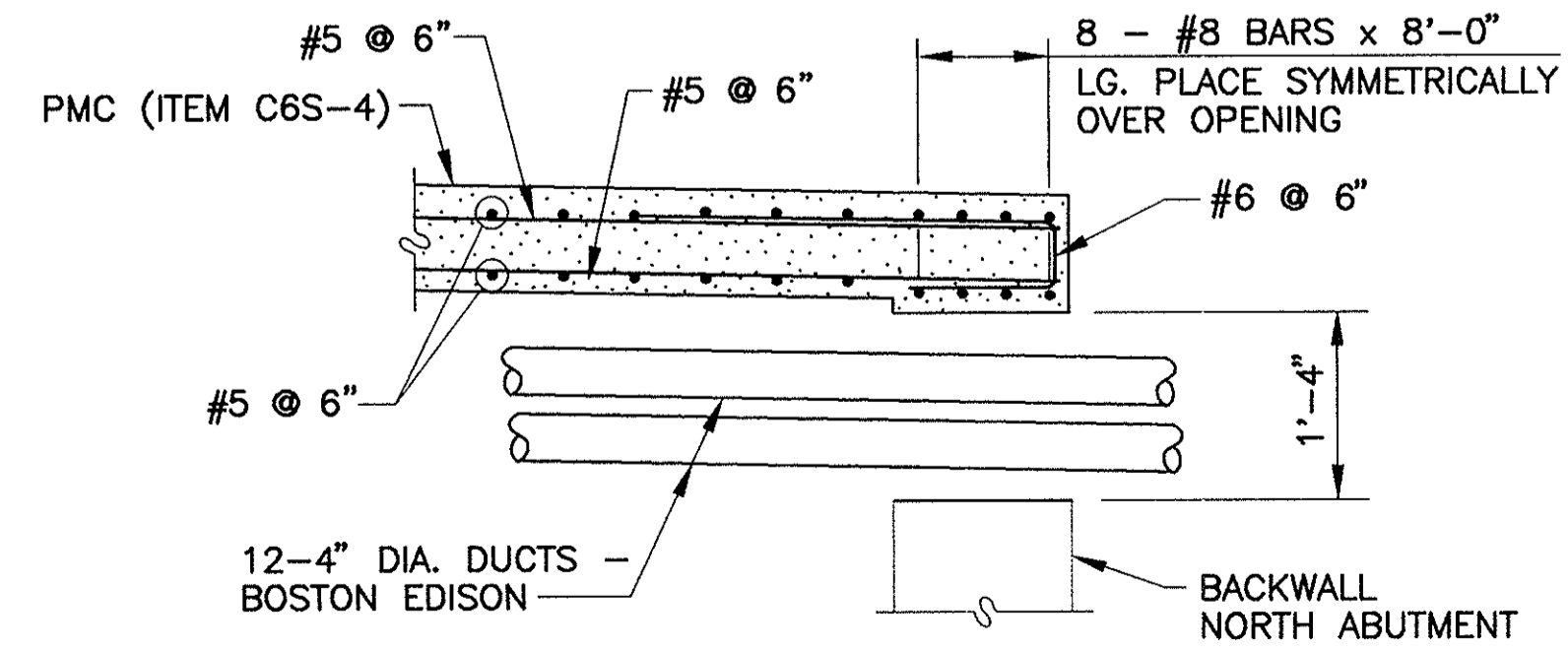
SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION D-D
SCALE: 3/4" = 1'-0"



SECTION A-A
SCALE 1/2" = 1'-0"



SECTION E-E
SCALE: 3/4" = 1'-0"

AS BUILT

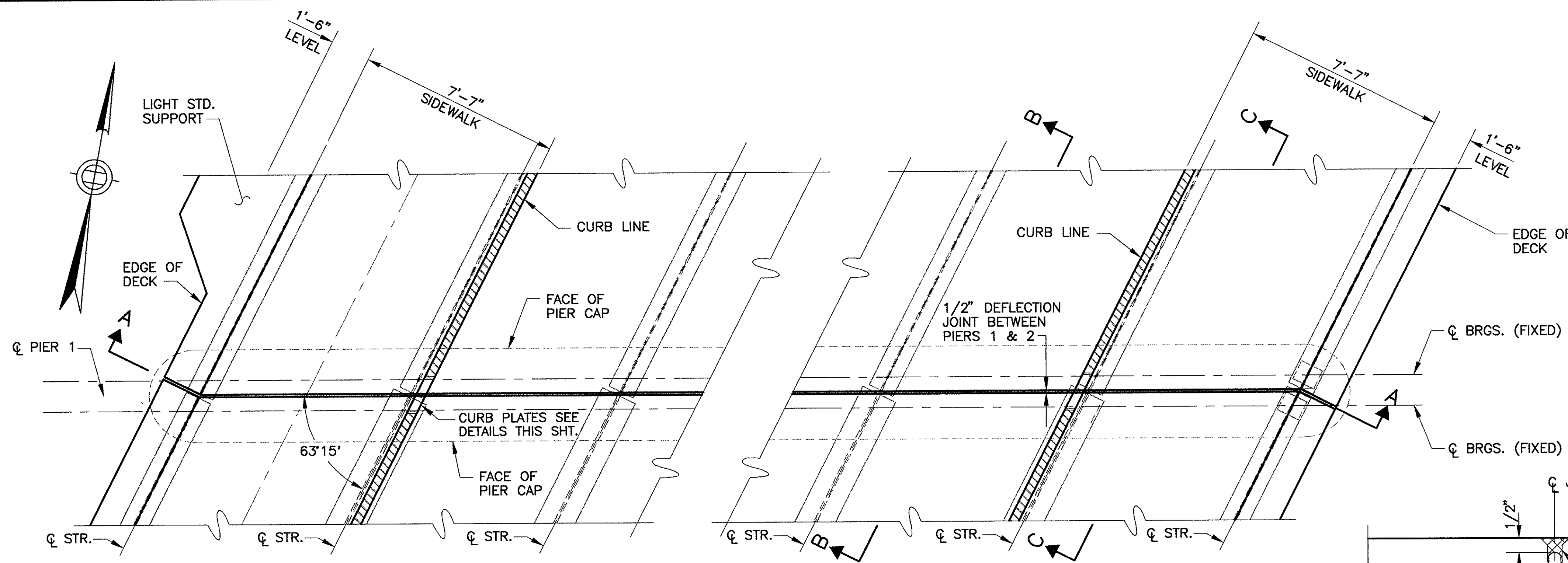
NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
 ADDITIONAL DECK DETAILS - SPAN 3

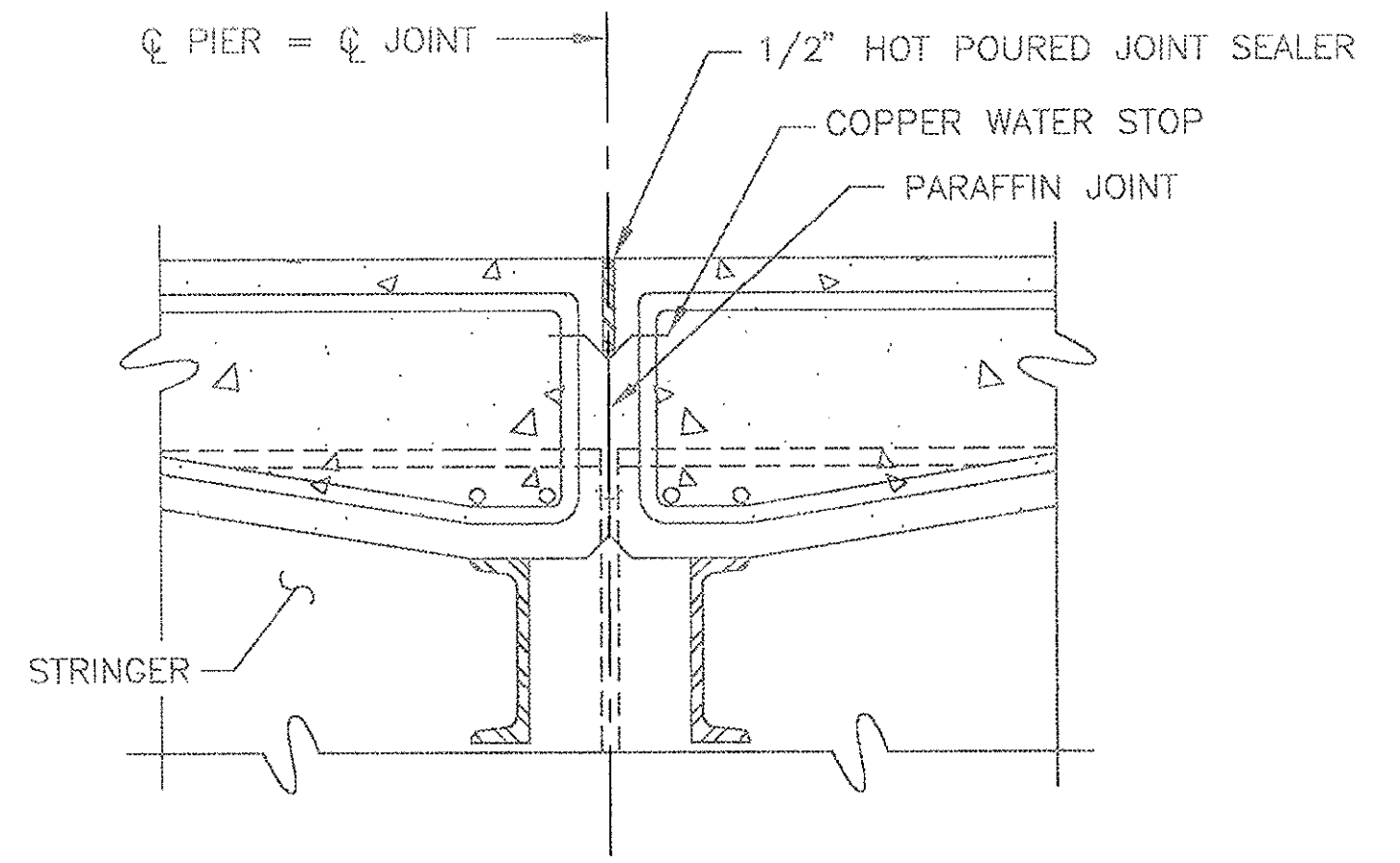
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 52
The Schraft Center
 529 Main Street
 Boston, Massachusetts 02129

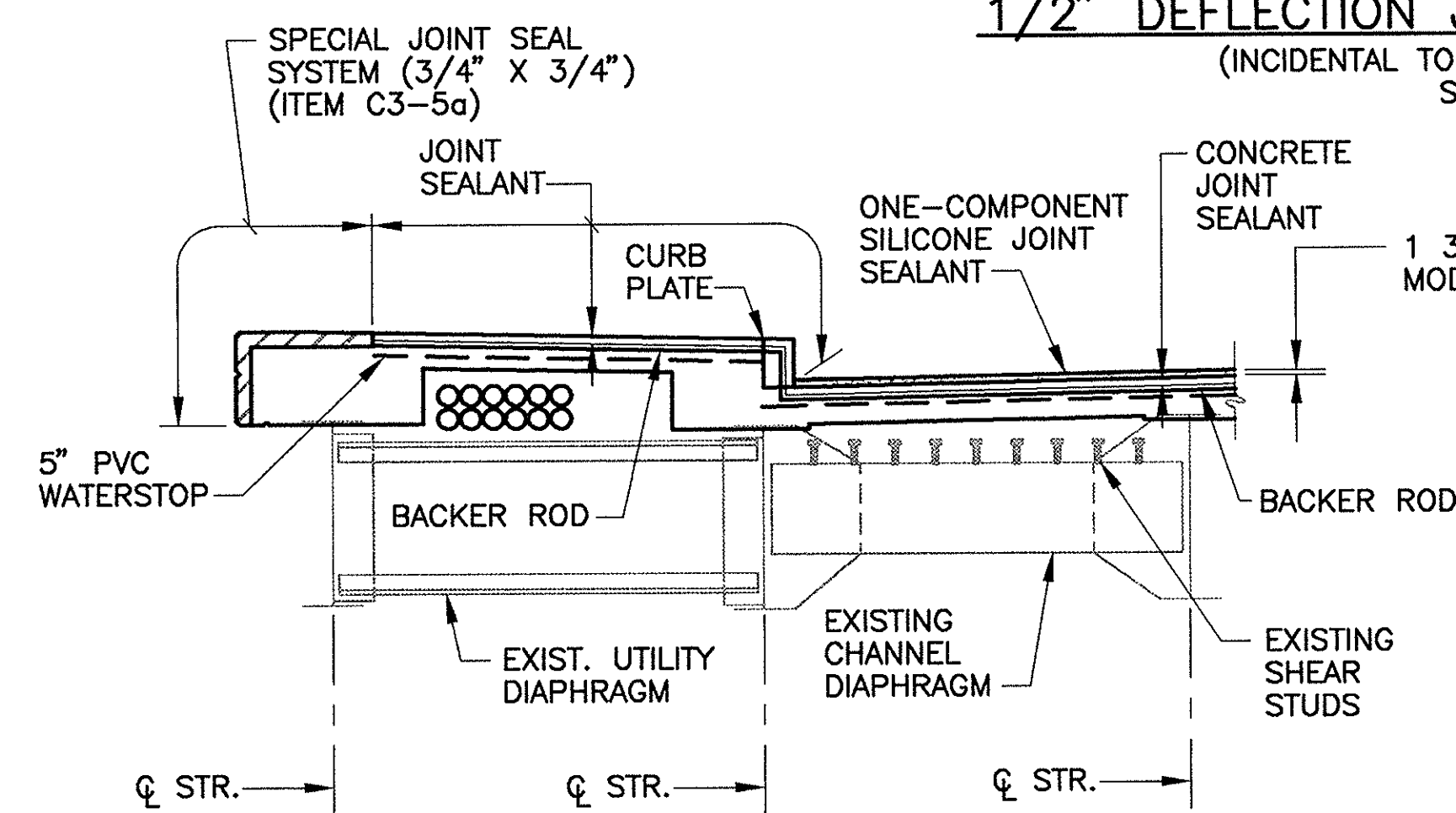
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



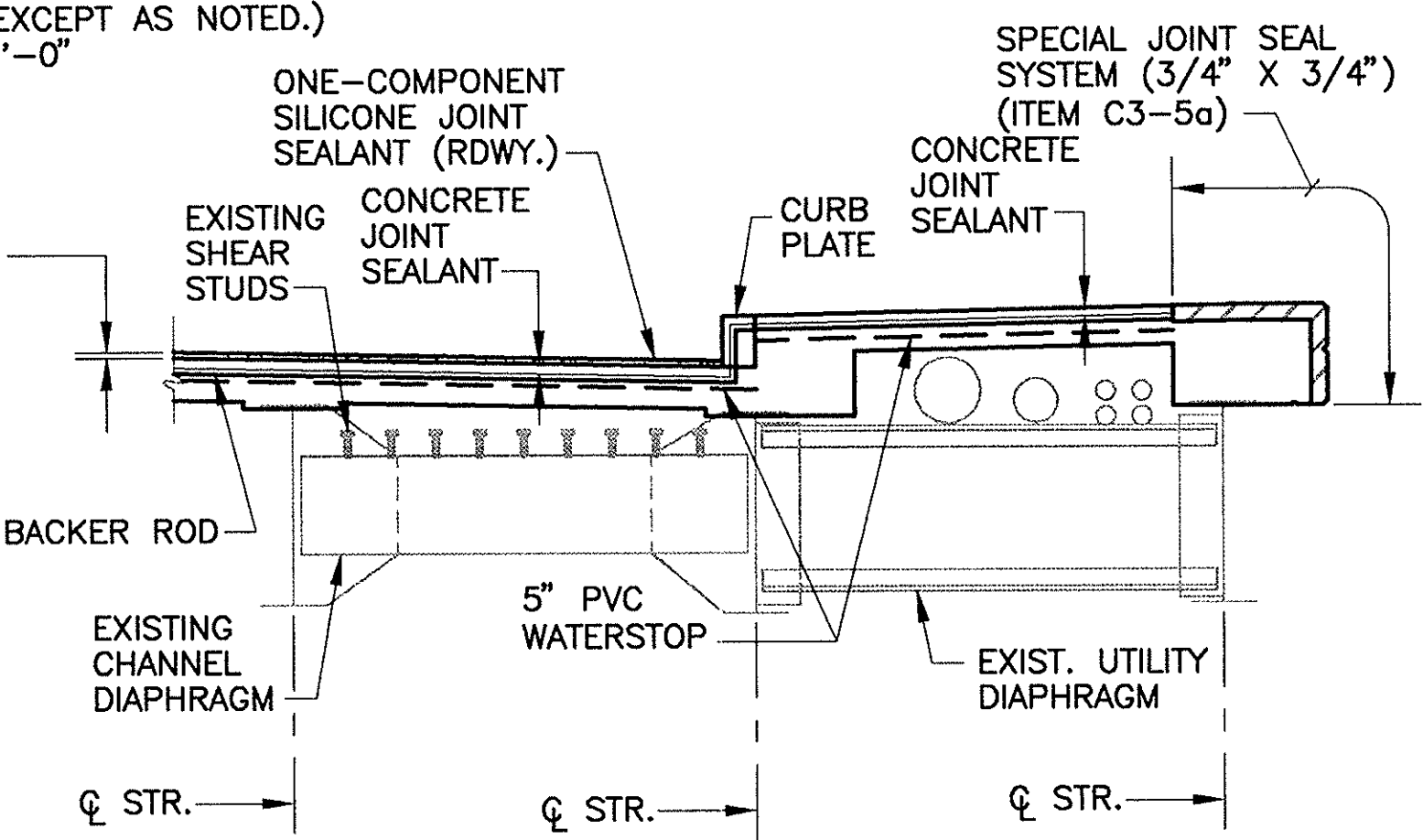
PLAN
1/2" DEFLECTION JOINT BETWEEN SPANS 1 & 2
 (INCIDENTAL TO ITEM C32-1c, EXCEPT AS NOTED.)
 SCALE: 3/8" = 1'-0"



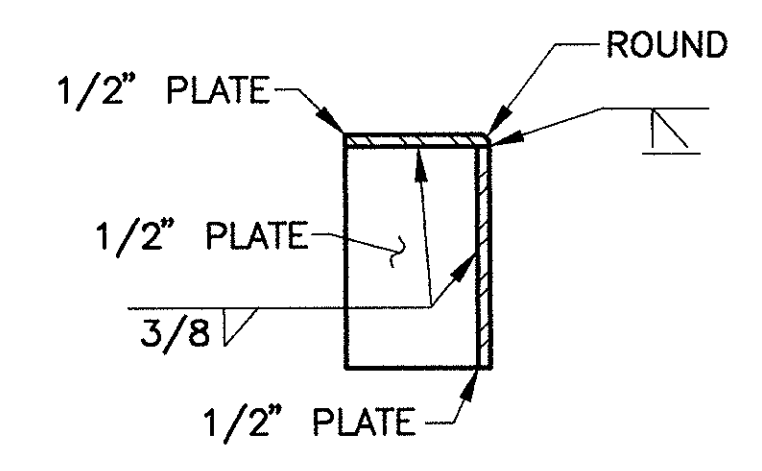
EXISTING CLOSED DECK JOINT @ PIER 1
 SCALE: 1 1/2" = 1'-0"



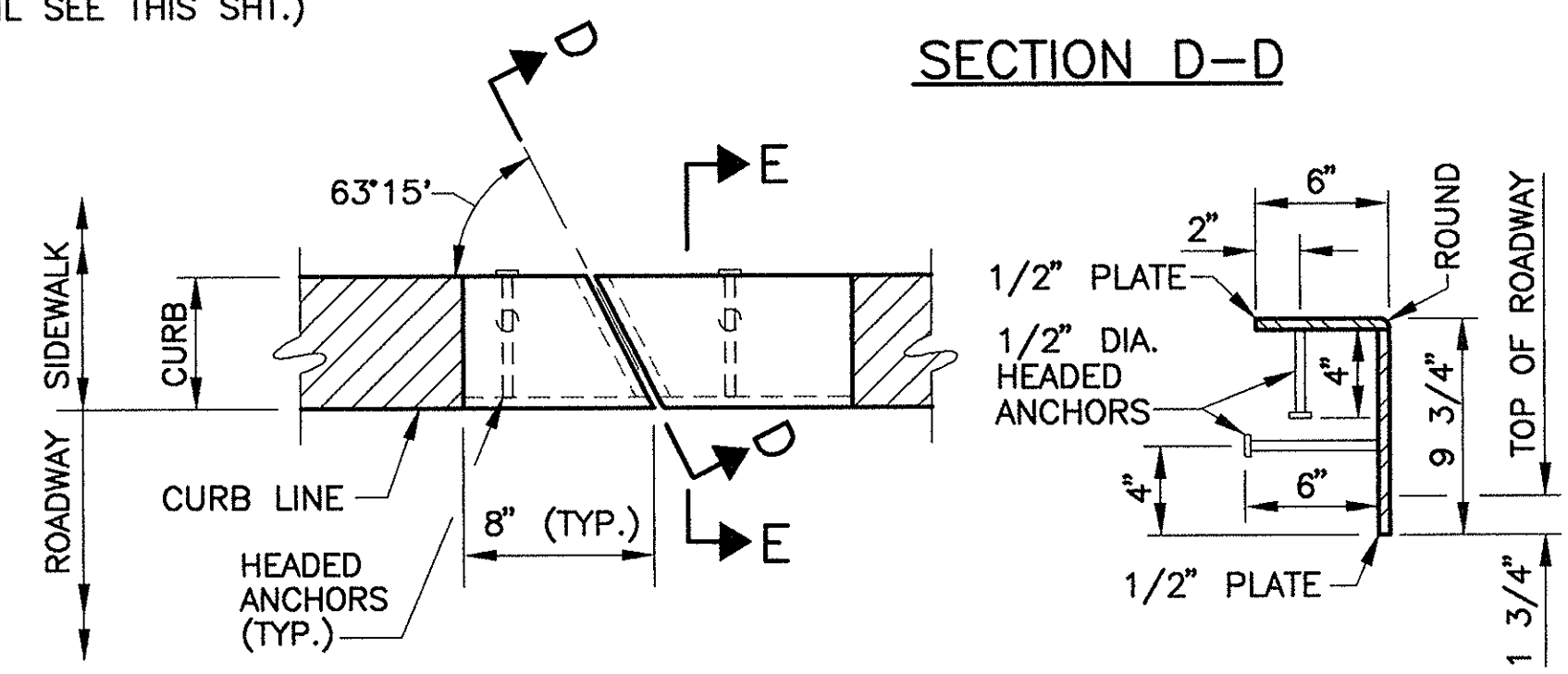
SECTION A-A
 SCALE: 3/8" = 1'-0"



SECTION C-C
 NTS

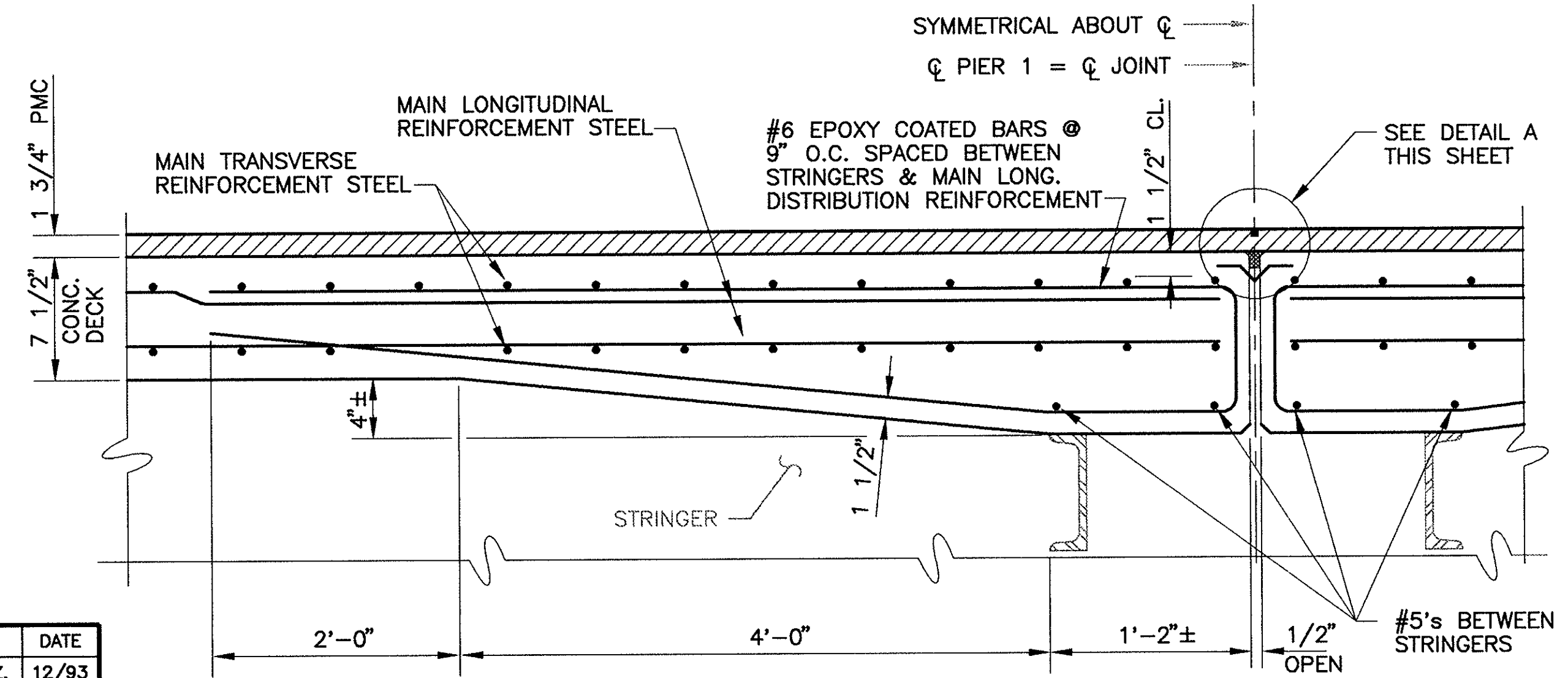
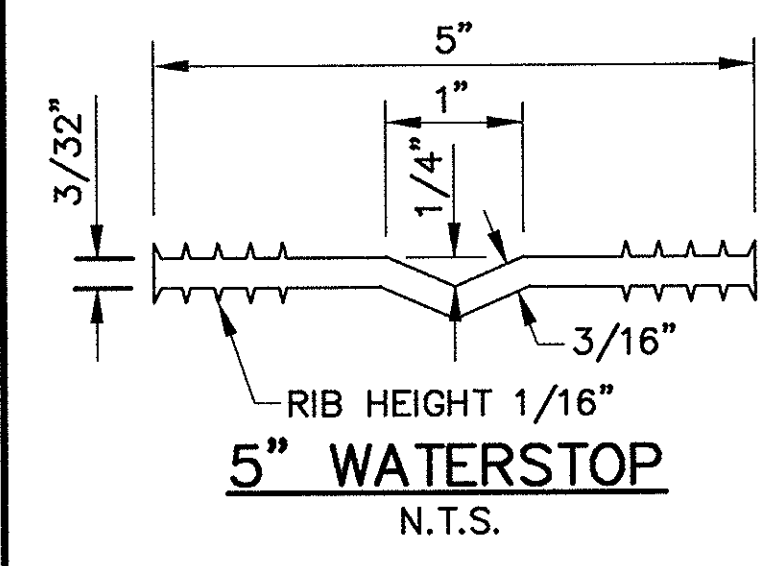


SECTION D-D

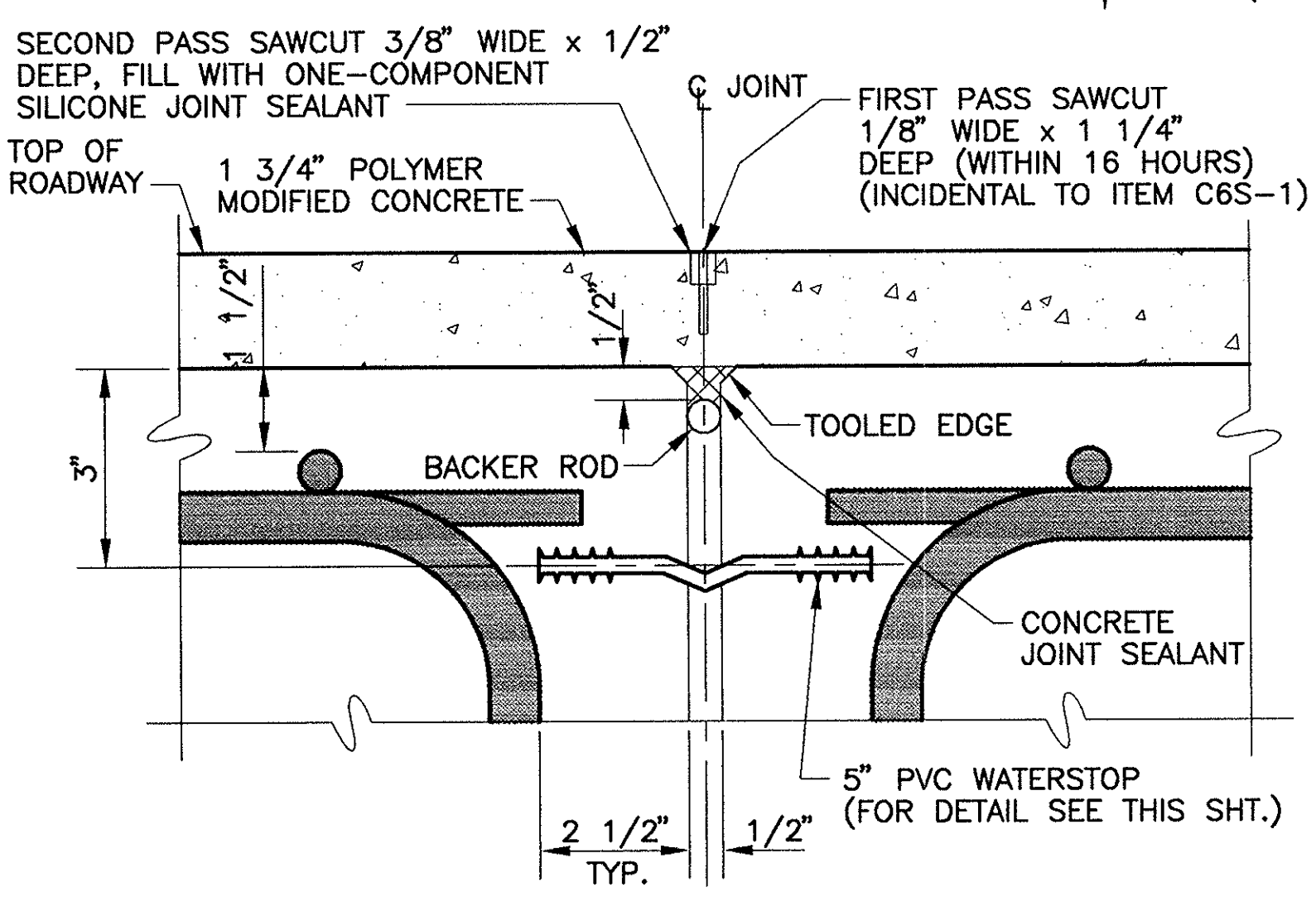


SECTION E-E

PLAN
CURB PLATE DETAILS AT SIDEWALKS
 (INCIDENTAL TO ITEM C32-1c)
 SCALE: 1 1/2" = 1'-0"



SECTION B-B
 NTS



DETAIL A
 NTS

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

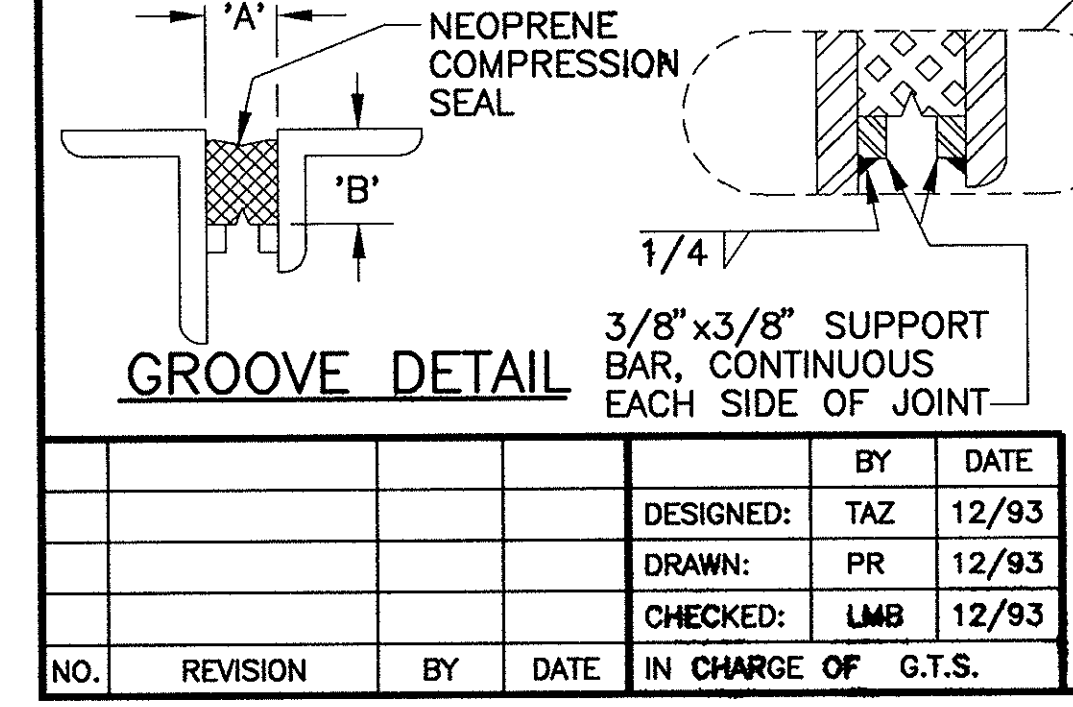
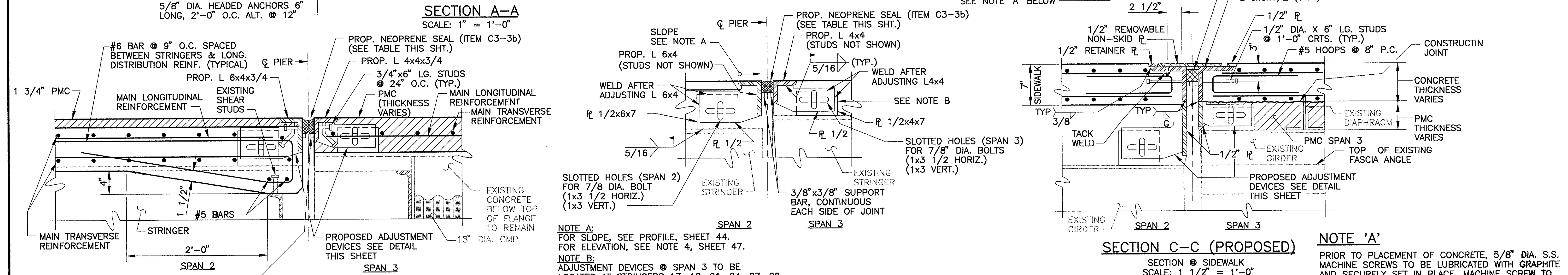
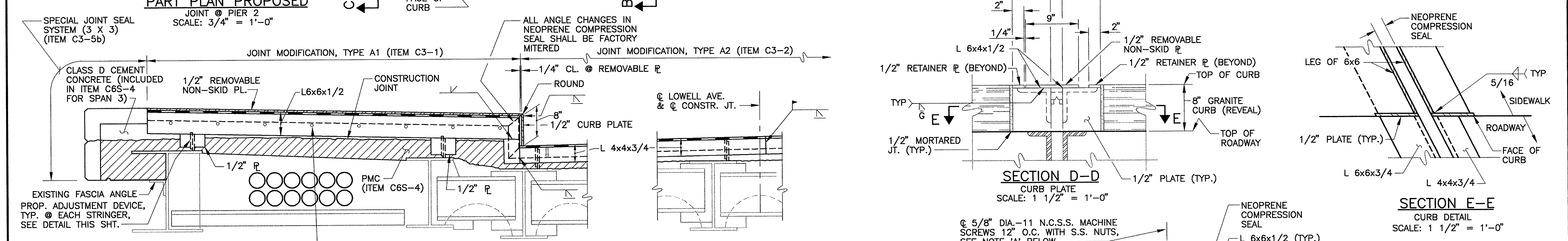
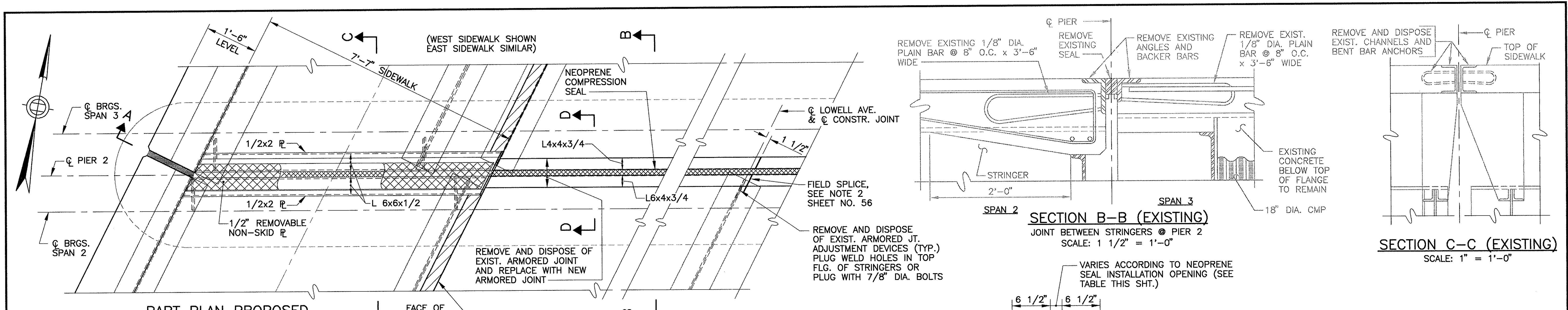
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
JOINT DETAILS AT PIER 1

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 53
 The Schraft Center
 529 Main Street
 Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NEOPRENE SEAL INFORMATION TABLE

LOCATION	*SEAL	A, INCHES - INSTALLATION WIDTH AT DEGREES F.									MOVEMENT	WIDTH	HEIGHT	GROOVE WIDTH "A"		GROOVE DEPTH "B"	INSTALLATION WIDTH
		20	30	40	50	60	70	80	90	100				MIN.	MAX.		
SOUTH ABUTMENT & PIER 2	WJ-250	1 7/8"	1 13/16"	1 3/4"	1 11/16"	1 5/8"	1 9/16"	1 1/2"	1 7/16"	1 3/8"	1.000"	2 1/2"	2 1/2"	1.130"	2.130"	3 1/2"	1 1/2"

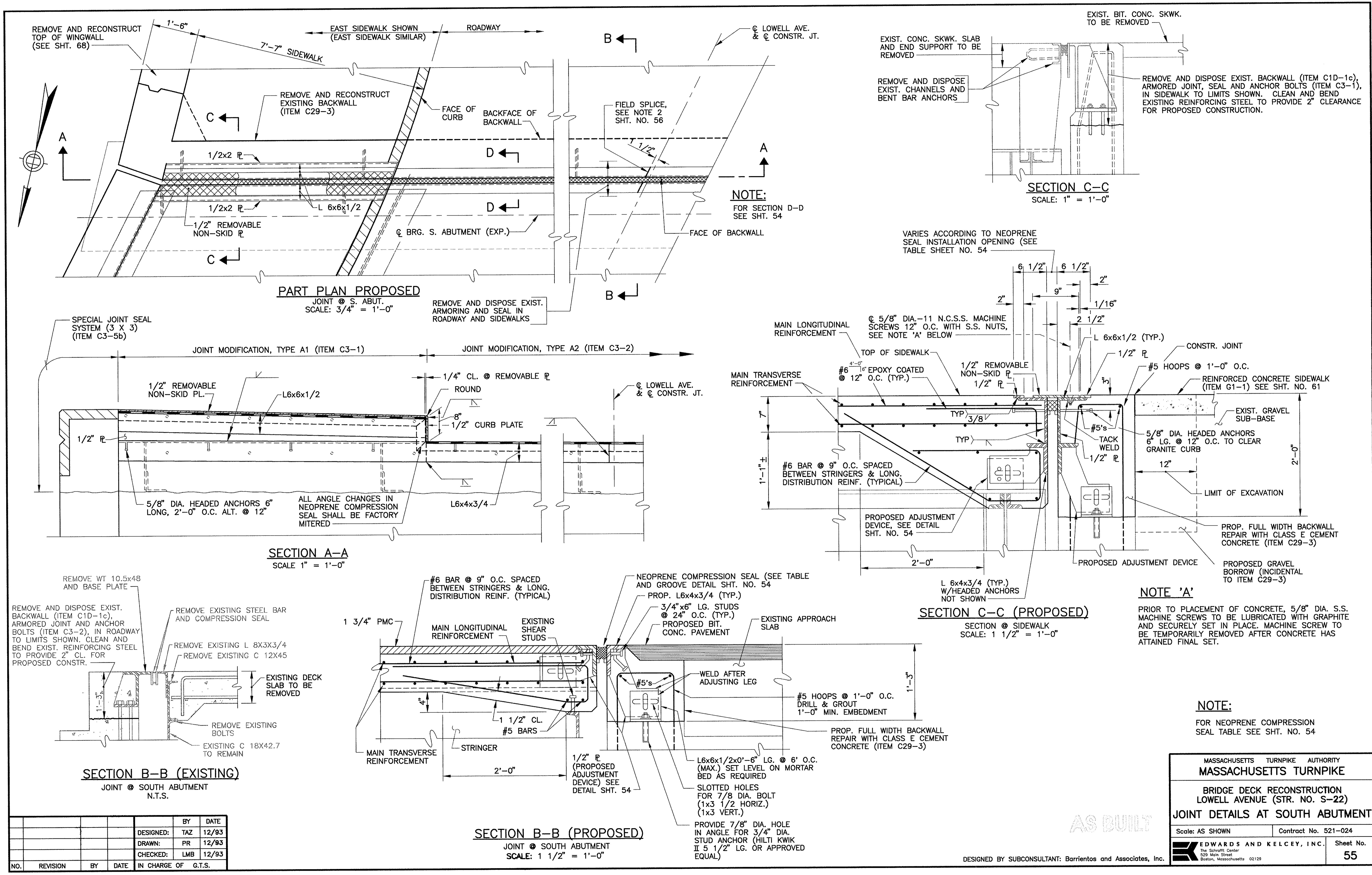
*WATSON BOWMAN ACME WJ SERIES OR APPROVED EQUAL

NOTE 'A'
 PRIOR TO PLACEMENT OF CONCRETE, 5/8" DIA. S.S. MACHINE SCREWS TO BE LUBRICATED WITH GRAPHITE AND SECURELY SET IN PLACE. MACHINE SCREW TO BE TEMPORARILY REMOVED AFTER CONCRETE HAS ATTAINED FINAL SET.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
 JOINT DETAILS AT PIER 2

Scale: AS SHOWN Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 54
 The Schraft Center
 529 Main Street
 Boston, Massachusetts 02129
 DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	TAZ	12/93	
		DRAWN:	PR	12/93	
		CHECKED:	LMB	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

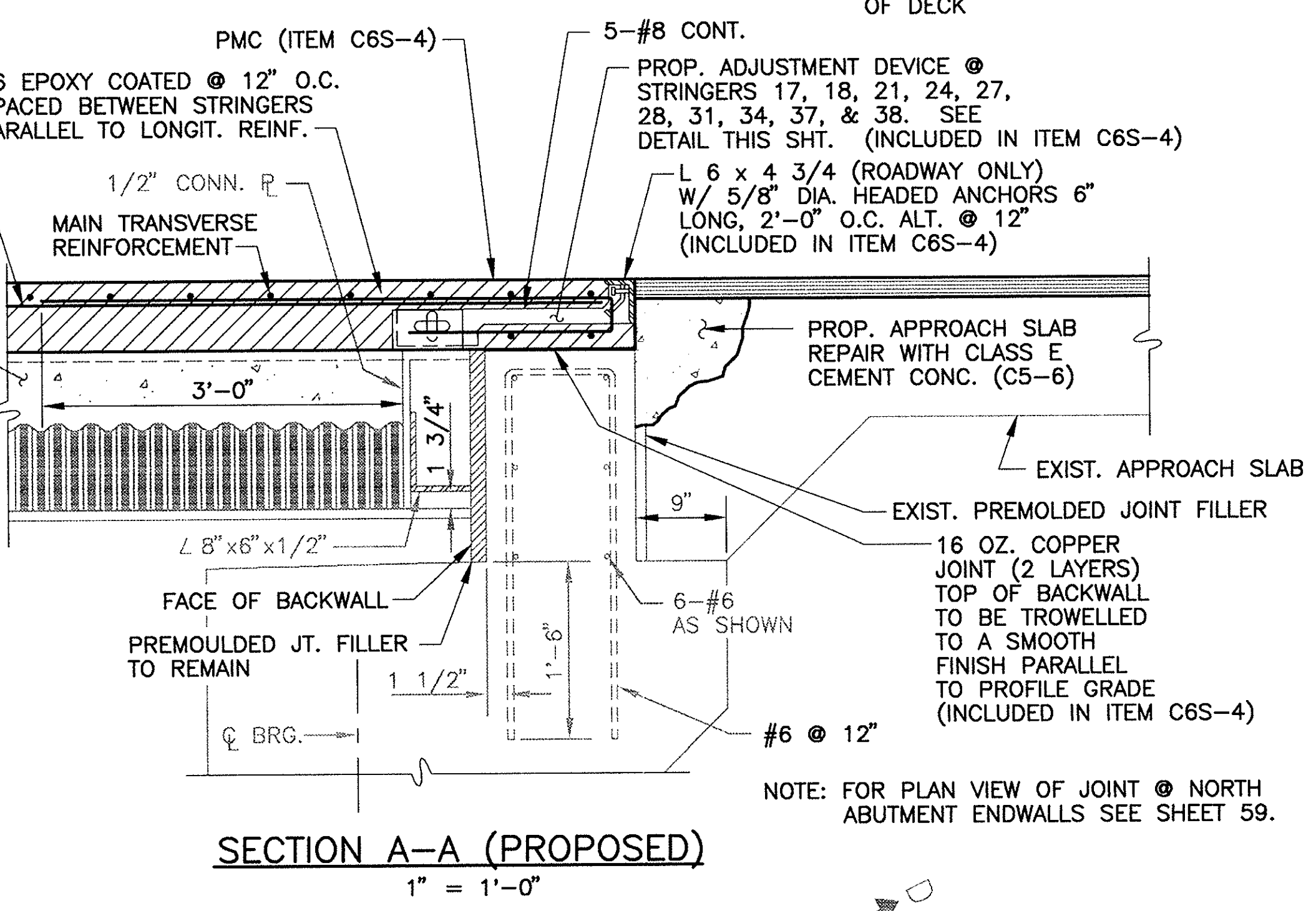
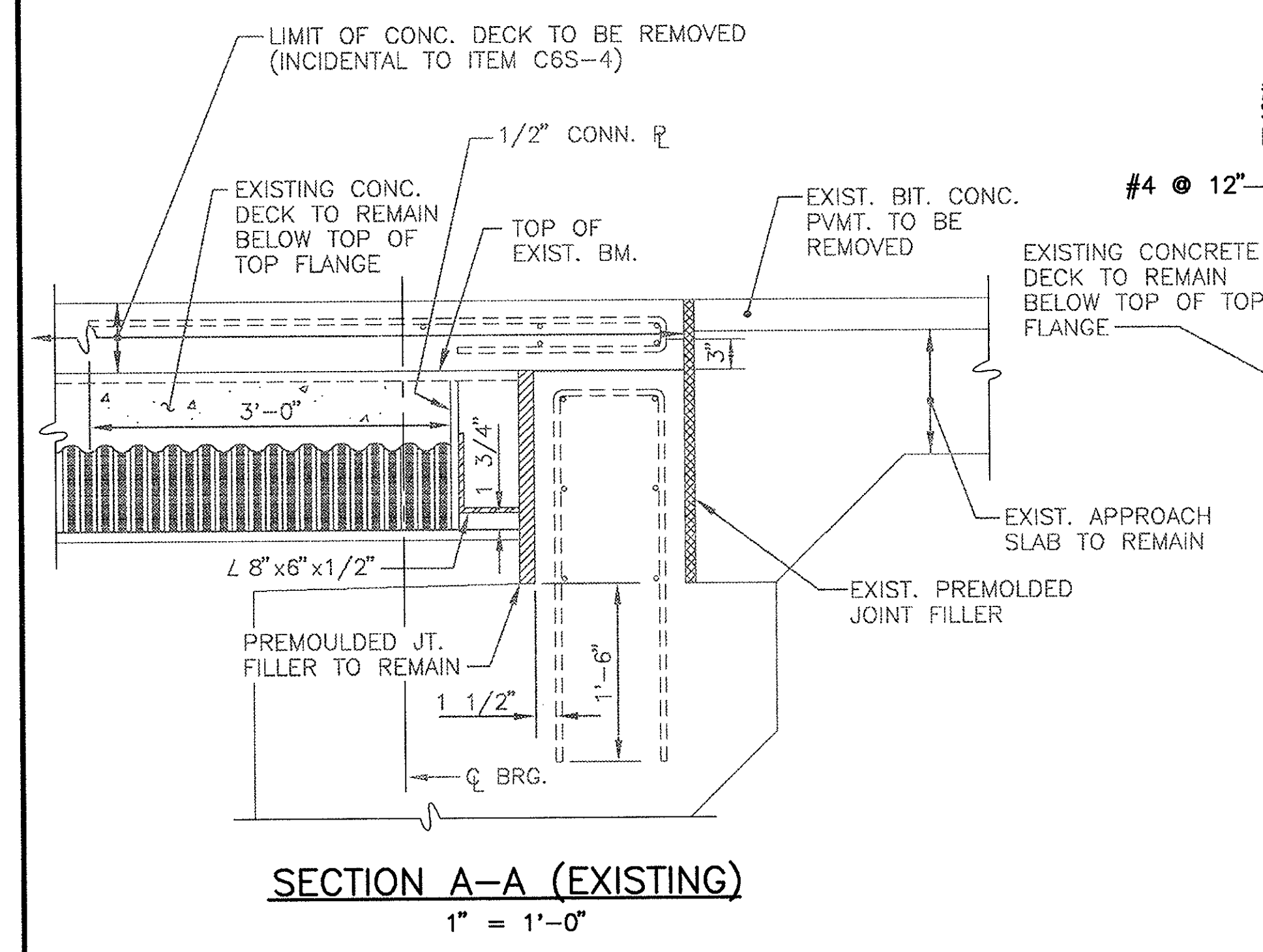
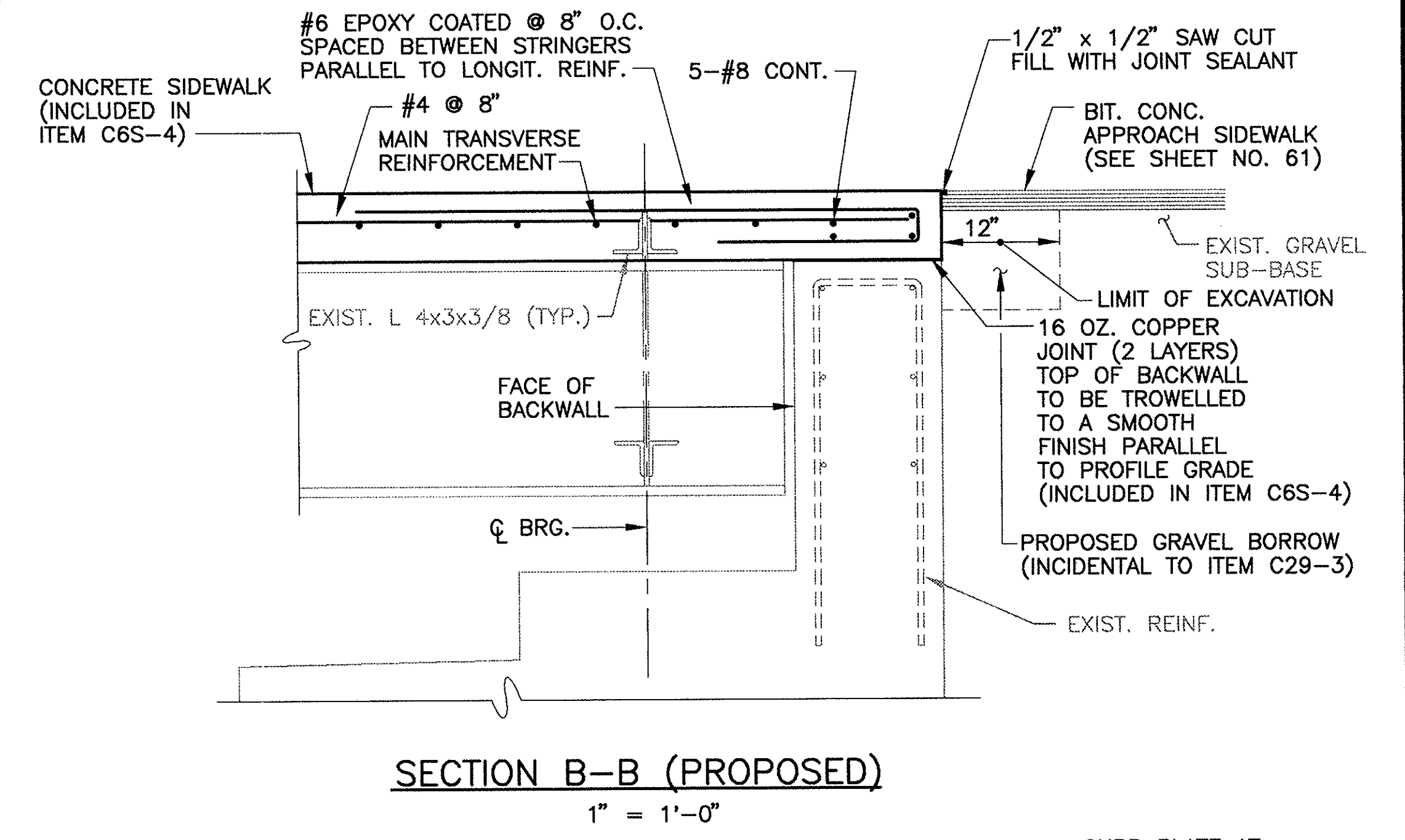
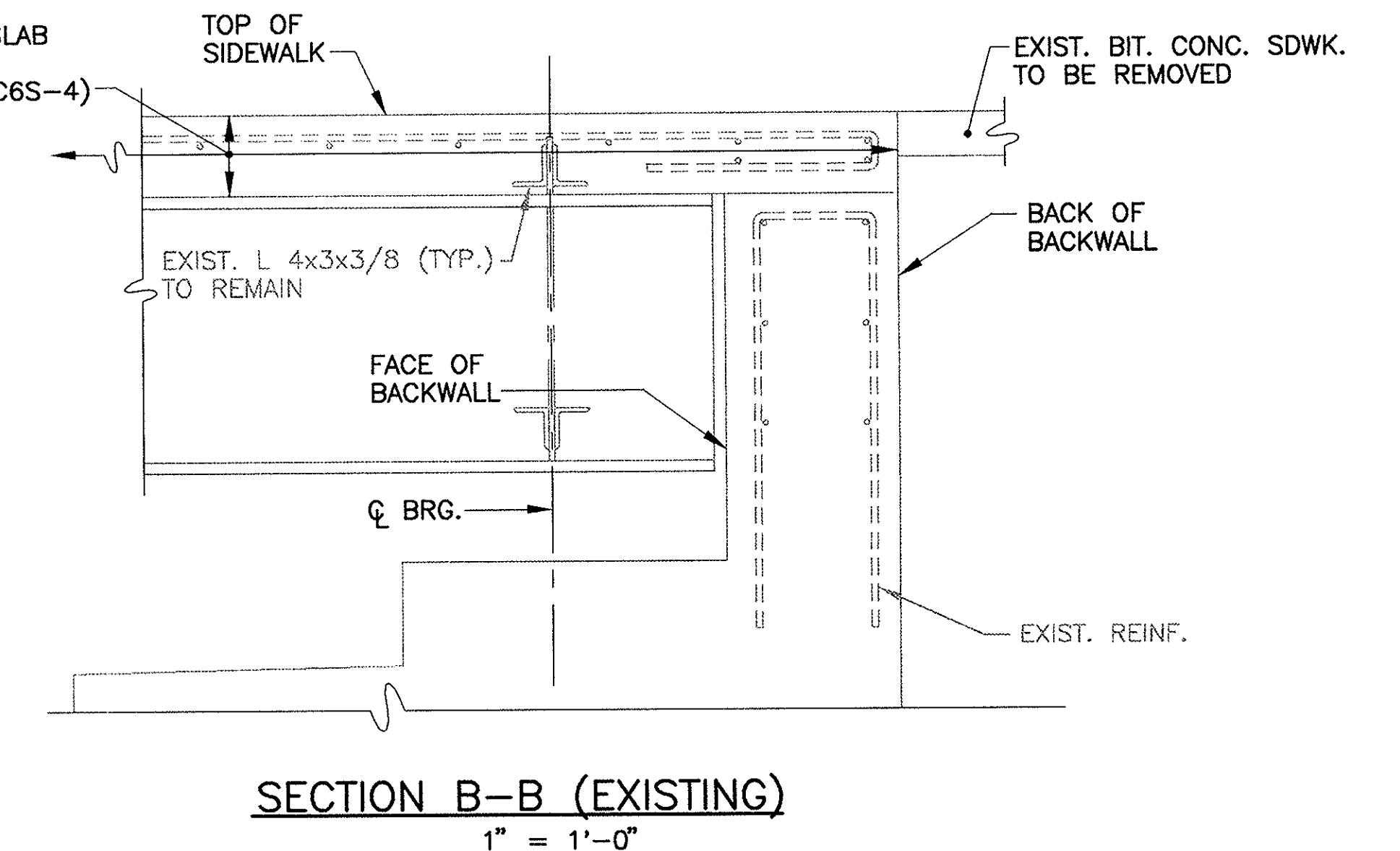
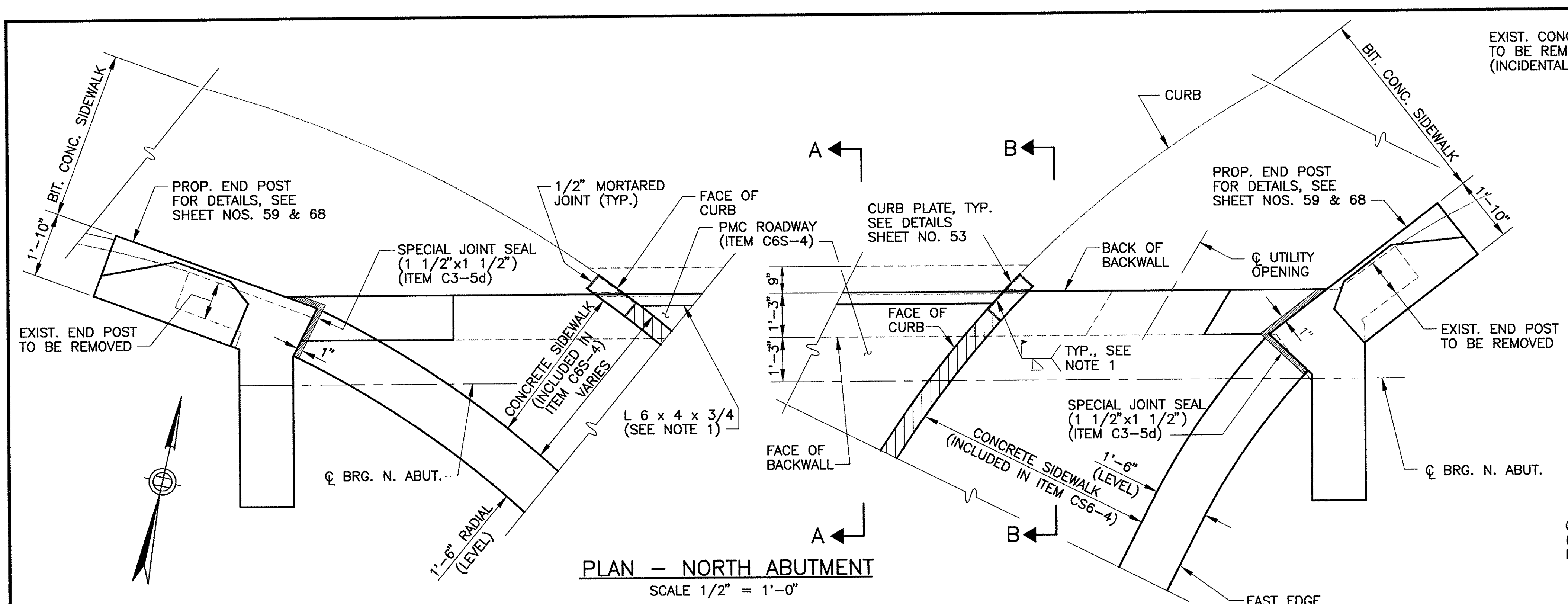
BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
JOINT DETAILS AT SOUTH ABUTMENT

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 55
 The Schmitt Center
 929 Main Street
 Boston, Massachusetts 02129

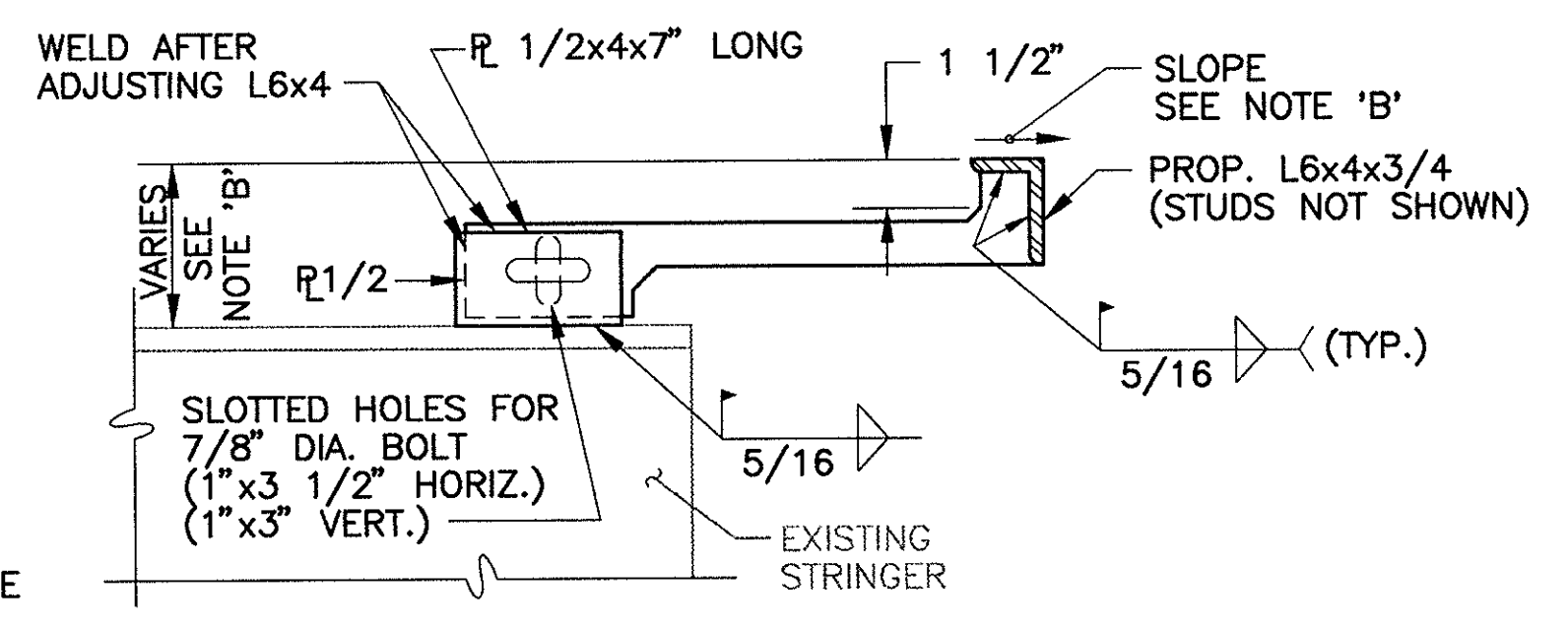
AS BUILT

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



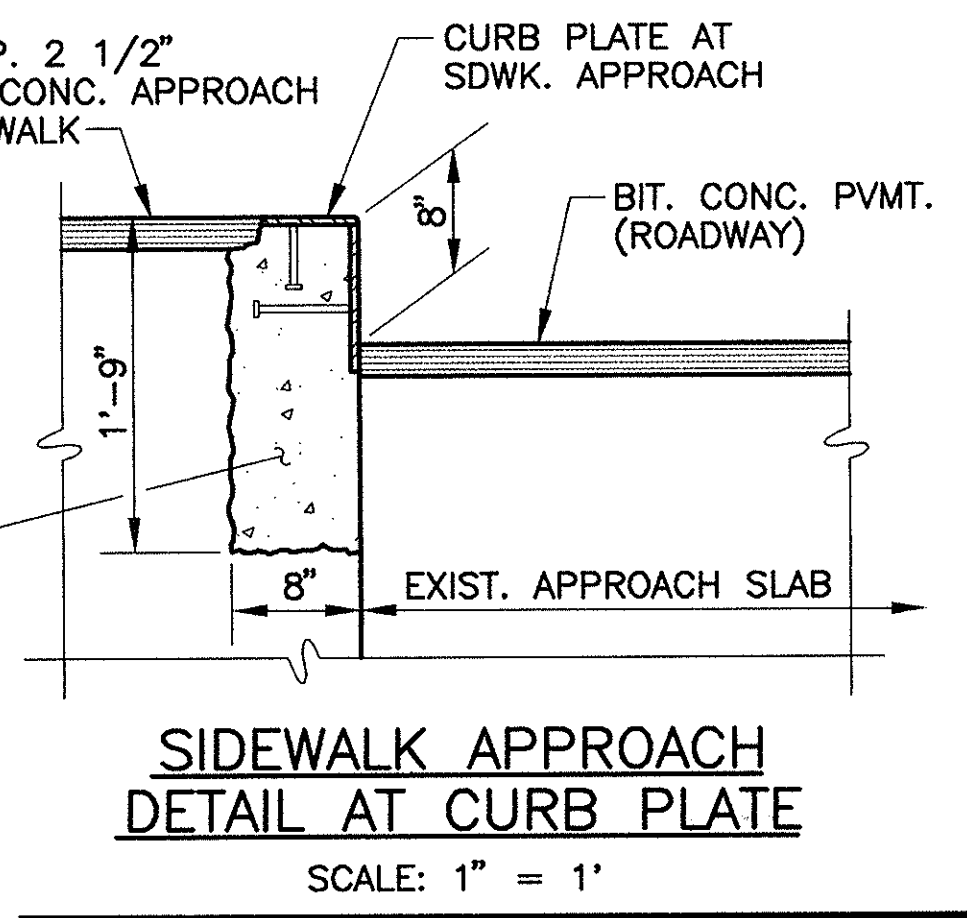
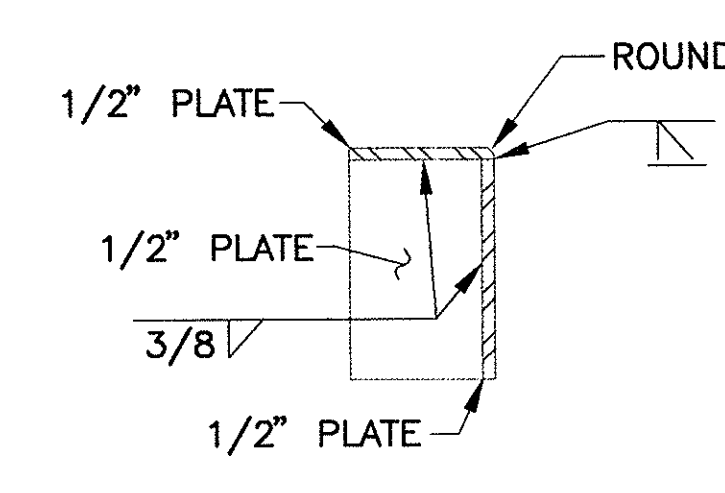
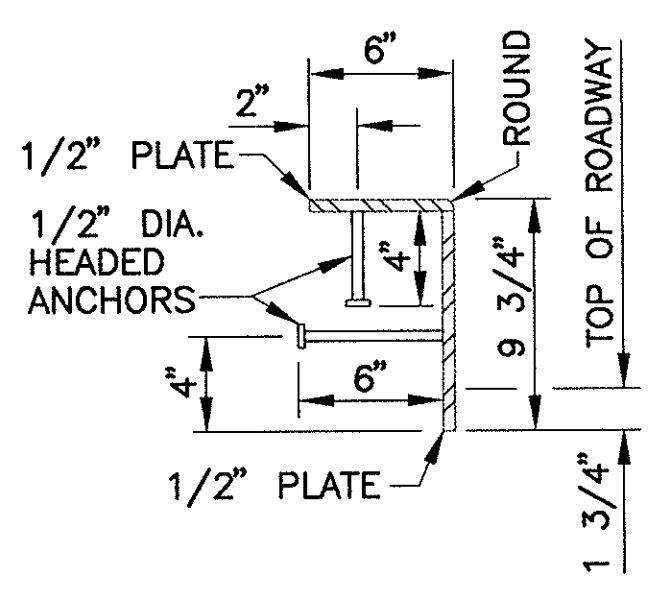
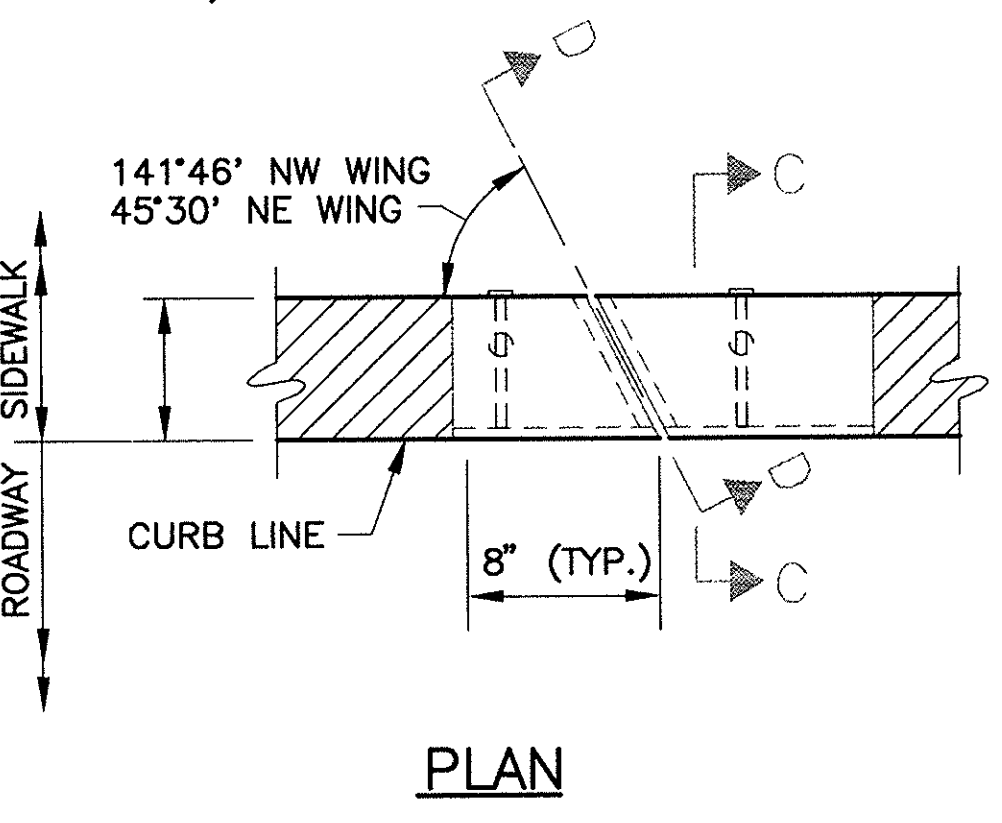
NOTE: FOR PLAN VIEW OF JOINT @ NORTH ABUTMENT ENDWALLS SEE SHEET 59.

- NOTES:**
- AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
 - PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2' BEYOND CONSTRUCTION JOINT AT @ LOWELL AVENUE. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPLICED USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE.



NOTE 'B'
SLOPE AND DIMENSION FROM TOP OF ANGLE TO TOP OF EXIST. STR. SHALL BE VERIFIED BY THE CONTRACTOR.

PROPOSED ADJUSTMENT DEVICE
SCALE: 1 1/2" = 1'-0"



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

CURB PLATE DETAILS AT SIDEWALKS
(INCIDENTAL TO ITEM C6S-4)
SCALE: 1 1/2" = 1'-0"

AS BUILT

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

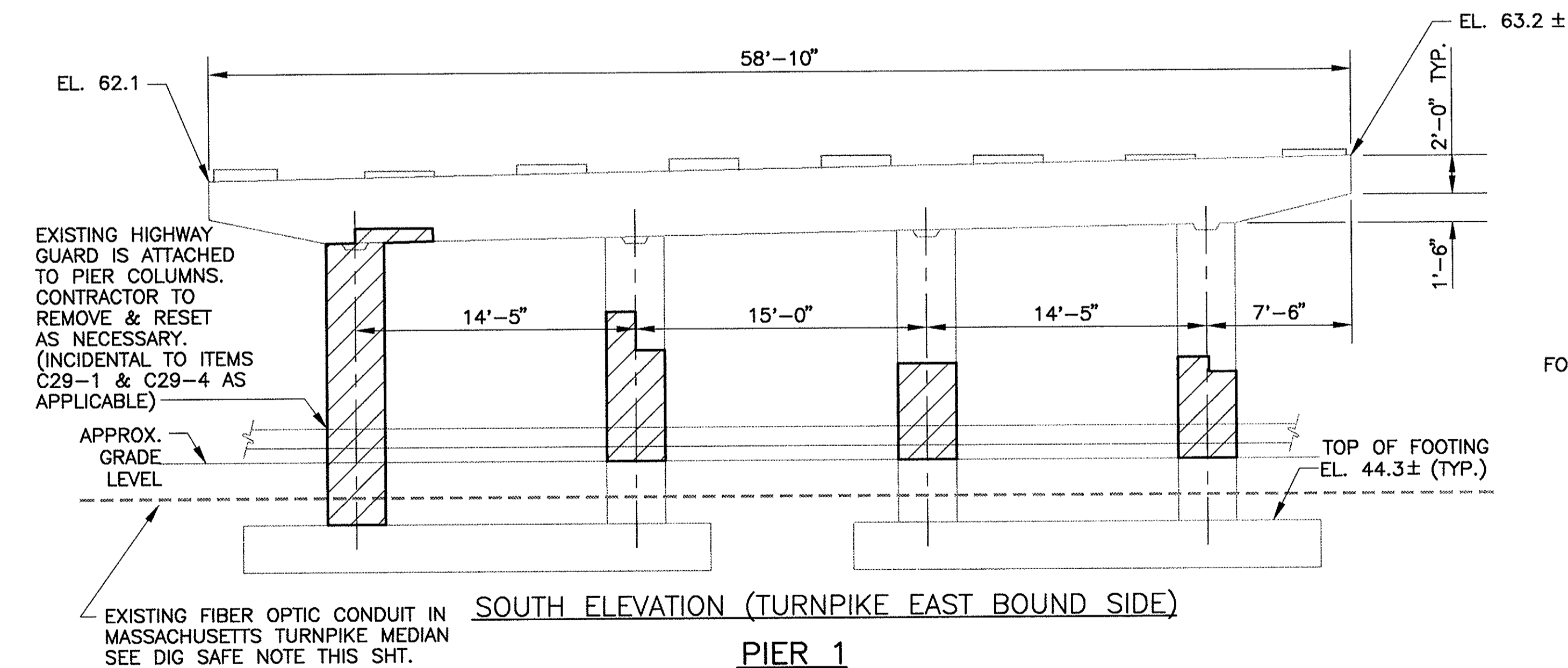
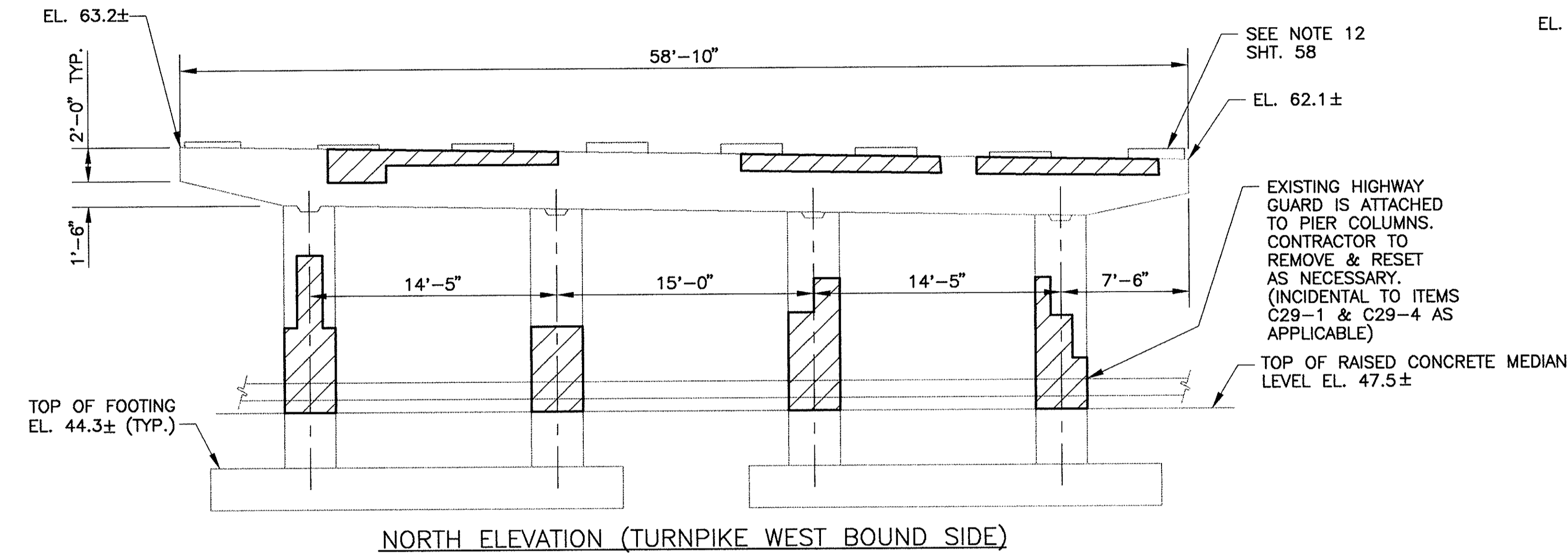
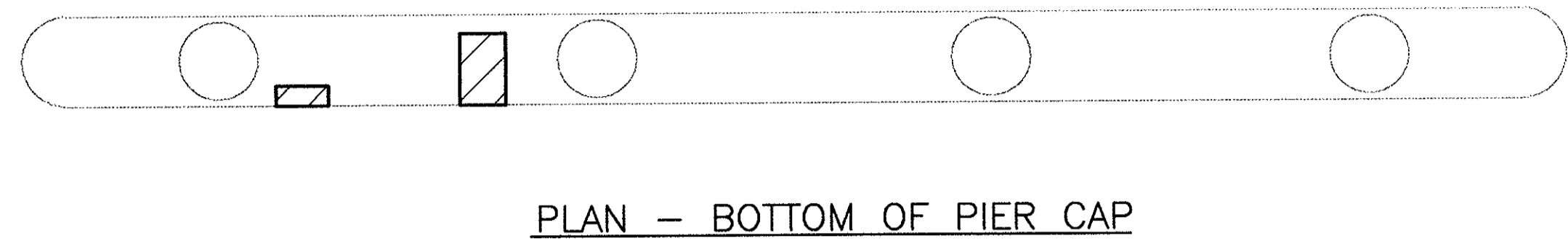
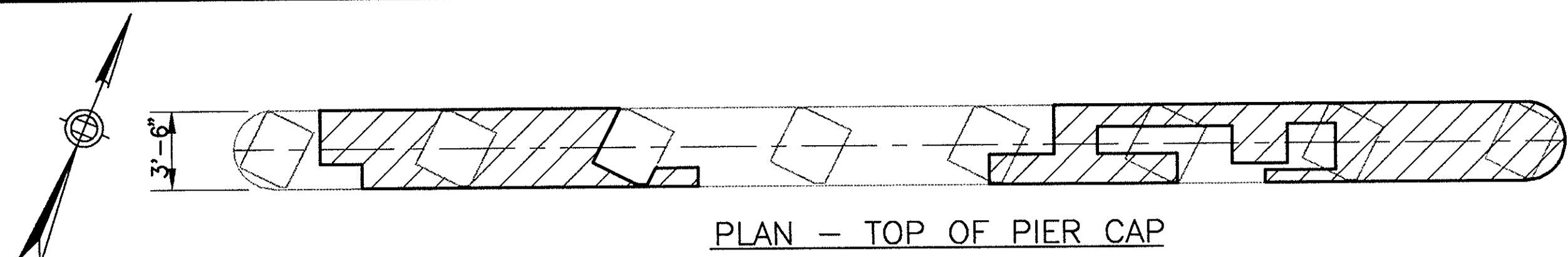
BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)

JOINT DETAILS AT NORTH ABUTMENT

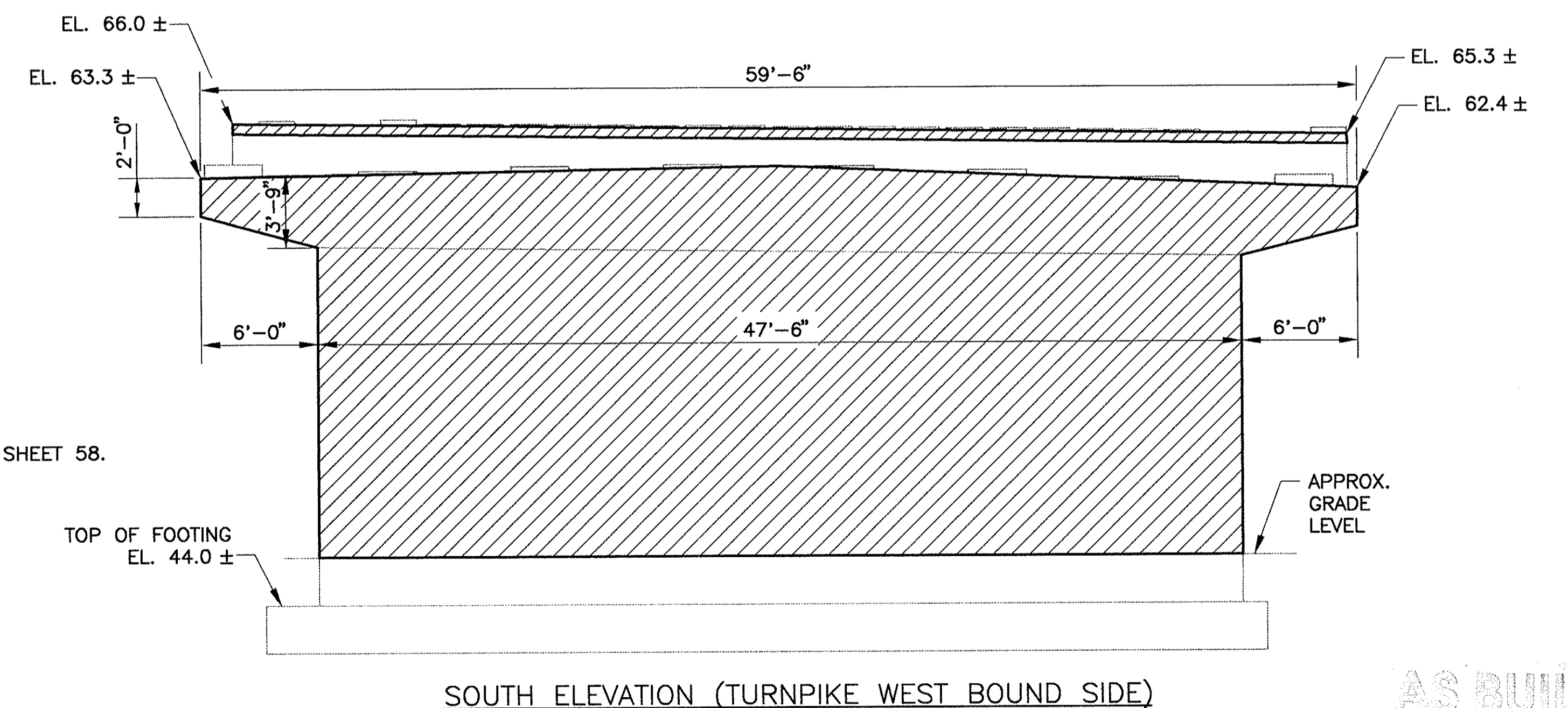
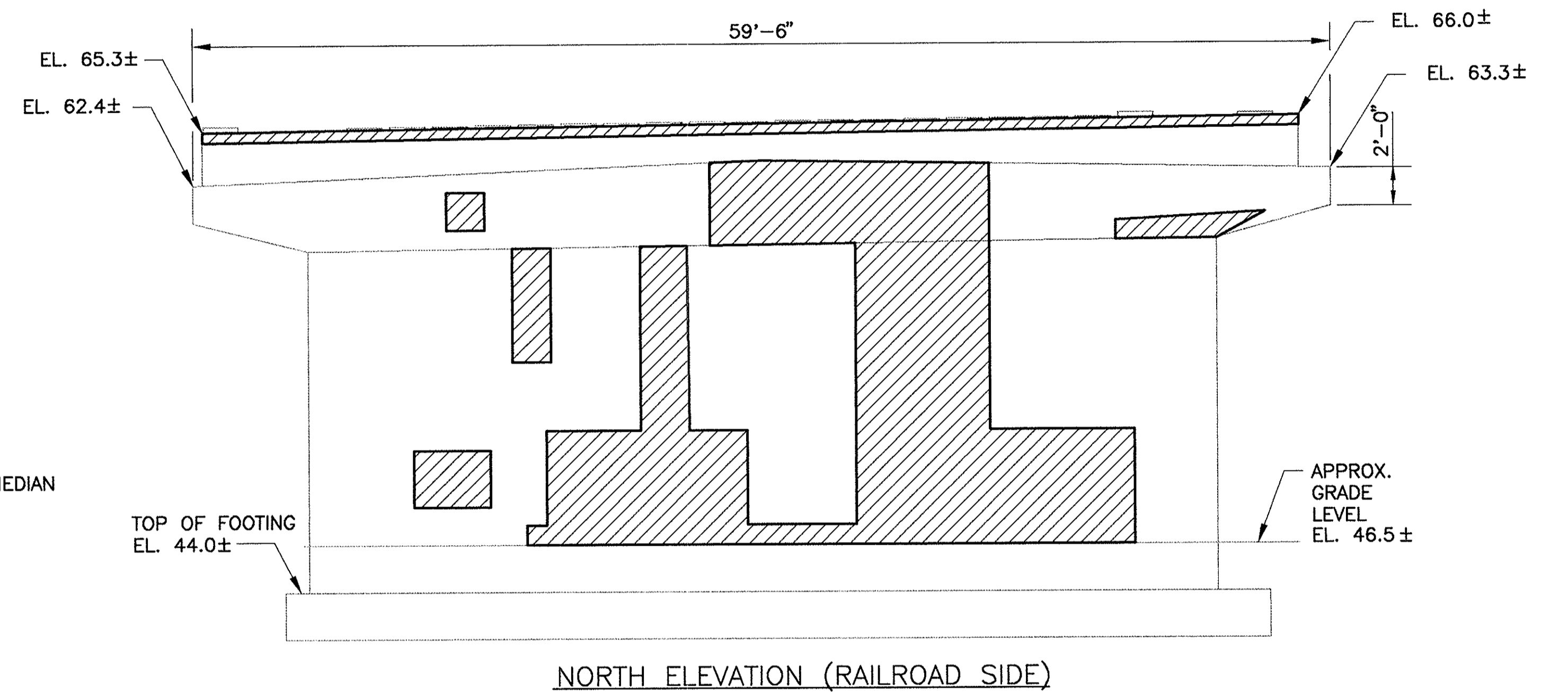
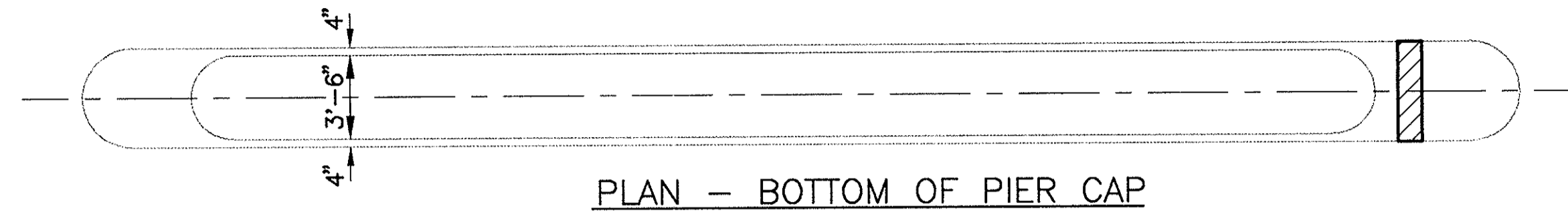
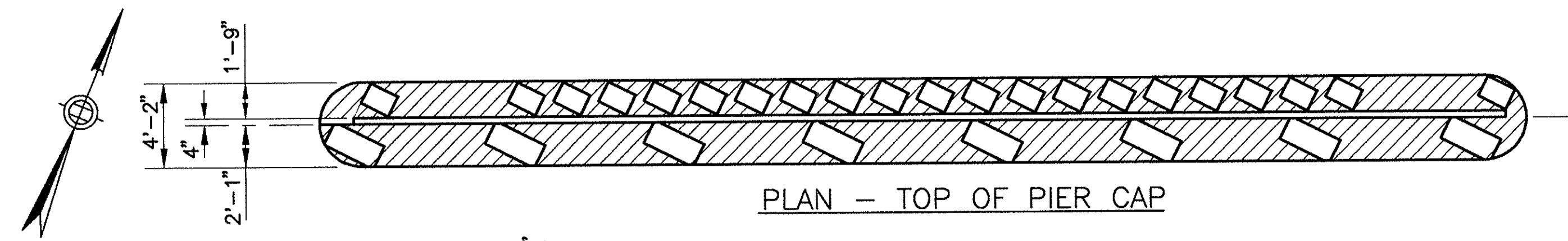
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 56

329 Main Street
Boston, Massachusetts 02129



PIER 1



PIER 2

NOTES:
FOR NOTES, SEE SHEET 58.

DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT A FIBER OPTIC CONDUIT AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844.

LEGEND

APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

TOTAL REPAIR AREA FOR PIERS 1 & 2 = 1405 S.F.±

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

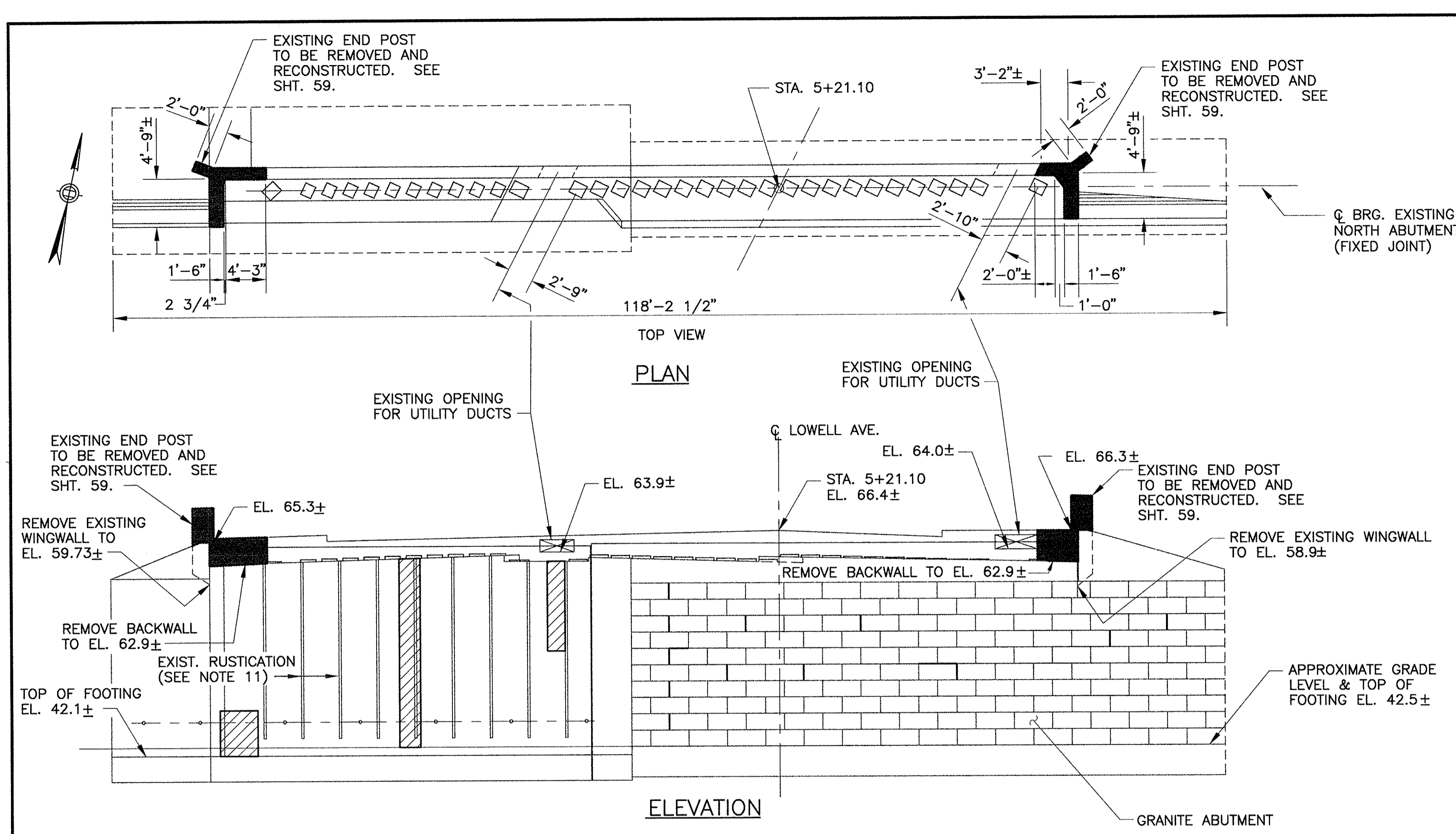
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

AS BUILT

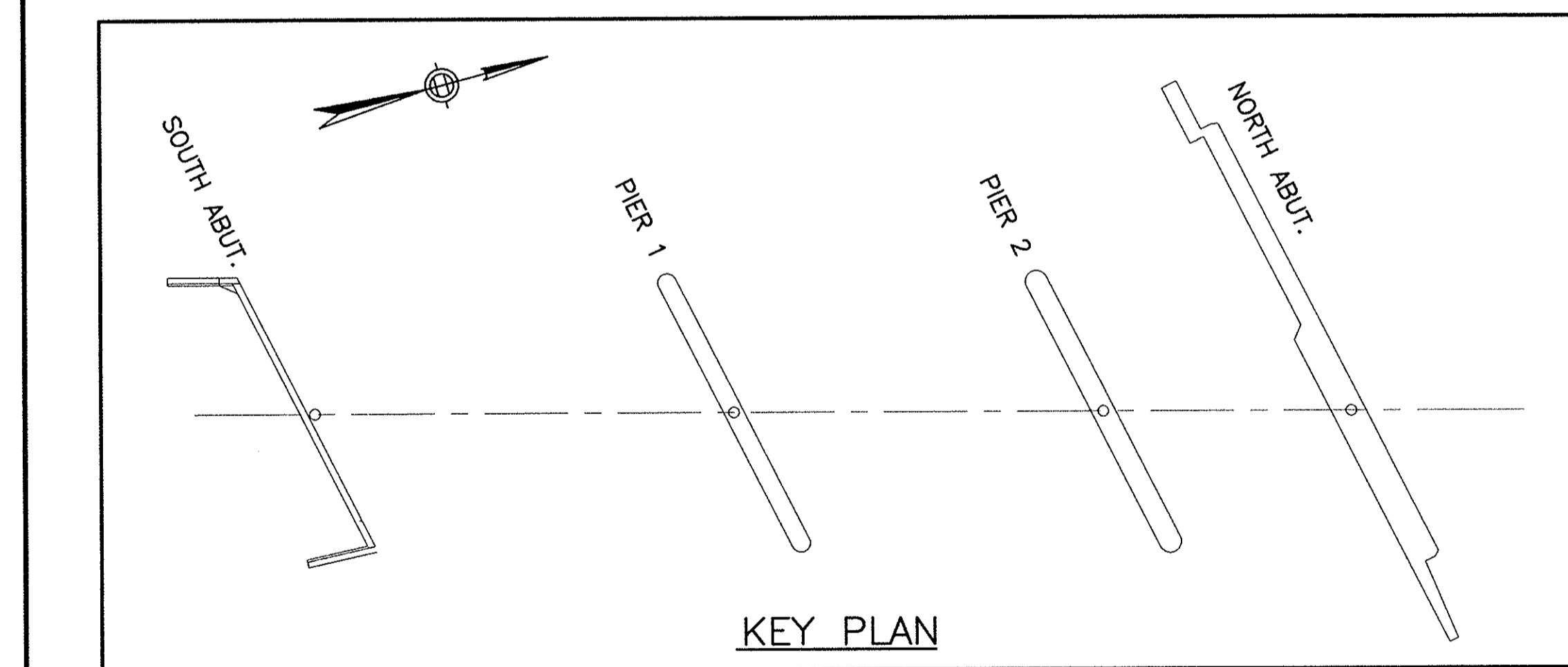
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SUBSTRUCTURE CONCRETE REPAIR
PIERS 1 & 2

Scale: NTS Contract No. 521-024

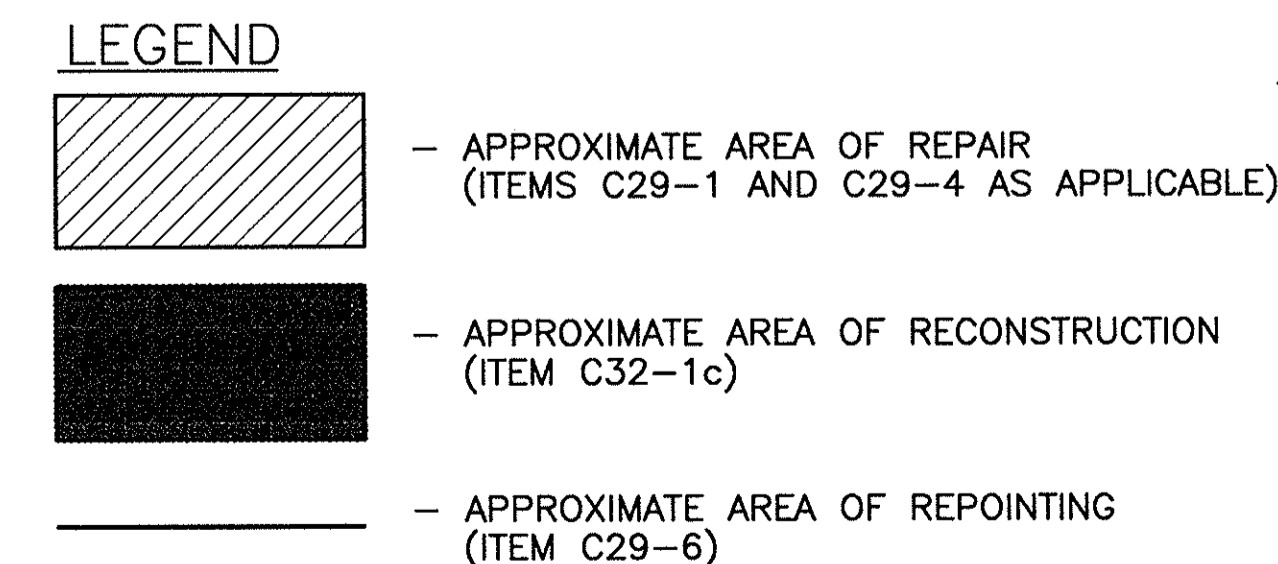
EDWARDS AND KELCEY, INC. Sheet No. 57
The Schraft Center
529 Main Street
Boston, Massachusetts 02129



NORTH ABUTMENT (LOOKING NORTH) ELEVATION

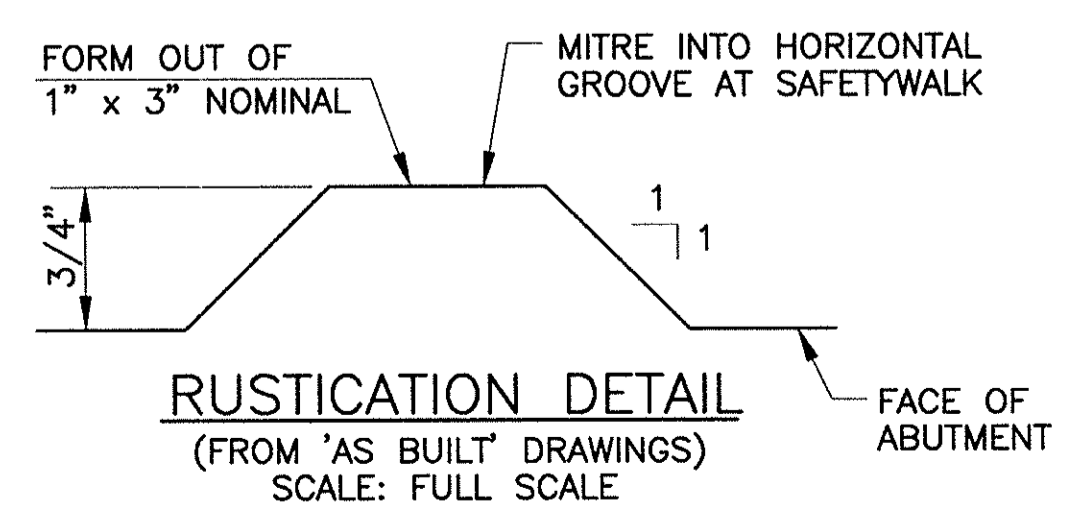


KEY PLAN

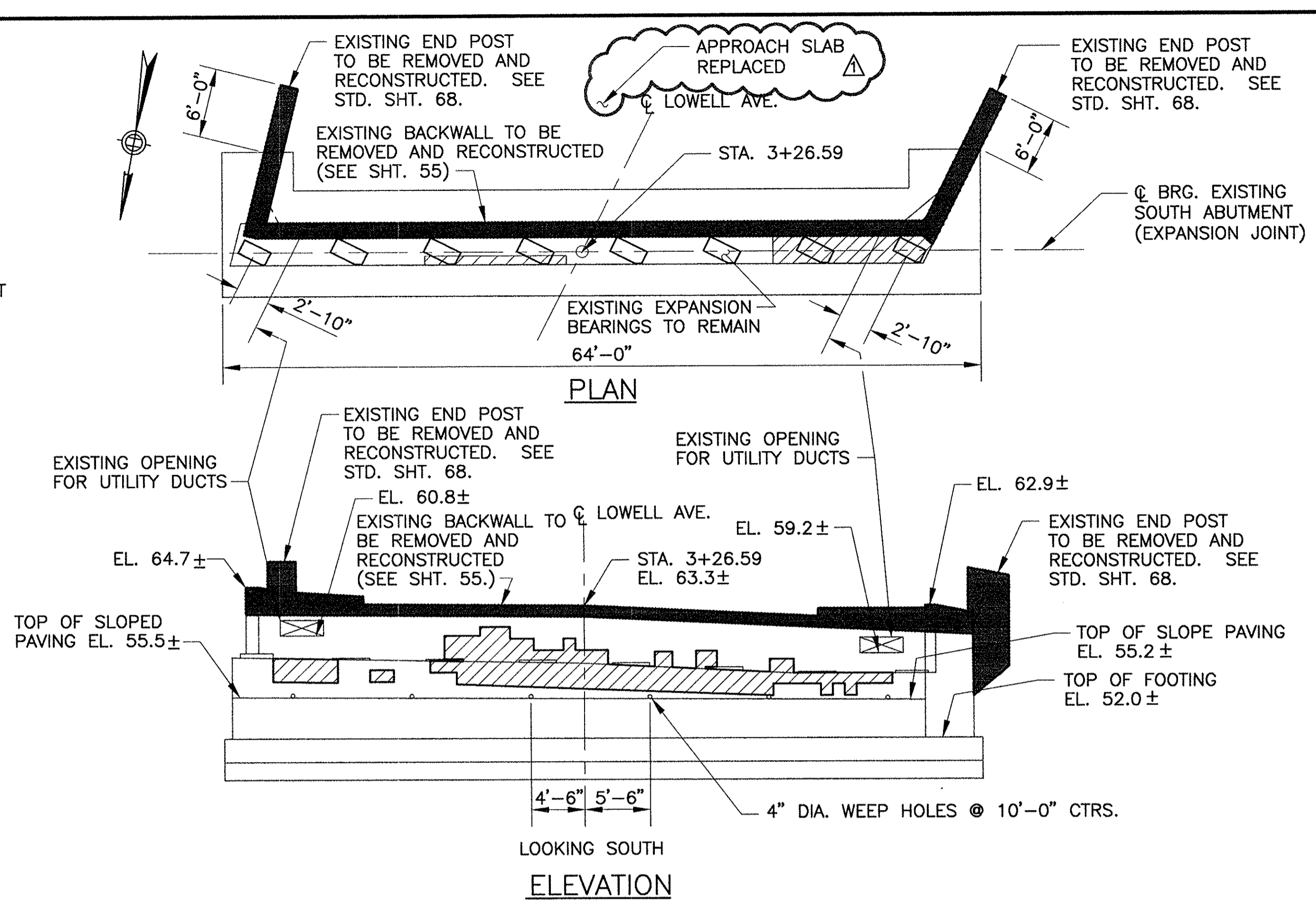


REPAIR AREA (NORTH ABUTMENT) = 56 S.F. ±
 REPAIR AREA (SOUTH ABUTMENT) = 155 S.F. ±

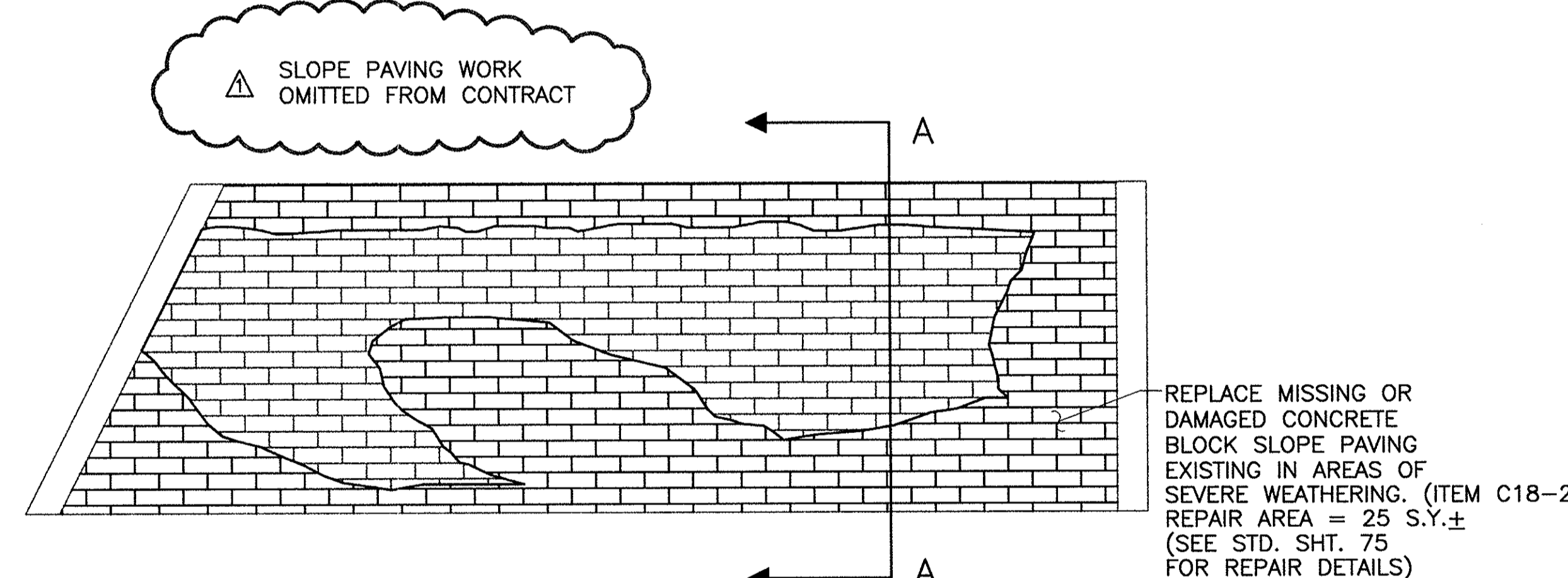
- NOTES:**
- AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
 - ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER (FOR DETAIL SEE SHEET 16).
 - FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHT. 67.
 - FOR LIMITS OF PENETRATING SEALER SEE SHT. 67.
 - FOR REPOINTING OF THE GRANITE BLOCK ABUTMENT WALLS SEE CONTRACT SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION METHODS. (ITEM C29-6)
 - ELEVATIONS AND DIMENSIONS SHOWN ARE TAKEN FROM "AS BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
 - THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
 - ALL PIER CAPS, BEAM SEATS, & DRAINAGE TROUGHS SHALL BE CLEANED OF DEBRIS (ROCKS, STICKS, LEAVES, & TRASH) AND DISPOSED OF BY CONTRACTOR.
 - SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
 - THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE. SEE DETAIL THIS SHEET.
 - IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).



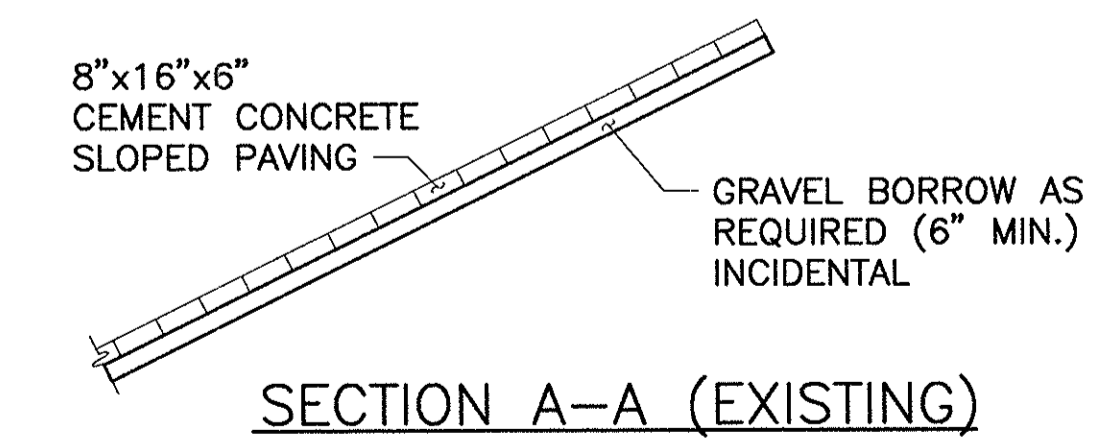
NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
	AS-BUILT	GTS	10/95	CHECKED:	L.M.B. 12/93
				DESIGNED:	T.A.Z. 12/93
				DRAWN:	T.L. 12/93



SOUTH ABUTMENT (LOOKING SOUTH) ELEVATION



SLOPED PAVING @ SOUTH ABUTMENT - ELEVATION



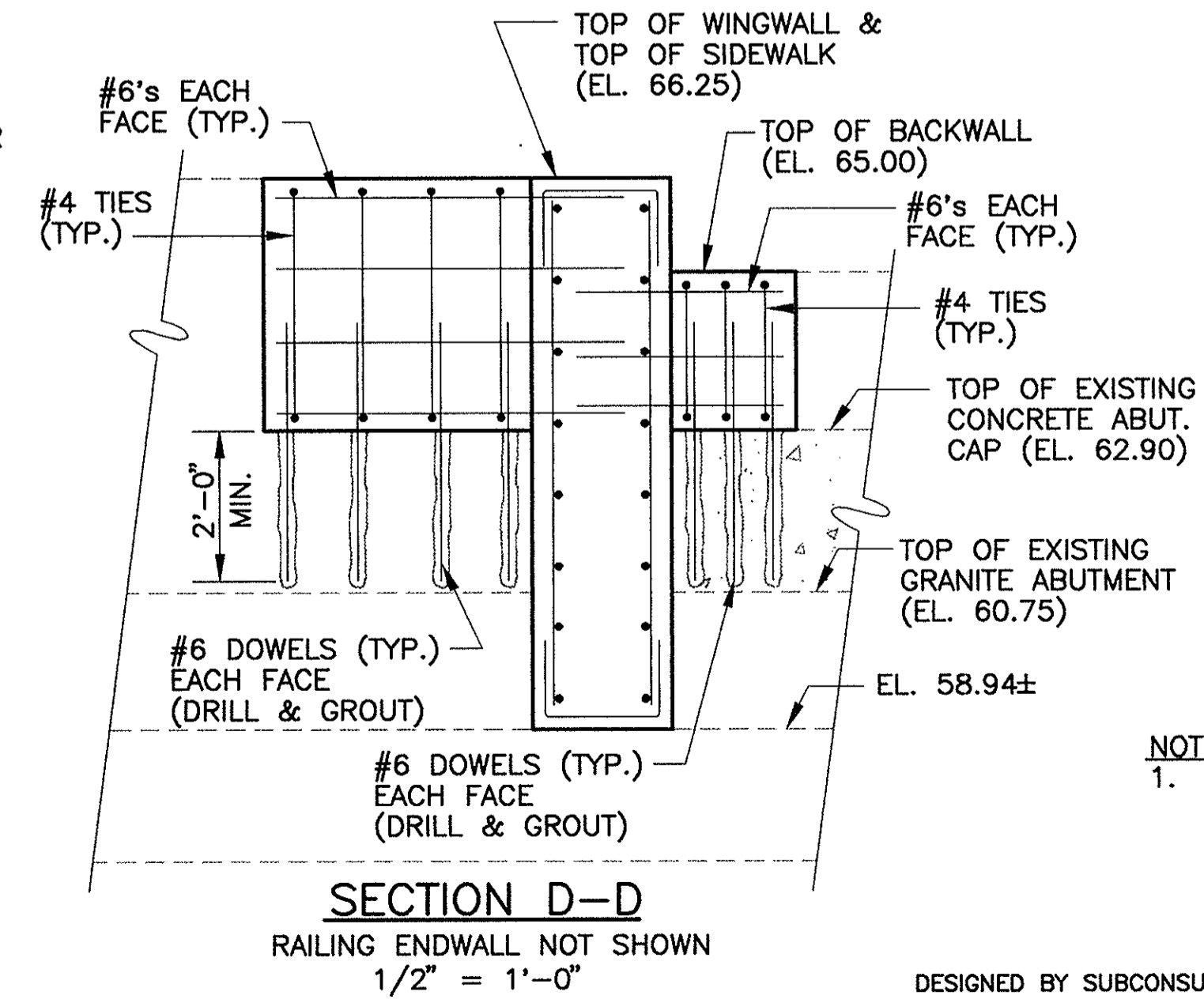
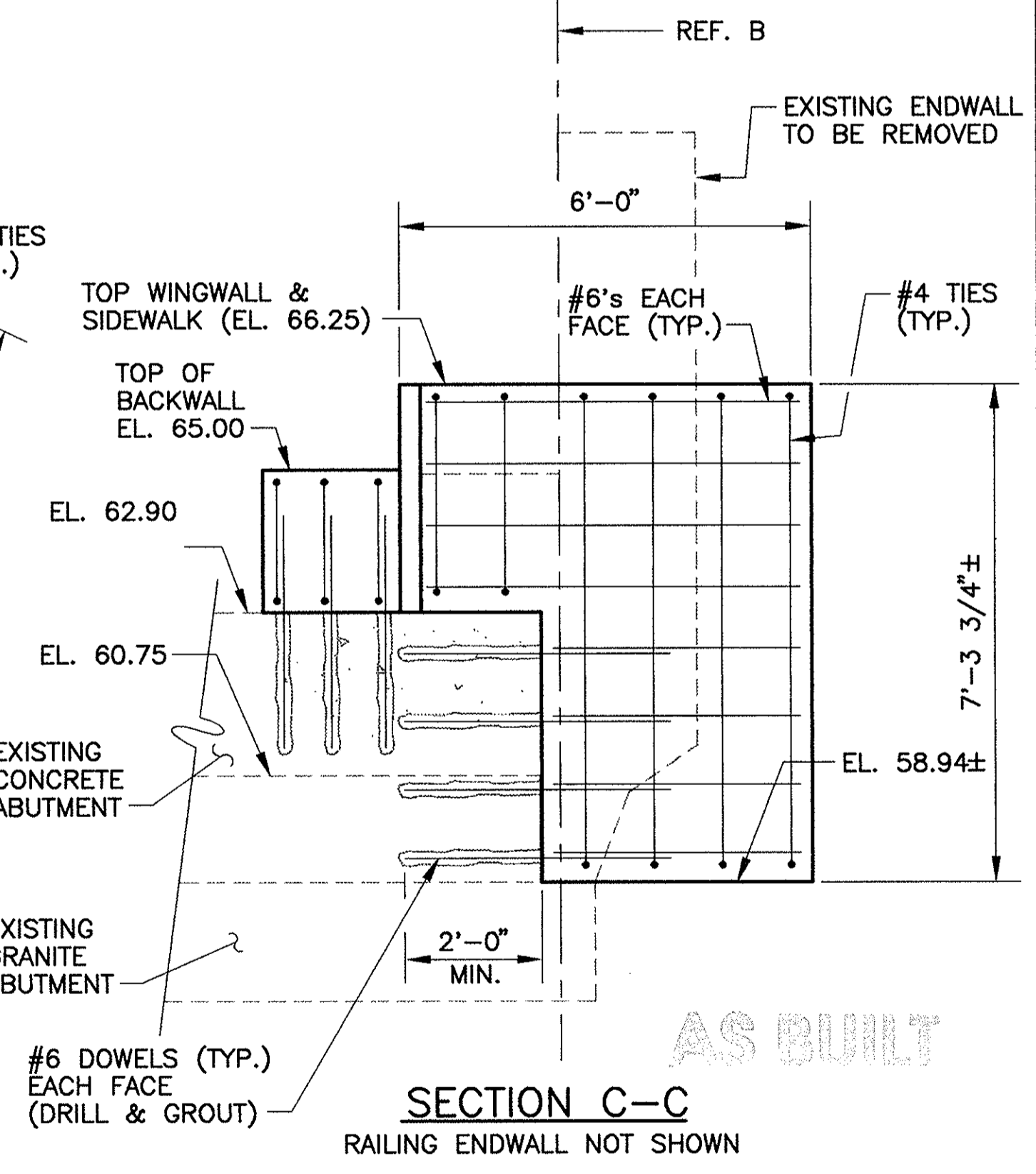
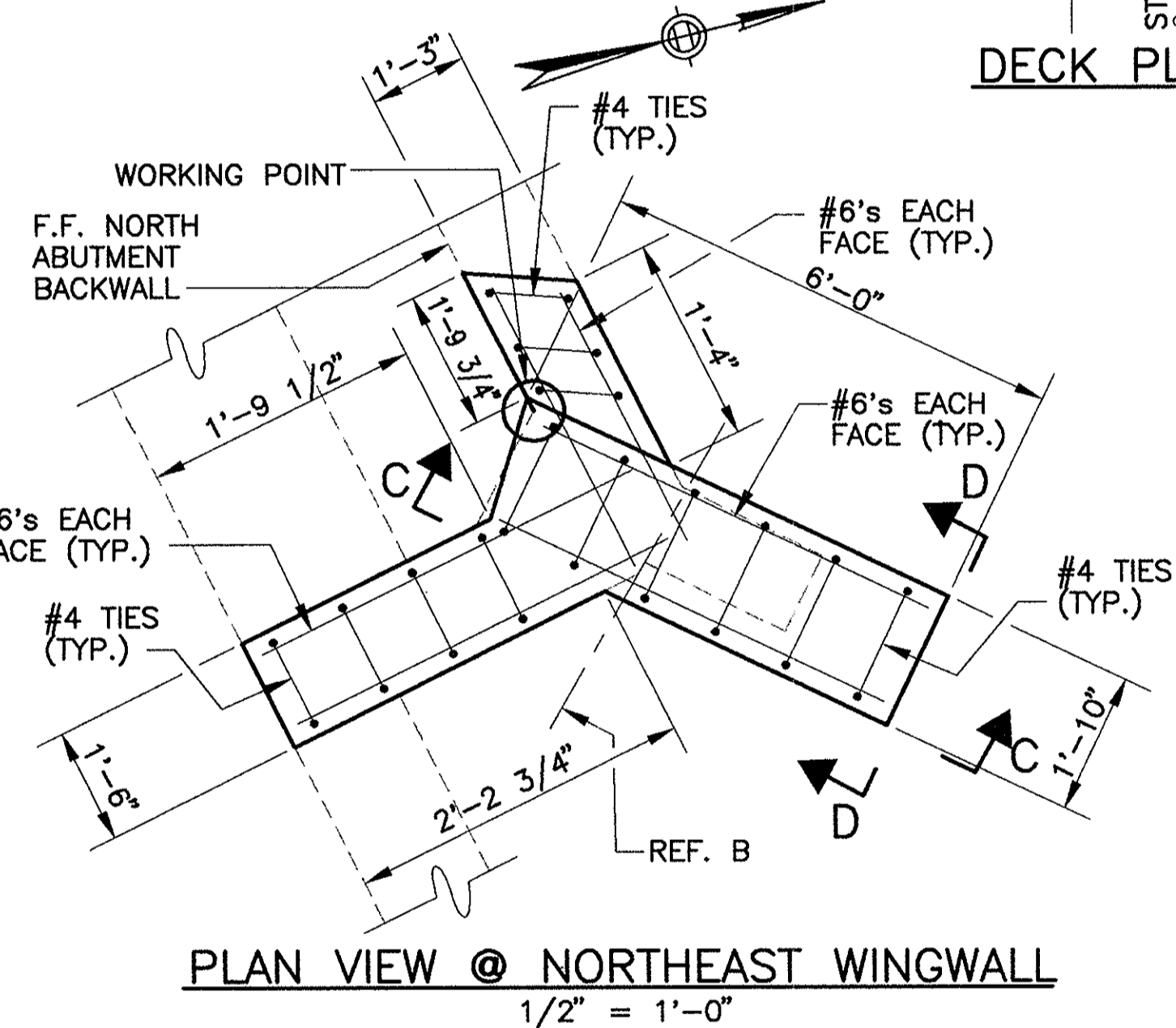
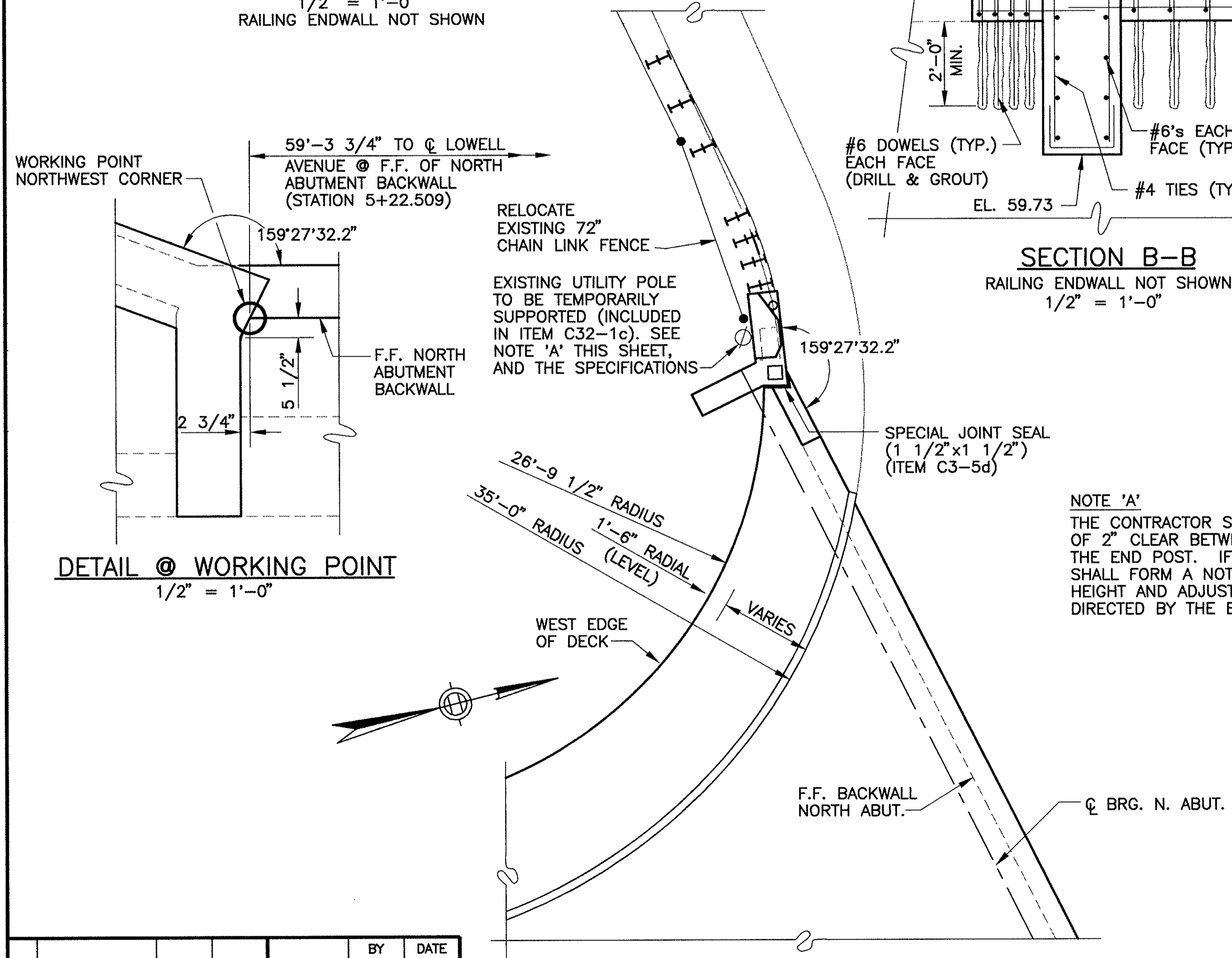
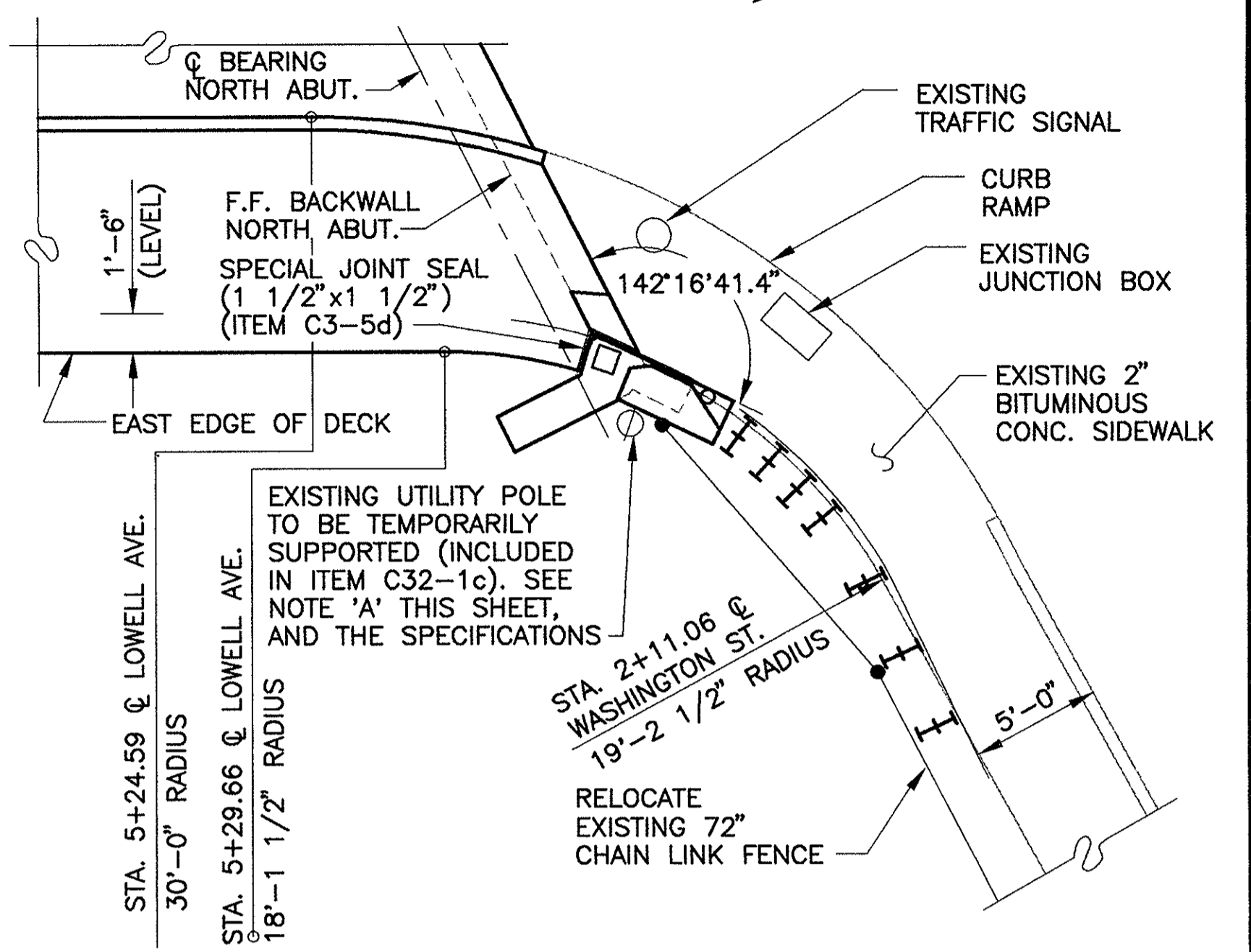
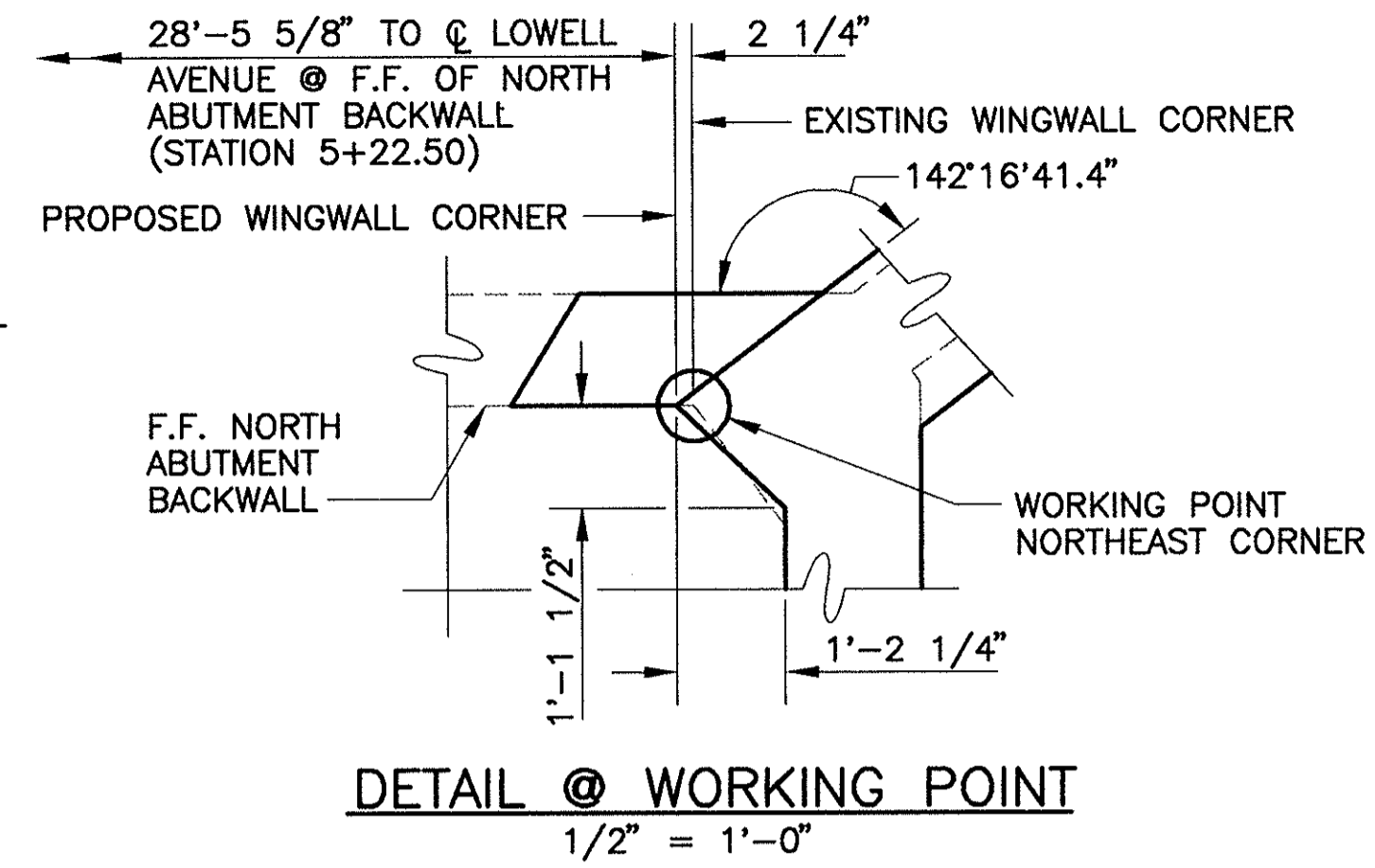
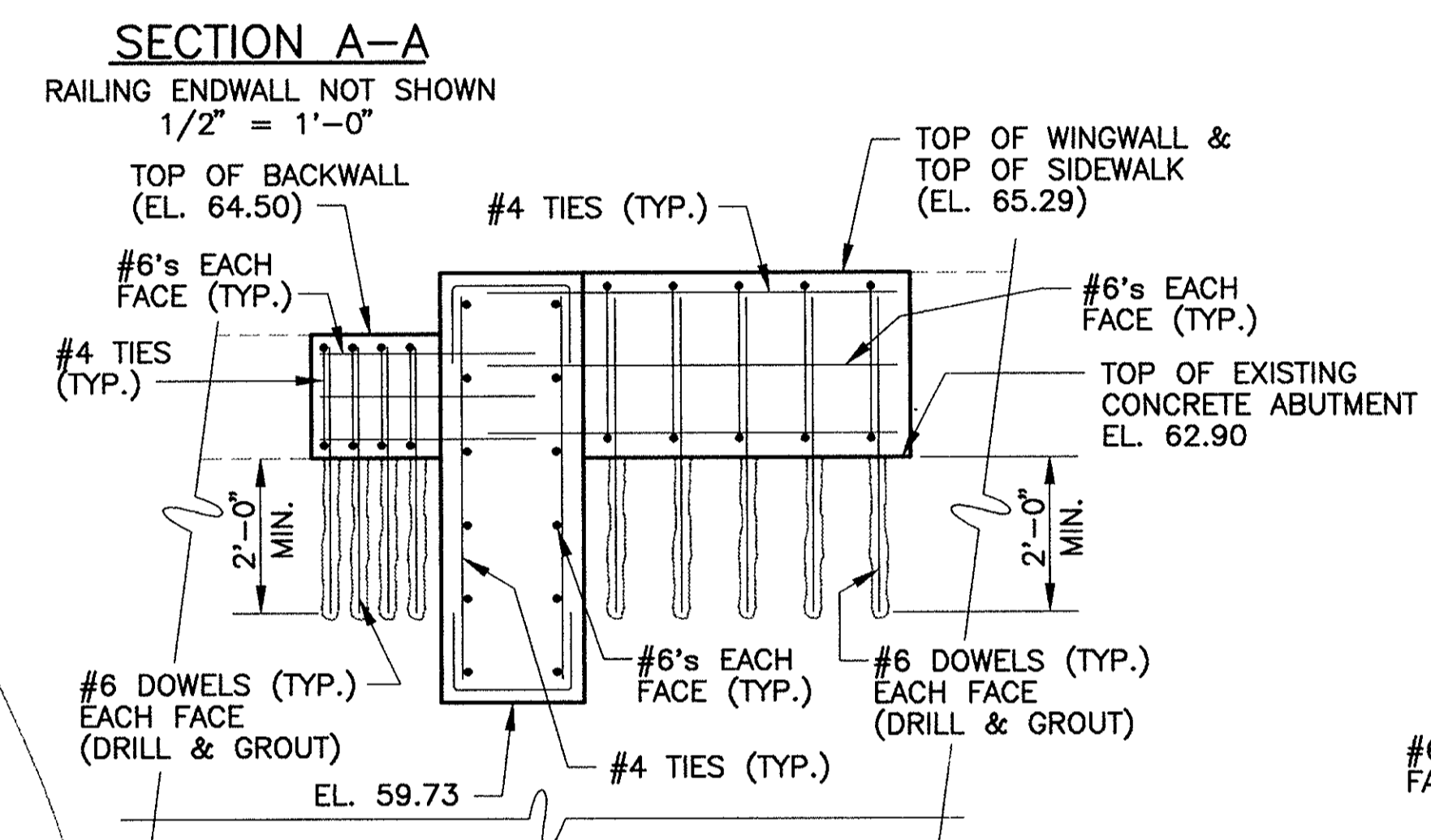
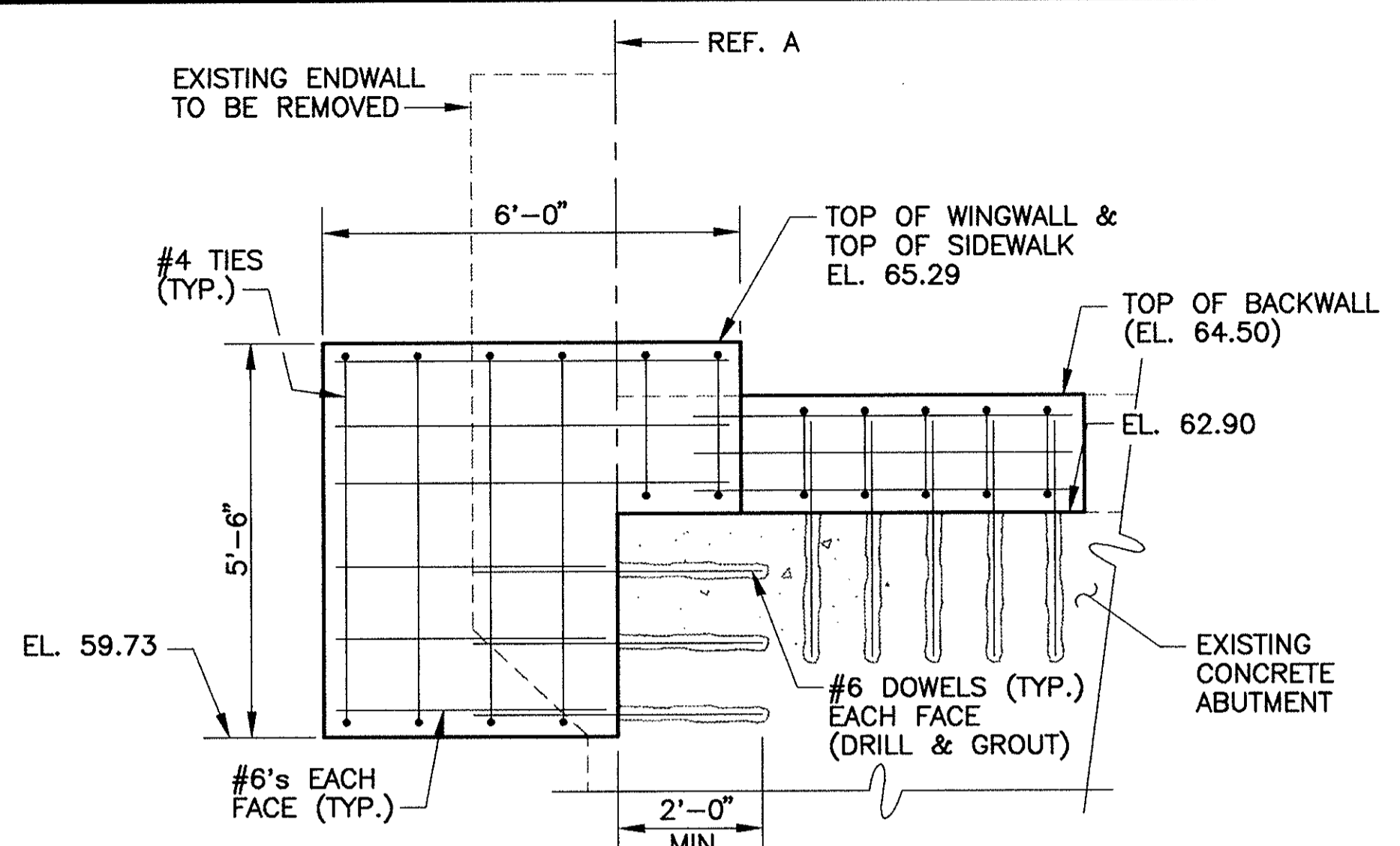
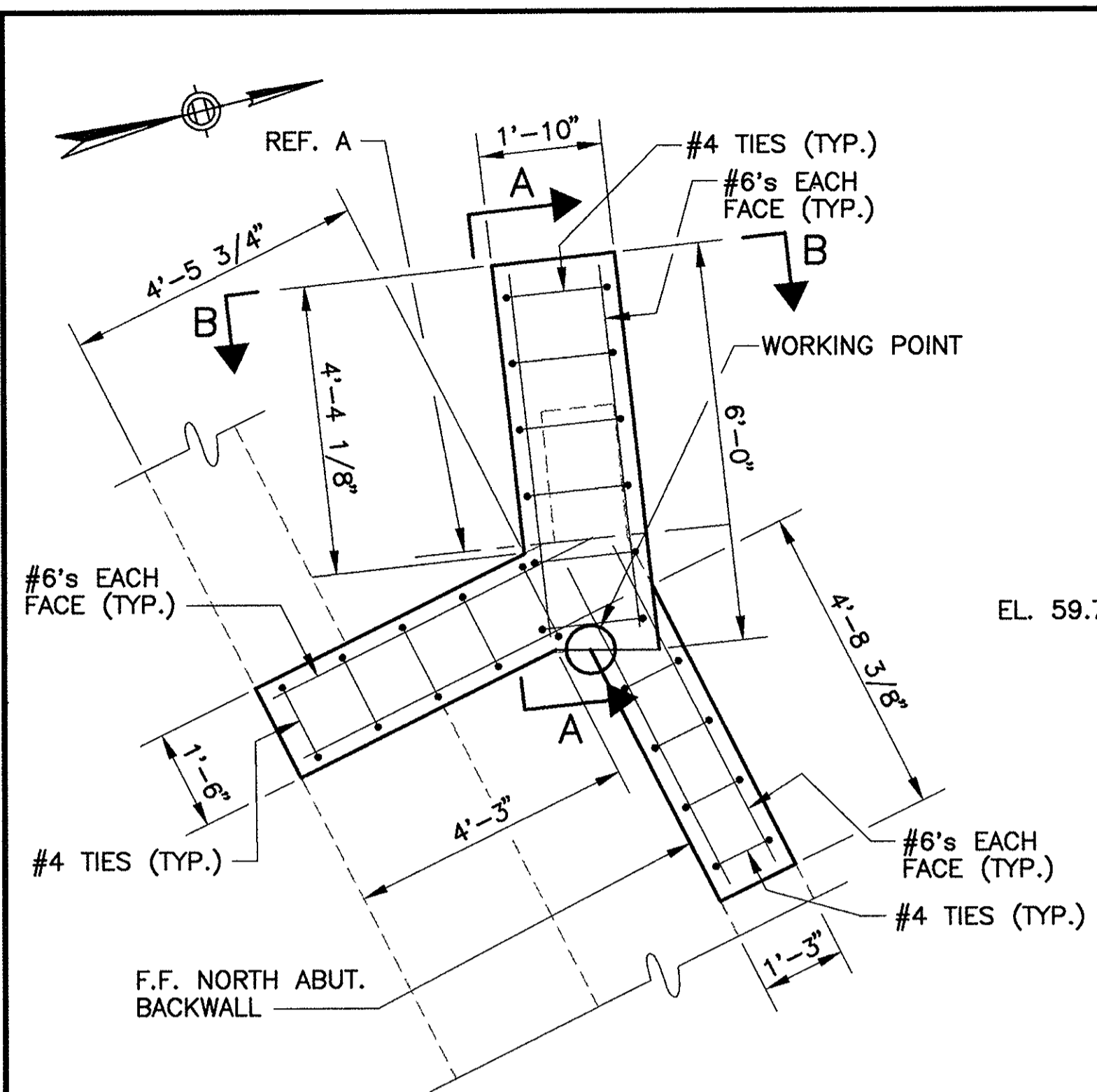
SECTION A-A (EXISTING)

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
**SUBSTRUCTURE CONCRETE REPAIRS
 NORTH & SOUTH ABUTMENTS**

Scale: NTS Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 58
The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NOTE 'A'
 THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 2" CLEAR BETWEEN THE UTILITY POLE AND THE END POST. IF REQUIRED, THE CONTRACTOR SHALL FORM A NOTCH IN THE END POST FULL HEIGHT AND ADJUST THE REINFORCING AS DIRECTED BY THE ENGINEER.

NOTES:
 1. FOR RAILING ENDWALL SEE STD. SHT. 68.

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

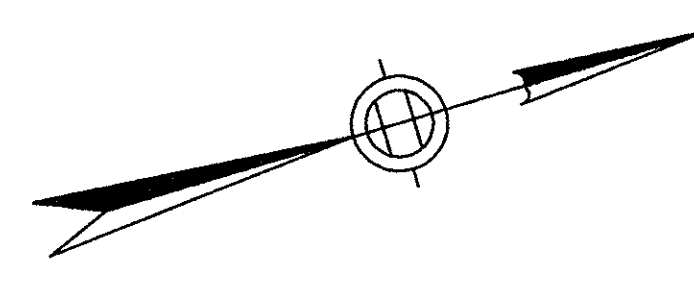
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
NORTH ABUTMENT ENDWALL DETAILS

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 59

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



PROPOSED 410'± ALUMINUM BRIDGE RAIL TYPE AL-3 (ITEM C20-1) REMOVE & DISPOSE EXISTING BRIDGE RAIL (INCIDENTAL TO ITEM C1D-1c)

PROPOSED 410'± ANTI-MISSILE CHAIN LINK FENCE (ITEM E6-5)

EXISTING FIBER OPTIC CONDUIT IN MEDIAN, SEE DIG SAFE NOTE THIS SHEET

REMOVE & DISPOSE EXISTING 6 FT. CHAIN LINK FENCE (NOT SHOWN) (ITEM E9-13) EACH SIDE SPANS 1 & 2

INSTALL 41'± HIGHWAY GUARD (ITEMS E4-12, E4-1, E4-9b INCLUSIVE) SEE NOTE 7 THIS SHEET AND SHEET 68, 72, & 73

EXISTING APPROACH SLAB

PROPOSED END POST (FOR DETAILS SEE SHEET 68) @ 3" PVC CONDUIT (ITEM L10-3)

PROPOSED END POST (FOR DETAILS SEE SHEETS 59 & 68) @ 12" DIA. DUCTS BOSTON EDISON

STA. 4+05.25 @ LOWELL AVENUE = STA. 187+58.11 @ MASSACHUSETTS TURNPIKE

INSTALL 36'± HIGHWAY GUARD (ITEMS E4-12, E4-1, E4-9b INCLUSIVE) SEE NOTE 7 THIS SHEET AND SHEET 68, 72, & 73

EXISTING LIGHT STANDARD TO BE REMOVED BY BOSTON EDISON (ITEM LS-1)

REMOVE AND DISPOSE OF EXISTING FENCE (ITEM E9-13) INSTALL 50'± 6 FT. CHAIN LINK FENCE (ITEM E8-1b) SEE SHEET 74.

UTILITY POLE TO BE TEMPORARILY SUPPORTED (INCLUDED IN ITEM C32-1c)

PROPOSED END POST (FOR DETAILS SEE SHEETS 59 & 68) @ 12" DIA. DUCTS BOSTON EDISON

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

MEET EXISTING BIT. CONC. SIDEWALK @ END OF RADIUS

BIT. CONC. CURB RAMP #3 (FOR DETAILS SEE THIS SHEET)

PROPOSED SAWCUT (INCIDENTAL TO ITEM A7-4) FOR DETAILS SEE SHEET 61

LIMITS OF APPROACH WORK

60'± GRANITE CURB TYPE VA-5, CURVED (ITEM F1-6)

STA. 5+67.21 LOWELL @ = STA. 1+90.42 WASHINGTON ST.

@ 3" PVC CONDUIT (ITEM G19-1) SEE NOTE 8

PROPOSED END POST (FOR DETAILS SEE SHEETS 59 & 68)

TRAFFIC SIGNAL CURB RAMP #A

BIT. CONC. CURB RAMP #B

JUNCTION BOX (EXISTING)

MEET EXISTING BIT. CONC. SIDEWALK @ END OF RADIUS

WASHINGTON ST.

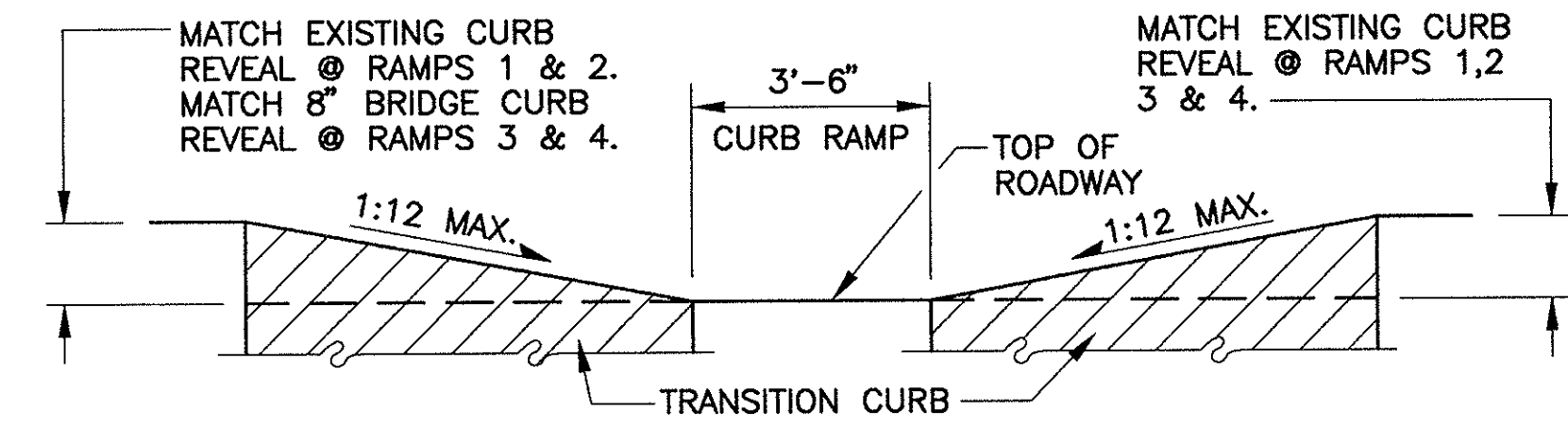
EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

REMOVE AND DISPOSE OF EXISTING FENCE (ITEM E9-13) INSTALL 50'± 6 FT. CHAIN LINK FENCE (ITEM E8-1b) SEE SHEET 74.

REMOVE & RESET "PARKING ON BRIDGE PROHIBITED" SIGN ON BRIDGE FENCE INCLUDED IN (ITEM G15-1)

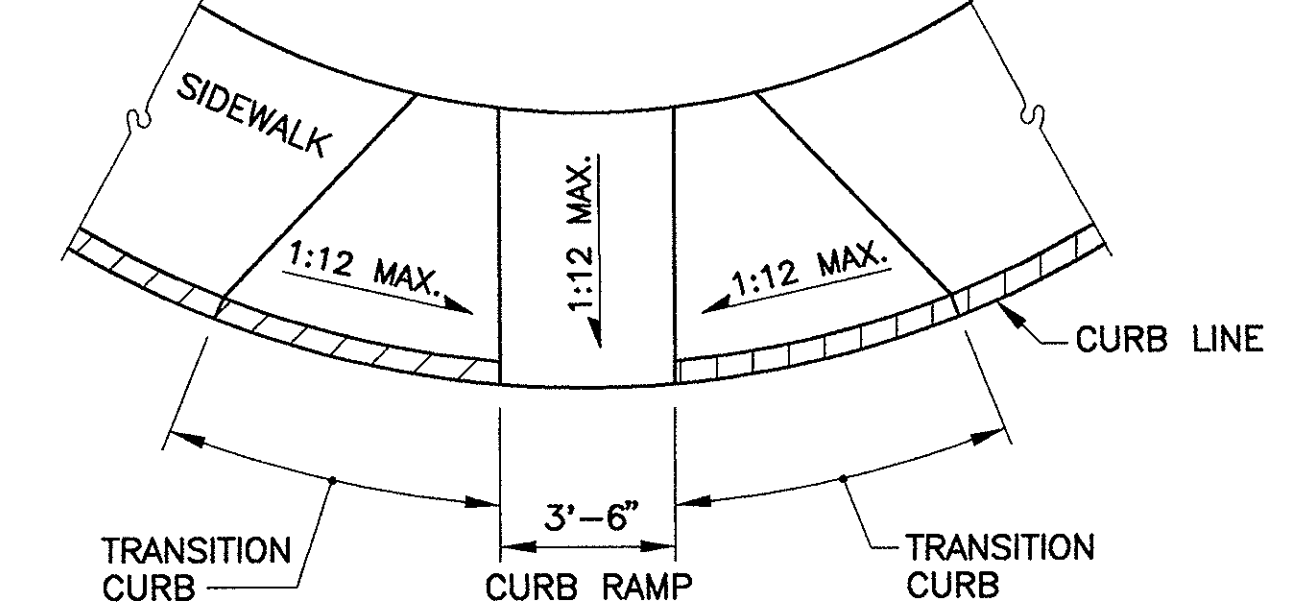
INSTALL 36'± HIGHWAY GUARD (ITEMS E4-12, E4-1, E4-9b INCLUSIVE) SEE NOTE 7 THIS SHEET AND SHEET 68, 72, & 73

REMOVE & DISPOSE OF EXISTING FENCE (ITEM E9-13) INSTALL 50'± 6 FT. CHAIN LINK FENCE (ITEM E8-1b) SEE SHEET 74.



BRIDGE CURB TRANSITION DETAILS AT CURB RAMPS

(BITUMINOUS CONCRETE CURB RAMPS 3 & 4 INCLUDED IN ITEM B1-3) (CEMENT CONCRETE CURB RAMPS 1 & 2 INCLUDED IN ITEM G1-1)



CURB RAMP DETAIL

NOTES:

- LOCATIONS OF EXISTING UTILITIES AND SURFACE DETAILS HAVE BEEN OBTAINED FROM "AS BUILT" DRAWINGS AND ARE NOT GUARANTEED FOR COMPLETENESS AND ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND DETAILS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES PRIOR TO CONSTRUCTION AND COORDINATE ALL ASSOCIATED WORK WITH THEM THROUGHOUT CONSTRUCTION.
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- ALL JOINTS IN BITUMINOUS CONCRETE PAVEMENT SHALL BE COATED WITH HOT POURED RUBBERIZED ASPHALT. FED. SPEC. SS-S-1401c.
- LIGHT STANDARD SHALL BE REMOVED AND REPLACED BY BOSTON EDISON. THE CONTRACTOR SHALL NOTIFY BOSTON EDISON'S WALTHAM SERVICE CENTER (617-652-6300) TWO (2) WEEKS IN ADVANCE OF DEMOLITION.
- THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND ANCHOR BOLTS FOR LIGHT STANDARD AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT AT ABUTMENT BACKWALL. BOSTON EDISON WILL FURNISH AND INSTALL CONDUCTORS FROM FEED TO LIGHT STANDARD.
- HIGHWAY GUARD SHALL CONSIST OF 16'± HIGHWAY GUARD ATTACHMENT (LOCAL ROAD) (ITEM E4-12), SINGLE FACE W-BEAM HIGHWAY GUARD (ITEM E4-1) AND 14'± TERMINAL END WITHOUT ANCHORAGE (E4-9b).
- THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND TRAFFIC LOOPS AS SHOWN ON THE PLANS, AS DIRECTED BY THE ENGINEER, AND AS COORDINATED WITH THE CITY OF NEWTON. THE CONTRACTOR SHALL CONNECT THE PROPOSED CONDUIT TO THE EXISTING CONDUIT AT THE EXISTING SIDEWALK JUNCTION BOX OR AS SPECIFIED BY THE CITY OF NEWTON.

REMOVE AND DISPOSE OF EXISTING FENCE (ITEM E9-13) INSTALL 50'± 6 FT. CHAIN LINK FENCE (ITEM E8-1b) SEE SHEET 74.

LIMITS OF APPROACH SIDEWALK RECONSTRUCTION AT END OF RADIUS (FOR DETAILS SEE SHEET 61)

PROPOSED SAWCUT (INCIDENTAL TO ITEM A7-4) FOR DETAILS SEE SHEET 61

CEMENT CONCRETE CURB RAMP #1

BOSTON EDISON M.H.

REMOVE & RESET EXISTING CURB (ITEM F3-1)

NEW ENGLAND TEL. M.H.

LIMITS OF APPROACH WORK

WATER M.H.

CEMENT CONCRETE CURB RAMP #2

LIMITS OF APPROACH SIDEWALK RECONSTRUCTION AT END OF RADIUS (FOR DETAILS SEE SHEET 61)

EXISTING LIGHT STANDARD TO BE REMOVED BY BOSTON EDISON (ITEM LS-1)

@ MASSACHUSETTS TURNPIKE WESTBOUND ROADWAY

MASSACHUSETTS TURNPIKE EASTBOUND ROADWAY

UTILITY POLE TO BE TEMPORARILY SUPPORTED (INCLUDED IN ITEM C32-1c)

PROPOSED END POST (FOR DETAILS SEE SHEETS 59 & 68) @ 12" DIA. DUCTS BOSTON EDISON

EXISTING APPROACH SLAB

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

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EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

EXISTING 6 FT. CHAIN LINK FENCE TO REMAIN

PAVEMENT PLAN SCALE: 1" = 20'

LEGEND

- PROPOSED PAVEMENT SURFACE REMOVAL 2 1/2"± (ITEM A7-4)
- PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
- PROPOSED BRIDGE DECK RECONSTRUCTION (ITEM C32-1c)
- PROPOSED POLYMER MODIFIED CONCRETE (PMC) OVERLAY (1 3/4") (ITEM C6S-1) SPAN 1 & 2, AND PROPOSED REHABILITATION OF SPAN 3 (ITEM C6S-4)
- PROPOSED CONCRETE SIDEWALK REMOVAL INCIDENTAL TO (ITEM C1D-1c)
- PROPOSED 4" CONCRETE SIDEWALK (ITEM G1-1)
- PROPOSED BITUMINOUS CONCRETE SIDEWALK PAVEMENT SURFACE REMOVAL 2 1/2" (INCIDENTAL TO ITEM C1D-1c)
- PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)

- NOTE 'A'
JUNCTION BOX FOR LOOP DETECTORS SHALL BE A FORMED BOX OUT IN SIDEWALK SLAB 1'-6" LONG x 9" WIDE x 9" DEEP. EDGE OF BOX OUT SHALL BE LOCATED 10" IN FROM FACE OF CURB. FOR DETAIL OF FRAME AND COVER, SEE DETAILS 'A' AND 'B' SHEET NO. 50. ANCHORS ALONG LONGITUDINAL SIDES OF FRAME SHALL BE WELDED PLUMB FROM THE OUTSTANDING LEG OF ANGLE. COVER SHALL BE SEALED WATERTIGHT.
- PROPOSED LIGHT STANDARD TO BE INSTALLED BY BOSTON EDISON (ITEM LS-1)
 - PROPOSED JUNCTION BOX FRAME AND COVER (INCIDENTAL TO ITEM L10-3 OR ITEM G19-1 AS APPLICABLE)

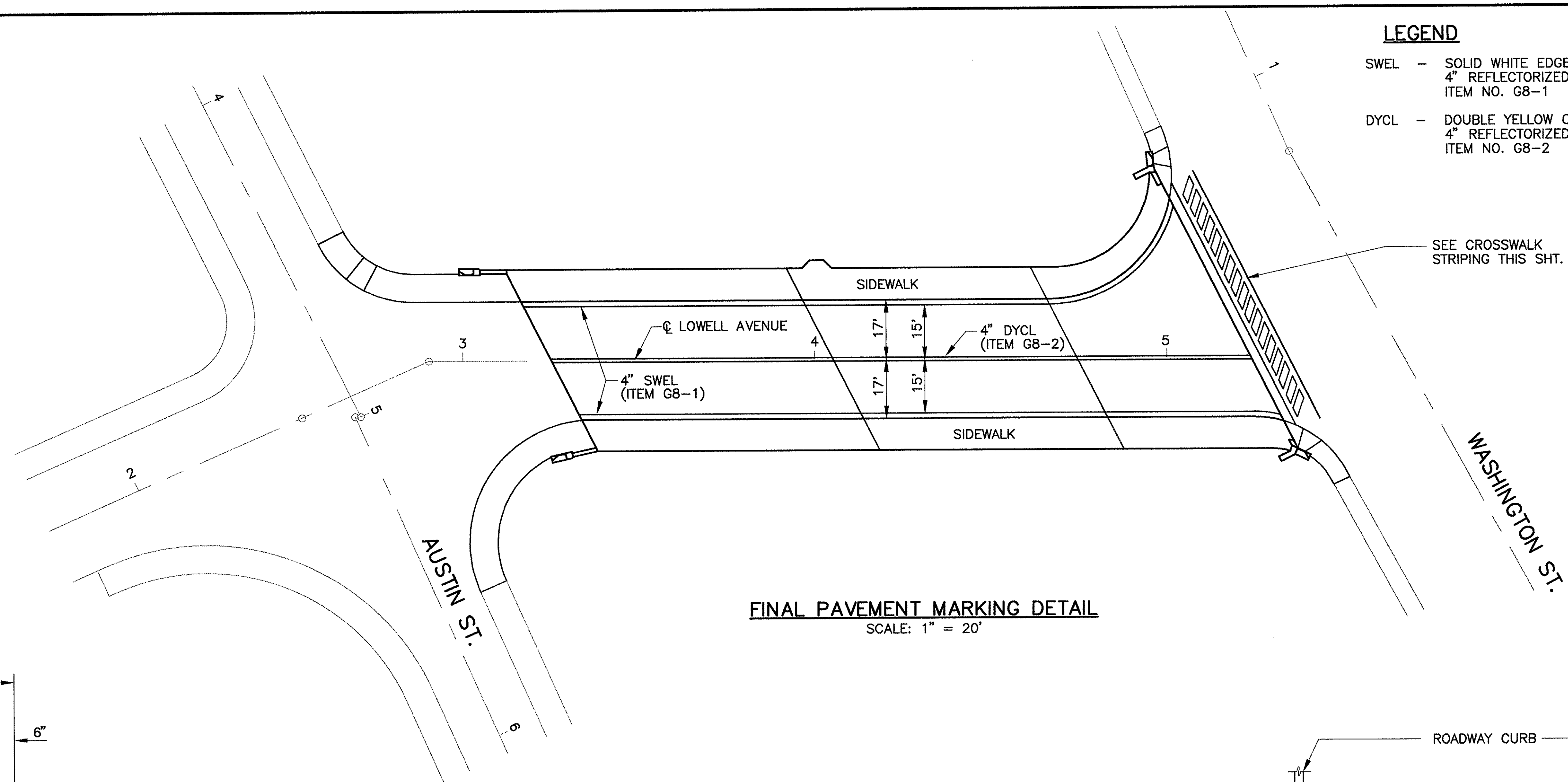
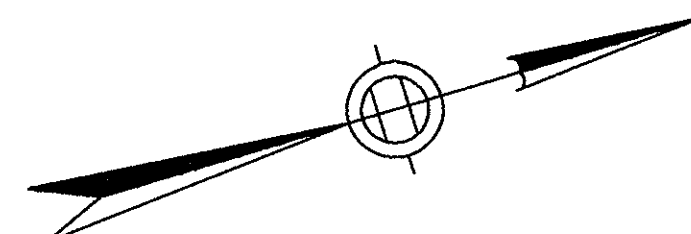
DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT A FIBER OPTIC CONDUIT AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844.

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

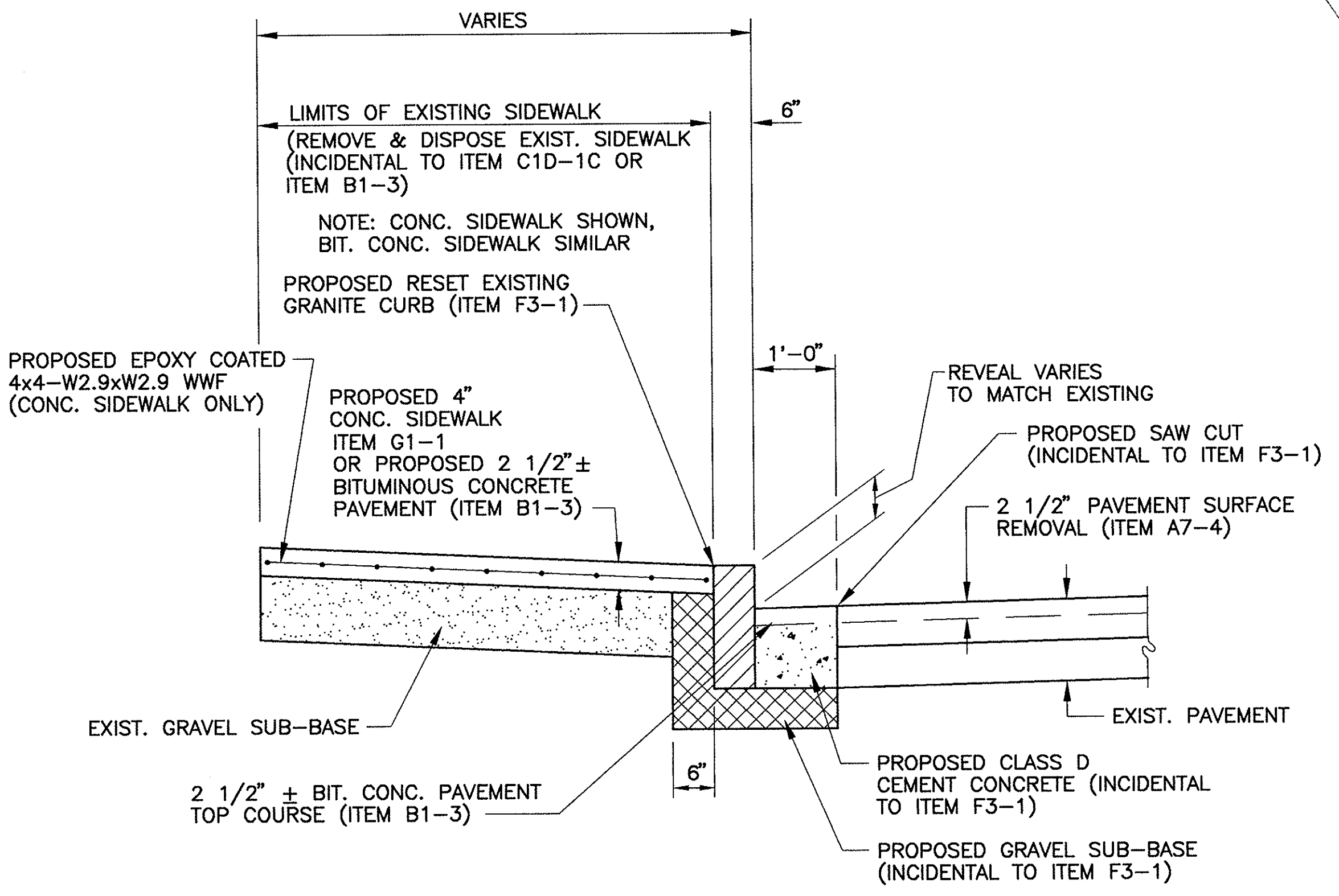
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
PAVEMENT PLAN
 Scale: 1" = 20' Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 60
 323 Main Street, Boston, Massachusetts 02129
 DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

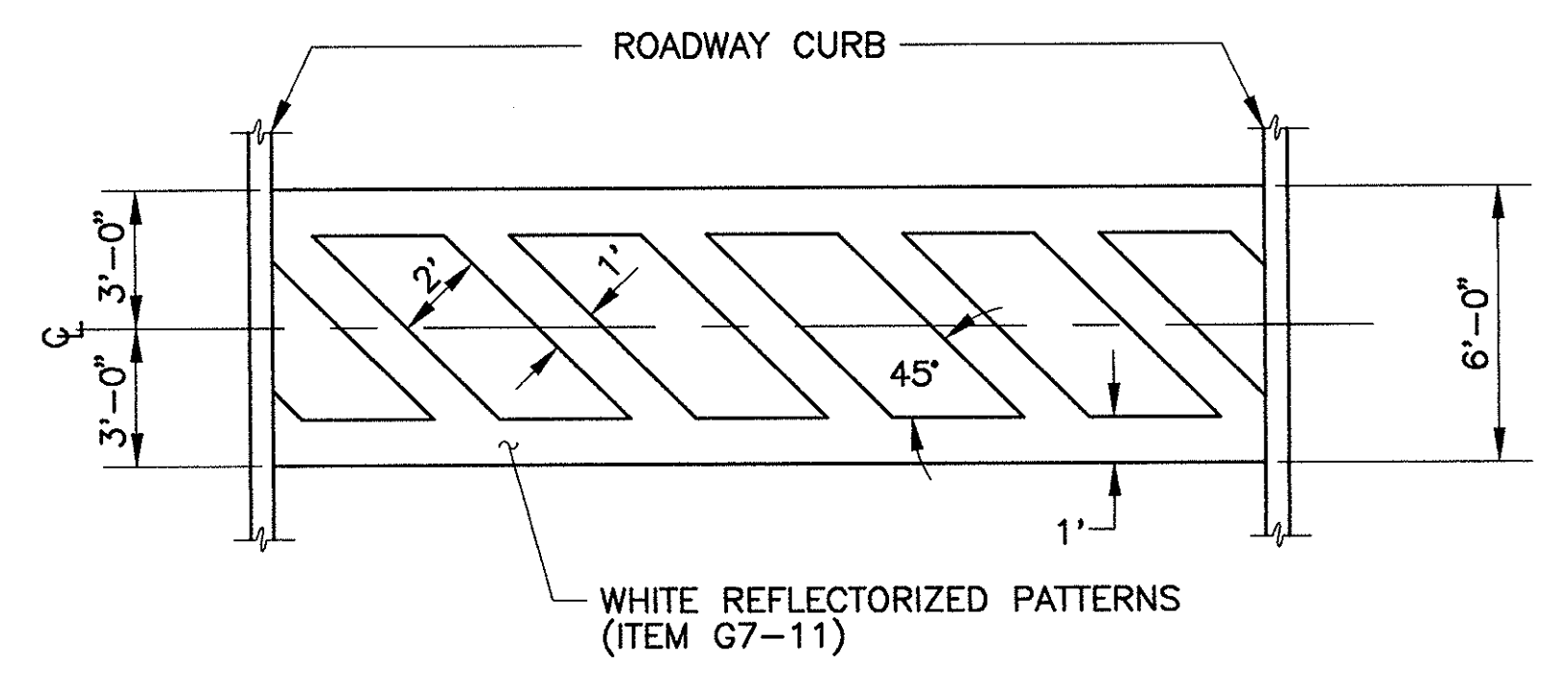


- LEGEND**
- SWEL - SOLID WHITE EDGE LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
ITEM NO. G8-1
 - DYCL - DOUBLE YELLOW CENTER LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
ITEM NO. G8-2

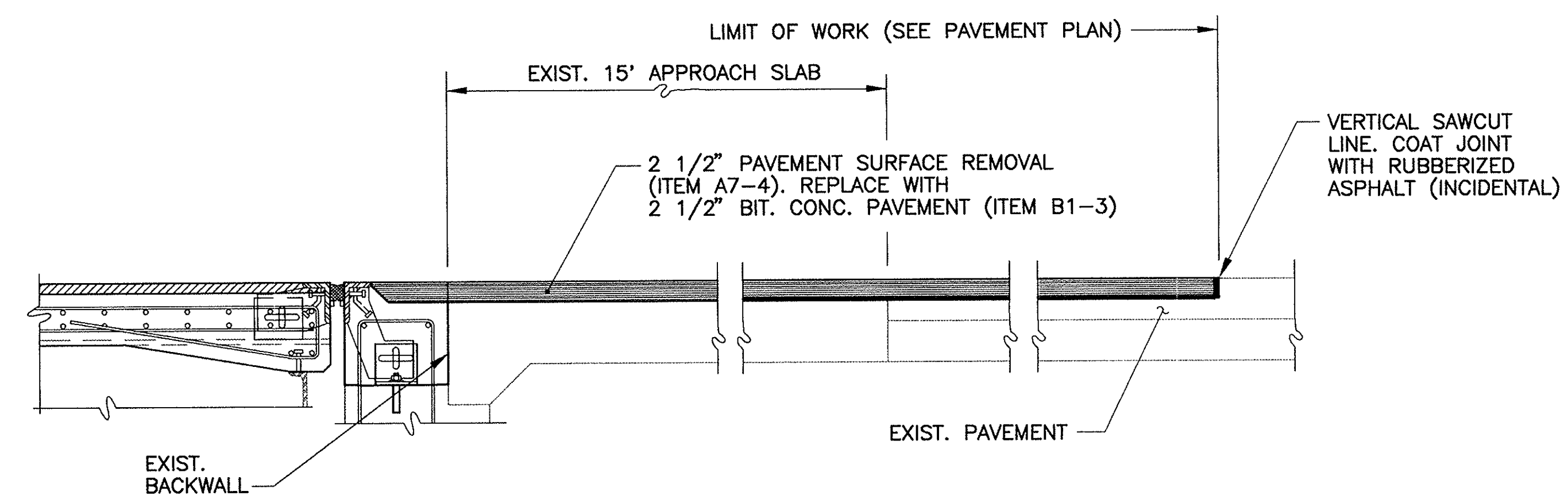
FINAL PAVEMENT MARKING DETAIL
SCALE: 1" = 20'



METHOD OF RESETTING GRANITE CURB AND SIDEWALK DETAIL:
SCALE: 3/4" = 1'-0"



CROSSWALK STRIPING
NOT TO SCALE



PAVEMENT TRANSITION AT ABUTMENTS:
SCALE: 3/4" = 1'-0"

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

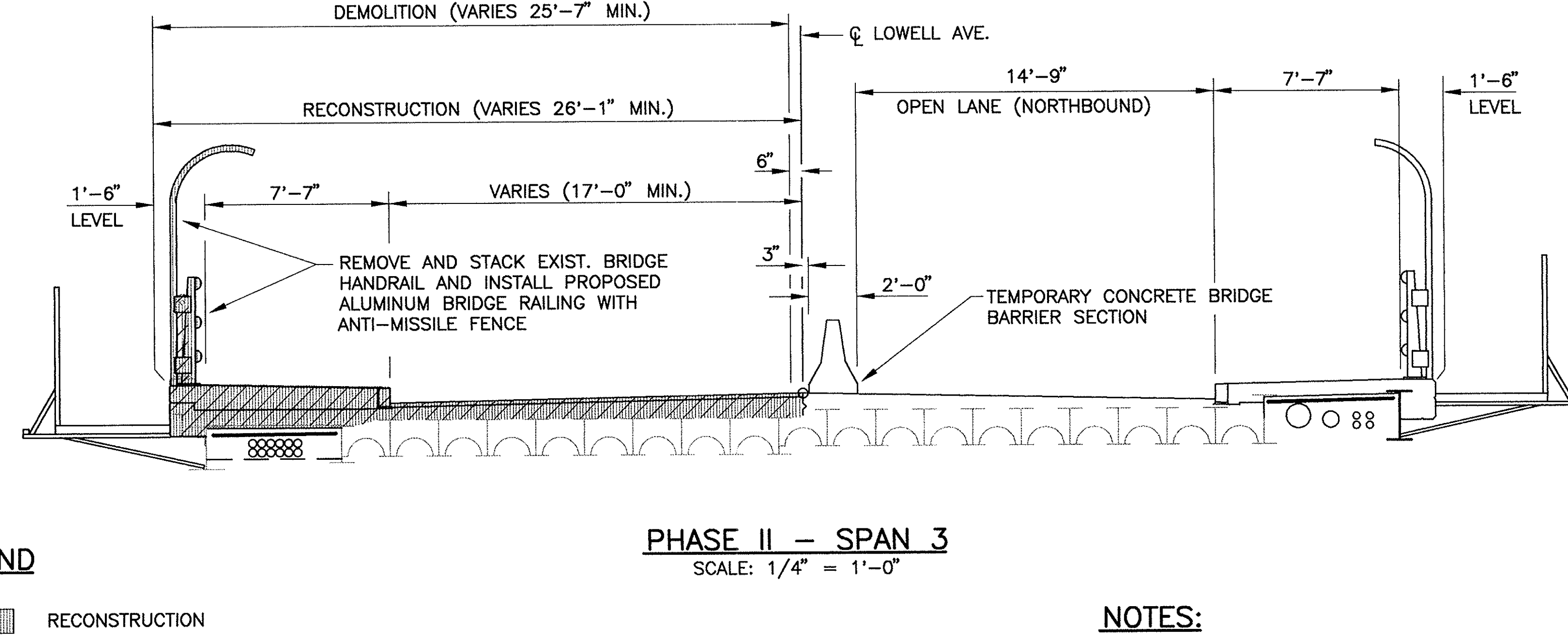
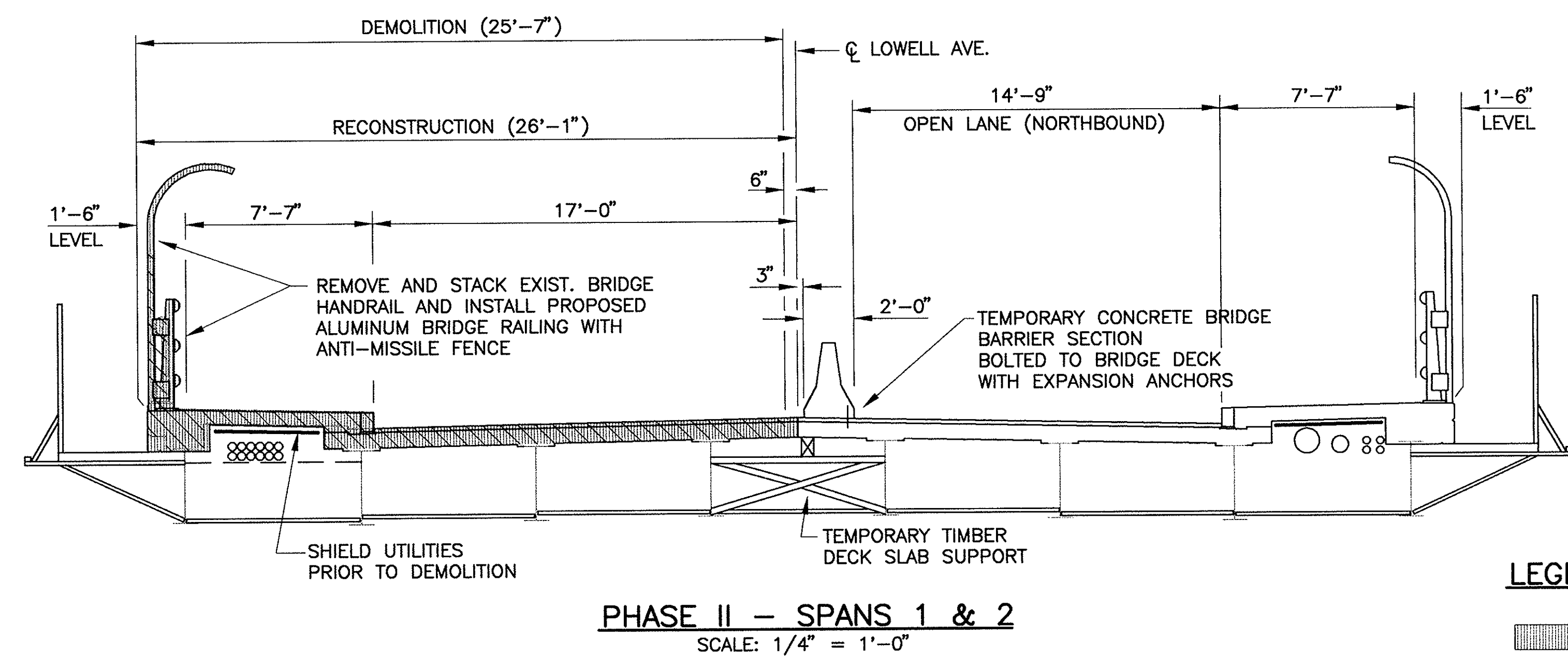
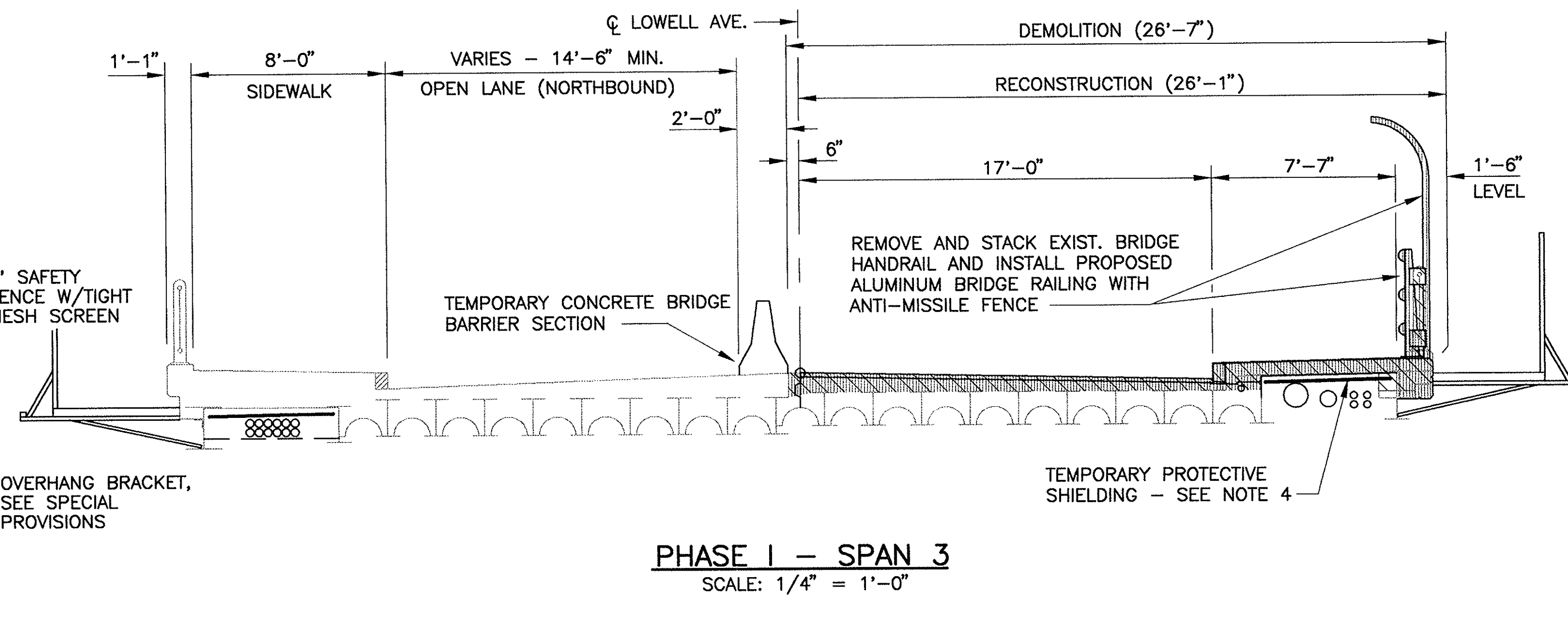
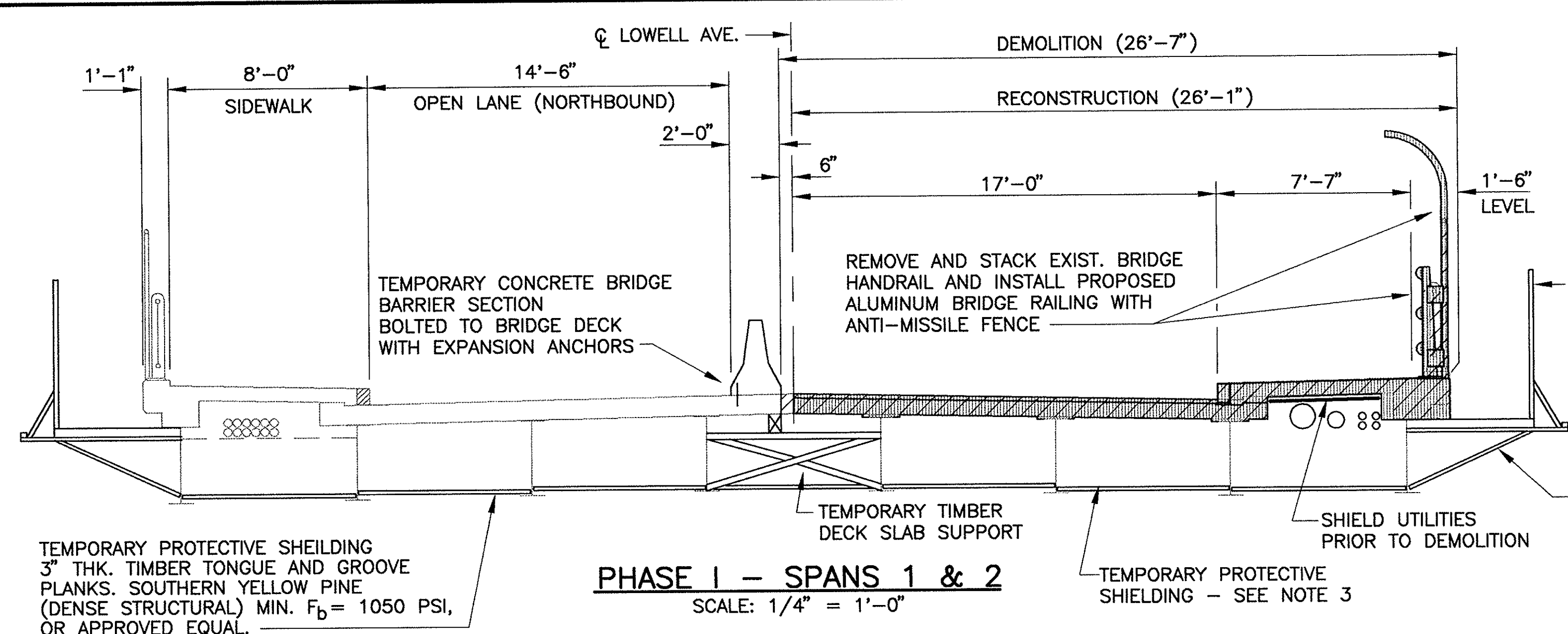
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
PAVEMENT DETAILS

Scale: 1" = 20' Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 61

DESIGNED BY SUBCONSULTANT: Borrientos and Associates, Inc.

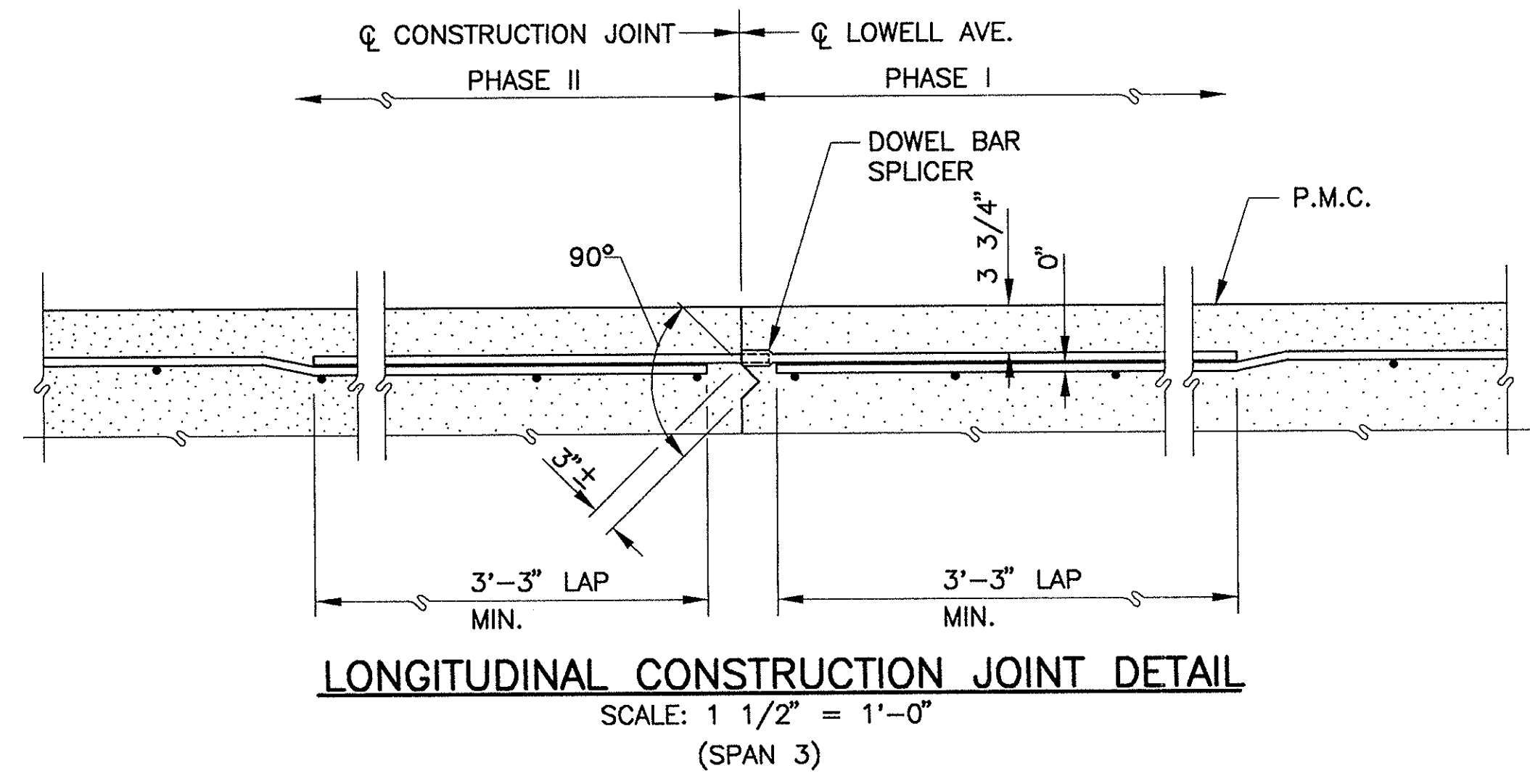
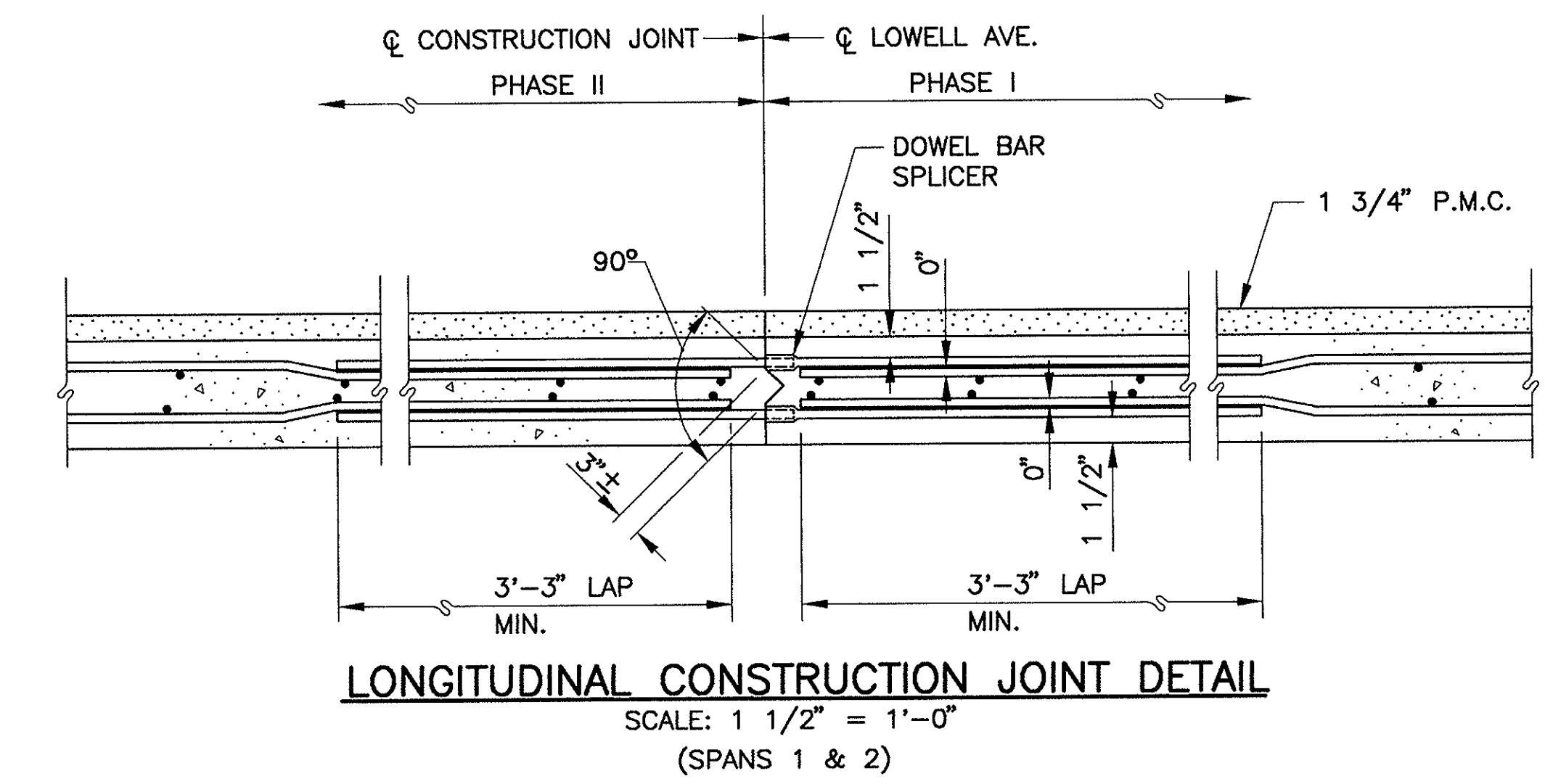


LEGEND

- RECONSTRUCTION
- DEMOLITION

NOTES:

1. ALL SECTIONS ARE TAKEN LOOKING TOWARD THE NORTH ABUTMENT.
2. A TIMBER DECK SLAB SUPPORT SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN. (SEE SPECIFICATIONS FOR DETAILS).
3. AT SPANS 1 & 2 TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN STRINGERS AND AROUND THE FASCIA PRIOR TO ANY DEMOLITION WORK.
4. AT SPAN 3 TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN STRINGERS AT EXTERIOR UTILITY BAYS ONLY, AND AROUND THE FASCIA PRIOR TO ANY DEMOLITION WORK.
5. TEMPORARY BRIDGE & ROADWAY BARRIERS WILL BE PROVIDED BY THE TURNPIKE AUTHORITY AND TRANSPORTED AND PLACED BY THE CONTRACTOR.



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

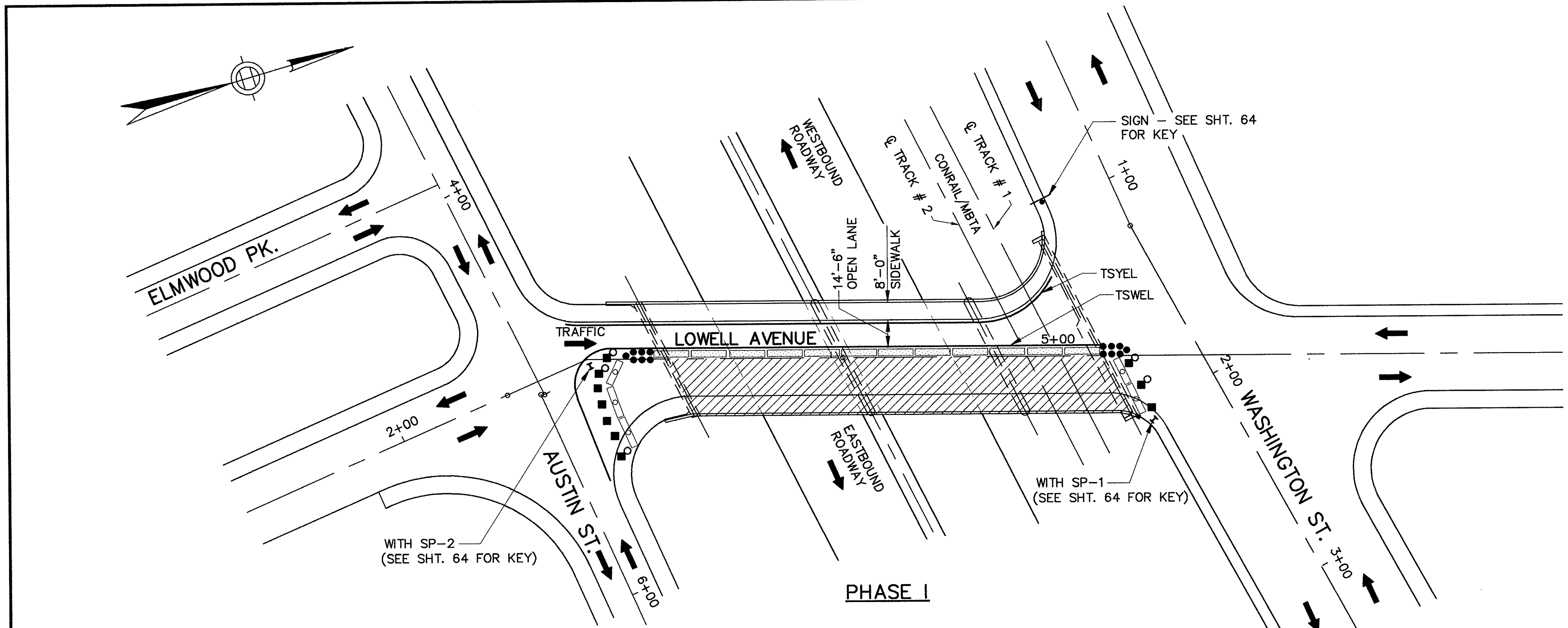
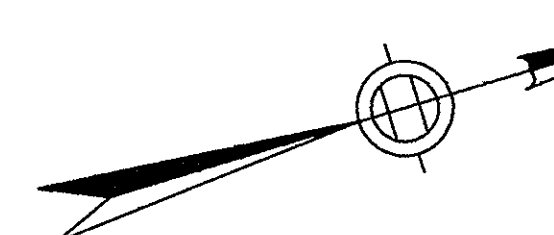
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SEQUENCE OF CONSTRUCTION

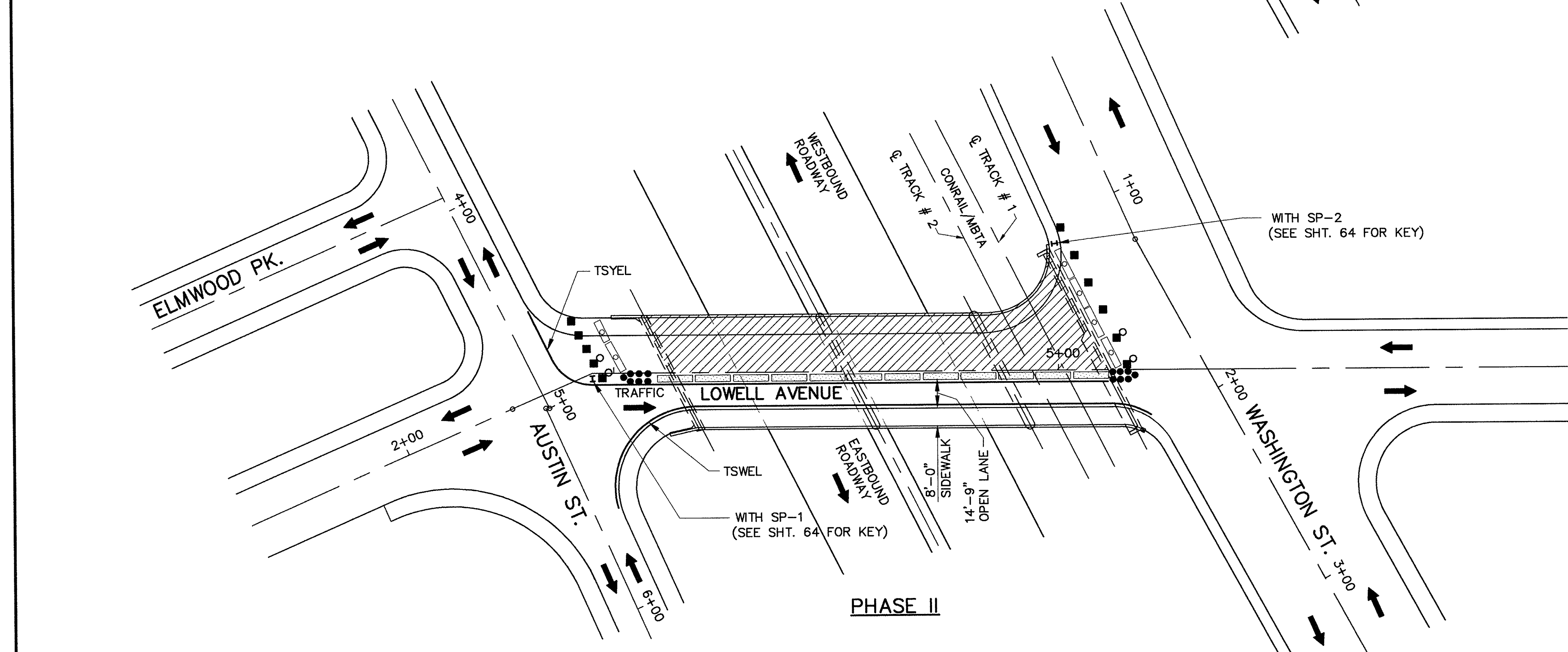
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 62
The Schraff Center
329 Main Street
Boston, Massachusetts 02129



NOTES:

1. TEMPORARY CONCRETE BRIDGE BARRIER SHALL BE PLACED AND BOLTED ON THE BRIDGE DECK ONLY. TEMPORARY CONCRETE ROADWAY BARRIER SHALL BE PLACED AT ALL OTHER LOCATIONS AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. A FLASHING LIGHT SHALL BE PLACED ON THE FIRST TWO UNITS AT THE APPROACH END OF EACH SEQUENCE OF DRUMS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING UNAUTHORIZED ACCESS TO THE WORK AREA. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESIGN FOR A SAFETY FENCE TO BE CONSTRUCTED TO THE LIMITS SHOWN ON THIS PLAN.
4. ALL EXISTING SIGNS AND PAVEMENT MARKINGS NOT APPLICABLE TO VARIOUS STAGES OF CONSTRUCTION SHALL BE REMOVED OR COVERED AS DIRECTED.
5. THE SEQUENCING OF VARIOUS CONSTRUCTION OPERATIONS WITHIN EACH STAGE SHALL BE APPROVED BY THE ENGINEER.
6. AT THE COMPLETION OF PHASE II CONSTRUCTION THE DETOURS SHALL BE REMOVED AND PERMANENT PAVEMENT MARKINGS INSTALLED AS SHOWN ON SHEET 61, OR AS DIRECTED BY THE ENGINEER.



LEGEND

- WORK AREA
- TEMPORARY CONCRETE BRIDGE BARRIERS WITH REFLECTORIZED MARKERS
- TEMPORARY CONCRETE ROADWAY BARRIERS WITH STEADY BURN LIGHTS AND REFLECTORIZED MARKERS
- REFLECTORIZED DRUMS WITH STEADY BURN LIGHTS AT 20' O.C.
- REFLECTORIZED DRUMS WITH FLASHING LIGHTS AT 20' O.C.
- DIRECTION OF TRAFFIC
- INERTIAL BARRIER SYSTEM (SEE SPECIFICATIONS)
- TYPE II BARRICADE
- 4" TEMPORARY PAVEMENT MARKING TAPE
- TSWEL TEMPORARY SOLID WHITE EDGE LINE
- TSYEL TEMPORARY SOLID YELLOW EDGE LINE

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

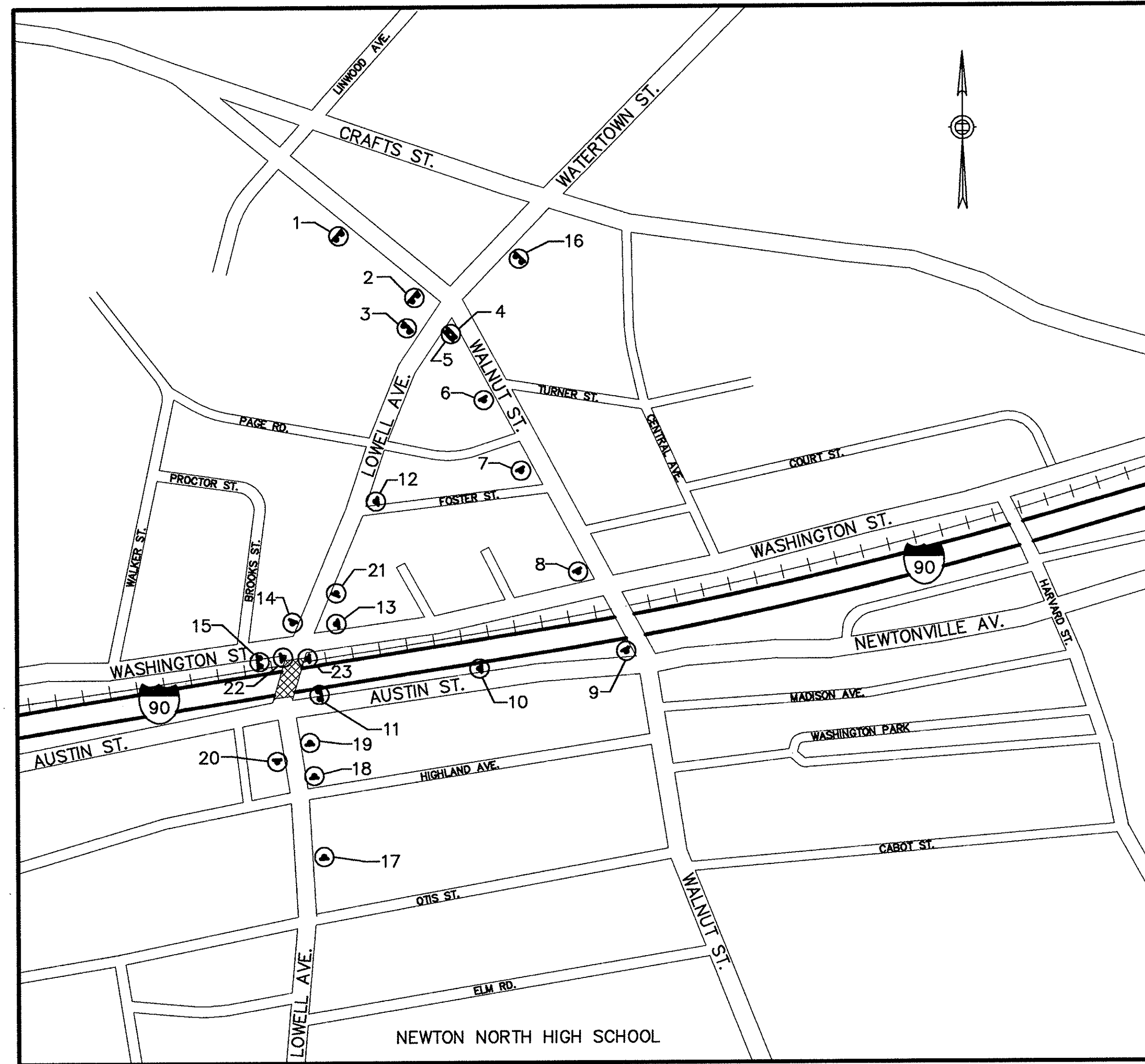
BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
TRAFFIC PHASING PLAN

Scale: 1" = 30' Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. **63**

The Schroll Center
529 Main Street
Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



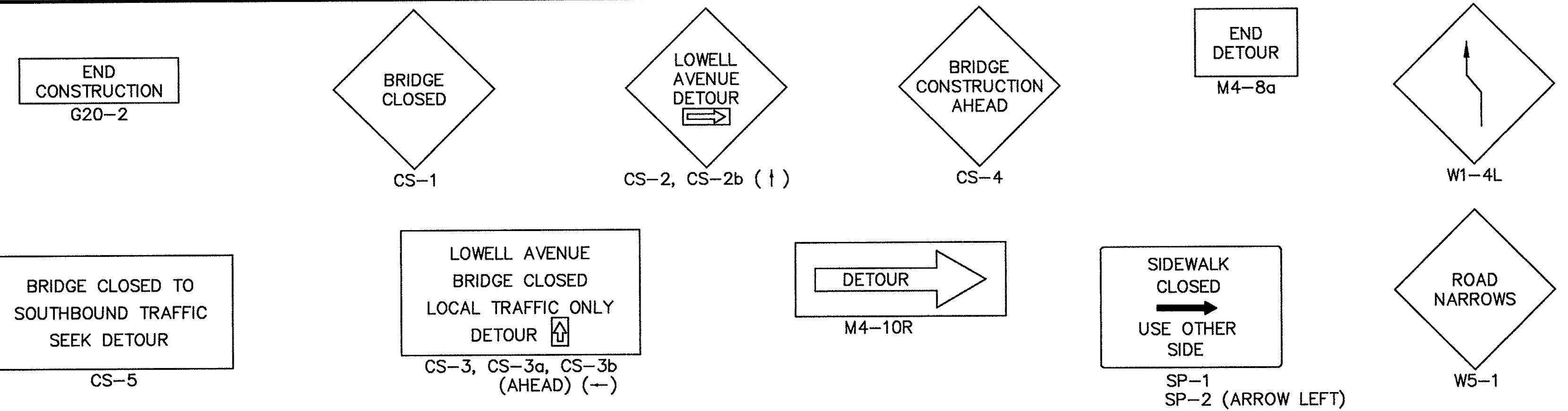
DETOUR PLAN

NOT TO SCALE

CONSTRUCTION SIGN LOCATION SCHEDULE

LOCATION NO.	SIGNS REQUIRED	LOCATION NO.	SIGNS REQUIRED
①	CS-3a	⑫	CS-1, M4-10R
②	CS-3	⑬	CS-1, M4-10R
③	CS-5	⑭	CS-1
④	CS-3b	⑮	CS-3
⑤	CS-2	⑯	CS-3a
⑥	CS-2b	⑰	CS-4
⑦	CS-2b	⑱	W5-1
⑧	CS-2b	⑲	W1-4L (PHASE I ONLY)
⑨	CS-2	⑳	M4-8a, G20-2
⑩	CS-2b	㉑	G20-2
⑪	CS-3b	㉒	SP-4
		㉓	SP-3

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
				DESIGNED:	T.A.Z. 12/93
				DRAWN:	S.B.S. 12/93
				CHECKED:	L.M.B. 12/93



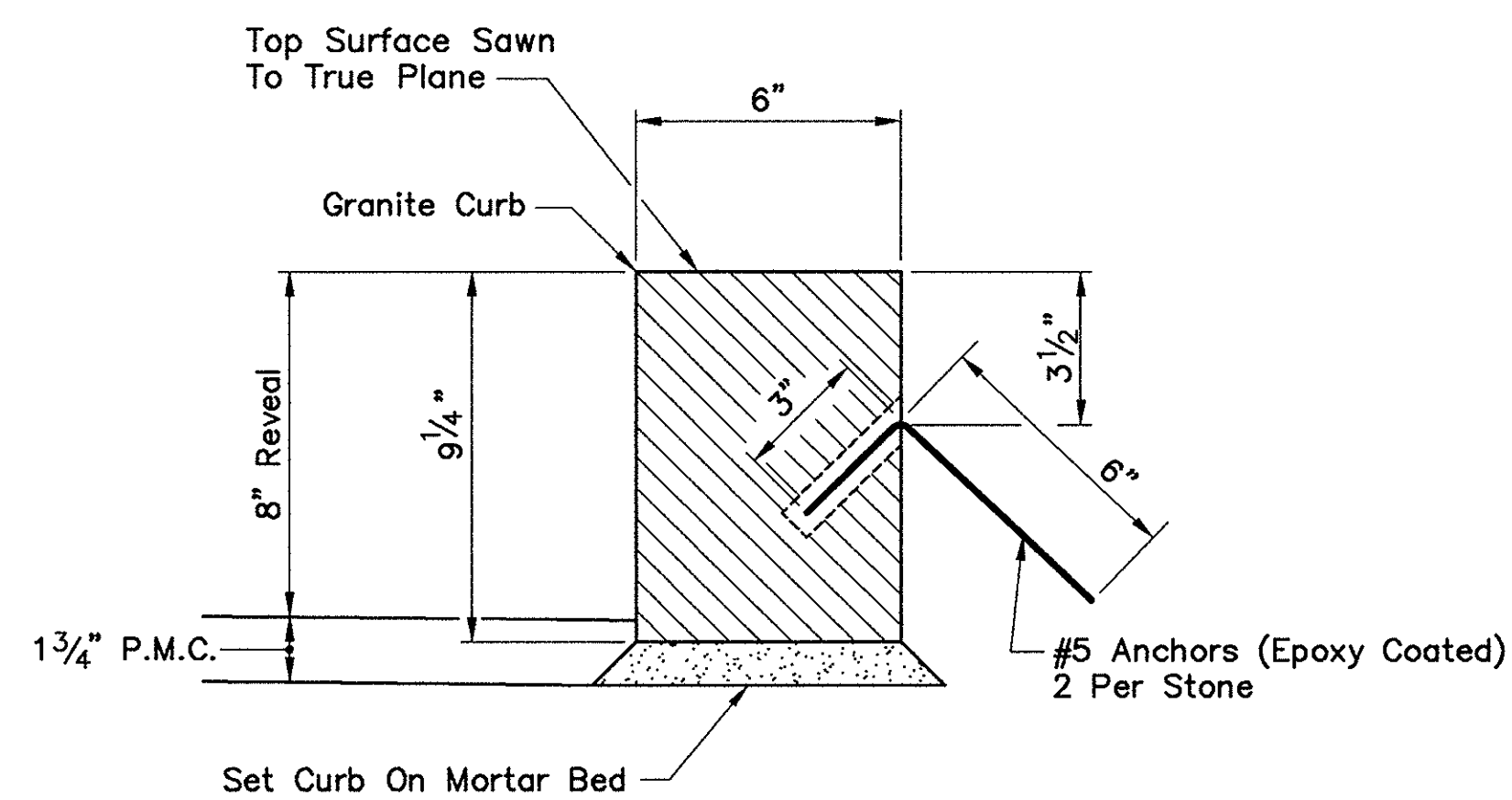
IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
CS-1	48"	48"	BRIDGE CLOSED	7"C 7"C	4 3/4"		3	ORANGE	BLACK	BLACK
CS-2	48"	48"	LOWELL AVENUE DETOUR	6"C 6"C 6"C	4"	10"x 6" @ 180?	2	ORANGE	BLACK	BLACK
CS-2b	48"	48"	LOWELL AVENUE ↑ DETOUR	6"C 6"C 6"C	4"	10"x 6" @ 90?	4	ORANGE	BLACK	BLACK
CS-3	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR ↓	5"C 5"C 5"C	3" 3" 3"	5"x 8.33" @ 90?	2	ORANGE	BLACK	BLACK
CS-3a	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR AHEAD	5"C 5"C 5"C	3" 3" 3"		2	ORANGE	BLACK	BLACK
CS-3b	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR ←	5"C 5"C 5"C	3" 3" 3"	5"x 8.33" @ 180?	2	ORANGE	BLACK	BLACK
CS-4	48"	48"	BRIDGE CONSTRUCTION AHEAD	7"C 7"C 7"C	4 3/4" 4 3/4"		1	ORANGE	BLACK	BLACK
CS-5	72"	30"	BRIDGE CLOSED TO SOUTHBOUND TRAFFIC SEEK DETOUR	5"C 5"C 5"C	3" 3"		1	ORANGE	BLACK	BLACK
M4-10R	48"	18"	DETOUR	SEE FHWA STANDARD HIGHWAY SIGNS 1979			2	SEE M.U.T.C.D. 1988		
M4-8a	24"	18"	END DETOUR				1			
W1-4L	30"	30"					1			
W5-1	36"	36"	ROAD NARROWS				1			
G20-2	60"	24"	END CONSTRUCTION				2			
SP-1	24"	18"	SIDEWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 180?	1	WHITE	BLACK	BLACK
SP-2	24"	18"	SIDEWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 0?	1	WHITE	BLACK	BLACK
SP-3	24"	18"	CROSSWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 180?	1	WHITE	BLACK	BLACK
SP-4	24"	18"	CROSSWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 0?	1	WHITE	BLACK	BLACK

GENERAL NOTE:
ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PART VI AND "STANDARD HIGHWAY SIGNS", CURRENT EDITION.

- NOTES:**
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - ALL DETOUR SIGNING TO BE PLACED PRIOR TO PHASE I AND MAINTAINED BY THE CONTRACTOR UNTIL THE PROJECT IS COMPLETED.
 - MISSING OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT NO COST TO THE AUTHORITY.
 - SEE SHEET 63 FOR SIGNS SP-1 & SP-2 LOCATION.

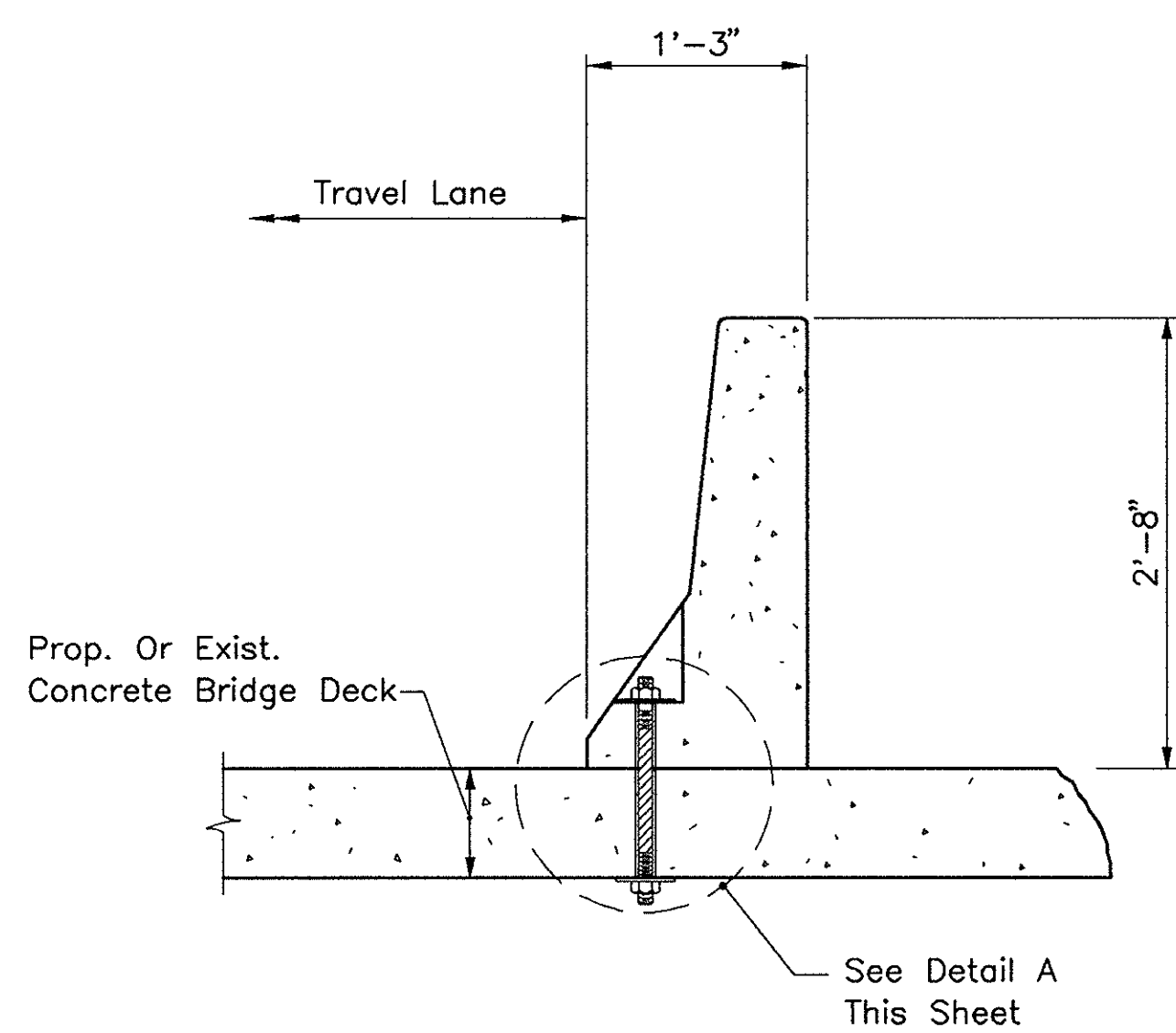
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
TRAFFIC DETOUR PLAN AND SIGNING
 Scale: NOT TO SCALE Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 64
 329 Main Street
 Boston, Massachusetts 02129
 DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



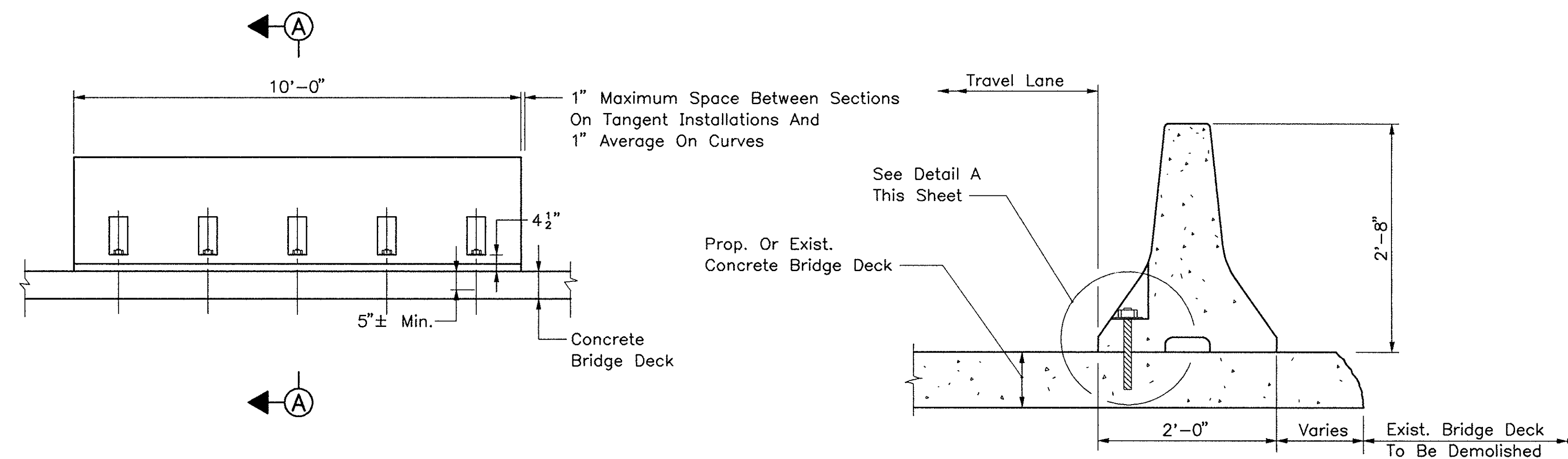
GRANITE BRIDGE CURB AND TYPE VA-5 CURVED CURB DETAIL

(ITEM F1-7 AND ITEM F1-6)
SCALE: 3" = 1'-0"



**TEMPORARY SINGLE FACE
CONCRETE BRIDGE BARRIER SECTION**

SCALE: 1" = 1'-0"

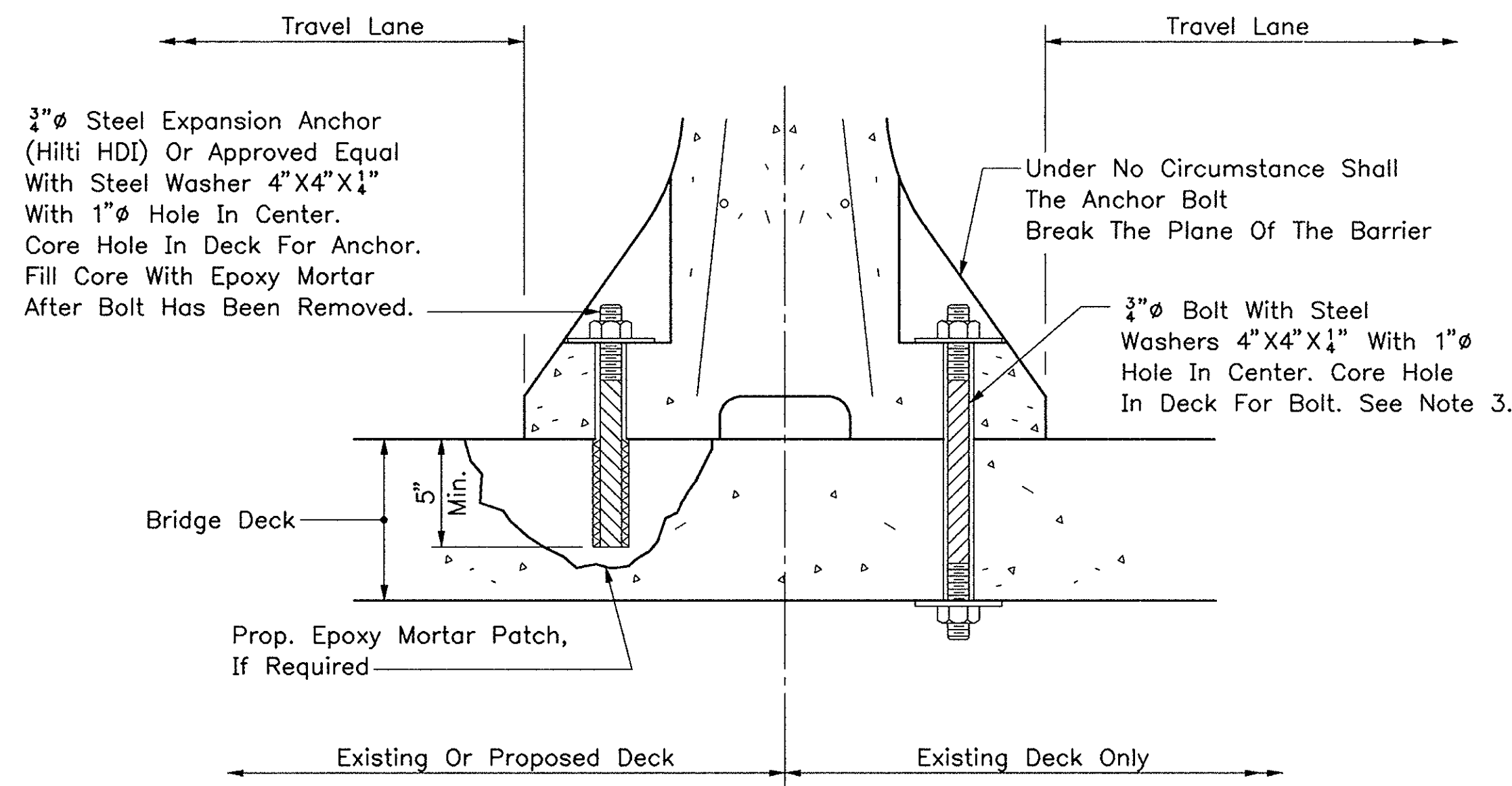


TEMPORARY CONCRETE BRIDGE BARRIER ELEVATION

1/2" = 1'-0"

SECTION A-A

1" = 1'-0"



**DETAIL A
(Barrier Mounted On Existing
Or Proposed Structure)**

2" = 1'-0"

TEMPORARY CONCRETE BRIDGE BARRIER DETAILS

2" = 1'-0"

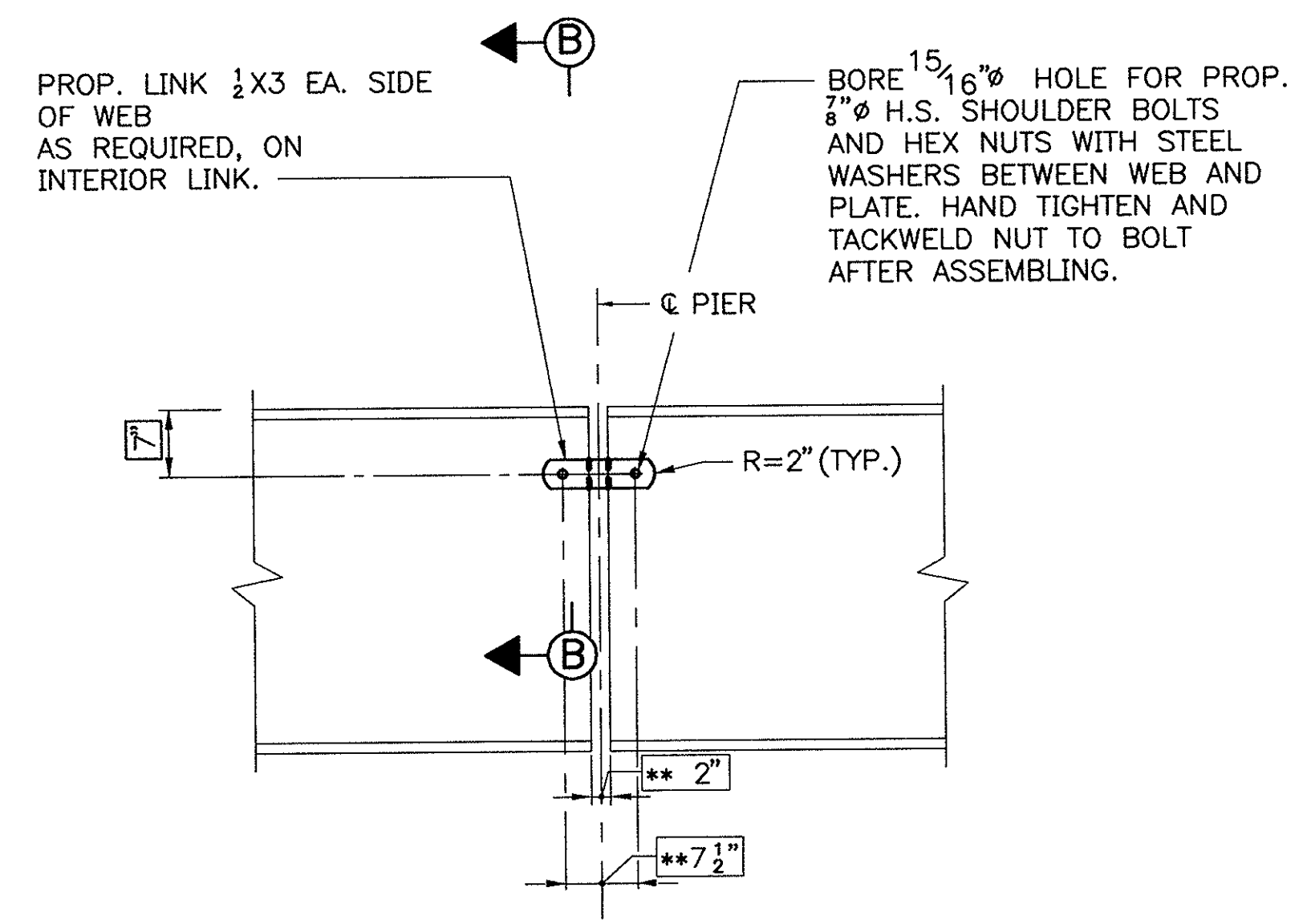
NOTES

- Expansion Anchors Installed On Existing Deck Are To Be Of Steel Conforming To ASTM A108. Those Installed On Proposed Deck Are To Be Of Stainless Steel Conforming To AISI Type 303.
- Bolts And Nuts Shall Conform To A.S.T.M. A307.
- Where The Through Bolt Interferes With The Top Flange Of A Stringer, Use The Expansion Anchor Detail Shown For The Proposed Deck.
- After The Barrier Is Removed, The Contractor Shall Remove The Stainless Steel Bolts And Patch The Holes In The New Deck With Epoxy Mortar To The Satisfaction Of The Engineer.
- All Temporary Single Face Concrete Bridge Barriers, Temporary Double Face Concrete Bridge Barriers, and Temporary Double Face Concrete Roadway Barriers Will Be Furnished By The Authority, And Transported And Placed By The Contractor.
- Connecting Rods For Roadway Barriers Shall Be Furnished By The Contractor and Shall Not Extend Above The Top Of The Barrier.

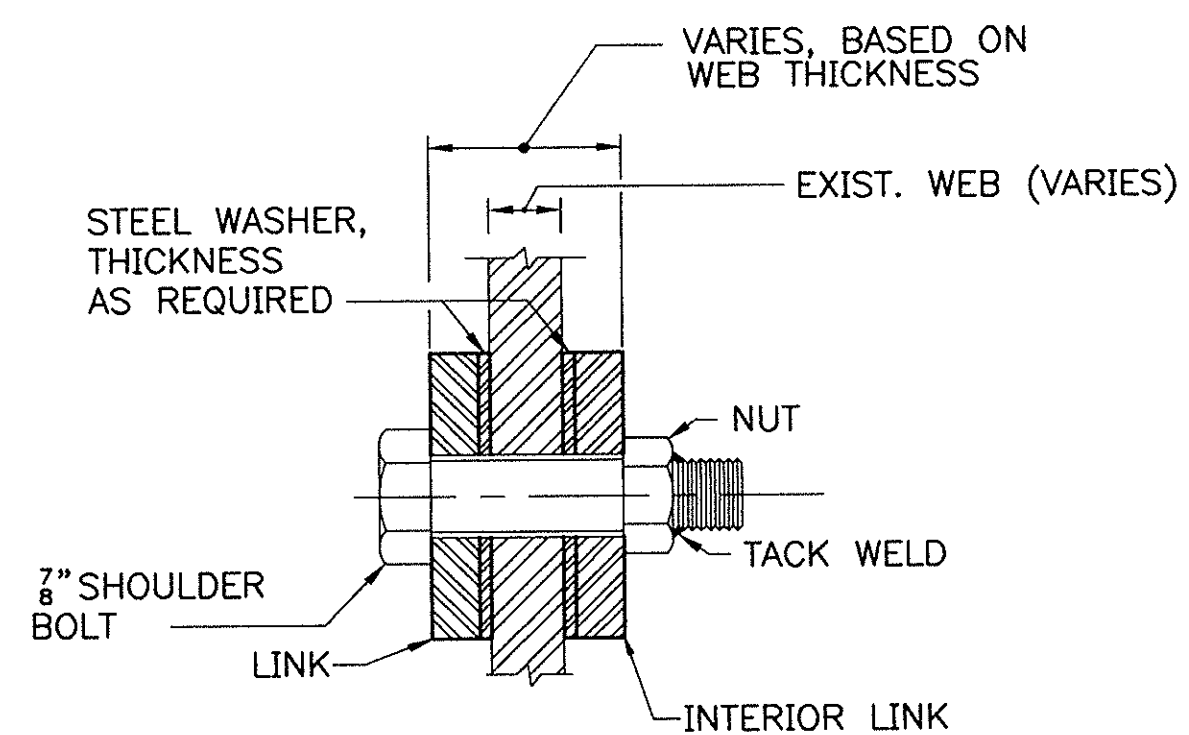
NO.	REVISION	BY	DATE
1	DELETED SPECIAL BR. CURB	E&K	12/93
2	ADDED BR. CURB & SINGLE FACE BARRIER	E&K	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
BRIDGE CURB & TEMPORARY CONCRETE BARRIER DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 65



LINK REPLACEMENT DETAIL (ITEM C7-3)
 3/4" = 1'-0"



SECTION B-B
 HALF SIZE

LINK REPLACEMENT NOTES

1. ** DIMENSIONS ARE FROM M.T.A. STANDARDS, DATED 1954. CONTRACTOR MUST VERIFY, IN FIELD, PRIOR TO FABRICATION.
2. EXISTING BOLT HOLES IN WEB SHALL BE FILLED WITH WELD AND REBORED.
3. NEW BOLTS AND NUTS SHALL CONFORM TO A.S.T.M. A325 HIGH STRENGTH BOLTS.
4. LINK REPLACEMENT, IF REQUIRED, SHALL BE AS DIRECTED BY THE ENGINEER.
5. REPLACE ONE LINK ASSEMBLY AT A TIME.

NOTES

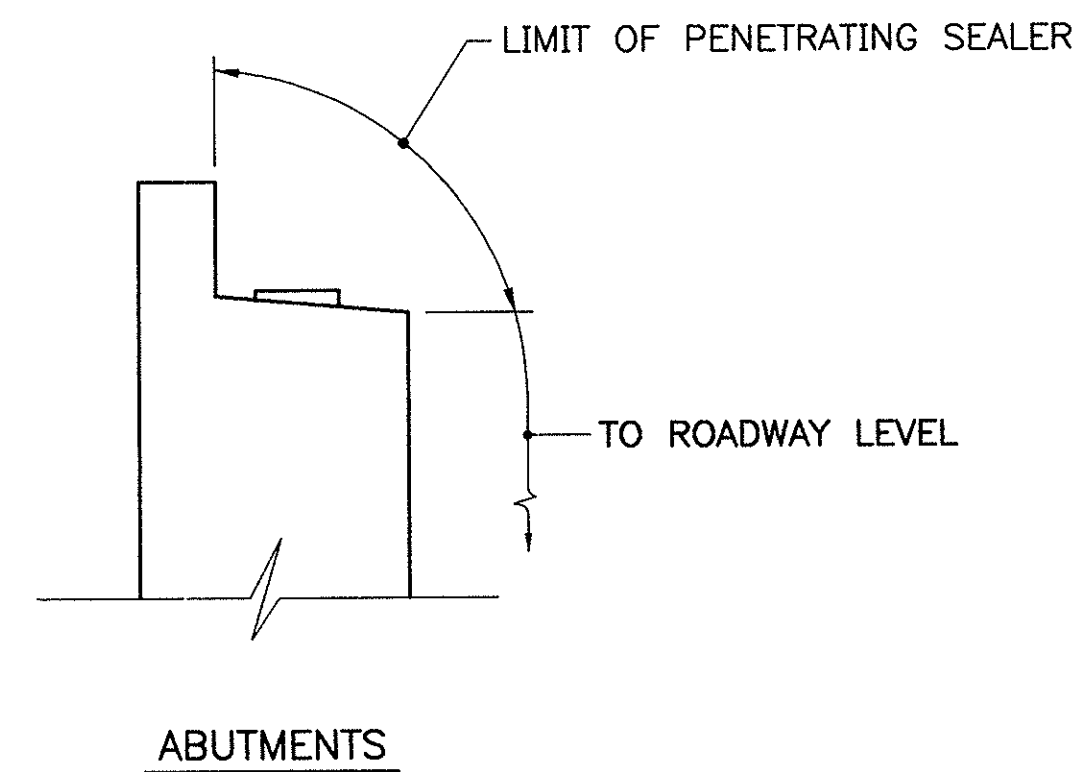
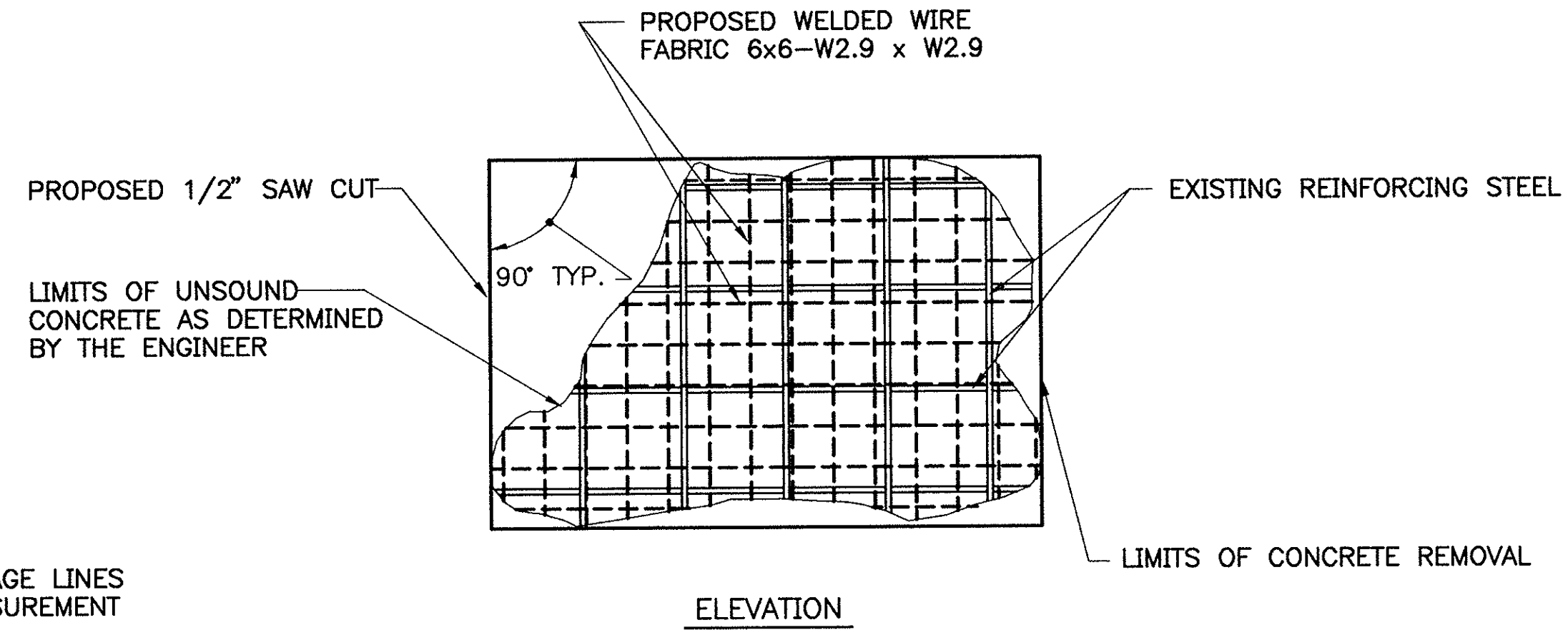
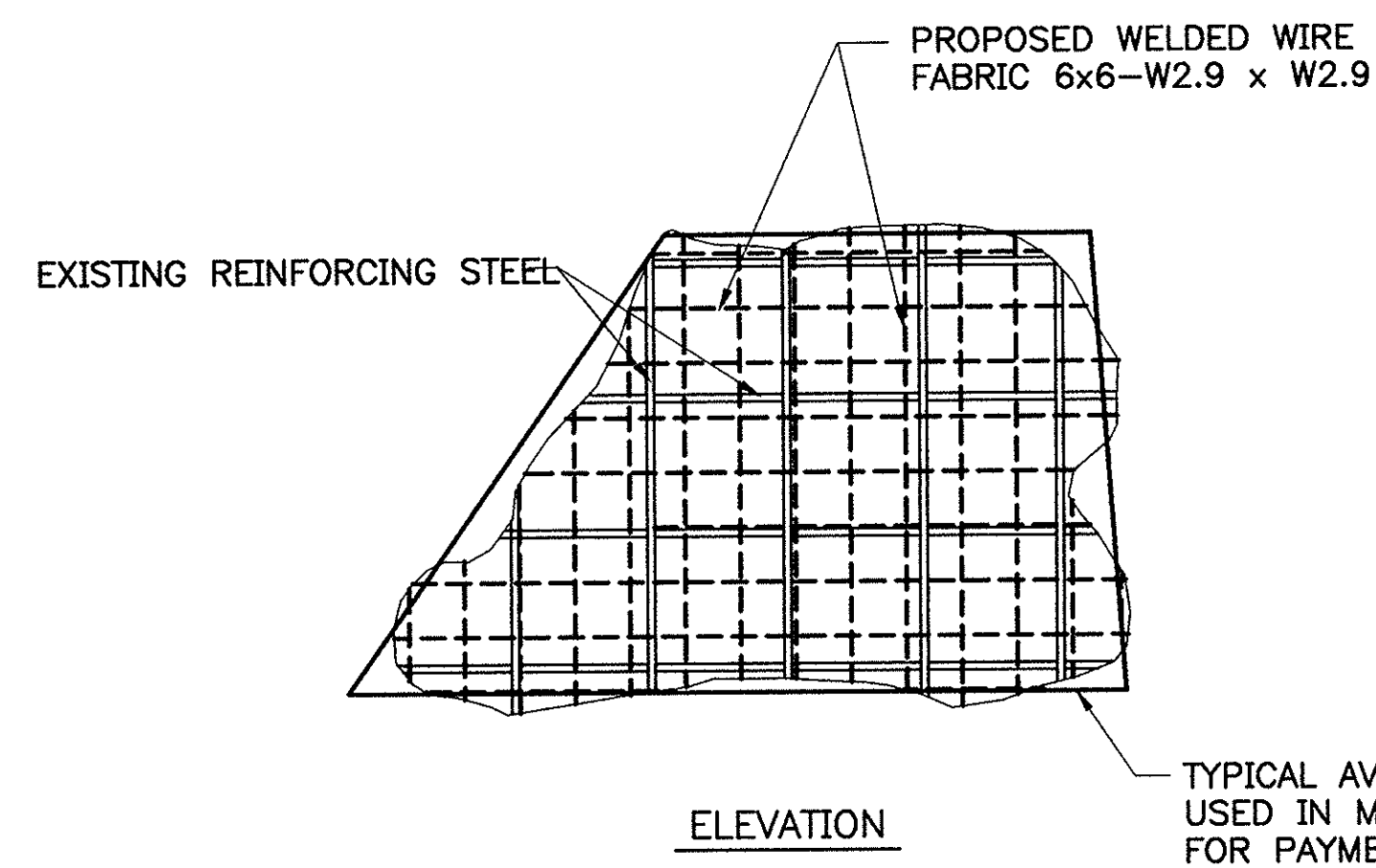
1. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS, SEE SPECIFICATIONS.

NO.	REVISION	BY	DATE



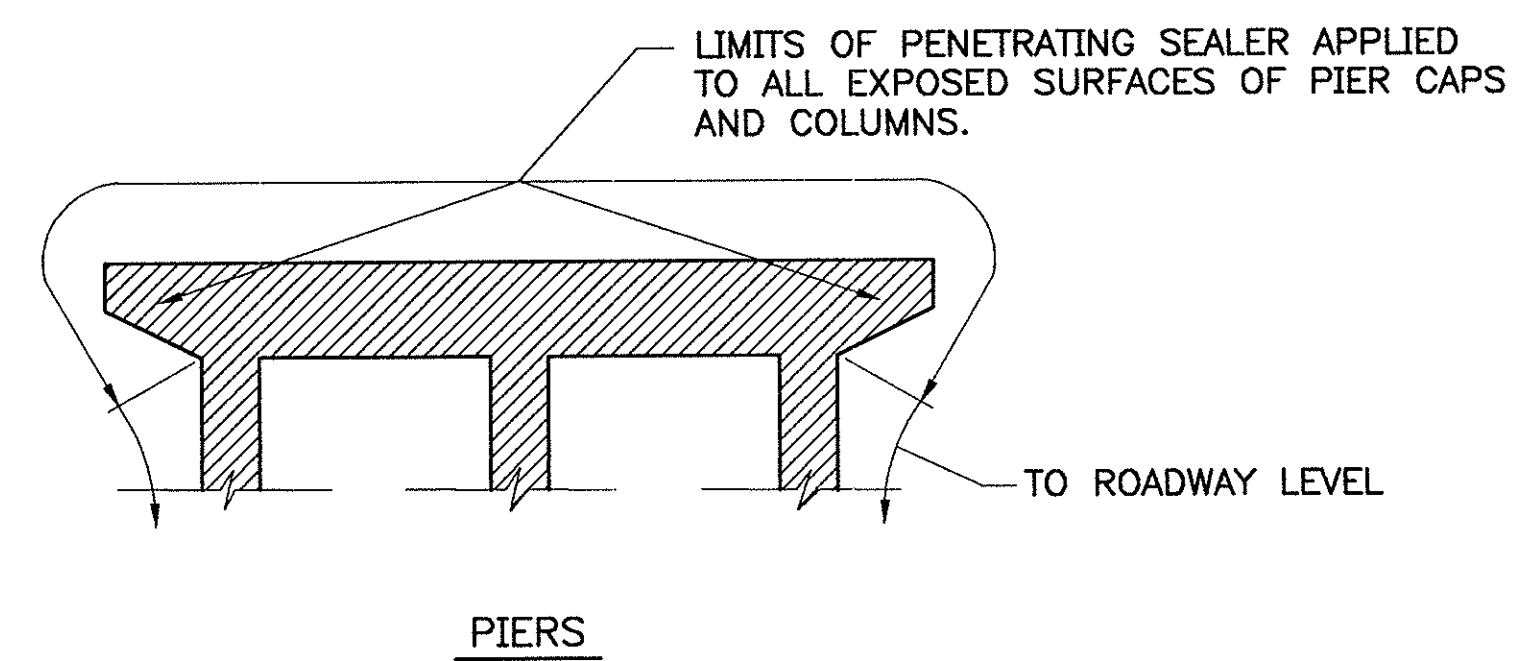
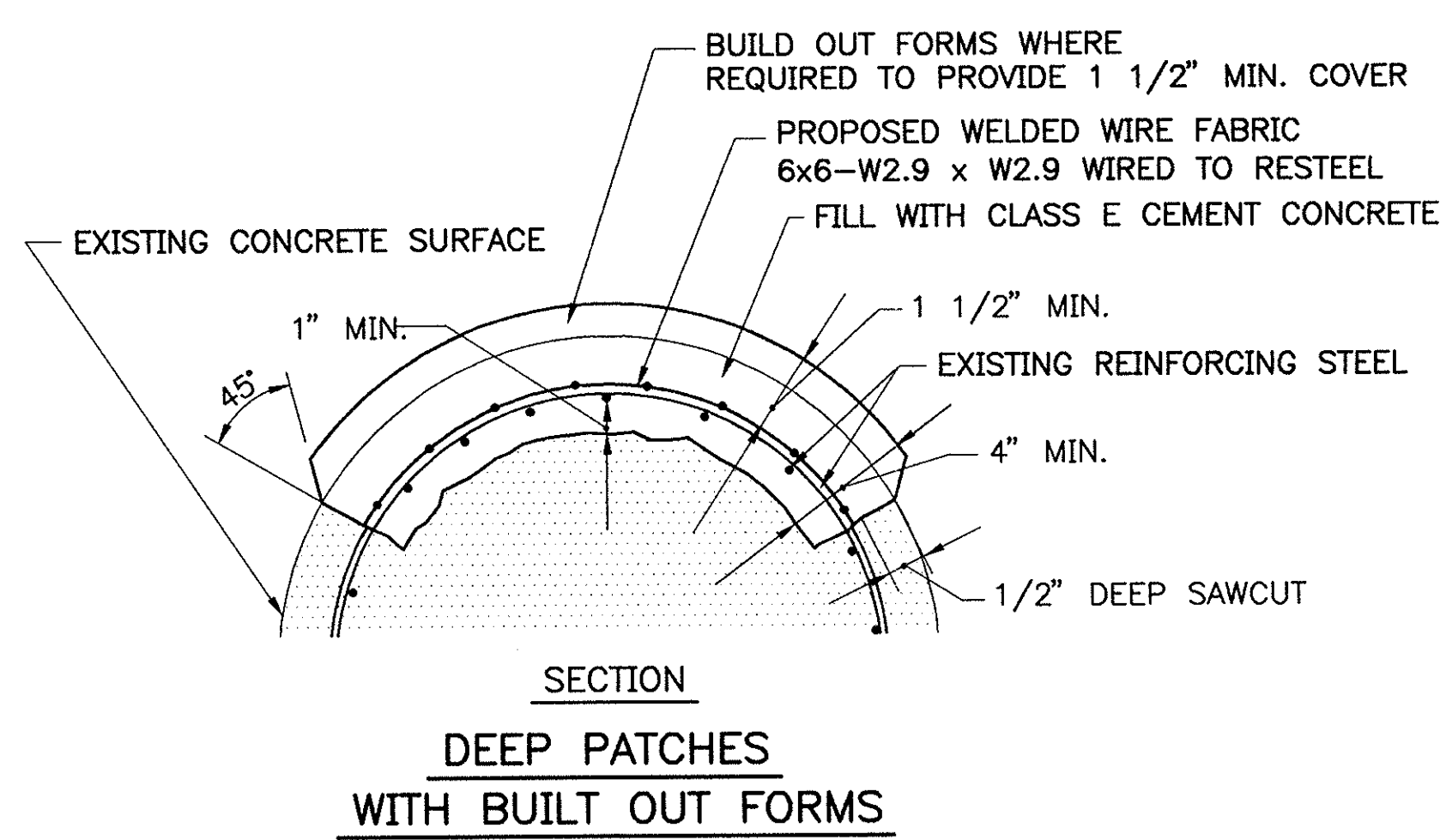
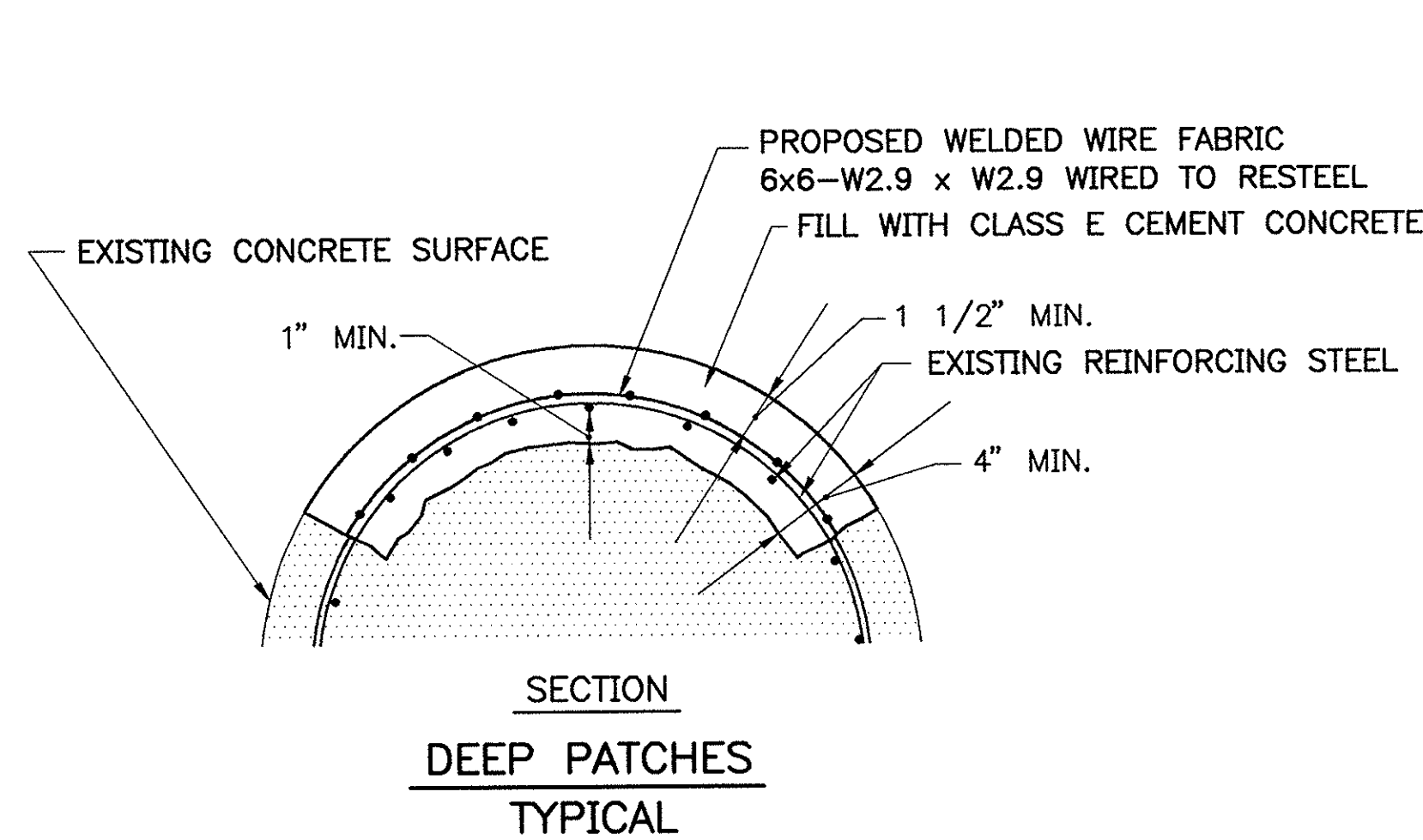
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
STRUCTURAL STEEL DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 66

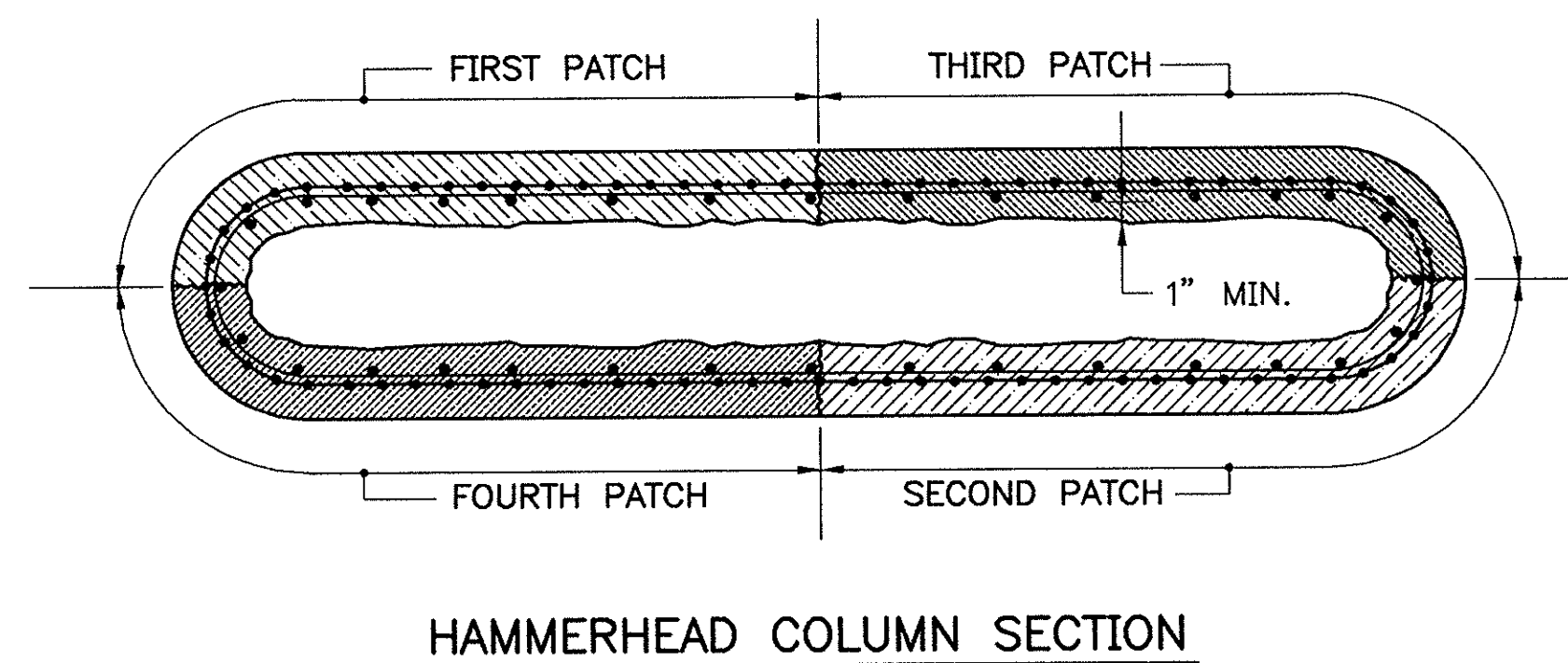
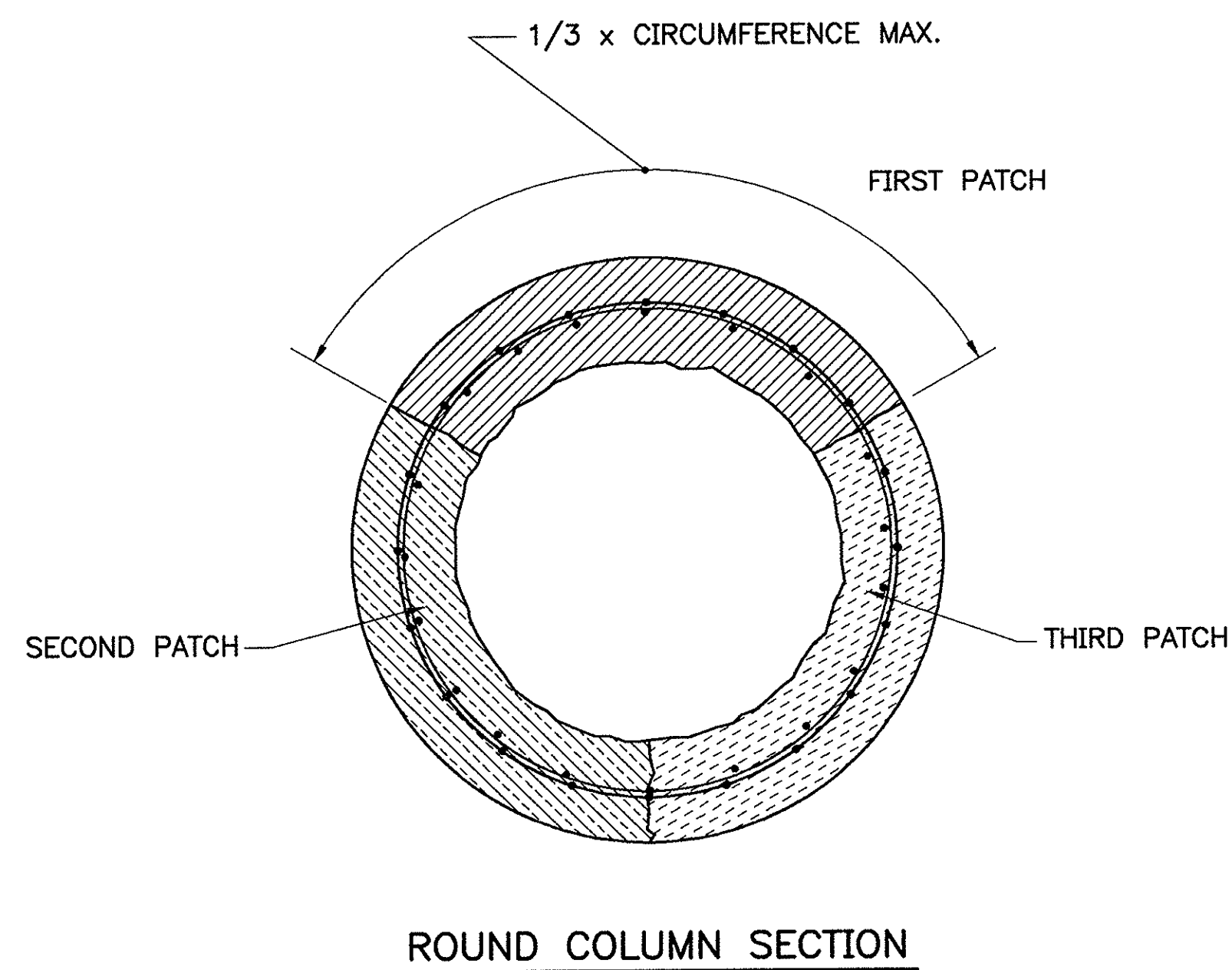
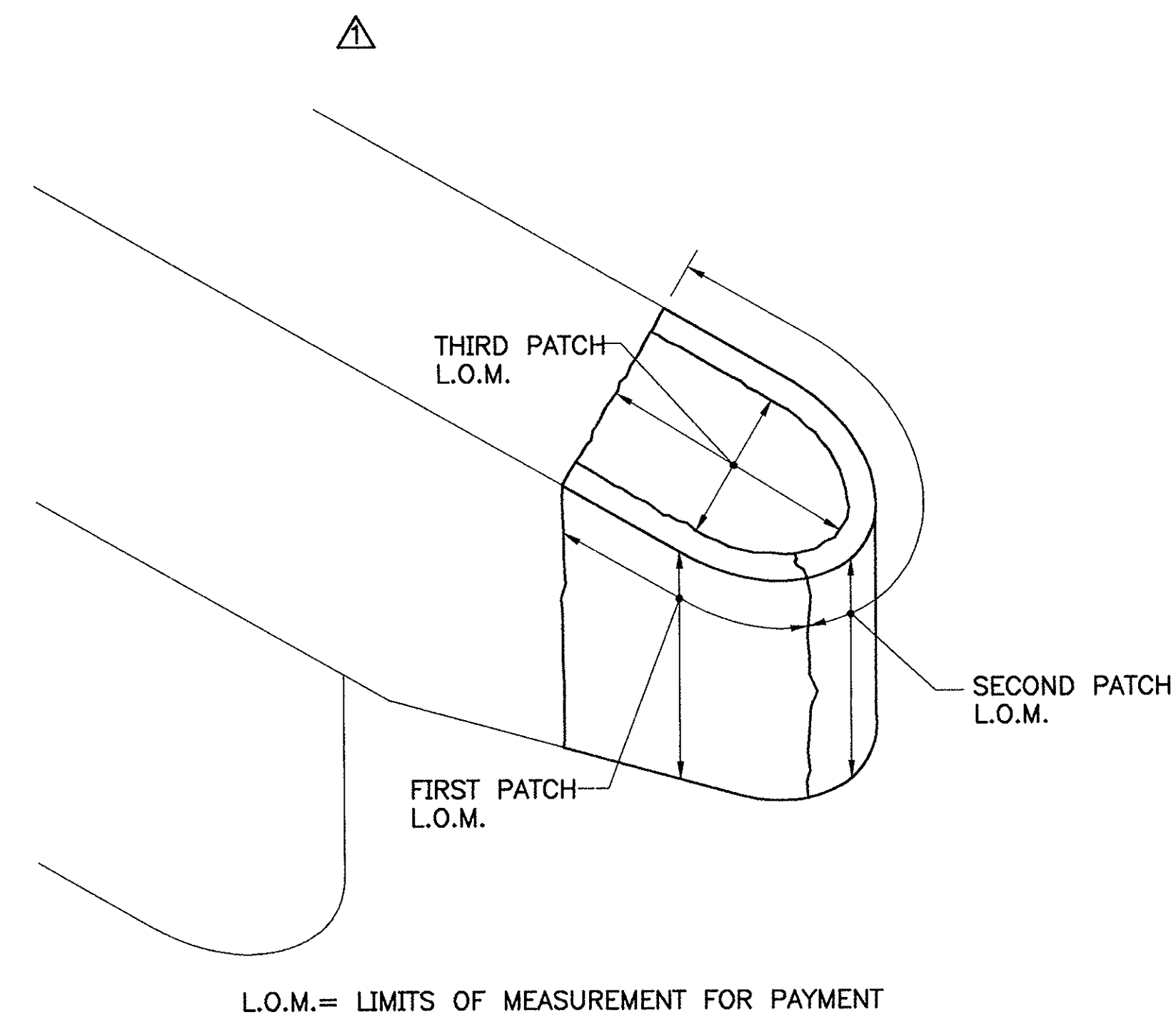


SEQUENCE OF CONSTRUCTION FOR DEEP PATCH

1. REMOVE CONCRETE ON FIRST SURFACE ONLY.
2. FORM AND PATCH SURFACE.
3. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN PLACING OF CONCRETE AND START OF NEXT PATCH.
4. REMOVE CONCRETE ON NEXT SURFACE.
5. REPEAT STEPS 2 AND 3.
6. REPAIR REMAINING SIDES IN A SIMILAR MANNER.
7. ALL WELDED WIRE FABRIC SHALL BE GALVANIZED OR EPOXY COATED.
8. ALL CONCRETE SHALL BE CLASS E.
9. ALL SURFACES SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH.
10. ALL EXISTING REINF. STEEL SHALL BE COATED WITH EPOXY BONDING COMPOUND AFTER BLAST CLEANING. SEE SPECIFICATIONS.
11. PENETRATING SEALER SHALL BE APPLIED TO THE LIMITS SHOWN. SEE SPECIFICATIONS.
12. DETAILS FOR HAMMERHEAD COLUMNS SIMILAR TO THOSE FOR ROUND COLUMNS.



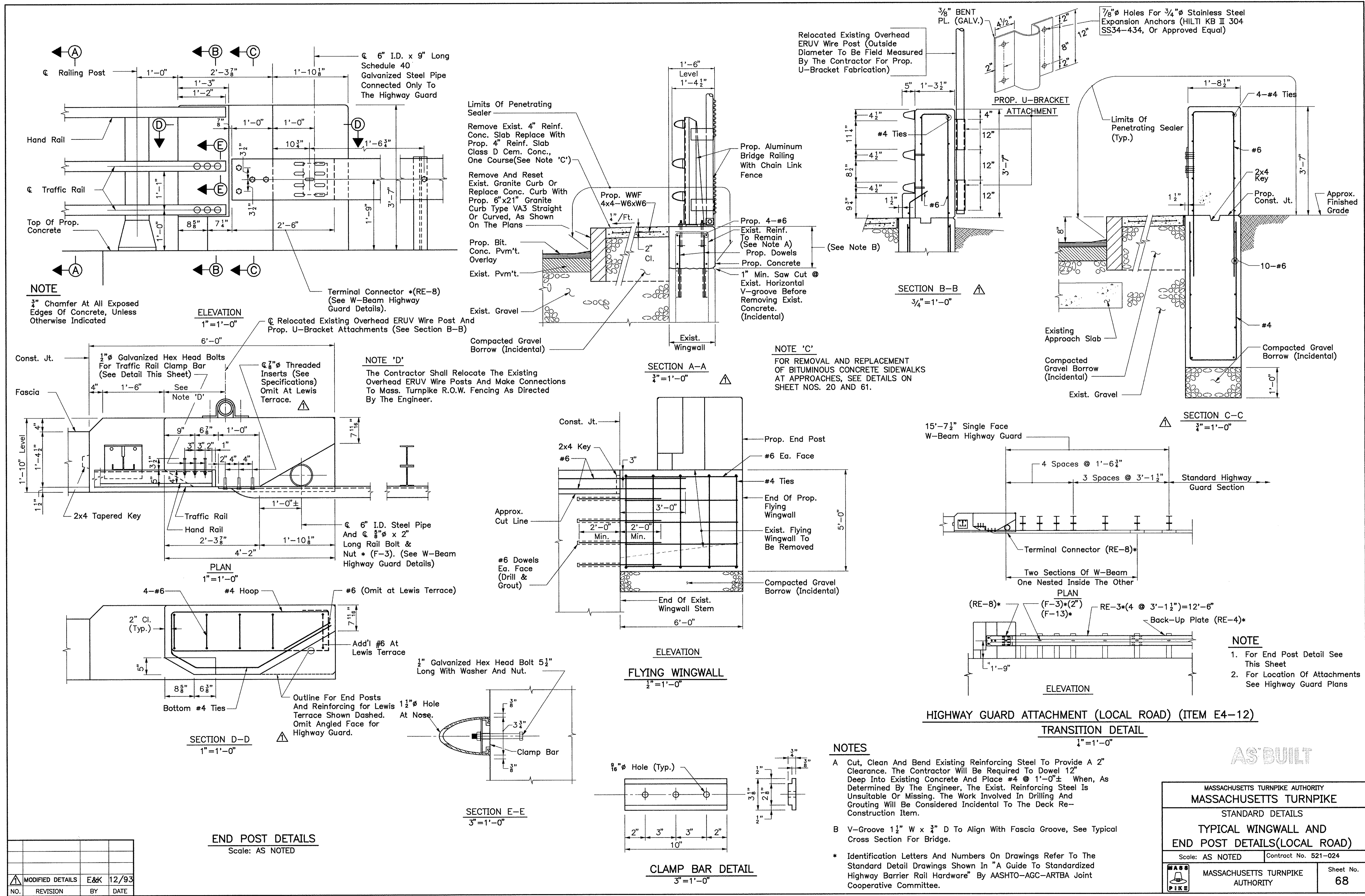
LIMITS OF PENETRATING SEALER



AS BUILT

NO.	REVISION	BY	DATE
1	REVISED NOTE 7 AND LIMITS OF PENETR. SEALER	E&K	12/93

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
SUBSTRUCTURE CONCRETE REPAIRS	
DETAILS (BOSTON EXTENSION)	
Scale: NOT TO SCALE	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 67



NOTE
 3/4" Chamfer At All Exposed Edges Of Concrete, Unless Otherwise Indicated

ELEVATION
 1"=1'-0"

PLAN
 1"=1'-0"

SECTION D-D
 1"=1'-0"

END POST DETAILS
 Scale: AS NOTED

NOTE 'D'
 The Contractor Shall Relocate The Existing Overhead ERUV Wire Posts And Make Connections To Mass. Turnpike R.O.W. Fencing As Directed By The Engineer.

SECTION A-A
 1/2"=1'-0"

ELEVATION
 1/2"=1'-0"

CLAMP BAR DETAIL
 3"=1'-0"

NOTE 'C'
 FOR REMOVAL AND REPLACEMENT OF BITUMINOUS CONCRETE SIDEWALKS AT APPROACHES, SEE DETAILS ON SHEET NOS. 20 AND 61.

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

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

HIGHWAY GUARD ATTACHMENT (LOCAL ROAD) (ITEM E4-12)

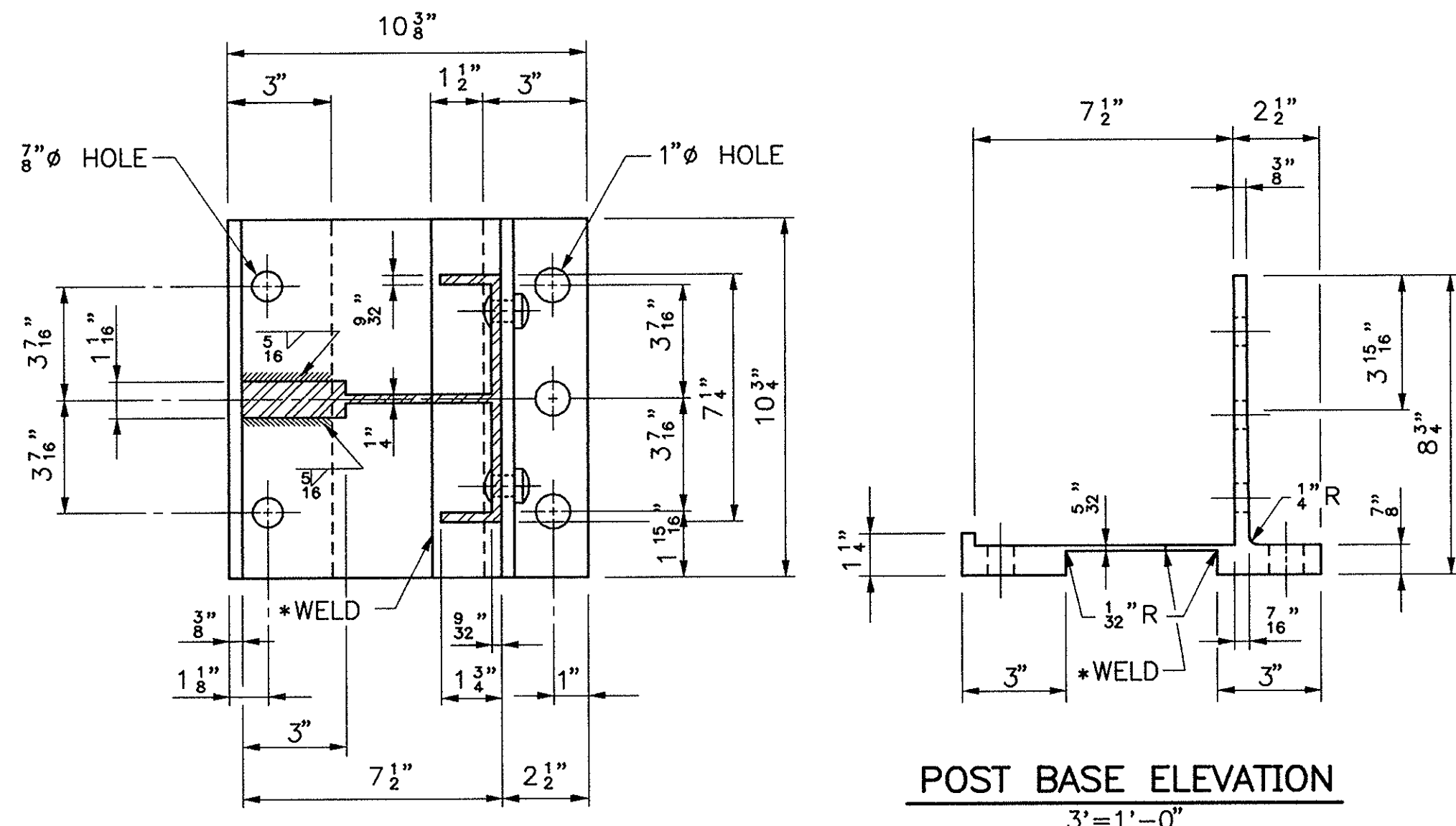
TRANSITION DETAIL
 1"=1'-0"

NOTES

- A Cut, Clean And Bend Existing Reinforcing Steel To Provide A 2" Clearance. The Contractor Will Be Required To Dowel 12" Deep Into Existing Concrete And Place #4 @ 1'-0"± When, As Determined By The Engineer, The Exist. Reinforcing Steel Is Unsuitable Or Missing. The Work Involved In Drilling And Grouting Will Be Considered Incidental To The Deck Re-construction Item.
 - B V-Groove 1 1/2" W x 3/4" D To Align With Fascia Groove, See Typical Cross Section For Bridge.
- * Identification Letters And Numbers On Drawings Refer To The Standard Detail Drawings Shown In "A Guide To Standardized Highway Barrier Rail Hardware" By AASHTO-AGC-ARTBA Joint Cooperative Committee.

AS BUILT

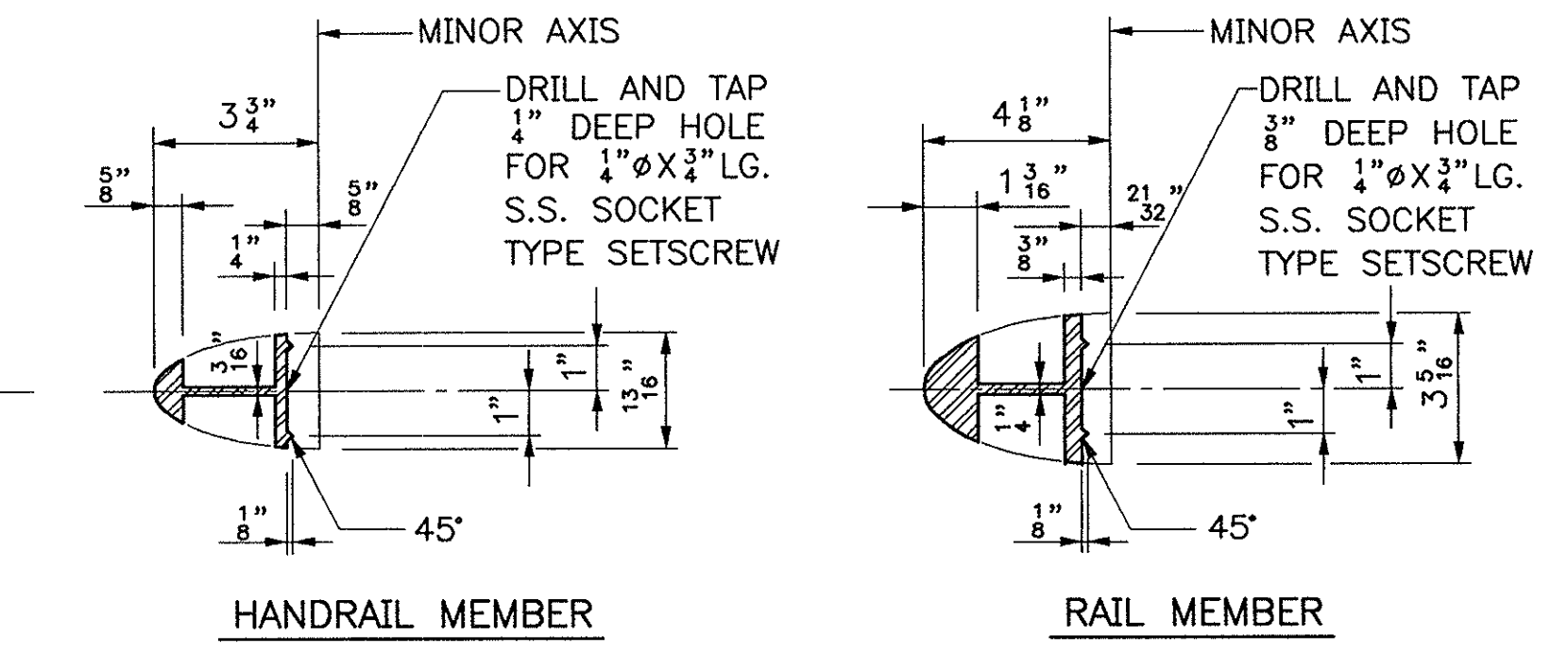
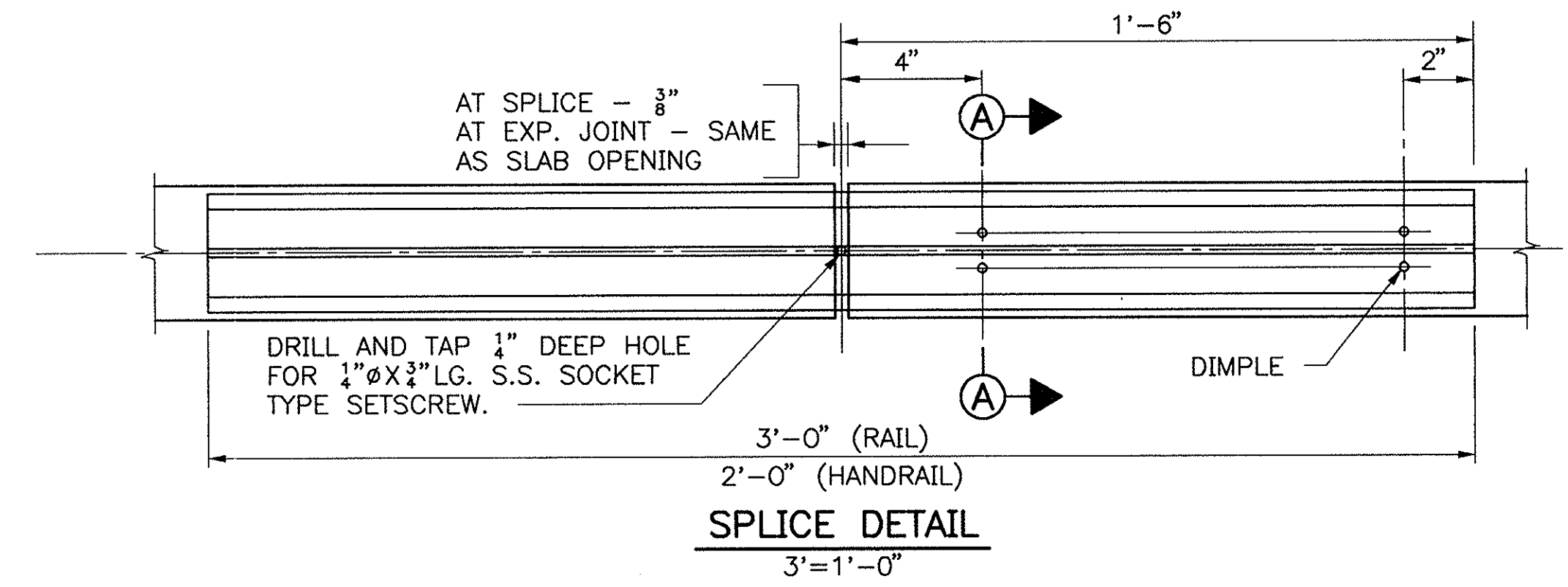
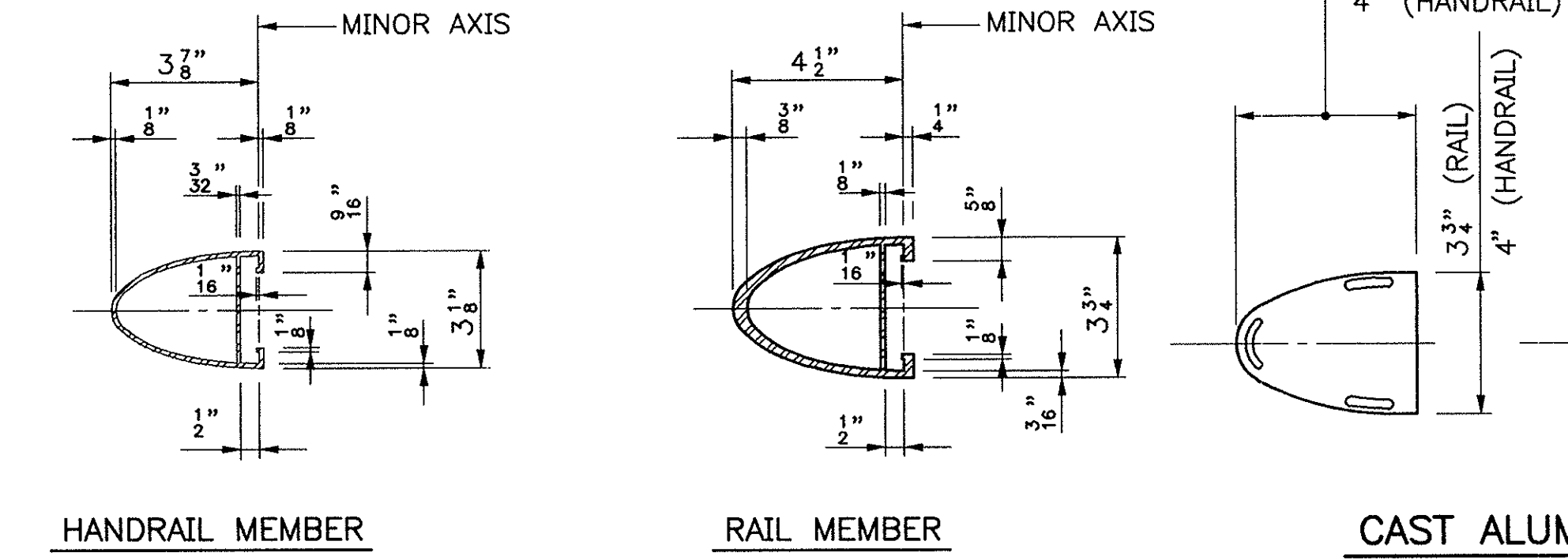
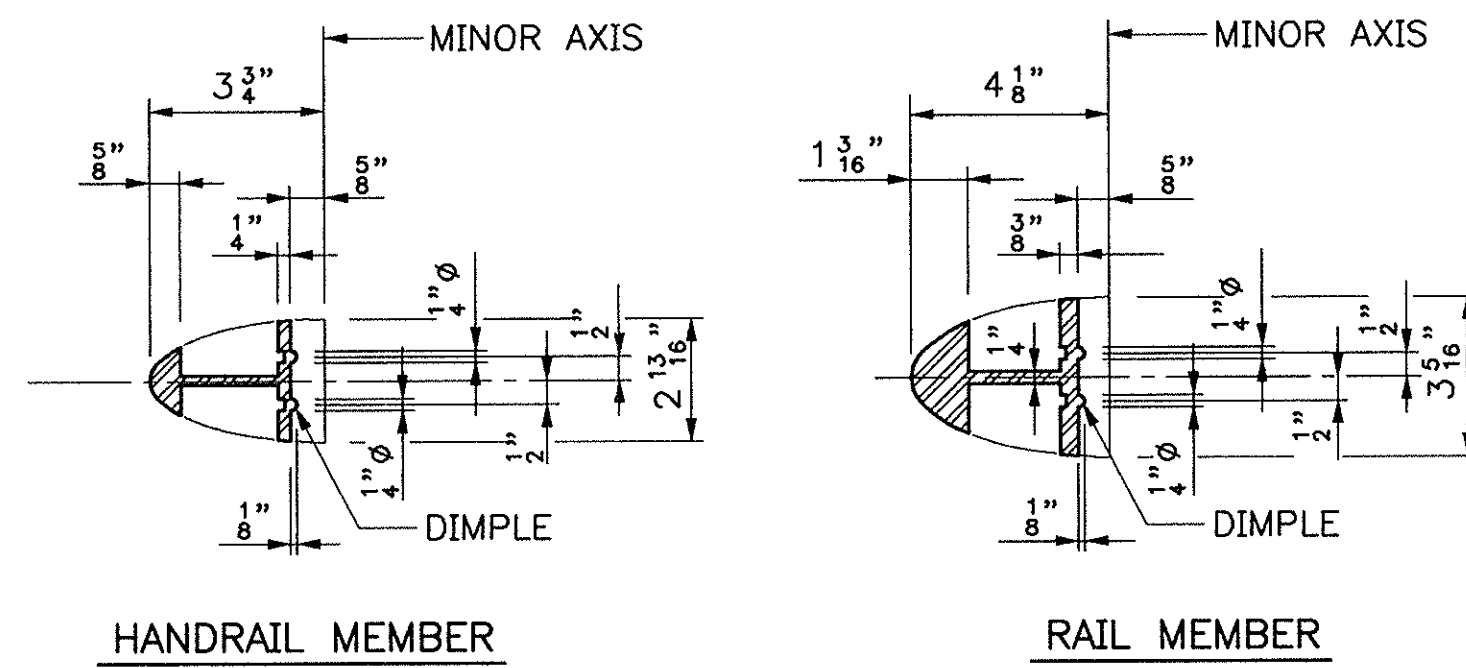
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
TYPICAL WINGWALL AND	
END POST DETAILS (LOCAL ROAD)	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 68



NOTE

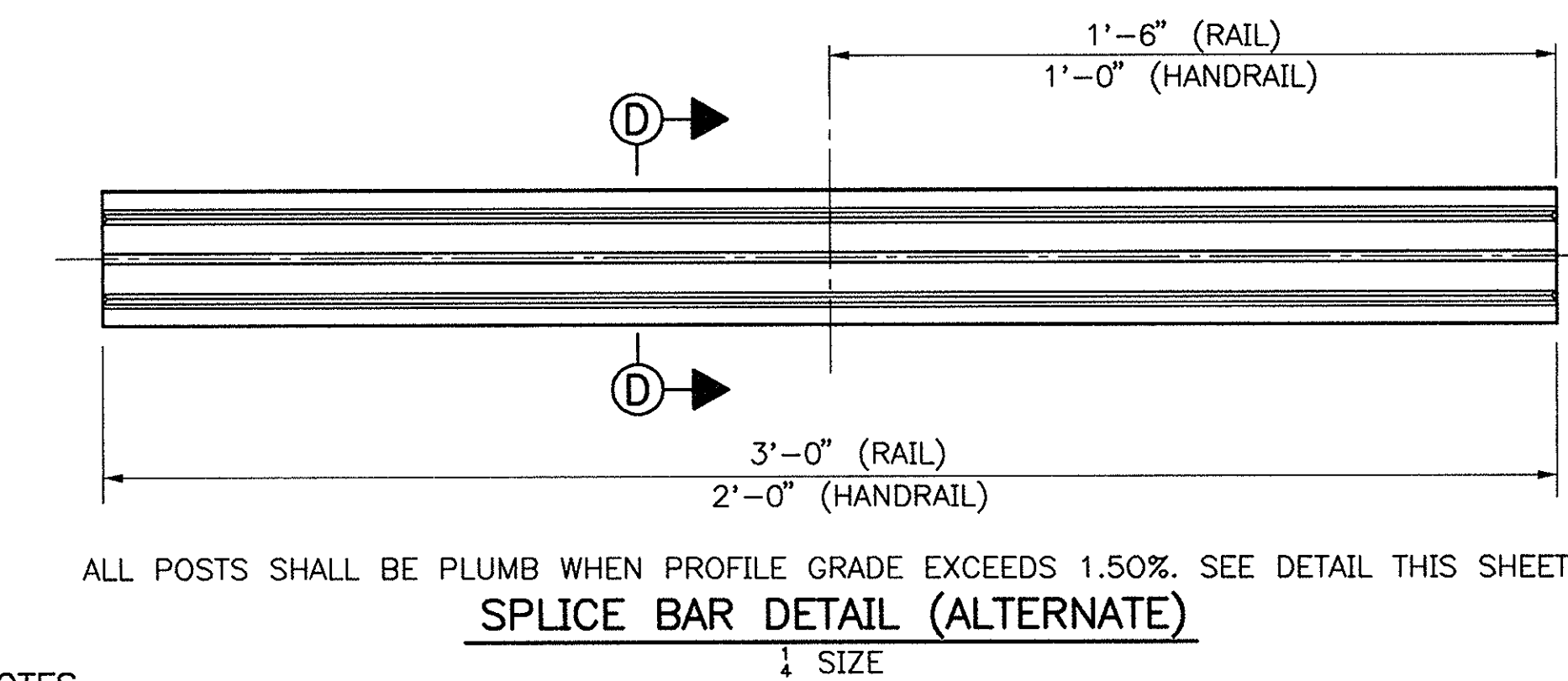
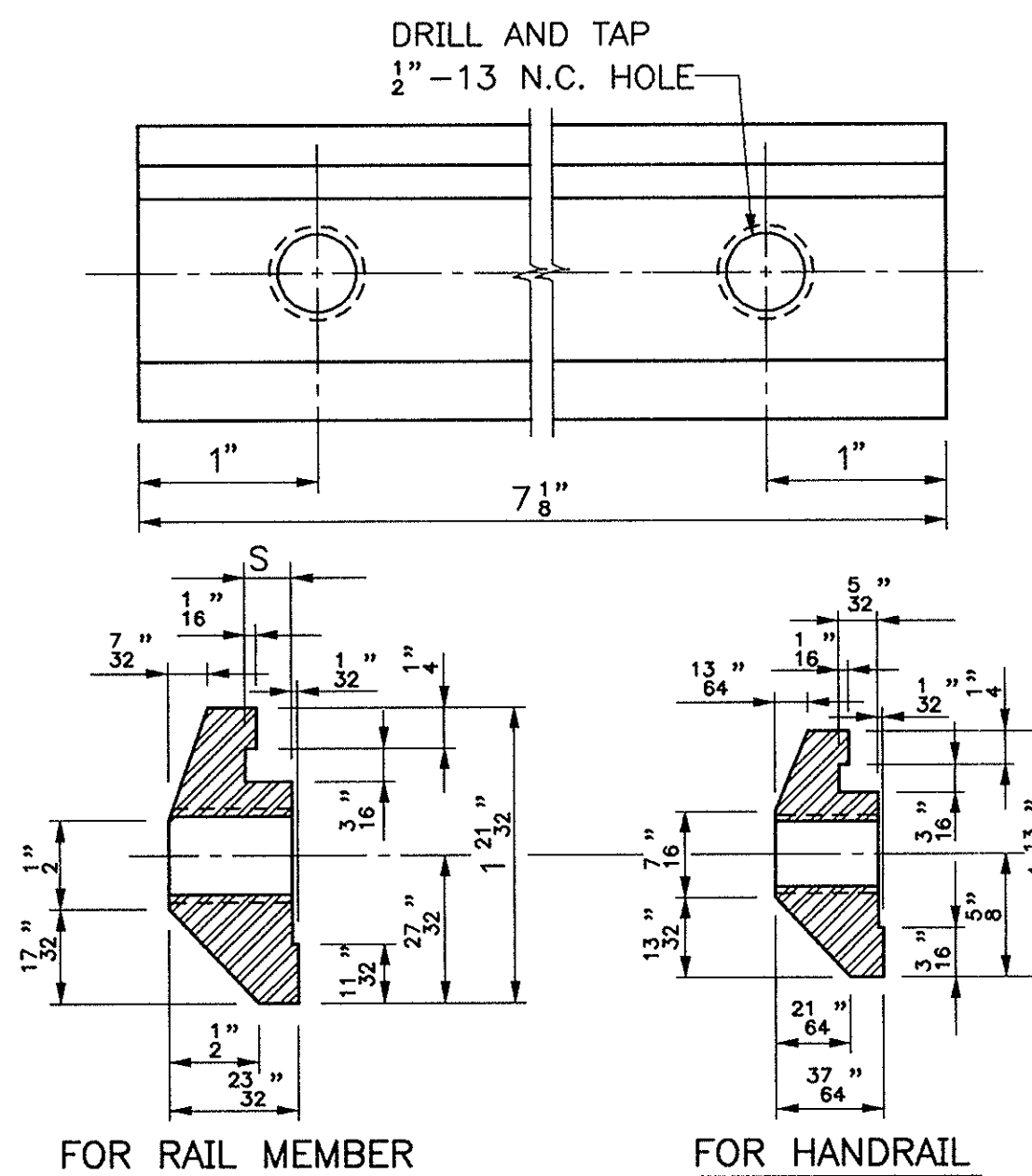
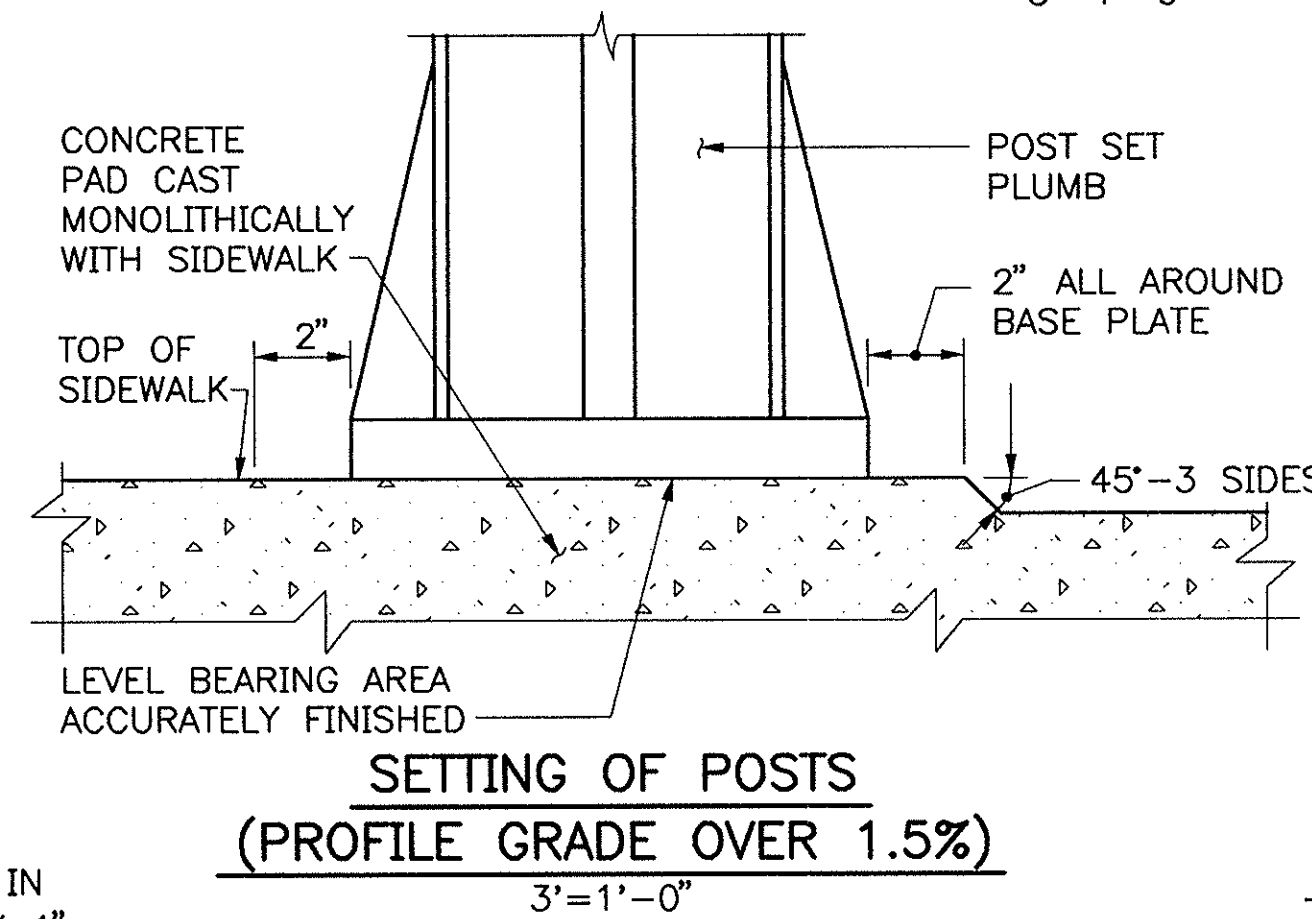
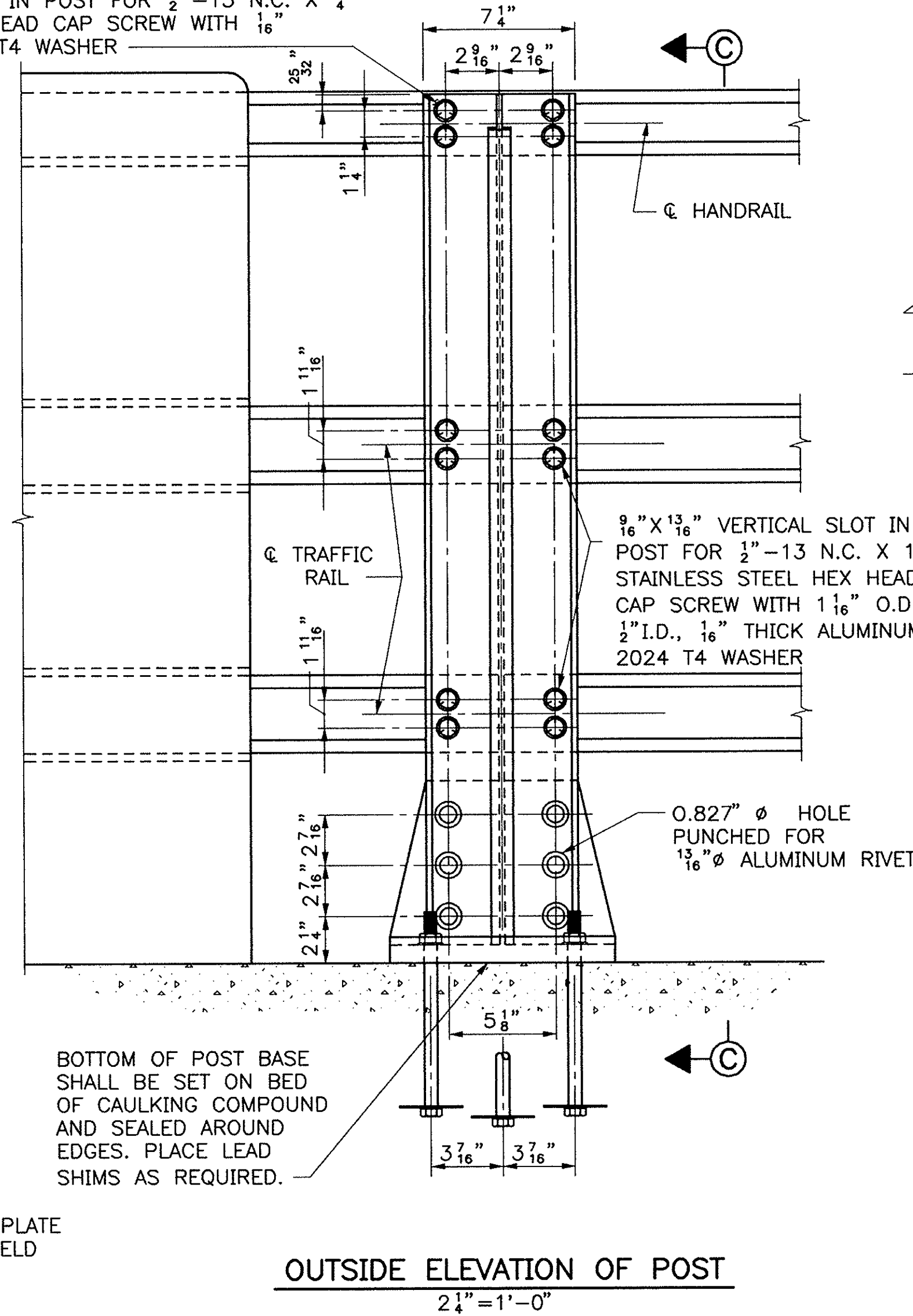
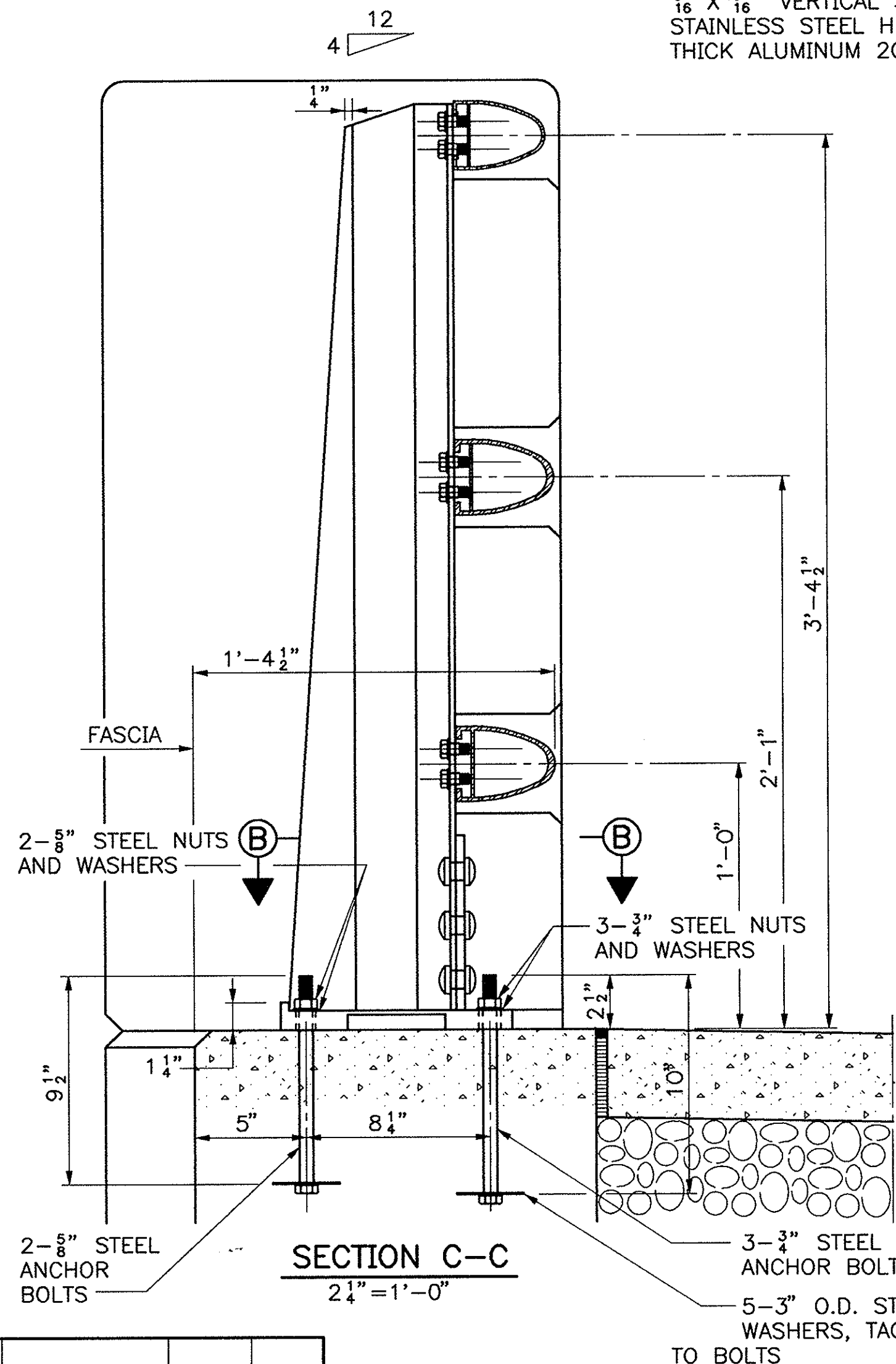
* ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE. WELDING SHALL BE PERFORMED BY METAL INERT GAS ("MIG") PROCESS.

SECTION B-B
3'-1'-0"



SECTION D-D
3'-1'-0"

9/16" X 1 1/8" VERTICAL SLOT IN POST FOR 1/2"-13 N.C. X 3/4" STAINLESS STEEL HEX HEAD CAP SCREW WITH 1/16" THICK ALUMINUM 2024 T4 WASHER



NOTES

MAXIMUM POST SPACING = 6'-6"
RAILS SHALL BE CONTINUOUS FROM END TO END OF BRIDGE WITH SPLICES, AS NECESSARY. RAILS SHALL BE CONTINUOUS OVER A MIN. OF FOUR POSTS WITHOUT SPLICES, WHERE POSSIBLE. RAILS SHALL BE SPLICED IN PANEL OVER EXPANSION JOINTS. SPLICES SHALL BE LOCATED 2'-0" FROM C. OF POST, OR AS NOTED ON THE PLANS. POSTS SHALL BE SET PERPENDICULAR TO GRADE. DESIGN IN ACCORDANCE WITH A.A.S.H.T.O. 1992 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND A.A.S.H.T.O. INTERIM SPECIFICATIONS.

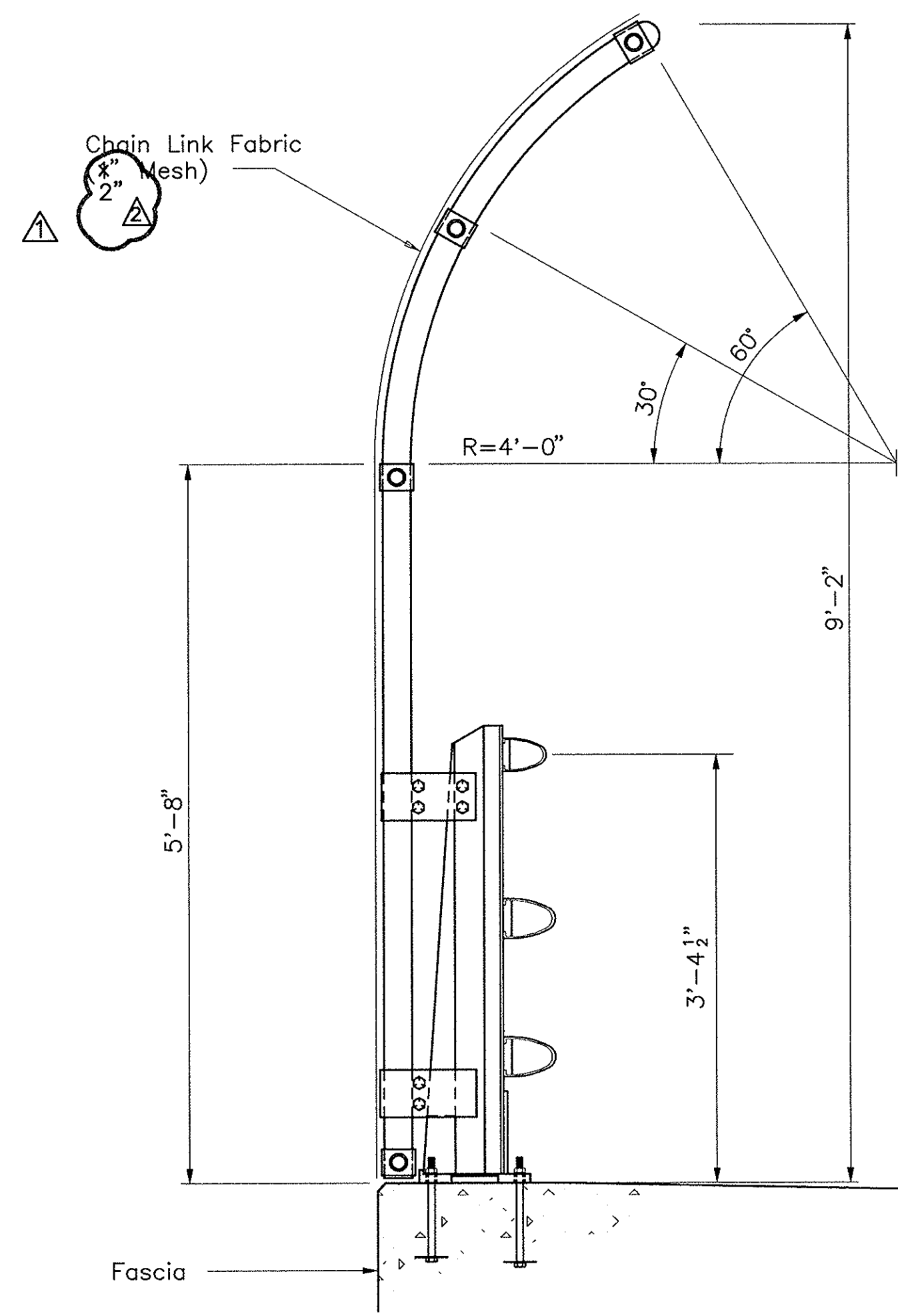
ALL EXPOSED EDGES OF HANDRAIL AND POSTS SHALL BE GROUND SMOOTH. TOPS OF POSTS SHALL BE GROUND SMOOTH BELOW TOP RAIL.

WHERE GALVANIZING IS DAMAGED, THE DAMAGED AREAS SHALL BE THOROUGHLY CLEANED AND GIVEN ONE COAT OF ZINC DUST-ZINC OXIDE PAINT CONFORMING TO THE REQUIREMENTS FOR TYPE III AS SPECIFIED IN FEDERAL SPECIFICATION TT-P-641b.

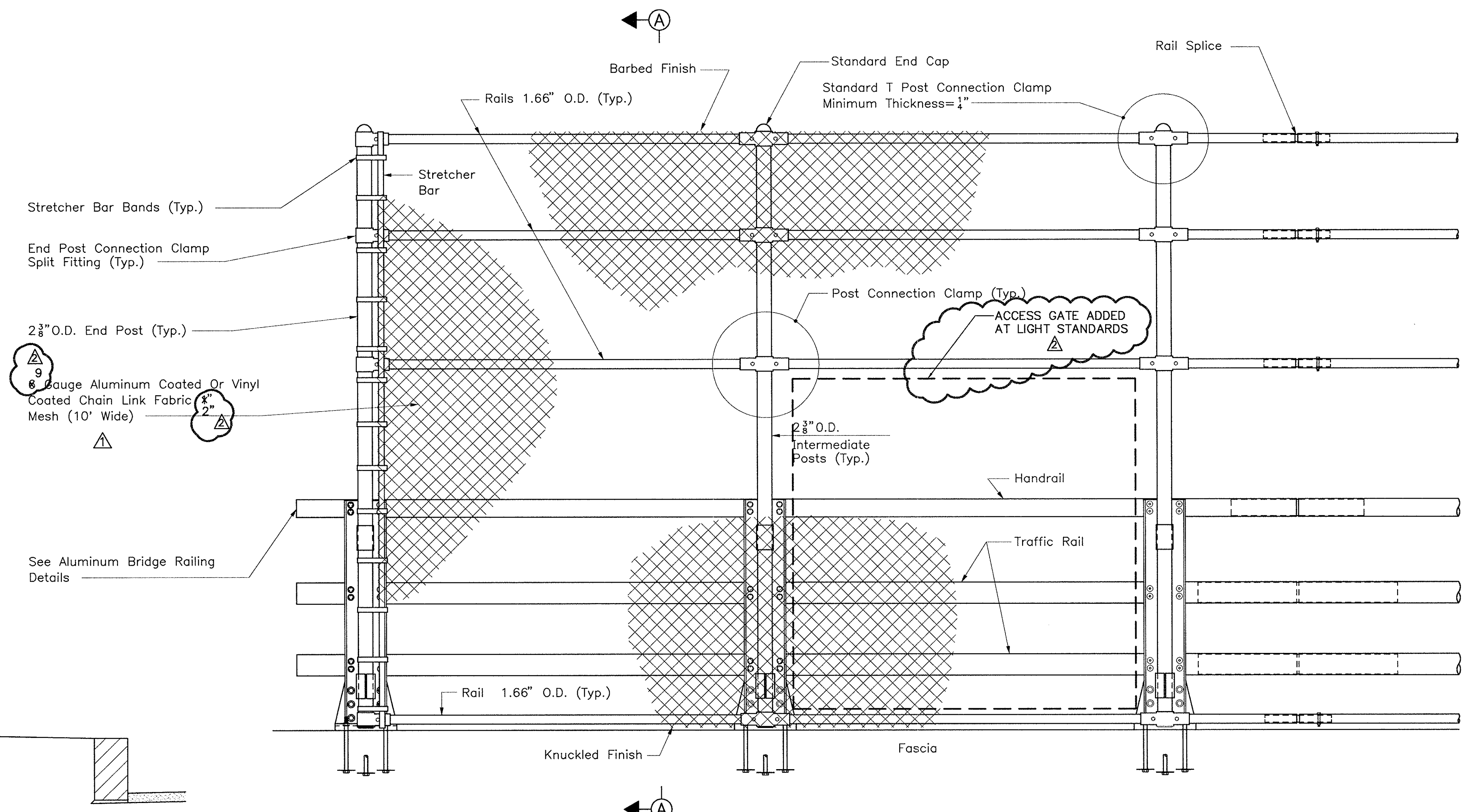
MATERIAL NOTES

- RAILS, POSTS, POST BASES ———— ASTM B-221 ALLOY 6061-T6
- SPLICES, CLAMP BARS ———— ASTM B-221 ALLOY 6061-T6
- RIVETS ———— ASTM B-316 ALLOY 6061-T6
- ALUMINUM WASHERS ———— ASTM B-209 ALLOY ALCLAD 2024-T4
- END PLUGS ———— ASTM B-26 ALLOY 43F OR 356F
- STAINLESS STEEL CAP AND SET SCREWS ———— ASTM A-193 GRADE B8
- STEEL BOLTS, NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ASTM A-325 AND SHALL BE GALVANIZED.

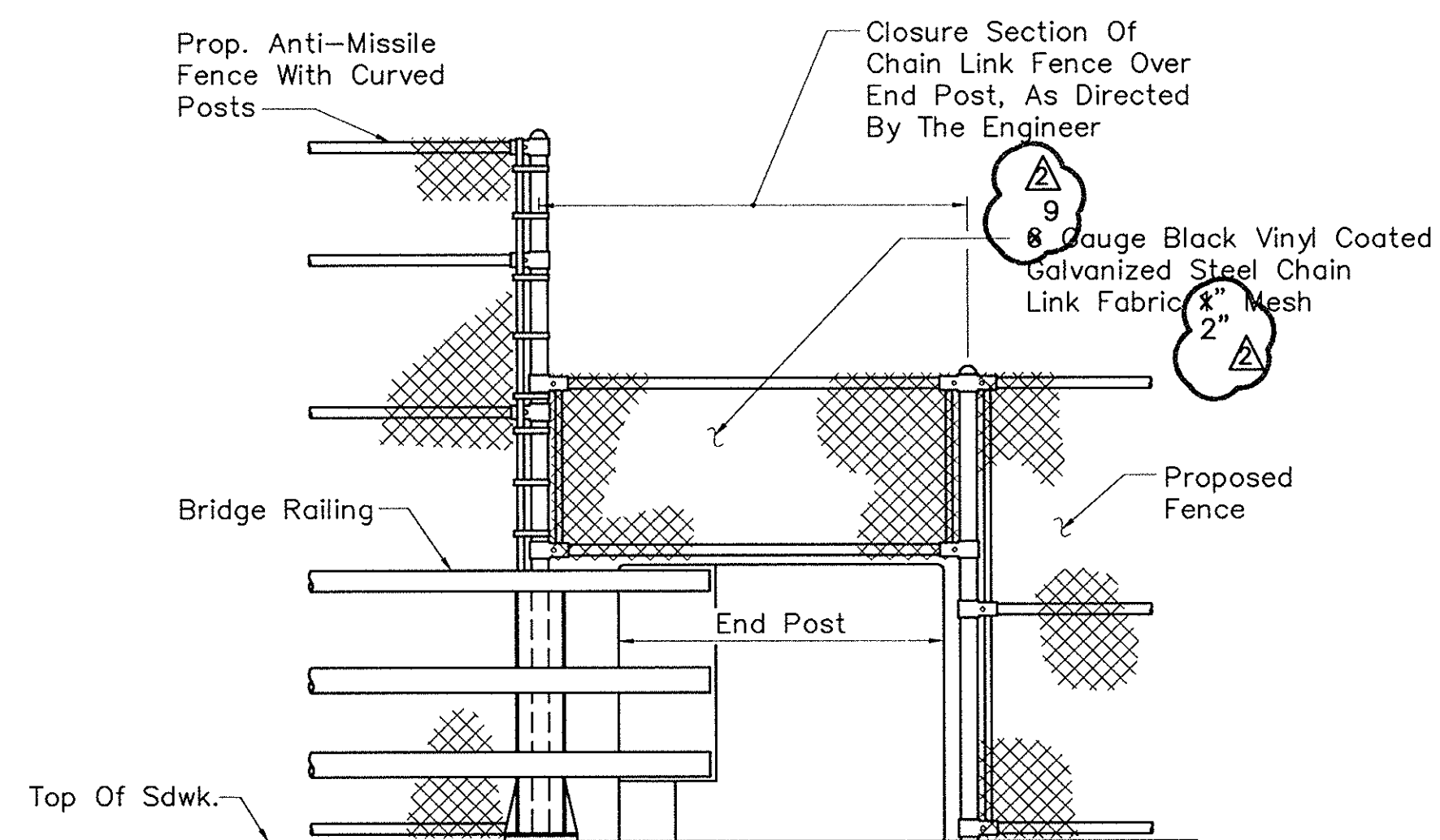
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
STANDARD DETAILS ALUMINUM BRIDGE RAILING DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 69



SECTION A-A
SCALE: 1" = 1'-0"



ELEVATION
SCALE: 1" = 1'-0"



CHAIN LINK FENCE CLOSURE SECTION AT END POST
SCALE: 1/2" = 1'-0"

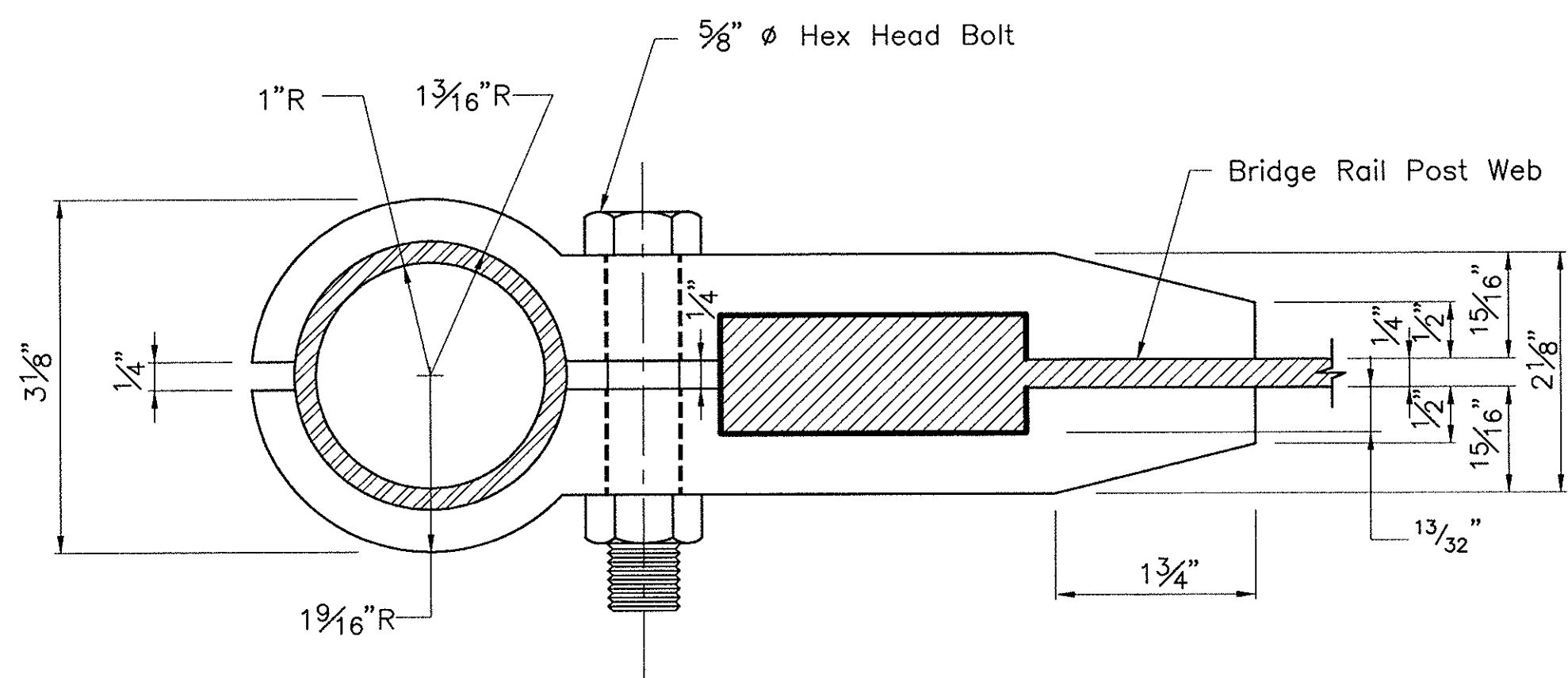
NOTES

1. Fabric Ties To All Posts And Top Three Rails Shall Be Spaced At 12" O.C. Ties To Bottom Rail Shall Be Spaced At 6" O.C.
2. Provide Splices At Each Bridge Deck Joint And At Bridge Railing Splices.

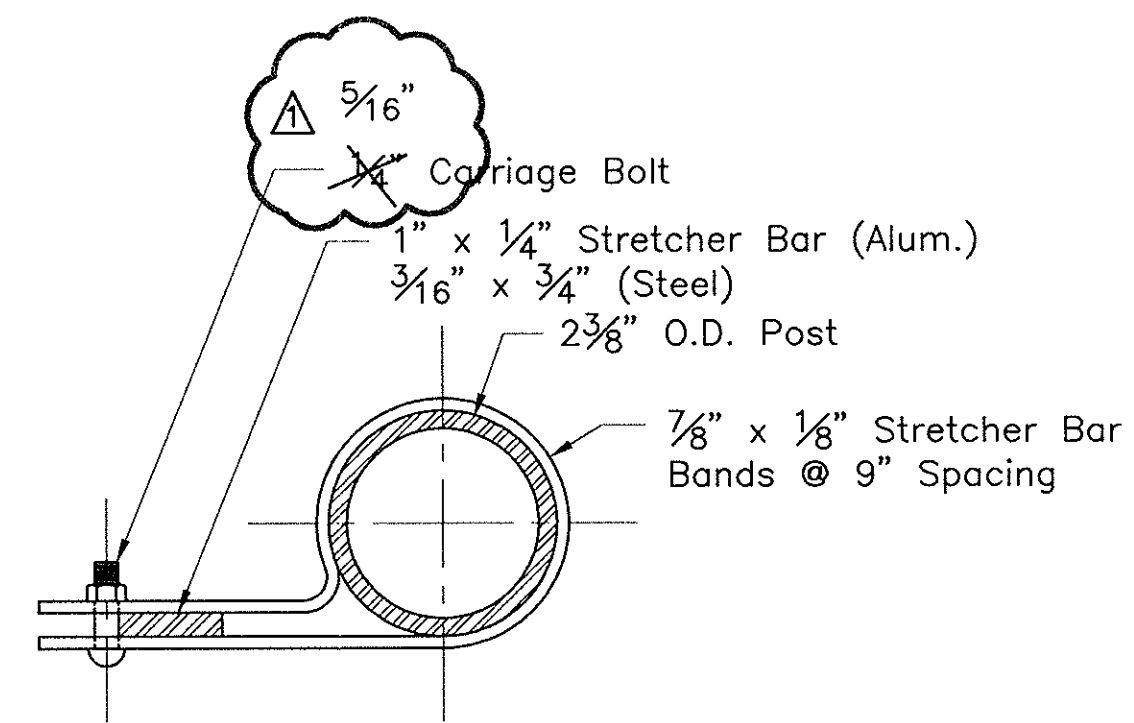
NO.	REVISION	BY	DATE
AS-BUILT	GTS	10/95	
CHANGED GAUGE AND MESH SIZE	E&K	12/93	

AS BUILT

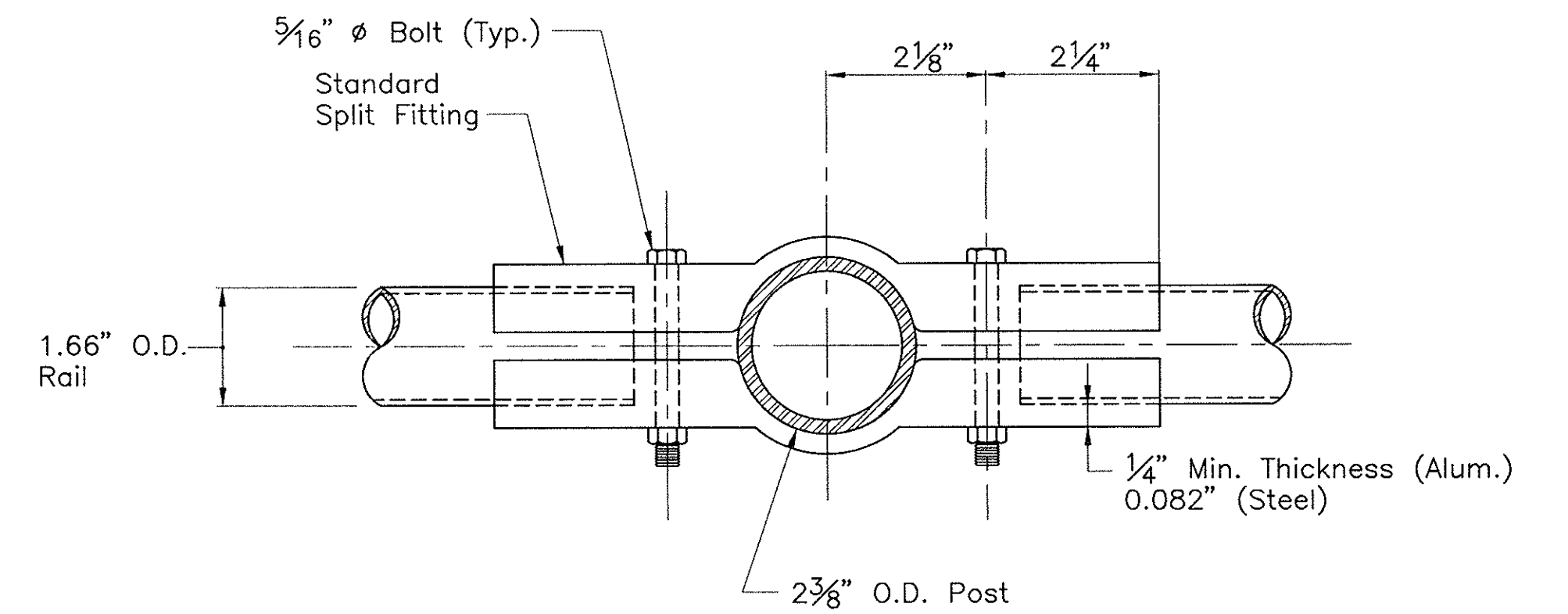
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
CHAIN LINK FENCE FOR BRIDGES	
DETAILS I	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 70



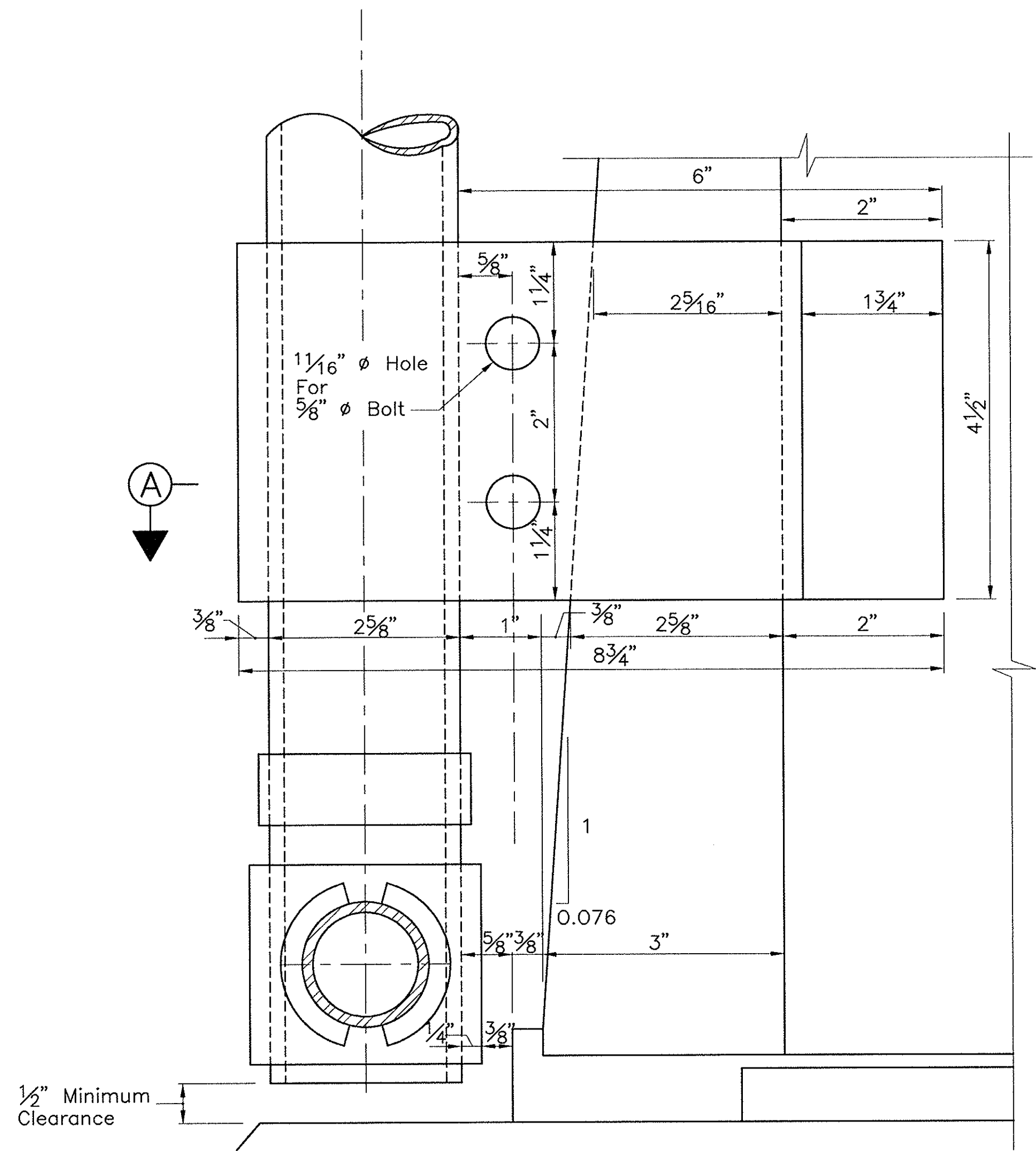
SECTION A-A
3/4 SIZE



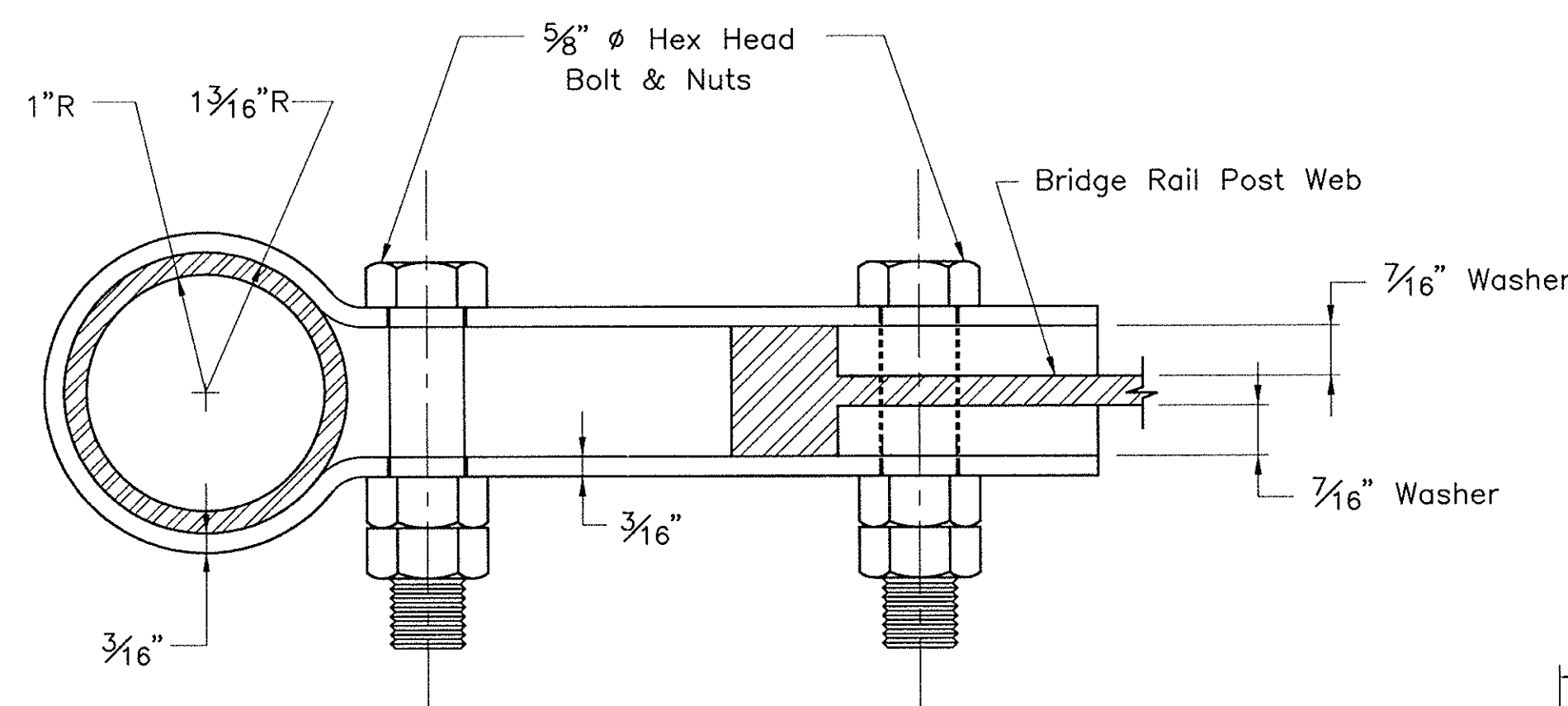
PLAN
STRETCHER BAR BAND CONNECTION
HALF SIZE



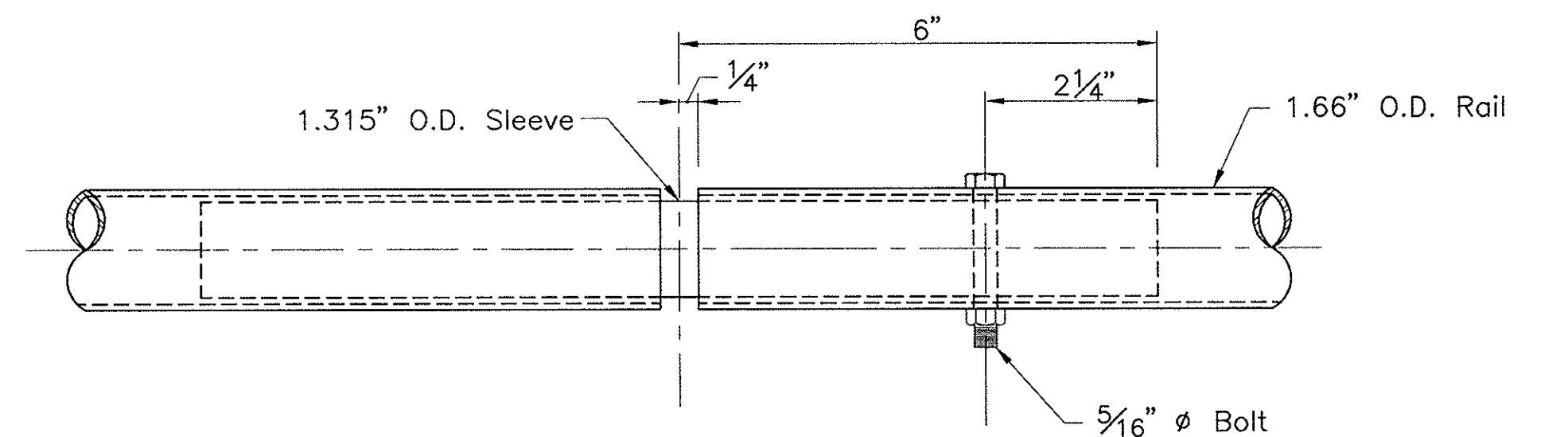
PLAN
POST CONNECTION CLAMP
HALF SIZE



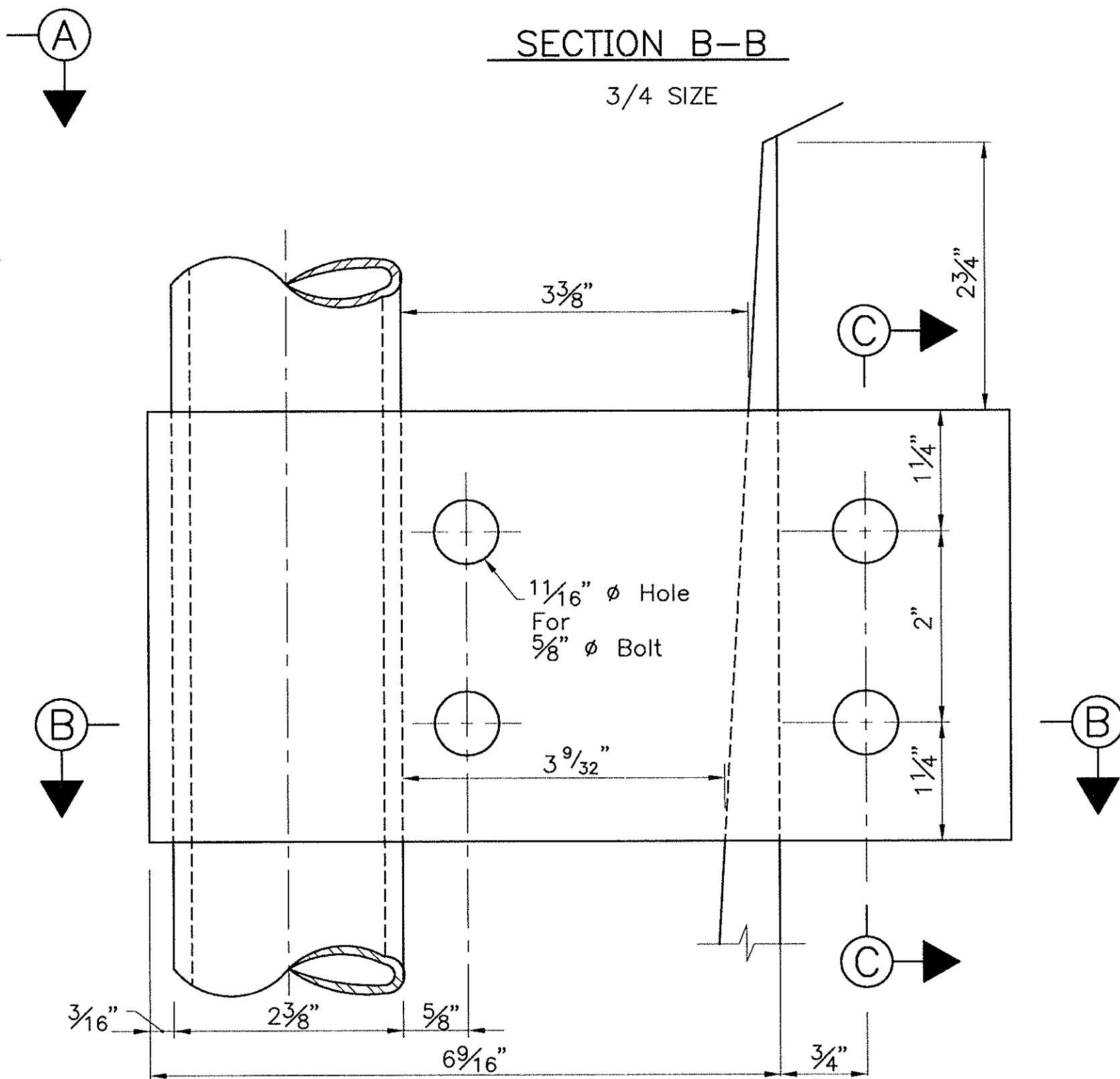
ELEVATION
LOWER CLAMP
3/4 SIZE



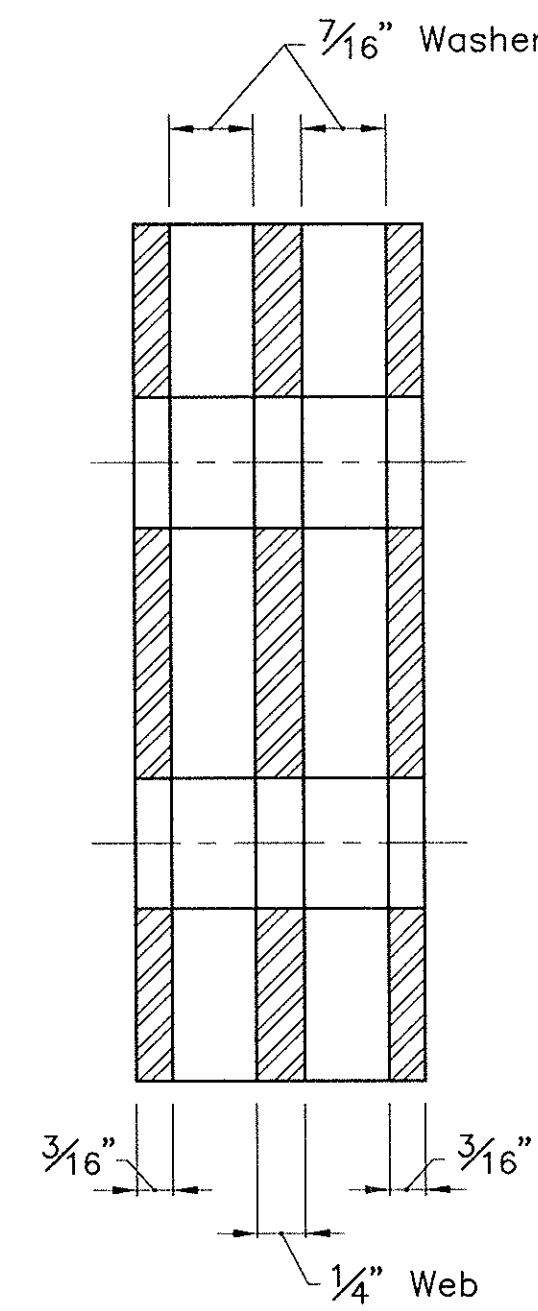
SECTION B-B
3/4 SIZE



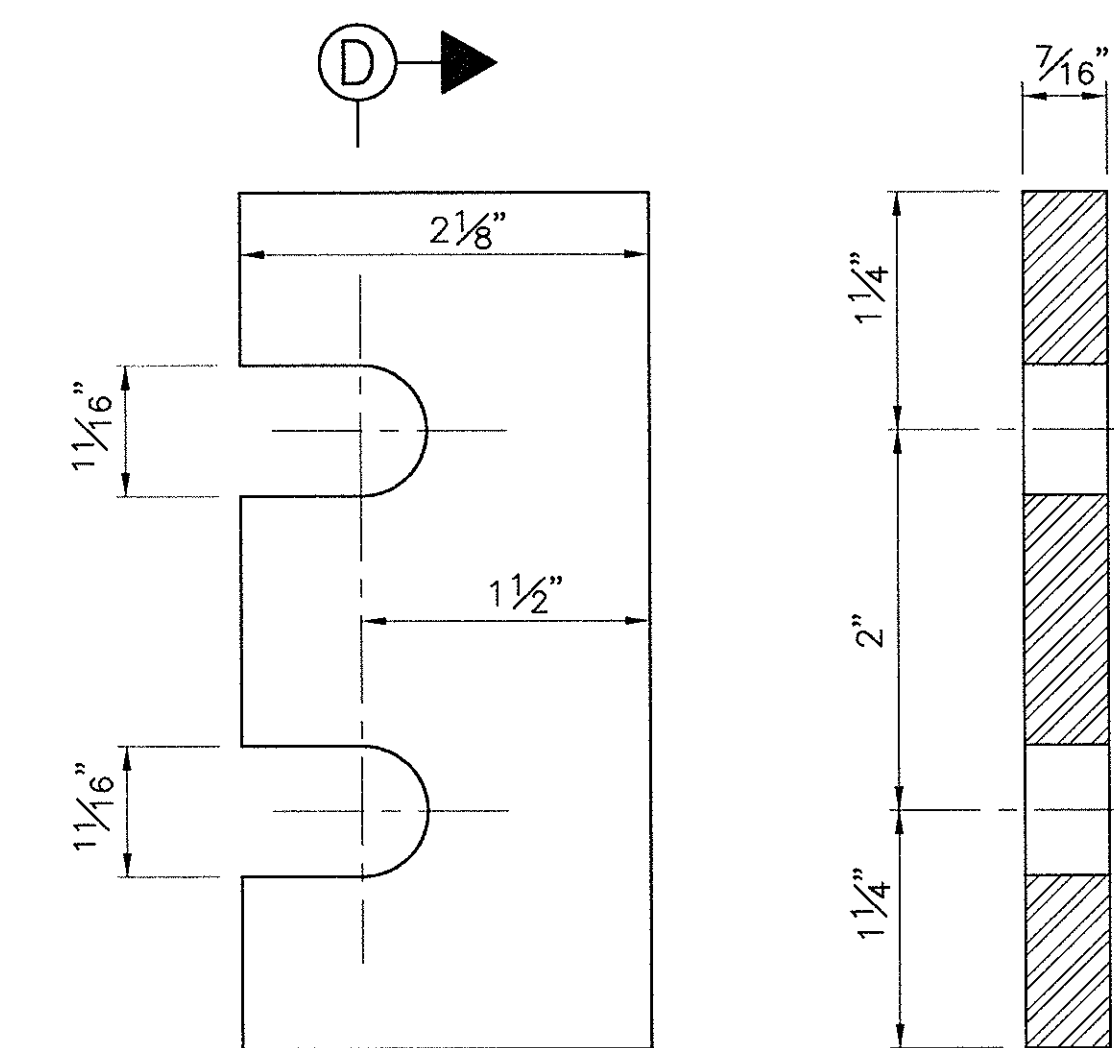
RAIL SPLICE DETAIL
HALF SIZE



ELEVATION
UPPER CLAMP
3/4 SIZE



SECTION C-C
FULL SIZE



ELEVATION
UPPER CLAMP WASHER
FULL SIZE

SECTION D-D

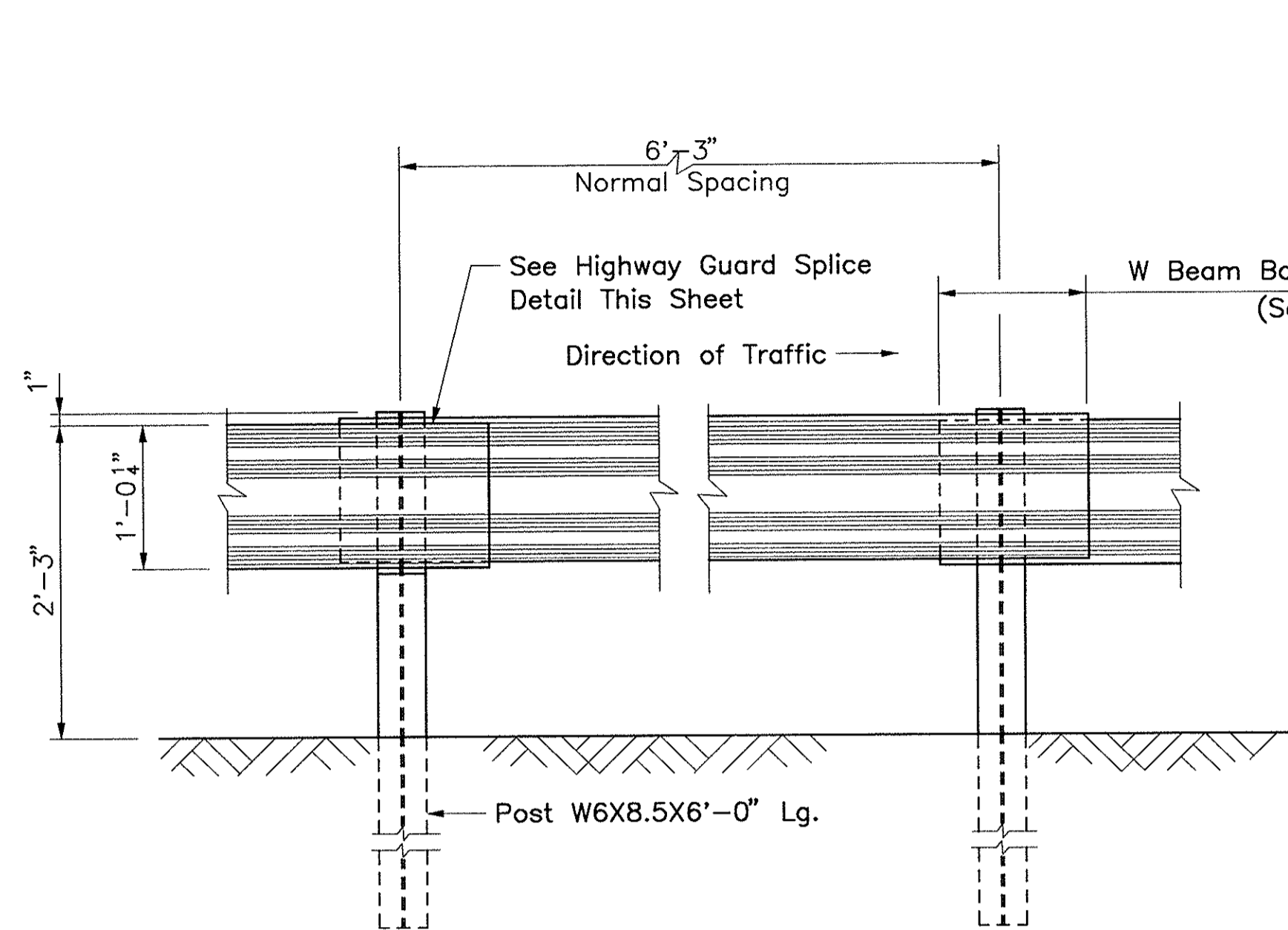
NOTE

1. Clamp Details Are For Attachment To AL-3 Type Bridge Rail Posts.
2. Lower Clamps Shall Be Fabricated From Aluminum Alloy 356-T6 Conforming To ASTM B26 Or B108.
3. Lower Clamps Shall Be Fabricated From Aluminum Alloy 6061-T6 Or 6063-T6 Conforming To ASTM B221.
4. Upper Clamp Washer Shall Be Fabricated From Aluminum Alloy 6061-T6 Conforming To ASTM B221.

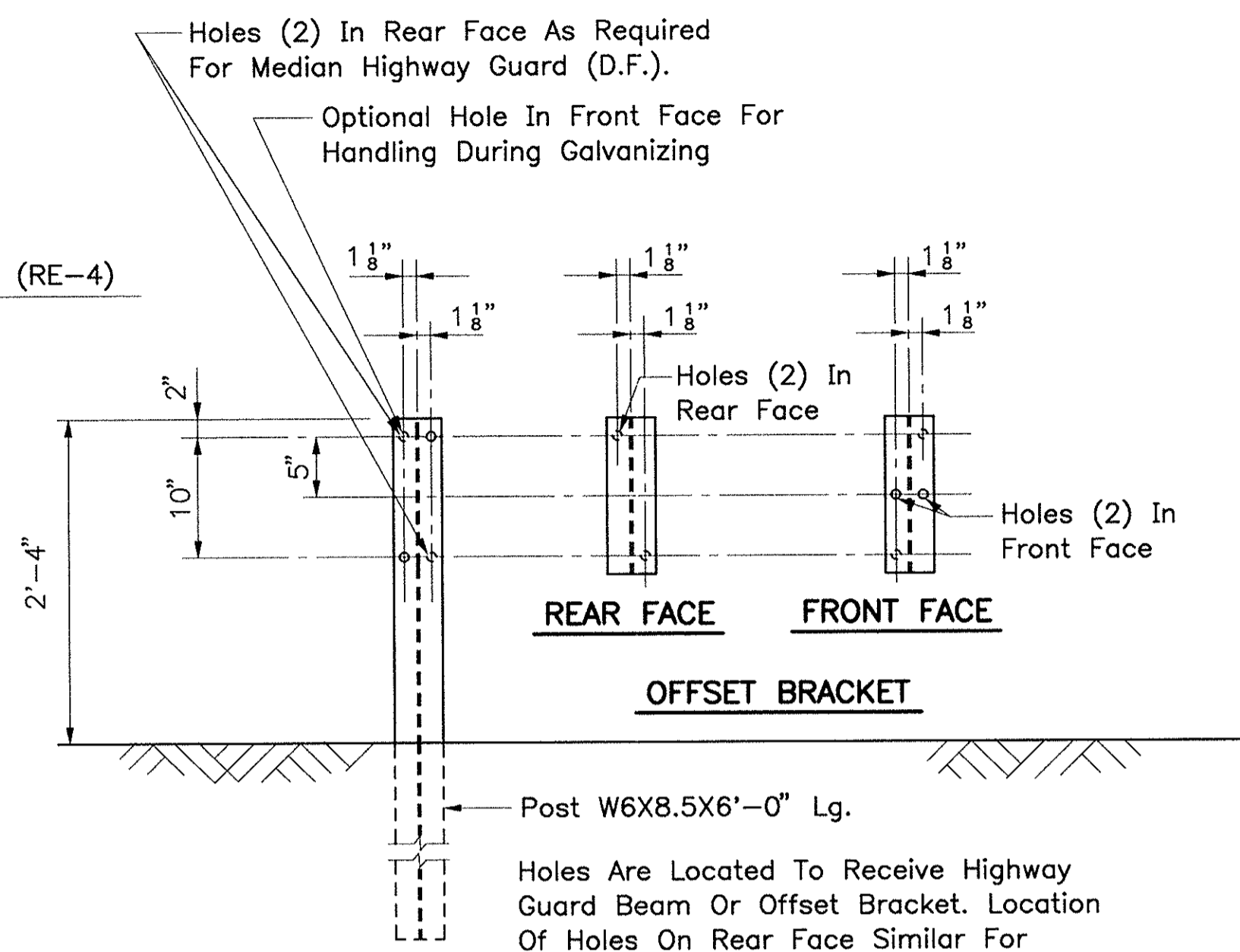
AS BUILT

NO.	REVISION	BY	DATE

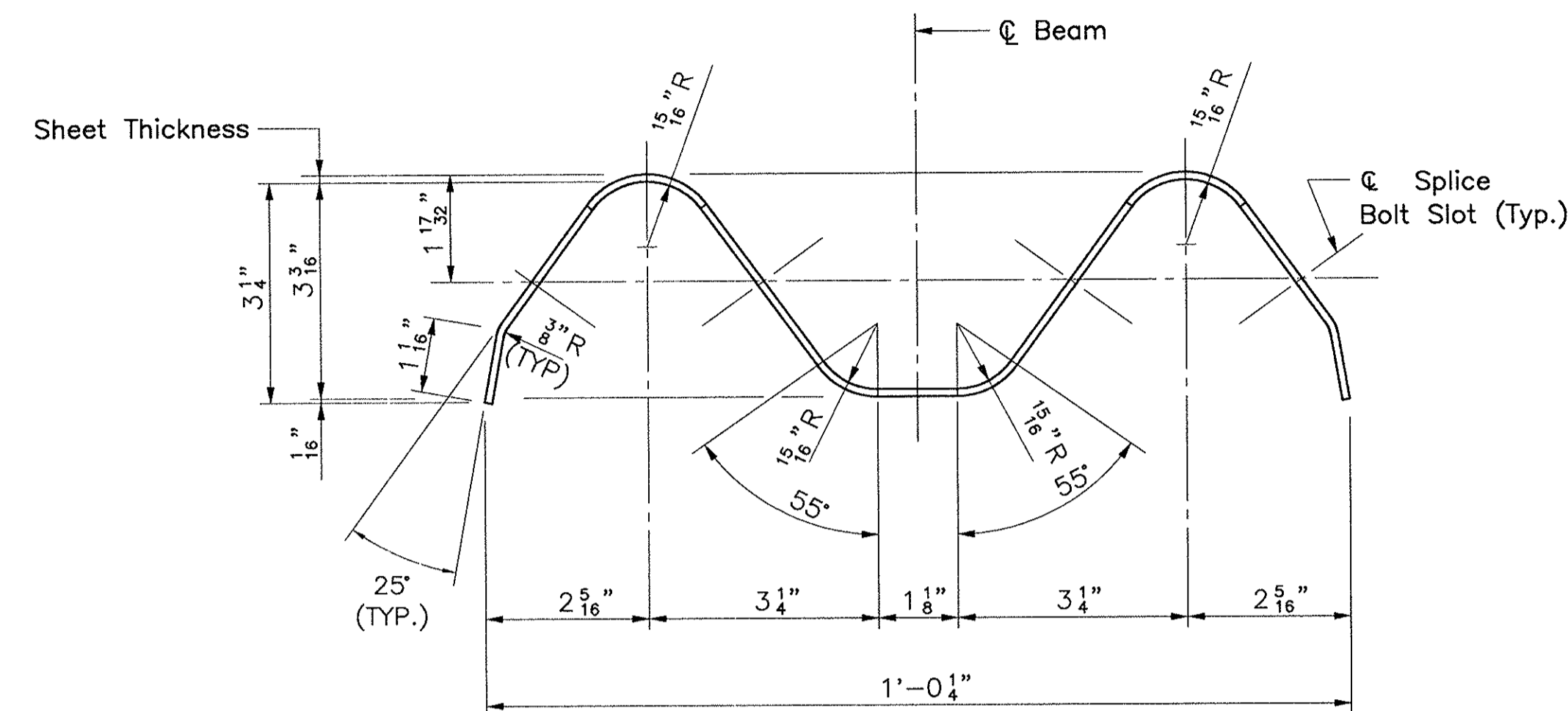
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
CHAIN LINK FENCE FOR BRIDGES	
DETAILS II	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 71



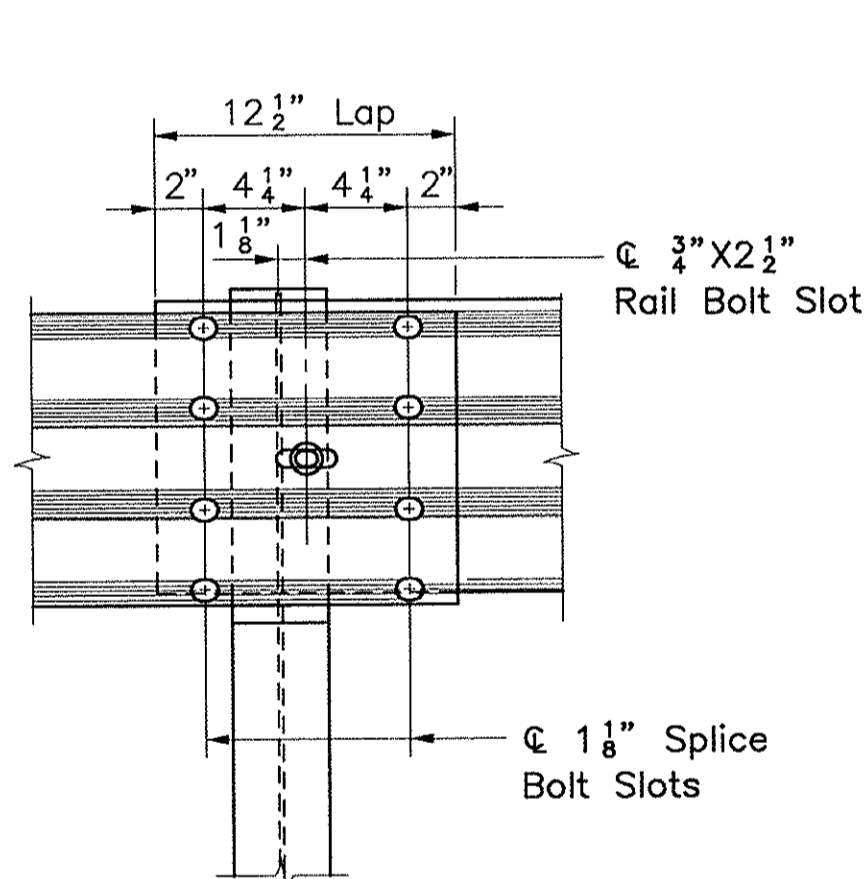
TYPICAL ELEVATION
1" = 1'-0"



P-10
W BEAM POST
1" = 1'-0"

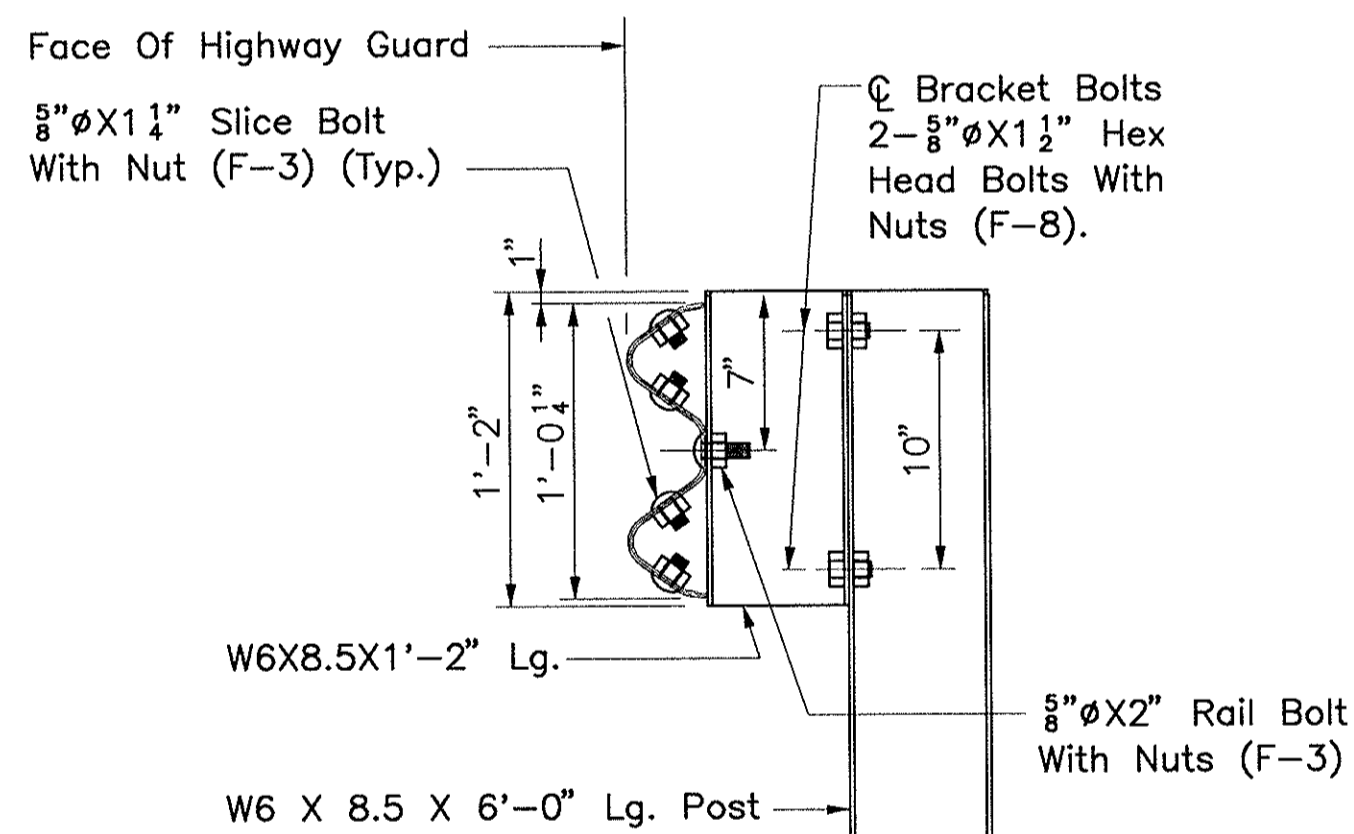


RE-3
W BEAM SECTION
Half Size

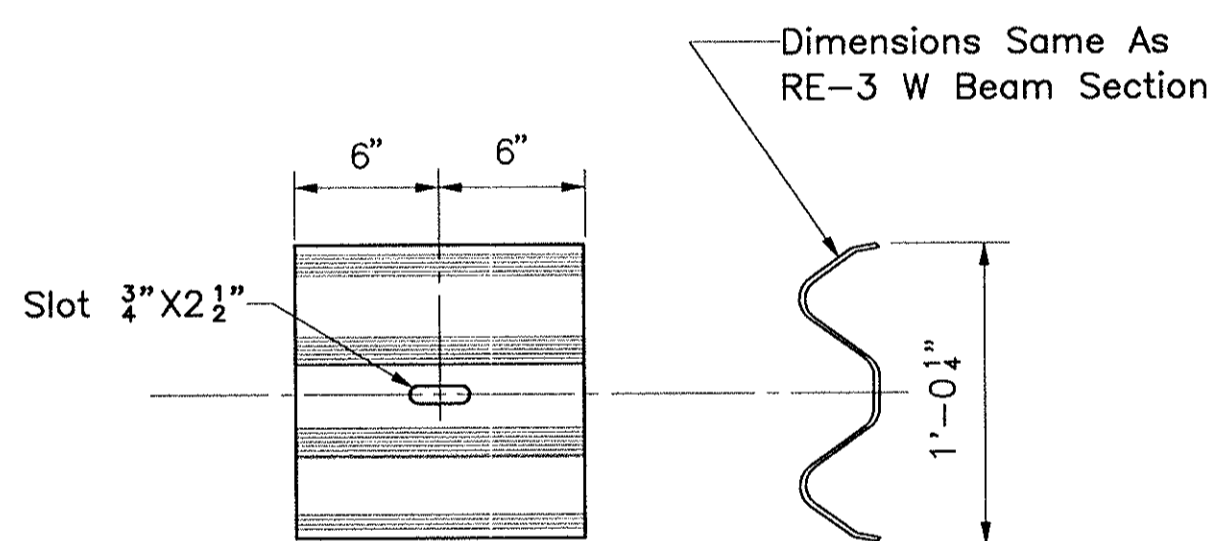


ELEVATION

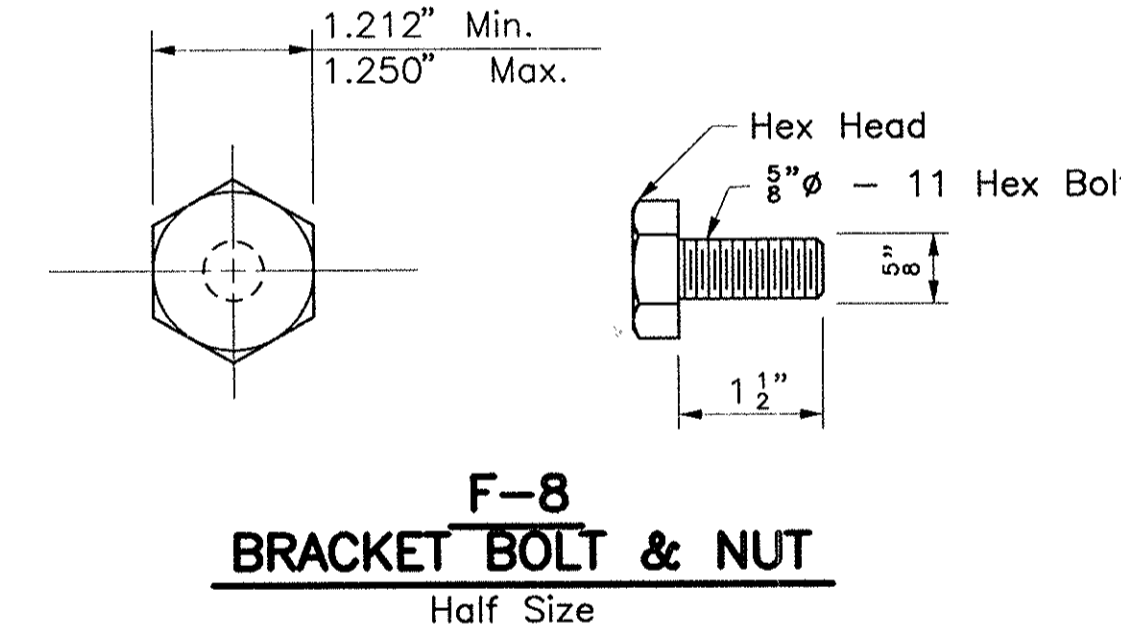
HIGHWAY GUARD SPLICE
1 1/2" = 1'-0"



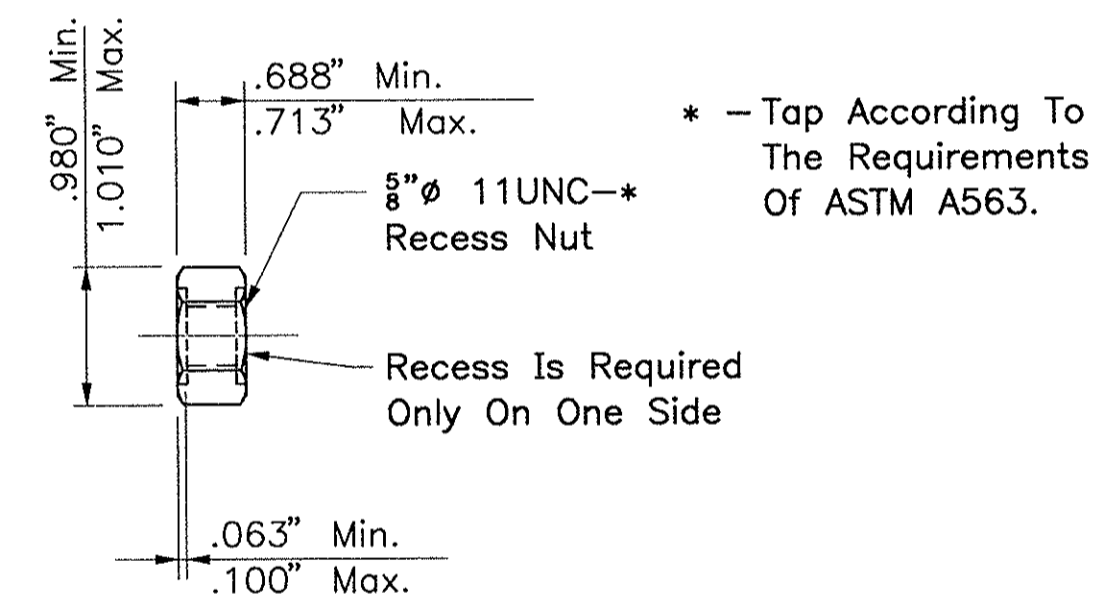
SECTION



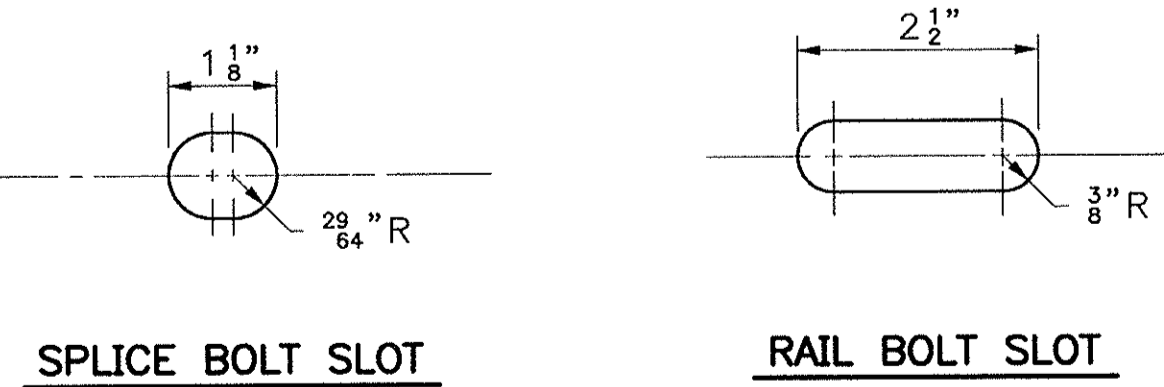
RE-4
W BEAM BACK - UP PLATE
1 1/2" = 1'-0"



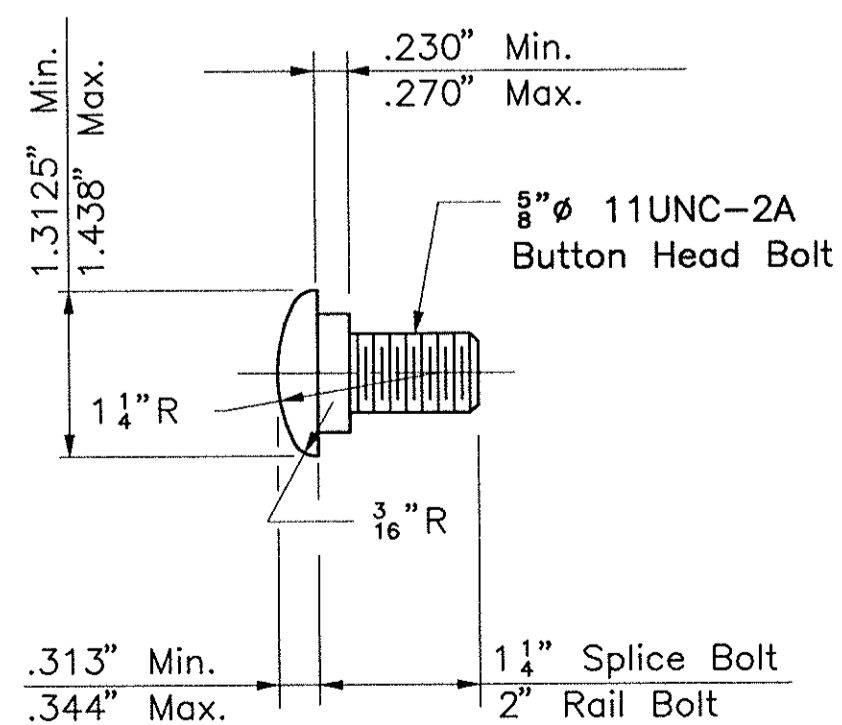
F-8
BRACKET BOLT & NUT
Half Size



F-3
NUT AND BOLT FOR RAIL AND SPLICE
Half Size



SLOTS IN RAIL ELEMENT
Half Size



F-3
NUT AND BOLT FOR RAIL AND SPLICE
Half Size

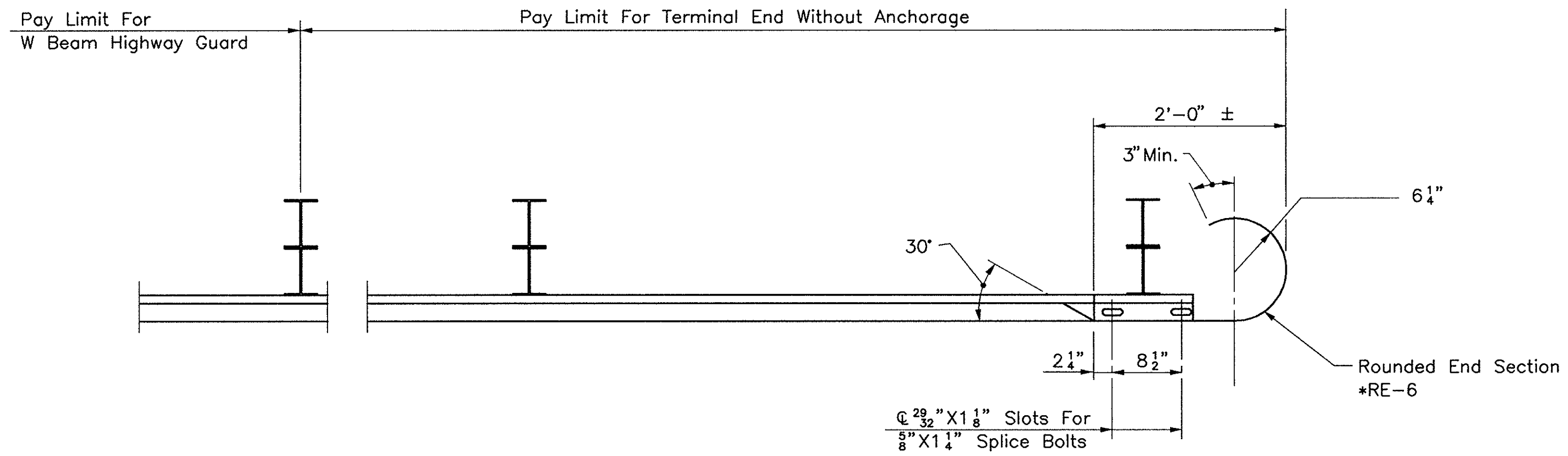
NOTES

1. Identification letters and numbers on drawings refer to the standard detail drawings shown in "A Guide to Standardized Highway Barrier Rail Hardware" by AASHTO-AGC-ARTBA Joint Cooperative Committee.
2. At posts without a rail element splice (every other post), a back-up plate shall be nested between the continuous rail element and the offset bracket.

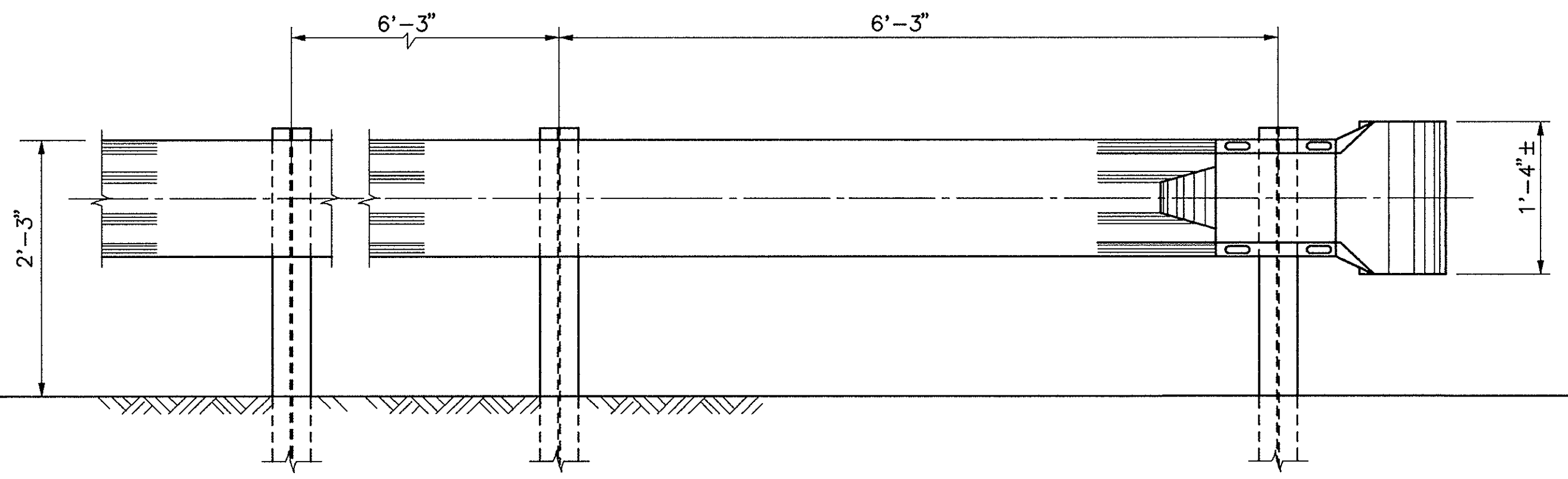
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
DETAILS I	
W BEAM HIGHWAY GUARD	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 72

NO.	REVISION	BY	DATE



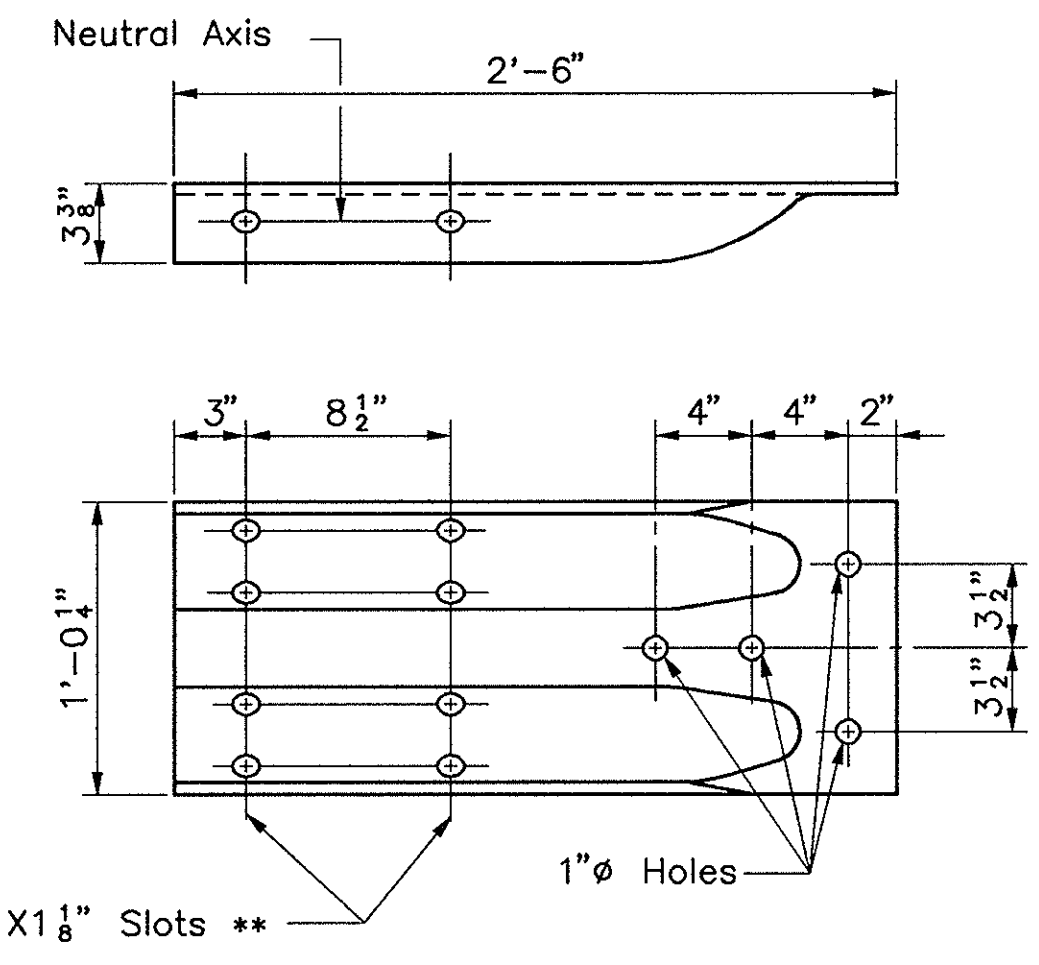
PLAN



ELEVATION

TERMINAL END WITHOUT ANCHORAGE (ITEM E4-9b)

1" = 1'-0"

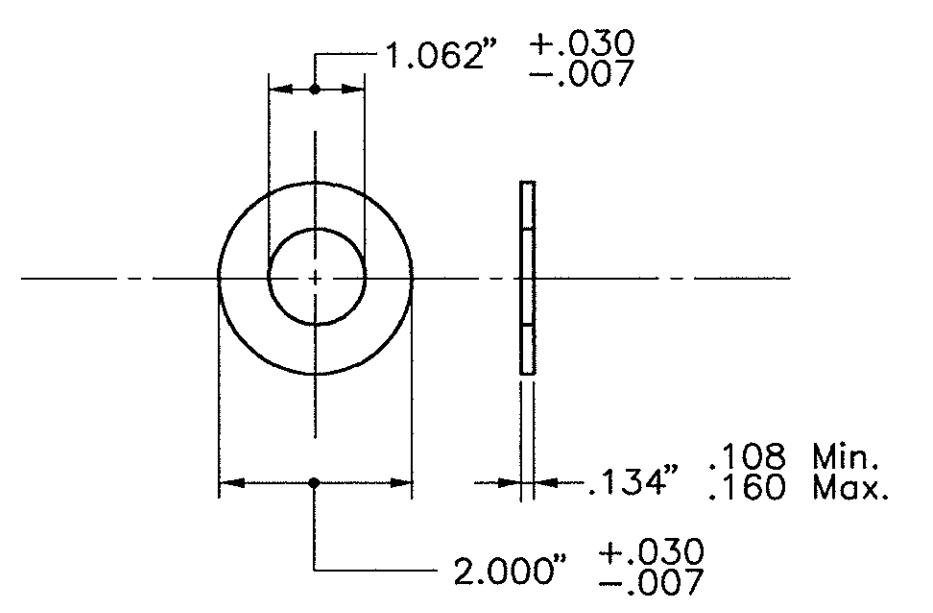


* RE-8

W BEAM TERMINAL CONNECTOR

1 1/2" = 1'-0"

**An Acceptable Alternative Is 2 3/32" X 3" Slots Used In Conjunction With 1" I.D., 2" O.D., Narrow, Type A Plain Washers *F-45 On The Splice Bolts.



* F-45

1" I.D., 2" O.D.
NARROW TYPE A PLAIN WASHER
HALF SIZE

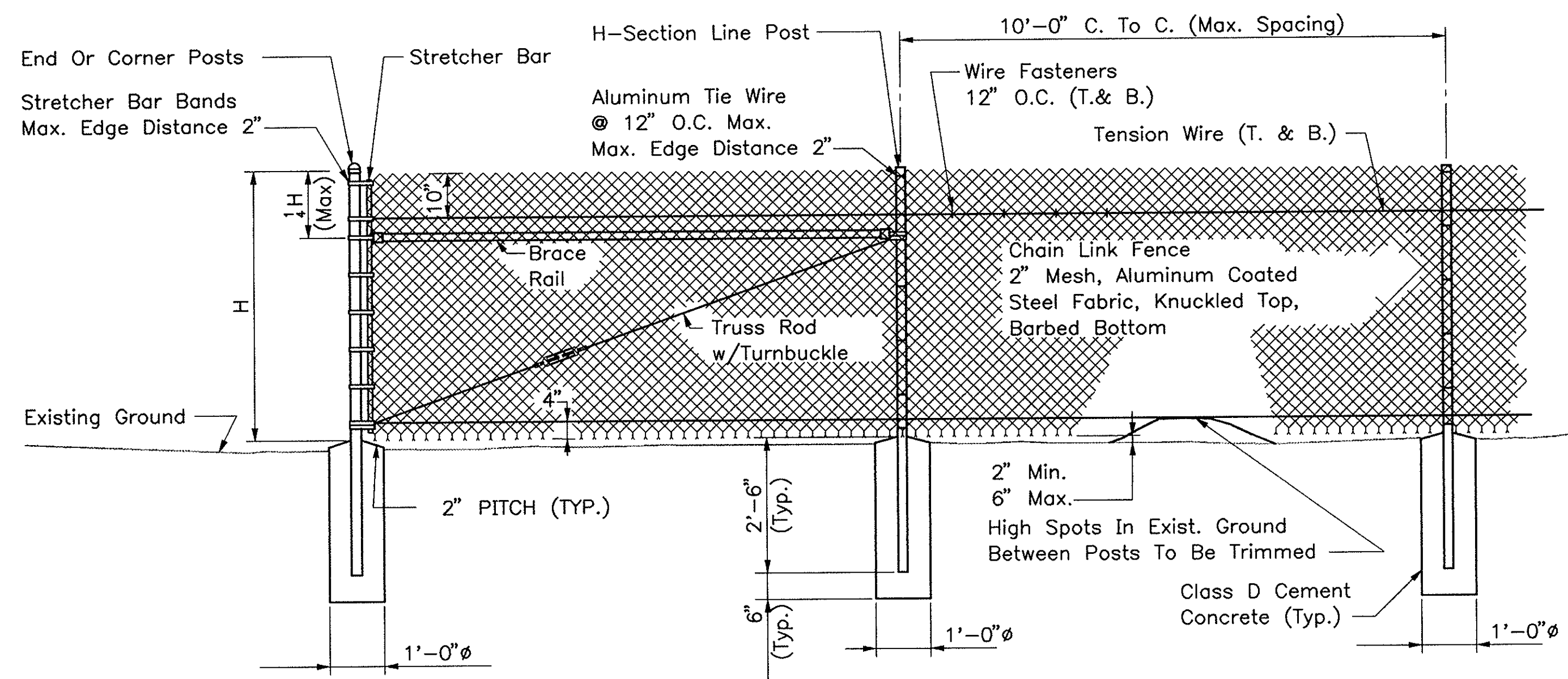
NOTE

* Identification letters and numbers on drawings refer to the standard detail drawings shown in "A Guide To Standardized Highway Barrier Rail Hardware" by AASHTO-AGC-ARTBA Joint Cooperative Committee.

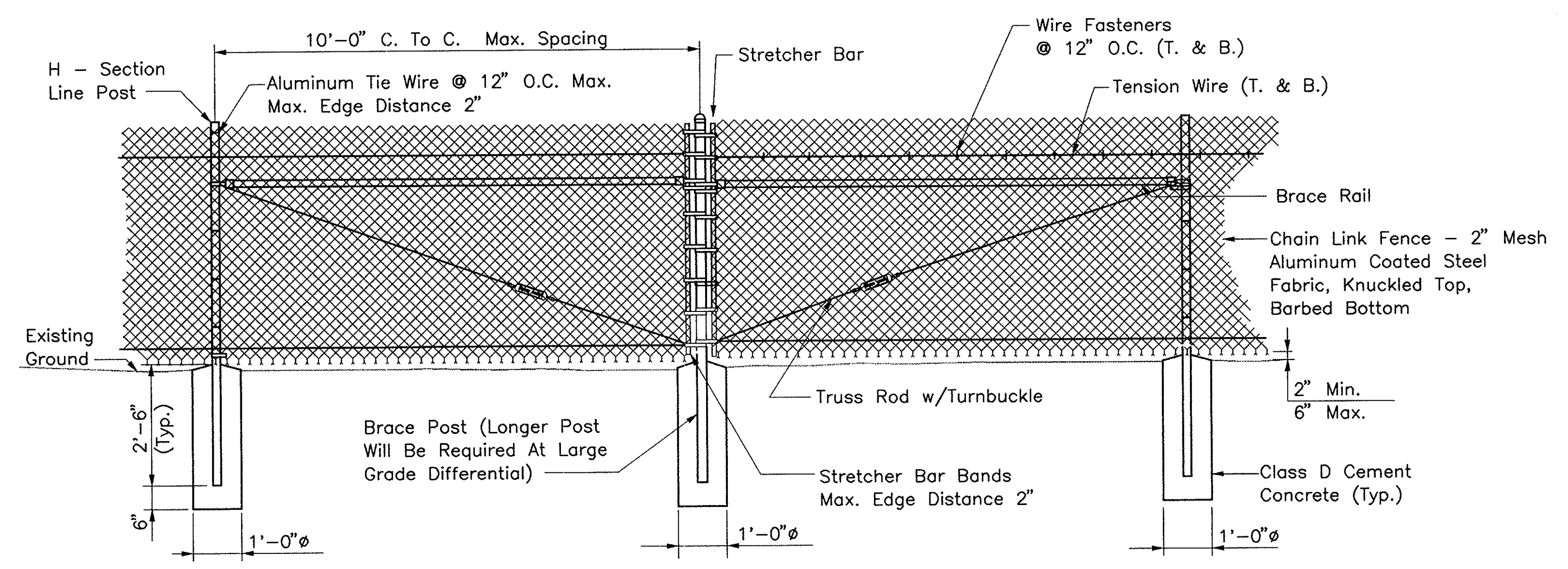
NO.	REVISION	BY	DATE
		E&K	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
STANDARD DETAILS DETAILS II W BEAM HIGHWAY GUARD	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 73

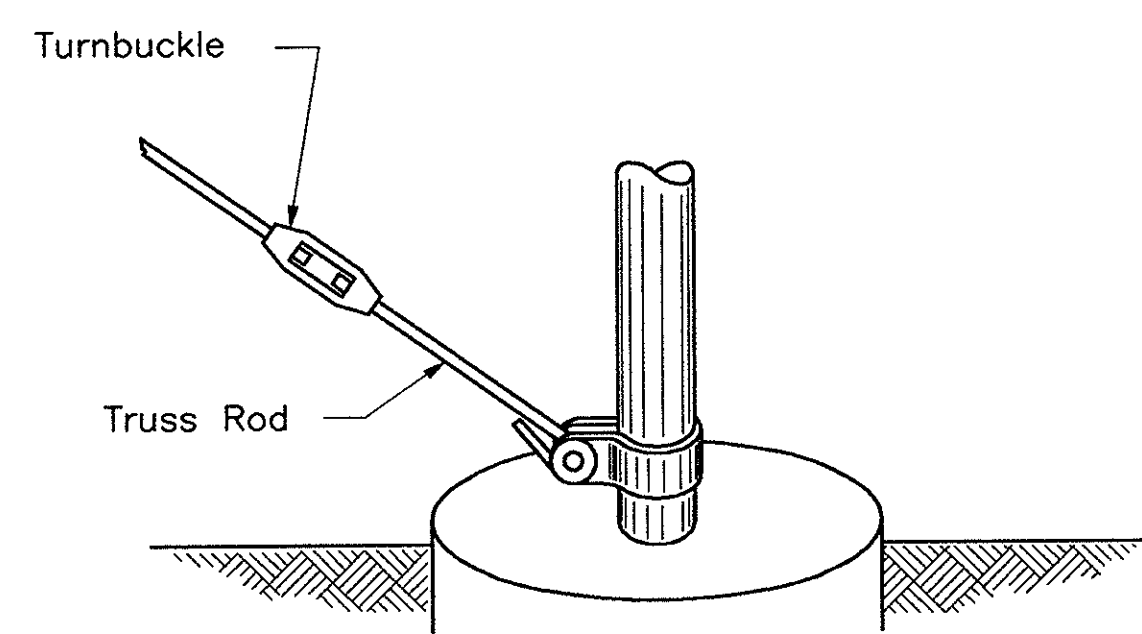


TYPICAL END OR CORNER PANEL

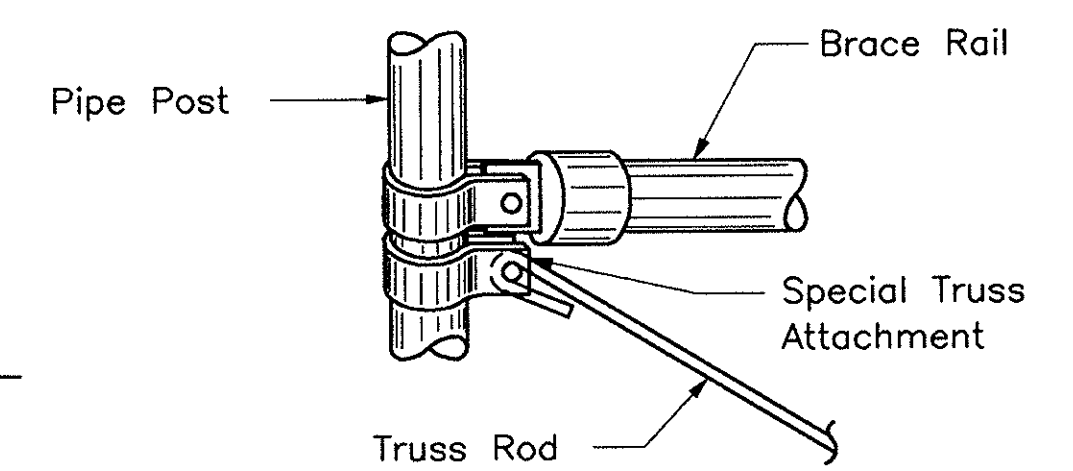


TYPICAL BRACE PANEL

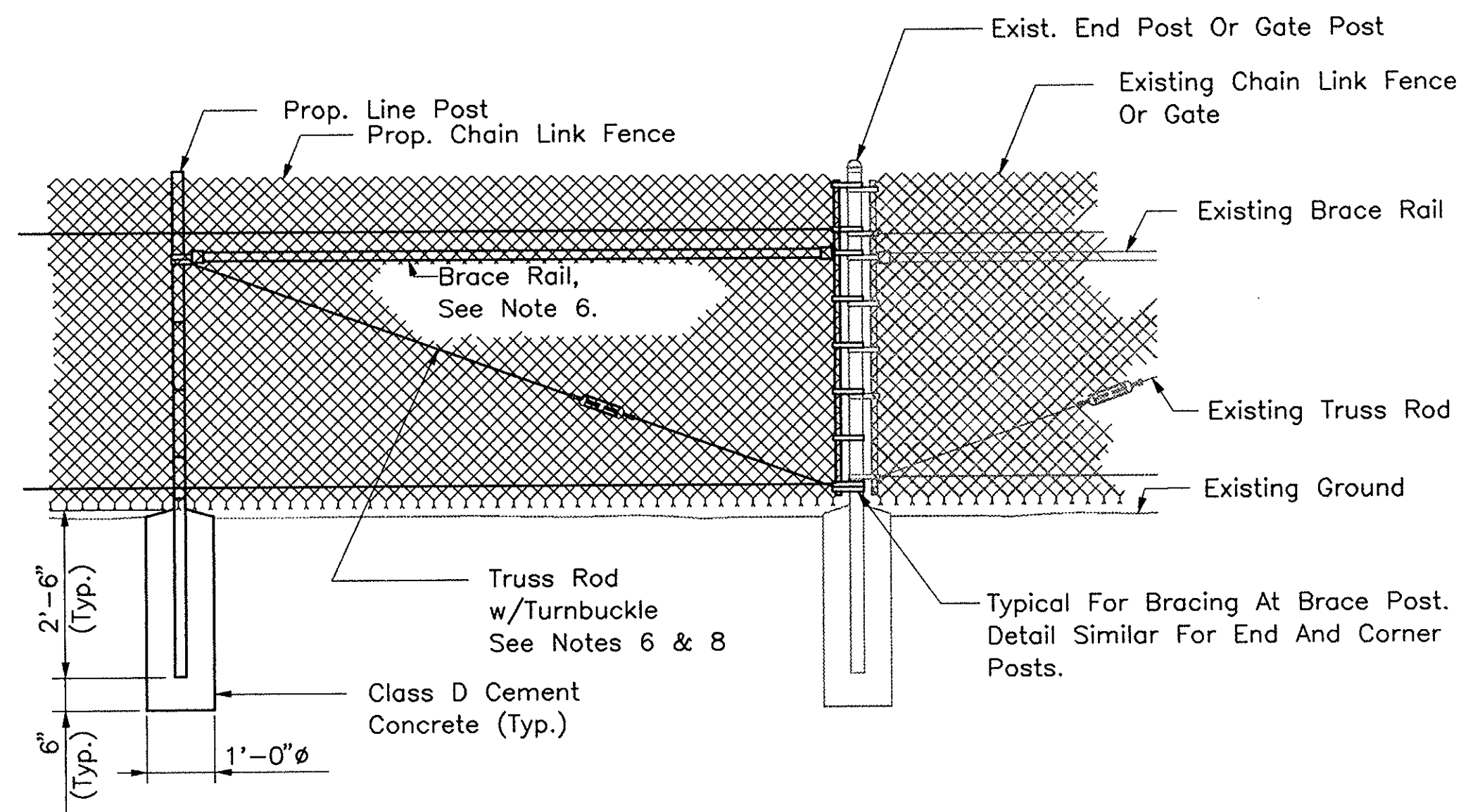
TYPICAL INTERMEDIATE PANEL



TRUSS ROD ATTACHMENT TO END, CORNER AND BRACE POSTS



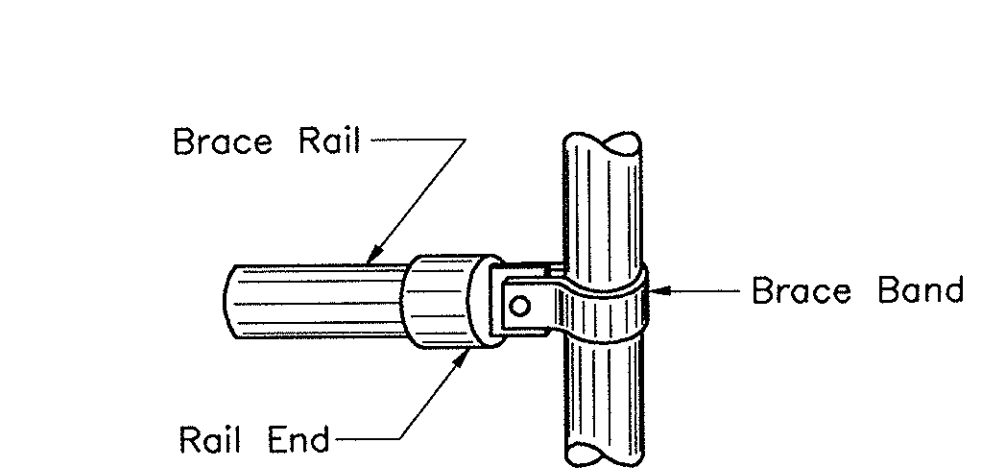
BRACE AND TRUSS ATTACHMENT AT LINE POST



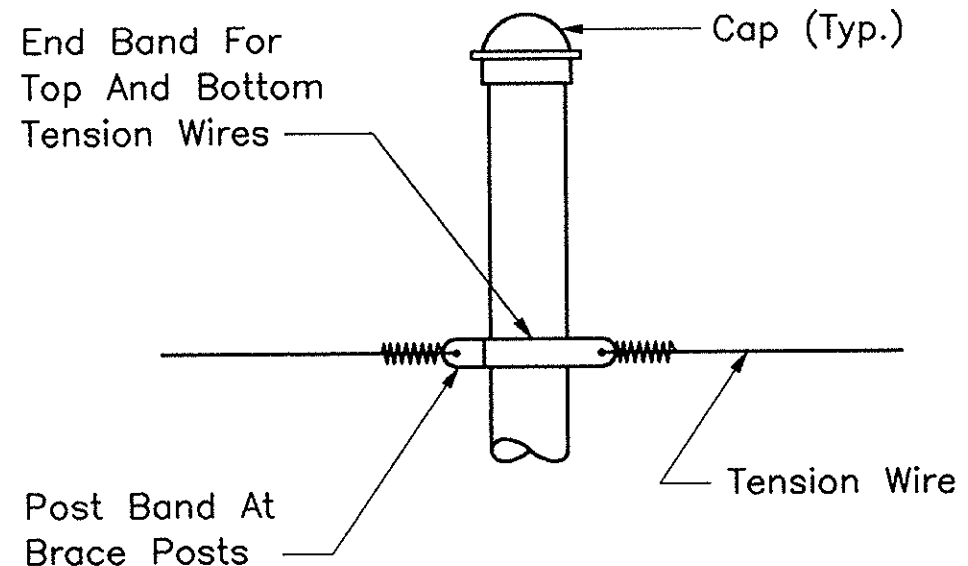
MEETING EXISTING CHAIN LINK FENCE

NOTES

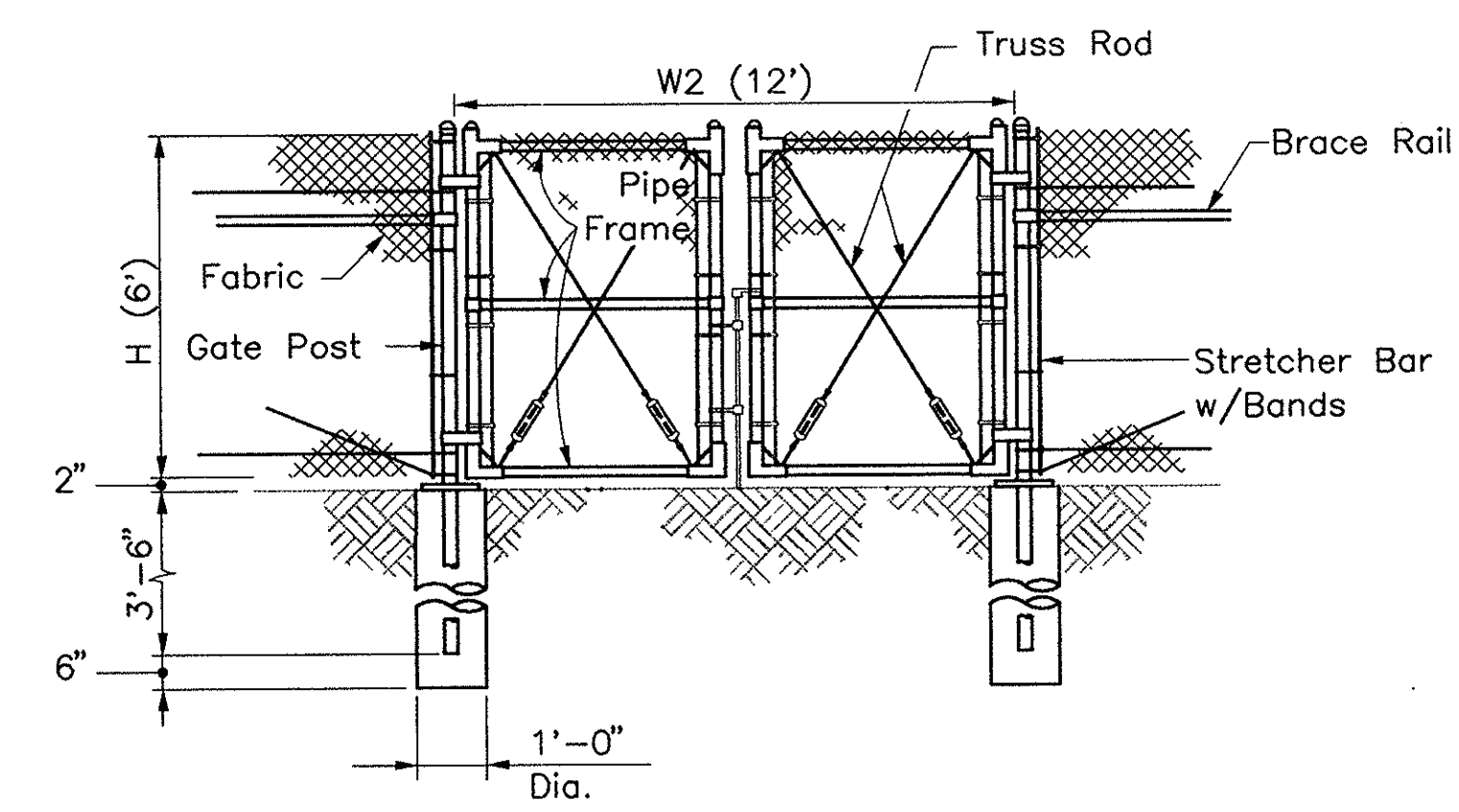
1. Brace Panels Shall Be Installed At 300' Maximum Intervals.
2. Brace Panels Shall Be Installed Where The Change In Grade Between Any Three Posts Exceeds 15%.
3. No Additional Payment Will Be Made For Longer Posts Necessitated By Large Grade Differential.
4. Two Panels Will Be Required At Corner Posts.
5. Changes In Line Of 30 Degrees Or More Shall Be Considered As Corners.
6. When Proposed Chain Link Fence Meets Existing Chain Link Fence, A Brace Rail And Truss Rod And All Necessary Hardware Shall Be Installed, And Shall Be Considered Incidental To And Paid For Under The Item For Chain Link Fence Of The Height Installed.
7. All Bands Shall Be Rectangular On "H" Posts And Round On Round Posts.
8. Secure Turnbuckle To Wire Fabric With 2 Tie Wires.



HORIZONTAL BRACE RAIL ATTACHMENT TO END, CORNER AND BRACE POSTS



TENSION WIRE ATTACHMENT TO END, CORNER AND BRACE POSTS



DOUBLE GATE

Gate Width		Gate Post O.D.
W1 to 6'	W2 to 12'	3 3/8"
6' to 12'	12' to 24'	4 1/2"
12' to 18'	24' to 36'	6 5/8"

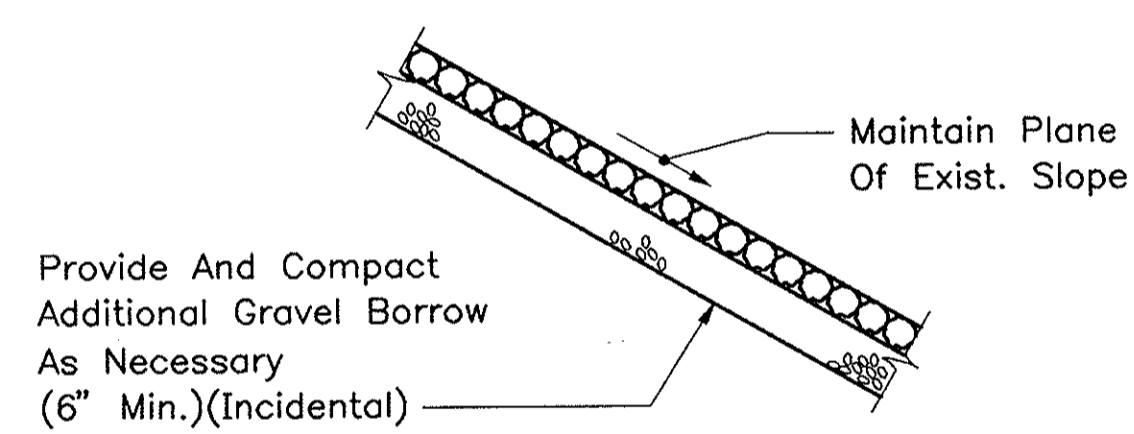
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 STANDARD DETAILS
CHAIN LINK FENCE DETAILS

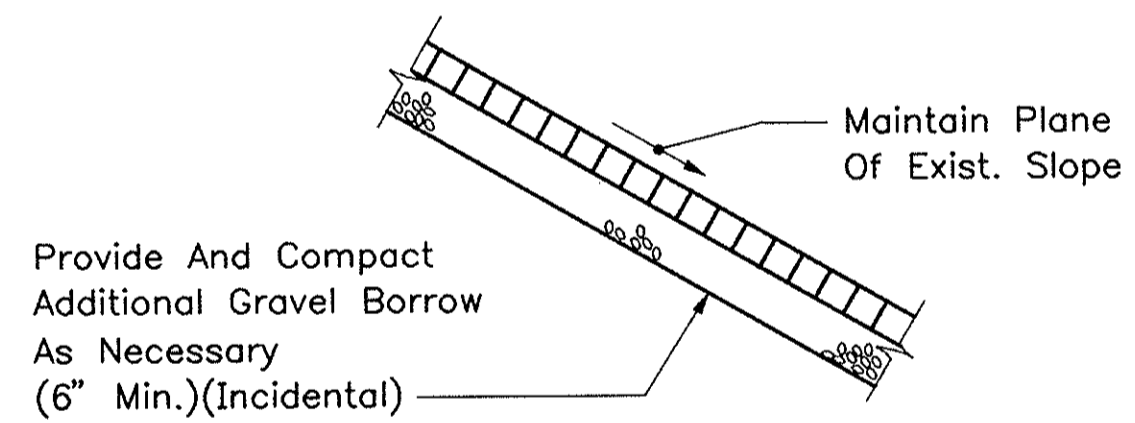
Scale: NOT TO SCALE Contract No. 521-024

MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. **74**

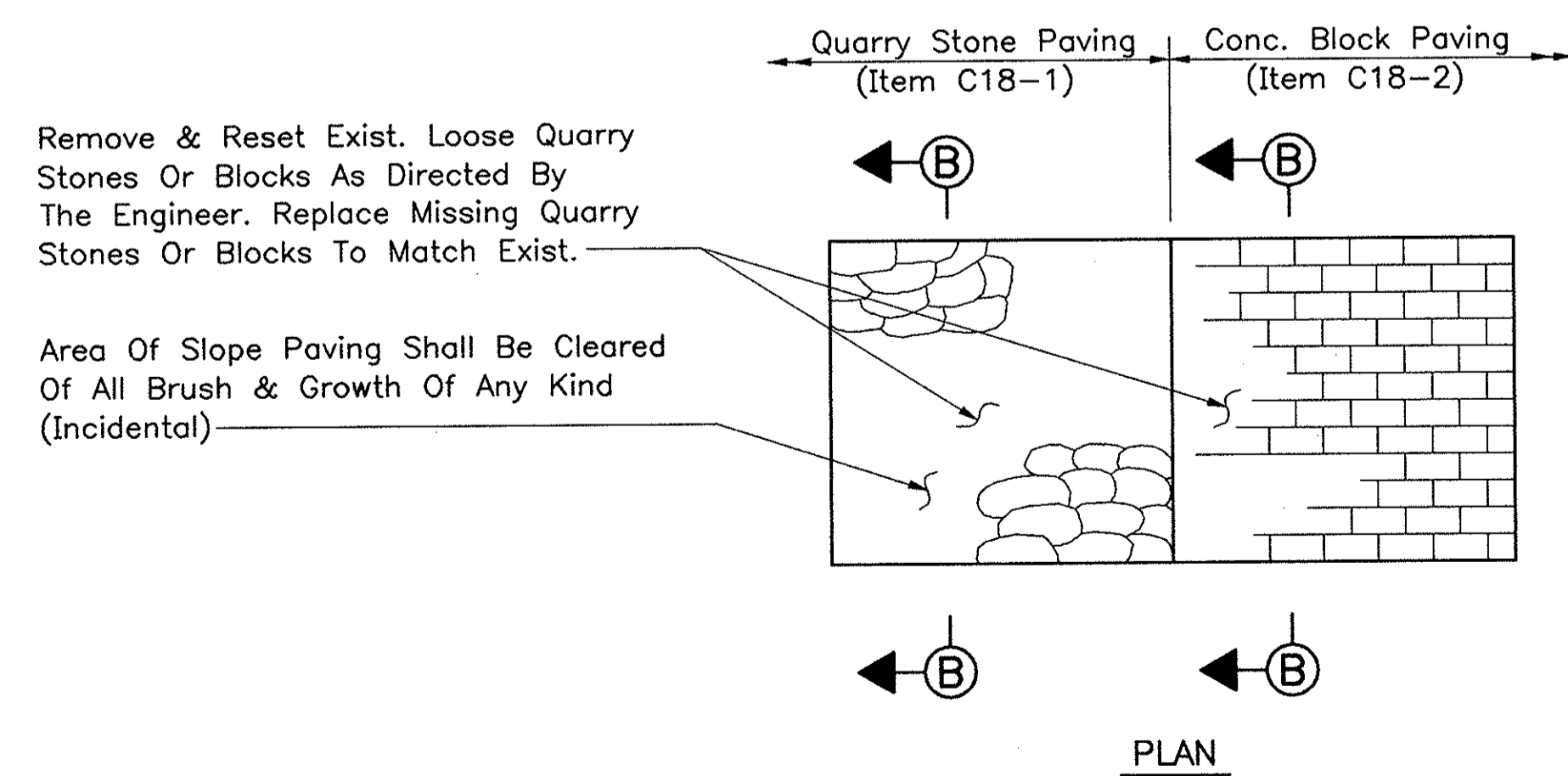
NO.	REVISION	BY	DATE



SECTION B-B
QUARRY STONE



SECTION B-B
CONCRETE BLOCK



SLOPE PAVING UNDER BRIDGES (ITEMS C18-1 & C18-2)
Not To Scale

NOTES

1. For Description, Materials And Construction Methods, See Specifications.
2. Limit Of Areas For Repair Or Replacement Shall Be As Shown On Plans And As Directed By The Engineer In The Field.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
SLOPE PAVEMENT	
REPAIR DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 75

NO.	REVISION	BY	DATE

MASSACHUSETTS TURNPIKE AUTHORITY

MASSACHUSETTS TURNPIKE

JAMES J. KERASIOES CHAIRMAN

THOMAS J. CURLEY, JR. VICE CHAIRMAN
ANN M. HERSHFANG MEMBER

SUBSTRUCTURE CONCRETE REPAIR MILE 124.59 TO MILE 134.00

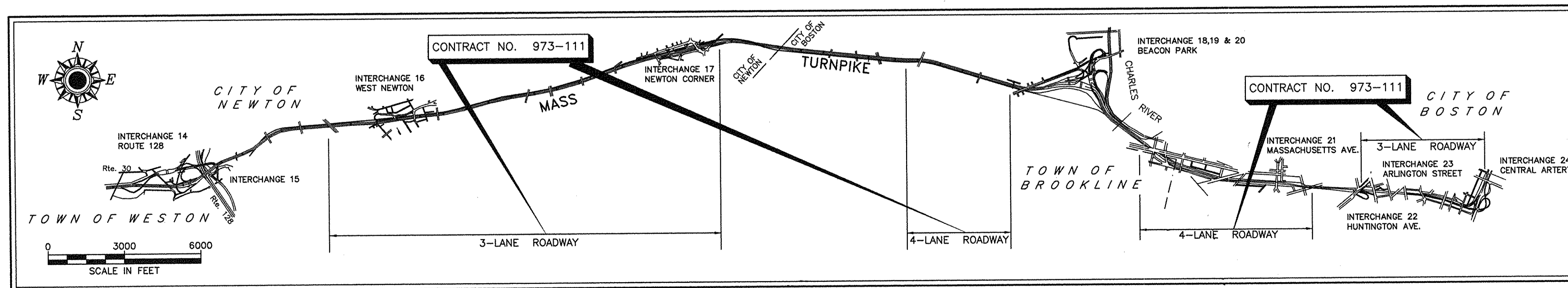
INDEX	
SHEET	TITLE
1	TITLE SHEET
2-3	SUBSTRUCTURE CONCRETE REPAIR - MILE 124.59, COMMONWEALTH AVE., 14B.
4-5	SUBSTRUCTURE CONCRETE REPAIR - MILE 126.68, HARVARD STREET
6-7	SUBSTRUCTURE CONCRETE REPAIR - MILE 127.33, CHURCH STREET
8	SUBSTRUCTURE CONCRETE REPAIR - MILE 127.8, ST. JAMES STREET
9-11	SUBSTRUCTURE CONCRETE REPAIR - MILE 129.52, MARKET STREET
12-15	SUBSTRUCTURE CONCRETE REPAIR - MILE 131.62, COMMONWEALTH AVE.
16-18	SUBSTRUCTURE CONCRETE REPAIR - MILE 131.86, ST. MARY'S STREET
19	SUBSTRUCTURE CONCRETE REPAIR - MILE 132.18, BEACON STREET
20-22	SUBSTRUCTURE CONCRETE REPAIR - MILE 132.33, BROOKLINE AVENUE
23-26	SUBSTRUCTURE CONCRETE REPAIR - MILE 132.92, BOSTON STREET
27	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.20, PRUDENTIAL PASSAGeways
28	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.56, CLARENDON STREET
29-30	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.62, COLUMBUS AVENUE
31	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.70, BERKELEY STREET
32-33	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.81, ARLINGTON STREET
34	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.83, TREMONT STREET
35	SUBSTRUCTURE CONCRETE REPAIR - MILE 133.88, SHAWMUT AVENUE
36-37	SUBSTRUCTURE CONCRETE REPAIR - MILE 134.00, WASHINGTON STREET
38.01	DETAILS - SUBSTRUCTURE CONCRETE REPAIRS WITH WET SHOTCRETE
39	MISCELLANEOUS DETAILS
40	ADDITIONAL BRIDGE REPAIR LOCATIONS
R1	REFERENCE DRAWING
R2	REFERENCE DRAWING

△

△ ADDENDUM NO. 1

IN THE CITIES OF NEWTON AND BOSTON
AND
IN THE TOWN OF BROOKLINE

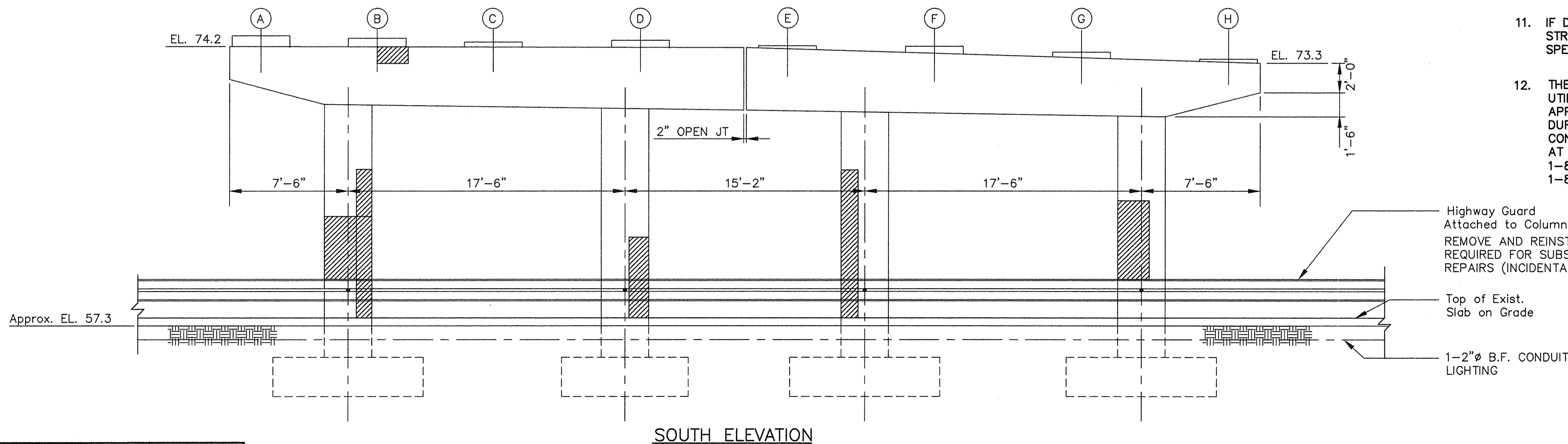
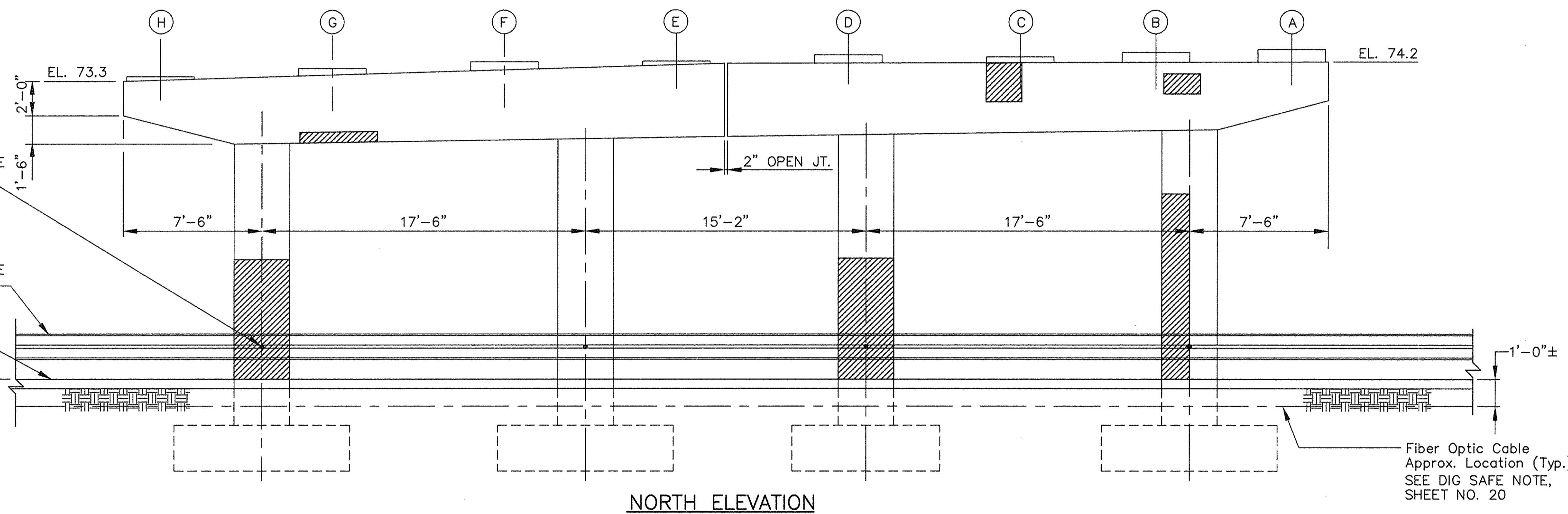
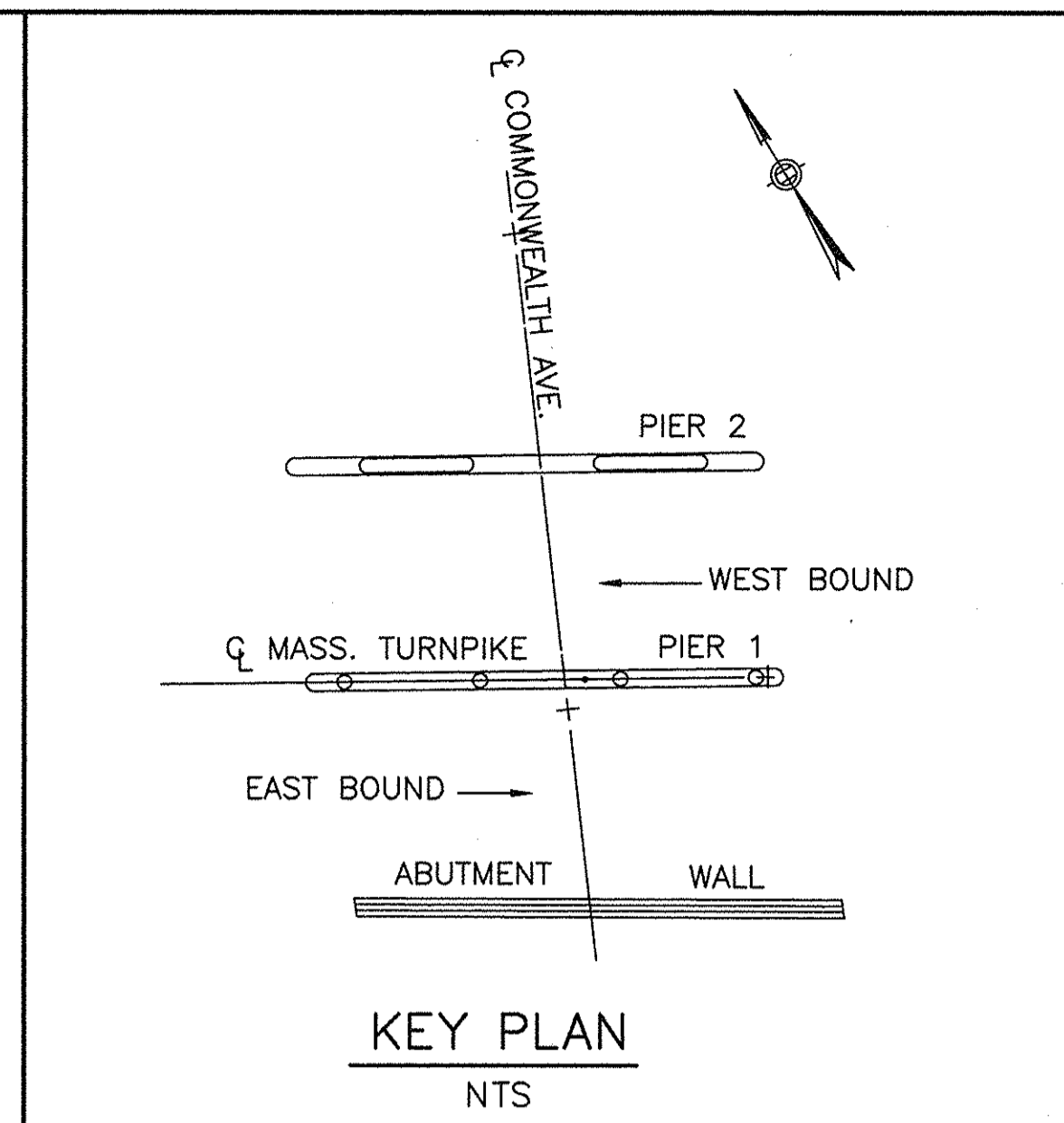
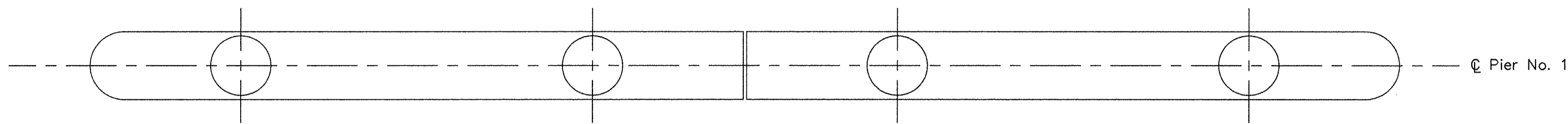
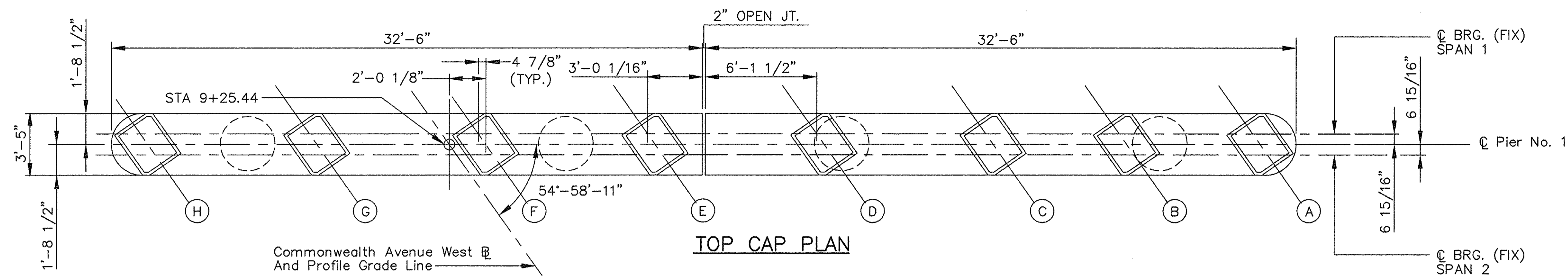
CONTRACT NO. 973-111



LOCATION PLAN

MASSACHUSETTS TURNPIKE AUTHORITY
APPROVED:

Joseph P. Gill DATE *4/9/67*
CHIEF ENGINEER



NOTES:

- SEE SHEET NO. 40 FOR ADDITIONAL SUBSTRUCTURE REPAIR LOCATIONS. PLAN SHEETS ARE NOT INCLUDED FOR THESE LOCATIONS.
- AREAS AND QUANTITIES OF REPAIR INDICATED ARE APPROXIMATE.
- ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEETS 38 & 39.
- SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND CRASHWALLS, ABUTMENT BACKWALL, BRIDGE SEATS AND ABUTMENT/PIER STEMS FULL HEIGHT WITH CONCRETE PROTECTIVE SEALER C36-2 OR PENETRATING SEALER C12-1.
- ELEVATIONS AND DIMENSIONS ARE TAKEN FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
- CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER. FOR DETAIL, SEE SHEET NO. 39.
- ANY EXCAVATION REQUIRED FOR REPAIRS THAT EXTENDS BELOW GRADE SHALL BE CONSIDERED INCIDENTAL TO THE REPAIR ITEM, INCLUDING BACKFILLING THE EXCAVATED AREA TO ITS ORIGINAL STATE.
- ALL PIER CAPS, BEAM SEATS AND DRAINAGE TROUGHS SHALL BE CLEARED OF DEBRIS (ROCKS, STICKS, LEAVES AND TRASH) AND DISPOSED OF BY THE CONTRACTOR. CLEARING AND DISPOSING OF DEBRIS WILL BE CONSIDERED INCIDENTAL TO SUBSTRUCTURE CONCRETE REPAIR ITEMS.
- THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE, SEE DETAIL SHEET NO. 40.
- IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-18 (ITEM C18-5).
- THE CONTRACTOR SHALL NOTE THAT A FIBER-OPTIC AND OTHER UTILITIES EXISTS IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY EXCAVATION OPERATIONS NEAR THE FIBER-OPTIC CONDUIT AND UTILITIES. THE CONTRACTOR SHALL NOTIFY DIG SAFE AT LEAST 72 HOURS BEFORE ANY EXCAVATION BEGINS AT 1-800-322-4844, WILTEL AT 1-800-446-2658 AND AT&T AT 1-800-252-1133.

LEGEND

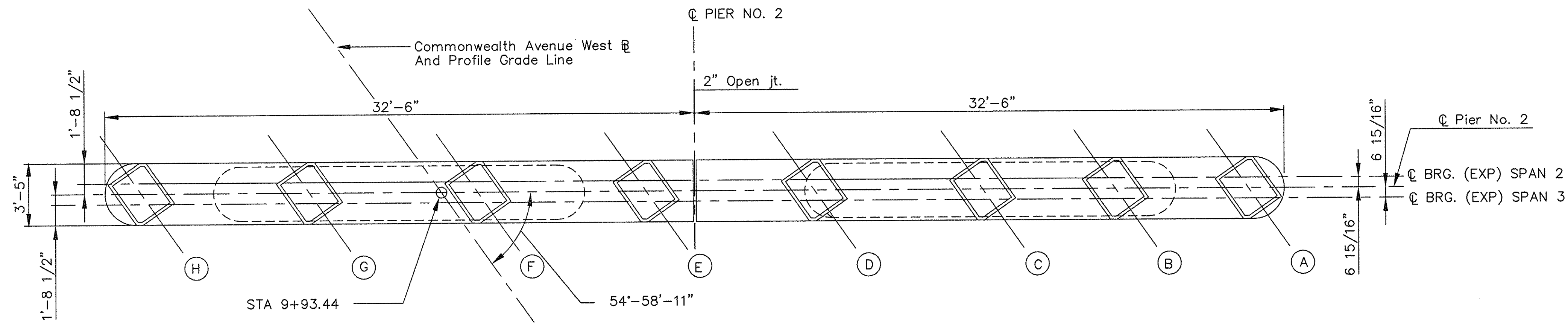
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER 1 = 110 S.F. ±

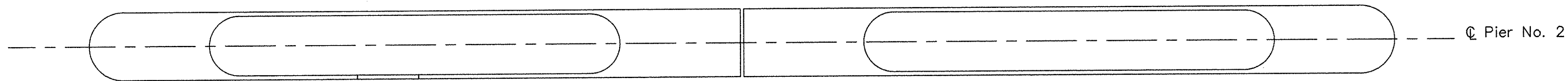
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 124.59	
STR. 14B, COMMONWEALTH AVE.-PIER 1	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 2

DESIGNED:	BY	DATE			
DRAWN:	B.R.	2/97			
CHECKED:	B.R.	2/97			
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.

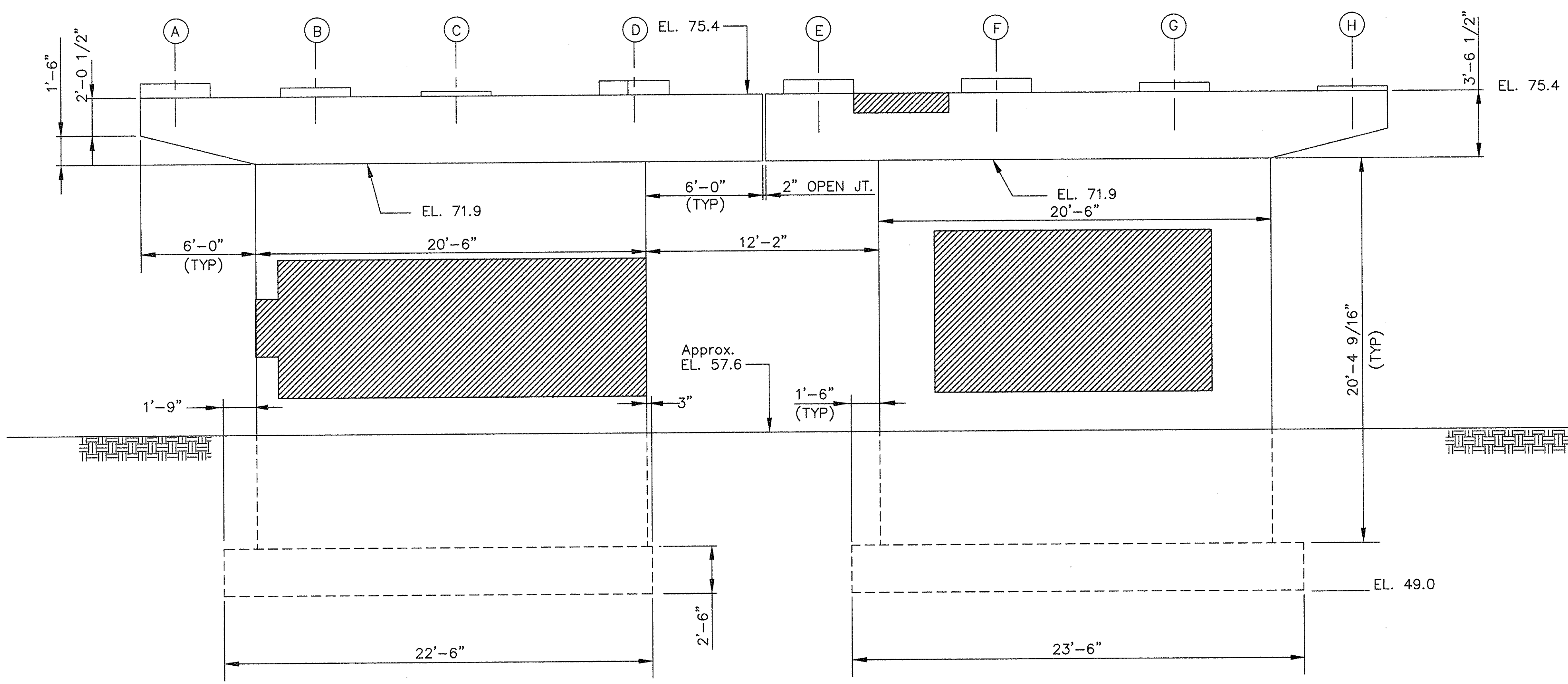
PIER NO. 1



TOP CAP PLAN

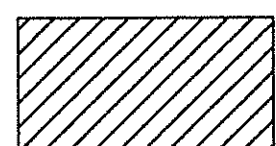


BOTTOM CAP PLAN



SOUTH ELEVATION

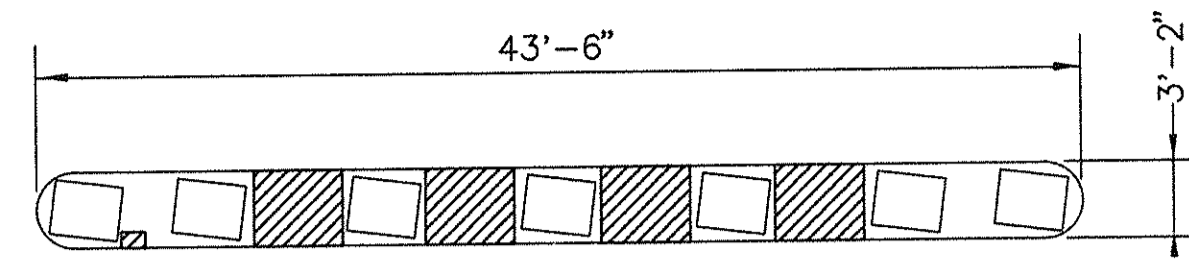
PIER NO. 2

LEGEND
 APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER 2 = 275 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE
		DESIGNED: B.R.	2/97
		DRAWN: B.R.	2/97
		CHECKED:	
		IN CHARGE OF	P.C.

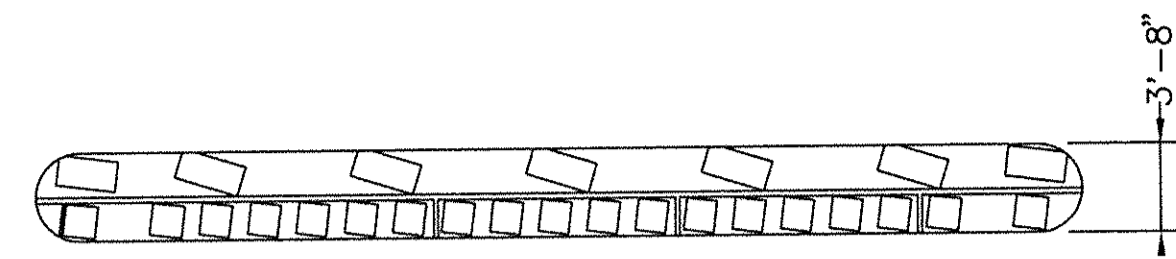
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 124.59	
STR. 14B, COMMONWEALTH AVE.-PIER 2	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 3



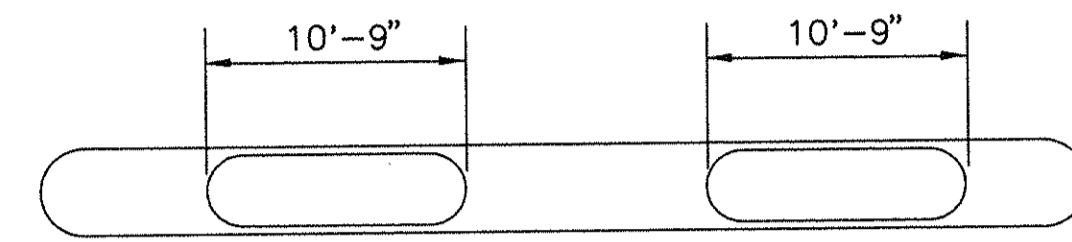
TOP OF CAP



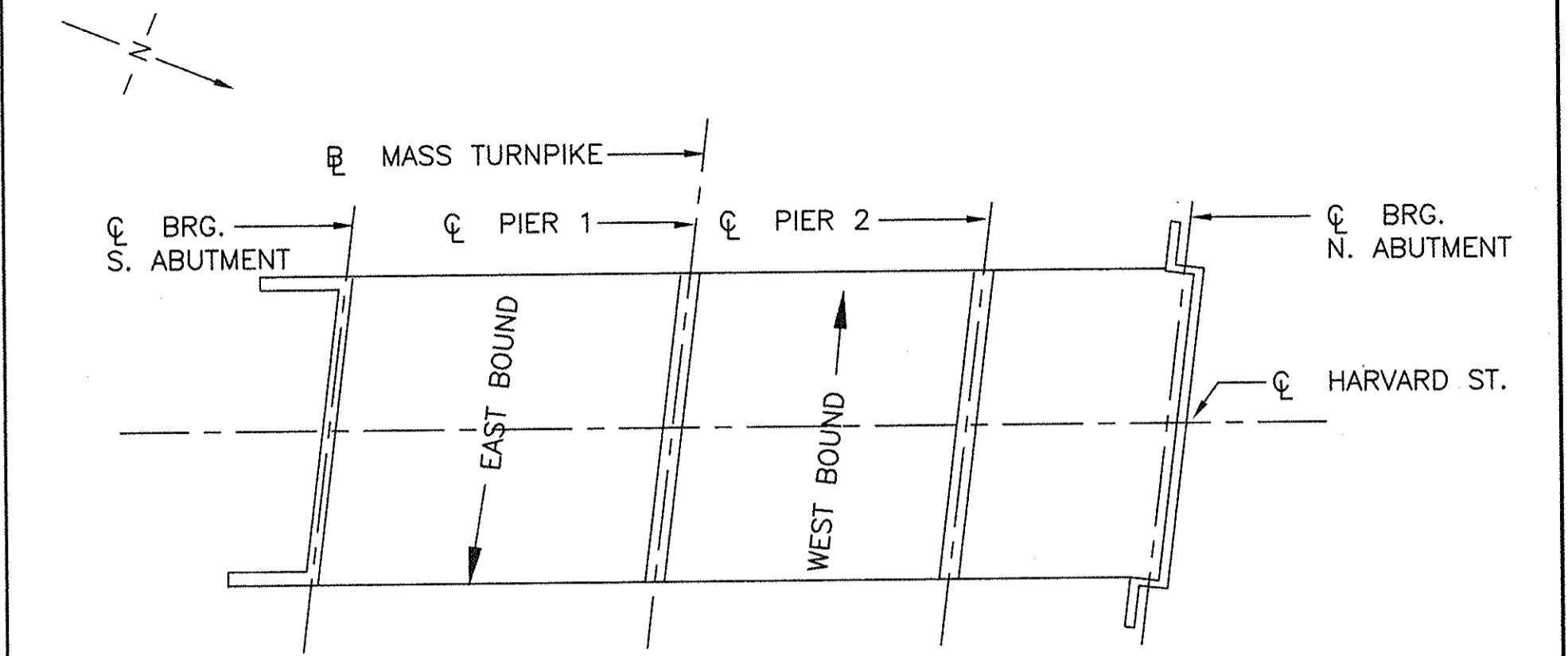
BOTTOM OF CAP



TOP OF CAP

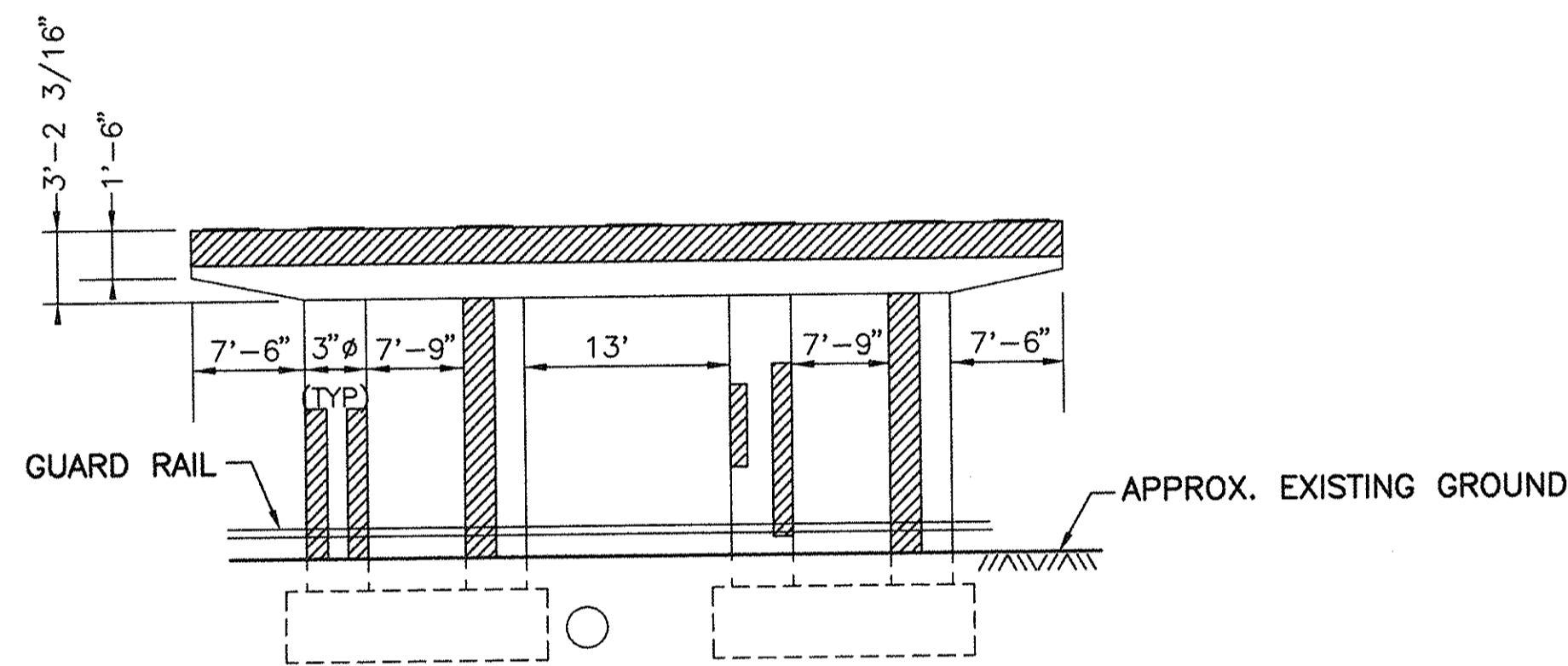


BOTTOM OF CAP

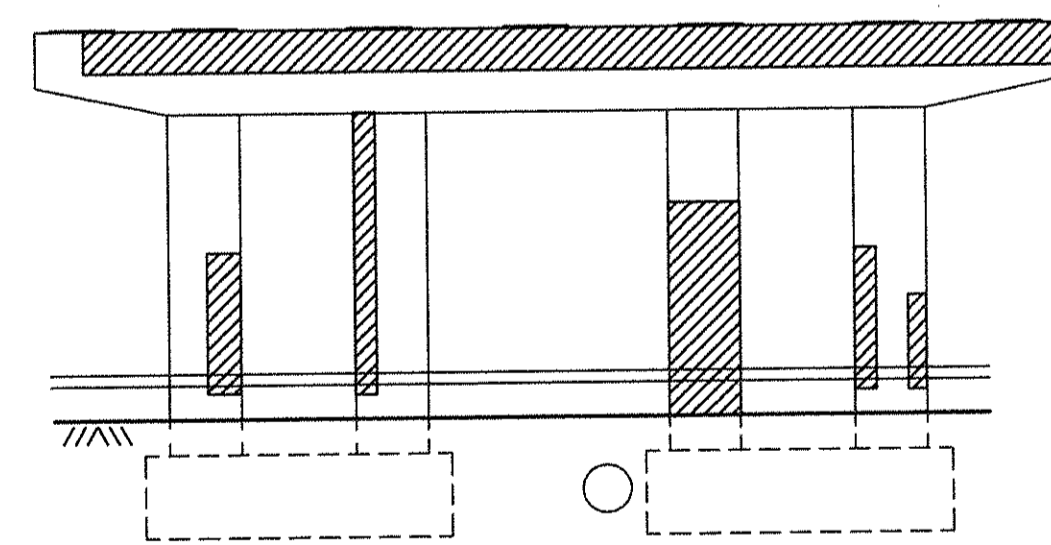


KEY PLAN

NO SCALE



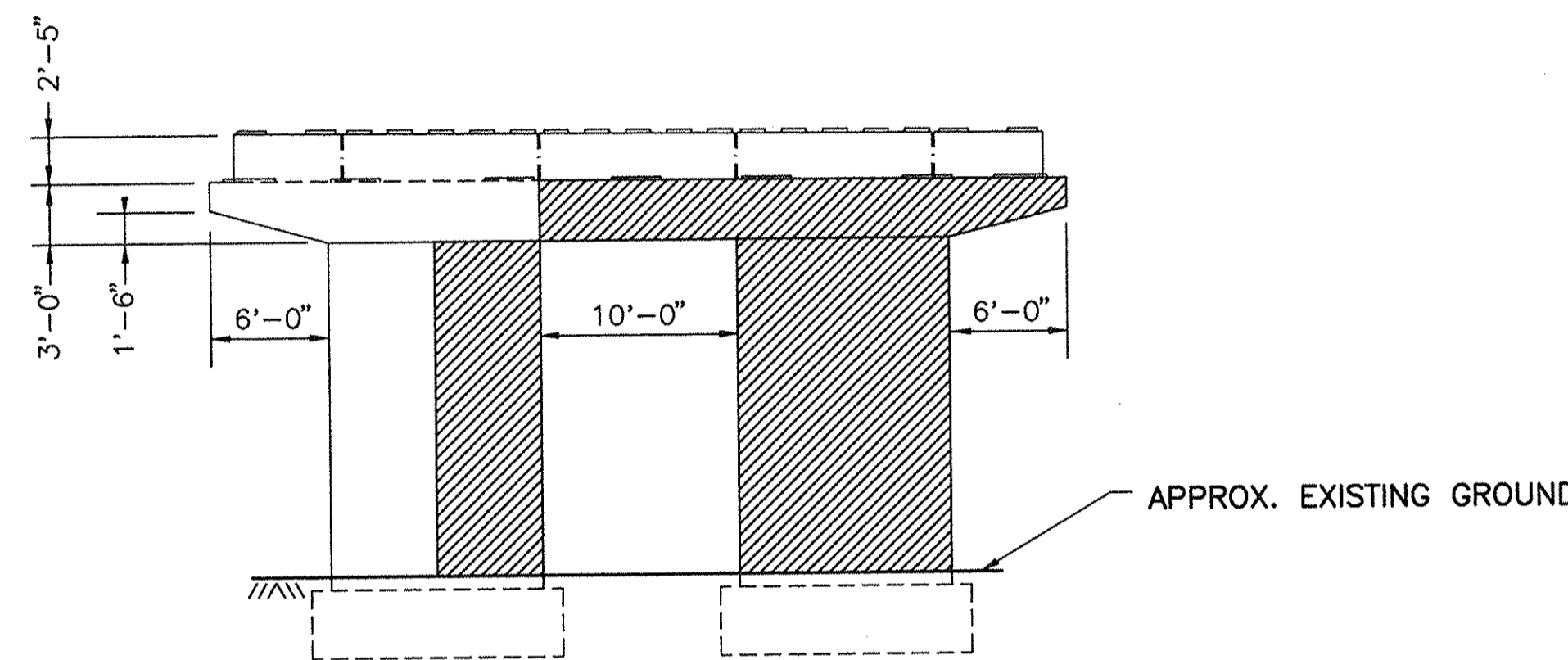
SOUTH ELEVATION



NORTH ELEVATION

PIER 1

REPAIR AREA = 310 SQ.FT.

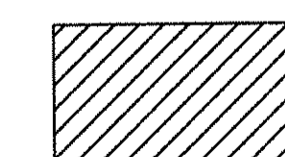


SOUTH ELEVATION

PIER 2

REPAIR AREA = 370 SQ.FT.

LEGEND



APPROXIMATE AREA OF REPAIR

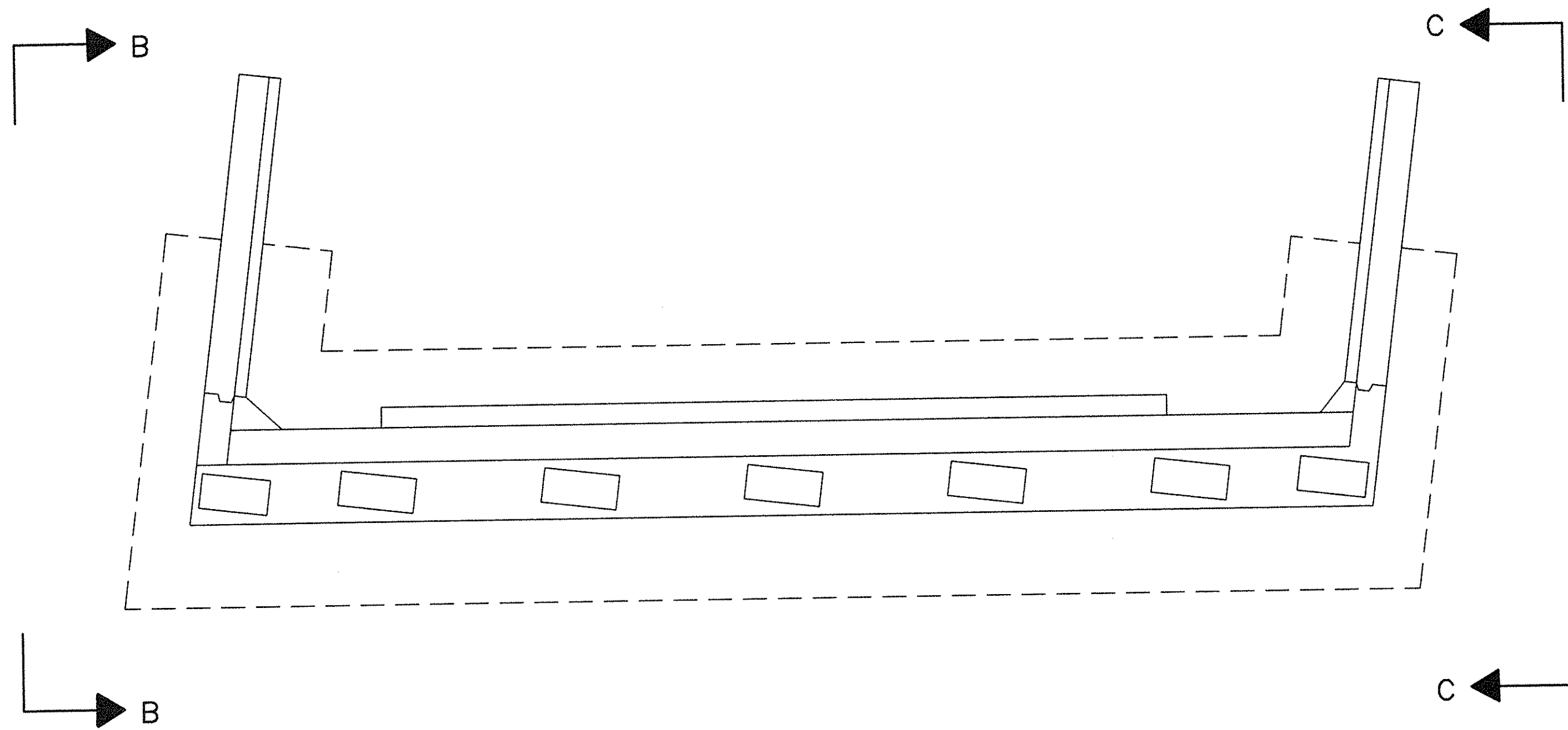
TOTAL REPAIR AREA = 680 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

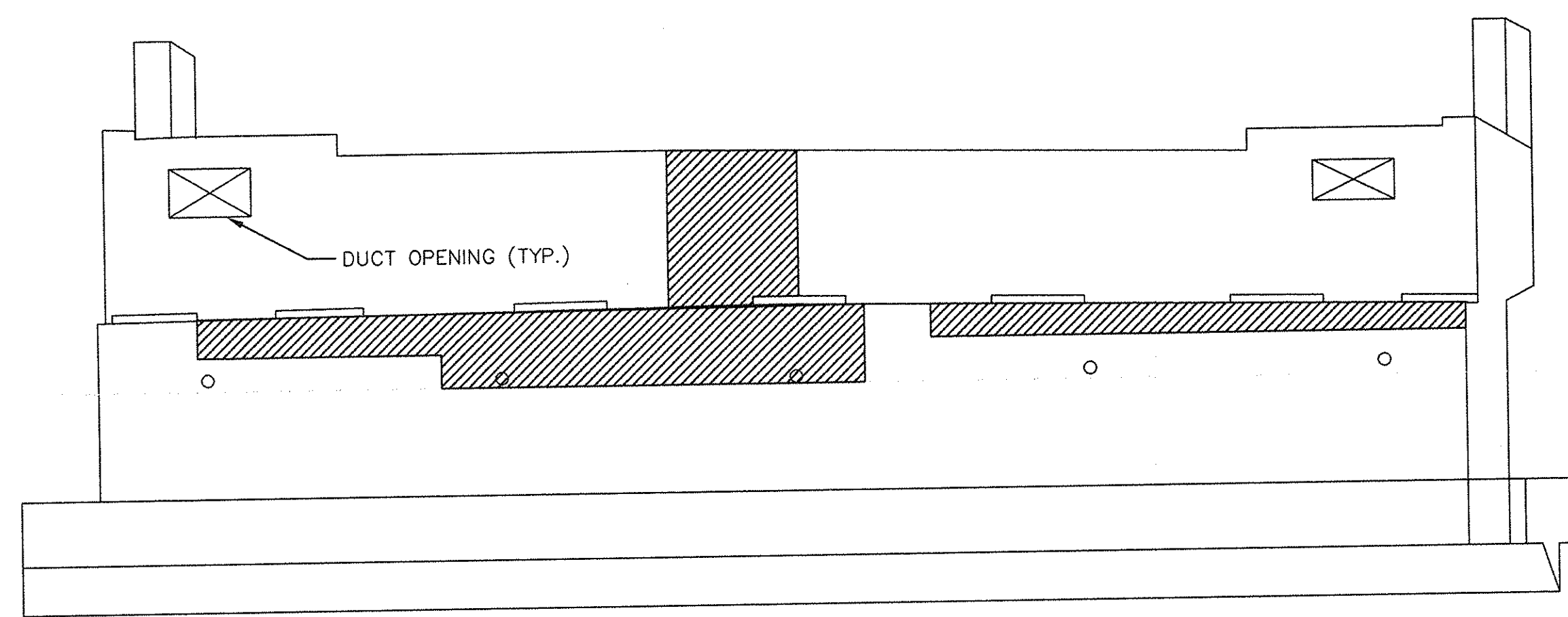
NO.	REVISION	BY	DATE	IN CHARGE	PC

BY:	DATE
DESIGN:	VT/BR 03/97
DRAWN:	NC/DM 03/97
CHECKED:	

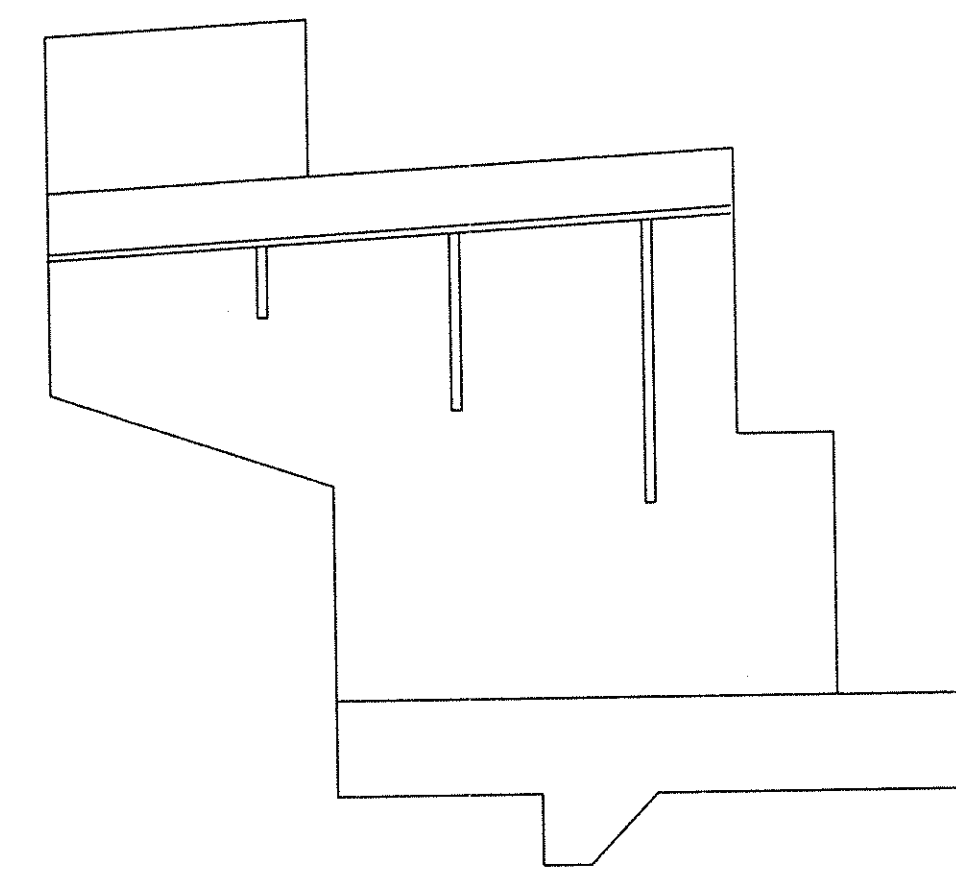
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIRS	
MILE 126.68	
STR. 24, HARVARD STREET-PIER 1 & 2	
Scale: 1/8"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 4



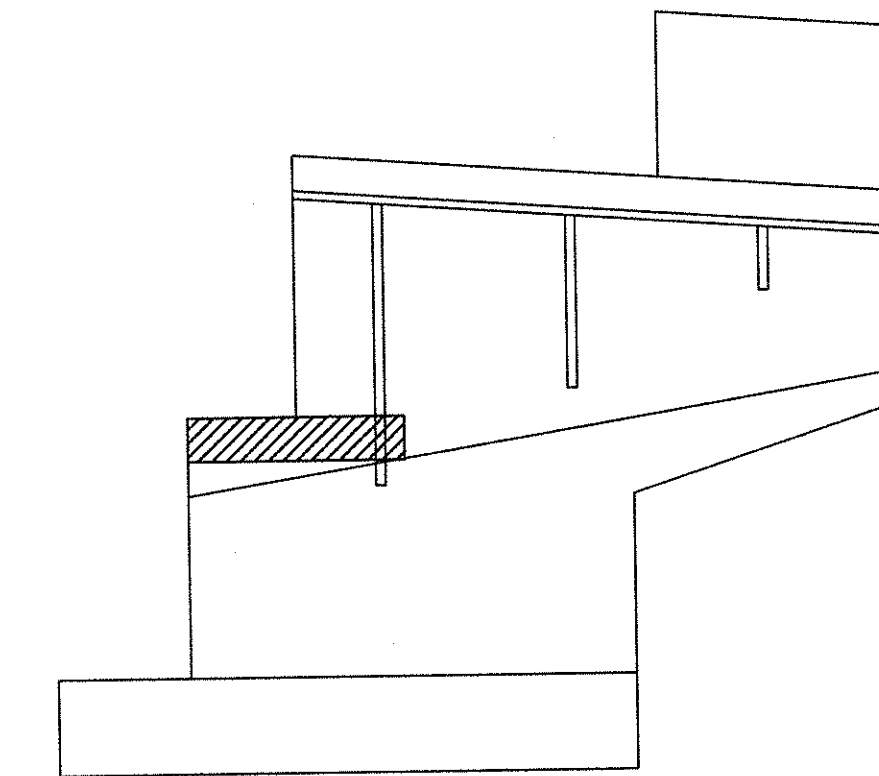
TOP OF ABUTMENT SEAT



SOUTH ABUTMENT

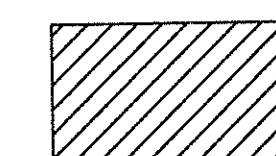


SECTION B-B



SECTION C-C

LEGEND

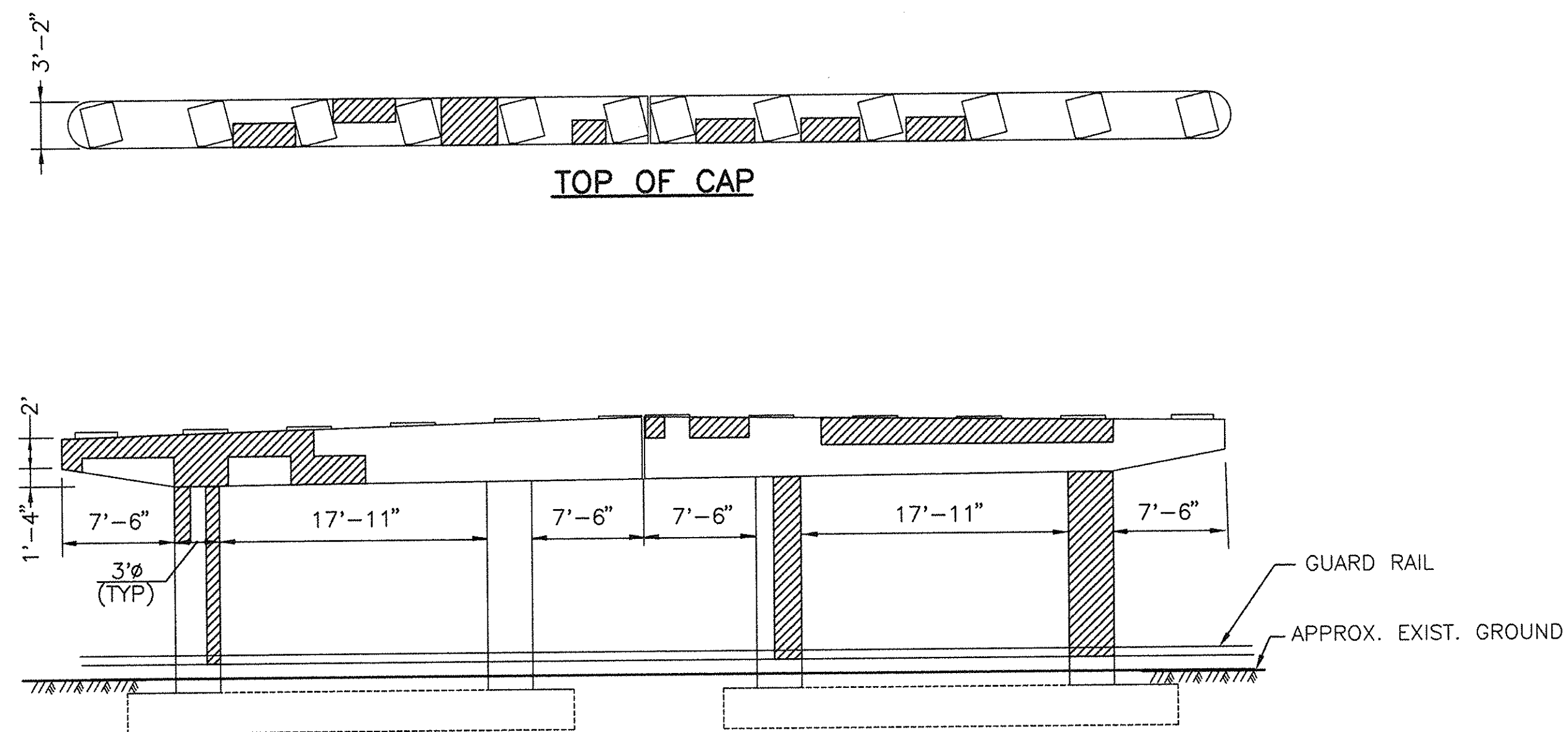


APPROXIMATE AREA OF REPAIR

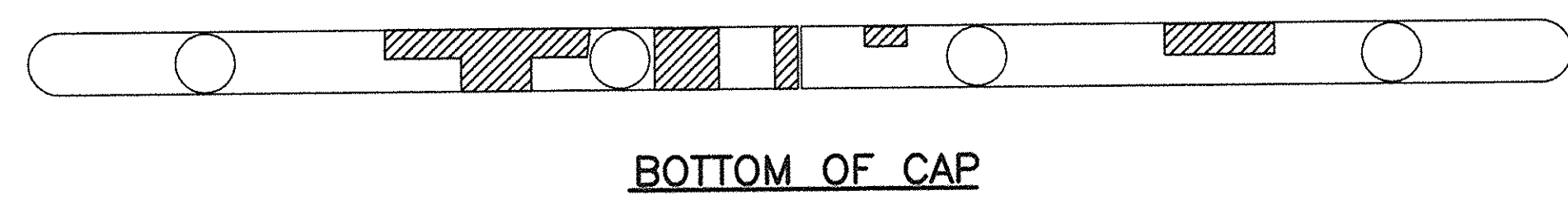
TOTAL REPAIR AREA = 70 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

				BY:	DATE
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NO.	REVISION	BY	DATE	IN CHARGE	PC

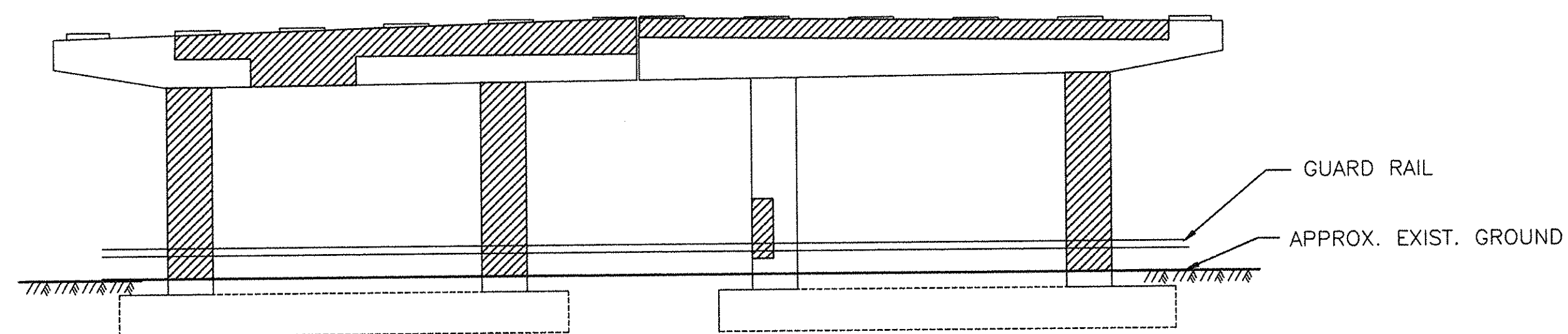
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIRS	
MILE 126.68	
STR. 24 HARVARD STREET-S. ABUTMENT	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 5



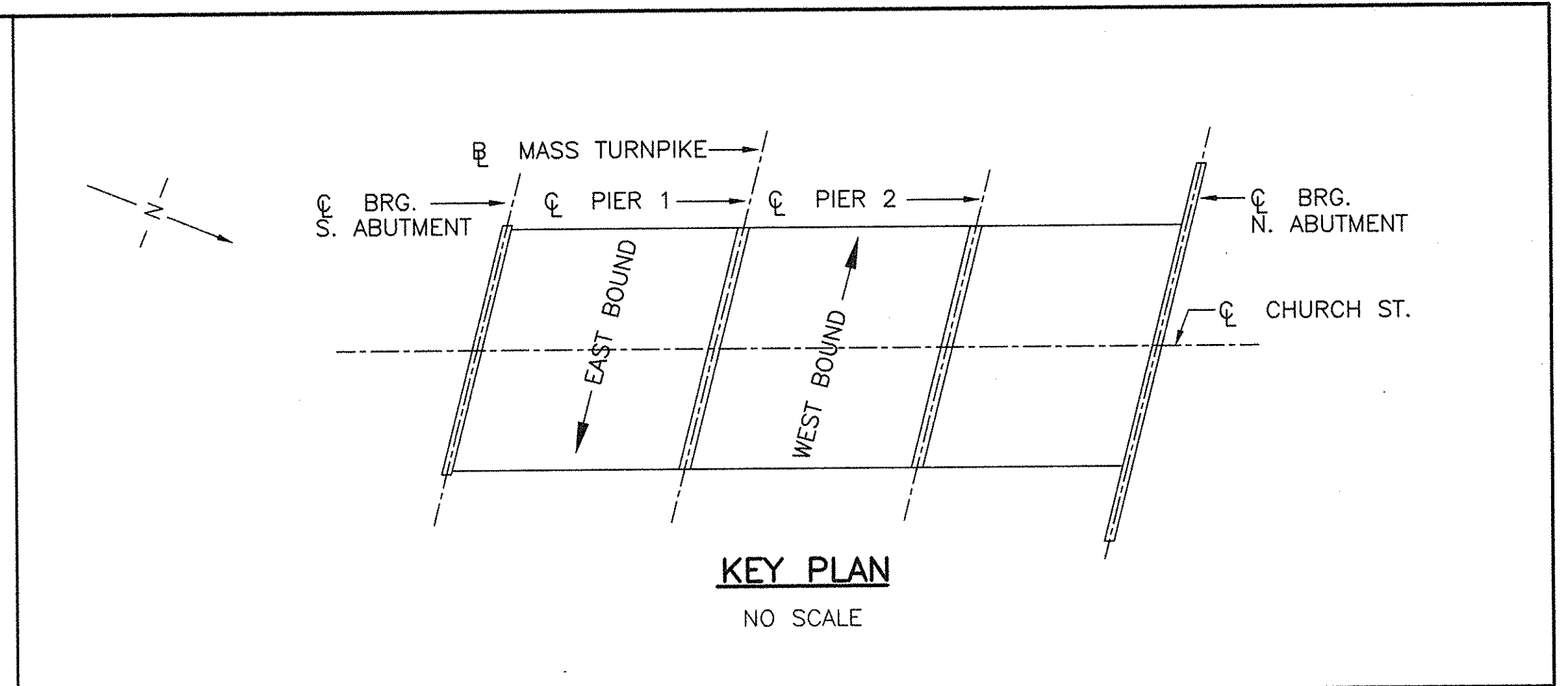
NORTH ELEVATION



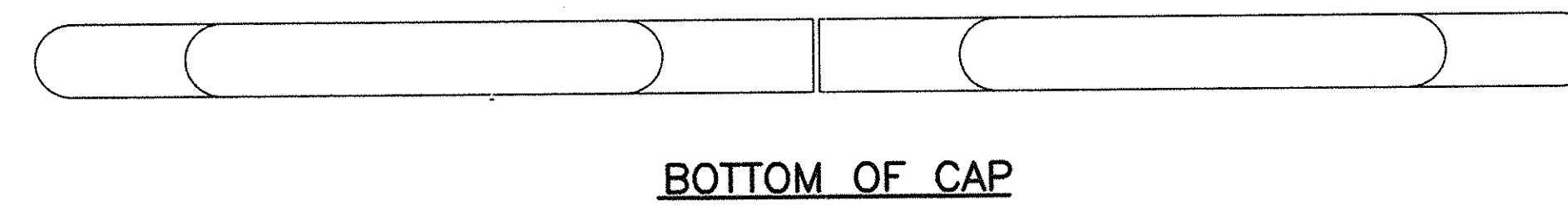
BOTTOM OF CAP



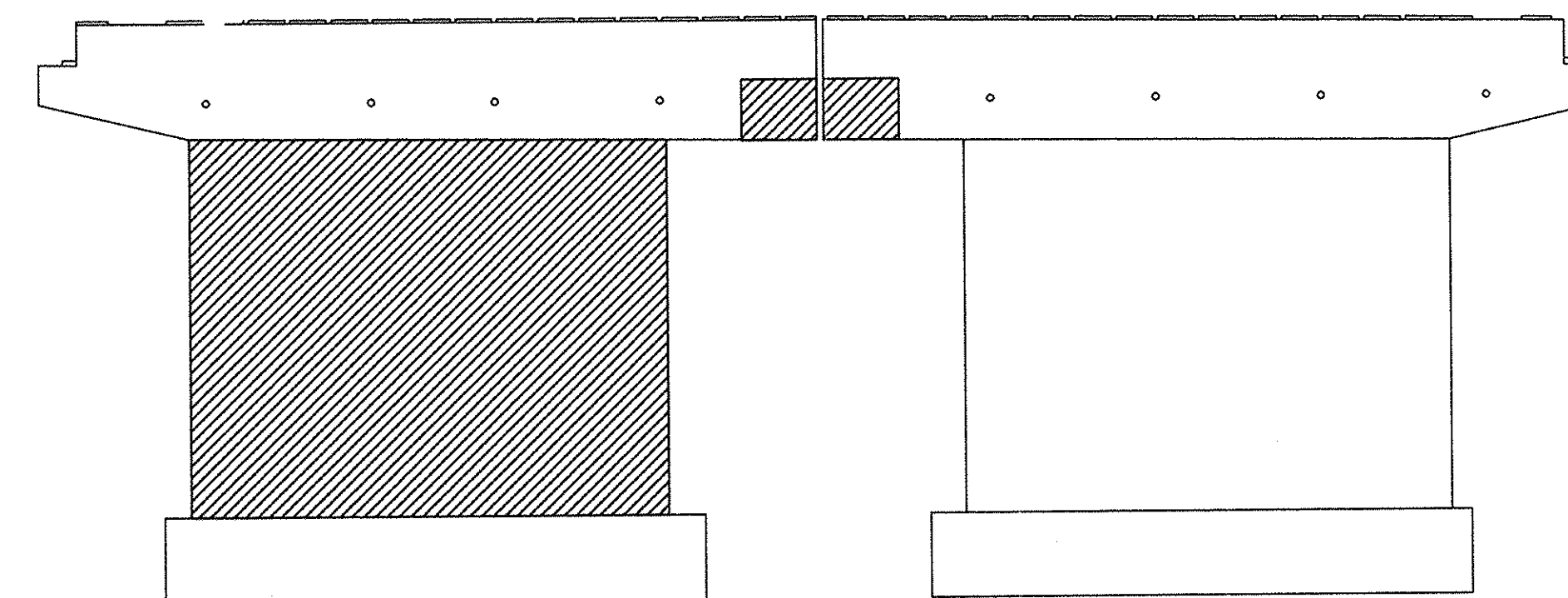
**SOUTH ELEVATION
PIER 1
REPAIR AREA = 480 SQ.FT.**



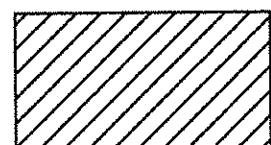
**KEY PLAN
NO SCALE**



BOTTOM OF CAP




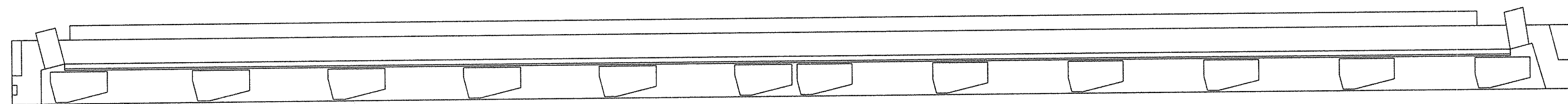
**SOUTH ELEVATION
PIER 2
REPAIR AREA = 475 SQ.FT.**

LEGEND
 APPROXIMATE AREA OF REPAIR

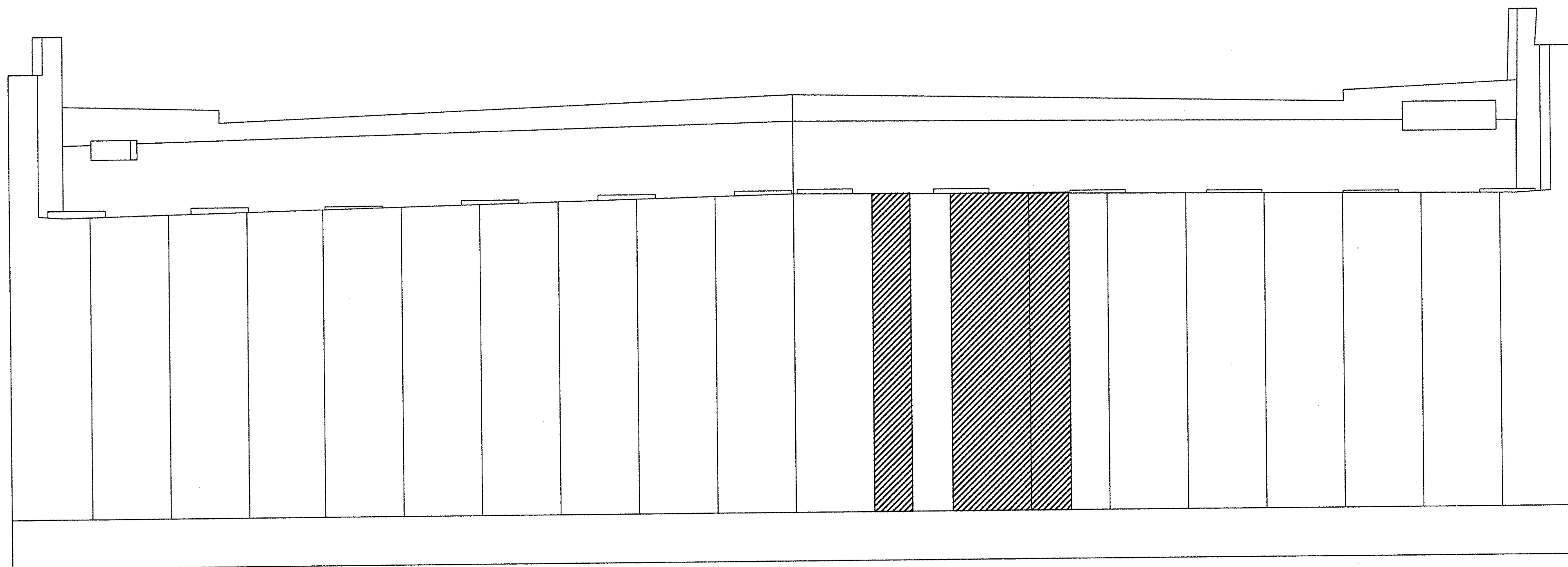
TOTAL REPAIR AREA = 955 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2

				BY:	DATE
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				CHECKED:	
NO.	REVISION	BY	DATE	IN CHARGE	PC

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIRS	
MILE 127.33	
STR. 26, CHURCH STREET-PIER 1 & 2	
Scale: 1/8" = 1'-0"	Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 6



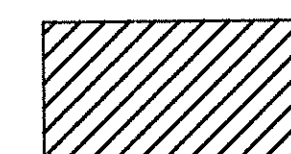
TOP OF ABUTMENT SEAT



SOUTH ABUTMENT

REPAIR AREA = 132 SQ.FT.

LEGEND



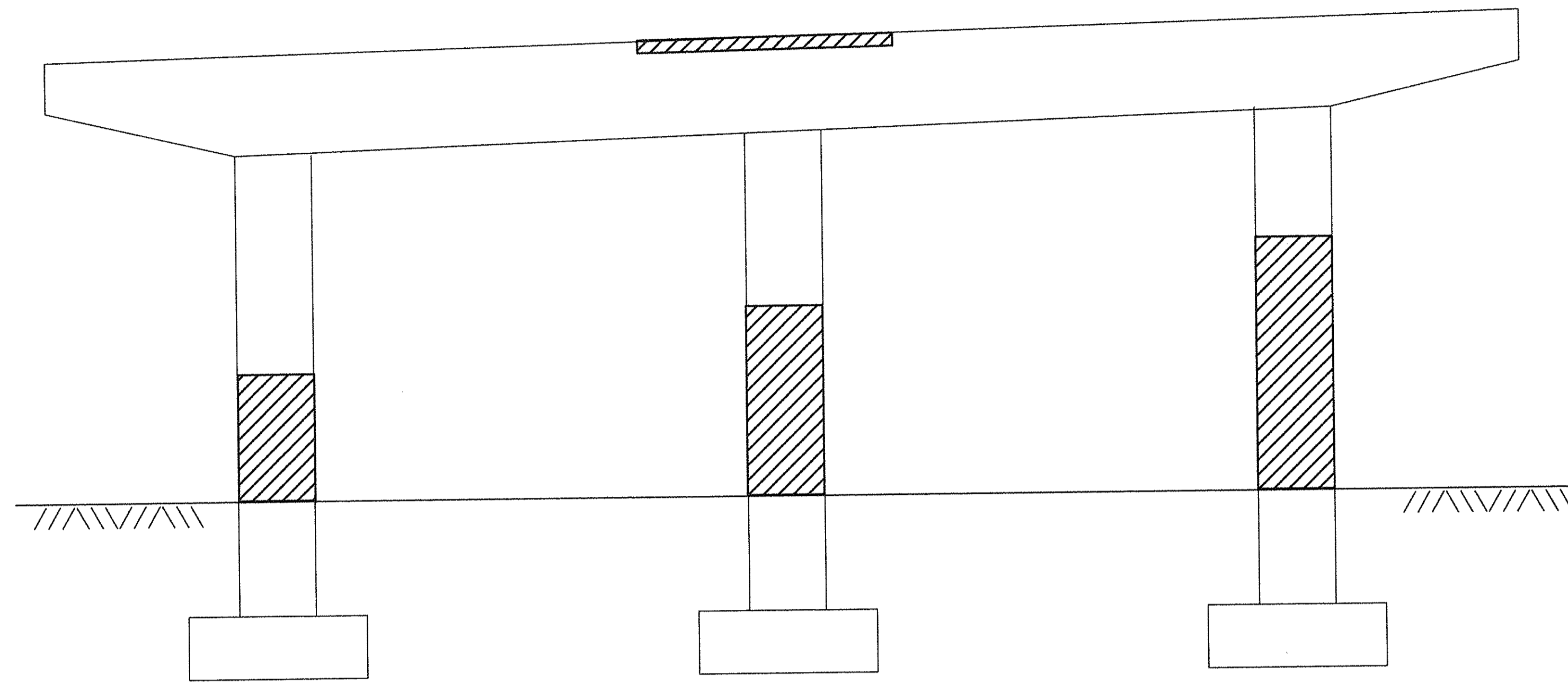
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA = 135 S.F. ±

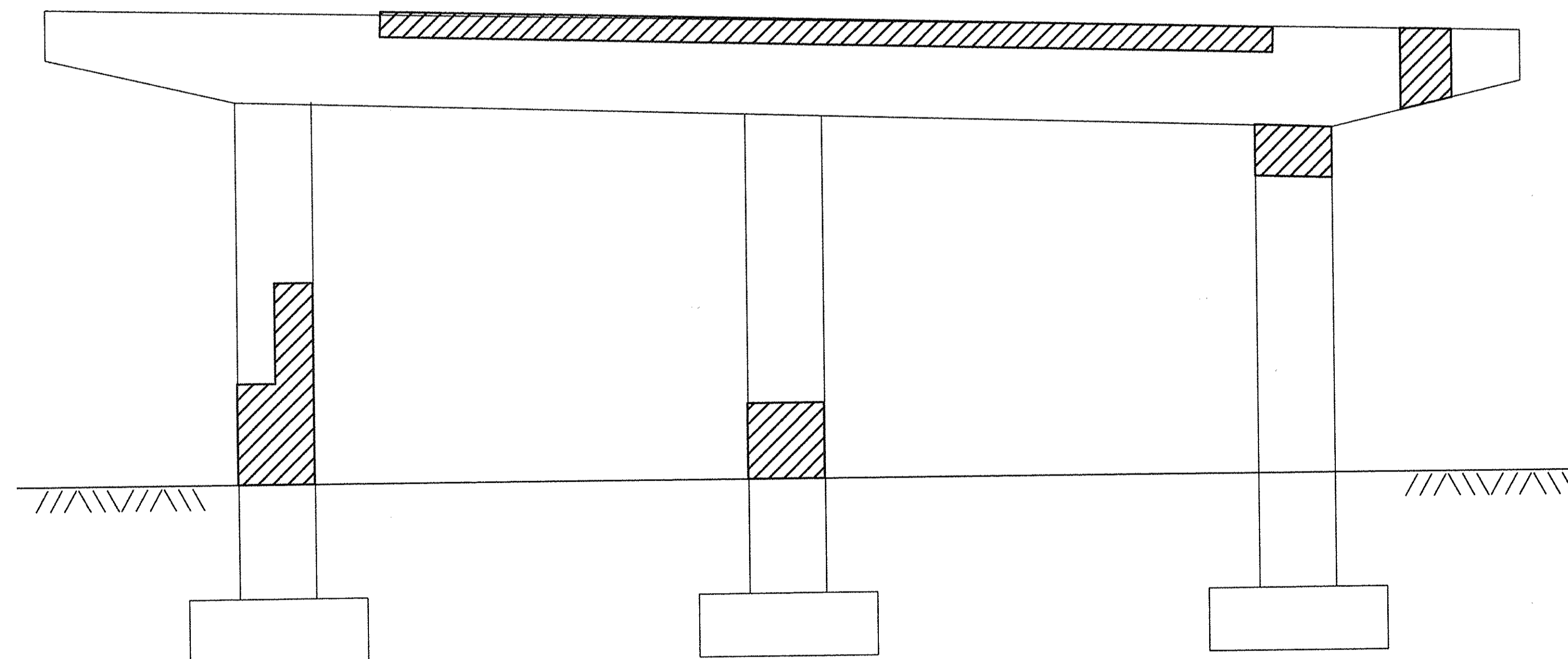
FOR GENERAL NOTES SEE SHEET NO. 2

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NO.	REVISION	BY	DATE	IN CHARGE	PC

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIRS	
MILE 127.33	
STR. 26, CHURCH STREET-S. ABUTMENT	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 7

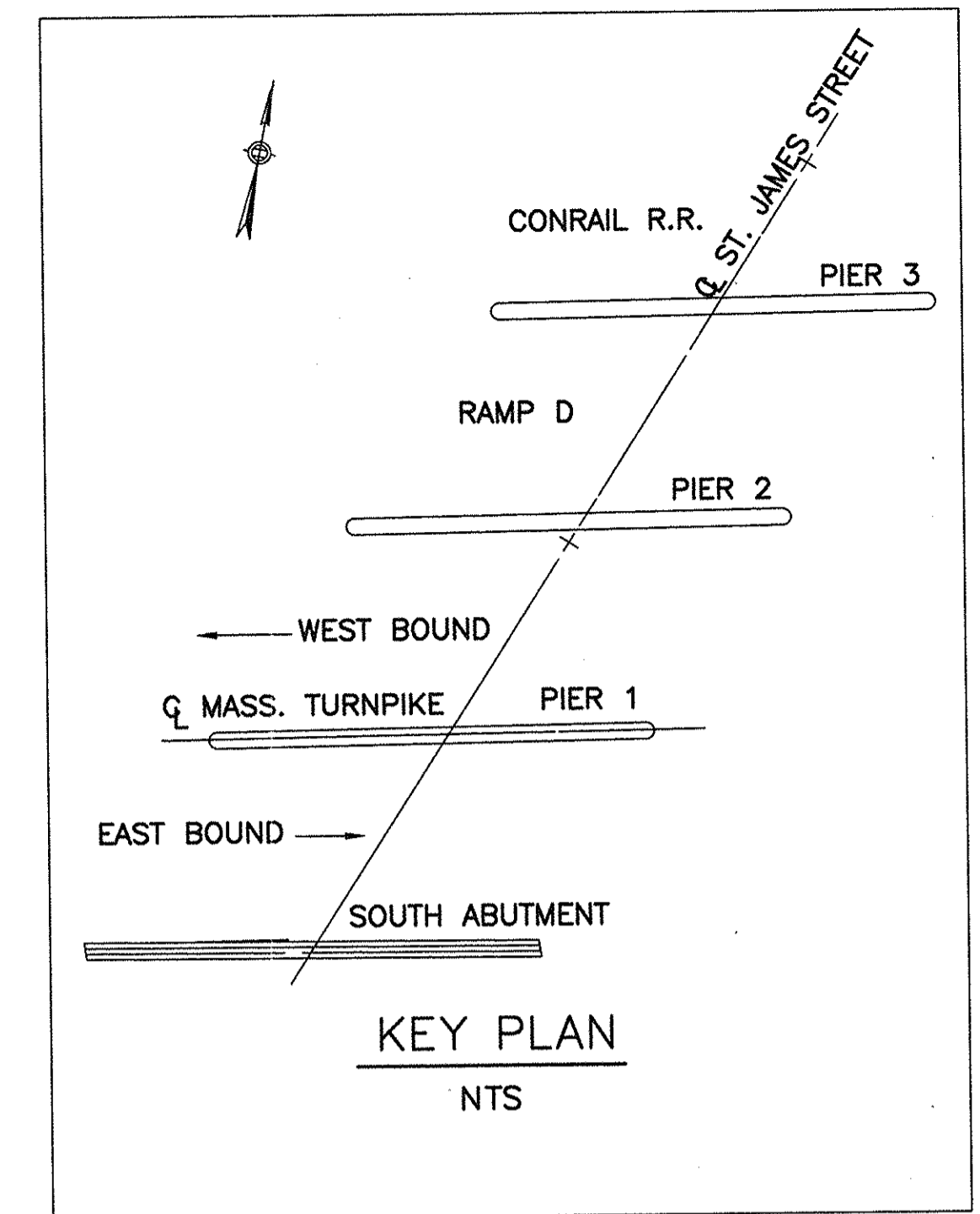


SOUTH ELEVATION

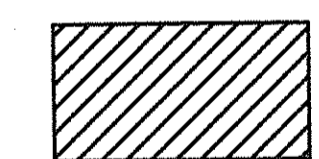


NORTH ELEVATION

PIER 1



LEGEND



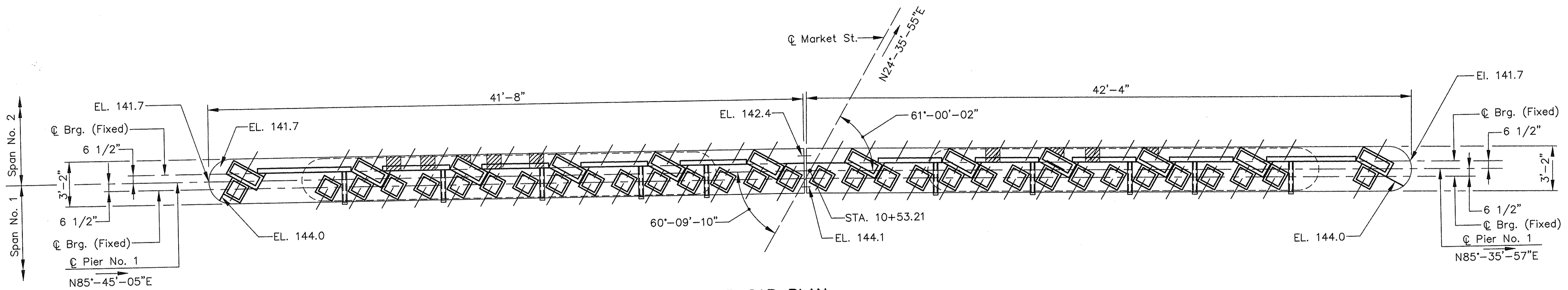
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER 1 = 150 S.F. ±

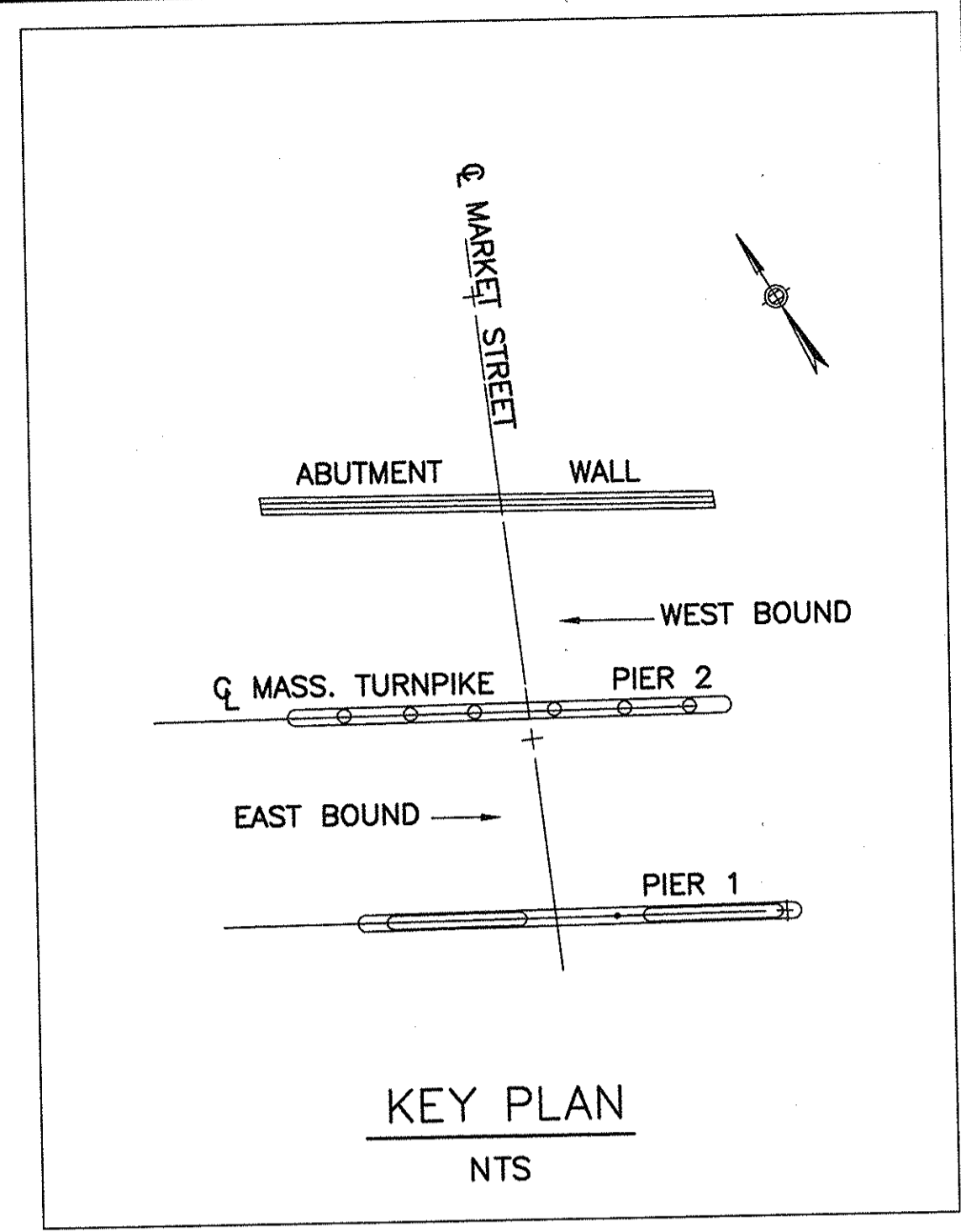
FOR GENERAL NOTES SEE SHEET NO. 2

				DESIGNED:	L.S.	3/97
				DRAWN:	D.M.	3/97
				CHECKED:		
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.	

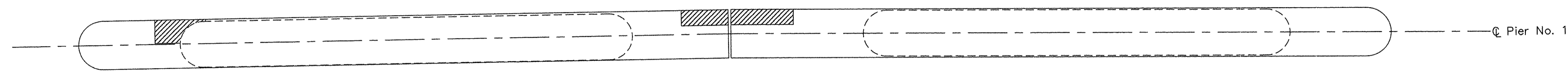
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 127.8	
STR. 33, ST. JAMES STREET-PIER 1	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 8



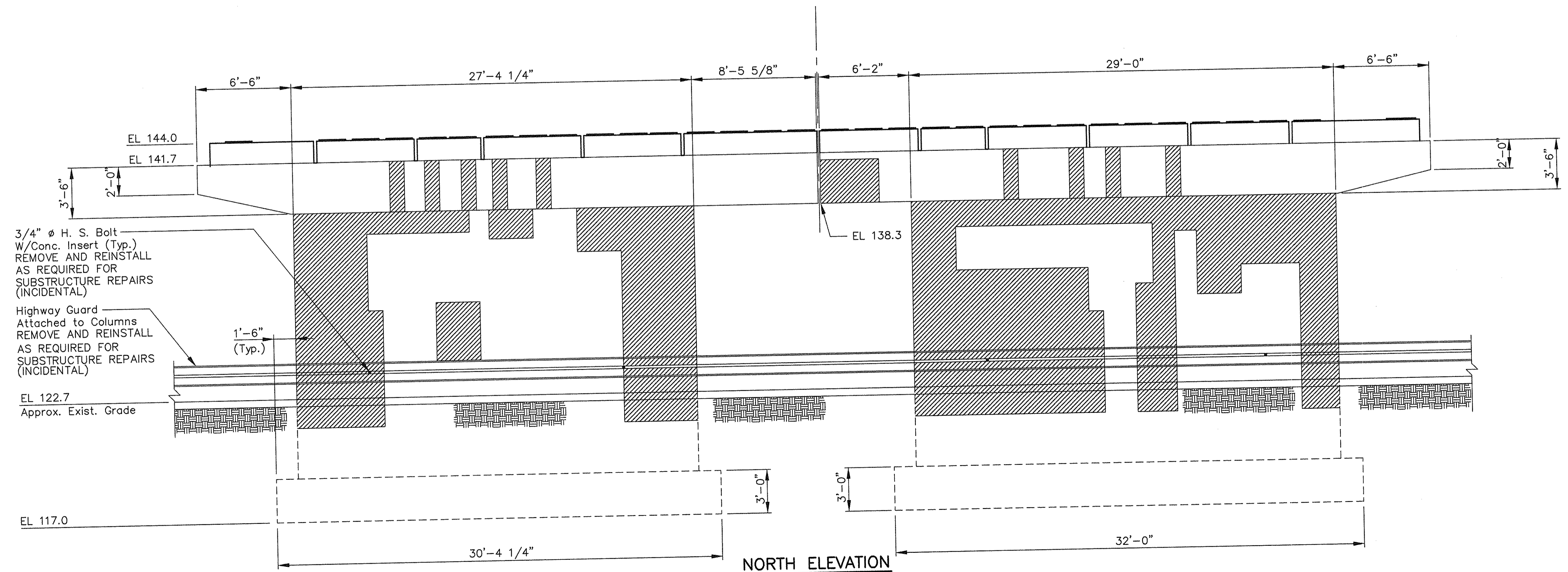
TOP CAP PLAN



KEY PLAN
NTS



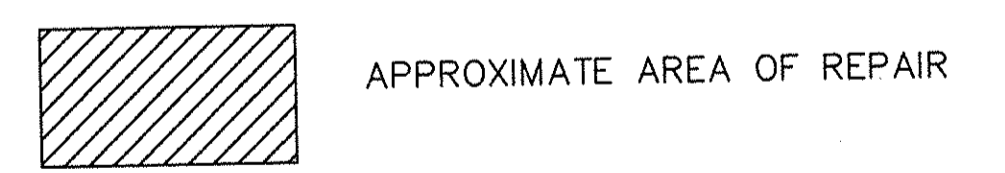
BOTTOM CAP PLAN



NORTH ELEVATION

PIER NO. 1

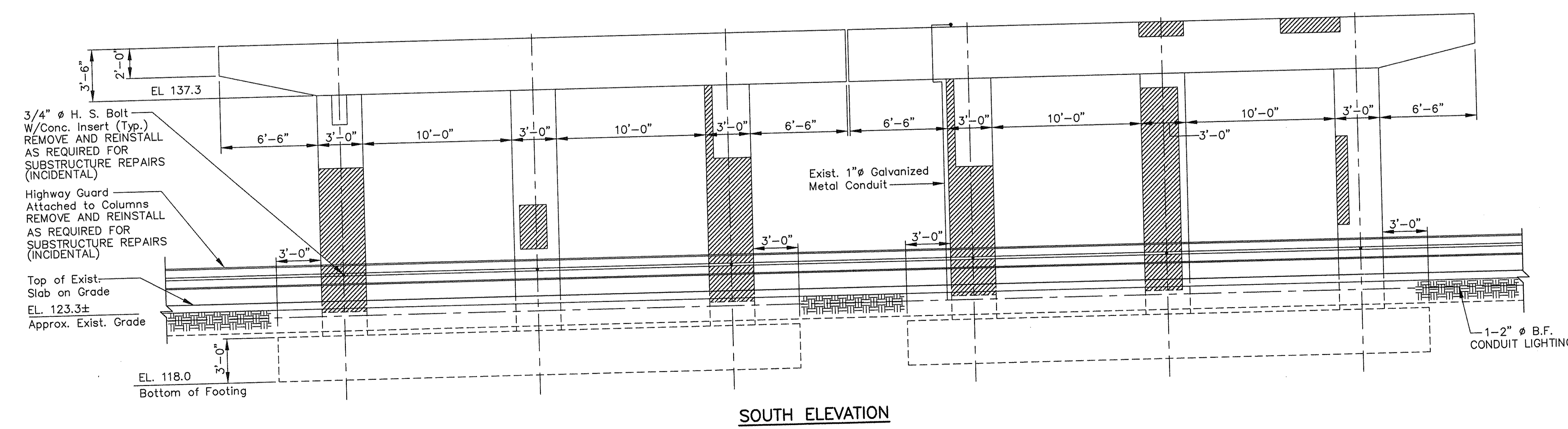
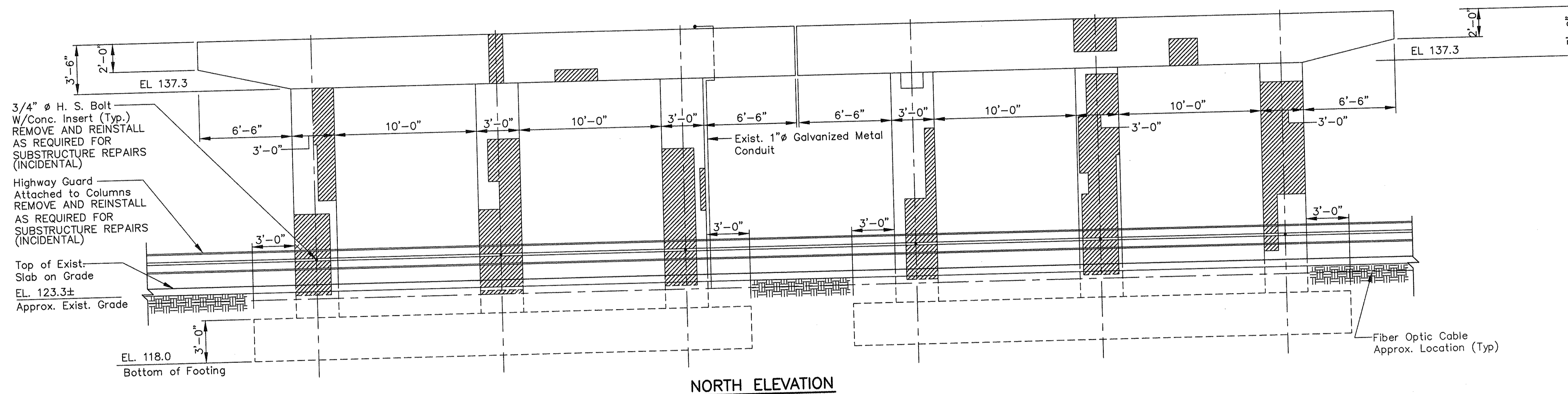
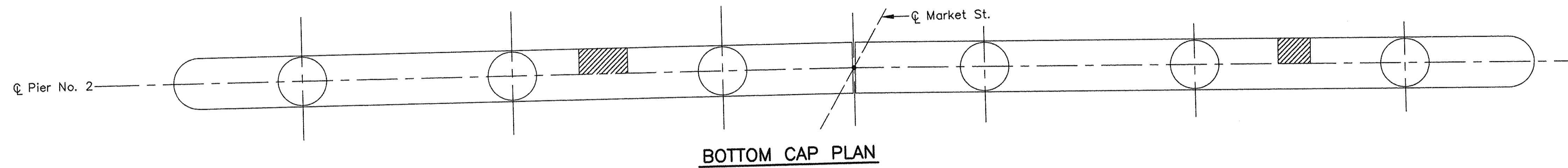
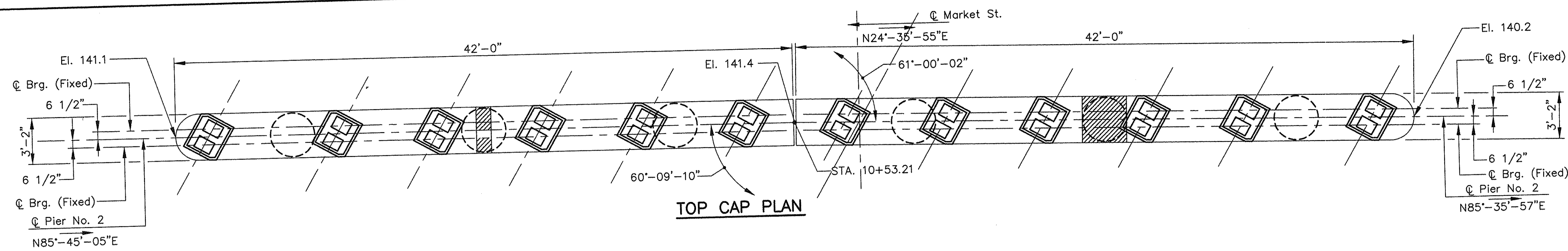
LEGEND



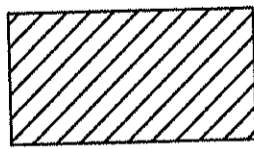
TOTAL REPAIR AREA - PIER 1 = 640 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	BY	DATE	
		DRAWN:	B.R.	2/97	
		CHECKED:	B.R.	2/97	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
SUBSTRUCTURE CONCRETE REPAIR
 MILE 129.52
 STR. 41, MARKET STREET - PIER 1
 Scale: 1/4" = 1'-0" Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY
 Sheet No. 9



LEGEND

 APPROXIMATE AREA OF REPAIR

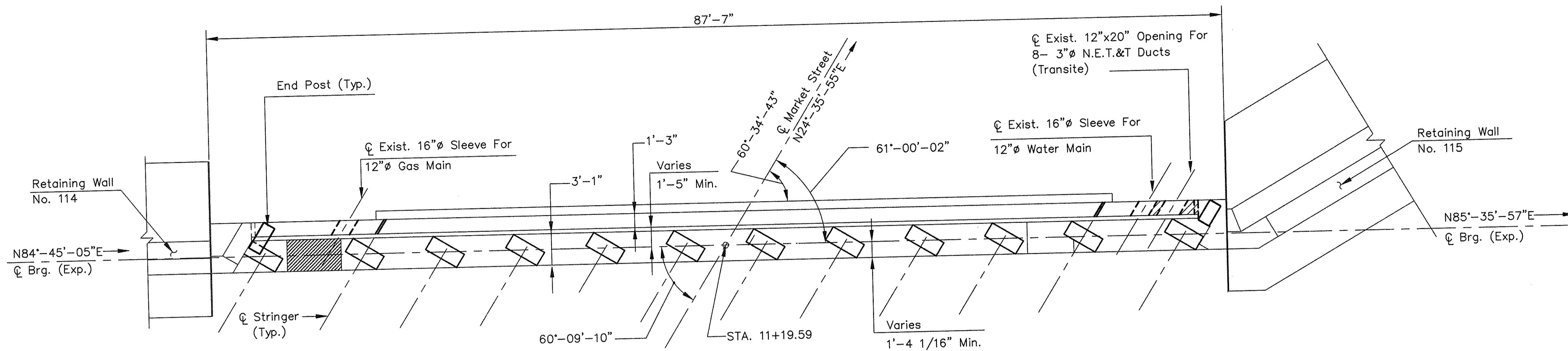
TOTAL REPAIR AREA-PIER 2 = 640 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

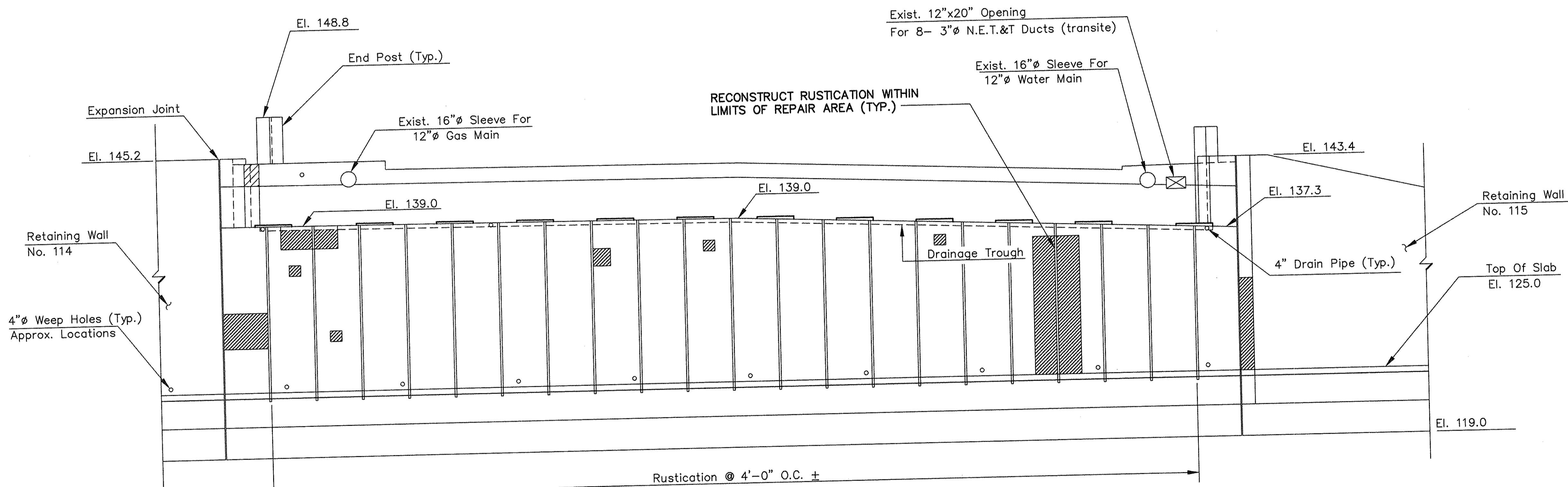
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 129.52	
STR. 41, MARKET STREET-PIER 2	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 10

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	3/97	
		DRAWN:	B.R.	3/97	
		CHECKED:			

PIER NO. 2

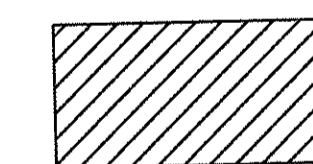


NORTH ABUTMENT - PLAN




NORTH ABUTMENT - ELEVATION

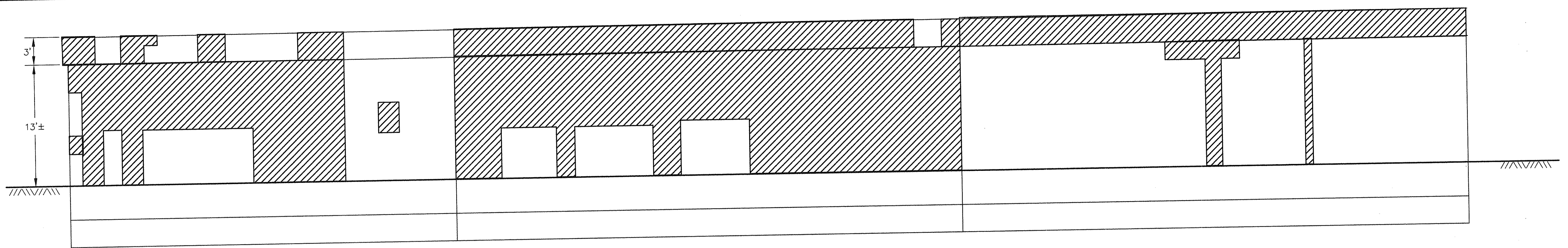
LEGEND

 APPROXIMATE AREA OF REPAIR

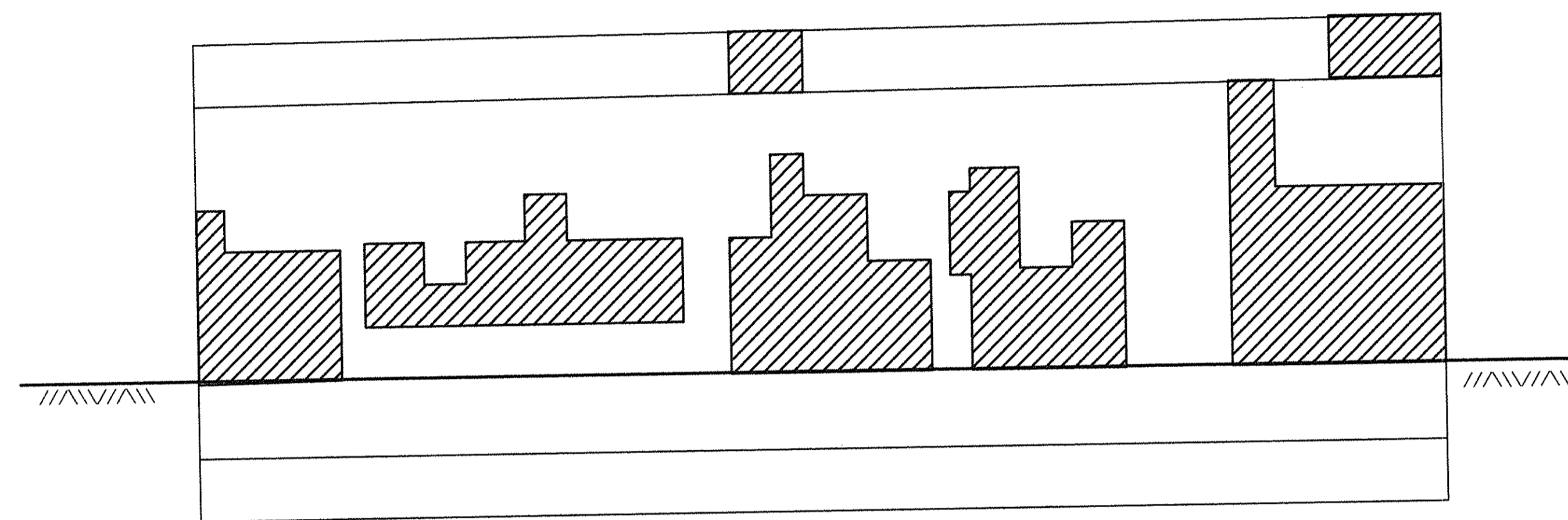
TOTAL REPAIR AREA-N. ABUT. = 190 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	3/97	
		DRAWN:	B.R.	3/97	
		CHECKED:			

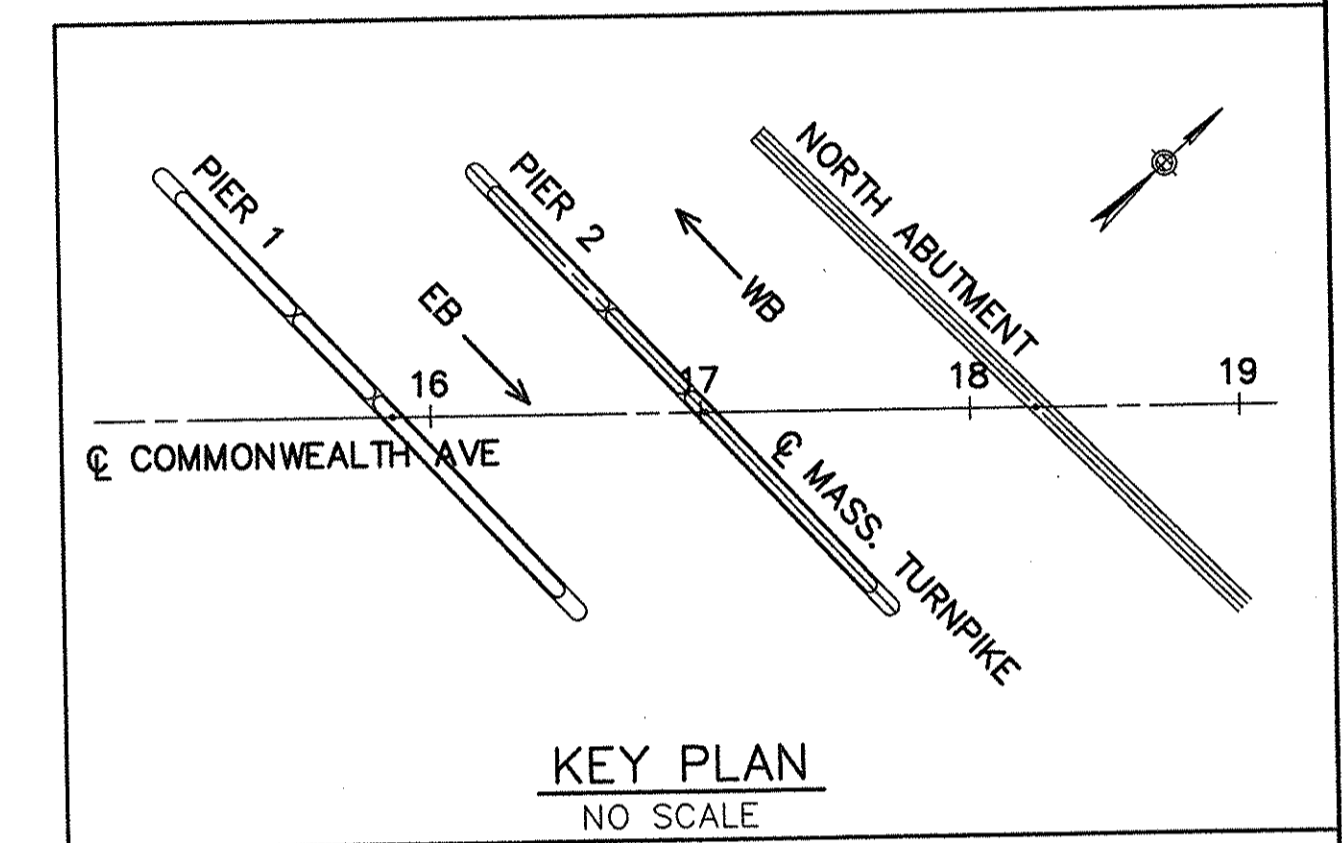
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIRS MILE 129.52 STR. 41 MARKET STREET- N. ABUTMENT	
Scale: 3/16"=1'-0"	Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 11



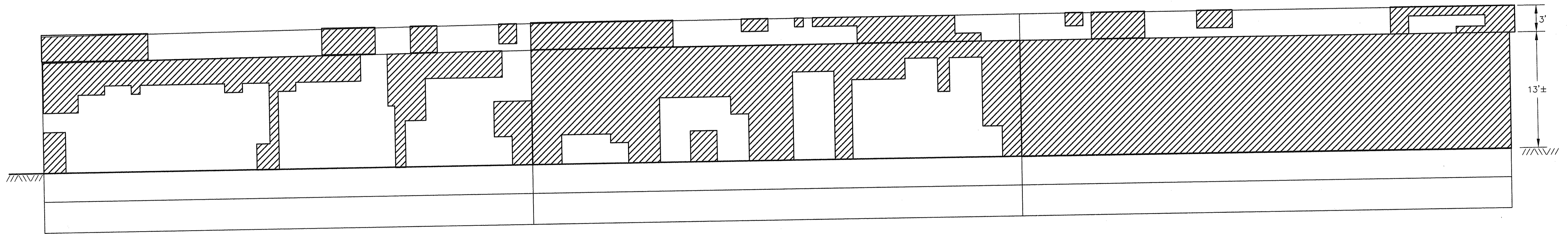
NORTH ELEVATION-EAST
3/16"=1'-0"



NORTH ELEVATION-CENTER
3/16"=1'-0"

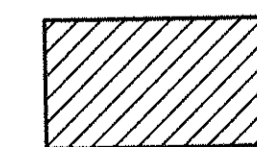


KEY PLAN
NO SCALE



NORTH ELEVATION-WEST
3/16"=1'-0"

PIER 1

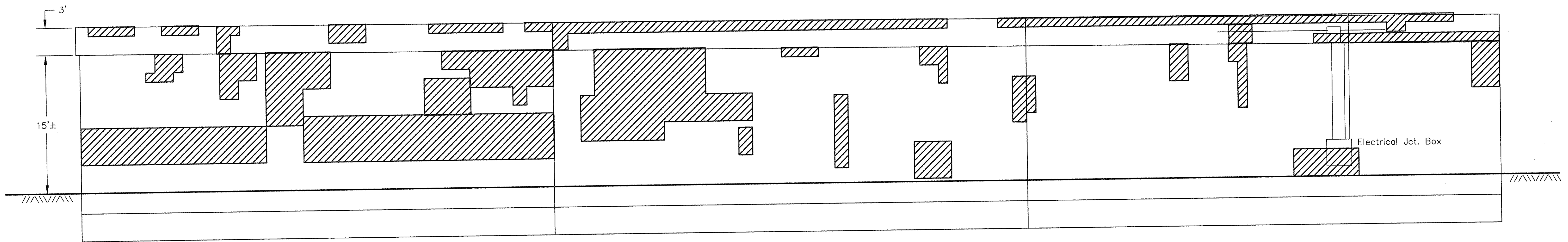


LEGEND
APPROXIMATE AREA OF REPAIR

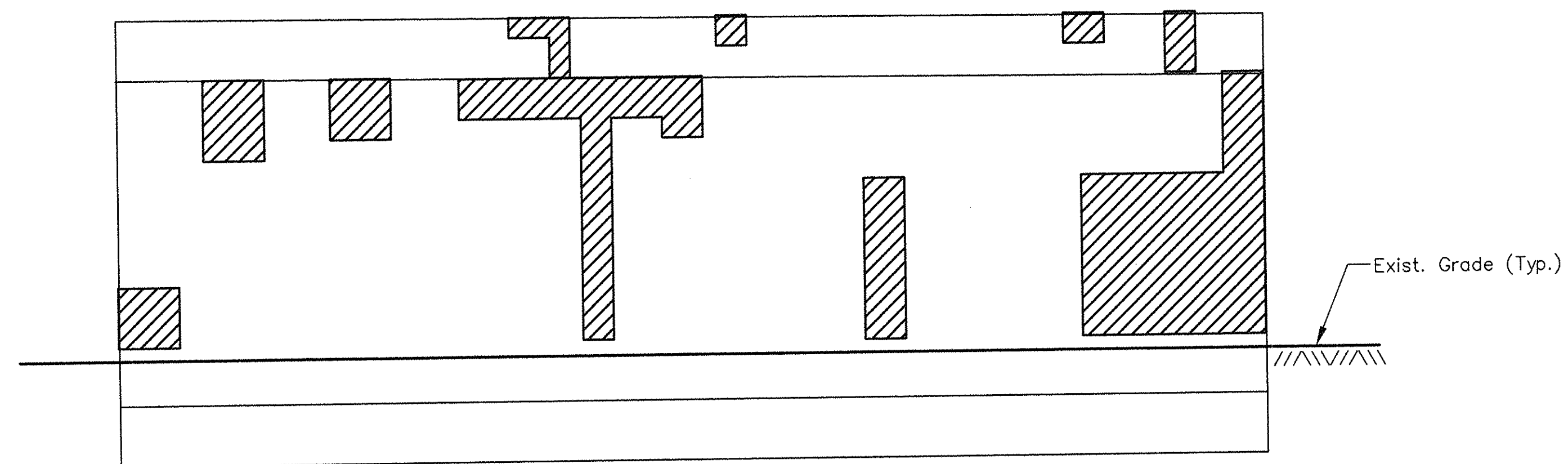
TOTAL REPAIR AREA-PIER 1 = 3350 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

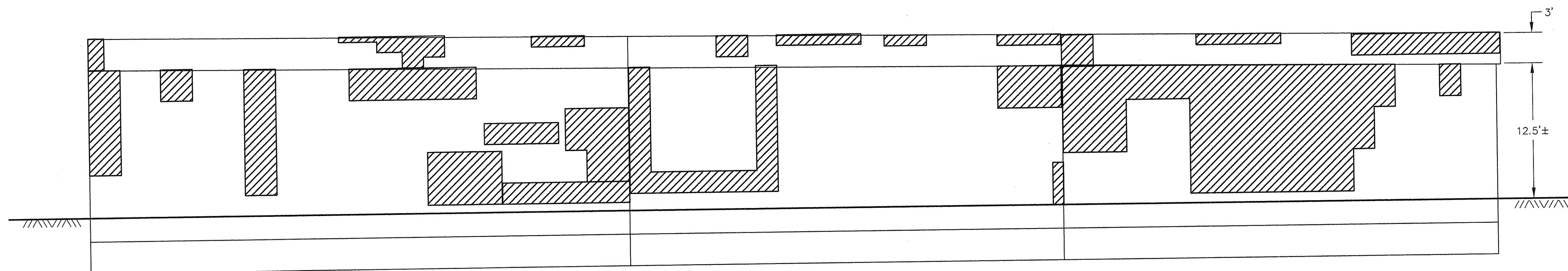
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 131.62	
STR. S-48, COMMONWEALTH AVENUE-PIER 1	
Scale: AS NOTED	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 12



SOUTH ELEVATION-WEST



SOUTH ELEVATION-CENTER



SOUTH ELEVATION-EAST

PIER 2

LEGEND

 APPROXIMATE AREA OF REPAIR

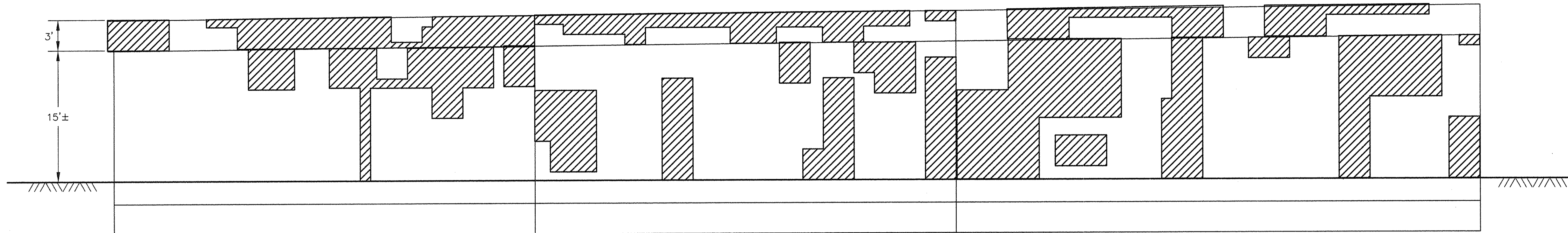
TOTAL REPAIR AREA-PIER 2, SOUTH ELEV. = 1750 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

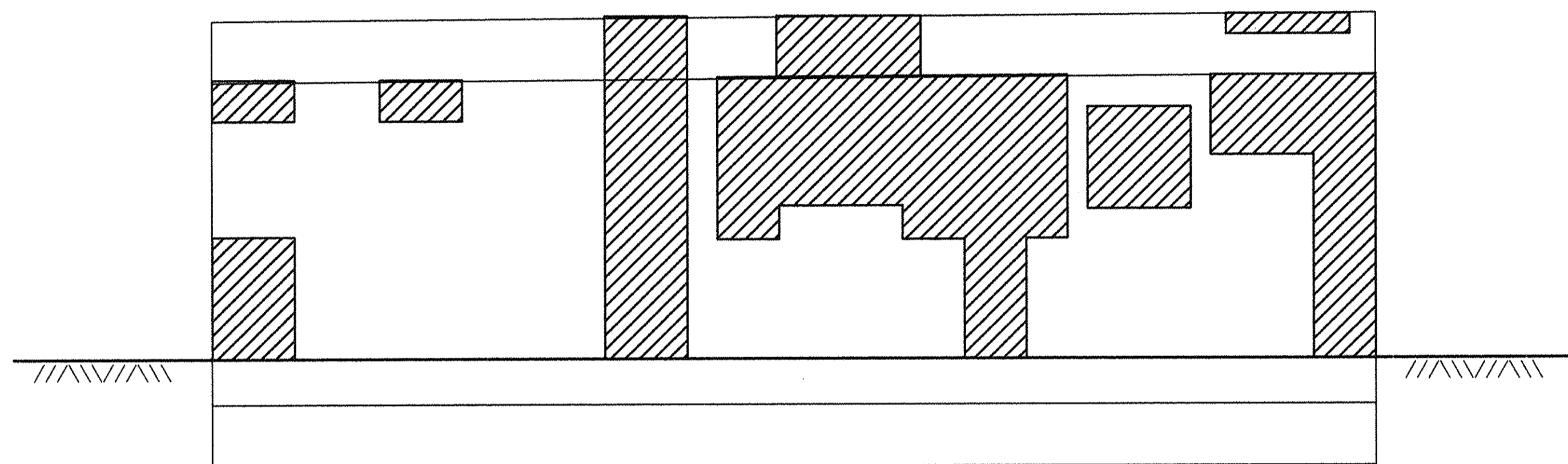
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 131.62	
STR. S-48, COMMONWEALTH AVENUE-PIER 2	
Scale: 3/16"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 13

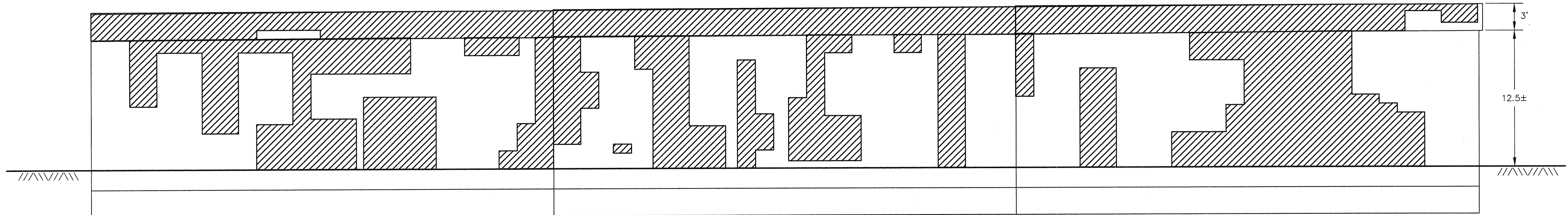
973-111/S-13
04/04/97



NORTH ELEVATION-EAST



NORTH ELEVATION-CENTER



NORTH ELEVATION-WEST

PIER 2


LEGEND

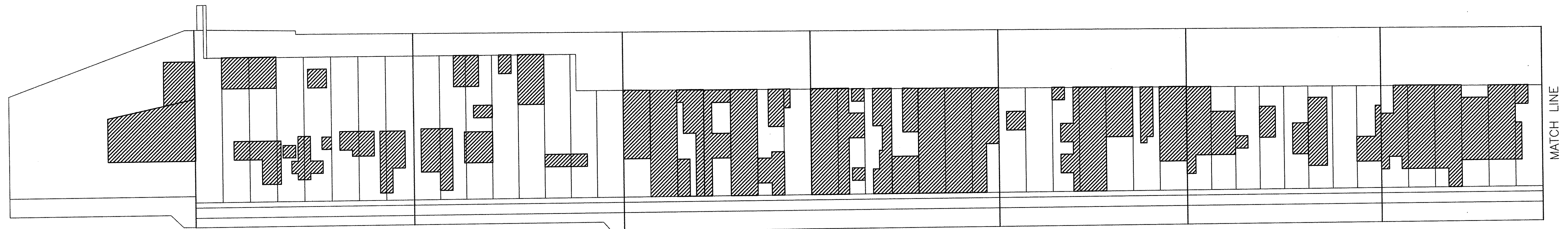
 APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA-PIER 2, N. ELEV. = 2750 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

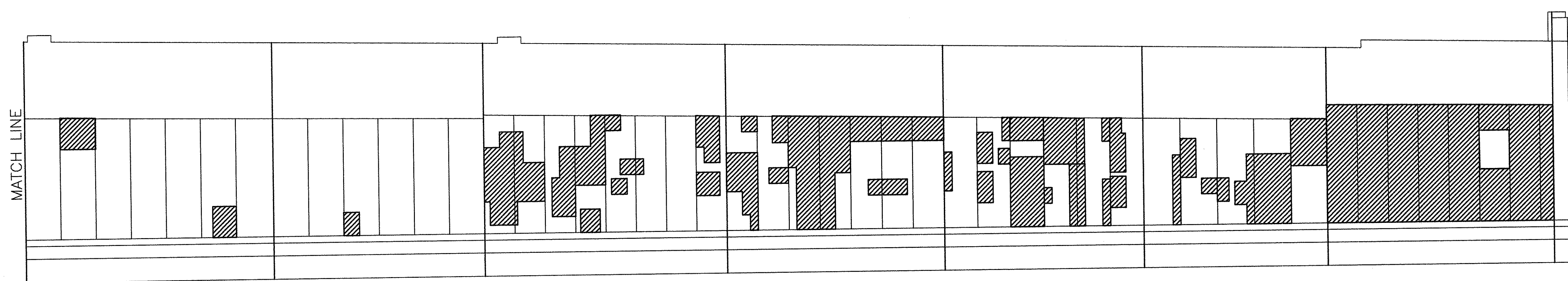
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.

DESIGNED:	BY	DATE
L.S.	L.S.	3/97
DRAWN:	D.M.	3/97
CHECKED:		

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 131.62	
STR. S-48, COMMONWEALTH AVENUE-PIER 2	
Scale: 3/16"=1'-0"	Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 14



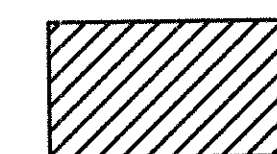
SOUTH ELEVATION



SOUTH ELEVATION

NORTH ABUTMENT

LEGEND



APPROXIMATE AREA OF REPAIR

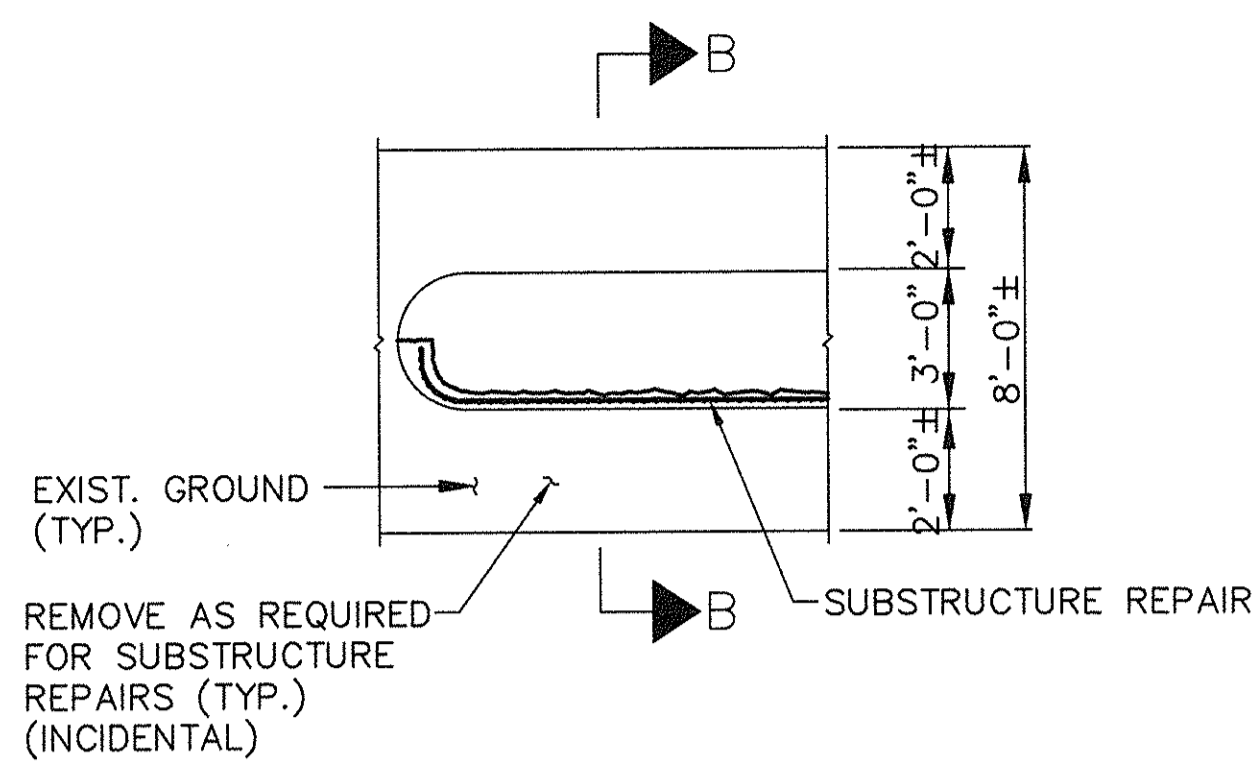
TOTAL REPAIR AREA-N. ABUT.= 2900 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

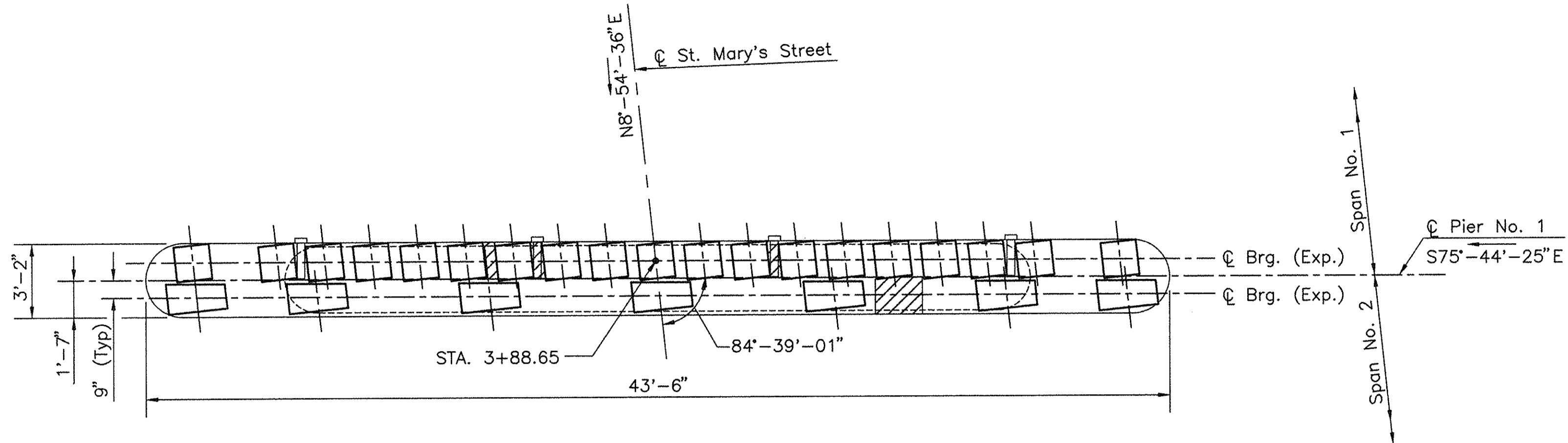
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.

DESIGNED:	L.S.	3/97
DRAWN:	D.M.	3/97
CHECKED:		

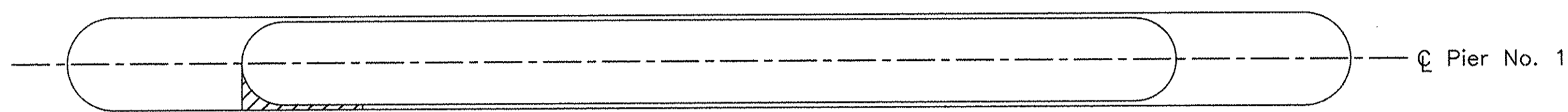
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 131.62	
STR.48, COMMONWEALTH AVE.-N. ABUT.	
Scale: 1/8"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 15



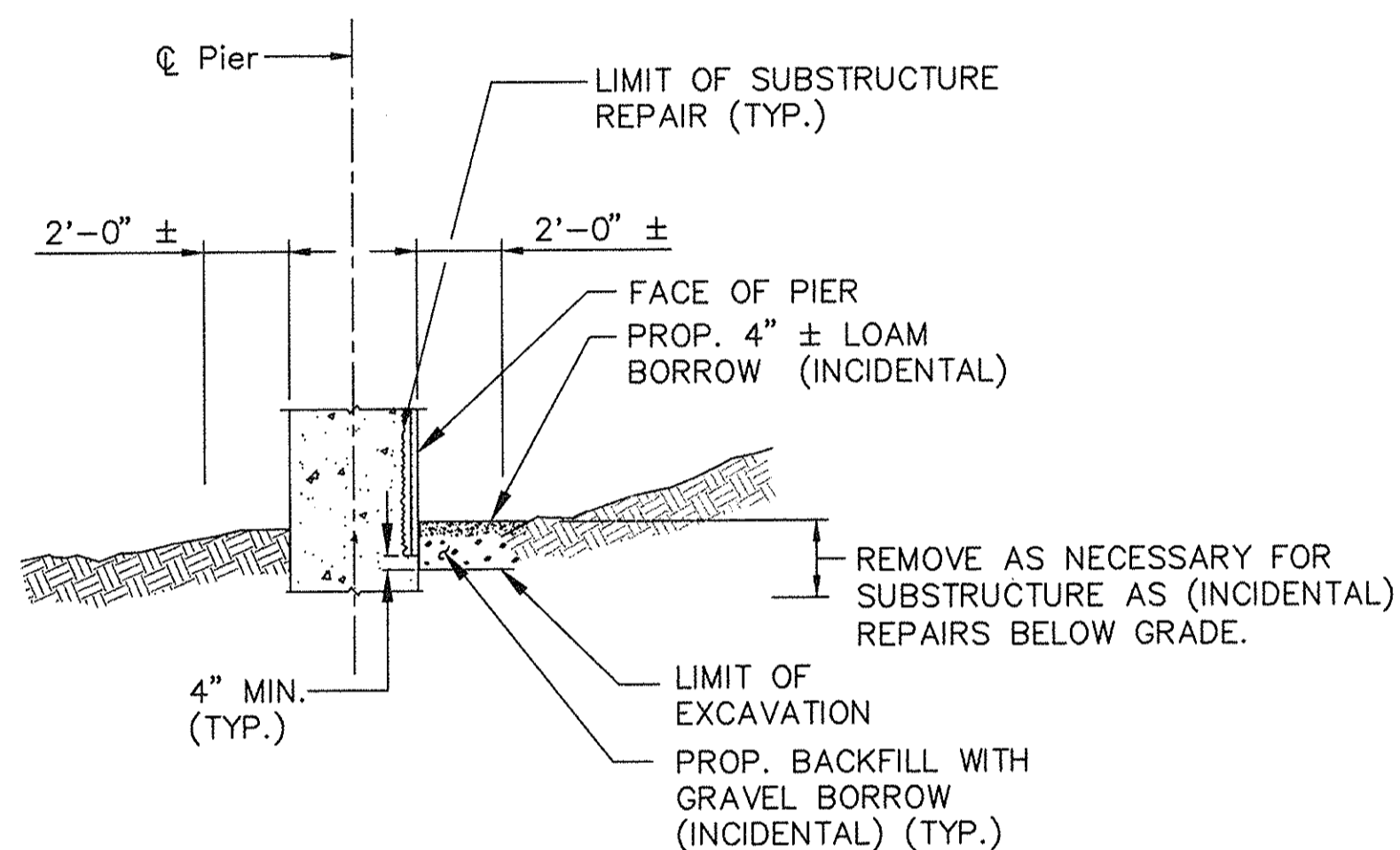
SECTION A-A
 DETAIL AT SUBSTRUCTURE REPAIRS BELOW GRADE
 (INCIDENTAL)
 SCALE: 1/4"=1'-0"



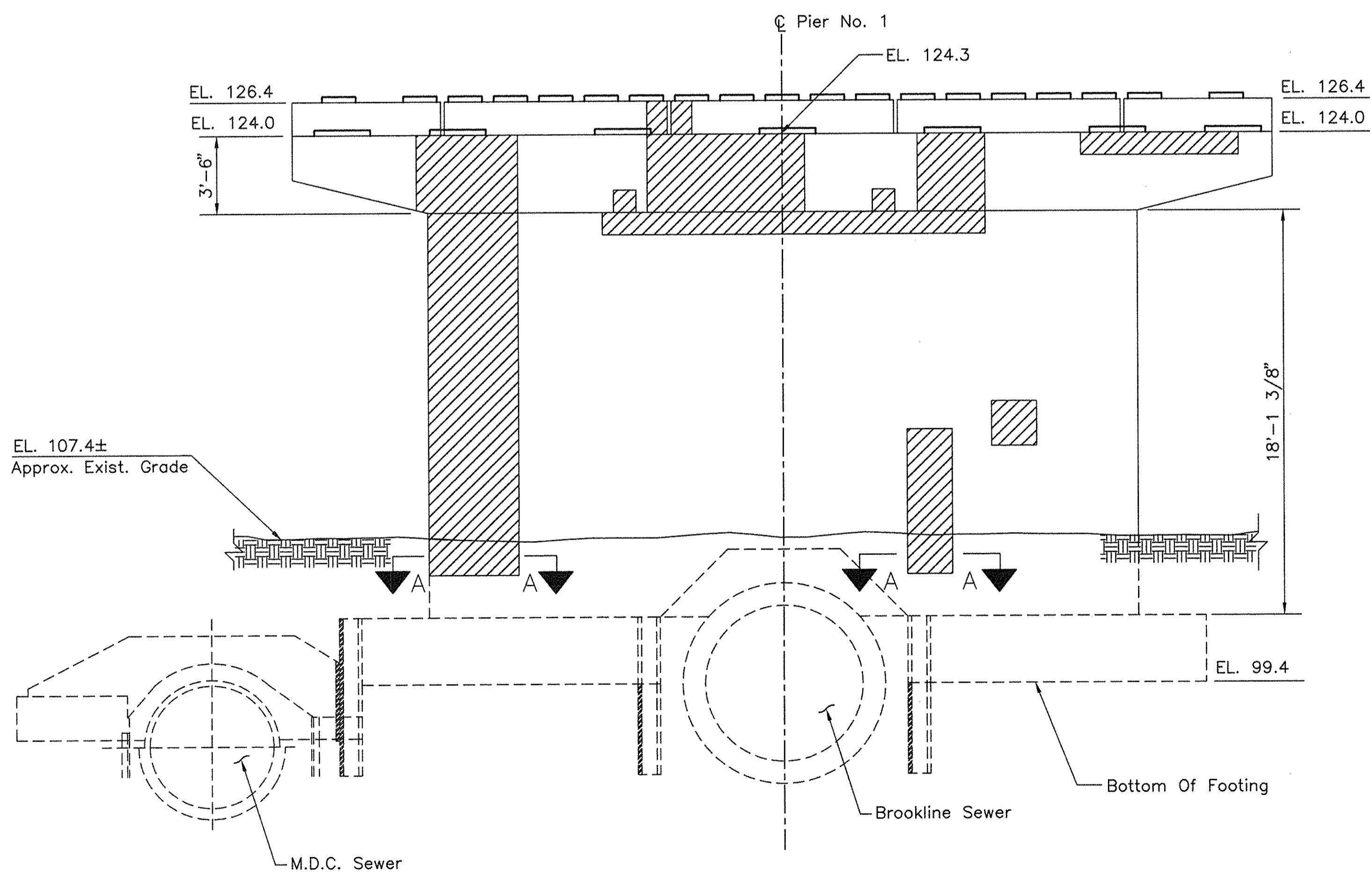
PIER NO. 1 - TOP CAP PLAN
 SCALE: 1/4"=1'-0"



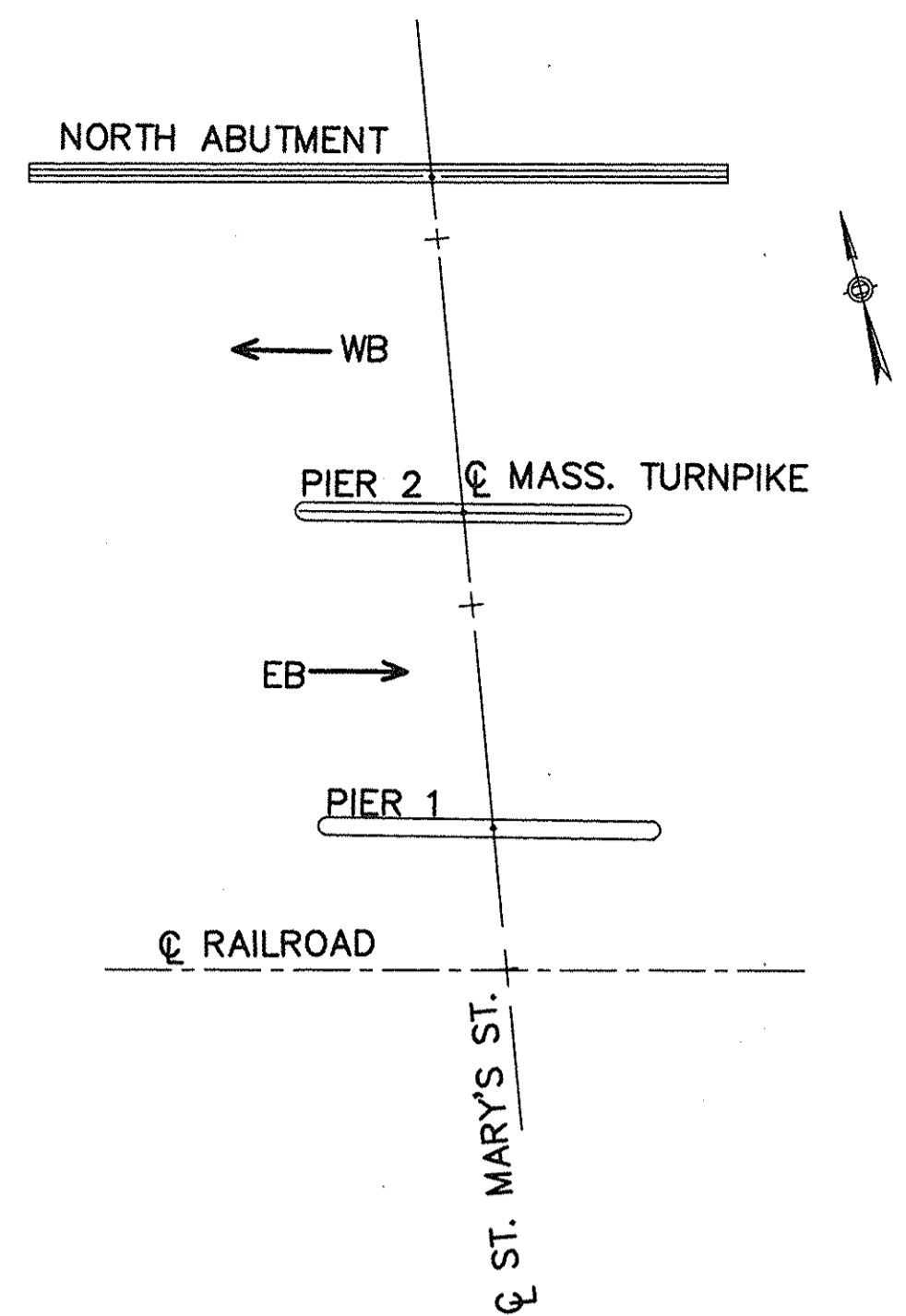
PIER NO. 1 - BOTTOM CAP PLAN
 SCALE: 1/4"=1'-0"



SECTION B-B
 SCALE: 1/4"=1'-0"



PIER NO. 1 - NORTH ELEVATION
 SCALE: 1/4"=1'-0"



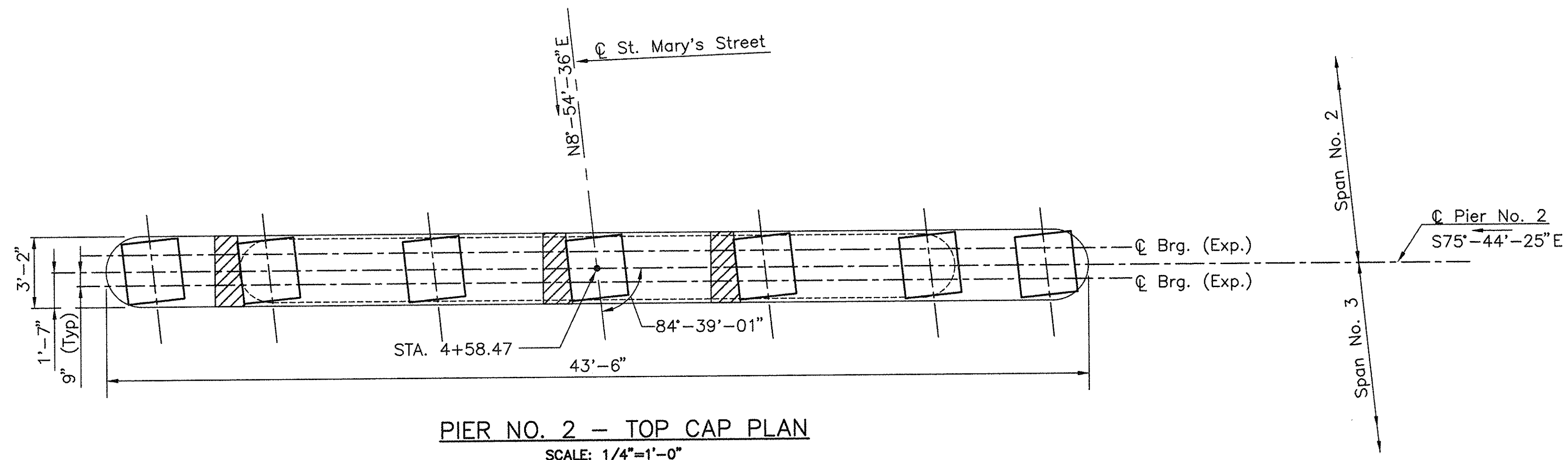
KEY PLAN
 NO SCALE



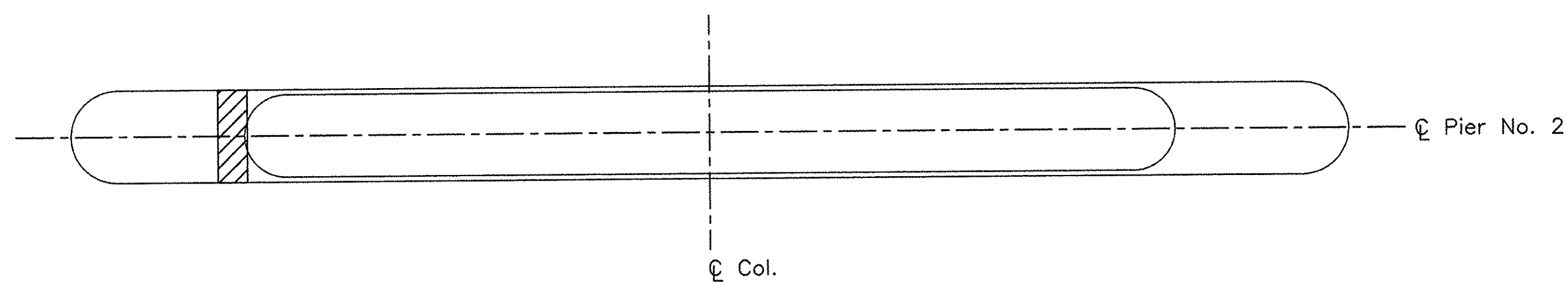
LEGEND
 APPROXIMATE AREA OF REPAIR
TOTAL REPAIR AREA-PIER 1 = 270 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2.

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 131.86	
STR. S-49, ST. MARY'S STREET-PIER 1	
Scale: AS NOTED	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 16

DESIGNED:	BY	DATE			
DRAWN:	L.S.	3/97			
CHECKED:	D.M.	3/97			
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.

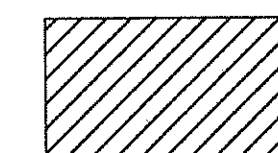


PIER NO. 2 - TOP CAP PLAN
SCALE: 1/4"=1'-0"



PIER NO. 2 - BOTTOM CAP PLAN
SCALE: 1/4"=1'-0"

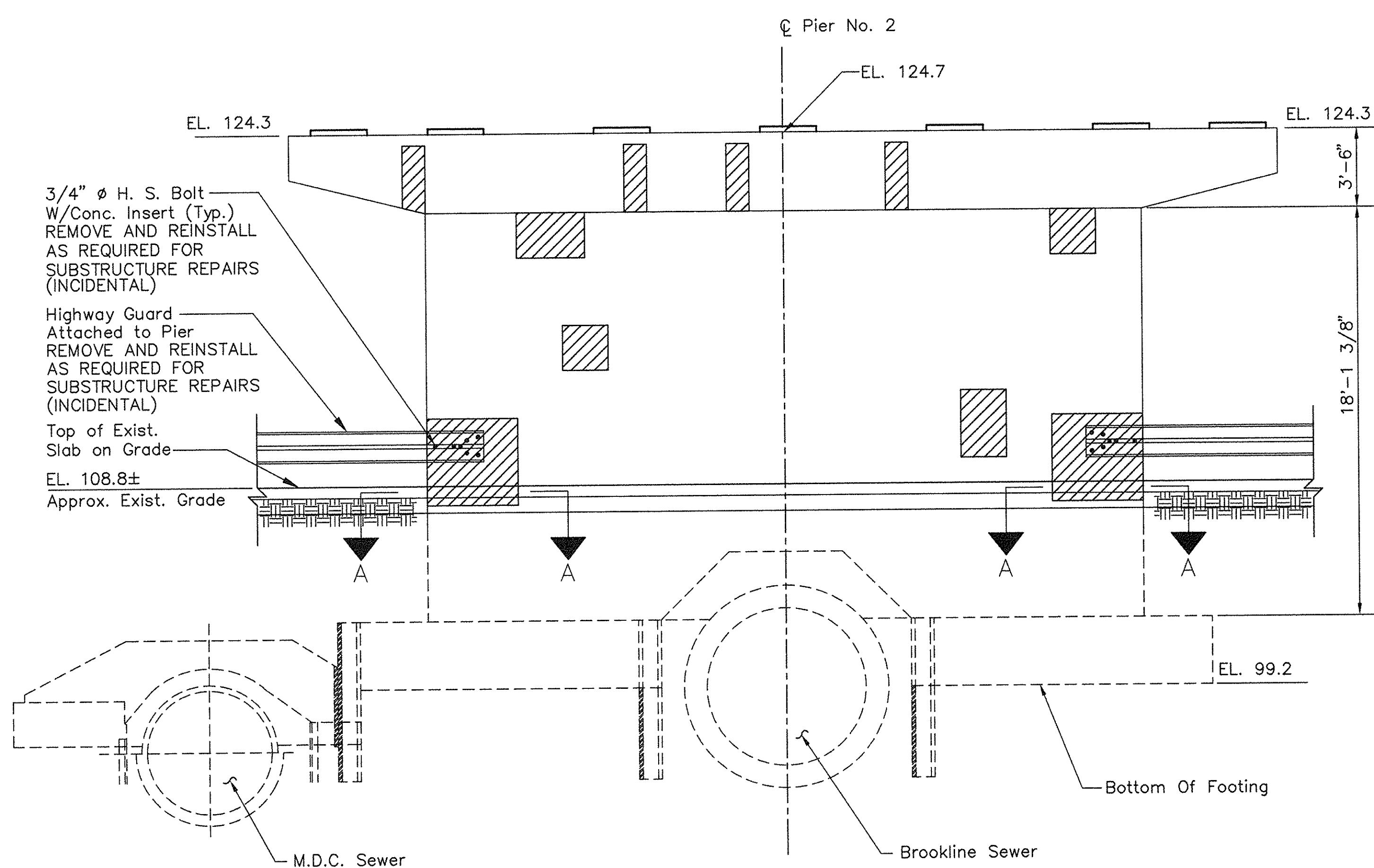
LEGEND



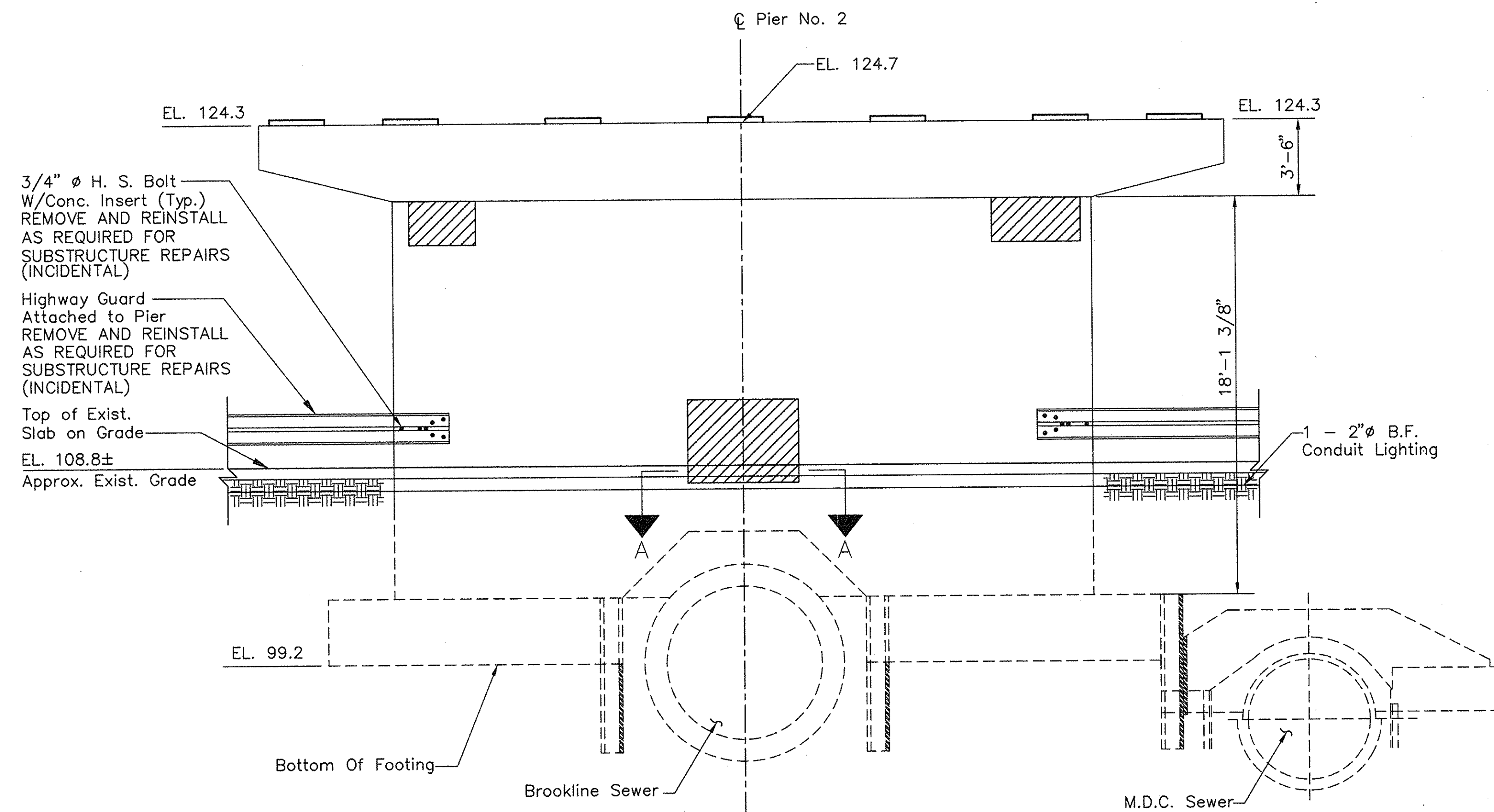
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA-PIER 2 = 160 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2



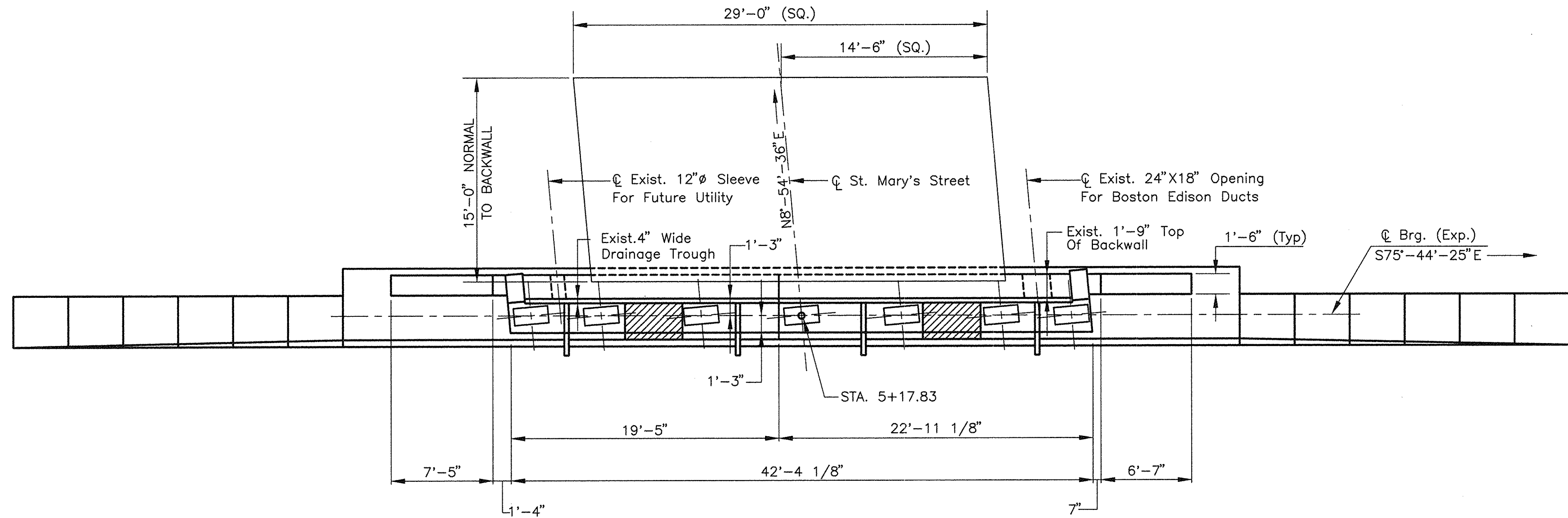
PIER NO. 2 - NORTH ELEVATION
SCALE: 1/4"=1'-0"



PIER NO. 2 - SOUTH ELEVATION
SCALE: 1/4"=1'-0"

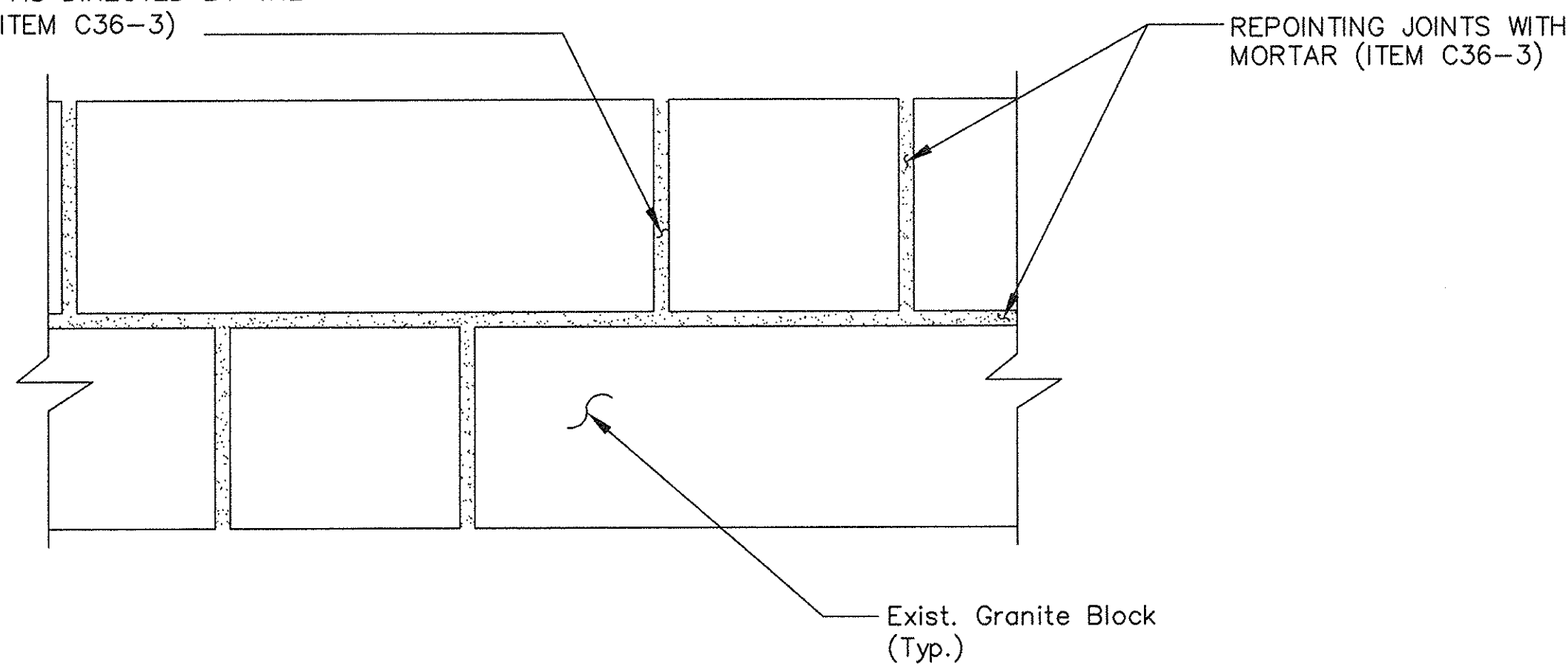
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 SUBSTRUCTURE CONCRETE REPAIR
 MILE 131.86
 STR. S-49, ST. MARY'S STREET-PIER 2
 Scale: AS NOTED Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY
 Sheet No. 17



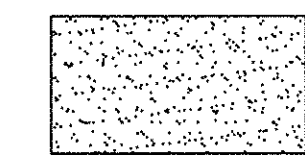

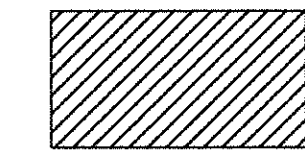
NORTH ABUTMENT PLAN
SCALE: 3/16" = 1'-0"

JOINTS WHICH ARE MISSING MORTAR SHALL BE CLEANED TO A DEPTH OF 3" MIN. OR AS DIRECTED BY THE ENGINEER (ITEM C36-3)



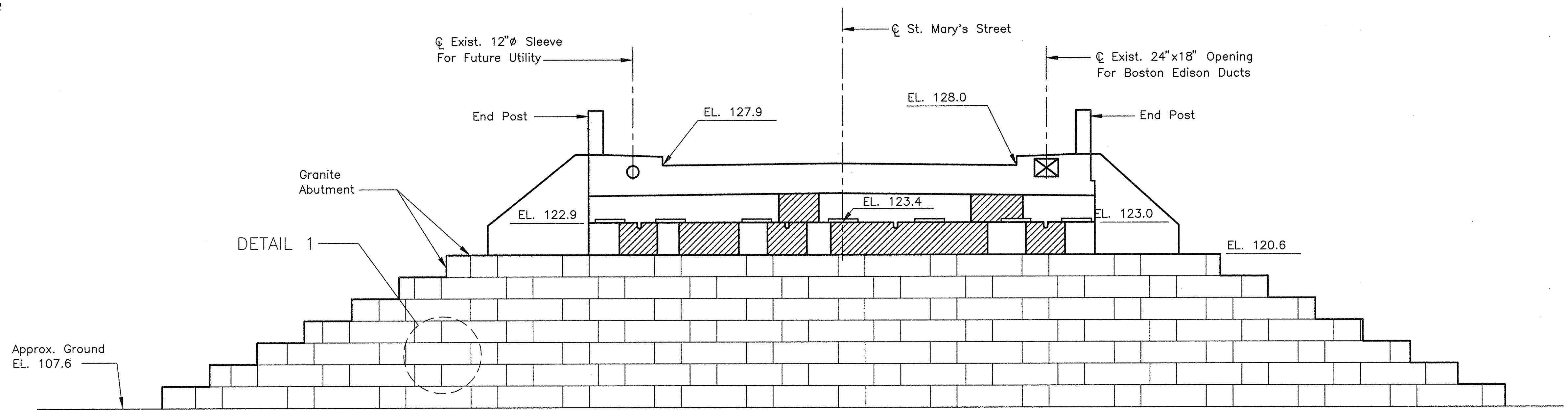
DETAIL 1
REPOINTING GRANITE BLOCK JOINTS
SCALE: NTS

LEGEND

-  REPOINTING JOINTS (ITEM C36-3)
-  REPOINTING JOINTS-N. ABUT.=500 L.F.±
-  APPROXIMATE AREA OF REPAIR


TOTAL REPAIR AREA-N. ABUT.=180 S.F.±

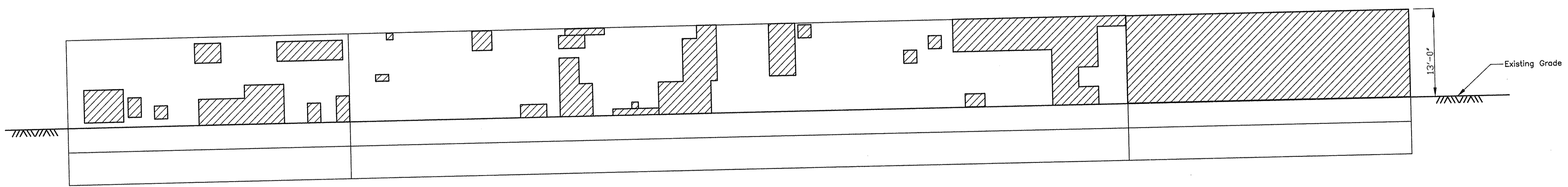
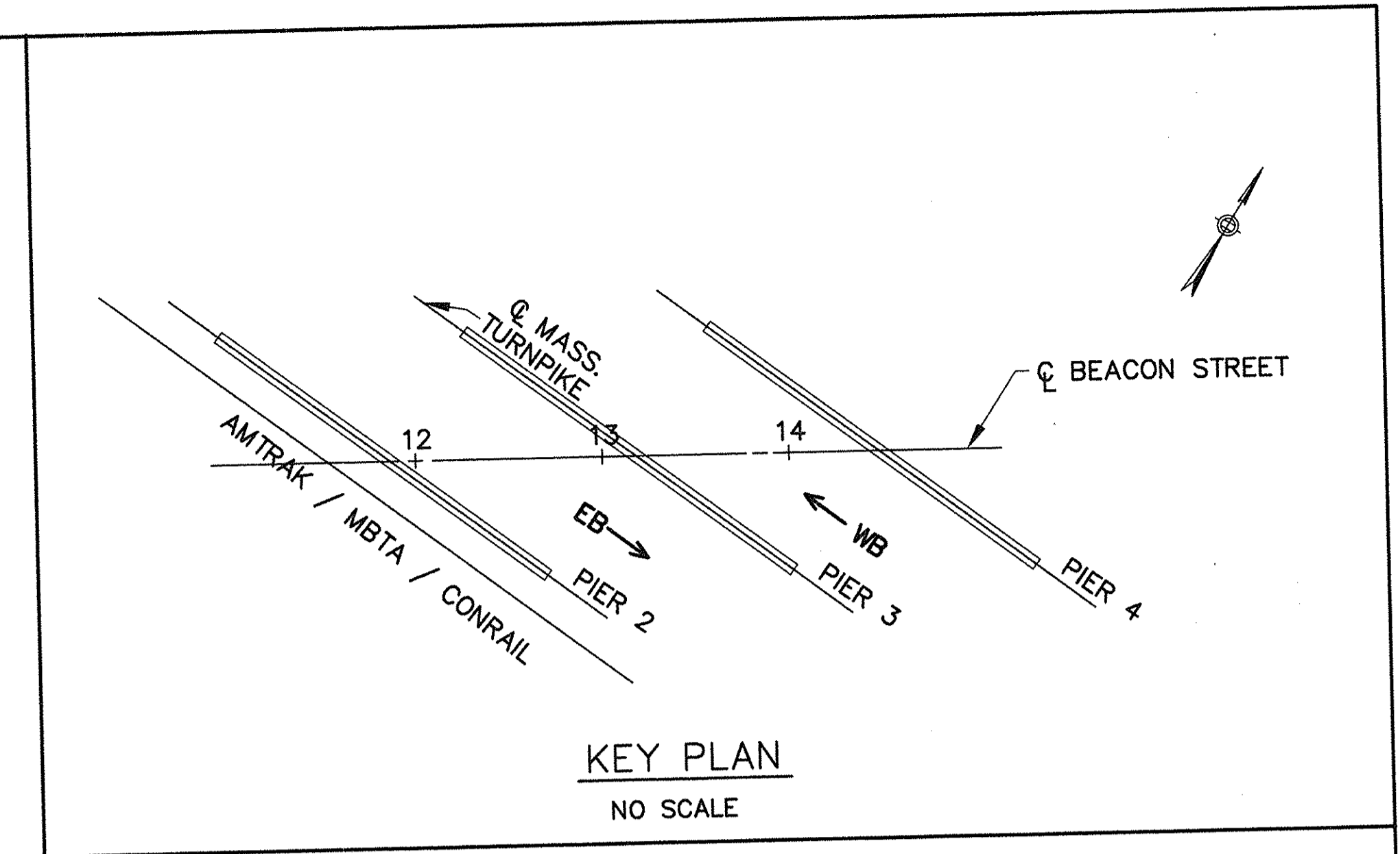
FOR GENERAL NOTES SEE SHEET NO. 2



NORTH ABUTMENT ELEVATION
SCALE: 3/16" = 1'-0"

				BY	DATE
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
SUBSTRUCTURE CONCRETE REPAIR
 MILE 131.86
 STR. S-49, ST. MARY'S STREET-N.ABUTMENT
 Scale: AS NOTED Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY
 Sheet No. 18



SOUTH ELEVATION
PIER 3

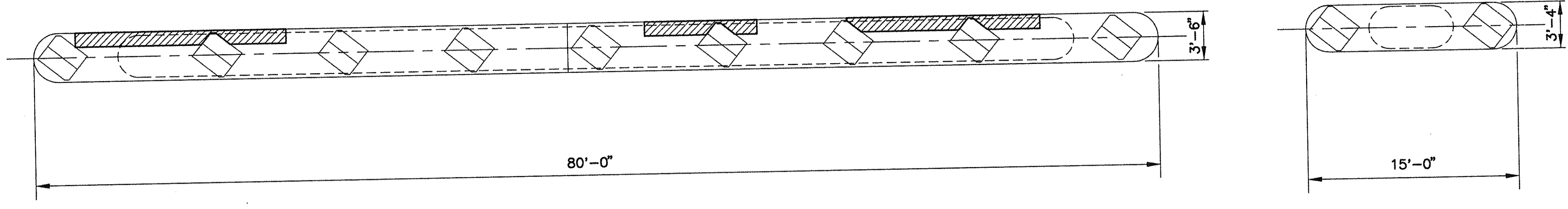
LEGEND

APPROXIMATE AREA OF REPAIR

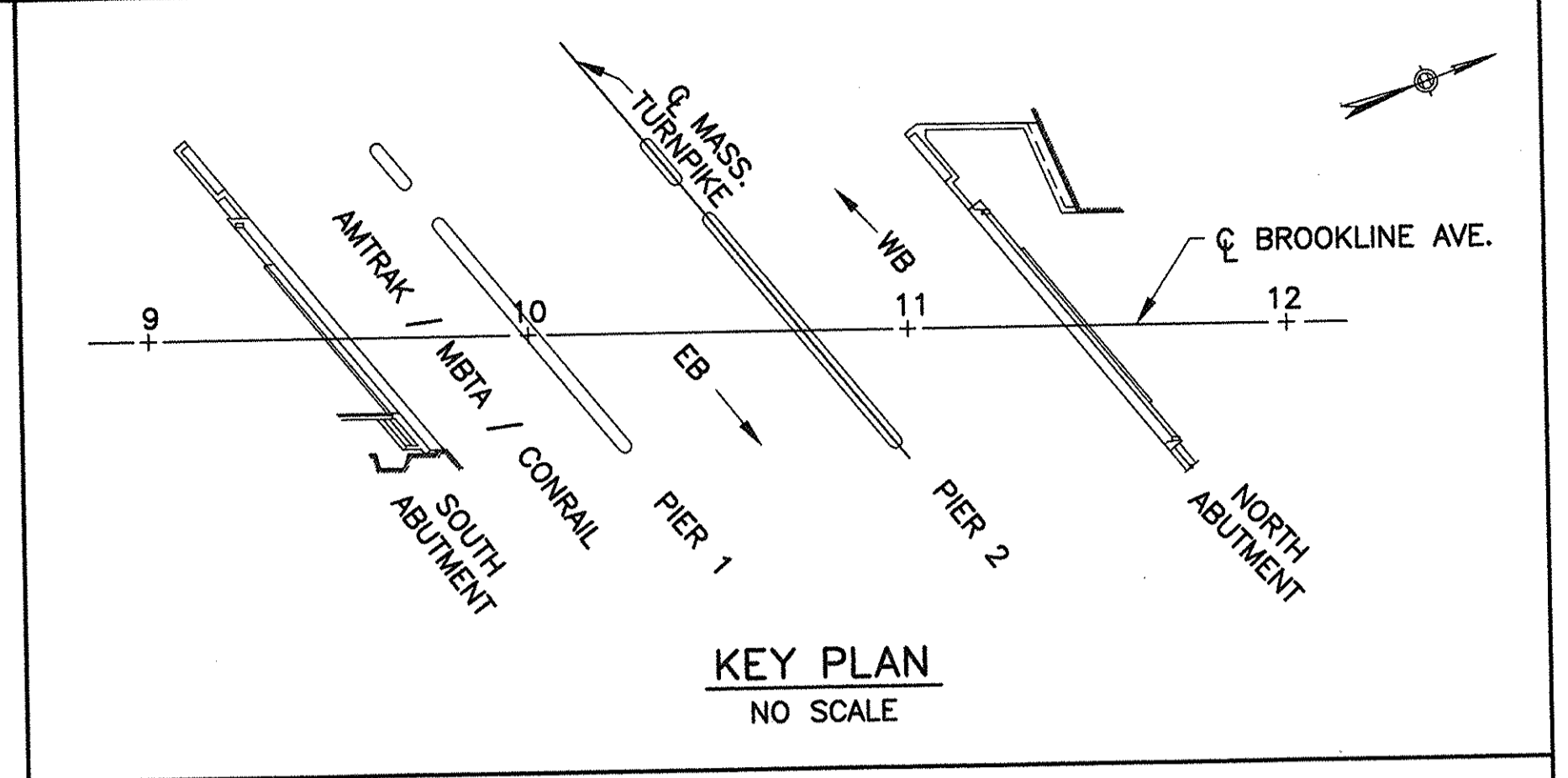
TOTAL REPAIR AREA-PIER 3 = 1110 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

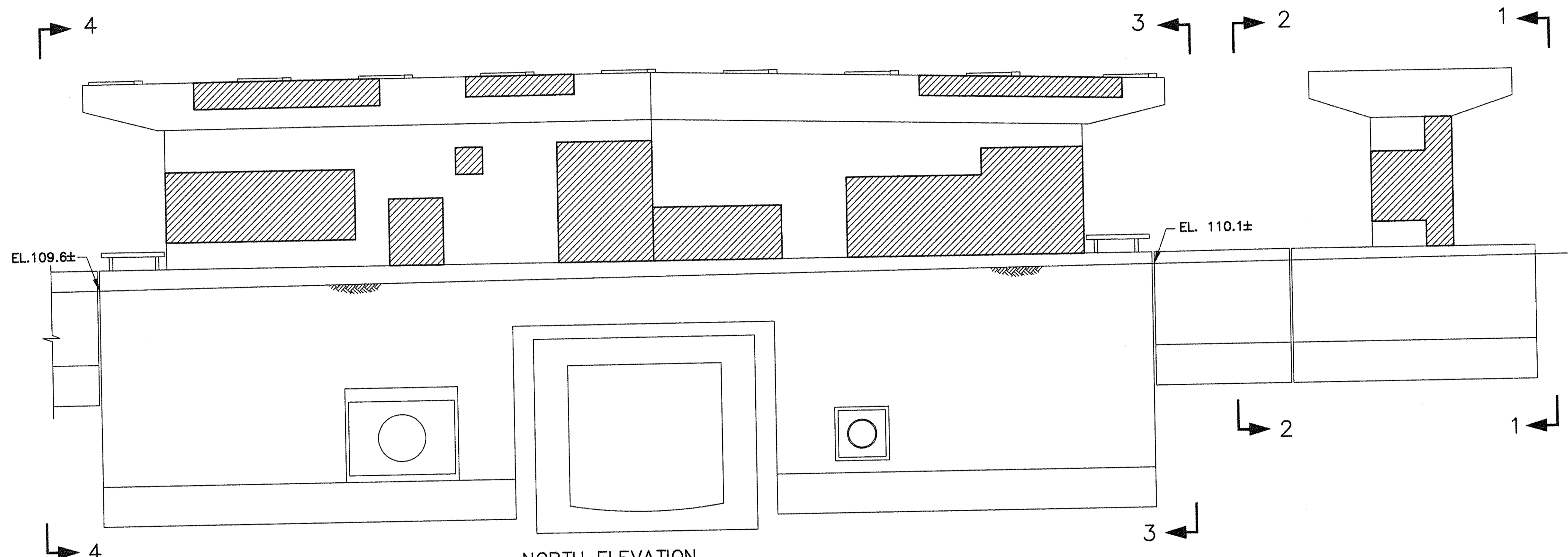
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 132.18	
STR.50, BEACON STREET-PIER 3	
Scale: 1/8"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 19



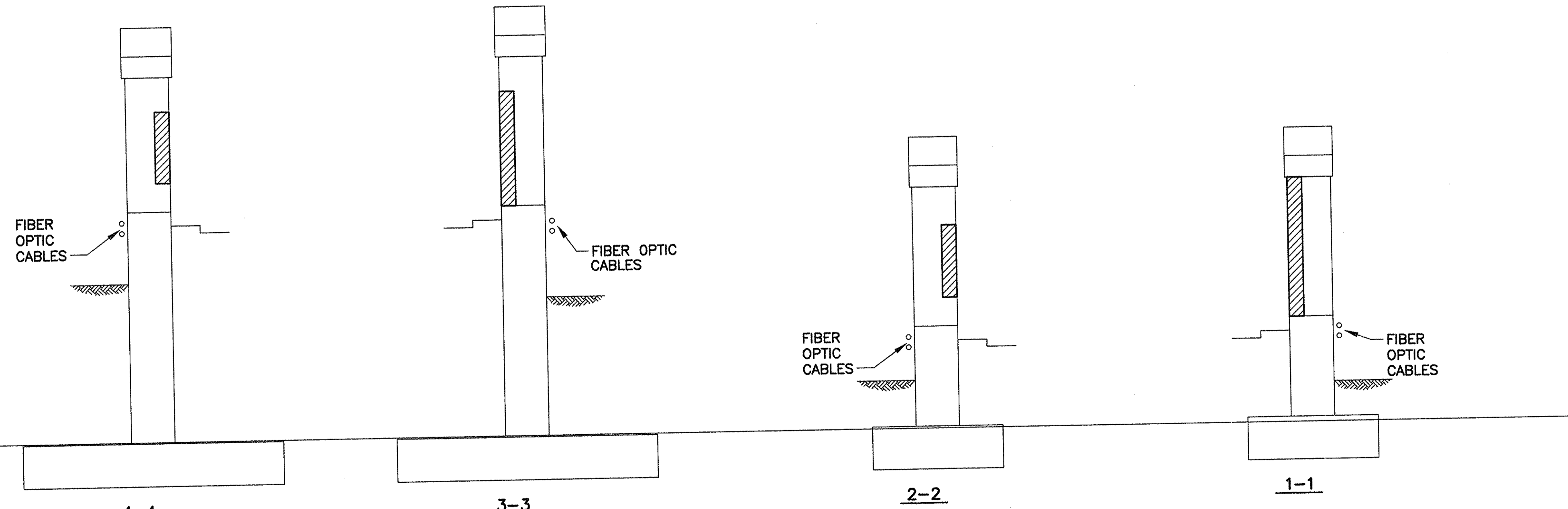
PLAN - TOP OF PIER CAP



KEY PLAN
NO SCALE



NORTH ELEVATION
PIER 1



SECTIONS

LEGEND



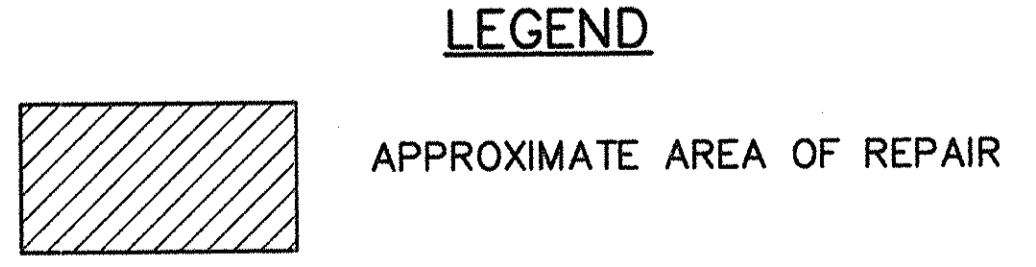
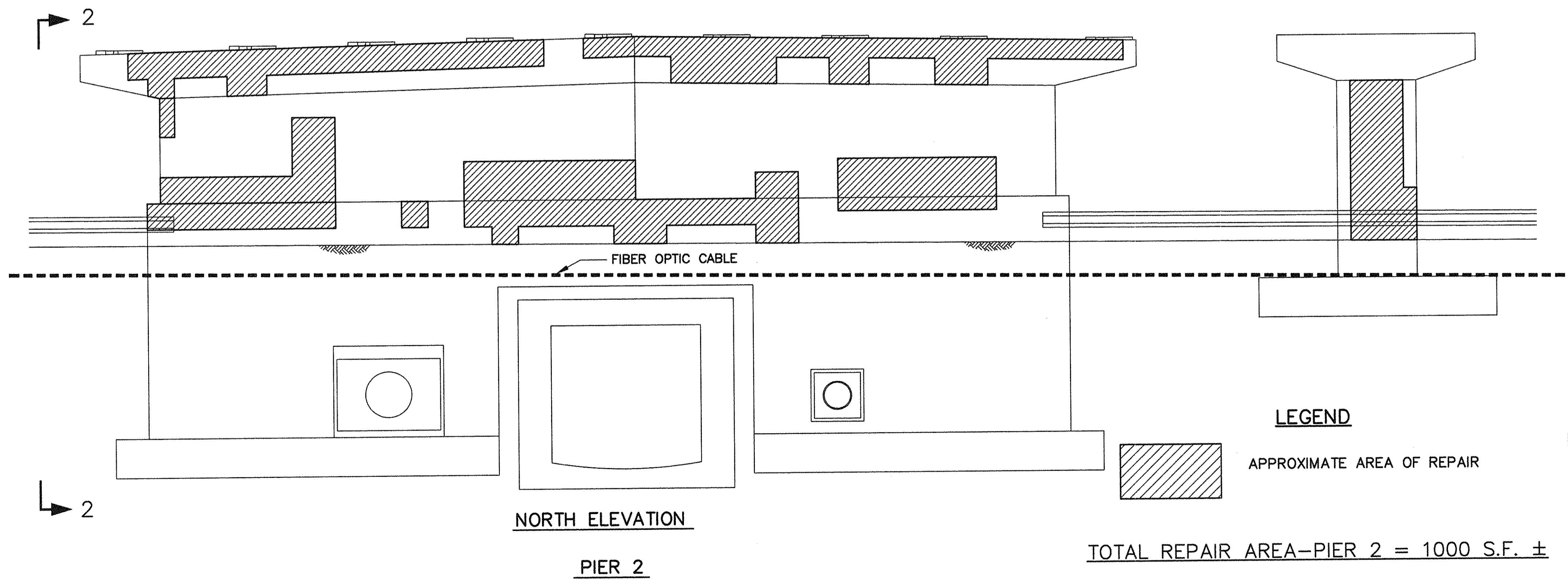
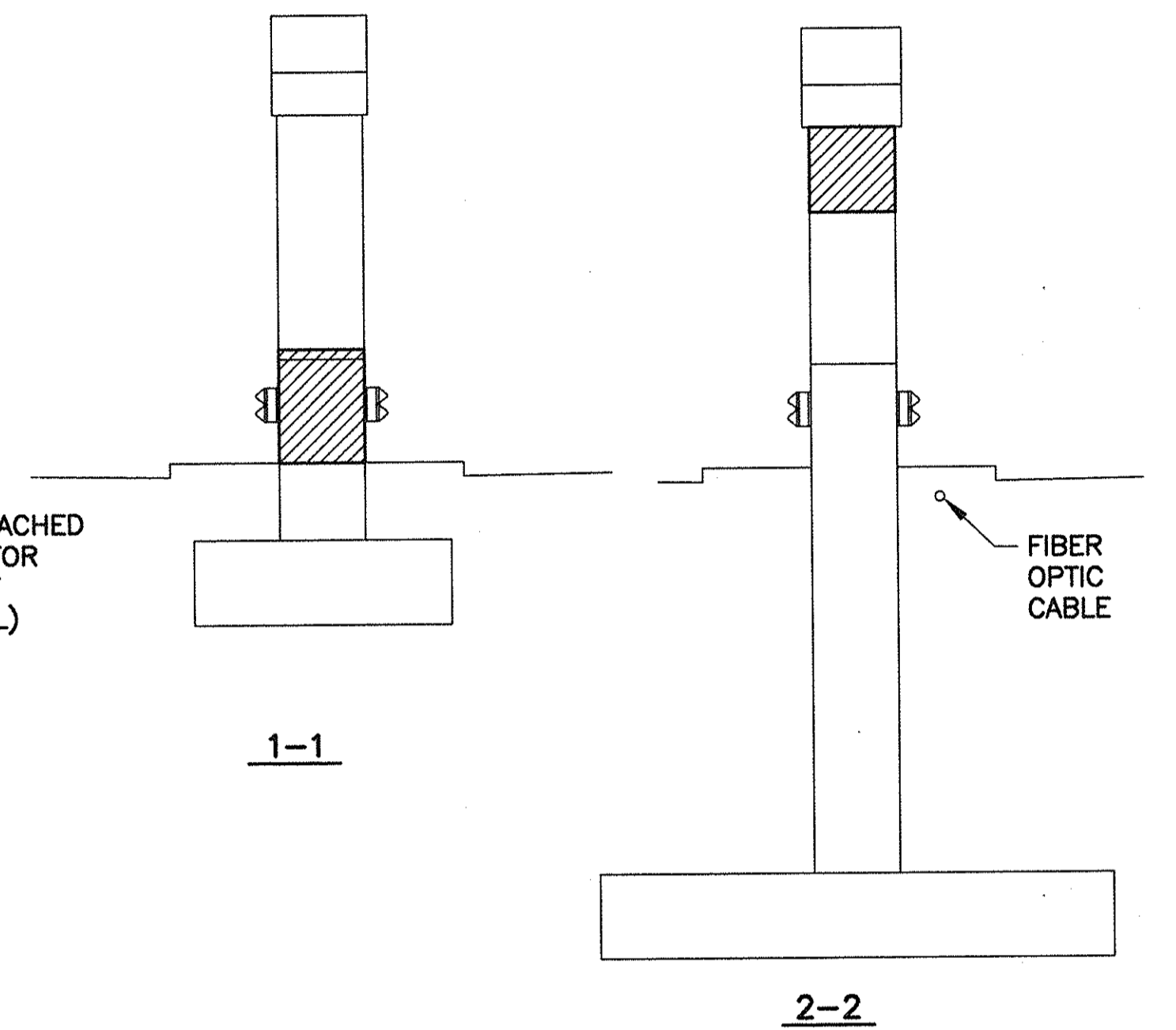
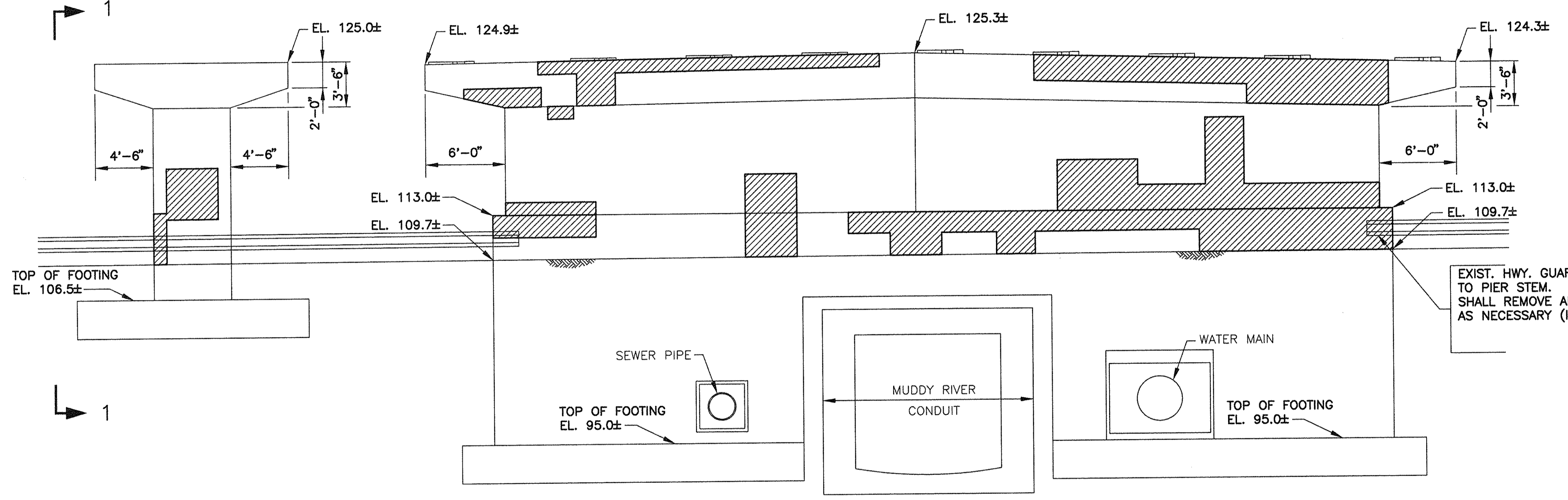
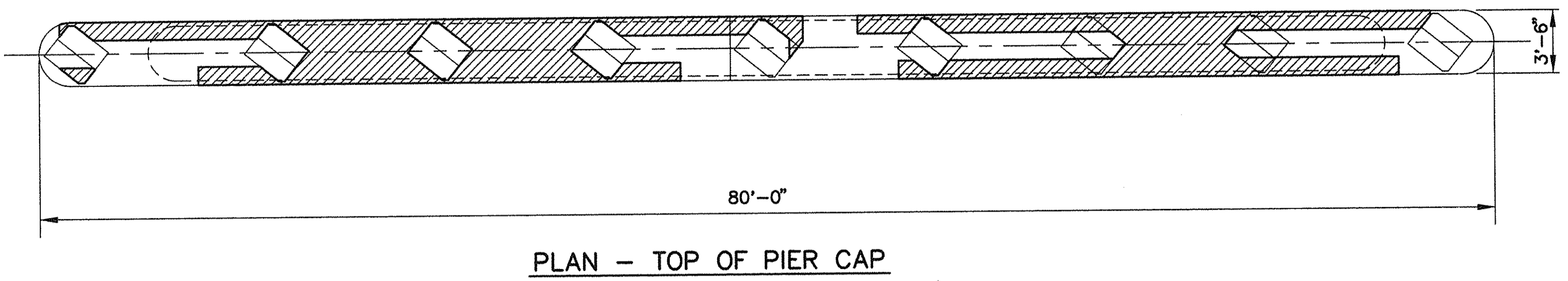
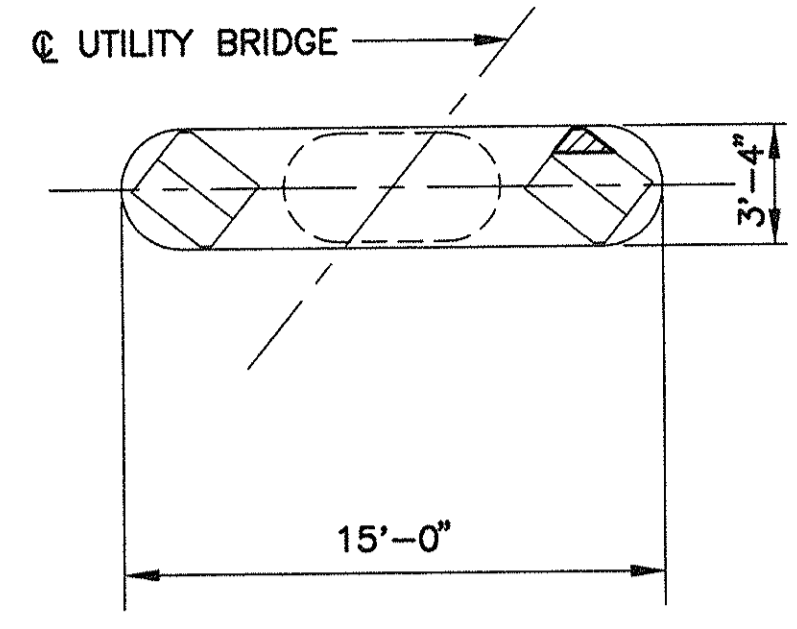
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA-PIER 1 = 500 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 132.33	
STR. S-51, BROOKLINE AVENUE-PIER 1	
Scale: 3/16"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 20

DESIGNED:	L.S.	3/97			
DRAWN:	D.M.	3/97			
CHECKED:					
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.



TOTAL REPAIR AREA-PIER 2 = 1000 S.F. ±

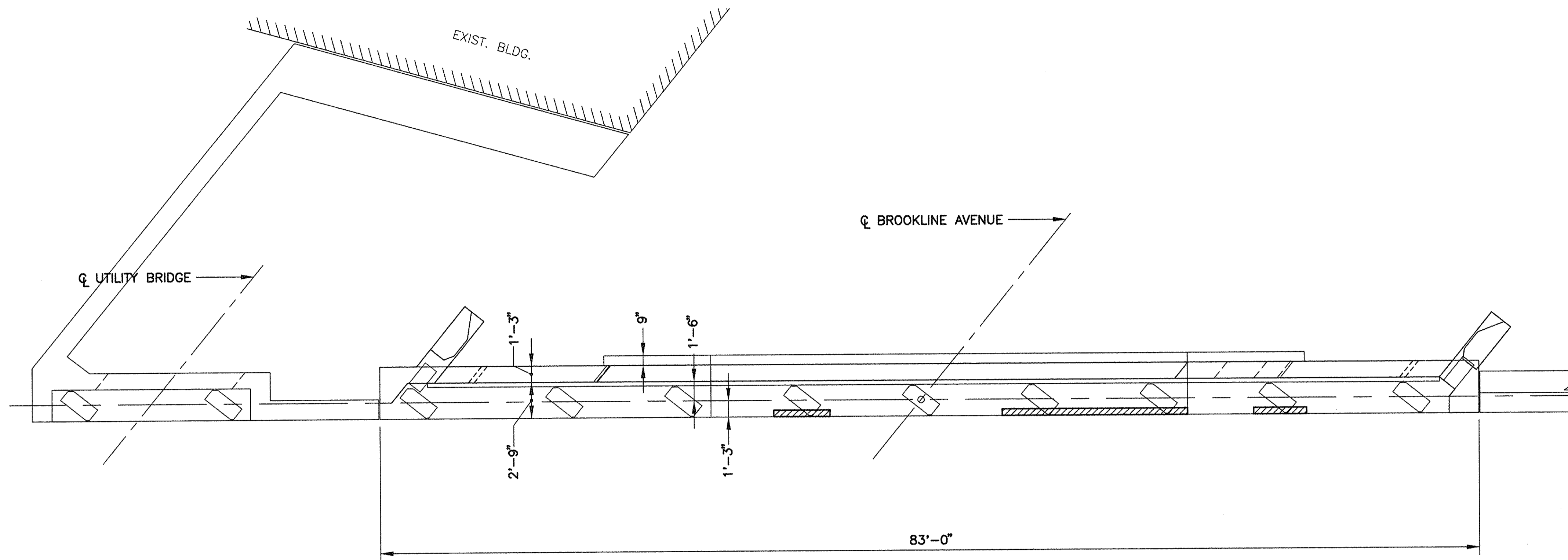
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

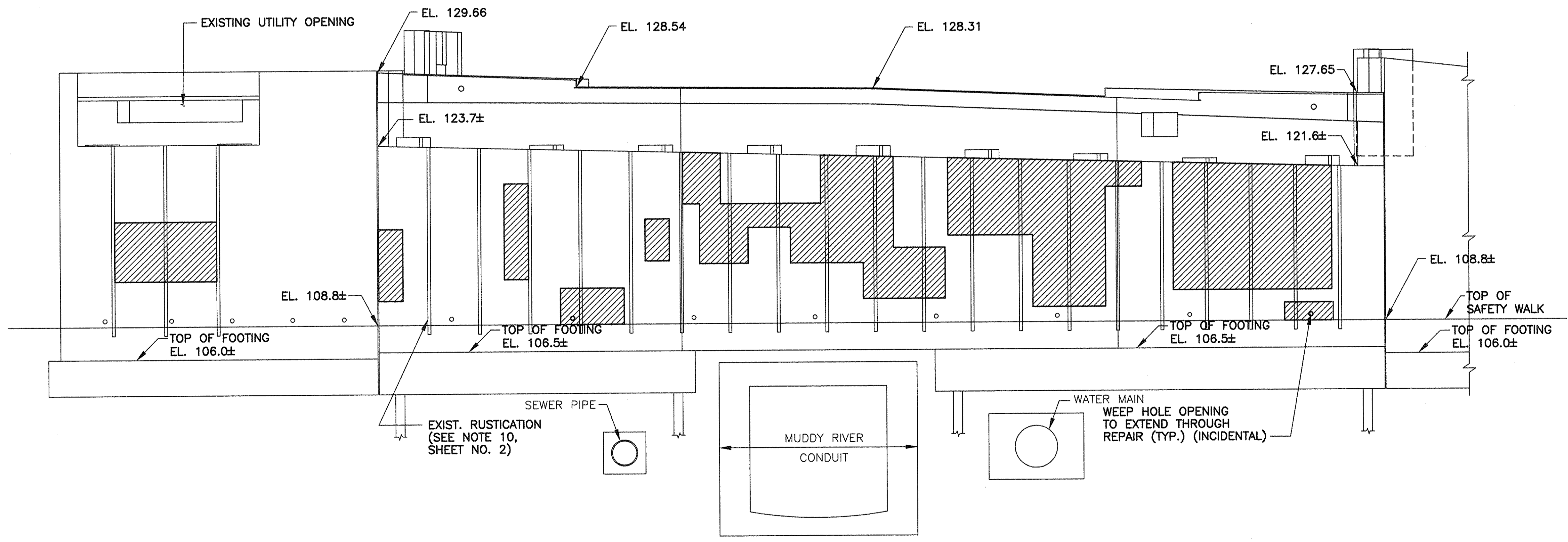
MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE
 SUBSTRUCTURE CONCRETE REPAIR
 MILE 132.33
 STR. S-51, BROOKLINE AVENUE-PIER 2

Scale: 3/16"=1'-0" Contract No. 973-111

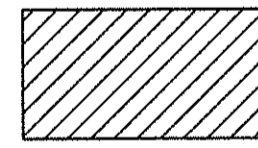
MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. 21



PLAN

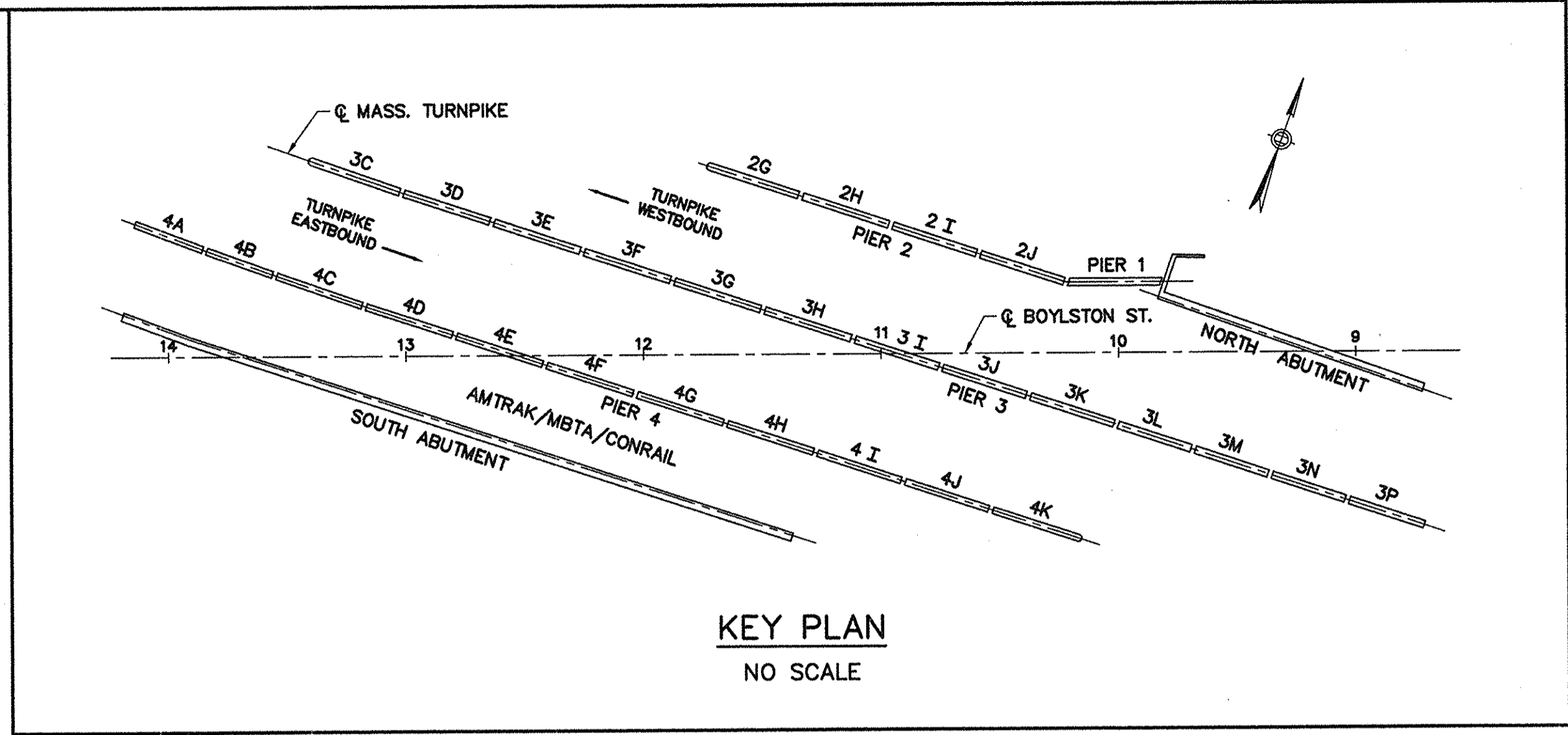


ELEVATION
NORTH ABUTMENT

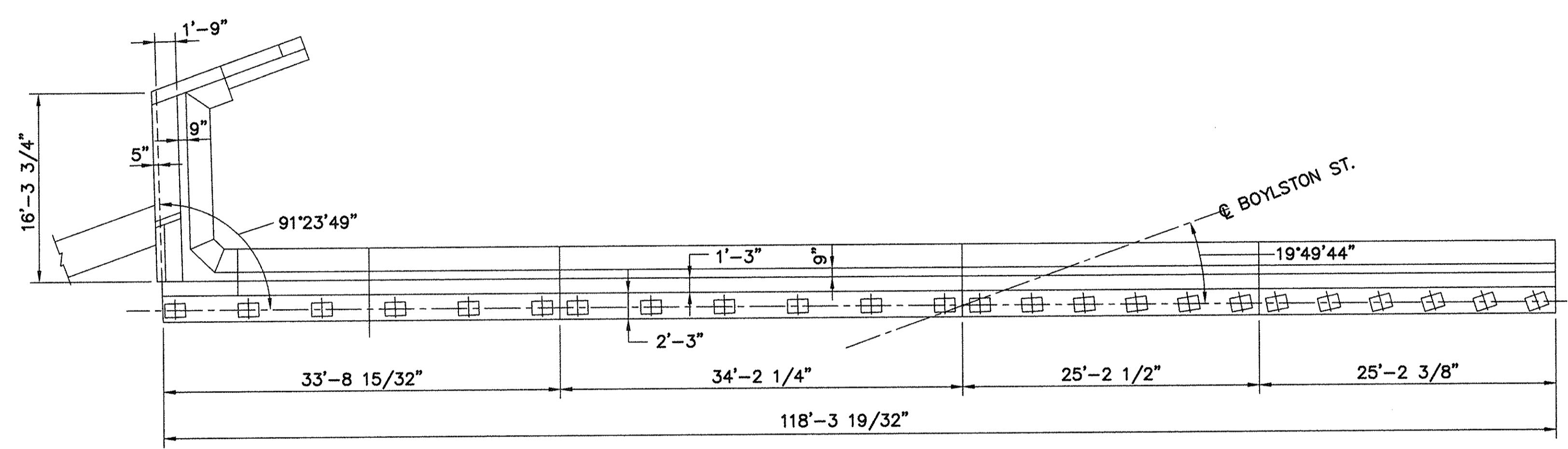
LEGEND
 APPROXIMATE AREA OF REPAIR
 TOTAL REPAIR AREA-N. ABUT. = 500 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

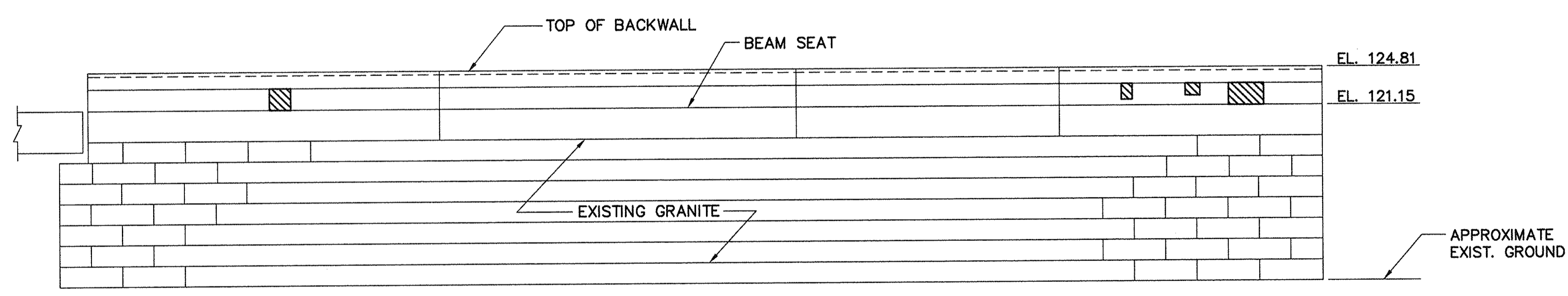
MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE
 SUBSTRUCTURE CONCRETE REPAIR
 MILE 132.33
 STR. S-51, BROOKLINE AVENUE-N. ABUTMENT
 Scale: 3/16"=1'-0" Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY
 Sheet No. 22



KEY PLAN
NO SCALE



PLAN



ELEVATION

NORTH ABUTMENT

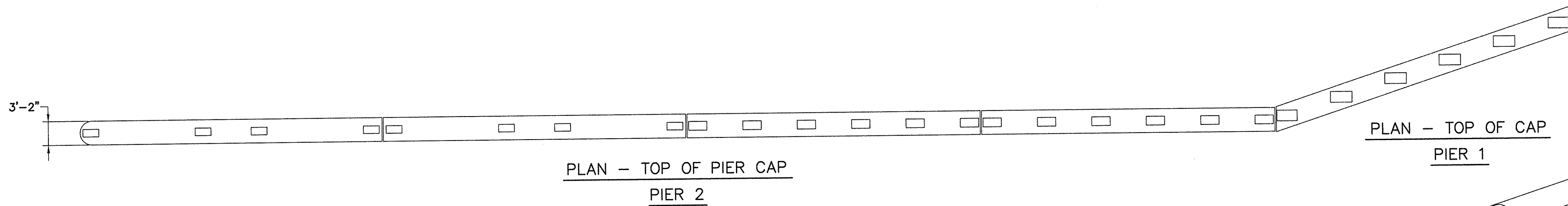


TOTAL REPAIR AREA-N. ABUT. = 40 S.F. ±

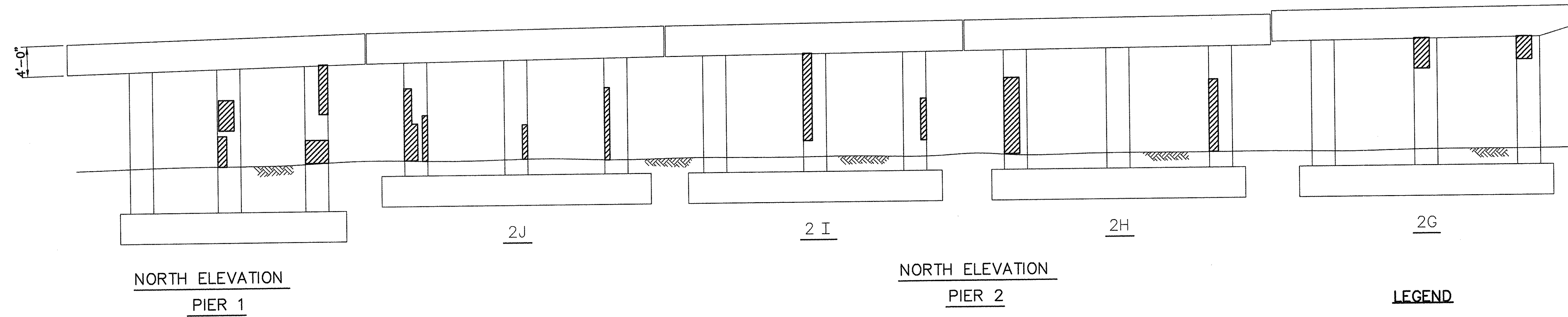
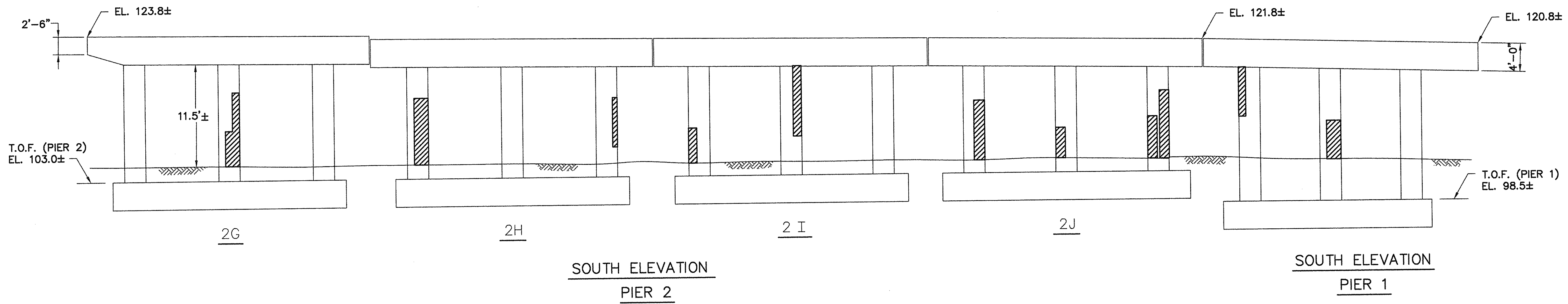
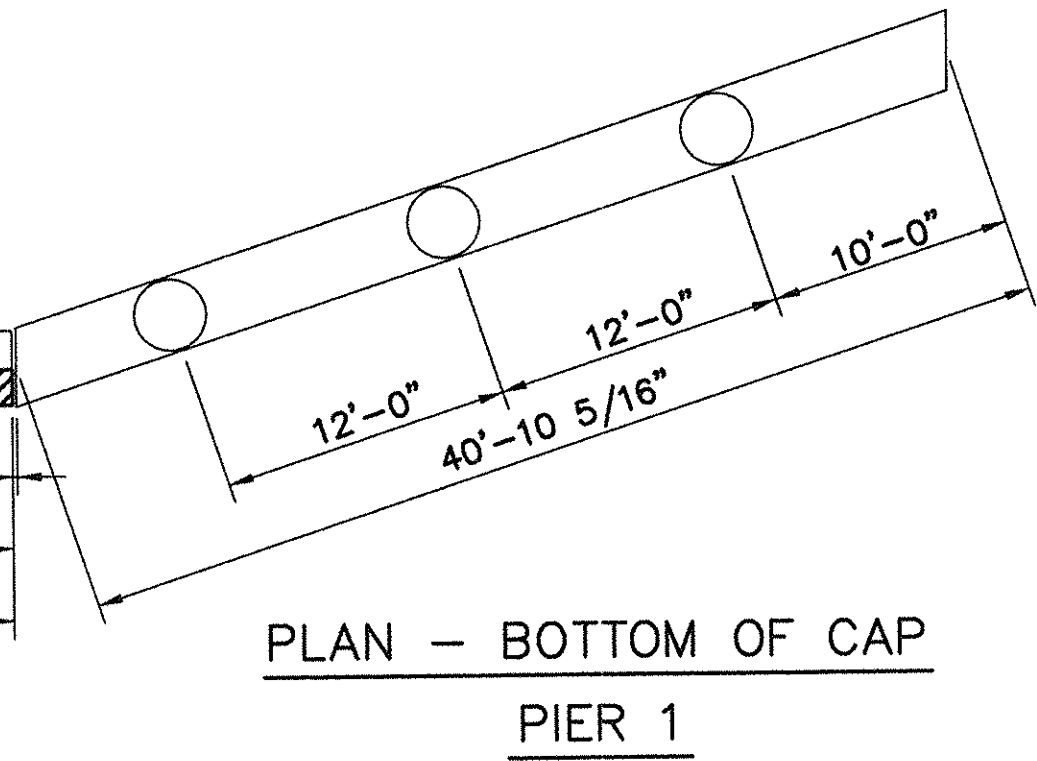
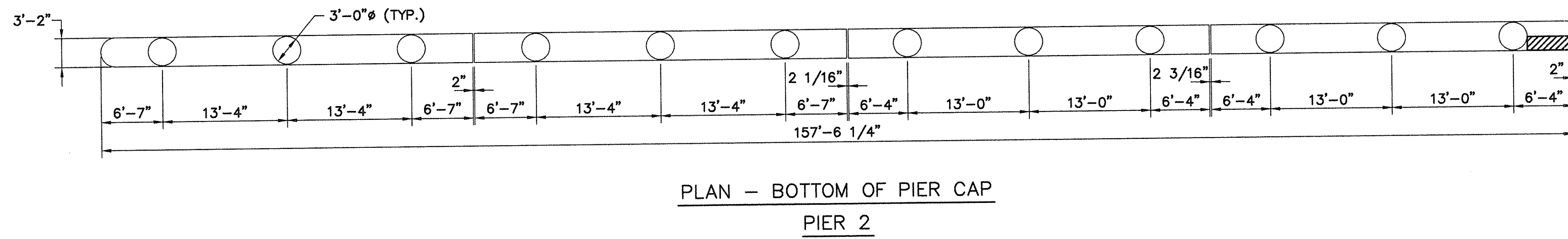
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

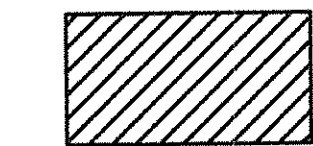
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 132.92	
STR. S-55, BOYLSTON STREET-N. ABUTMENT	
Scale: 1/8" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 23



PLAN - TOP OF CAP
PIER 1



LEGEND



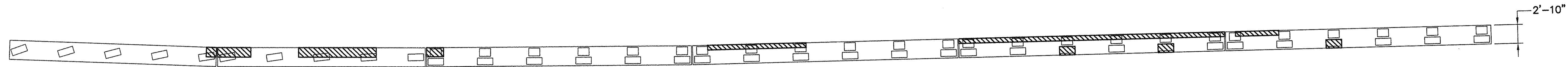
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA-PIER 1 & 2 = 240 S.F. ±

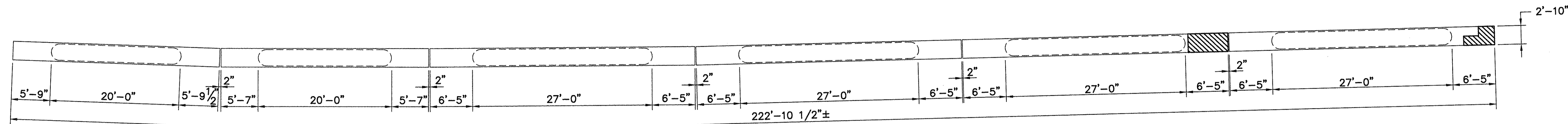
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

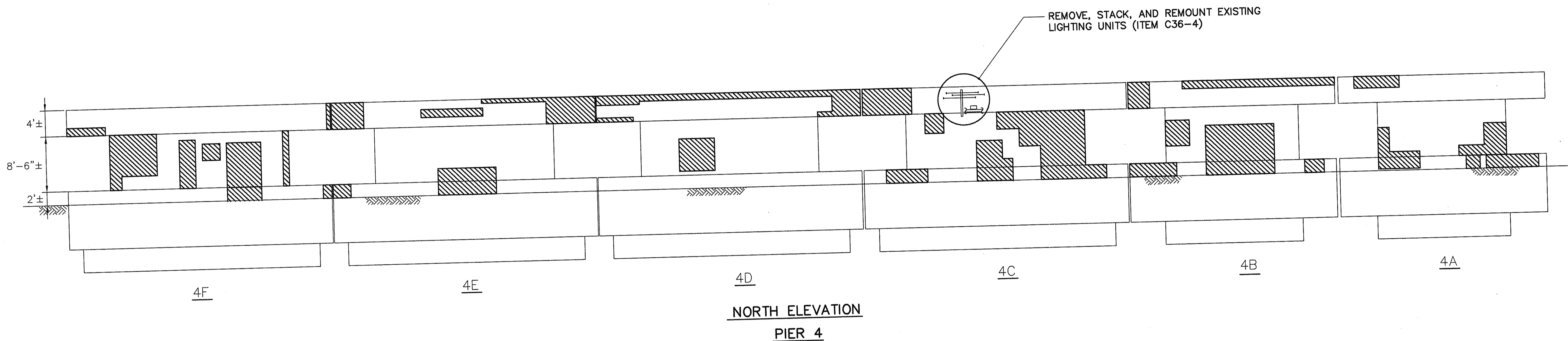
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 132.92	
STR. S-55, BOYLSTON STREET-PIER 1 & 2	
Scale: 1/8" = 1'	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 24



PLAN - TOP OF PIER CAP

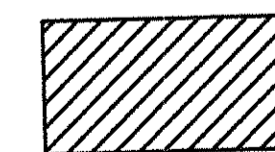


PLAN - BOTTOM OF PIER CAP



NORTH ELEVATION
PIER 4

LEGEND

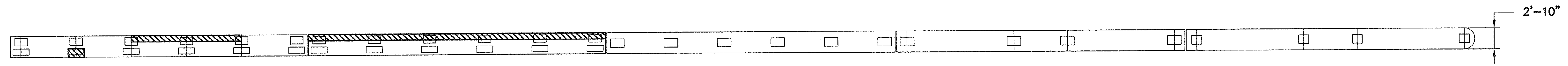


APPROXIMATE AREA OF REPAIR

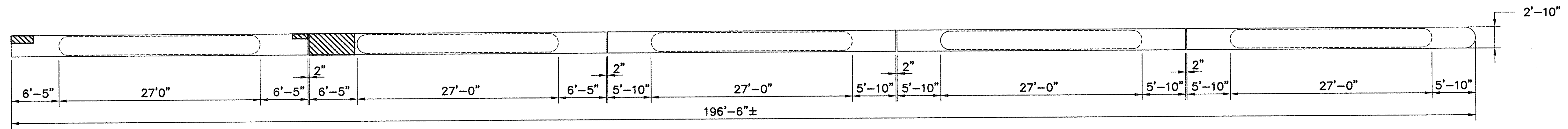
TOTAL REPAIR AREA-PIER 4-PART 1 = 900 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

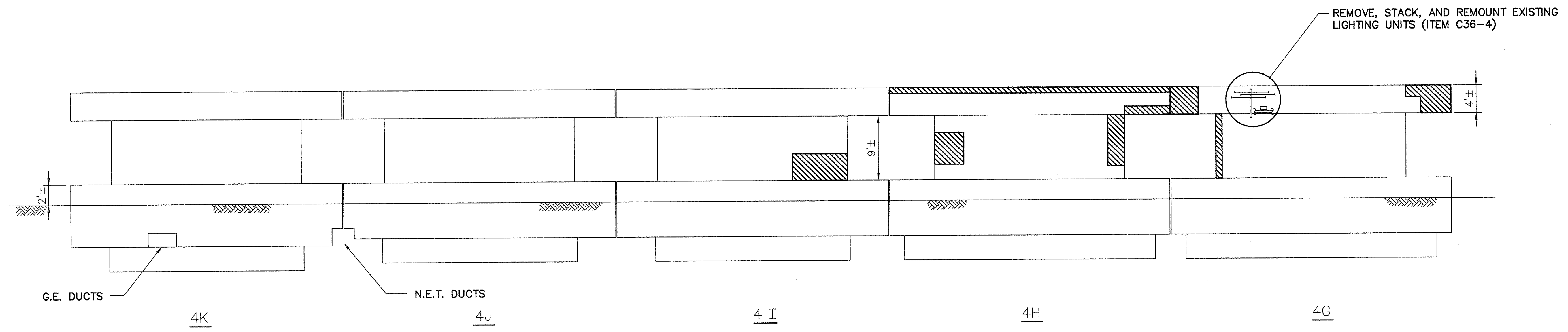
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR MILE 132.92 STR. S-55, BOYLSTON STREET-PIER 4	
Scale: 1/8" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 25



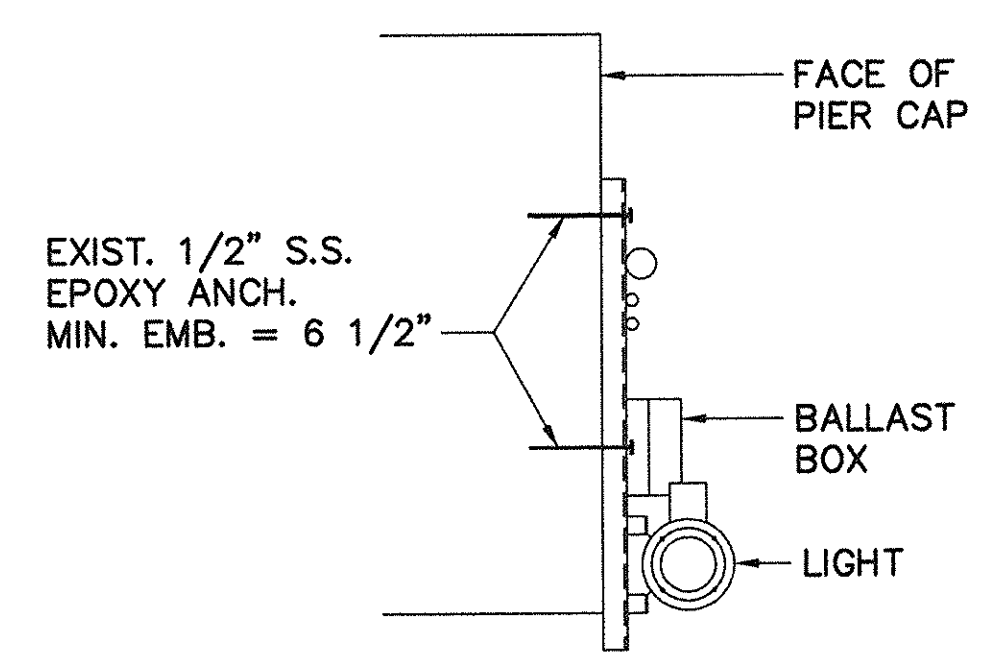
PLAN - TOP OF PIER CAP



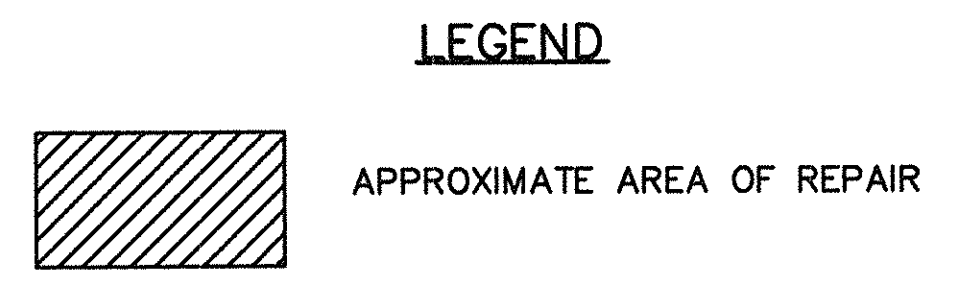
PLAN - BOTTOM OF PIER CAP



NORTH ELEVATION
PIER 4



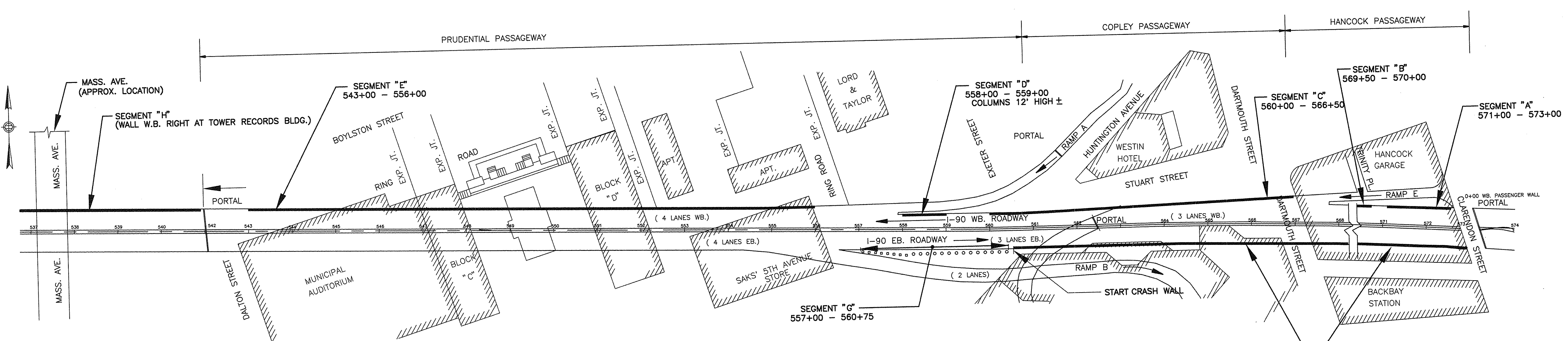
EXIST. LIGHTING SYSTEM
ATTACHMENT DETAIL
NOT TO SCALE



TOTAL REPAIR AREA-PIER 4-PART 2 = 200 S.F. ±
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR MILE 132.92 STR. S-55, BOYLSTON STREET-PIER 4	
Scale: 1/8" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 26



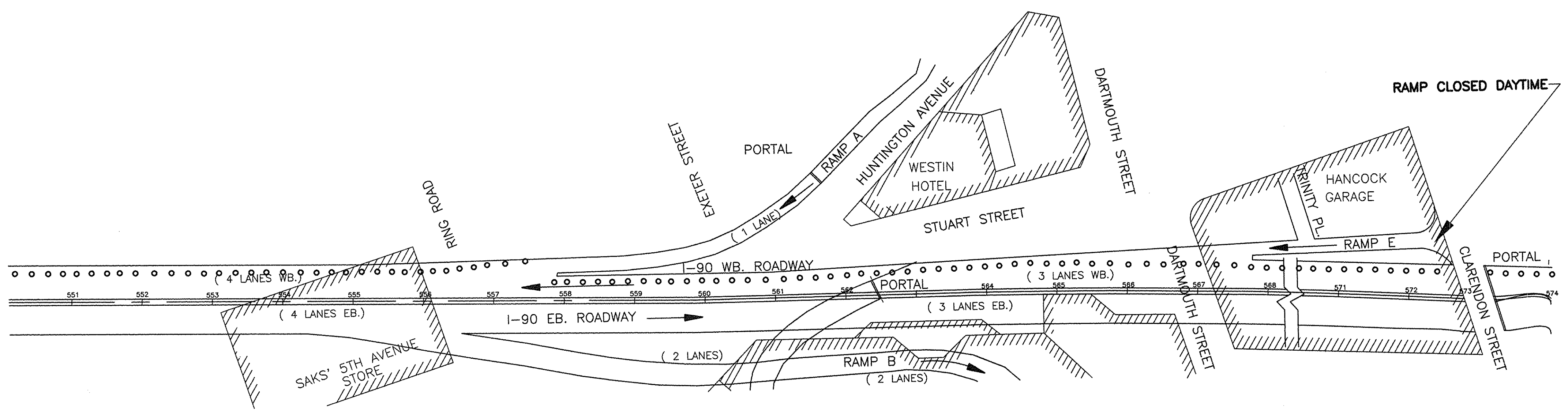
SUMMARY TABLE

WALL SECTION	TUNNEL REPAIR AREA (sf)
OUTSIDE (WB) SLOW LANE, SEGMENT "A"	124
OUTSIDE (WB) SLOW LANE, SEGMENT "B"	41
OUTSIDE (WB) SLOW LANE, SEGMENT "C"	475
OUTSIDE (WB) SLOW LANE, SEGMENT "D"	188
OUTSIDE (WB) SLOW LANE, SEGMENT "E"	176
OUTSIDE (WB) SLOW LANE, SEGMENT "F"	3225
OUTSIDE (WB) SLOW LANE, SEGMENT "G"	1000
OUTSIDE (WB) SLOW LANE, SEGMENT "H"	685
GRAND TOTAL	5914

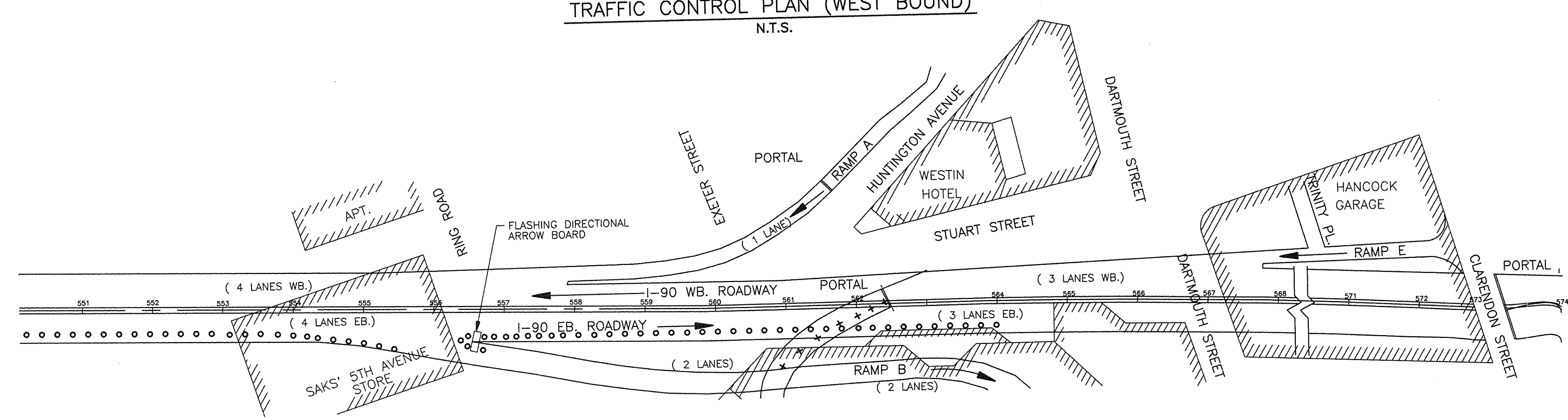
NOTES:

1. TRAFFIC SET UPS FOR EASTBOUND LANE CLOSURES SHALL START AT APPROXIMATELY STA. 524+00.
2. WESTBOUND TRAFFIC SET UPS REQUIRES RAMP "E" (CLARENDON ST.) CLOSURE EXCEPT IN CONJUNCTION WITH RAMP "A" CLOSURES
3. WESTBOUND TRAFFIC SET UPS REQUIRE ADDITIONAL "ROAD WORK AHEAD" SIGNS AT RAMPS C, D & F AT APPROXIMATELY STA 604+00 AND "MERGE LEFT" SIGNS AT THE ARLINGTON ST. RAMP
4. TYPICAL TRAFFIC CONTROL SIGNS WESTBOUND LOW SPEED LANE ARE REQUIRED TO BE WALL MOUNTED SO AS NOT TO IMPEDE TRAFFIC
5. NO ROADWAY LANE CLOSURE SET UPS WILL BE ALLOWED DURING INCLEMENT WEATHER AS DIRECTED BY THE ENGINEER.
6. FLASHING ARROW BOARDS LOCATED OUTSIDE OF TUNNEL SHALL BE SOLAR POWERED WITH BATTERY BACK UP.
7. TYPICAL TRAFFIC CONTROL LAYOUTS AND SIGN DETAILS ARE SHOWN IN SPECIFICATION SECTION G-5 "TRAFFIC CONTROL FACILITIES".
8. THE CONTRACTOR IS REQUIRED TO CONFORM TO ALL DIVISION 1 AND DIVISION 2 REQUIREMENTS PERTAINING TO TRAFFIC CONTROLS.

TRAFFIC CONTROL PLAN (WEST BOUND)
N.T.S.



TRAFFIC CONTROL PLAN (EAST BOUND)
N.T.S.

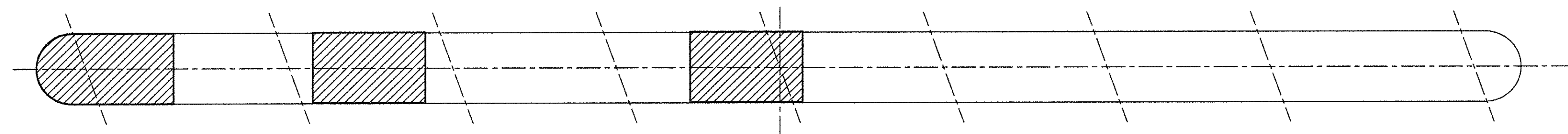


LEGEND:

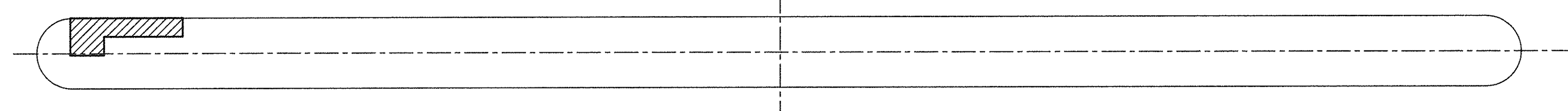
- REPAIR AREA
- ONE LANE CLOSURE, CONES AT 40' SPACING.

NO.	REVISION	BY	DATE	IN CHARGE OF P.C.
		DESIGNED:	B.R.	3/97
		DRAWN:	B.R.	3/97
		CHECKED:		

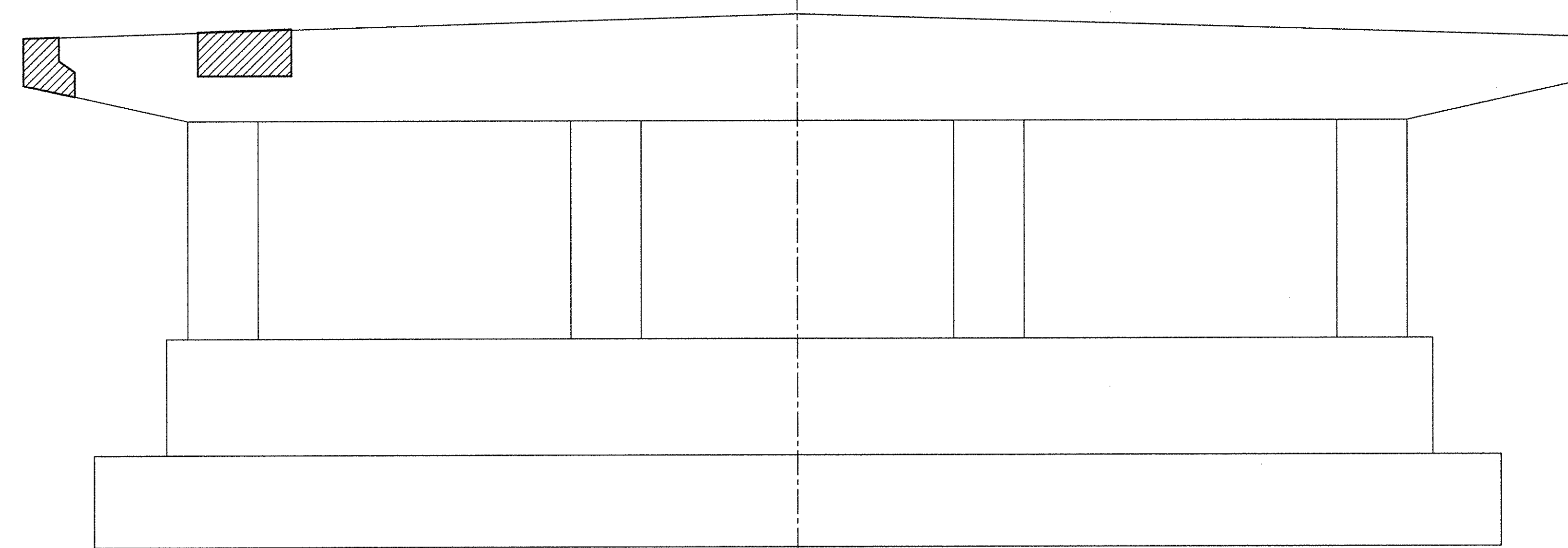
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 SUBSTRUCTURE CONCRETE REPAIR
 MILE 133.20
 PRUDENTIAL PASSAGEWAYS
 Scale: NOT TO SCALE Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. 27



PLAN - TOP OF PIER CAP

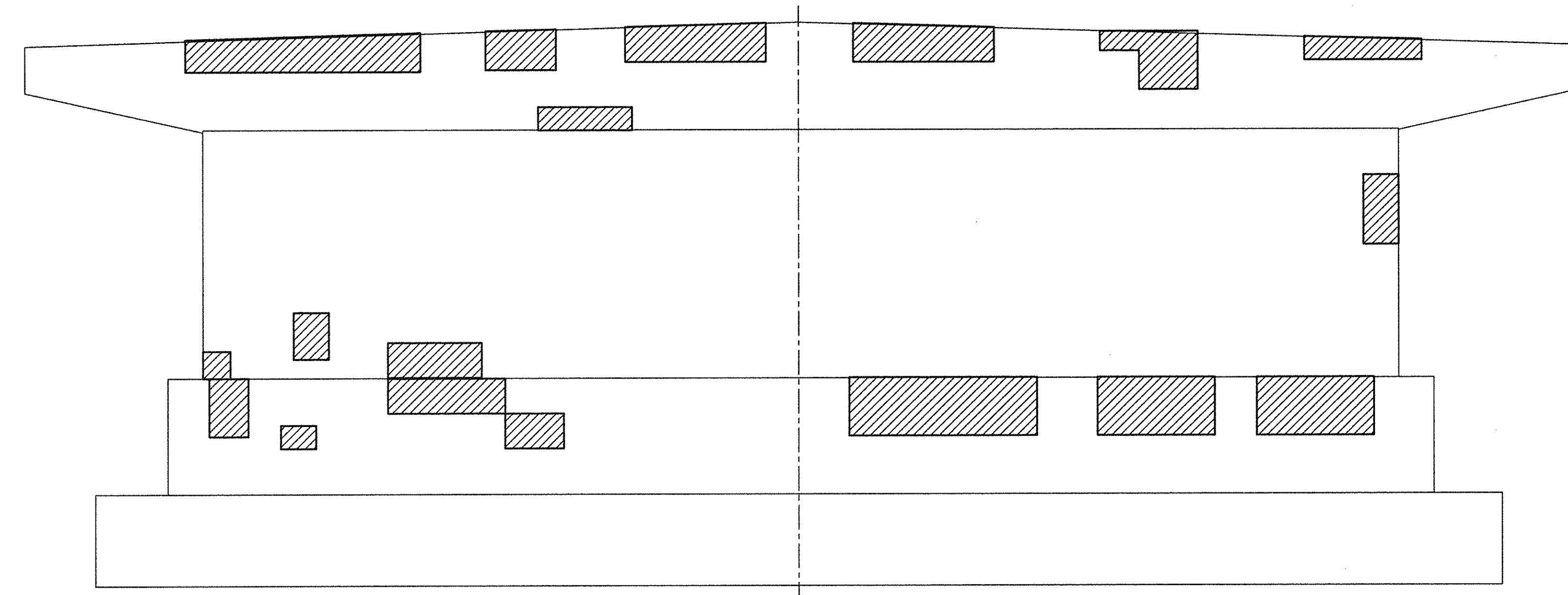


PLAN - BOTTOM OF PIER CAP
PIER C



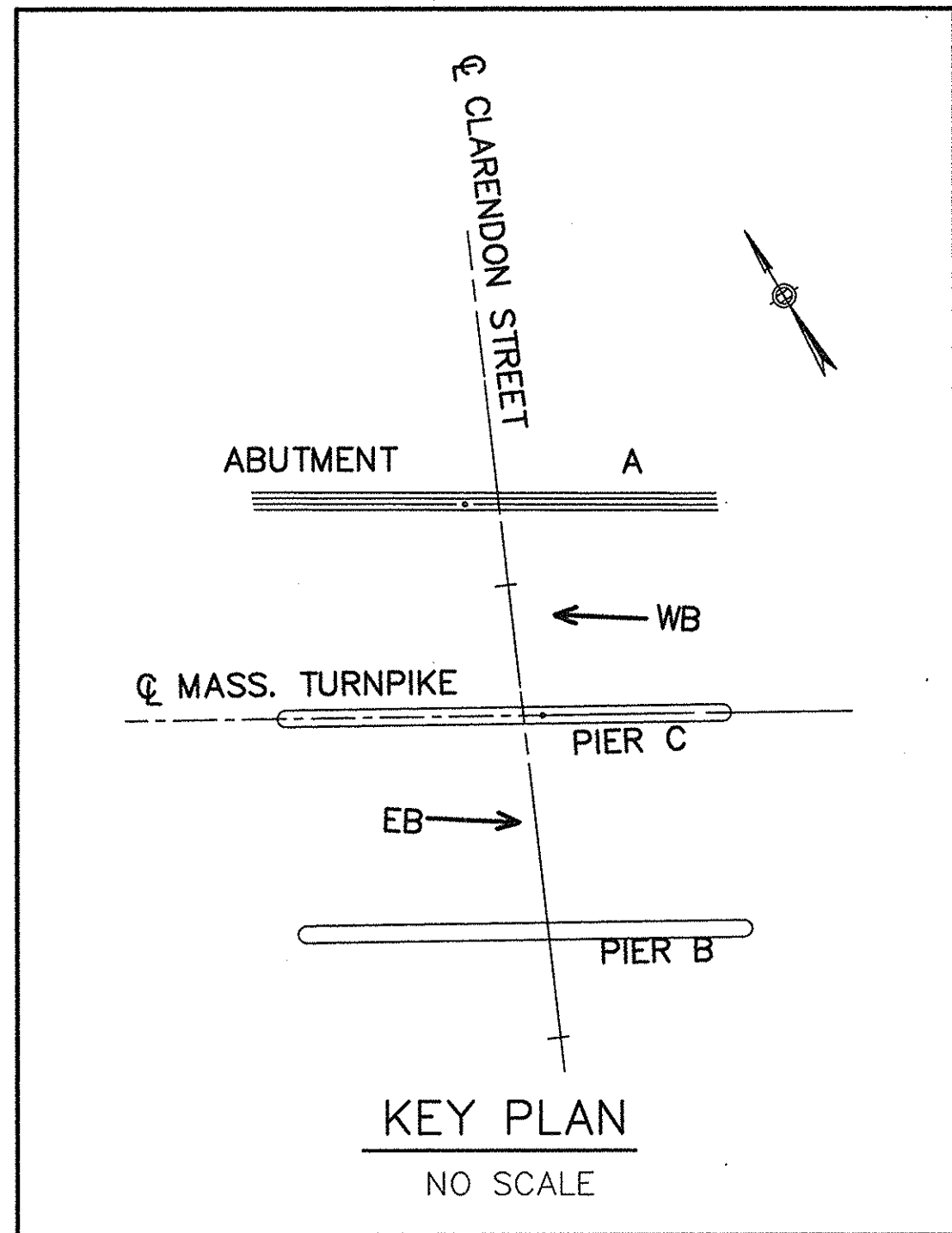
SOUTH ELEVATION

PIER C



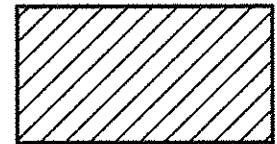
NORTH ELEVATION

PIER B



KEY PLAN
NO SCALE

LEGEND



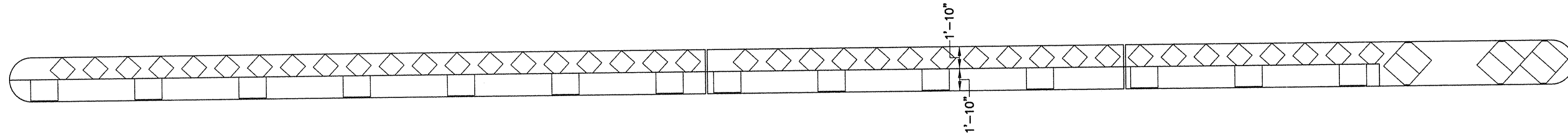
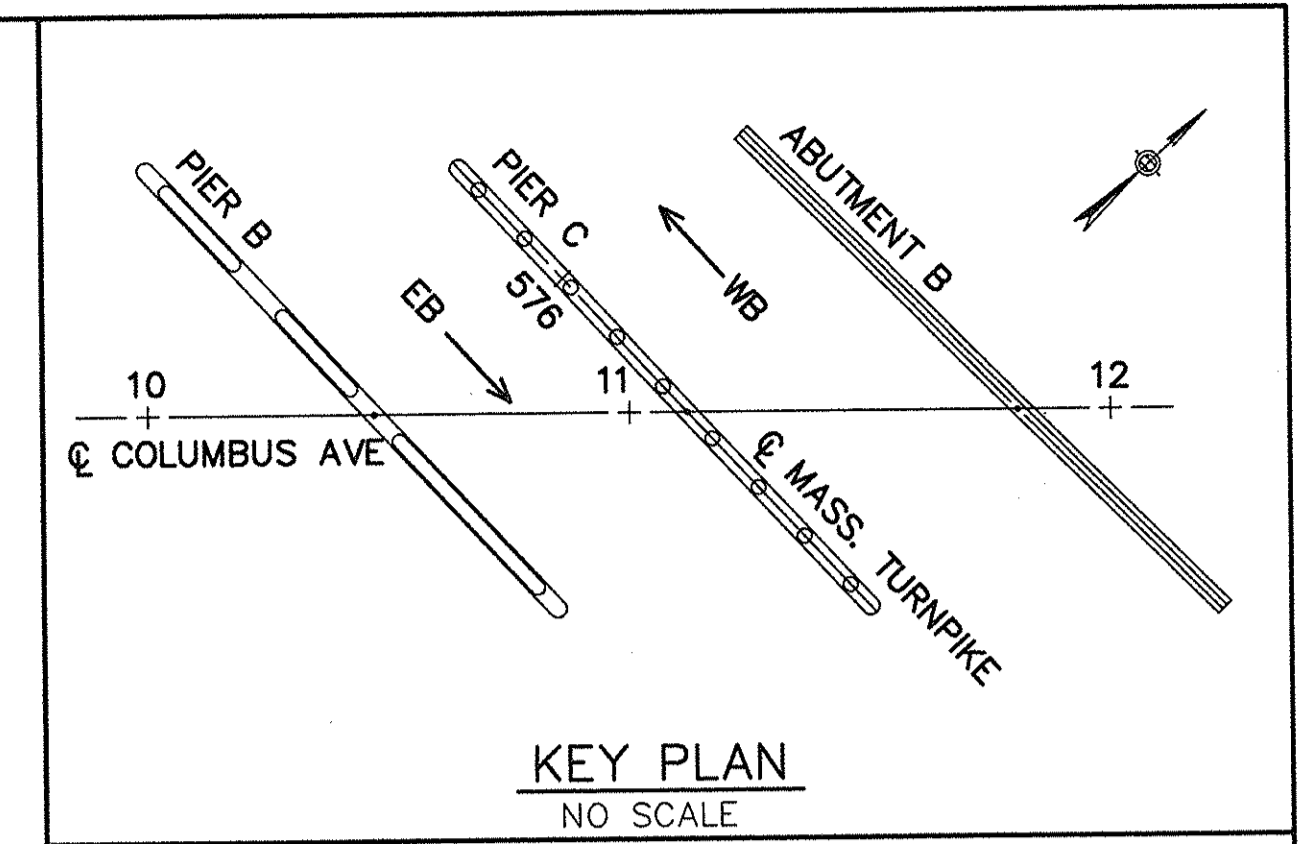
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA-PIER B = 140 S.F. ±
TOTAL REPAIR AREA-PIER C = 90 S.F. ±

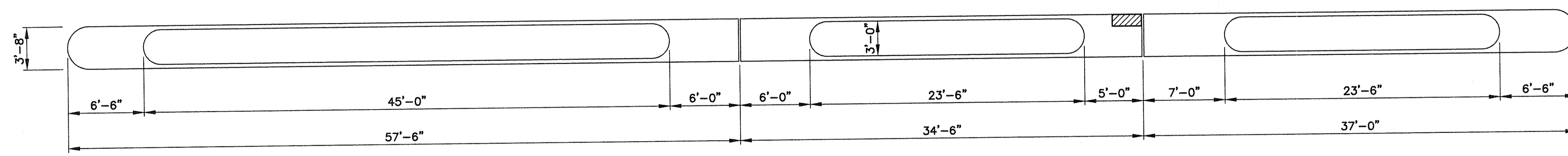
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

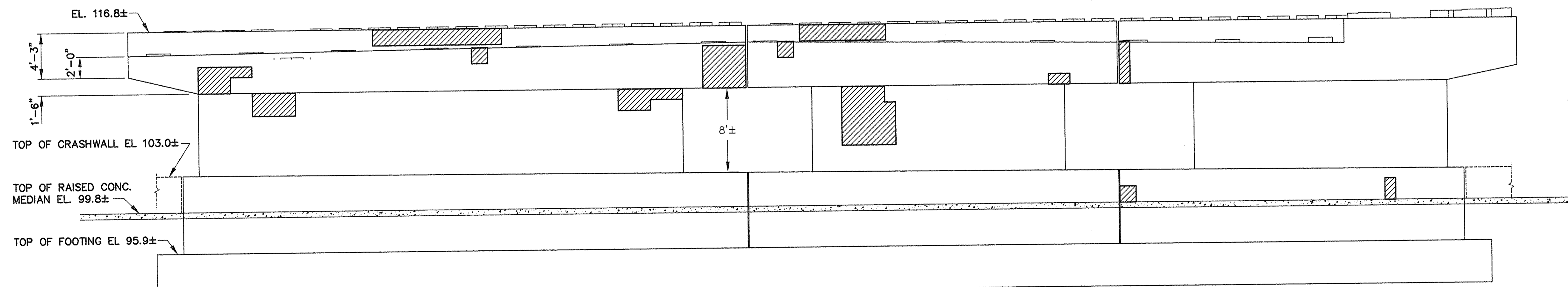
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 133.56	
STR. 71, CLARENDON STREET-PIER B & C	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 28



PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP



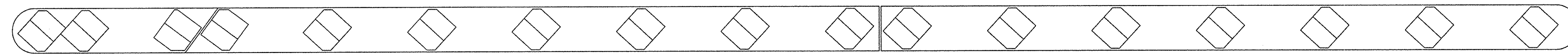
NORTH ELEVATION
PIER B

LEGEND
 APPROXIMATE AREA OF REPAIR

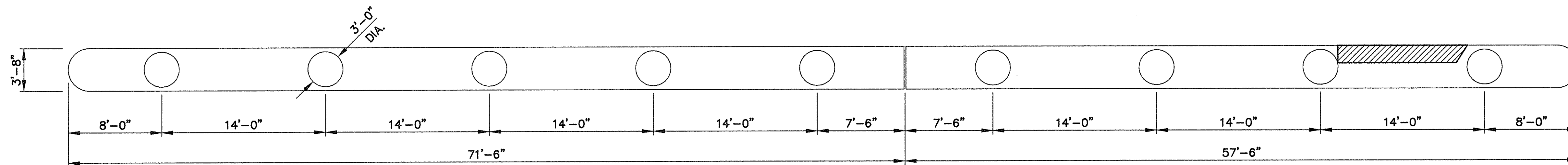
TOTAL REPAIR AREA-PIER B = 120 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	L.S.	3/97	
		DRAWN:	D.M.	3/97	
		CHECKED:			

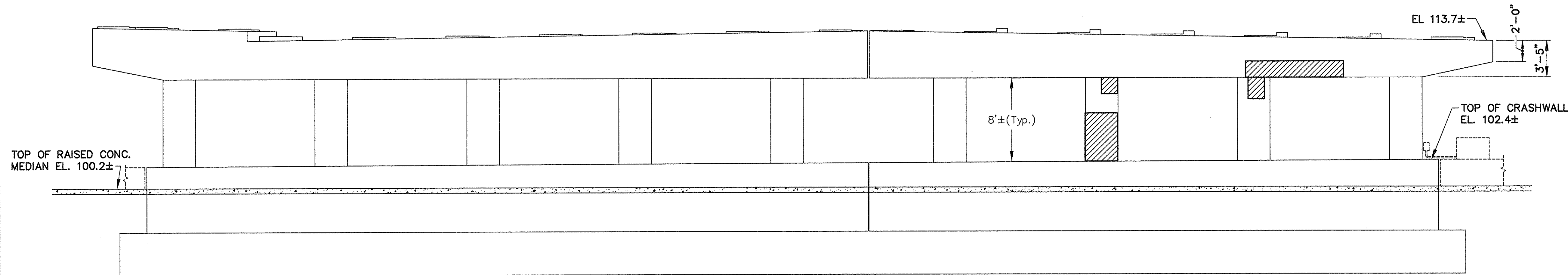
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 133.62	
STR. S-65, COLUMBUS AVENUE-PIER B	
Scale: 3/16"=1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 29



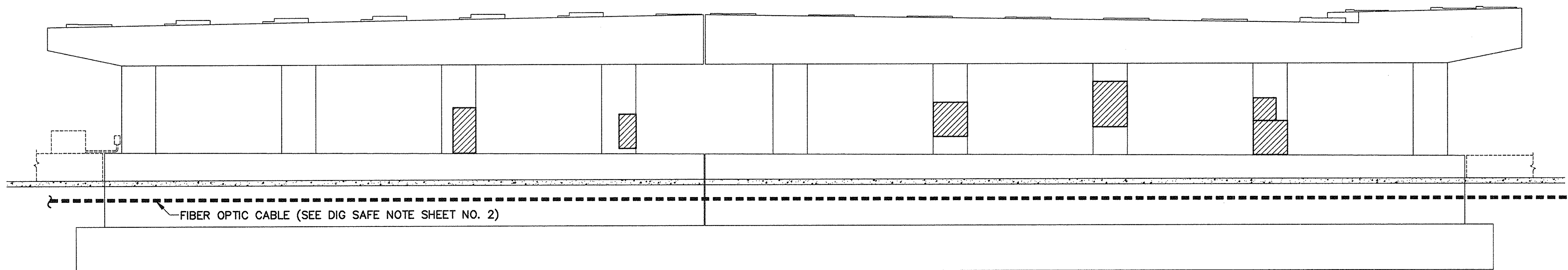
PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP

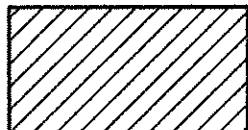


SOUTH ELEVATION




NORTH ELEVATION

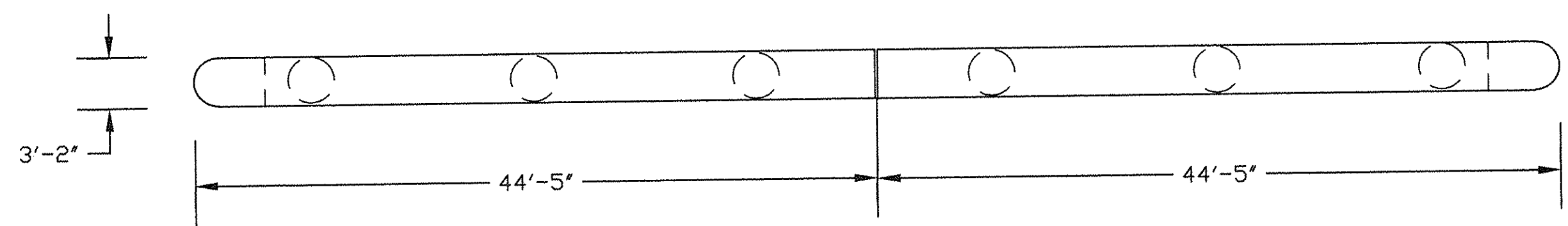
PIER C

LEGEND
 APPROXIMATE AREA OF REPAIR

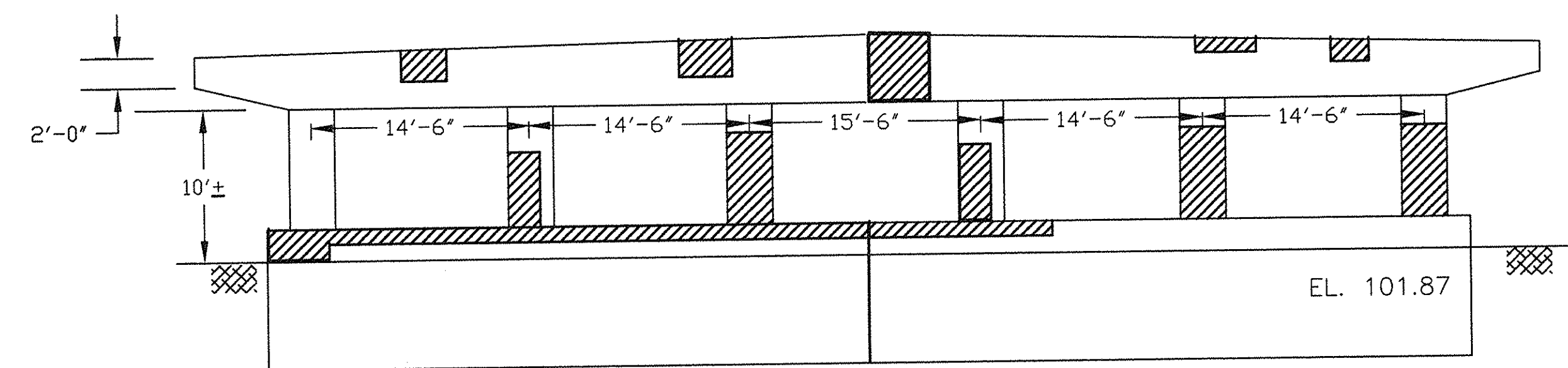
TOTAL REPAIR AREA-PIER C = 90 S.F. ±
 FOR GENERAL NOTES SEE SHEET NO. 2

				DESIGNED:	L.S.	3/97
				DRAWN:	D.M.	3/97
				CHECKED:		
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.	

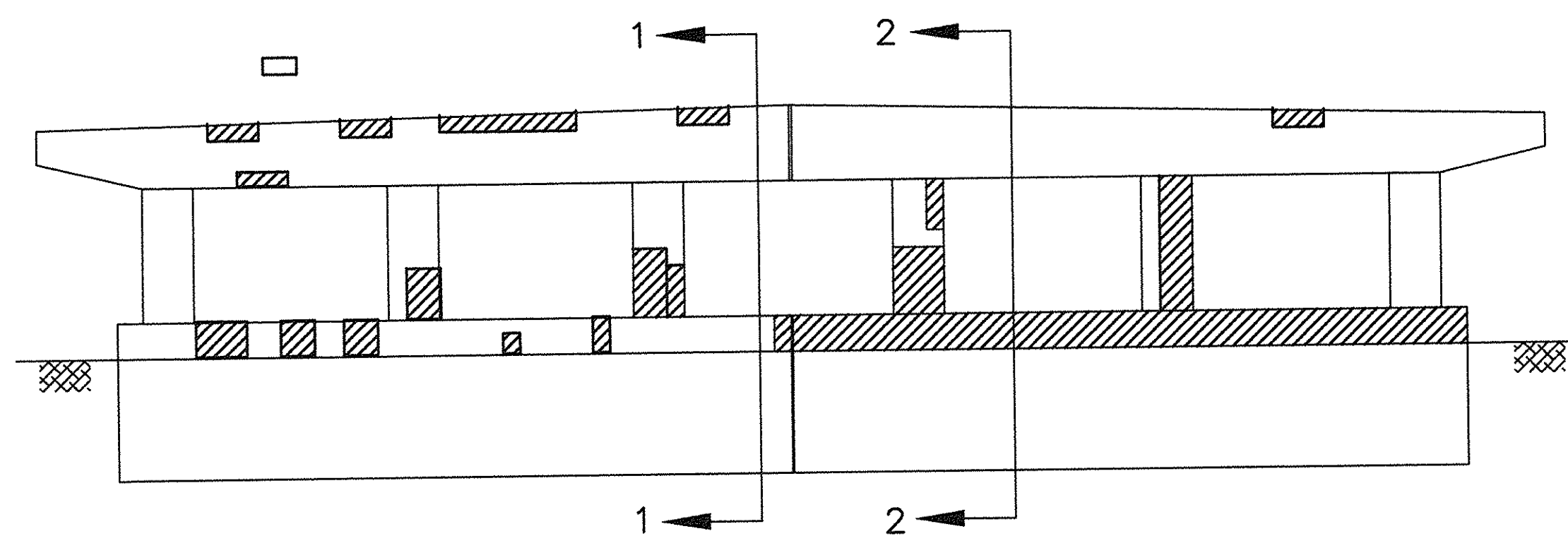
MASSACHUSETTS TURNPIKE AUTHORITY		
MASSACHUSETTS TURNPIKE		
SUBSTRUCTURE CONCRETE REPAIR		
MILE 133.62		
STR. S-65, COLUMBUS AVENUE-PIER C		
Scale:	3/16"=1'-0"	Contract No. 973-111
	MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 30



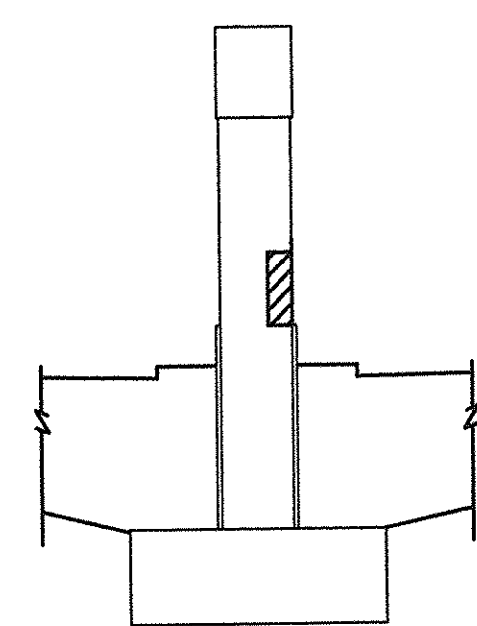
PLAN - BOTTOM OF PIER CAP



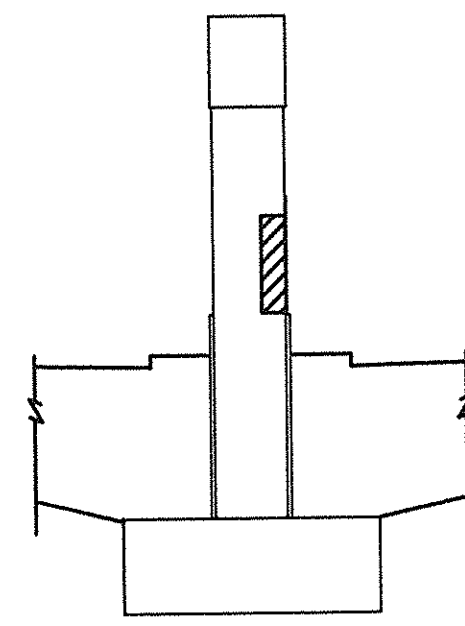
SOUTH ELEVATION



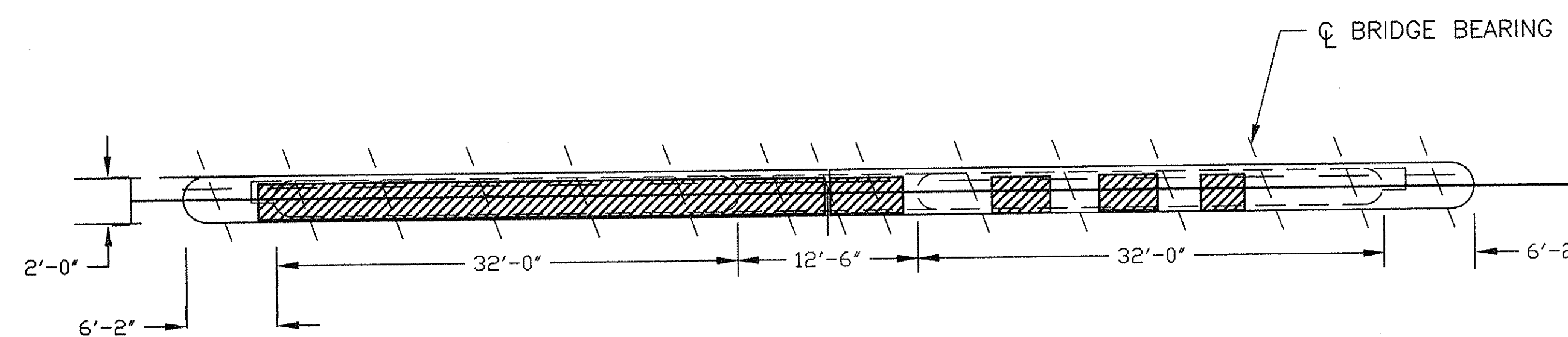
NORTH ELEVATION
PIER C



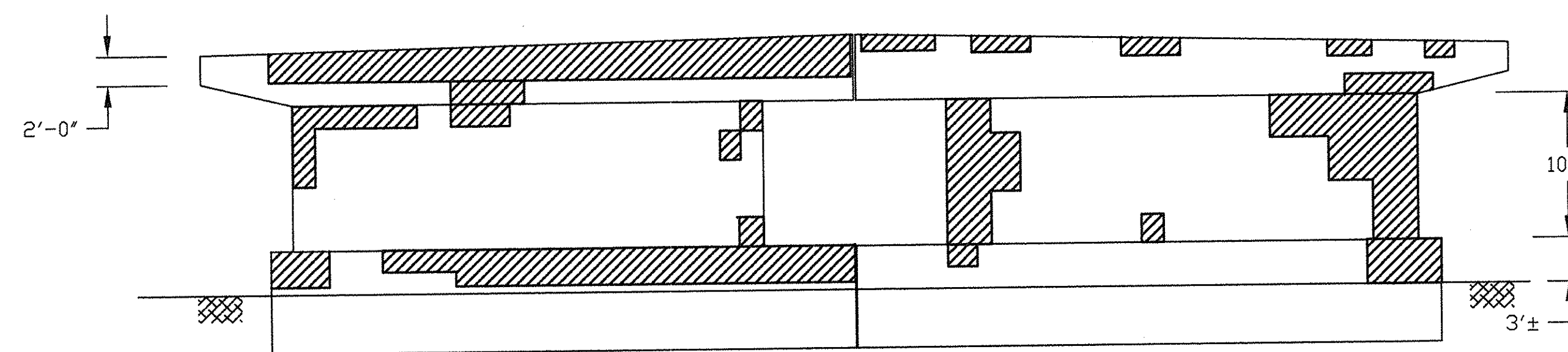
SECTION 1-1



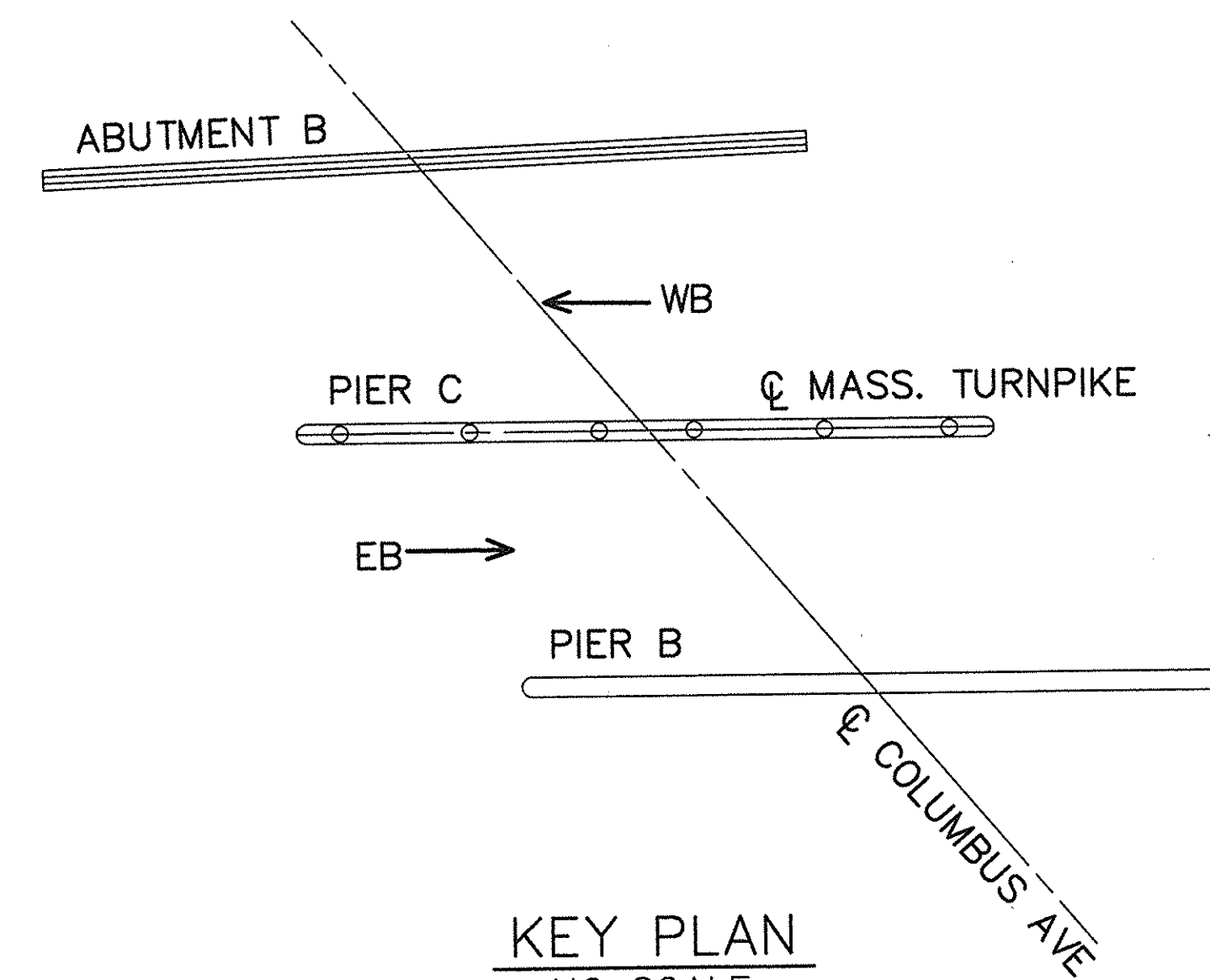
SECTION 2-2



PLAN - TOP OF PIER CAP



NORTH ELEVATION
PIER B



KEY PLAN
NO SCALE

LEGEND

 APPROXIMATE AREA OF REPAIR

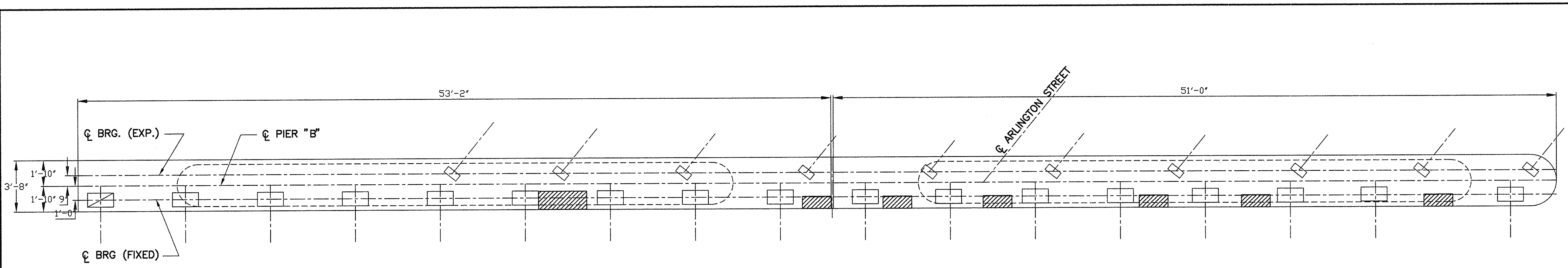
TOTAL REPAIR AREA-PIER B = 480 S.F.

TOTAL REPAIR AREA-PIER C = 390 S.F.

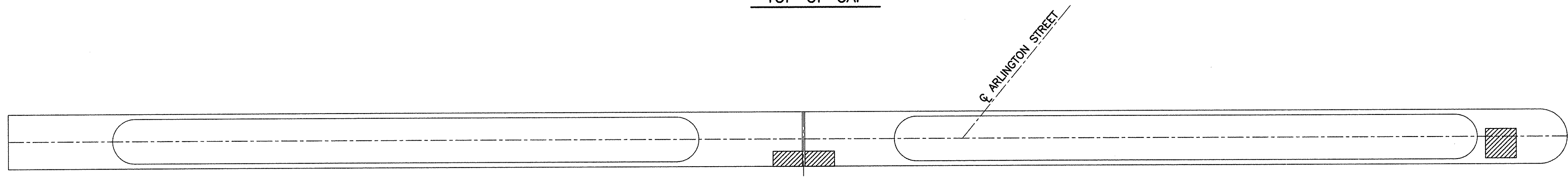
FOR GENERAL NOTES SEE SHEET NO.2

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 133.7	
STR.66, BERKELEY STREET - PIER B & C	
Scale: 1/8" = 1'	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 31

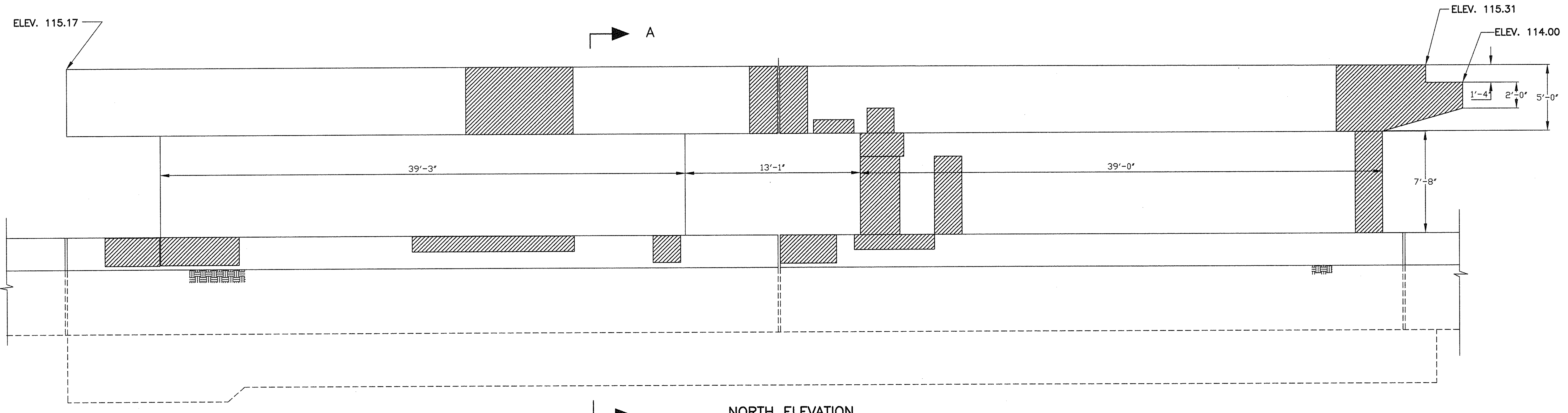
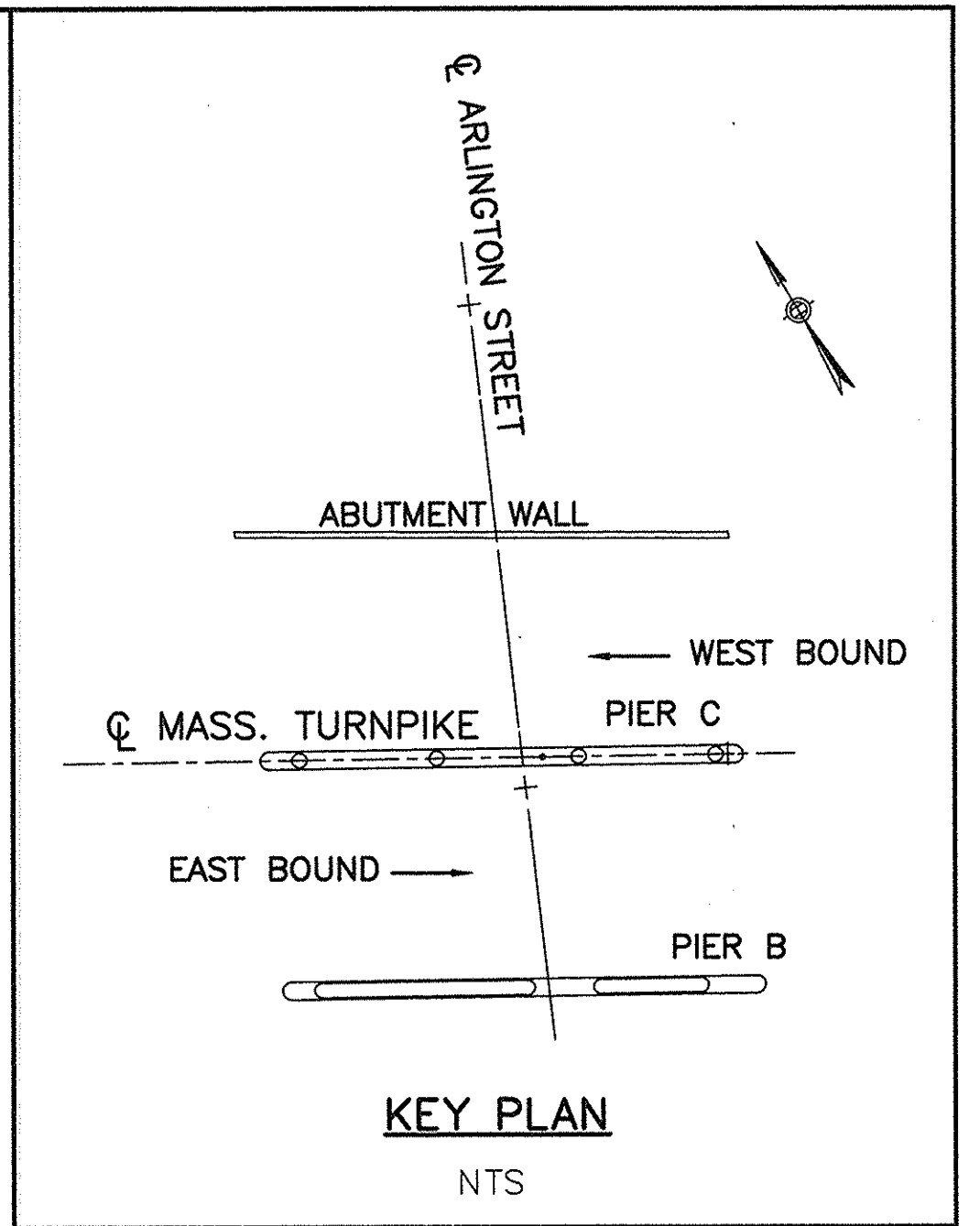
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: L.A.S	3/97	
		DRAWN: L.A.S	3/97	
		CHECKED:		



TOP OF CAP

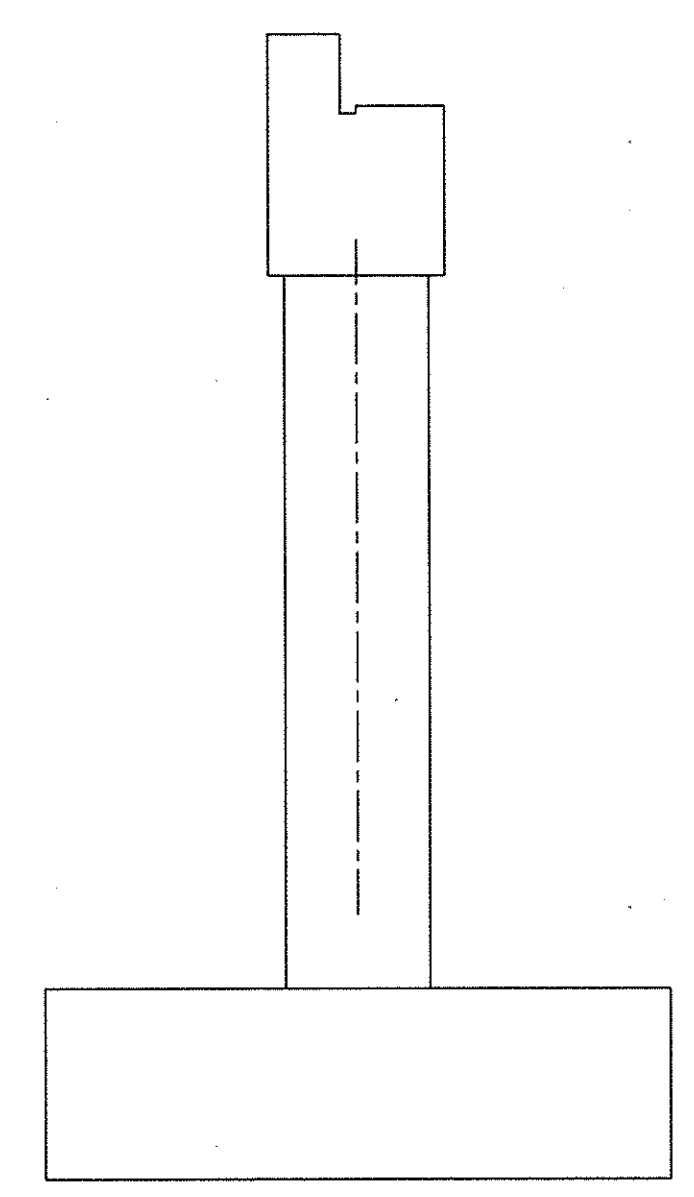


BOTTOM OF CAP



NORTH ELEVATION

PIER B



SECTION A-A

LEGEND

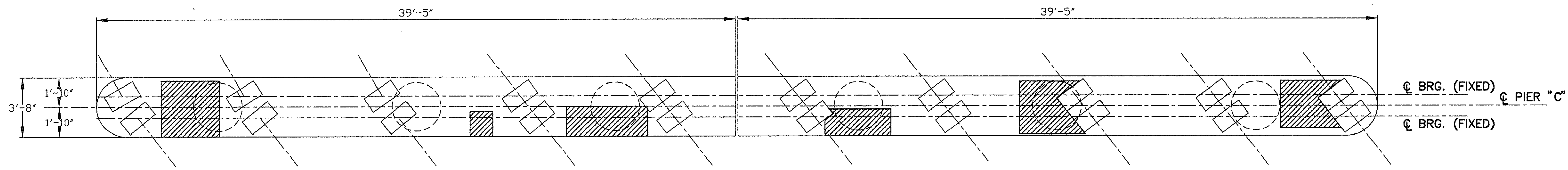
 APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER B = 235 S.F. ±

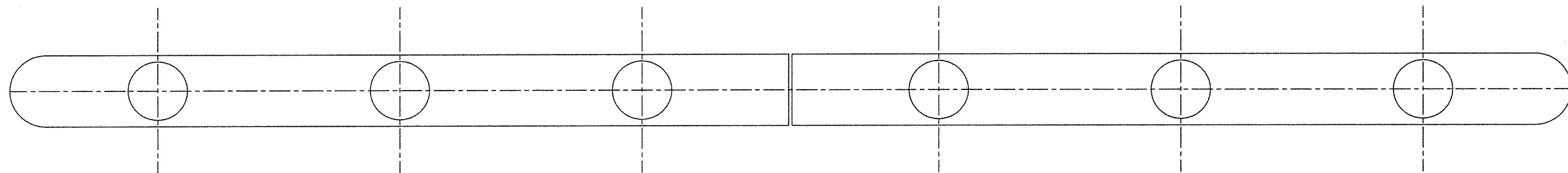
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	2/97	
		DRAWN:	B.R.	2/97	
		CHECKED:			

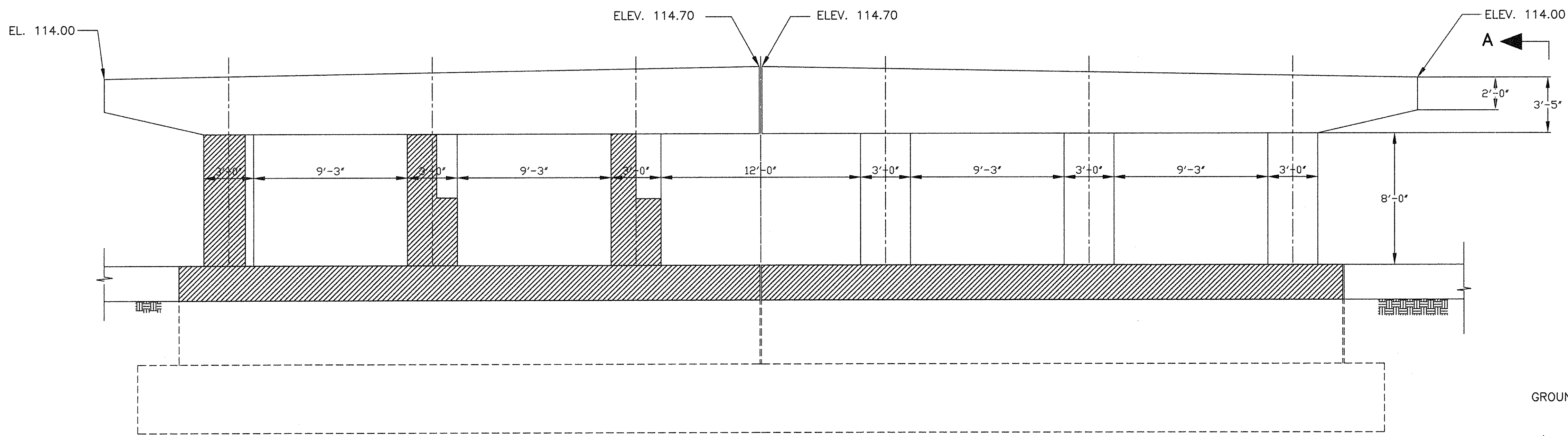
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 133.81	
STR. 67, ARLINGTON STREET-PIER B	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 32



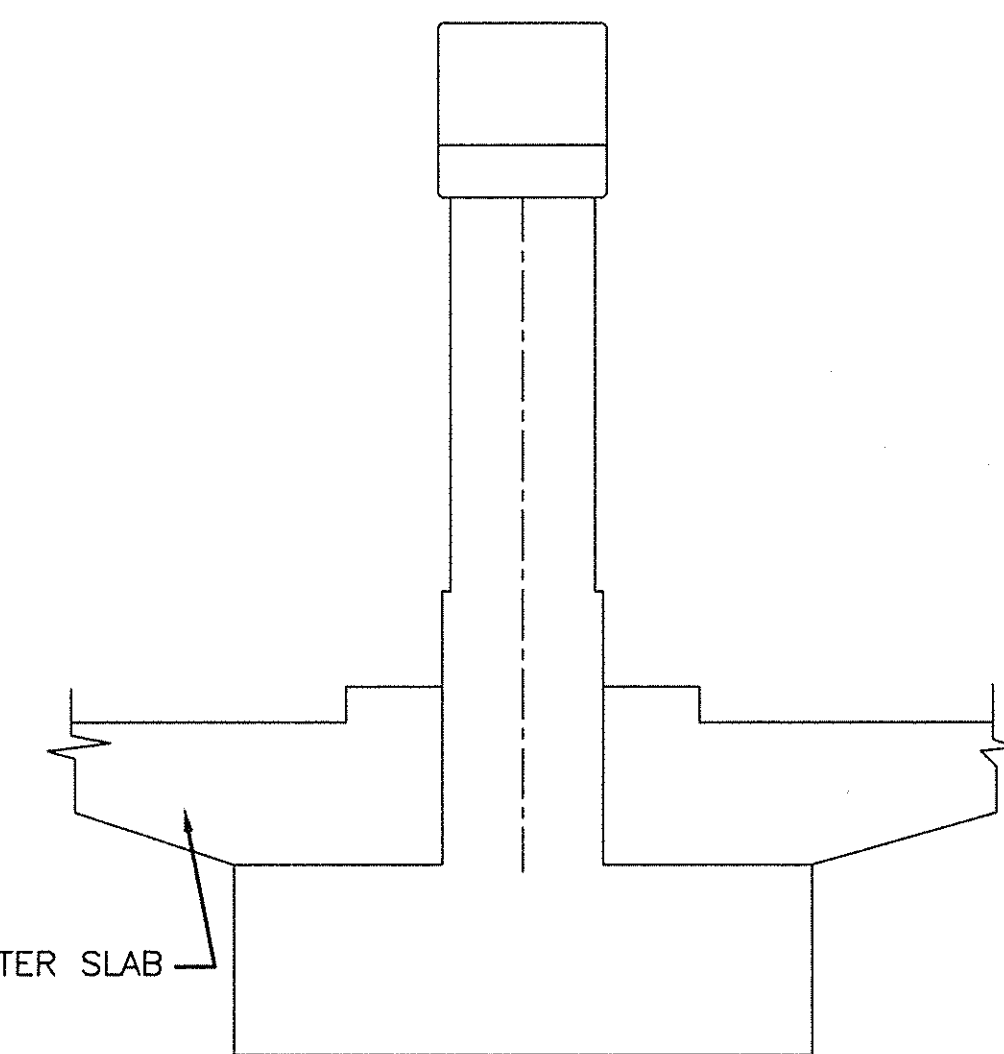
TOP OF CAP



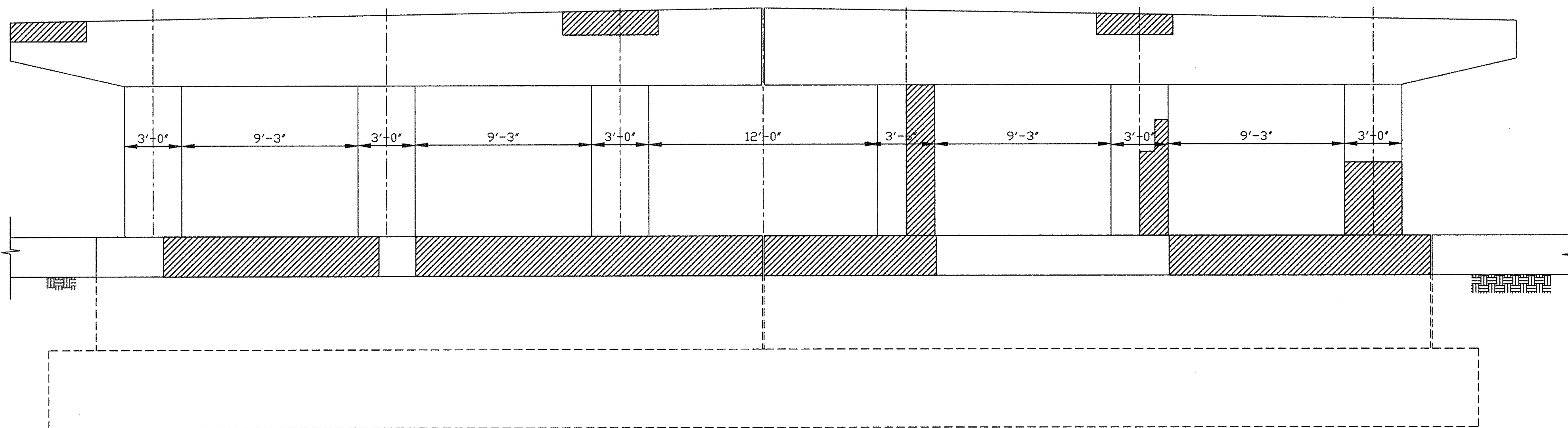
BOTTOM OF CAP



SOUTH ELEVATION



SECTION A-A



NORTH ELEVATION

PIER C

LEGEND

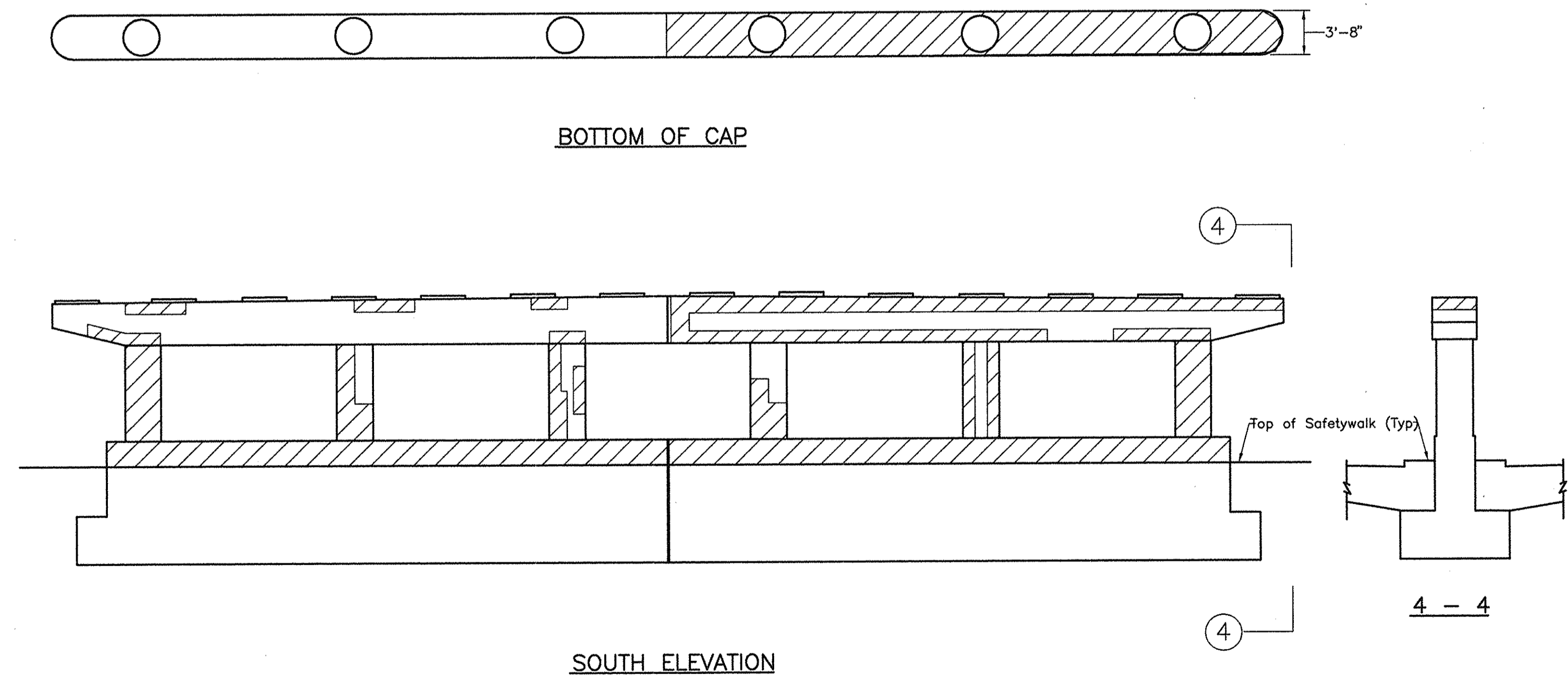
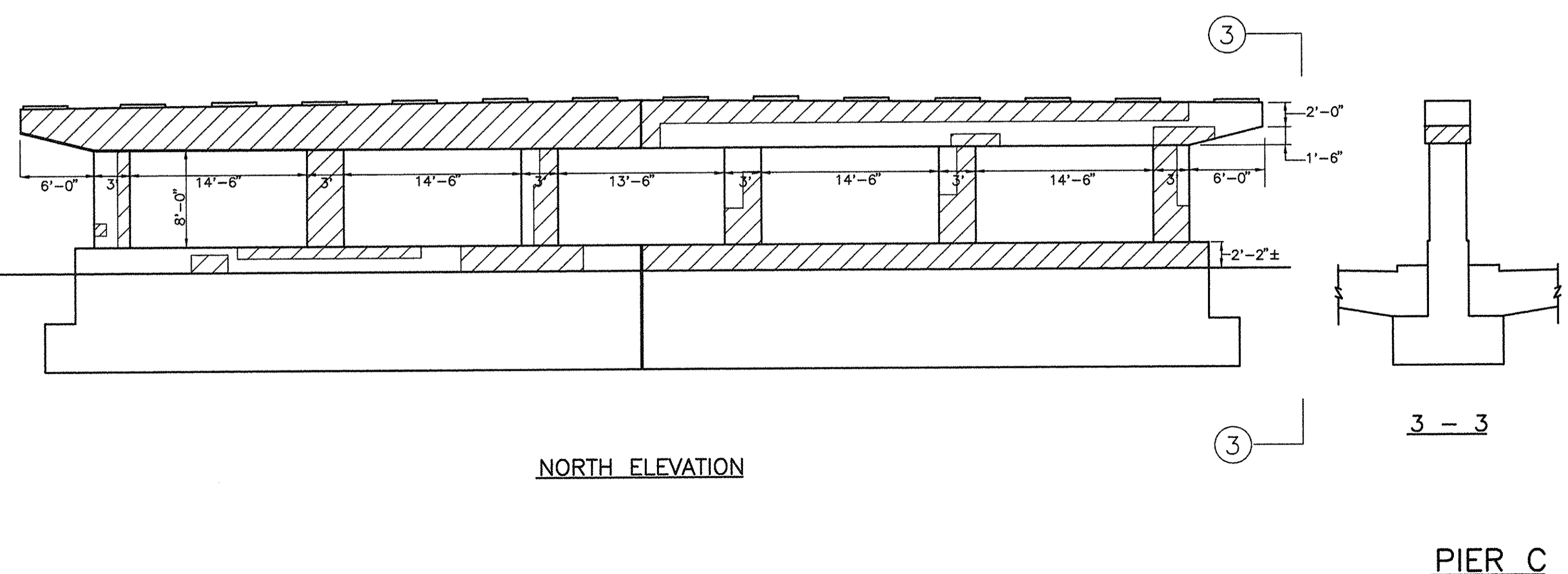
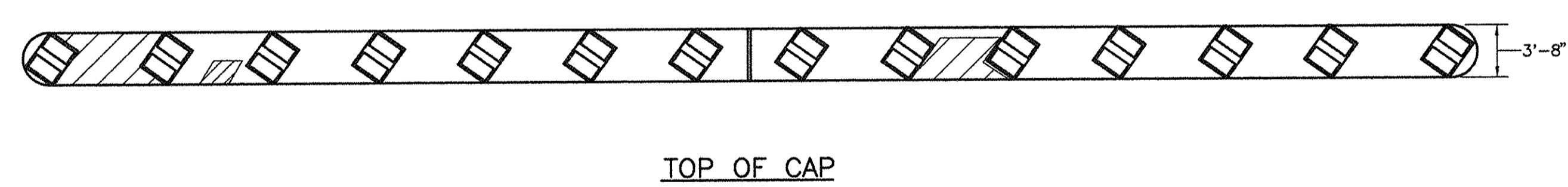
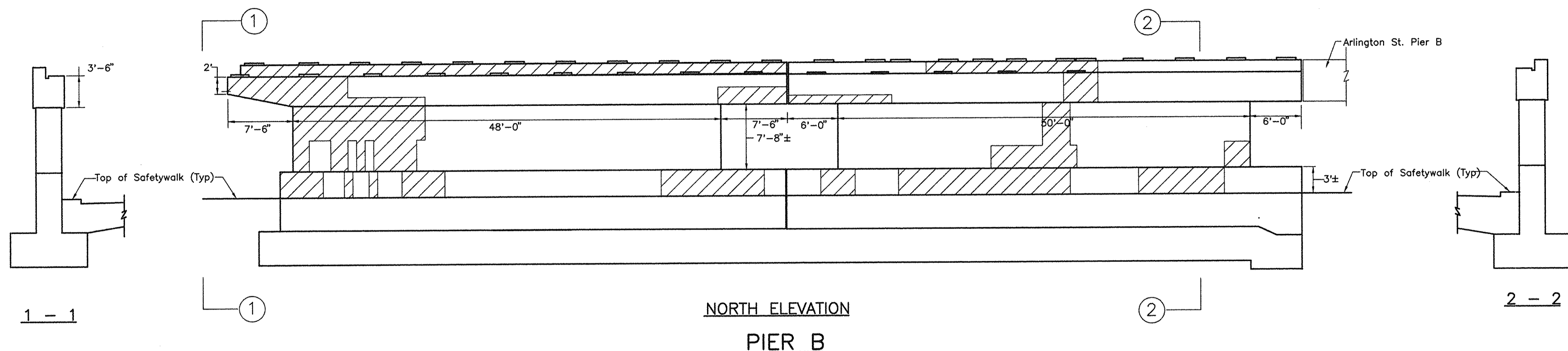
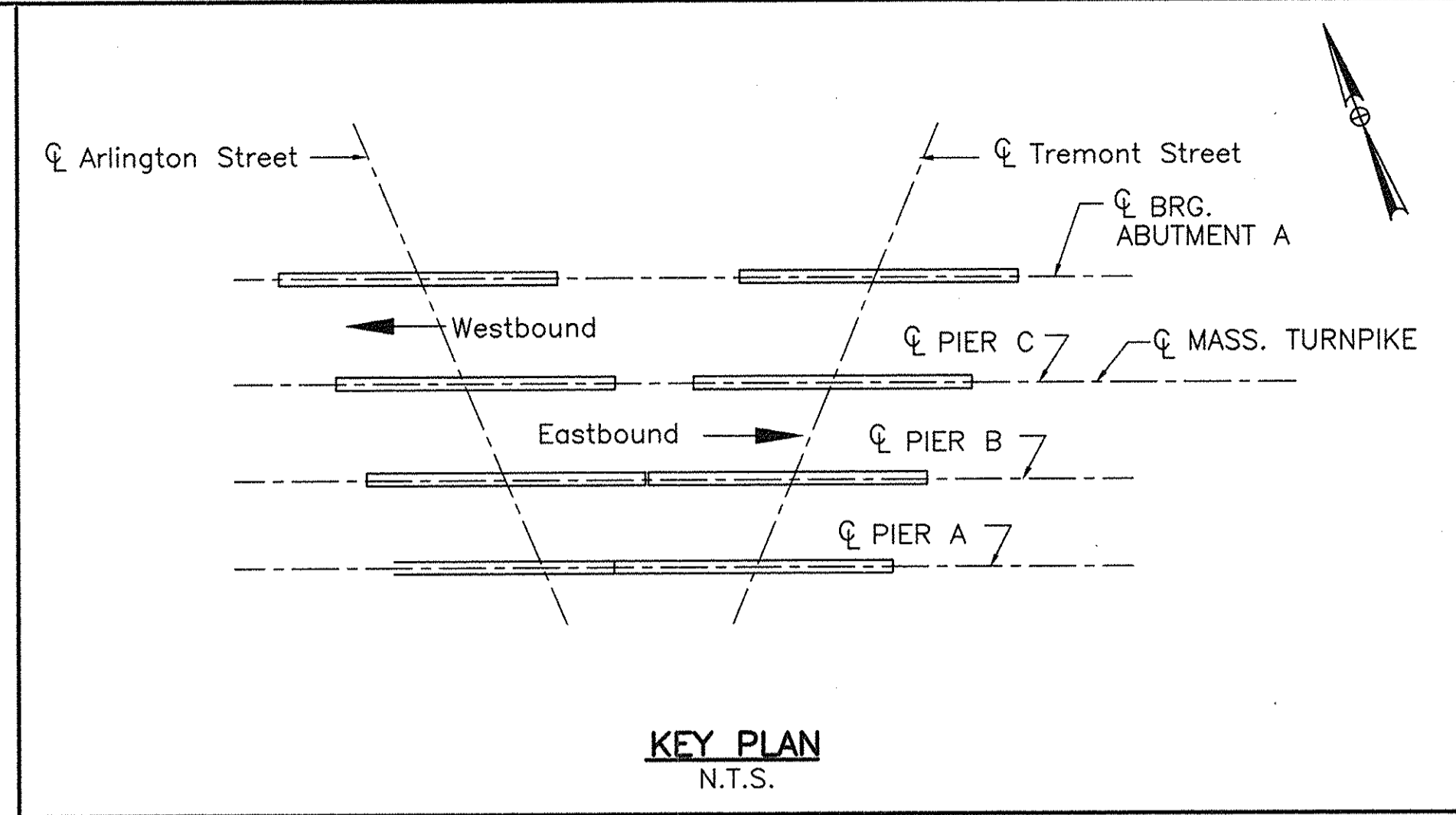
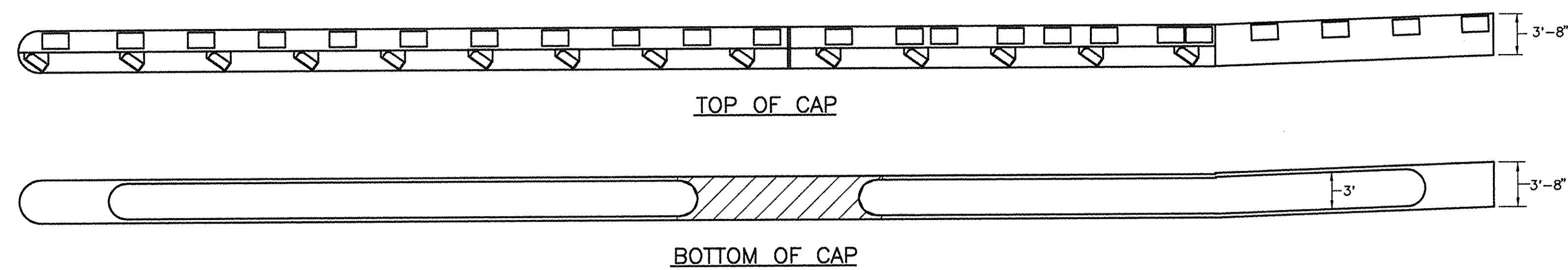
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER C = 410 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	2/97	
		DRAWN:	B.R.	2/97	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR MILE 133.81 STR. 67, ARLINGTON STREET-PIER C	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 33

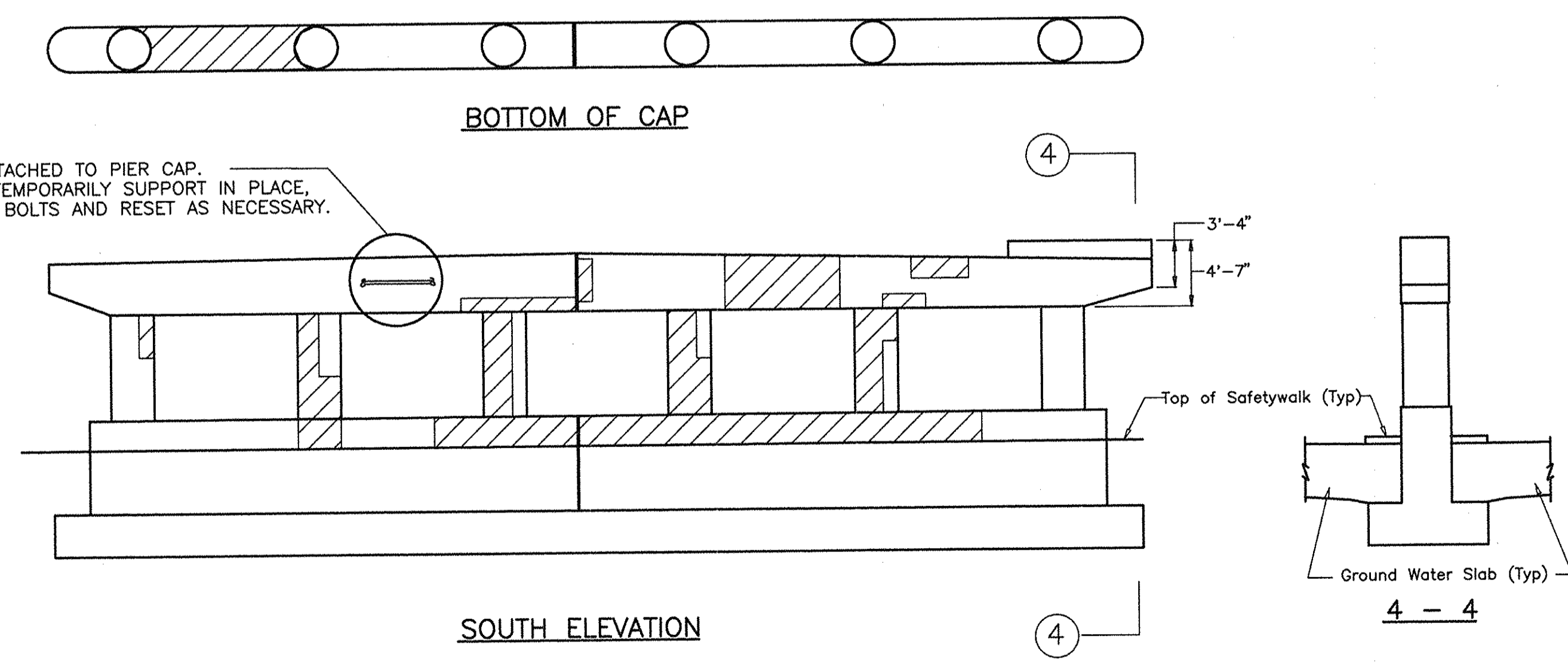
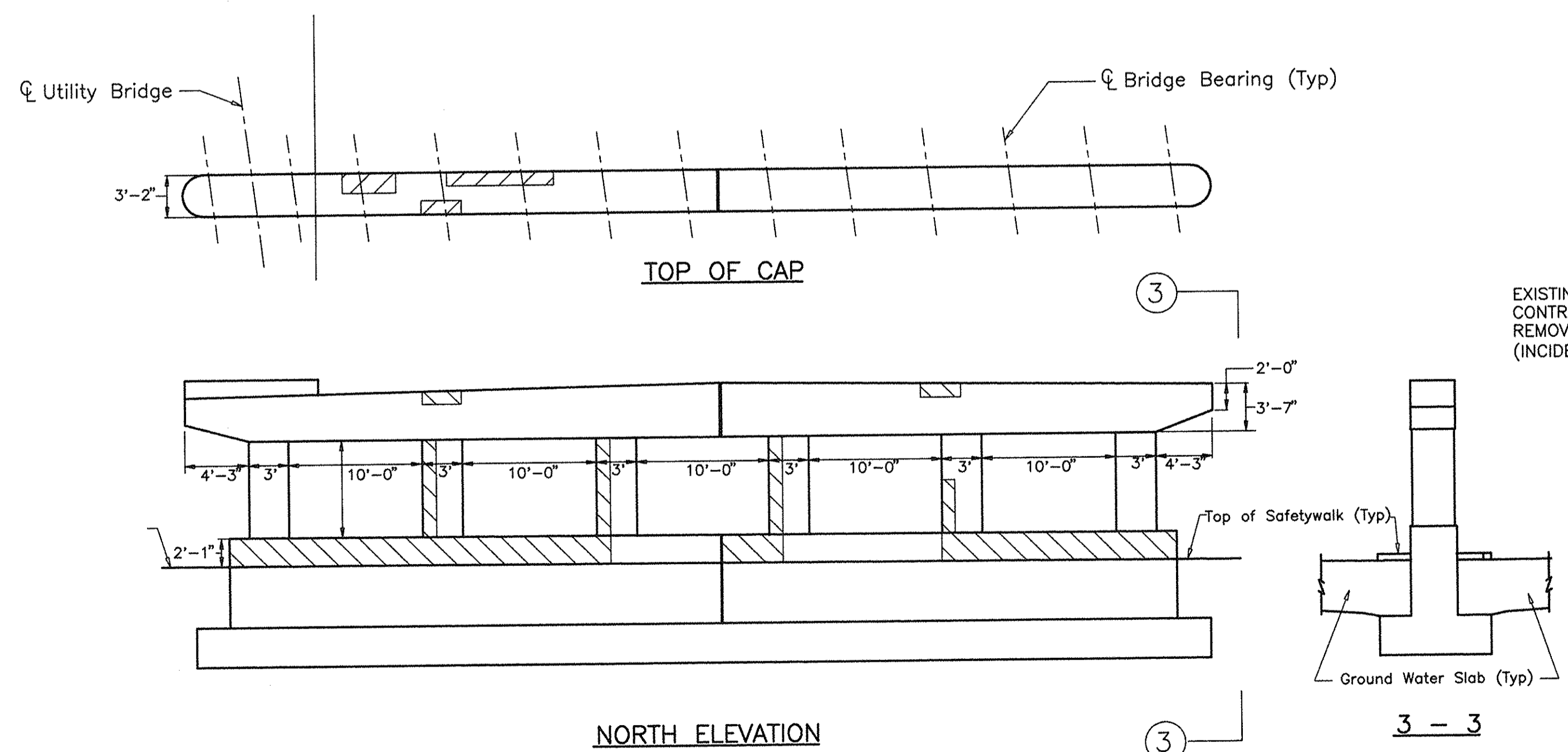
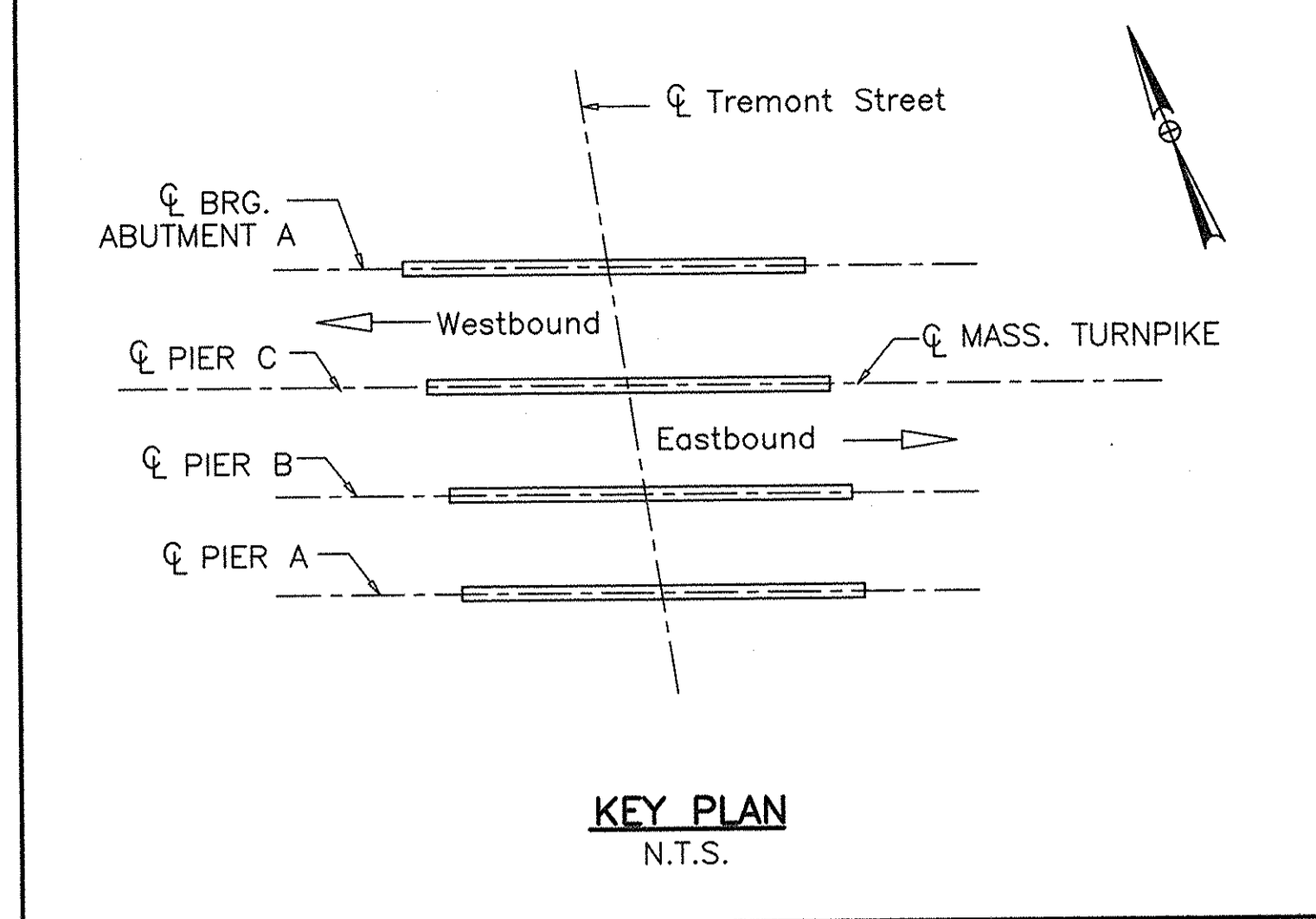
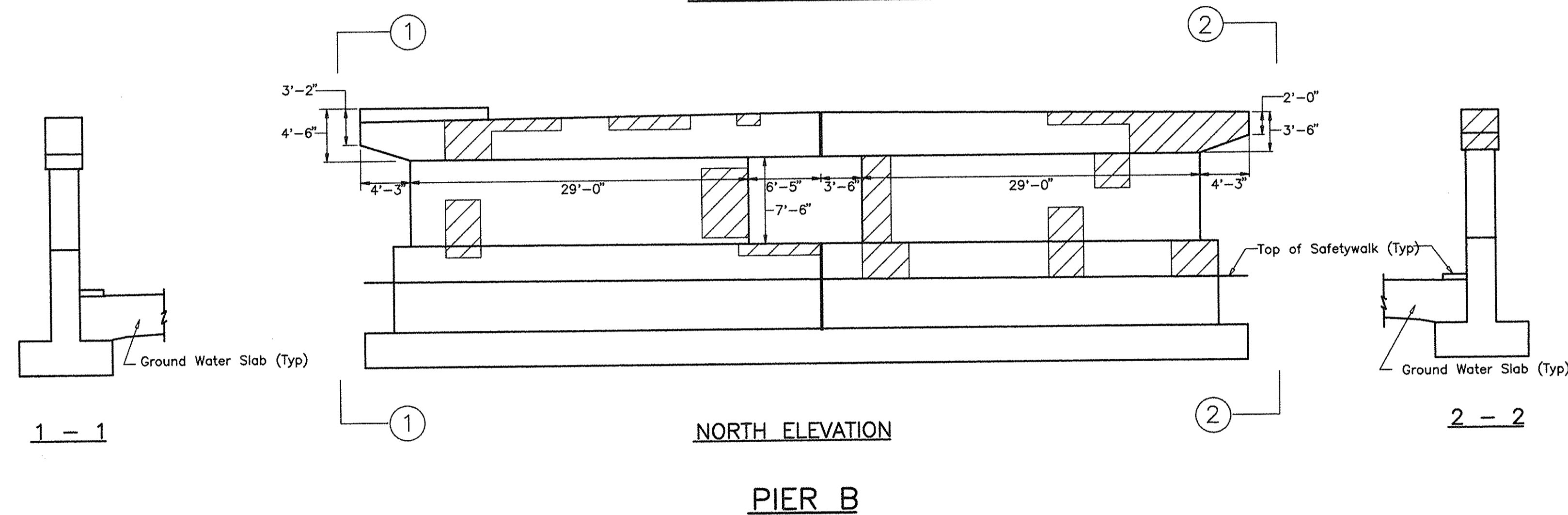
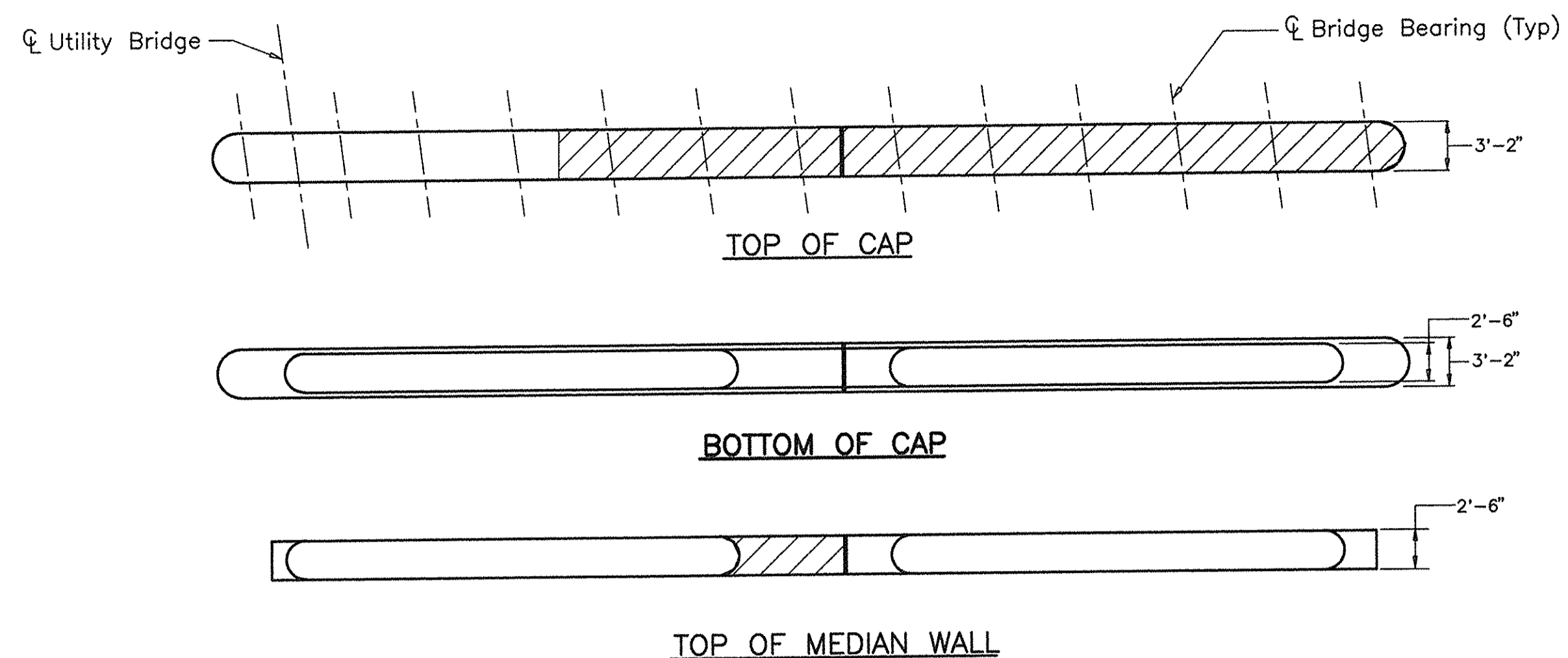


LEGEND

APPROXIMATE AREA OF REPAIR
 TOTAL REPAIR AREA—PIER B = 600± SQ.FT.
 TOTAL REPAIR AREA—PIER C = 1,210± SQ.FT.
 FOR GENERAL NOTES SEE SHEET NO. 2.

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR MILE 133.83 STR.68, TREMONT STREET—PIER B & C	
Scale: 1" = 1/8"	Contract No. 973-111
	Sheet No. 34

NO.	REVISION	BY	DATE	IN CHARGE OF	PC
		DESIGNED: VT	2/97		
		DRAWN: VT	2/97		
		CHECKED:			



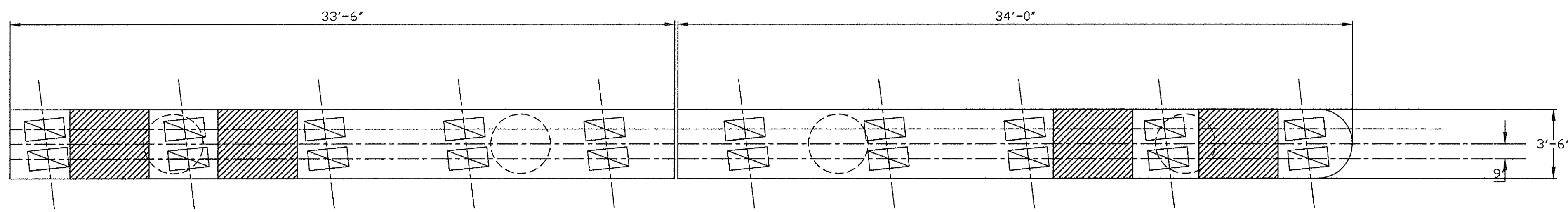
EXISTING CONDUIT ATTACHED TO PIER CAP. CONTRACTOR SHALL TEMPORARILY SUPPORT IN PLACE, REMOVE ATTACHMENT BOLTS AND RESET AS NECESSARY. (INCIDENTAL)

LEGEND

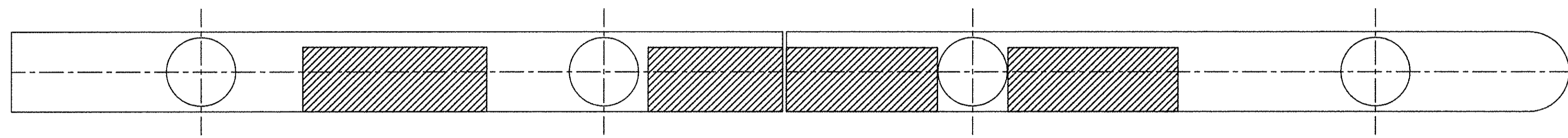
APPROXIMATE AREA OF REPAIR
 TOTAL REPAIR AREA-PIER B = 400 ± SQ.FT.
 TOTAL REPAIR AREA-PIER C = 400 ± SQ.FT.
 FOR GENERAL NOTES SEE SHEET NO. 2

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 133.88	
STR.69, SHAWMUT AVENUE-PIER B & C	
Scale: 1' = 1/8"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 35

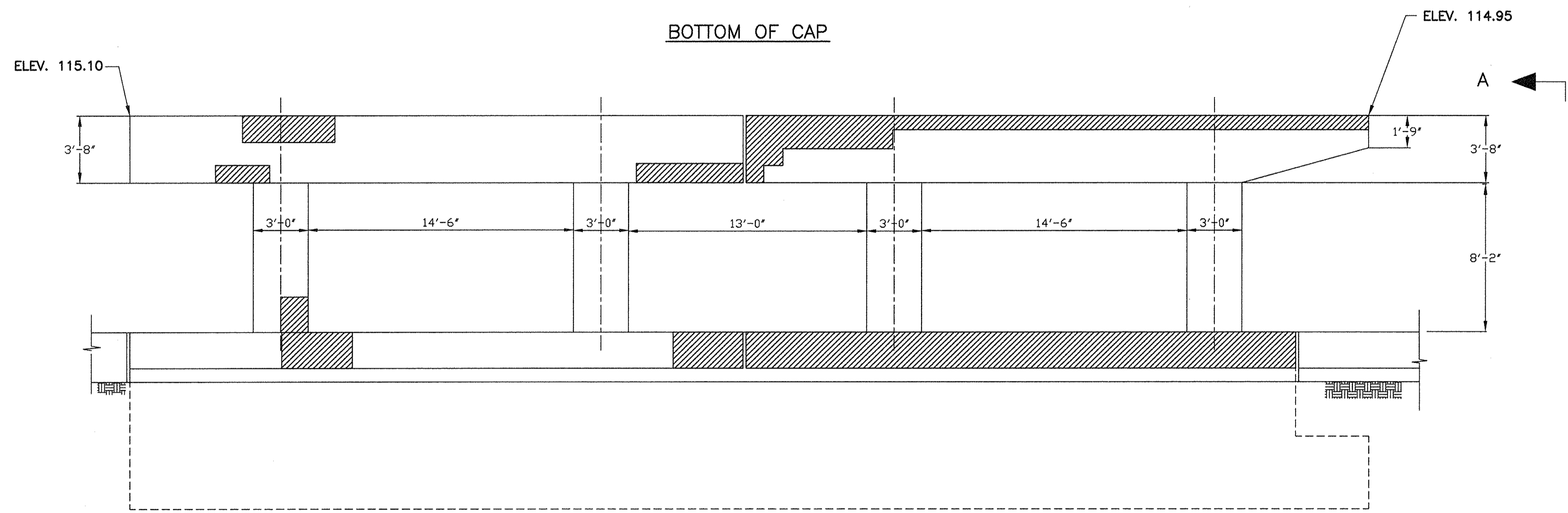
NO.	REVISION	BY	DATE	IN CHARGE OF	PC
		DESIGNED: VT	2/97		
		DRAWN: VT	2/97		
		CHECKED:			



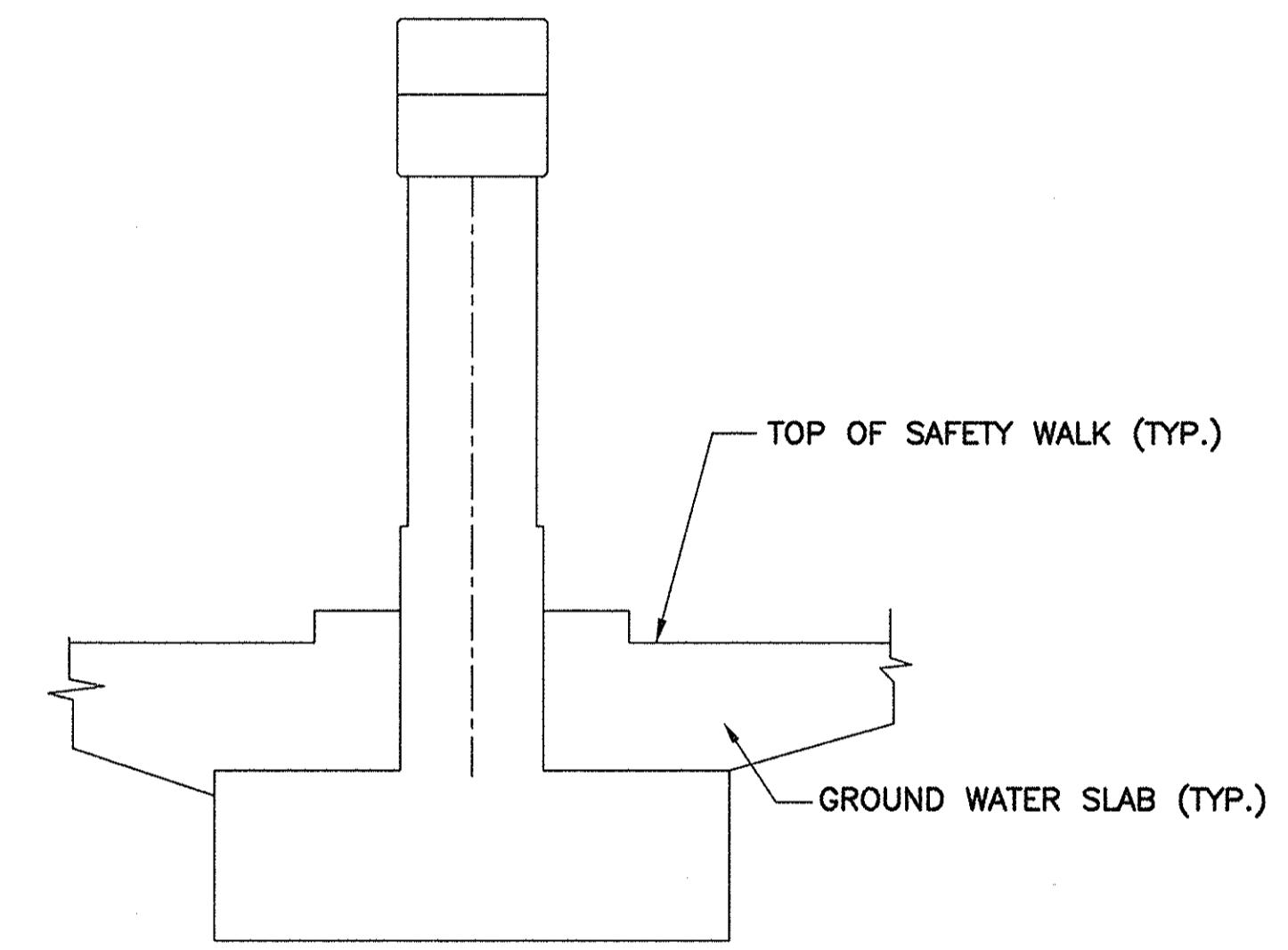
TOP OF CAP



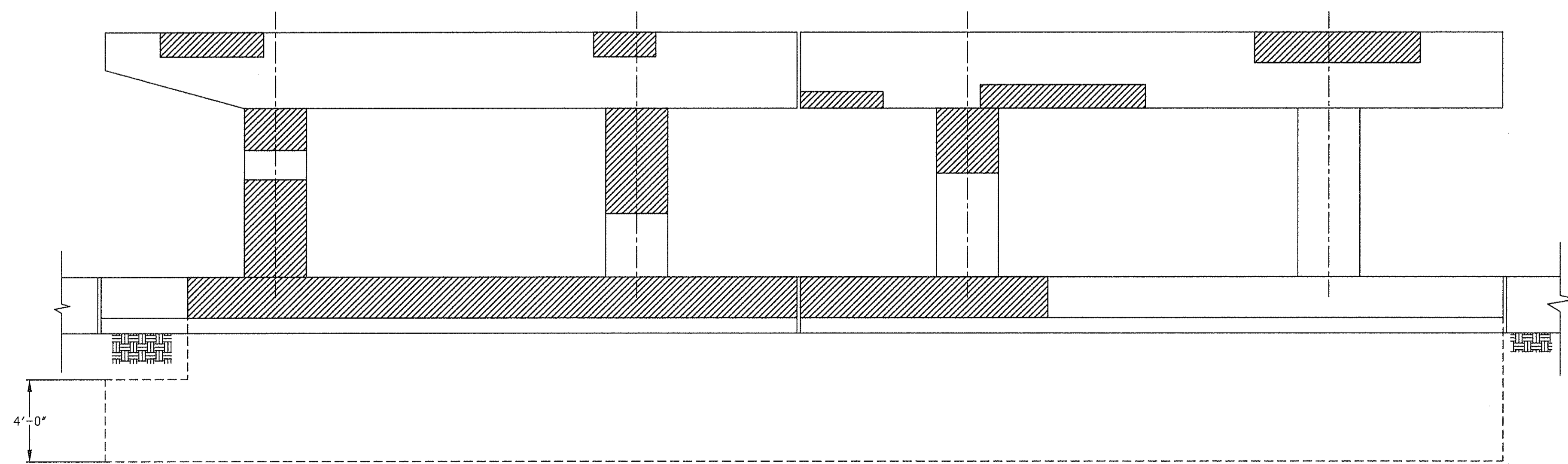
BOTTOM OF CAP



NORTH ELEVATION

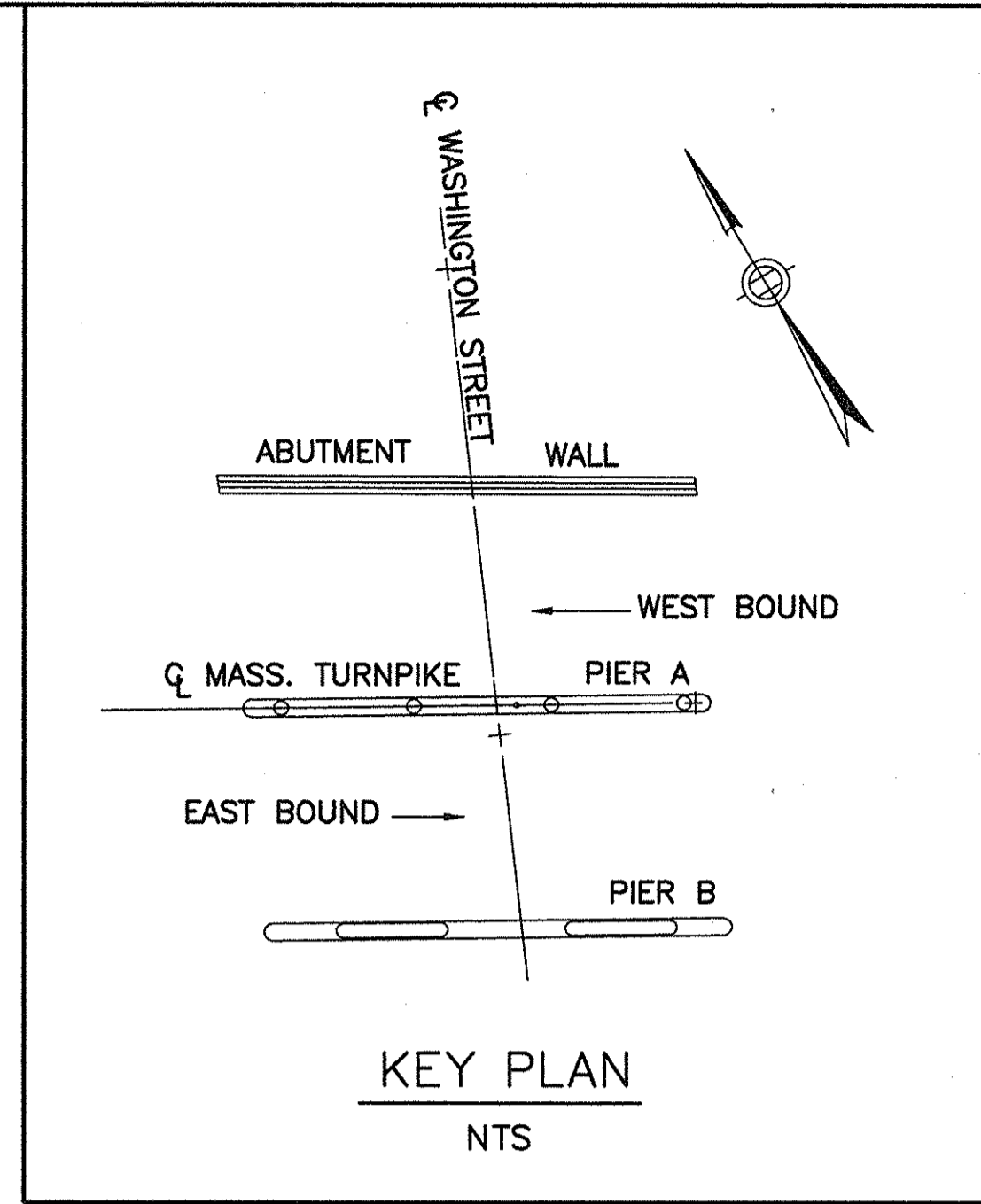


SECTION A-A



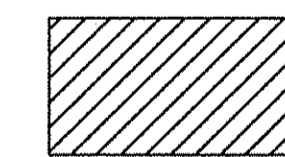
SOUTH ELEVATION

PIER A



KEY PLAN
NTS

LEGEND



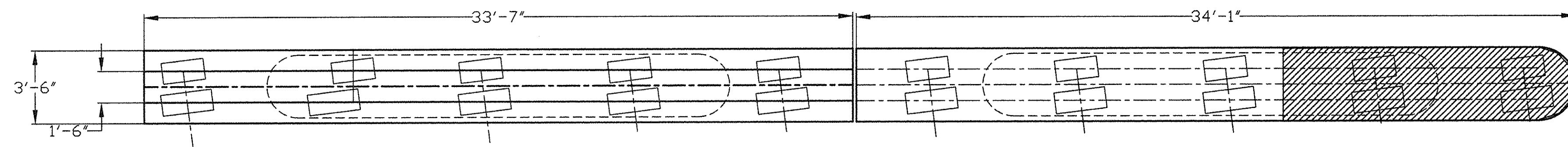
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER A = 420 S.F. ±

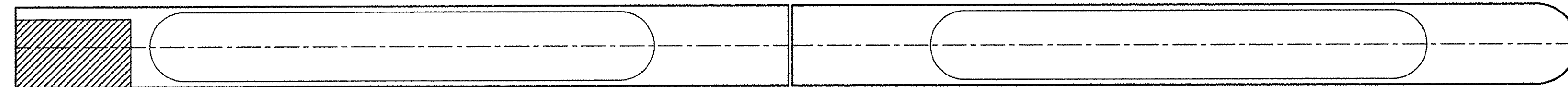
FOR GENERAL NOTES SEE SHEET NO. 2

NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	2/97	
		DRAWN:	B.R.	2/97	
		CHECKED:			

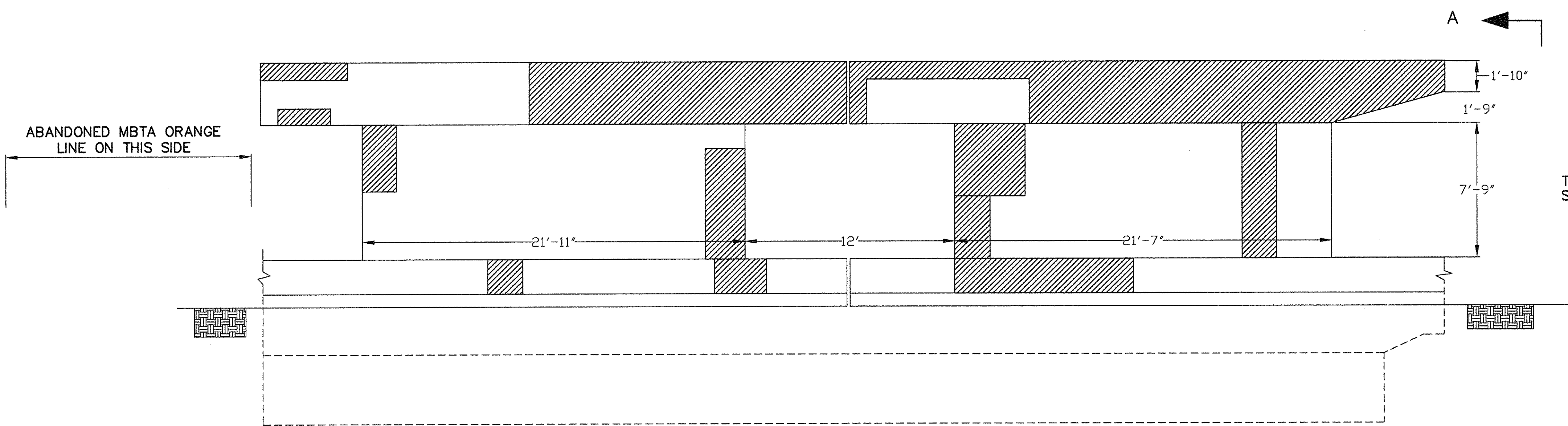
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MILE 134.0	
STR.71, WASHINGTON STREET-PIER A	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 36



TOP OF CAP

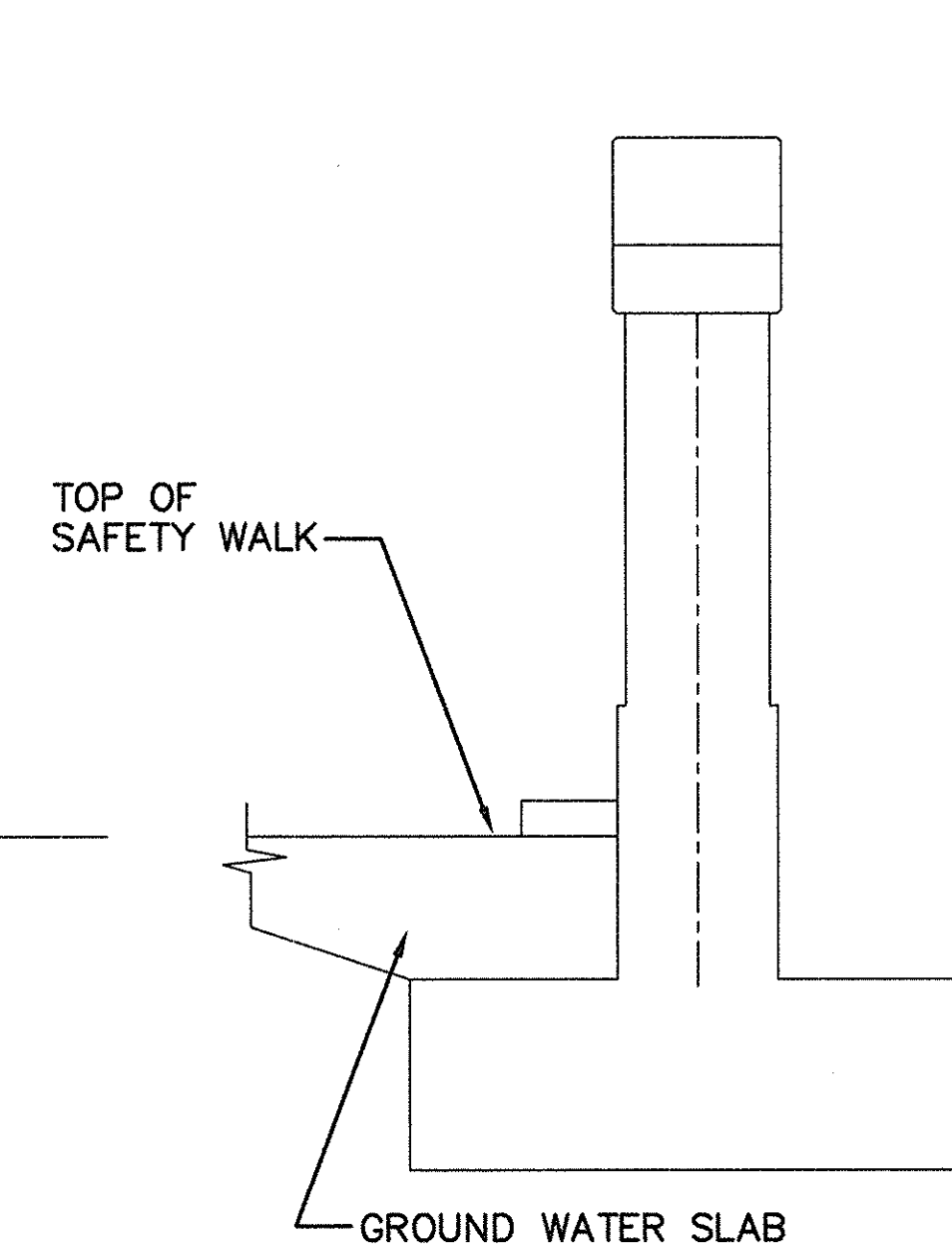


BOTTOM OF CAP



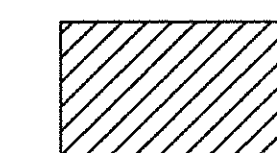
NORTH ELEVATION

PIER B



SECTION A-A

LEGEND



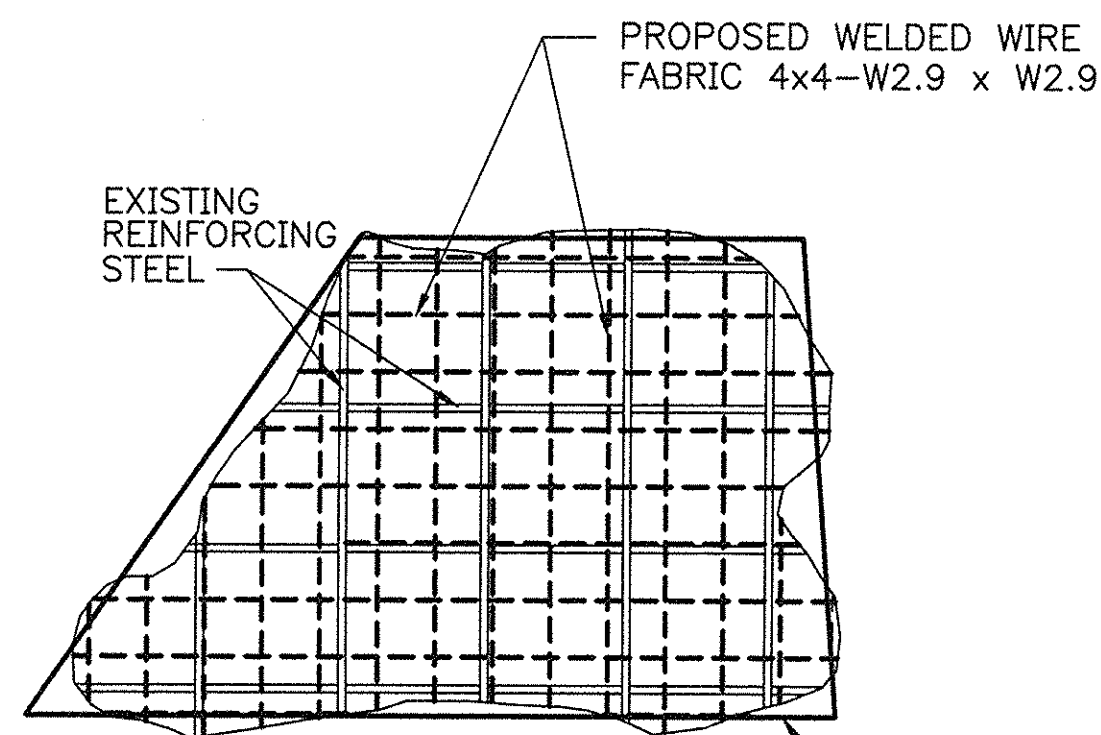
APPROXIMATE AREA OF REPAIR

TOTAL REPAIR AREA - PIER B = 310 S.F. ±

FOR GENERAL NOTES SEE SHEET NO. 2

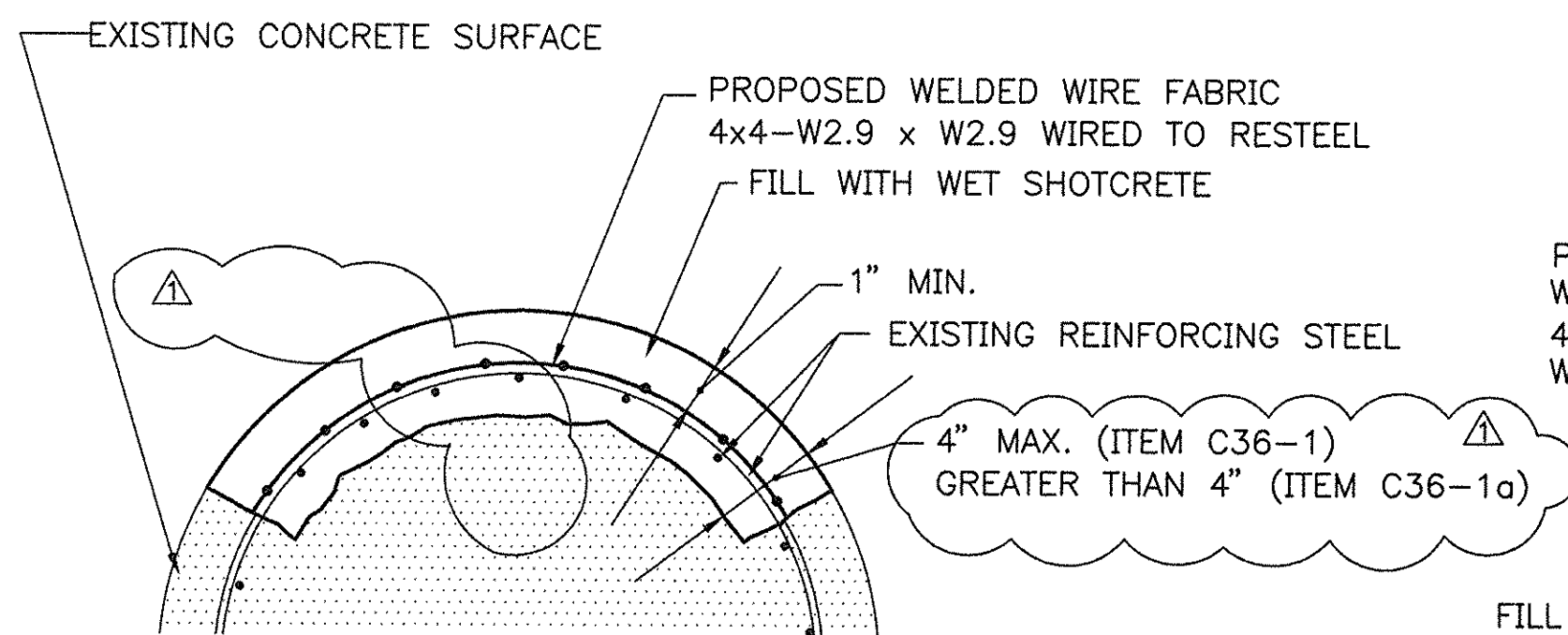
NO.	REVISION	BY	DATE	IN CHARGE OF	P.C.
		DESIGNED:	B.R.	3/97	
		DRAWN:	B.R.	3/97	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STRUCTURE CONCRETE REPAIR	
MILE 134.0	
STR.71, WASHINGTON STREET-PIER B	
Scale: 1/4" = 1'-0"	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 37



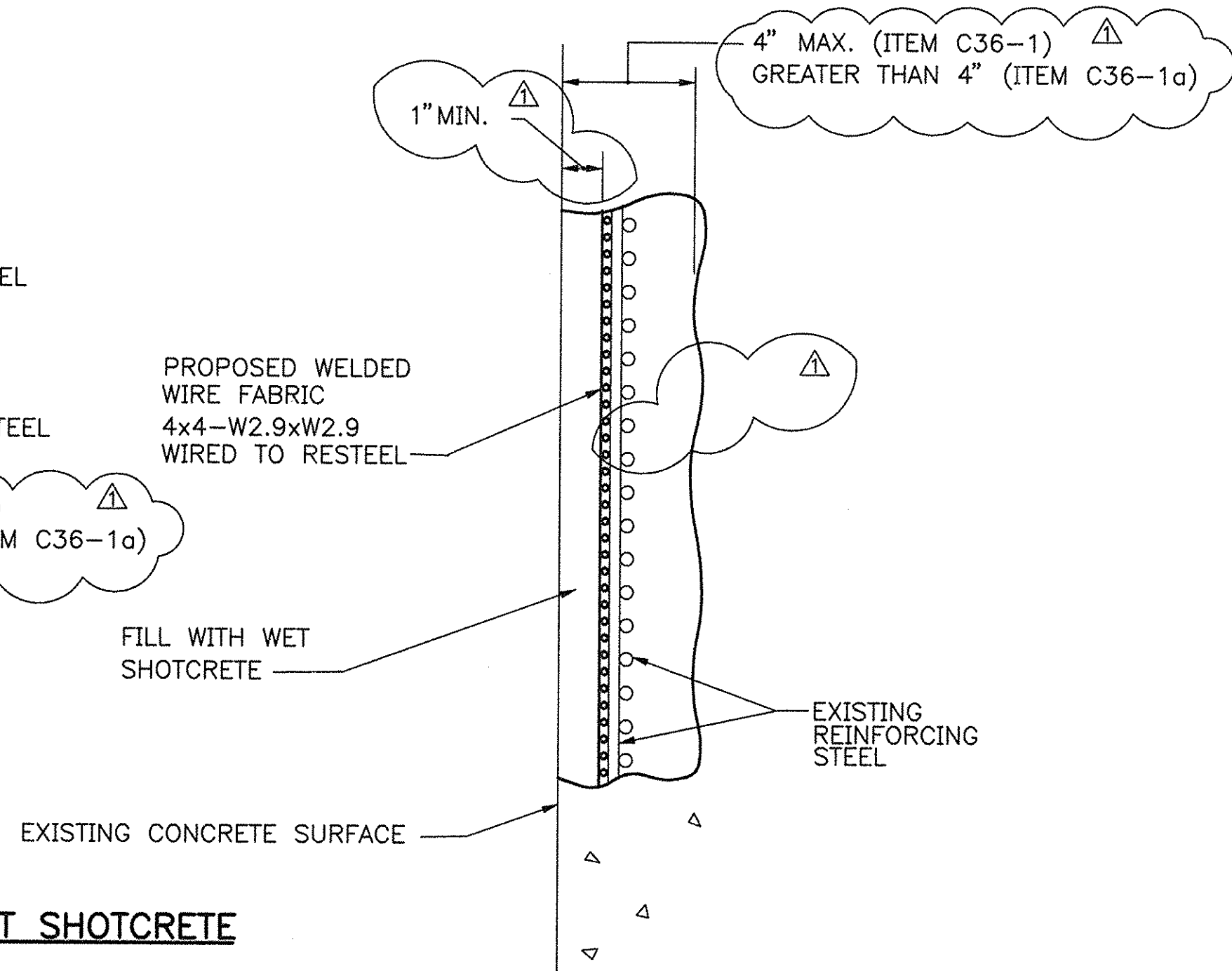
ELEVATION

TYPICAL AVERAGE LINES USED IN MEASUREMENT FOR PAYMENT

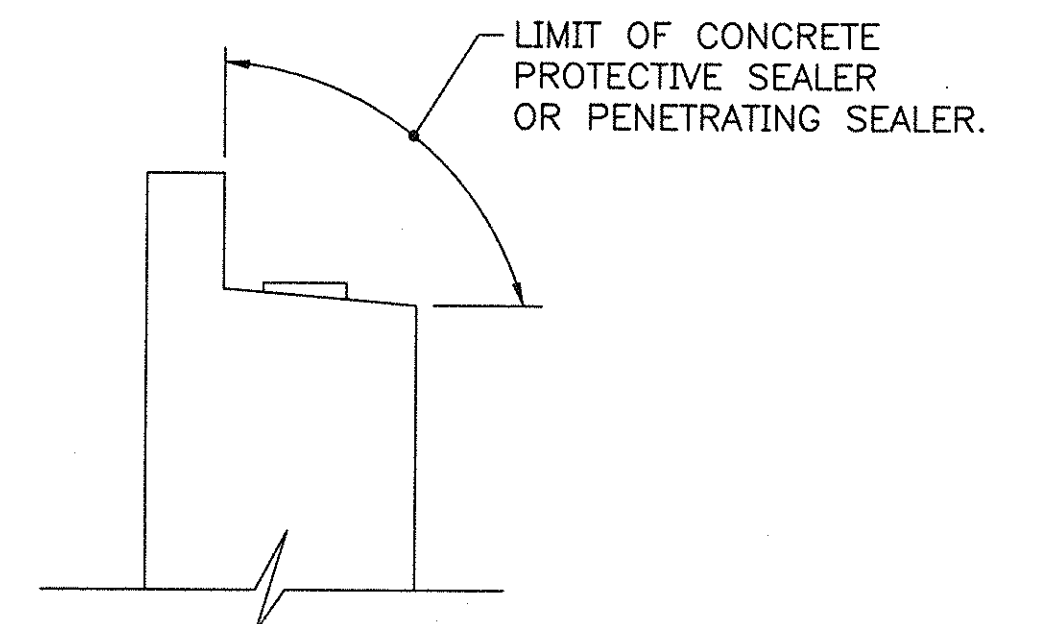


COLUMN SECTION

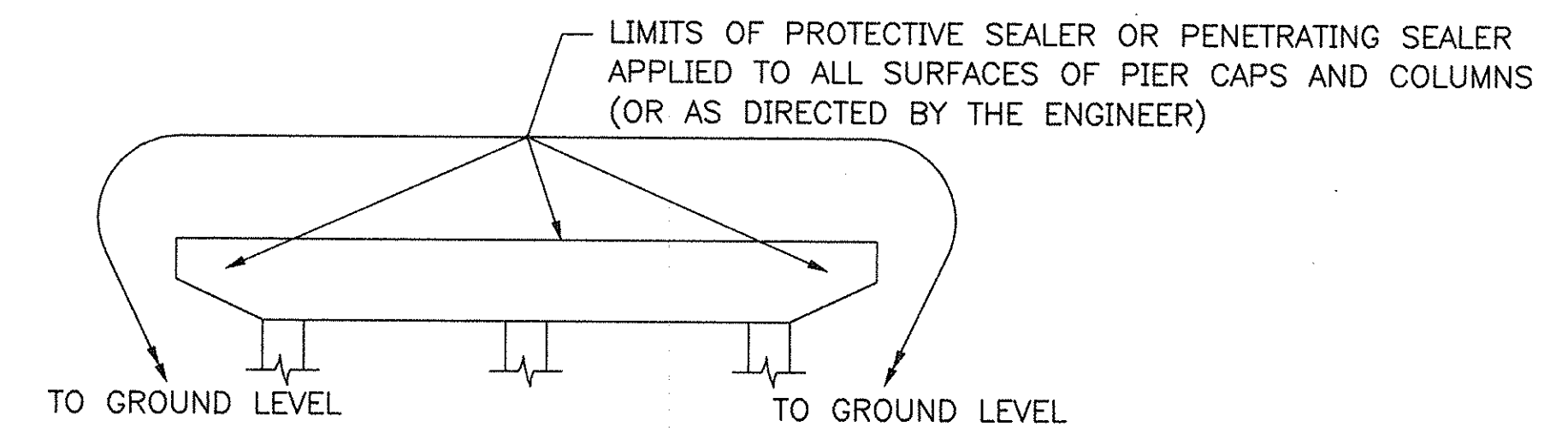
SUBSTRUCTURE CONCRETE REPAIR WITH WET SHOTCRETE



WALL SECTION



ABUTMENTS

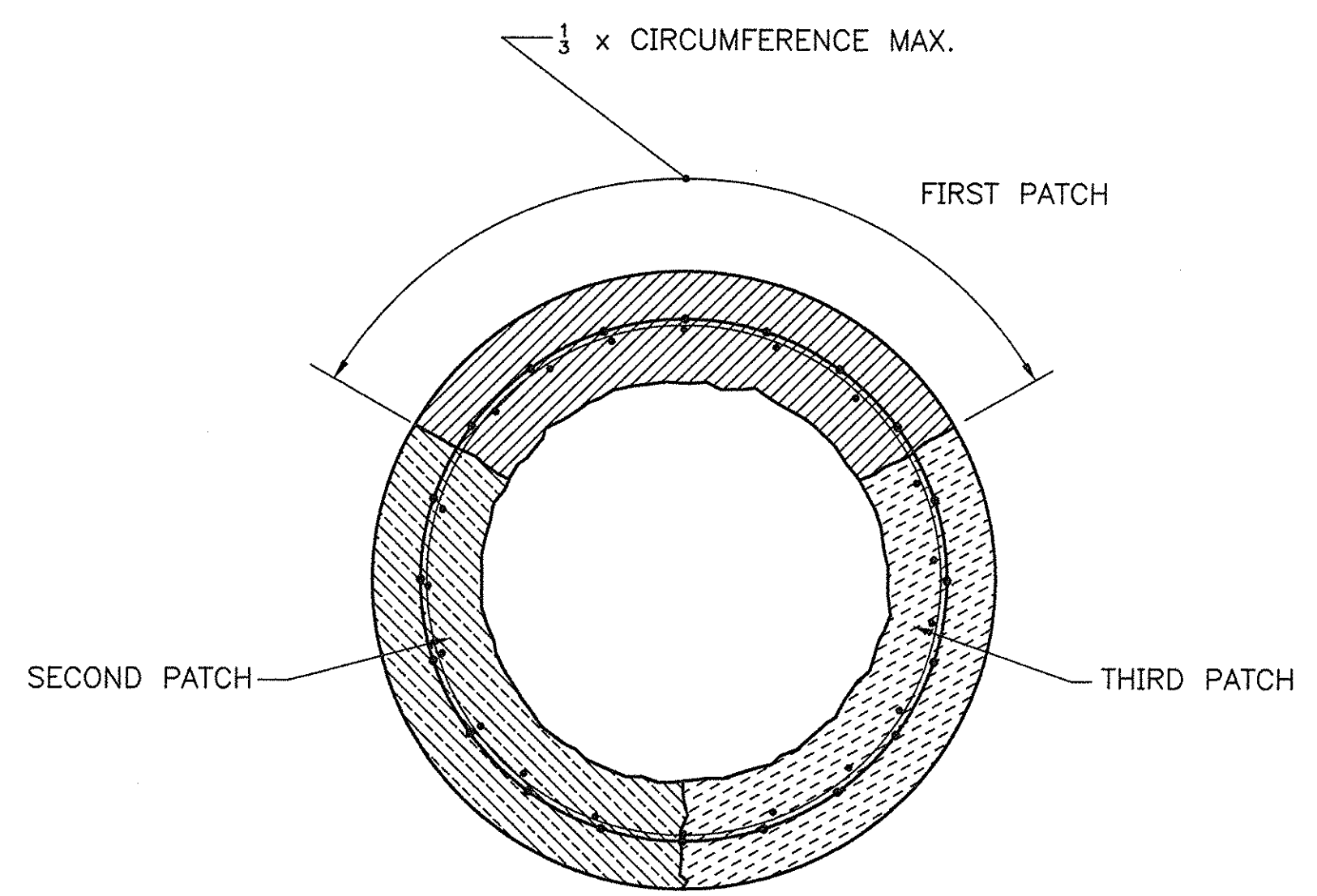


PIERS

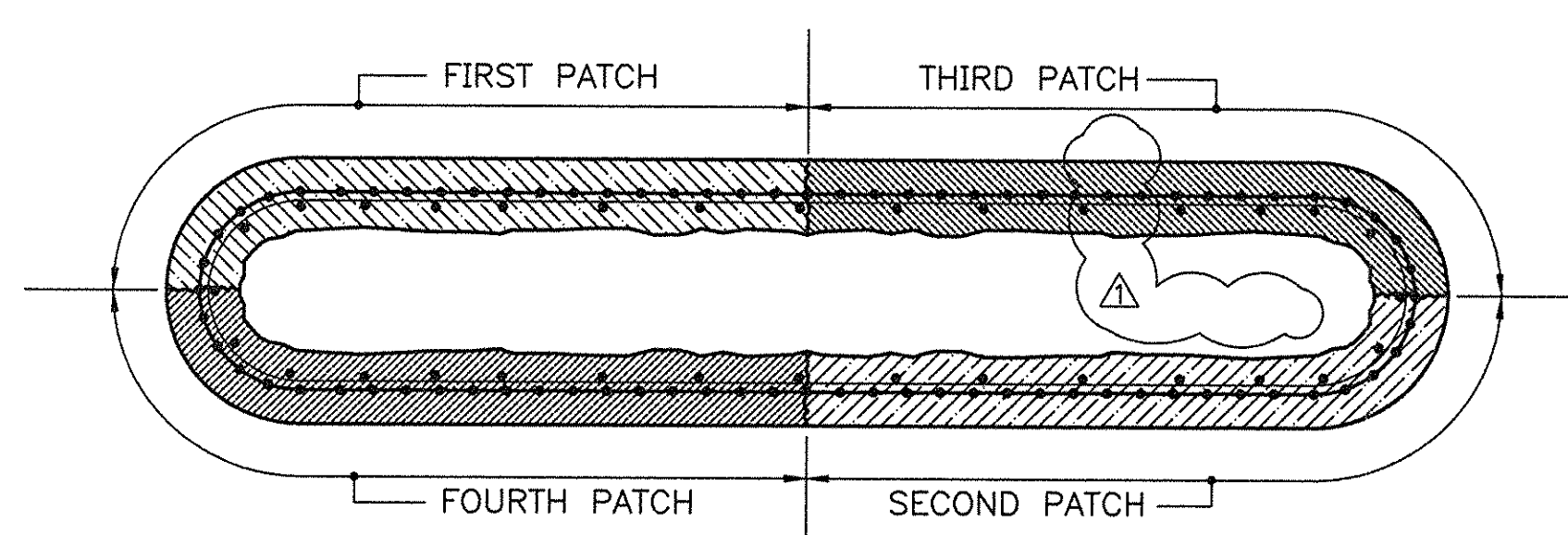
**LIMITS OF PENETRATING SEALER-ITEM C12-1
LIMITS OF CONCRETE PROTECTIVE SEALER-ITEM C36-2**

SUBSTRUCTURE CONCRETE REPAIR

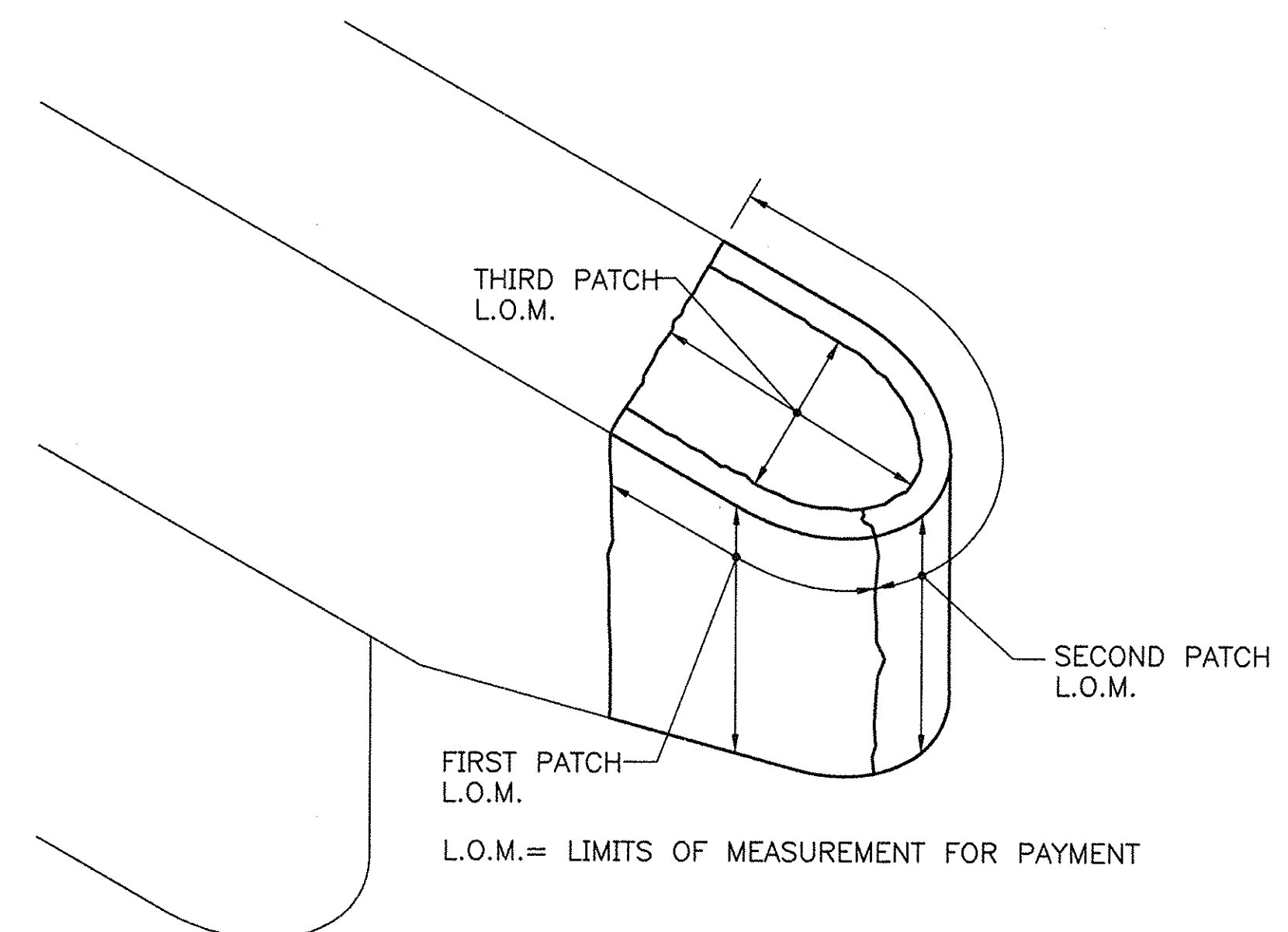
SHEET NO. 38
Contract No. 973-111



ROUND COLUMN SECTION



HAMMERHEAD COLUMN SECTION
RECTANGULAR COLUMN SECTIONS SIMILAR



ISOMETRIC VIEW OF PIER CAP
SHOWING METHOD OF PAYMENT

SUBSTRUCTURE CONCRETE REPAIR

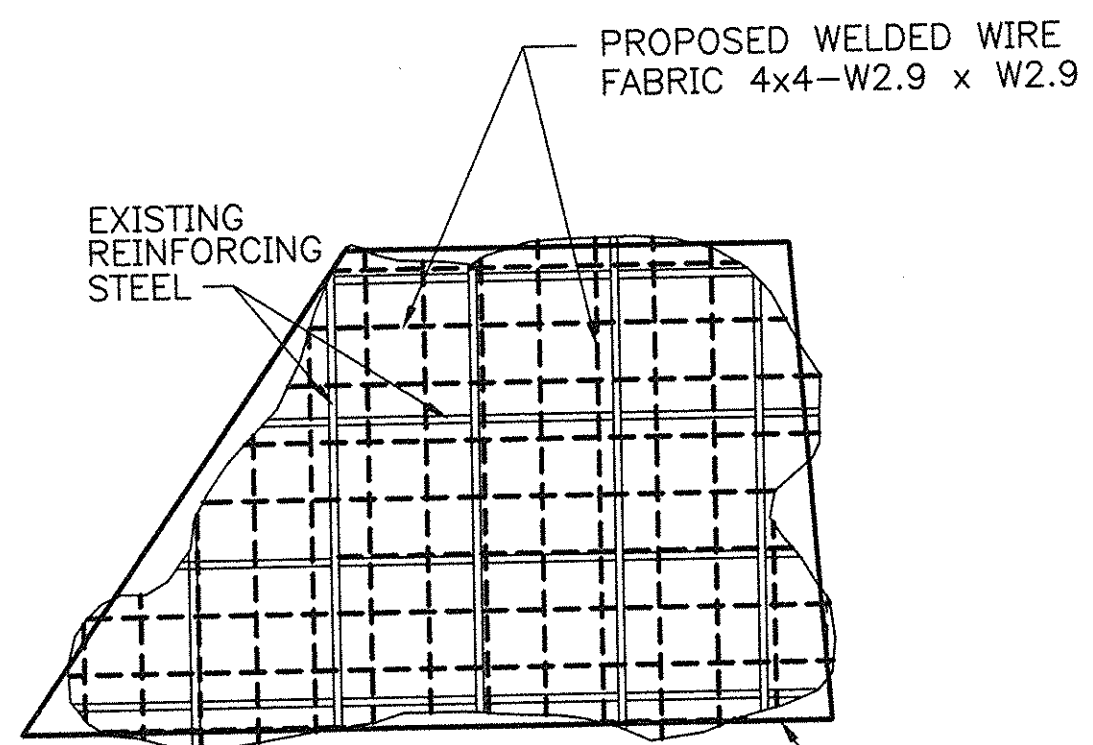
SHEET NO. 38
Contract No. 973-111

SEQUENCE OF CONSTRUCTION FOR REPAIR:

1. REMOVE CONCRETE ON FIRST SURFACE ONLY.
2. CLEAN EXISTING REINFORCING STEEL AND CONCRETE (NEWLY EXPOSED) BY WATER BLASTING OR ABRASIVE BLASTING. SEE SPECIFICATIONS. MISSING OR DETERIORATED REINFORCING STEEL SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
3. ALL EXISTING REINFORCING STEEL SHALL BE COATED WITH ZINC RICH PRIMER, AFTER BLAST CLEANING TO SSPC-SP6.
4. PATCH SURFACE. FORMS, PINS, AND TIE WIRE WILL BE USED, AS REQUIRED.
5. TIME ELAPSE BETWEEN PLACING OF WET SHOTCRETE AND START OF NEXT PATCH SHALL CONFORM TO THE WET SHOTCRETE MANUFACTURER'S RECOMMENDATIONS.
6. REMOVE CONCRETE ON NEXT SURFACE.
7. REPEAT STEPS 2 THRU 5.
8. REPAIR REMAINING SIDES IN A SIMILAR MANNER.
9. ALL WELDED WIRE FABRIC SHALL BE GALVANIZED OR EPOXY COATED.
10. ALL CONCRETE SHALL BE WET SHOTCRETE, WITH A 28-DAY COMPRESSION STRENGTH OF 6,000 PSI.
11. ALL SURFACES SHALL BE RUBBED WHILE GREEN TO PRODUCE A SMOOTH FINISH. ANY RUSTICATIONS, OR STRIATIONS, IN THE EXISTING CONCRETE, SHALL BE REPRODUCED IN THE PATCHED AREA, TO PROVIDE AN ASTHETIC MATCH.
12. PROTECTIVE SURFACE COATING SHALL BE APPLIED TO THE LIMITS SHOWN, SEE SPECIFICATIONS.
13. DETAILS FOR HAMMERHEAD COLUMNS SIMILAR TO THOSE FOR ROUND COLUMNS.

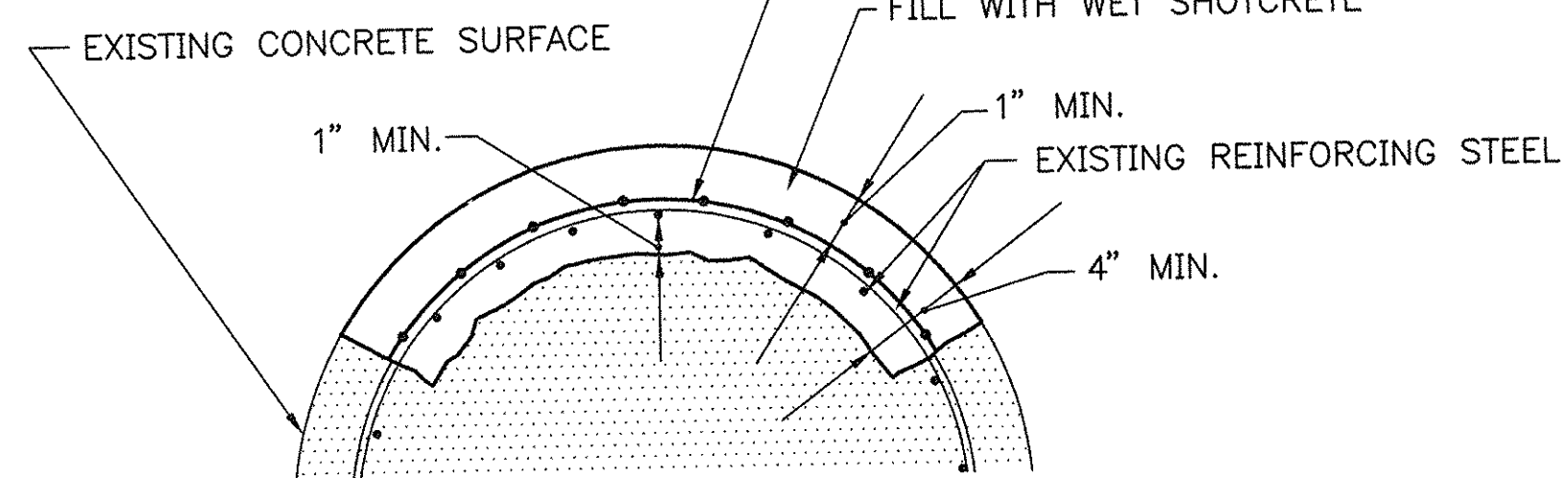
NO.	REVISION	BY	DATE

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
SUBSTRUCTURE CONCRETE REPAIR
DETAILS-SUBSTRUCTURE CONCRETE
REPAIRS WITH WET SHOTCRETE
 Scale: NOT TO SCALE Contract No. 973-111
 MASSACHUSETTS TURNPIKE AUTHORITY
 SHEET NO. **38.01**

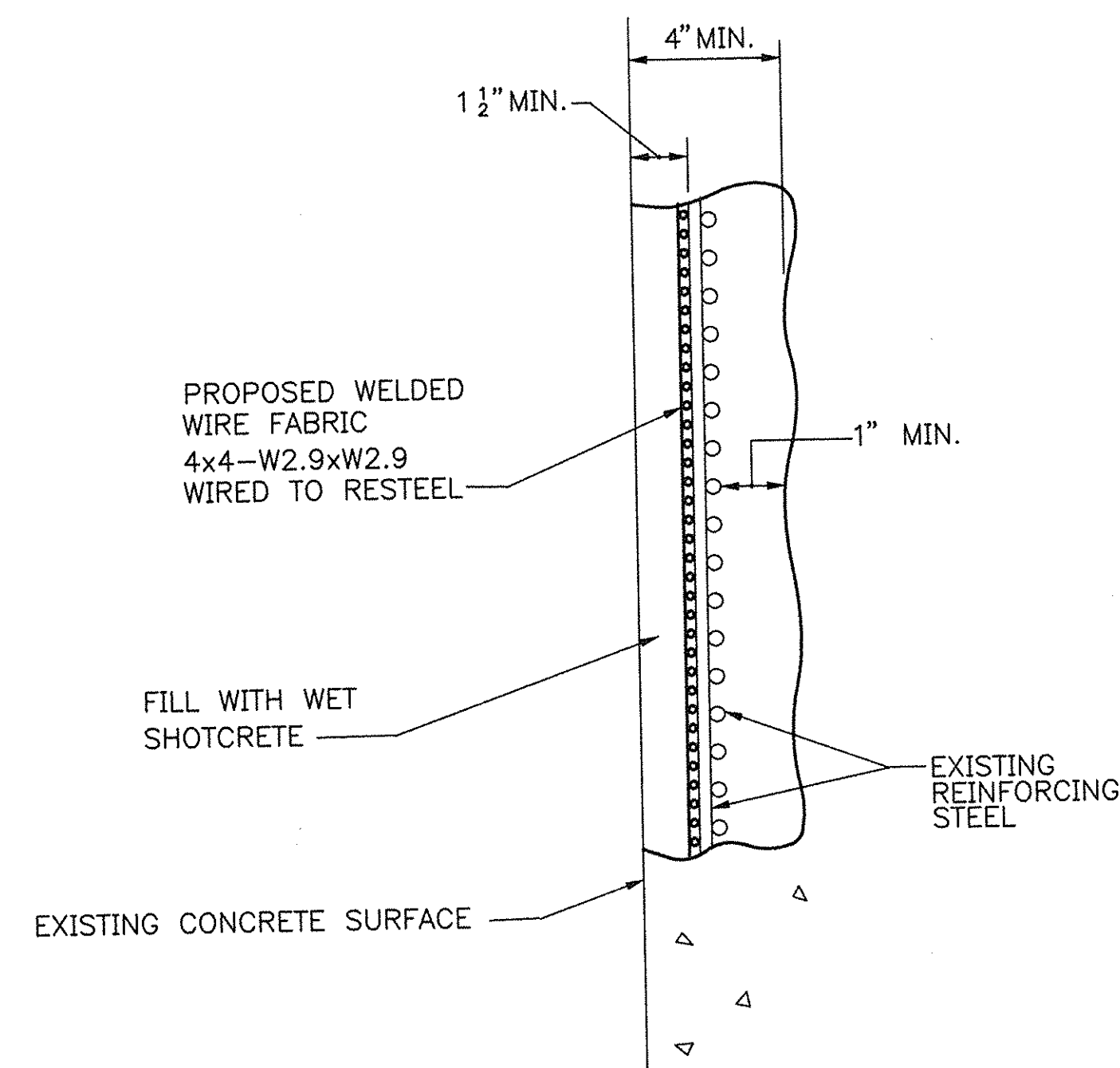


ELEVATION

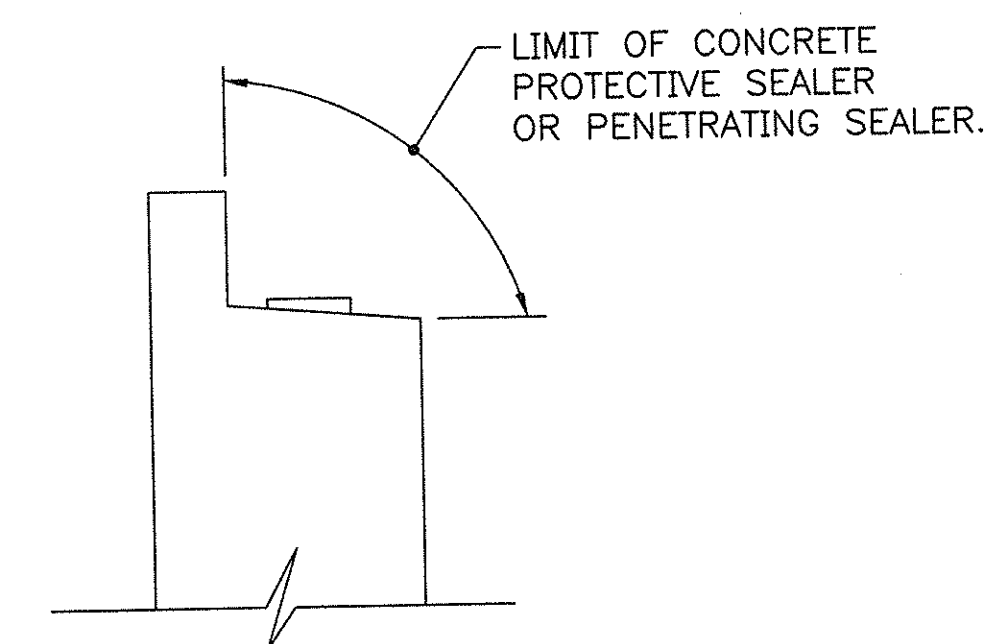
TYPICAL AVERAGE LINES
USED IN MEASUREMENT
FOR PAYMENT



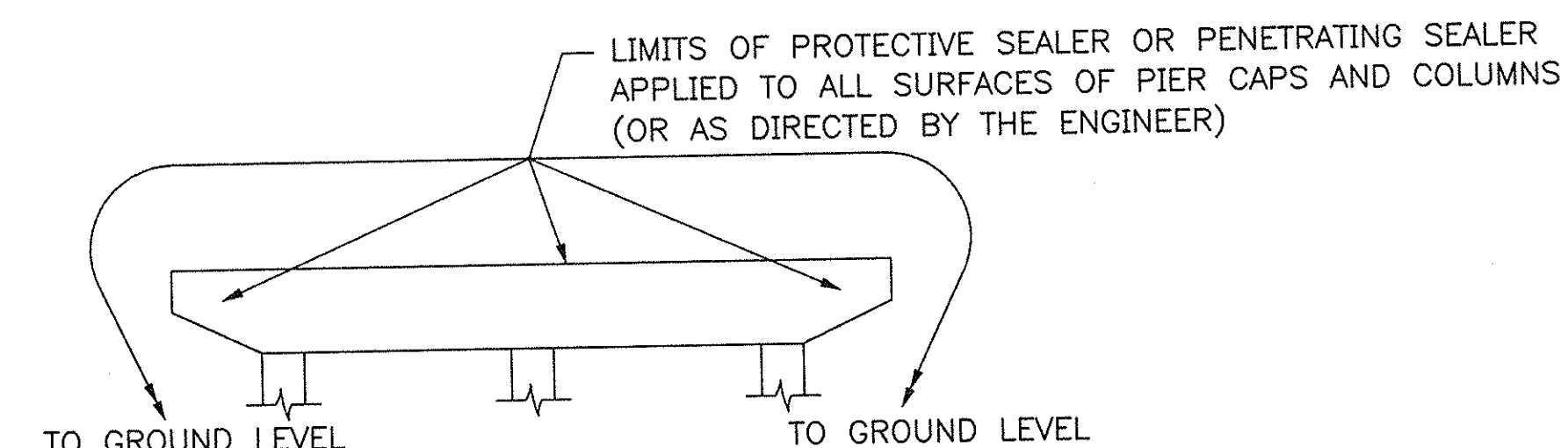
COLUMN SECTION



WALL SECTION



ABUTMENTS



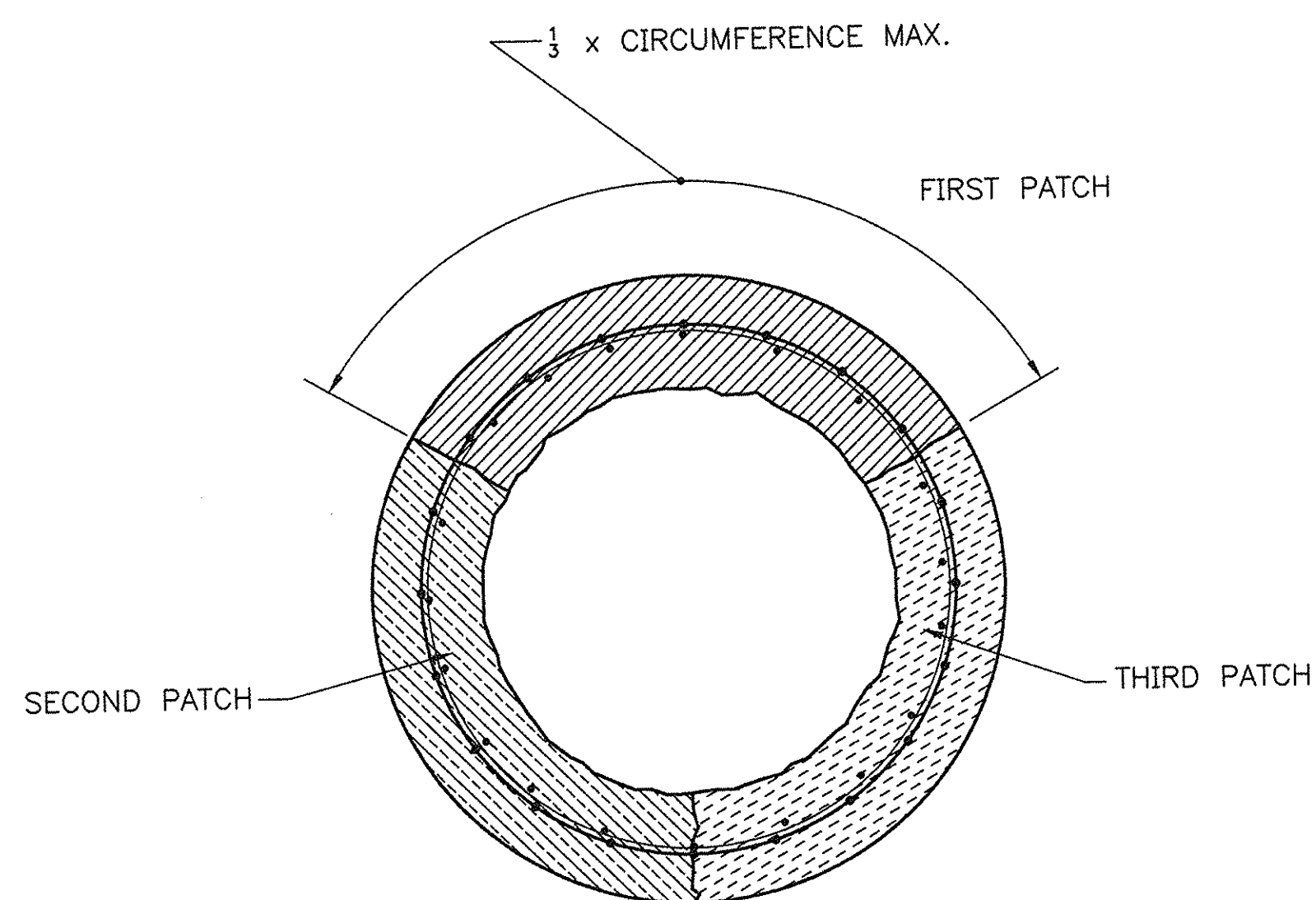
PIERS

LIMITS OF PENETRATING SEALER-ITEM C12-1
LIMITS OF CONCRETE PROTECTIVE SEALER-ITEM C36-2

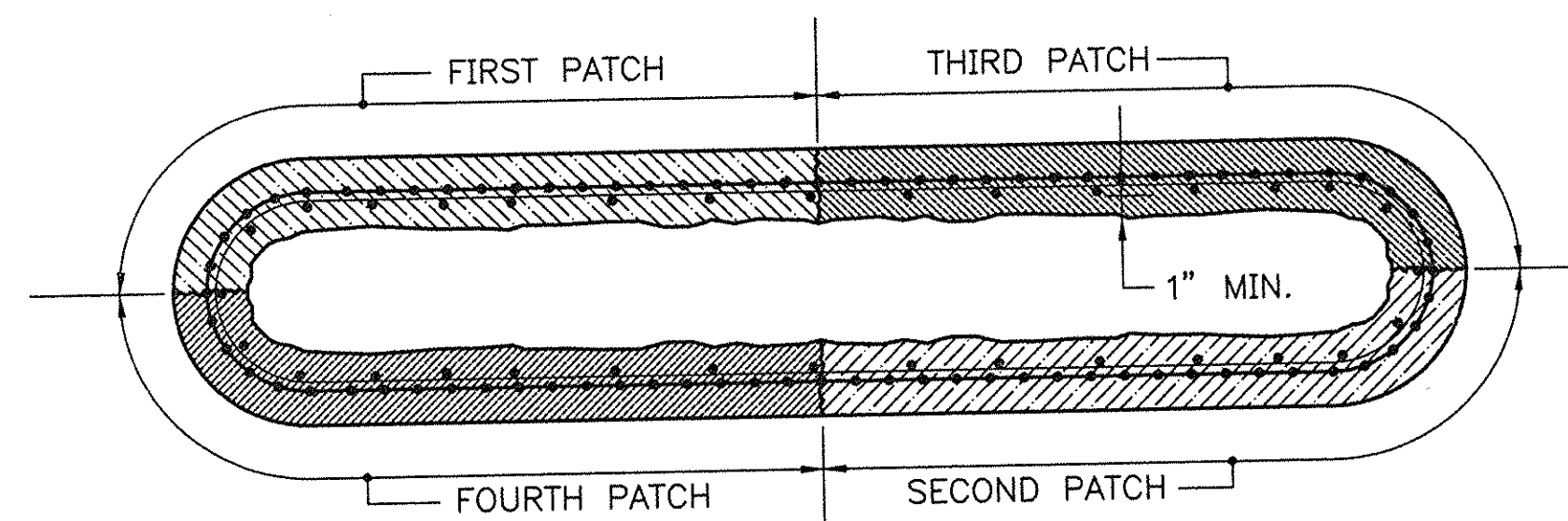
SUBSTRUCTURE CONCRETE REPAIR WITH WET SHOTCRETE
(ITEM C36-1)

SEQUENCE OF CONSTRUCTION
FOR REPAIR:

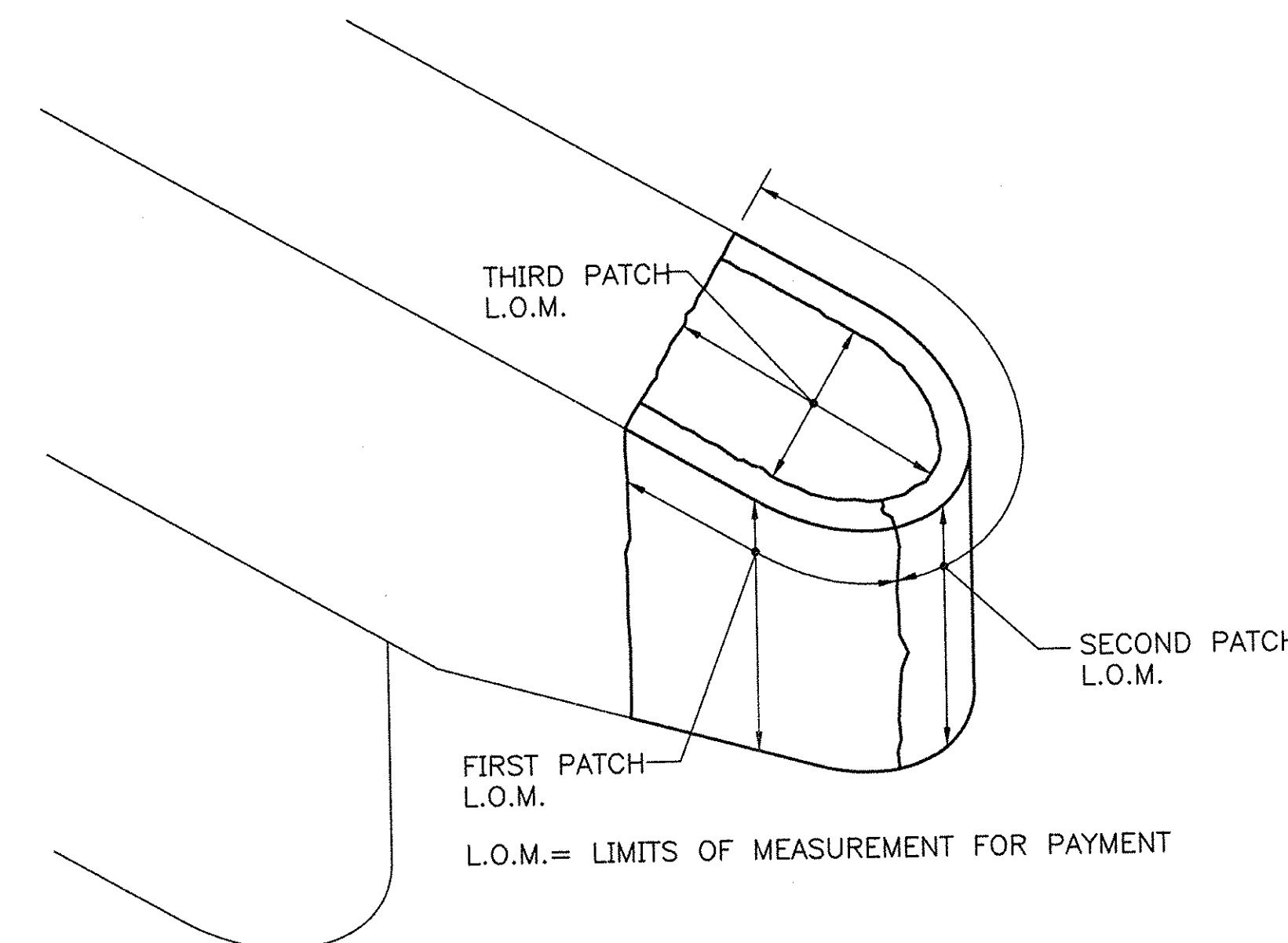
1. REMOVE CONCRETE ON FIRST SURFACE ONLY.
2. CLEAN EXISTING REINFORCING STEEL AND CONCRETE (NEWLY EXPOSED) BY WATER BLASTING OR ABRASIVE BLASTING, SEE SPECIFICATIONS. MISSING OR DETERIORATED REINFORCING STEEL SHALL BE REPLACED AS DIRECTED BY THE ENGINEER AT NO ADDITIONAL COST TO THE AUTHORITY.
3. ALL EXISTING REINFORCING STEEL SHALL BE COATED WITH ZINC RICH PRIMER, AFTER BLAST CLEANING TO SSPC-SP6.
4. PATCH SURFACE, FORMS, PINS, AND TIE WIRE WILL BE USED, AS REQUIRED.
5. TIME ELAPSE BETWEEN PLACING OF WET SHOTCRETE AND START OF NEXT PATCH SHALL CONFORM TO THE WET SHOTCRETE MANUFACTURER'S RECOMMENDATIONS.
6. REMOVE CONCRETE ON NEXT SURFACE.
7. REPEAT STEPS 2 THRU 5.
8. REPAIR REMAINING SIDES IN A SIMILAR MANNER.
9. ALL WELDED WIRE FABRIC SHALL BE GALVANIZED OR EPOXY COATED.
10. ALL CONCRETE SHALL BE WET SHOTCRETE, WITH A 28-DAY COMPRESSION STRENGTH OF 6,000 PSI.
11. ALL SURFACES SHALL BE RUBBED WHILE GREEN TO PRODUCE A SMOOTH FINISH. ANY RUSTICATIONS, OR STRIATIONS, IN THE EXISTING CONCRETE, SHALL BE REPRODUCED IN THE PATCHED AREA, TO PROVIDE AN ASTHETIC MATCH.
12. PROTECTIVE SURFACE COATING SHALL BE APPLIED TO THE LIMITS SHOWN, SEE SPECIFICATIONS.
13. DETAILS FOR HAMMERHEAD COLUMNS SIMILAR TO THOSE FOR ROUND COLUMNS.



ROUND COLUMN SECTION



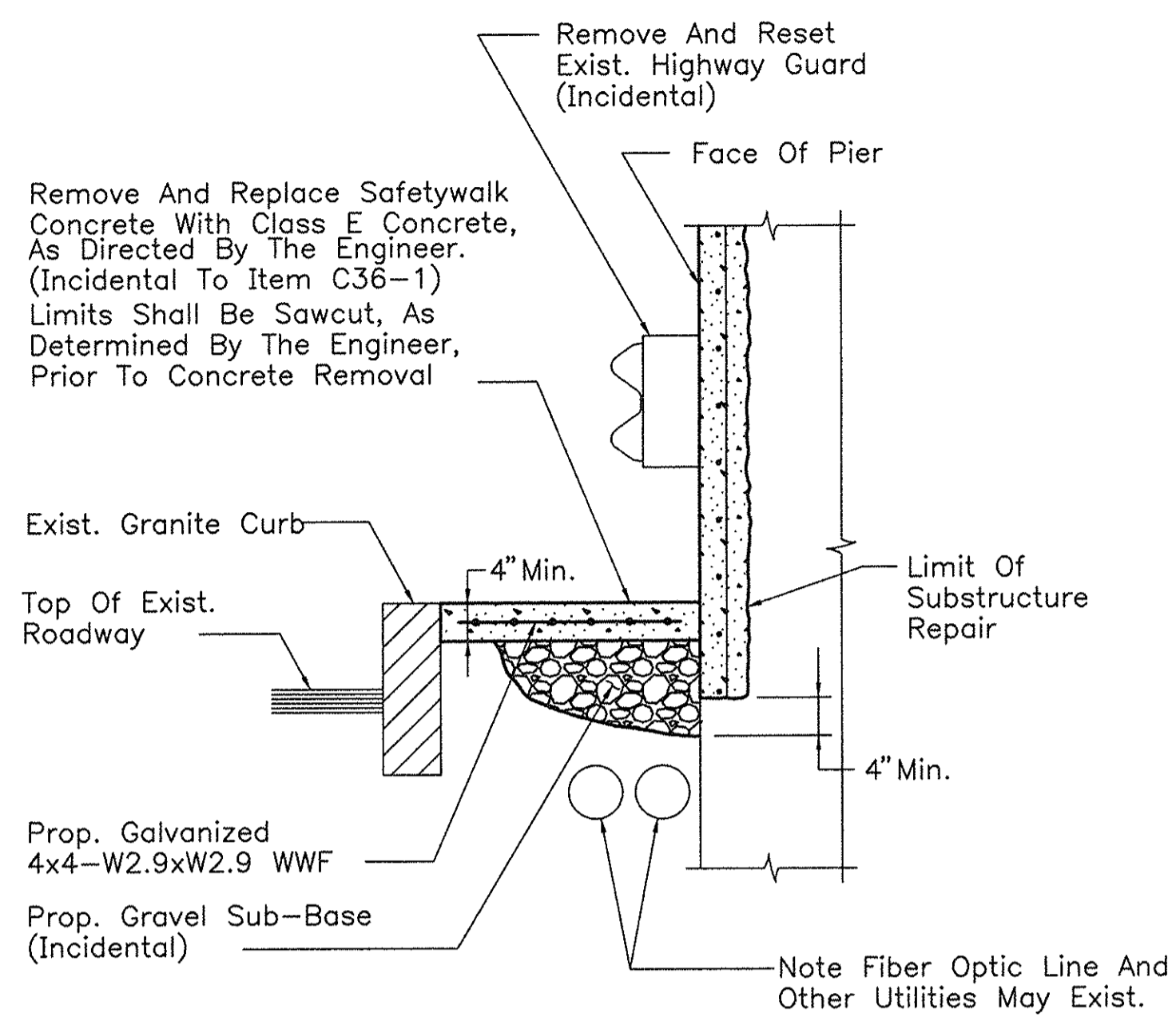
HAMMERHEAD COLUMN SECTION
RECTANGULAR COLUMN SECTIONS SIMILAR



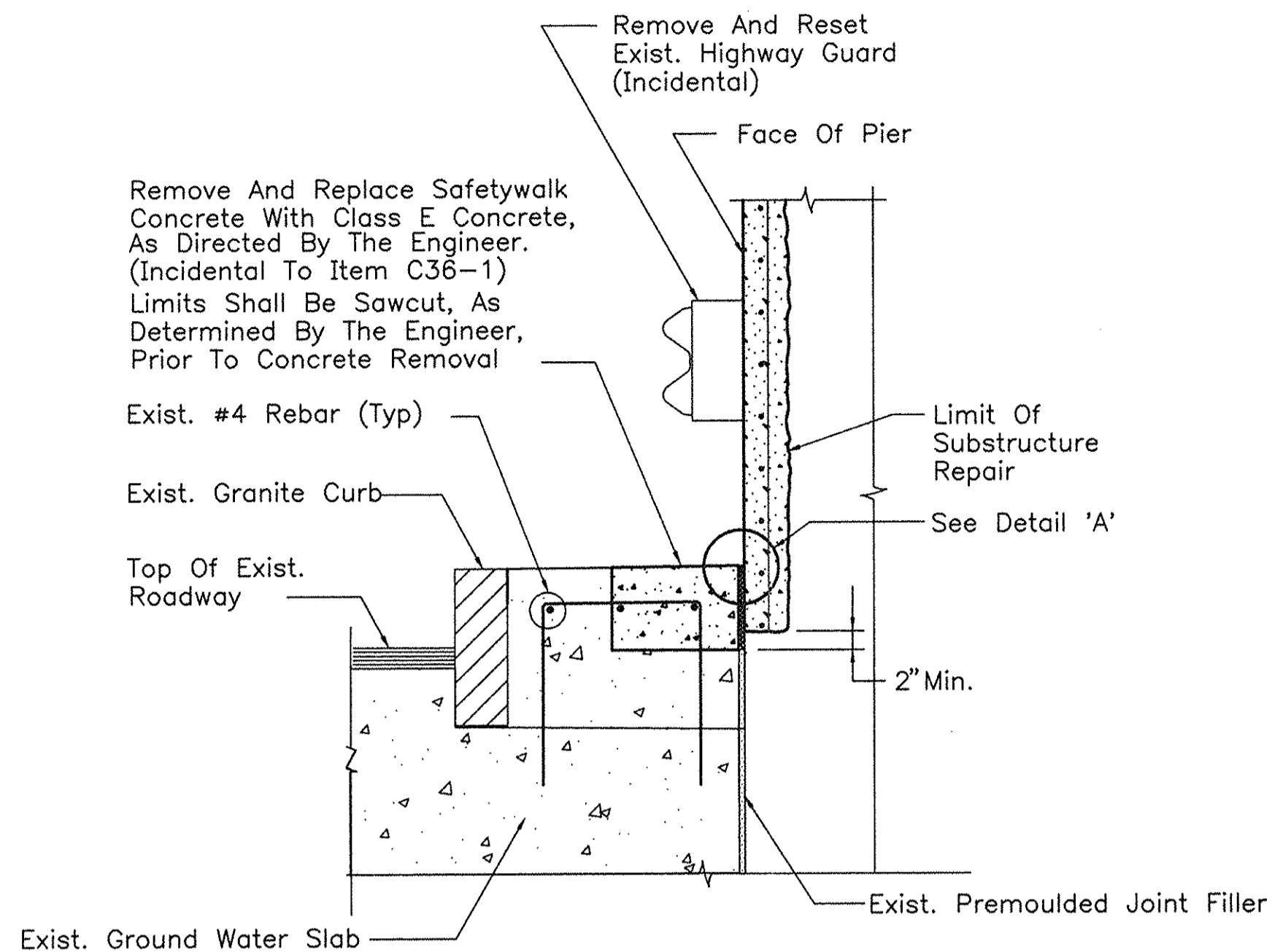
ISOMETRIC VIEW OF PIER CAP
SHOWING METHOD OF PAYMENT

NO.	REVISION	BY	DATE

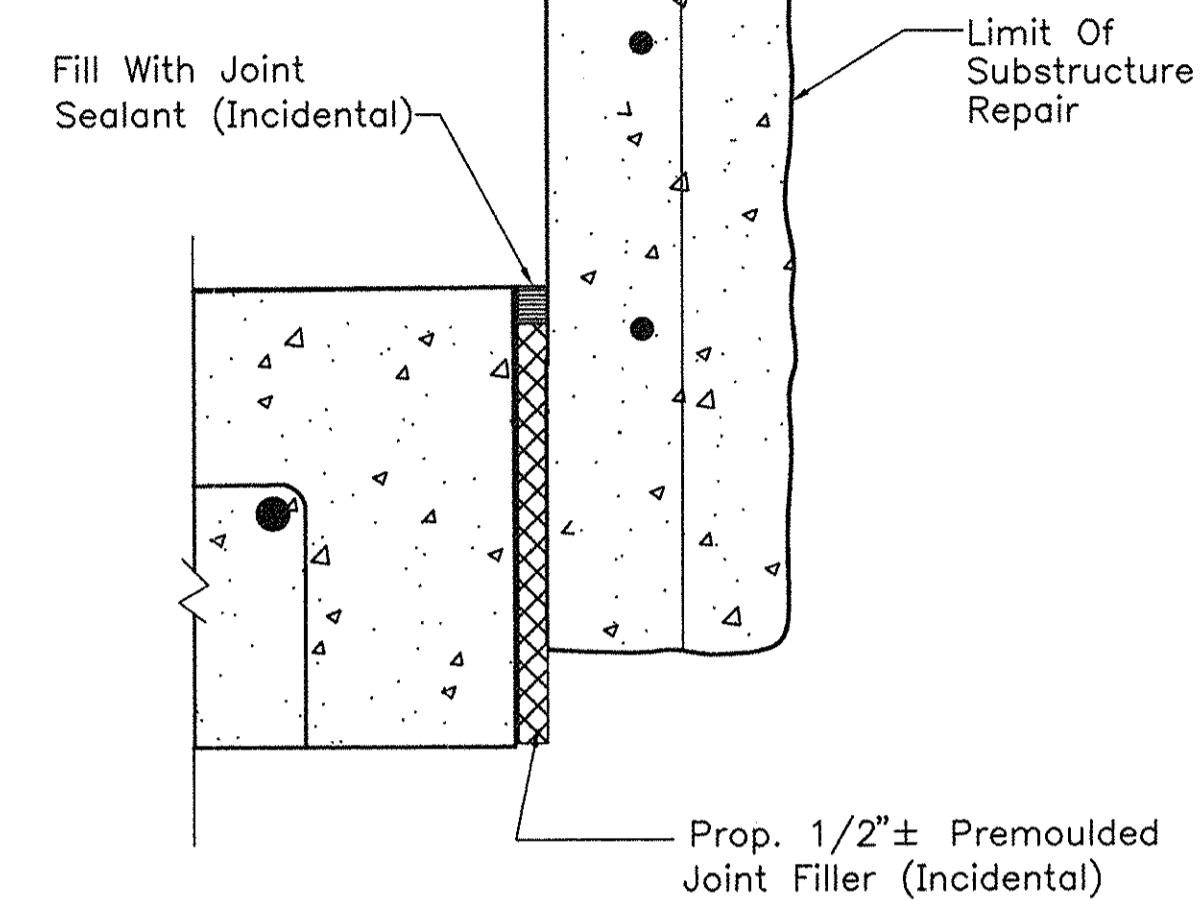
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR DETAILS-SUBSTRUCTURE CONCRETE REPAIRS WITH WET SHOTCRETE	
Scale: NOT TO SCALE	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 38



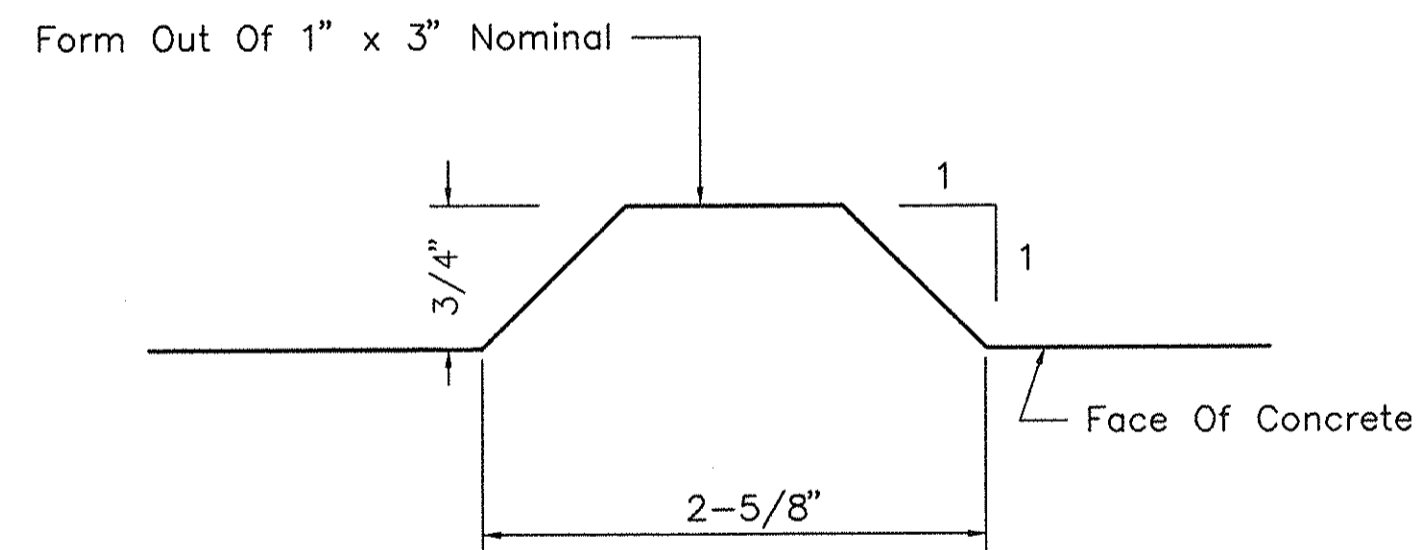
**REPAIRS BELOW GRADE
AT CONCRETE SAFETYWALK
(INCIDENTAL TO ITEM C36-1)**
N.T.S.



**REPAIRS BELOW GRADE
AT CONCRETE SAFETYWALK W/WATER SLAB
(INCIDENTAL TO ITEM C36-1)**
N.T.S.



DETAIL 'A'
N.T.S.

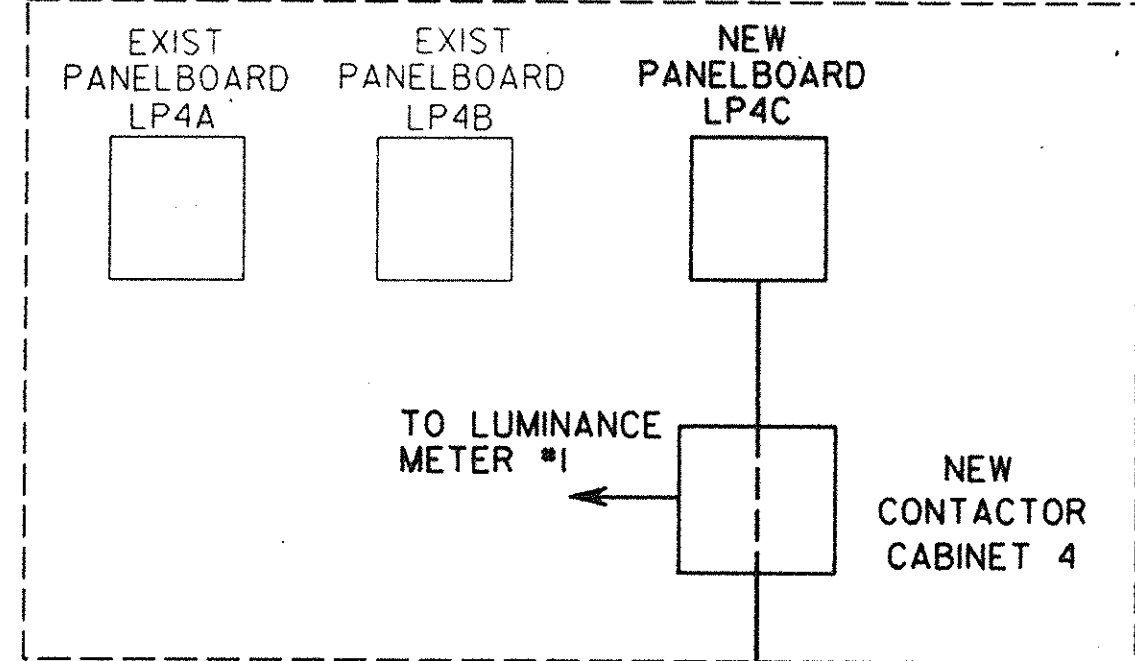


RUSTICATION DETAIL
FULL SIZE

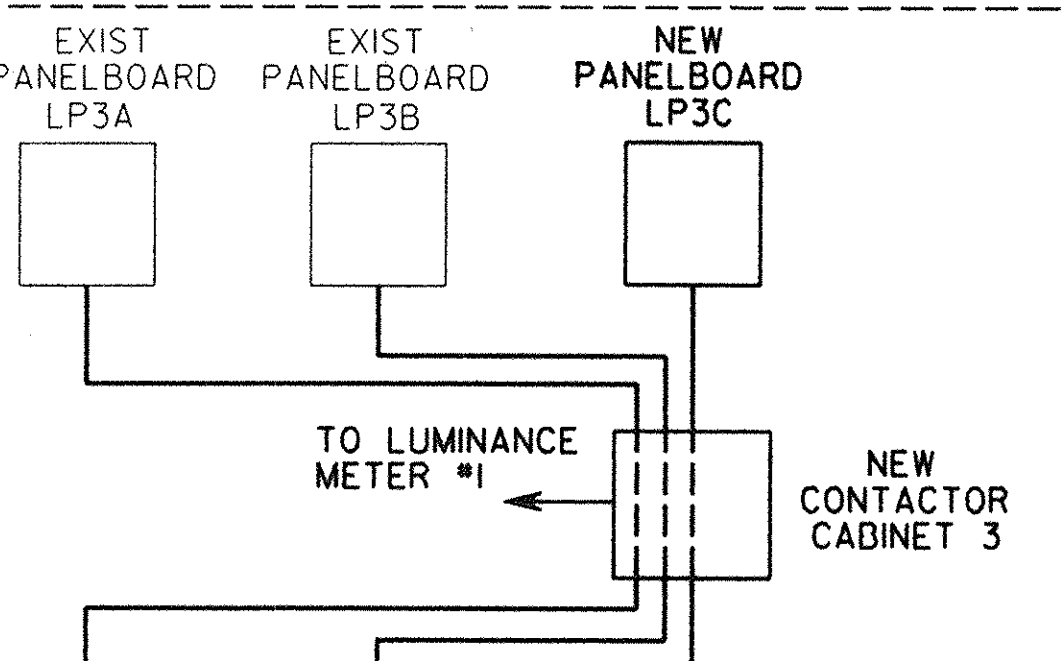
NO.	REVISION	BY	DATE	IN CHARGE	PC

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
SUBSTRUCTURE CONCRETE REPAIR	
MISCELLANEOUS DETAILS	
Scale: AS NOTED	Contract No. 973-111
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 39

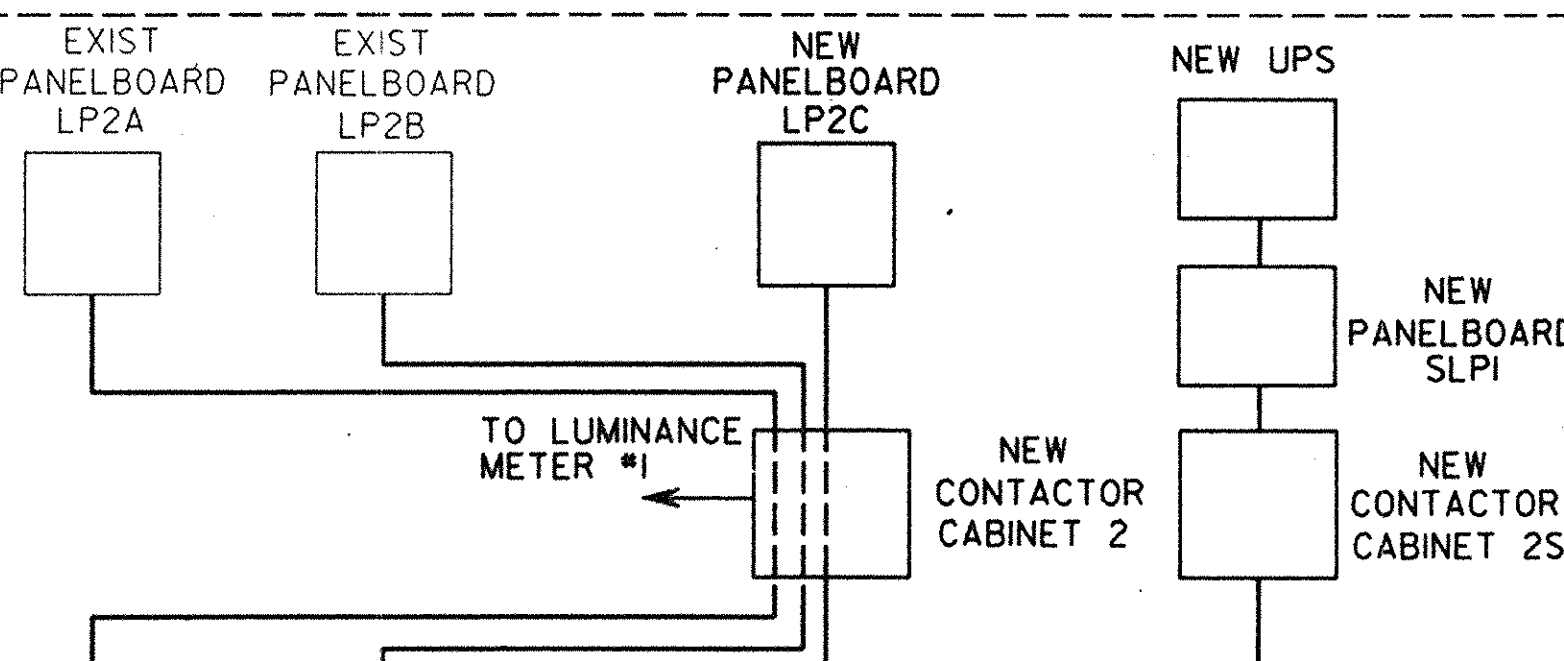
FAN ROOM # 4



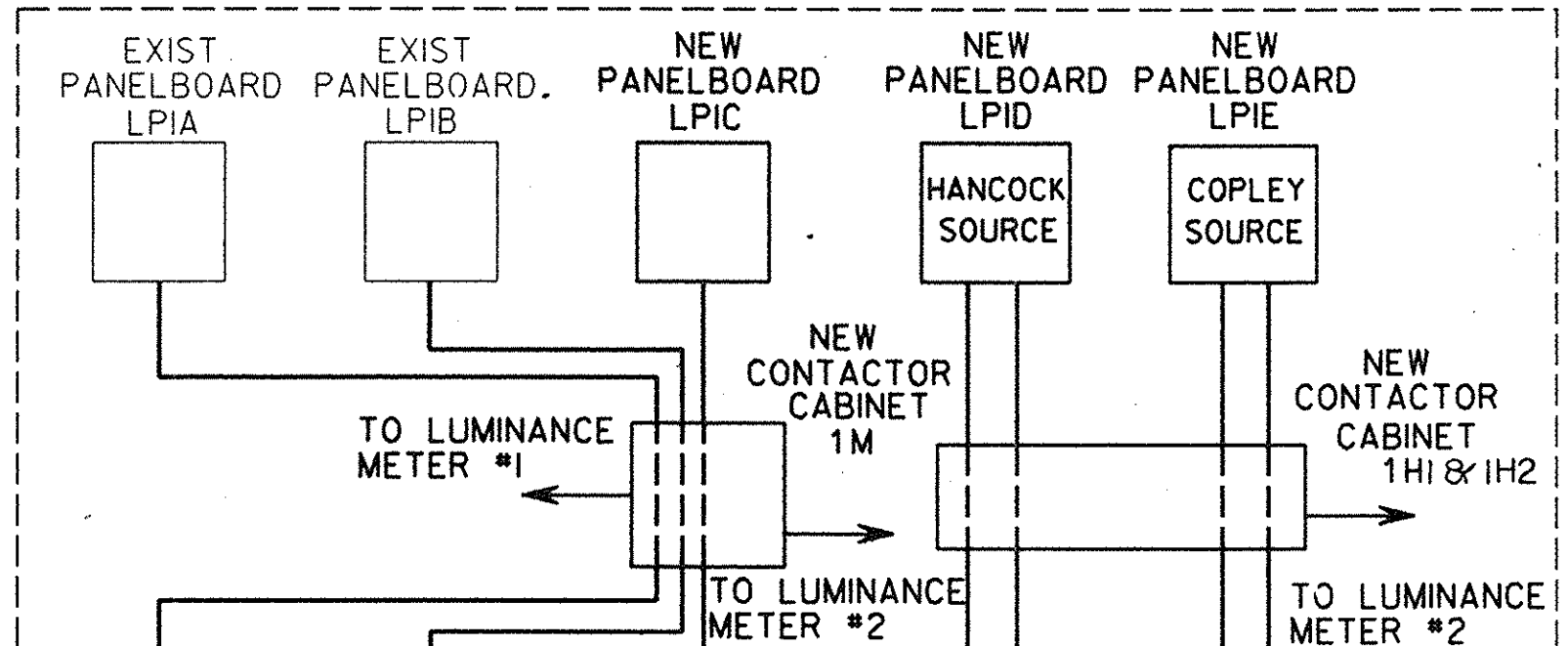
FAN ROOM # 3



FAN ROOM # 2



FAN ROOM # 1



EASTBOUND TRANSITION/
THRESHOLD ZONE
DRIVER WALL FIXTURES

EASTBOUND TRANSITION/
THRESHOLD ZONE
PASSENGER WALL FIXTURES

EASTBOUND TRANSITION/
THRESHOLD ZONES
PASSENGER WALL FIXTURES

INTERIOR ZONE
WESTBOUND
DRIVER WALL FIXTURES

INTERIOR ZONE
WESTBOUND
PASSENGER WALL FIXTURES

RAMP A PASSENGER WALL
FIXTURES

INTERIOR ZONE
EASTBOUND
DRIVER WALL FIXTURES

INTERIOR ZONE
EASTBOUND
PASSENGER WALL FIXTURES

RAMP A PASSENGER WALL
FIXTURES

EASTBOUND TRANSITION/
THRESHOLD ZONES
DRIVER WALL FIXTURES

WESTBOUND INTERIOR ZONE
DRIVER & PASSENGER WALL
FIXTURES

EASTBOUND INTERIOR ZONE
DRIVER & PASSENGER WALL
FIXTURES

RAMP E
INTERIOR ZONE
DRIVER WALL FIXTURES

RAMP E
INTERIOR ZONE
PASSENGER WALL FIXTURES

WESTBOUND TRANSITION/
THRESHOLD FIXTURES

COPLEY RAMP (B&D)
INTERIOR ZONE FIXTURES

DRIVER WALL

PASSENGER WALL

DRIVER WALL

PASSENGER WALL

EVERY 4TH FIXTURE
INTERIOR ZONE - WESTBOUND & EASTBOUND
- RAMPS A, B & D
(LIBRARY, COPLEY)

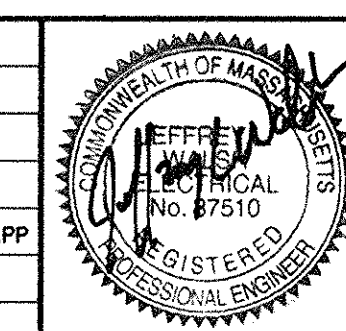
NOTES:

- LUMINANCE METER #1 SERVICES EASTBOUND ENTRY PORTAL.
- LUMINANCE METER #2 SERVICES WESTBOUND ENTRY PORTAL.
- HANCOCK SOURCE POWERS FIXTURES FROM STA. 0+00 TO STA. 7+20 EASTBOUND AND WESTBOUND, AS WELL AS RAMP E.
- COPLEY SOURCE POWERS FIXTURES FROM STA. 7+20 TO STA. 12+50 EASTBOUND AND WESTBOUND, AS WELL AS ALL OF THE COPLEY RAMP.
- MTA SOURCE POWERS FIXTURES AT BOYLSTON ST. AND MASSACHUSETTS AVE PIERS, AS WELL AS RAMP A, FROM STA. 12+50 TO STA. 36+00 WESTBOUND, AND FROM STA. 12+50 TO STA. 31+30 EASTBOUND.
- CIRCUIT SCHEDULES ARE SHOWN ON DRAWING NOS. EL-47, EL-48 AND EL-49.
- PANELBOARD SCHEDULES ARE SHOWN ON DRAWING NOS. EL-50 THROUGH EL-53.
- FAN ROOM LAYOUTS ARE SHOWN ON DRAWING NOS. EL-45 AND EL-46.
- TUNNEL CONDUIT ROUTING AND SCHEDULES ARE SHOWN DRAWING NO. EL-54.
- LUMINANCE METER DETAILS AND CONTROL WIRING RISER DIAGRAM ARE SHOWN ON DRAWING NO. EL-58.

TUNNEL LIGHTING
CONTROL & CIRCUITING SCHEMATIC

N.T.S.

ISSUE DATE	DESCRIPTION	BY	CHK	APP
	ACCEPTED FOR CONSTRUCTION			
S/PB:		MTA:		



MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

I-90 PRUDENTIAL TUNNEL
TUNNEL LIGHTING
CIRCUITING DIAGRAM

Sverdrup/Parsons Brinckerhoff
Joint Venture

DESIGNED BY: JLW CHECKED BY: MJF DATE: NOV 21, 1994
DRAWN BY: LED IN CHARGE: PJL SCALE: N.T.S.

CONTRACT NO. 511-023R DRAWING NO. EL-43

Design File Name: rpt_012/013246/consysa.plt
Plot File Name: rptconsysa.prf
Date of Plot: 11/15/94 (using STANDARD.TBL)

CIRCUIT SCHEDULE
EASTBOUND - DRIVER WALL NORMAL CIRCUIT

CIRCUIT (NOTE 2)	QTY/SIZE	PANEL	ZONE	FIXTURE LOCATION		ROW	HOMERUN LENGTH (FT)	QTY OF FIXTURES	WIRING REFERENCE DIAGRAM	CONTACTOR ASSIGNMENT	STEP	FIXT. TYPE
				FROM STA.	TO STA.							
MET1	4 *3	LP4C	THRES	31+30	24+10	3	200	24	1	4-A	HIGH	MH1
MET2	4 *3	LP4C	THRES	31+30	24+10	3	200	24	1	4-B	HIGH	MH1
MET3	4 *3	LP4C	THRES	31+30	24+10	3	200	24	1	4-C	HIGH	MH1
MET4	4 *3	LP3C	THRES	31+30	24+10	3	200	24	1	3-A	HIGH	MH1
MET5	4 *3	LP3C	THRES	31+30	24+10	3	200	24	1	3-B	HIGH	MH1
MET6	4 *4	LP3C	THRES	31+30	24+10	3	200	21	1	3-C	HIGH	MH1
MET7	4 *4	LP2C	THRES	31+30	24+10	2	510	21	1	2-A	MEDIUM	MH1
MET8	4 *4	LP2C	THRES	31+30	24+10	2	510	21	1	2-B	MEDIUM	MH1
MET9	4 *4	LP2C	THRES	31+30	24+10	2	510	21	1	2-C	MEDIUM	MH1
MET10	4 *4	LP2C	THRES	31+30	24+10	2	510	21	1	2-D	MEDIUM	MH1
MET11	4 *6	LP3C	THRES	31+30	24+10	2	200	21	1	3-D	MEDIUM	MH1
MET12	4 *4	LP1C	THRES	31+30	24+10	2	710	21	1	1M-A	LOW	MH1
MET13	4 *4	LP1C	THRES	31+30	24+10	2	710	21	1	1M-B	LOW	MH1
MET14	4 *6	LP2C	THRES	31+30	24+10	2	510	9	1	2-E	LOW	MH1
MER1	4 *4	LP1C	TRANS 1	24+10	20+50	2	350	33	2	1M-C	HIGH	MH2
MER2	4 *6	LP1A	TRANS 1	24+10	20+50	2	350	15	2	1M-D	MEDIUM	MH2
MER3	4 *6	LP1A	TRANS 1	24+10	20+50	2	350	15	2	1M-E	LOW	MH2
MEN1	4 *6	LP1B	TRANS 2	20+50	18+00	2	200	16	3	1M-F	HIGH	MH2
MEN2	4 *6	LP1B	TRANS 2	20+50	18+00	2	200	16	3	1M-G	MEDIUM	MH2
MEN3	4 *6	LP1B	TRANS 2	20+50	18+00	2	200	16	3	1M-H	HIGH	MH2
MEN4	4 *6	LP1B	TRANS 2	20+50	18+00	2	200	16	3	1M-I	MEDIUM	MH2
HE11	4 *6	LP1D	INT	0+00	7+20	1	1380	22	4	1H1-A	NIGHT	LP1
CE11	4 *6	LP1E	INT	7+20	12+50	1	850	17	4	1H1-B	NIGHT	LP1
ME11	4 *4	LP2B	INT	12+50	23+06	1	200	37	4	2-F	NIGHT	LP1
ME12	4 *4	LP2B	INT	23+06	31+30	1	406	37	4	2-G	NIGHT	LP1

FLUORESCENT ALTERNATE

HE11	4 *4	LP1D	INT	0+00	7+20	1	1380	65	4	-	NIGHT	FL1
CE11	4 *6	LP1E	INT	7+20	12+50	1	850	48	4	-	NIGHT	FL1
ME11	4 *3	LP2B	INT	12+50	23+06	1	200	96	4	-	NIGHT	FL1
ME12	4 *3	LP2B	INT	23+06	31+30	1	406	75	4	-	NIGHT	FL1

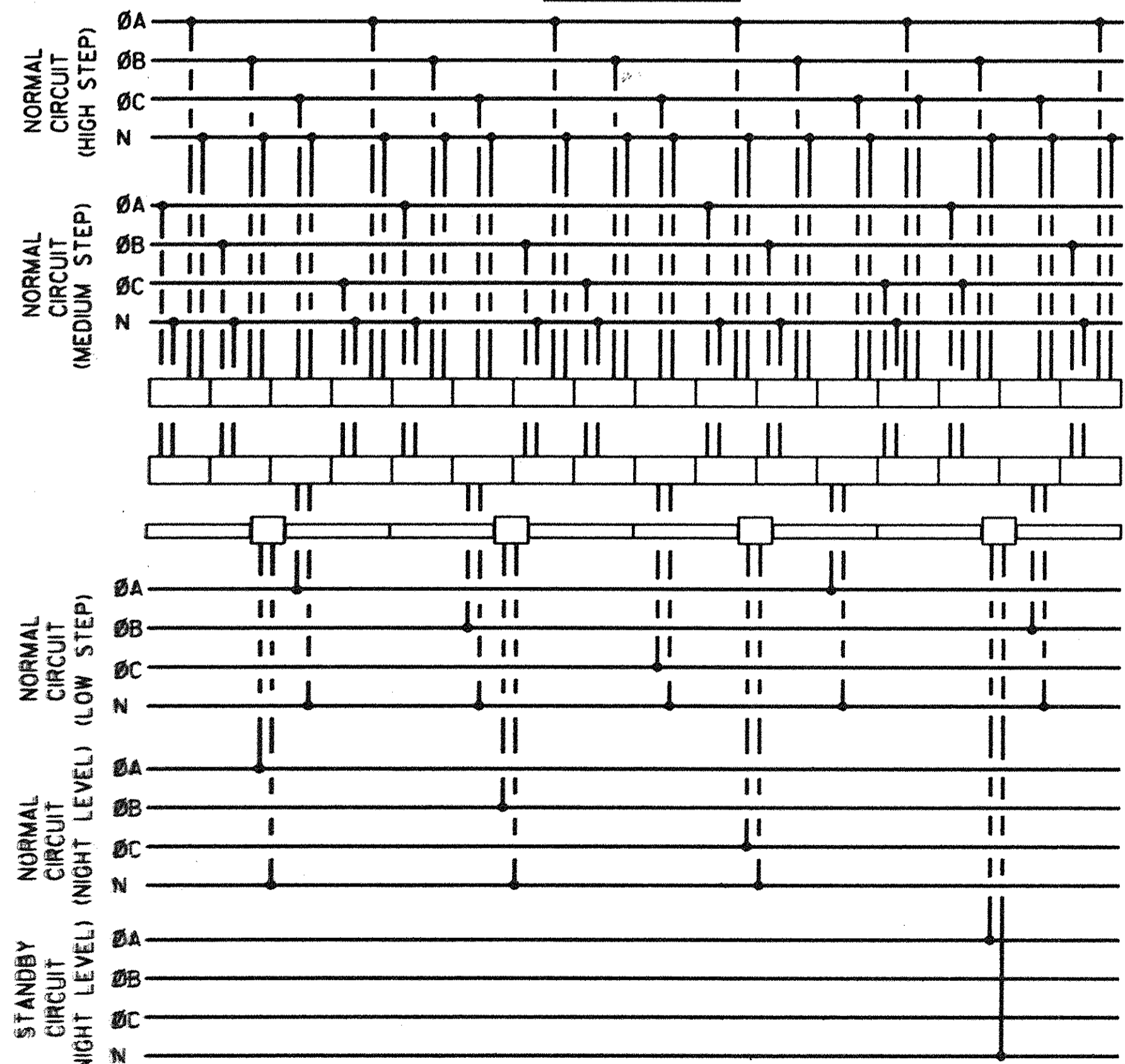
EASTBOUND - DRIVER WALL STANDBY CIRCUITS

CIRCUIT (NOTE 2)	QTY/SIZE	PANEL	ZONE	FIXTURE LOCATION		ROW	HOMERUN LENGTH (FT)	QTY OF FIXTURES	WIRING REFERENCE DIAGRAM	CONTACTOR ASSIGNMENT (SEE NOTE 3)	STEP	FIXT. TYPE
				FROM STA.	TO STA.							
* ME11-S	4 *6	SLP1	INT-S	0+00	18+24	1	476	18	4	2S-A	NIGHT	LP1
* ME12-S	4 *6	SLP1	INT-S	18+24	31+30	1	200	19	4	2S-B	NIGHT	LP1

FLUORESCENT ALTERNATE

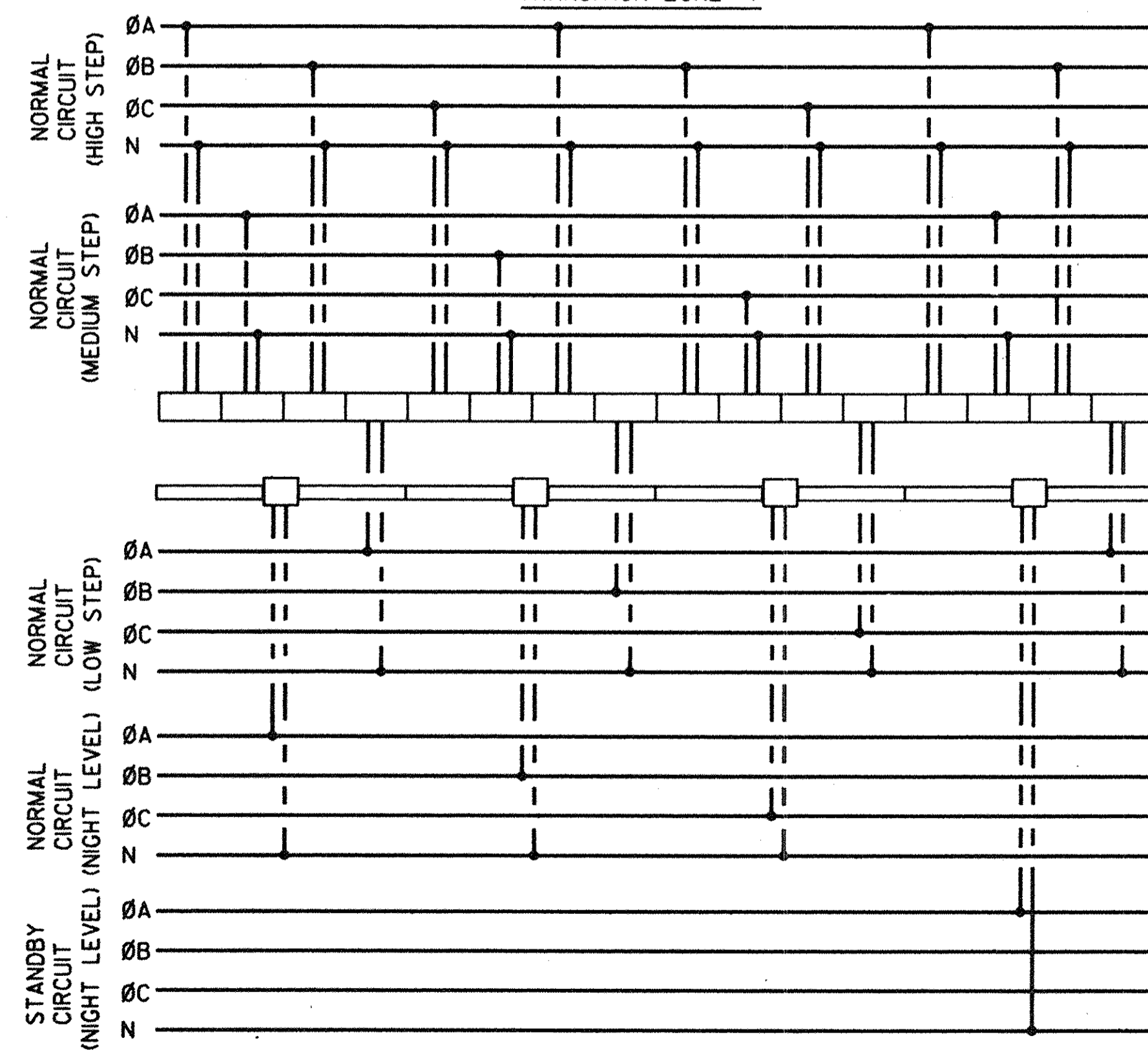
ME11-S	4 *6	SLP1	INT-S	0+00	18+24	1	476	55	4	-	NIGHT	FL1
ME12-S	4 *6	SLP1	INT-S	18+24	31+30	1	200	40	4	-	NIGHT	FL1

THRESHOLD ZONE



WIRING DIAGRAM #1
(SAME FOR FLUORESCENT OPTION)

TRANSITION ZONE #1



WIRING DIAGRAM #2
(SAME FOR FLUORESCENT OPTION)

CIRCUIT SCHEDULE
EASTBOUND - PASSENGER WALL NORMAL CIRCUIT

CIRCUIT (NOTE 2)	QTY/SIZE	PANEL	ZONE	FIXTURE LOCATION		ROW	HOMERUN LENGTH (FT)	QTY OF FIXTURES	WIRING REFERENCE DIAGRAM	CONTACTOR ASSIGNMENT	STEP	FIXT. TYPE
				FROM STA.	TO STA.							
MET1A	4 *4	LP4C	THRES	32+16	31+30	3	400	17	1	4-D1	HIGH	MH1
MET1	4 *3	LP4C	THRES	32+16	24+10	3	300	24	1	4-D	HIGH	MH1
MET2	4 *3	LP4C	THRES	32+16	24+10	3	300	24	1	4-E	HIGH	MH1
MET3	4 *3	LP4C	THRES	32+16	24+10	3	300	24	1	4-F	HIGH	MH1
MET4	4 *3	LP3C	THRES	32+16	24+10	3	300	24	1	3-E	HIGH	MH1
MET5	4 *3	LP3C	THRES	32+16	24+10	3	300	24	1	3-F	HIGH	MH1
MET6	4 *4	LP3C	THRES	32+16	24+10	3	300	21	1	3-G	HIGH	MH1
MET7	4 *4	LP2C	THRES	32+16	24+10	2	610	21	1	2-H	MEDIUM	MH1
MET8	4 *4	LP2C	THRES	32+16	24+10	2	610	21	1	2-I	MEDIUM	MH1
MET9	4 *4	LP2C	THRES	32+16	24+10	2	610	21	1	2-J	MEDIUM	MH1
MET10	4 *4	LP2C	THRES	32+16	24+10	2	610	21	1	2-K	MEDIUM	MH1
MET11	4 *4	LP3C	THRES	32+16	24+10	2	300	21	1	3-H	MEDIUM	MH1
MET12	4 *4	LP1C	THRES	32+16	24+10	2	810	21	1	1M-J	LOW	MH1
MET13	4 *4	LP1C	THRES	32+16	24+10	2	810	21	1	1M-K	LOW	MH1
MET14	4 *4	LP2C	THRES	32+16	24+10	2	610	14	1	2-L	LOW	MH1
MER1	4 *4	LP1C	TRANS 1	24+10	20+50	2	450	33	2	1M-L	HIGH	MH2
MER2	4 *6	LP1A	TRANS 1	24+10	20+50	2	450	15	2	1M-M	MEDIUM	MH2
MER3	4 *6	LP1A	TRANS 1	24+10	20+50	2	450	15	2	1M-N	LOW	MH2
MEN1	4 *6	LP1B	TRANS 2	20+50	18+00	2	300	16	3	1M-O	HIGH	MH2
MEN2	4 *6	LP1B	TRANS 2	20+50	18+00	2	300	16	3	1M-P	MEDIUM	MH2
MEN3	4 *6	LP1B	TRANS 2	20+50	18+00	2	300	16	3	1M-Q	HIGH	MH2
MEN4	4 *6	LP1B	TRANS 2	20+50	18+00	2	300	16	3	1M-R	MEDIUM	MH2
* HE11	4 *6	LP1D	INT	0+00	7+20	1	1480	22	4	1H1-C	NIGHT	LP1
* CE11	4 *6	LP1E	INT	7+20	12+50	1	950	17	4	1H1-D	NIGHT	LP1
* ME11	4 *4	LP2B	INT	12+50	23+06	1	300	37	4	2-M	NIGHT	LP1
* ME12	4 *3	LP2B	INT	23+06	32+16	1	506	41	4	2-N	NIGHT	LP1

FLUORESCENT ALTERNATE

HE11	4 *4	LP1D	INT	0+00	7+20	1	1480	65	4	-	NIGHT	FL1
CE11	4 *6	LP1E	INT	7+20	12+50	1	950	48	4	-	NIGHT	FL1
ME11	4 *3	LP2B	INT	12+50	23+06	1	300	96	4	-	NIGHT	FL1
ME12	4 *4	LP2B	INT	23+06	32+16	1	506	85	4	-	NIGHT	FL1

EASTBOUND - PASSENGER WALL STANDBY CIRCUITS

CIRCUIT (NOTE 2)	QTY/SIZE	PANEL	ZONE	FIXTURE LOCATION		ROW	HOMERUN LENGTH (FT)	QTY OF FIXTURES	WIRING REFERENCE DIAGRAM	CONTACTOR ASSIGNMENT (SEE NOTE 3)	STEP	FIXT. TYPE
				FROM STA.	TO STA.							
* ME11-S	4 *6	SLP1	INT-S	0+00	18+24	1	576	18	4	2S-C	NIGHT	LP1
* ME12-S	4 *6	SLP1	INT-S	18+24	32+16	1	300	23	4	2S-D	NIGHT	LP1

FLUORESCENT ALTERNATE

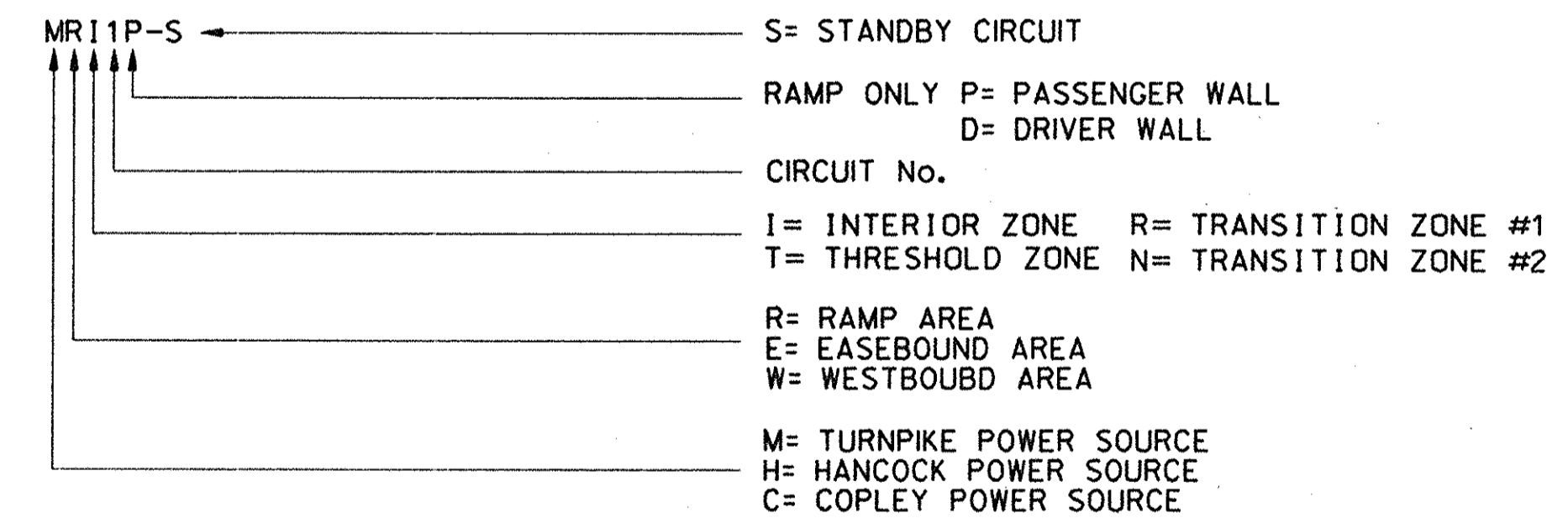
ME11-S	4 *6	SLP1	INT-S	0+00	18+24	1	576	55	4	-	NIGHT	FL1
ME12-S	4 *6	SLP1	INT-S	18+24	32+16	1	300	50	4	-	NIGHT	FL1

* - INDICATES CIRCUITS THAT WOULD BE EFFECTED BY UTILIZATION OF FLUORESCENT ALTERNATE IN PLACE OF LIGHT PIPE. SEE "FLUORESCENT ALTERNATE" CIRCUIT SCHEDULE FOR FLUORESCENT CIRCUIT INFORMATION.

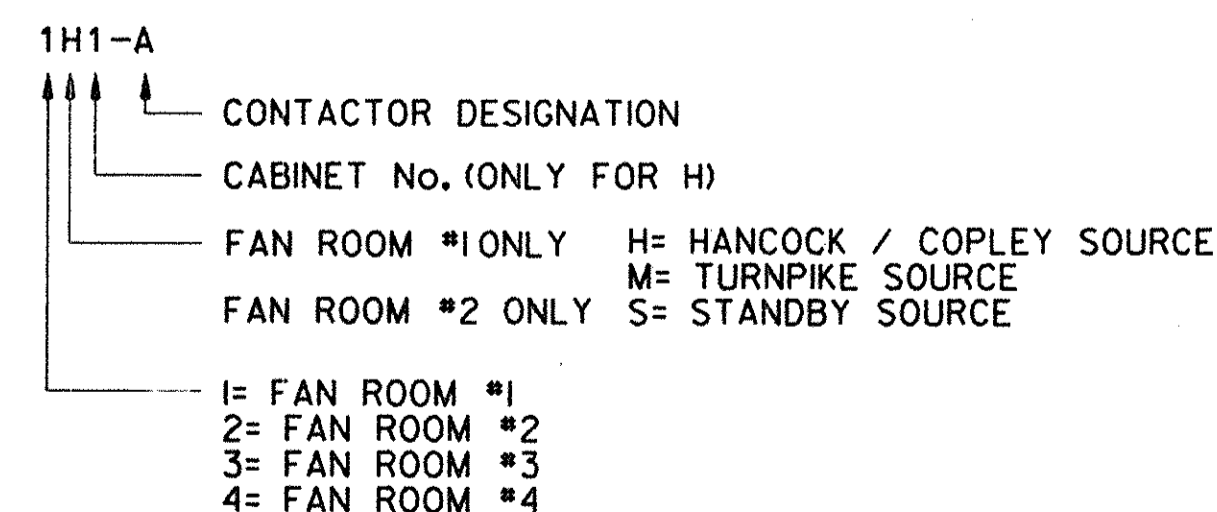
NOTES: (FOR CONTINUATION OF NOTES SEE DWG. NO. EL-48)

1. MAINTAIN WIRE SIZE SHOWN ON SCHEDULE THROUGHOUT MAIN TUNNEL CONDUIT AND WIREWAY SYSTEM. WIRING WHIPS TO FIXTURES SHALL BE #8. PROVIDE 1-#3 GND CONDUCTOR IN EACH CONDUIT AND WIREWAY.

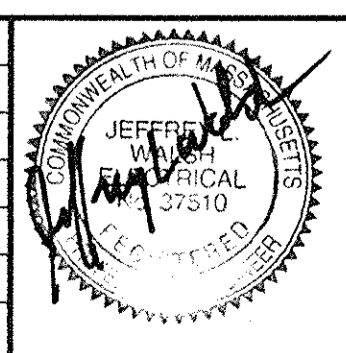
2. CIRCUIT DESIGNATIONS ARE AS FOLLOWS:



3. CONTACTOR ASSIGNMENTS ARE AS FOLLOWS:



ISSUE DATE	DESCRIPTION	BY	CHK	APP



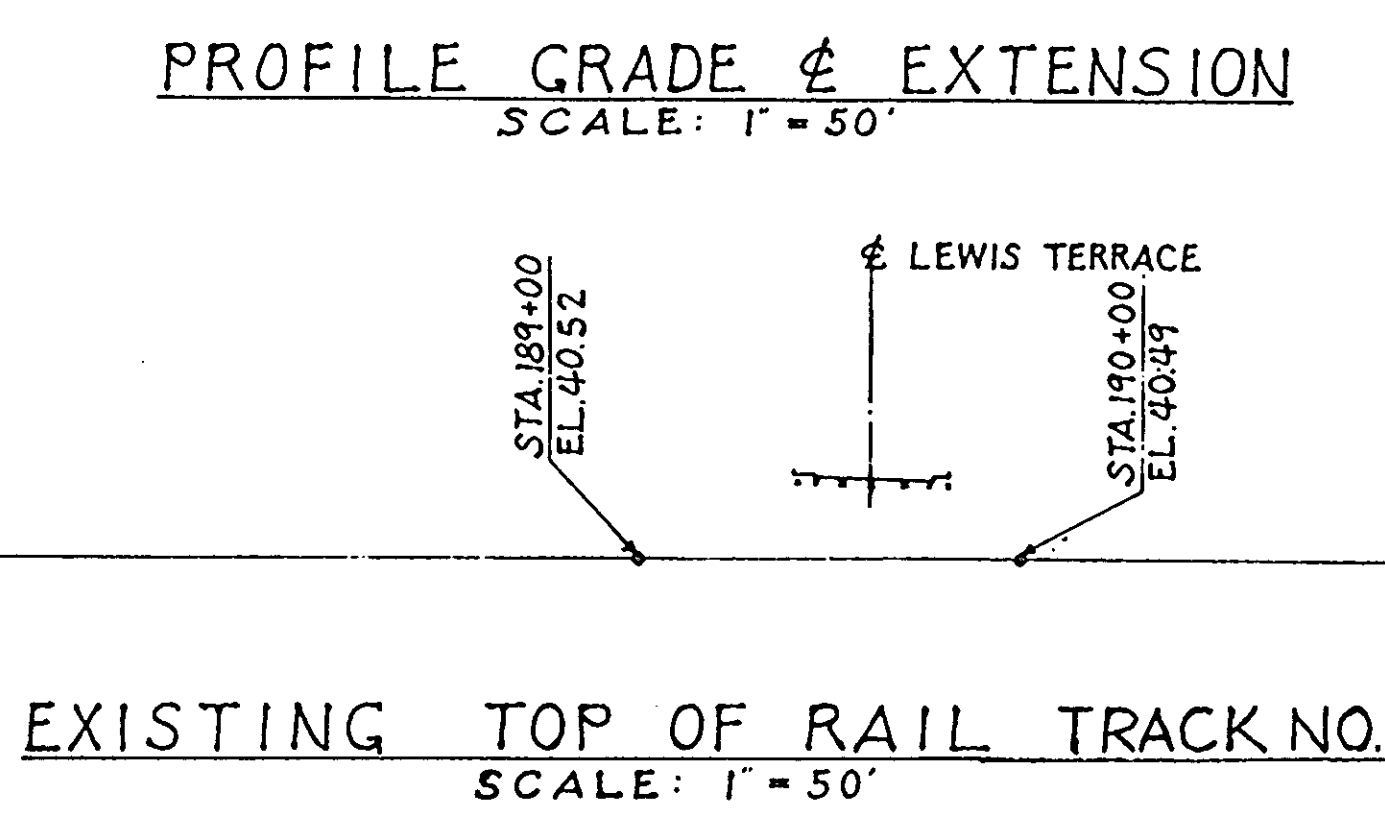
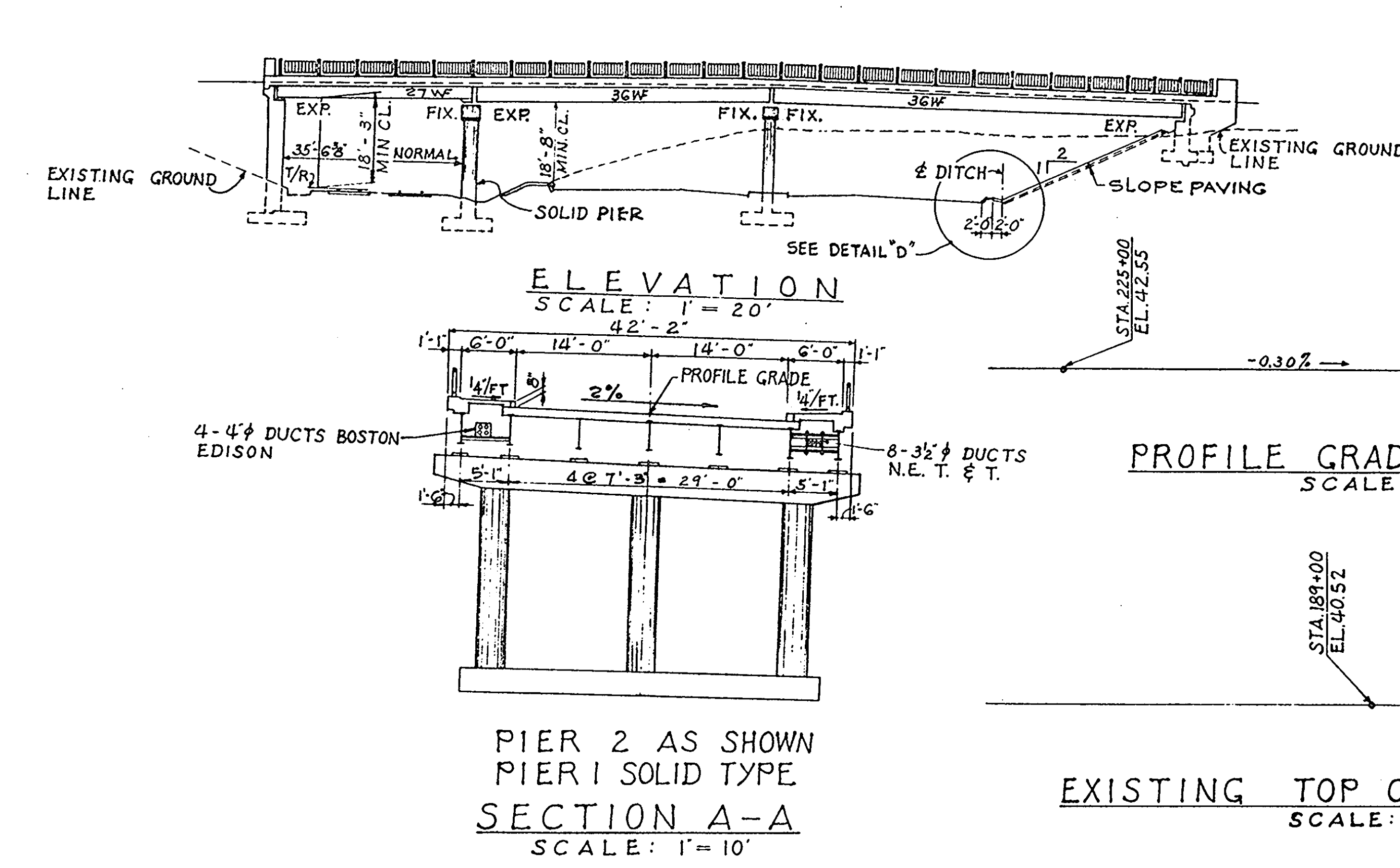
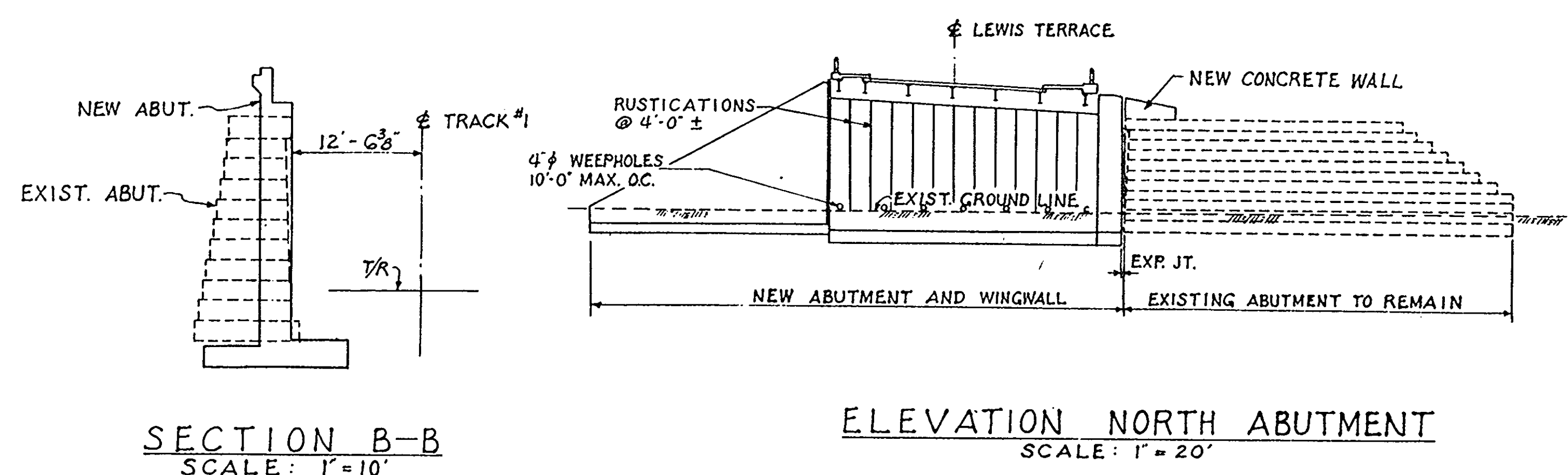
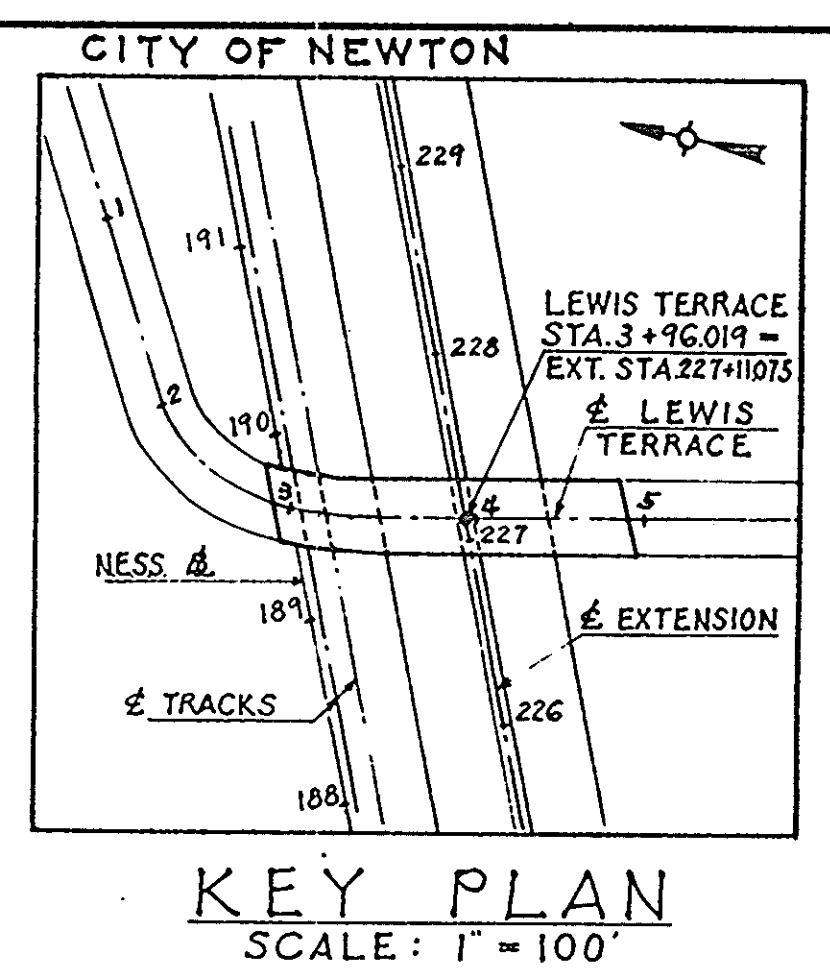
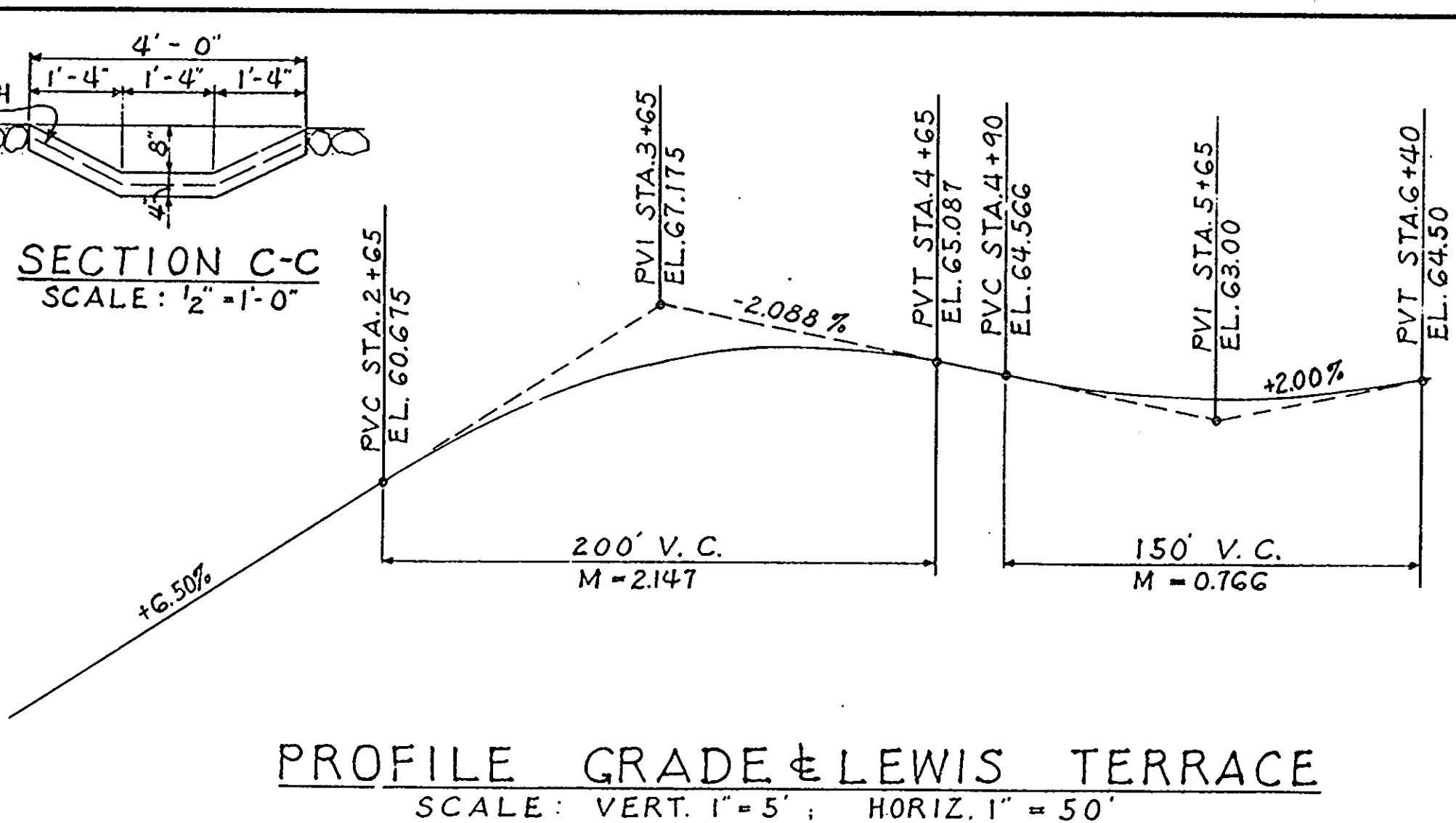
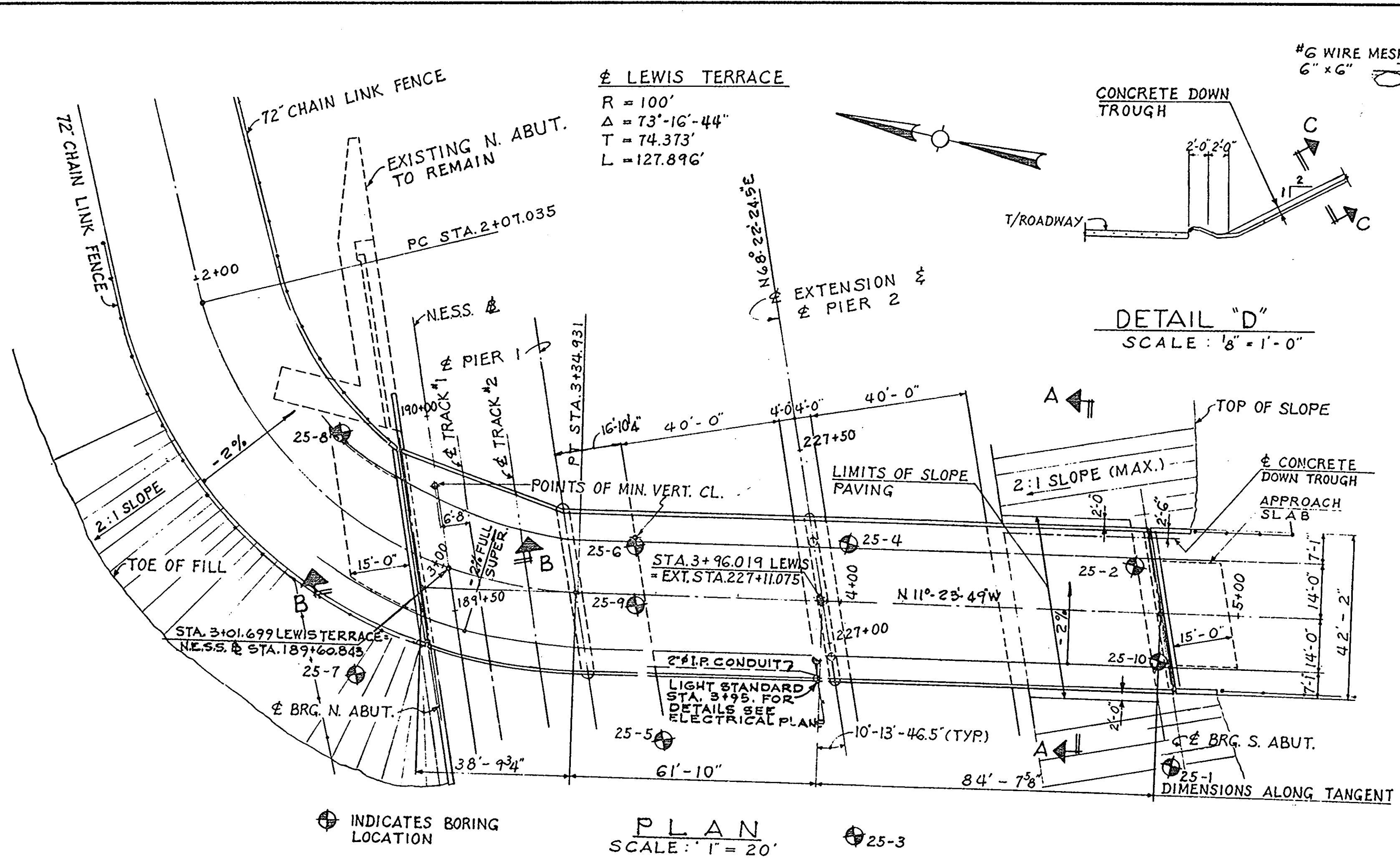
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

I-90 PRUDENTIAL TUNNEL
**LIGHTING CIRCUIT SCHEDULES
AND SCHEMATICS SHEET 1 OF 3**

Sverdrup/Parsons Brinckerhoff
Joint Venture

DESIGNED BY: JLW	CHECKED BY: MJF	DATE: NOV. 21, 1994
DRAWN BY: LED	IN CHARGE: P.J.L.	SCALE: N.T.S.

CONTRACT NO. 511-023R DRAWING NO. EL-47



GENERAL NOTES

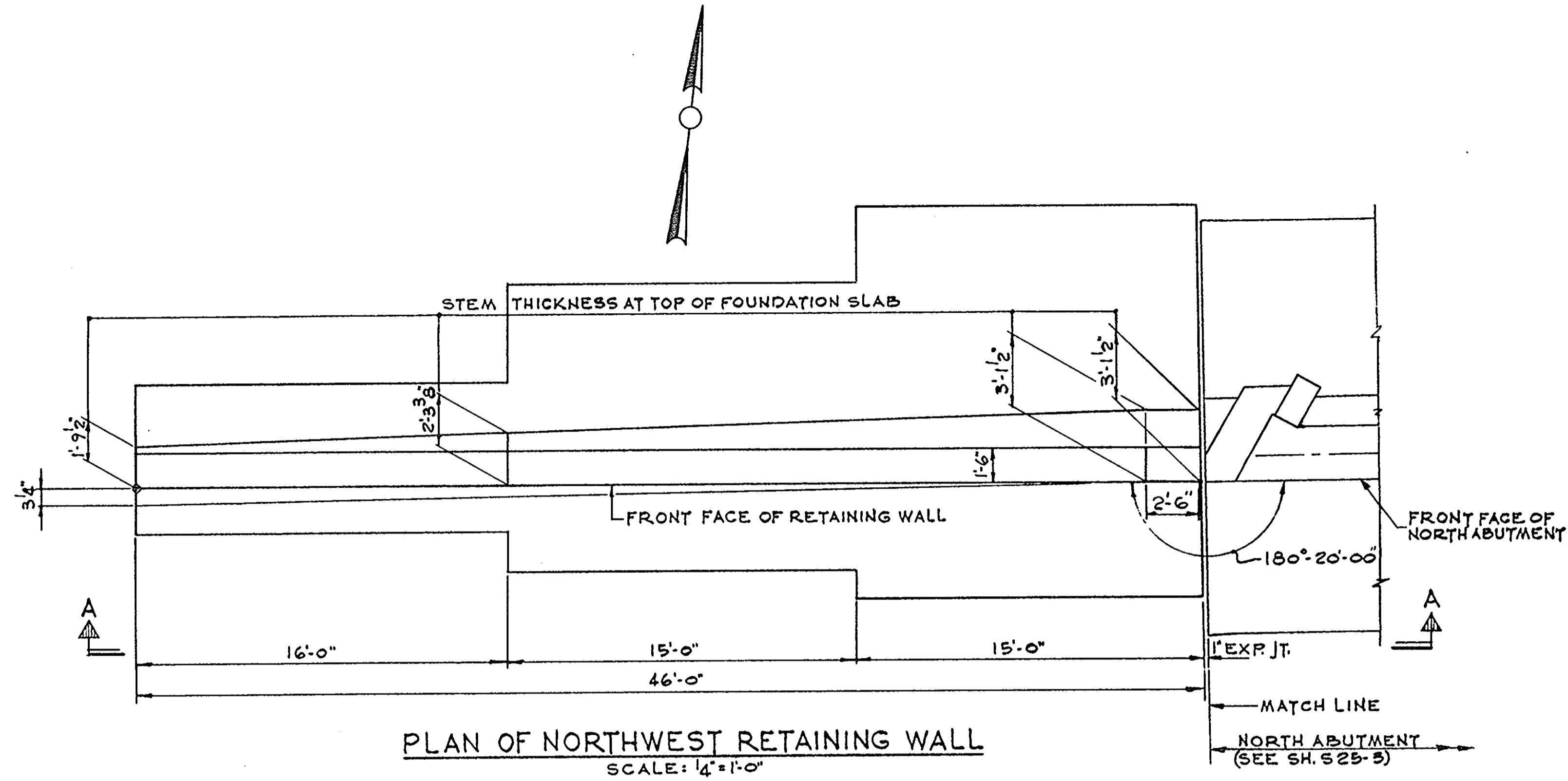
LIVE LOAD: H20-44

FOUNDATION:
 ALL SUBSTRUCTURE UNITS SHALL BE SOIL BEARING WITH AN AVERAGE SOIL PRESSURE OF 3500 POUNDS PER SQ. FT. MAXIMUM TOE PRESSURE UNDER ANY LOADING SHALL BE 4500 POUNDS PER SQ. FT.

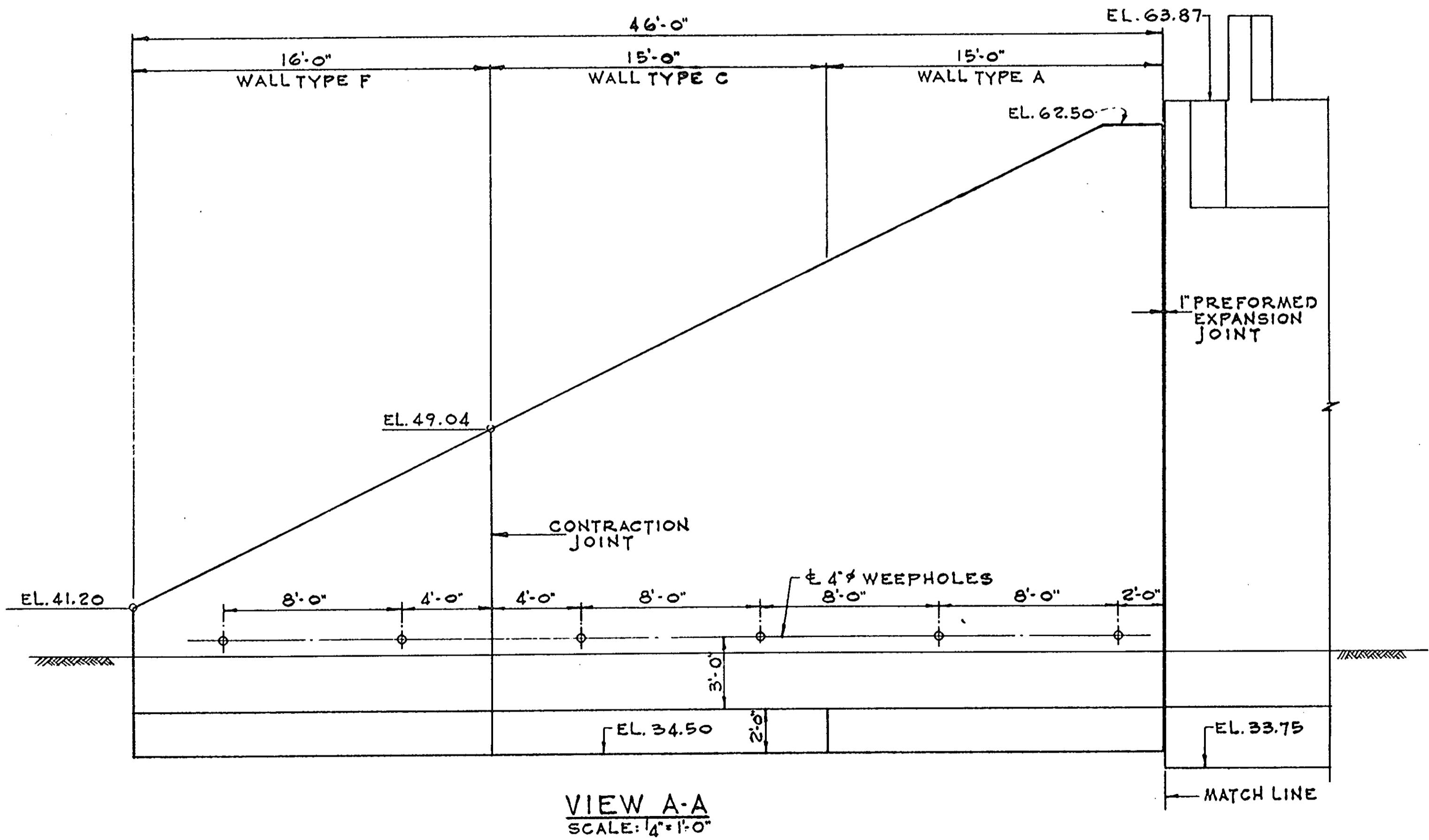
"AS-BUILT PLANS"

BOSTON EXTENSION	
STRUCTURE NO. 25	
LEWIS TERRACE OVER EXTENSION	
LIST OF DRAWINGS	
SHEET NO.	TITLE
S 25-1	GENERAL PLAN
S 25-2	SOIL BORING LOGS
S 25-3	NORTH ABUTMENT
S 25-4	SOUTH ABUTMENT
S 25-5	NW RETAINING WALL & ABUT. DETAILS
S 25-6	PIER #1 & #2
S 25-7	FRAMING PLAN, CROSS SECT. & DETAILS
S 25-8	BEARING DETAILS, DECK DETAILS, & ELEVATIONS
S 25-9	PAVEMENT ELEVATIONS
MASSACHUSETTS TURNPIKE AUTHORITY	
BOSTON EXTENSION	
SECTION B	
STRUCTURE #25	
LEWIS TERRACE OVER EXTENSION	
GENERAL PLAN	
DE LEUW, CATHER & CO.	SCALE:
CONSULTING ENGINEERS	381 BOYLSTON
BROOKLINE, MASS.	SHEET NO. S25-1

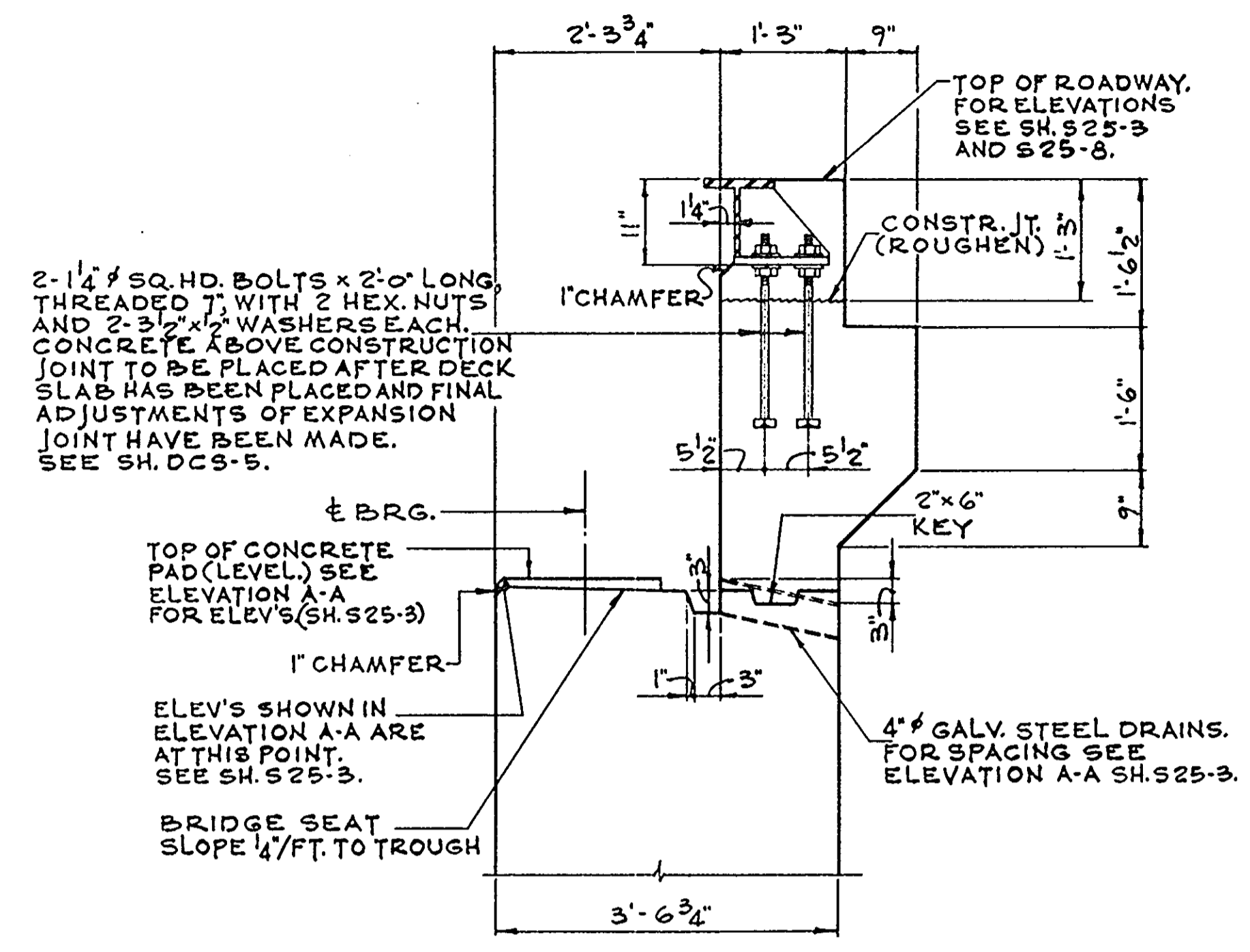
NOTE:
 THESE "AS BUILT" PLANS HAVE BEEN PREPARED BY HOWARD, NEEDLES, TAMMEN AND BERGENDOFF FROM INFORMATION FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY.



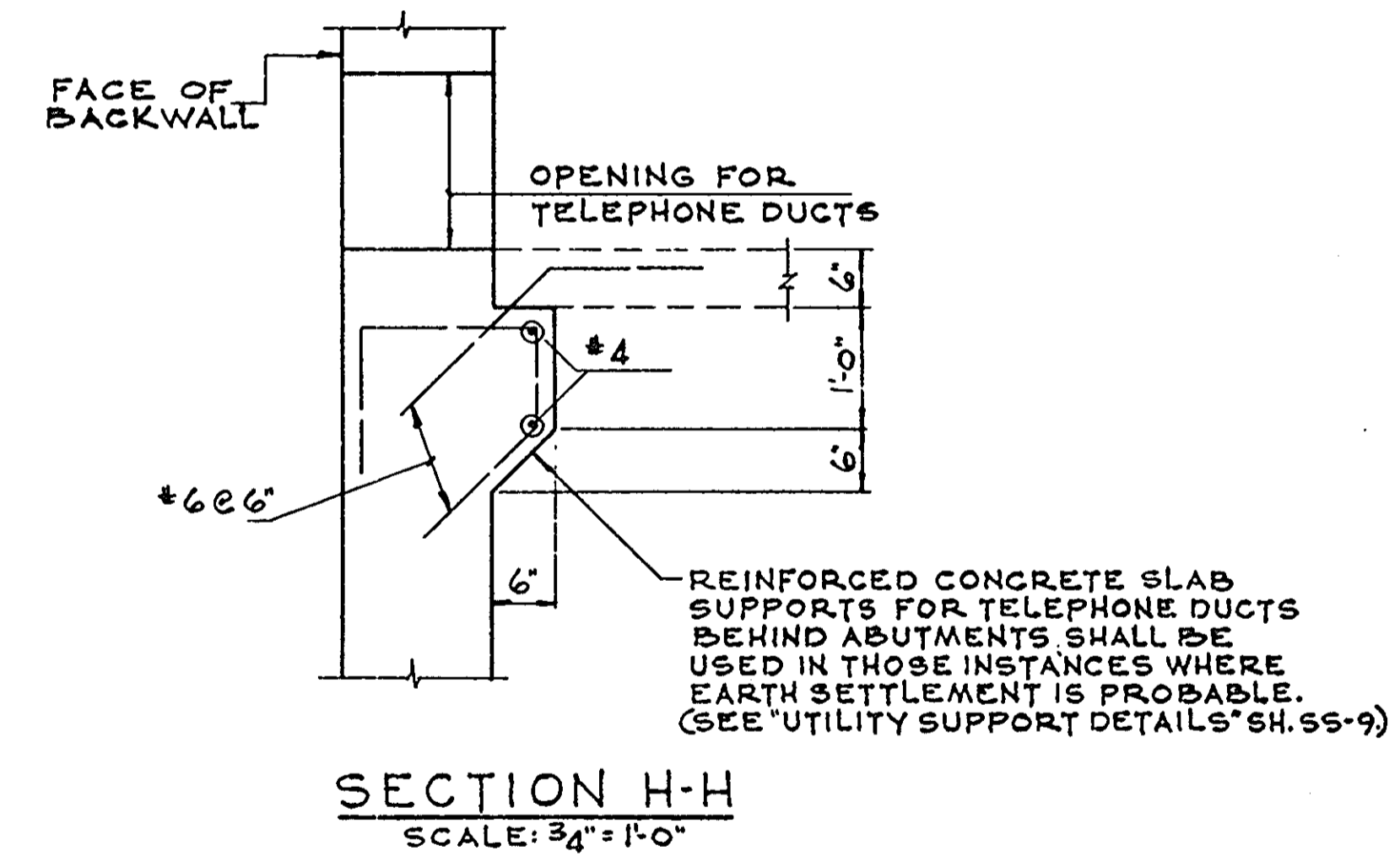
PLAN OF NORTHWEST RETAINING WALL
SCALE: 1/4" = 1'-0"



VIEW A-A
SCALE: 1/4" = 1'-0"



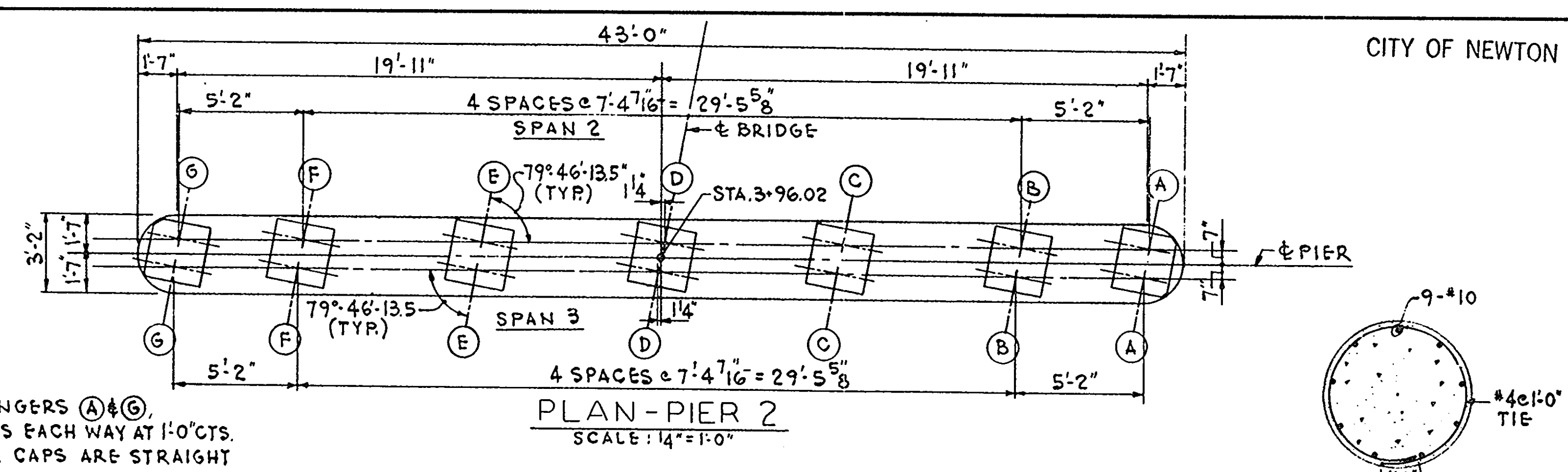
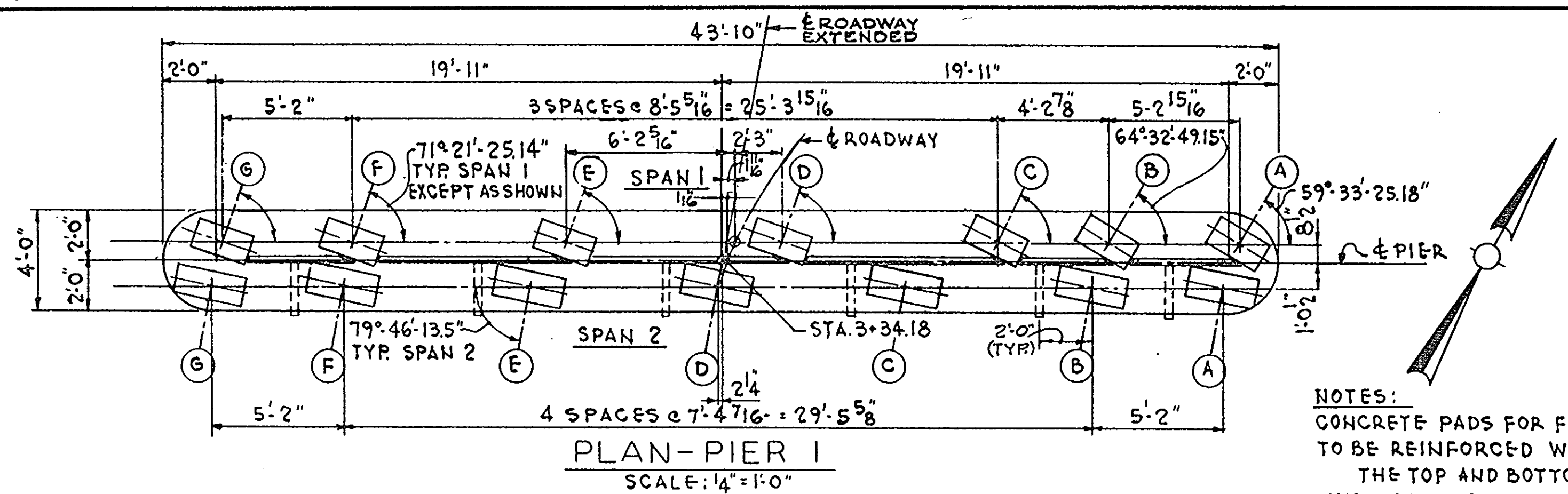
TYPICAL CROSS-SECTION THRU NORTH ABUTMENT
SCALE: 3/4" = 1'-0"



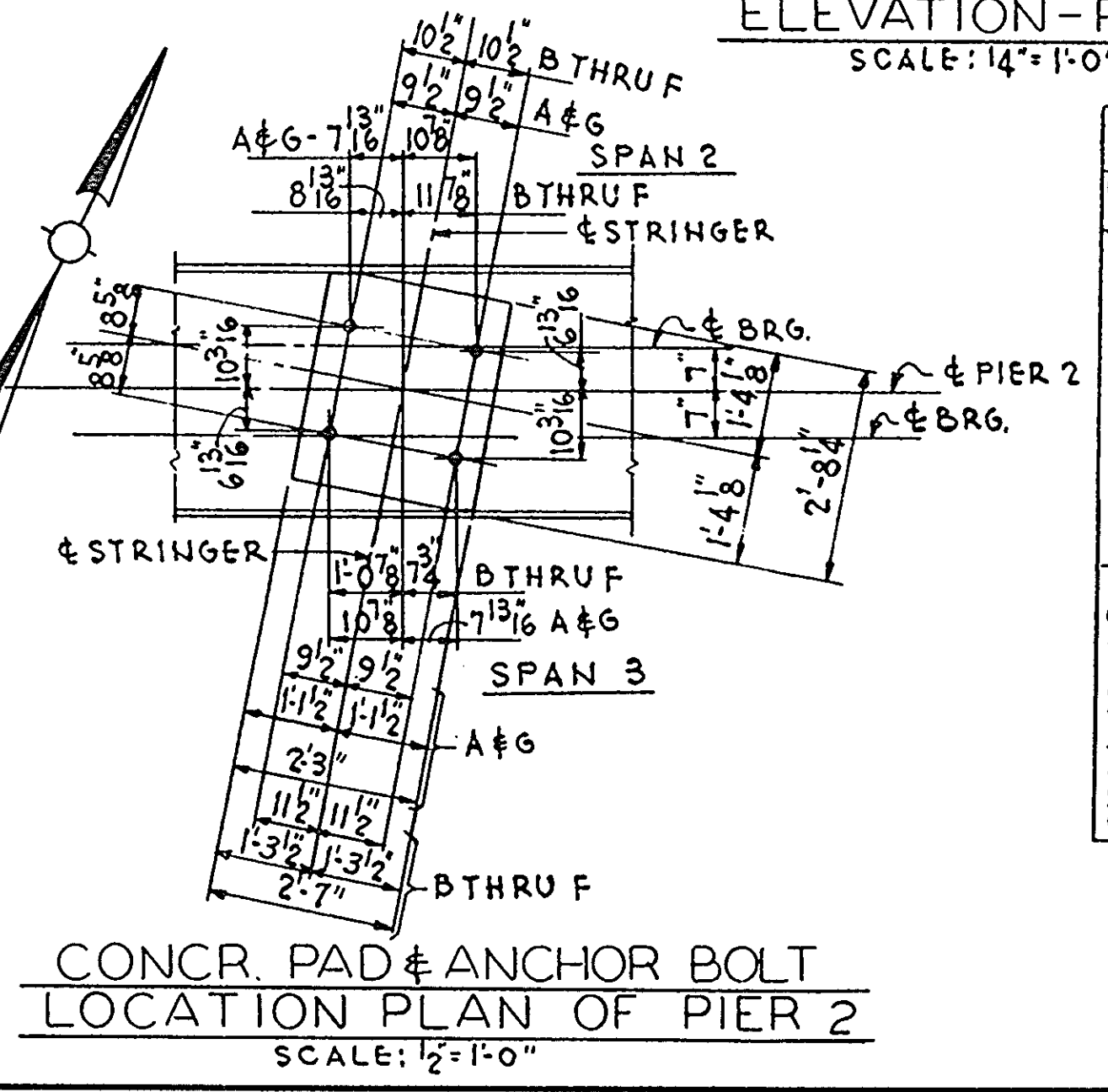
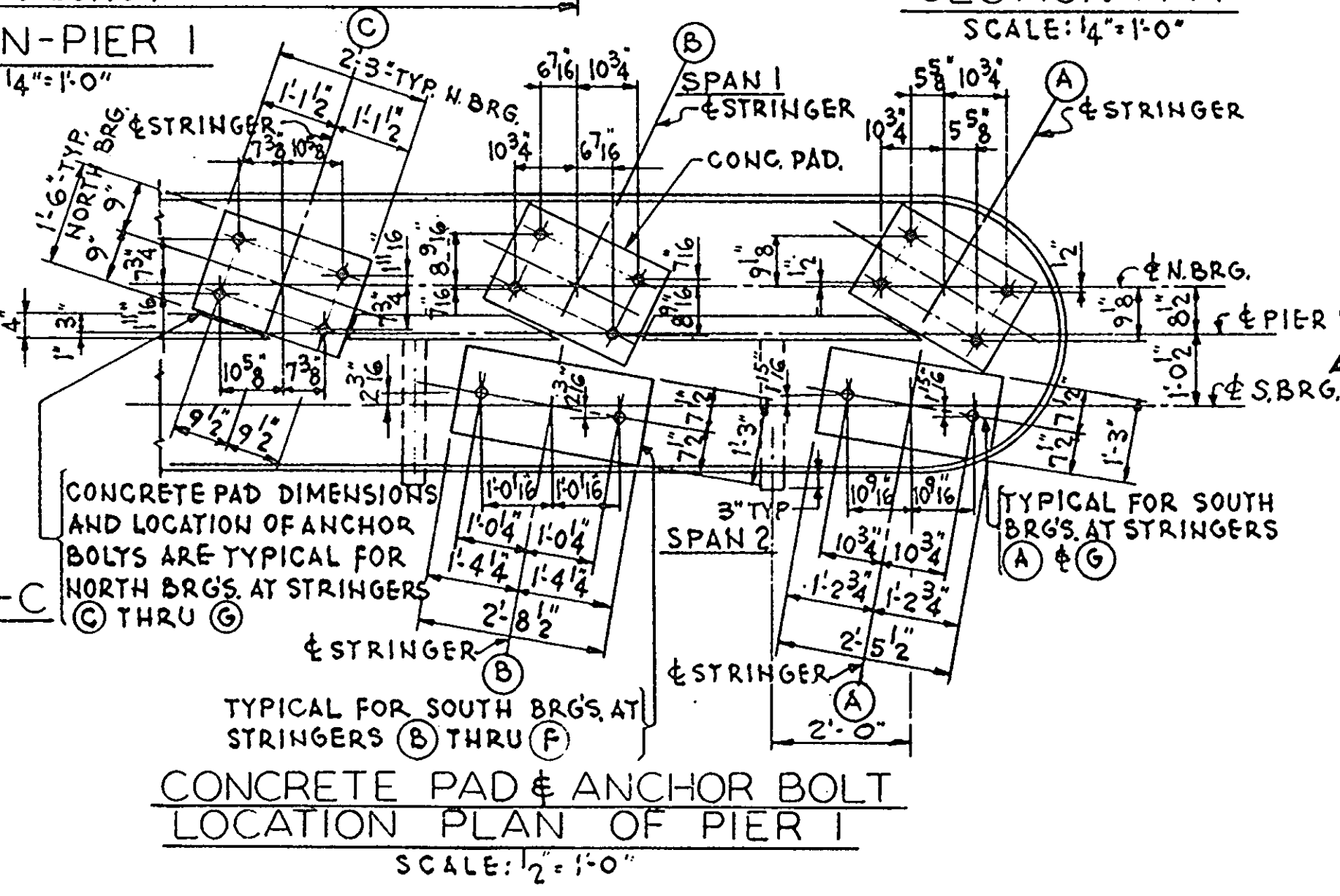
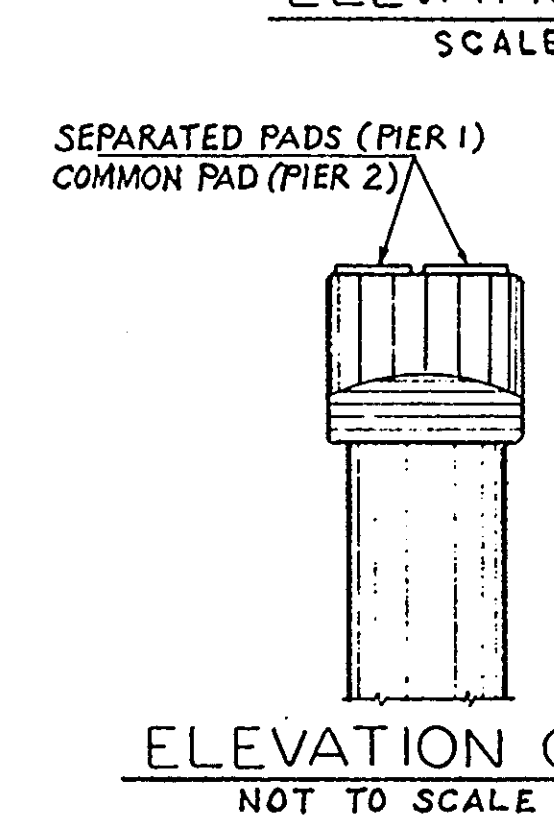
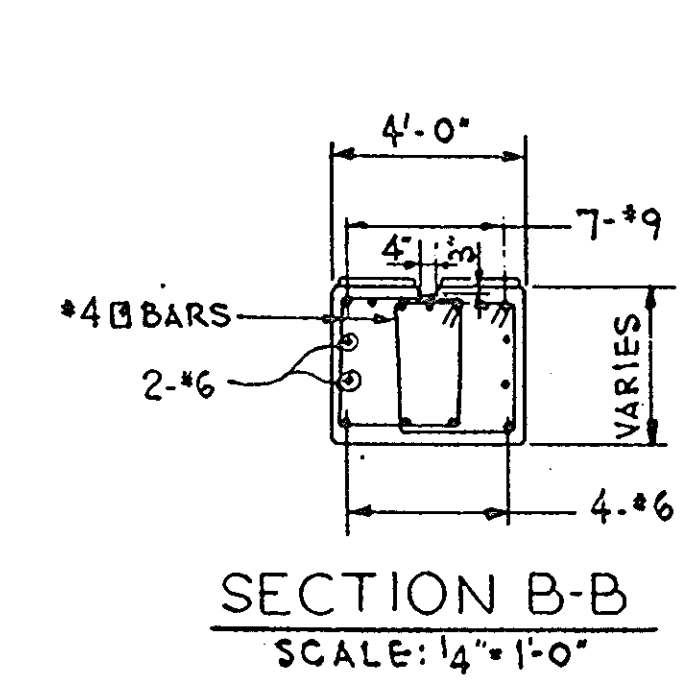
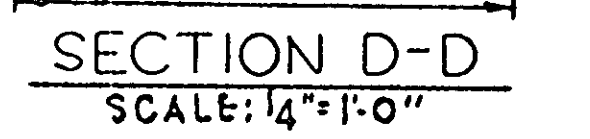
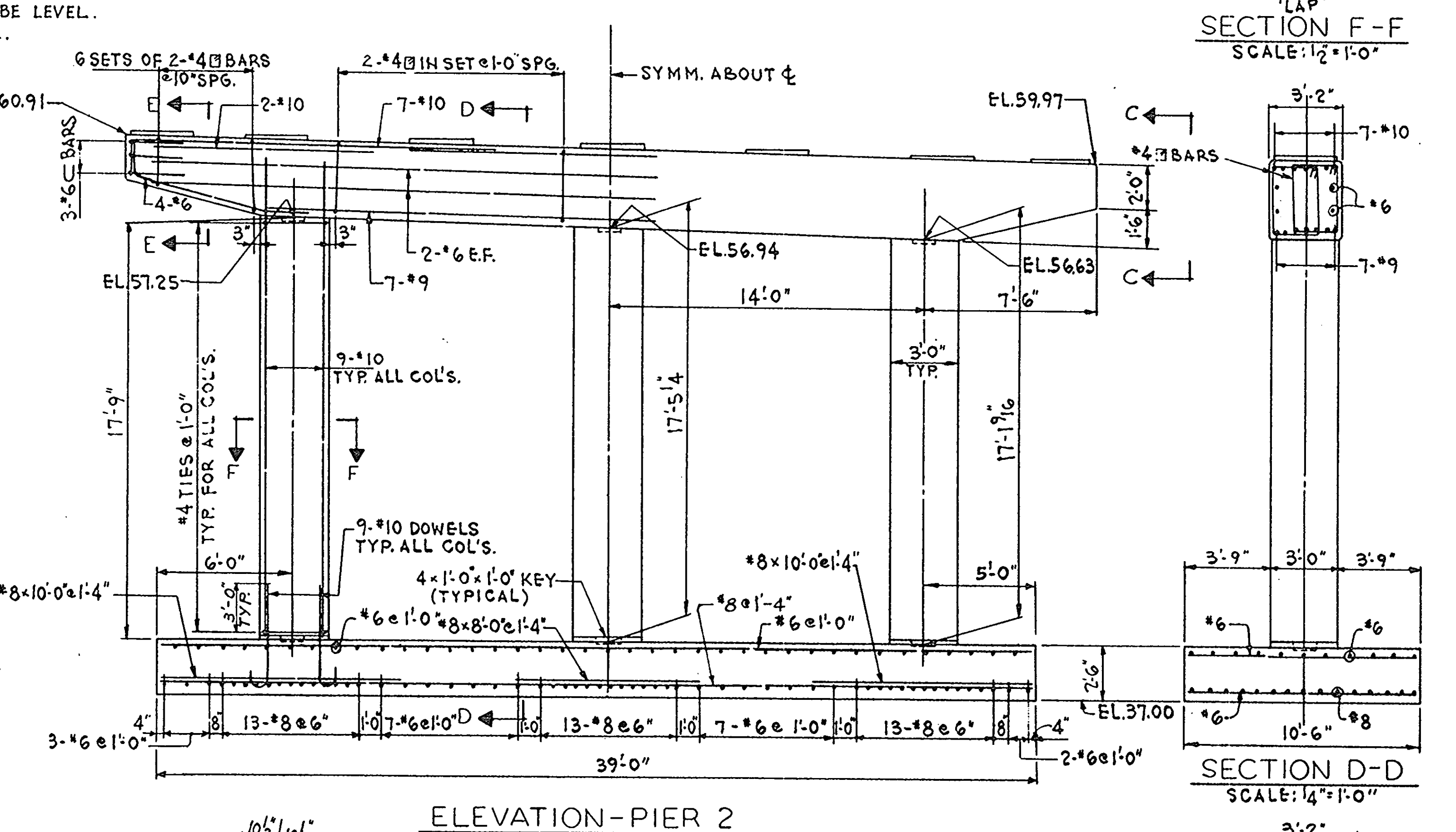
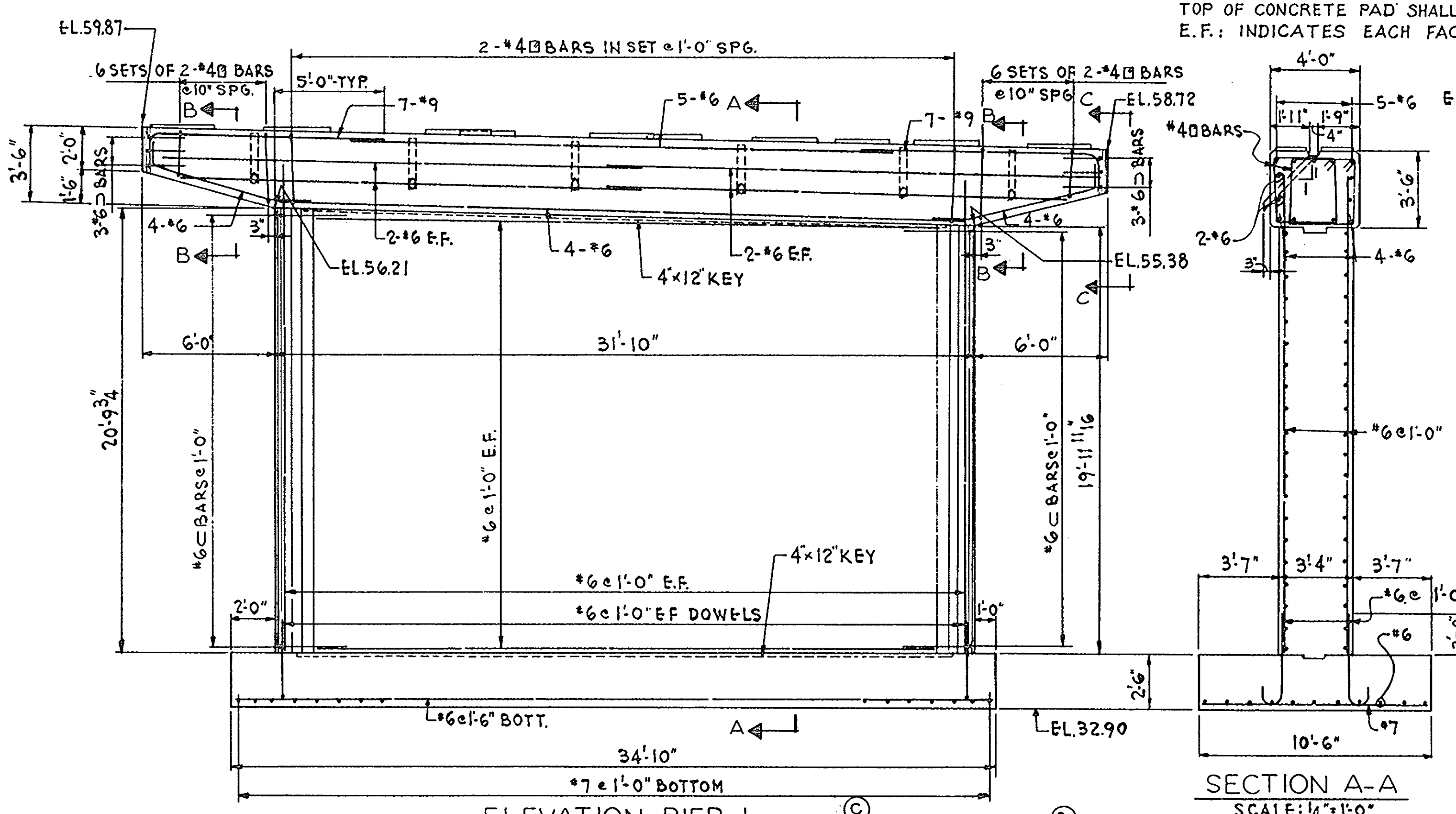
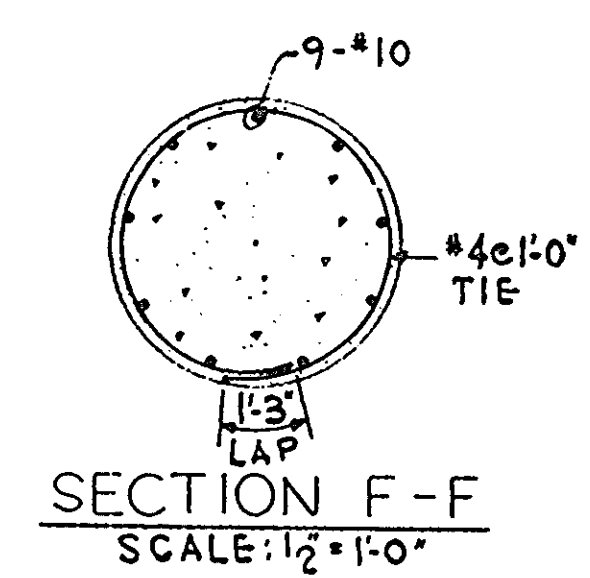
SECTION H-H
SCALE: 3/4" = 1'-0"

NOTES:
FOR ADDITIONAL DETAILS AND SPACING OF REINFORCING BARS OF RETAINING WALLS TYPE A, C AND F SEE "RETAINING WALL STANDARDS" #1 SH. NO. DCS-1.
FOR DETAILS OF EXPANSION AND CONTRACTION JOINTS, WATERSTOP, BACKFILL, AND WEEPHOLE DETAILS SEE SH. NO. DCS-1.

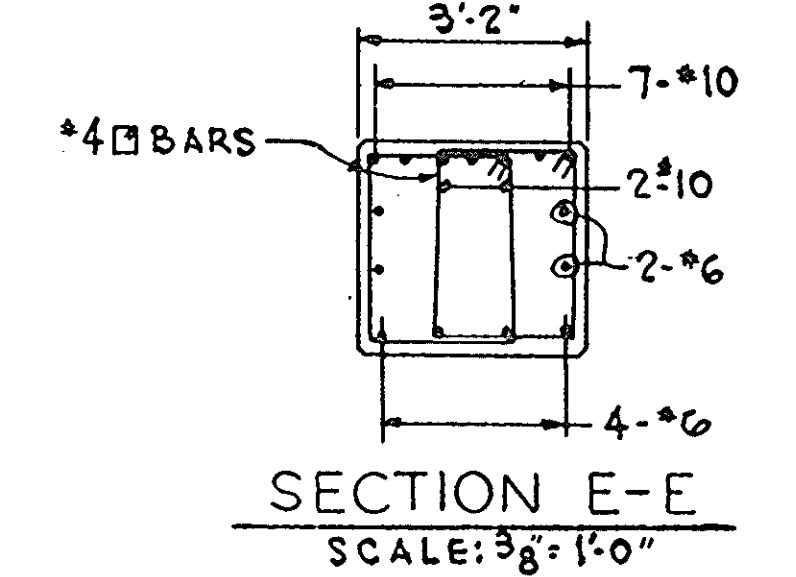
"AS-BUILT PLANS"	
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION B	
STRUCTURE #25 LEWIS TERRACE OVER EXTENSION NORTHWEST RETAINING WALL AND NORTH ABUTMENT DETAILS	
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 361 BOYLSTON BROOKLINE, MASS.	SCALE: AS NOTED SHEET NO. S25-5



NOTES:
CONCRETE PADS FOR FASCIA STRINGERS (A) & (G) TO BE REINFORCED WITH #4 BARS EACH WAY AT 1'-0" CTS. THE TOP AND BOTTOM OF PIER CAPS ARE STRAIGHT LINES BETWEEN THE ELEVATIONS SHOWN. TOP OF CONCRETE PAD SHALL BE LEVEL. E.F.: INDICATES EACH FACE.



CONCRETE PAD ELEVATIONS			
(ALL ELEVATIONS ARE THE FINISHED ELEVATIONS OF THE TOP OF PADS)			
STRINGER	CONC. PAD ELEV.	STRINGER	CONC. PAD ELEV.
PIER 1, SPAN 1 (A)	59.11	PIER 2, SPAN 2 (A)	60.53
(B)	59.03	(B)	60.27
(C)	59.17	(C)	60.41
(D)	59.39	(D)	60.57
(E)	59.60	(E)	60.73
(F)	59.81	(F)	60.89
(G)	59.95	(G)	61.14
PIER 1, SPAN 2 (A)	59.12		
(B)	59.04		
(C)	59.24		
(D)	59.43		
(E)	59.62		
(F)	59.81		
(G)	59.95		



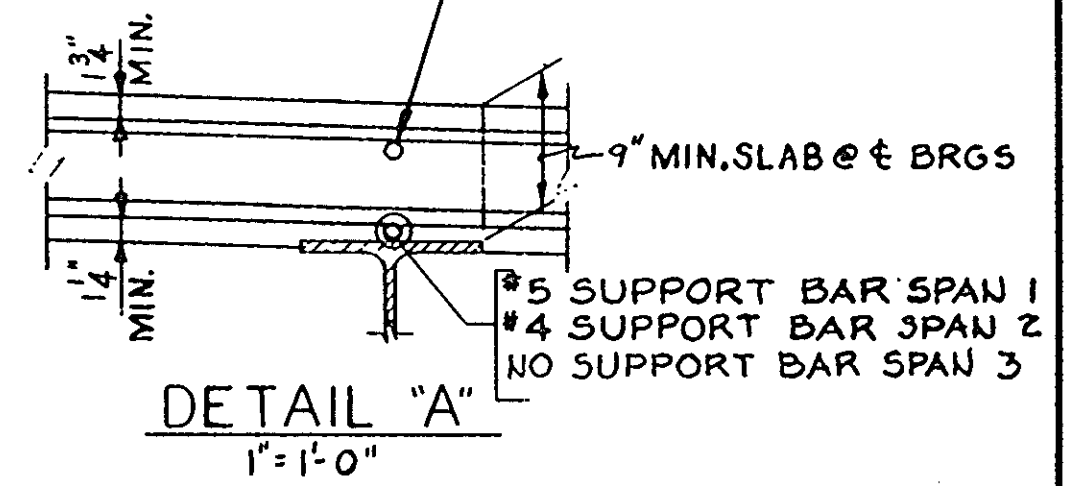
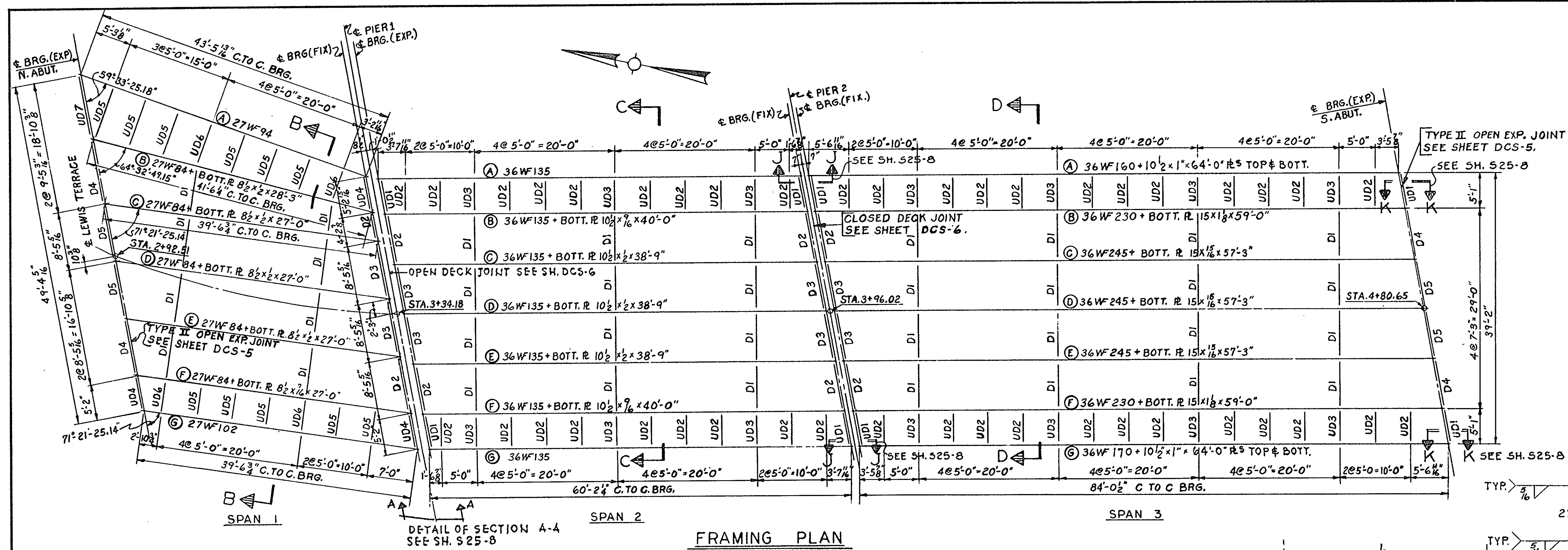
"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

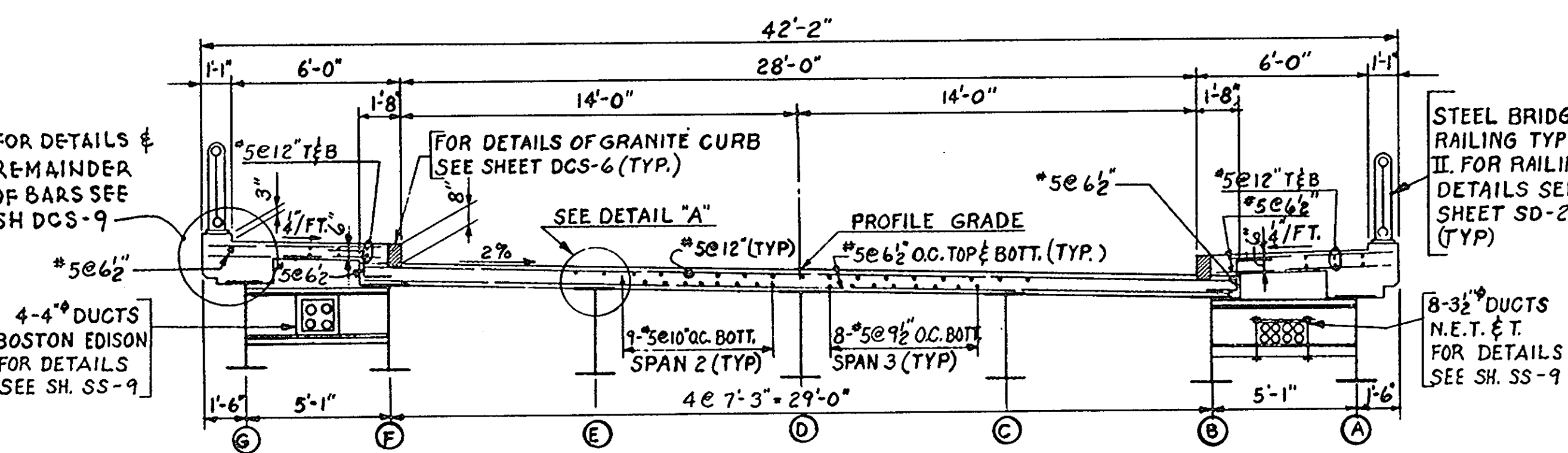
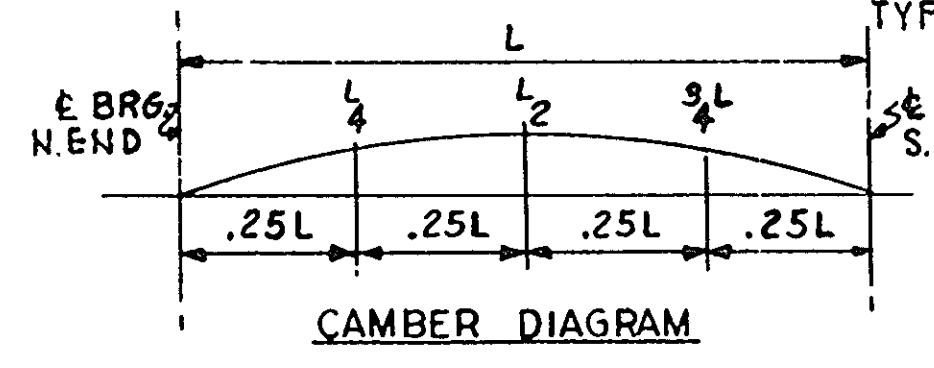
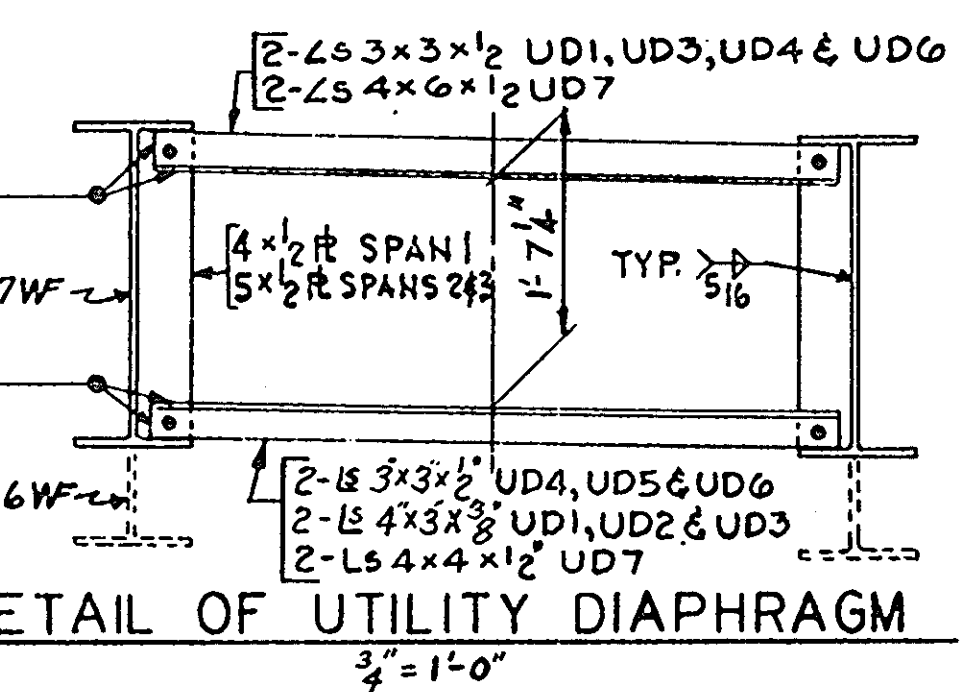
STRUCTURE #25
PIERS #1 & #2

DE LEUW, CATHER & CO. SCALE: AS SHOWN
CONSULTING ENGINEERS
361 BOYLSTON BROOKLINE, MASS. SHEET NO. S25-6

FOR SUPPORT BAR INFORMATION SEE DETAIL "E" SHEET DCS-6

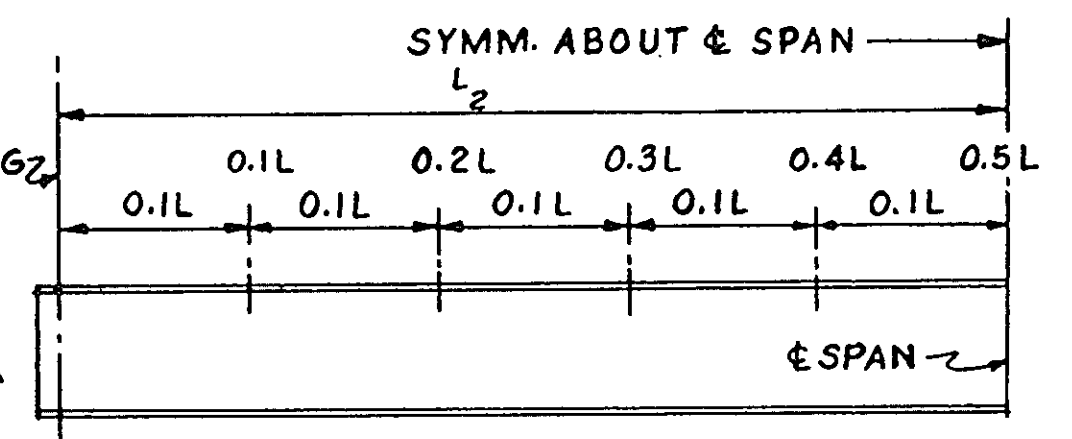
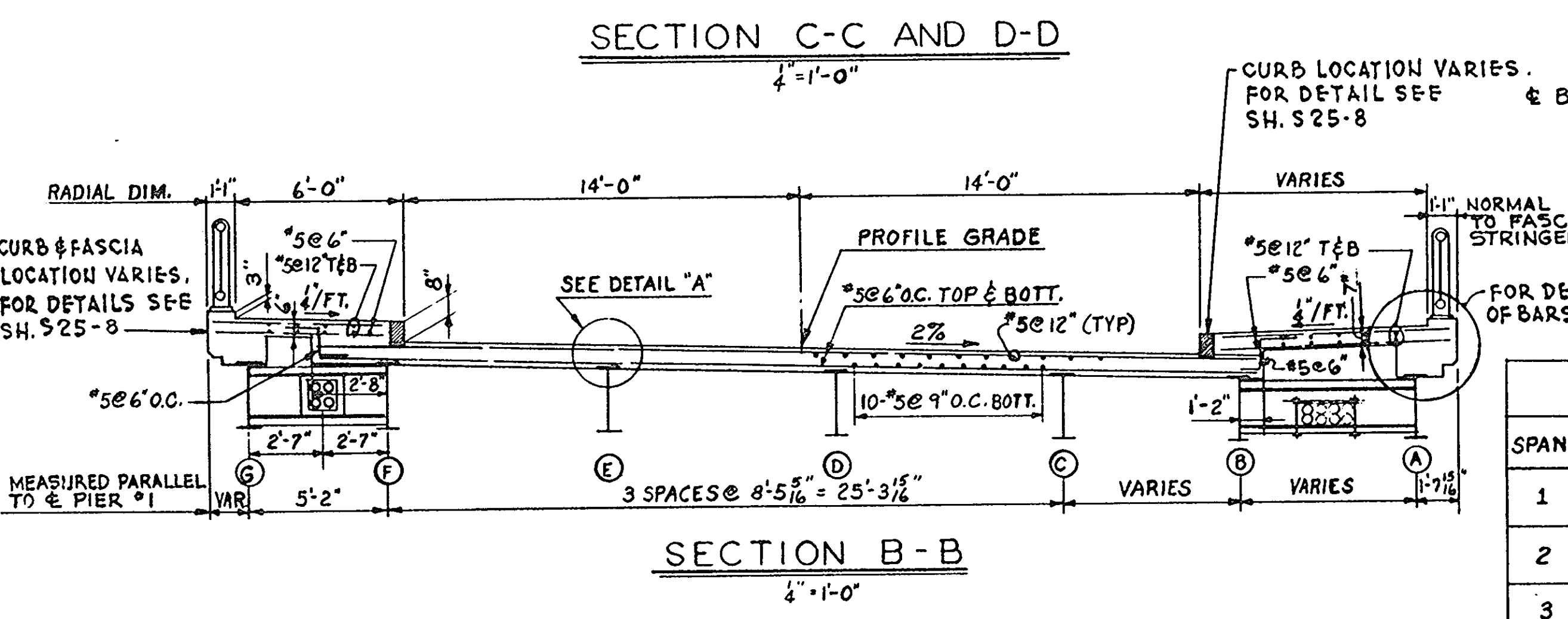


UTILITY DIAPHRAGM	BOTTOM MEMBER	TOP MEMBER
UD1	7FS 4x3x2	JLS 3x3x2
UD2	7FS 4x3x2	---
UD3	7FS 4x3x2	JLS 3x3x2
UD4	7FS 3x3x2	JLS 3x3x2
UD5	7FS 3x3x2	---
UD6	7FS 3x3x2	JLS 3x3x2
UD7	7FS 4x4x2	JLS 4x4x2



		SPAN 1			SPAN 2			SPAN 3		
STRINGER		N. ABUT.	PIER 1	PIER 1	PIER 2	PIER 2	PIER 2	PIER 2	S. ABUT.	
(A)	E1	F1	E1	F1	F1	F1	F1	F1	E1	
(B)	E1	F1	E2	F2	F2	F3	F3	F3	E3	
(C)	E1	F1	E2	F2	F3	F3	F3	F3	E3	
(D)	E1	F1	E2	F2	F3	F3	F3	F3	E3	
(E)	E1	F1	E2	F2	F3	F3	F3	F3	E3	
(F)	E1	F1	E2	F2	F3	F3	F3	F3	E3	
(G)	E1	F1	E1	F1	F1	F1	F1	F1	E1	

NOTE: FOR DETAIL OF SHOES SEE SH. SD-21.



SPAN	STRINGER	DIA. STUDS	NO./ROW	HT.	MAX. SHEAR STUD SPACING			
					0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L
1	(A) & (G)	3/8"	2	6"	12"	12"	12"	12"
	(B) THRU (F)	3/8"	2	4"	5 1/2"	6 1/2"	8 1/2"	10 1/2"
2	(A) & (G)	3/8"	2	6"	12"	12"	12"	12"
	(B) THRU (F)	3/8"	2	4"	6 1/2"	7 1/2"	9 1/2"	12"
3	(A) & (G)	3/8"	2	6"	12"	12"	12"	12"
	(B) THRU (F)	3/8"	2	6"	7 1/2"	9 1/2"	12"	17"

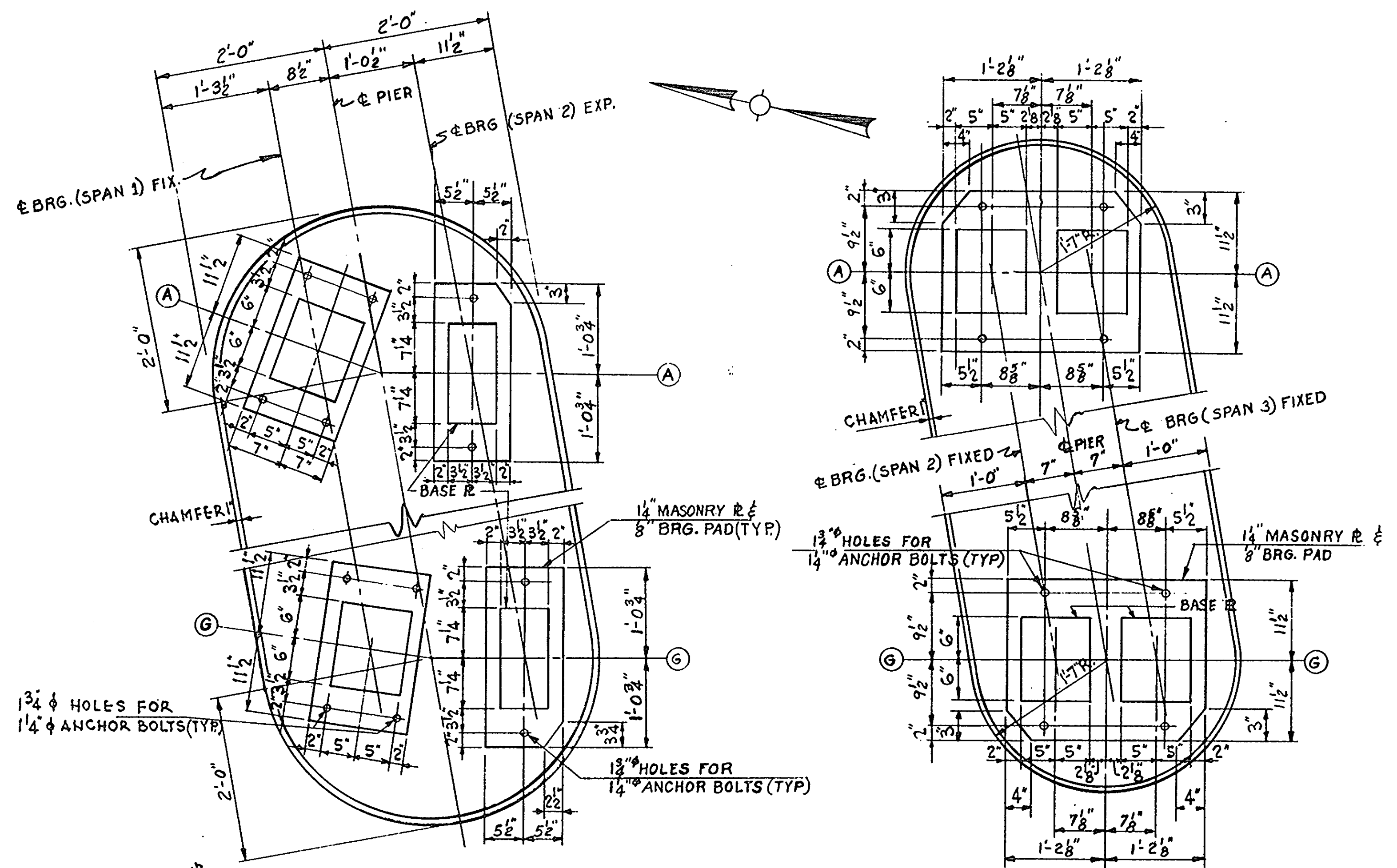
CAMBER NOTES
 S=CAMBER DUE TO WEIGHT OF STRUCTURAL STEEL.
 C=CAMBER DUE TO WEIGHT OF ALL CONCRETE EXCEPT SIDEWALK, PARAPET AND RAILING.
 B=CAMBER DUE TO WEIGHT OF SIDEWALK, PAPAPET & RAILING.
 U=CAMBER DUE TO WEIGHT OF UTILITIES.
 V=CAMBER DUE TO VERTICAL CURVE
 T=TOTAL CAMBER DUE TO FULL DEAD LOAD & VERTICAL CURVE
 ALL DEFLECTIONS IN INCHES.
 FOR GENERAL CAMBER NOTES SEE SH. DCS-3

"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION B

STRUCTURE #25
 FRAMING PLAN,
 CROSS SECTION AND DETAILS

DE LEUW, CATHER & CO. SCALE: AS NOTED
 CONSULTING ENGINEERS
 361 BOYLSTON BROOKLINE, MASS. SHEET NO. S25-7



SOLE PLATE THICKNESSES FOR SHOES AT PIER 2

STRINGER	(A)	(B)	(C)	(D)	(E)	(F)	(G)
SPAN 2	2 1/2"	4"	4 1/2"	4 3/4"	4 3/4"	4 1/2"	2 1/2"
SPAN 3	2"	2"	2"	2"	2"	2"	2"

SOLE PLATE THICKNESSES FOR SHOES AT PIER 2

BEARING STIFFENER

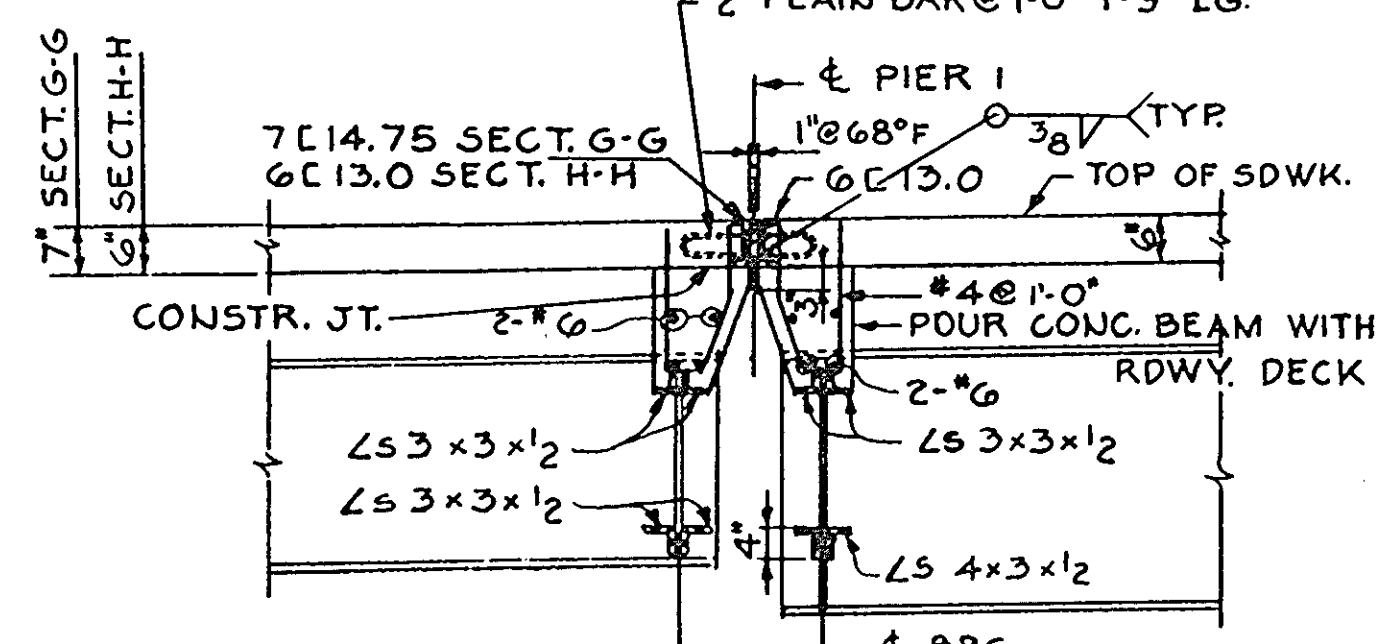
SPAN	SIZE OF PLATES
1	4 x 1/2"
2	5 x 1/2"
3	7 x 5/8"

NOTES:
 FOR DETAIL OF BEARING STIFFENER SEE SHEET DCS-7
 FOR DIAPHRAGMS DI THRU D5 SEE SHEET DCS-7
 FOR DETAILS OF UTILITIES SEE SHEET SS-9
 FOR GENERAL NOTES SEE SHEET DCS-3
 * BEARING STIFFENER OF FASCIA STRINGERS A & G SHALL BE 5 x 1/2" R.

TABLE OF ELEVATIONS

STRINGER	TOP OF STEEL ELEV. AT E OF BEARING		TOP OF ROADWAY OR SIDEWALK ELEV. FOR SETTING EXP. JOINTS			
	NORTH END	SOUTH END	FACE OF BACKWALL N. ABUT.	PIER 1	FACE OF BACKWALL S. ABUT.	
SPAN 1	(A)	60.314	63.027	61.607	64.475	—
	(B)	60.652	62.946	61.323	64.429	63.741
	(C)	61.171	63.068	61.860	63.858	—
	(D)	61.582	63.300	62.277	64.088	—
	(E)	61.953	63.522	62.653	64.307	—
	(F)	62.293	63.739	63.664	65.192	64.525
SPAN 2	(A)	62.496	63.881	63.861	65.325	—
	(B)	63.108	64.548	—	64.475	65.971
	(C)	63.025	64.425	—	64.429	65.879
	(D)	63.228	64.583	—	63.947	65.349
	(E)	63.421	64.740	—	64.144	65.506
	(F)	63.612	64.897	—	64.335	65.662
SPAN 3	(A)	63.801	65.053	—	65.192	66.483
	(B)	63.943	65.171	—	65.325	66.5817
	(C)	64.561	63.916	—	—	65.971
	(D)	64.433	63.761	—	—	65.879
	(E)	64.591	63.879	—	—	65.191
	(F)	64.747	63.776	—	—	65.191
SPAN 3	(A)	64.903	64.114	—	—	65.506
	(B)	65.058	64.232	—	—	64.735
	(C)	65.180	64.328	—	—	65.662
	(D)	—	—	—	—	64.833
	(E)	—	—	—	—	64.971
	(F)	—	—	—	—	65.720
EAST FASCIA LINE	—	—	61.535	64.490	65.999	65.344
EAST CURB LINE	—	—	61.247	63.774	65.202	64.508
WEST CURB LINE	—	—	62.736	64.512	65.806	64.963
WEST FASCIA LINE	—	—	63.914	65.364	66.624	65.744
PROFILE GRADE	—	—	62.213	64.144	65.506	64.735

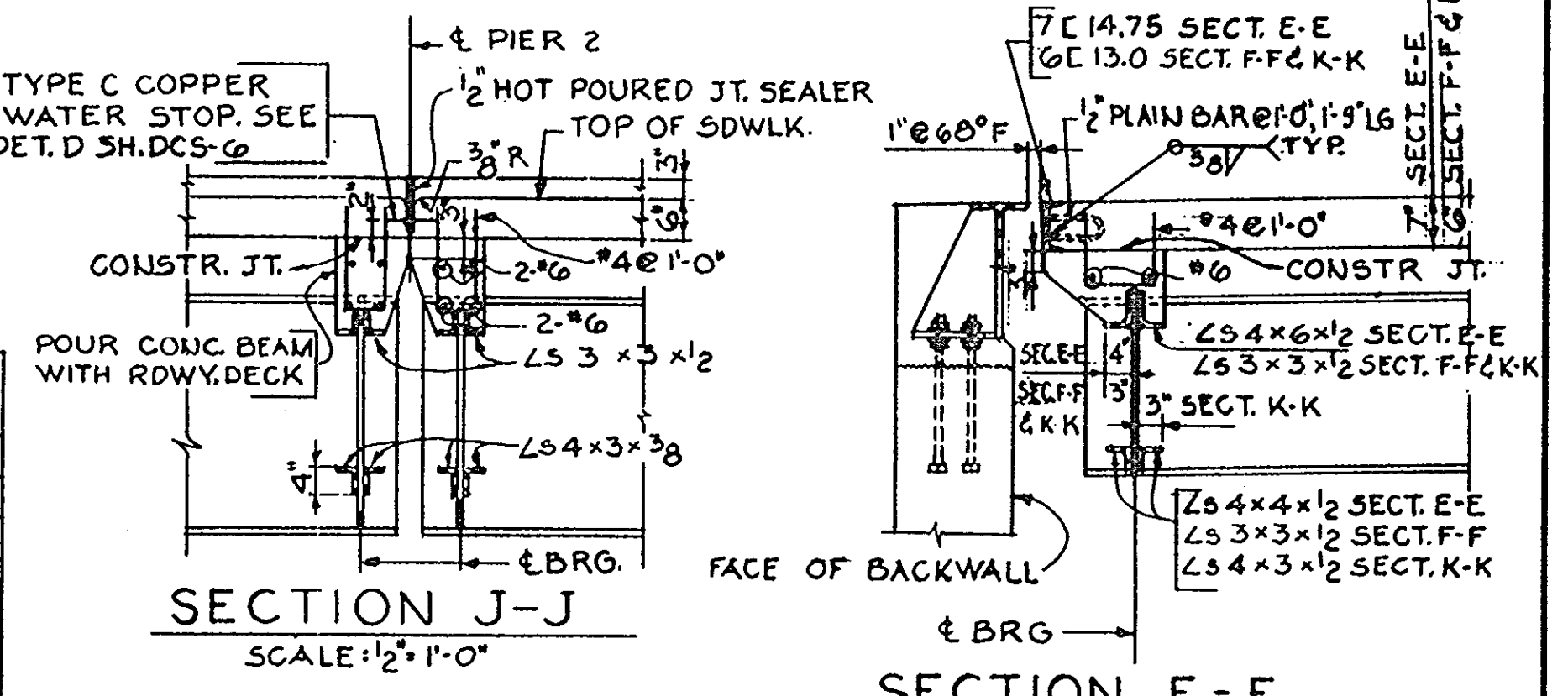
* FIGURES IN THESE LINES ARE THE ELEV. AT TOP OF ROADWAY, TOP OF CURB ELEV. SHOULD BE 8" HIGHER.



SECTION G-G
SECTION H-H
SCALE: 1/2" = 1'-0"

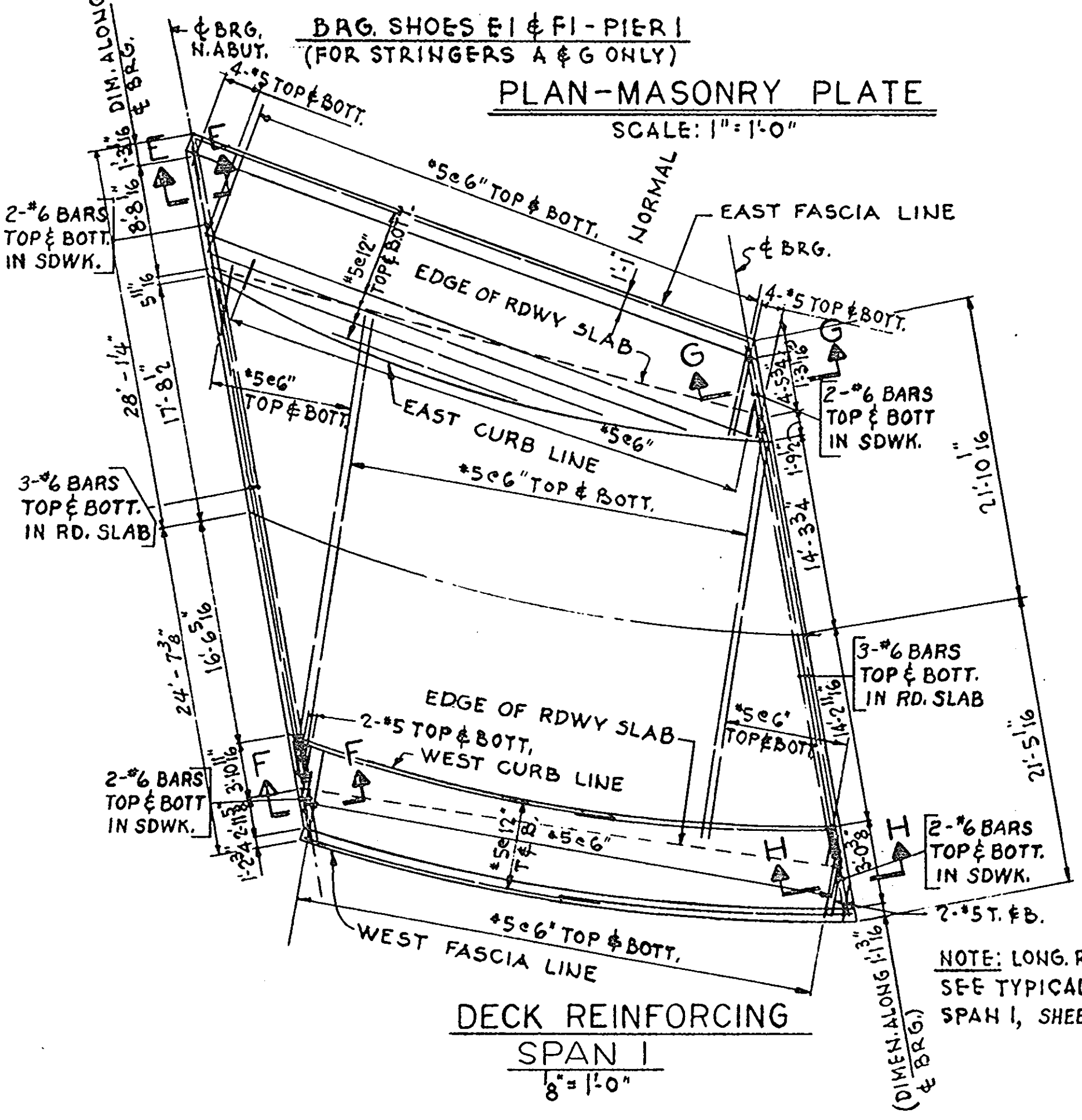
STRINGER BOLSTER HEIGHT "H"

(A)	7 1/16"
(B)	7 3/8"
(C)	7 5/8"
(D)	7 13/16"
(E)	7 15/16"
(F)	8 1/16"
(G)	7 7/8"



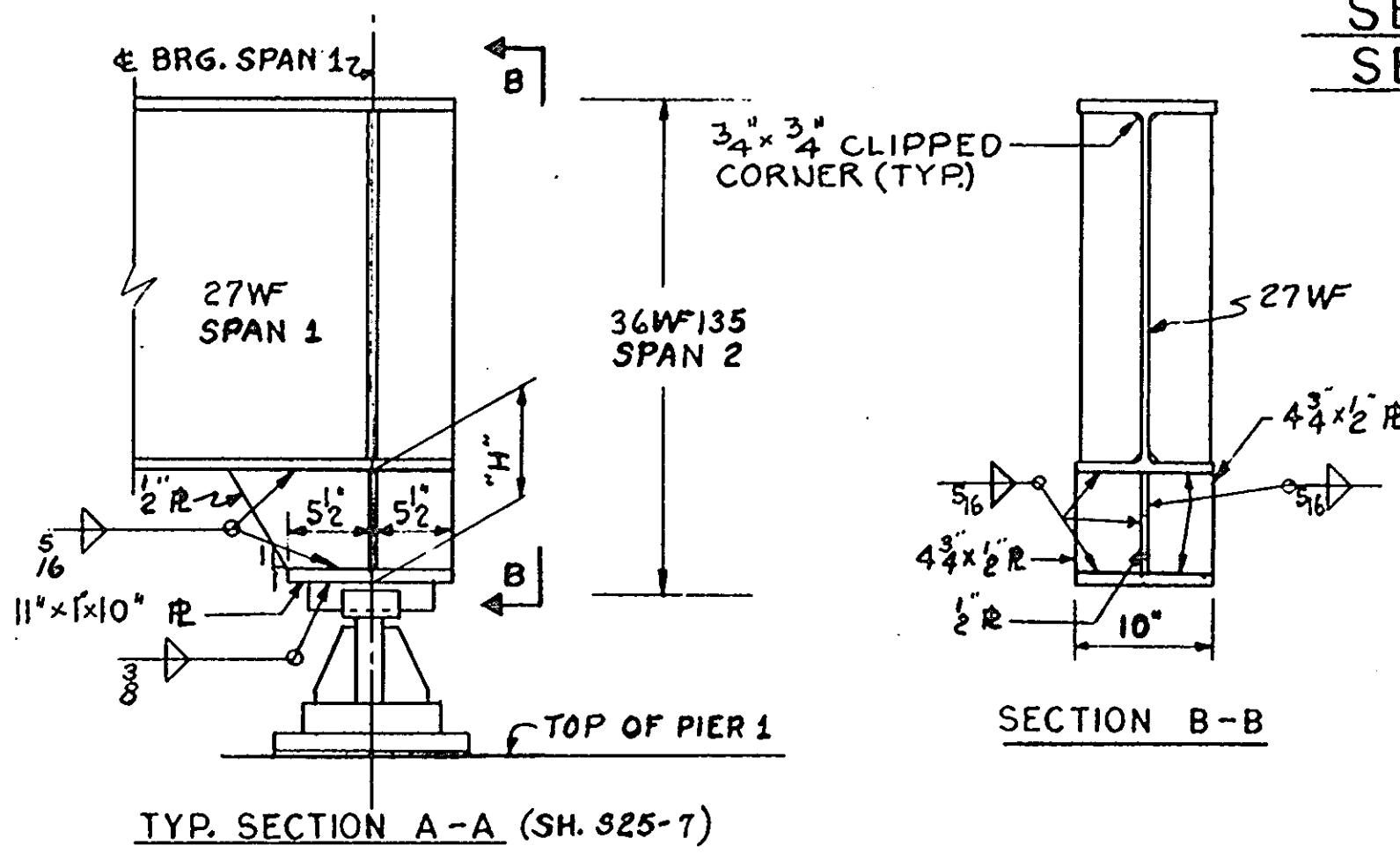
SECTION J-J
SCALE: 1/2" = 1'-0"

SECTION E-E
SECTION F-F
SECTION K-K
SCALE: 1/2" = 1'-0"



PLAN-MASONRY PLATE
SCALE: 1" = 1'-0"

DECK REINFORCING
SPAN 1
1/8" = 1'-0"



BOLSTER DETAILS PIER 1
1" = 1'-0"

NOTE: LONG REINF. IN ROADWAY SEE TYPICAL CROSS SECTION, SPAN 1, SHEET S25-7

"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION B

STRUCTURE #25
 BEARING DETAILS, DECK DETAILS
 AND ELEVATIONS

DE LEUW, CATHER & CO. SCALE: AS NOTED
 CONSULTING ENGINEERS
 381 BOYLSTON BROOKLINE, MASS. SHEET NO. S25-8

STRUCTURE NO. 25 - LEWIS TERR. OVER EXTENSION															
TABLE OF ELEVATIONS															
TOP OF ROADWAY ALONG ϕ STRINGER*															
STRINGER	SPAN 1				SPAN 2					SPAN 3					
	ϕ BRG. NO. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	ϕ BRG. PIER 1	ϕ BRG. PIER 1	1/4 PT.	1/2 PT.	3/4 PT.	ϕ BRG. PIER 2	ϕ BRG. PIER 2	1/4 PT.	1/2 PT.	3/4 PT.	ϕ BRG. SO. ABUT.
A	61.731	62.566	63.316	63.948	64.443	64.525	65.053	65.454	65.758	65.965	65.977	66.093	66.019	65.755	65.333
B	61.410	62.072	62.710	63.260	63.709	63.785	64.291	64.687	64.985	65.185	65.197	65.304	65.222	64.950	64.525
C	61.930	62.422	62.912	63.384	63.826	63.988	64.474	64.861	65.151	65.343	65.354	65.450	65.355	65.072	64.642
D	62.341	62.790	63.233	63.659	64.059	64.181	64.657	65.035	65.316	65.500	65.511	65.594	65.488	65.193	64.760
E	62.712	63.123	63.527	63.915	64.280	64.372	64.839	65.209	65.481	65.657	65.667	65.738	65.620	65.313	64.878
F	63.051	63.429	63.800	64.156	64.498	64.561	65.020	65.381	65.645	65.813	65.822	65.881	65.752	65.433	65.000
G	63.912	64.273	64.626	64.965	65.297	65.360	65.813	66.168	66.427	66.588	66.596	66.648	66.510	66.183	65.745

* ELEVATIONS SHOWN FOR STRINGERS A AND G ARE TOP OF SIDEWALK.

"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION B	
STRUCTURE #25 LEWIS TERRACE OVER EXTENSION TABLE OF ELEVATIONS	
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 361 BOYLSTON BROOKLINE, MASS.	SCALE: SHEET NO. S25-9

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BOSTON EXTENSION

JOHN T. DRISCOLL, CHAIRMAN

PHILIP A. GRAHAM, VICE-CHAIRMAN

ALBERT P. MANZI, MEMBER

PHILIP H. KITFIELD, CHIEF ENGINEER

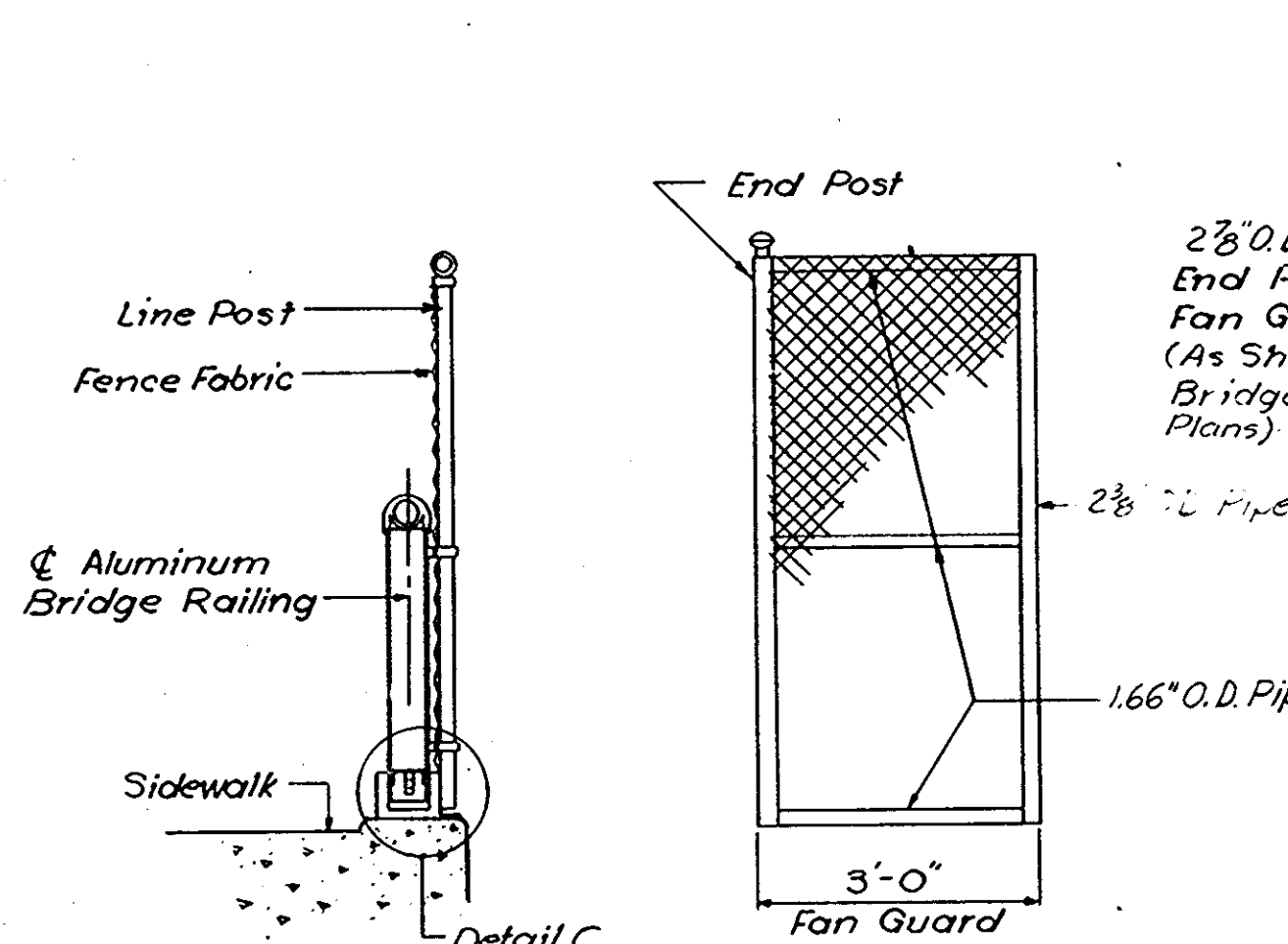
CONTRACT NO. 551-0031

FOR

CHAIN LINK FENCE ON 25 BRIDGES
IN NEWTON, BOSTON AND BROOKLINE, MASSACHUSETTS

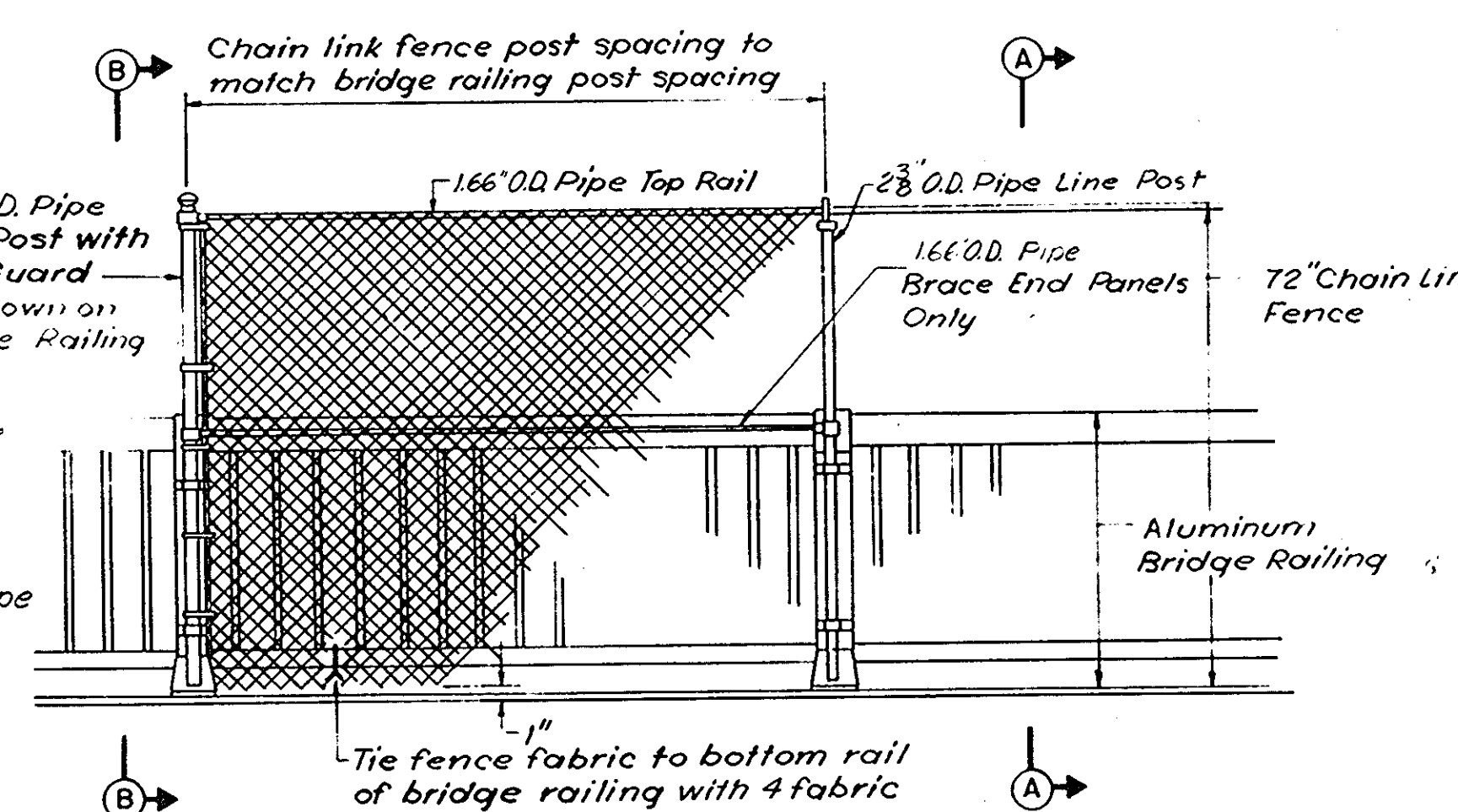
RECOMMENDED BY Umlachter DATE 2-18-69
HOWARD, NEEDLES, TAMMEN & BERGENDOFF

APPROVED BY PH Kitfield DATE 2-19-69
FOR THE MASSACHUSETTS TURNPIKE AUTHORITY

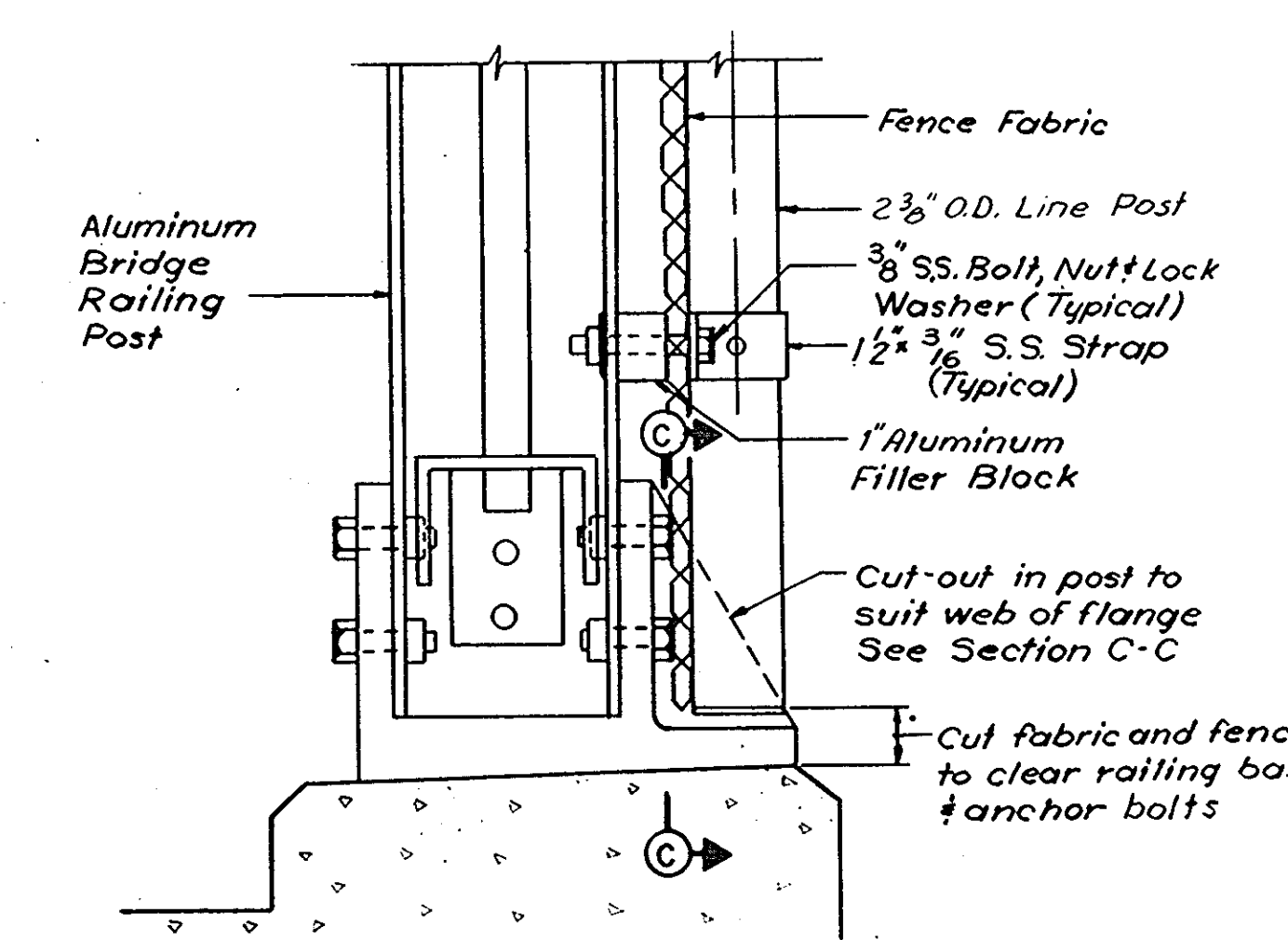


SECTION A-A
1/2" = 1'-0"

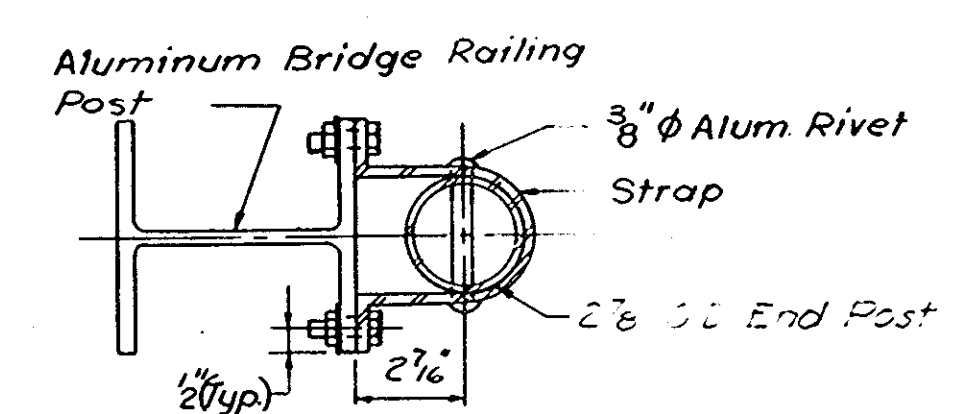
SECTION B-B
1/2" = 1'-0"



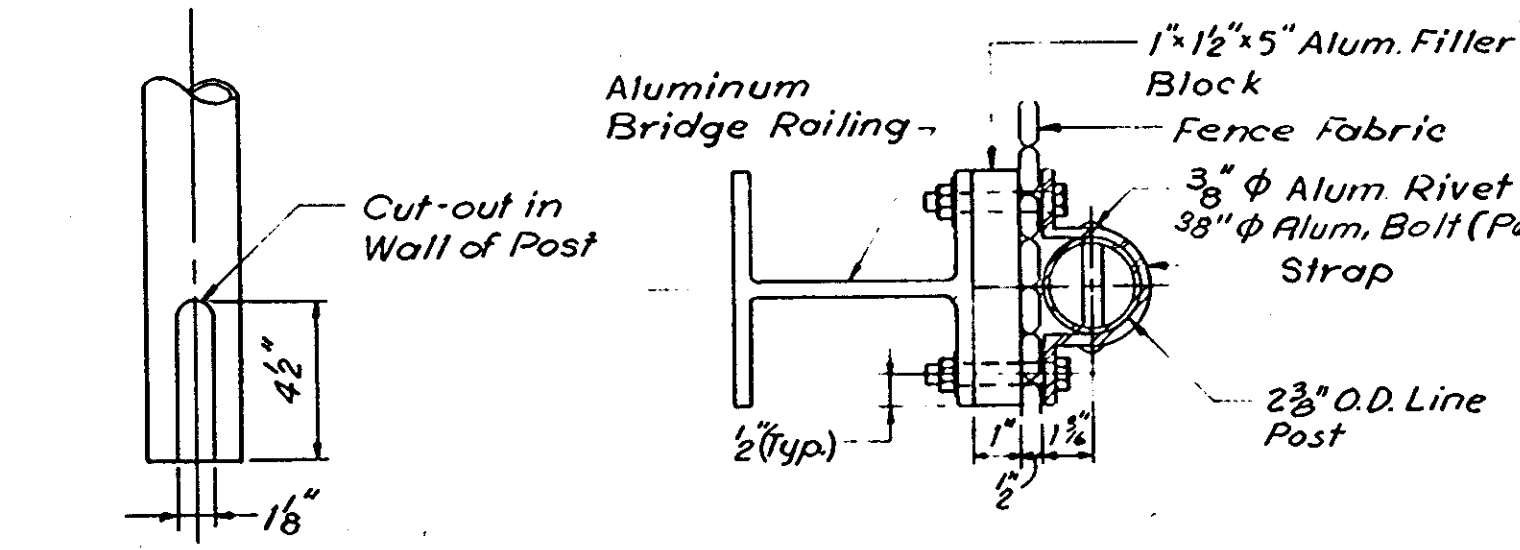
BRIDGE CHAIN LINK FENCE - TYPE A
1/2" = 1'-0"



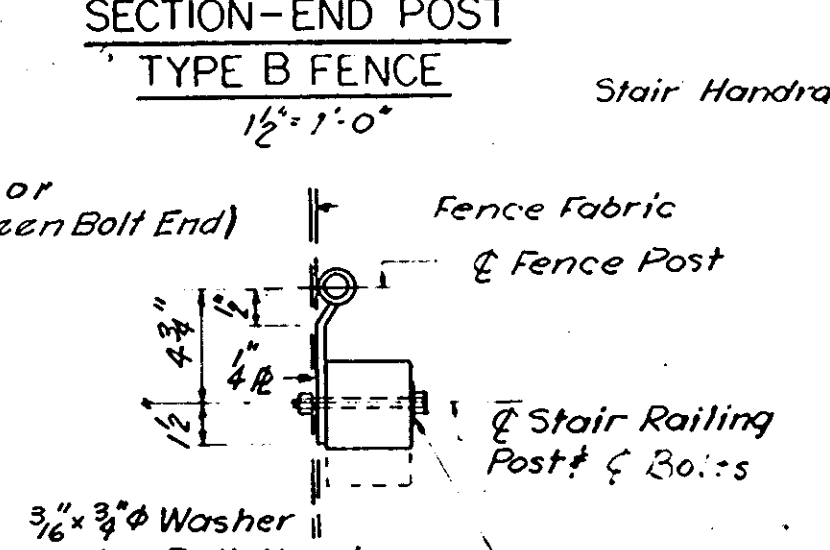
DETAIL C
3" = 1'-0"
Detail of end post similar



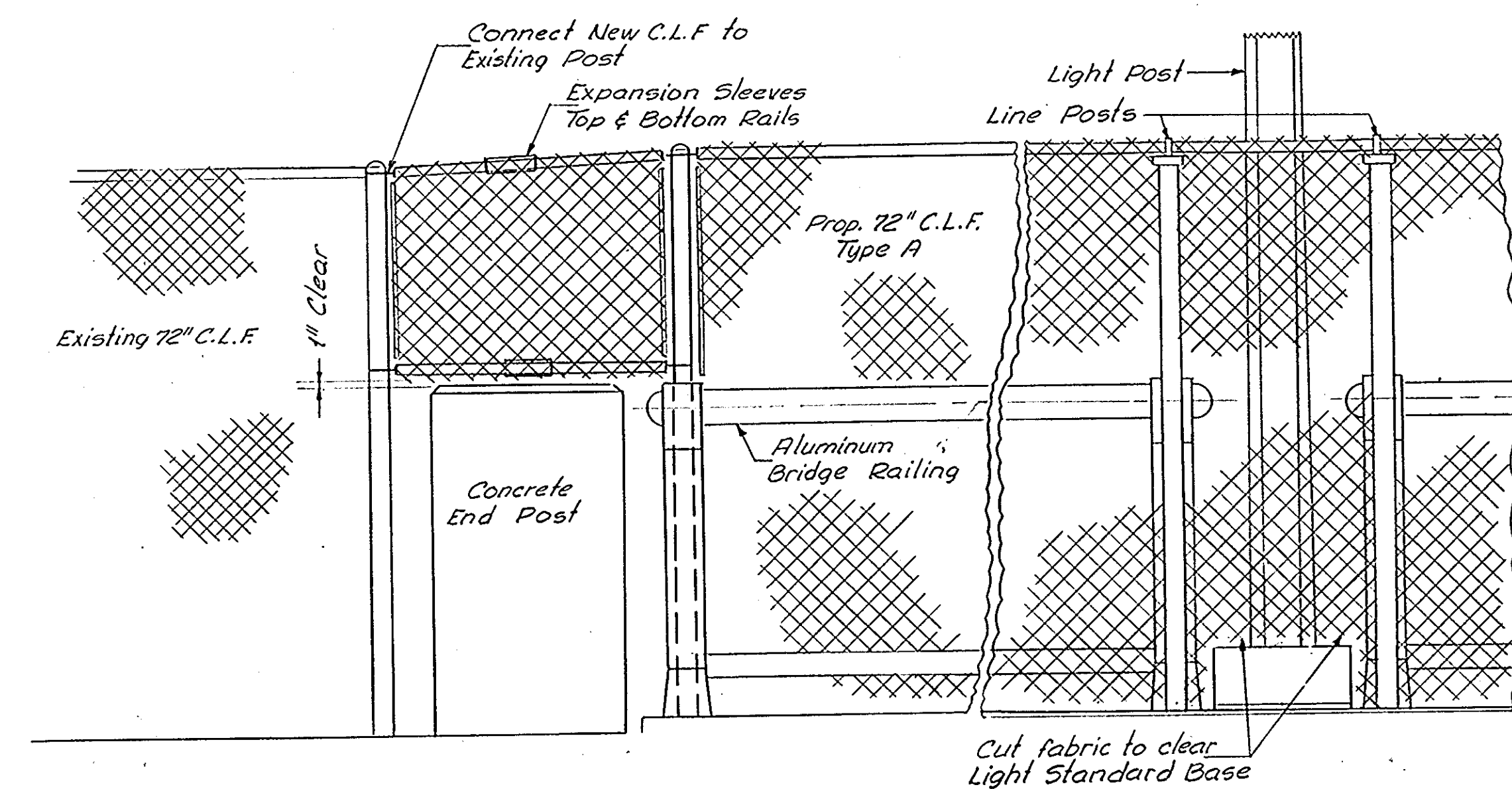
SECTION - END POST - TYPE A FENCE
3" = 1'-0"



SECTION - LINE POST - TYPE A FENCE
3" = 1'-0"

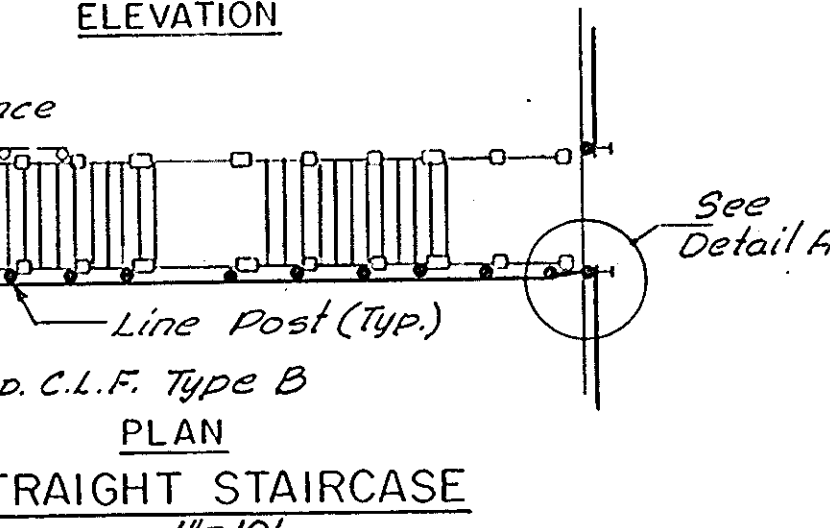
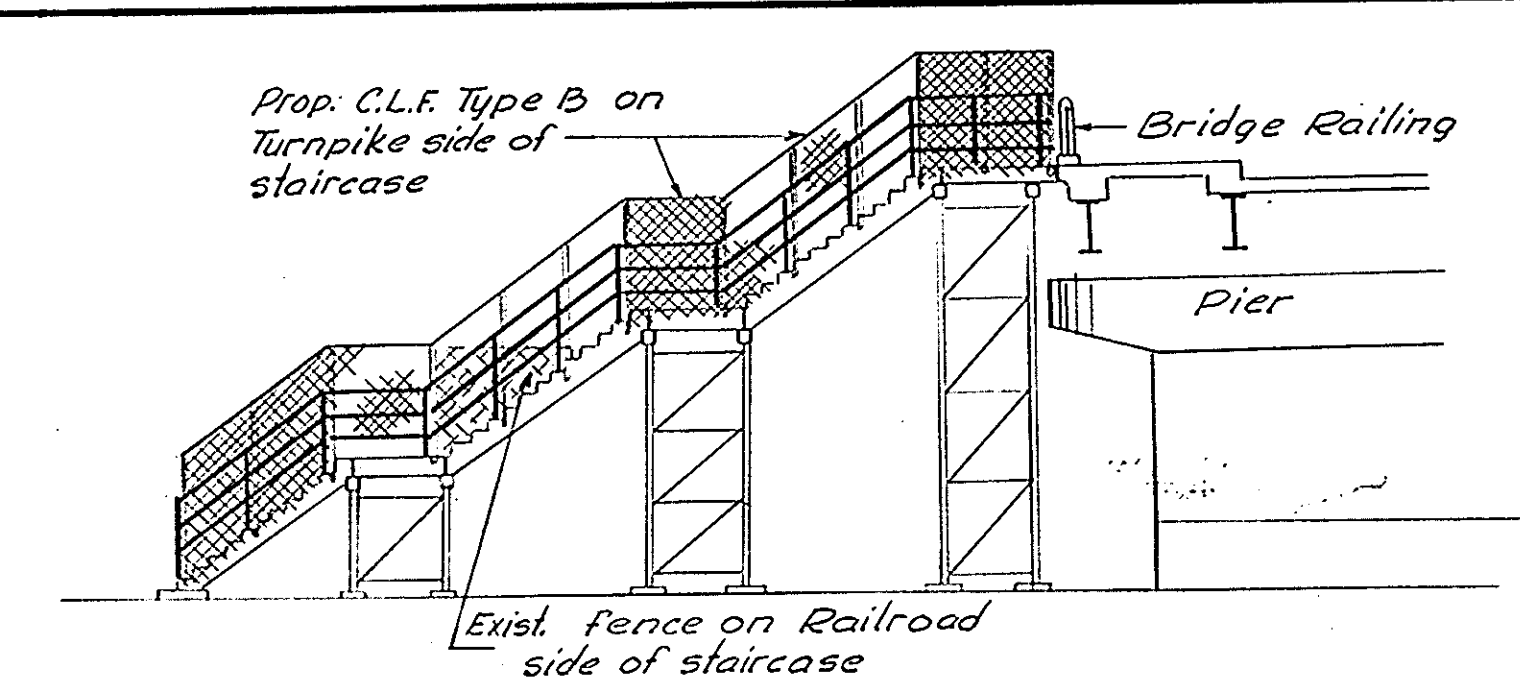


SECTION - LINE POST - TYPE B FENCE
1 1/2" = 1'-0"

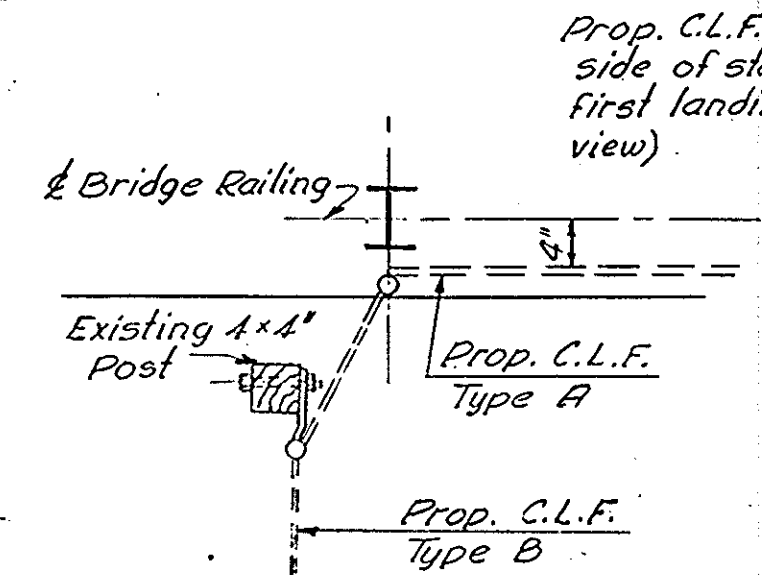


TYPICAL ELEVATION AT END POSTS
3/4" = 1'-0"

TYPICAL ELEVATION AT LIGHT STANDARDS
3/4" = 1'-0"



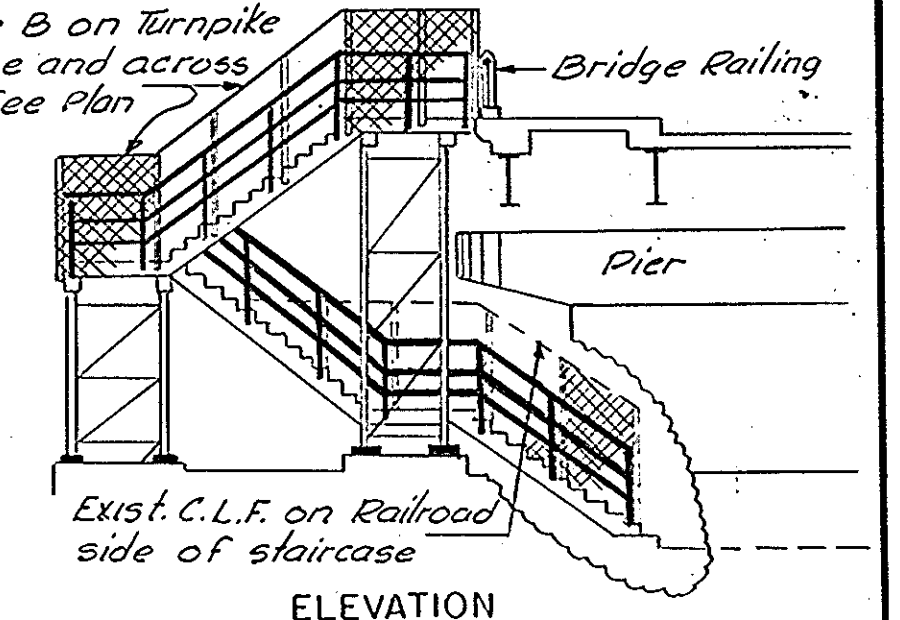
PLAN
STRAIGHT STAIRCASE
1" = 10'



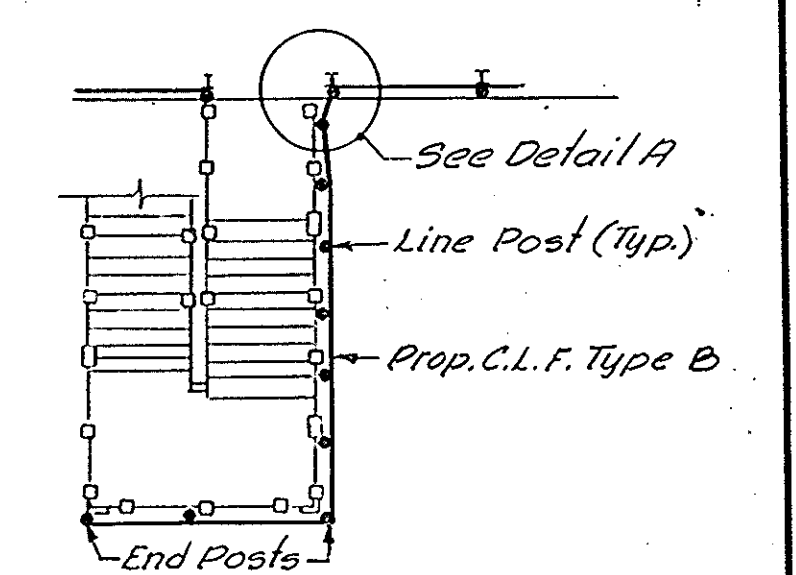
DETAIL A
3/4" = 1'-0"

BRIDGES WITH STAIRCASES TO BE FENCED

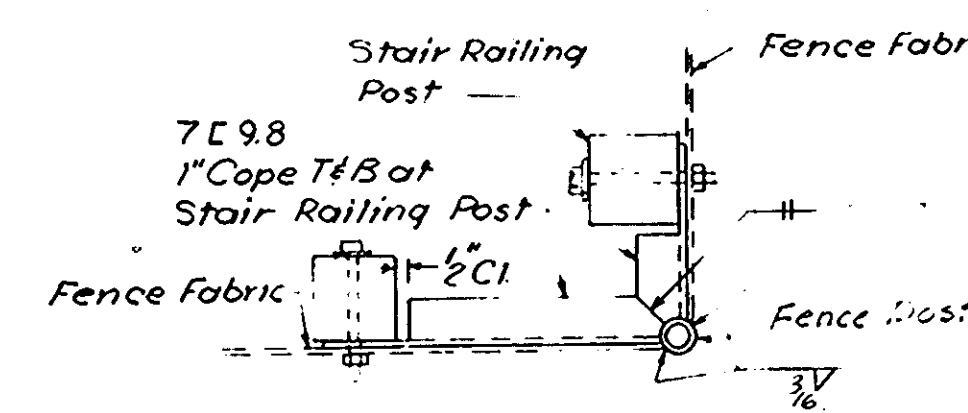
Straight Staircases	Staircases with Return
Harvard St. - Newton	Putnam St. - W. Newton
Walnut St. - Newton	
Auburn St. - Newton	



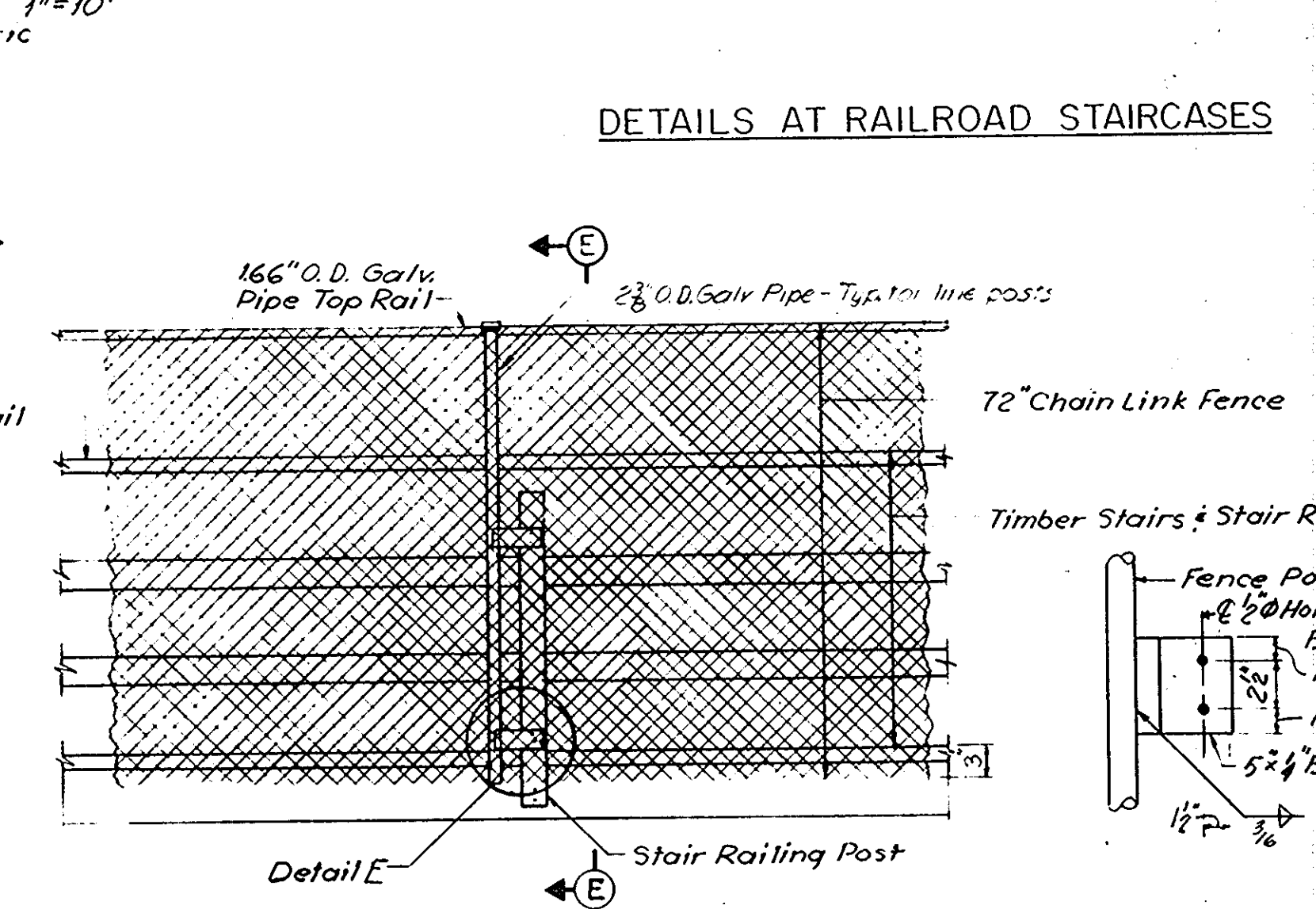
ELEVATION



PLAN
STAIRCASE WITH RETURN
1" = 10'

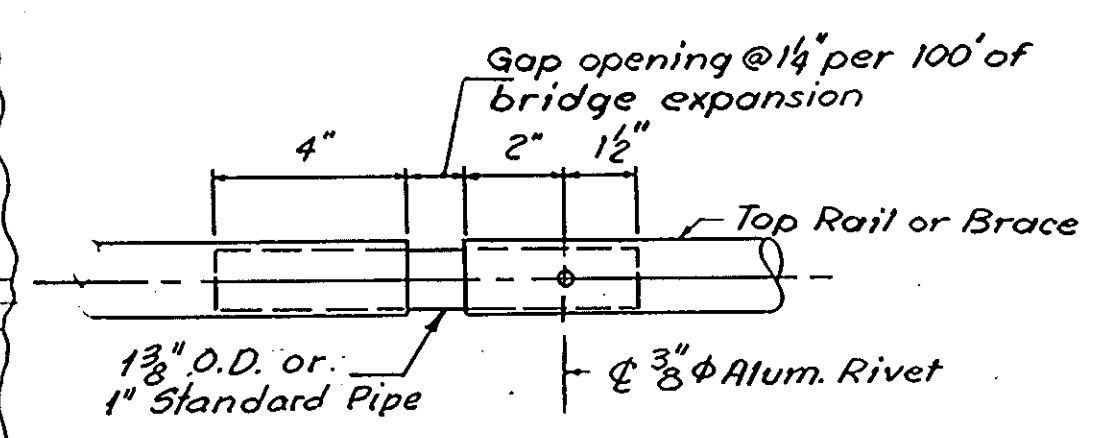


SECTION - END POST
TYPE B FENCE
1 1/2" = 1'-0"



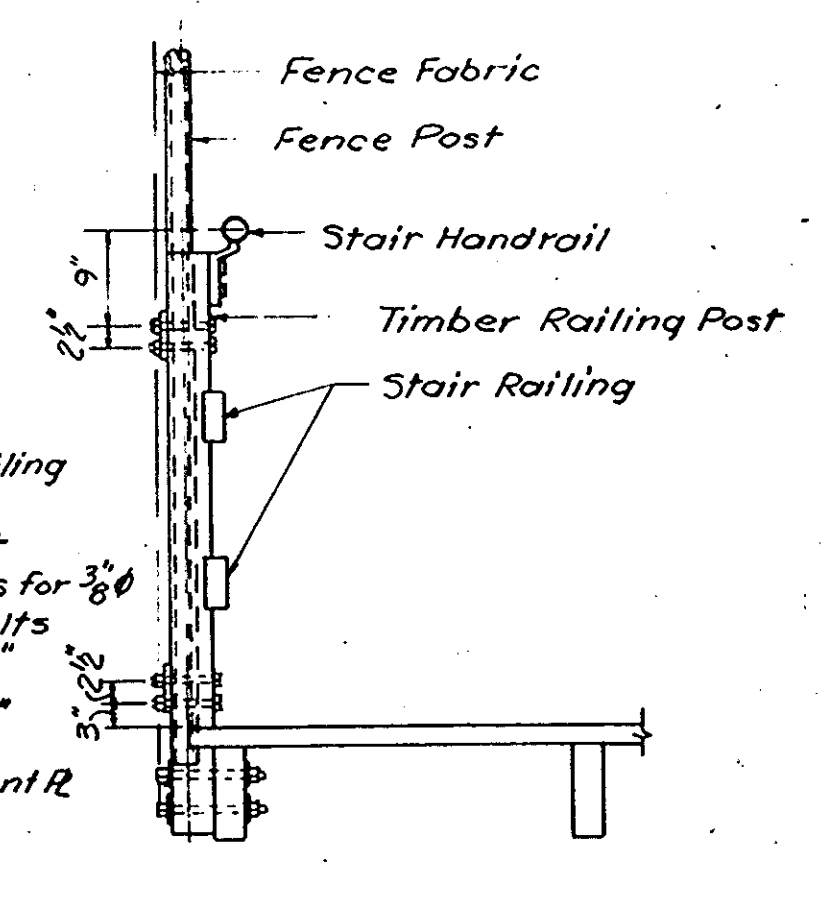
CHAIN LINK FENCE - TYPE B
1 1/2" = 1'-0"

Fence fabric shall have knuckled selvage top and barbed selvage bottom.
Pipe supporting members and connections shall be galvanized steel.



SLEEVE DETAIL
FOR BRIDGE CHAIN LINK FENCE
3" = 1'-0"

Sleeves shall be located in the top rail or brace in panels spanning bridge expansion joints.



SECTION E-E
3/4" = 1'-0"

DETAIL E
Note: Detail of End Posts Similar
1 1/2" = 1'-0"

1. Material designations for chain link fence material shall be as specified in the Special Provisions.
2. Pipe supporting members and hardware for fences shall be aluminum unless otherwise noted.
3. Fence fabric shall be 11-gauge aluminum coated steel wire with knuckled selvage top & bottom unless otherwise noted.
4. Holes in aluminum material shall be accurately located & drilled to a size that will provide a tight fit for connection bolts.
5. For Bridge Railing Plans and location of fan guards, see Sheets 2-13.

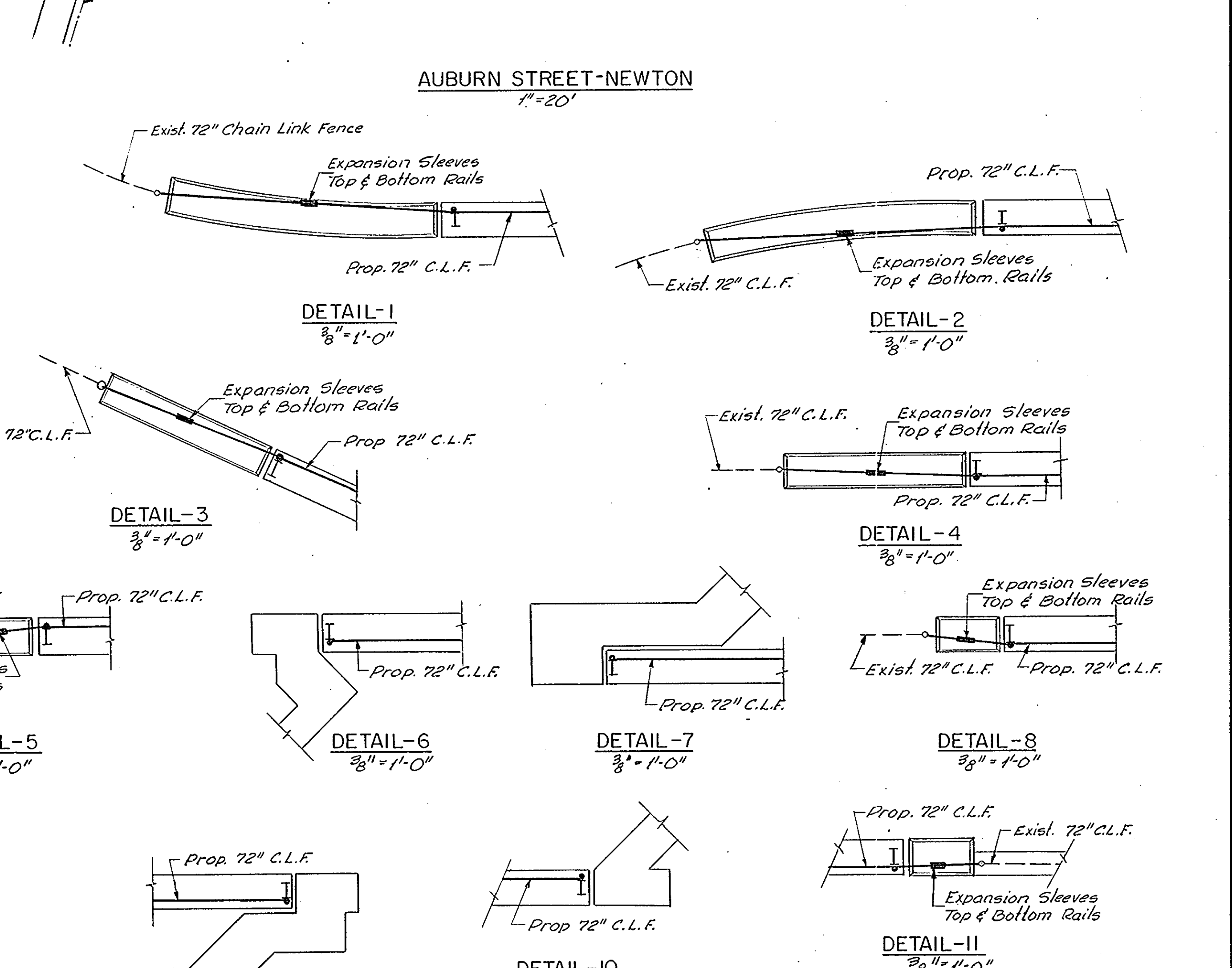
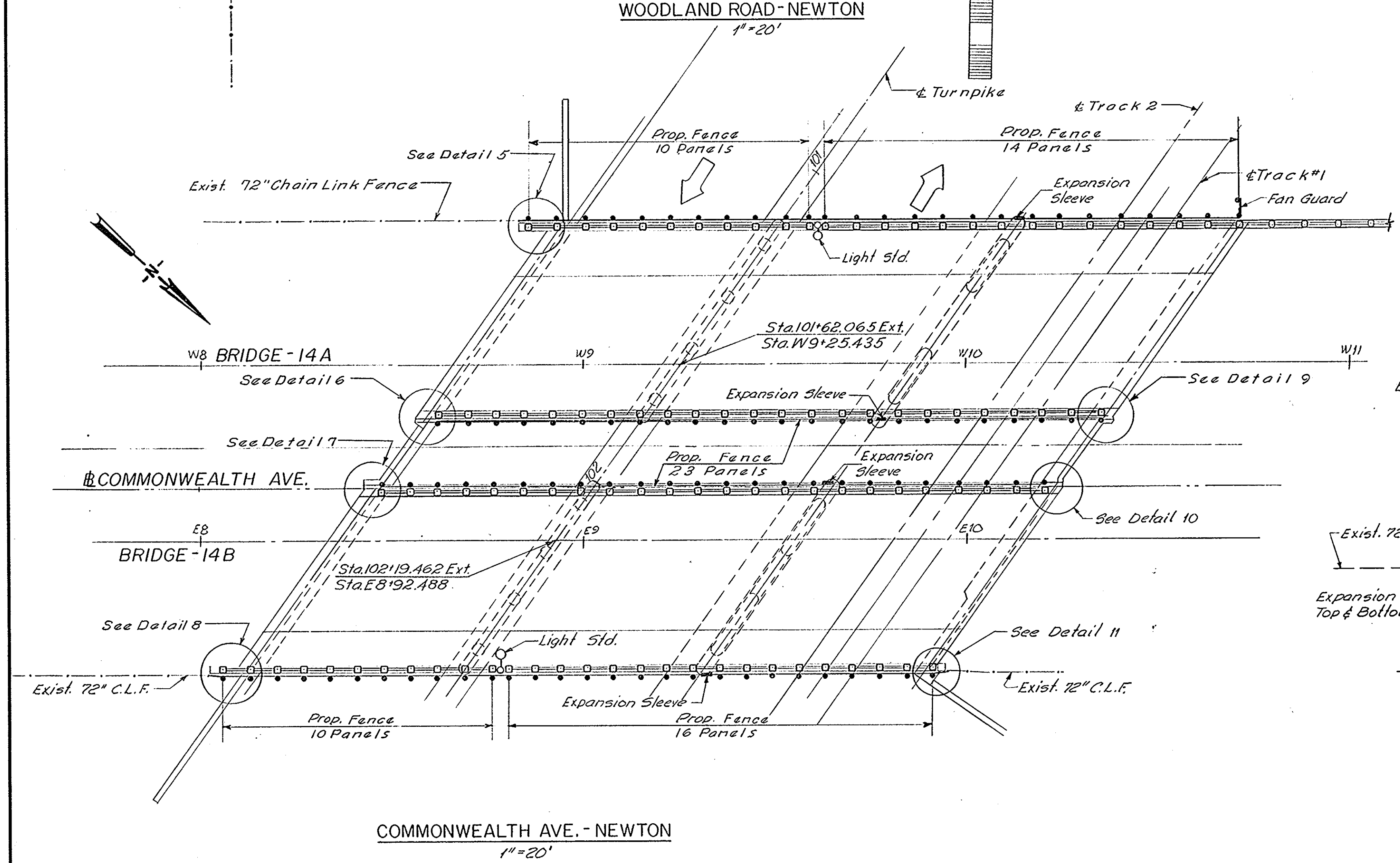
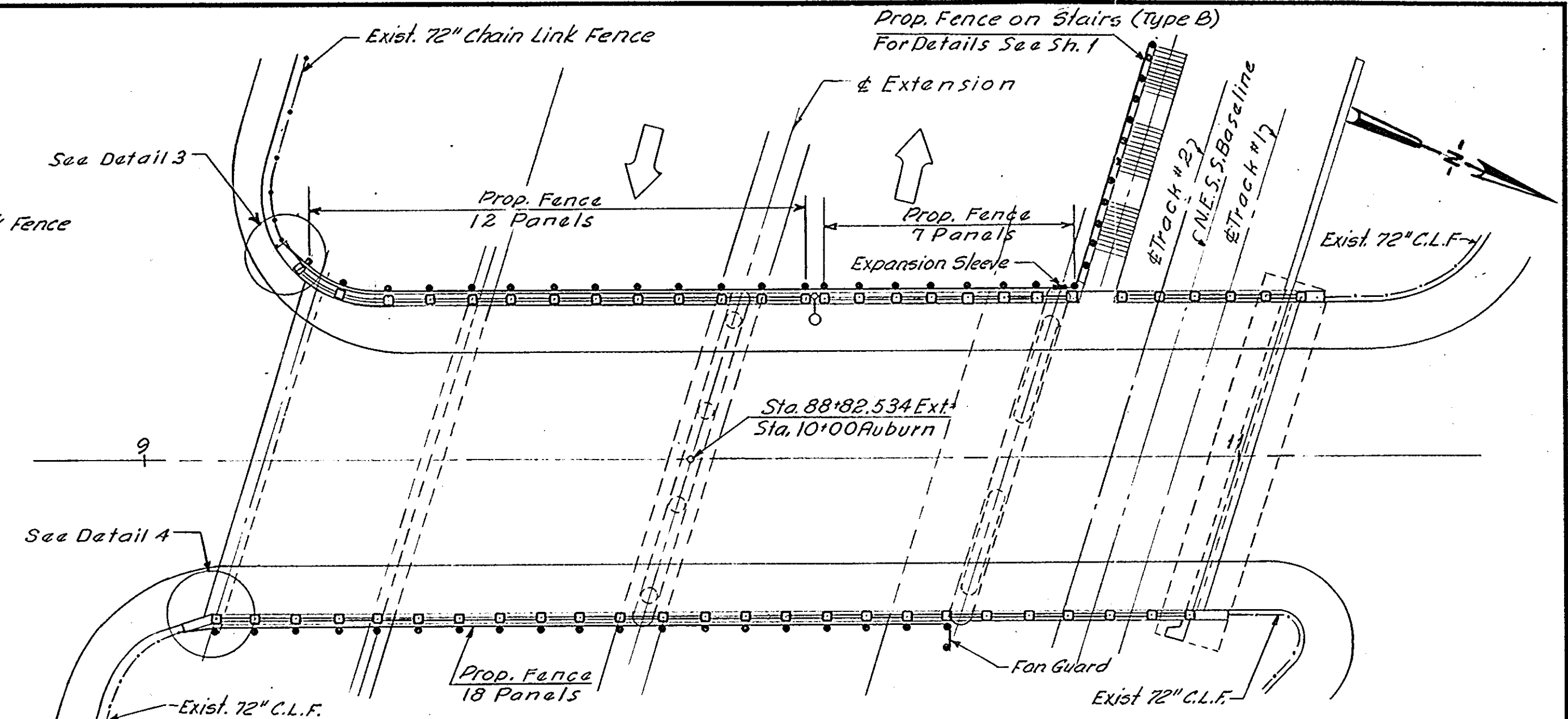
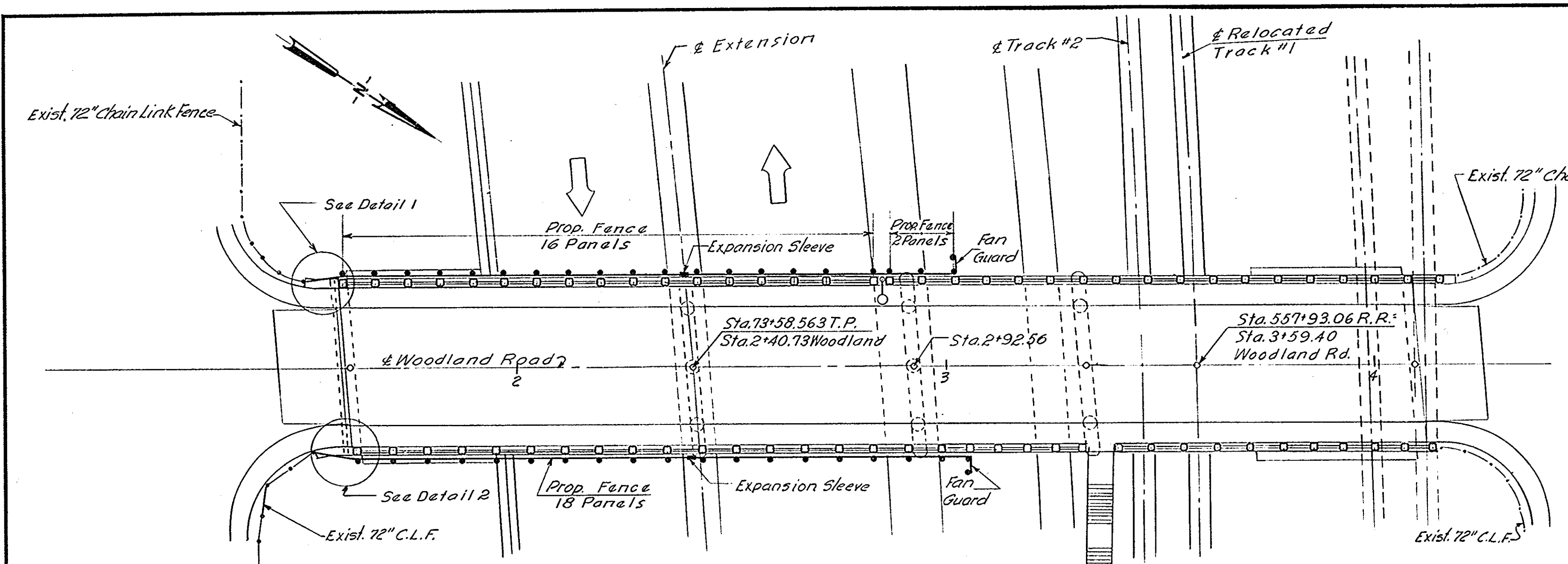
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		MADE	R.C.M. 2-1-69
		TRACED	
		CHECKED	
		IN CHARGE OF	J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
TYPICAL DETAILS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
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SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 1 of 13



NO.	REVISION	BY	DATE
		MADE	G.F.K. 1-29-69
		TRACED	
		CHECKED	
		IN CHARGE OF	J.N.G.

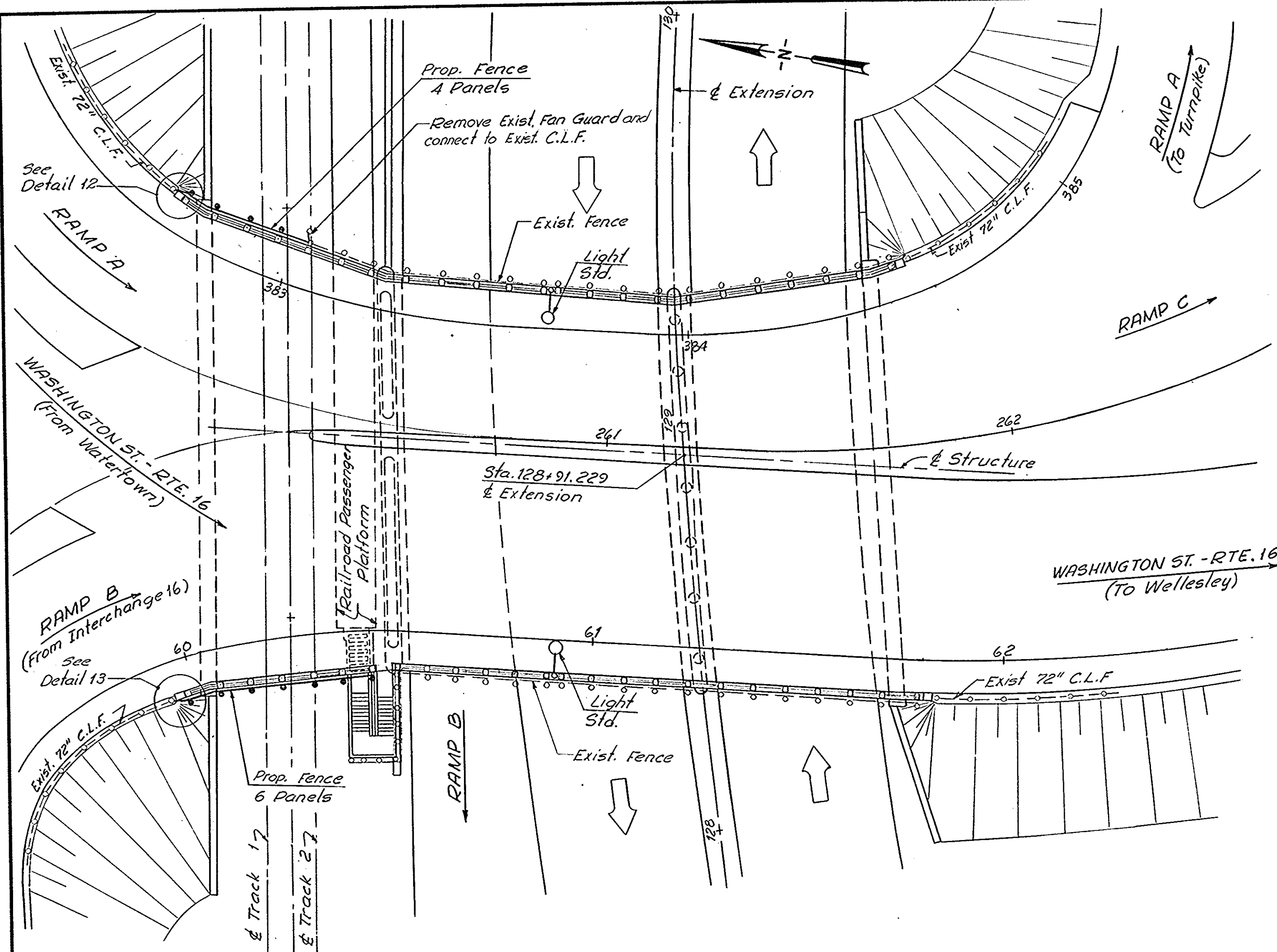
NOTE: For General Notes, Typical Sections and Details see Sheet No. 1.

MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION

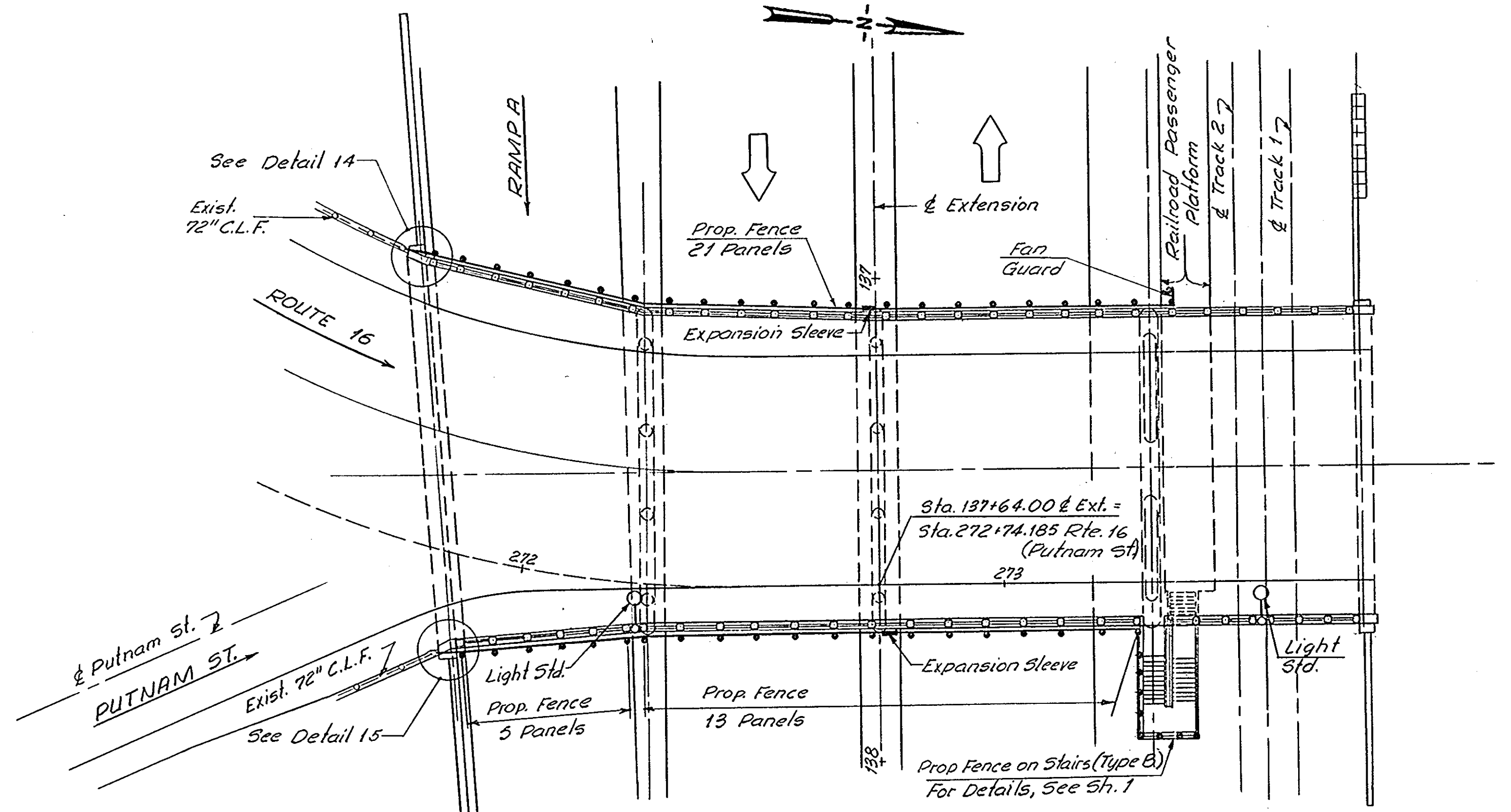
CHAIN LINK FENCE ON BRIDGES
 WOODLAND RD.-NEWTON AUBURN ST.-NEWTON
 COMMONWEALTH AVE.-NEWTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY

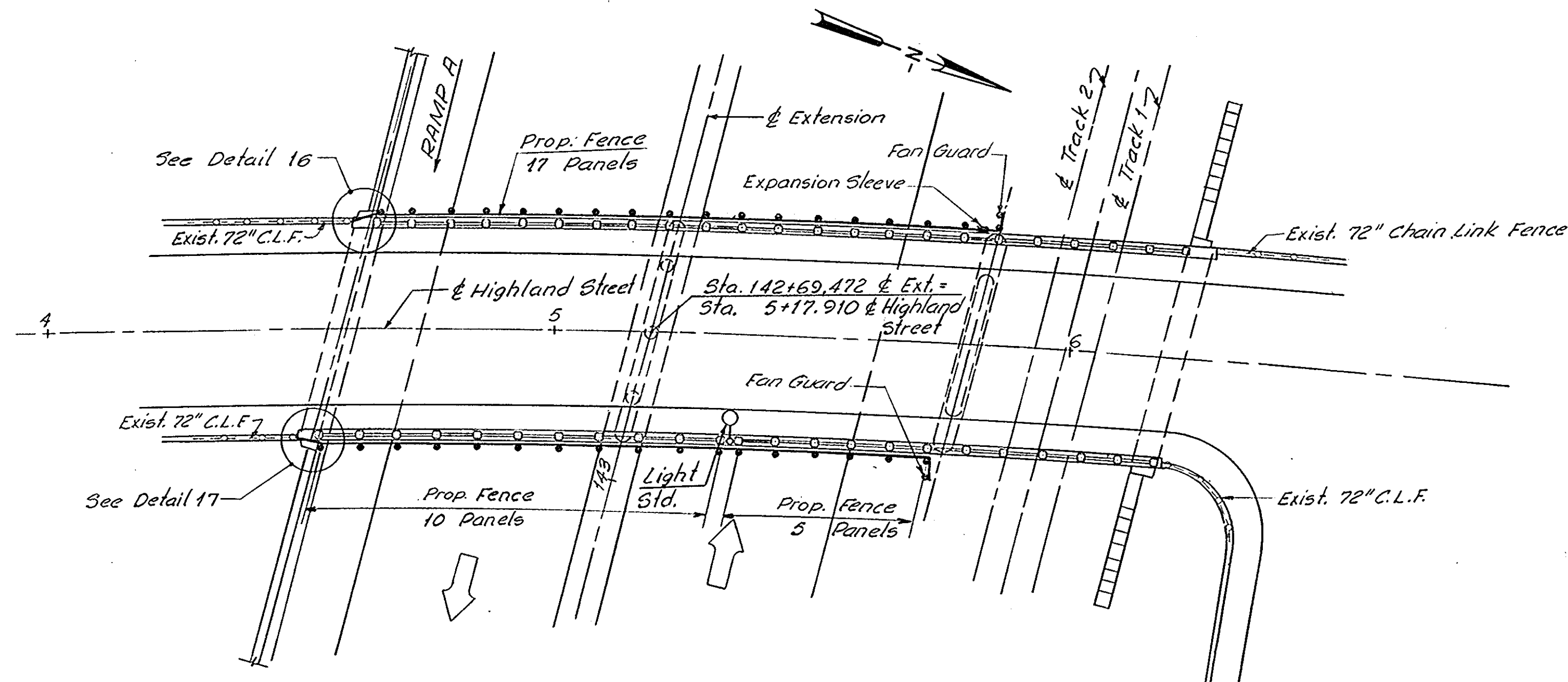
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 CONT. NO. 551-0031
 SHEET NO. 2 of 13



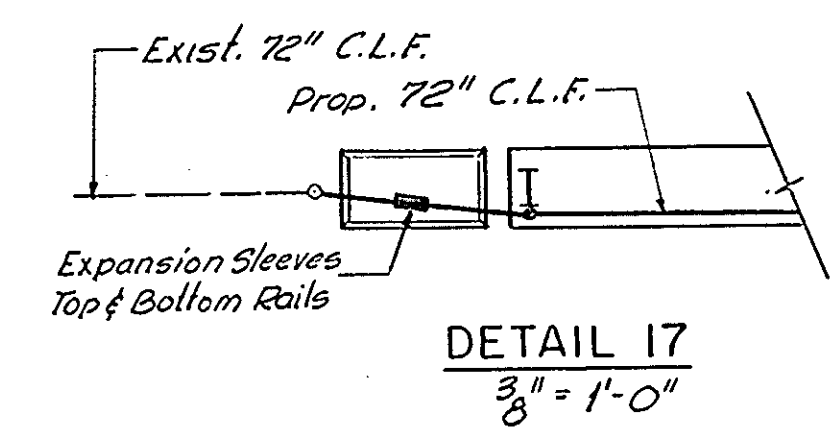
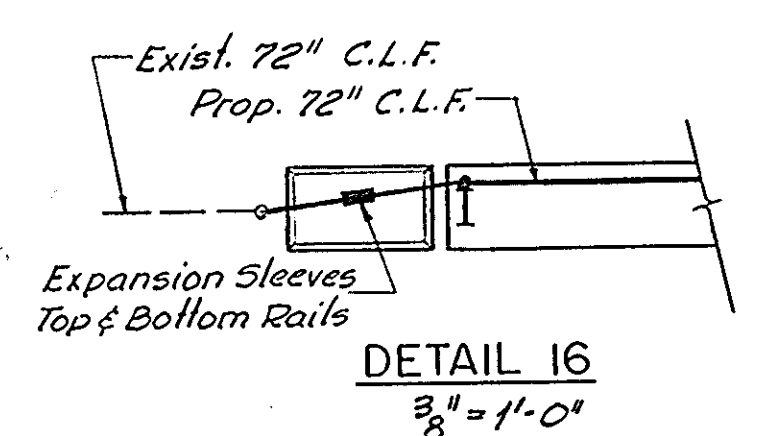
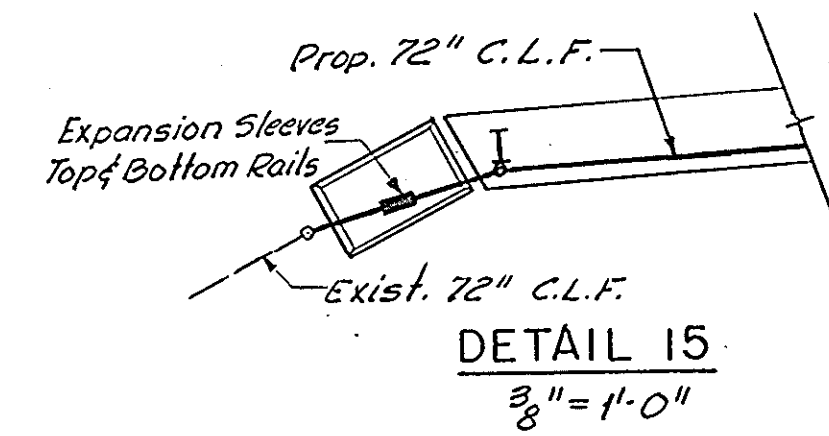
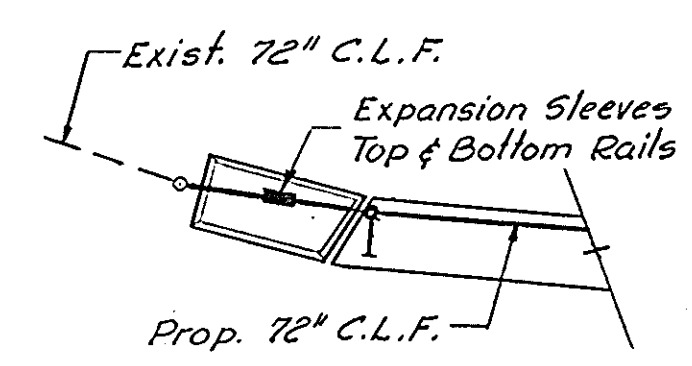
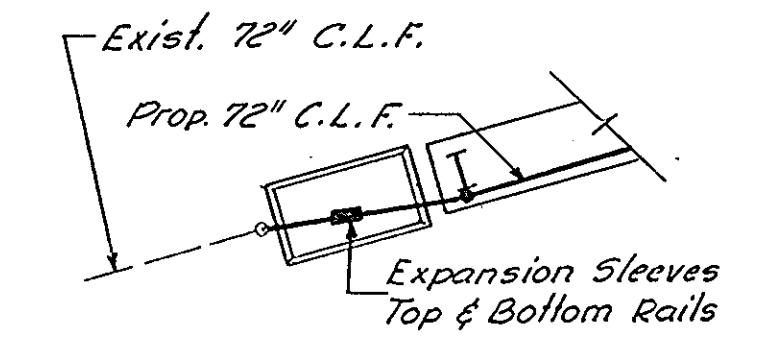
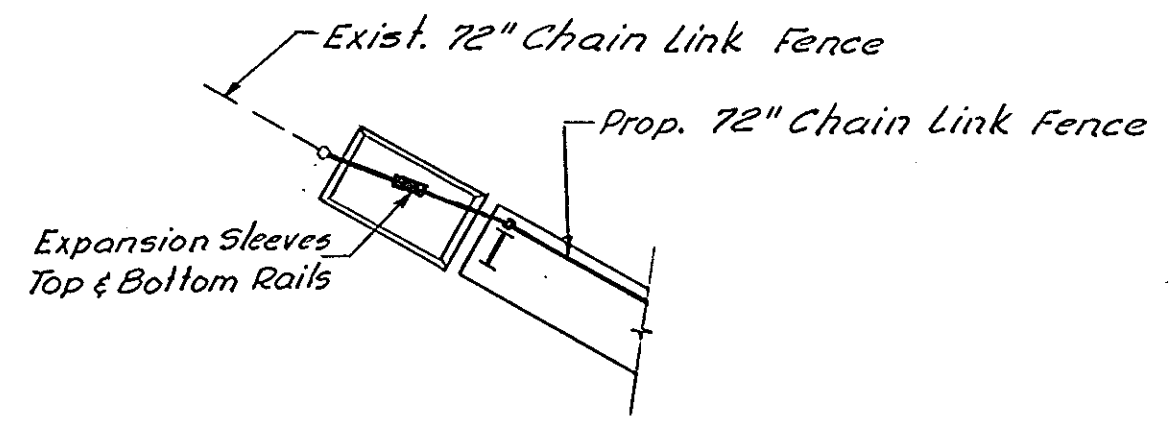
WASHINGTON STREET - W. NEWTON
1" = 20'



PUTNAM STREET - W. NEWTON
1" = 20'



HIGHLAND STREET - NEWTON
1" = 20'



NOTE
For General Notes, Typical Sections and Details, see Sheet No. 1.

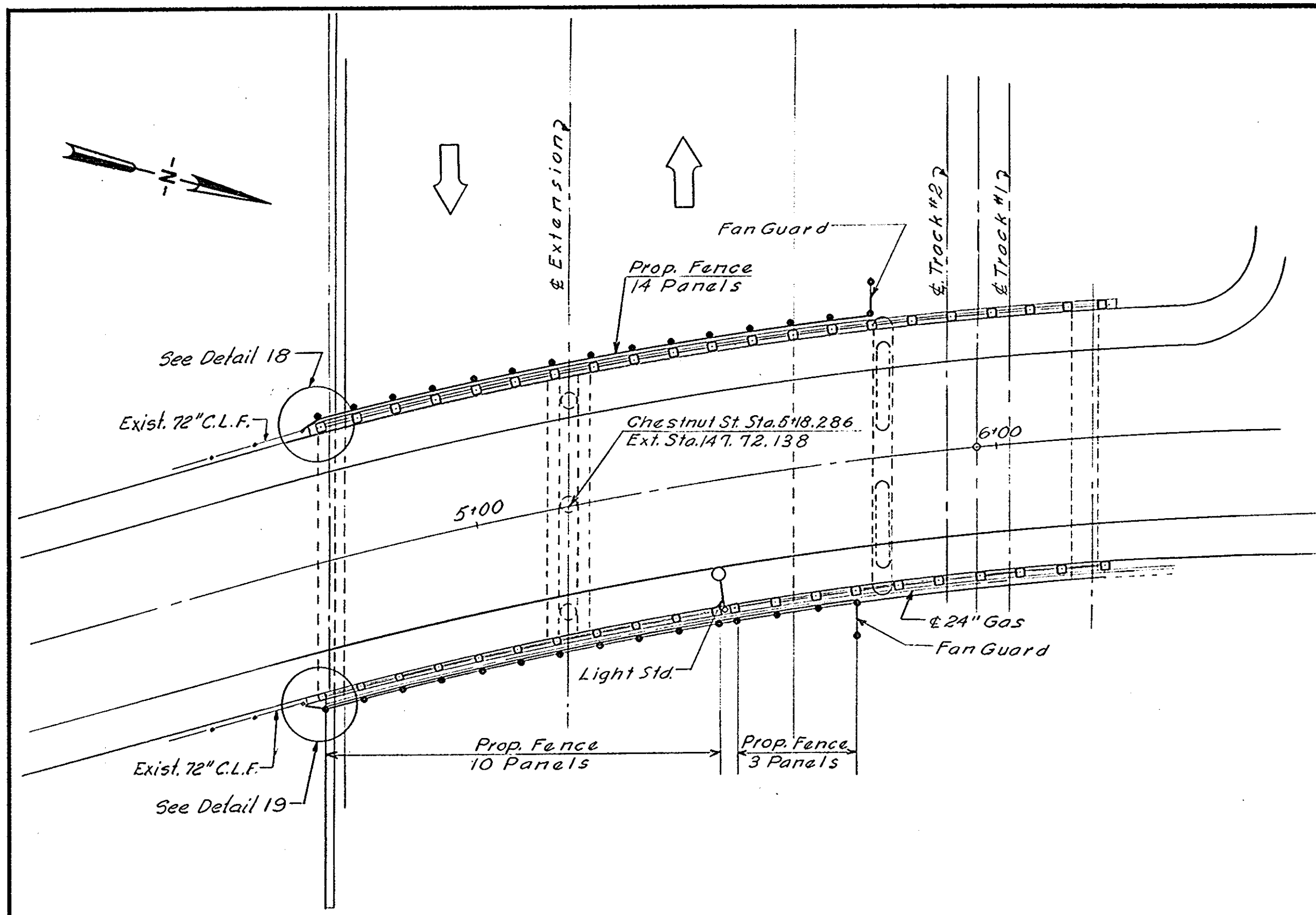
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				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

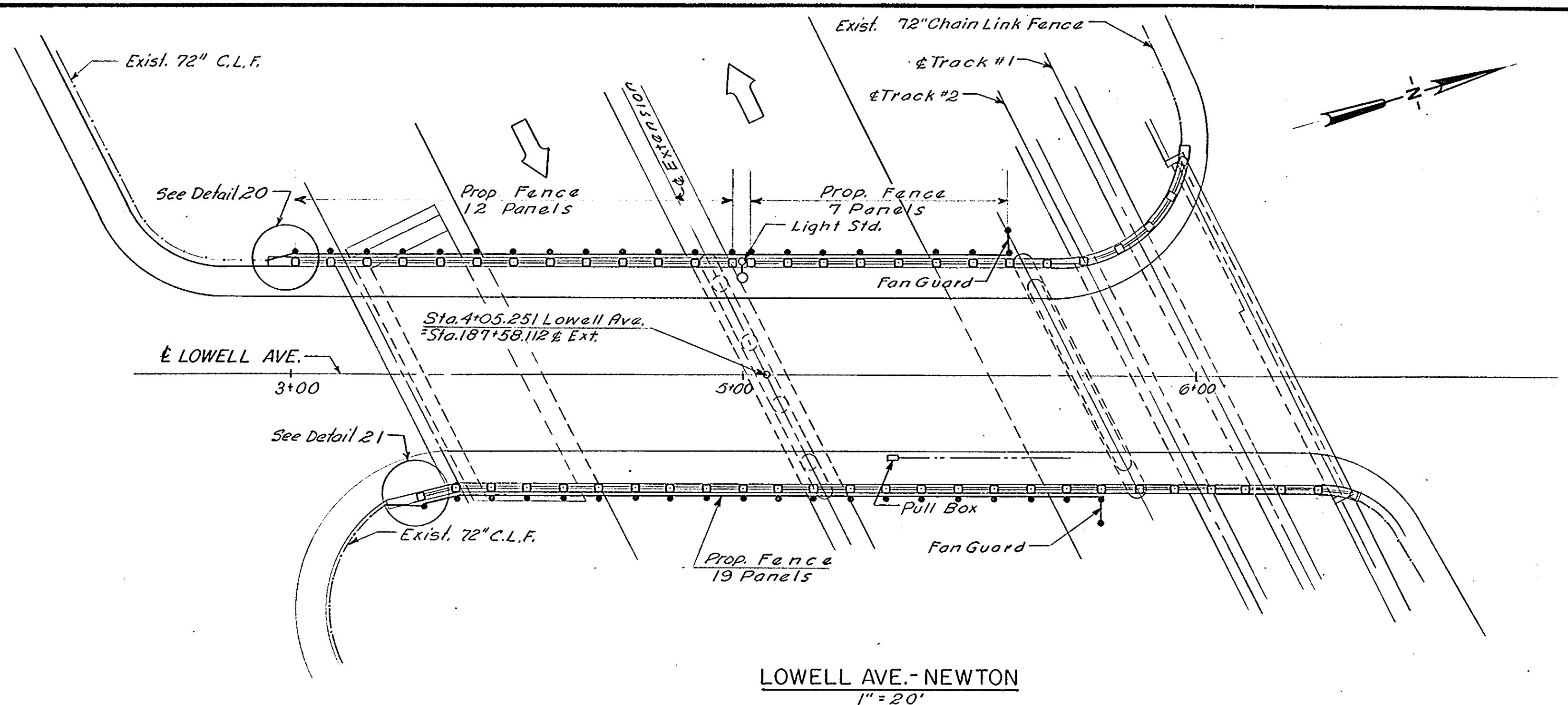
CHAIN LINK FENCE ON BRIDGES
WASHINGTON ST.-W. NEWTON | PUTNAM ST.-W. NEWTON
HIGHLAND ST.-NEWTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
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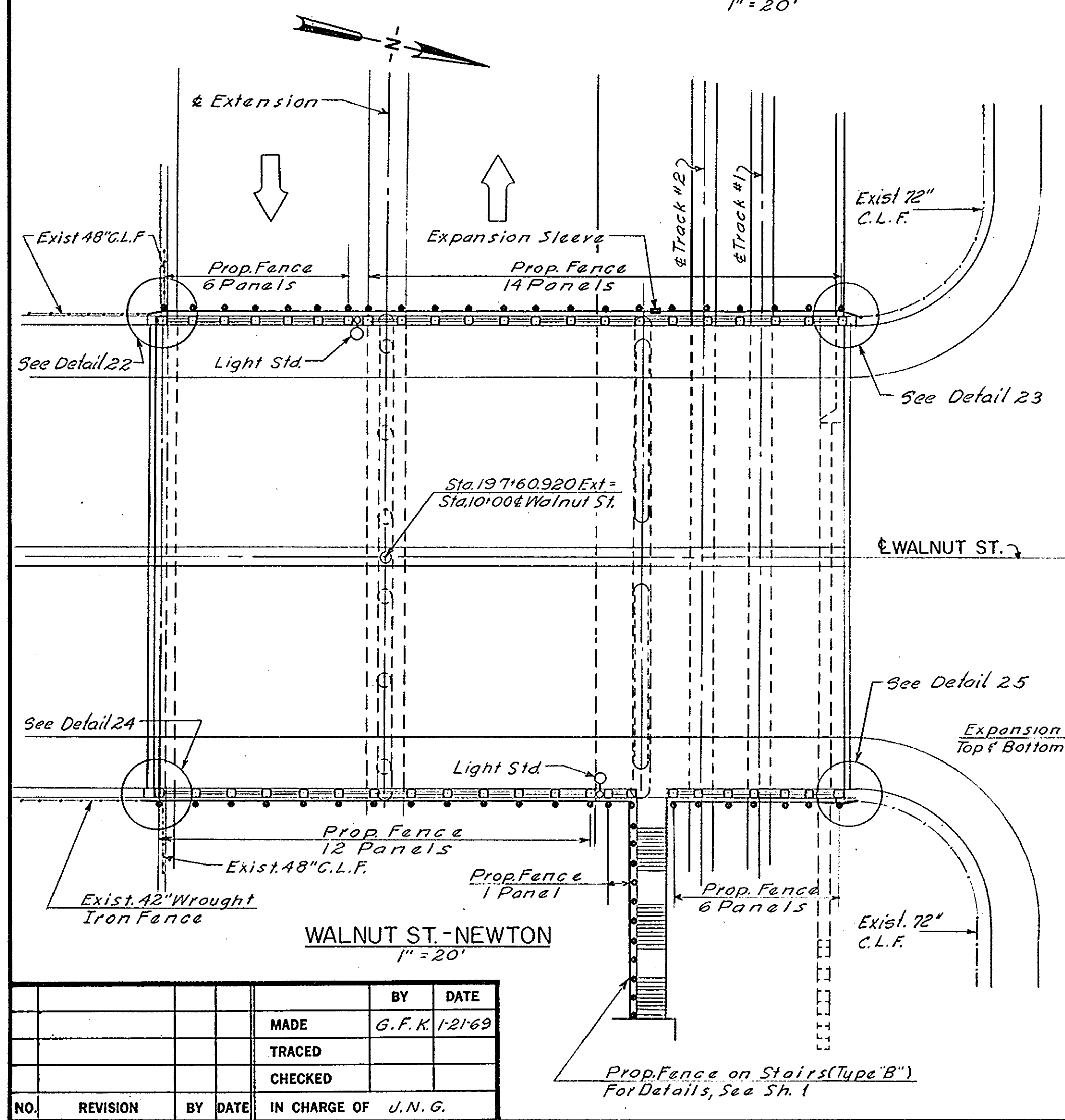
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CONT. NO. 551-0031
SHEET NO. 3 OF 13



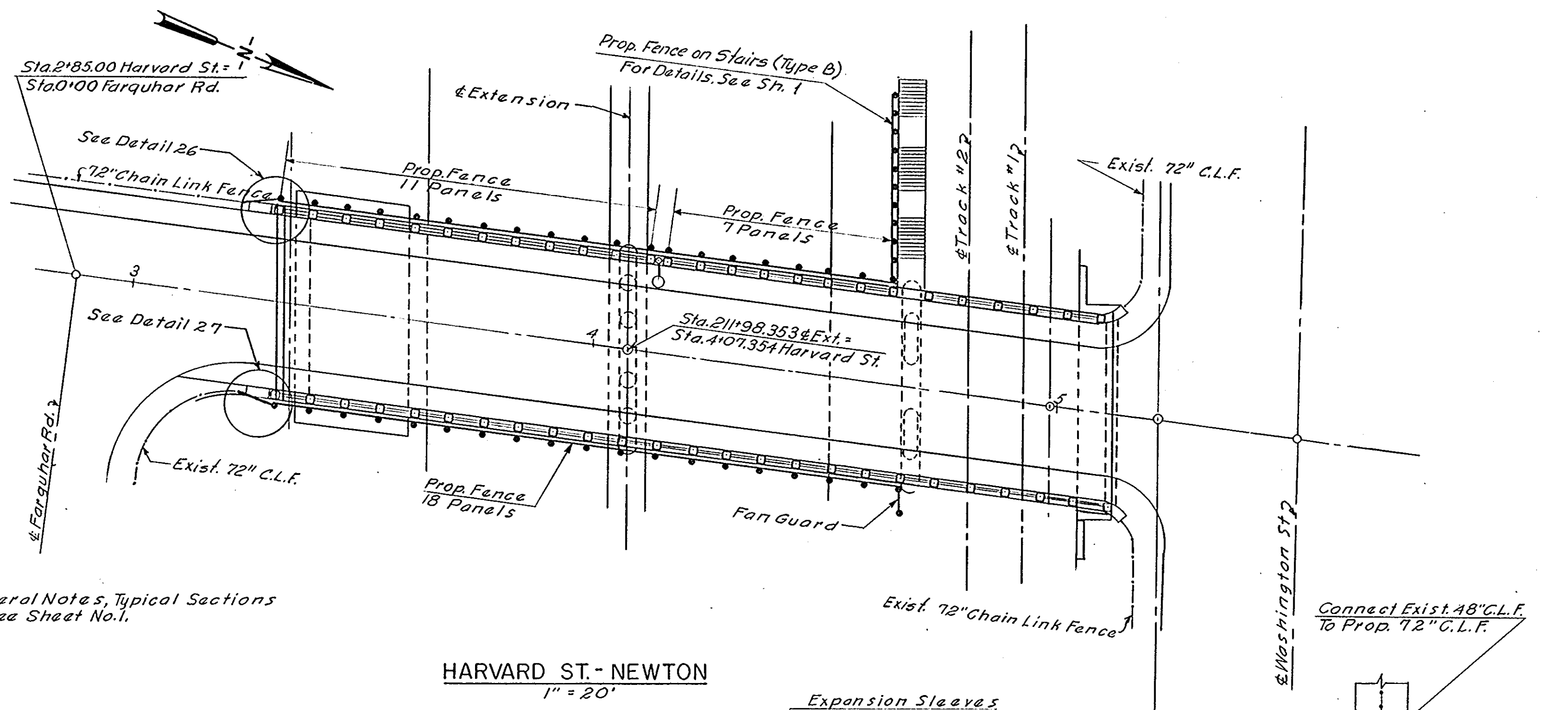
CHESTNUT ST.-NEWTON
1" = 20'



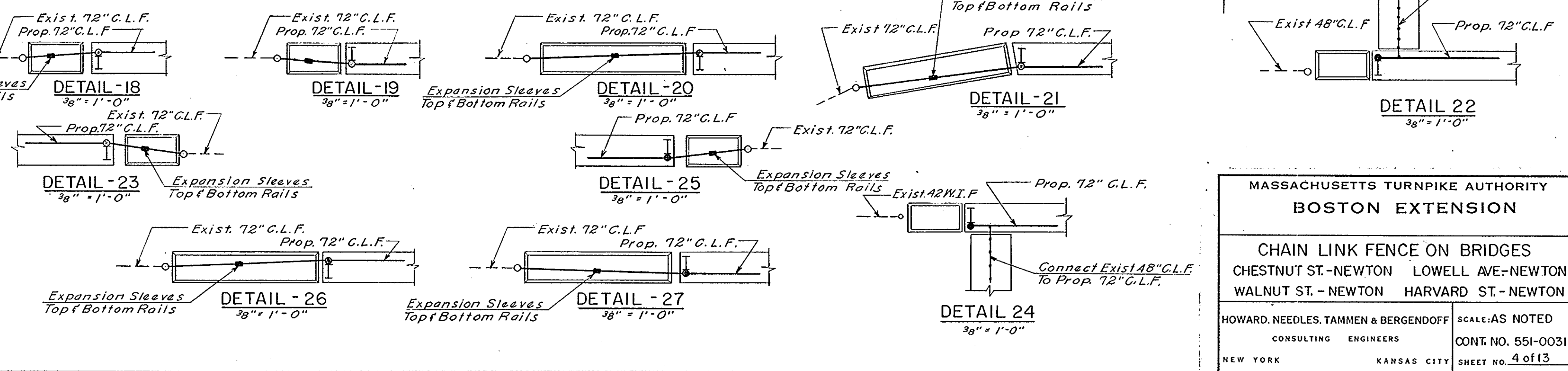
LOWELL AVE.-NEWTON
1" = 20'



WALNUT ST.-NEWTON
1" = 20'



HARVARD ST.-NEWTON
1" = 20'



NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

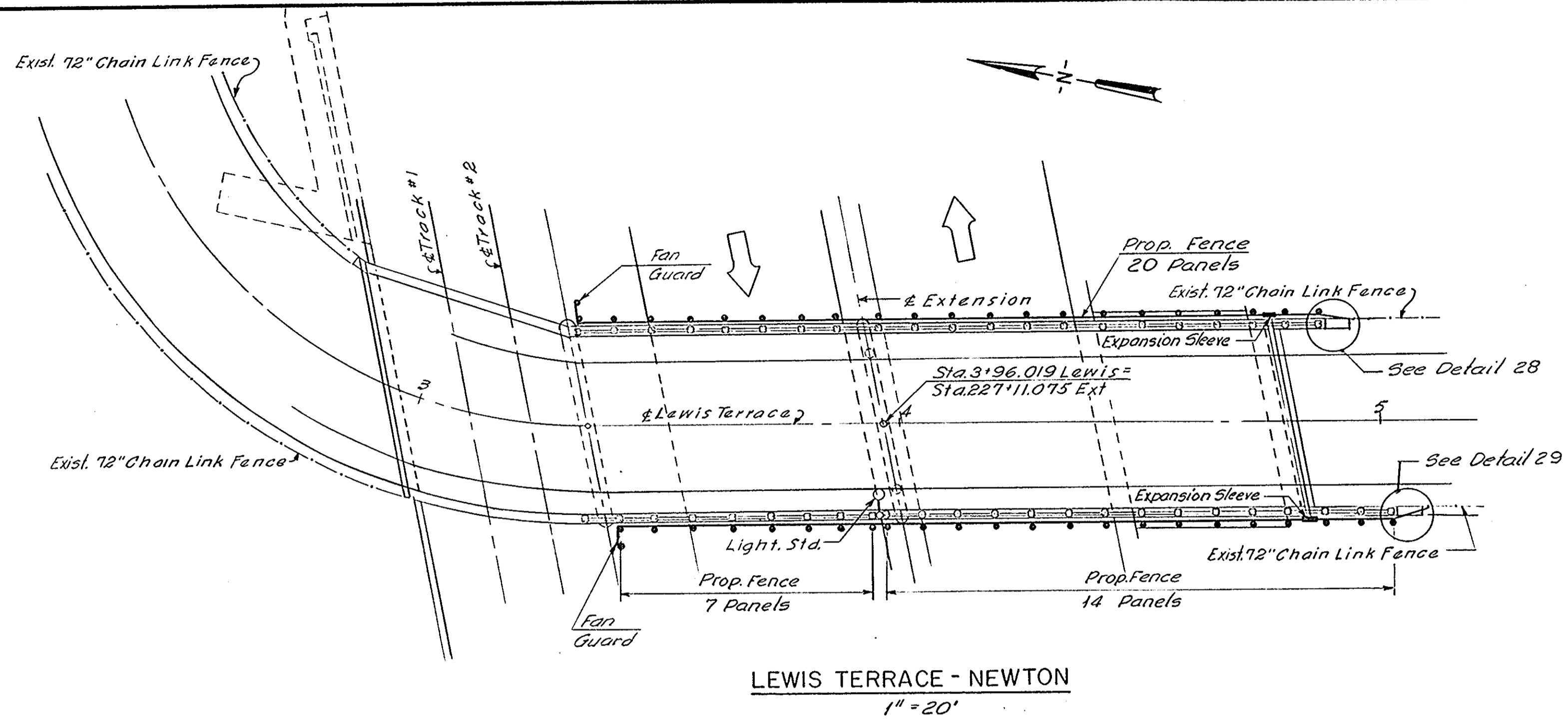
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		MADE	G. F. K. 1-21-69	
		TRACED		
		CHECKED		
		BY DATE		
		IN CHARGE OF	J. N. G.	

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

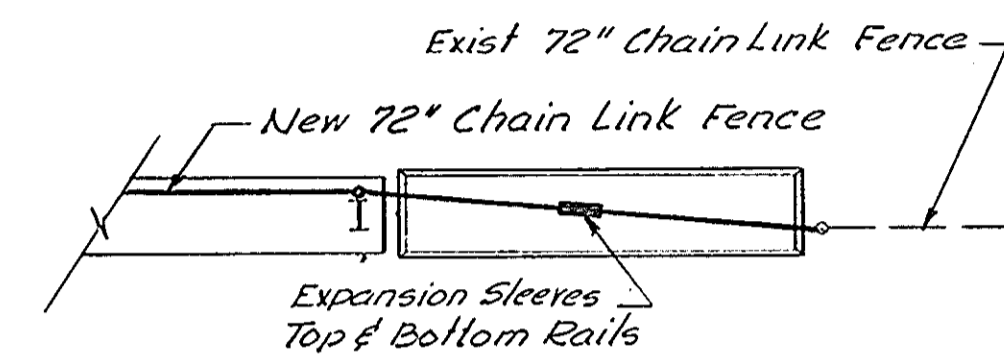
CHAIN LINK FENCE ON BRIDGES
CHESTNUT ST.-NEWTON LOWELL AVE.-NEWTON
WALNUT ST.-NEWTON HARVARD ST.-NEWTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

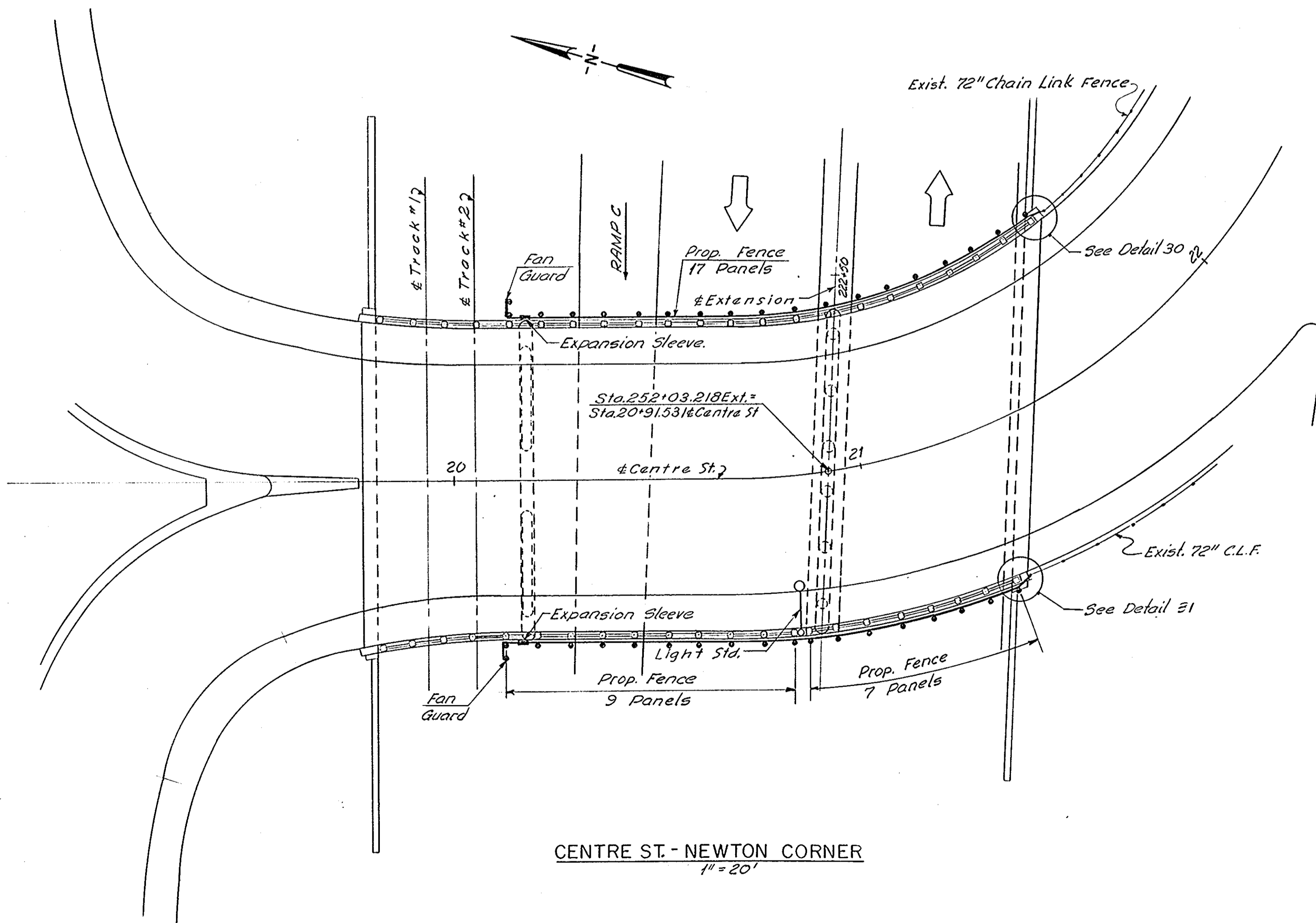
SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 4 of 13



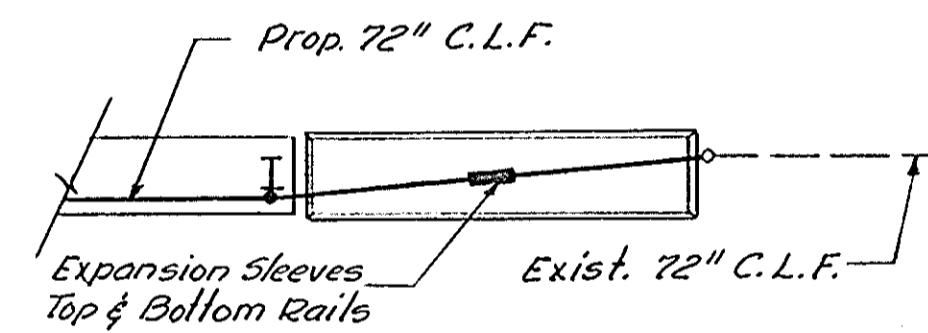
LEWIS TERRACE - NEWTON
1" = 20'



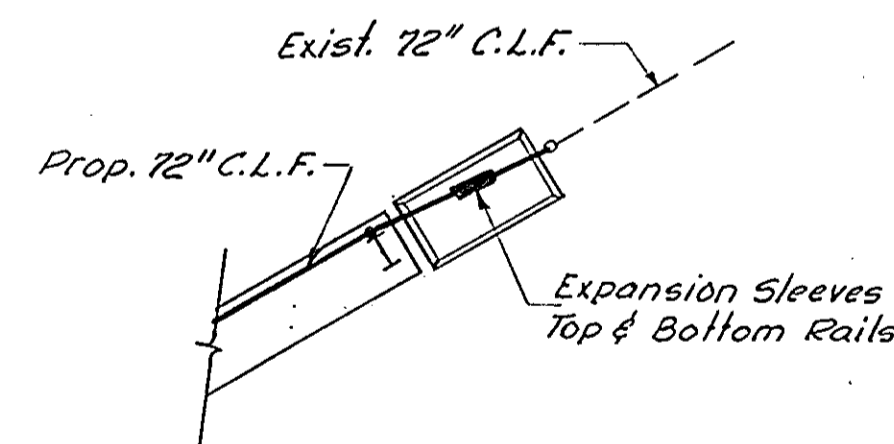
DETAIL 28
3/8" = 1'-0"



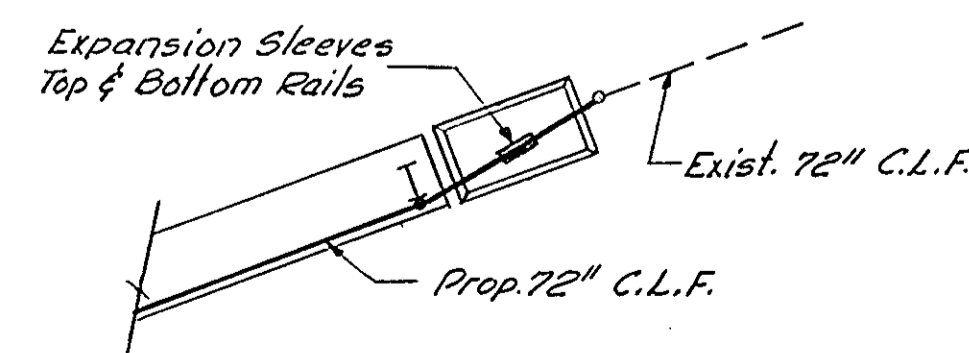
CENTRE ST. - NEWTON CORNER
1" = 20'



DETAIL 29
3/8" = 1'-0"



DETAIL 30
3/8" = 1'-0"

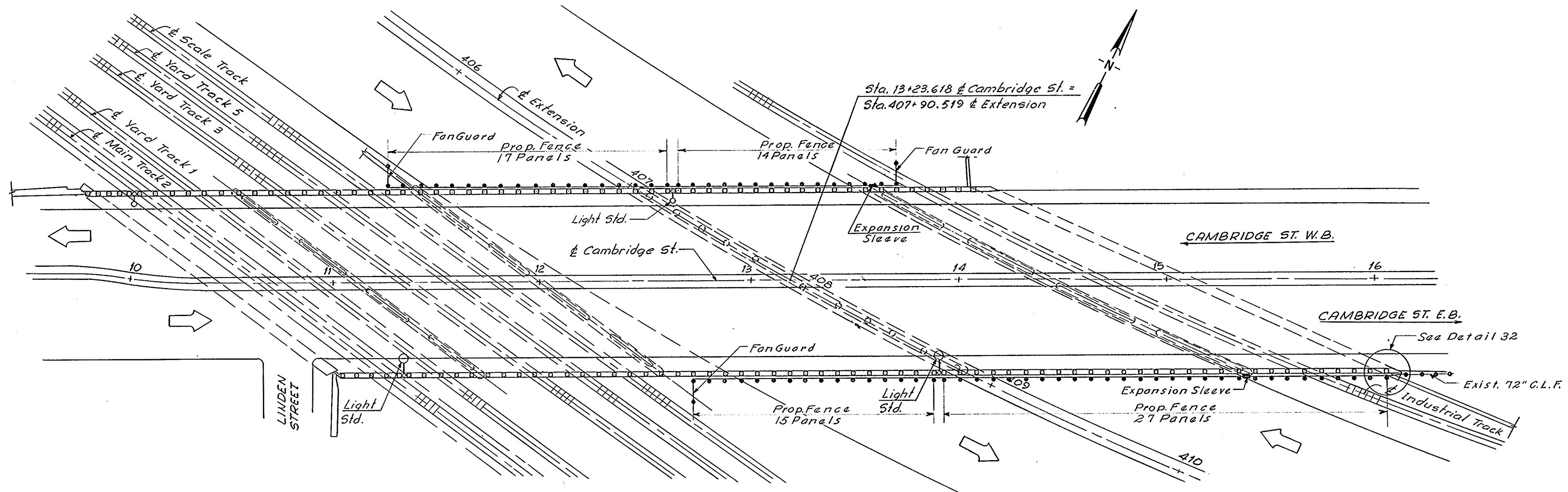


DETAIL 31
3/8" = 1'-0"

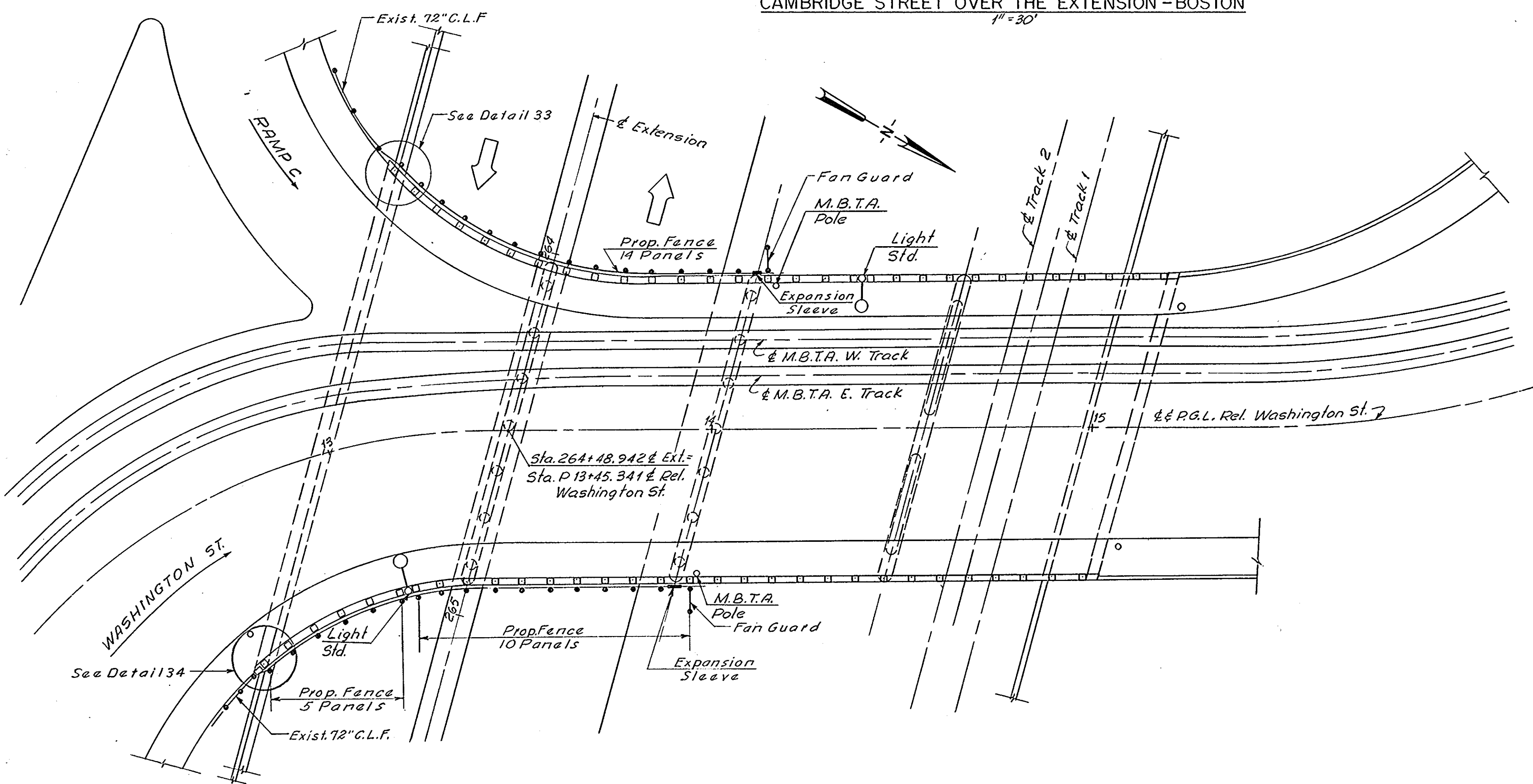
NOTE
For General Notes, Typical Sections and Details, see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	R.C.M. 1-30-69	
		TRACED		
		CHECKED		
		IN CHARGE OF J. N. G.		

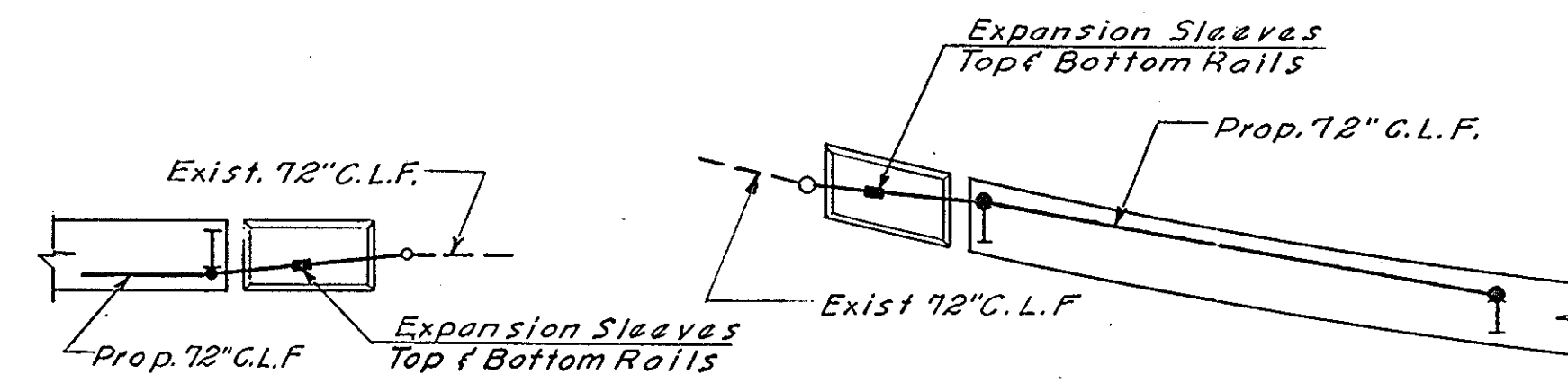
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES LEWIS TERRACE - NEWTON CENTRE ST. - NEWTON CORNER	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 5 of 13 KANSAS CITY



CAMBRIDGE STREET OVER THE EXTENSION - BOSTON
1" = 30'

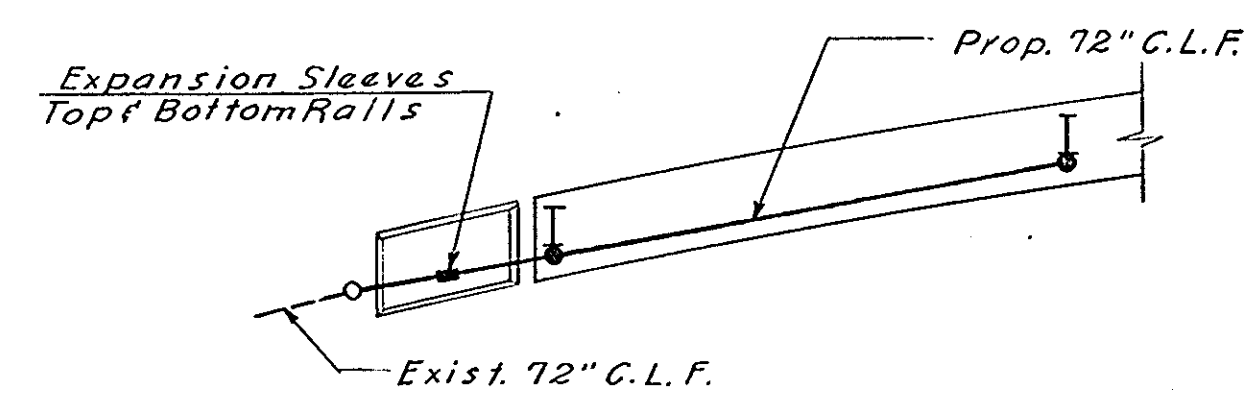


WASHINGTON STREET - NEWTON CORNER
1" = 20'



DETAIL 32
3/8" = 1'-0"

DETAIL 33
3/8" = 1'-0"

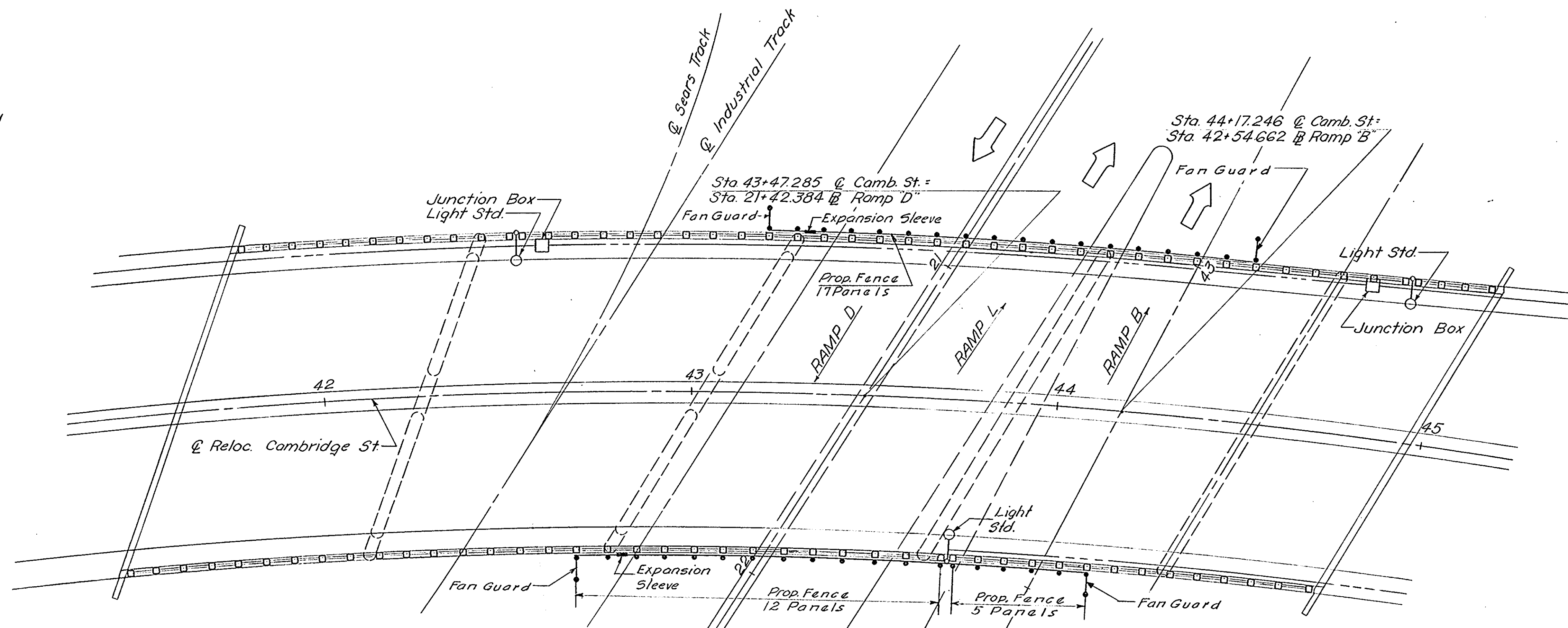
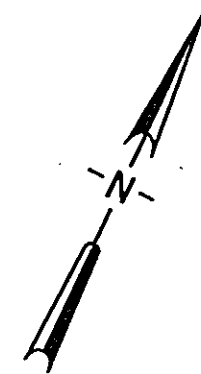


DETAIL 34
3/8" = 1'-0"

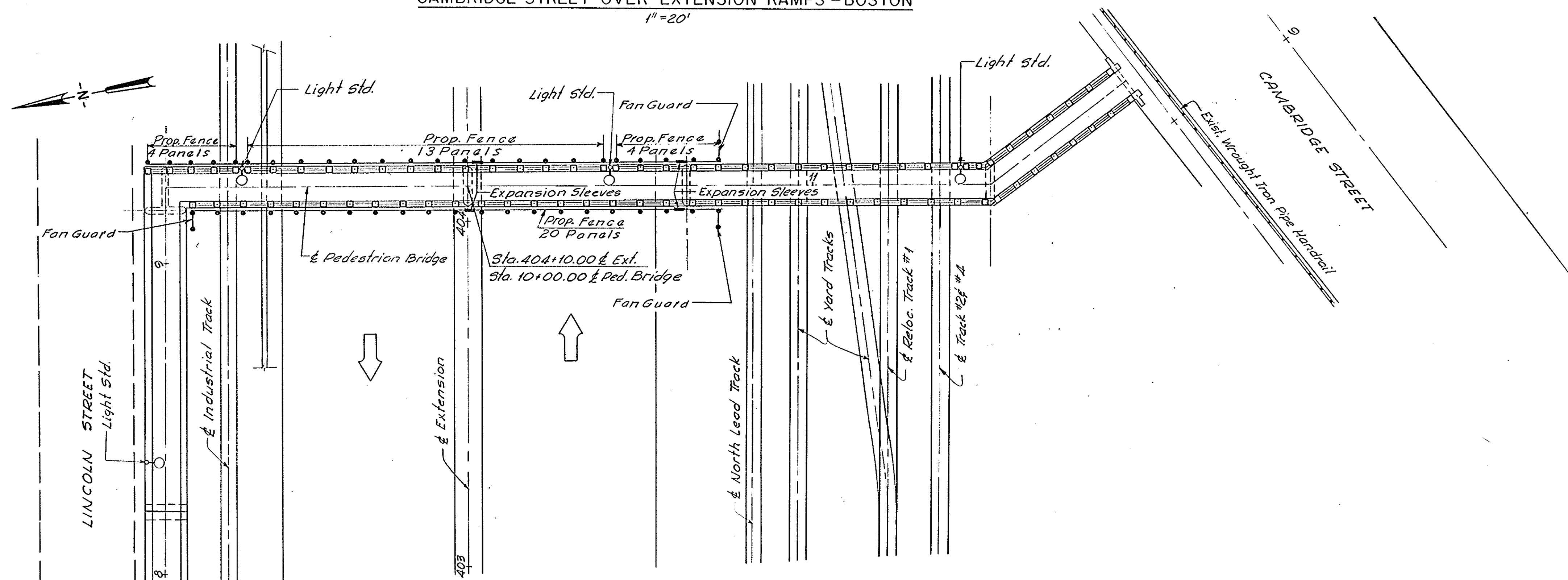
NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
	MADE	R.C.M.	1-23-69	
	TRACED			
	CHECKED			
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES CAMBRIDGE ST. OVER THE EXTENSION - BOSTON WASHINGTON ST. - NEWTON CORNER	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK KANSAS CITY	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 6 OF 13



CAMBRIDGE STREET OVER EXTENSION RAMP - BOSTON
1" = 20'



PEDESTRIAN BRIDGE AT CAMBRIDGE STREET - BOSTON
1" = 20'

NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	FCT 1-23-69	
		TRACED		
		CHECKED		
		J.N.G.		

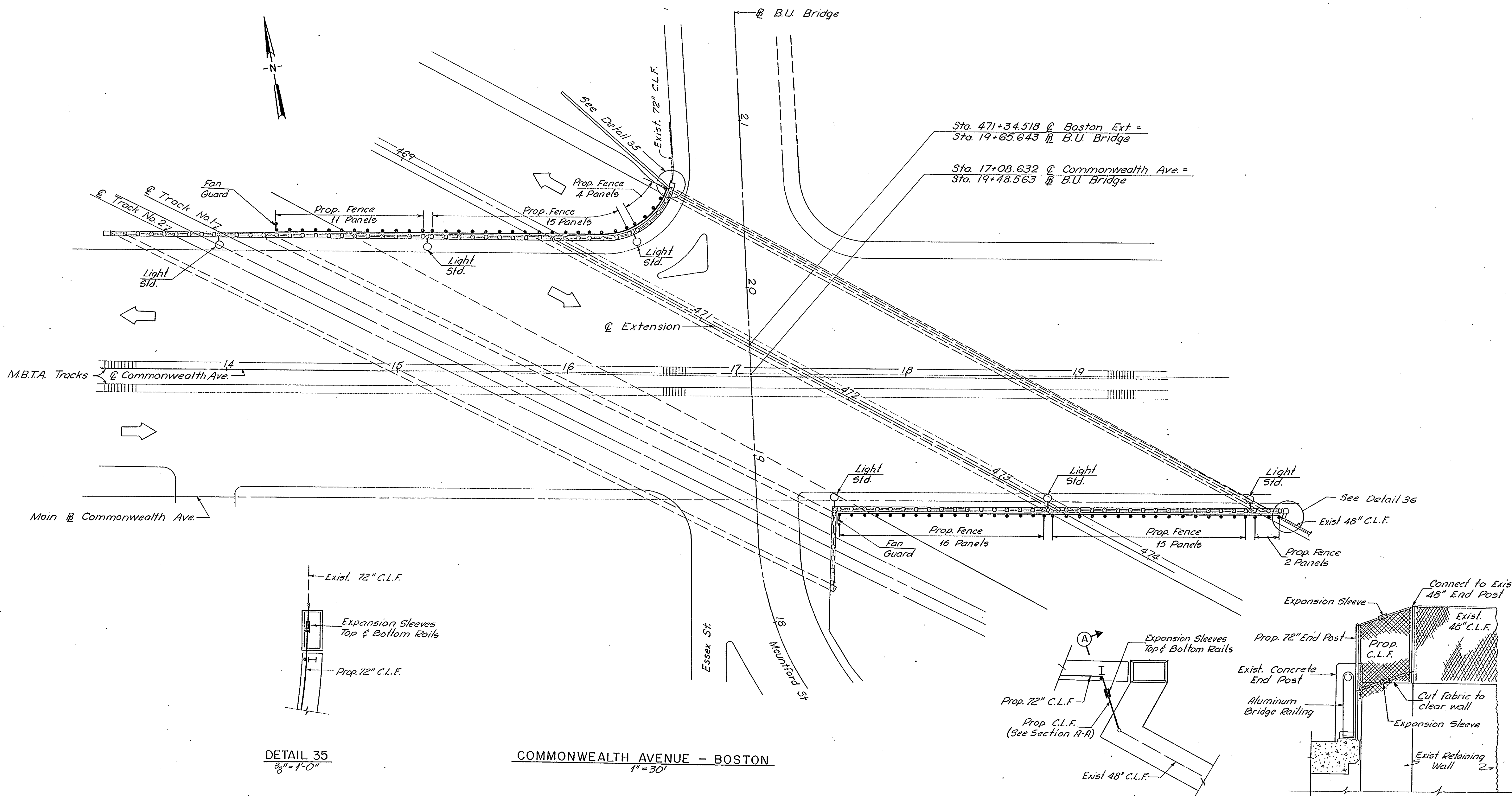
Concrete Landing
Exist. 72" C.L.F.
Gravity Wall

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

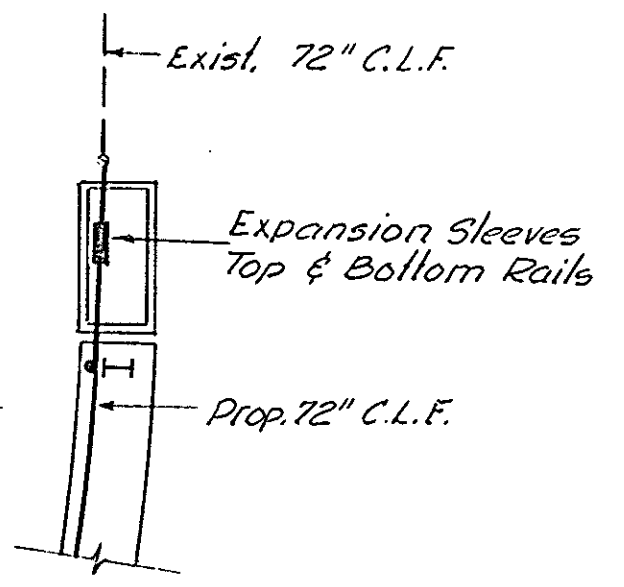
CHAIN LINK FENCE ON BRIDGES
CAMBRIDGE ST. OVER EXTENSION RAMP - BOSTON
PEDESTRIAN BRIDGE AT CAMBRIDGE ST. - BOSTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

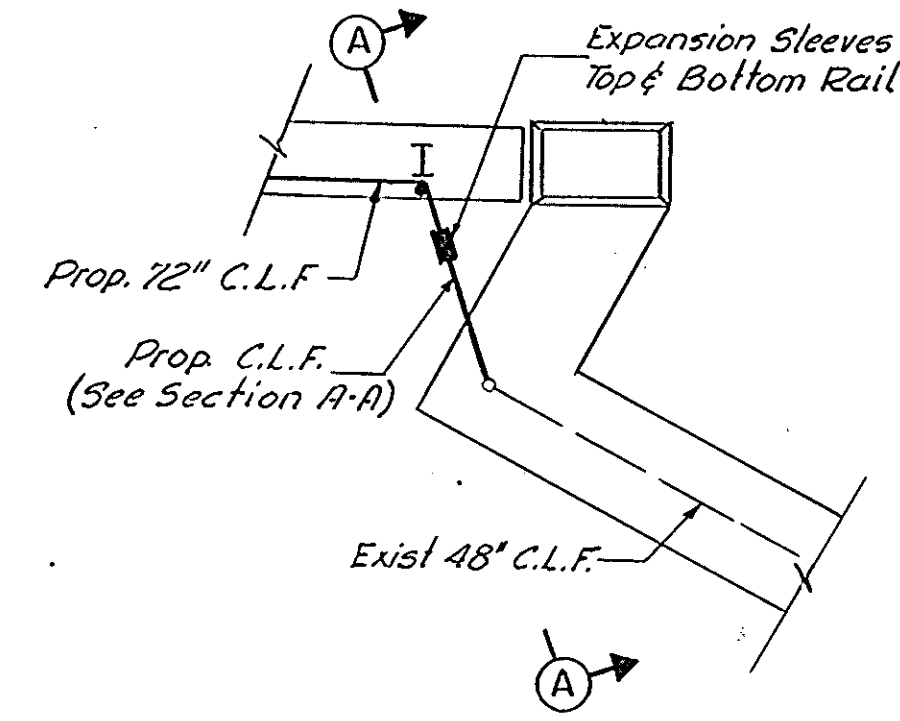
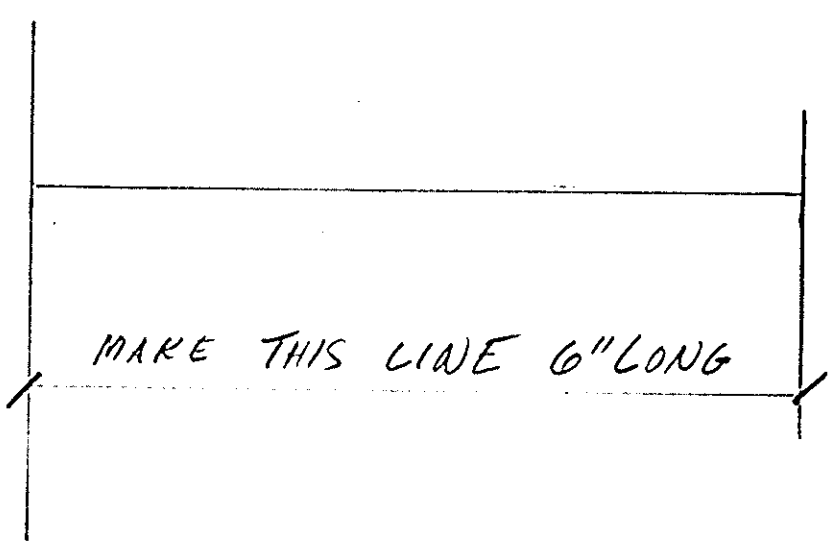
SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 7 of 13



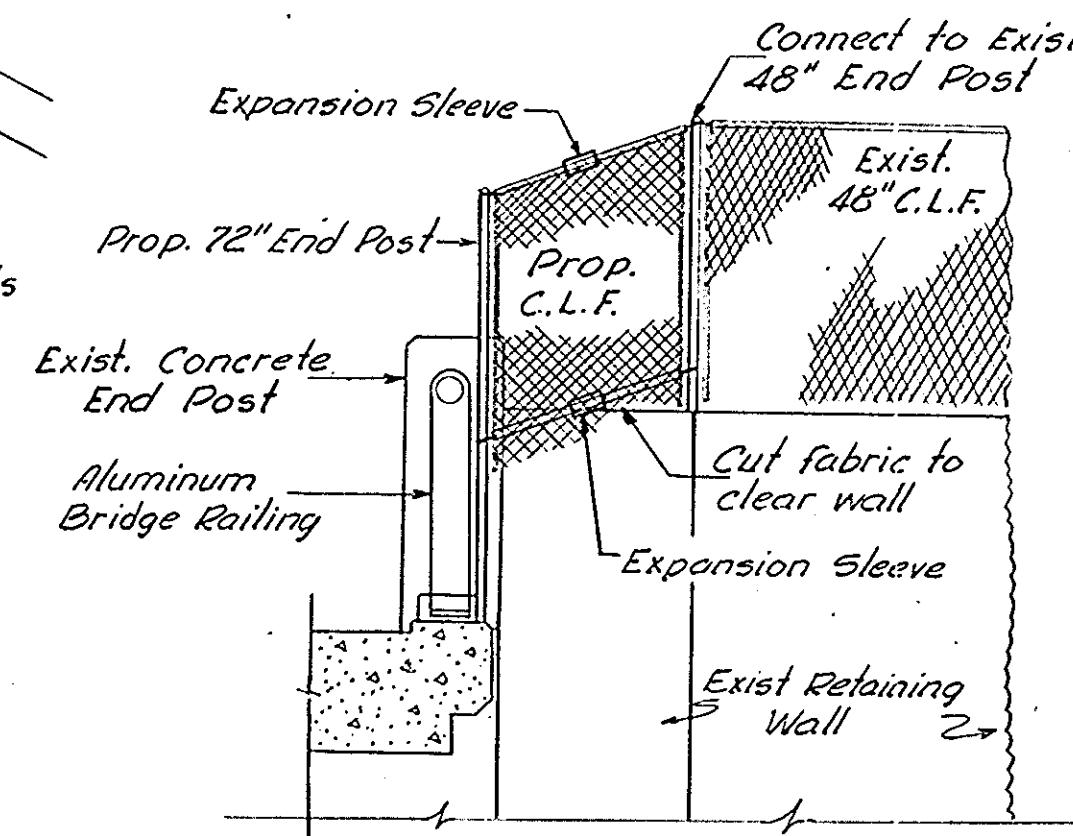
DETAIL 35
3/8" = 1'-0"



COMMONWEALTH AVENUE - BOSTON
1" = 30'



DETAIL 36
3/8" = 1'-0"



SECTION A-A
3/8" = 1'-0"

NOTE: For General Notes, Typical Sections and Details See Sheet No. 1

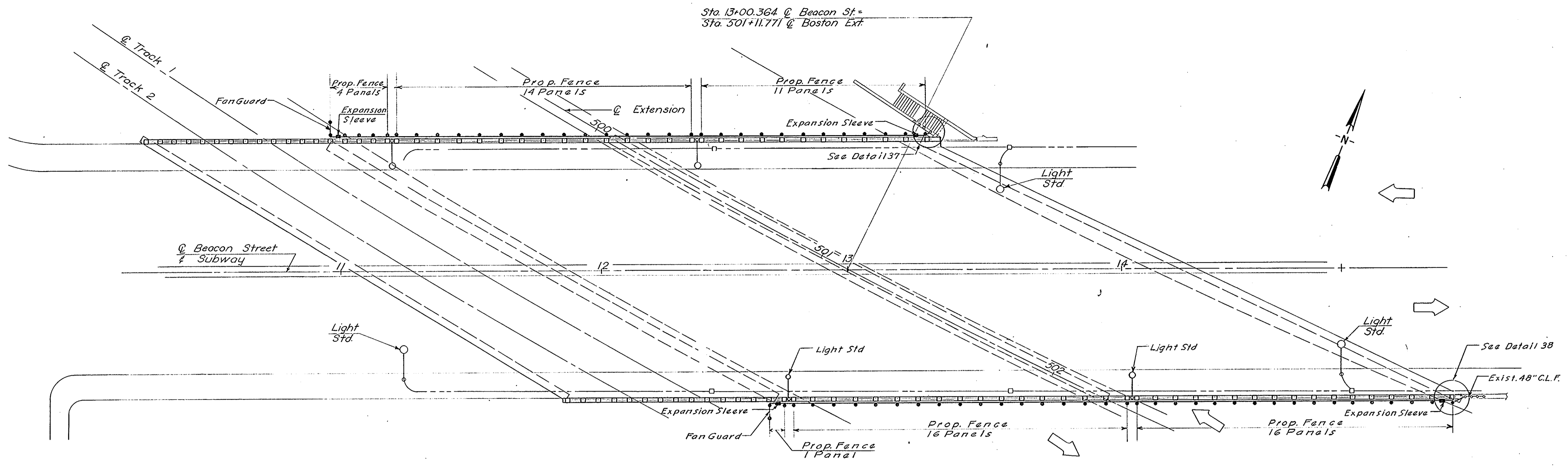
NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	F.C.T.	1-21-69
		TRACED		
		CHECKED		
				J.N.G.

1" = 30'

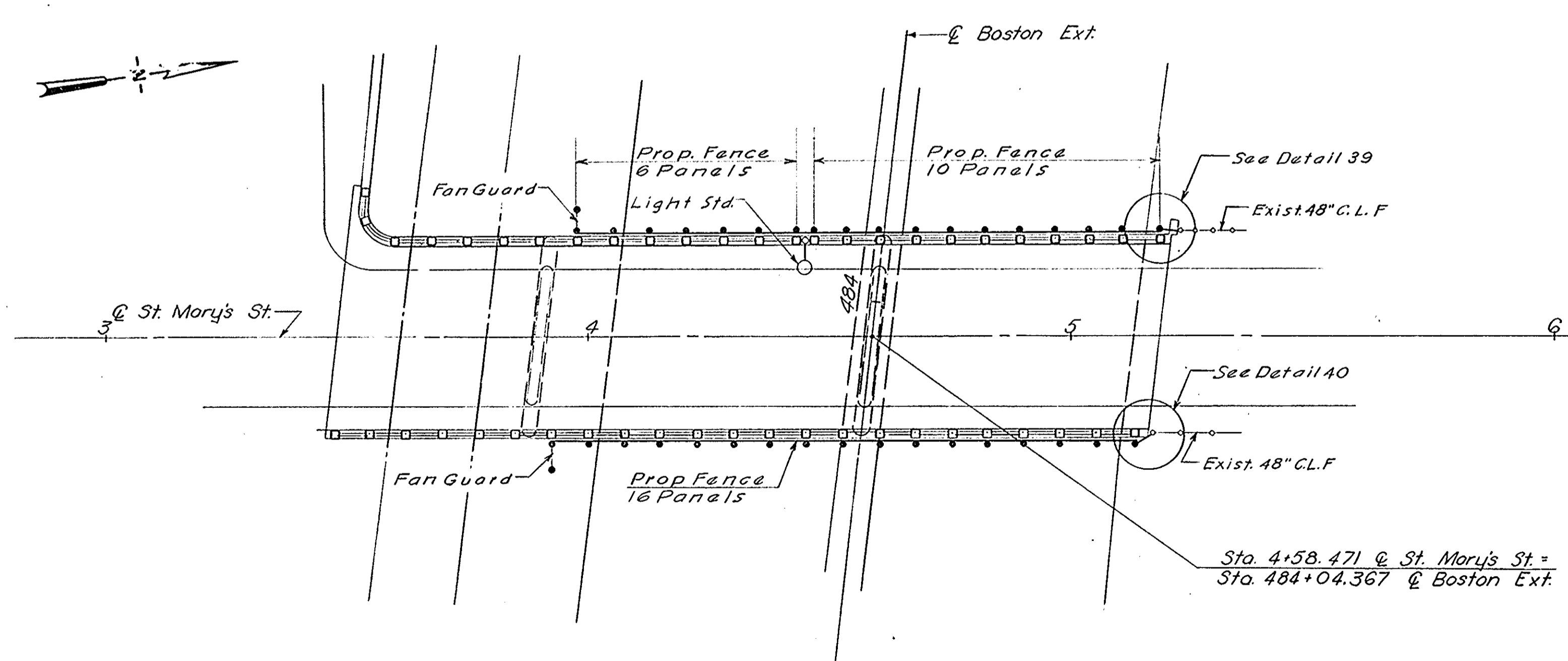
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
 CHAIN LINK FENCE ON BRIDGES
 COMMONWEALTH AVE. - BOSTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY

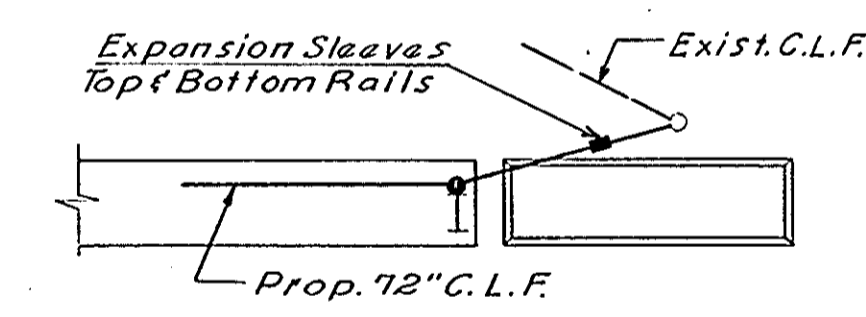
SCALE: AS NOTED
 CONT. NO. 551-0031
 SHEET NO. 8 OF 13



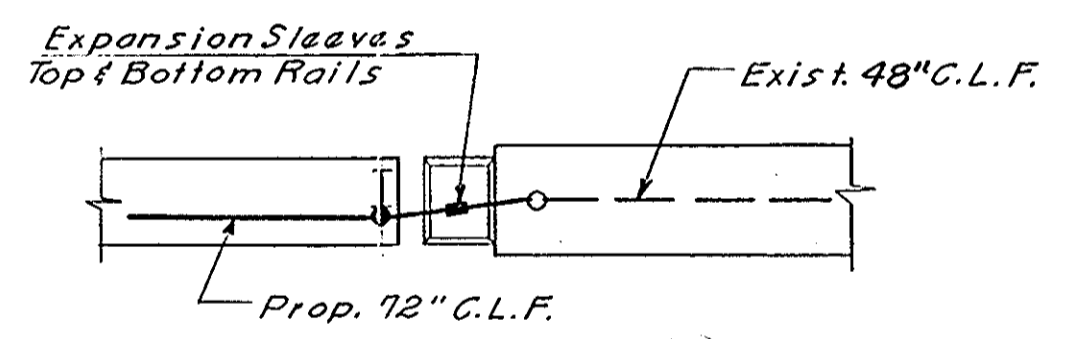
BEACON STREET - BOSTON
1" = 20'



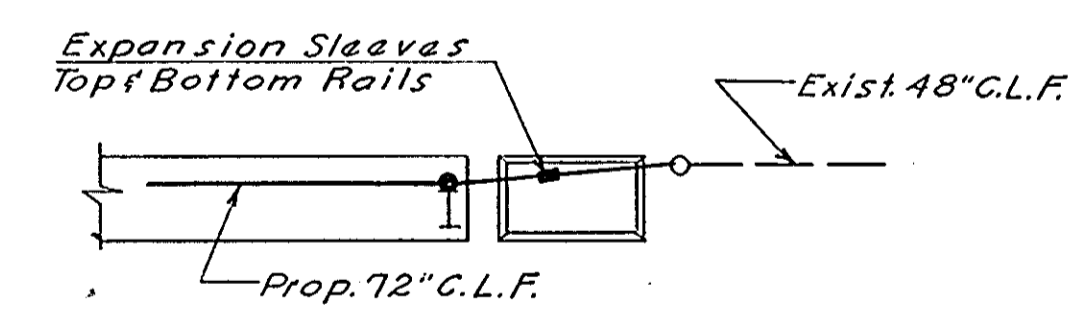
ST. MARY'S STREET - BROOKLINE
1" = 20'



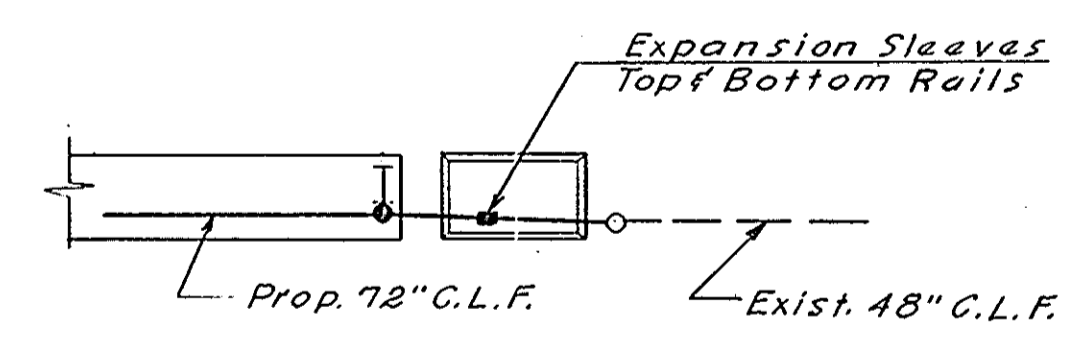
DETAIL-37
3/8" = 1'-0"



DETAIL-38
3/8" = 1'-0"



DETAIL-39
3/8" = 1'-0"



DETAIL-40
3/8" = 1'-0"

NOTE:
For General Notes, Typical Sections and Details see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	G.F.K. 2-7-69	
		TRACED		
		CHECKED		

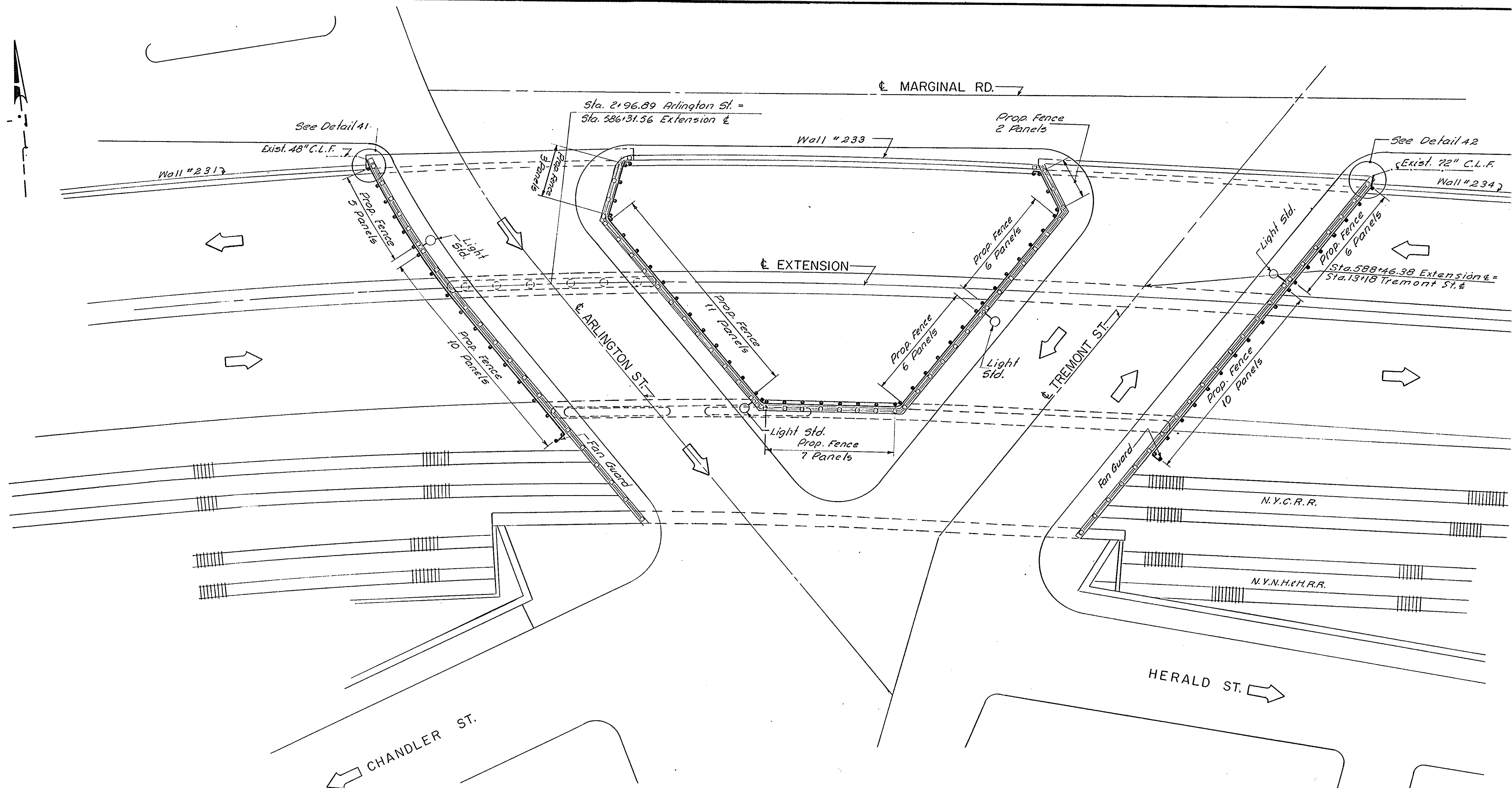
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
BEACON ST.-BOSTON
ST. MARY'S ST.-BROOKLINE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

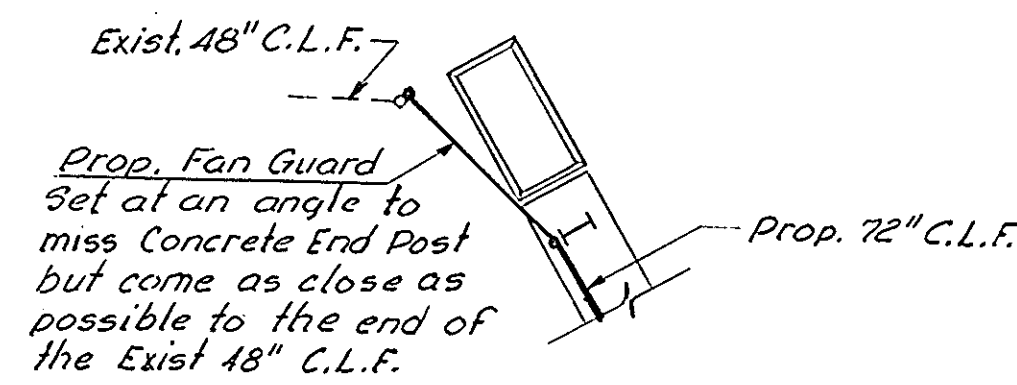
SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 9 of 13

09857 99-11

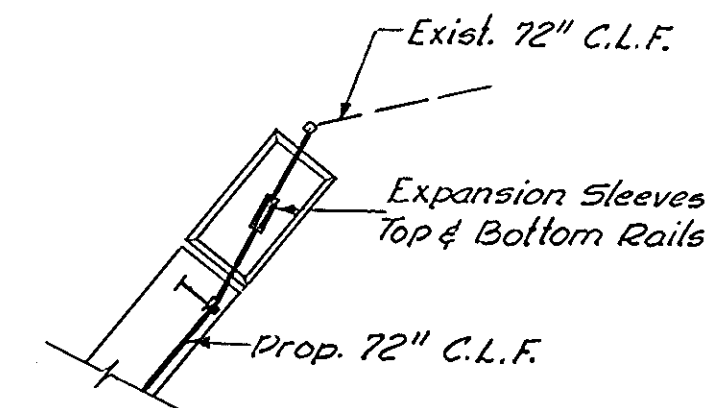


ARLINGTON ST. & TREMONT ST.
BOSTON
1" = 20'

NOTE:
For General Notes, Typical Sections
and Details see Sheet No. 1.



DETAIL - 41
3/8" = 1'-0"

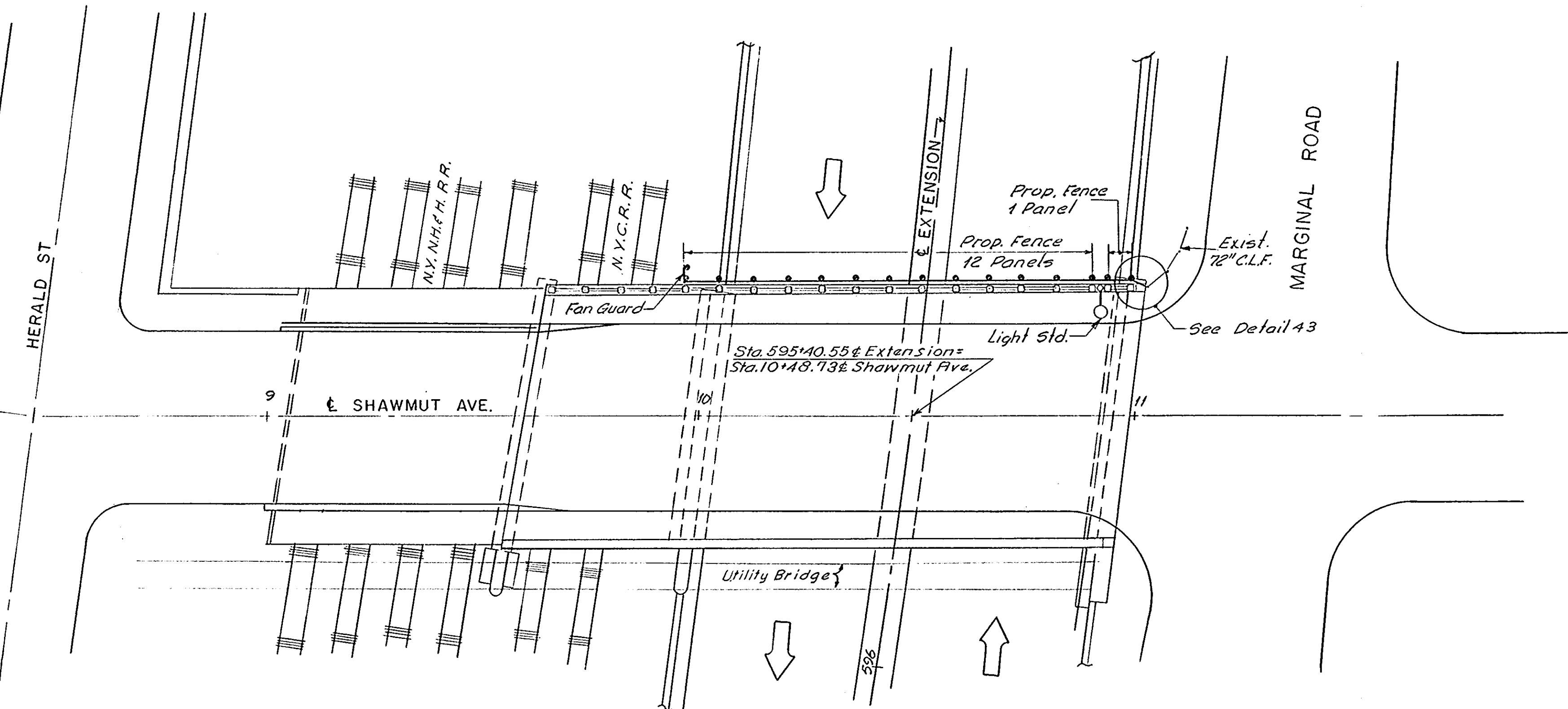
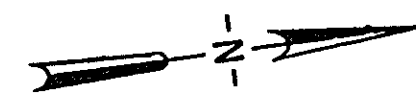


DETAILS - 42
3/8" = 1'-0"

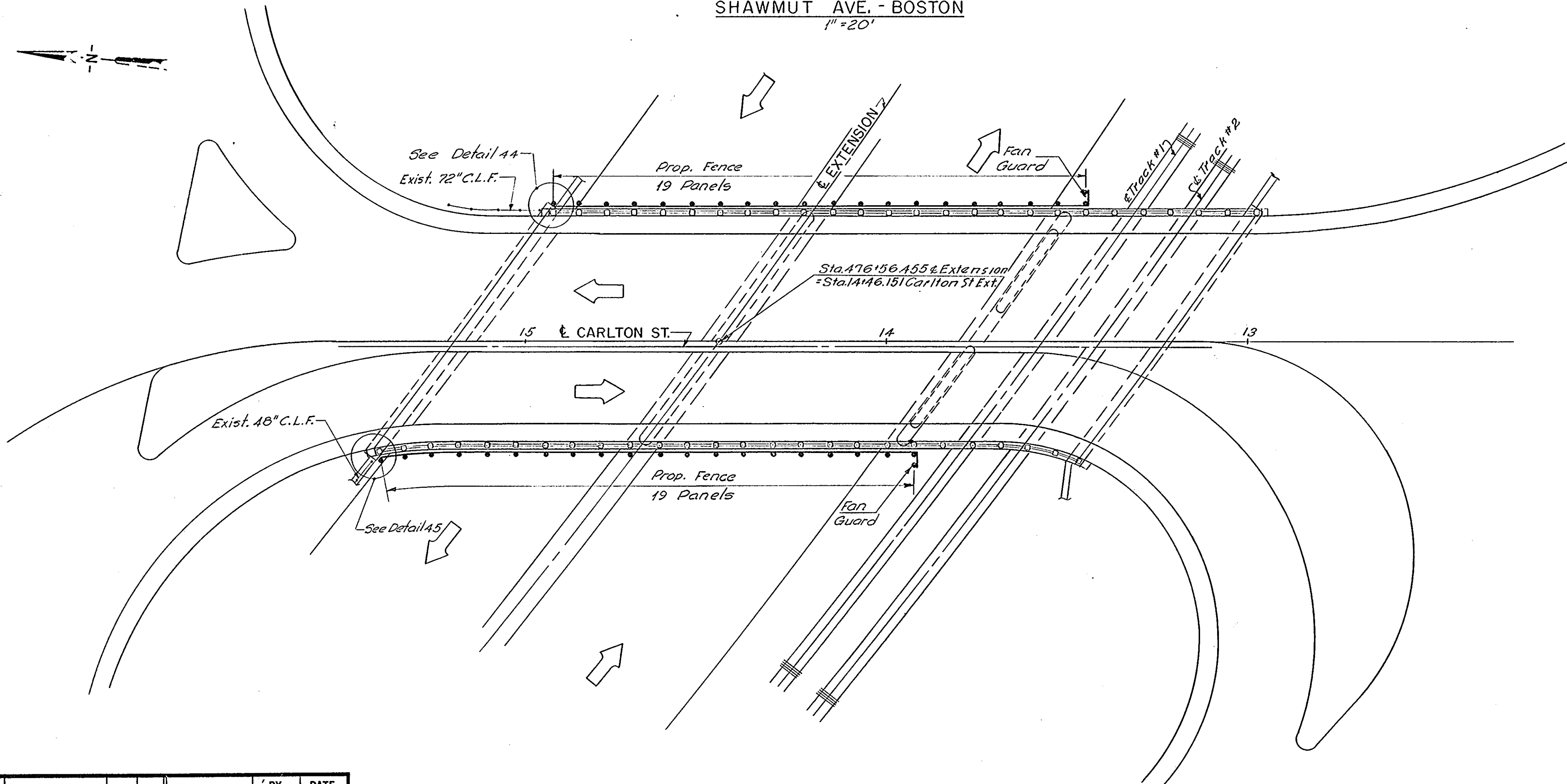
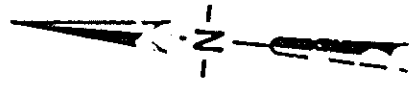
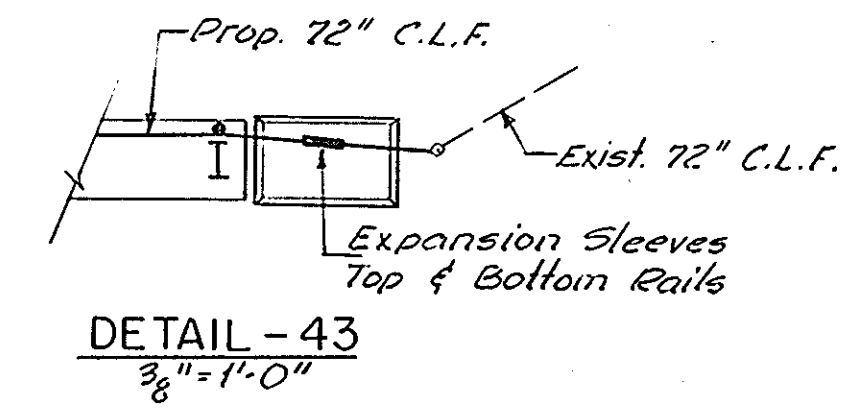
NO.	REVISION	BY	DATE	IN CHARGE OF
	MADE	R.C.M.	2-7-69	
	TRACED			
	CHECKED			
				J.N.G.

Traced on New Sheet

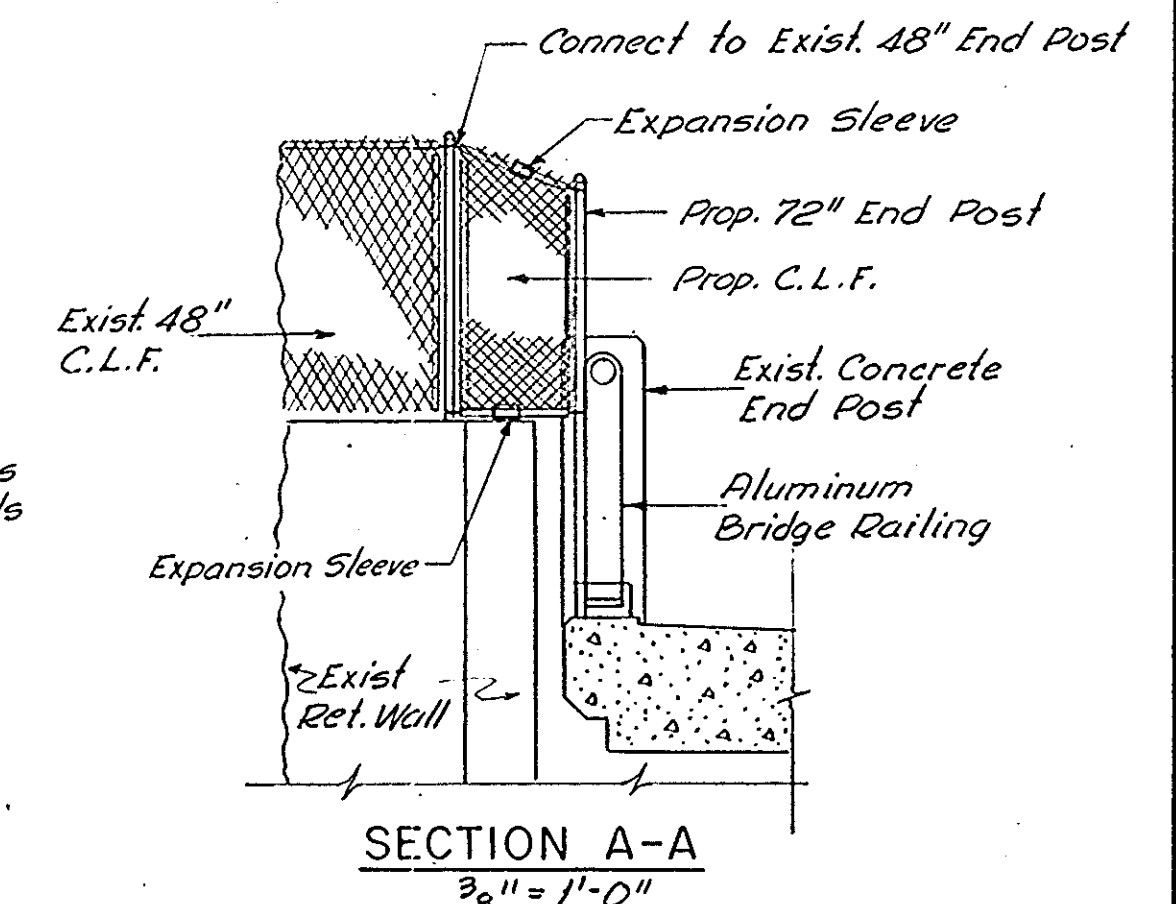
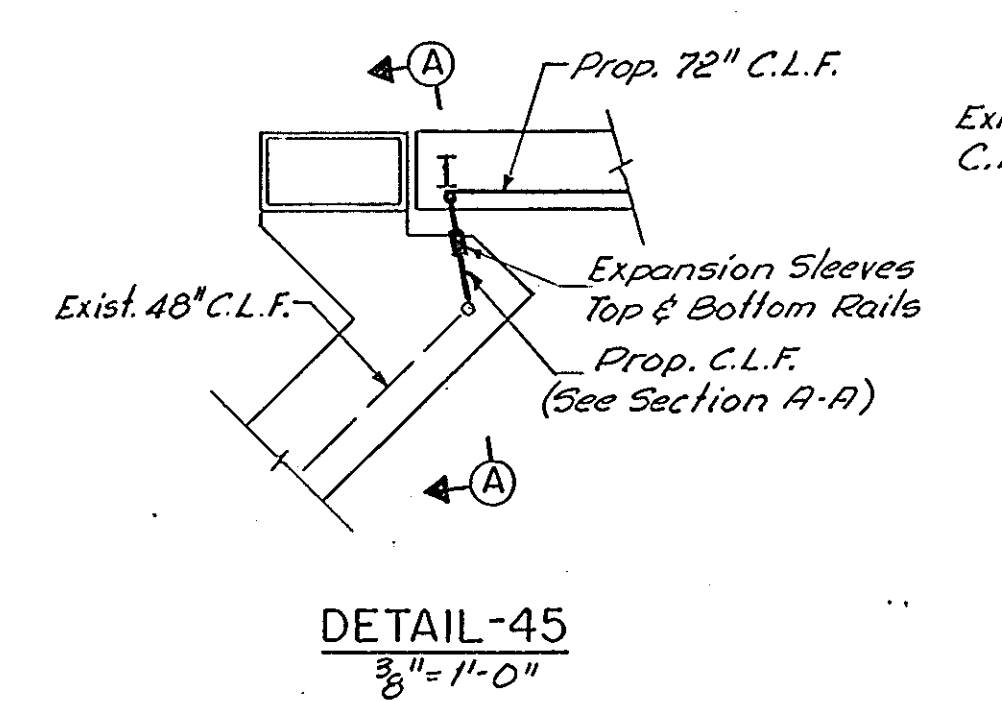
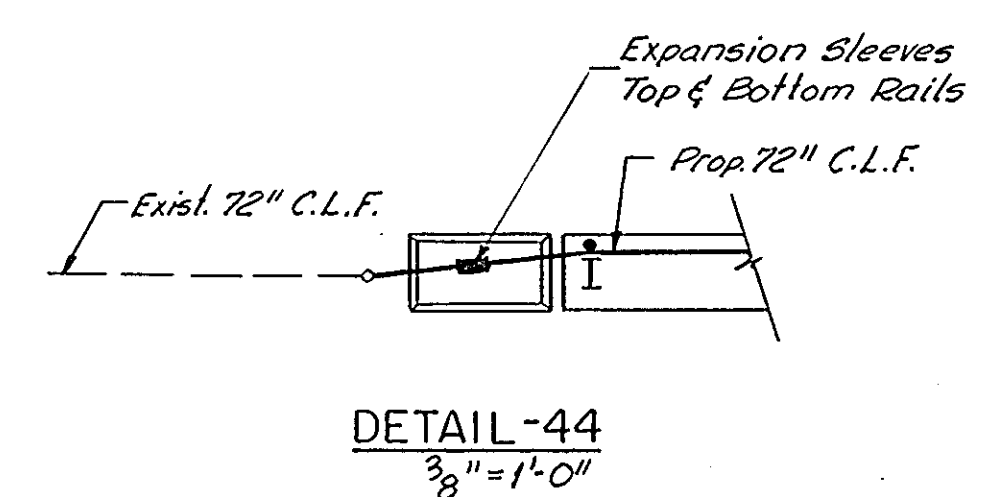
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES ARLINGTON ST.-BOSTON TREMONT ST.-BOSTON	
HOWARD, NEELES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 10 of 13 KANSAS CITY



SHAWMUT AVE. - BOSTON
1" = 20'



CARLTON ST. - BROOKLINE
1" = 20'



NOTE:
For General Notes, Typical Sections
and Details see Sheet No. 1.

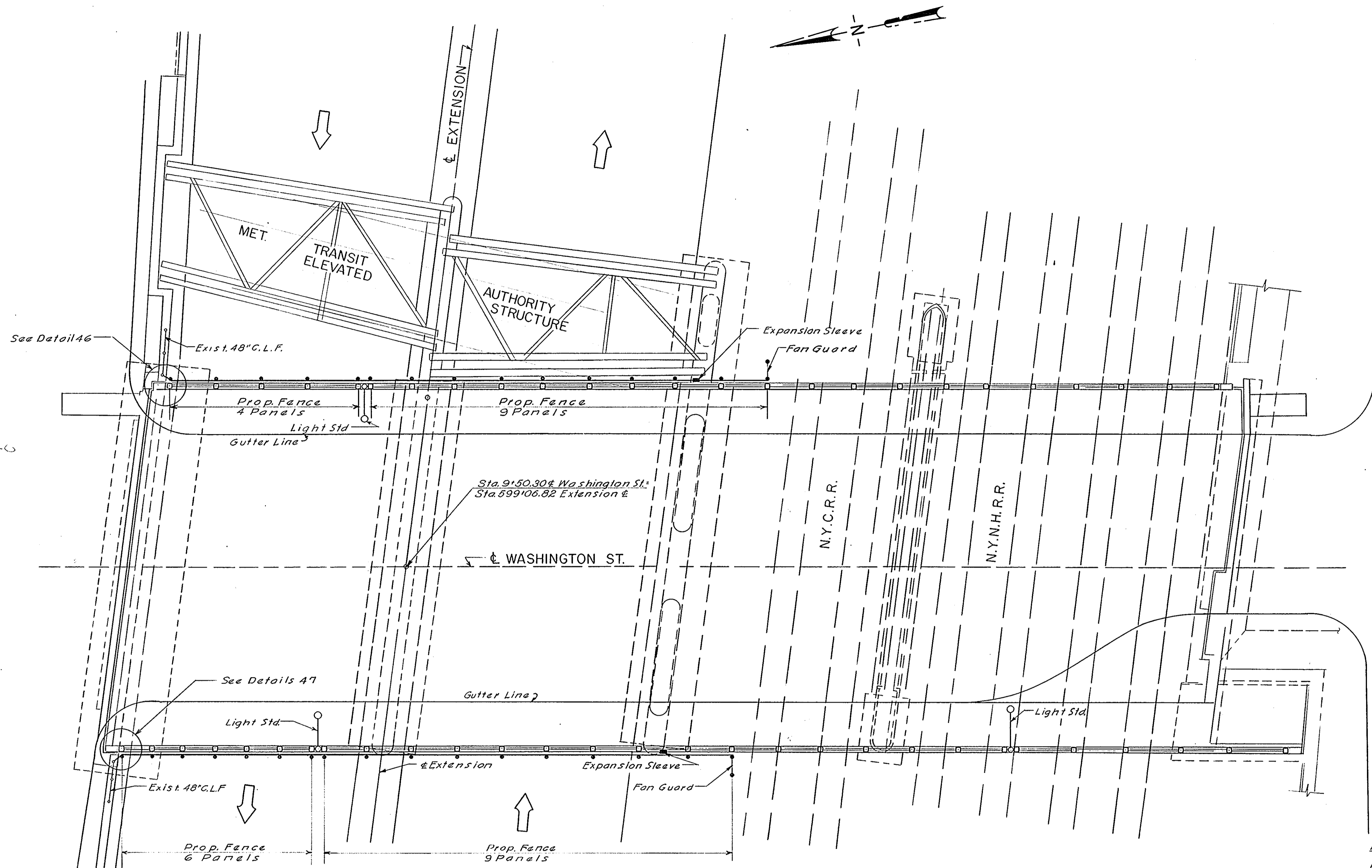
NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	R.C.M.	2-5-69
		TRACED		
		CHECKED		
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
SHAWMUT AVE. - BOSTON
CARLTON ST. - BROOKLINE

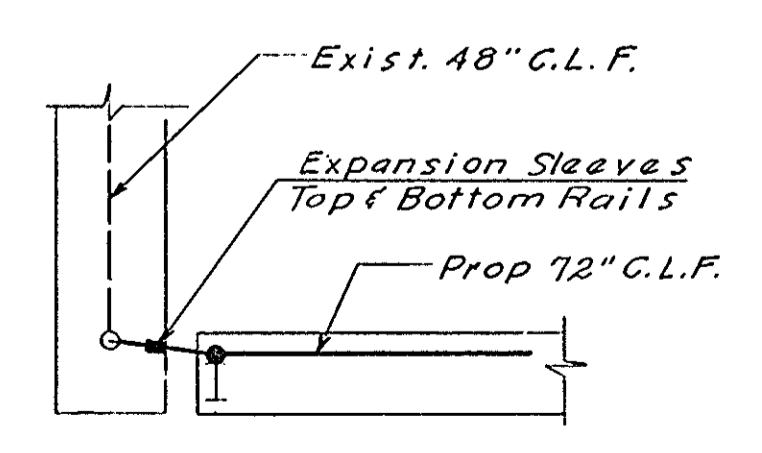
HOWARD, NEELES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 11 OF 13

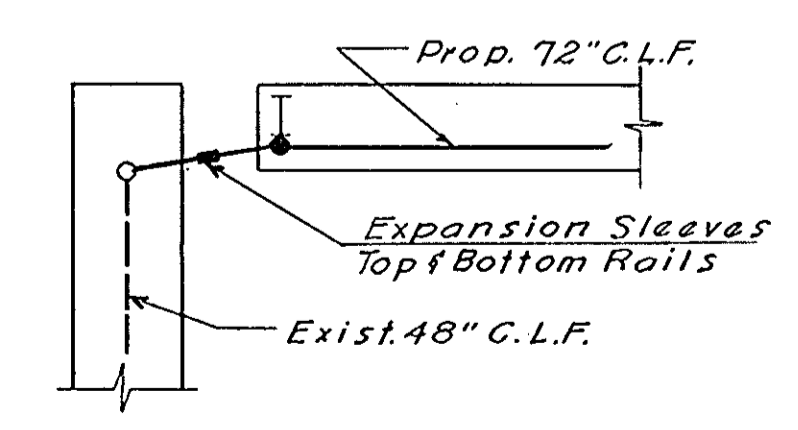


NOTE: For General Notes, Typical Sections and Details, see Sheet No. 1.

WASHINGTON ST. - BOSTON



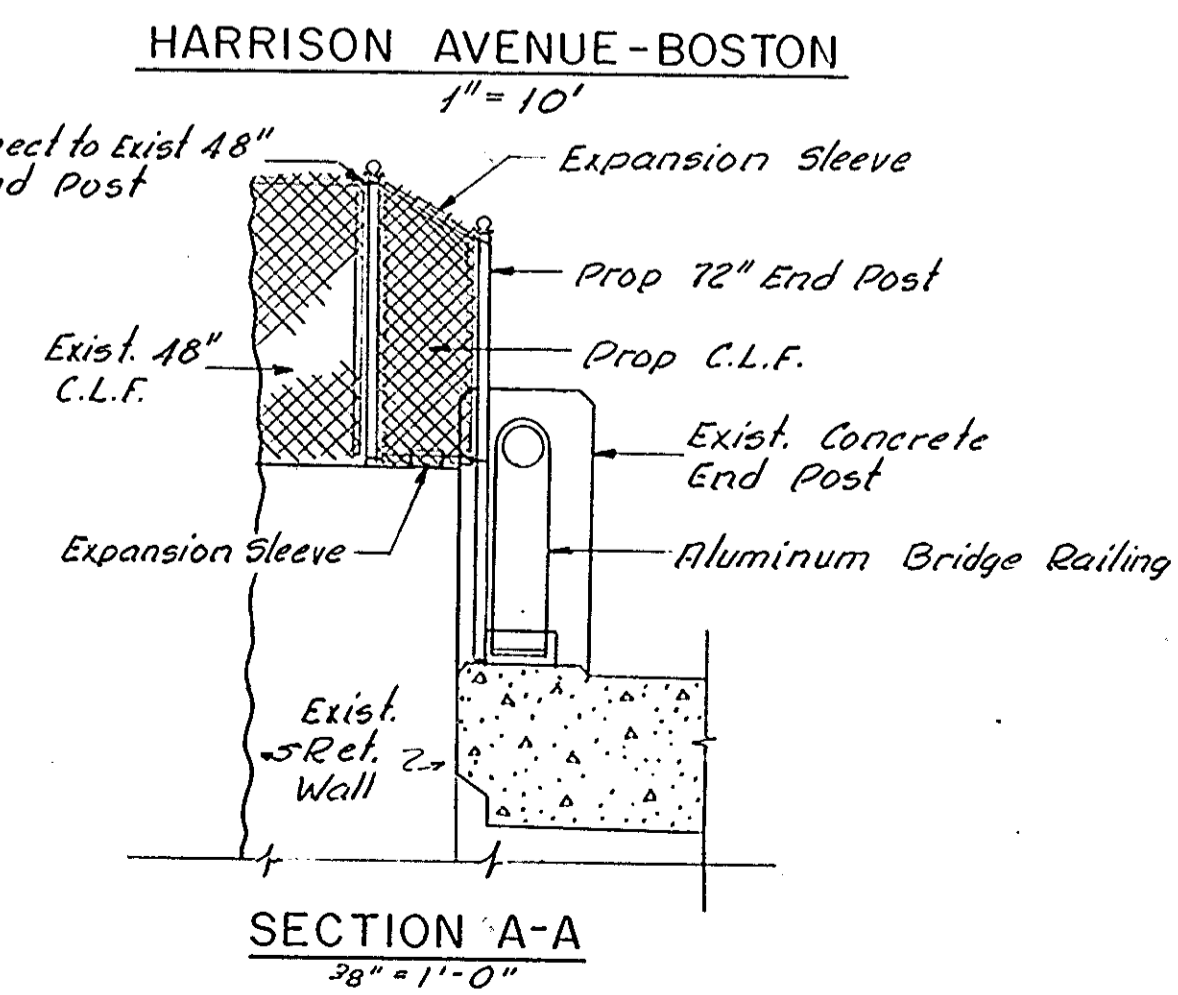
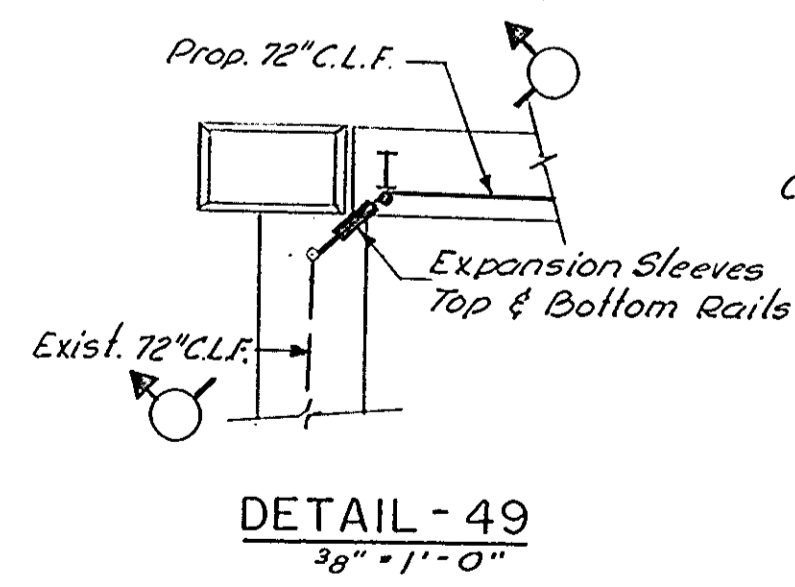
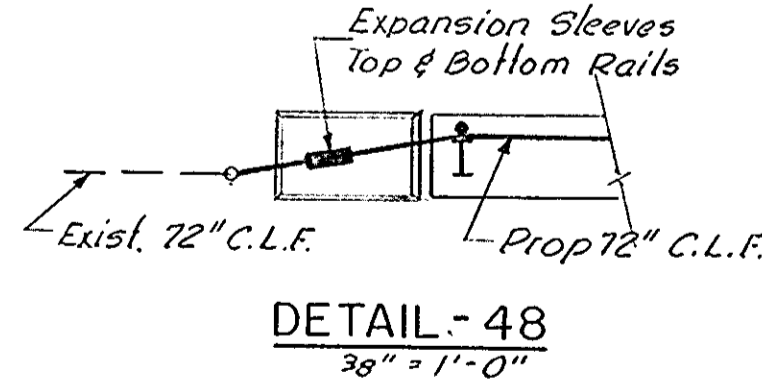
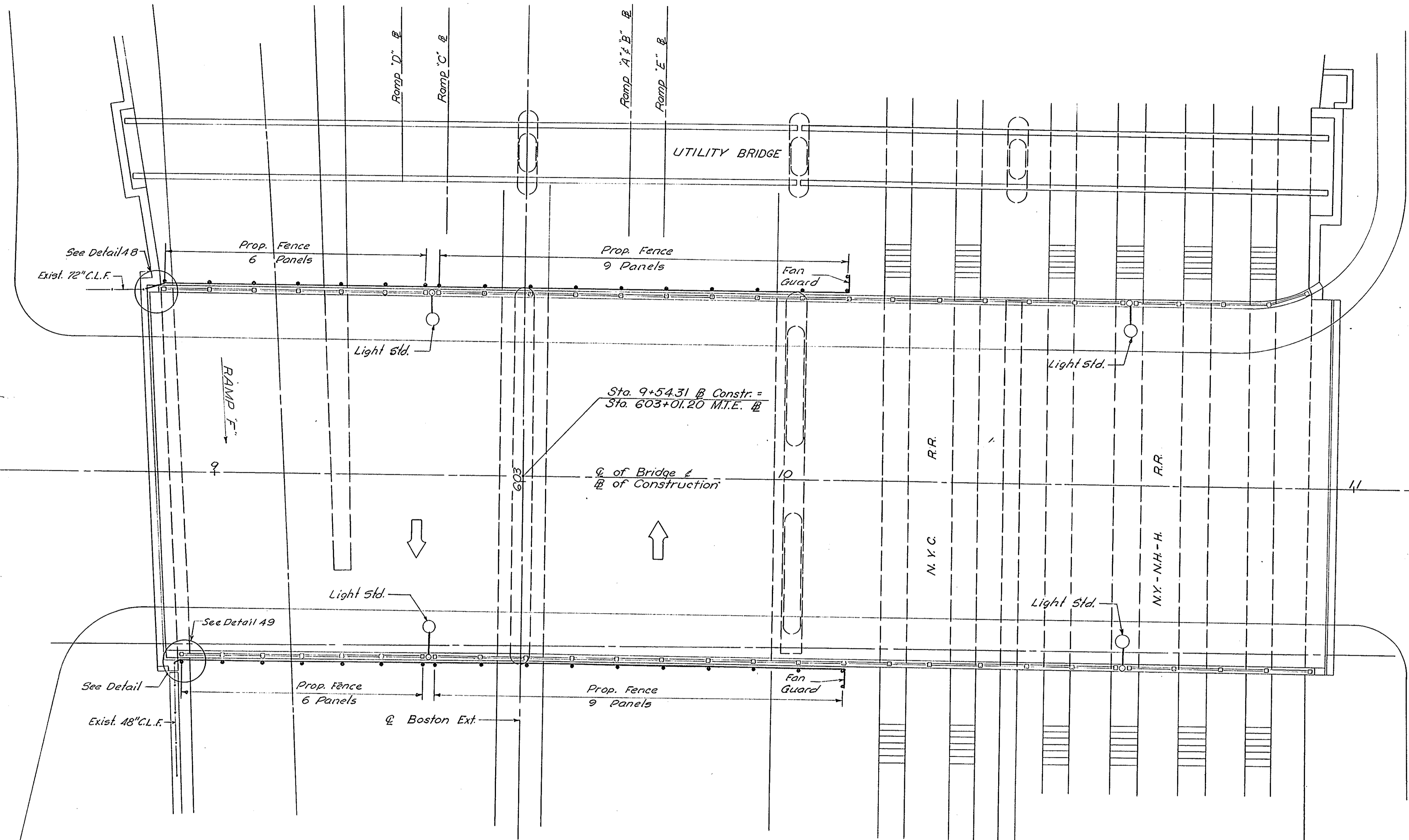
DETAIL - 46
3/8" = 1'-0"



DETAIL - 47
3/8" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	G.F.K. 2-6-60	
		TRACED		
		CHECKED		
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION	
CHAIN LINK FENCE ON BRIDGES WASHINGTON ST. - BOSTON	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK KANSAS CITY	SCALE: AS NOTED CONT. NO. 551-0031 SHEET NO. 12 of 13



NOTE
For General Notes, Typical Sections
and Details see Sheet No. 1.

NO.	REVISION	BY	DATE	IN CHARGE OF
		MADE	G.F.K. 7-8-68	
		TRACED		
		CHECKED		
				J.N.G.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION

CHAIN LINK FENCE ON BRIDGES
HARRISON AVE. - BOSTON

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: AS NOTED
CONT. NO. 551-0031
SHEET NO. 13 of 13

MASSACHUSETTS TURNPIKE AUTHORITY

MASSACHUSETTS TURNPIKE

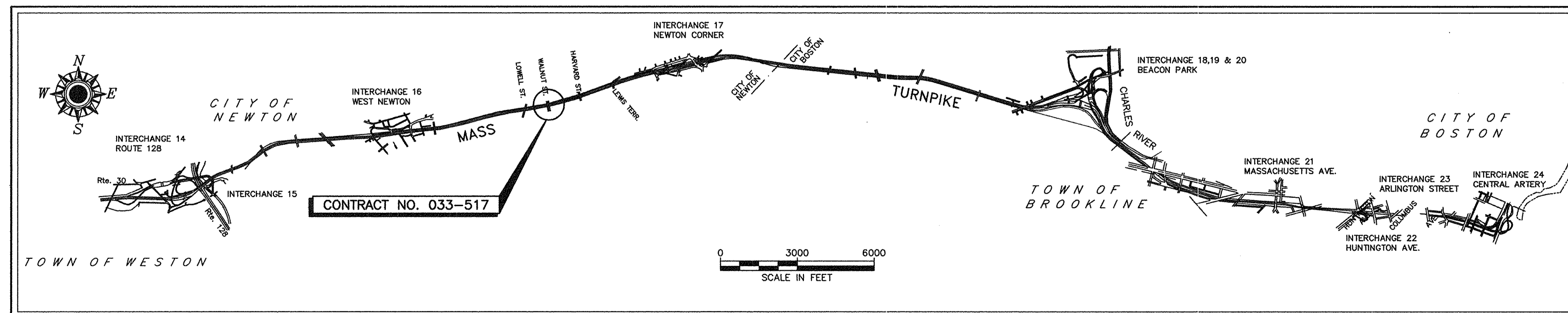
MATTHEW J. AMORELLO	CHAIRMAN
JORDAN LEVY	VICE-CHAIRMAN
RICHARD K. ANDERSON	DIRECTOR
CHRISTY P. MIHOS	DIRECTOR
JOHN M. MOSCARDELLI	DIRECTOR

INDEX	
SHEET	TITLE
1	TITLE SHEET
2	EXISTING PLAN AND PROFILE
3	PROPOSED DECK RESURFACING PLAN
4	JOINT DETAILS AT PIER AND ABUTMENT
5.01	TRAFFIC PHASING AND PAVEMENT STRIPING DETAILS
6	TRAFFIC DETOUR PLAN AND SIGNING

BRIDGE DECK RESURFACING WALNUT STREET, STR. NO. S-23 MILE 126.4

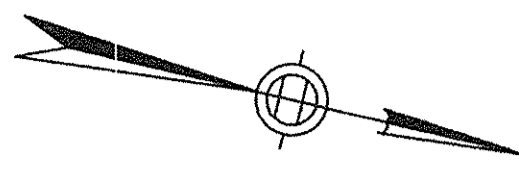
IN THE CITY OF NEWTON

CONTRACT NO. 033-517



LOCATION PLAN

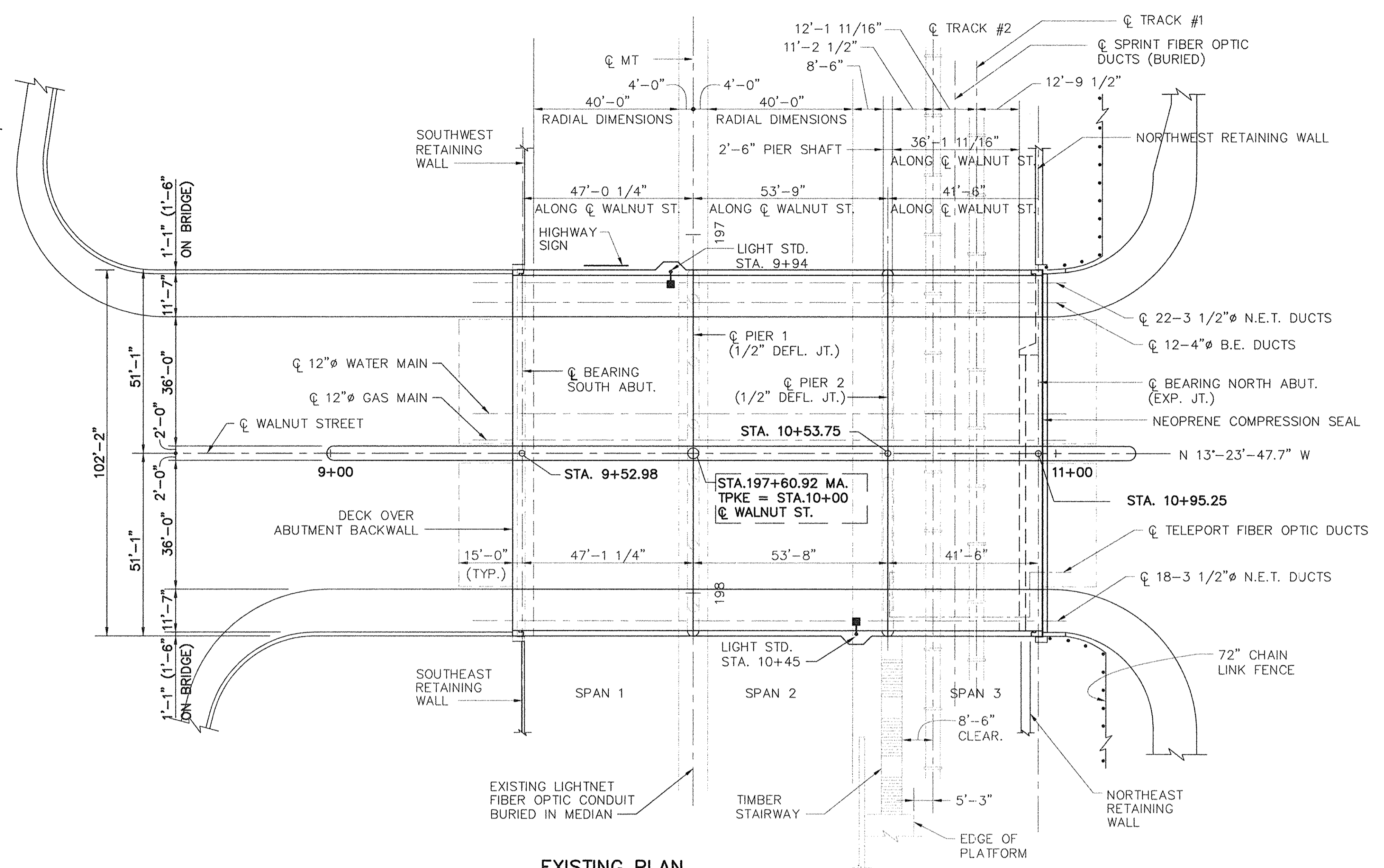
MASSACHUSETTS TURNPIKE AUTHORITY
APPROVED: *Neil Johnson, PE* DATE 4/25/03
CHIEF ENGINEER



MASSACHUSETTS TURNPIKE

CURVE DATA

$\Delta = 11^{\circ}-16'-54.6''$
 $R = 10,800'$
 $T = 1066.737'$
 $L = 2126.575'$
 $P.C. STA. 191+09.451$

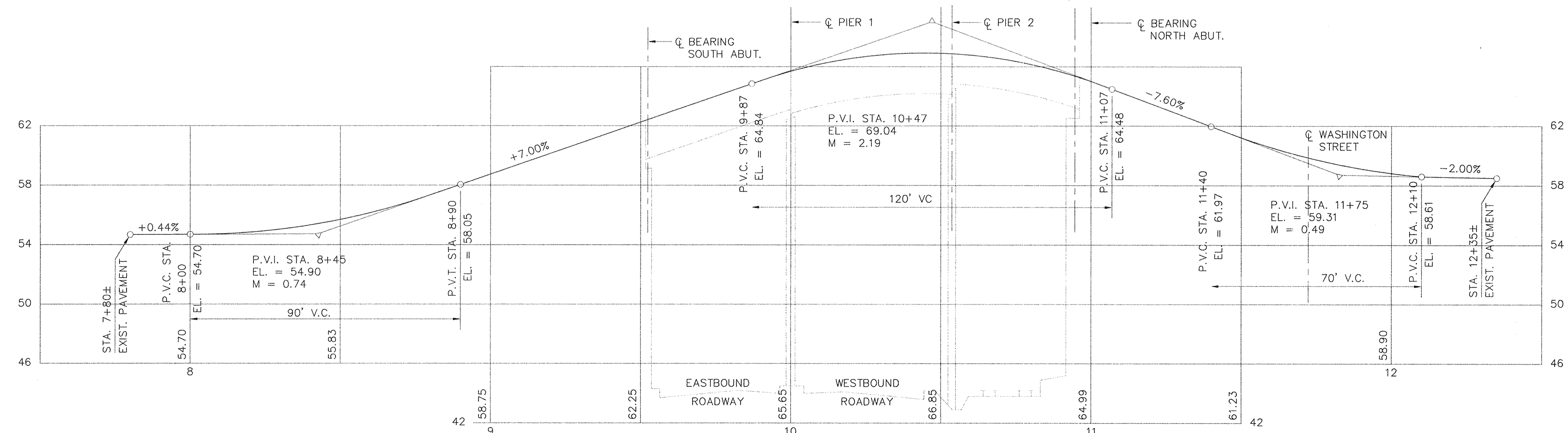


EXISTING PLAN

1" = 20'

NOTES

1. DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILT PLANS AND ARE NOT GUARANTEED TO BE CORRECT.
2. ELEVATIONS ARE BASED ON U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929.
3. PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
4. IN 1996, WALNUT ST. BRIDGE WAS RECONSTRUCTED WITH REINFORCED CLASS D CEMENT CONCRETE AND OVERLAY WITH POLYMER MODIFIED CONCRETE.

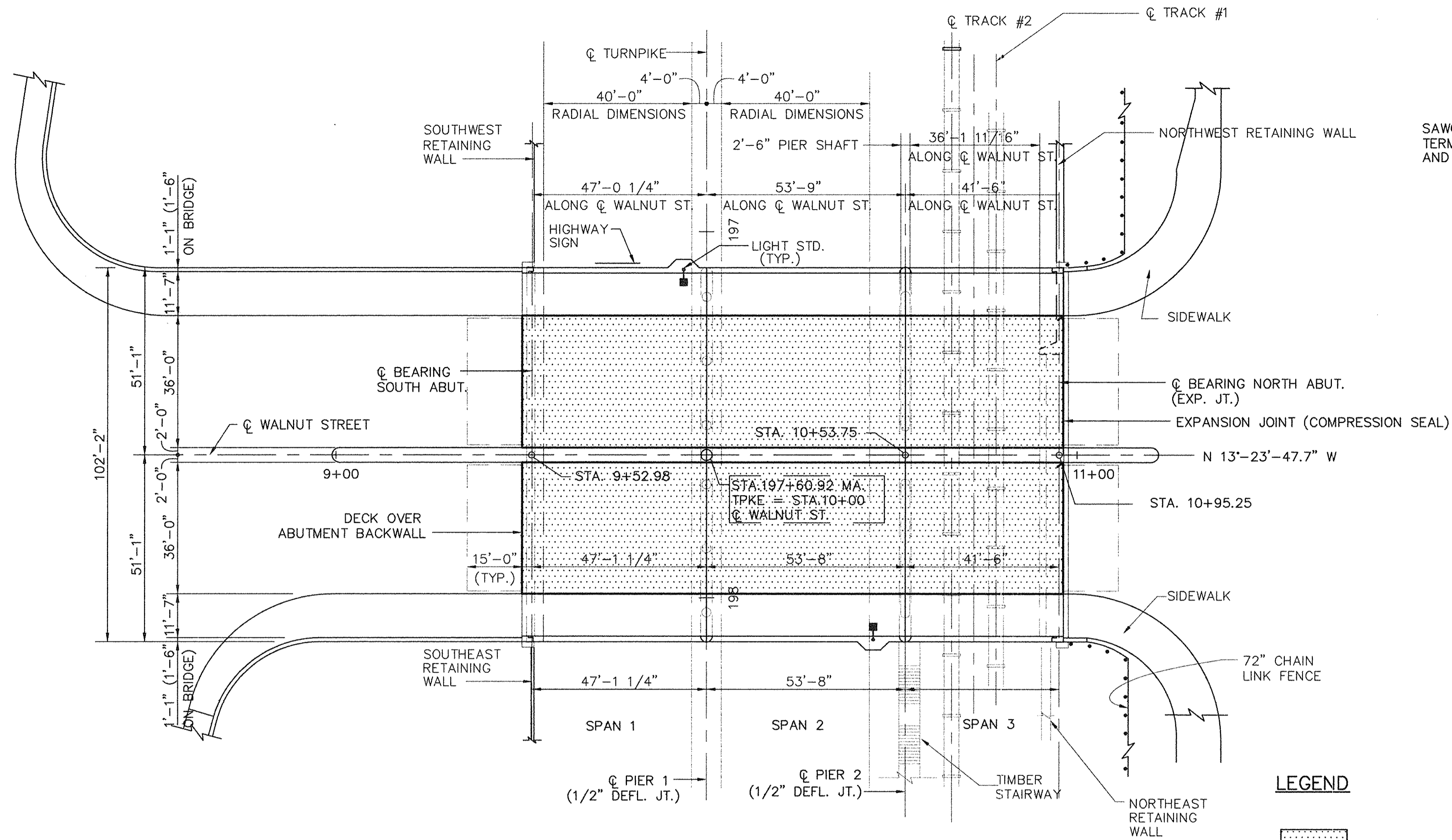
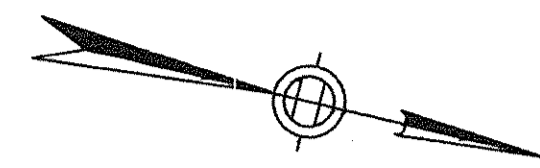


PROFILE-WALNUT STREET

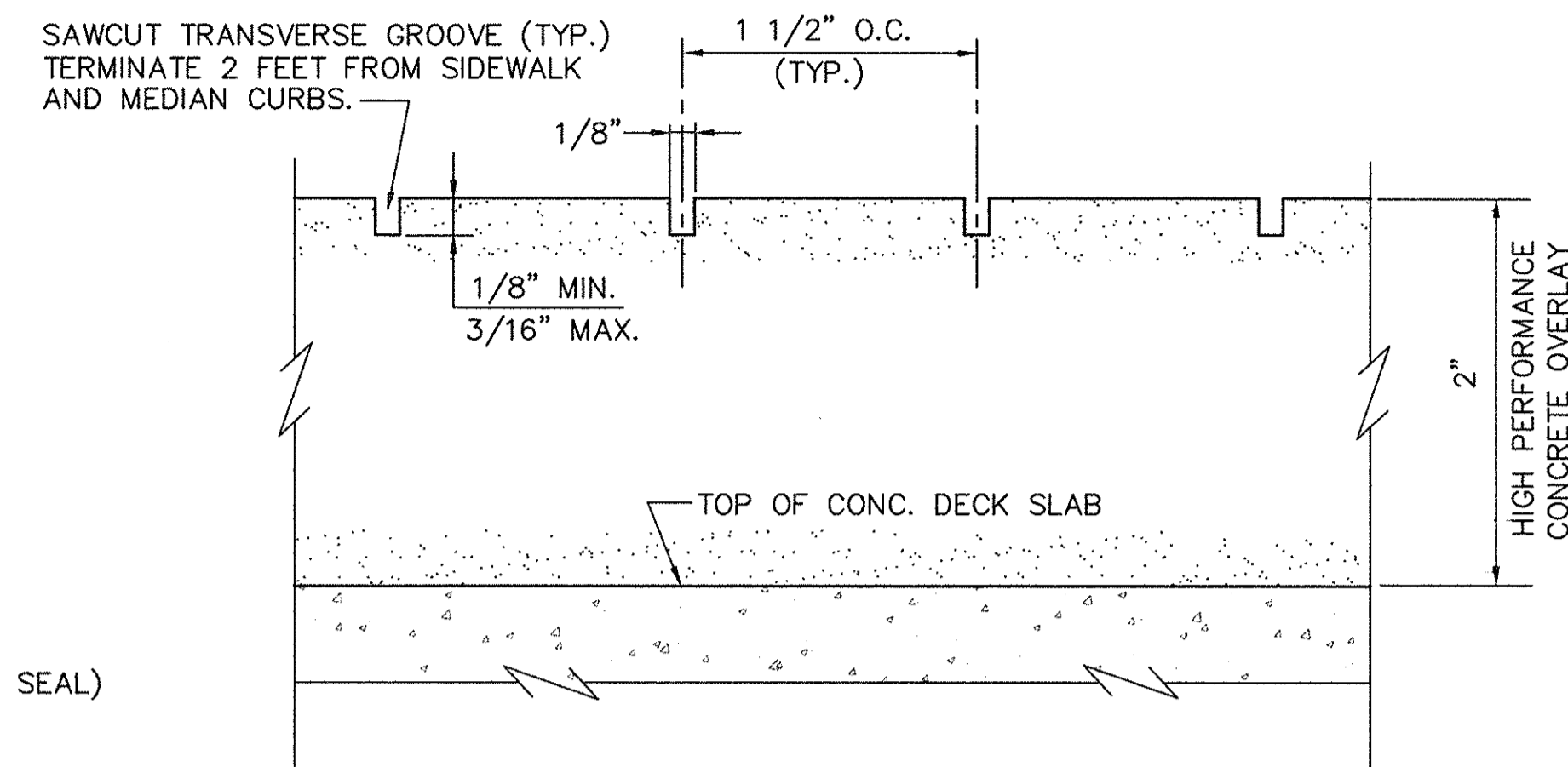
1" = 20' H
 1" = 4' V

NO.	REVISION	BY	DATE	IN CHARGE	PC
		DESIGN:	VT	03/03	
		DRAWN:	VT	03/03	
		CHECKED:			

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RESURFACING	
WALNUT STREET (STR. NO. S-23)	
EXISTING PLAN & PROFILE	
Scale: AS NOTED	Contract No. 033-517
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 2

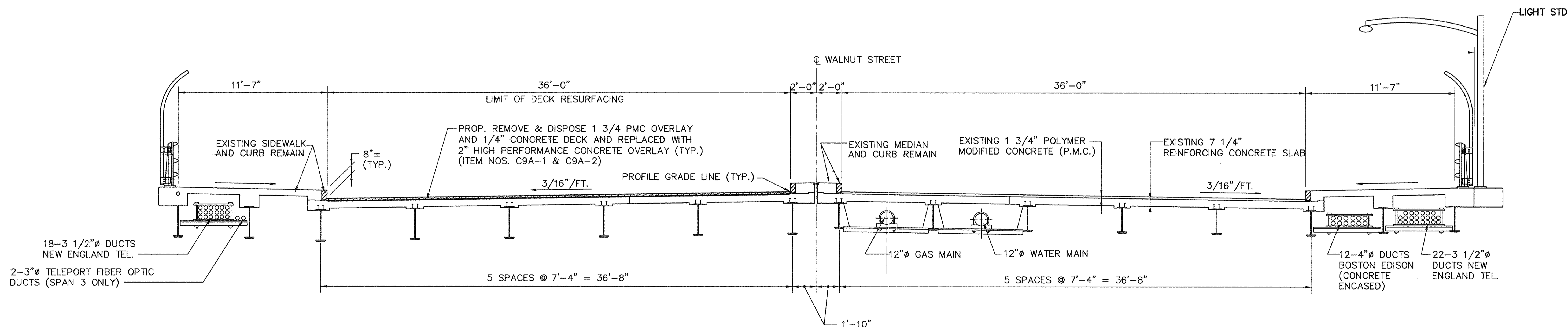


PROPOSED DECK PLAN
1" = 20'



OVERLAY SAWCUT TRANSVERSE GROOVES DETAIL
NO SCALE

LEGEND
 PROP. DECK RESURFACING



PROPOSED- HALF CROSS SECTION

EXISTING- HALF CROSS SECTION

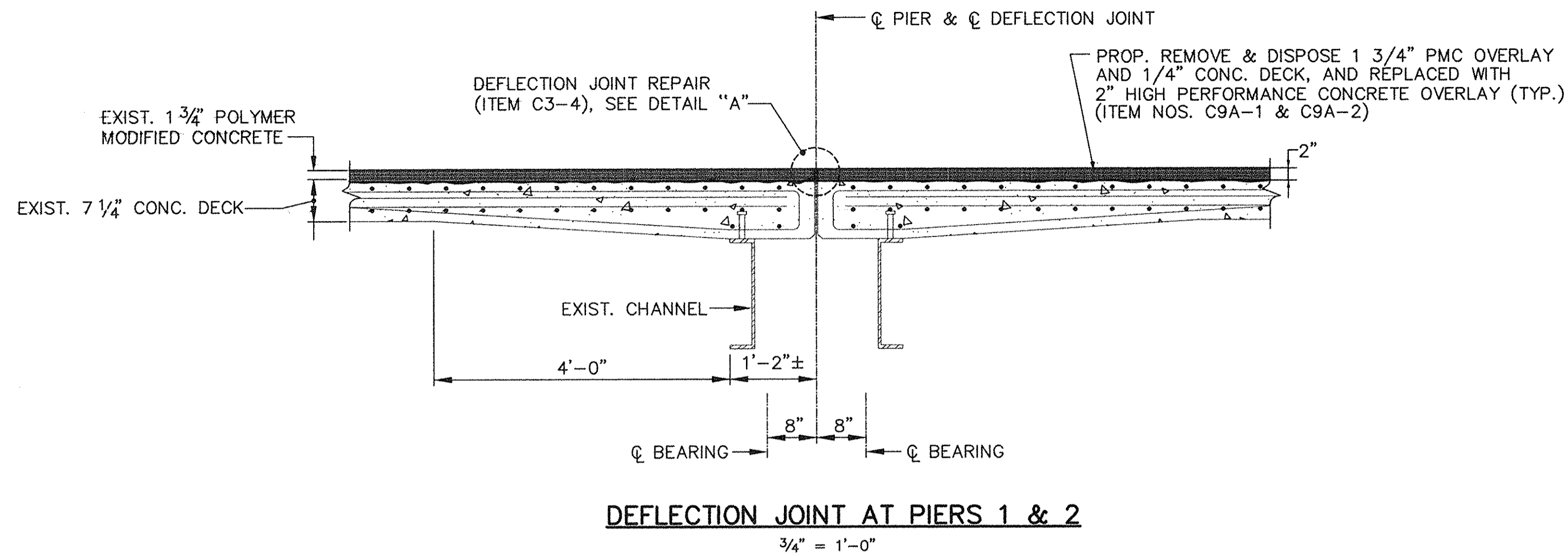
TYPICAL CROSS SECTION (LOOKING SOUTH)
(EASTSIDE SHOWN WESTSIDE SIMILAR)
1/4" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE	PC
		DESIGN:	VT	03/03	
		DRAWN:	VT	03/03	
		CHECKED:			

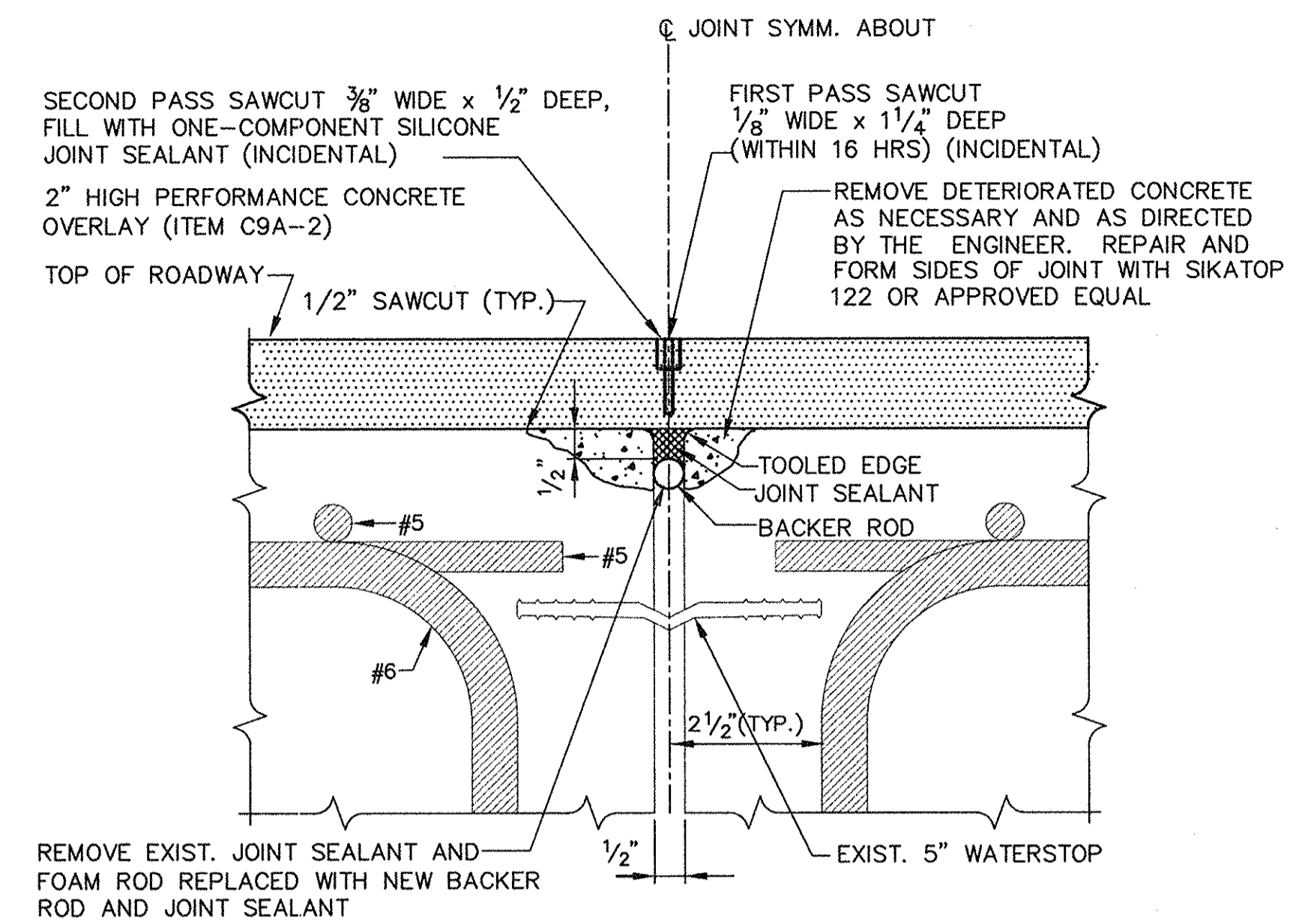
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RESURFACING
 WALNUT STREET (STR. NO. S-23)
PROPOSED DECK RESURFACING PLAN

Scale: AS NOTED Contract No. 033-517

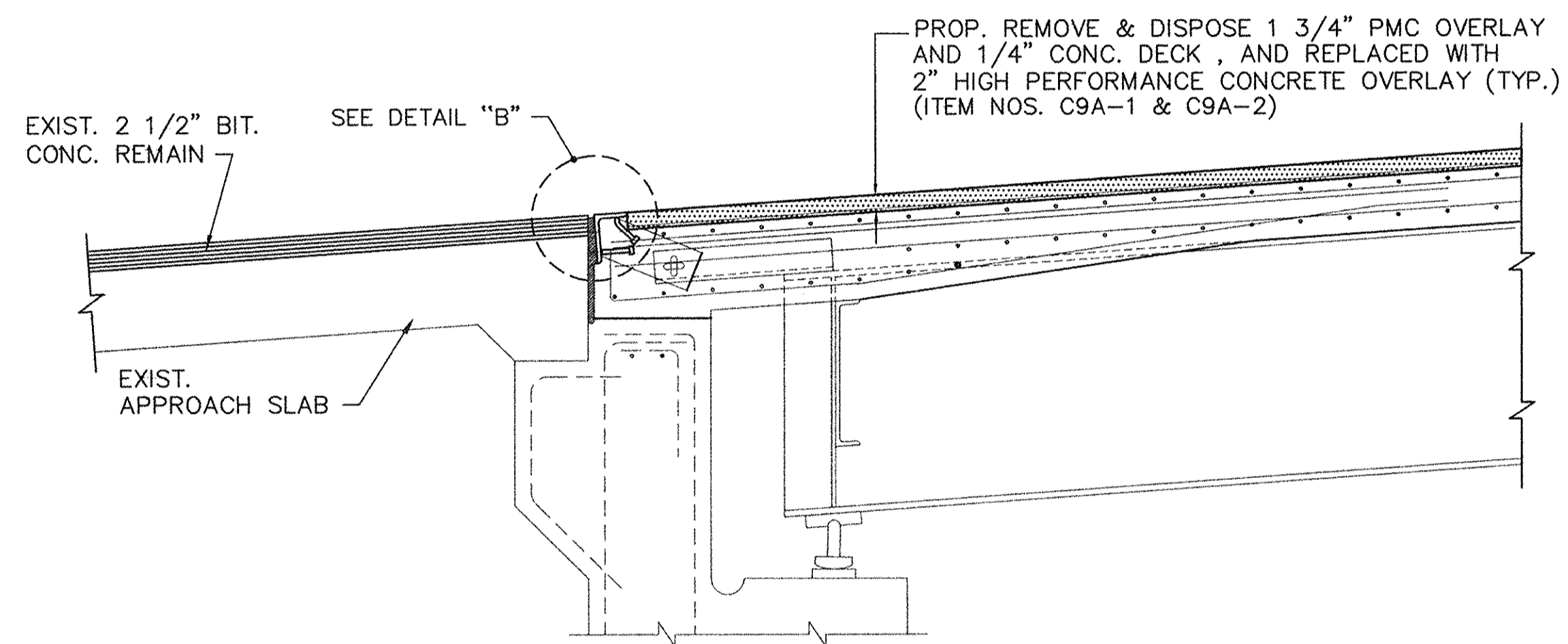
MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. **3**



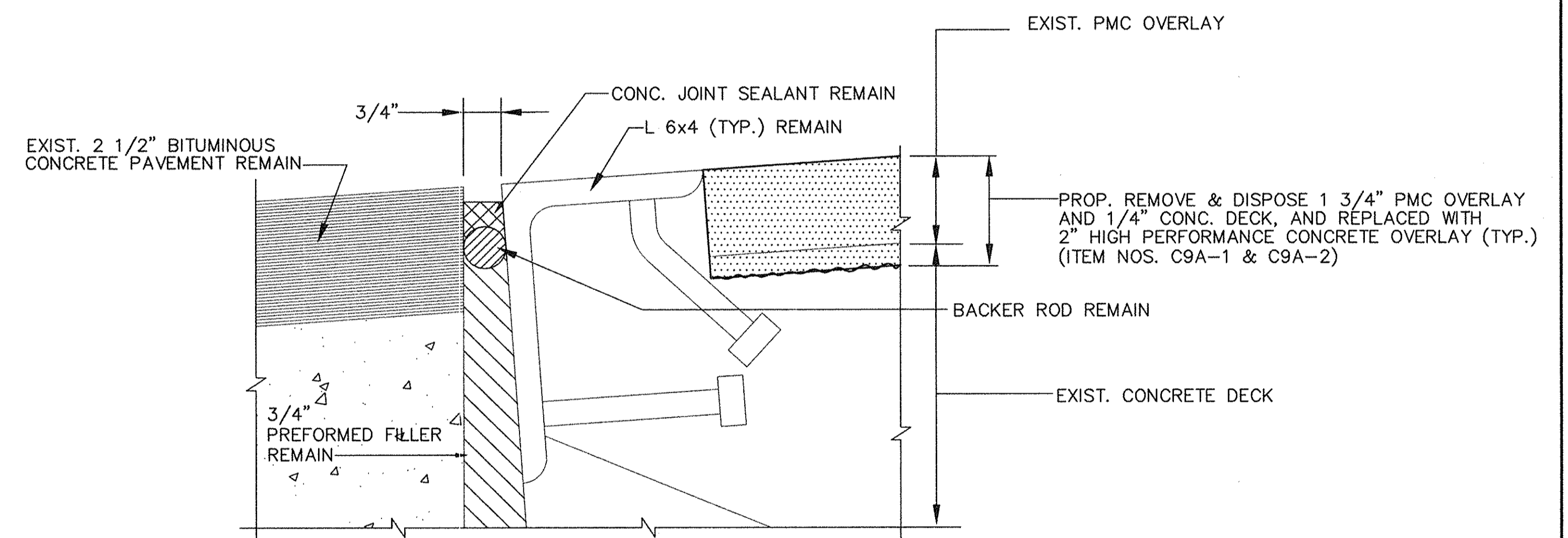
DEFLECTION JOINT AT PIERS 1 & 2
3/4" = 1'-0"



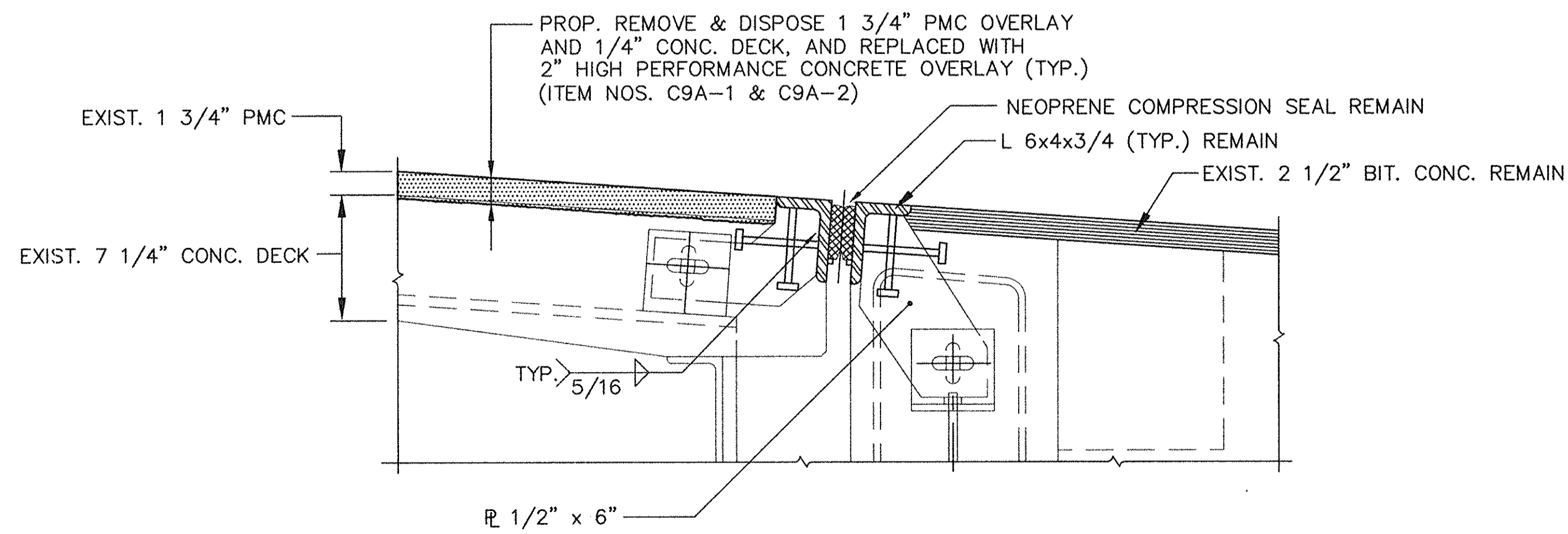
DETAIL "A"
NOT TO SCALE



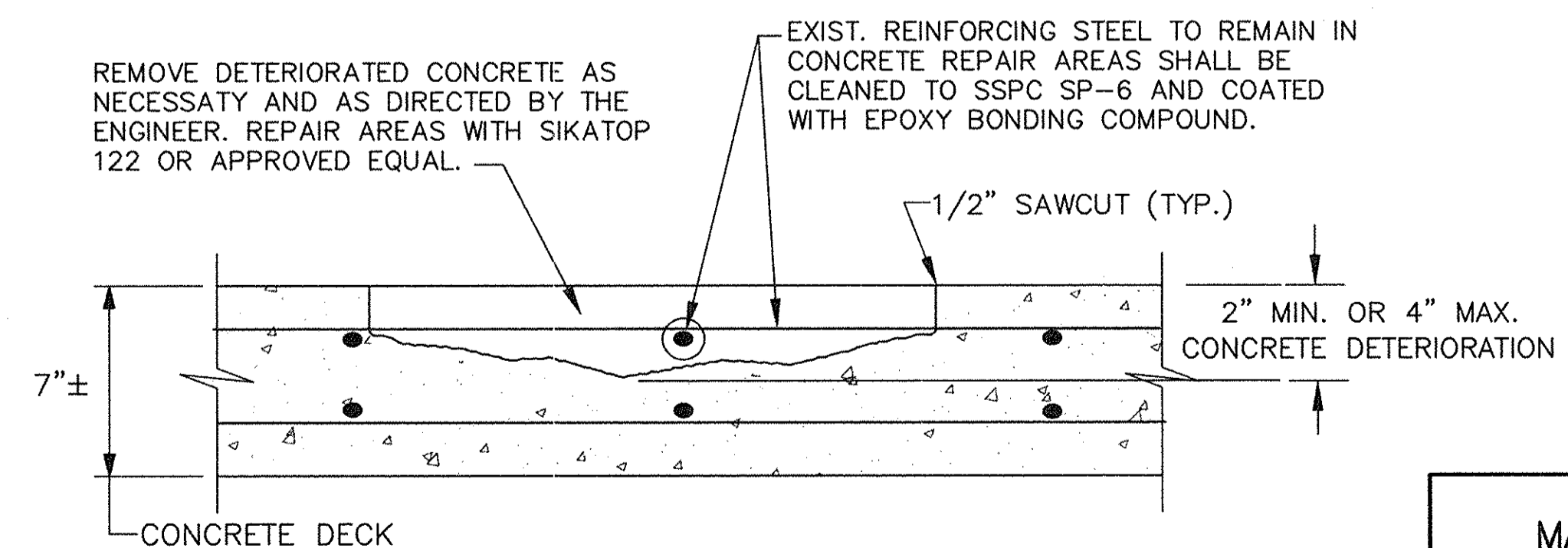
JOINT AT SOUTH ABUTMENT
3/4" = 1'-0"



DETAIL "B"
3" = 1'-0"



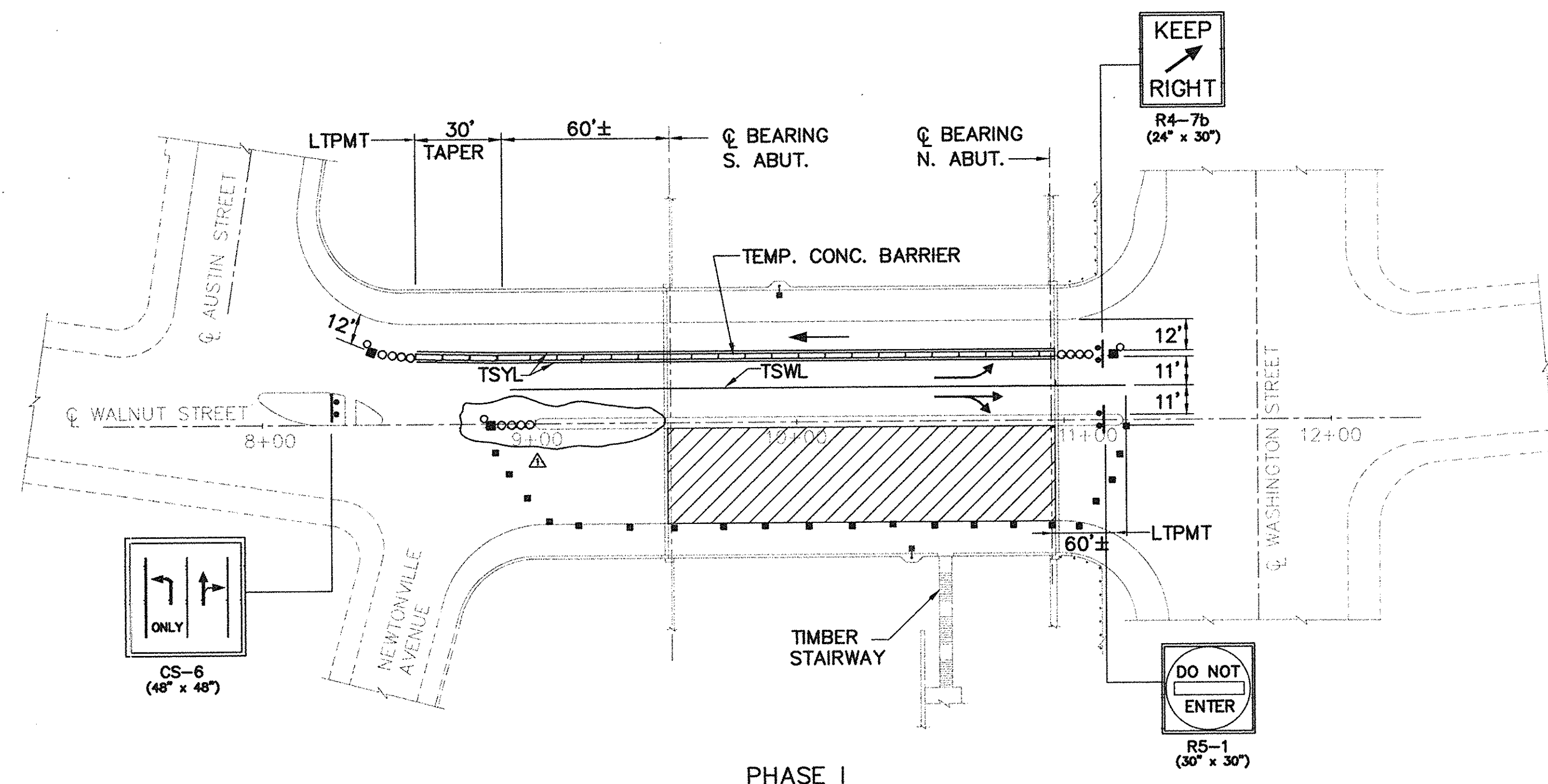
JOINT AT NORTH ABUTMENT
1 1/2" = 1'-0"



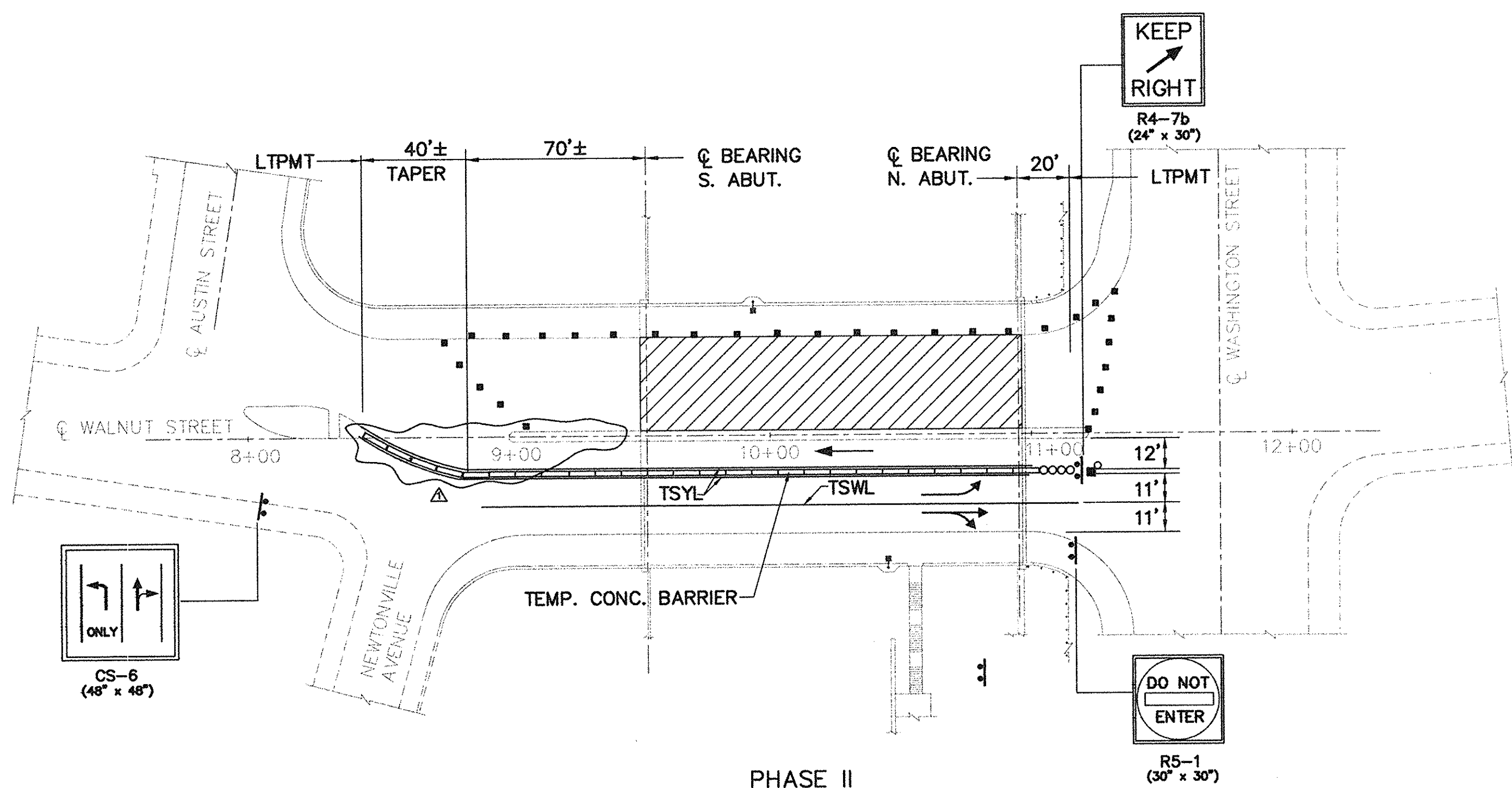
CONCRETE DECK SURFACE REPAIR (ITEM C5-1)
NO SCALE

DESIGN:	VT	BY	VT	DATE	03/03
DRAWN:	VT	BY	VT	DATE	03/03
CHECKED:		BY		DATE	
NO.	REVISION	BY	DATE	IN CHARGE	PC

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RESURFACING	
WALNUT STREET (STR. NO. S-23)	
JOINT DETAILS AT	
PIER AND ABUTMENT	
Scale: AS NOTED	Contract No. 033-517
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 4



PHASE I



PHASE II

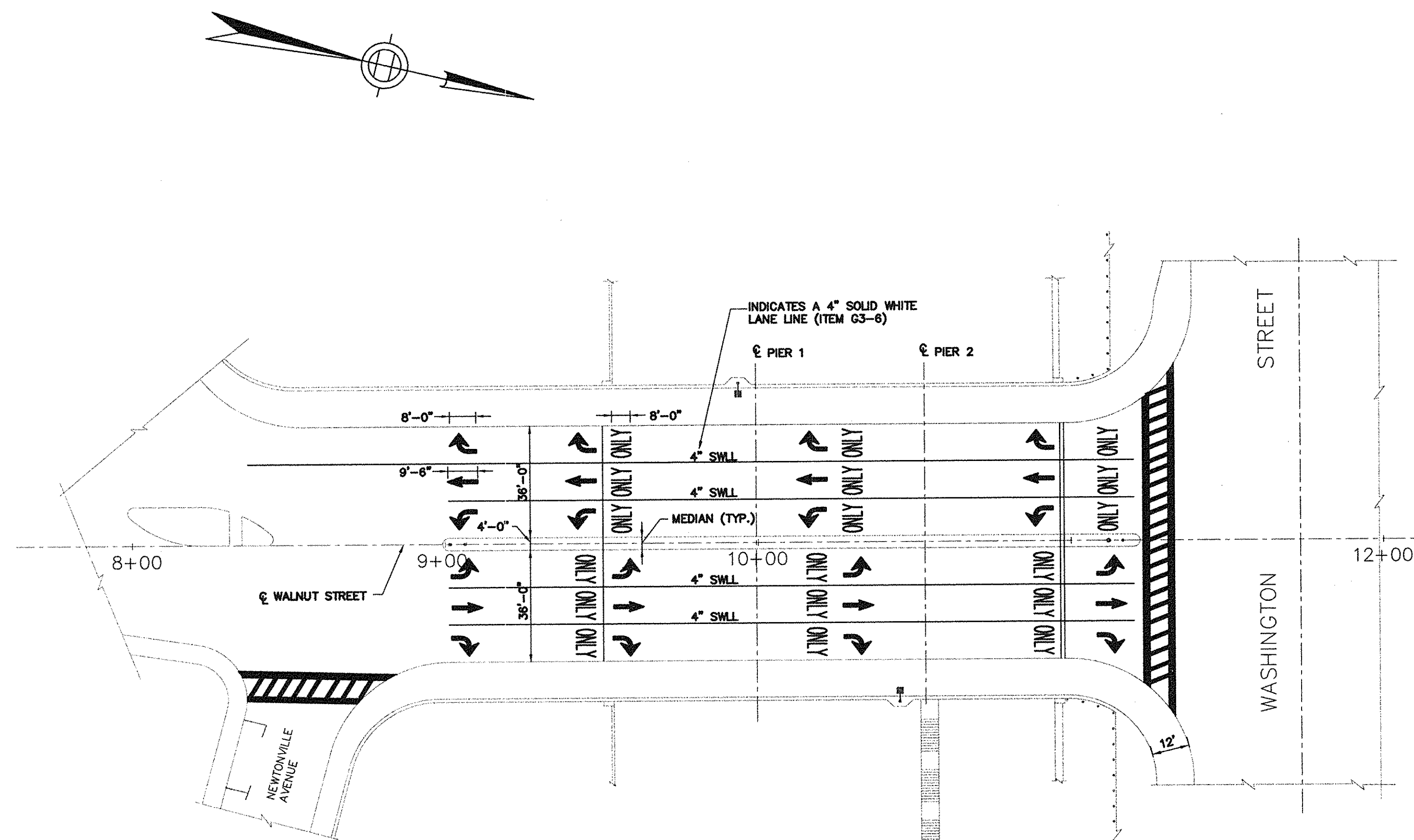
TRAFFIC PHASING PLAN
1" = 40'

LEGEND

- AREA OF BRIDGE UNDER CONSTRUCTION
- DIRECTION OF TRAFFIC FLOW
- 4" TEMPORARY PAVEMENT MARKING TAPE
- TEMPORARY CONCRETE BRIDGE OR ROADWAY BARRIERS WITH REFLECTORIZED MARKERS
- TSYL TEMPORARY SOLID YELLOW LINE
- TSWL TEMPORARY SOLID WHITE LINE
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM WITH STEADY BURN LIGHT
- LTPMT LIMIT OF TEMPORARY PAVEMENT MARKING TAPE
- INERTIAL BARRIER SYSTEM - TEMPORARY

NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING UNAUTHORIZED ACCESS TO THE WORK AREA.
2. DRUMS SPACING AT 10 FEET MAXIMUM.
3. ARROWS INDICATE DIRECTION OF TRAFFIC FLOW AND NOT ACTUAL SIGNING.



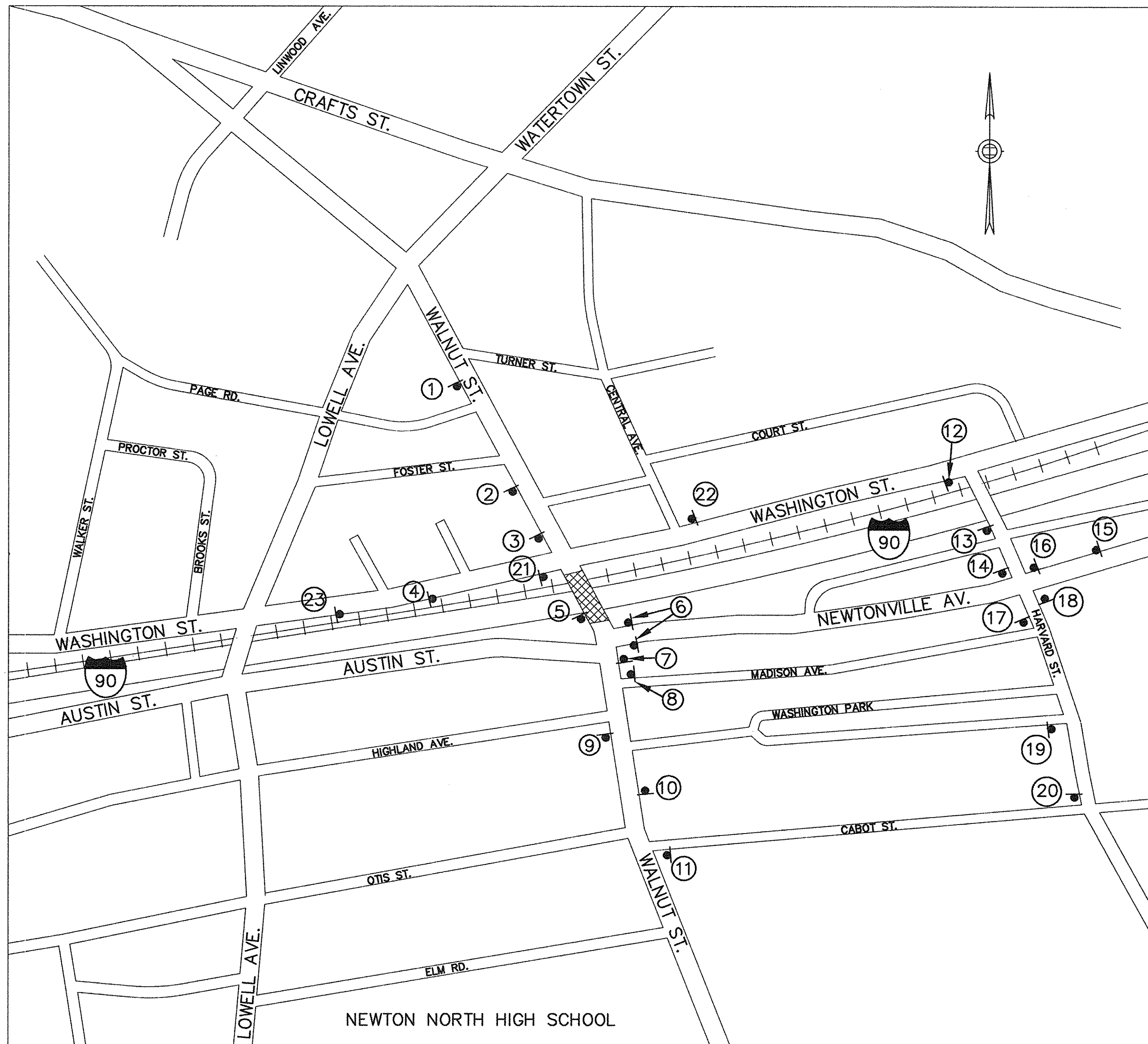
PAVEMENT STRIPING DETAILS
1" = 30'

NOTES:

1. SIZES FOR ARROWS, CROSSWALKS AND LEGENDS SHALL BE IN ACCORDANCE WITH "MASSACHUSETTS MANUAL ON TRAFFIC CONTROL DEVICES" AND "STANDARD ALPHABETS ON HIGHWAY SIGNS AND OTHER PAVEMENT MARKINGS" FROM THE FHWA.
2. ARROWS, CROSSWALKS, AND LEGENDS SHALL BE PAID FOR AS ITEM G3-8, REFLECTORIZED THERMOPLASTIC PATTERNS.
3. LOCATION OF ARROWS, CROSSWALKS, AND LEGENDS SHALL BE COORDINATED AND APPROVED BY THE CITY OF NEWTON.

ADDENDUM NO. 1	VT	04/03	DESIGN:	VT	03/03
			DRAWN:	VT	03/03
			CHECKED:		
NO.	REVISION	BY	DATE	IN CHARGE	PC

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RESURFACING
 WALNUT STREET (STR. NO. S-23)
TRAFFIC PHASING & PAVEMENT STRIPING DETAILS
 Scale: AS NOTED Contract No. 033-517
 MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. 5.01



ADVANCE WARNING & DETOUR SIGN PLAN
NOT TO SCALE

CONSTRUCTION SIGN LOCATION SCHEDULE

LOCATION NO.	SIGNS REQUIRED	LOCATION NO.	SIGNS REQUIRED
①	W20-1 (AHEAD)	⑪	M4-8a
②	CS-2	⑫	CS-1a, M4-10R
③	W1-3L	⑬	CS-3
④	CS-1	⑭	CS-3a
⑤	R3-2, CS-2a	⑮	CS-3
⑥	R3-2	⑯	CS-3b, M4-10L
⑦	W1-3L (PHASE 1 ONLY)	⑰	CS-3b, M4-10R
⑧	CS-3c, M4-10R	⑱	M4-8a
⑨	CS-2b, M4-10L	⑲	CS-2b, M4-10L
⑩	W20-1 (AHEAD)	⑳	CS-1a, M4-10R
		㉑	CS-4
		㉒ ㉓	CS-5

DESIGN:	VT	BY	DATE	03/03
DRAWN:	VT	BY	DATE	03/03
CHECKED:		BY	DATE	
NO.	REVISION	BY	DATE	IN CHARGE

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
R3-2	24"	24"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			2	SEE FHWA STANDARD HIGHWAY SIGNS 1979		
W1-3L	36"	36"					2			
W20-1 (AHEAD)	36"	36"					2			
M4-10R M4-10L (←)	48"	18"					7			
M4-8a	24"	18"					2			
CS-1	72"	30"		5" 5" 5"	3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-1a	48"	48"		6" 6" 6"	4" 4"		2	ORANGE	BLACK	BLACK
CS-2	72"	30"		5" 5" 5"	3" 3"		1	ORANGE	BLACK	BLACK
CS-2a	72"	24"		5" 5" 5"	3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-2b	72"	24"		5" 5" 5"	3"		2	ORANGE	BLACK	BLACK
CS-3	72"	36"		5" 5" 5" 5"	3" 3" 3"		2	ORANGE	BLACK	BLACK
CS-3a	72"	30"		5" 5" 5" 5"	3" 3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-3b	72"	24"		5" 5" 5"	3"		2	ORANGE	BLACK	BLACK
CS-3c	48"	48"		6" 6" 6"	4"		1	ORANGE	BLACK	BLACK
CS-4	48"	48"		6" 6" 6"	4" 4"		1	ORANGE	BLACK	BLACK
CS-5	72"	30"		5" 5" 5"	3" 3"		2	ORANGE	BLACK	BLACK

GENERAL NOTE:

ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PART VI AND "STANDARD HIGHWAY SIGNS", CURRENT EDITION.

NOTES:

- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
- ALL DETOUR SIGNING TO BE PLACED PRIOR TO PHASE I AND MAINTAINED BY THE CONTRACTOR UNTIL THE PROJECT IS COMPLETED.
- MISSING OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT NO COST TO THE AUTHORITY.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RESURFACING
 WALNUT STREET (STR. NO. S-23)
TRAFFIC DETOUR PLAN & SIGNING

Scale: AS NOTED Contract No. 033-517
 MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. 6

MASSACHUSETTS TURNPIKE AUTHORITY

MASSACHUSETTS TURNPIKE

ALLAN R. McKINNON CHAIRMAN
 ANN M. HERSHFANG VICE-CHAIRWOMAN
 THOMAS J. CURLEY, JR. MEMBER

JOHN J. JUDGE DIRECTOR OF OPERATIONS
 J. BRUCE GRIMALDI CHIEF ENGINEER

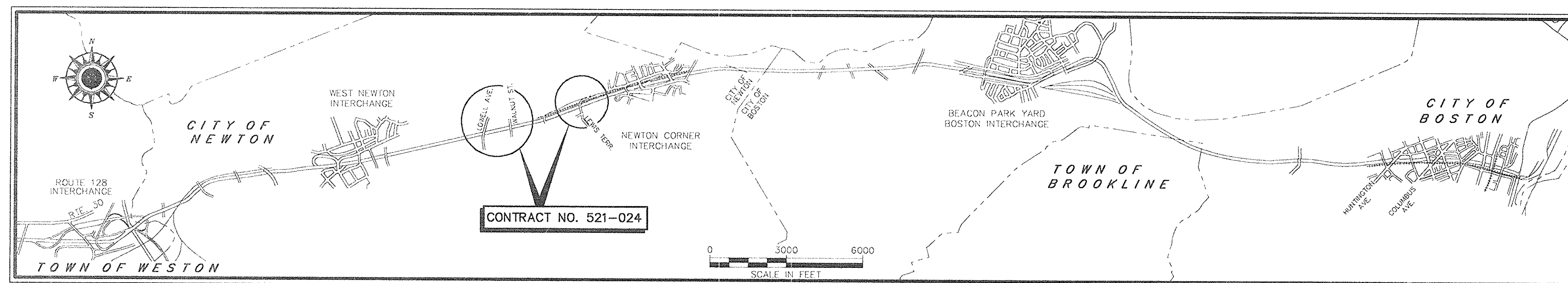
BRIDGE DECK RECONSTRUCTION

LEWIS TERRACE (STR. NO. S-25) MILE 127.0
 WALNUT STREET (STR. NO. S-23) MILE 126.4
 LOWELL AVENUE (STR. NO. S-22) MILE 126.2

IN THE CITY OF
 NEWTON

CONTRACT NO. 521-024

AS BUILT

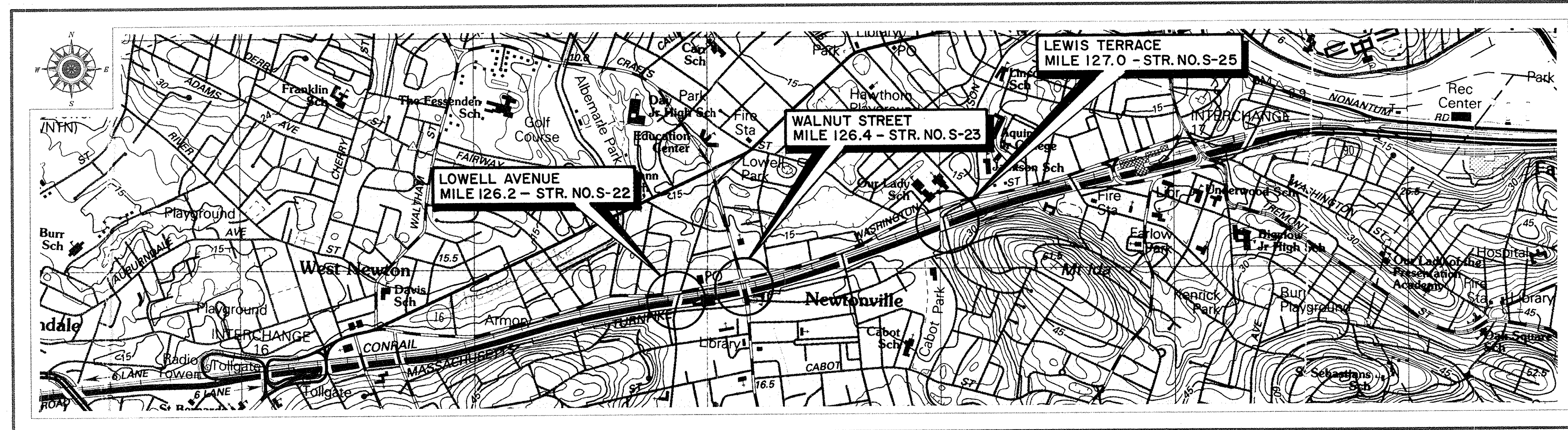


LOCATION PLAN

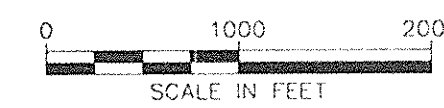
EDWARDS AND KELCEY, INC.
 DESIGNED:
Gregory T. Stefano DATE 12/29/93

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 RECOMMENDED:
Carl Miller DATE 12/23/93

MASSACHUSETTS TURNPIKE AUTHORITY
 APPROVED:
John J. Judge DATE 12/21/93
 CHIEF ENGINEER



LOCATION PLAN




INDEX	
SHEET	TITLE
1	COVER SHEET
2	LOCATION PLAN/INDEX
LEWIS TERRACE (STR. NO. S-25)	
3	EXISTING PLAN AND PROFILE
4	FRAMING PLAN
5	PROPOSED DECK PLAN
6	DECK PLAN AND DETAILS
7	CONCRETE PLACING SEQUENCE
8	DECK SECTIONS SPAN 1
9	DECK SECTIONS AND DETAILS SPANS 2 & 3
10	SIDEWALK AND LIGHT POLE SUPPORT DETAILS
11	JOINT DETAILS AT NORTH ABUTMENT
12	JOINT DETAILS AT PIER 1
13	JOINT DETAILS AT PIER 2
14	JOINT DETAILS AT SOUTH ABUTMENT
15	SUBSTRUCTURE CONCRETE REPAIRS - NORTH ABUTMENT
16	SUBSTRUCTURE CONCRETE REPAIRS - PIERS 1 & 2
17	SUBSTRUCTURE CONCRETE REPAIRS - SOUTH ABUTMENT
18	MISCELLANEOUS SUBSTRUCTURE AND END POST DETAILS
19	PAVEMENT PLAN

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SHEET	TITLE
20	PAVEMENT DETAILS
21	SEQUENCE OF CONSTRUCTION SPAN 1
22	SEQUENCE OF CONSTRUCTION SPANS 2 & 3
23	TRAFFIC PHASING PLAN
24	TRAFFIC AND SIGNING PLAN PART 1
25	TRAFFIC AND SIGNING PLAN PART 2
WALNUT STREET (STR. NO. S-23)	
26	EXISTING PLAN AND PROFILE
27	FRAMING PLAN
28	PROPOSED DECK PLAN
29	DECK PLAN AND DETAILS
30	CONCRETE PLACING SEQUENCE
31	TYPICAL CROSS SECTIONS
32	SIDEWALK & DECK DETAILS
33	END POST DETAILS
34	JOINT DETAILS AT PIERS 1 AND 2
35	JOINT DETAILS AT NORTH ABUTMENT
36	JOINT DETAILS AT SOUTH ABUTMENT AND MISCELLANEOUS STEEL DETAILS
37	SUBSTRUCTURE CONCRETE REPAIRS SOUTH & NORTH ABUTMENTS
38	SUBSTRUCTURE CONCRETE REPAIRS PIER NO. 1 & PIER NO. 2

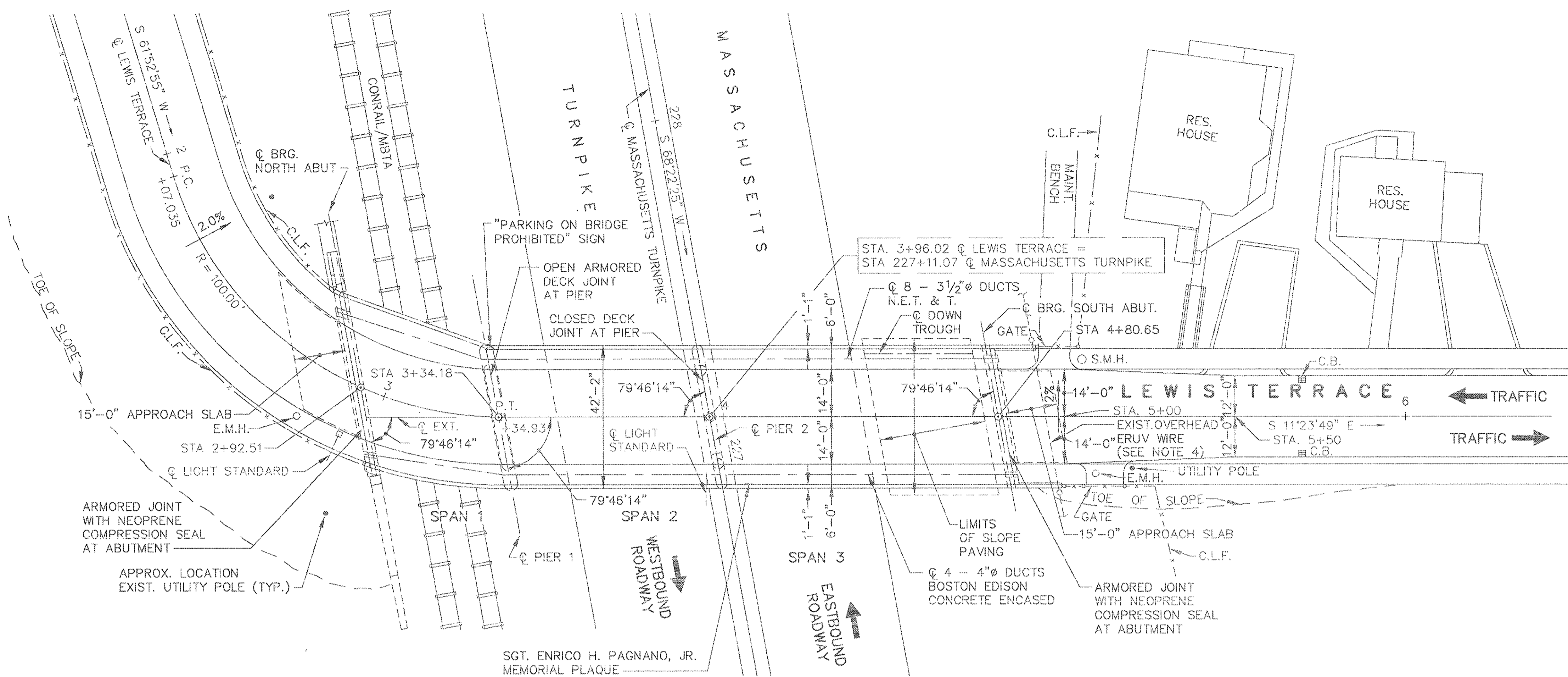
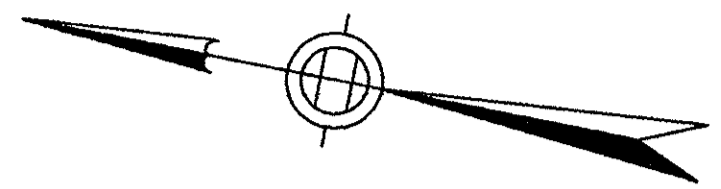
INDEX	
SHEET	TITLE
39	PAVEMENT PLAN
40	PAVEMENT STRIPING DETAILS
41	SEQUENCE OF CONSTRUCTION
42	TRAFFIC PHASING PLAN
43	DETOUR PLAN AND SIGNING
LOWELL AVENUE (STR. NO. S-22)	
44	EXISTING PLAN AND PROFILE
45	FRAMING PLAN
46	PROPOSED DECK PLAN
47	DECK PLAN AND DETAILS
48	CONCRETE PLACING SEQUENCE
49	SECTIONS AND DETAILS SPANS 1 & 2
50	DECK DETAILS AT LIGHT POLE SPAN 2
51	SECTIONS AND DETAILS - SPAN 3
52	ADDITIONAL DECK DETAILS - SPAN 3
53	JOINT DETAILS AT PIER 1
54	JOINT DETAILS AT PIER 2
55	JOINT DETAILS AT SOUTH ABUTMENT
56	JOINT DETAILS AT NORTH ABUTMENT
57	SUBSTRUCTURE CONCRETE REPAIR PIERS 1 & 2
58	SUBSTRUCTURE CONCRETE REPAIRS NORTH & SOUTH ABUTMENTS
59	NORTH ABUTMENT ENDWALL DETAILS

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61	PAVEMENT DETAILS
62	SEQUENCE OF CONSTRUCTION
63	TRAFFIC PHASING PLAN
64	TRAFFIC DETOUR PLAN AND SIGNING
STANDARD DETAILS	
65	BRIDGE CURB & TEMPORARY CONCRETE BARRIER DETAILS
66	STRUCTURAL STEEL DETAILS
67	SUBSTRUCTURE CONCRETE REPAIRS DETAILS (BOSTON EXTENSION)
68	TYPICAL WINGWALL AND END POST DETAILS (LOCAL ROAD)
69	ALUMINUM BRIDGE RAILING DETAILS
70	CHAIN LINK FENCE FOR BRIDGES DETAILS I
71	CHAIN LINK FENCE FOR BRIDGES DETAILS II
72	DETAILS I W BEAM HIGHWAY GUARD
73	DETAILS II W BEAM HIGHWAY GUARD
74	CHAIN LINK FENCE DETAILS
75	SLOPE PAVEMENT REPAIR DETAILS

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION STRUCTURE NOS. S-25, S-23 AND S-22 LOCATION PLAN/INDEX	
Scale: AS NOTED	Contract No. 521-024
 EDWARDS AND KELCEY, INC. <small>The Schreffel Center 229 Main Street Boston, Massachusetts 02129</small>	
Sheet No. 2	

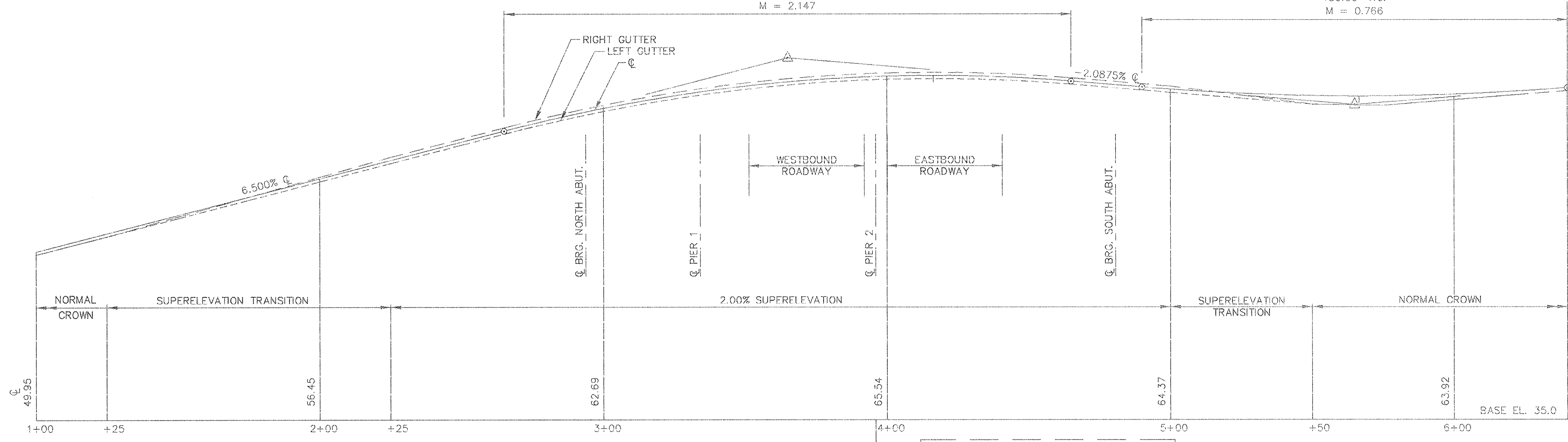
NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					DESIGNED:	KMC 12/93
					DRAWN:	KMC 12/93
					CHECKED:	GTS 12/93



EXISTING PLAN
SCALE: 1"=20'

P.V.I. STA = 3+65
P.V.I. ELEV = 67.17
200.00' V.C.
M = 2.147

P.V.I. STA = 5+65
P.V.I. ELEV = 63.00
150.00' V.C.
M = 0.766



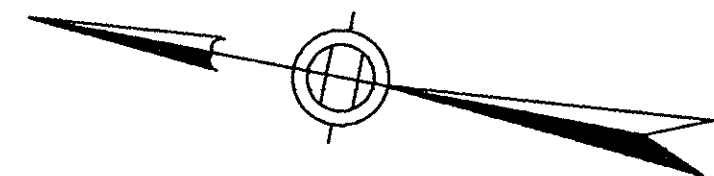
PROFILE - LEWIS TERRACE
SCALE: HORIZ. 1"=20'
VERT. 1"=5'

- NOTES:**
1. DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILTS AND ARE NOT GUARANTEED TO BE CORRECT.
 2. ELEVATIONS BASED ON U.S.C.&G.S. MEAN SEA LEVEL DATUM OF 1929 AND ARE NOT GUARANTEED TO BE CORRECT.
 3. PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
 4. EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

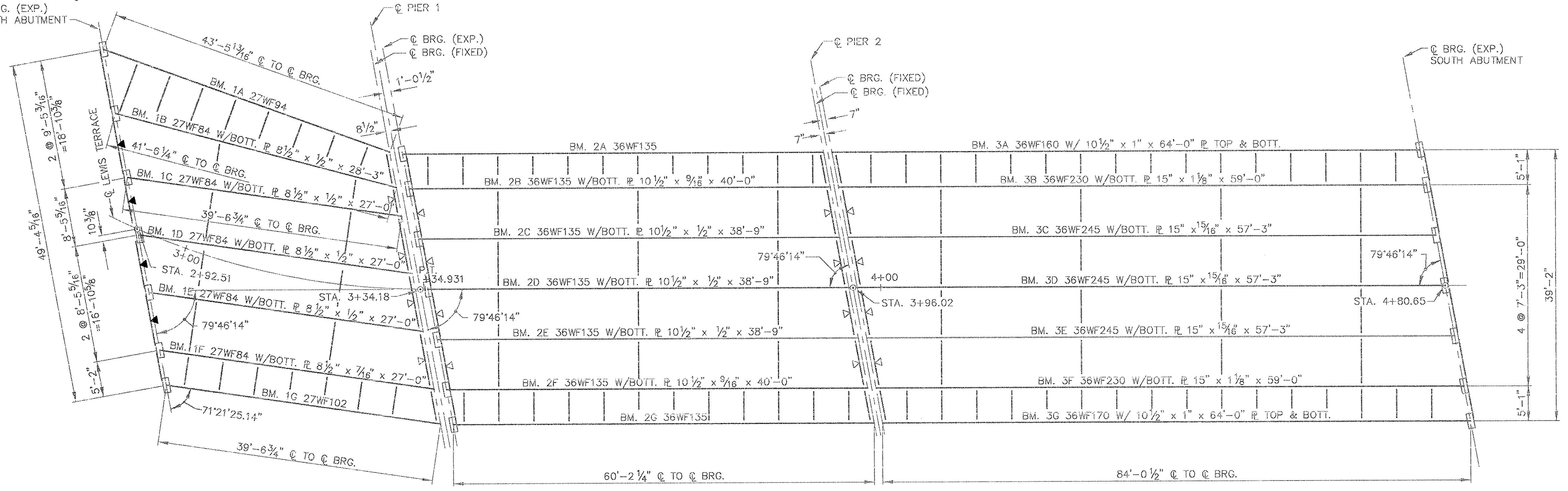
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: KMC	12/93	
		DRAWN: KMC	12/93	
		CHECKED: GTS	12/93	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) EXISTING PLAN AND PROFILE	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 3	



☉ BRG. (EXP.)
NORTH ABUTMENT



SPAN 1

SPAN 2

SPAN 3

FRAMING PLAN

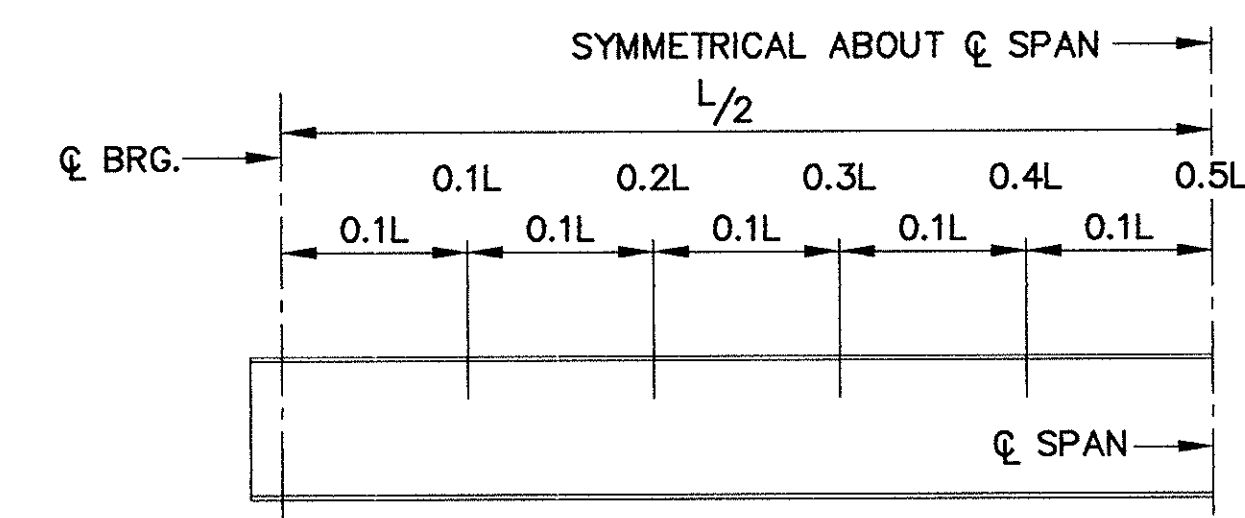
SCALE: 1/8"=1'-0"

LEGEND:

- ☐ - EXISTING EXPANSION BEARING
- △ - EXISTING DIAPHRAGM WITH SHEAR CONNECTORS
(7/8"Ø x 4" HIGH EACH @ 8"± O.C.)
- ▲ - EXISTING DIAPHRAGM
(PROP. 7/8"Ø x 4" HIGH SHEAR CONNECTORS @ 8" O.C.)

NOTES:

1. DIMENSIONS FOR THE FRAMING PLAN ARE FROM THE 'AS-BUILT' DRAWINGS. ACCURACY IS NOT GUARANTEED
2. SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.



EXISTING STUD SHEAR CONNECTOR SCHEDULE								
SPAN	BEAM NO.	STUDS/ROW	STUD HEIGHT	SPACING OF 7/8"Ø STUDS				
				0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L
1	1A & 1G	2	6"	12"	12"	12"	12"	12"
	1B THRU 1F	2	4"	5 1/2"	6 1/2"	8 1/2"	10 1/2"	13"
2	2A & 2G	2	6"	12"	12"	12"	12"	12"
	2B THRU 2F	2	4"	6 1/2"	7 1/2"	9 1/2"	12"	17"
3	3A & 3G	2	6"	12"	12"	12"	12"	12"
	3B THRU 3F	2	6"	6"	7 1/2"	9 1/2"	12"	17"

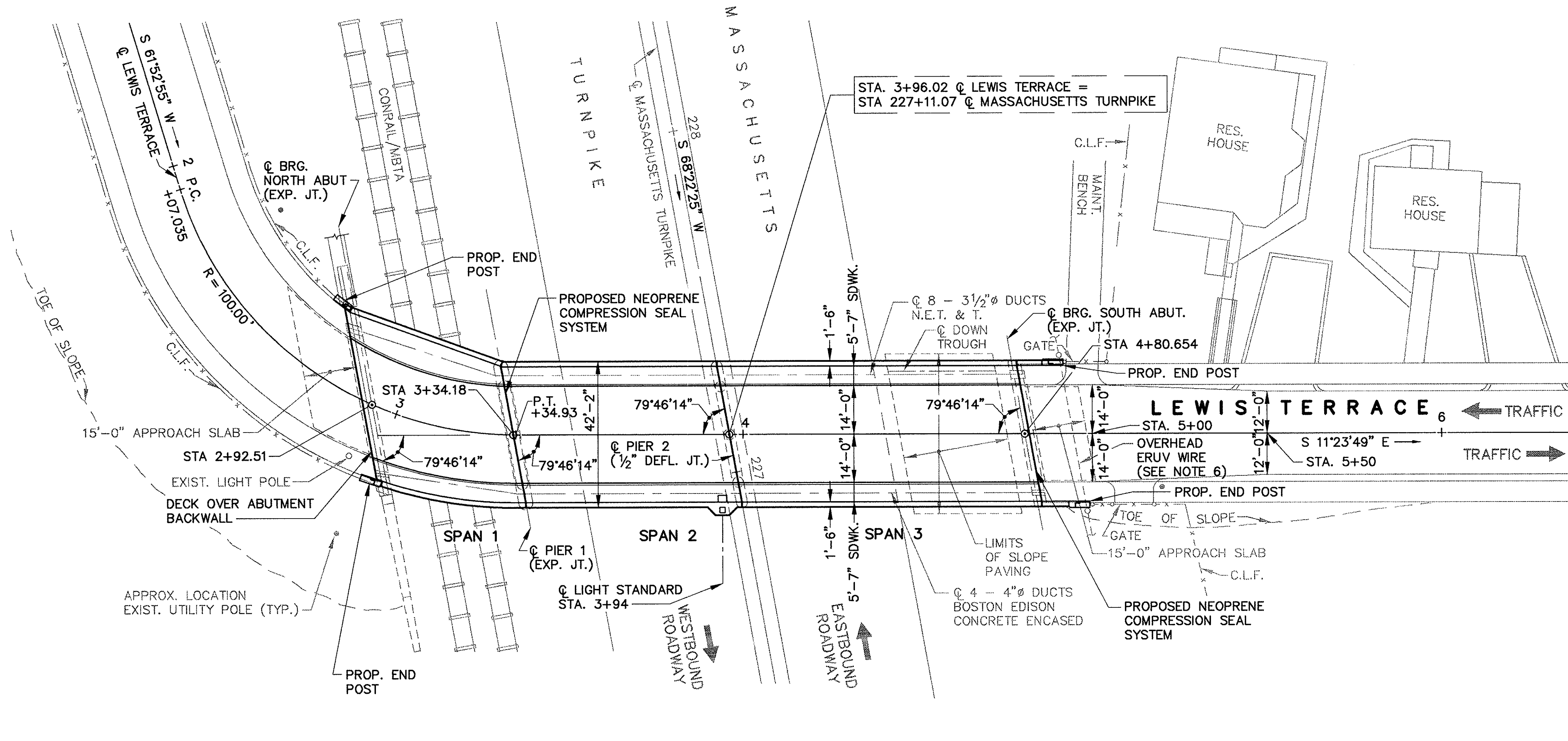
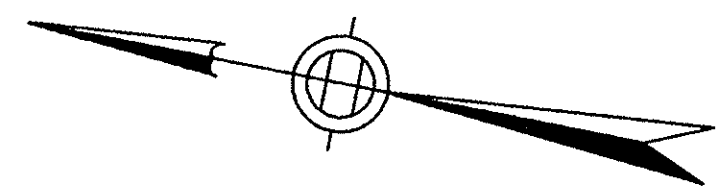
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS

AS BUILT

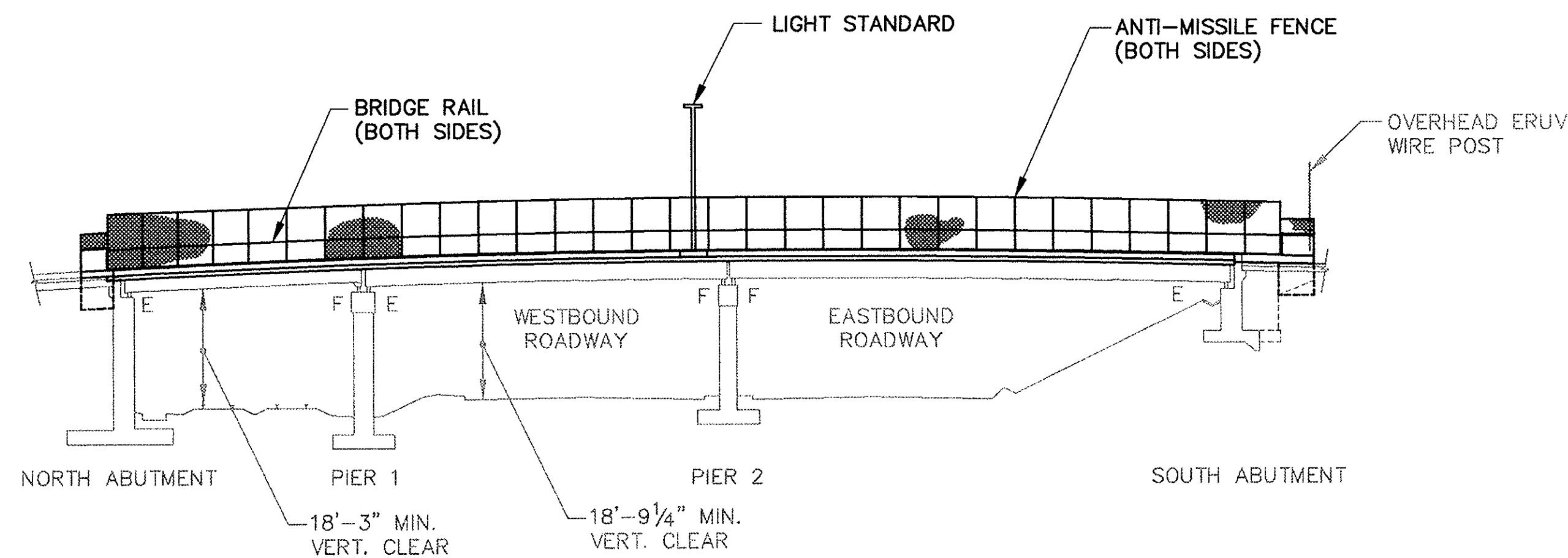
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
FRAMING PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. **4**
 The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129



PROPOSED DECK PLAN
SCALE: 1"=20'



ELEVATION
SCALE: 1"=20'

GENERAL NOTES:

- DESIGN LOADING:**
A.A.S.H.T.O. LOADING H20-44.
- MATERIALS:**
1. CONCRETE FOR DECK SLAB, SIDEWALKS, WINGWALL MODIFICATIONS AND END POSTS SHALL BE CLASS 'D' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c=4500$ PSI.
 2. CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c=5000$ PSI.
 3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
 4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
 5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
 6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

NOTES:

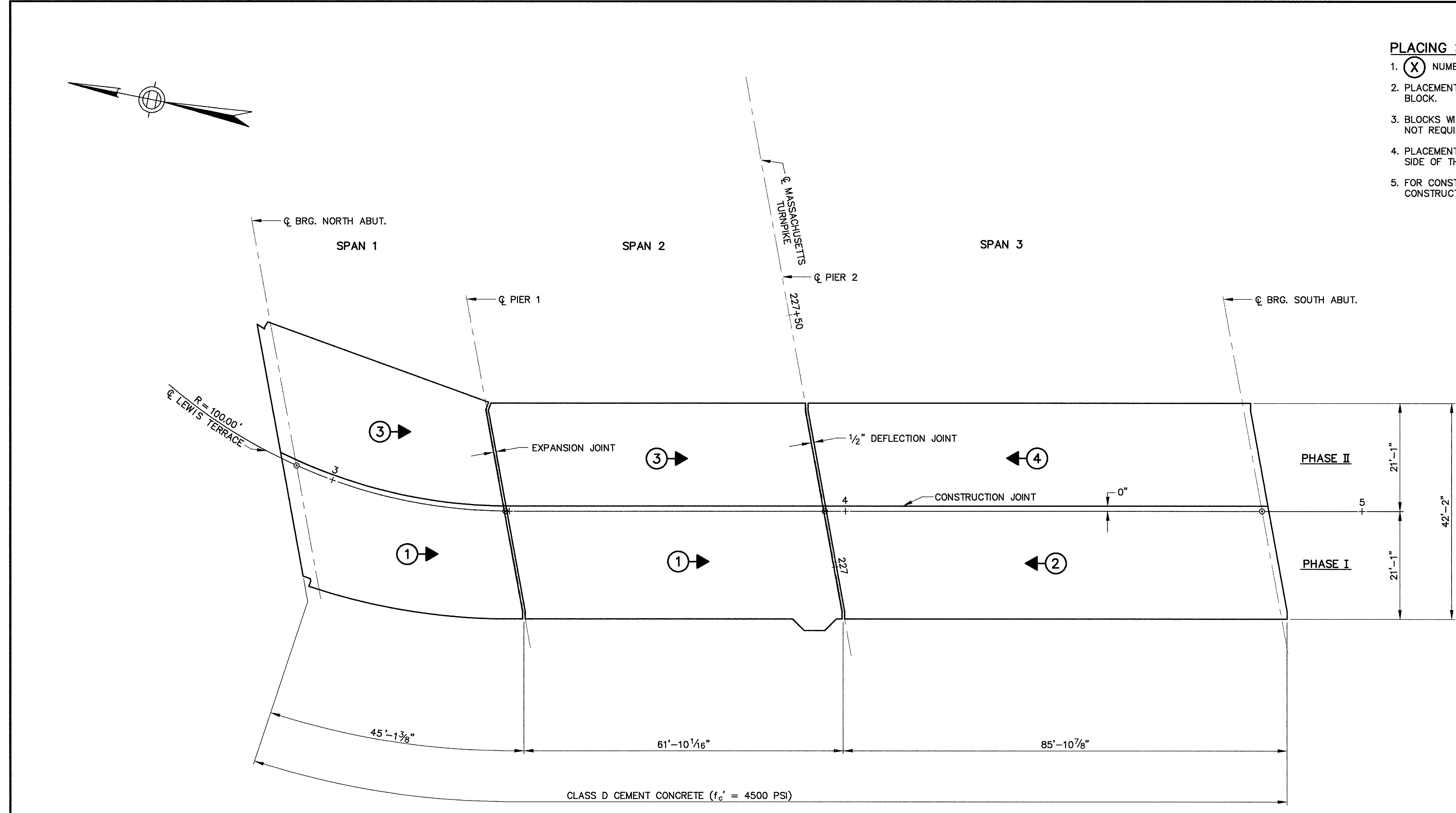
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR, TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
2. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SECTION C25A OF THE SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1a.
3. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
4. E DENOTES EXPANSION BEARING.
F DENOTES FIXED BEARING.
5. FOR END POST DETAILS, SEE SHEET NOS. 18 & 68.
6. EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GTS	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	FMK	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) PROPOSED DECK PLAN	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 5

- PLACING SEQUENCE NOTES:**
1. (X) NUMBERS INDICATE SEQUENCE OF PLACEMENT.
 2. PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
 3. BLOCKS WITH SAME SEQUENCE NUMBER DO NOT REQUIRE SAME DAY PLACING.
 4. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
 5. FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEET NOS. 21 & 22.



PLACING SEQUENCE FOR CONCRETE DECK
SCALE: 1" = 10'

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS

BY	DATE
DESIGNED: GTS	12/93
DRAWN: KMC	12/93
CHECKED: FMK	12/93

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

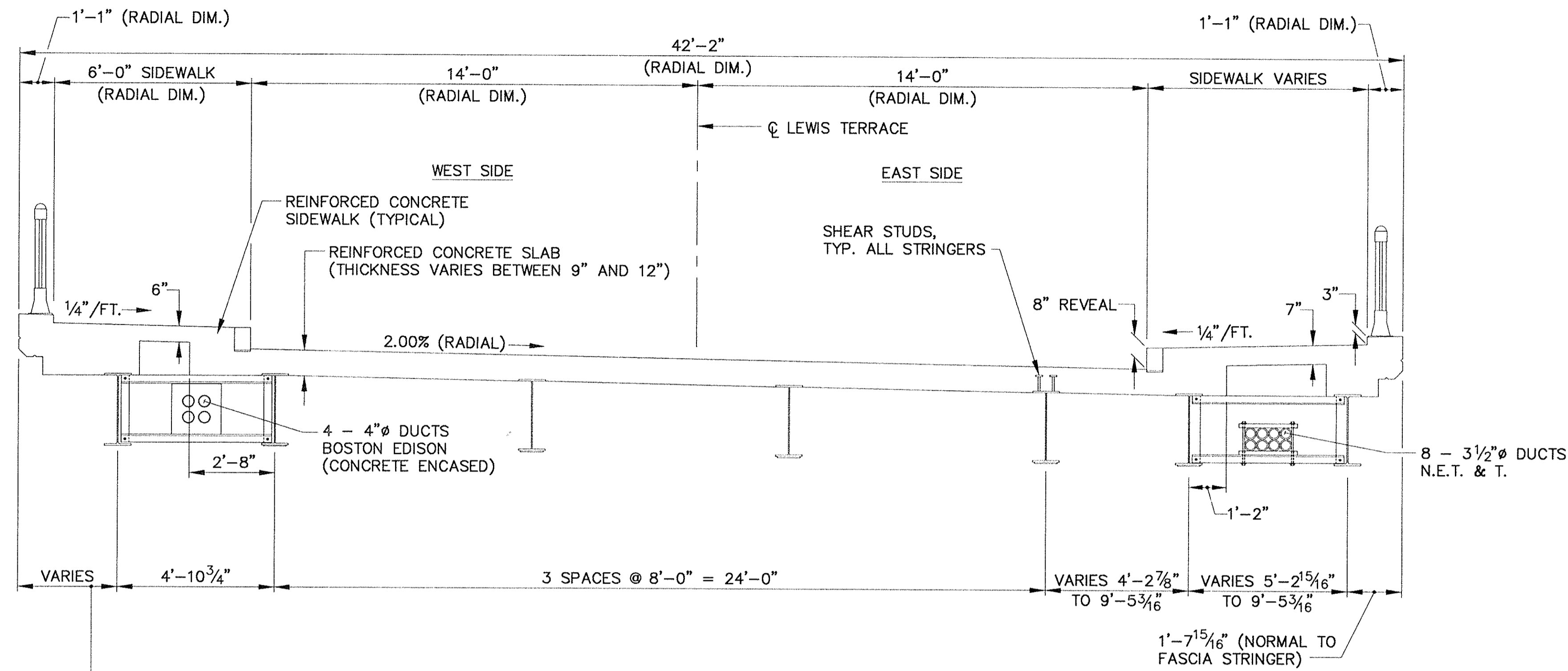
BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
CONCRETE PLACING SEQUENCE

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 7
The Schreffl Center
 529 Main Street
 Boston, Massachusetts 02129

NOTES:

1. ALL REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
2. TOP AND BOTTOM MAT OF THE REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
3. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
4. SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE. ($f_c = 4500$ PSI)
5. FOR GENERAL NOTES, SEE SHEET NO. 5.



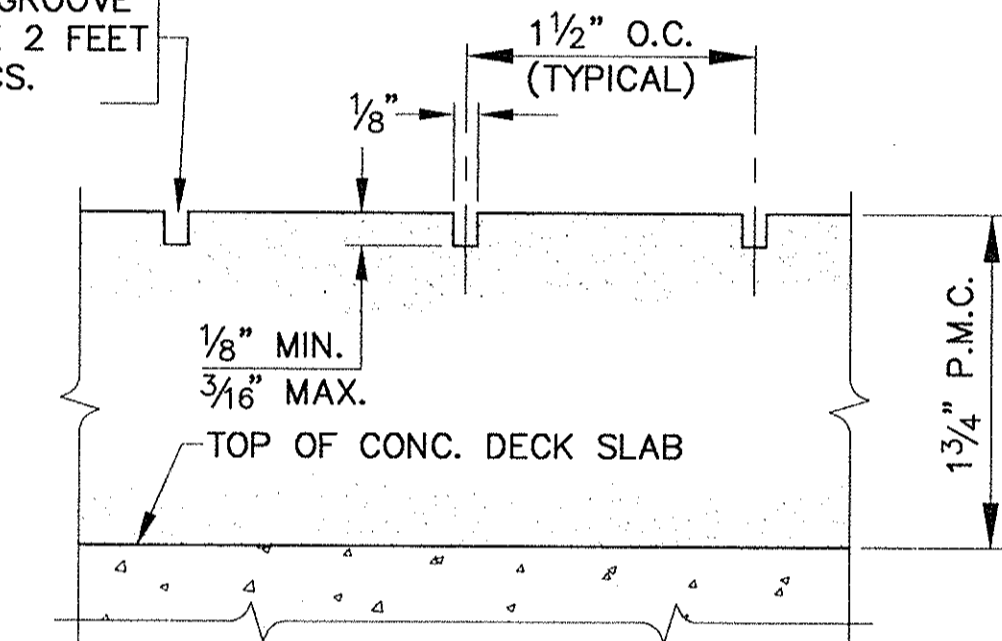
EXISTING TYPICAL CROSS SECTION - SPAN 1

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"

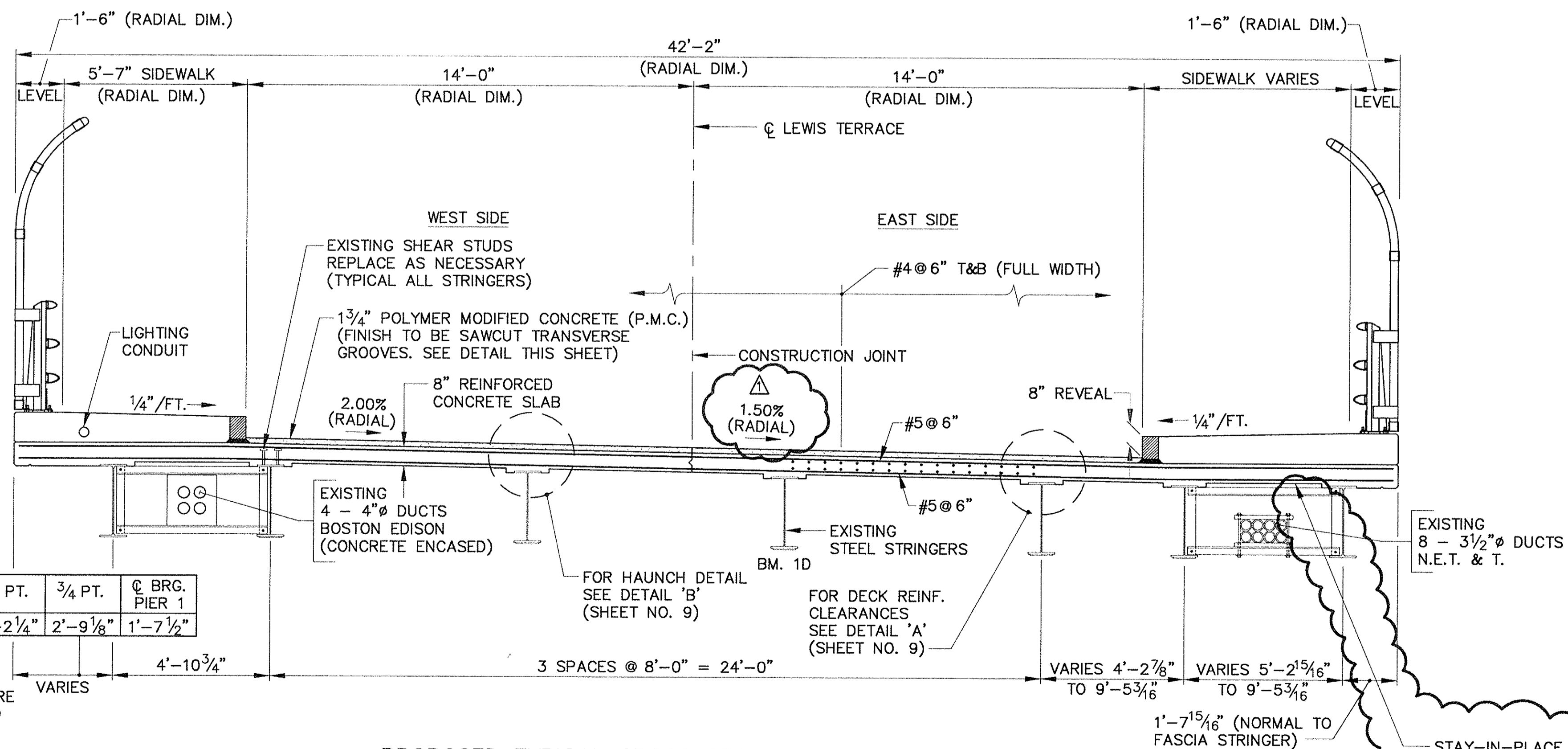
¢ BRG. N. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	¢ BRG. PIER 1
1'-6 1/4"	2'-9 5/16"	3'-2 1/4"	2'-9 1/8"	1'-7 1/2"

ALL DIMENSIONS ARE PERPENDICULAR TO ¢ OF STRINGER

SAWCUT TRANSVERSE GROOVE (TYPICAL). TERMINATE 2 FEET FROM CURB. SEE SPECS.



P.M.C. SAWCUT TRANSVERSE GROOVES DETAIL
SCALE: FULL SIZE



PROPOSED TYPICAL CROSS SECTION - SPAN 1

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"

¢ BRG. N. ABUT.	1/4 PT.	1/2 PT.	3/4 PT.	¢ BRG. PIER 1
1'-6 1/4"	2'-9 5/16"	3'-2 1/4"	2'-9 1/8"	1'-7 1/2"

ALL DIMENSIONS ARE PERPENDICULAR TO ¢ OF STRINGER

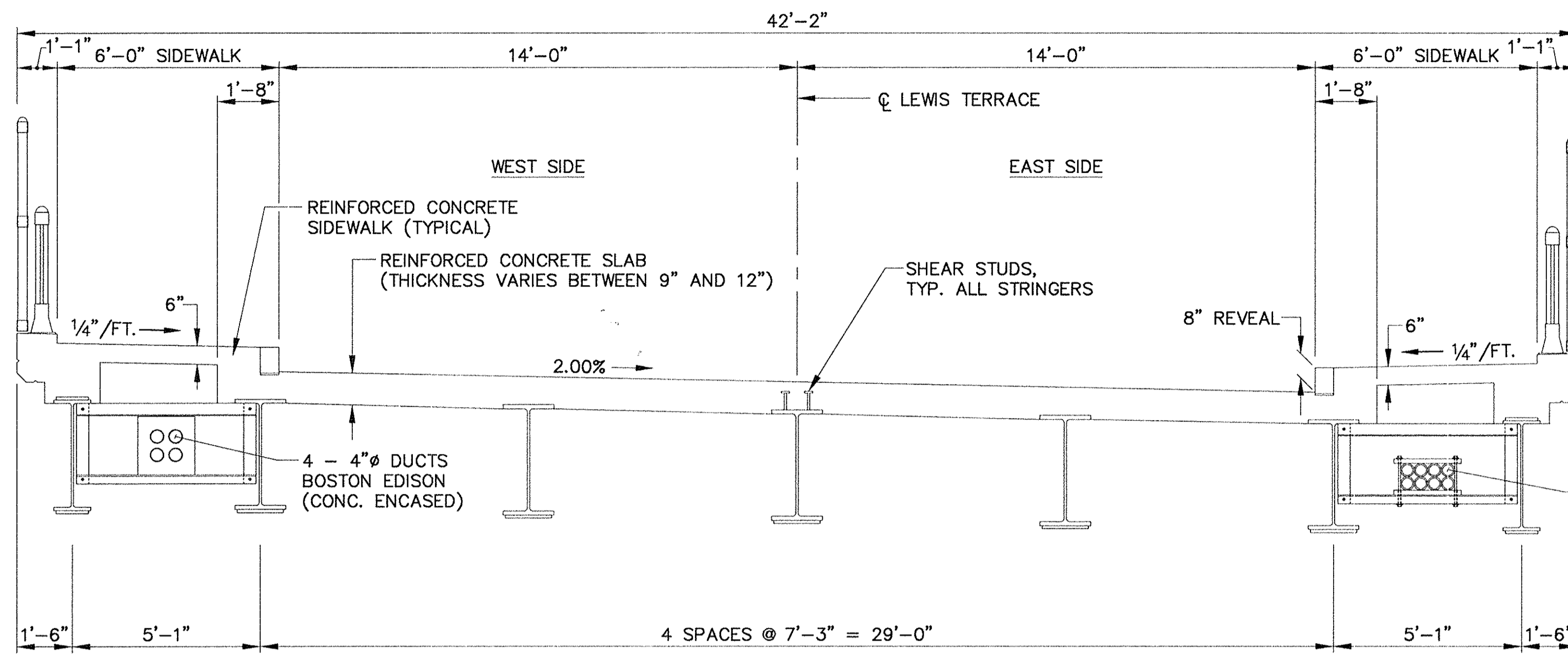
NOTES:

1. FOR SIDEWALK DETAILS, SEE SHEET NO. 10.
2. FOR DECK DETAILS, SEE SHEET NO. 9.

AS BUILT

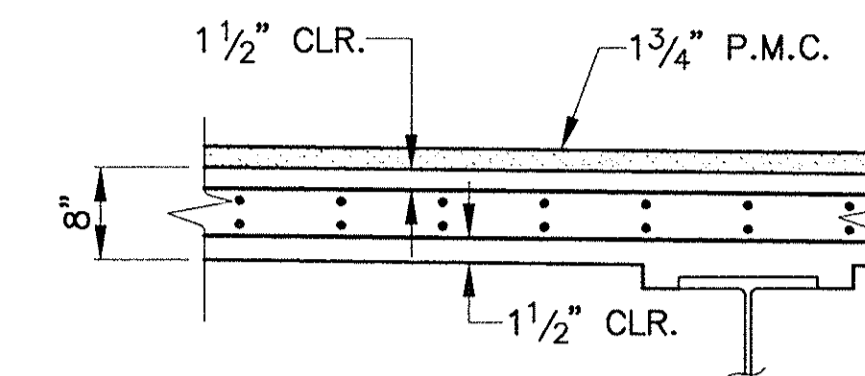
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) DECK SECTIONS SPAN 1	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schieffelin Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 8

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
	AS-BUILT	GTS	10/95	CHECKED: FMK	12/93
				DRAWN: KMC	12/93
				DESIGNED: GTS	12/93

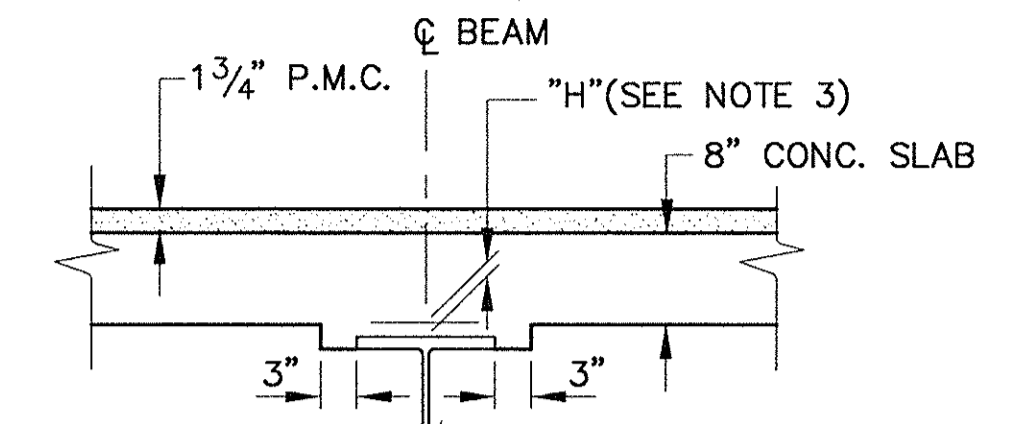


EXISTING TYPICAL CROSS SECTION - SPANS 2 & 3

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"



DETAIL 'A'
SCALE: 3/4" = 1'-0"

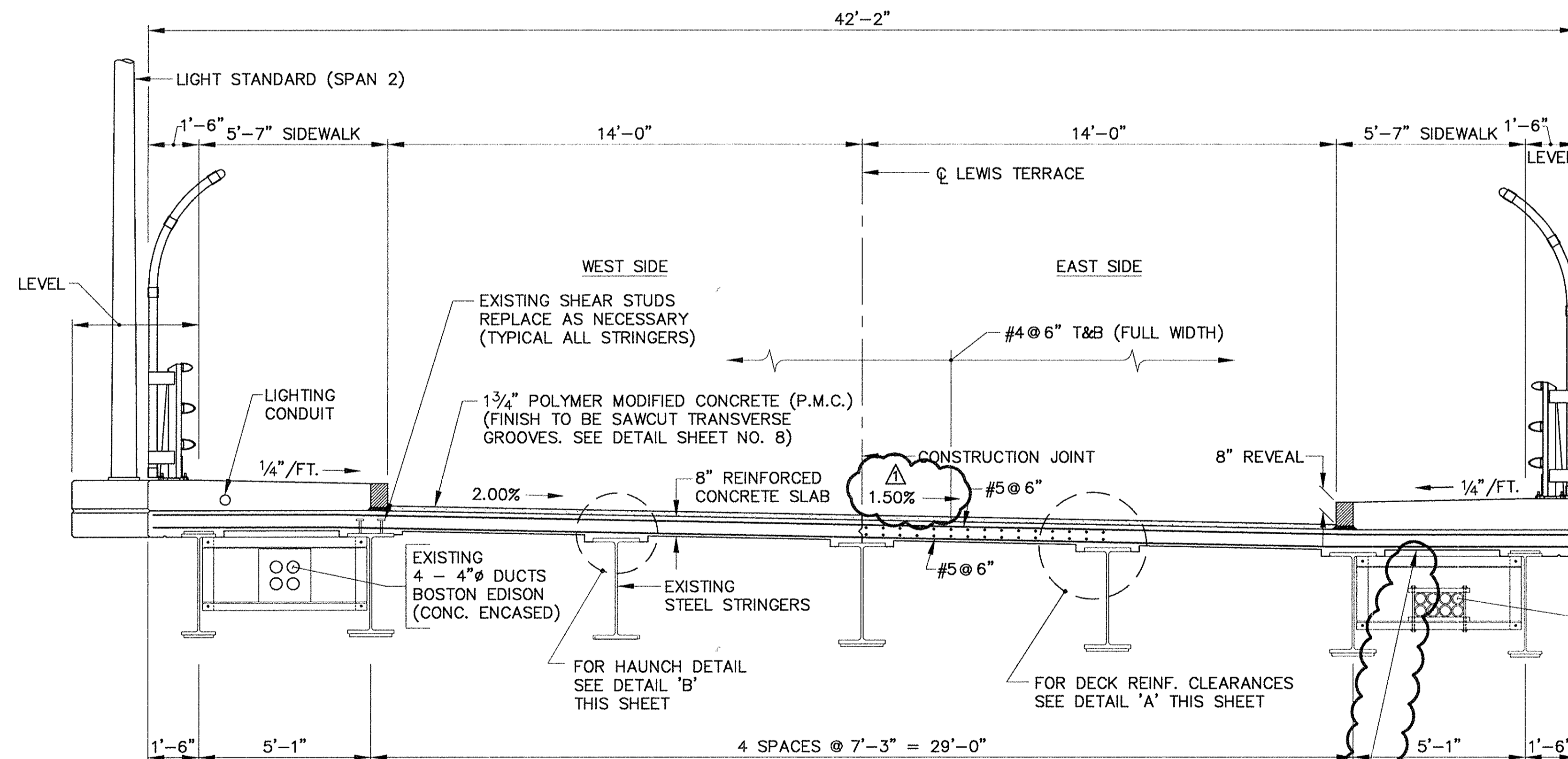


DETAIL 'B'
SCALE: 3/4" = 1'-0"

NOTE:
WHEN "H" IS GREATER THAN 3", SEE EXTRA DEPTH HAUNCH DETAIL THIS SHEET.

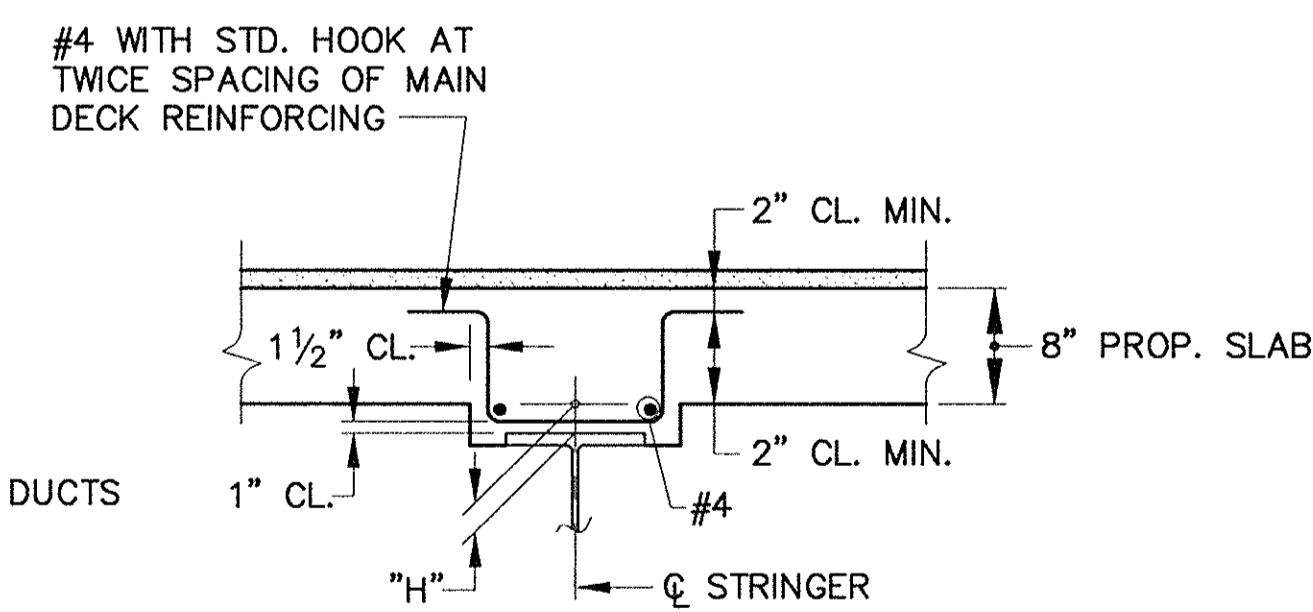
HAUNCH DEPTH "H" (INCHES) FOR SETTING TOP OF FORMS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE

BEAM NO.	INCREASING STATIONS →								
	CL. BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	CL. BRG.
SPAN 1	1A								
	1B								
	1C								
	1D								
	1E								
	1G								
SPAN 2	2A								
	2B								
	2C								
	2D								
	2E								
	2G								
SPAN 3	3A								
	3B								
	3C								
	3D								
	3E								
	3G								



PROPOSED TYPICAL CROSS SECTION - SPANS 2 & 3

(SECTION LOOKING NORTH)
SCALE: 3/8" = 1'-0"



EXTRA DEPTH HAUNCH DETAIL
(ITEM C32-2)
NOT TO SCALE

- NOTES:
- FOR NOTES, SEE SHEET NO. 8.
 - FOR SIDEWALK AND LIGHT POLE SUPPORT DETAILS, SEE SHEET NO. 10.
 - HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY, AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG CL. STRINGERS PRIOR TO CONCRETE REMOVAL AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED. SEE SPECIAL PROVISIONS SECTION C1-D.
 - THE CONTRACTOR SHOULD NOTE THAT THE EXISTING BRIDGE DECK MAY VARY BETWEEN 9" AND 12" THICK.
 - FOR LONGITUDINAL CONSTRUCTION JOINT DETAIL, SEE SHEET NO. 21.

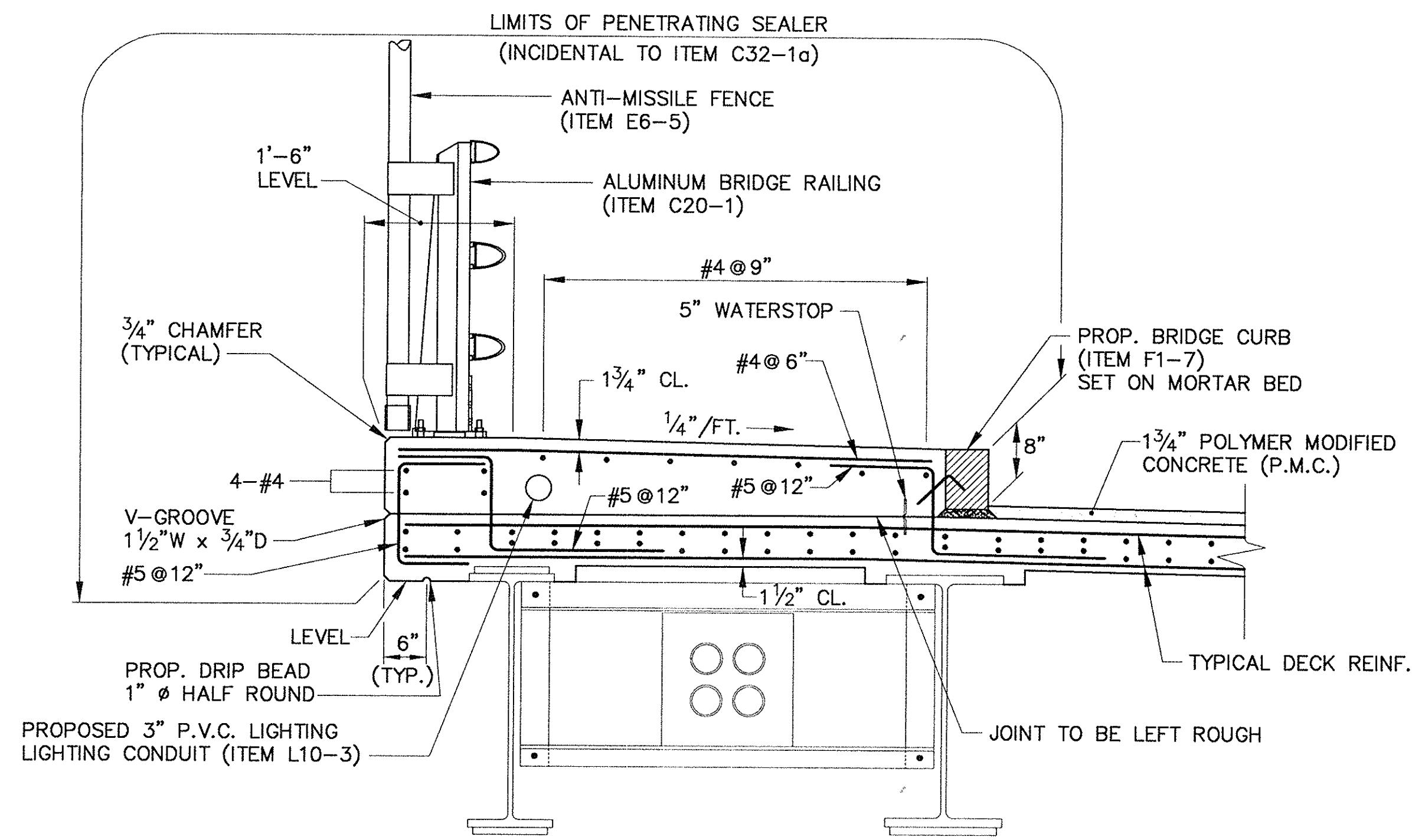
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
	AS-BUILT	GTS	10/95	CHECKED: FMK	12/93
				DESIGNED: GTS	12/93
				DRAWN: KMC	12/93

AS BUILT

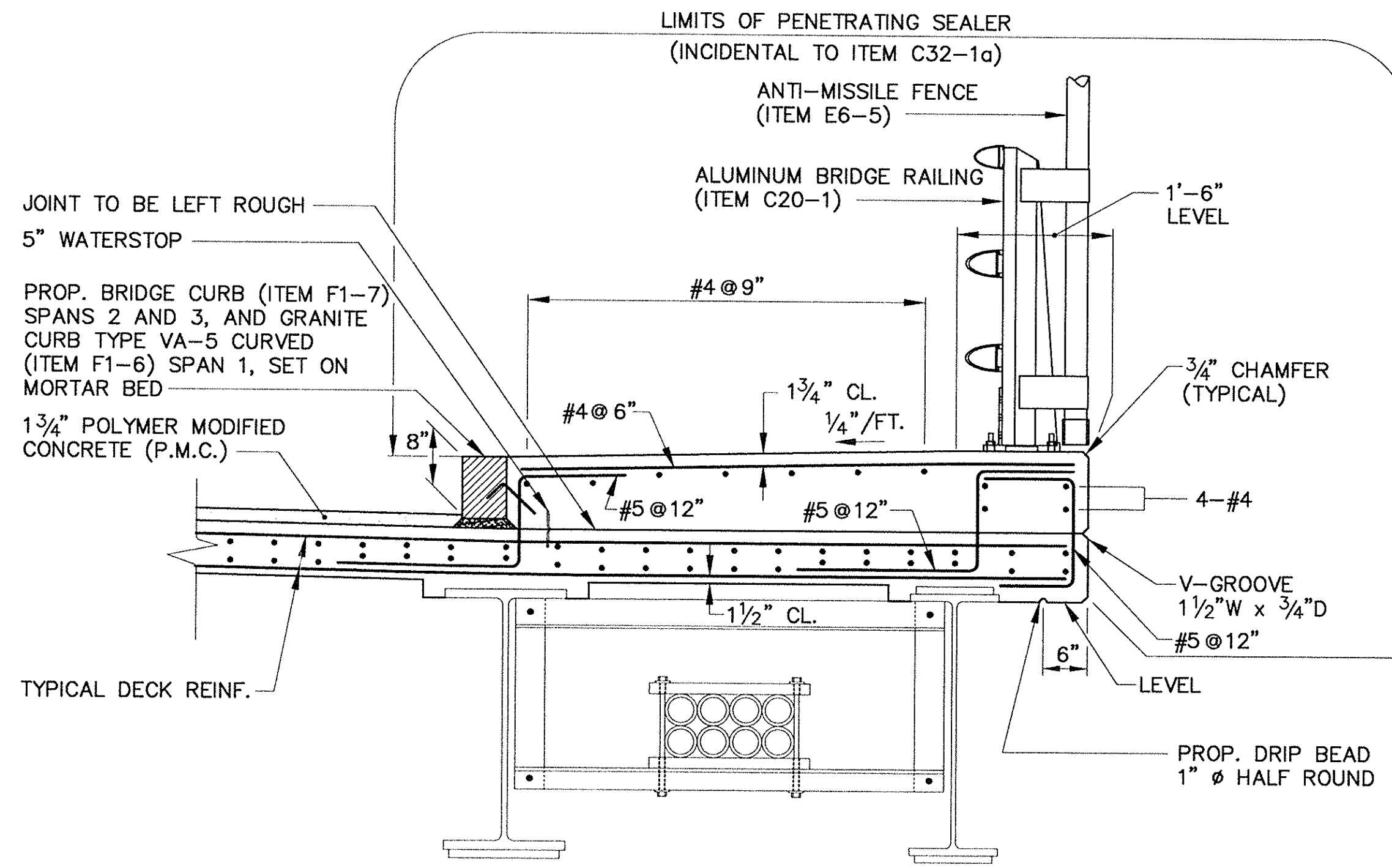
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
DECK SECTIONS AND DETAILS
SPANS 2 & 3

Scale: AS NOTED Contract No. 521-024

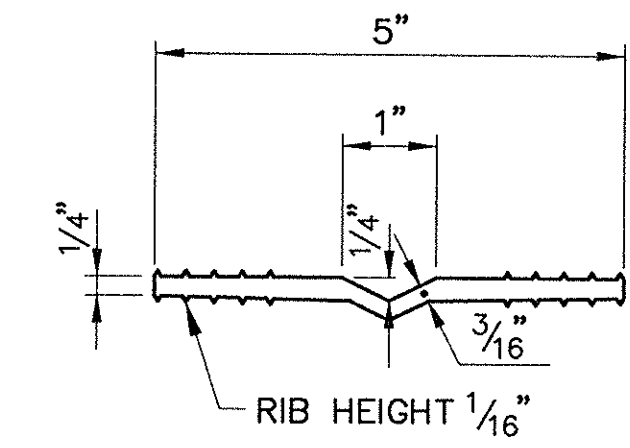
EDWARDS AND KELCEY, INC. Sheet No. **9**
 The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129



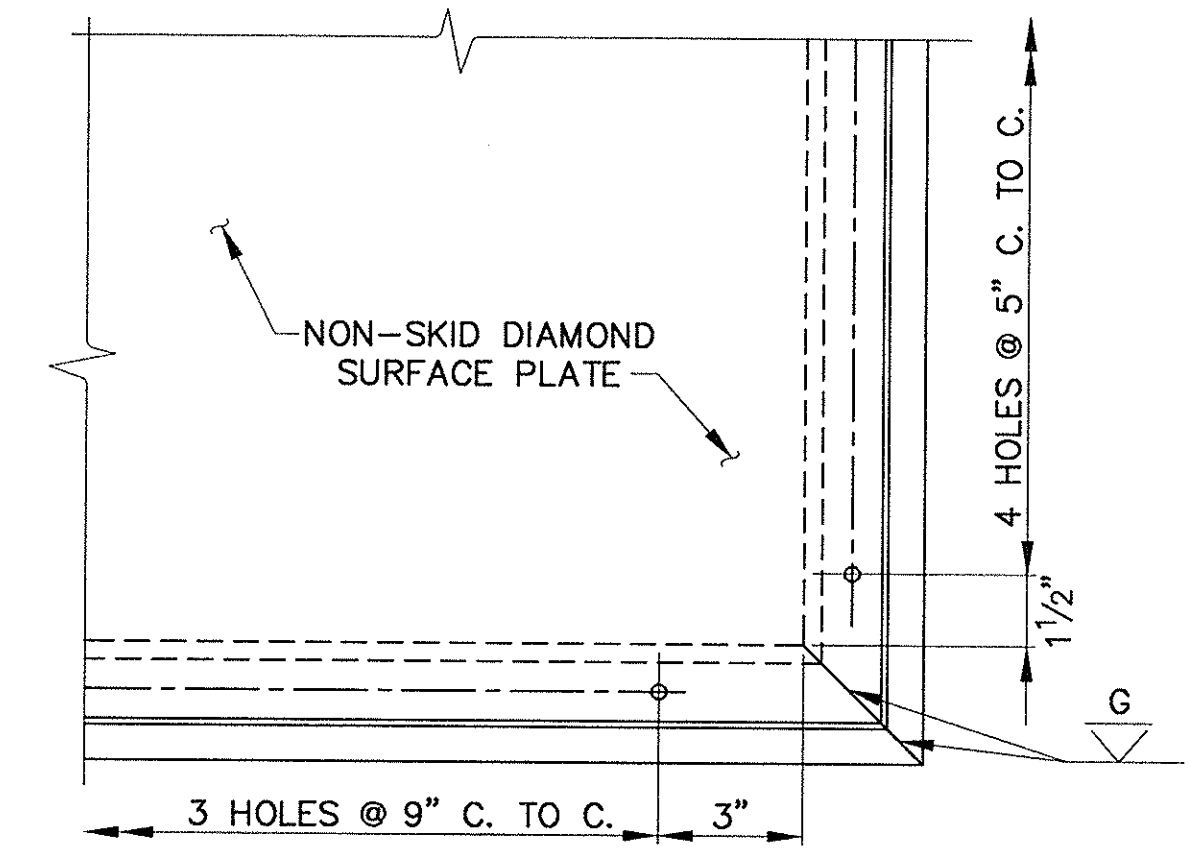
SIDEWALK DETAIL - WEST SIDE
SCALE: 3/4" = 1'-0"



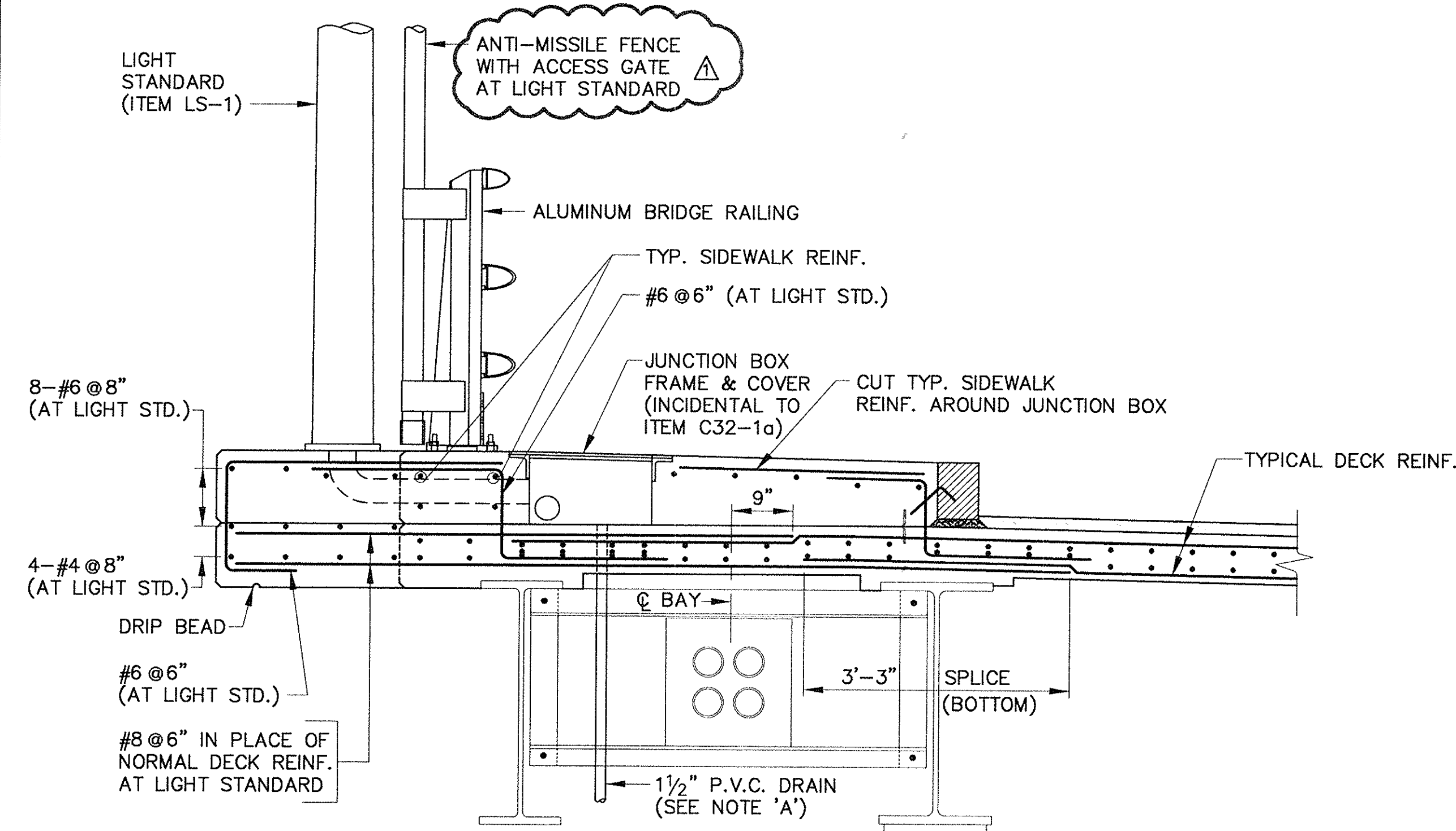
SIDEWALK DETAIL - EAST SIDE
SCALE: 3/4" = 1'-0"



5" WATERSTOP
NOT TO SCALE

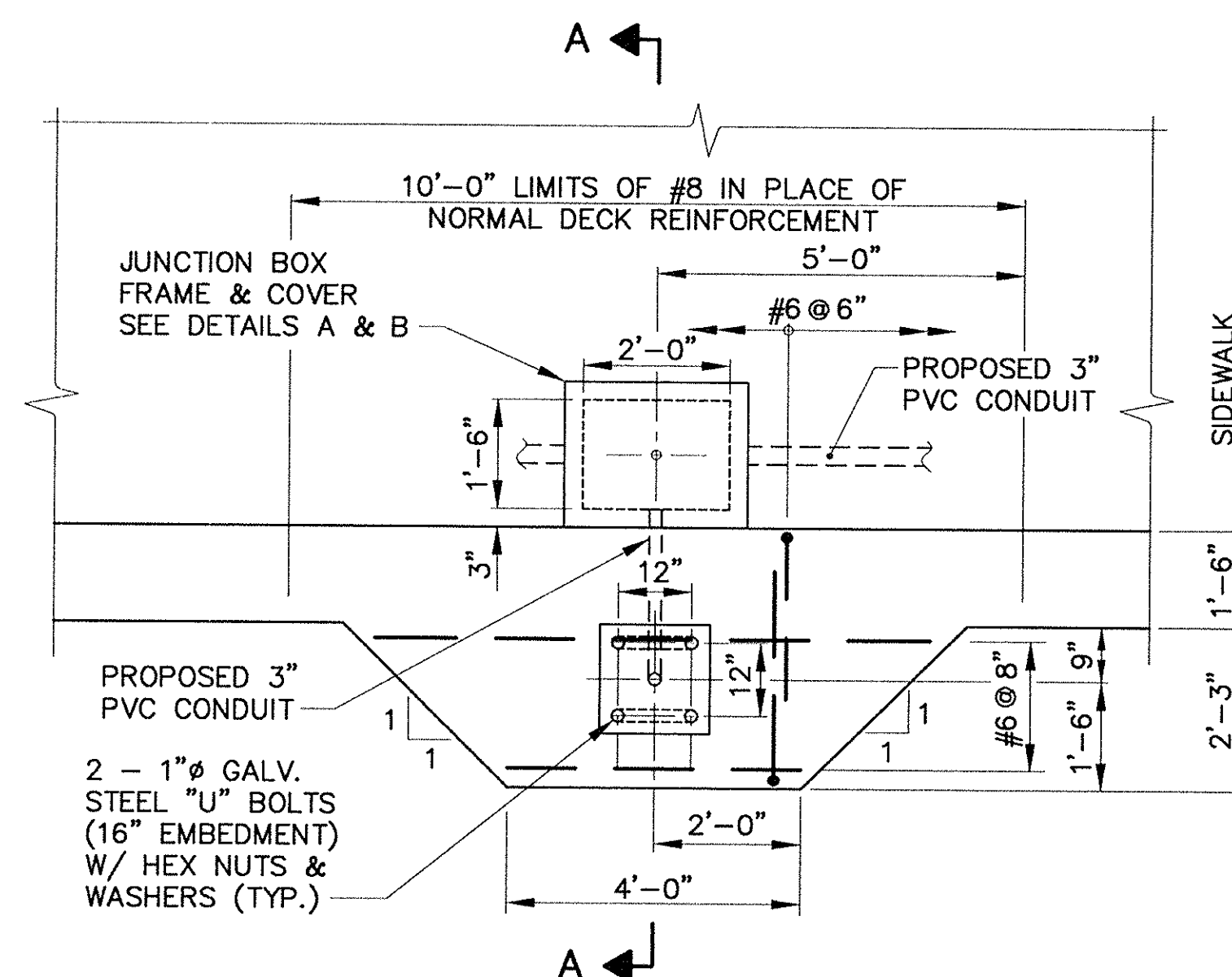


DETAIL A
SCALE: 3" = 1'-0"

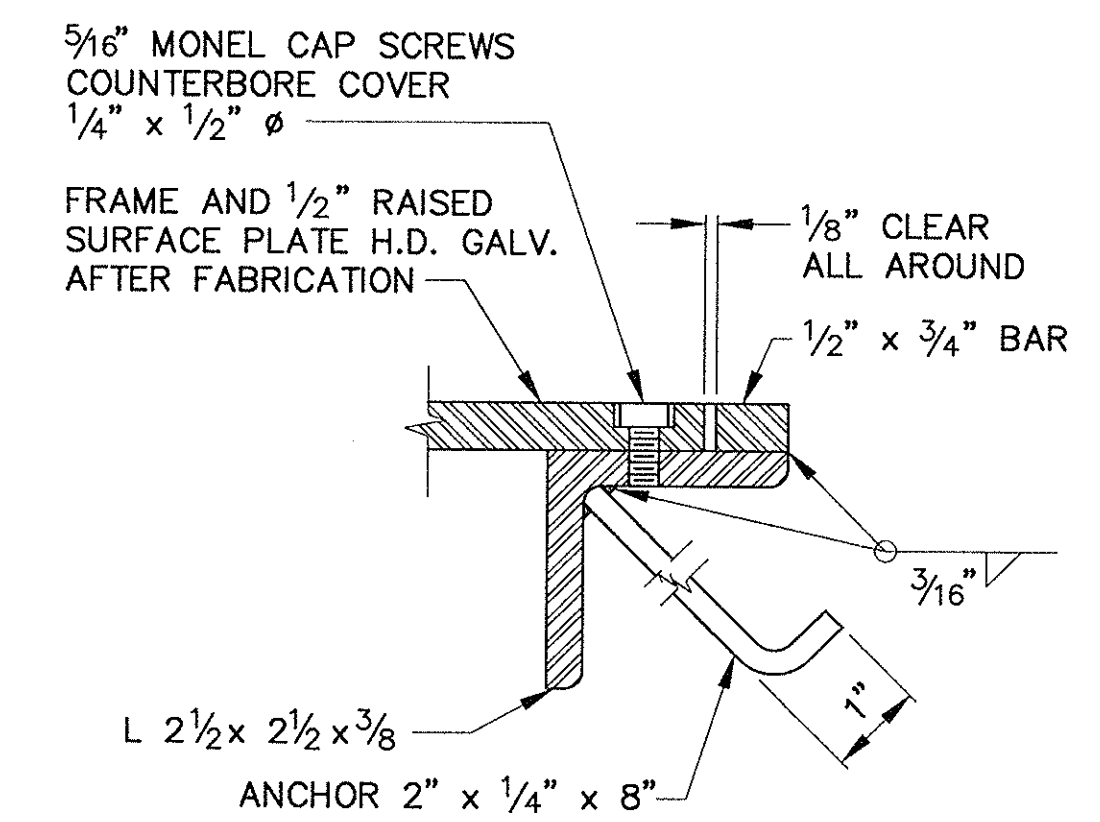


SECTION A-A
SCALE: 3/4" = 1'-0"

NOTE 'A'
P.V.C. DRAINS LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED NOT TO DRAIN ONTO THE TRAVELED WAY.



PLAN PROPOSED LIGHT POLE SUPPORT (WEST SIDE)
NOT TO SCALE



DETAIL B
SCALE: HALF SIZE
AS BUILT

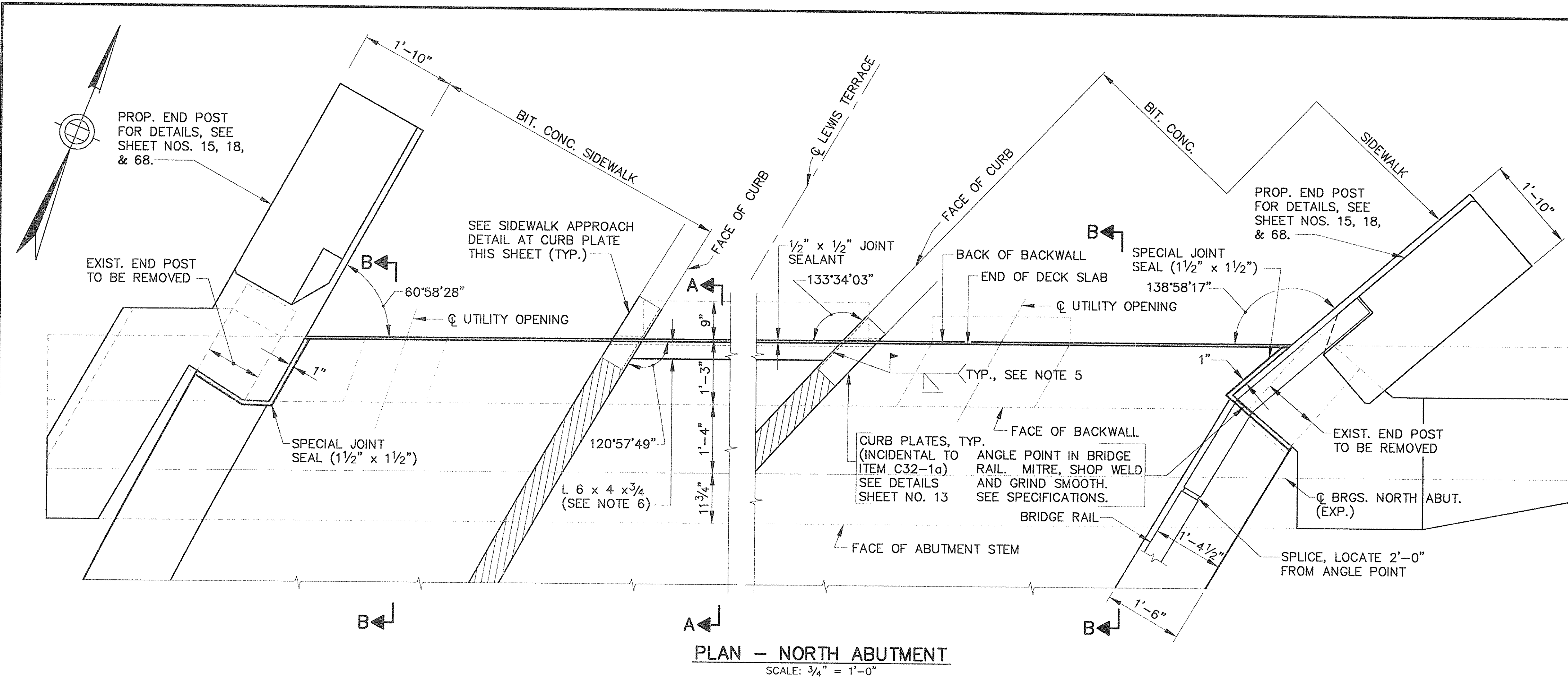
NO.	REVISION	BY	DATE	CHECKED	IN CHARGE OF
		DESIGNED:	GTS	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	FMK	12/93	
		BY	GTS		

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
SIDEWALK AND LIGHT POLE SUPPORT DETAILS

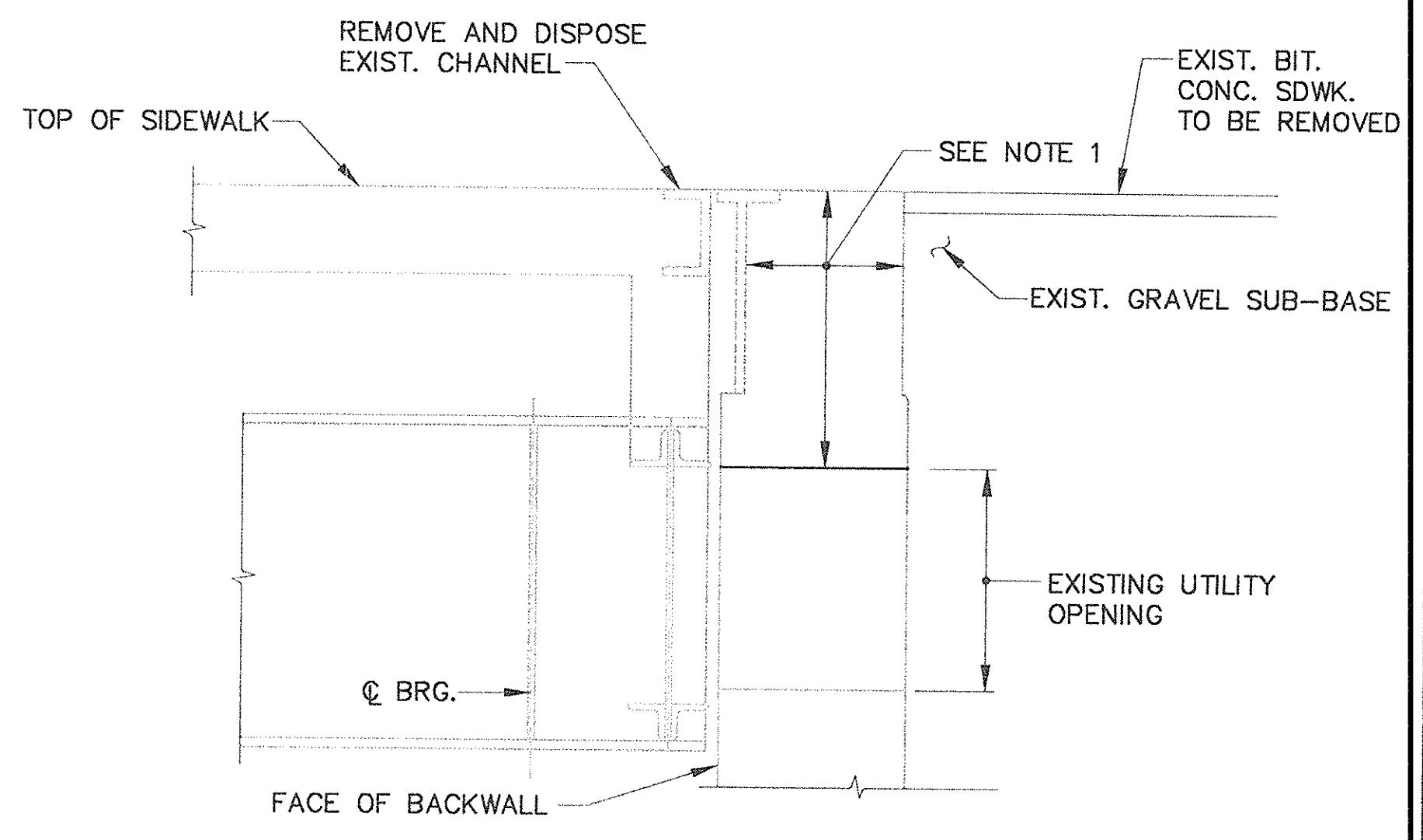
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
 The Schreffl Center
 329 Main Street
 Boston, Massachusetts 02129

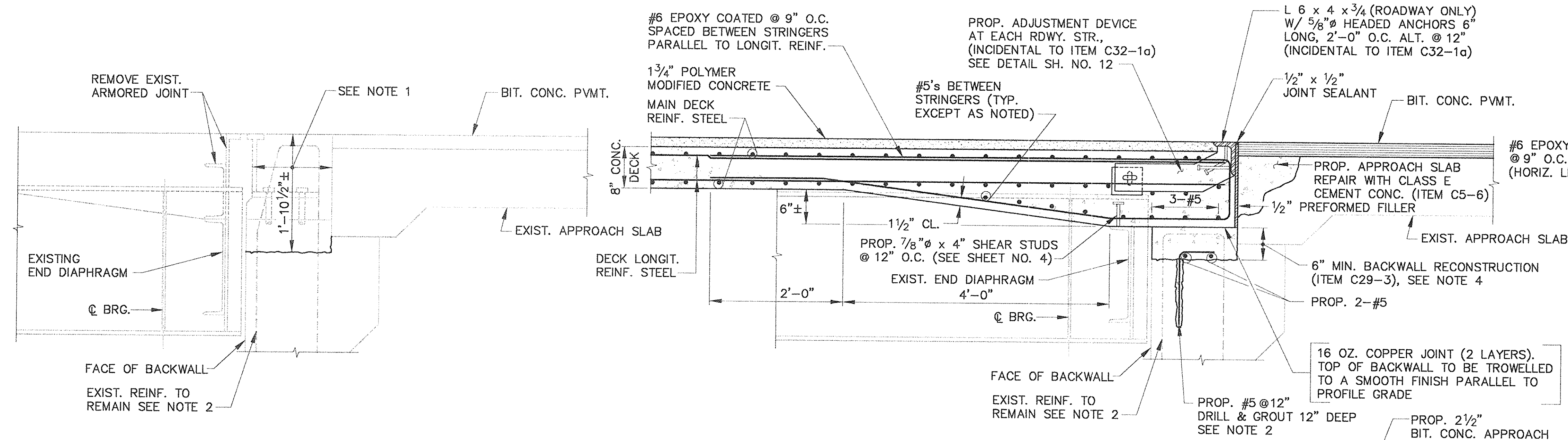
Sheet No. **10**



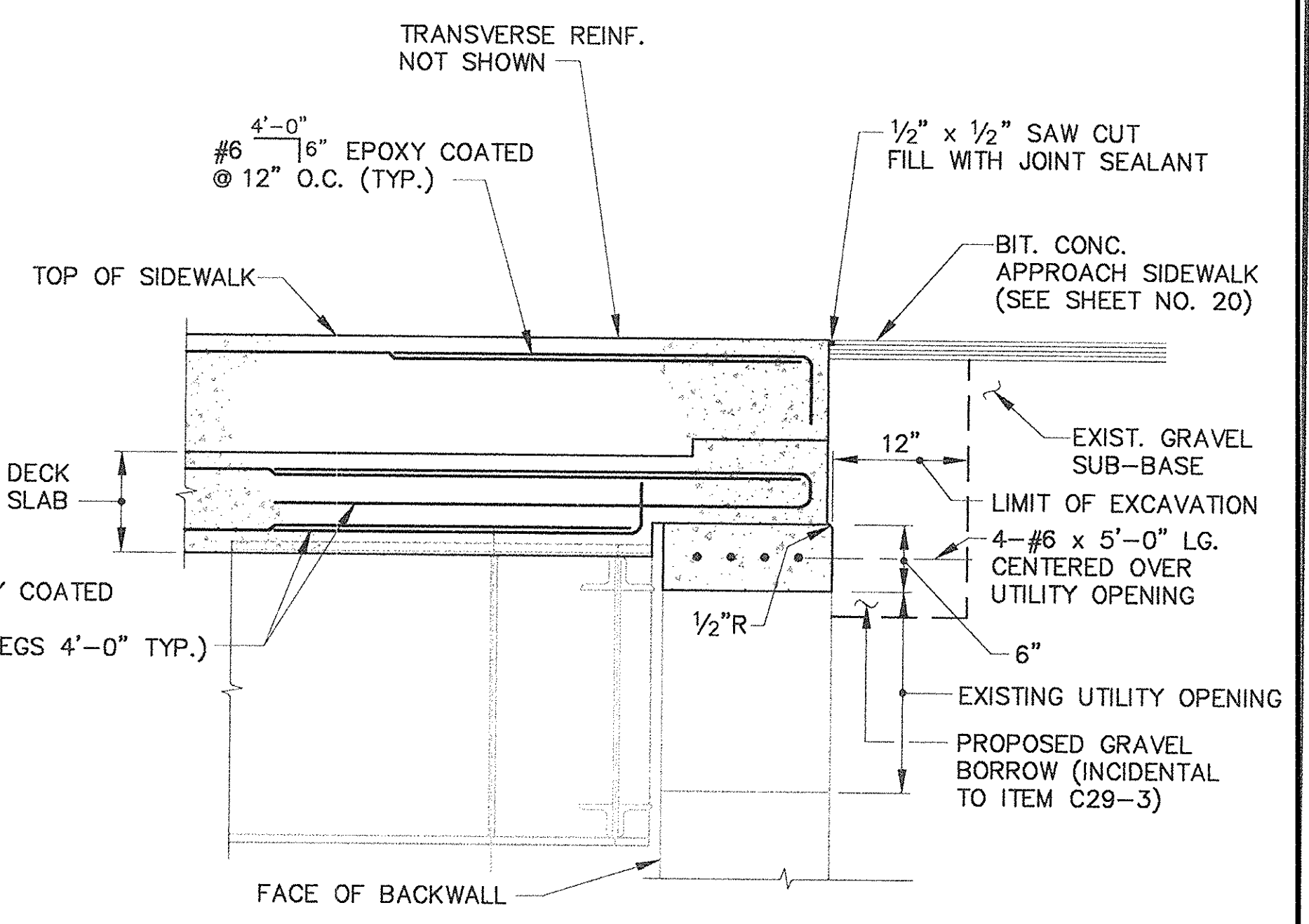
PLAN - NORTH ABUTMENT
SCALE: 3/4" = 1'-0"



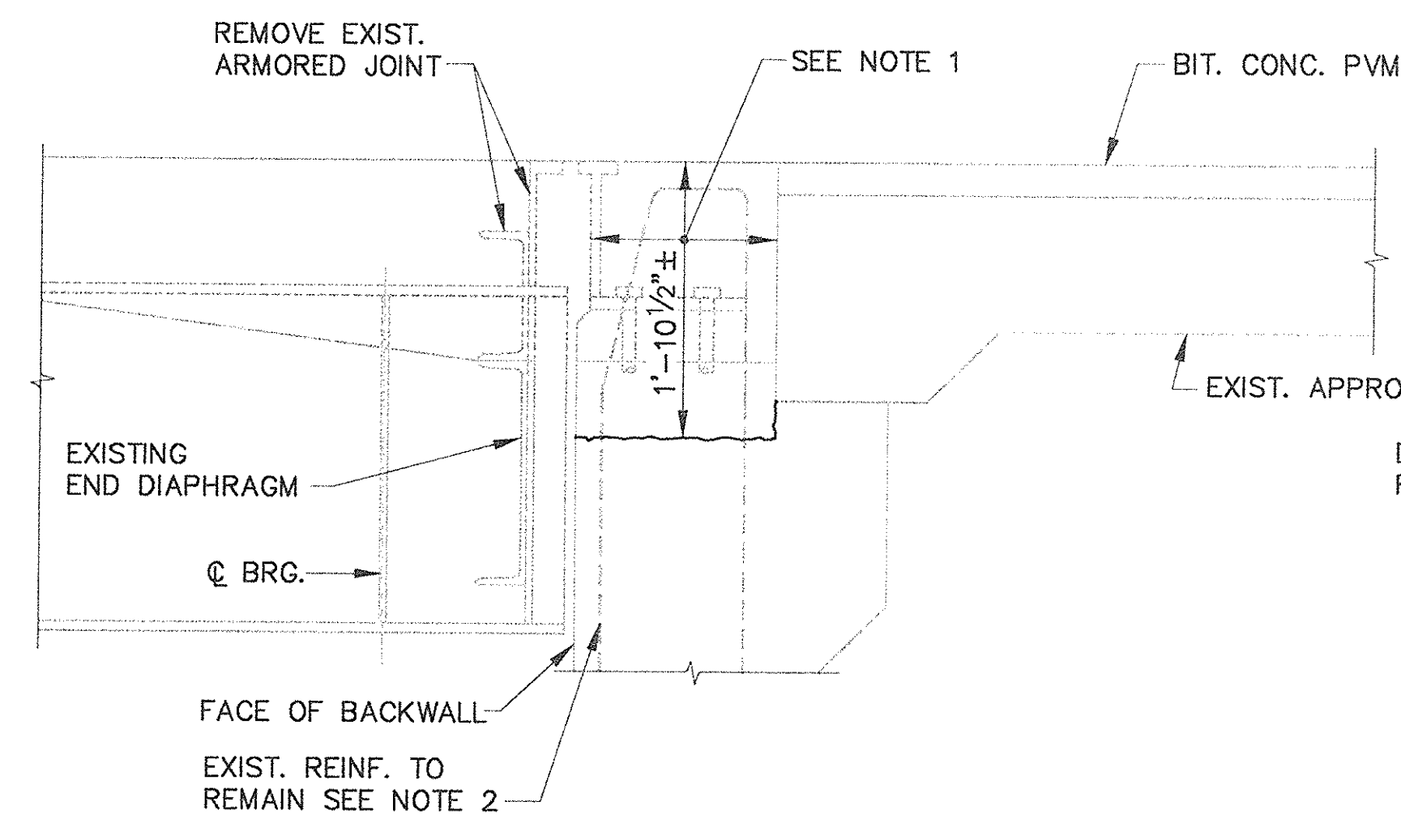
SECTION B-B (EXISTING)
SCALE: 1" = 1'-0"



SECTION A-A (PROPOSED)
SCALE: 1" = 1'-0"



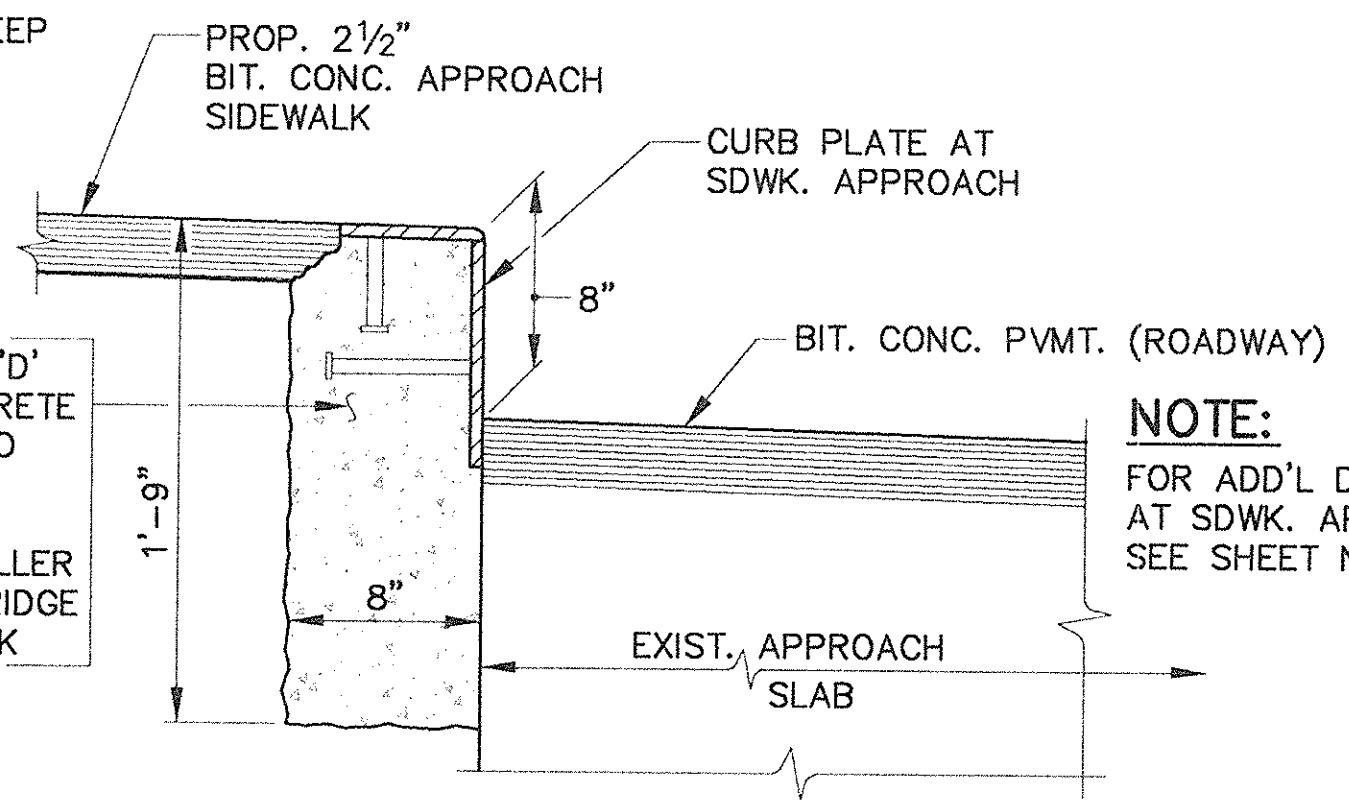
SECTION B-B (PROPOSED)
SCALE: 1" = 1'-0"



SECTION A-A (EXISTING)
SCALE: 1" = 1'-0"

NOTES:

1. REMOVE EXISTING BACKWALL, ARMORED JOINT AND ANCHOR BOLTS TO 4"± BELOW THE APPROACH SLAB SEAT AND TO TOP OF UTILITY OPENING AS SHOWN (ITEM C1D-1a). CUT, CLEAN AND BEND EXIST. REINFORCING STEEL TO PROVIDE 2" CLEARANCE.
2. THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO DECK RECONSTRUCTION ITEM C32-1a.
3. FOR ADDITIONAL END POST AND BACKWALL MODIFICATION DETAILS SEE SHEET NOS. 18 & 68.
4. CONCRETE FOR BACKWALL RECONSTRUCTION SHALL BE CLASS 'E' CEMENT CONCRETE (f_c=5000 PSI) AND FOR END POSTS AND END POSTS, SHALL BE CLASS 'D' CEMENT CONCRETE (f_c=4500 PSI).
5. AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
6. PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2" BEYOND CONSTRUCTION JOINT AT CL LEWIS TERRACE. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPliced USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE.



SIDEWALK APPROACH DETAIL AT CURB PLATE
SCALE: 1 1/2" = 1'-0"

AS BUILT

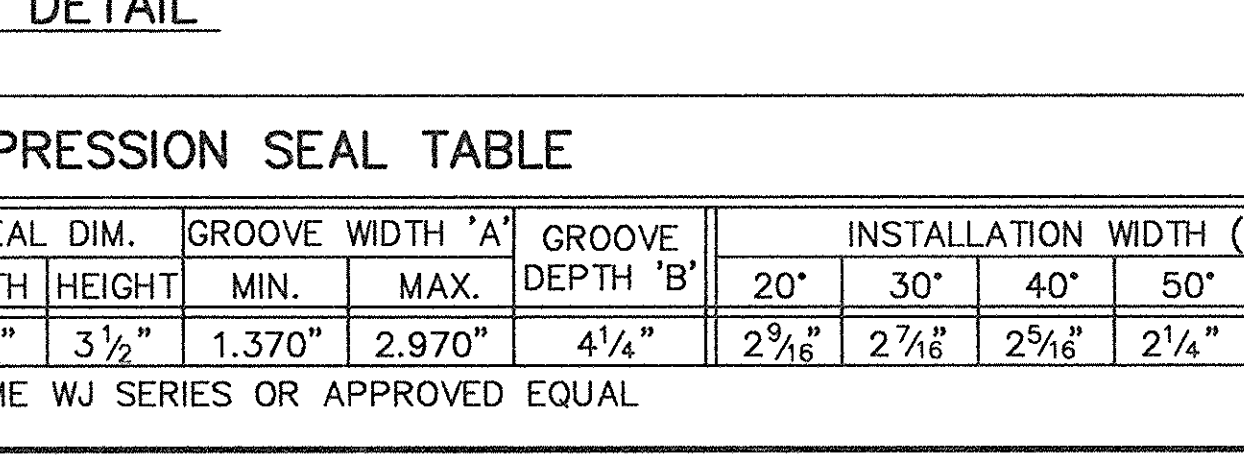
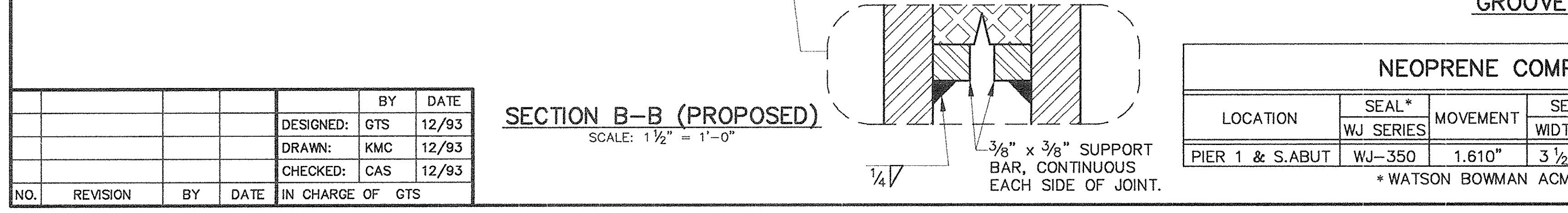
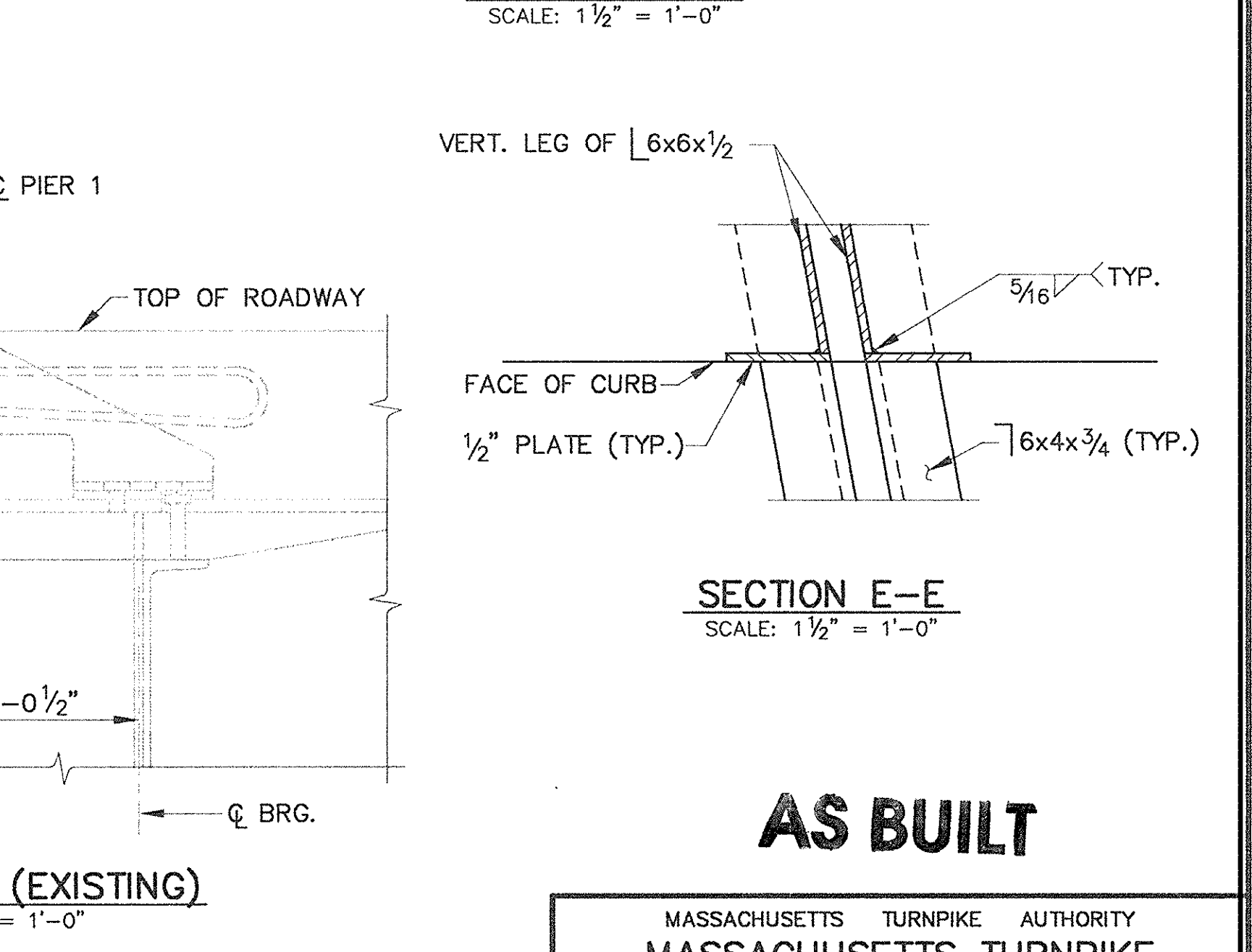
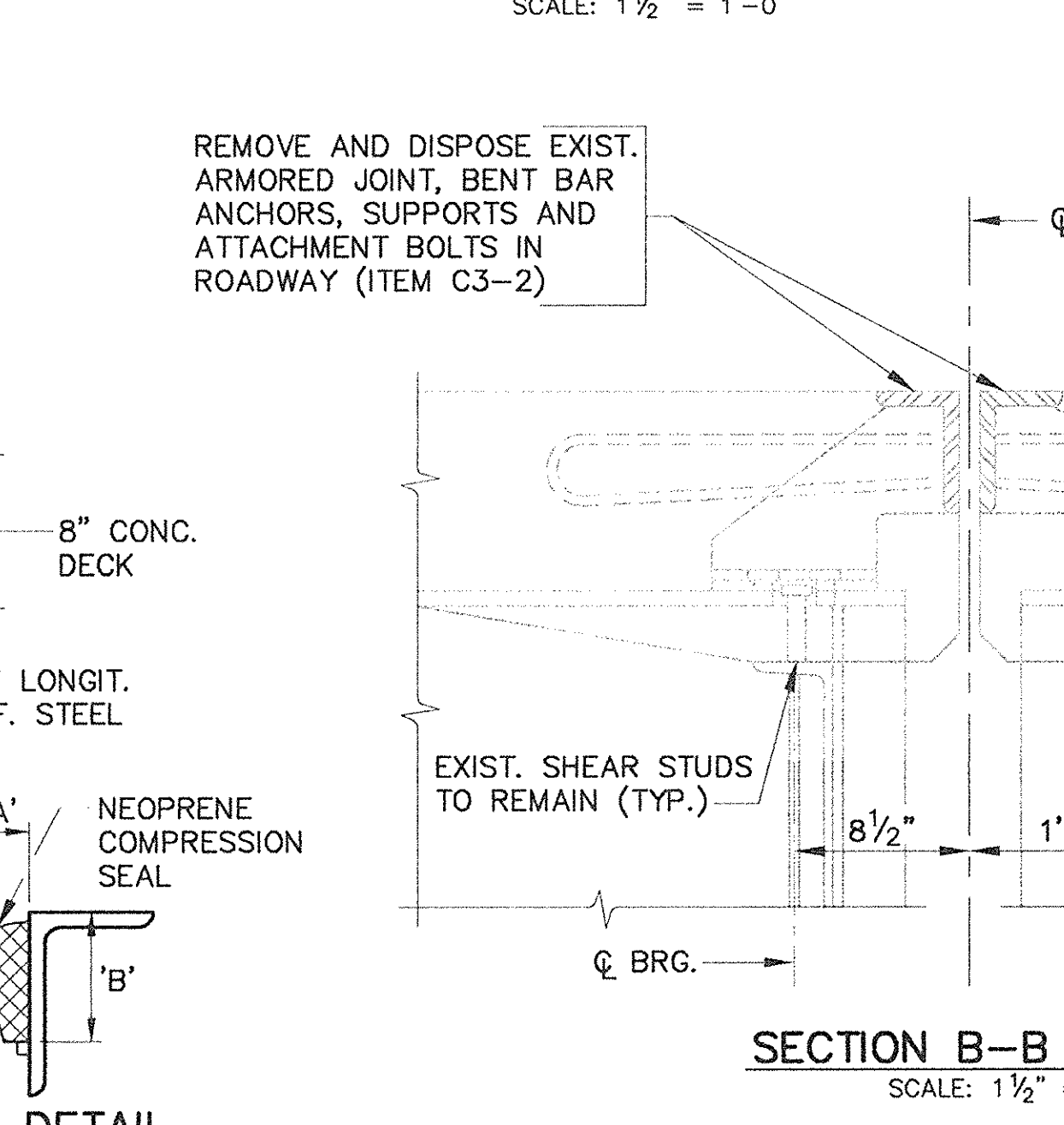
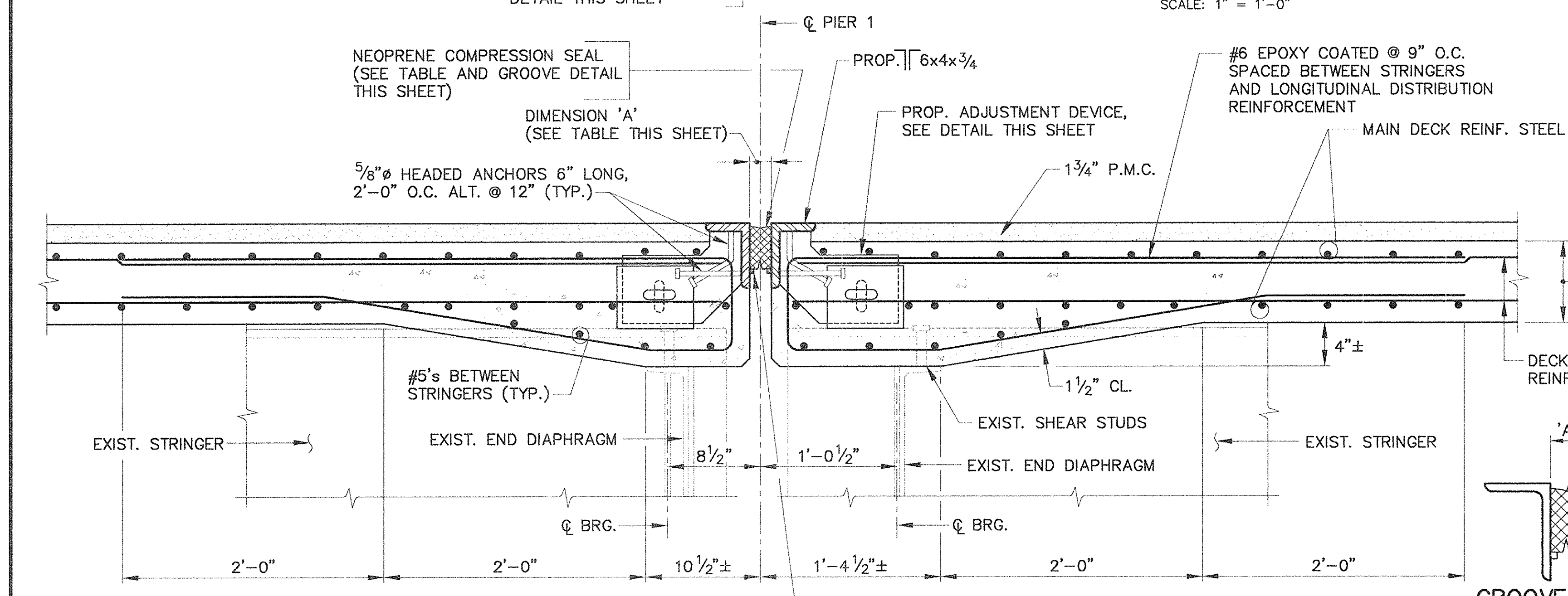
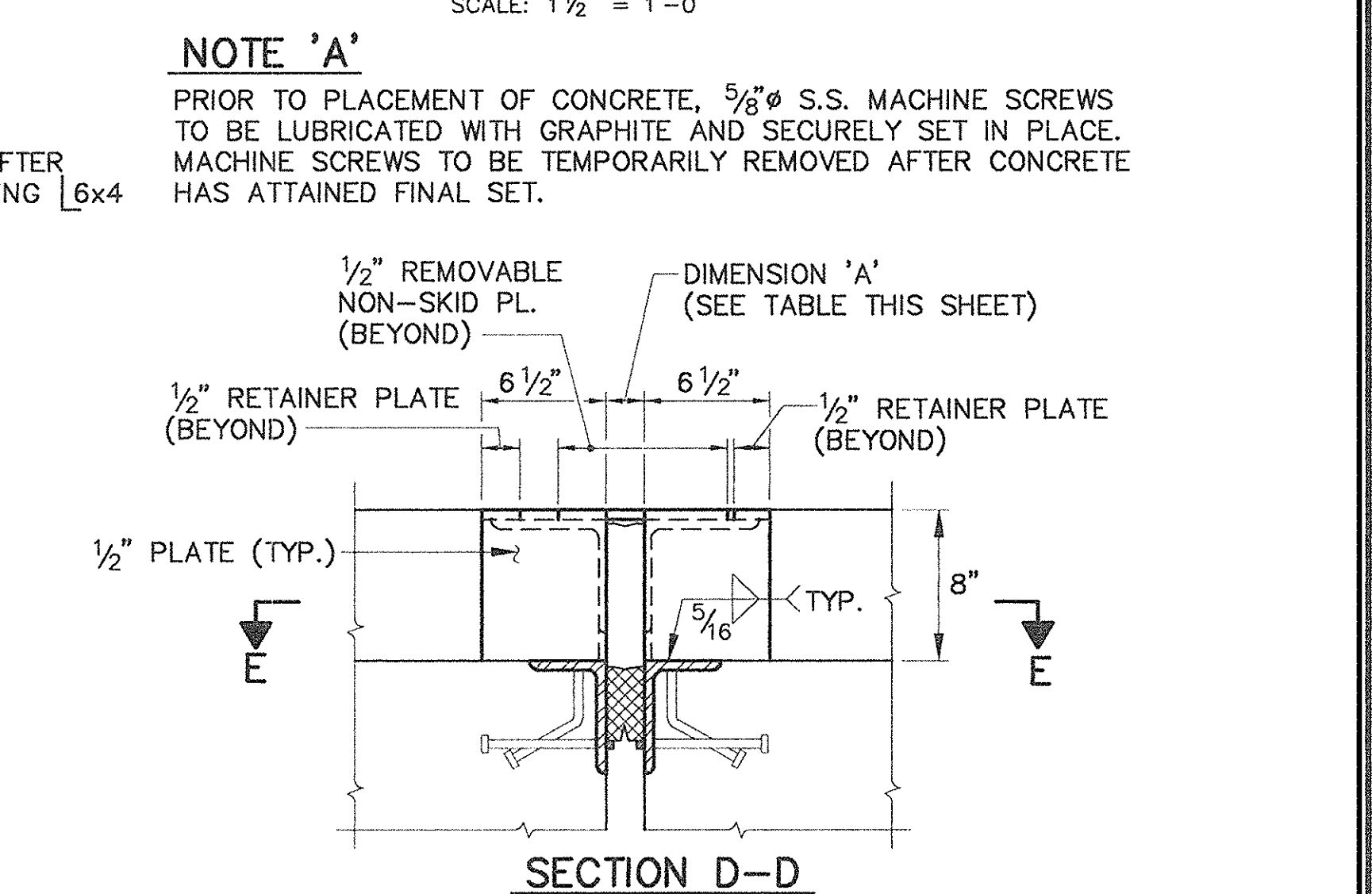
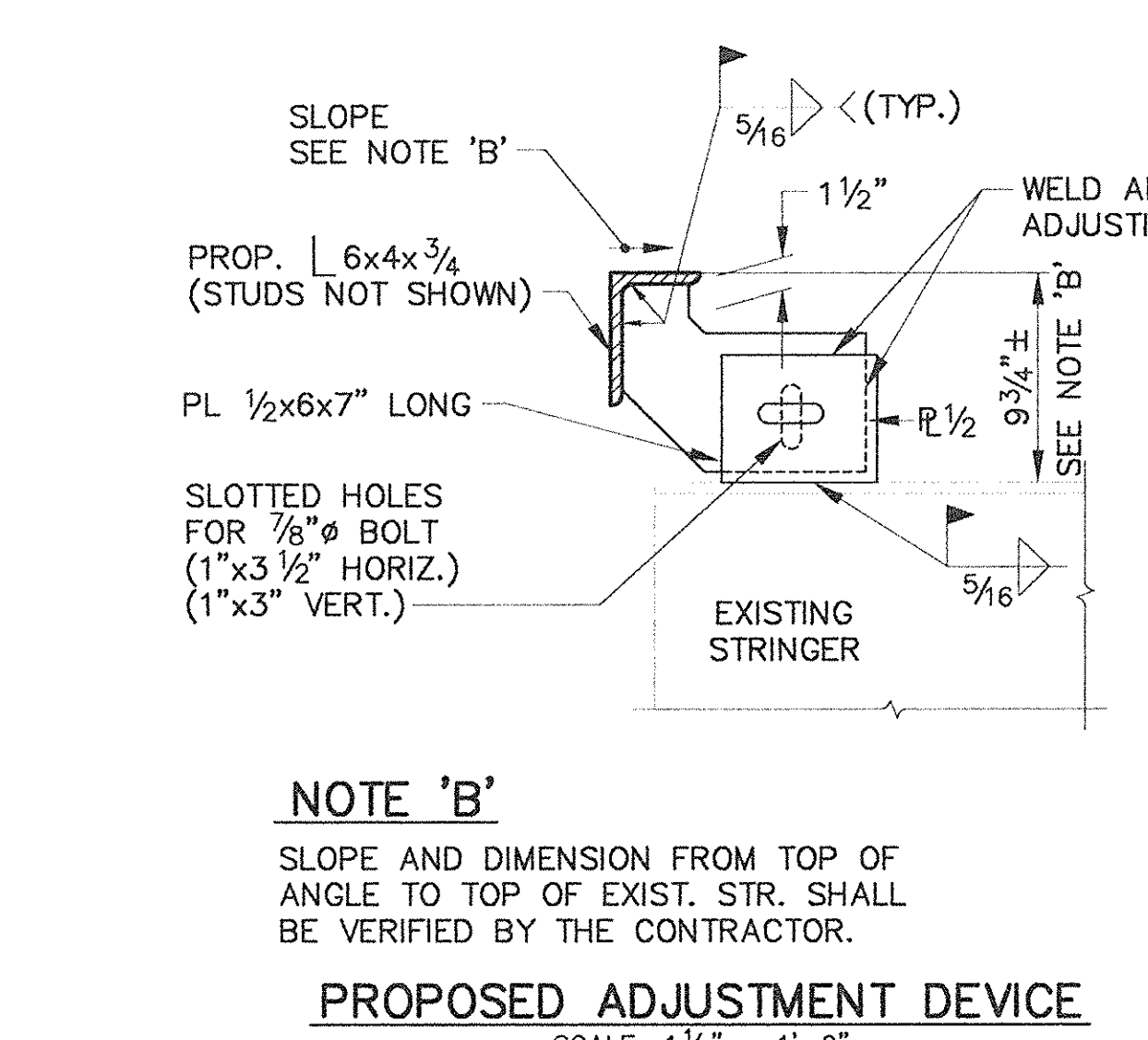
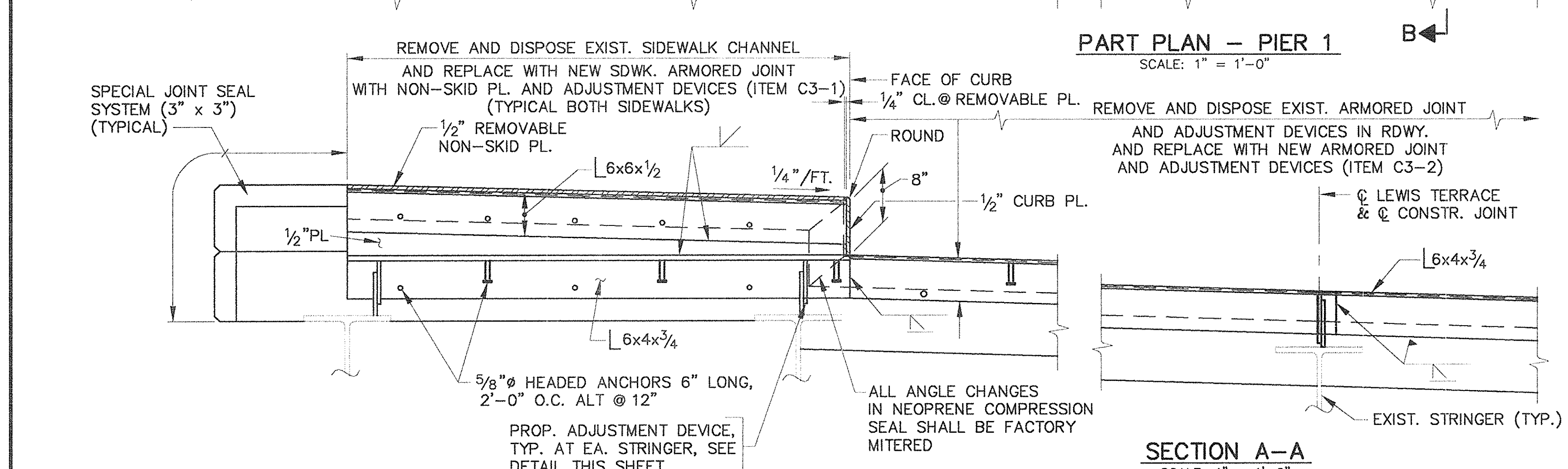
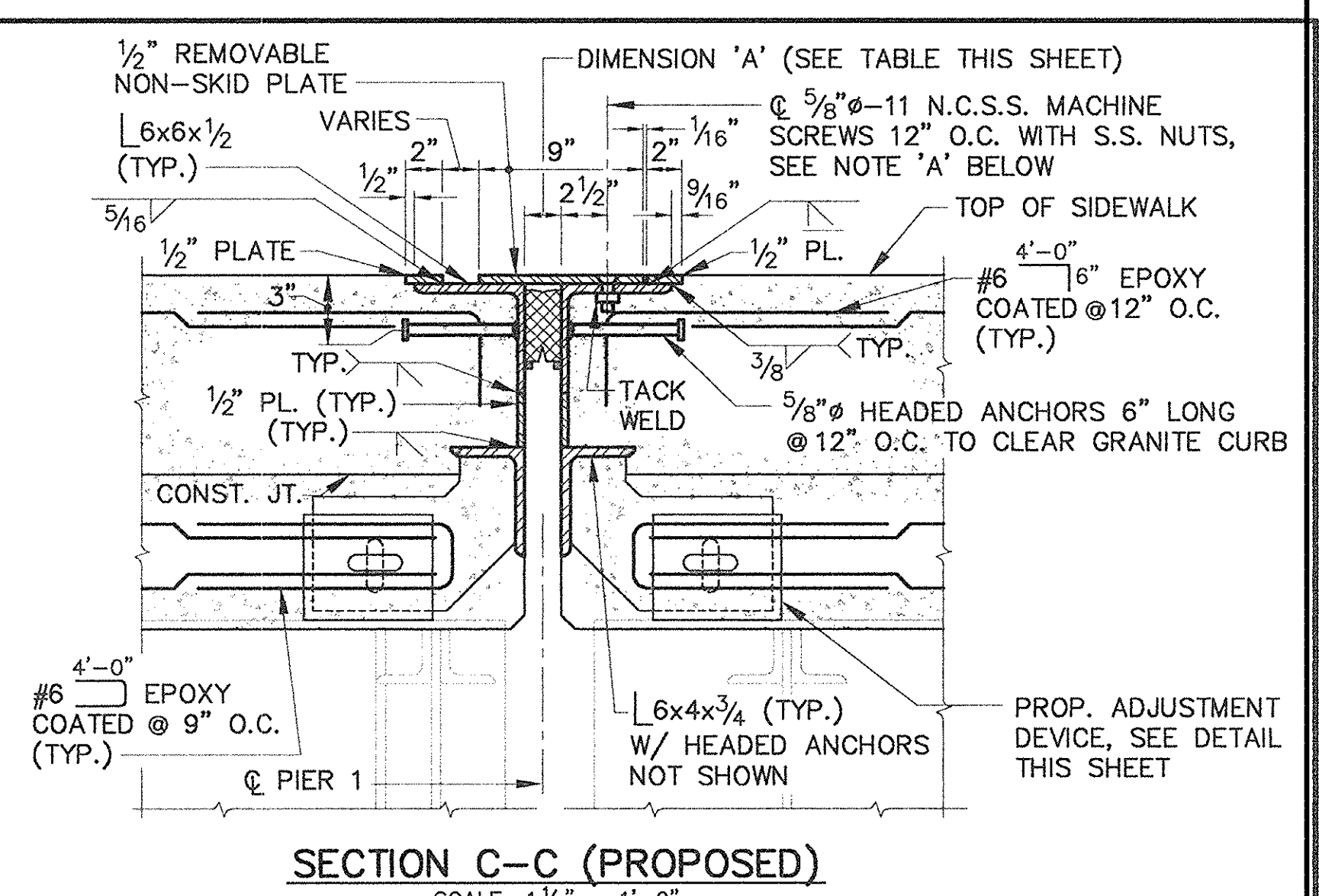
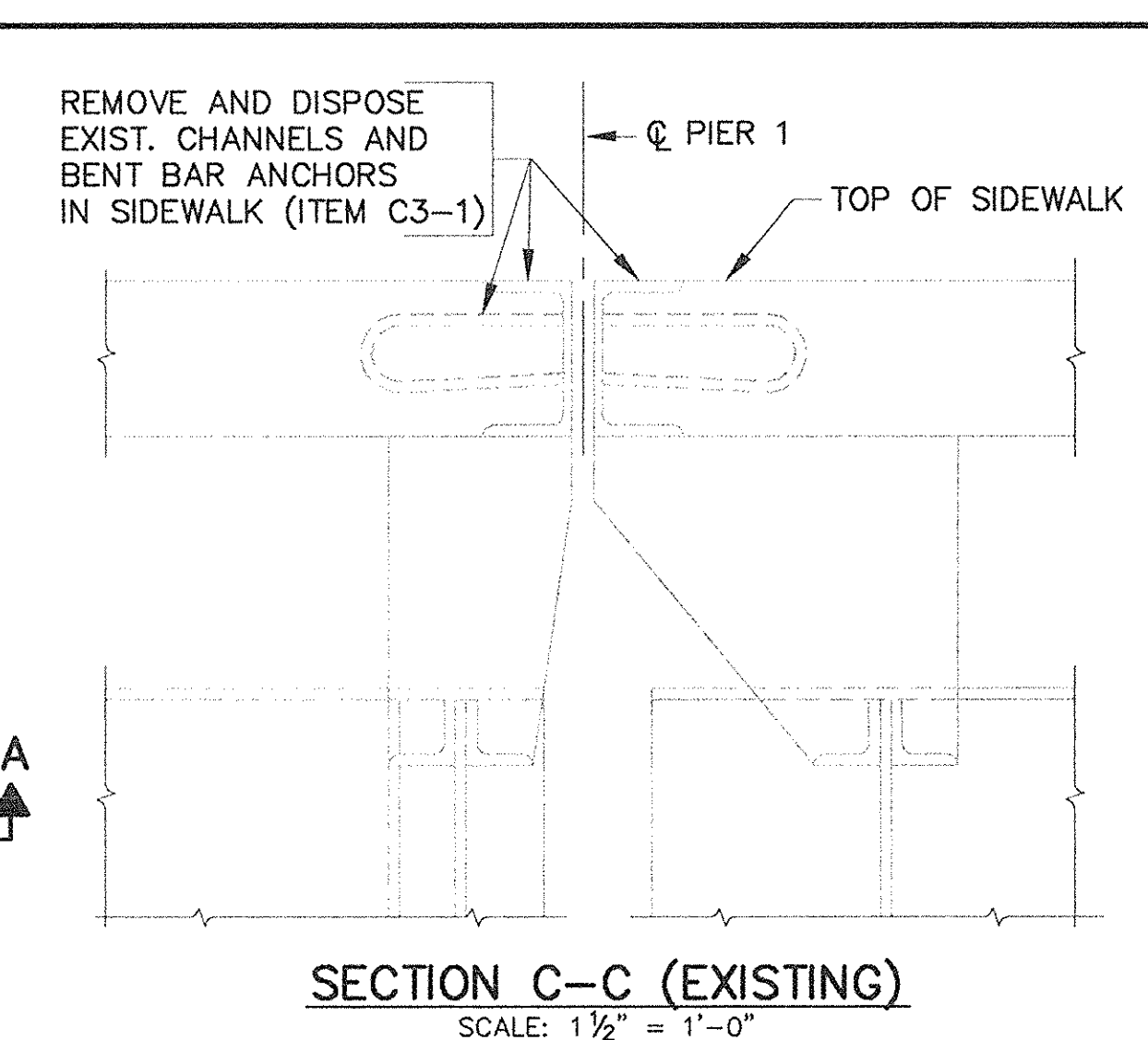
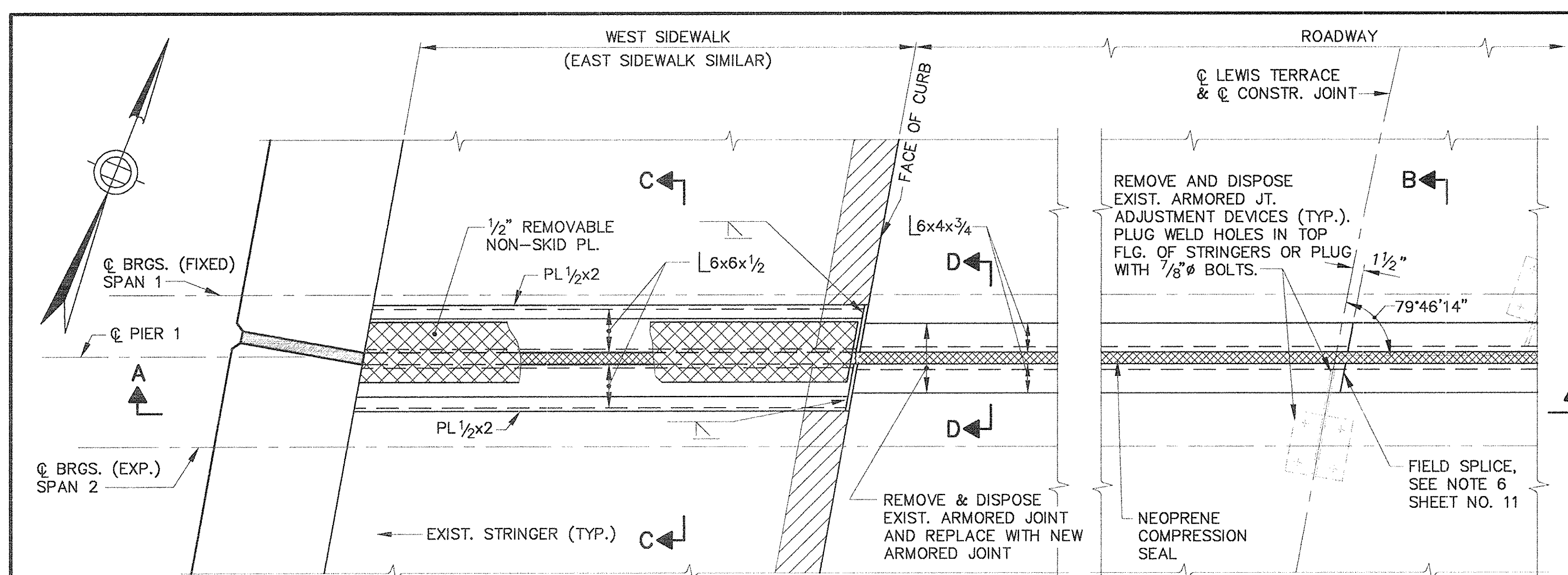
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
JOINT DETAILS AT NORTH ABUTMENT

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
 529 Main Street
 Boston, Massachusetts 02129

Sheet No. **11**

NO.	REVISION	BY	DATE	IN CHARGE OF	BY	DATE
					DESIGNED:	GTS 12/93
					DRAWN:	KMC 12/93
					CHECKED:	FMK 12/93



NEOPRENE COMPRESSION SEAL TABLE																
LOCATION	SEAL* WJ SERIES	MOVEMENT	SEAL DIM.		GROOVE WIDTH 'A'		GROOVE DEPTH 'B'	INSTALLATION WIDTH ('A') INCHES AT TEMPERATURE (F°)								
			WIDTH	HEIGHT	MIN.	MAX.		20°	30°	40°	50°	60°	70°	80°	90°	100°
PIER 1 & S.ABUT	WJ-350	1.610"	3 1/2"	3 1/2"	1.370"	2.970"	4 1/4"	2 9/16"	2 1/8"	2 3/16"	2 1/4"	2 1/8"	2"	1 7/8"	1 3/4"	1 1/16"

* WATSON BOWMAN ACME WJ SERIES OR APPROVED EQUAL

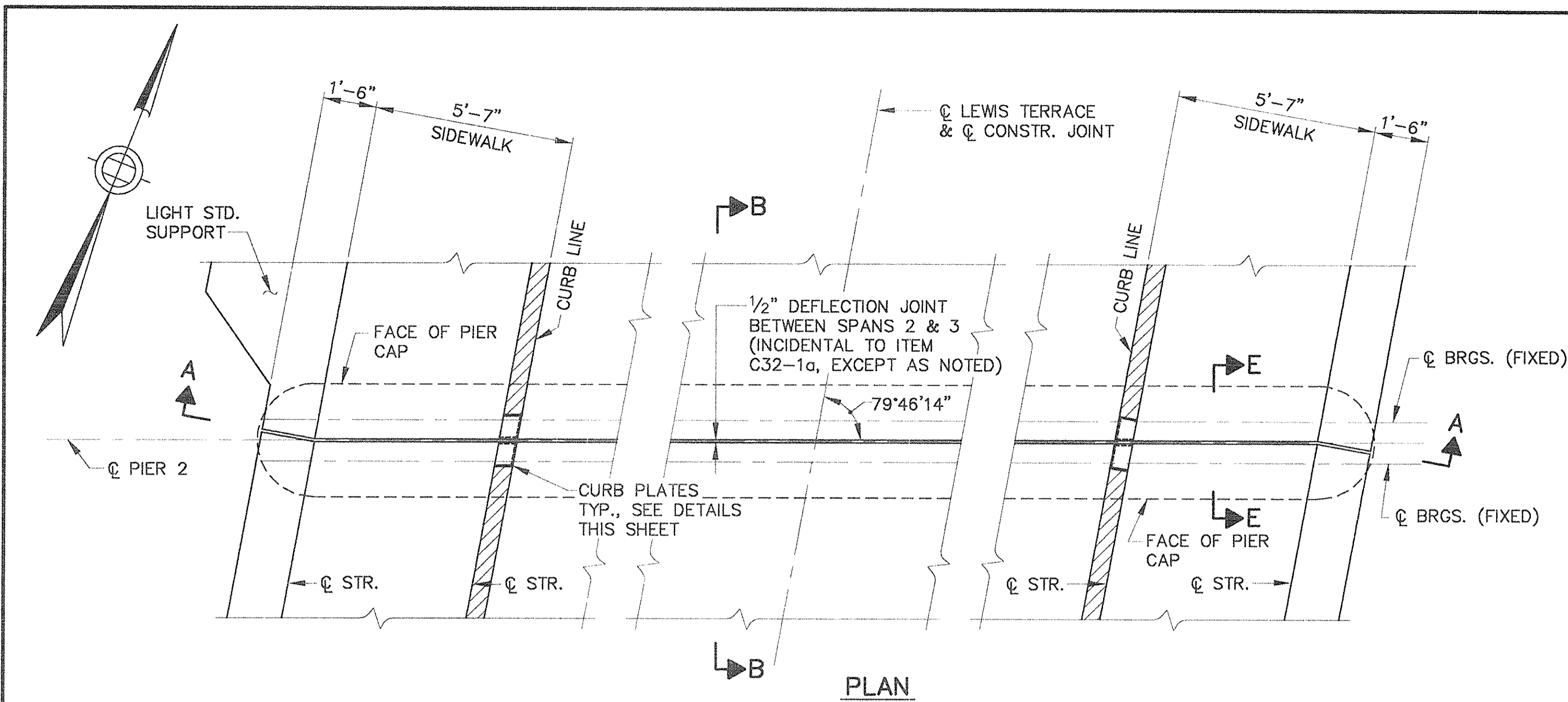
DESIGNED:	GTS	DATE:	12/93
DRAWN:	KMC	DATE:	12/93
CHECKED:	CAS	DATE:	12/93
NO.	REVISION	BY	DATE

AS BUILT

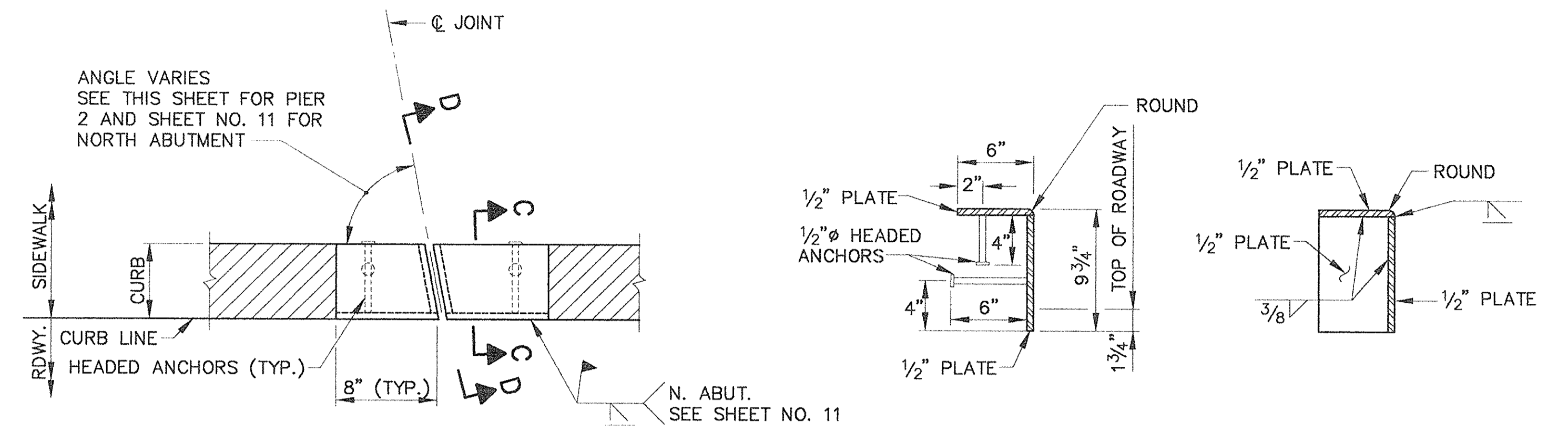
MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
 JOINT DETAILS AT
 PIER 1

Scale: AS NOTED Contract No. 521-024

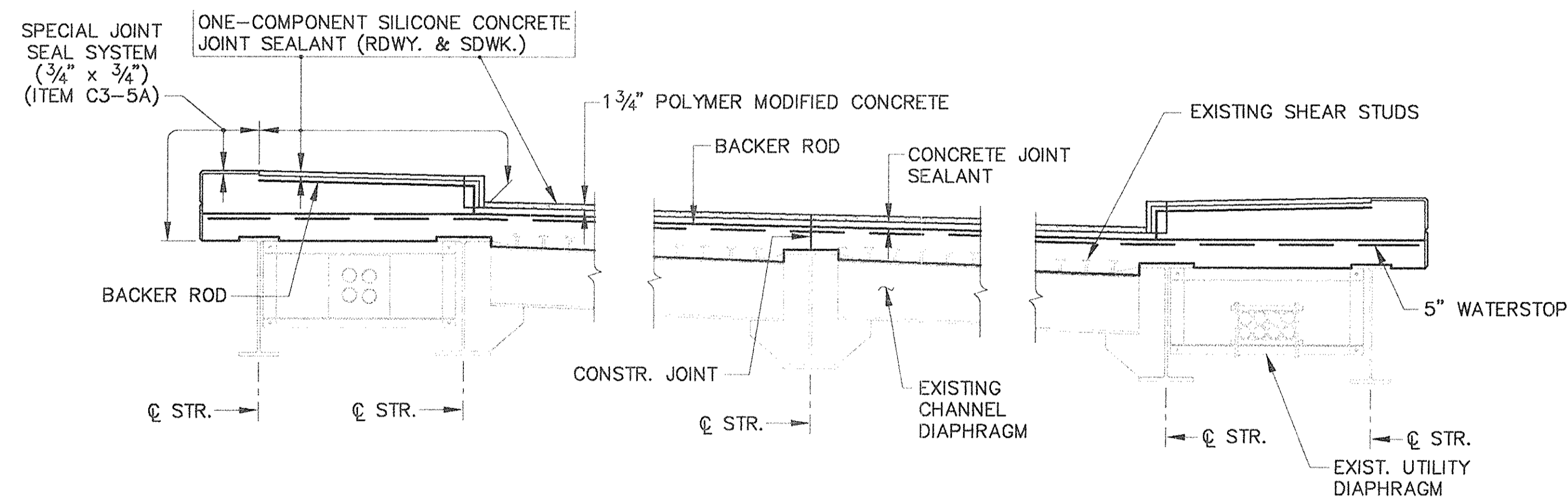
EDWARDS AND KELCEY, INC. Sheet No. 12



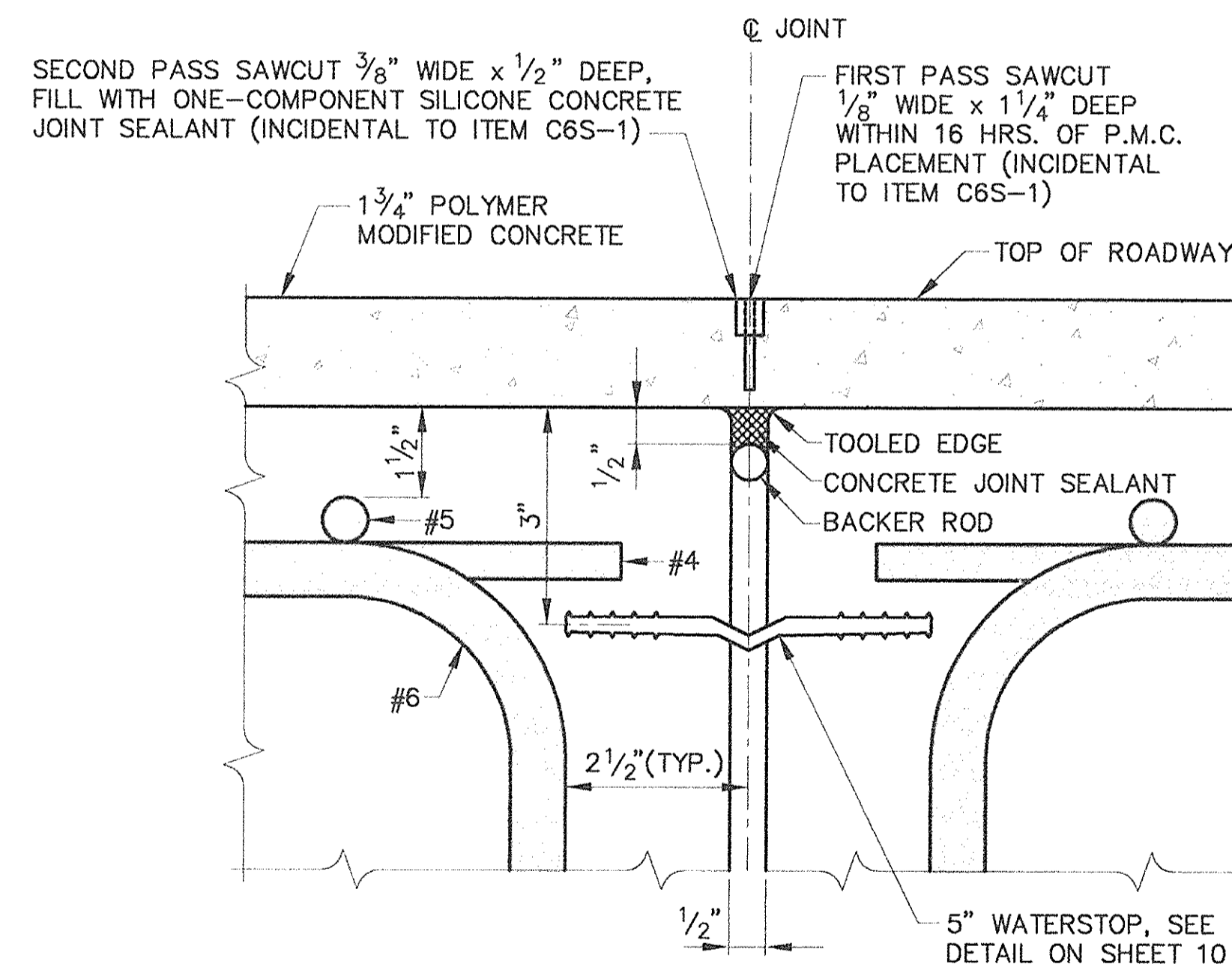
DEFLECTION JOINT OVER PIER 2
SCALE: 3/8" = 1'-0"



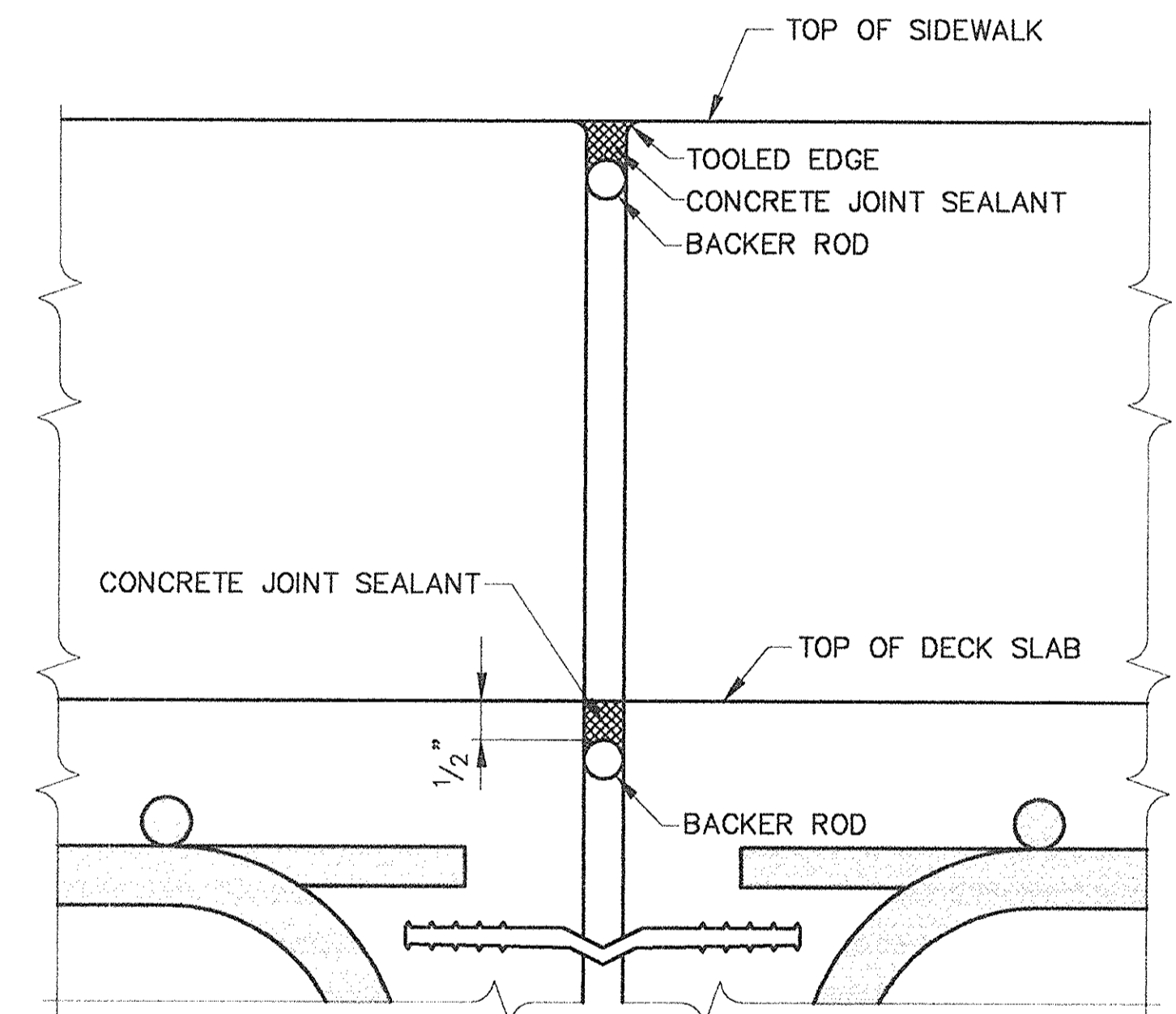
PROPOSED CURB PLATE DETAILS (INCIDENTAL TO ITEM C32-1a)
SCALE: 1 1/2" = 1'-0"



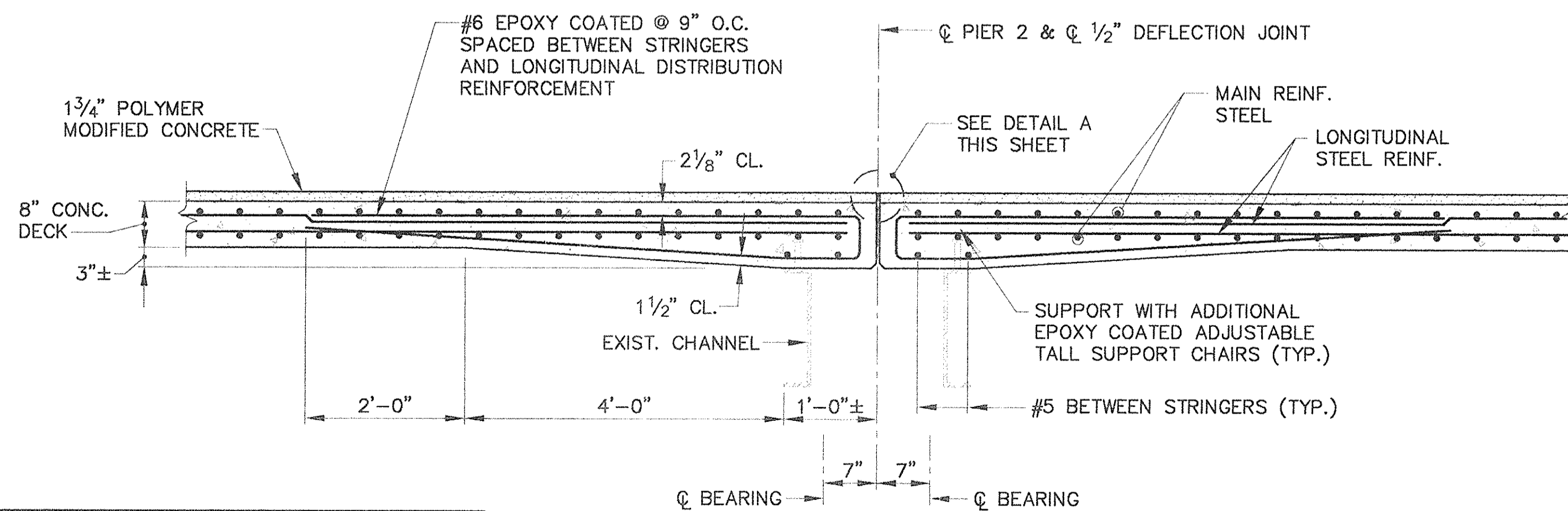
SECTION A-A
SCALE: 3/8" = 1'-0"



DETAIL A
NOT TO SCALE



SECTION E-E
NOT TO SCALE



SECTION B-B
SCALE: 3/4" = 1'-0"

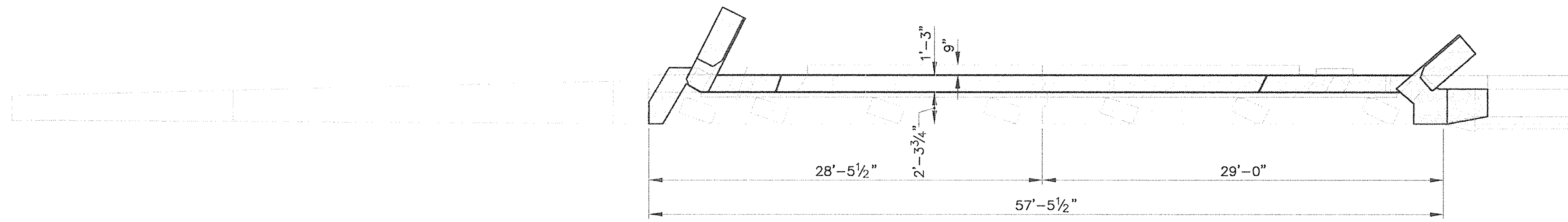
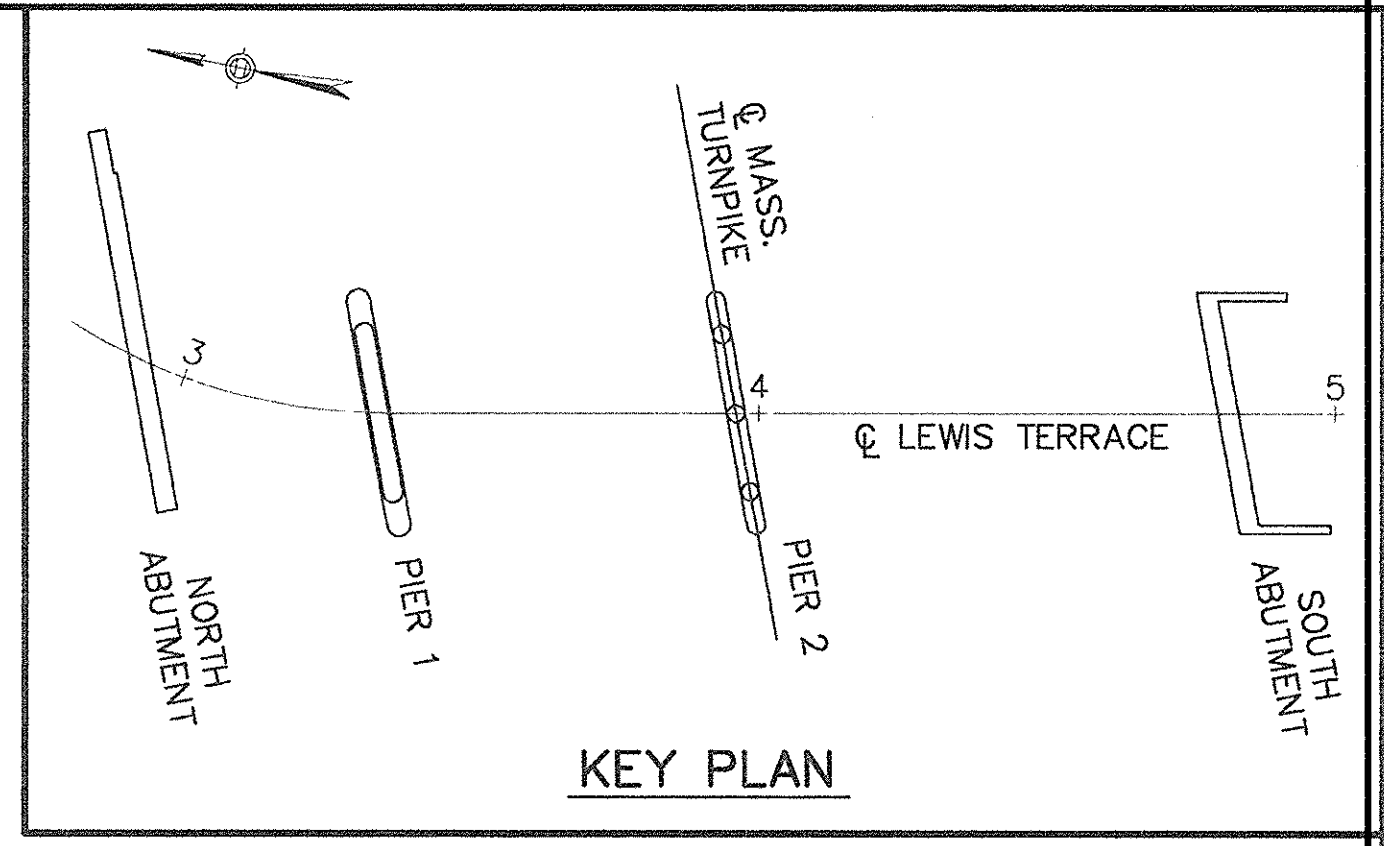
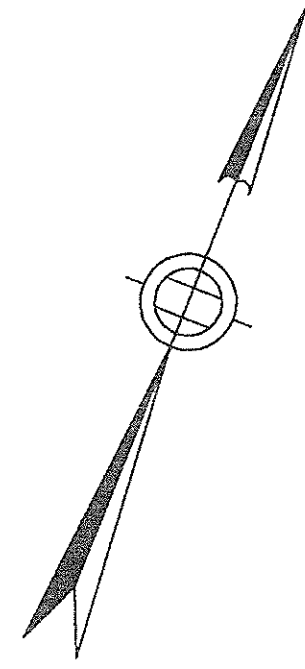
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO. S-25)
JOINT DETAILS AT PIER 2

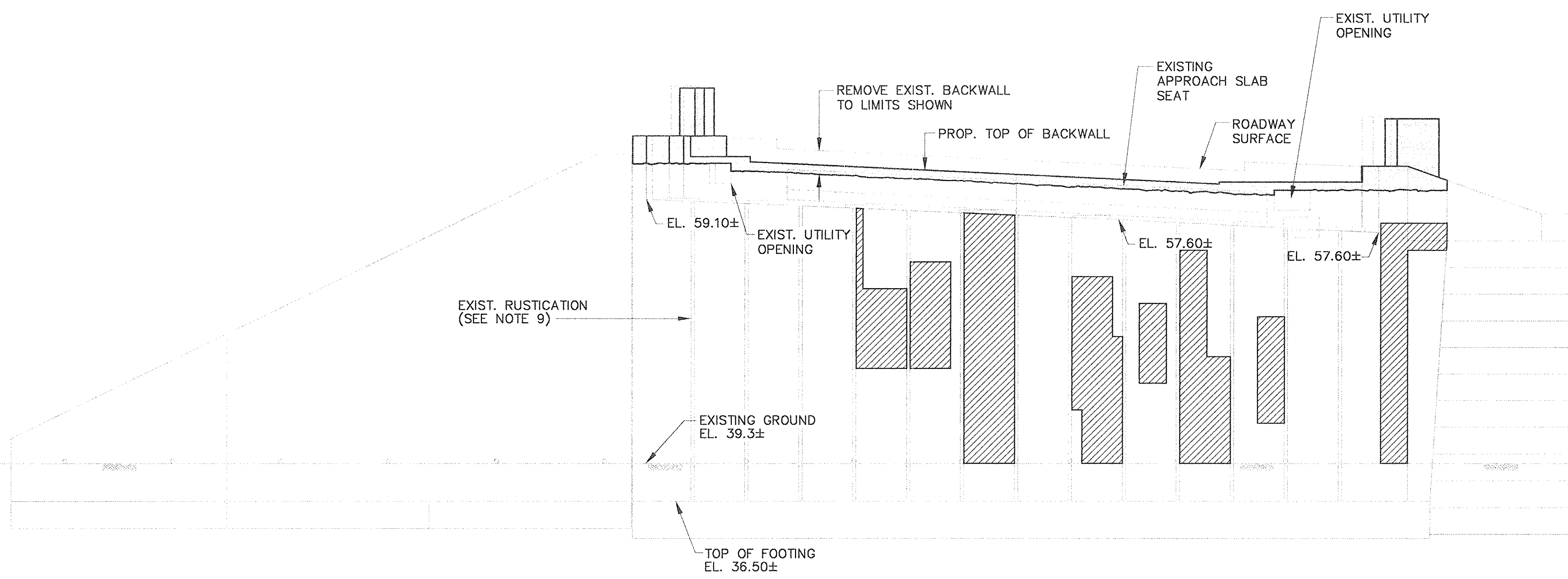
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 13
The Schreffl Center
529 Main Street
Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: GTS	12/93	
		DRAWN: KMC	12/93	
		CHECKED: CAS	12/93	
		BY	DATE	

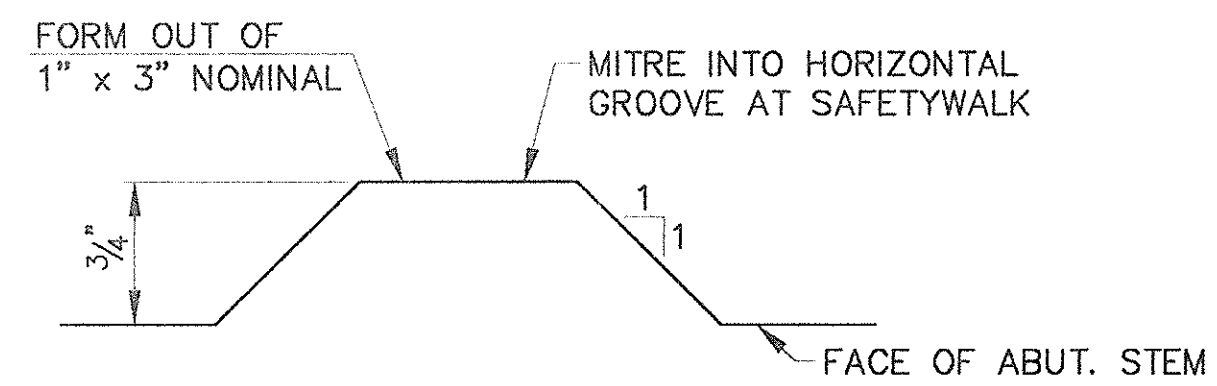


PLAN



ELEVATION

NORTH ABUTMENT (LOOKING NORTH)



RUSTICATION DETAIL
(FROM "AS-BUILT" DRAWINGS)
SCALE: FULL SIZE

NOTE:
FOR ADDITIONAL DETAILS AT AREAS OF RECONSTRUCTION, SEE SHEET NOS. 11, 18 & 68.

LEGEND:

- APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
- AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1a AS APPLICABLE)

REPAIR AREA (NORTH ABUTMENT) = 290 S.F.±

- NOTES:**
1. AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
 2. ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 3. CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER. FOR DETAIL SEE SHEET NO. 16.
 4. FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEET 67.
 5. SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
 6. ELEVATIONS AND DIMENSIONS ARE TAKEN FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
 7. THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
 8. ALL PIER CAPS, BEAM SEATS, AND DRAINAGE TROUGHS SHALL BE CLEARED OF DEBRIS (ROCKS, STICKS, LEAVES AND TRASH) AND DISPOSED OF BY CONTRACTOR.
 9. THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE. SEE DETAIL THIS SHEET.
 10. IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).

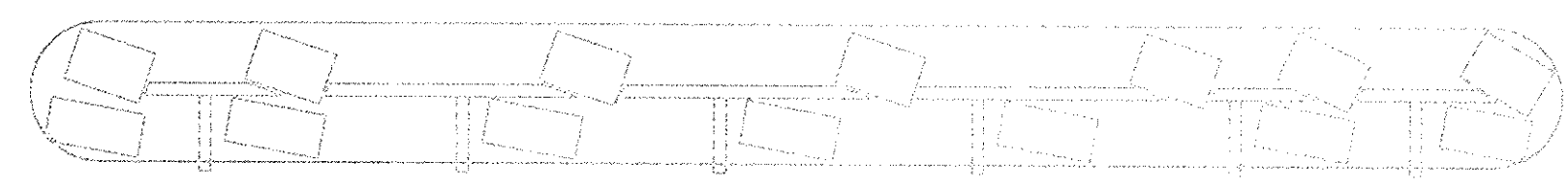
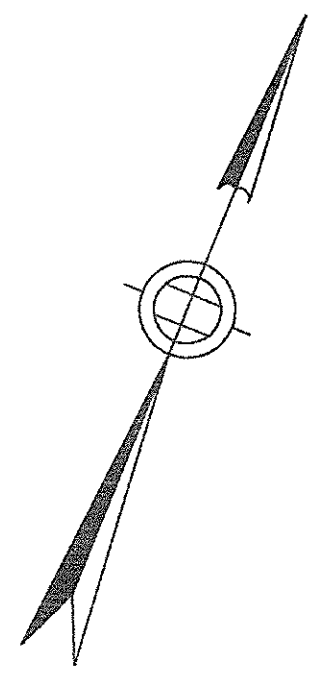
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: GTS	12/93	BY
		DRAWN: KMC	12/93	DATE
		CHECKED: FMK	12/93	IN CHARGE OF GTS

AS BUILT

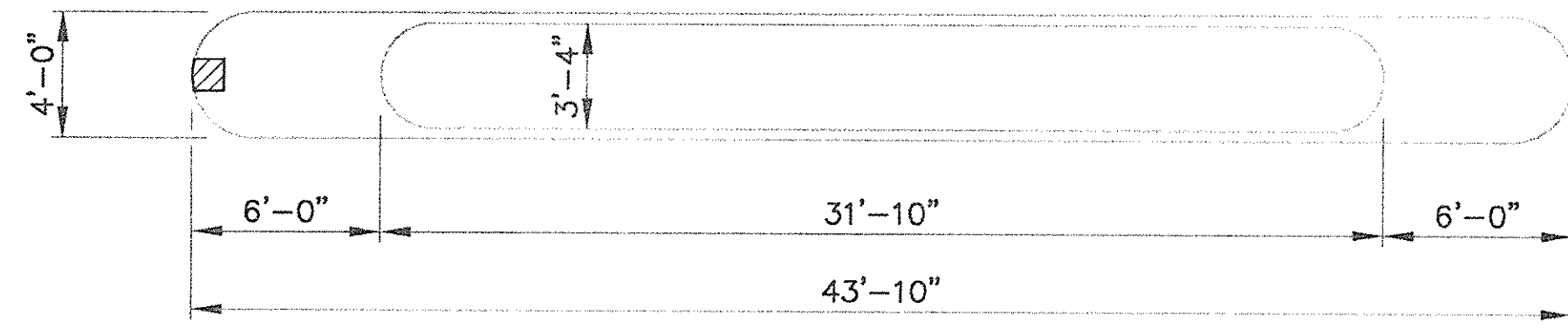
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
SUBSTRUCTURE CONCRETE REPAIRS - NORTH ABUTMENT

Scale: NOT TO SCALE Contract No. 521-024

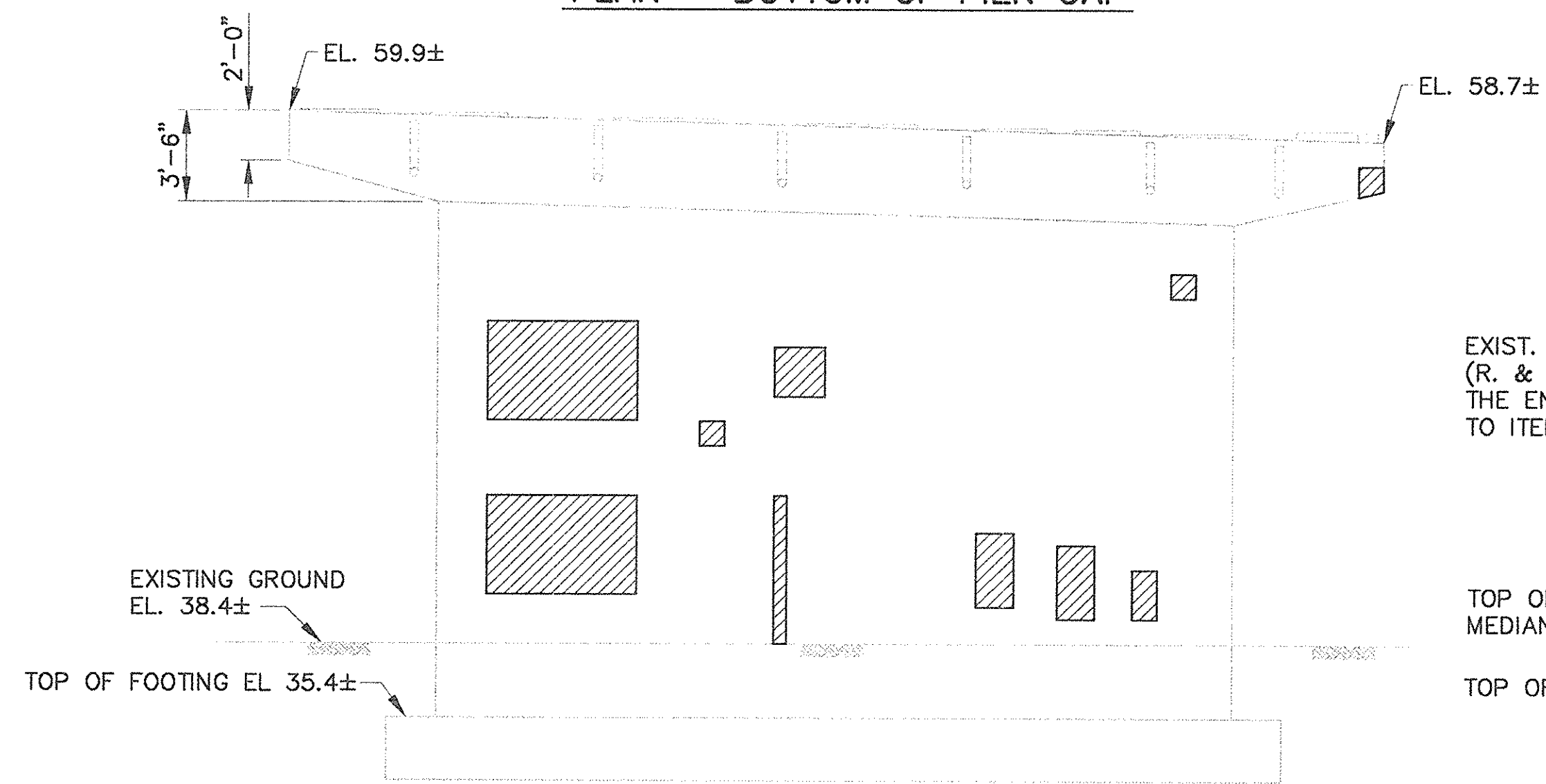
EDWARDS AND KELCEY, INC. Sheet No. 15
 The Schwett Center
 529 Main Street
 Boston, Massachusetts 02129



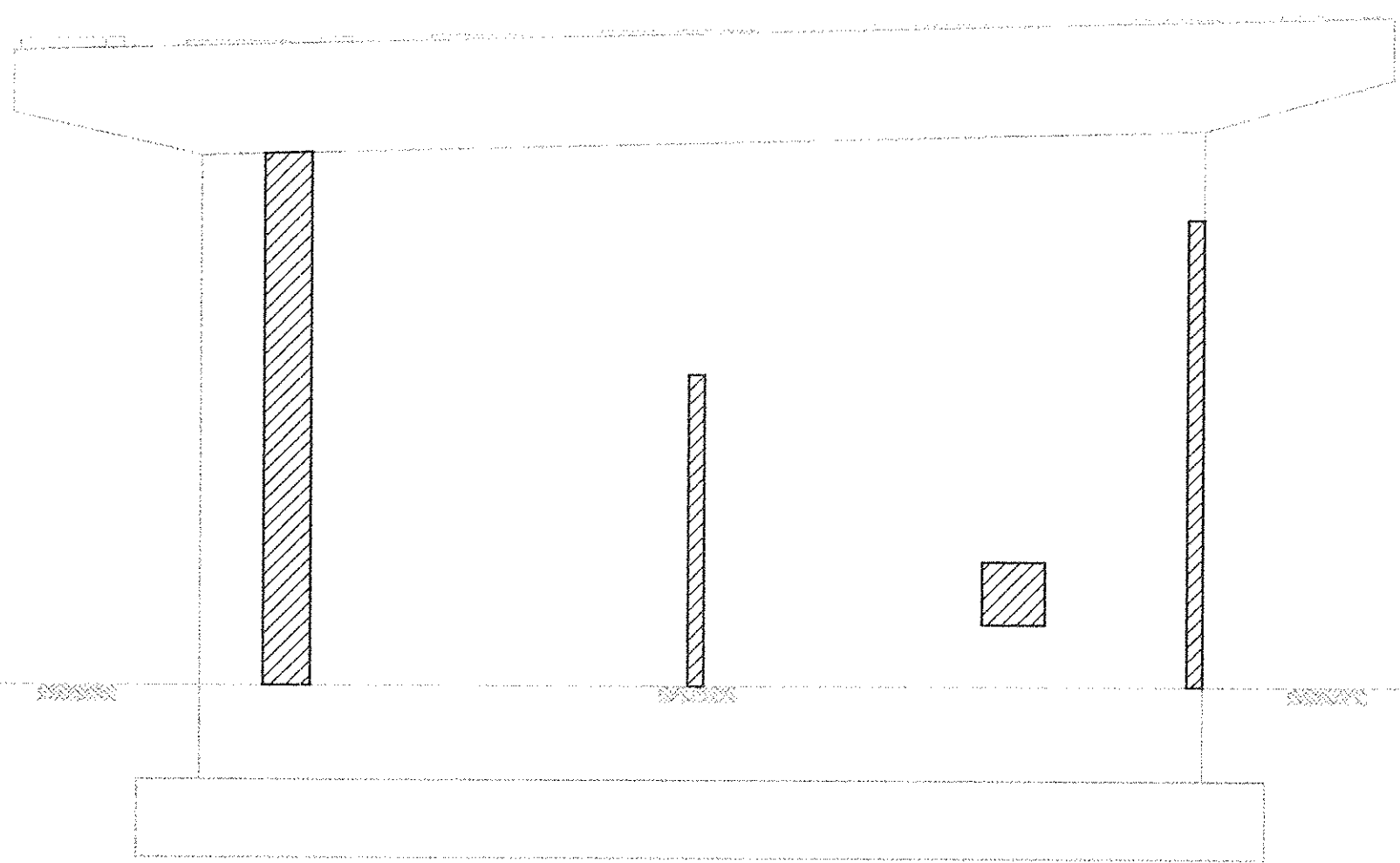
PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP

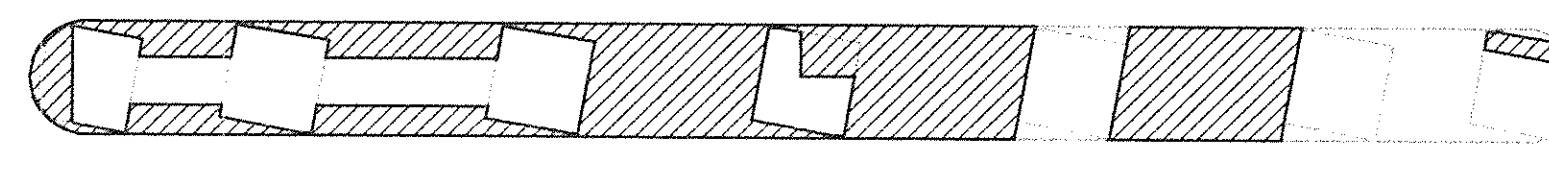


SOUTH ELEVATION (TURNPIKE SIDE)

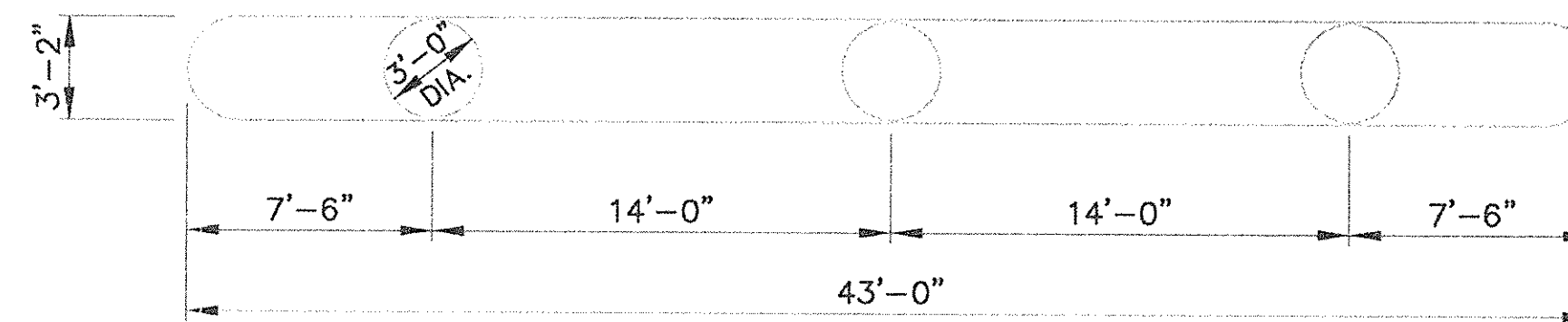


NORTH ELEVATION (RAILROAD SIDE)

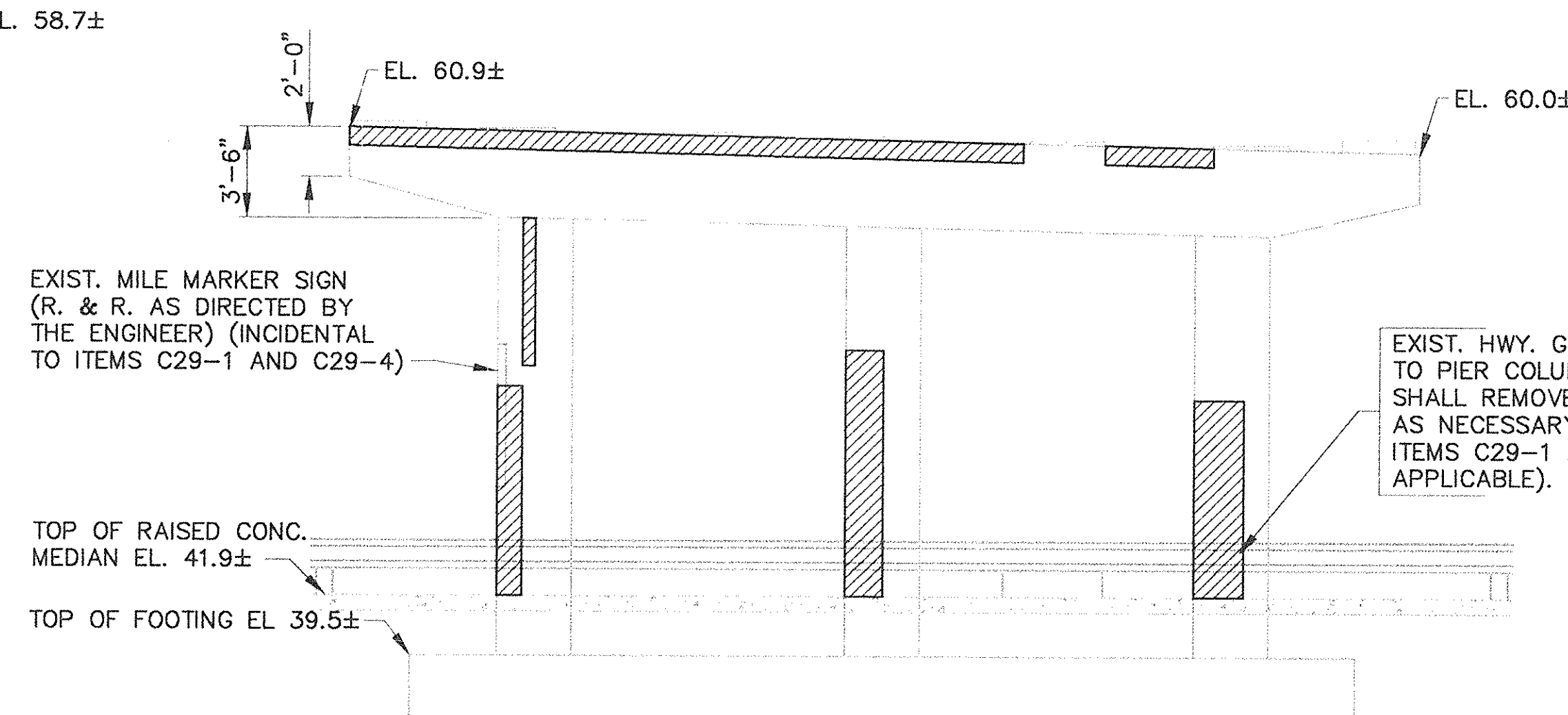
PIER 1



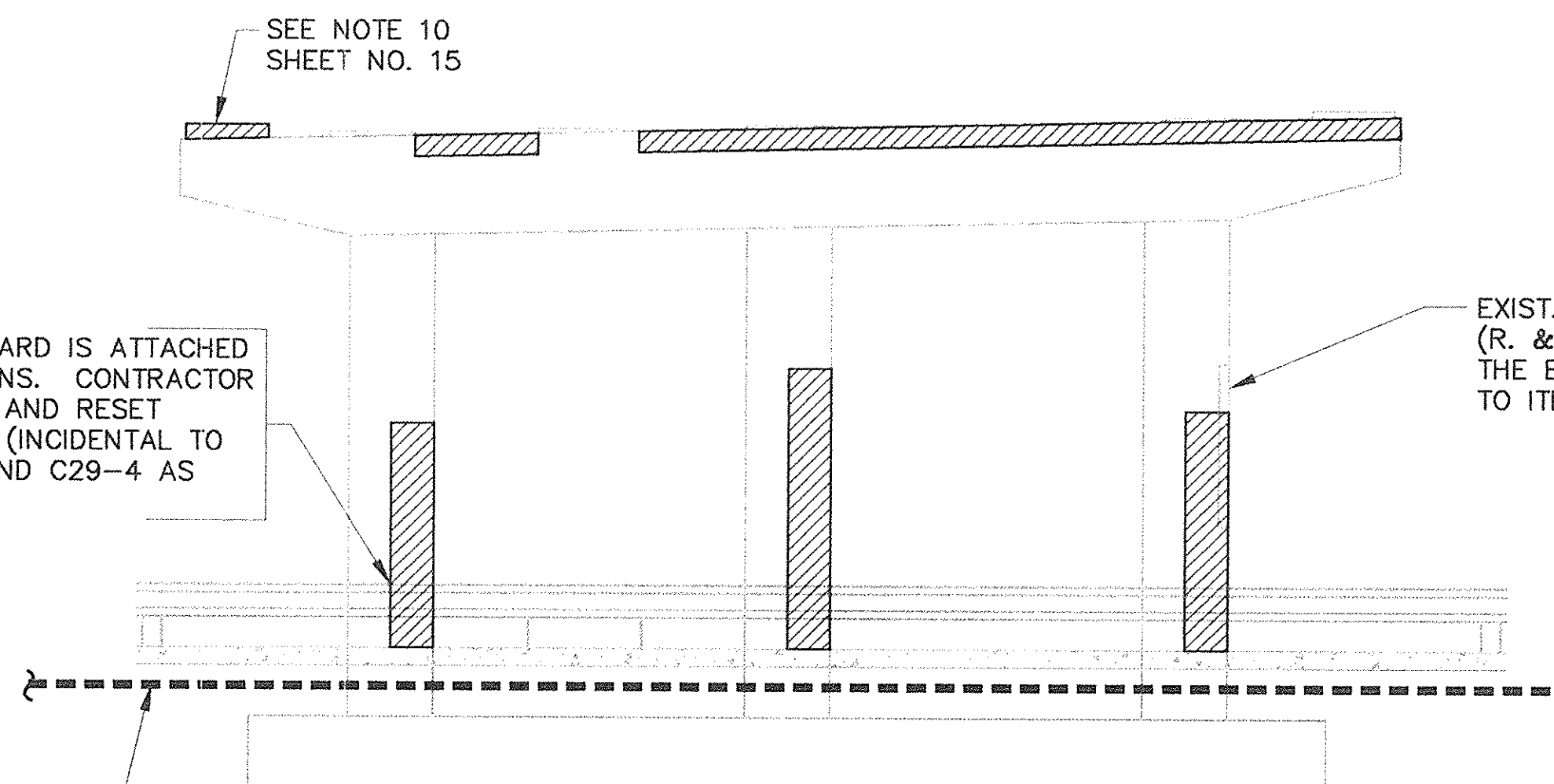
PLAN - TOP OF PIER CAP



PLAN - BOTTOM OF PIER CAP



SOUTH ELEVATION (TURNPIKE EAST BOUND SIDE)



NORTH ELEVATION (TURNPIKE WEST BOUND SIDE)

PIER 2

REMOVE AND REPLACE RAISED MEDIAN CONCRETE AT PIER 2 AS DIRECTED BY THE ENGINEER. LIMITS LONGITUDINALLY SHALL BE SAWCUT 1/2" DEEP FROM BACK OF CURB TO FACE OF PIER PRIOR TO CONCRETE REMOVAL.

EXISTING GRADE AT PIER/ABUT. OR TOP OF RAISED MEDIAN AT PIER 2

EXISTING GRANITE CURB AT RAISED MEDIAN (PIER 2)

TOP OF RDWY.

PROP. EPOXY COATED 4x4-W2.9xW2.9 WWF (LAP 12" WITH EXIST.)

PROP. GRAVEL SUB-BASE (INCIDENTAL)

PROP. 4" CLASS 'E' CEM CONC. WALK AT PIER 2 ONLY

FACE OF PIER/ABUT.

4" MIN. LIMIT OF SUBSTR. REPAIR

DETAIL AT SUBSTRUCTURE REPAIRS BELOW GRADE

(INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE)

SCALE: 3/4" = 1'-0"

EXIST. HWY. GUARD IS ATTACHED TO PIER COLUMNS. CONTRACTOR SHALL REMOVE AND RESET AS NECESSARY (INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE).

EXIST. MILE MARKER SIGN (R. & R. AS DIRECTED BY THE ENGINEER) (INCIDENTAL TO ITEMS C29-1 AND C29-4)

TOP OF RAISED CONC. MEDIAN EL. 41.9±

TOP OF FOOTING EL. 39.5±

LEGEND:

- APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

TOTAL REPAIR AREA FOR PIERS 1 & 2 = 320 S.F.±

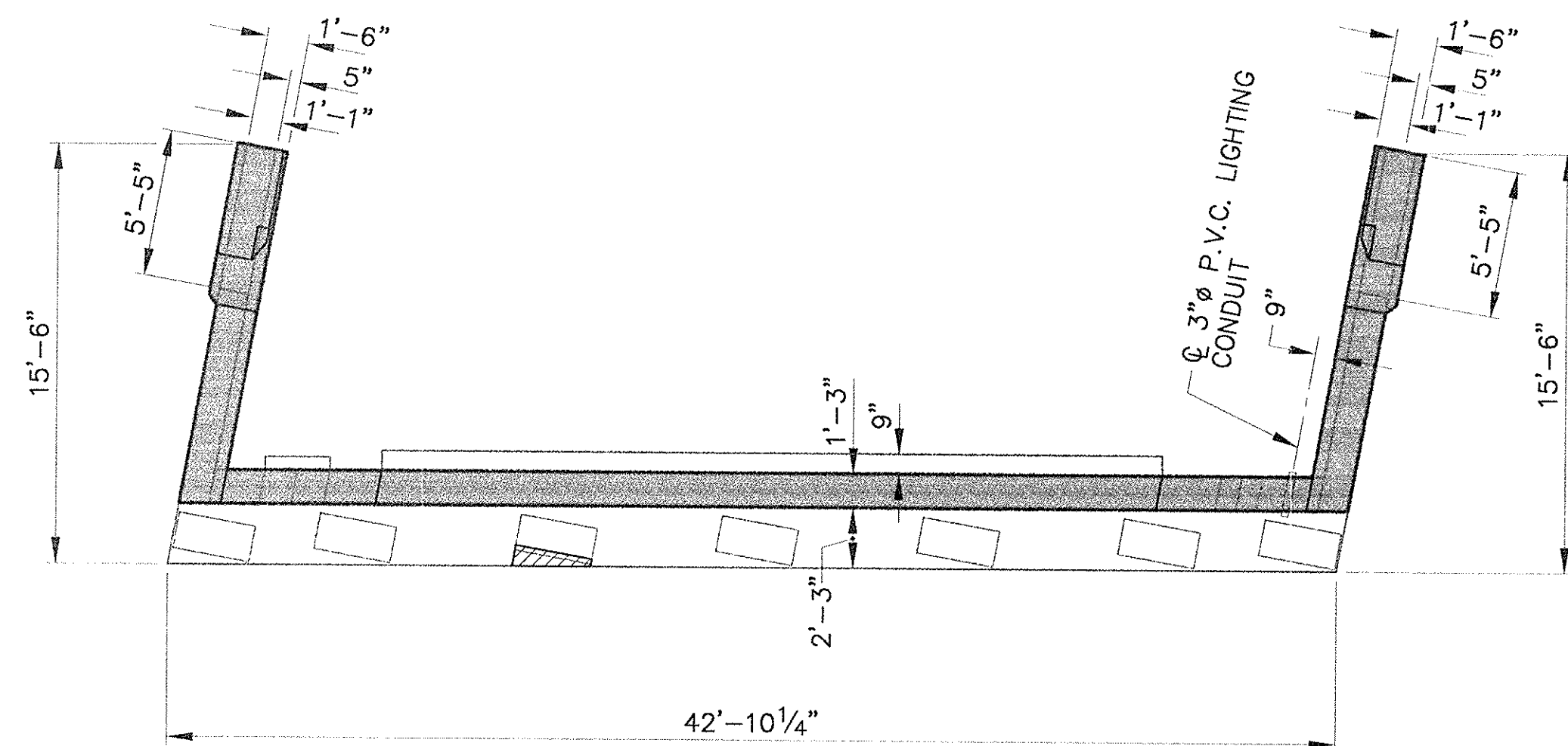
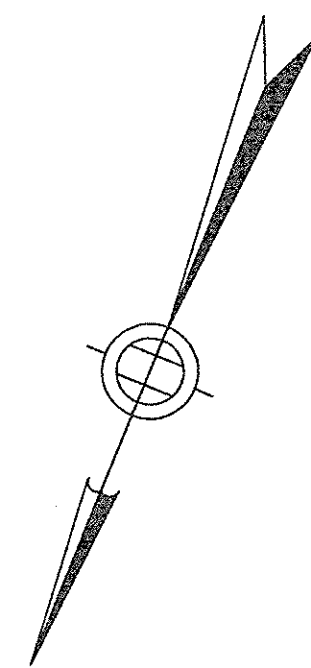
NOTES:

FOR NOTES, SEE SHEET 15.

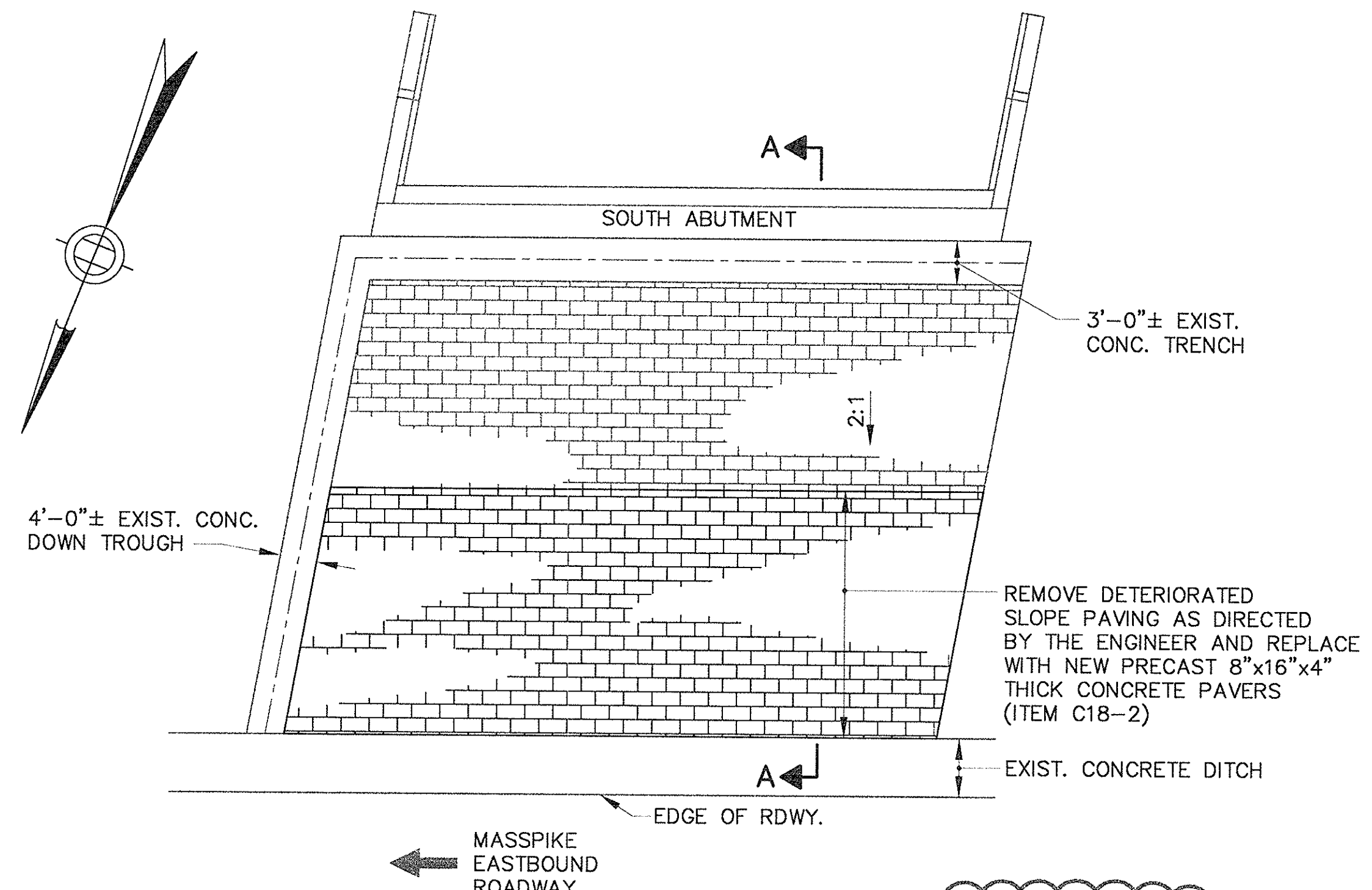
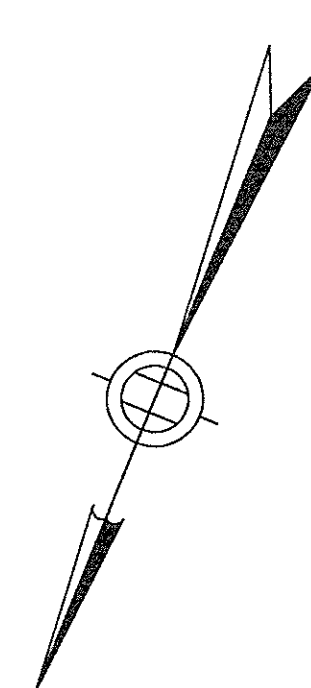
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25)	
SUBSTRUCTURE CONCRETE REPAIRS - PIERS 1 & 2	
Scale: NOT TO SCALE	Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 16	

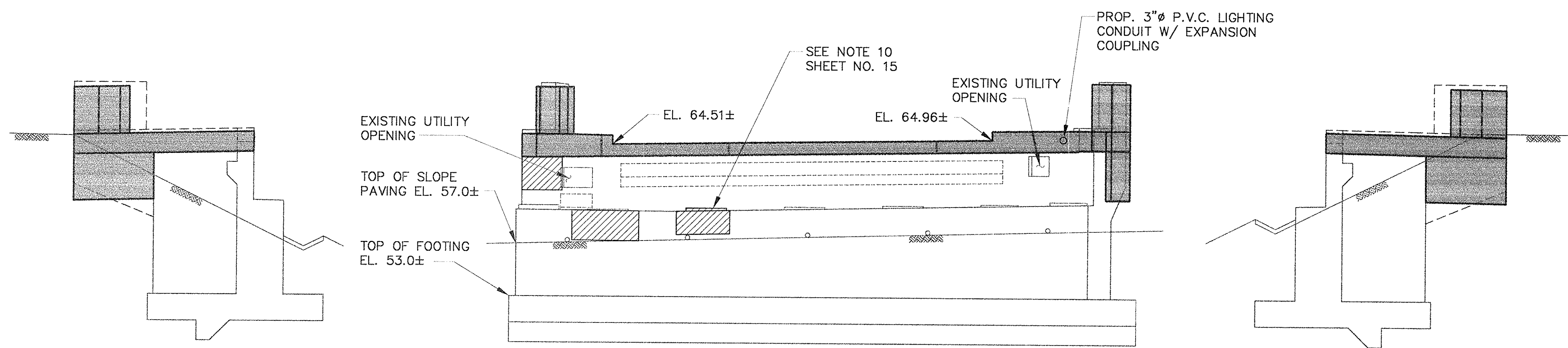
NO.	REVISION	BY	DATE	IN CHARGE OF	DATE
		DESIGNED:	GTS		12/93
		DRAWN:	KMC		12/93
		CHECKED:	FMK		12/93



PLAN

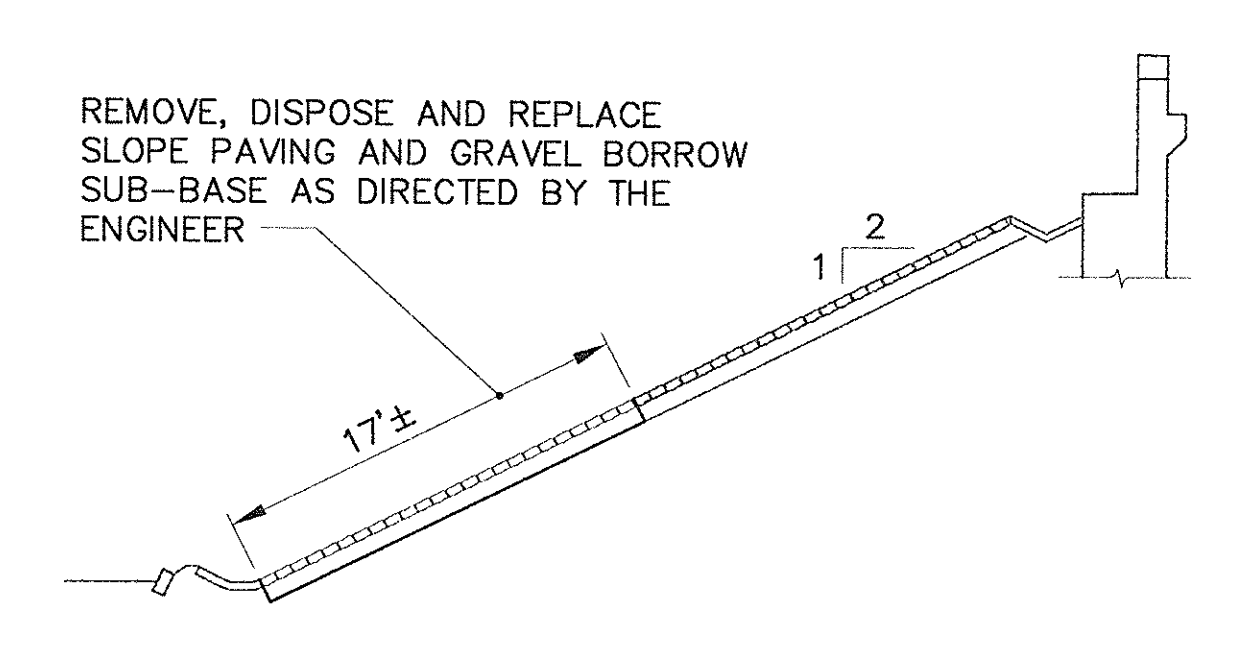


PLAN



ELEVATION

SOUTH ABUTMENT (LOOKING SOUTH)



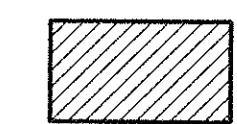

SECTION A-A

SLOPE PAVING DETAILS AT SOUTH ABUTMENT

NOTES:

1. FOR NOTES, SEE SHEET NO. 15.
2. FOR ADDITIONAL DETAILS AT AREAS OF RECONSTRUCTION, SEE SHEET NOS. 14 & 68.
3. DIMENSIONS SHOWN ARE EXISTING.
4. FOR ADDITIONAL DETAILS OF SLOPE PAVING, SEE SHEET NO. 75.

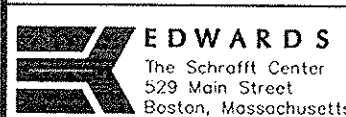
LEGEND:

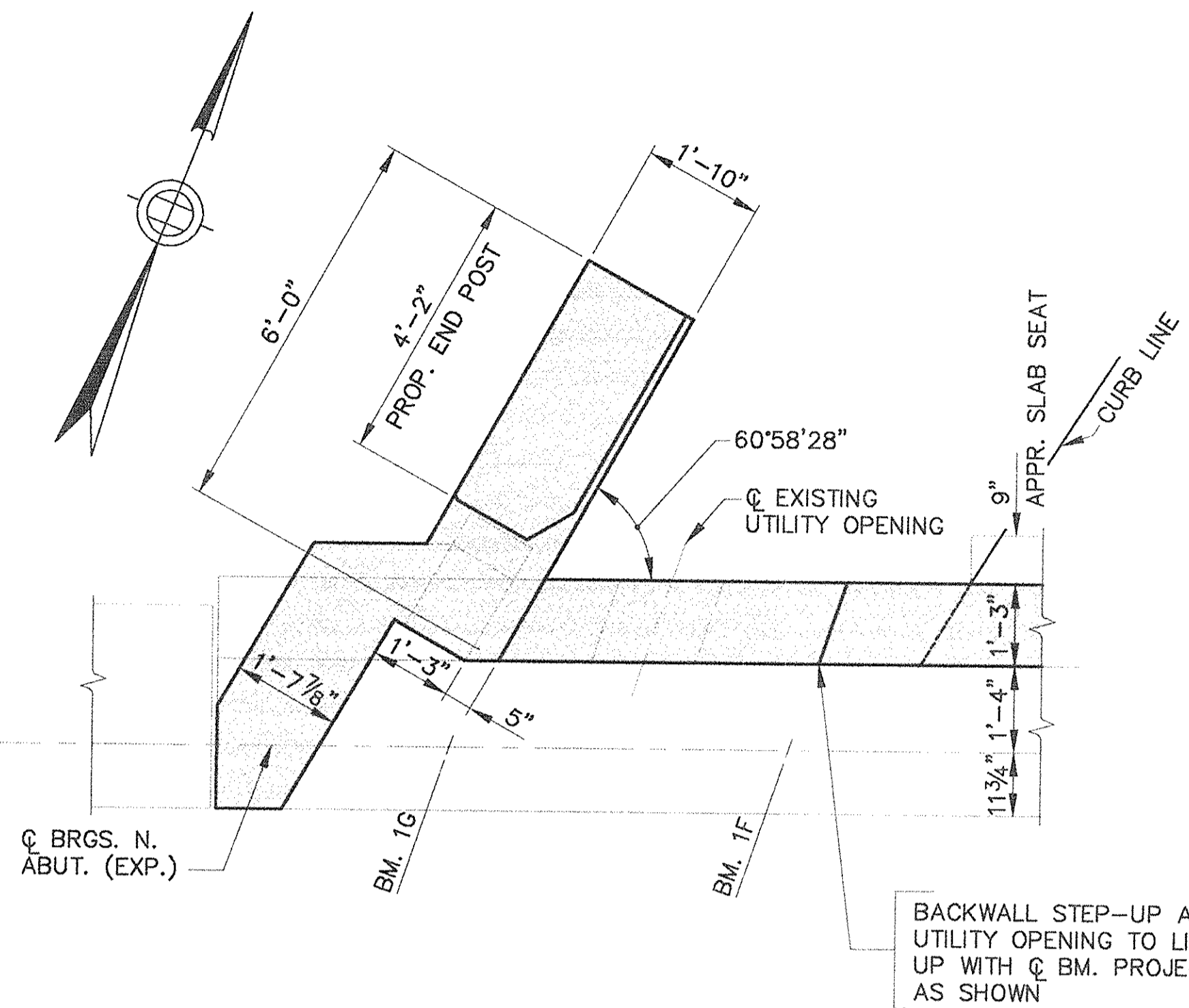
-  - APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
-  - AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1a AS APPLICABLE)

REPAIR AREA (SOUTH ABUTMENT) = 30 S.F.±

AS BUILT

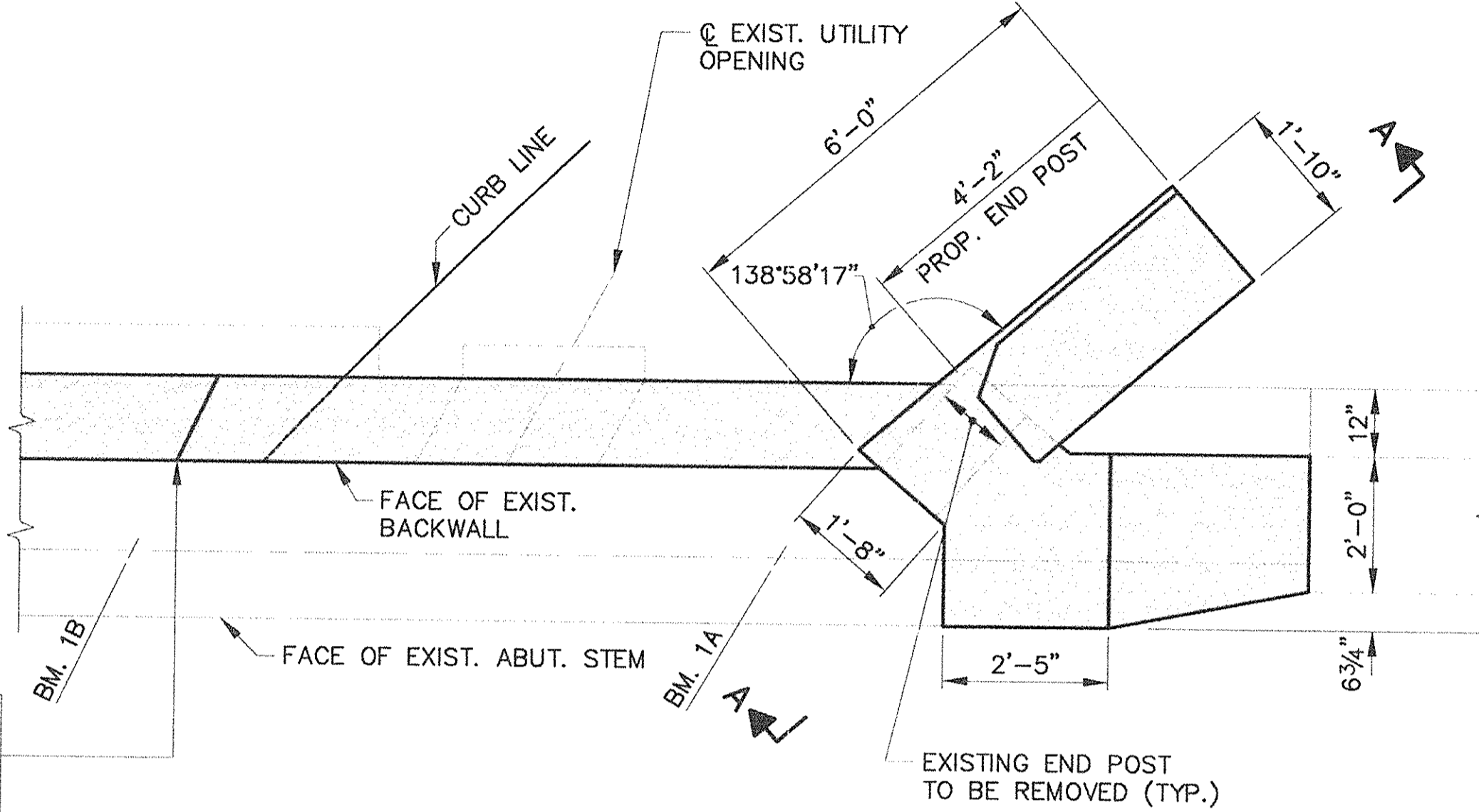
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
	AS-BUILT	GTS	10/95	CHECKED:	FMK
				DESIGNED:	GTS
				DRAWN:	KMC

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) SUBSTRUCTURE CONCRETE REPAIRS - SOUTH ABUTMENT	
Scale: NOT TO SCALE	Contract No. 521-024
 EDWARDS AND KELCEY, INC. <small>The Schmitt Center 329 Main Street Boston, Massachusetts 02129</small>	
Sheet No.	17



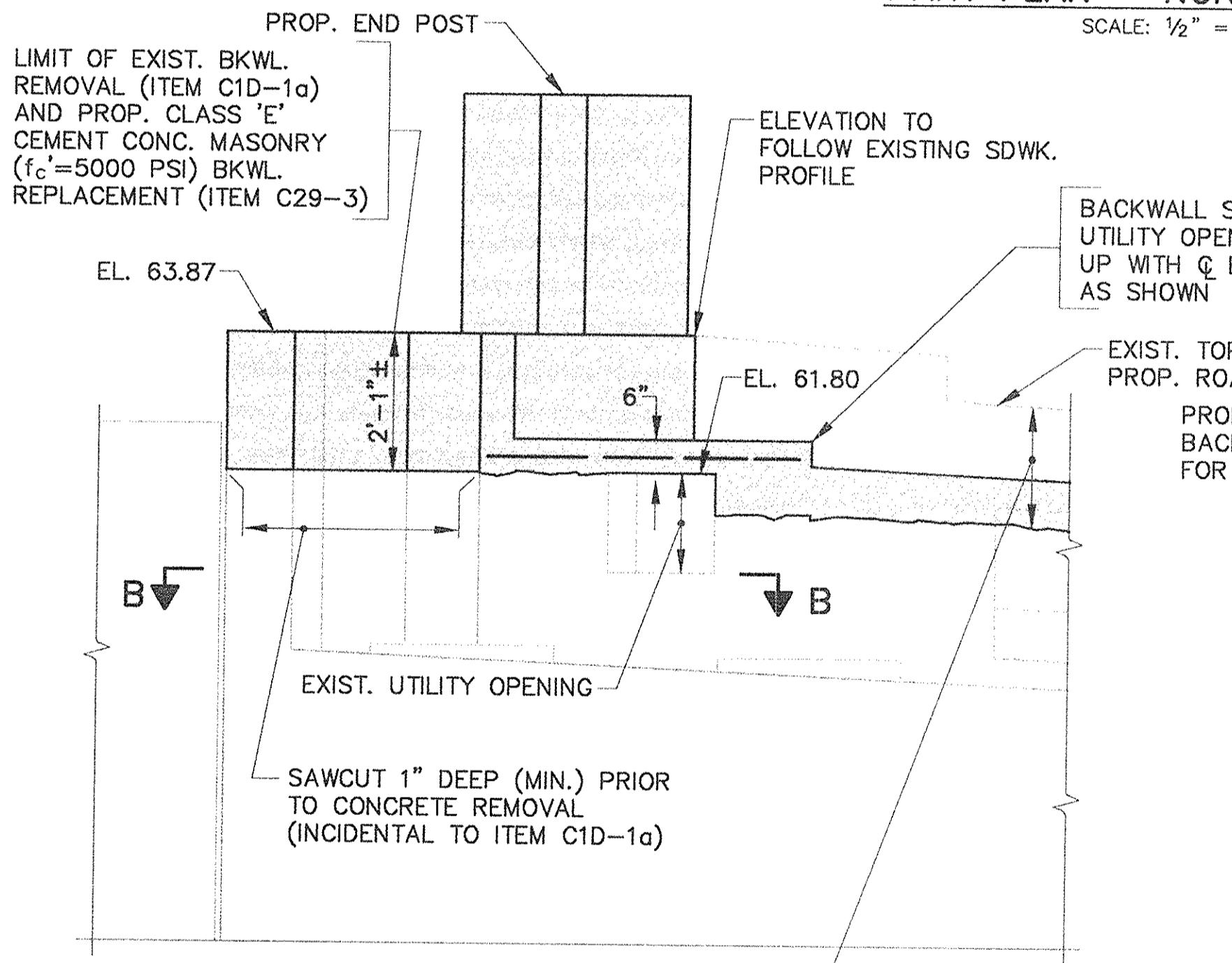
PART PLAN - NORTH ABUTMENT

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



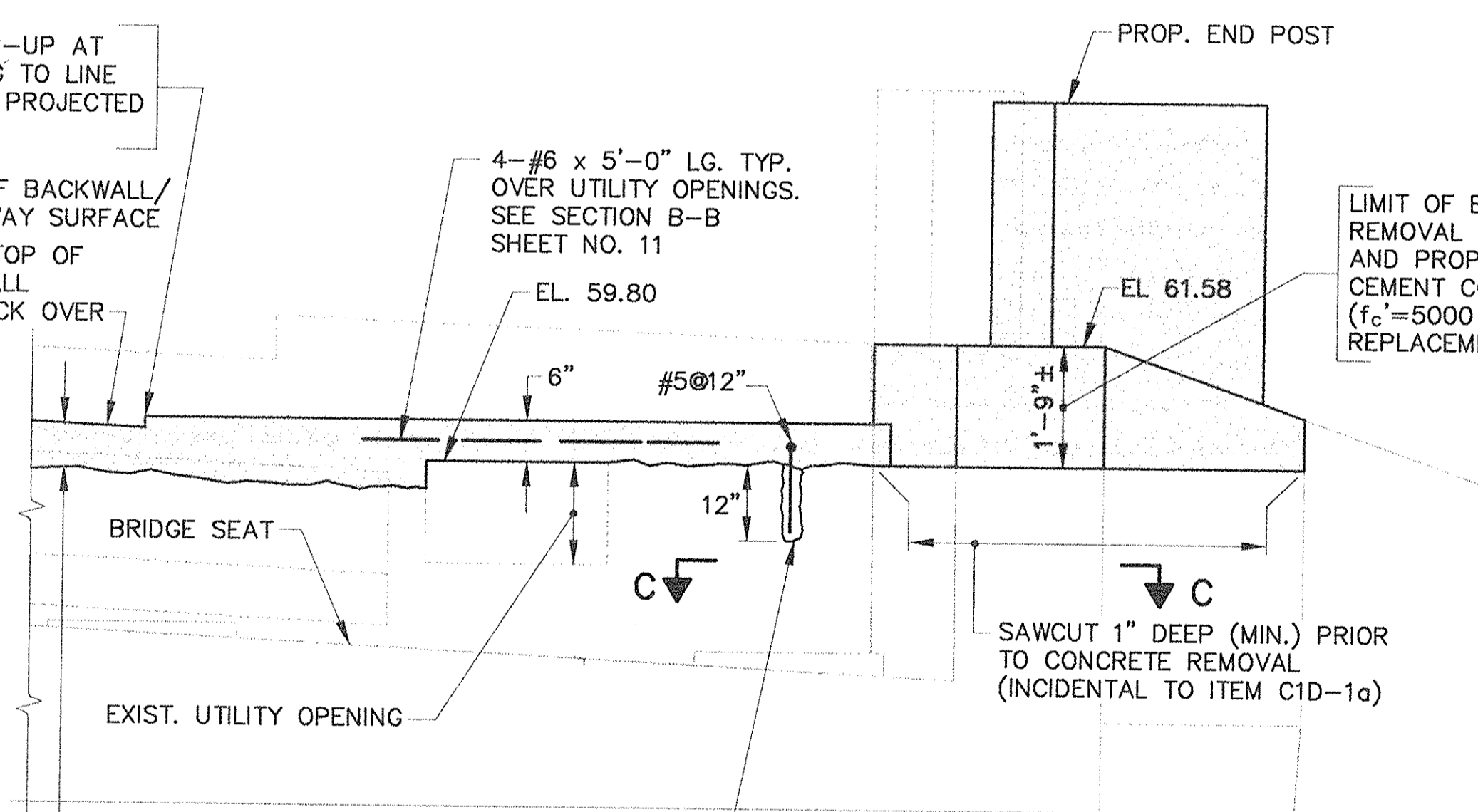
SECTION A-A (N.E. SHOWN, N.W. SIMILAR)

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



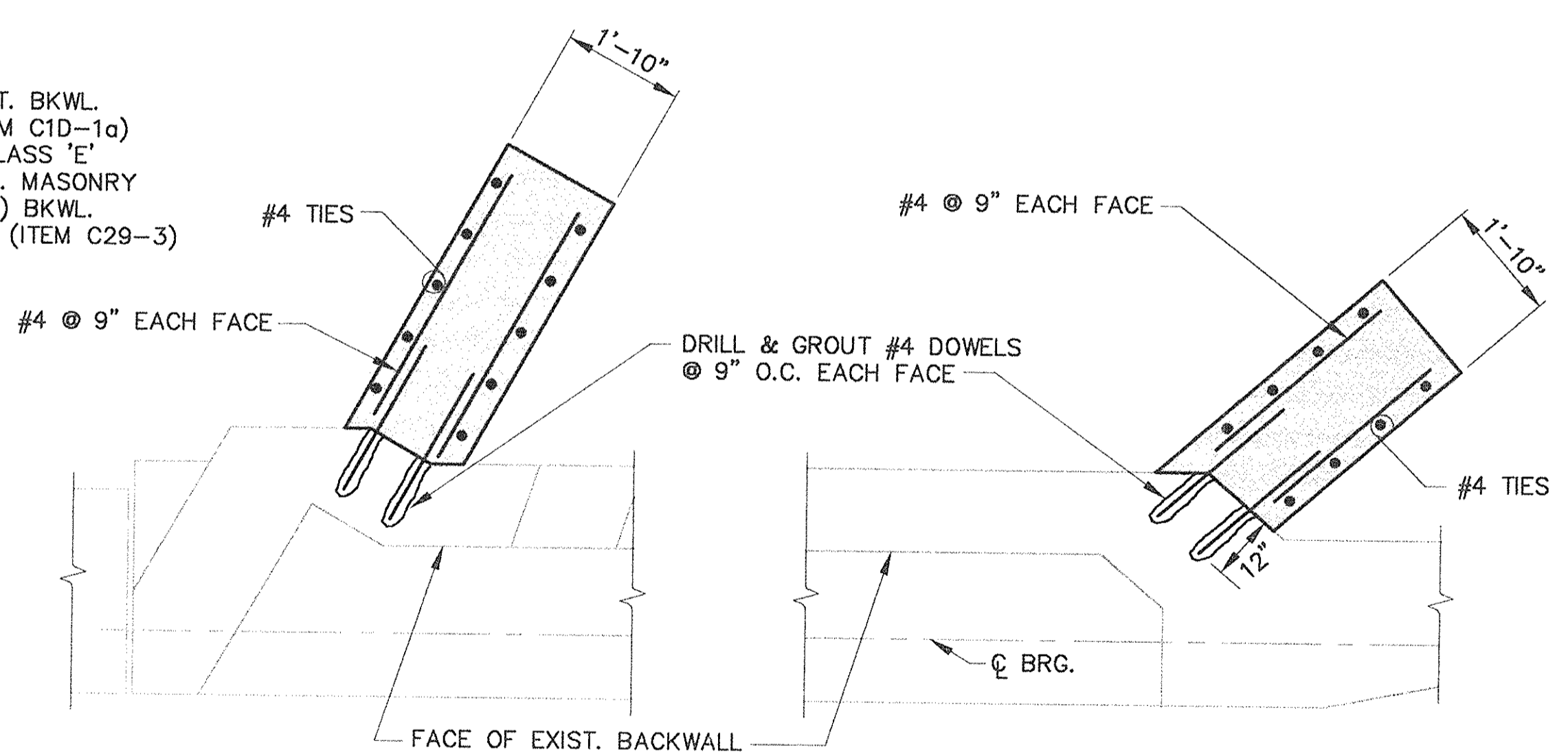
PART ELEVATION - NORTH ABUTMENT

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



SECTION C-C

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



SECTION B-B

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

THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO THE DECK RECONSTRUCTION (ITEM C32-1a)

NOTE:
ELEVATIONS SHOWN ARE FROM 'AS-BUILTS' AND MUST BE VERIFIED BY THE CONTRACTOR.

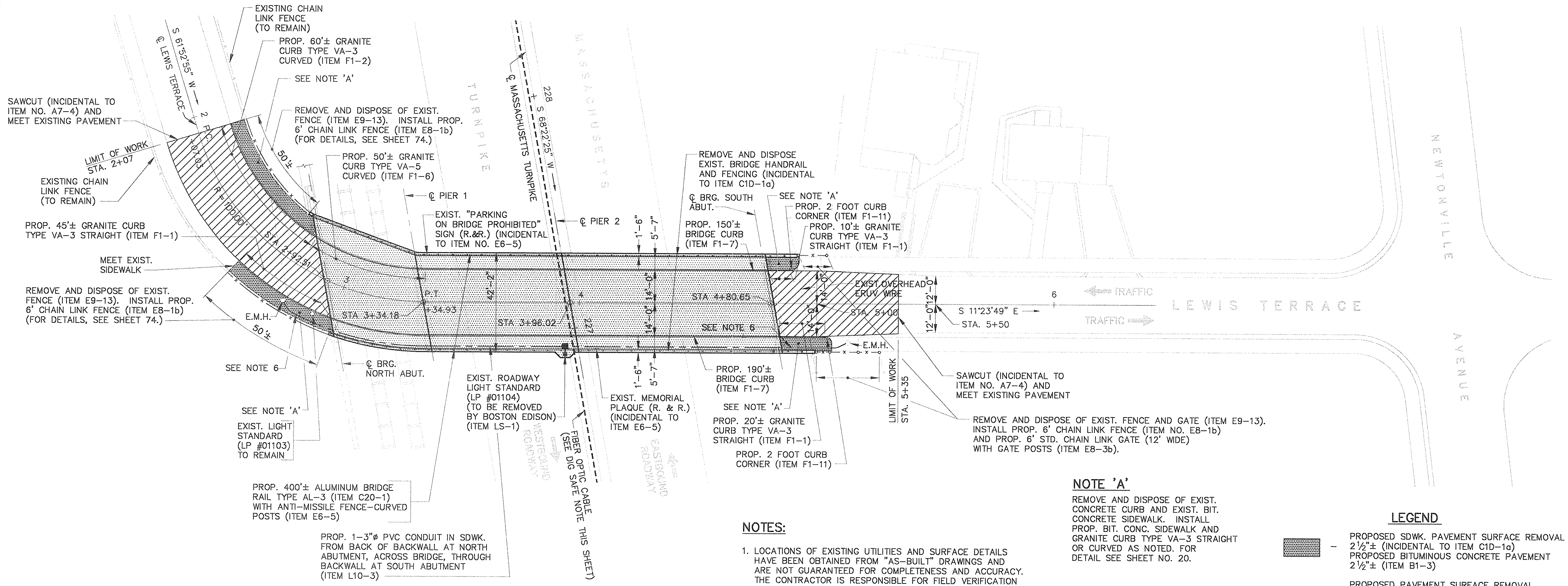
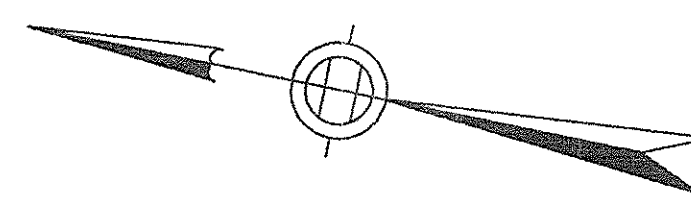
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: GTS	12/93	
		DRAWN: KMC	12/93	
		CHECKED: FMK	12/93	
				GTS

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
**MISCELLANEOUS SUBSTRUCTURE
 AND END POST DETAILS**

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 18
 229 Main Street
 Boston, Massachusetts 02129

AS BUILT



PAVEMENT PLAN
SCALE: 1" = 20'

DIG SAFE NOTE
THE CONTRACTOR SHALL NOTE THAT A FIBER OPTIC CONDUIT AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844, WLTCL AT 1-800-446-2658 AND AT&T AT 1-800-252-1133.

NOTES:

1. LOCATIONS OF EXISTING UTILITIES AND SURFACE DETAILS HAVE BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED FOR COMPLETENESS AND ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND DETAILS.
2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES PRIOR TO CONSTRUCTION AND COORDINATE ALL ASSOCIATED WORK WITH THEM THROUGHOUT CONSTRUCTION.
3. ALL JOINTS IN BITUMINOUS CONCRETE PAVEMENT SHALL BE COATED WITH HOT POURED RUBBERIZED ASPHALT. FED. SPEC. SS-S-1401C.
4. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
5. LIGHT STANDARD SHALL BE REMOVED AND REPLACED BY BOSTON EDISON. THE CONTRACTOR SHALL NOTIFY BOSTON EDISON'S WALTHAM SERVICE CENTER (617-652-6300) TWO (2) WEEKS IN ADVANCE OF DEMOLITION.
6. THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND ANCHOR BOLTS FOR LIGHT STANDARD AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT AT ABUTMENT BACKWALLS. BOSTON EDISON WILL FURNISH AND INSTALL CONDUCTORS FROM FEED TO LIGHT STANDARD.

NOTE 'A'

REMOVE AND DISPOSE OF EXIST. CONCRETE CURB AND EXIST. BIT. CONCRETE SIDEWALK. INSTALL PROP. BIT. CONC. SIDEWALK AND GRANITE CURB TYPE VA-3 STRAIGHT OR CURVED AS NOTED. FOR DETAIL SEE SHEET NO. 20.

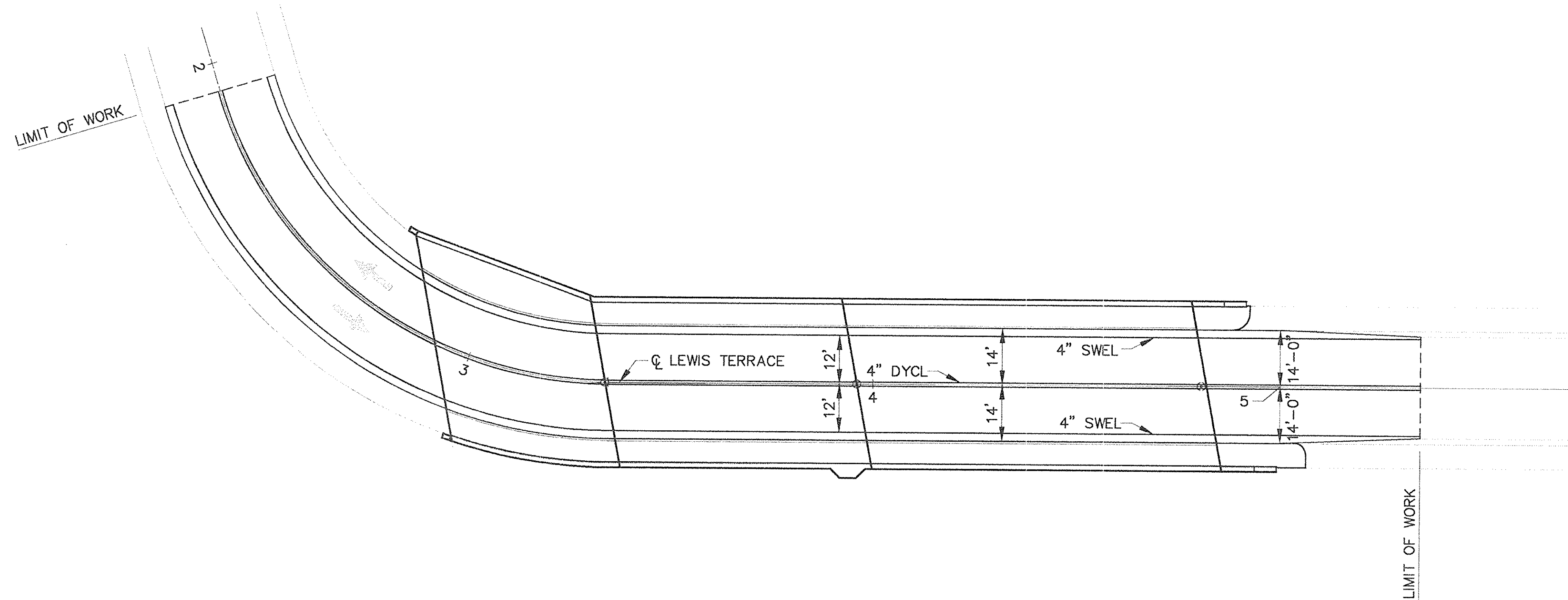
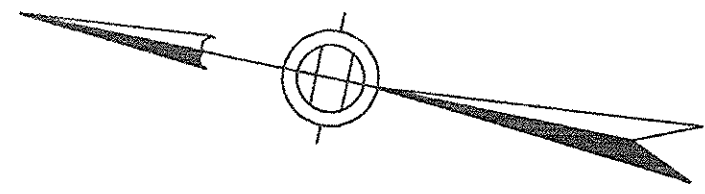
LEGEND

- PROPOSED SDWK. PAVEMENT SURFACE REMOVAL 2 1/2"± (INCIDENTAL TO ITEM C1D-1a) PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
- PROPOSED PAVEMENT SURFACE REMOVAL 2 1/2"± (ITEM A7-4). PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
- PROPOSED BRIDGE DECK RECONSTRUCTION (ITEM C32-1a)
- PROPOSED 1 3/4" POLYMER MODIFIED CONCRETE (P.M.C.) OVERLAY (ITEM NO. C6S-1)
- PROPOSED LIGHT STANDARD TO BE INSTALLED BY BOSTON EDISON (ITEM LS-1)
- PROPOSED JUNCTION BOX FRAME AND COVER (INCIDENTAL TO ITEM L10-3)

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GTS	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	CAS	12/93	

AS BUILT

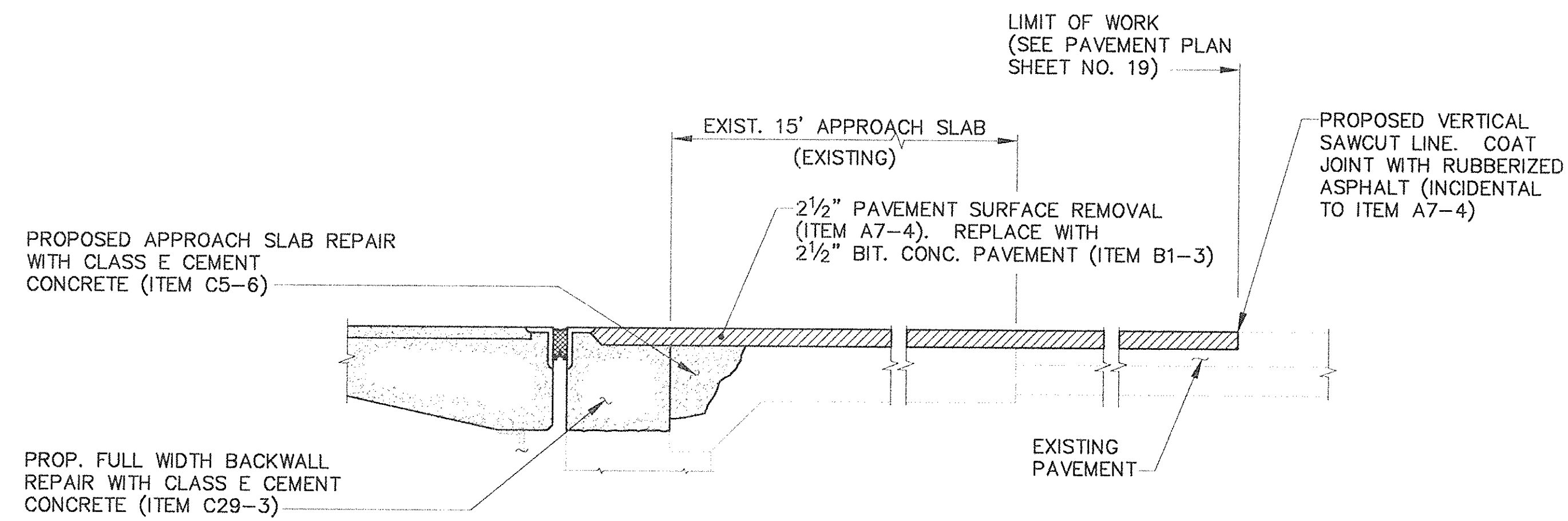
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) PAVEMENT PLAN	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129	
Sheet No. 19	



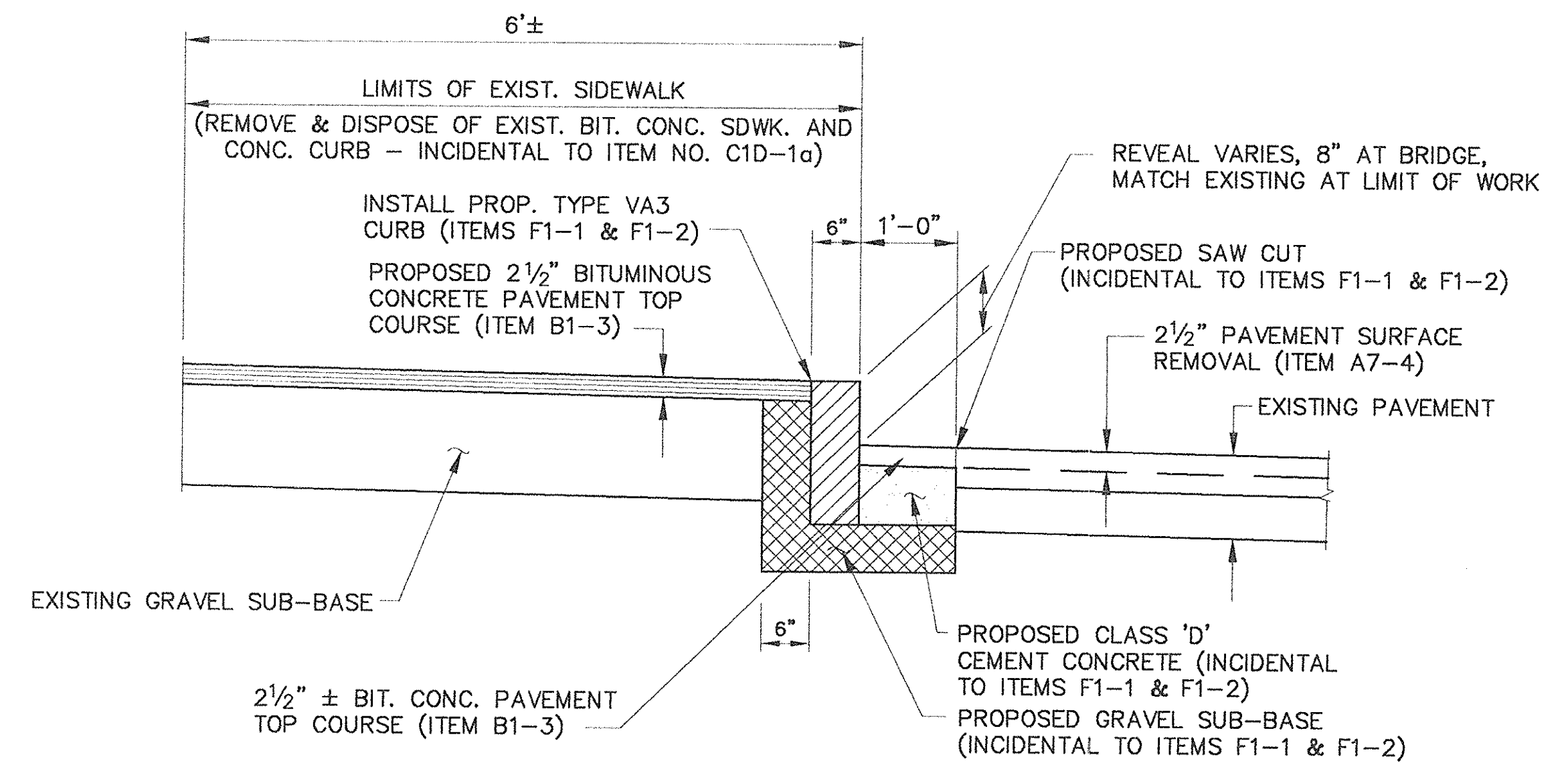
LEGEND

- SWEL - SOLID WHITE EDGE LINE
4" REFLECTORIZED THERMOPLASTIC WHITE LINE
(ITEM NO. G8-1)
- DYCL - DOUBLE YELLOW CENTER LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
(ITEM NO. G8-2)

FINAL PAVEMENT MARKING DETAIL
SCALE: 1"=20'



APPROACH PAVEMENT TRANSITION AT SOUTH ABUTMENT
SCALE: 3/4"=1'-0"

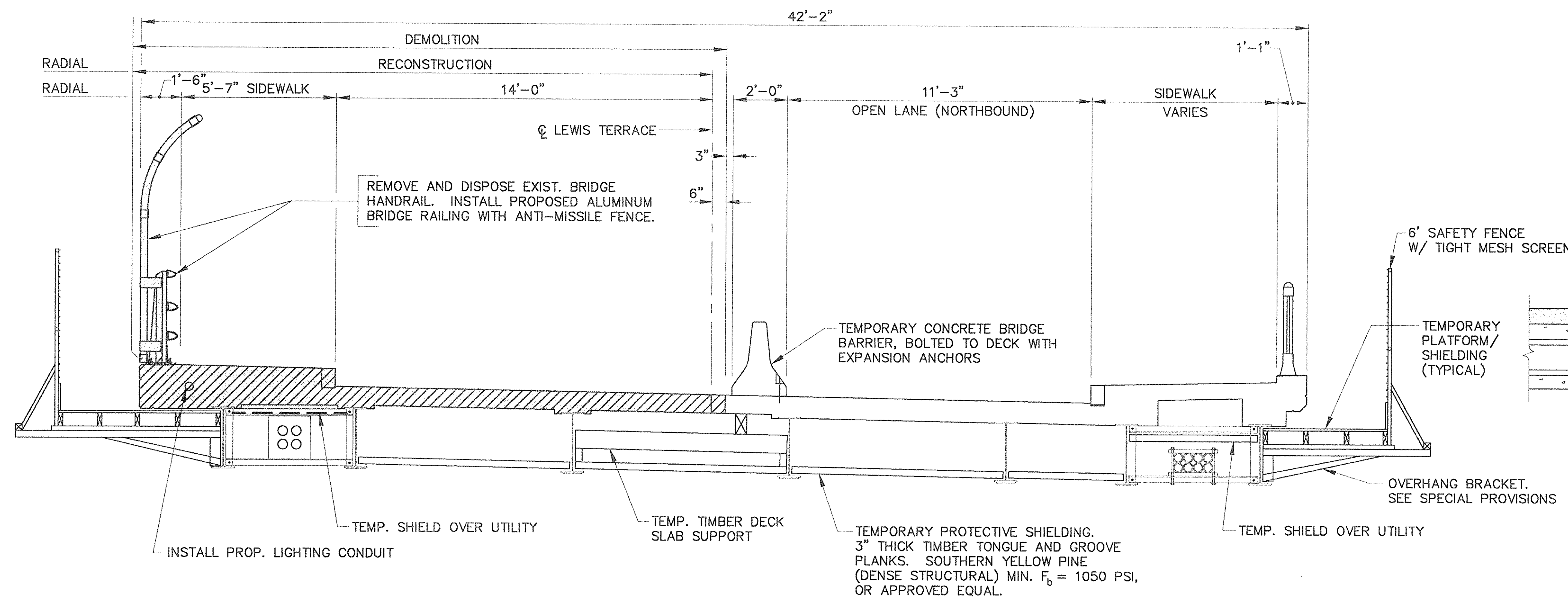


APPROACH GRANITE CURB AND SIDEWALK DETAIL
SCALE: 3/4"=1'-0"

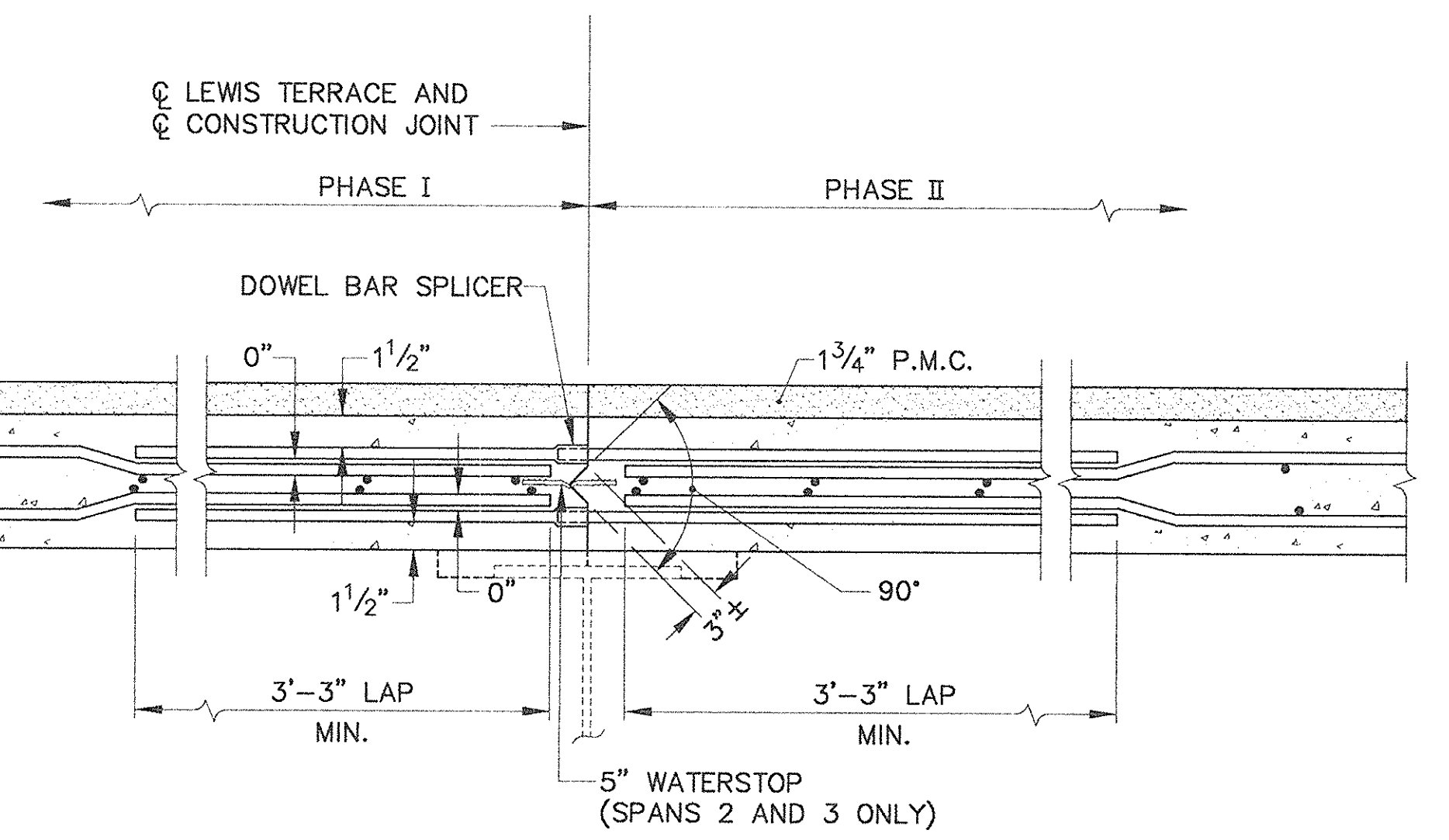
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	GTS 12/93	
		DRAWN:	KMC 12/93	
		CHECKED:	CAS 12/93	
				GTS

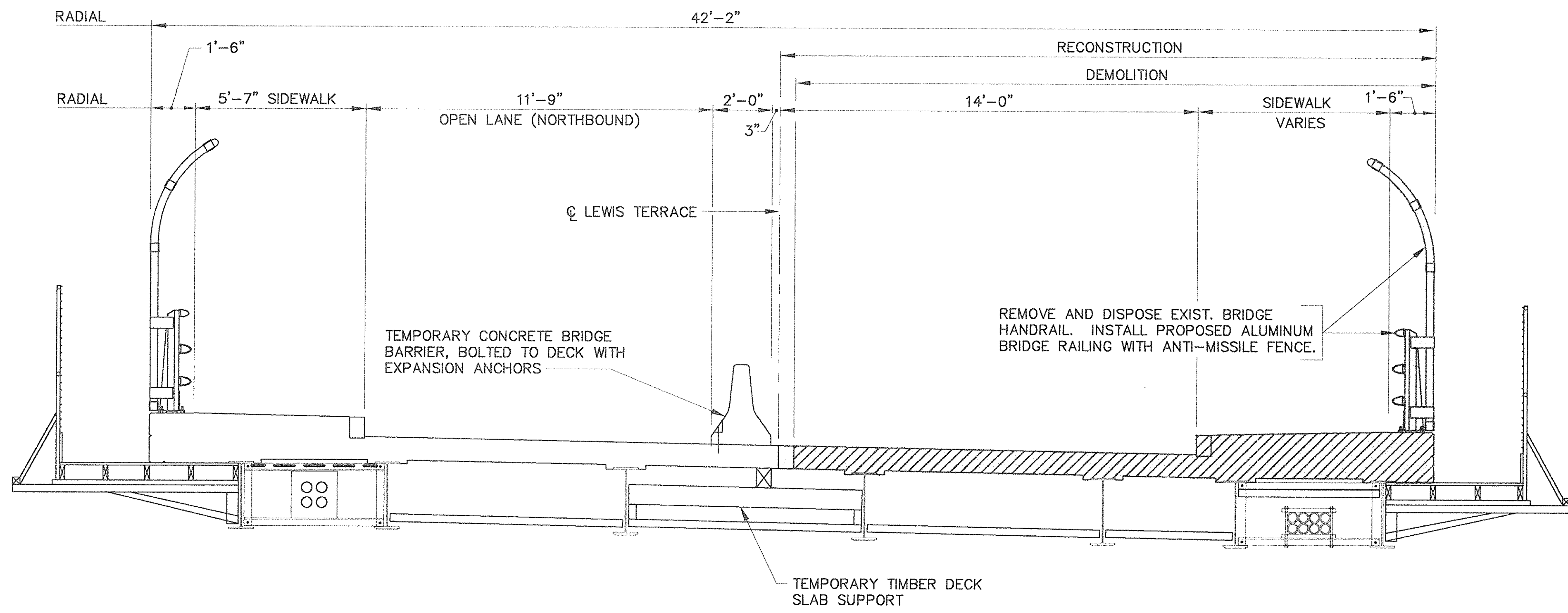
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LEWIS TERRACE (STR. NO. S-25) PAVEMENT DETAILS	
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schreffl Center 529 Main Street Boston, Massachusetts 02129	
Sheet No.	20



PHASE I
SCALE: 3/8" = 1'-0"



LONGITUDINAL CONSTRUCTION JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



PHASE II
SCALE: 3/8" = 1'-0"

- NOTES:**
1. SECTIONS TAKEN LOOKING TOWARDS THE NORTH ABUTMENT.
 2. TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN ALL STRINGERS, AROUND FASCIAS, AND OVER THE EXISTING UTILITIES PRIOR TO ANY DEMOLITION WORK.
 3. TEMPORARY CONCRETE BRIDGE AND ROADWAY BARRIERS WILL BE PROVIDED BY THE TURNPIKE AUTHORITY, AND TRANSPORTED AND PLACED BY THE CONTRACTOR.
 4. LIGHT STANDARD SHALL BE REMOVED AND REPLACED BY BOSTON EDISON.
 5. TEMPORARY TIMBER DECK SLAB SUPPORTS SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN (INCIDENTAL TO ITEM C32-1a). (SEE SPECIFICATIONS)

LEGEND

	- DEMOLITION
	- RECONSTRUCTION

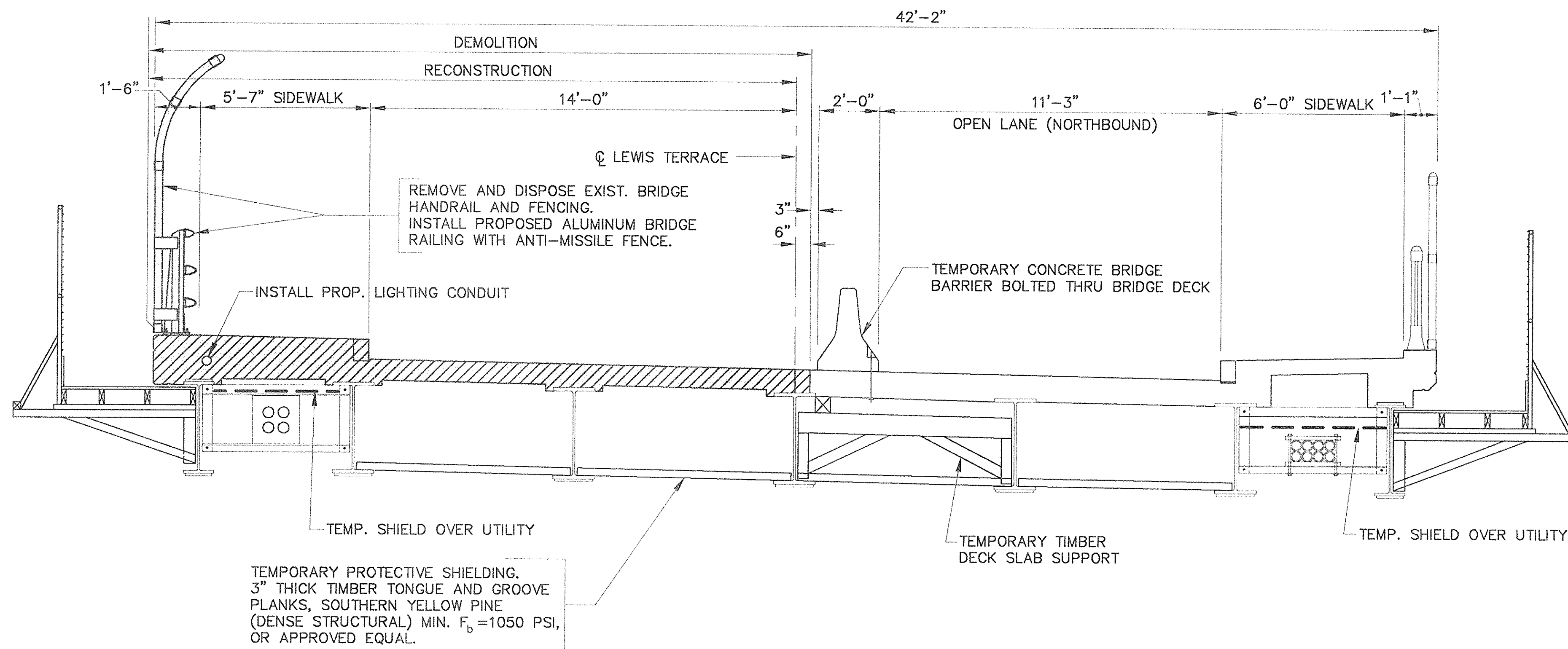
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
 SEQUENCE OF CONSTRUCTION
 SPAN 1

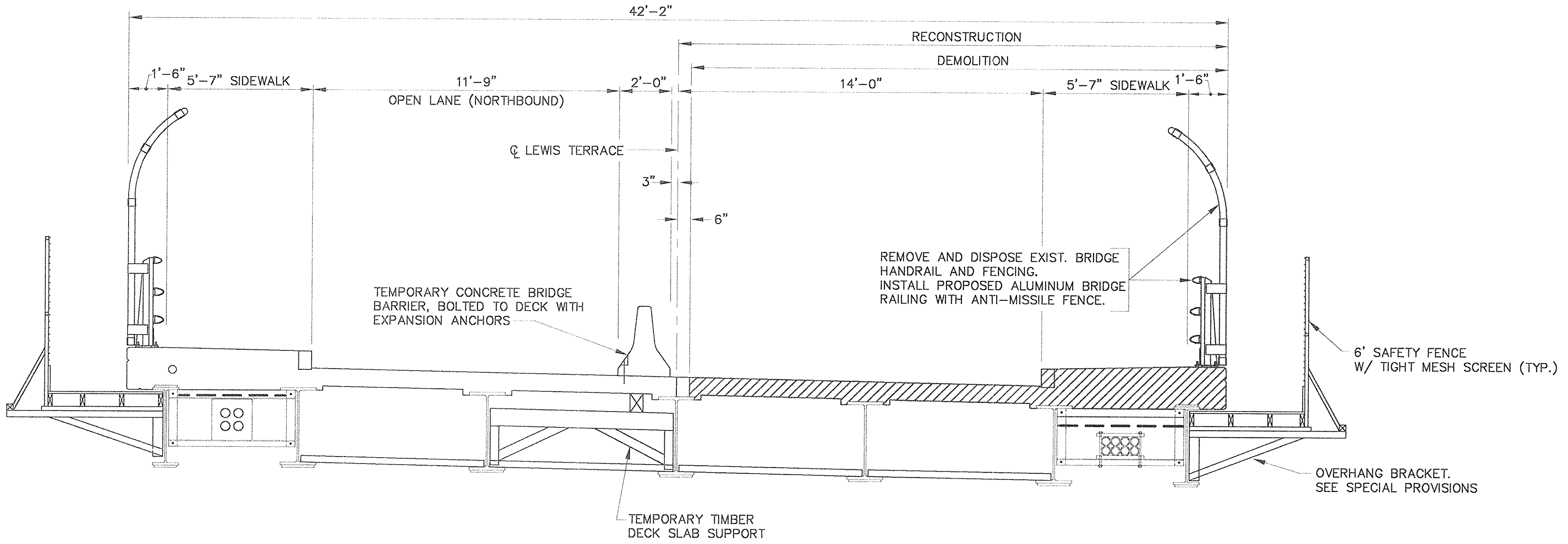
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 21
The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	CAS	12/93	

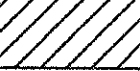



PHASE I
SCALE: 3/8" = 1'-0"




PHASE II
SCALE: 3/8" = 1'-0"

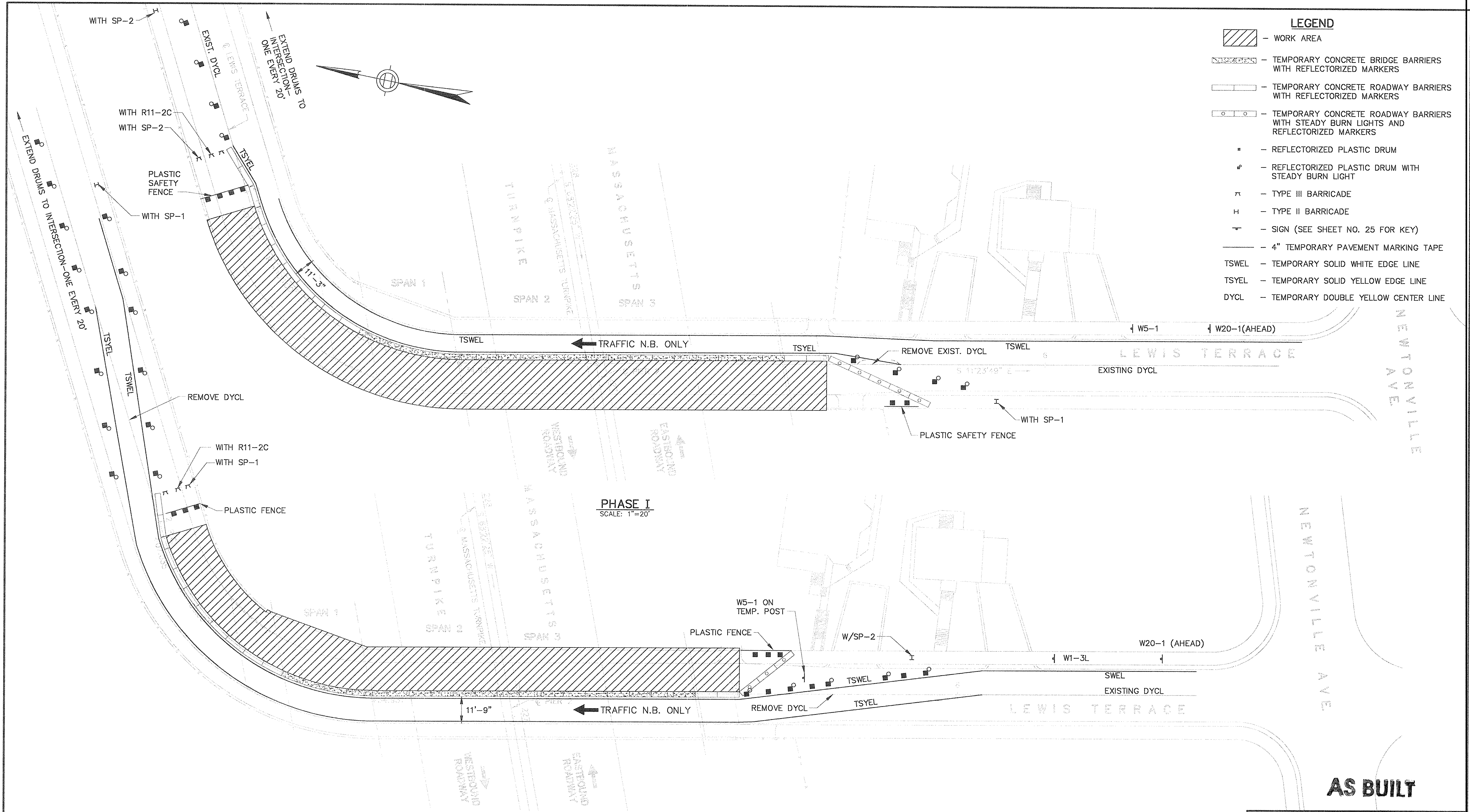
NOTE:
1. FOR NOTES AND LONGITUDINAL CONSTRUCTION JOINT DETAIL, SEE SHEET NO. 21.

LEGEND
 - DEMOLITION
 - RECONSTRUCTION

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION	
LEWIS TERRACE (STR. NO. S-25)	
SEQUENCE OF CONSTRUCTION	
SPANS 2 & 3	
Scale: AS NOTED	Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 22	

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	CAS	12/93	



- LEGEND**
- WORK AREA
 - TEMPORARY CONCRETE BRIDGE BARRIERS WITH REFLECTORIZED MARKERS
 - TEMPORARY CONCRETE ROADWAY BARRIERS WITH REFLECTORIZED MARKERS
 - TEMPORARY CONCRETE ROADWAY BARRIERS WITH STEADY BURN LIGHTS AND REFLECTORIZED MARKERS
 - REFLECTORIZED PLASTIC DRUM
 - REFLECTORIZED PLASTIC DRUM WITH STEADY BURN LIGHT
 - TYPE III BARRICADE
 - TYPE II BARRICADE
 - SIGN (SEE SHEET NO. 25 FOR KEY)
 - 4" TEMPORARY PAVEMENT MARKING TAPE
 - TSWEL - TEMPORARY SOLID WHITE EDGE LINE
 - TSYEL - TEMPORARY SOLID YELLOW EDGE LINE
 - DYCL - TEMPORARY DOUBLE YELLOW CENTER LINE

PHASE I
SCALE: 1"=20'

PHASE II
SCALE: 1"=20'

NOTE:
FOR SIGNS, SEE SHEET NO. 25.

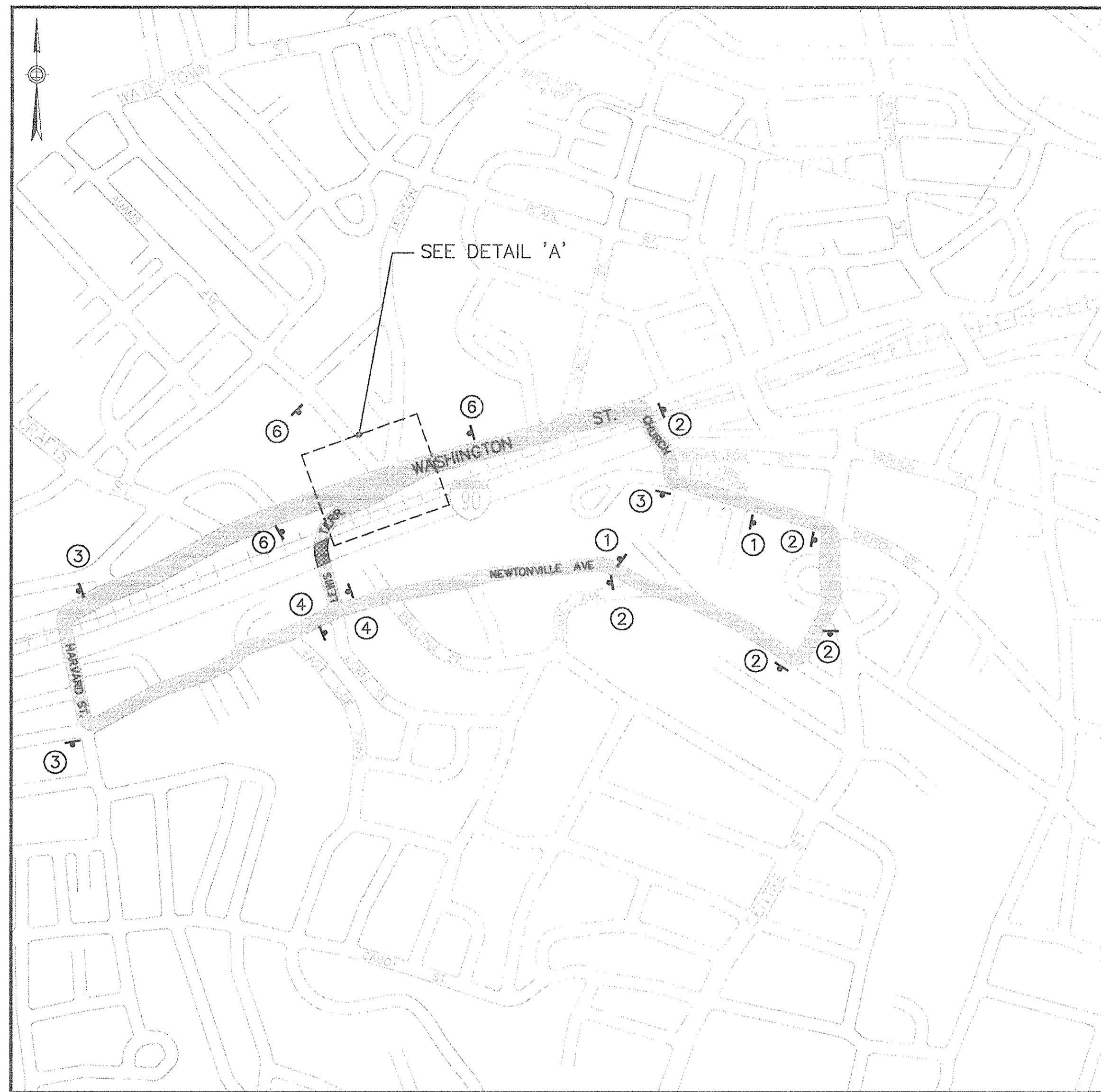
AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
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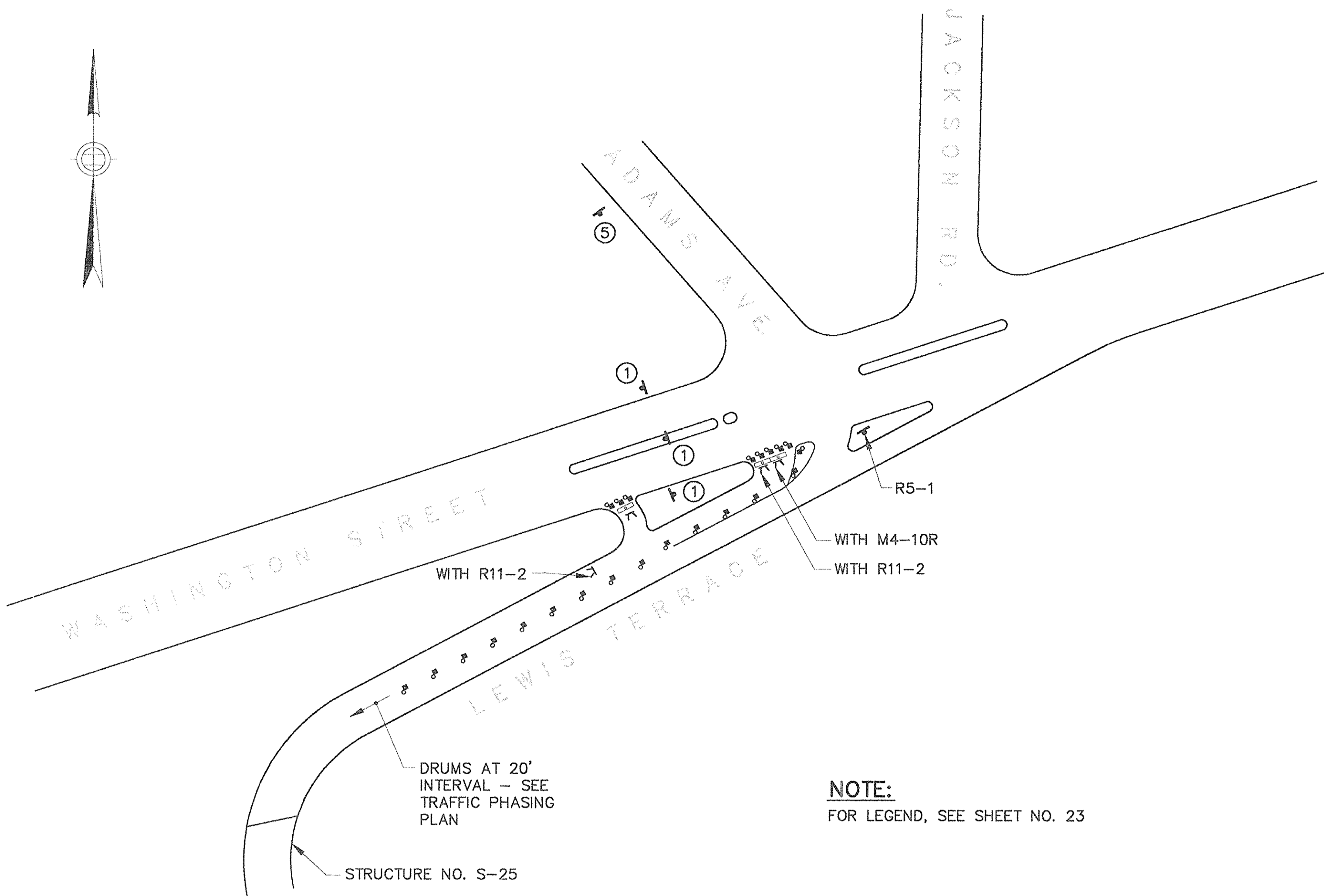
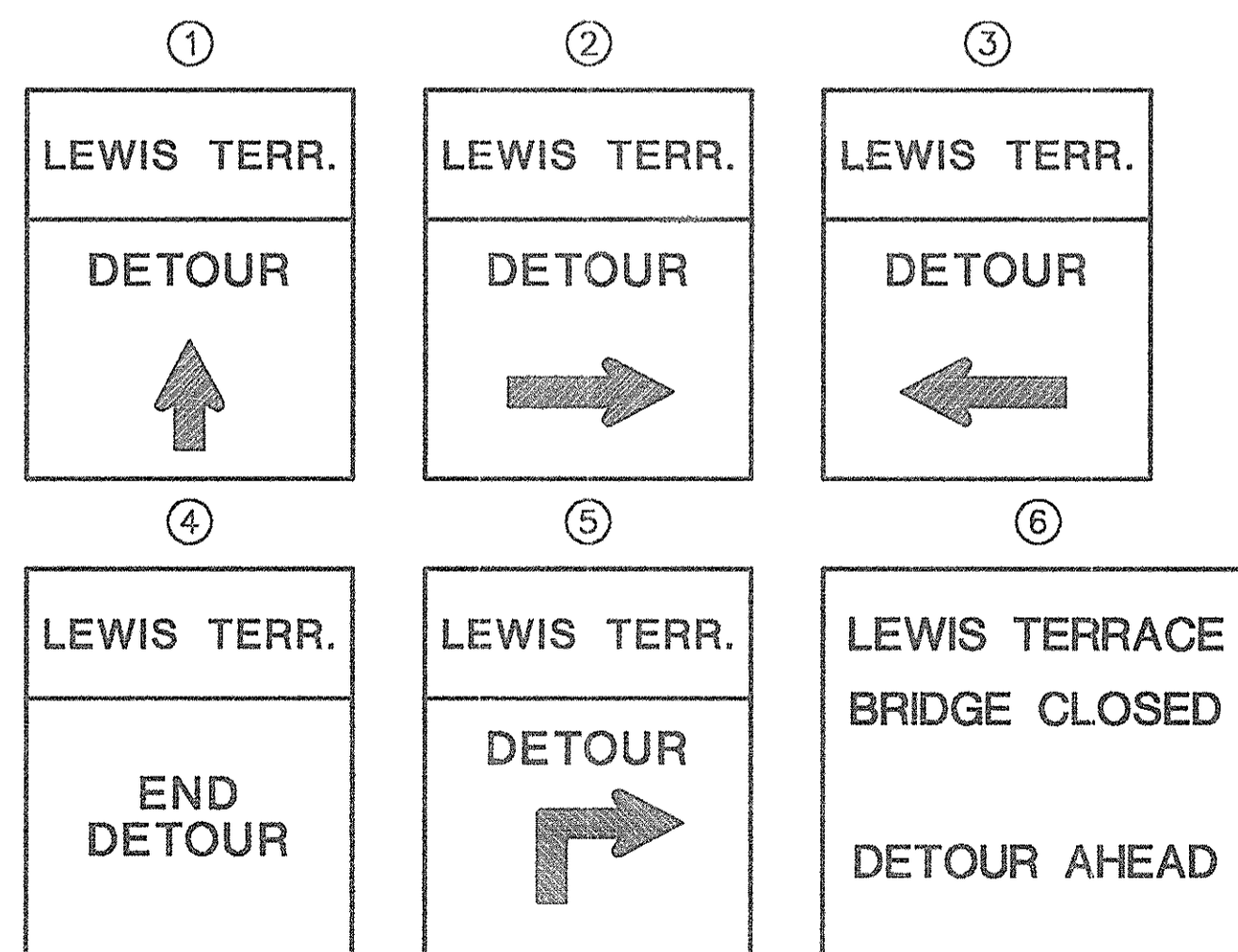
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LEWIS TERRACE (STR. NO. S-25)
TRAFFIC PHASING PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 23
 The Schwartz Center
 529 Main Street
 Boston, Massachusetts 02129



DETOUR PLAN
NOT TO SCALE



NOTE:
FOR LEGEND, SEE SHEET NO. 23

DETAIL 'A'
NOT TO SCALE

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GHB	12/93	
		DRAWN:	KMC	12/93	
		CHECKED:	GTS	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
LEWIS TERRACE (STR. NO S-25)
TRAFFIC AND SIGNING PLAN
PART 1

Scale: NOT TO SCALE Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 24
The Schreffelt Center
529 Main Street
Boston, Massachusetts 02129

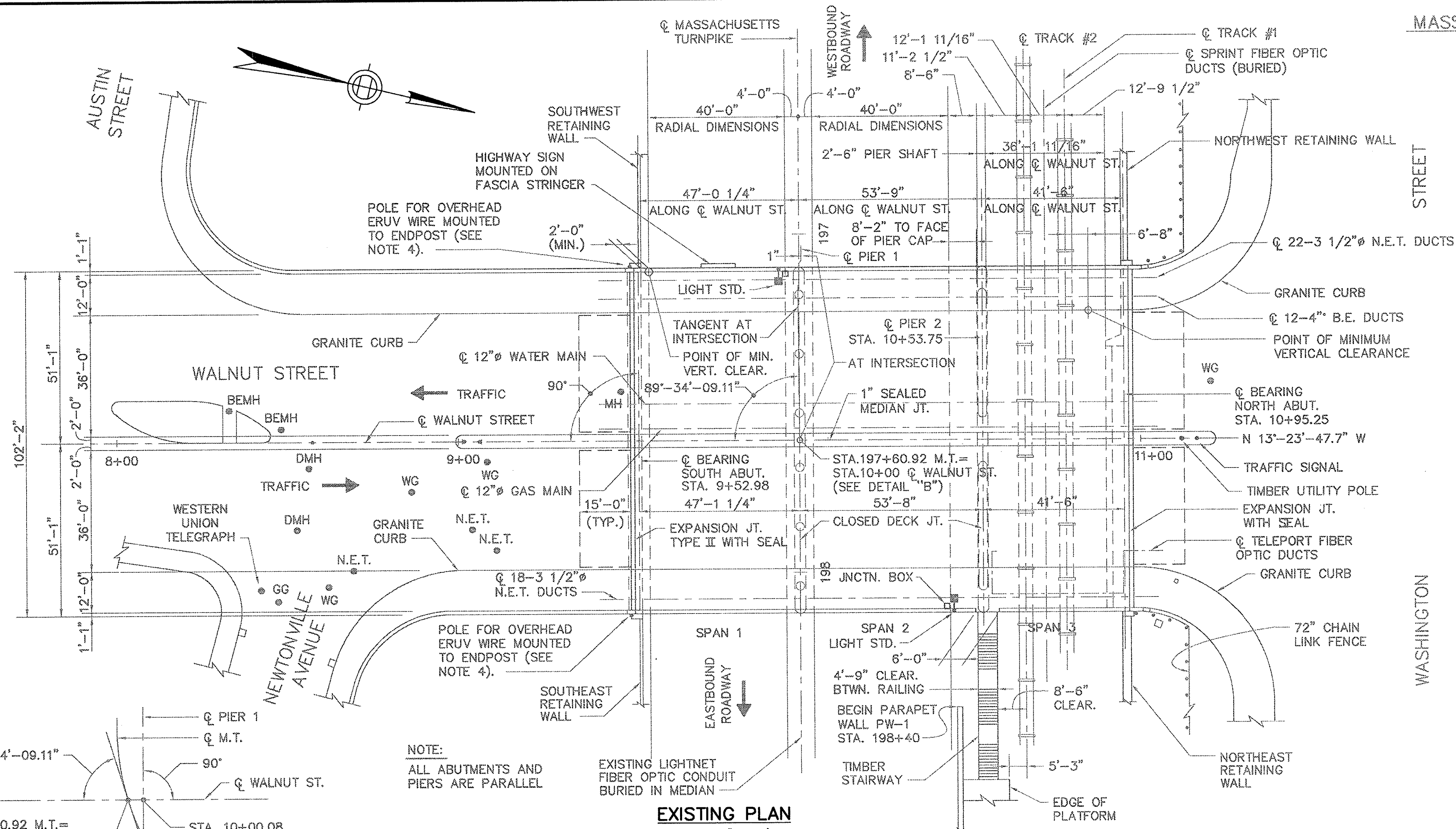
MASSACHUSETTS TURNPIKE

CURVE DATA

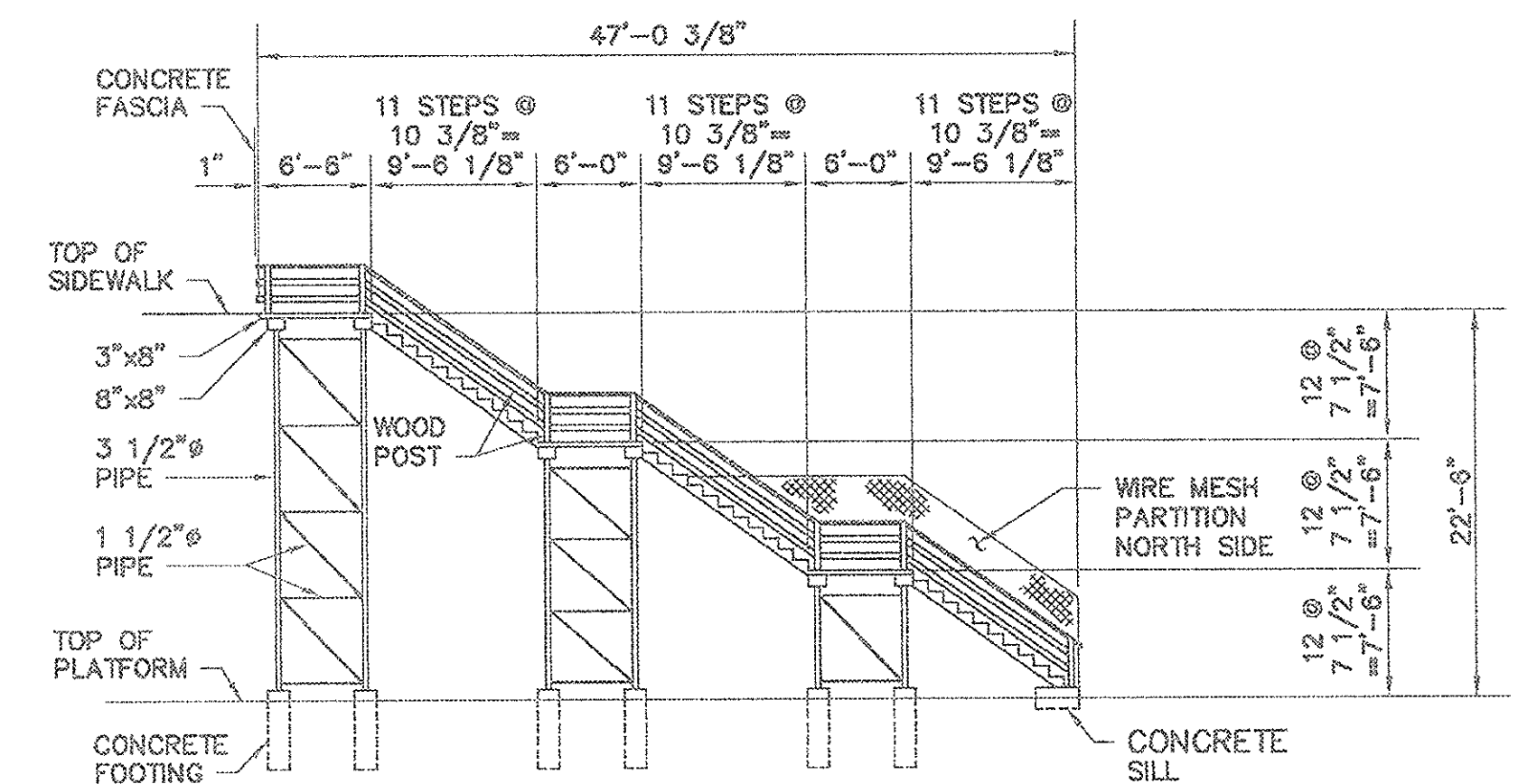
Δ = 11'-16"-54.6"
 R = 10,800'
 T = 1066.737'
 L = 2126.575'
 P.C. STA. 191+09.451

NOTES

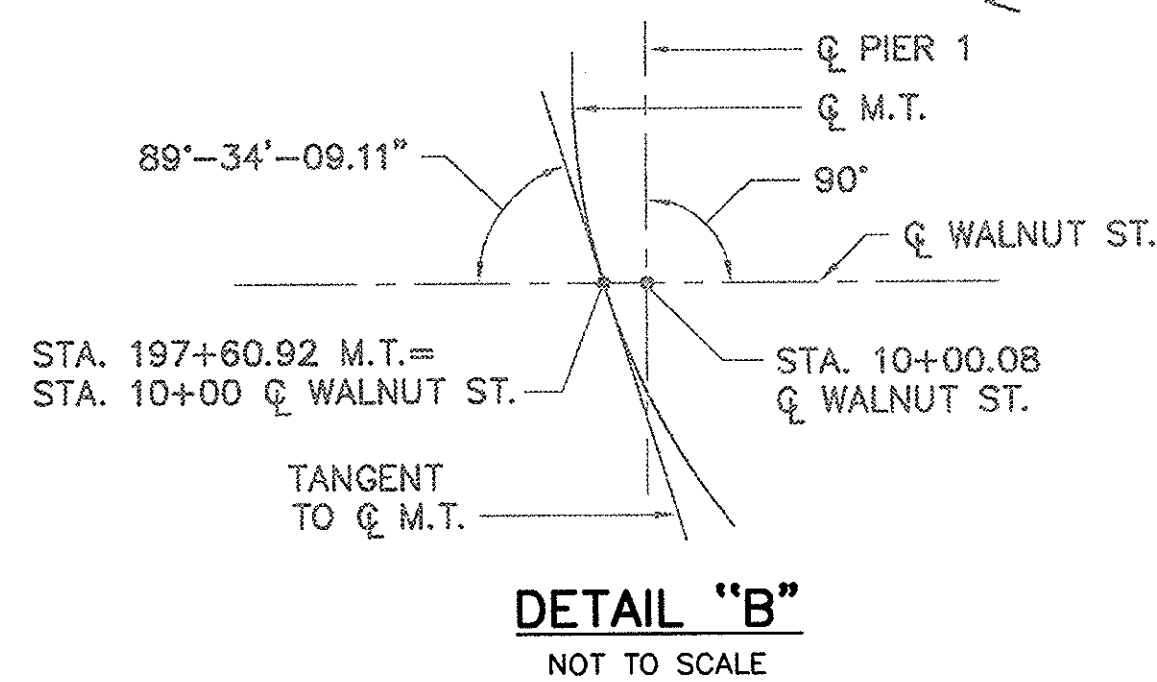
- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILT PLANS AND ARE NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS ARE BASED ON U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



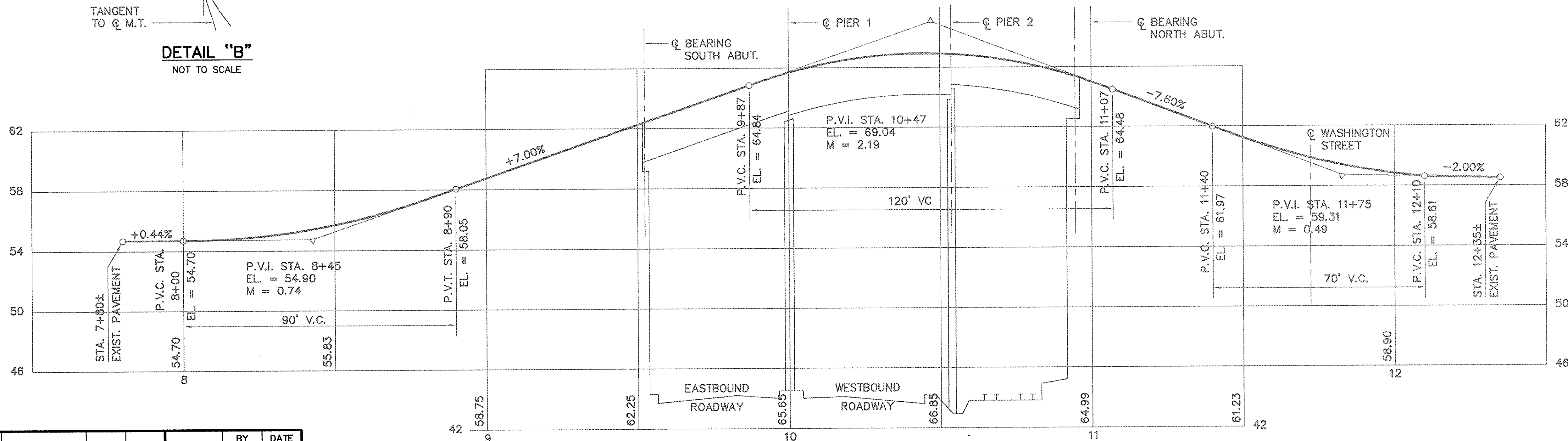
EXISTING PLAN
SCALE: 1" = 20'



ELEVATION
TIMBER STAIRWAY
SCALE: 1" = 10'



DETAIL "B"
NOT TO SCALE



PROFILE-WALNUT STREET

PROFILE SCALE
 1" = 20' H
 1" = 4' V

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI 12/93	
		DRAWN:	SAS 12/93	
		CHECKED:	EMM 12/93	

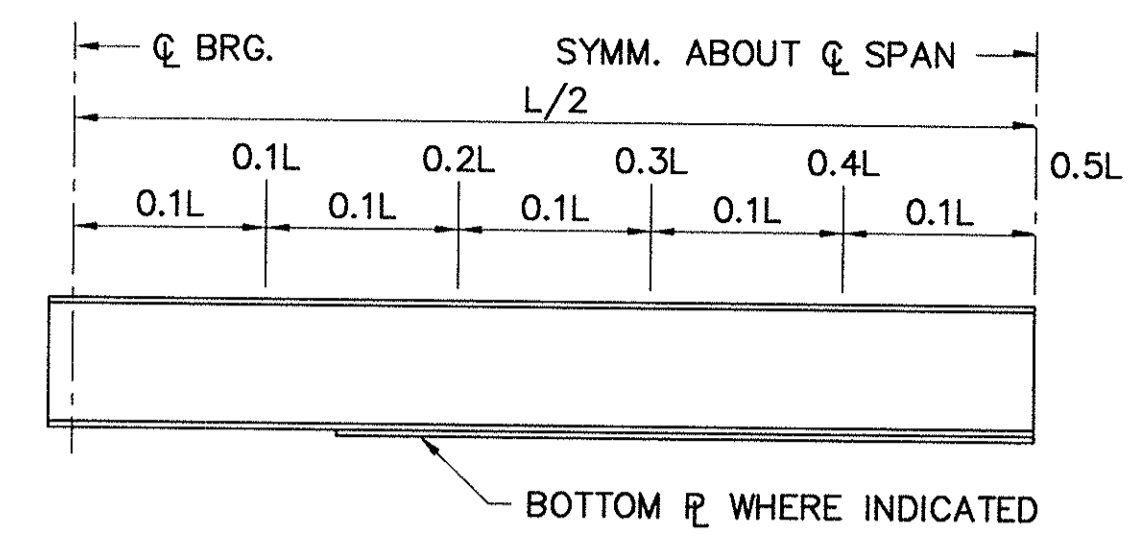
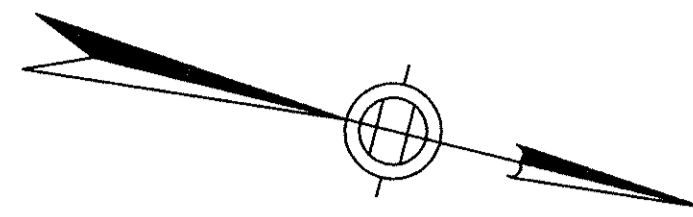
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
 80 Boylston Street
 Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
 MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR. NO. S-23)
 EXISTING PLAN & PROFILE

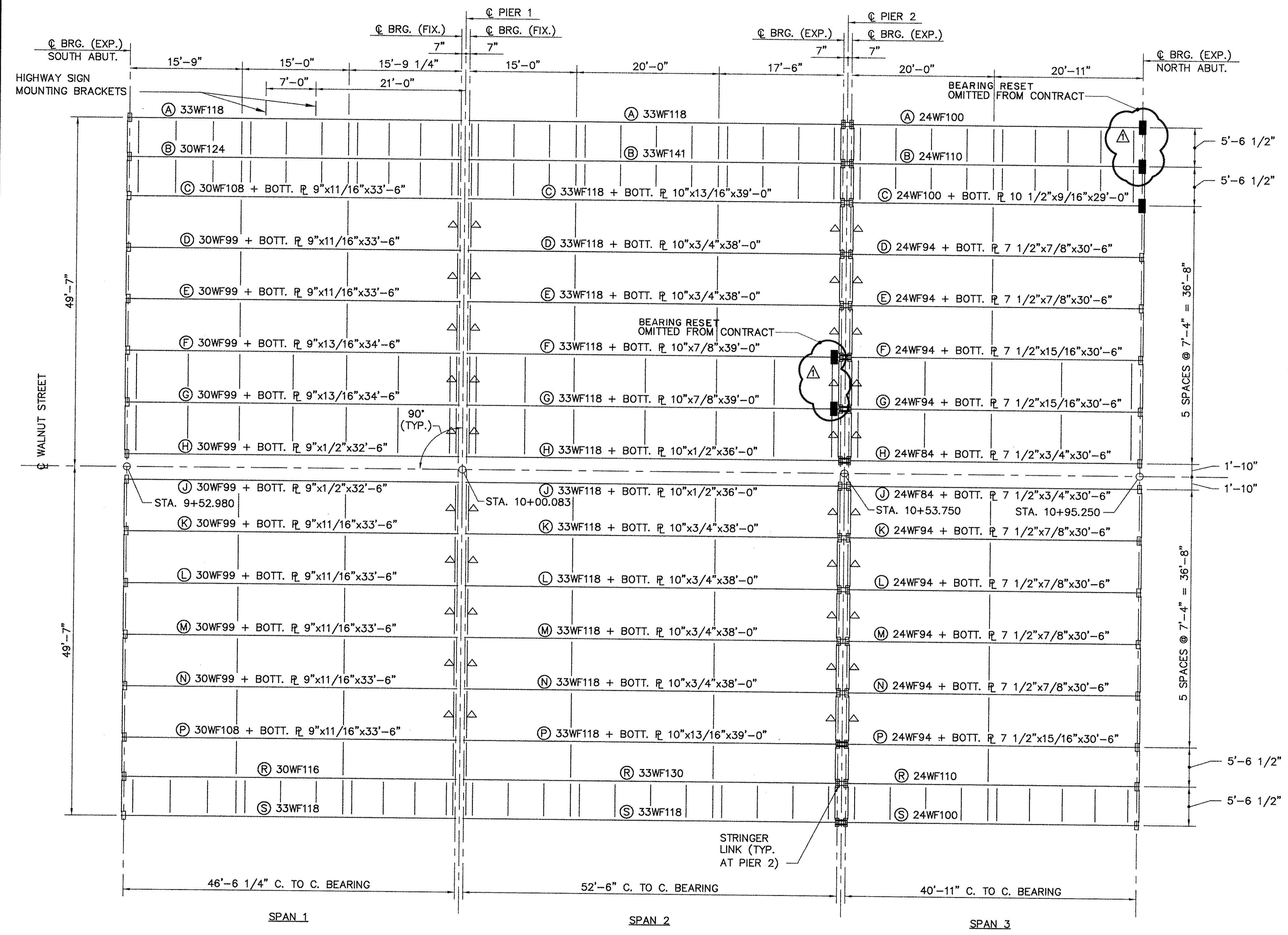
Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 26



EXISTING STUD SHEAR CONNECTOR SCHEDULE

SPAN	STRINGER	0.0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	STUDS PER ROW	HEIGHT
1,2,3	(A) (B) (R) (S)	12"	12"	12"	12"	12"	2-3/4"	6"
1&3	(C) (P)	4"	5"	6 1/2"	8"	10"	2-7/8"	4"
1&3	(D) (E) (F) (G) (K) (L) (M) (N)	4 1/2"	5 1/2"	7"	8 1/2"	10 1/2"	2-7/8"	4"
1&3	(H) (J)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(C) (P)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(D) (E) (H) (J) (K) (L) (M) (N)	6"	7"	8 1/2"	10"	12"	2-7/8"	4"
2	(F) (G)	5 1/2"	6 1/2"	8"	9 1/2"	12"	2-7/8"	4"



FRAMING PLAN
SCALE: 1/8" = 1'-0"

- LEGEND**
- - EXISTING EXPANSION SHOE ROCKER BEARING
 - △ - EXISTING DIAPHRAGM WITH 7/8" x 4" HIGH SHEAR CONNECTORS @ 8" O.C. CONTRACTOR SHALL REPLACE CONNECTORS IF MISSING OR DAMAGED.
 - - LINK TO BE REMOVED, DISPOSED AND REPLACED
 - - EXPANSION BEARING TO BE RESET

- NOTES:**
- DIMENSIONS FOR FRAMING PLAN ARE FROM THE "AS-BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
 - SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.
 - FOR LINK AND BEARING DETAILS SEE SHEET NOS. 36 AND 66.

AS BUILT

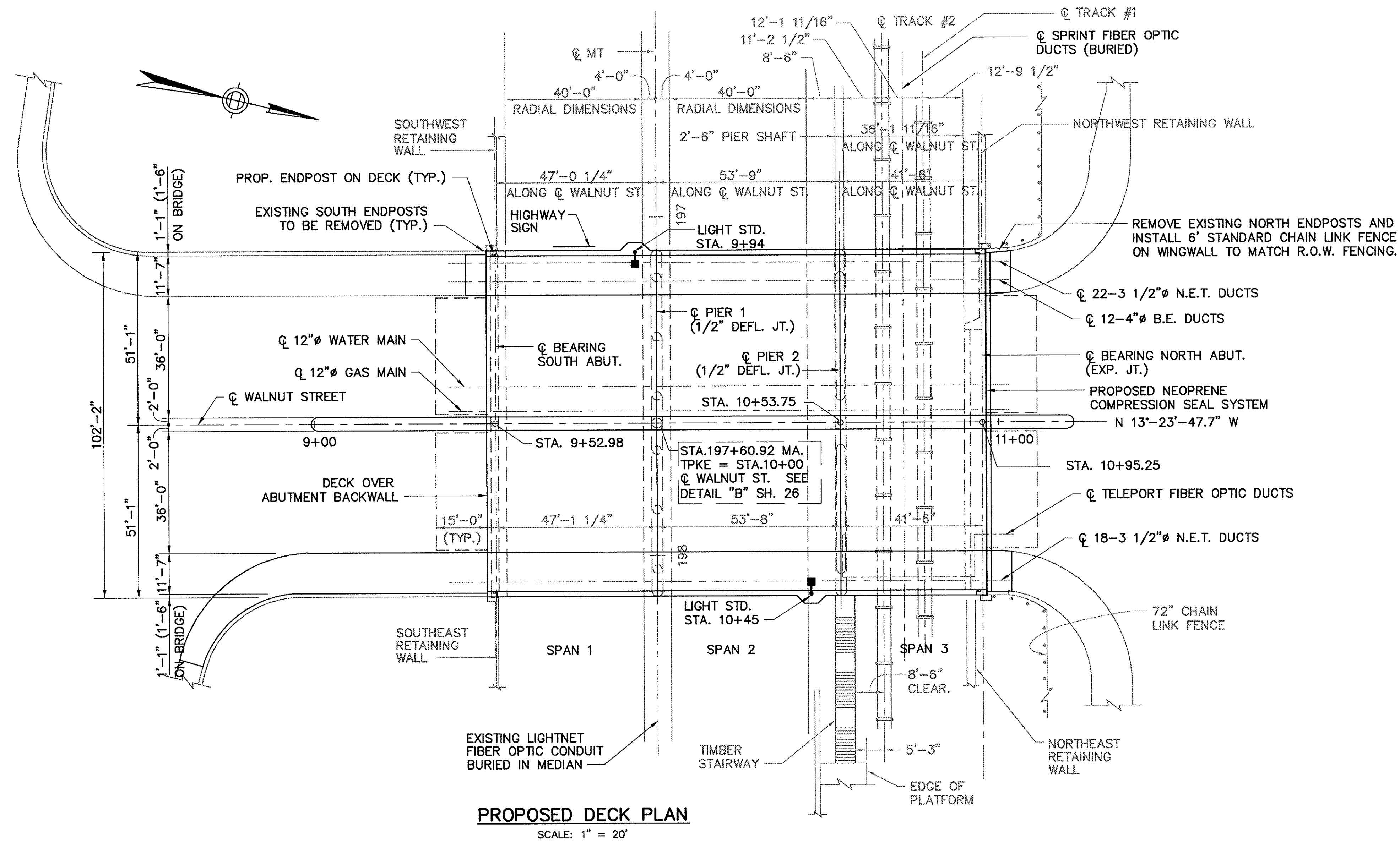
NO.	REVISION	BY	DATE	IN CHARGE OF

DESIGNED:	RRS	12/93	BY	DATE
DRAWN:	SAS	12/93		
CHECKED:	EMM	12/93		

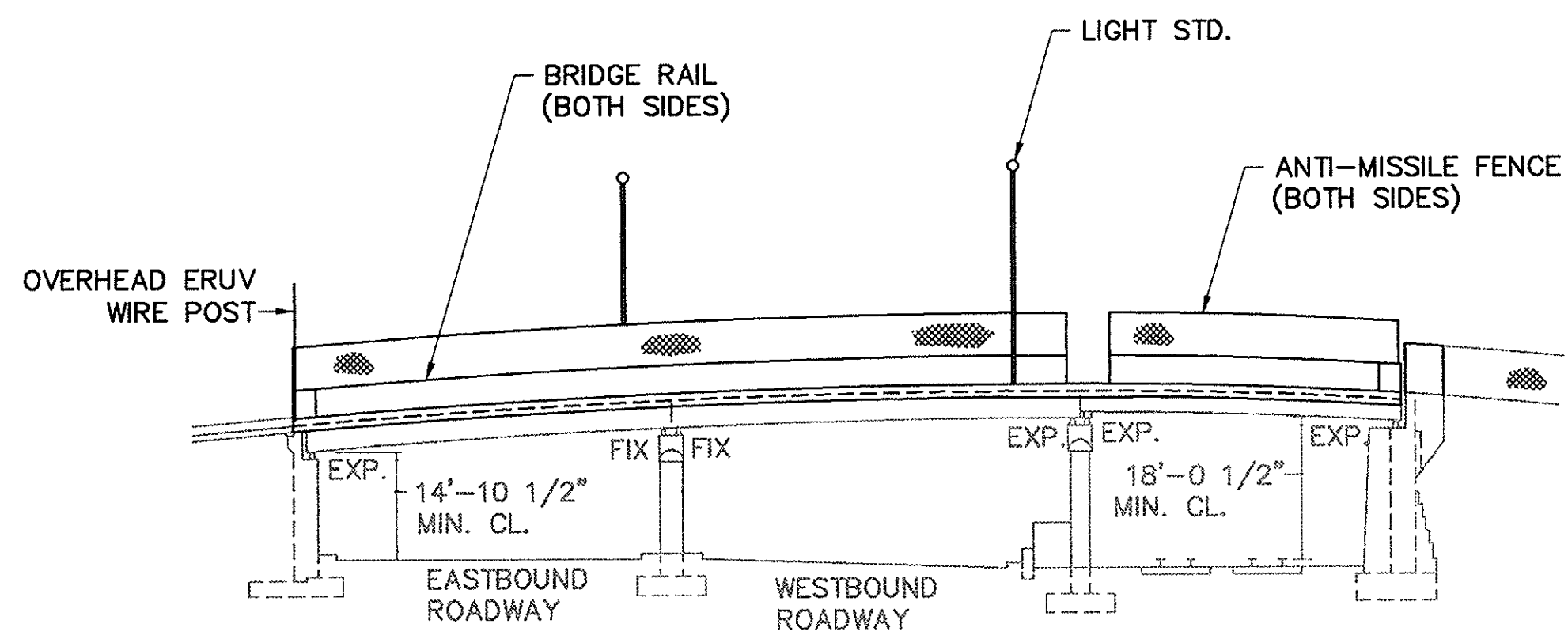
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
529 Main Street
Boston, Massachusetts 02129

Contract No. 521-024
Sheet No. **27**



PROPOSED DECK PLAN
SCALE: 1" = 20'



ELEVATION (EAST)
SCALE: 1" = 20'

GENERAL NOTES:

DESIGN LOADING:

A.A.S.H.T.O. LOADING HS20-44

MATERIALS:

1. CONCRETE FOR DECK SLAB, SIDEWALKS, MEDIANS, AND END POSTS SHALL BE CLASS "D" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4500$ PSI.
2. CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS "E" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=5000$ PSI.
3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

NOTES:

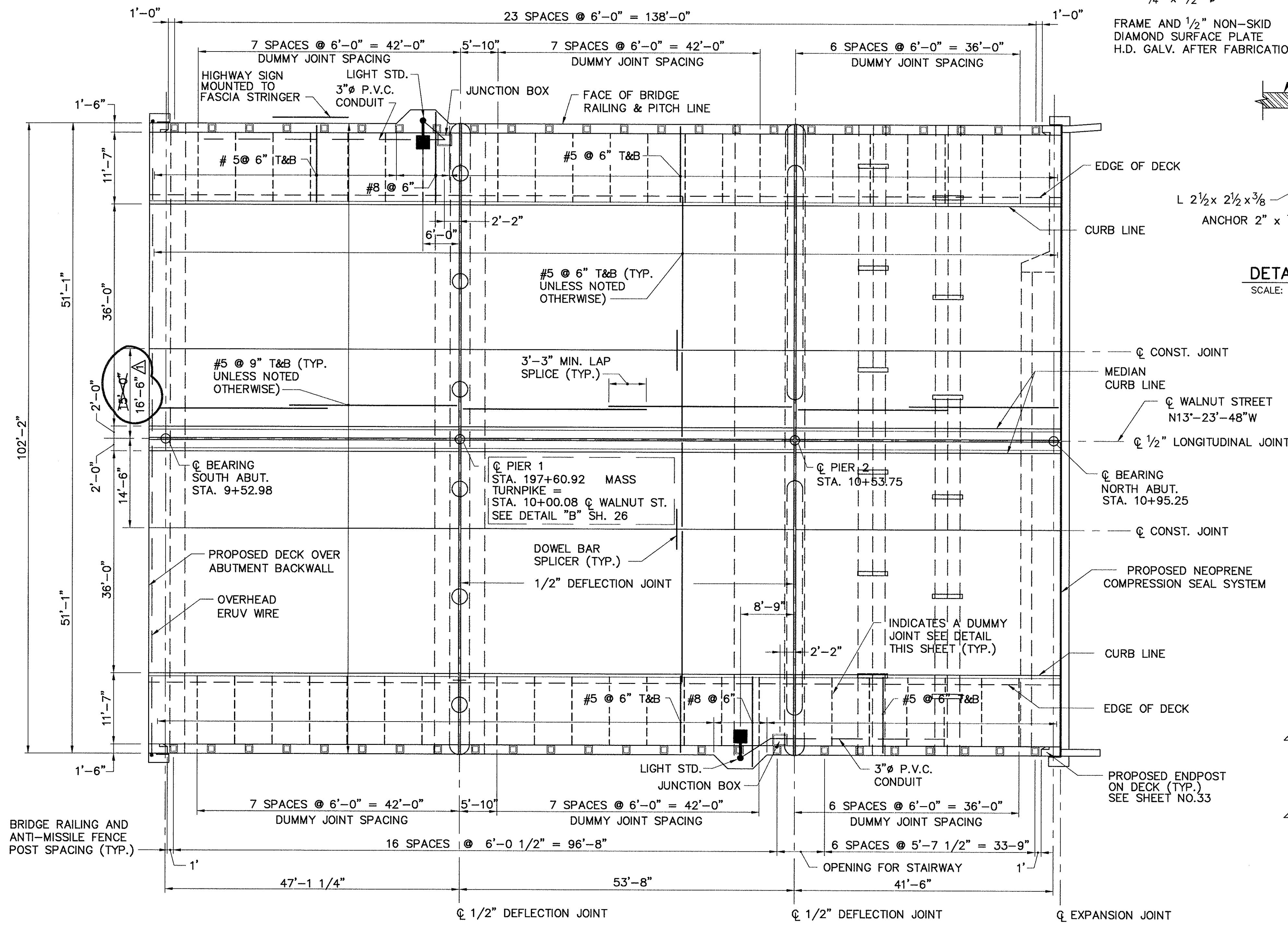
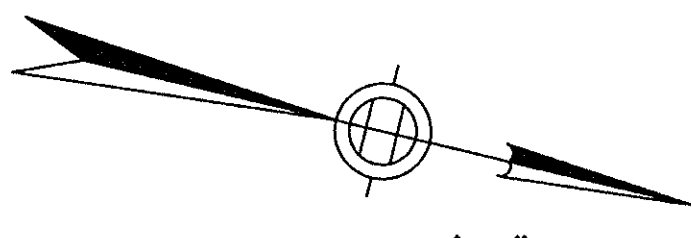
1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
2. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SECTION C25A OF THE SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1b.
3. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
4. FOR END POST DETAILS, SEE SHEET NO. 33.
5. EXISTING OVERHEAD "ERUV" WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		BY	DATE	
		DESIGNED: GRI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

AS-BUILT

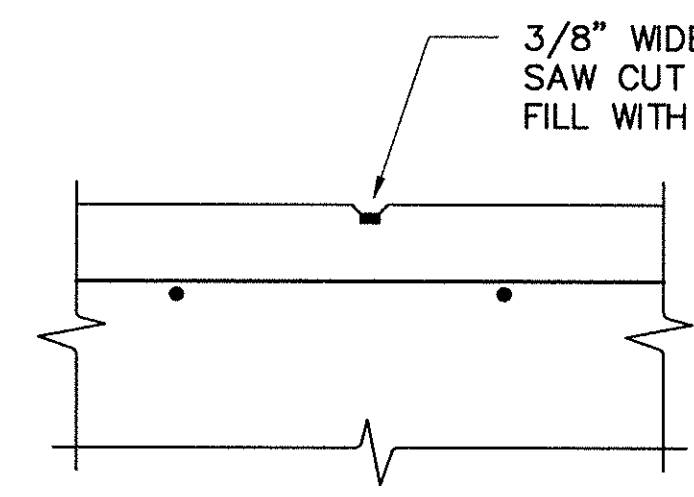
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR. NO. S-23) PROPOSED DECK PLAN	
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 28



PROPOSED DECK PLAN
SCALE: 1" = 10'

DUMMY JOINT NOTES:

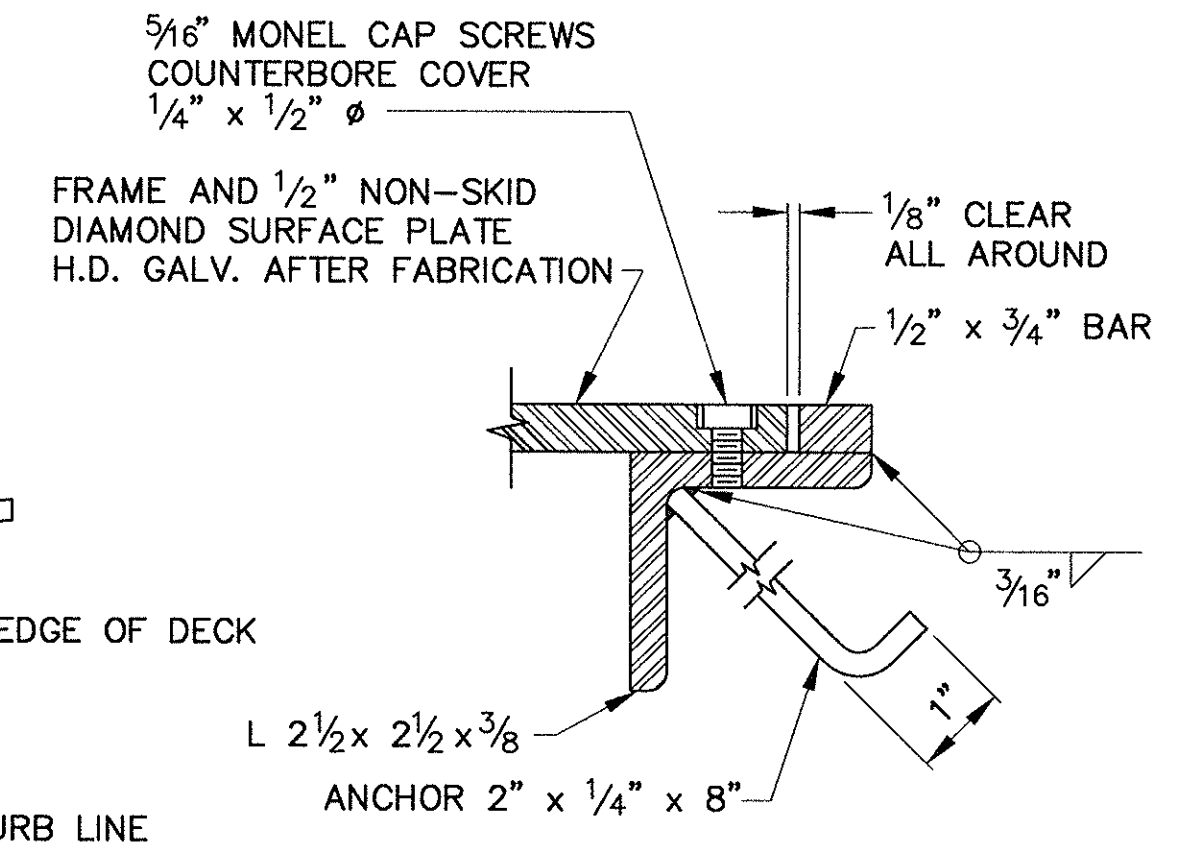
1. A MORTARED JOINT IN THE CURB SHALL BE PLACED AT EACH DUMMY JOINT.
2. JOINT SEALER TO BE SAME COLOR AS CONCRETE.
3. JOINTS TO BE SQUARE TO FACE OF CURB.



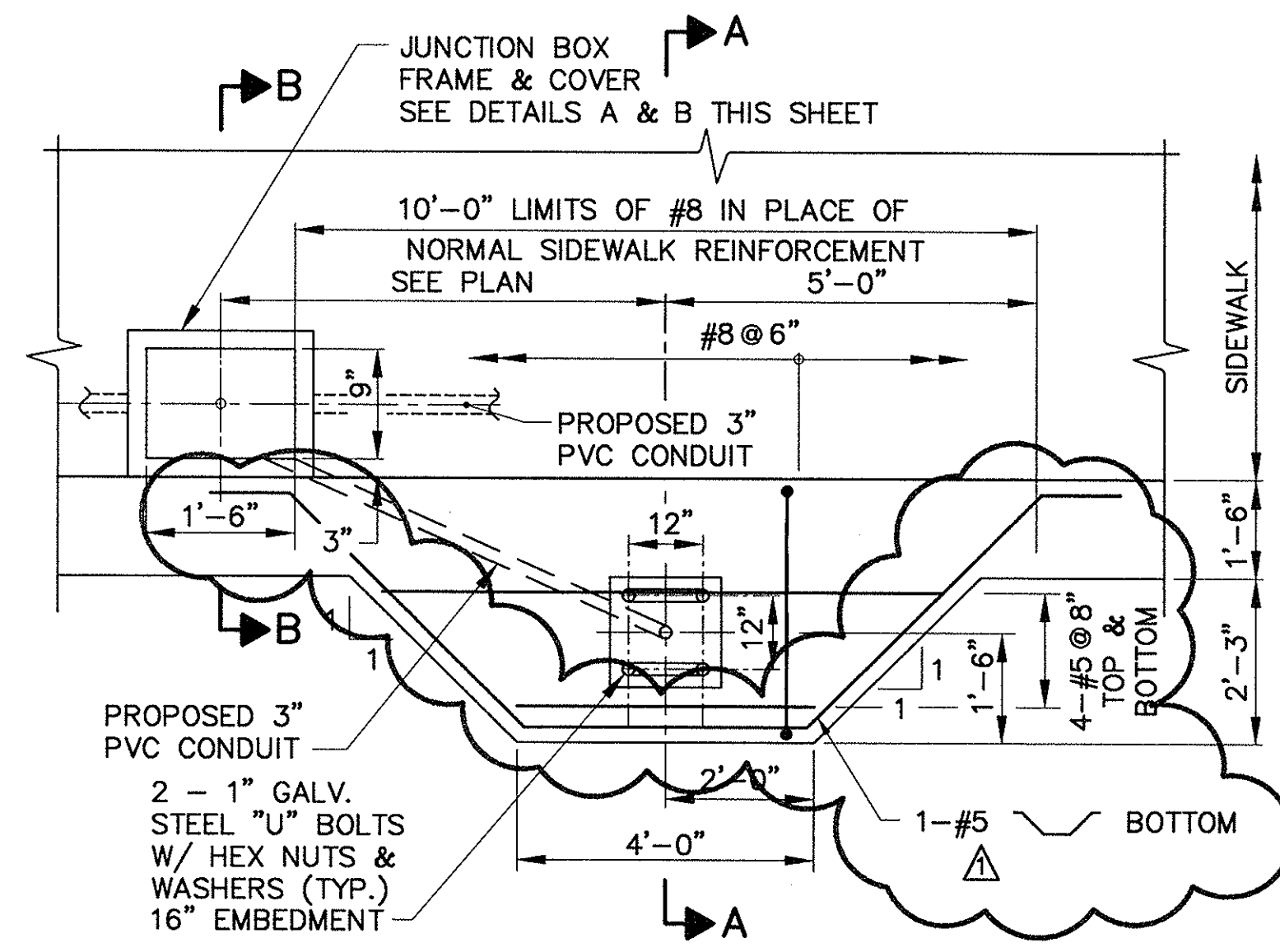
DUMMY JOINT DETAIL
SCALE: 3" = 1'-0"

NOTES:

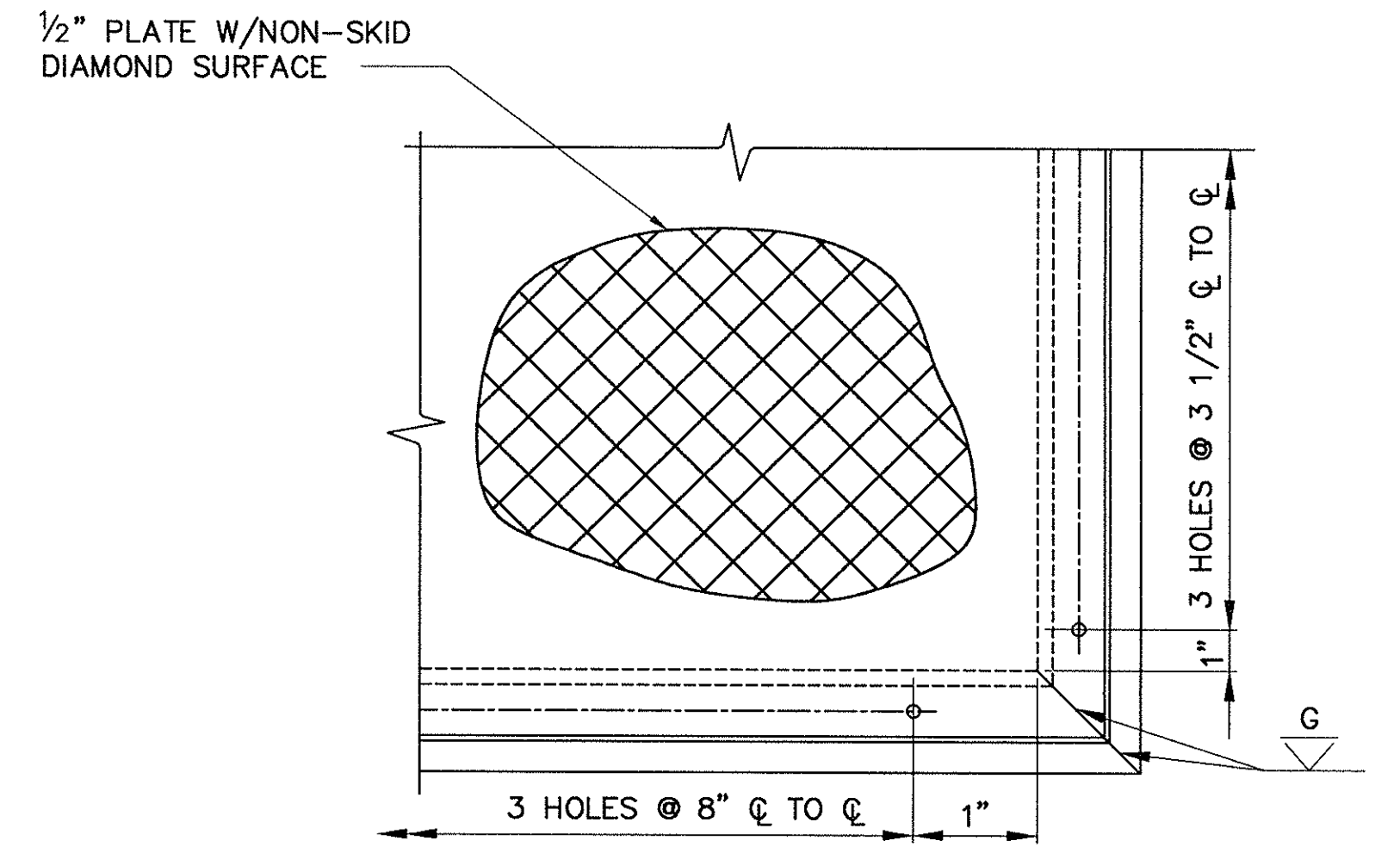
1. TRANSVERSE REINFORCEMENT SHALL BE PERPENDICULAR TO THE STRINGERS.
2. FOR REINFORCING NOT SHOWN SEE SHEET NOS. 32, 34, 35.
3. FOR LIMITS OF GRANITE CURB AT ROADWAY JOINTS SEE SHEET NO. 34, 35.
4. PVC DRAINS (SEE SHEET NO. 32) LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED SO THAT THEY DO NOT DRAIN ON TO THE TRAVELLED WAY.
5. FINISH FOR POLYMER MODIFIED CONCRETE WEARING SURFACE SHALL BE SAWCUT TRANSVERSE GROOVES, FOR DETAIL SEE SHEET NO. 39
6. SECTIONS A-A & B-B ARE SHOWN ON SHEET NO. 32



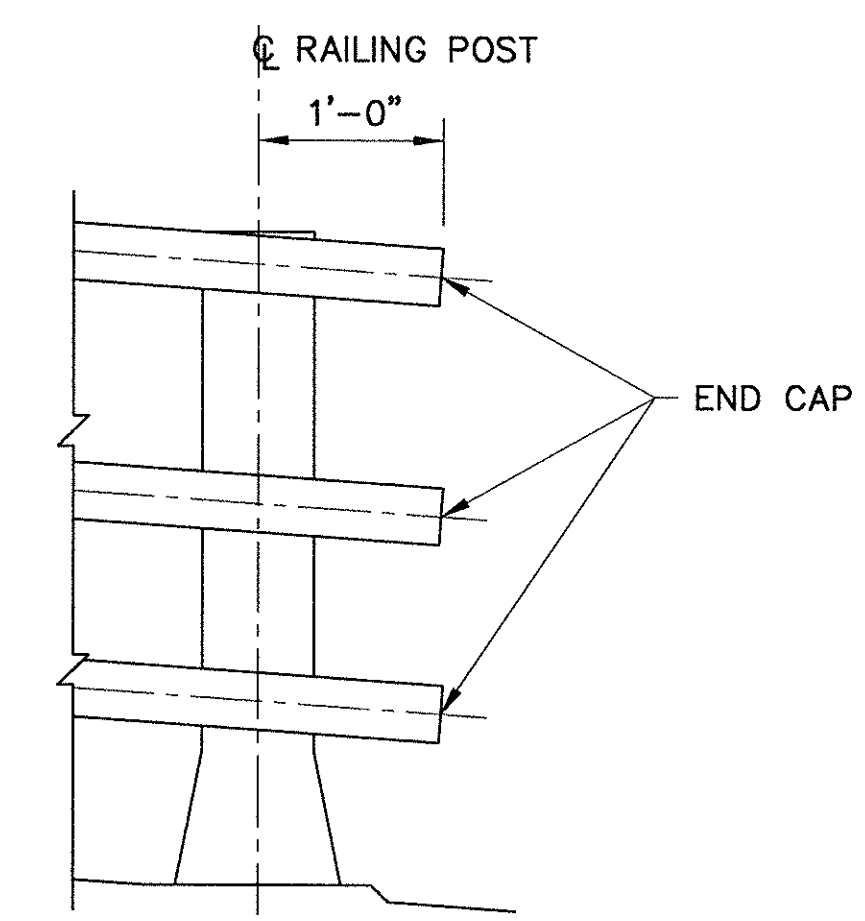
DETAIL "B"
SCALE: 6" = 1'-0"



PLAN PROPOSED LIGHT POLE SUPPORT
NOT TO SCALE



DETAIL "A"
SCALE: 3" = 1'-0"



END DETAIL AT STAIR OPENING
SCALE: 1" = 1'-0"

CAST ALUMINUM - DRIVE FIT

RAIL CAP
NOT TO SCALE **AS BUILT**

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GRI	12/93	
		DRAWN:	JNC	12/93	
		CHECKED:	EMM	12/93	
		BY	GTS	10/95	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

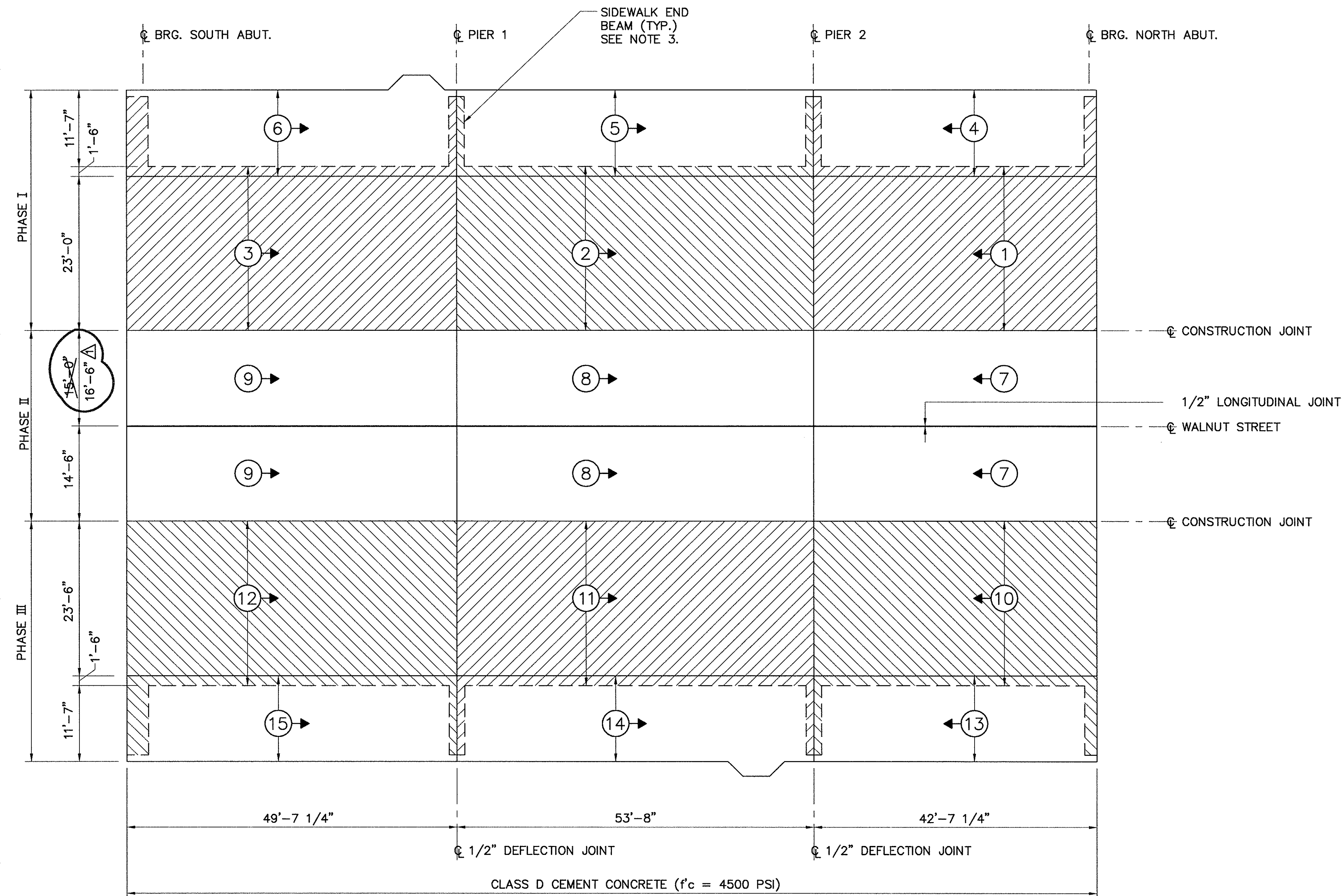
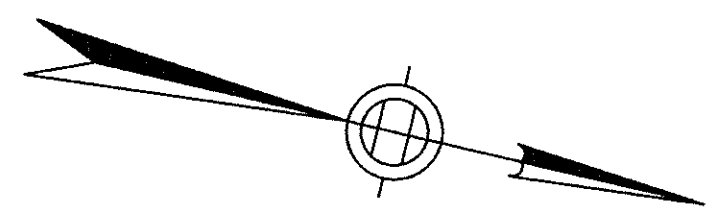
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
DECK PLAN AND DETAILS

Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
The Schwartz Center
629 Main Street
Boston, Massachusetts 02129

Sheet No. **29**



PLACING SEQUENCE FOR CONCRETE DECK

SCALE 1" = 10'

PLACING SEQUENCE NOTES:

1. (3) ETC. INDICATES SEQUENCE OF PLACEMENT.
2. PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
3. SIDEWALK END BEAMS AT PIERS AND ABUTMENTS SHALL BE PLACED CONTINUOUSLY WITH THE ROADWAY DECK SLAB SEE DETAIL SHEET NOS. 34 AND 35.
4. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
5. FOR CONSTRUCTION PHASING SEE SEQUENCE OF CONSTRUCTION SHEET NO. 41.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	
		BY	DATE	

HAUNCH DEPTH "H" (INCHES) FOR SETTING TOP OF FORMS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE									
BEAM	INCREASING STATIONS →								CL BRG.
	CL BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	
SPAN 1									
A									
B									
C									
D									
E									
F									
G									
H									
J									
K									
L									
M									
N									
P									
R									
S									
SPAN 2									
A									
B									
C									
D									
E									
F									
G									
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J									
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SPAN 3									
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AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

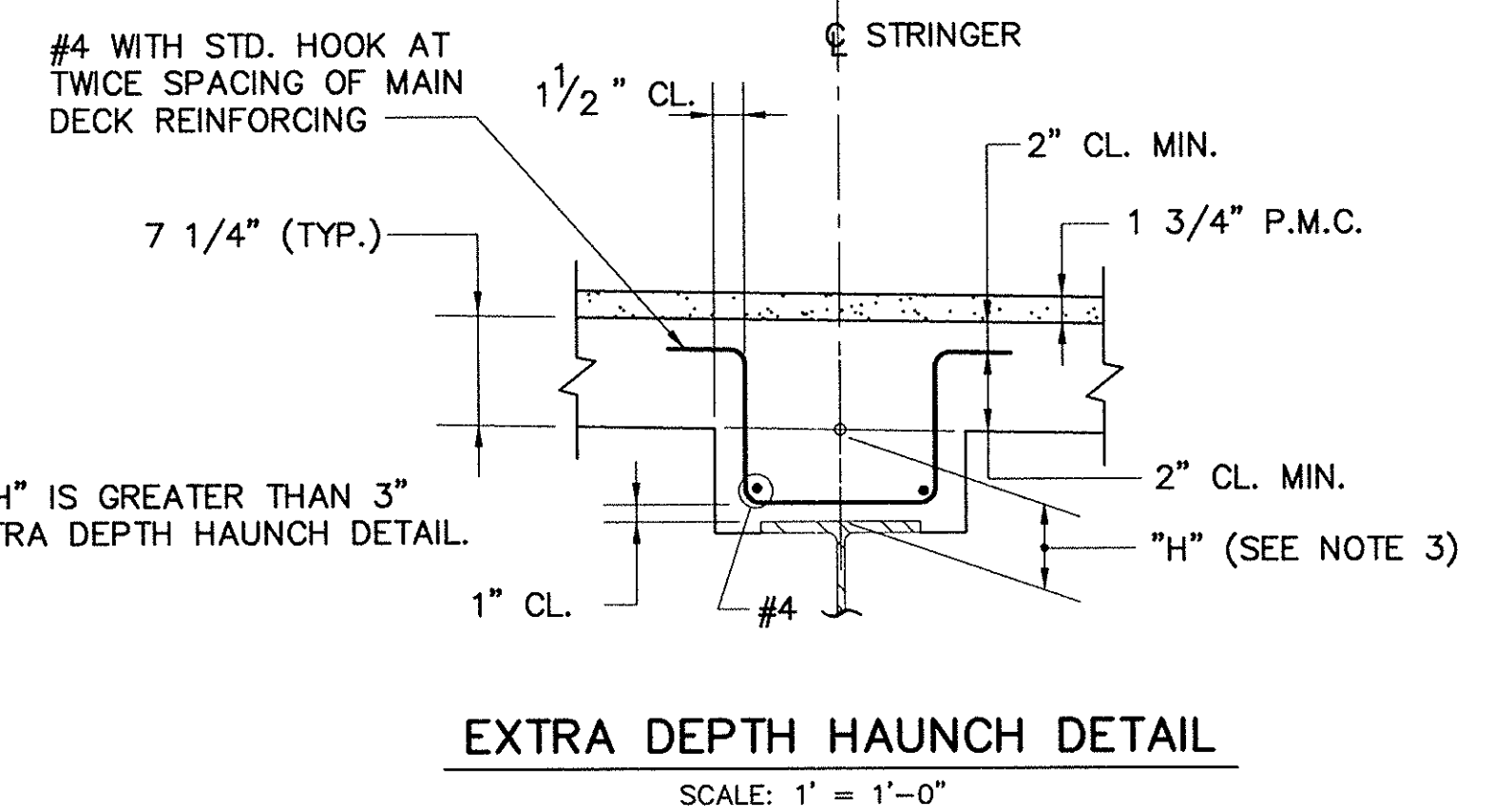
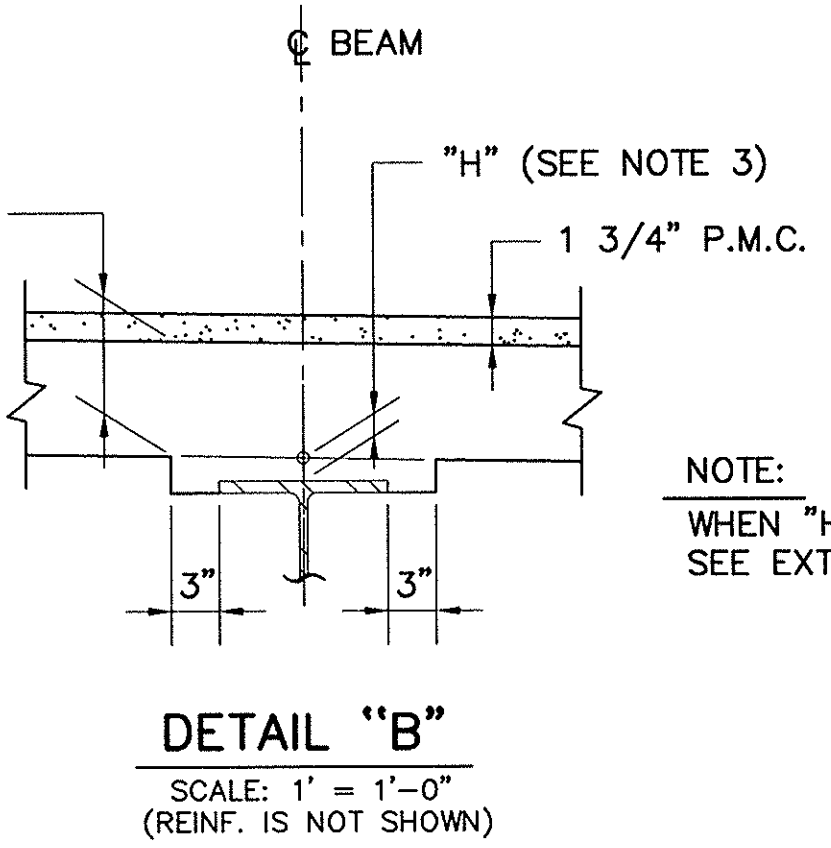
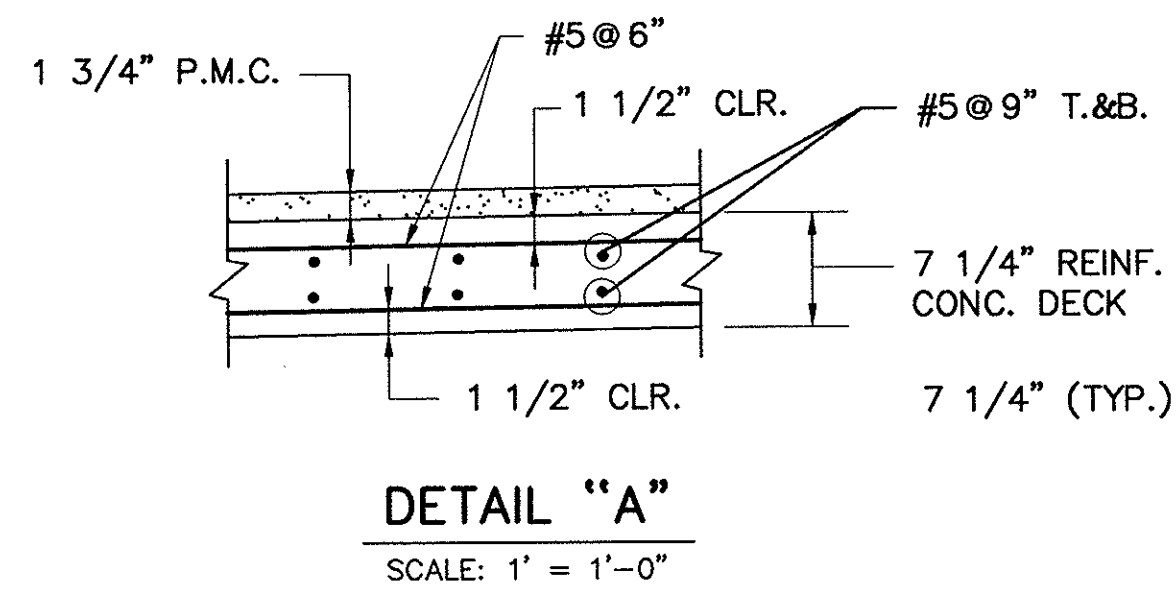
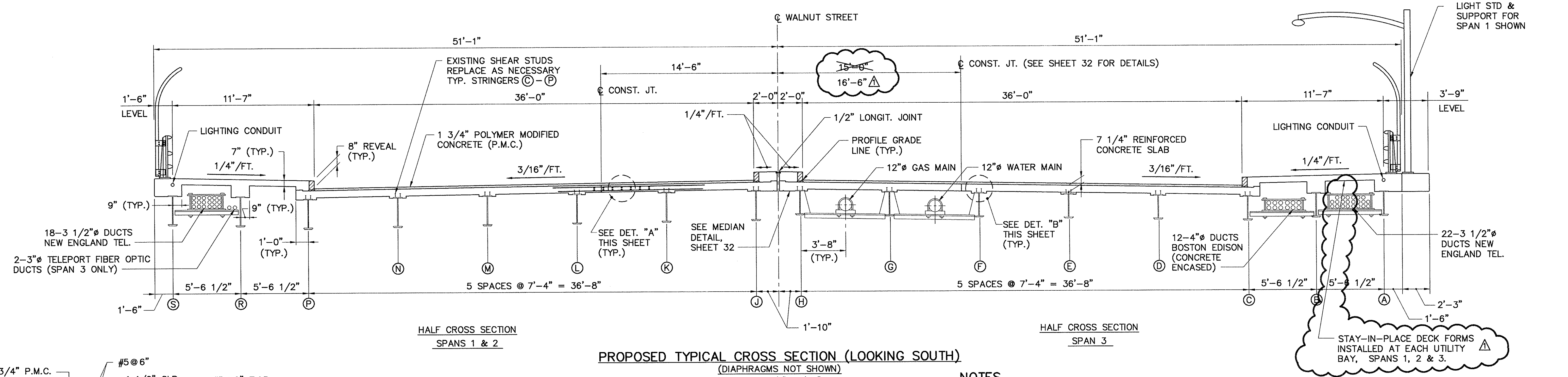
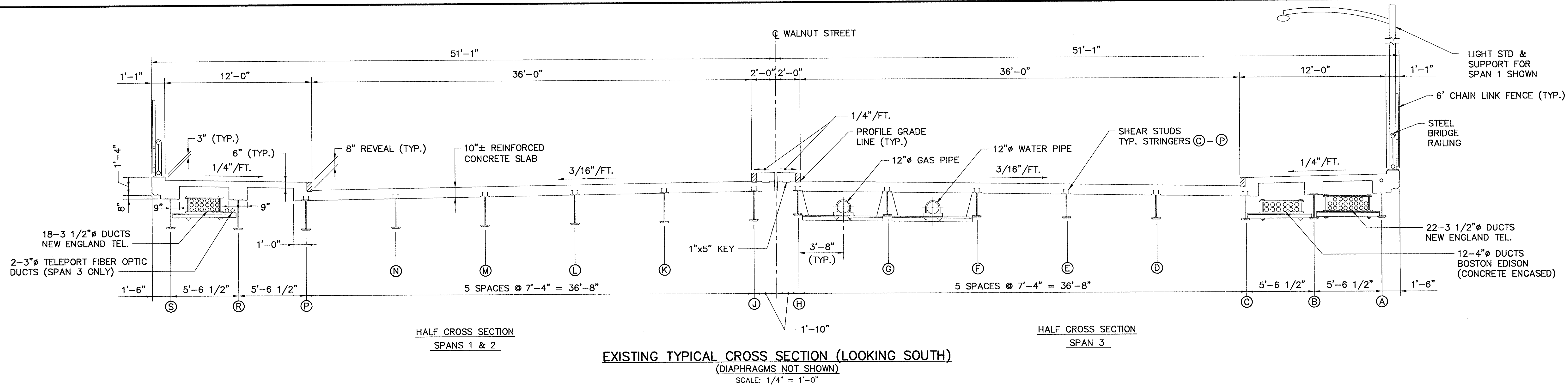
BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR. NO. S-23)
CONCRETE PLACING SEQUENCE

Scale: 1" = 10' Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
 80 Boylston Street
 Boston, MA 02116

EDWARDS AND KELCEY, INC.
 The Schrafft Center
 529 Main Street
 Boston, Massachusetts 02129

Sheet No. **30**



- NOTES**
- FOR TYPICAL SIDEWALK DETAILS, SEE SHEET NO. 32.
 - FOR MEDIAN DETAIL, SEE SHEET NO. 32.
 - HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG CENTERLINE STRINGERS PRIOR TO CONCRETE REMOVAL, AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED, SEE SPECIAL PROVISIONS SECTION C1-D.
 - FOR HAUNCH DEPTH SETTING CHART SEE SHEET NO. 30.
 - THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
 - THE TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
 - CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
 - SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE. ($f_c = 4500$ PSI).

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: SAS	12/93	
		CHECKED: EMM	12/93	
		BY	DATE	

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

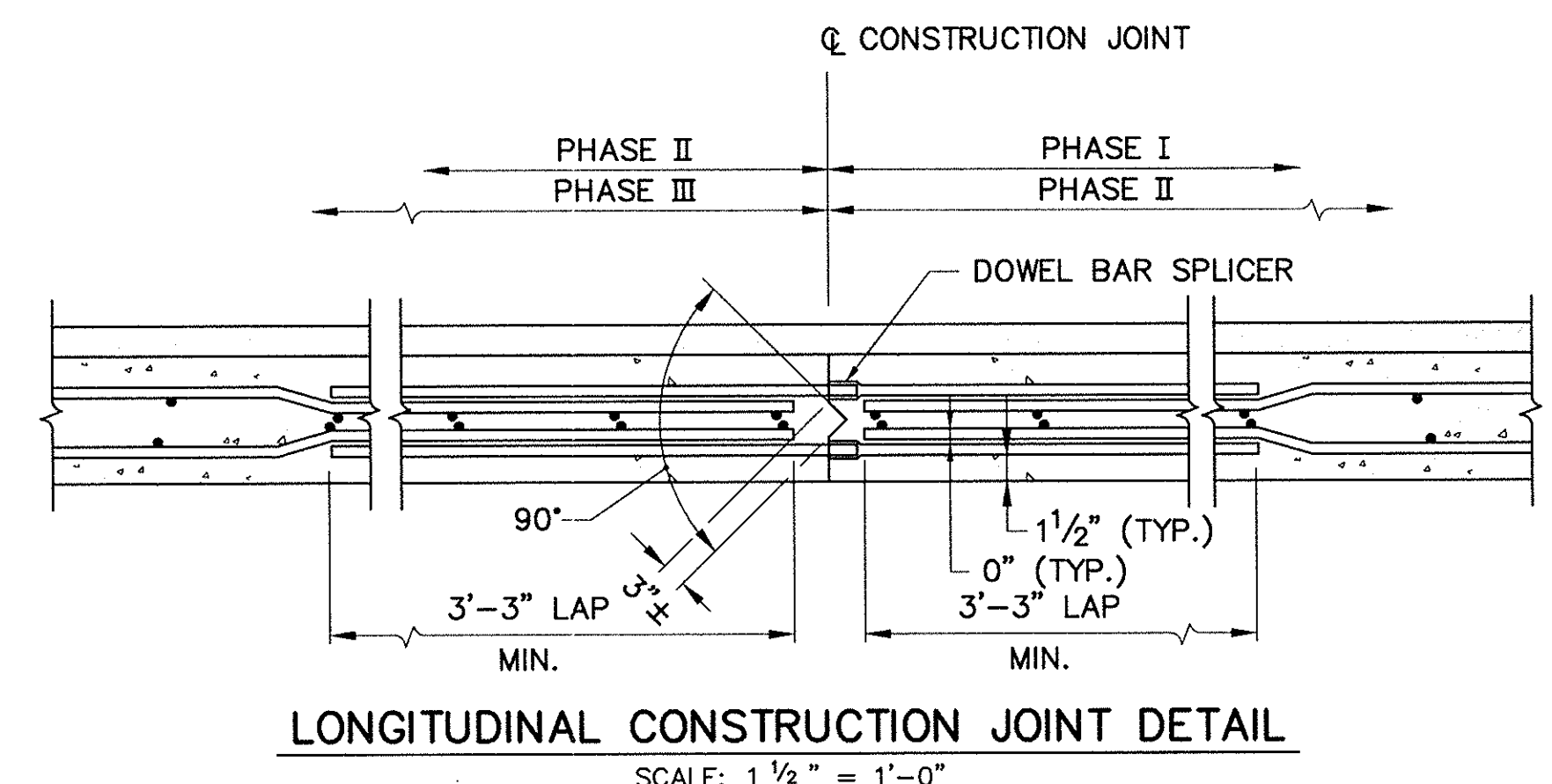
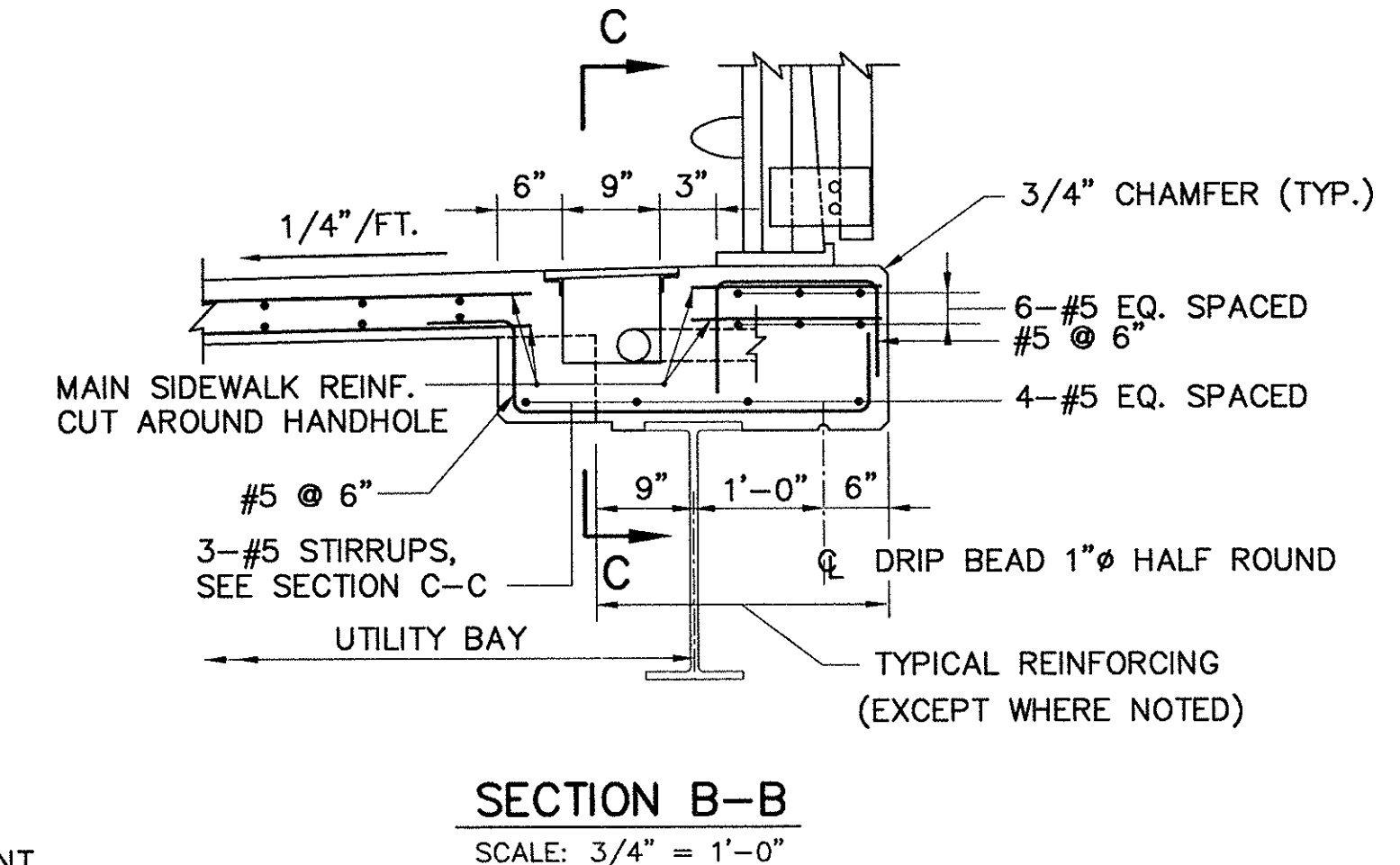
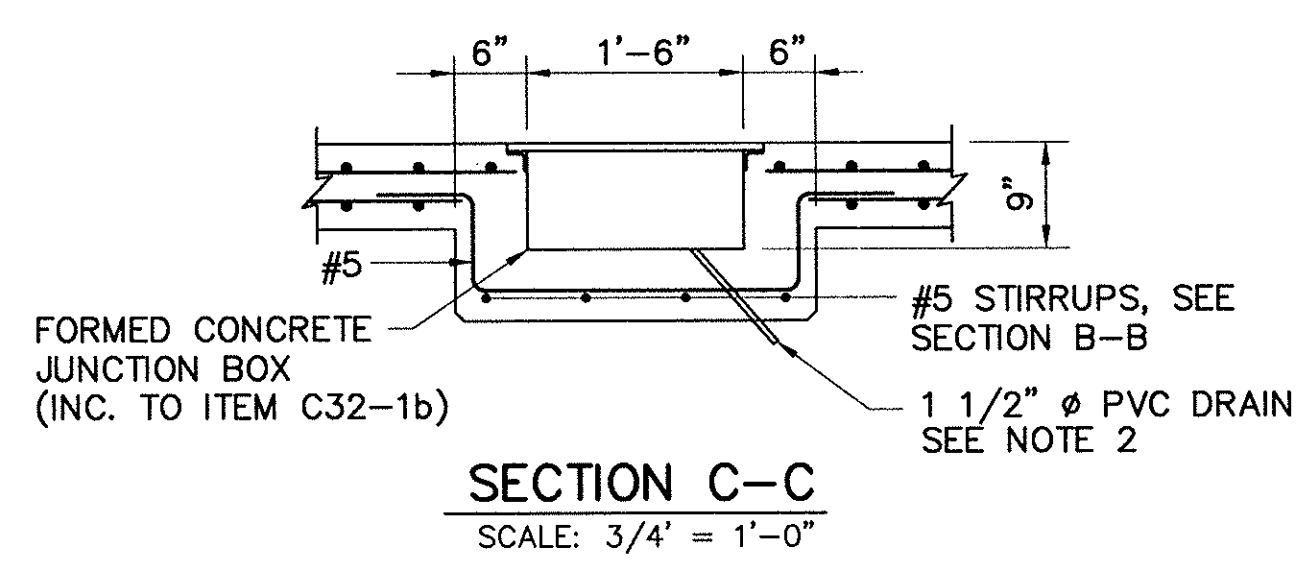
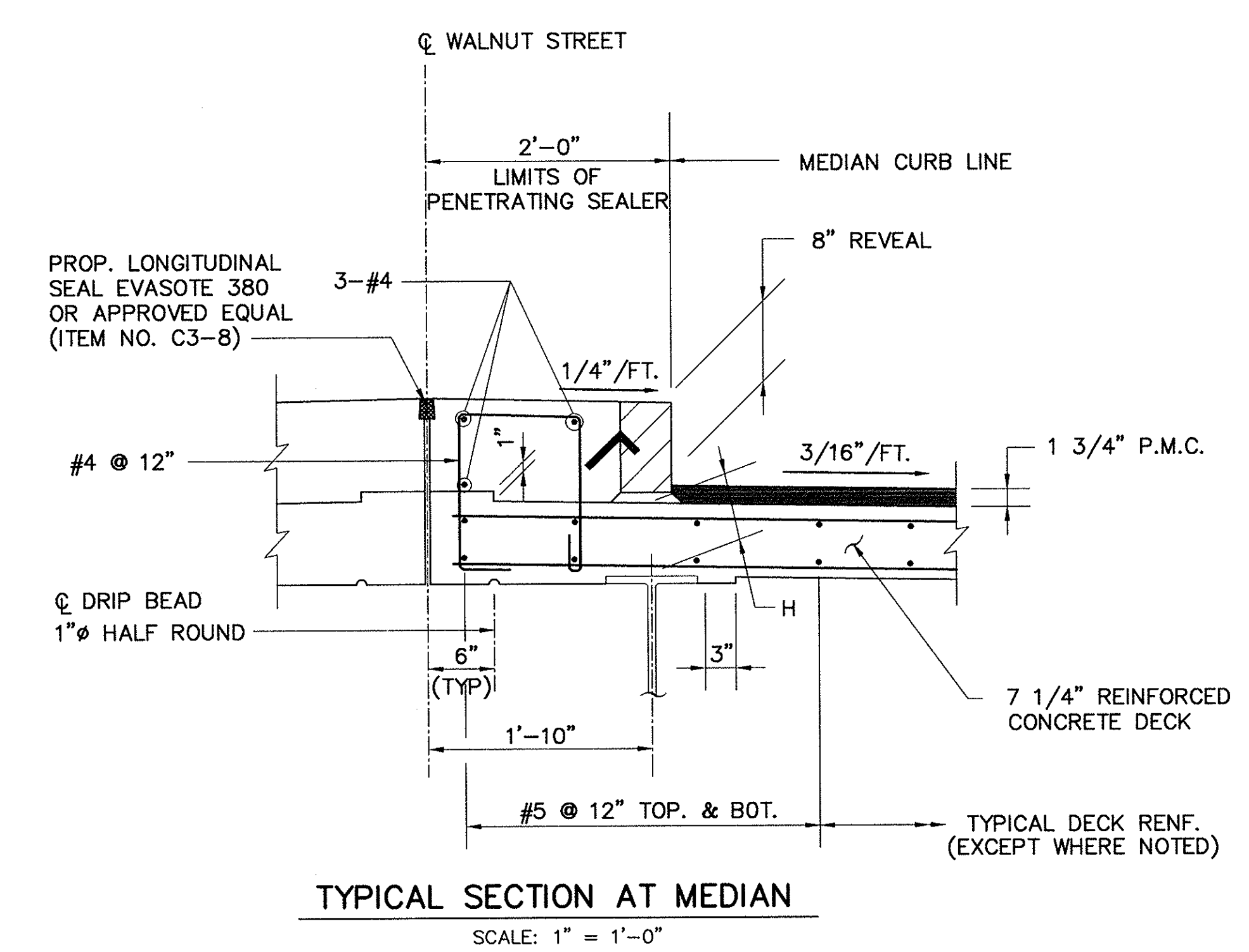
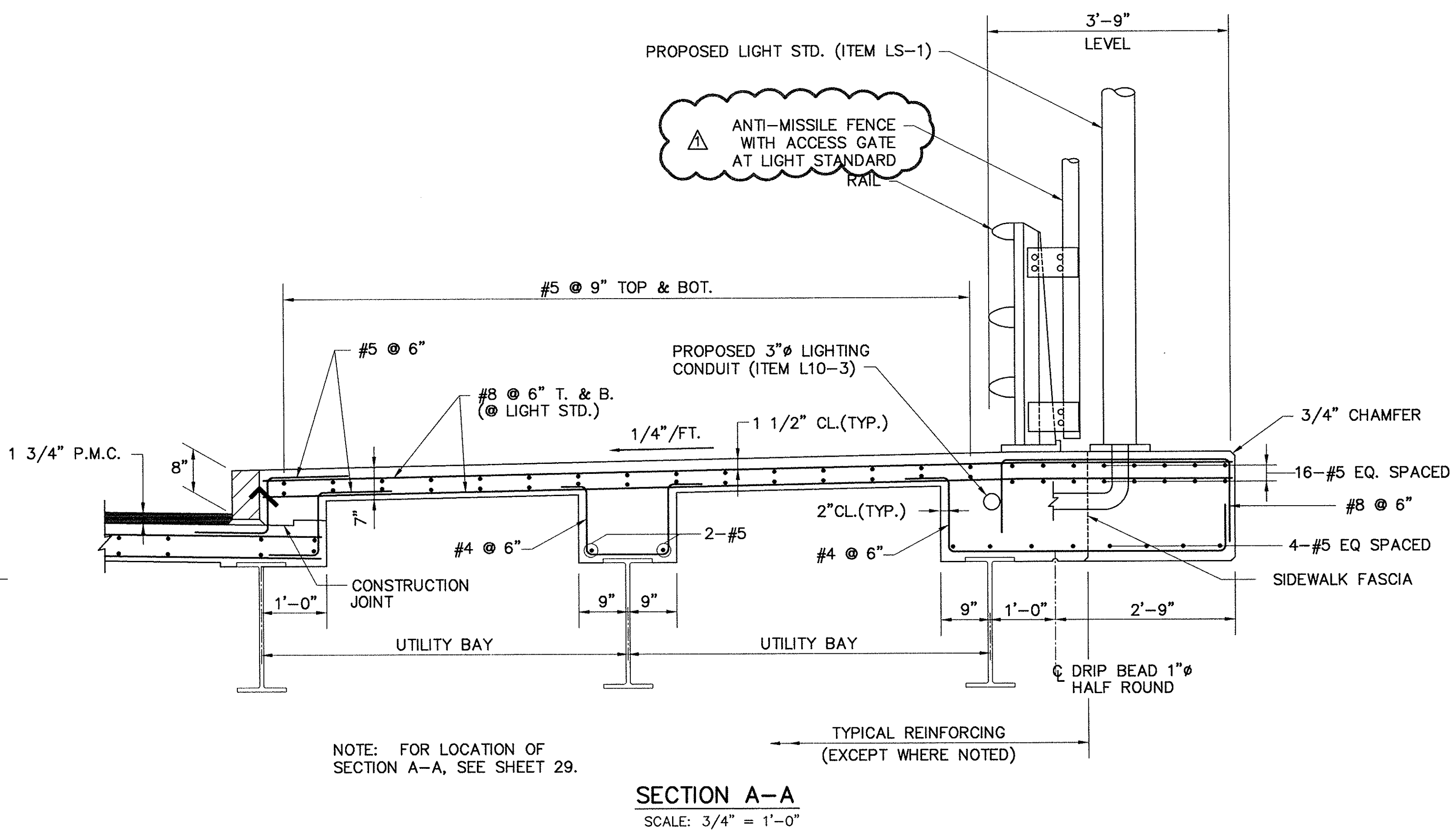
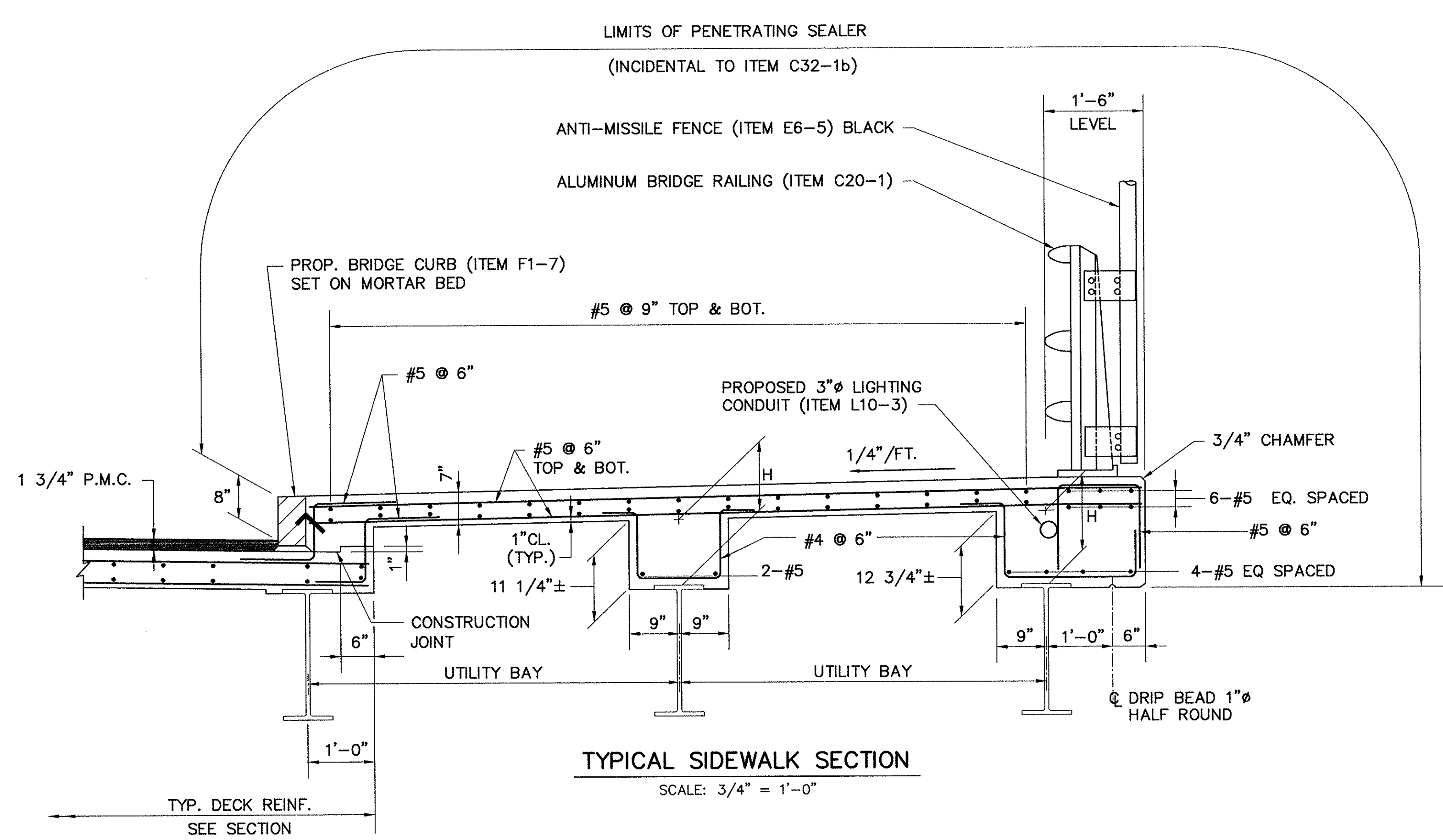
EDWARDS AND KELCEY, INC.
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

Scale: AS NOTED Contract No. 521-024 Sheet No. 31

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
TYPICAL CROSS SECTIONS



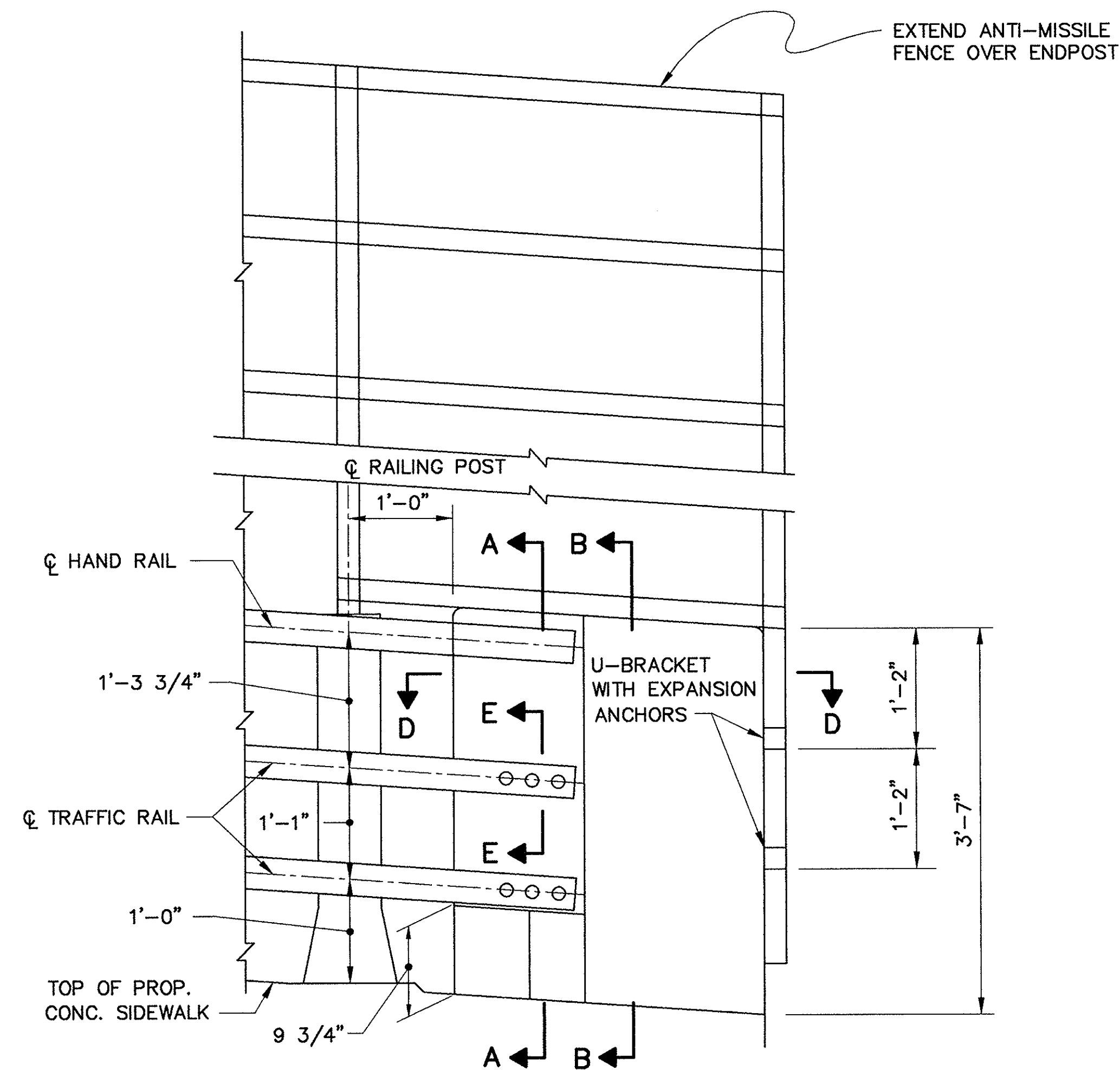
- NOTES:**
1. LOCATION OF SECTIONS A-A & B-B ARE SHOWN ON SHEET 29.
 2. P.V.C. DRAINS LOCATED ABOVE THE TURNPIKE SHALL BE POSITIONED NOT TO DRAIN ONTO THE TRAVELED WAY AND SHALL EXTEND BELOW UTILITIES.
 3. FOR JUNCTION BOX FRAME DETAILS SEE SHT. NO. 29.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI	12/93
		DRAWN:	WC	12/93
		CHECKED:	EMM	12/93
		BY	GTS	10/95

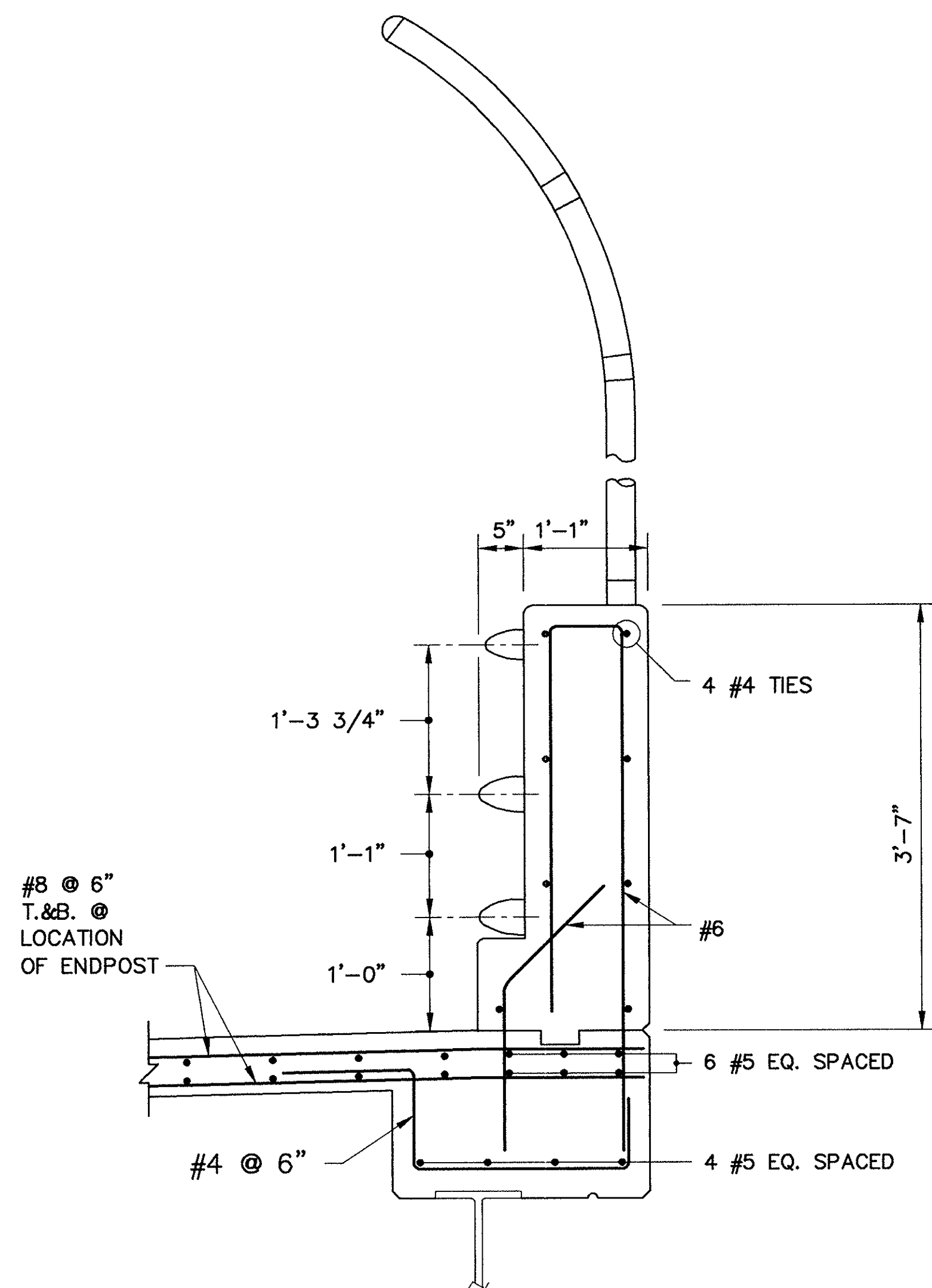
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116

EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129

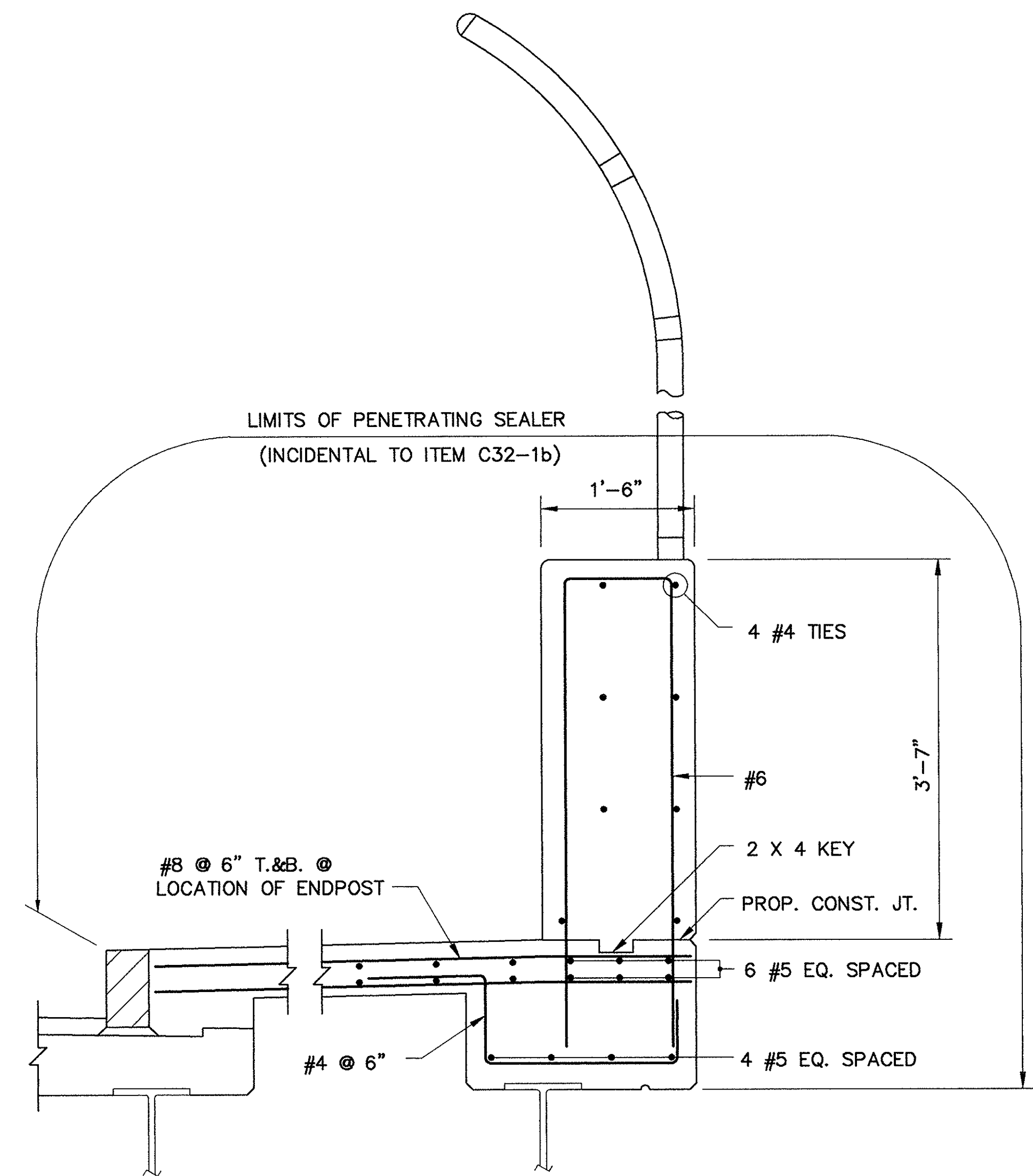
Scale: AS NOTED Contract No. 521-024 Sheet No. 32



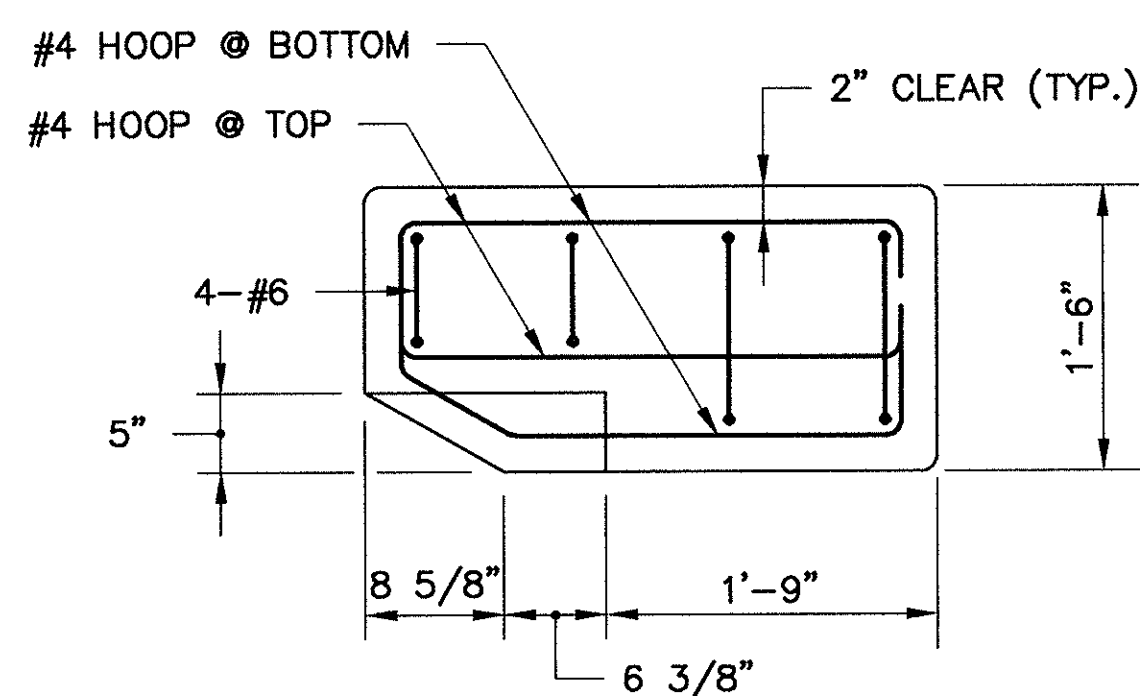
ELEVATION
SCALE: 1" = 1'-0"



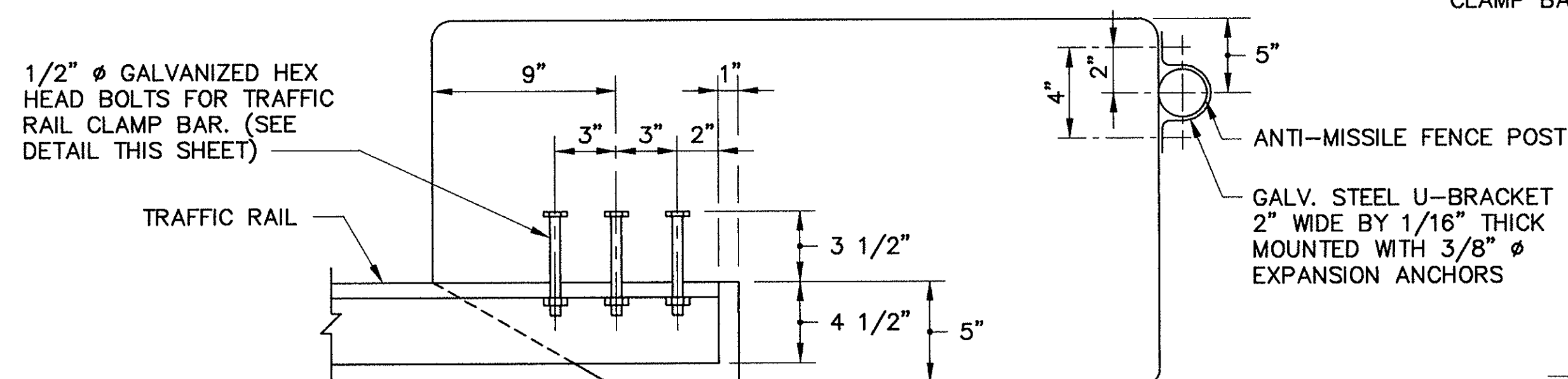
SECTION A-A
SCALE: 1" = 1'-0"



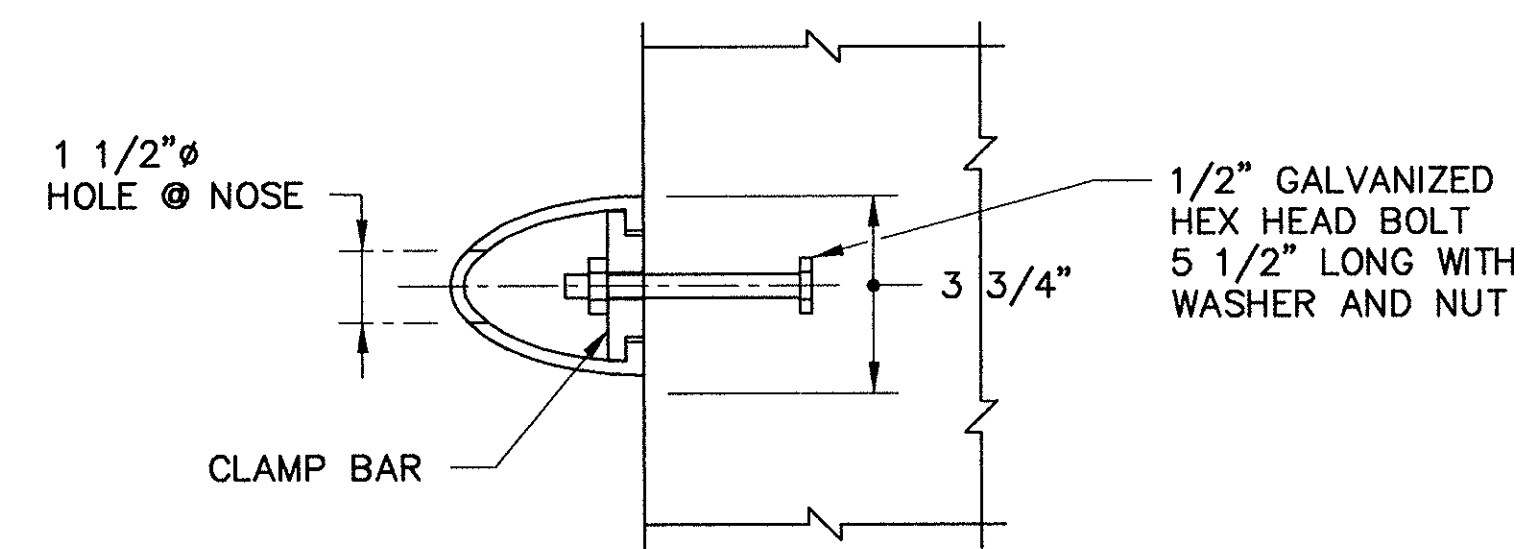
SECTION B-B
SCALE: 1" = 1'-0"



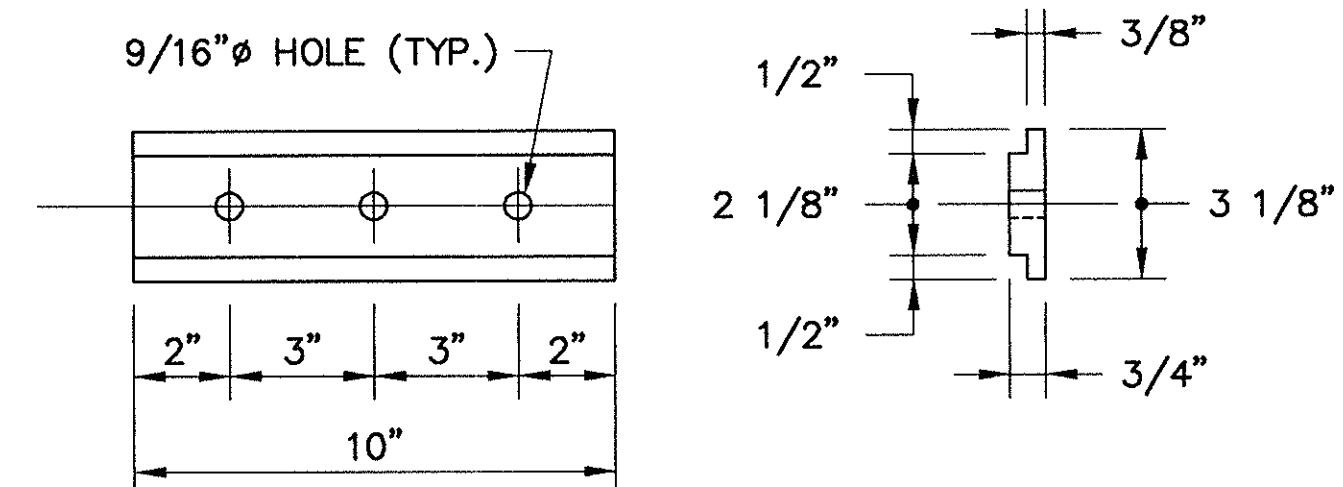
SECTION D-D
SCALE: 1" = 1'-0"



TRAFFIC RAIL ANCHOR BOLT DETAIL
SCALE: 2" = 1'-0"



SECTION E-E
SCALE: 3" = 1'-0"



CLAMP BAR DETAIL
SCALE: 3" = 1'-0"

NOTES:

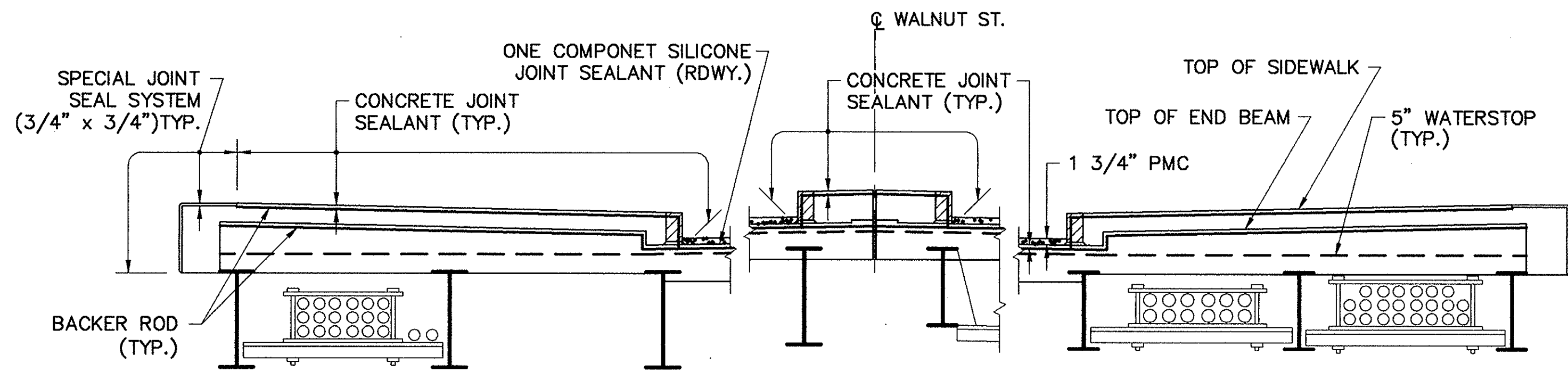
- EXISTING NORTH ABUTMENT ENDPOSTS TO BE REMOVED TO TOP OF WINGWALLS. CHAIN LINK FENCE TO BE INSTALLED ON TOP OF WINGWALL FROM THE FACE OF ABUTMENT TO MATCH EXISTING R.O.W. FENCING.
- CONTRACTOR SHALL PROVIDE FENCE CLOSURE BETWEEN PROPOSED BRIDGE FENCE AND EXISTING R.O.W. FENCING IN ACCORDANCE WITH ENGINEERS INSTRUCTIONS.

AS BUILT

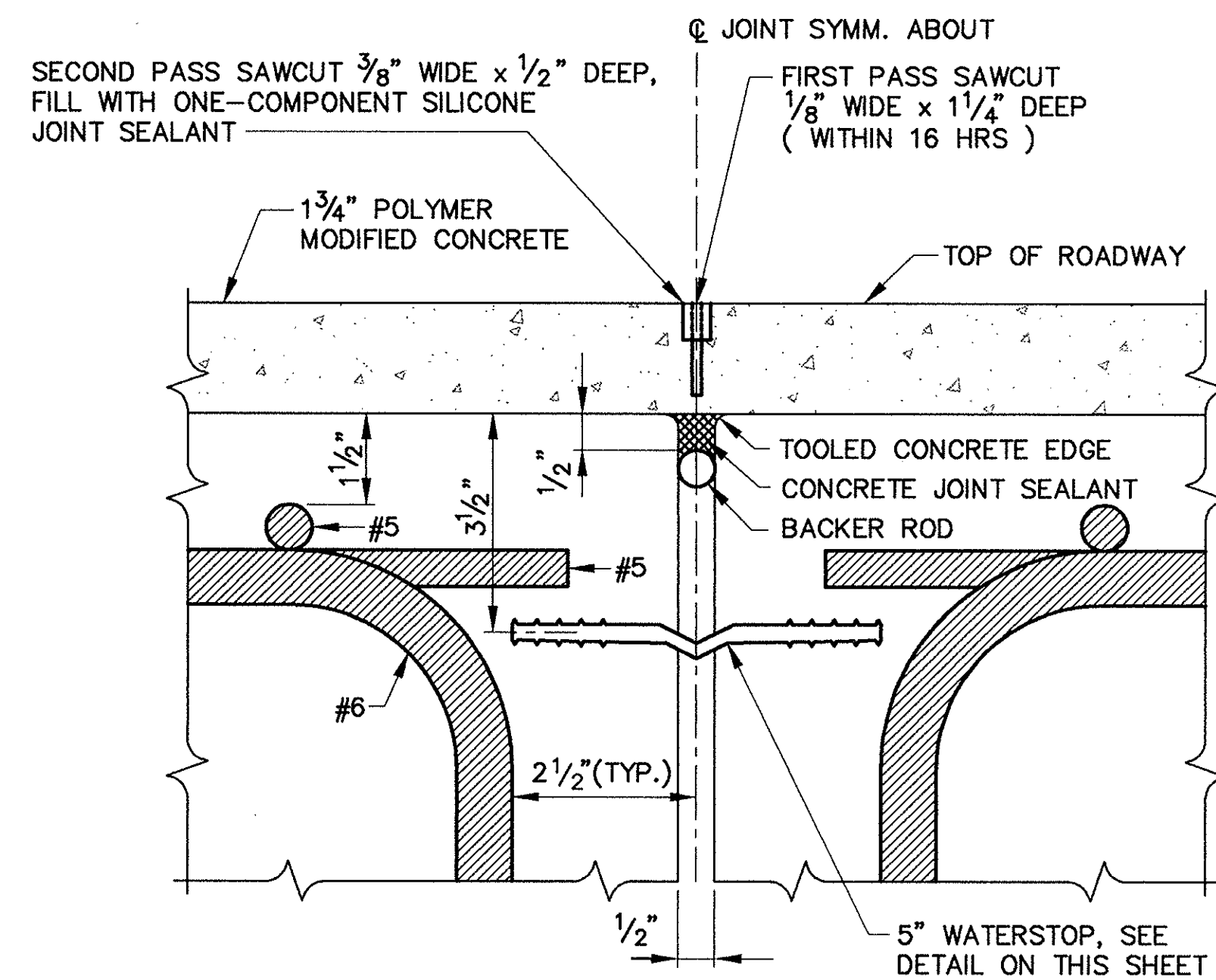
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
ENDPOST DETAILS

Scale: AS NOTED Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116
EDWARDS AND KELCEY, INC. Sheet No. 33

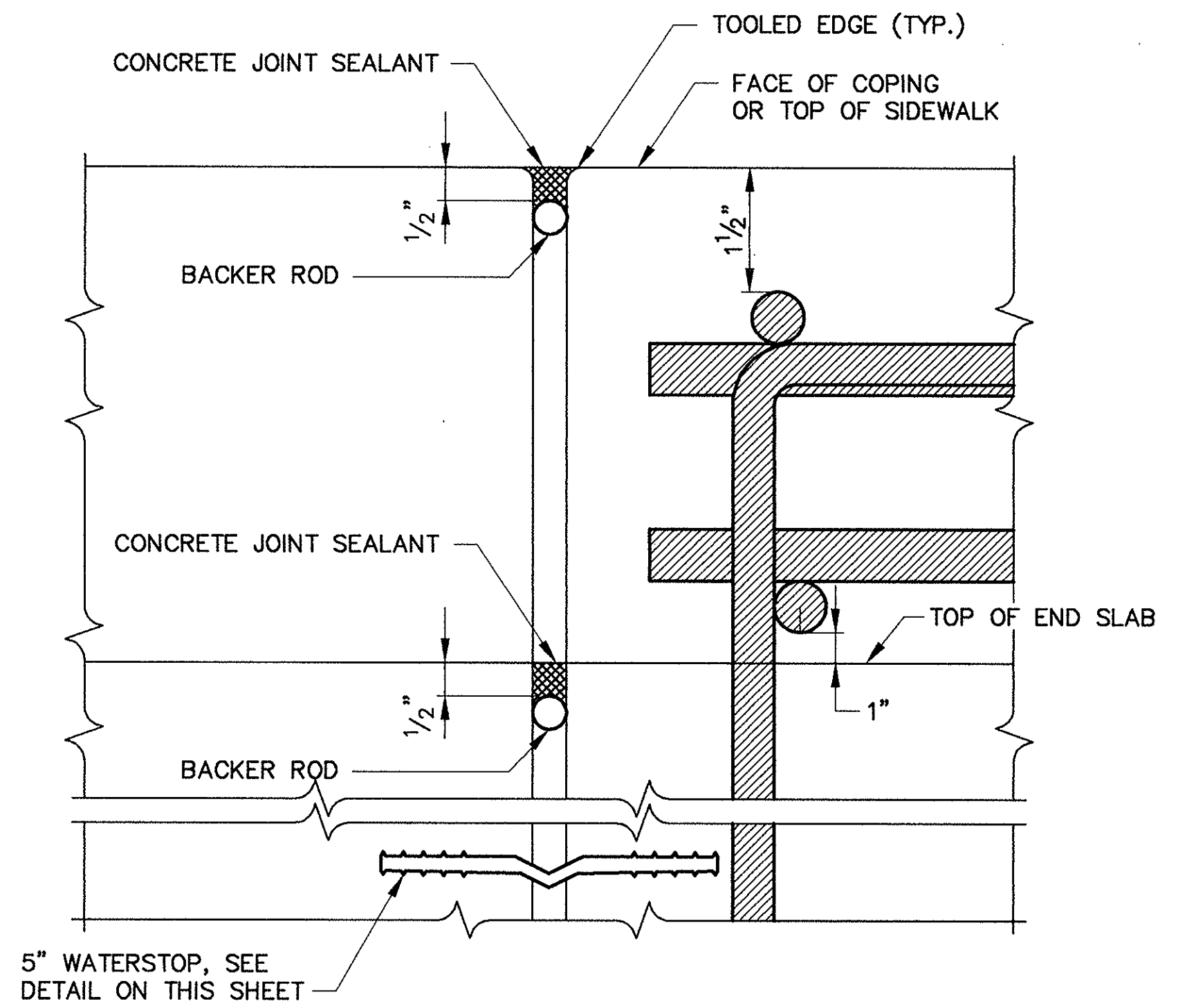
NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	GRI	12/93	
		DRAWN:	JNC	12/93	
		CHECKED:	EMM	12/93	



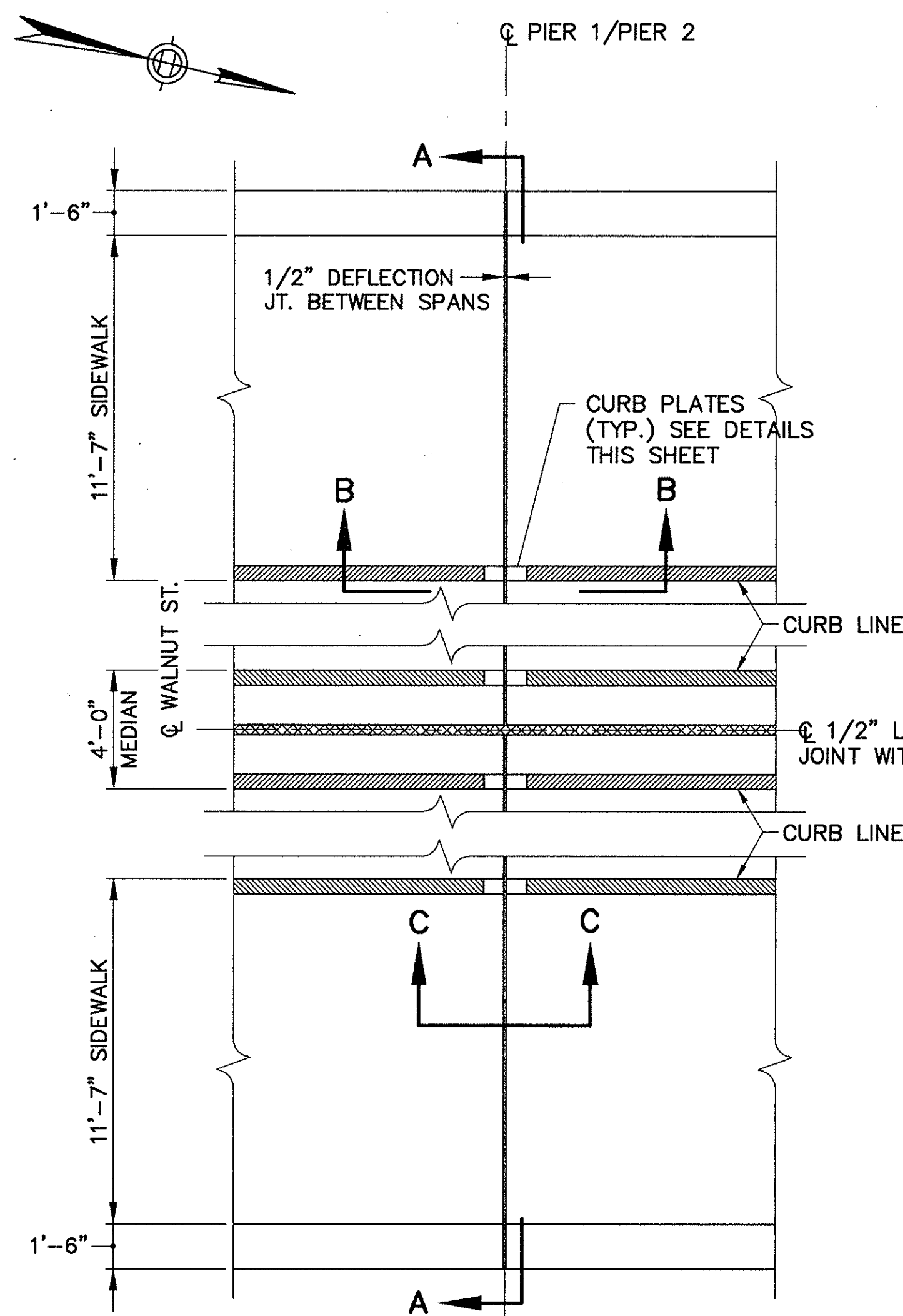
SECTION A-A
SCALE: 3/8" = 1'-0"



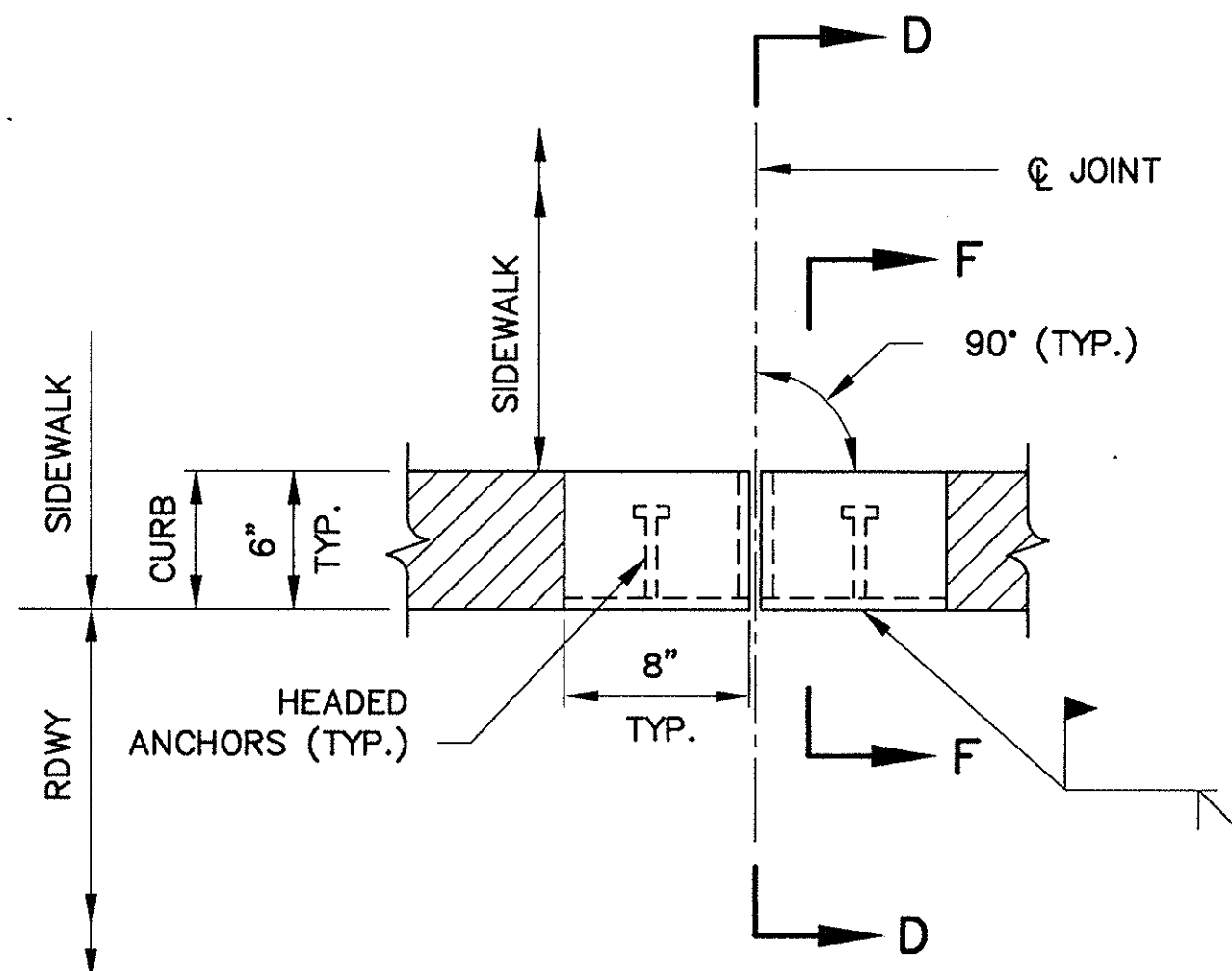
DETAIL "A"
NOT TO SCALE



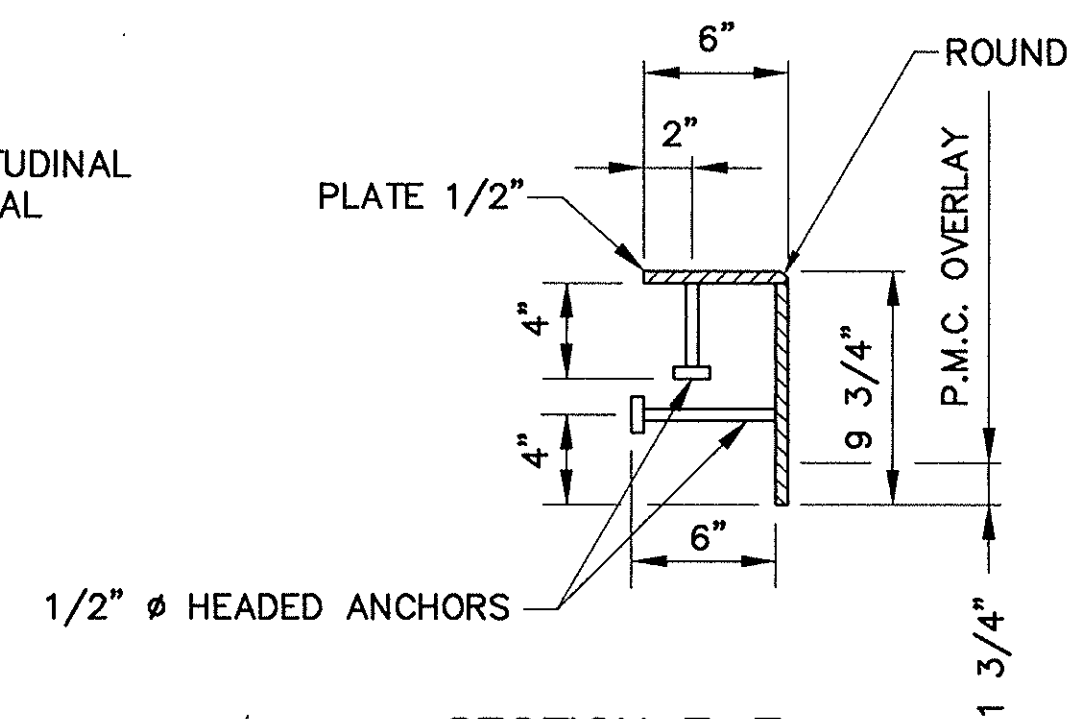
DETAIL "B"
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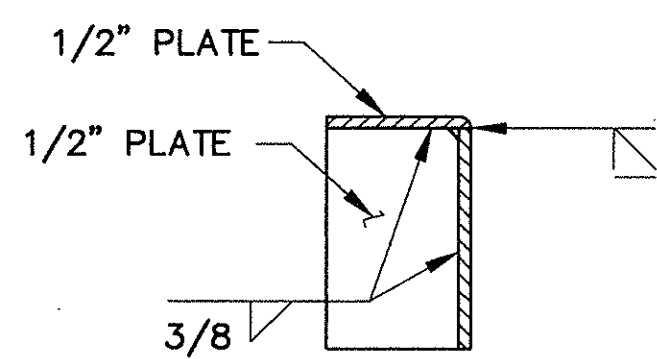
DEFLECTION JOINT OVER PIERS 1 AND 2
SCALE: 1/4" = 1'-0"



PLAN

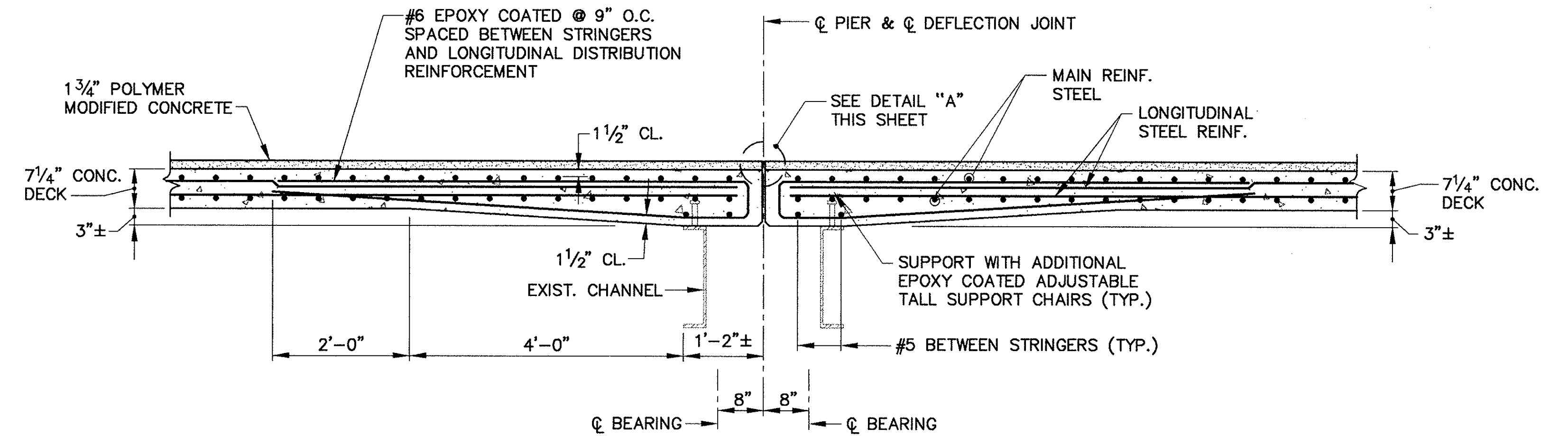


SECTION F-F
(PROPOSED CURB PLATE USED AT PIERS 1, 2 & SOUTH ABUTMENT)

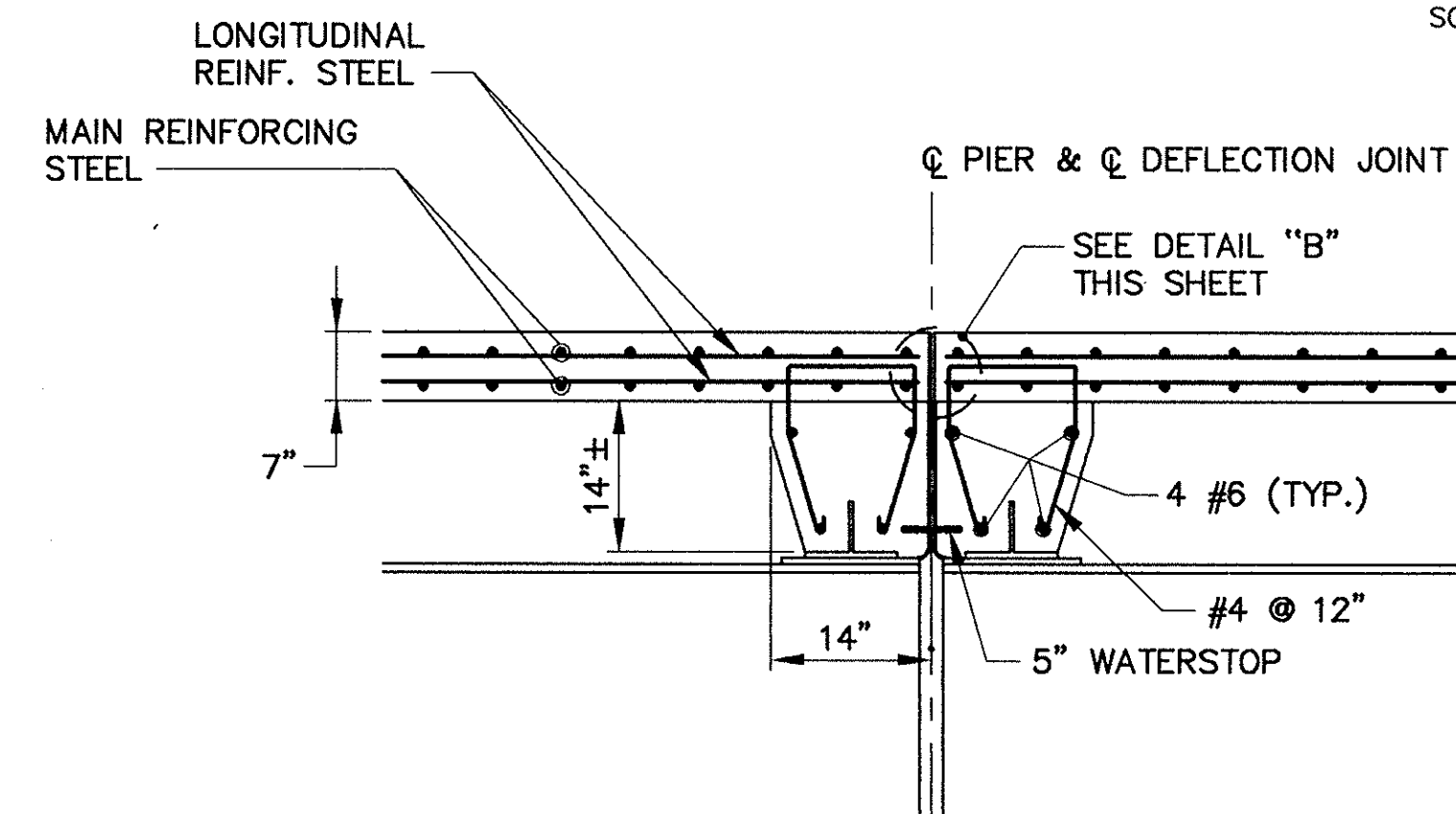


SECTION D-D

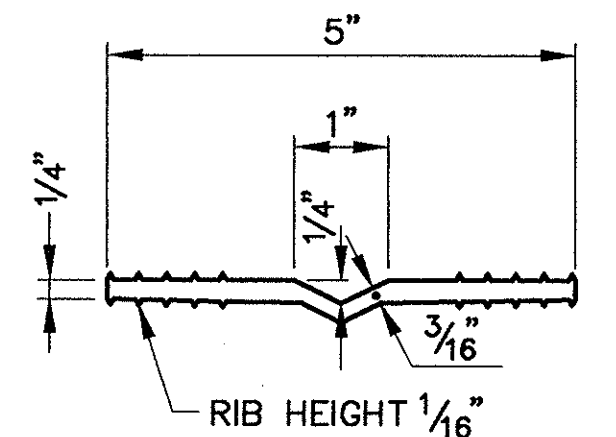
PROPOSED CURB PLATE DETAILS
SCALE: 1 1/2" = 1'-0"



SECTION B-B
SCALE: 3/4" = 1'-0"



SECTION C-C
SCALE: 3/4" = 1'-0"



5\"/> NOT TO SCALE

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: GRI	12/93	
		DRAWN: TJC	12/93	
		CHECKED: EMM	12/93	
		BY	DATE	GTS

AS BUILT

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

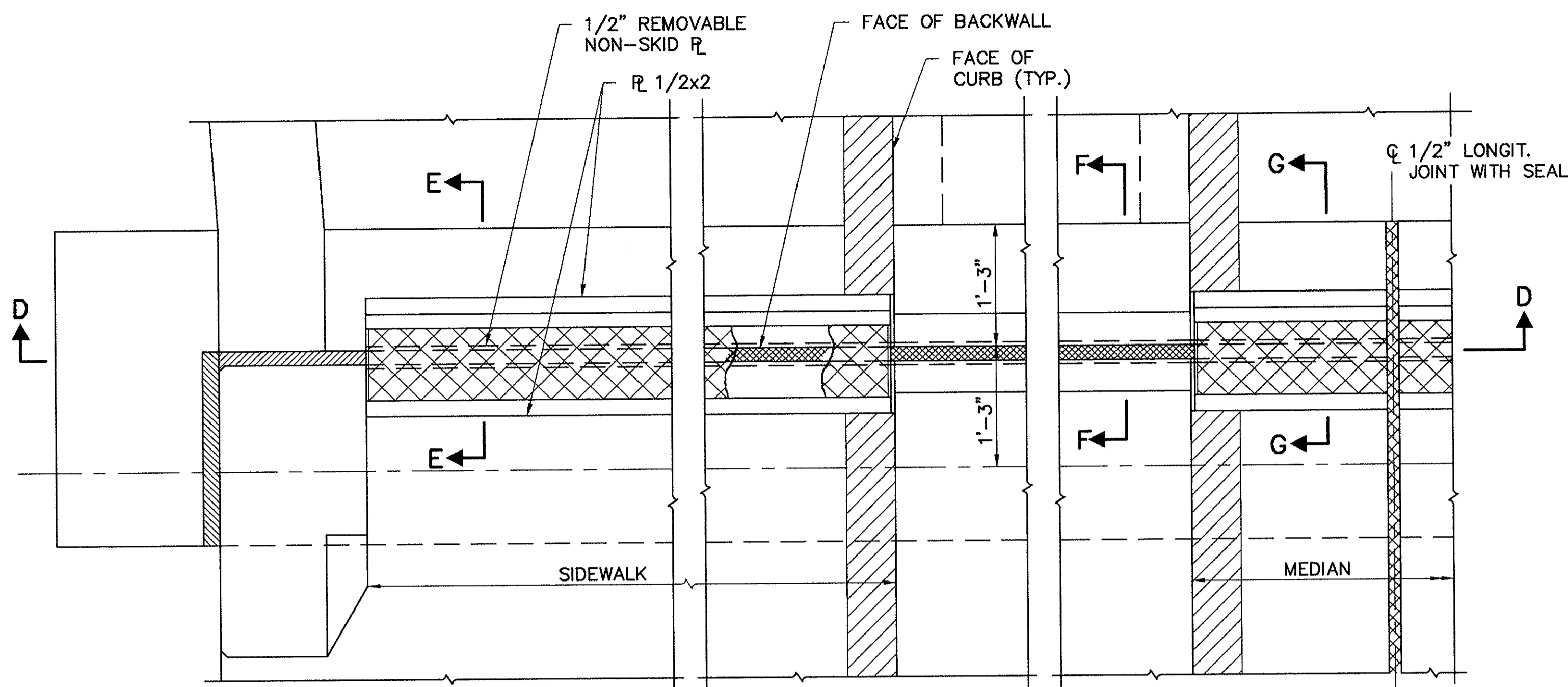
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT PIERS 1 AND 2

Scale: AS NOTED Contract No. 521-024

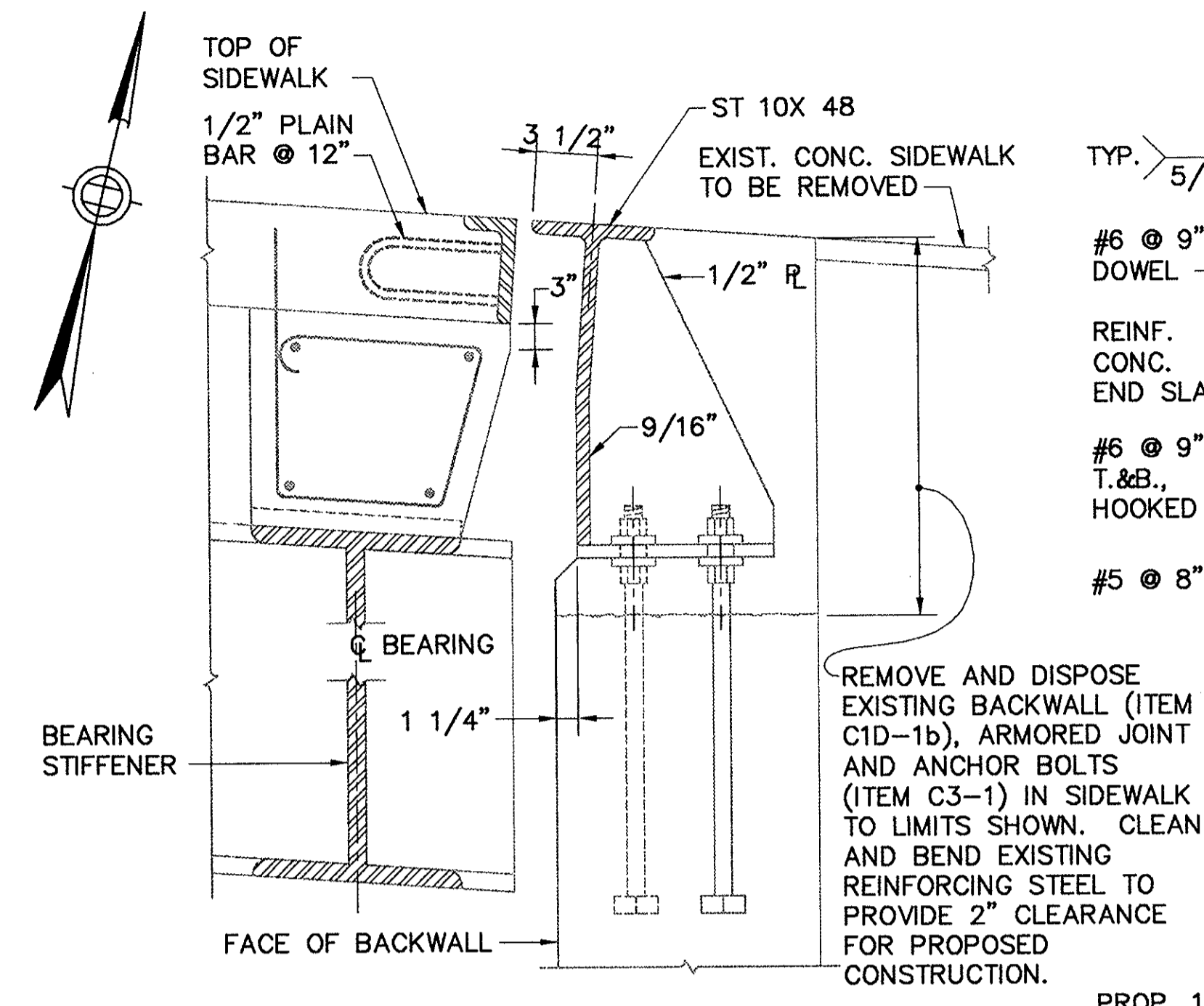
EDWARDS AND KELCEY, INC.
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

Sheet No. **34**



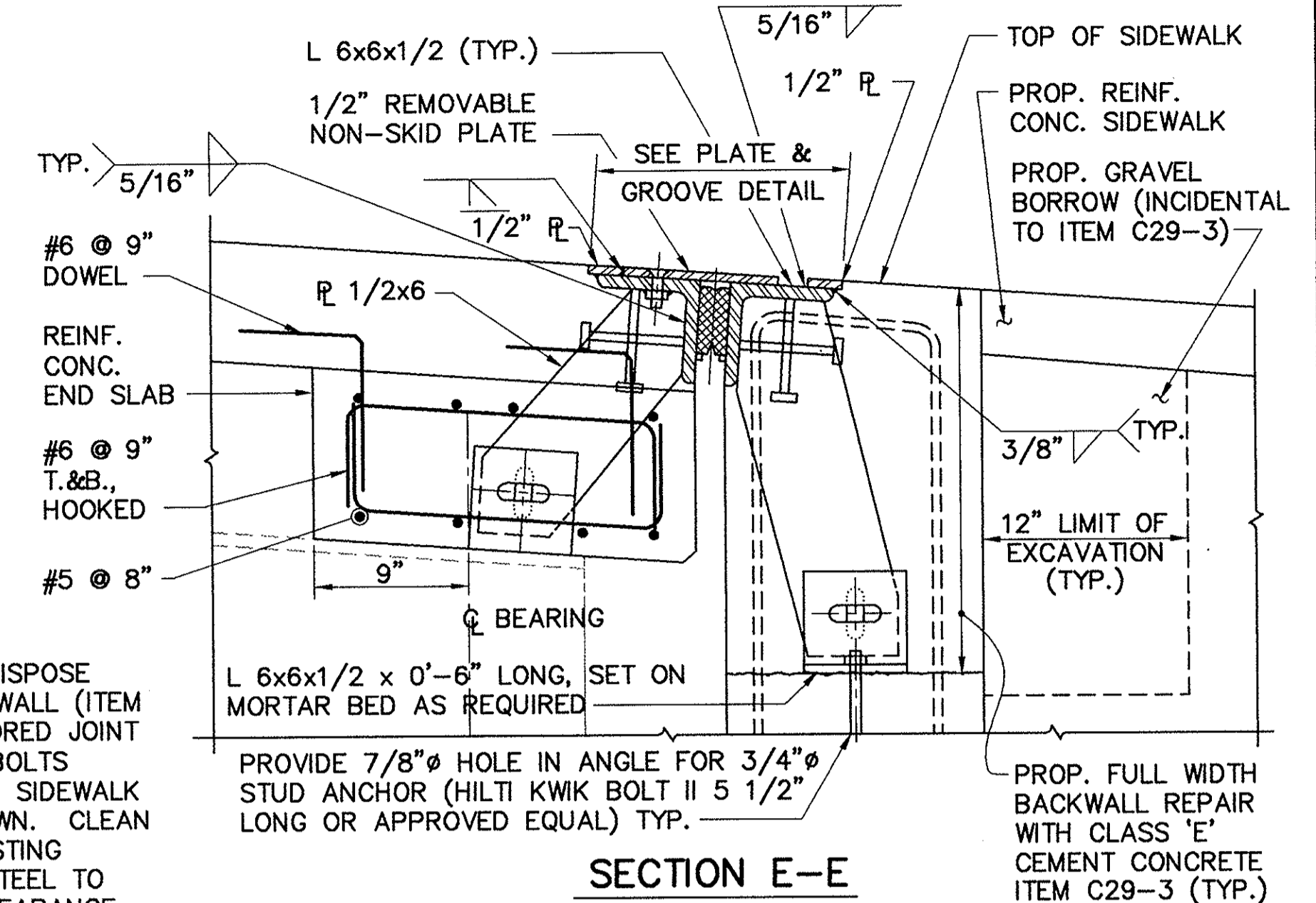
PLAN - NORTH ABUTMENT

SCALE: 1" = 1'-0"



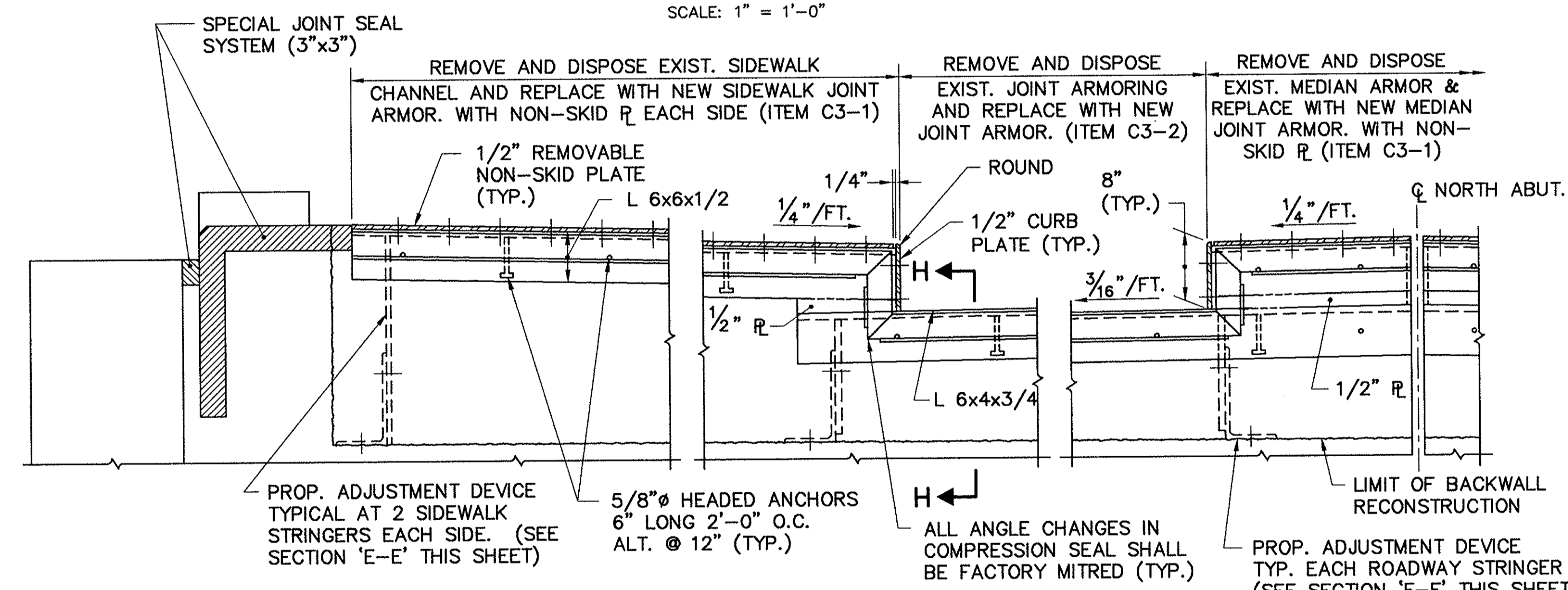
SECTION E-E, EXISTING SIDEWALK

SCALE: 1 1/2" = 1'-0"
(SECTION A-A ON SHEET 36 IS SIMILAR)



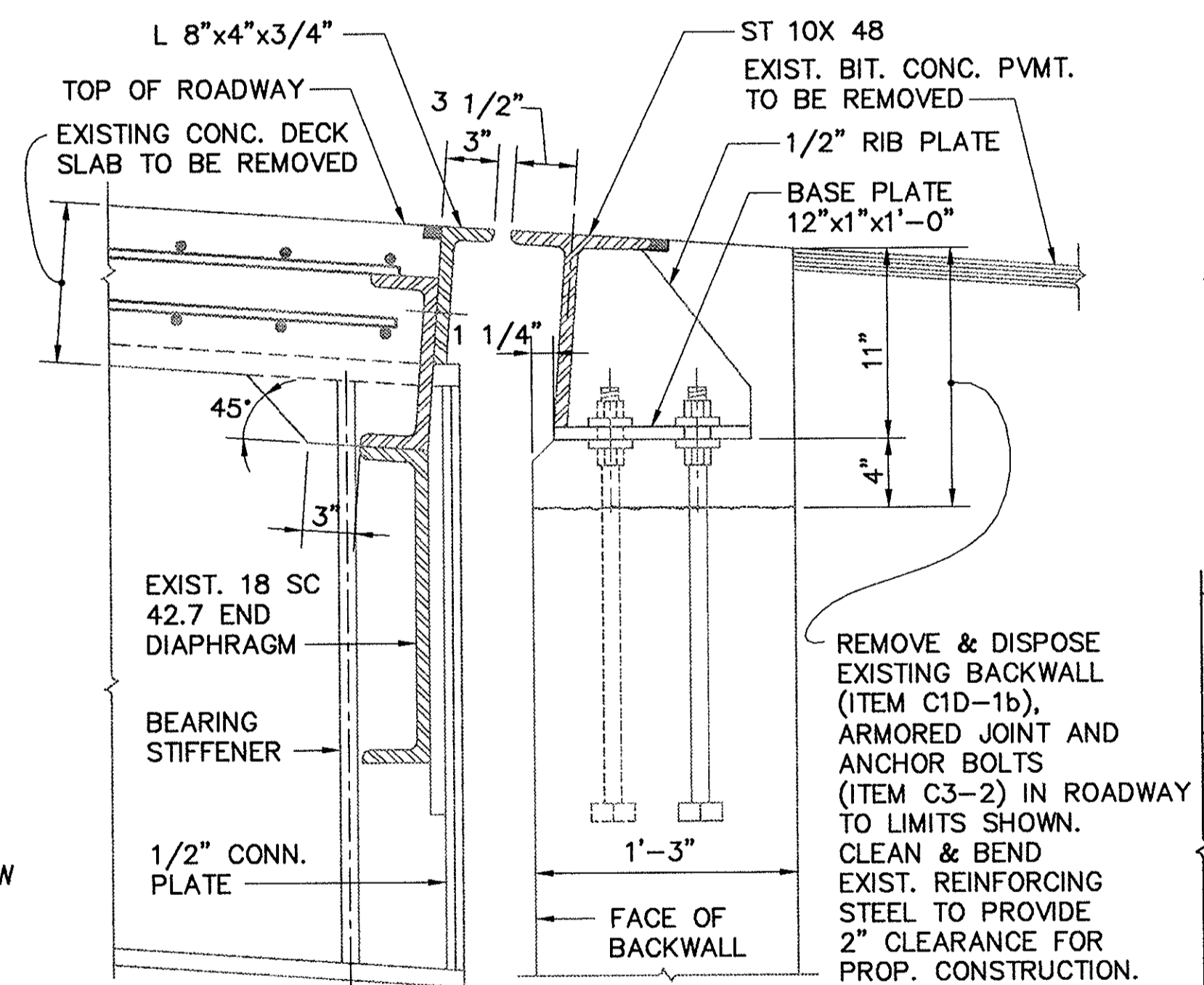
SECTION E-E
PROPOSED SIDEWALK

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



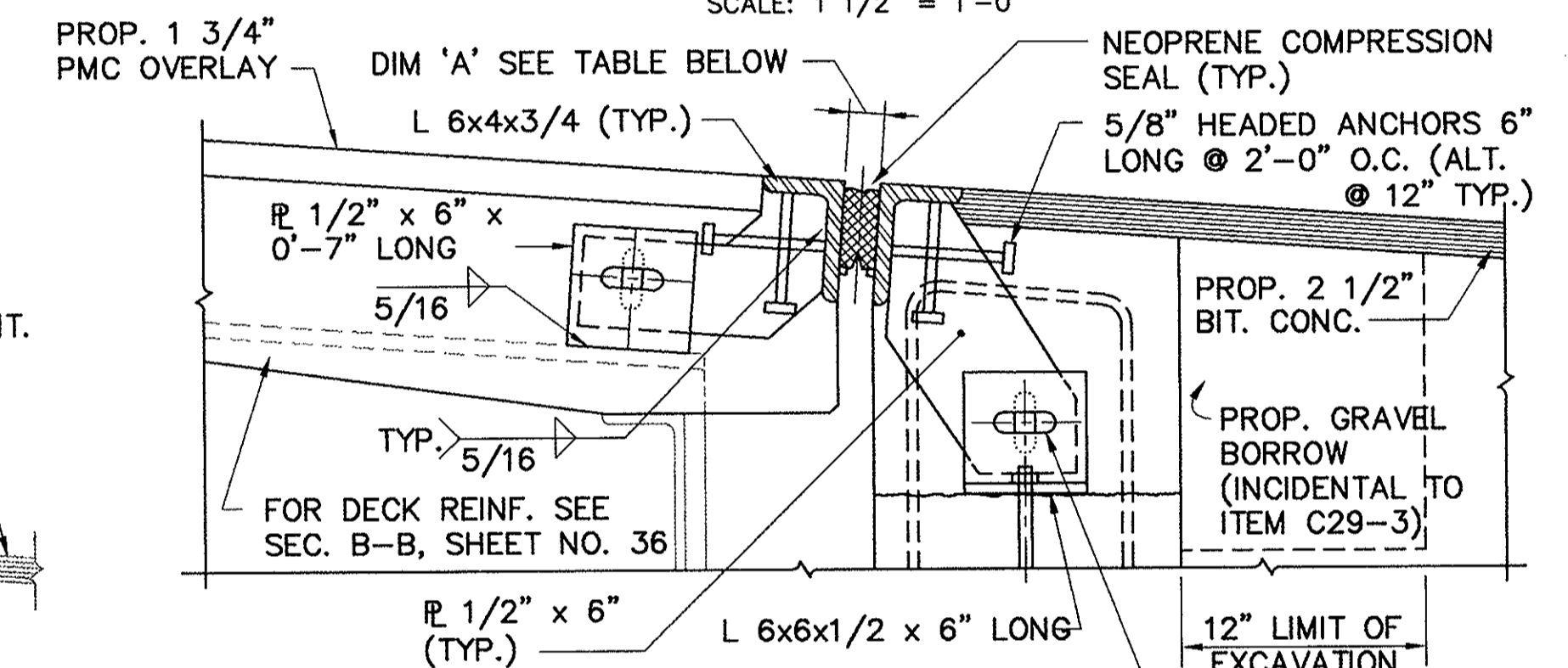
SECTION D-D

SCALE: 1" = 1'-0"



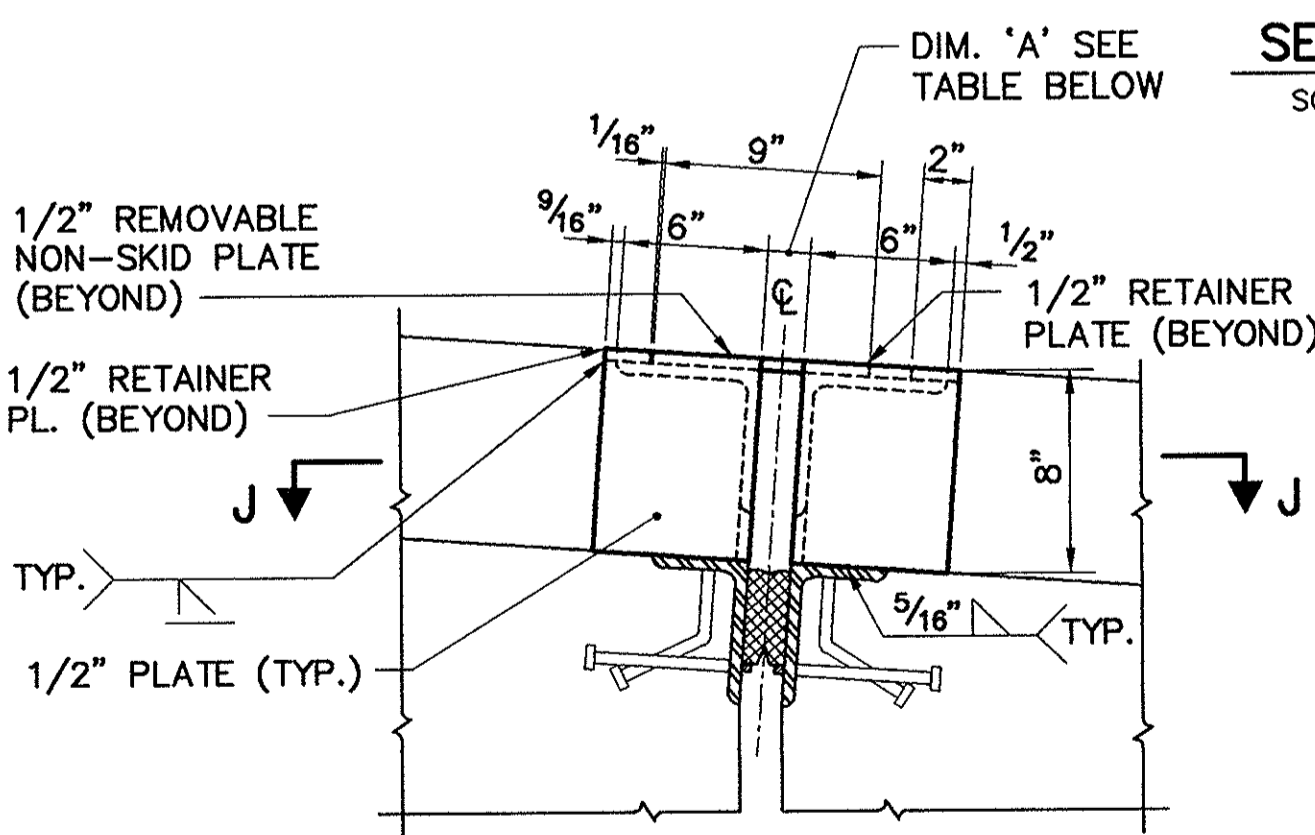
SECTION F-F
EXISTING ROADWAY

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



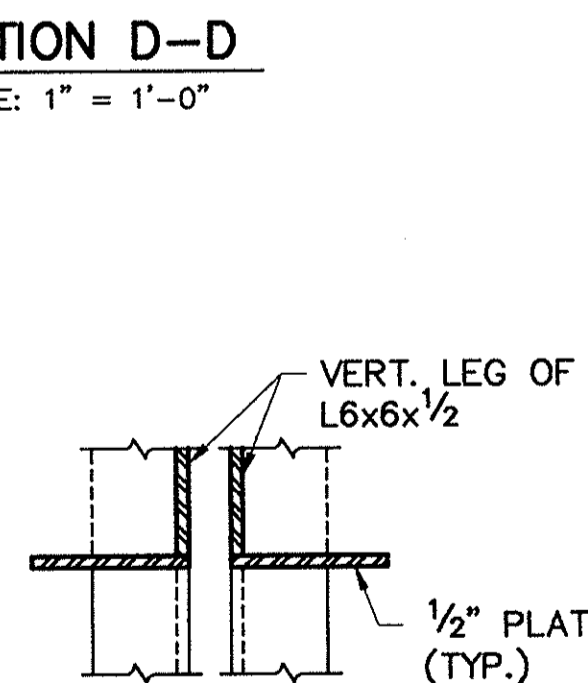
SECTION F-F
PROPOSED ROADWAY

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



SECTION H-H
CURB PLATES

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



SECTION J-J

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

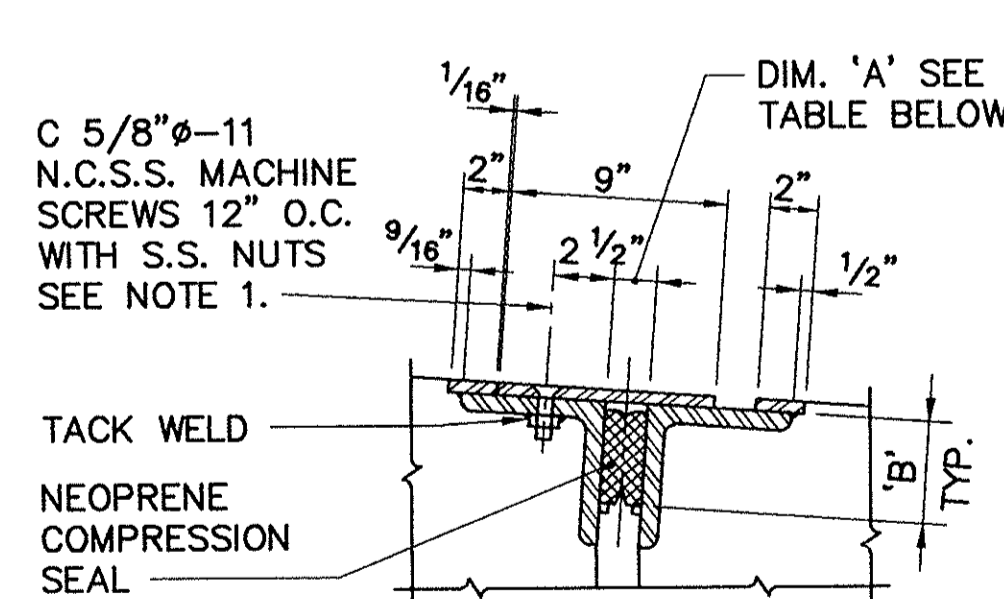


PLATE & GROOVE DETAIL

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

NOTE:

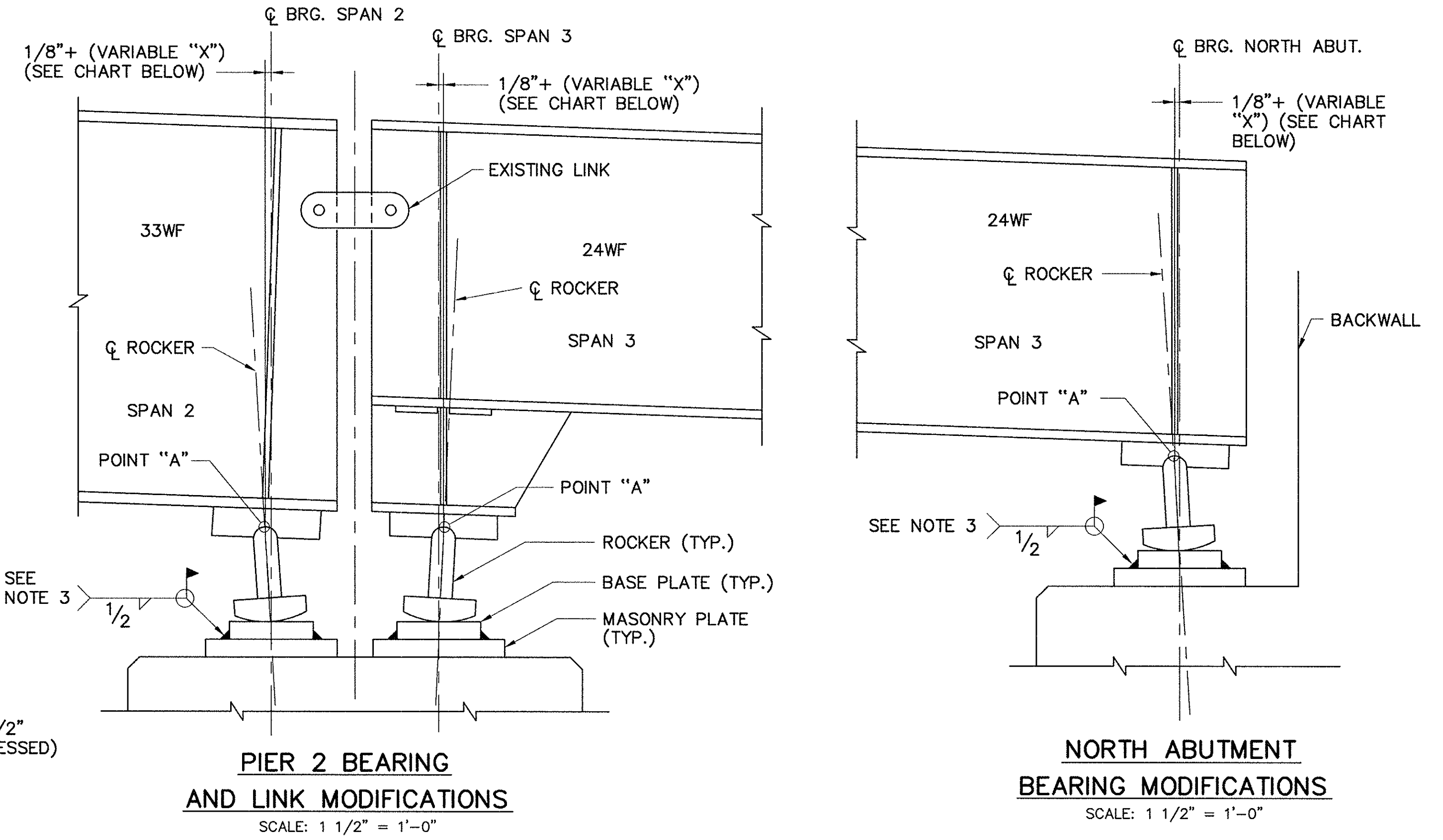
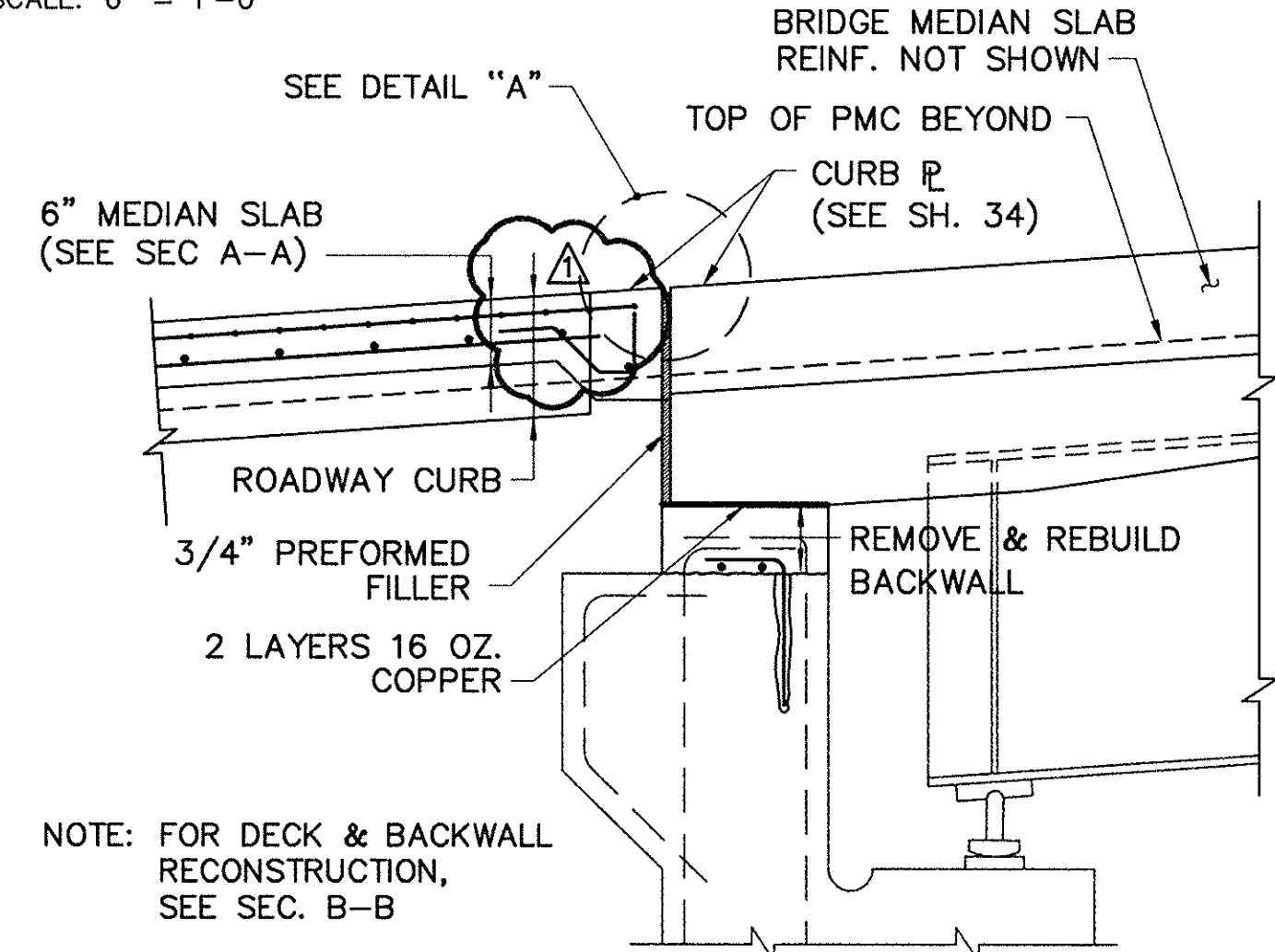
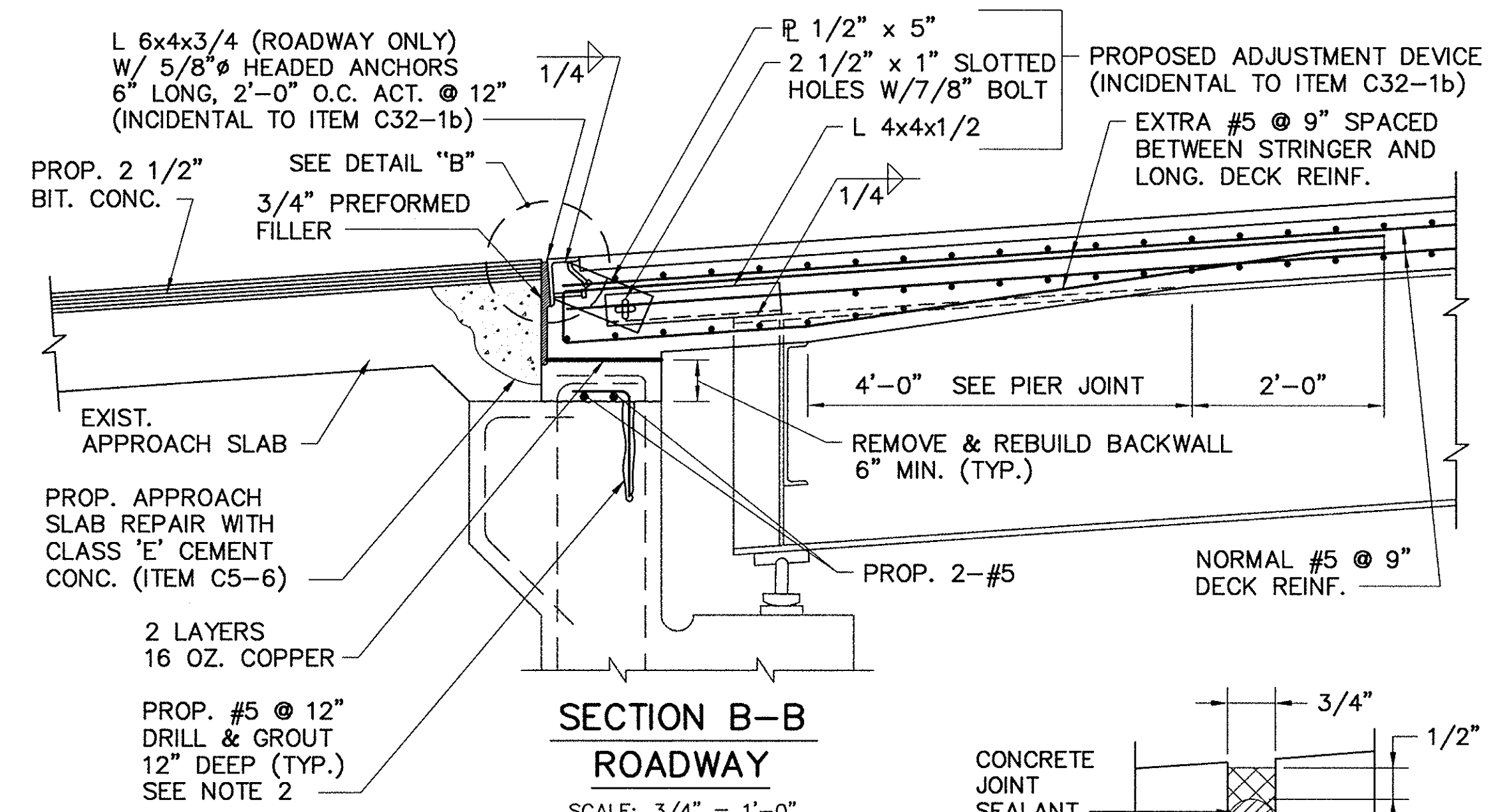
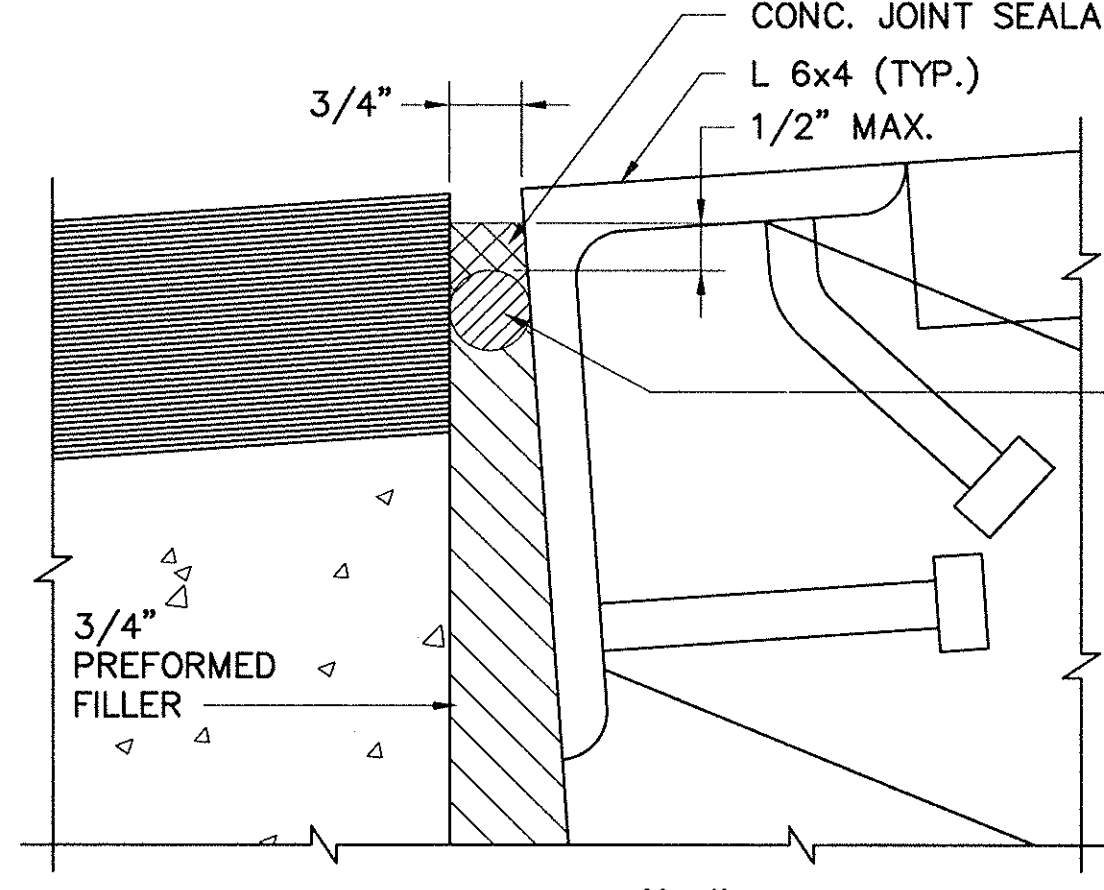
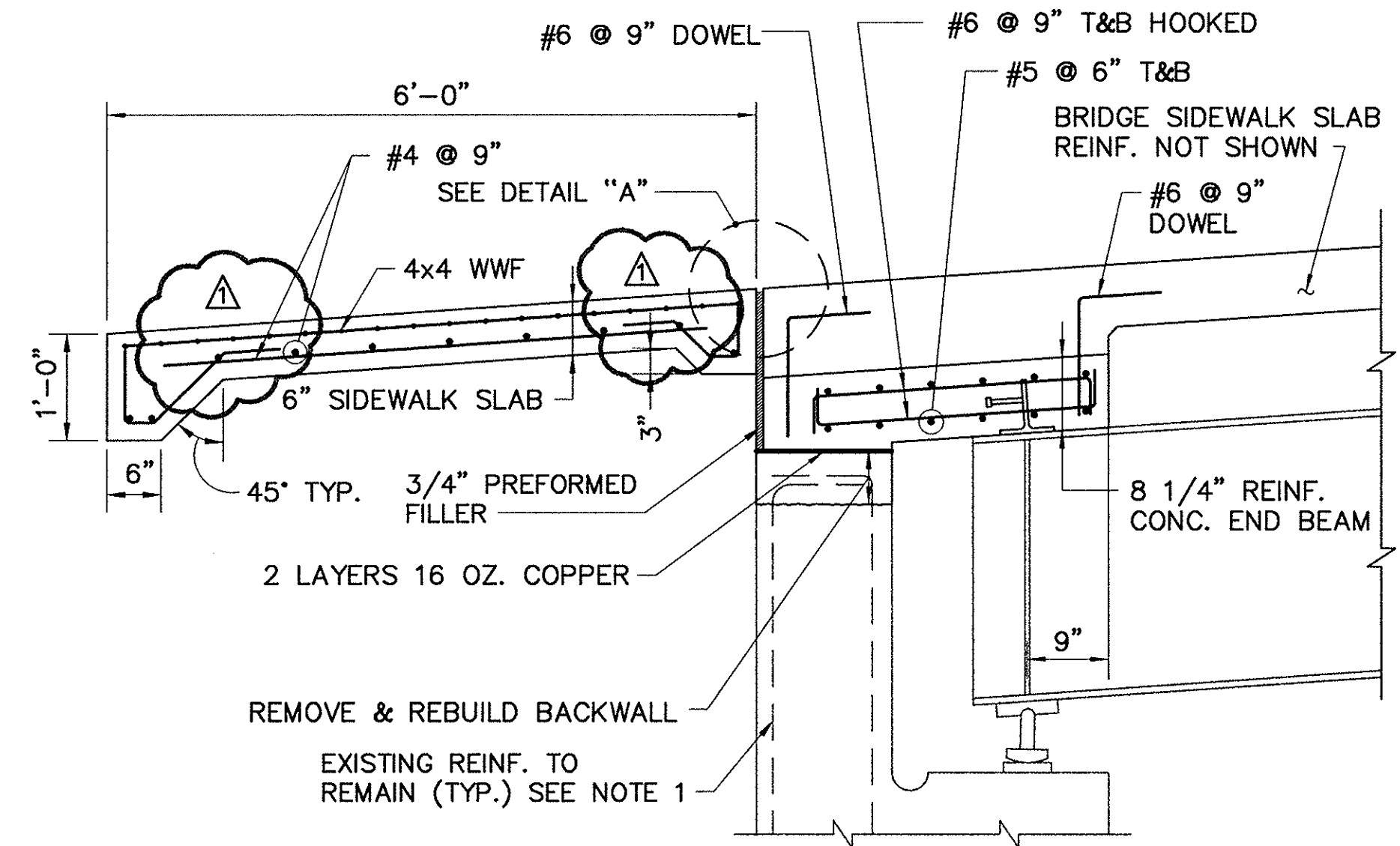
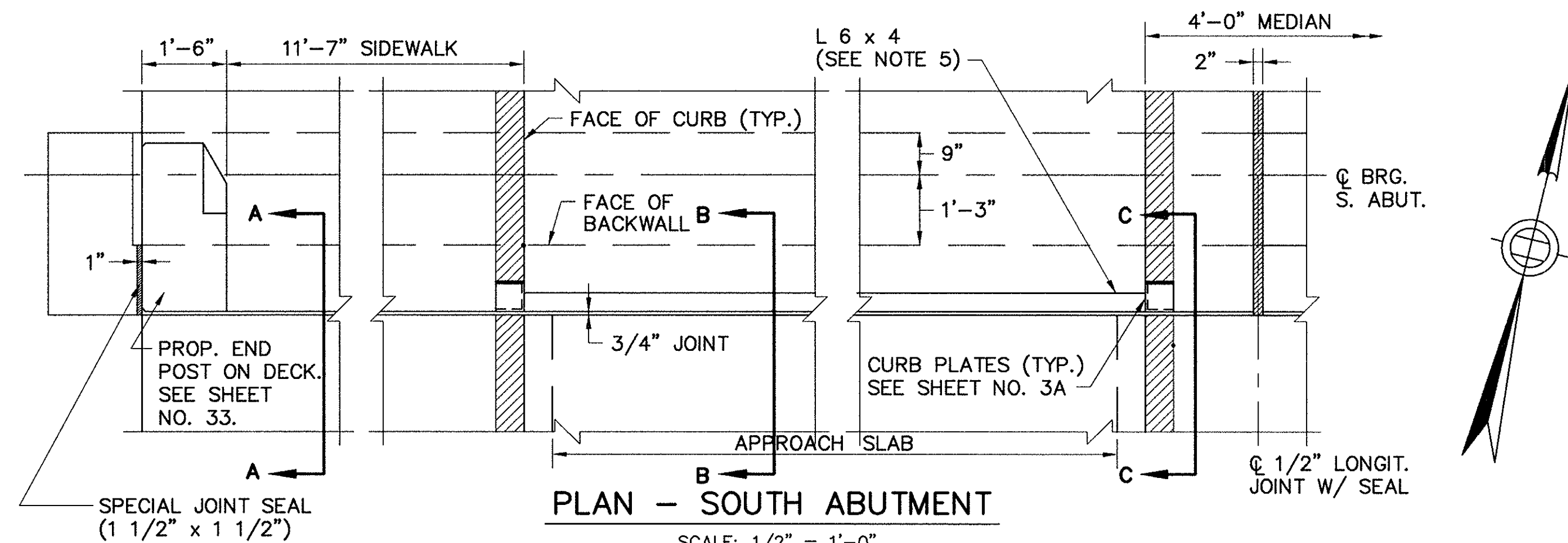
1. PRIOR TO PLACEMENT OF CONCRETE, 5/8" S.S. MACHINE SCREWS TO BE LUBRICATED WITH GRAPHITE AND SECURELY SET IN PLACE. MACHINE SCREW TO BE TEMPORARILY REMOVED AFTER CONCRETE HAS ATTAINED FINAL SET.

LOCATION	SEAL * WJ SERIES	MOVEMENT	SEAL DIM.		GROOVE WIDTH 'A'		GROOVE DEPTH 'B'	INSTALLATION WIDTH ('A') INCHES AT TEMPERATURE (F°)										
			WIDTH	HEIGHT	MIN.	MAX.		20°	30°	40°	50°	60°	70°	80°	90°	100°		
NORTH ABUTMENT	WJ-300	1.42"	3"	3 1/16"	1.13"	2.55"	4 1/4"	2 1/8"	2 1/16"	2"	1 7/8"	1 13/16"	1 3/4"	1 11/16"	1 5/8"	1 1/2"		

* WATSON BOWMAN ACME WJ SERIES OR APPROVED EQUAL

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: RS	12/93	
		DRAWN: JNC/SAM	12/93	
		CHECKED: EMM	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT NORTH ABUTMENT
Scale: AS NOTED Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116
EDWARDS AND KELCEY, INC. The Schmitt Center 329 Main Street Boston, Massachusetts 02129
Sheet No. 35



EXPANSION BEARING RESETTING NOTES

1. THE CONTRACTOR SHALL MEASURE THE AMOUNT THAT EACH EXPANSION ROCKER, INDICATED FOR RESETTING, IS OUT OF PLUMB. THIS DISTANCE SHALL BE MEASURED FROM A VERTICAL PLANE, THROUGH THE C OF BRG. TO POINT "A" AT THE TOP OF THE ROCKER. THESE DIMENSIONS SHALL BE TAKEN AFTER FULL SLAB DEAD LOAD HAS BEEN REMOVED AND ONLY STRUCTURAL STEEL DEAD LOADS ARE IN PLACE.
2. BASED ON THE CONTRACTOR'S MEASUREMENTS, THE ENGINEER SHALL DIRECT THE CONTRACTOR AS TO WHICH BEARING SHALL BE RESET.
3. BEARING POSITION CORRECTIONS ARE TO BE ACCOMPLISHED BY TEMPORARILY RELIEVING THE LOAD ON THE BEARING AND RESETTING THE ROCKER BY CHIPPING OUT THE EXISTING WELD CONNECTING THE BASE PLATE TO THE MASONRY PLATE, REPOSITION THE BASE PLATE AND FIELD WELD THE BASE PLATE TO THE MASONRY PLATE.
4. THE INDICATED ROCKER TILT DIMENSIONS ARE BASED ON THE ORIGINAL SHOP DRAWINGS (ERECTION SHEET E202). TEMPERATURE ADJUSTMENTS CORRESPOND TO 1/16" PER 15' F., FOR BEARINGS AT PIER 2 AND 1/16" PER 8' F., FOR BEARINGS AT THE NORTH ABUTMENT.

EXPANSION BEARING SETTING CHART

LOCATION	VARIABLE "X" (TEMP. IN FARENHEIT DEGREES)										
	0°	15°	30°	45°	60°	68°	75°	90°	105°	120°	
PIER 2, SPAN 2	+ 9/32"	+ 7/32"	+ 5/32"	+ 3/32"	+ 1/32"	0"	- 1/32"	- 3/32"	- 5/32"	- 7/32"	
PIER 2, SPAN 3	- 9/32"	- 7/32"	- 5/32"	- 3/32"	- 1/32"	0"	+ 1/32"	+ 3/32"	+ 5/32"	+ 7/32"	
NORTH ABUT.	+ 17/32"	+ 13/32"	+ 9/32"	+ 3/16"	+ 1/16"	0"	- 1/16"	- 5/32"	- 9/32"	- 13/32"	

AS BUILT

NOTES:

1. REMOVE EXISTING BACKWALL, ARMORED JOINT AND ANCHOR BOLTS TO THE APPROACH SLAB SEAT GRADE AND TO TOP OF UTILITY OPENING. CUT, CLEAN AND BEND EXISTING REINFORCING STEEL TO PROVIDE 2" CLEARANCE. (ITEMS C1D-1b AND C29-3 AS APPLICABLE)
2. THE CONTRACTOR WILL BE REQUIRED TO DOWEL INTO EXISTING CONCRETE WHEN, AS DETERMINED BY THE ENGINEER, THE EXISTING REINFORCING STEEL IS UNSUITABLE OR MISSING. THE WORK INVOLVED IN DRILLING AND GROUTING WILL BE INCIDENTAL TO DECK RECONSTRUCTION ITEM C32-1b.
3. CONCRETE FOR BACKWALL RECONSTRUCTION SHALL BE CLASS 'E' CEMENT CONCRETE (f' = 5000 PSI). BACKWALL RECONSTRUCTION WILL BE PAID FOR AS FULL WIDTH BACKWALL REPAIR (ITEM C29-3).

4. AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
5. PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2" BEYOND PHASE I/PHASE II CONSTRUCTION JOINT. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPLICED USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE. SIMILAR PROCEDURE SHALL BE FOLLOWED FOR PHASE II/PHASE III.
6. FOR EXISTING CONDITIONS AT SECTIONS B-B AND A-A, SEE SHEET NO. 35.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
JOINT DETAILS AT SOUTH
ABUTMENT AND MISCELLANEOUS
STEEL DETAILS

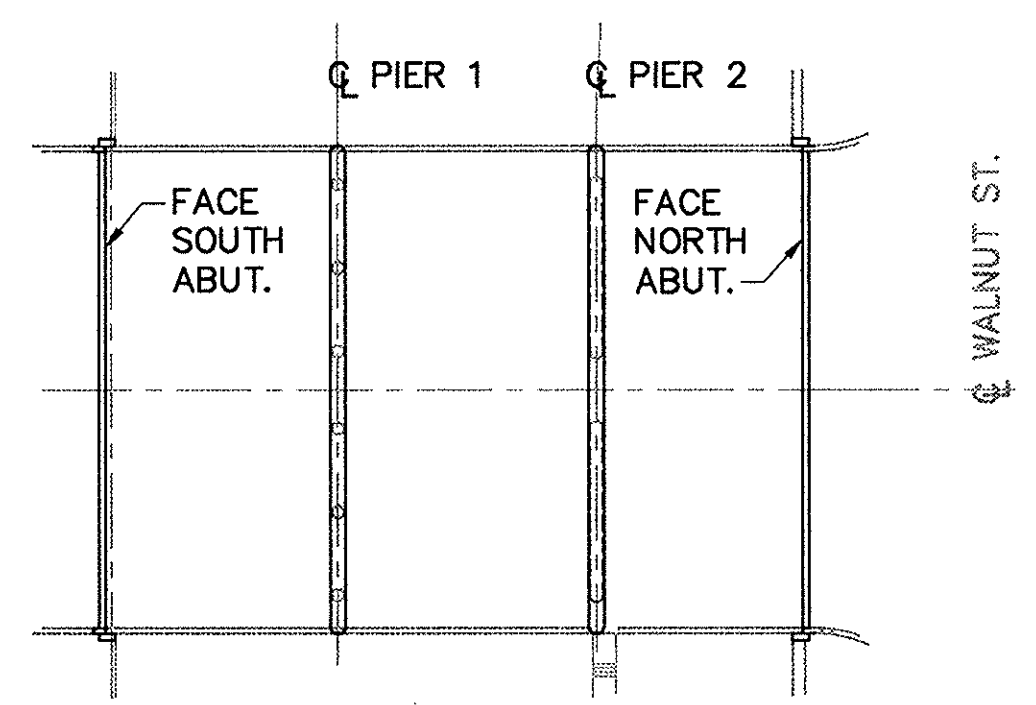
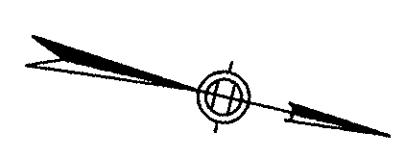
Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

EDWARDS AND KELCEY, INC.
The Schreffelt Center
529 Main Street
Boston, Massachusetts 02129

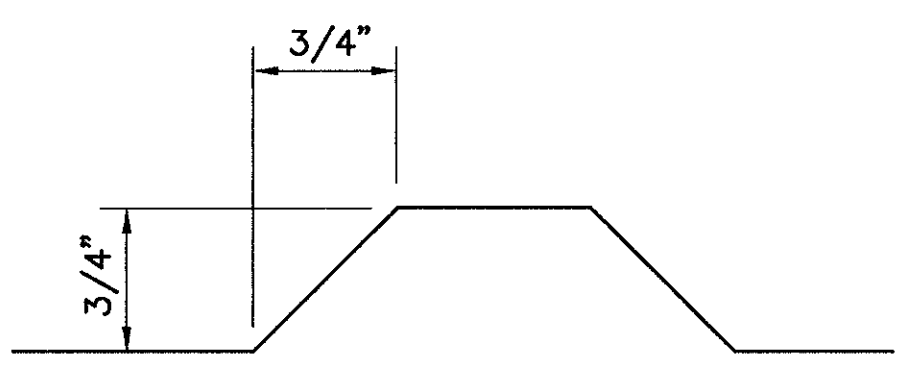
Sheet No. **36**

NO.	REVISION	BY	DATE	IN CHARGE OF	GTS
		DESIGNED:	RRS	12/93	
		DRAWN:	TJC	12/93	
		CHECKED:	EMM	12/93	
		BY	DATE	IN CHARGE OF	GTS

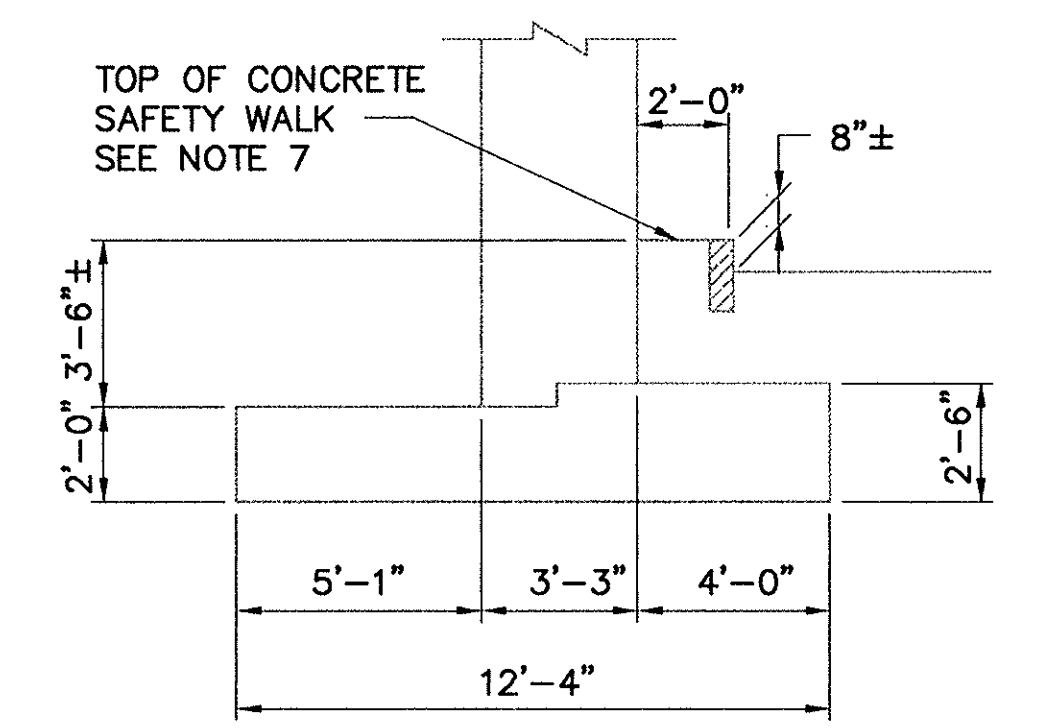


KEY PLAN

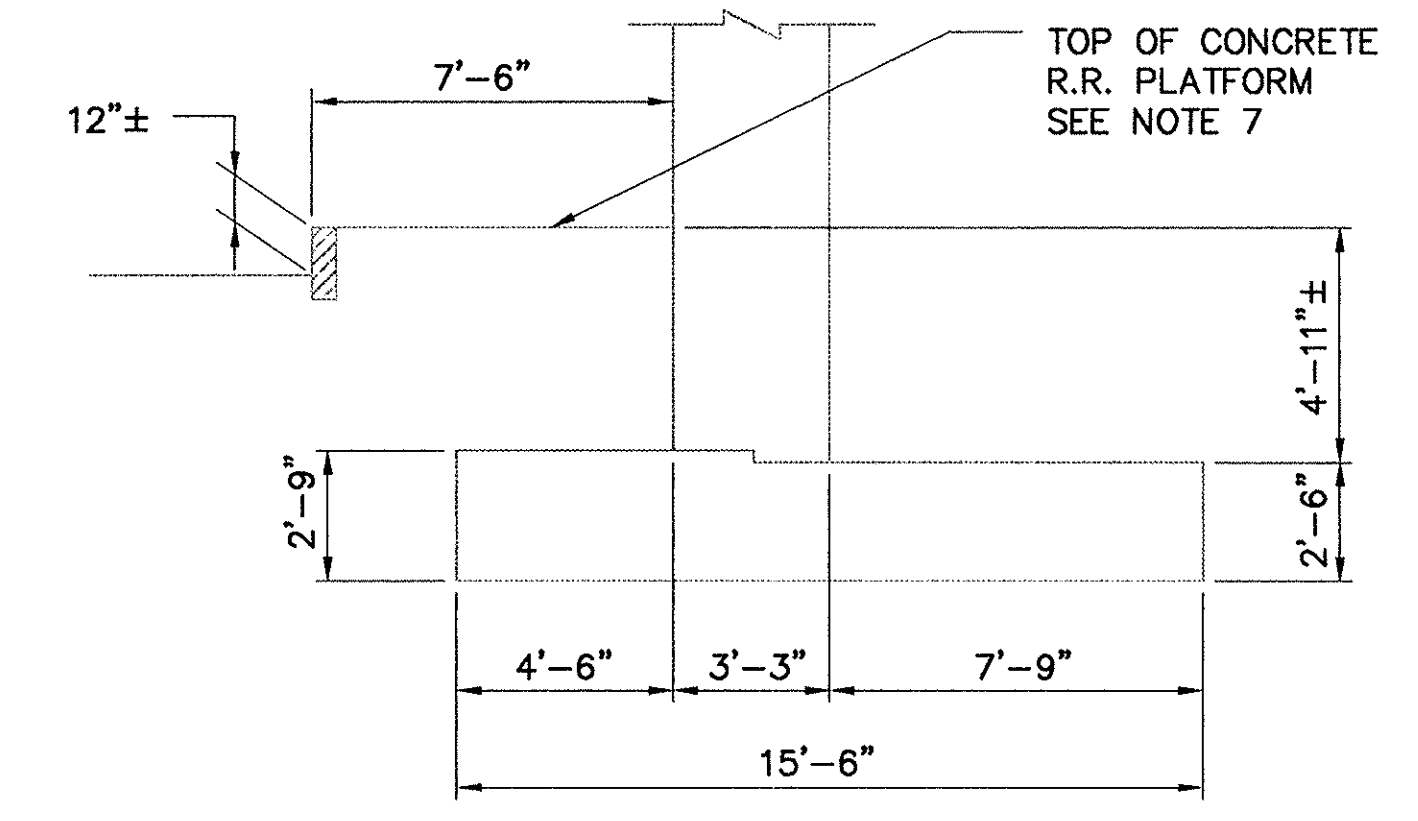
NOTE: FORM WITH 1" x 3" NOMINAL BOARD



RUSTICATION DETAIL
SCALE: FULL SCALE



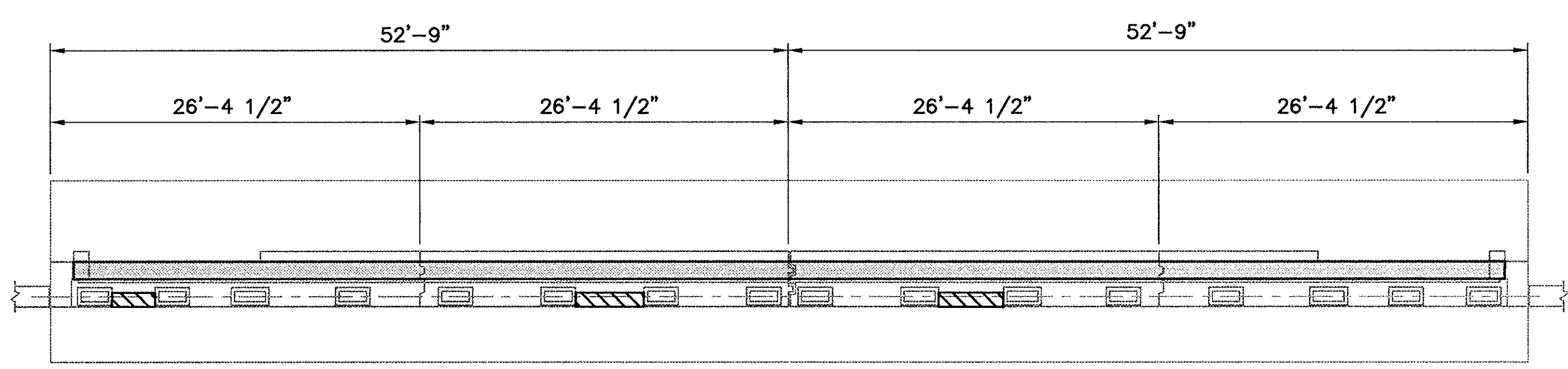
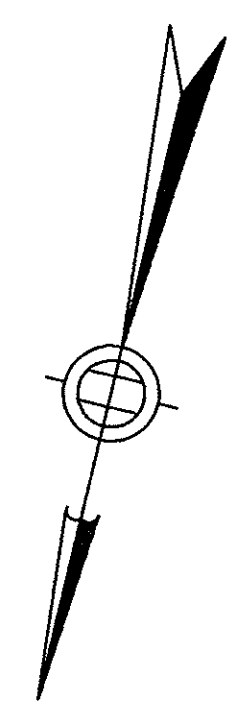
SECTION A-A
SCALE: 1/4" = 1'-0"



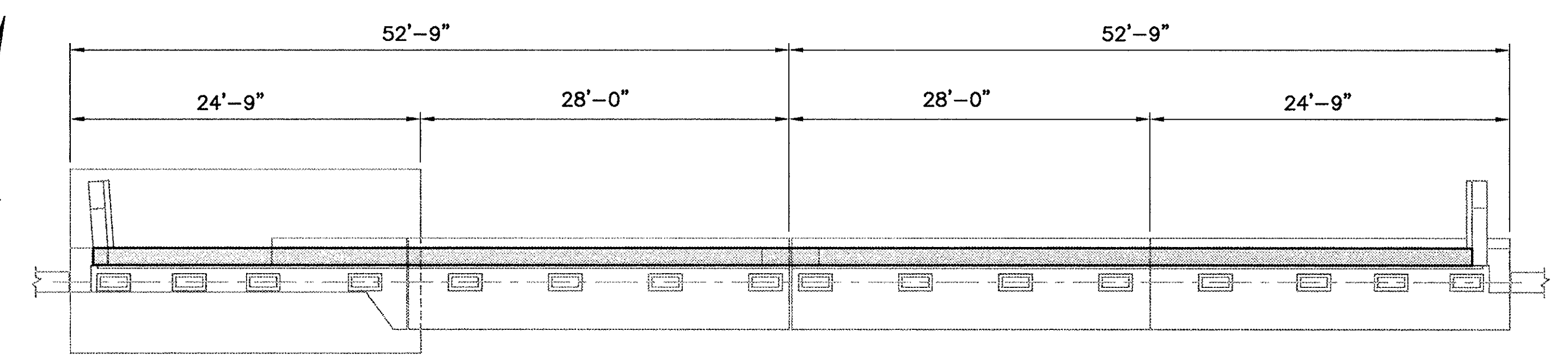
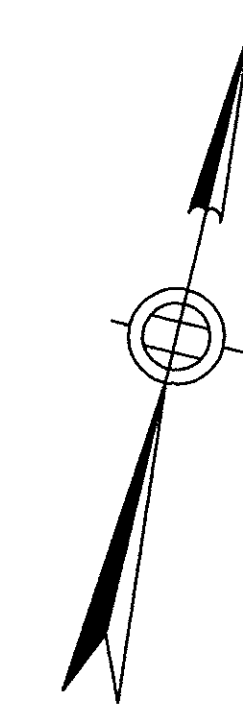
SECTION B-B
SCALE: 1/4" = 1'-0"

NOTES:

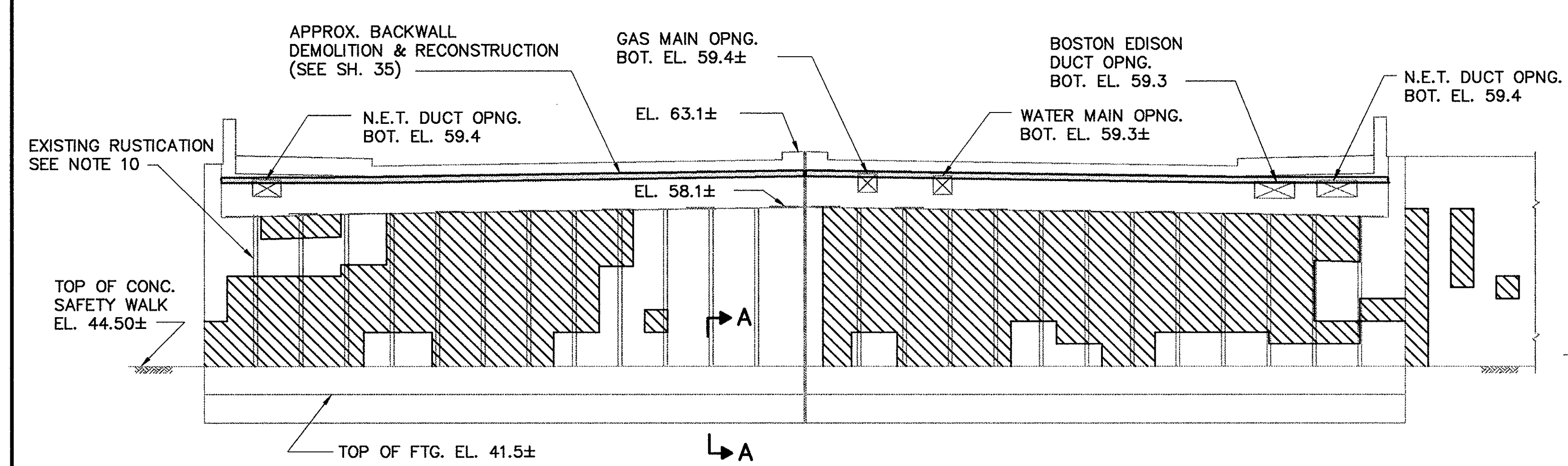
- AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
- ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
- FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHEET 67.
- SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND CRASHWALLS, ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
- ELEVATIONS AND DIMENSIONS ARE TAKEN FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
- THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
- CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER. FOR DETAIL, SEE SHEET NO. 16.
- ALL PIER CAPS, BEAM SEATS AND DRAINAGE TROUGHS SHALL BE CLEARED OF DEBRIS (ROCKS, STICKS, LEAVES AND TRASH) AND DISPOSED OF BY THE CONTRACTOR.
- FOR DIG SAFE REQUIREMENTS, SEE SHEET NO. 39.
- THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE.
- IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).



PLAN

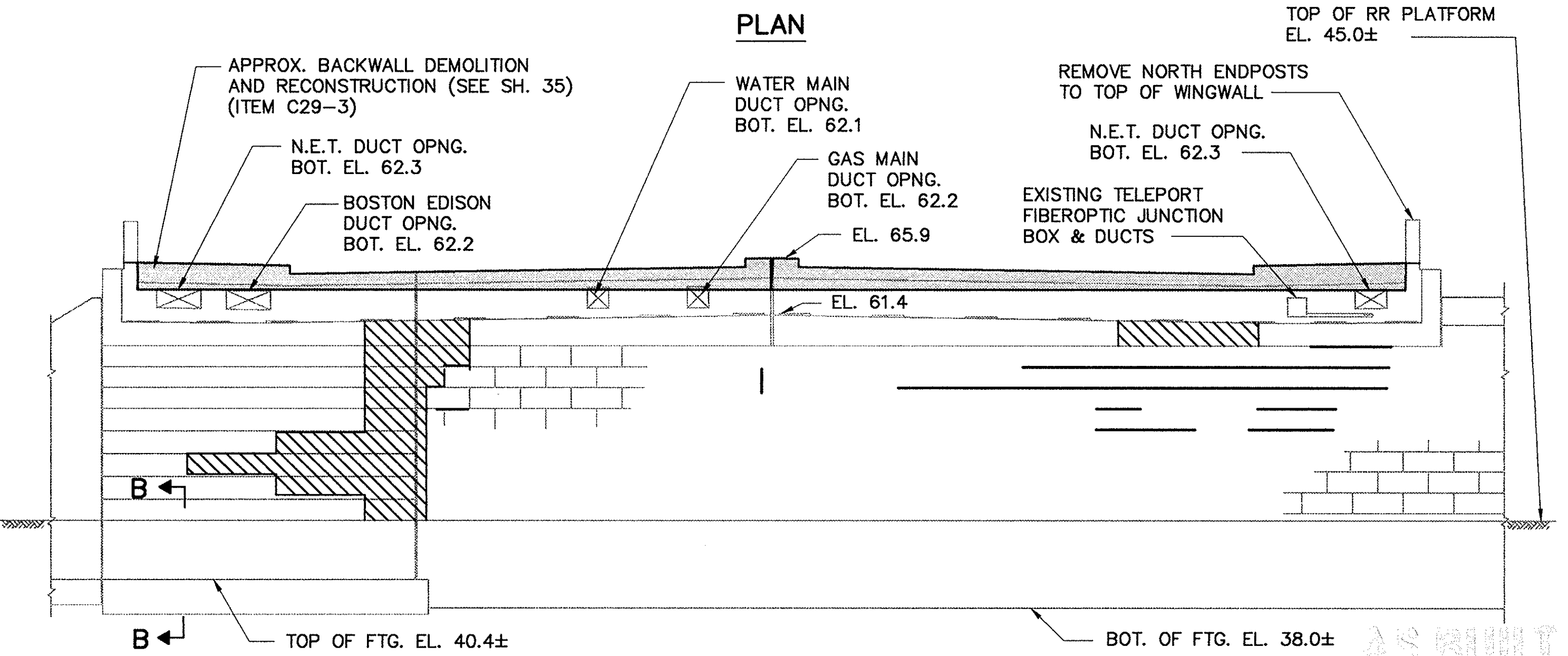


PLAN



ELEVATION - (LOOKING SOUTH)

SOUTH ABUTMENT
REPAIR AREA = 980 S.F.±
SCALE: 1/8" = 1'-0"



ELEVATION - (LOOKING NORTH)

NORTH ABUTMENT
REPAIR AREA = 120 S.F.±
REPOINTING QUANTITY = 130 L.F.±
SCALE: 1/8" = 1'-0"

LEGEND

- APPROXIMATE AREA OF REPAIR (ITEMS C29-1 AND C29-4 AS APPLICABLE)
- APPROXIMATE AREA OF RECONSTRUCTION (ITEMS C29-3 AND C32-1b AS APPLICABLE)
- APPROXIMATE AREA OF REPOINTING (ITEM C29-6)

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	ORI	12/93
		DRAWN:	SAS	12/93
		CHECKED:	EMM	12/93
			GTS	

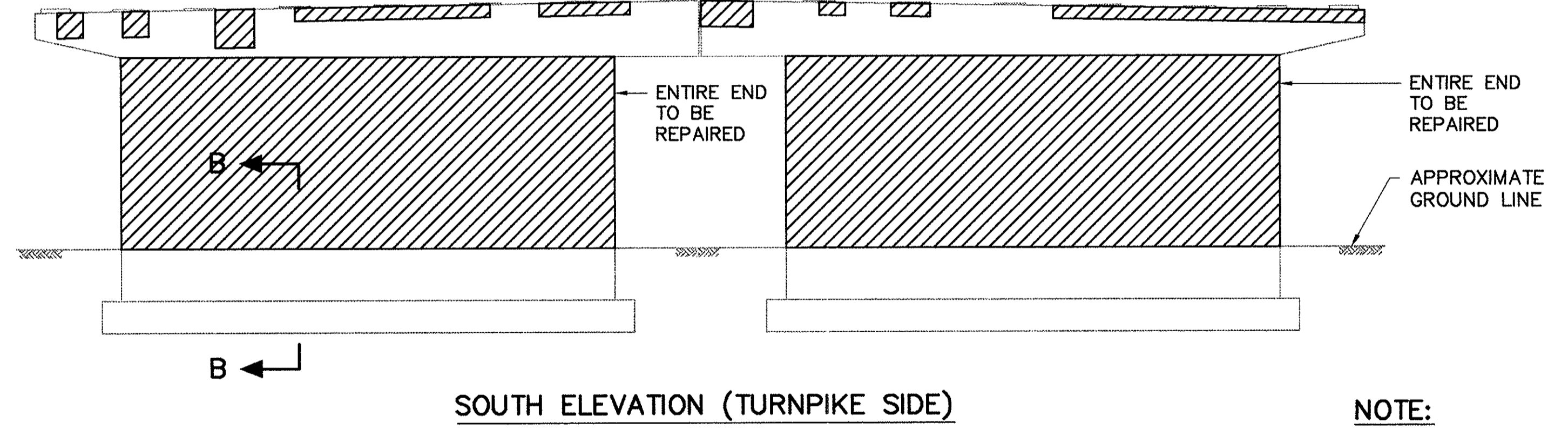
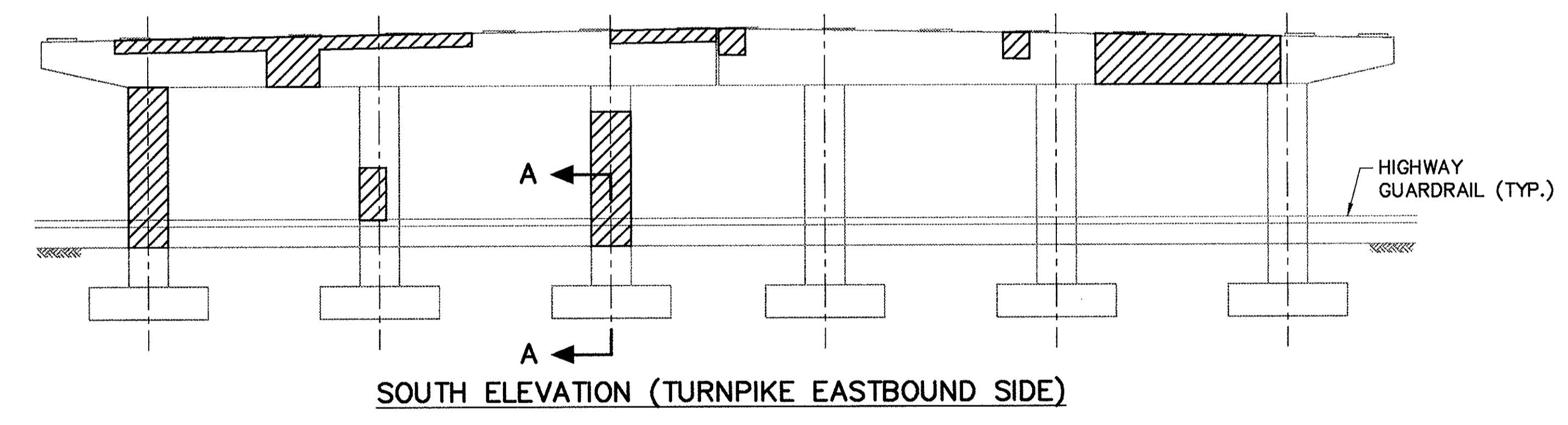
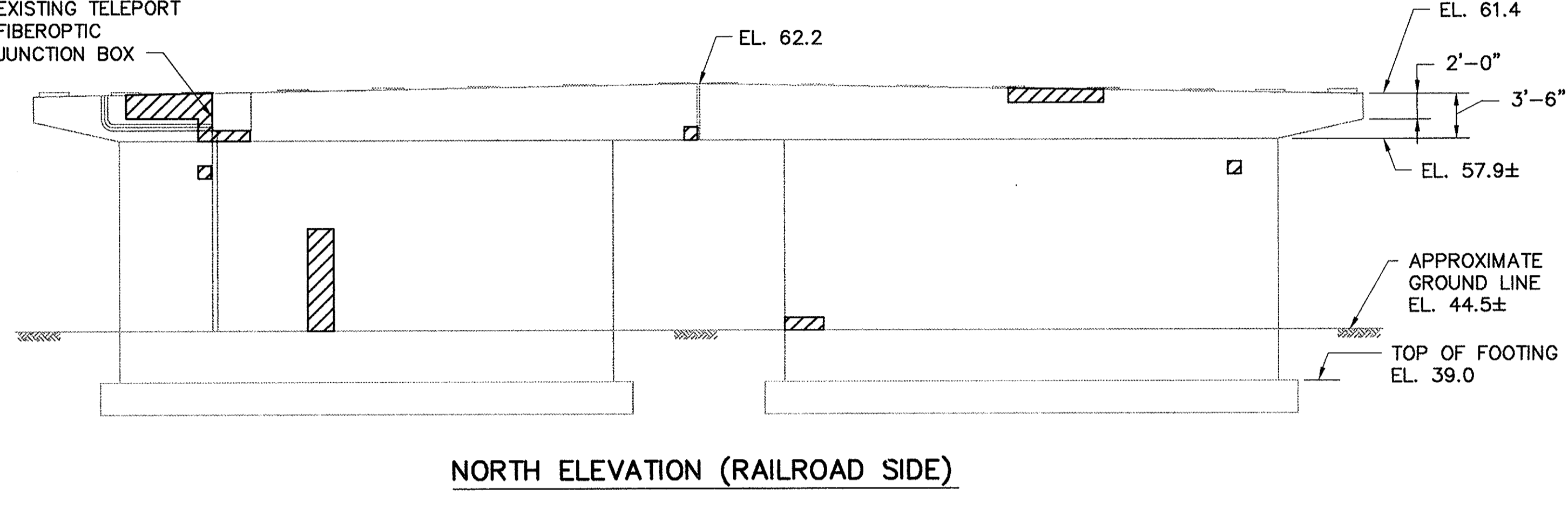
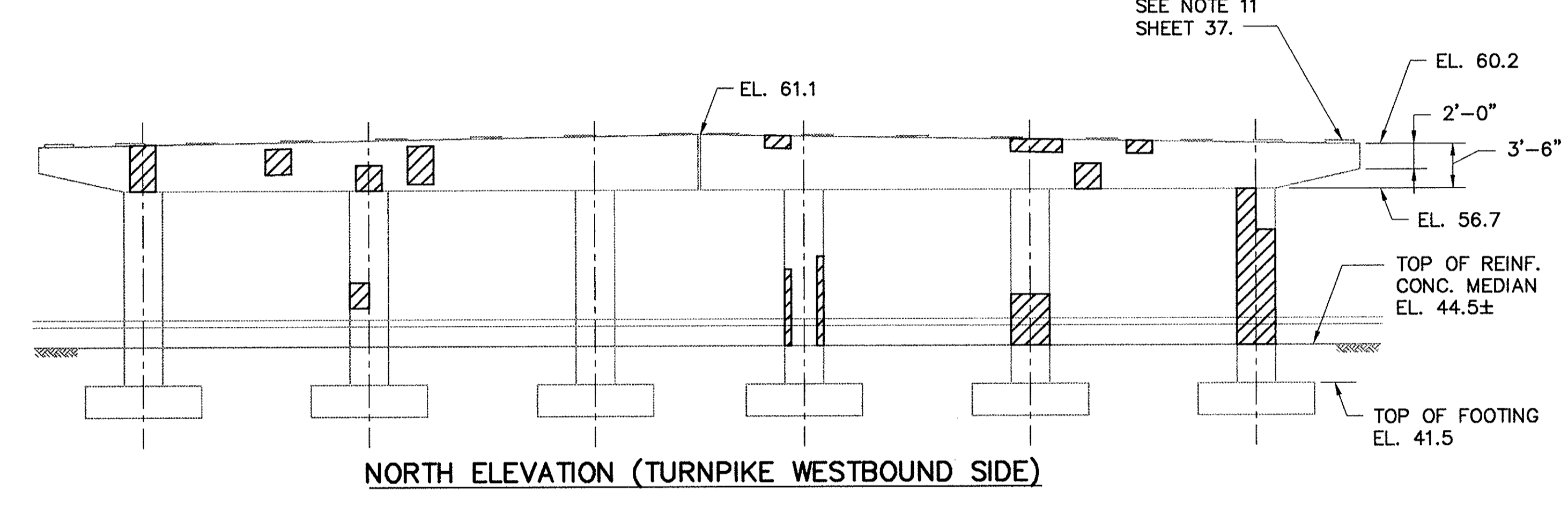
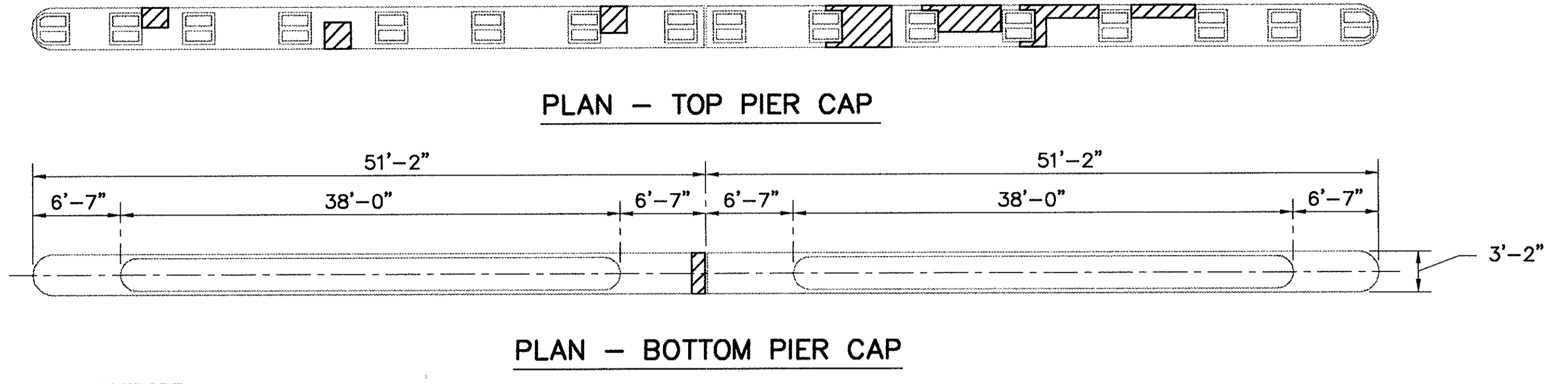
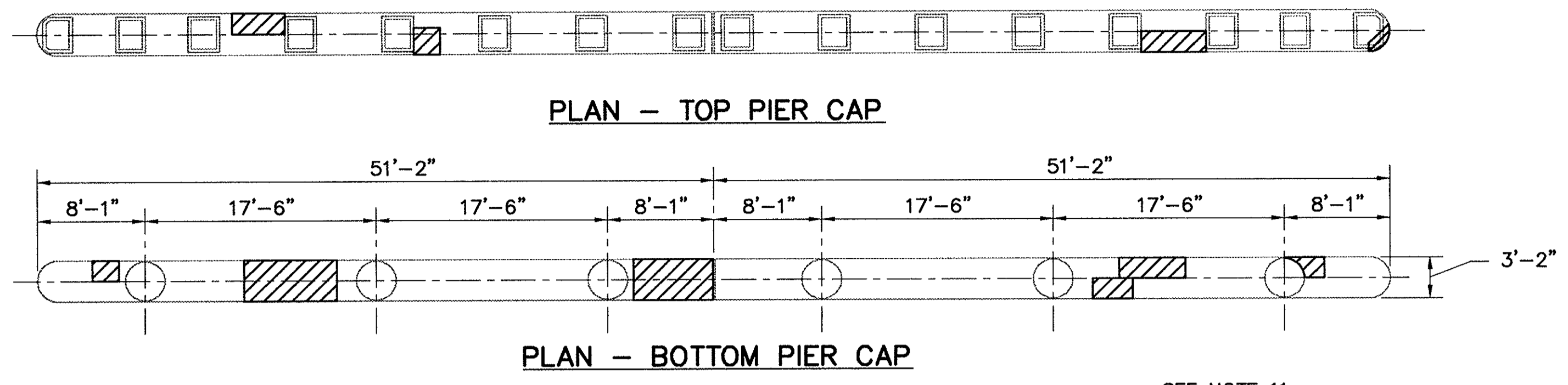
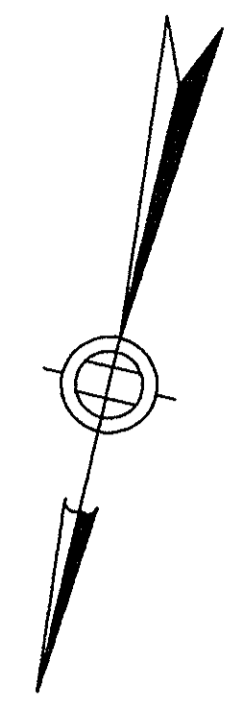
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR NO. S-23)
SUBSTRUCTURE CONCRETE REPAIRS
SOUTH & NORTH ABUTMENTS

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC.
The Schreffelt Center
829 Main Street
Boston, Massachusetts 02129

Sheet No. 37



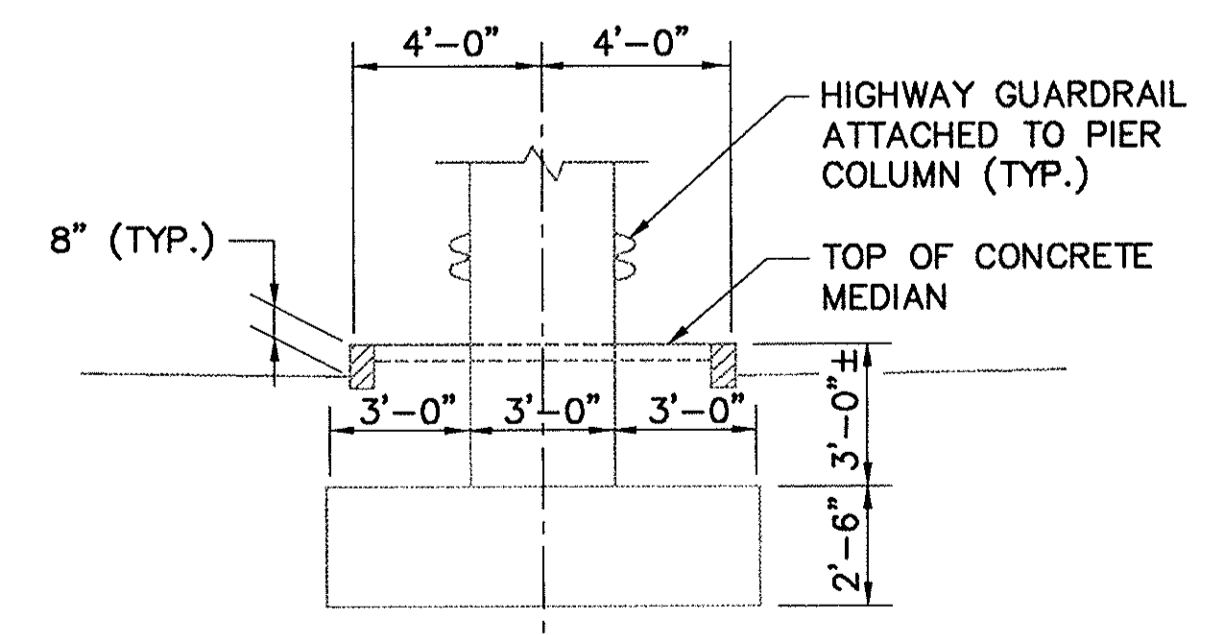
PIER NO. 1
REPAIR AREA = 430 S.F.±
 SCALE: 1/8" = 1'-0"

PIER NO. 2
REPAIR AREA = 1,385 S.F.±
 SCALE: 1/8" = 1'-0"

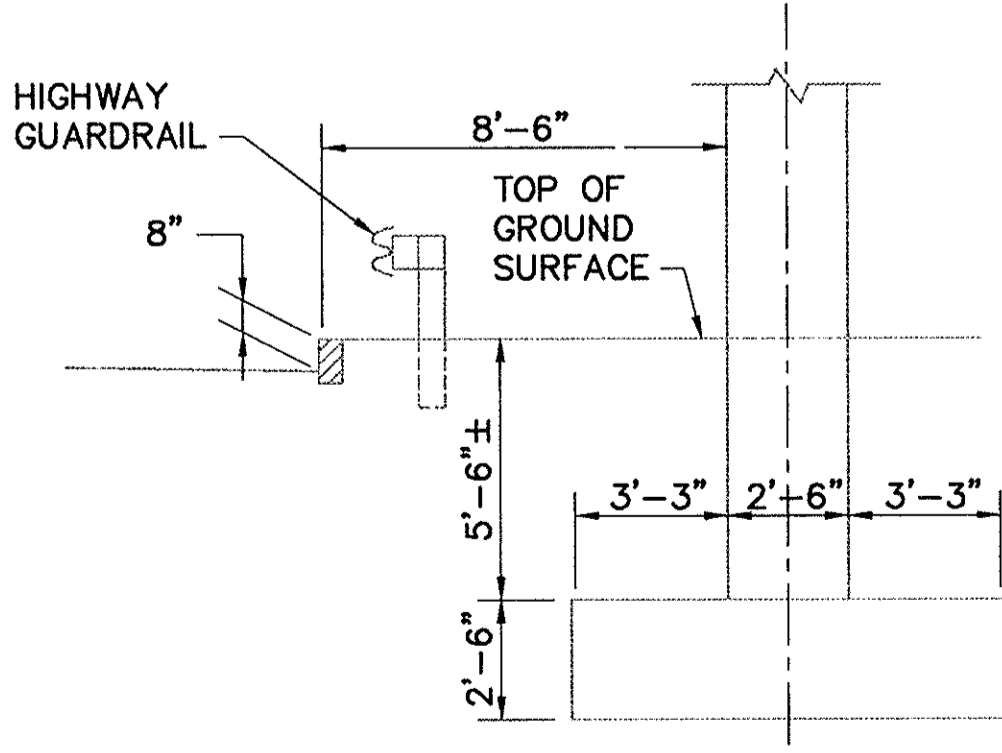
NOTE:
 FOR REPAIR NOTES SEE SHEET NO. 37.

DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT SEVERAL FIBER OPTIC CONDUITS AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN, THE BRIDGE APPROACHES AND ON PIERS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS, THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-(800)-322-4844, WILTEL AT 1-(800)-448-2658 AND AT&T AT 1-(800)-252-1133.



SECTION A-A
 SCALE: 1/4" = 1'-0"



SECTION B-B
 SCALE: 1/4" = 1'-0"

NOTE:
 REMOVE AND RESET HIGHWAY GUARDRAIL AS NECESSARY FOR REPAIRS AND AS DIRECTED BY THE ENGINEER (INCIDENTAL TO ITEMS C29-1 AND C29-4 AS APPLICABLE)

LEGEND
 APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

AS BUILT

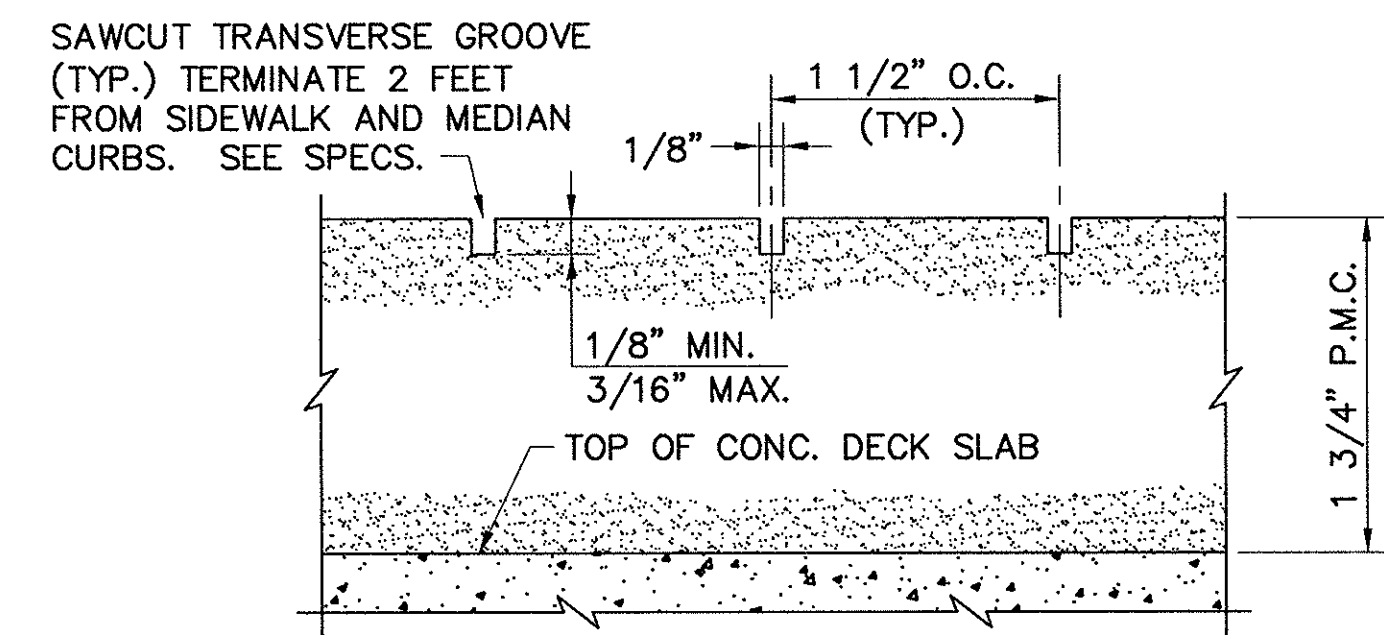
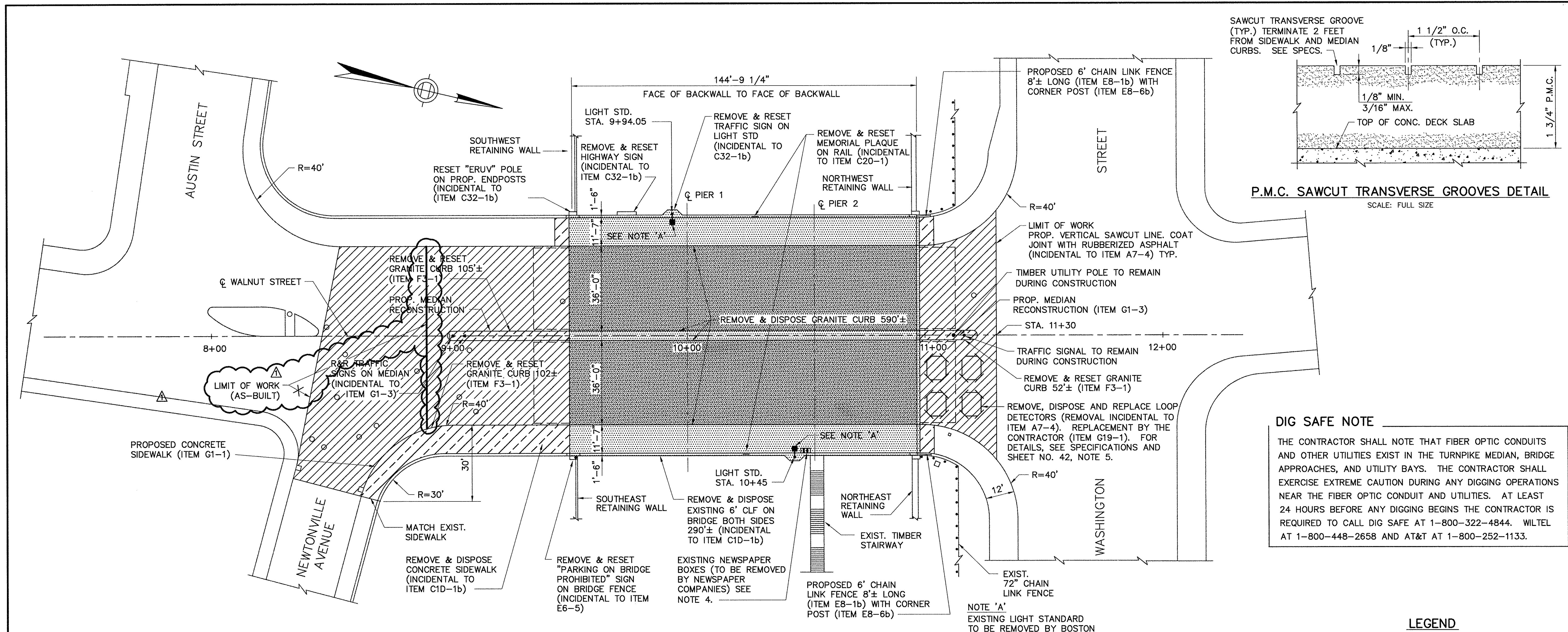
NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI 12/93	
		DRAWN:	SAS 12/93	
		CHECKED:	EMM 12/93	

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
 80 Boylston Street
 Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 WALNUT STREET (STR NO. S-23)
SUBSTRUCTURE CONCRETE REPAIRS
 PIER NO. 1 & PIER NO. 2

Scale: AS NOTED 521-024

EDWARDS AND KELCEY, INC. Sheet No. 38



P.M.C. SAWCUT TRANSVERSE GROOVES DETAIL
SCALE: FULL SIZE

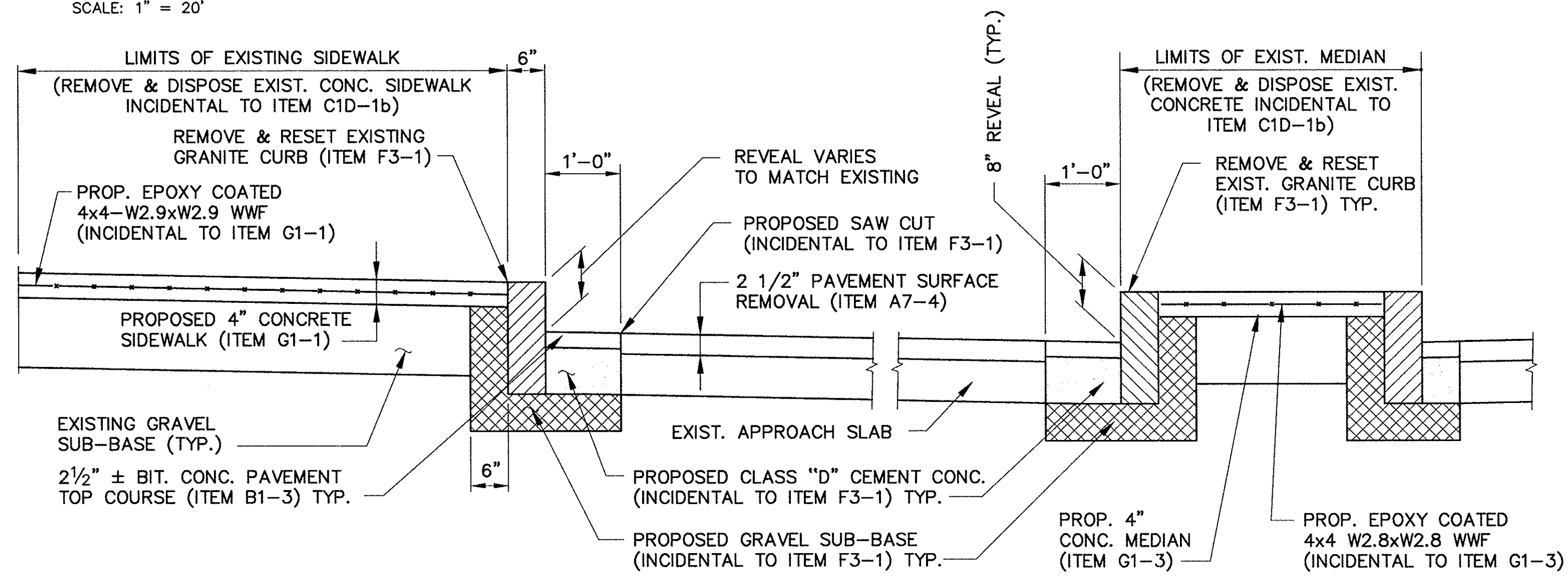
DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT FIBER OPTIC CONDUITS AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN, BRIDGE APPROACHES, AND UTILITY BAYS. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844. WILTEL AT 1-800-448-2658 AND AT&T AT 1-800-252-1133.

NOTES

- SOUTH APPROACH MEDIAN TO BE REMOVED & REPLACED WITH TEMP. BIT. CONC. PAVEMENT PRIOR TO START OF PHASE 1. MEDIAN RECONSTRUCTION NECESSARY FOR BRIDGE JOINT RECONSTRUCTION IS TO BE COMPLETED IN PHASE II. THE REMAINDER TO BE COMPLETED AT THE END OF PHASE III.
- LOCATIONS OF EXISTING UTILITIES AND SURFACE DETAILS HAVE BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND ARE NOT GUARANTEED FOR COMPLETENESS & ACCURACY. THE CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF ALL EXISTING UTILITIES AND DETAILS.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY UTILITY COMPANIES PRIOR TO CONSTRUCTION & COORDINATE ALL ASSOCIATED WORK WITH THEM THROUGHOUT CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE WITH THE NEWSPAPER COMPANIES 2 WEEKS PRIOR TO PHASE III FOR REMOVAL OF THE BOXES (SEE SPECIFICATIONS).
- ALL JOINTS IN BITUMINOUS CONCRETE ROADWAY PAVEMENT SHALL BE COATED WITH HOT POURED RUBBERIZED ASPHALT. FED. SPEC. SS-S-1401.C
- AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE.
- LIGHT STANDARD SHALL BE REMOVED & REPLACED BY BOSTON EDISON. THE CONTRACTOR SHALL NOTIFY BOSTON EDISON WALTHAM SERVICE CENTER (617-652-6300) TWO (2) WEEKS IN ADVANCE OF DEMOLITION.
- THE CONTRACTOR SHALL INSTALL THE CONDUITS, JUNCTION BOX AND ANCHOR BOLTS FOR LIGHT STANDARD AS SHOWN ON THE PLANS. THE CONTRACTOR SHALL CONNECT PROPOSED CONDUIT TO EXISTING CONDUIT AT ABUTMENT BACKWALLS. BOSTON EDISON WILL FURNISH AND INSTALL CONDUCTORS FROM FEED TO TO LIGHT STANDARD.

PAVEMENT PLAN



APPROACH GRANITE CURB, SIDEWALK AND MEDIAN DETAIL

AS BUILT

LEGEND

- PROPOSED DECK AND SIDEWALK SLAB RECONSTRUCTION (ITEM C32-1b)
- PROPOSED 1 3/4" PMC OVERLAY (ITEM C6S-1)
- PROPOSED BITUMINOUS CONCRETE REMOVAL 2 1/2"± (ITEM A7-4)
- PROPOSED BITUMINOUS CONCRETE PAVEMENT 2 1/2"± (ITEM B1-3)
- REMOVE EXISTING CONCRETE SDWK./MEDIAN (INCIDENTAL TO C1D-1b OR C29-3 AS APPLICABLE)
- PROPOSED CONCRETE SIDEWALK/MEDIAN (ITEM G1-1 / ITEM G1-3)
- UTILITY MANHOLE
- DROP INLET
- PROPOSED LIGHT STANDARD TO BE INSTALLED BY BOSTON EDISON (ITEM LS-1)

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI	12/93
		DRAWN:	GK	12/93
		CHECKED:	EMM	12/93
		AS-BUILT	GTS	10/95

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

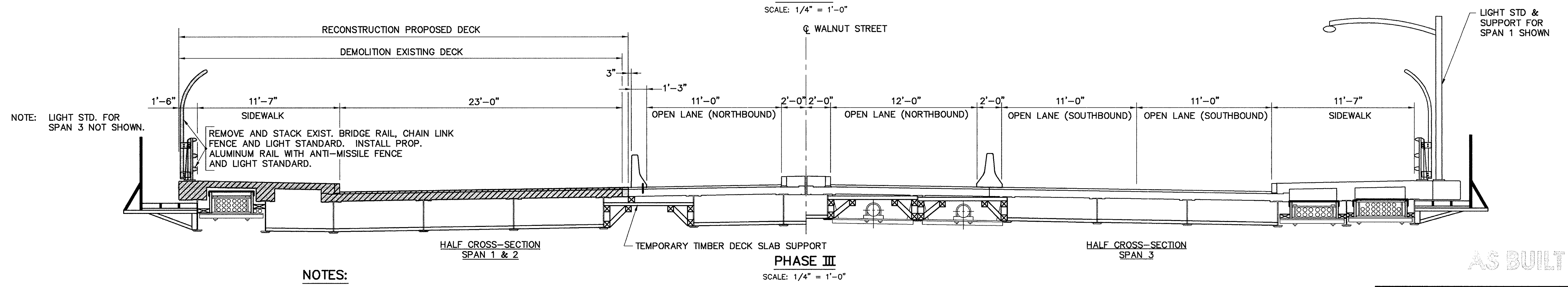
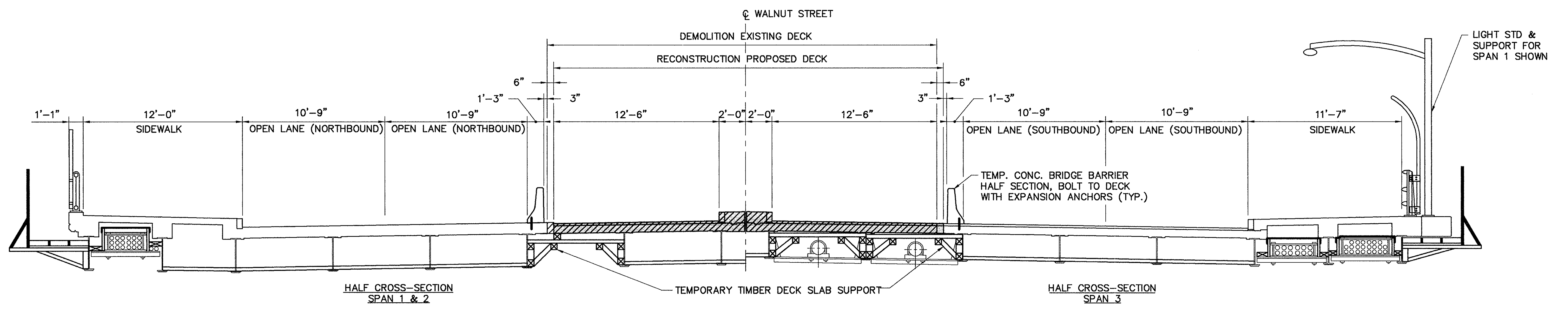
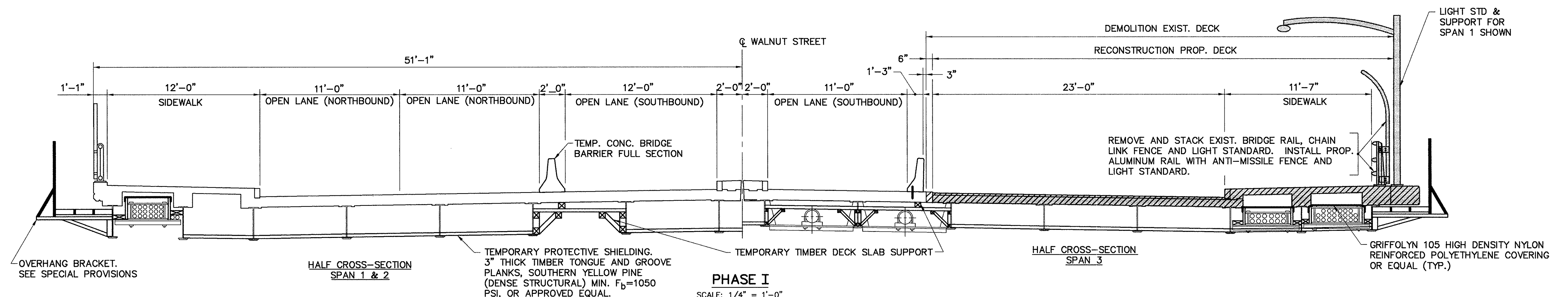
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)

PAVEMENT PLAN

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 39



NOTES:

1. ALL SECTIONS TAKEN LOOKING SOUTH.
2. TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN ALL STRINGERS, AROUND FASCIAS AND OVER THE EXISTING UTILITIES PRIOR TO ANY DEMOLITION WORK.
3. TEMP. CONC. BRIDGE & ROADWAY BARRIERS WILL BE PROVIDED BY THE AUTHORITY, AND TRANSPORTED AND PLACED BY THE CONTRACTOR.
4. LIGHT STANDARDS SHALL BE REMOVED AND REPLACED BY BOSTON EDISON.
5. A TIMBER DECK SLAB SUPPORT SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN. (SEE SPECIFICATIONS FOR DETAILS.)
6. SOUTH APPROACH MEDIAN SHALL BE REMOVED PRIOR TO START OF PHASE I AND REPLACED WITH PROPOSED APPROACH MEDIAN FOLLOWING COMPLETION OF PHASE III (SEE SPECIFICATIONS FOR DETAILS.)
7. FOR DECK SLAB CONSTRUCTION JOINT DETAIL SEE SHEET NO. 32.

LEGEND

	DEMOLITION
	RECONSTRUCTION

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: ORI	12/93	
		DRAWN: JNC	12/93	
		CHECKED: EMM	12/93	

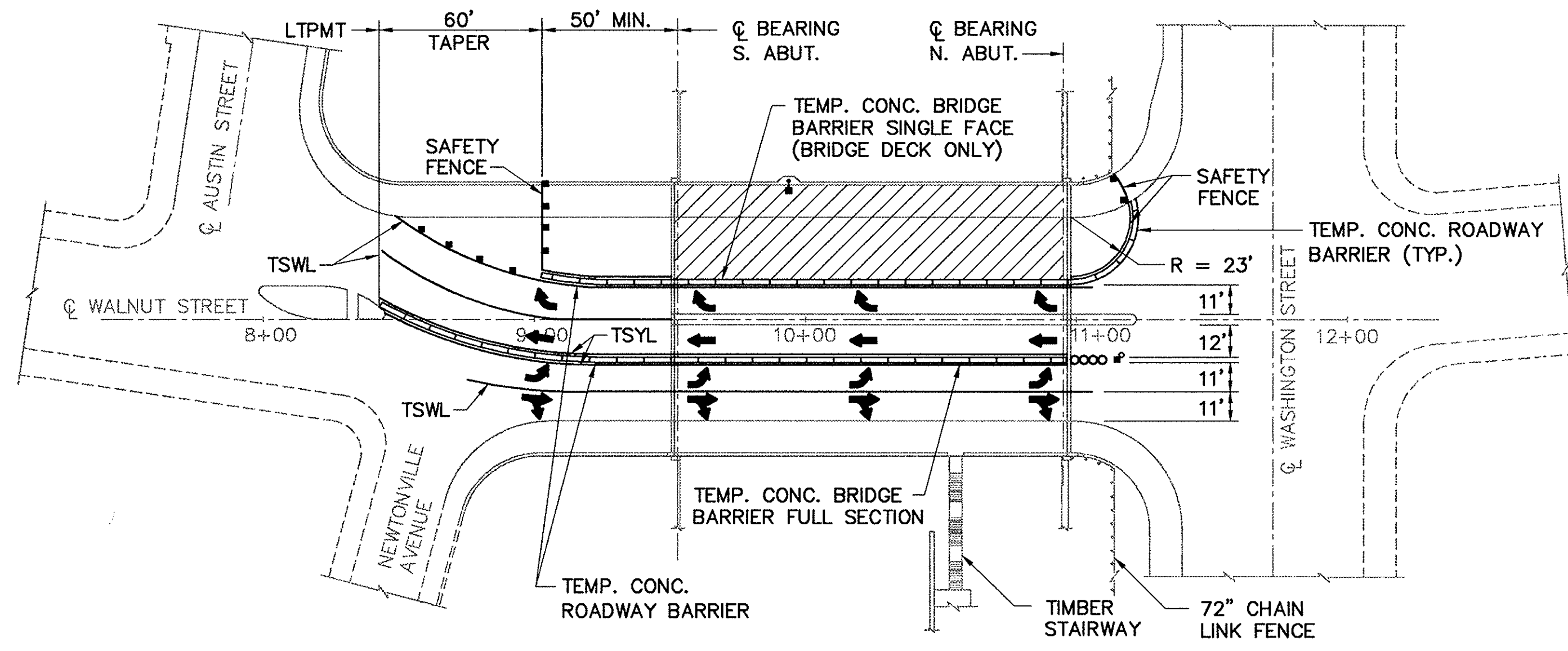
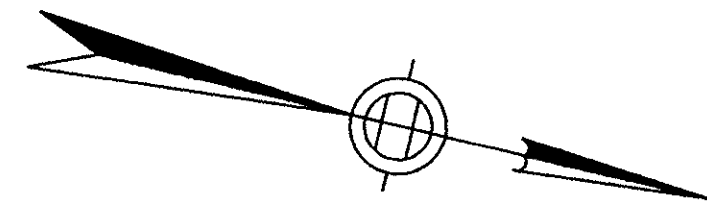
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

AS BUILT

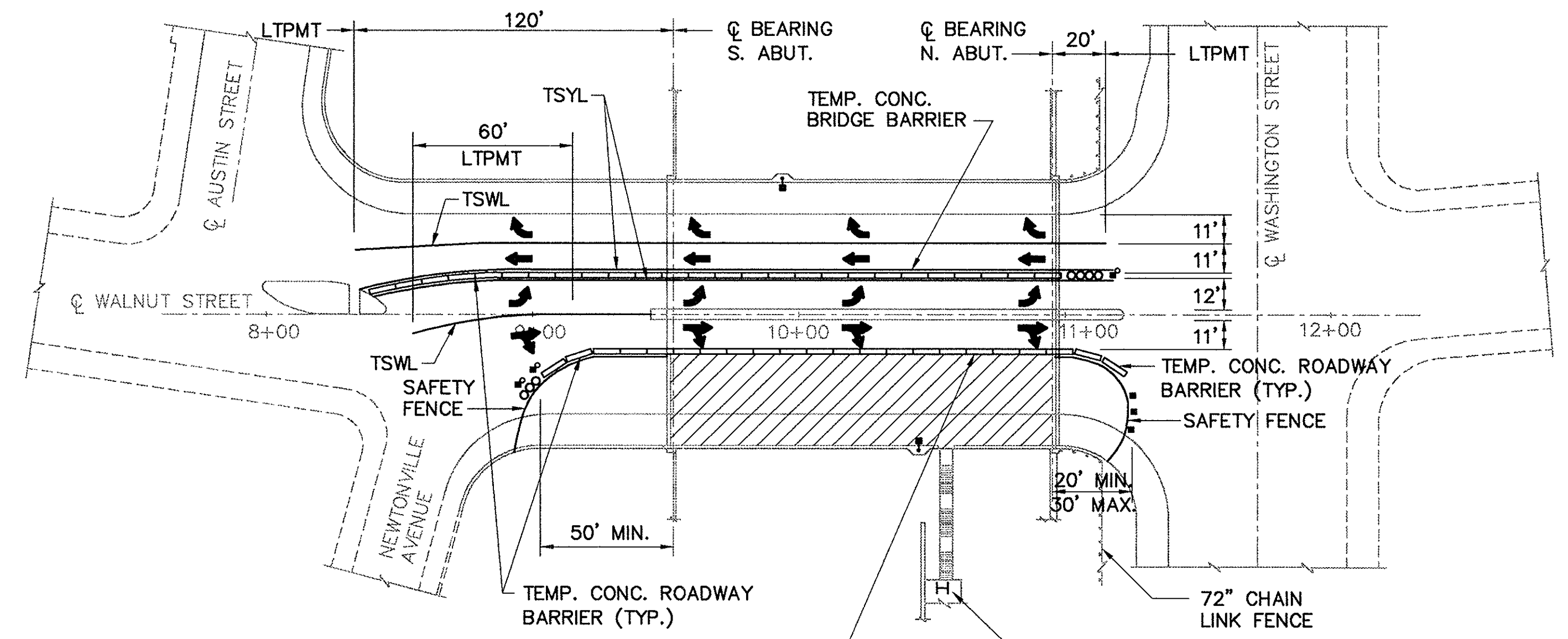
**MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE**

**BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR NO. S-23)
SEQUENCE OF CONSTRUCTION**

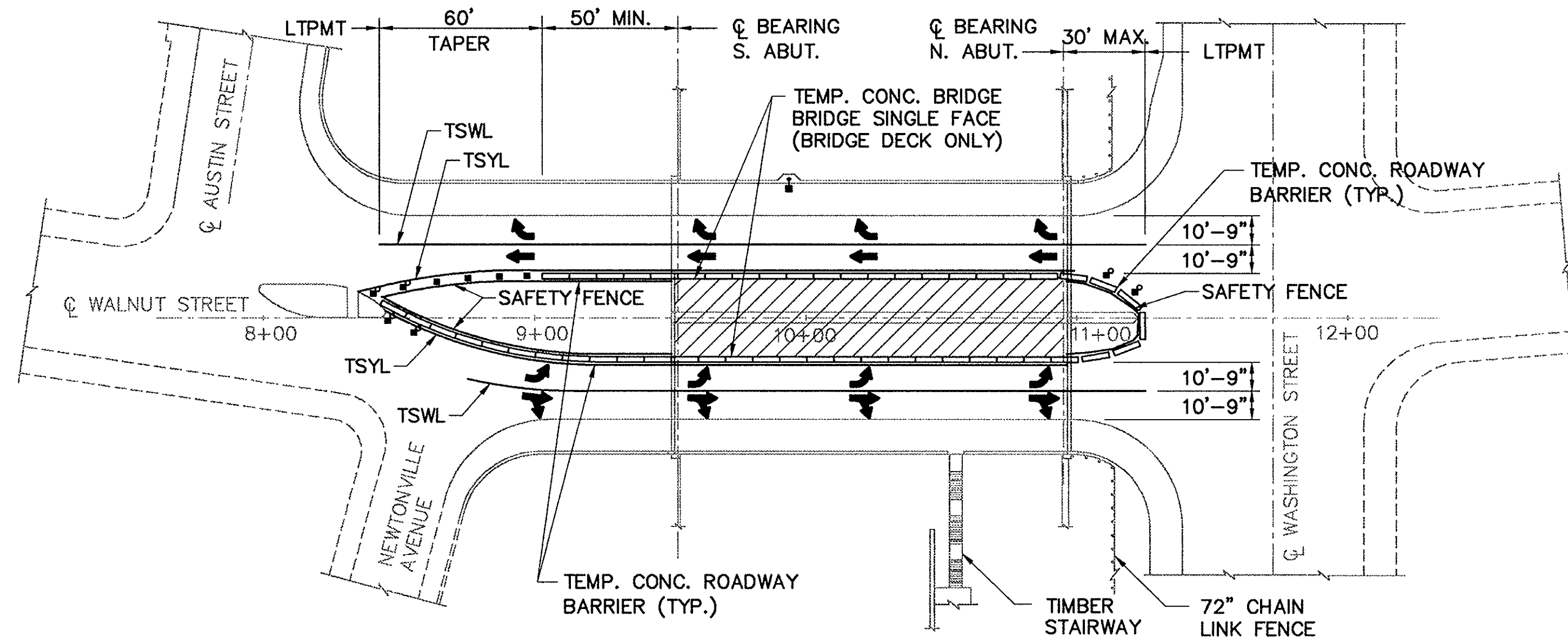
Scale: AS NOTED	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schreff Center 629 Main Street Boston, Massachusetts 02129	Sheet No. 41



PHASE I
SCALE: 1" = 40'



PHASE III
SCALE: 1" = 40'



PHASE II
SCALE: 1" = 40'

NOTES:

1. SPACE BARRELS FOR SAFETY FENCE AT 8 FEET MAXIMUM.
2. ARROWS INDICATE DIRECTION OF TRAFFIC FLOW AND NOT ACTUAL SIGNING.
3. DURING PHASE III, PEDESTRIANS SHALL BE DIRECTED TO HARVARD STREET FOR ACCESS TO THE COMMUTER RAIL STATION. WALNUT STREET ACCESS SHALL BE CLOSED DURING PHASE III.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING UNAUTHORIZED ACCESS TO THE WORK AREA. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESIGN FOR A SAFETY FENCE TO BE CONSTRUCTED TO THE LIMITS OF THIS PLAN.
5. THE CONTRACTOR SHALL NOTIFY THE CITY OF NEWTON ONE WEEK BEFORE REMOVING THE TRAFFIC SIGNAL LOOP DETECTORS. TRAFFIC SIGNAL TIMING SHALL BE ADJUSTED IN ACCORDANCE WITH THE CITY OF NEWTON REQUIREMENTS.
6. SOUTH APPROACH MEDIAN TO BE REMOVED AND REPLACED WITH TEMP. BIT. CONC. PAVEMENT PRIOR TO START OF PHASE I. MEDIAN RECONSTRUCTION NECESSARY FOR BRIDGE JOINT RECONSTRUCTION IS TO BE COMPLETED IN PHASE II. THE REMAINDER TO BE COMPLETED AT THE END OF PHASE III.

LEGEND

- AREA OF BRIDGE UNDER CONSTRUCTION
- TEMPORARY CONCRETE BRIDGE OR ROADWAY BARRIERS WITH REFLECTORIZED MARKERS
- REFLECTORIZED PLASTIC DRUM
- REFLECTORIZED PLASTIC DRUM WITH STEADY BURN LIGHT
- INERTIAL BARRIER SYSTEM
- TYPE II BARRICADE
- DIRECTION OF TRAFFIC FLOW
- 4" TEMPORARY PAVEMENT MARKING TAPE
- LIMIT OF TEMPORARY PAVEMENT MARKING TAPE
- TEMPORARY SOLID YELLOW LINE
- TEMPORARY SOLID WHITE LINE

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: SAS	12/93	
		CHECKED: EMM	12/93	

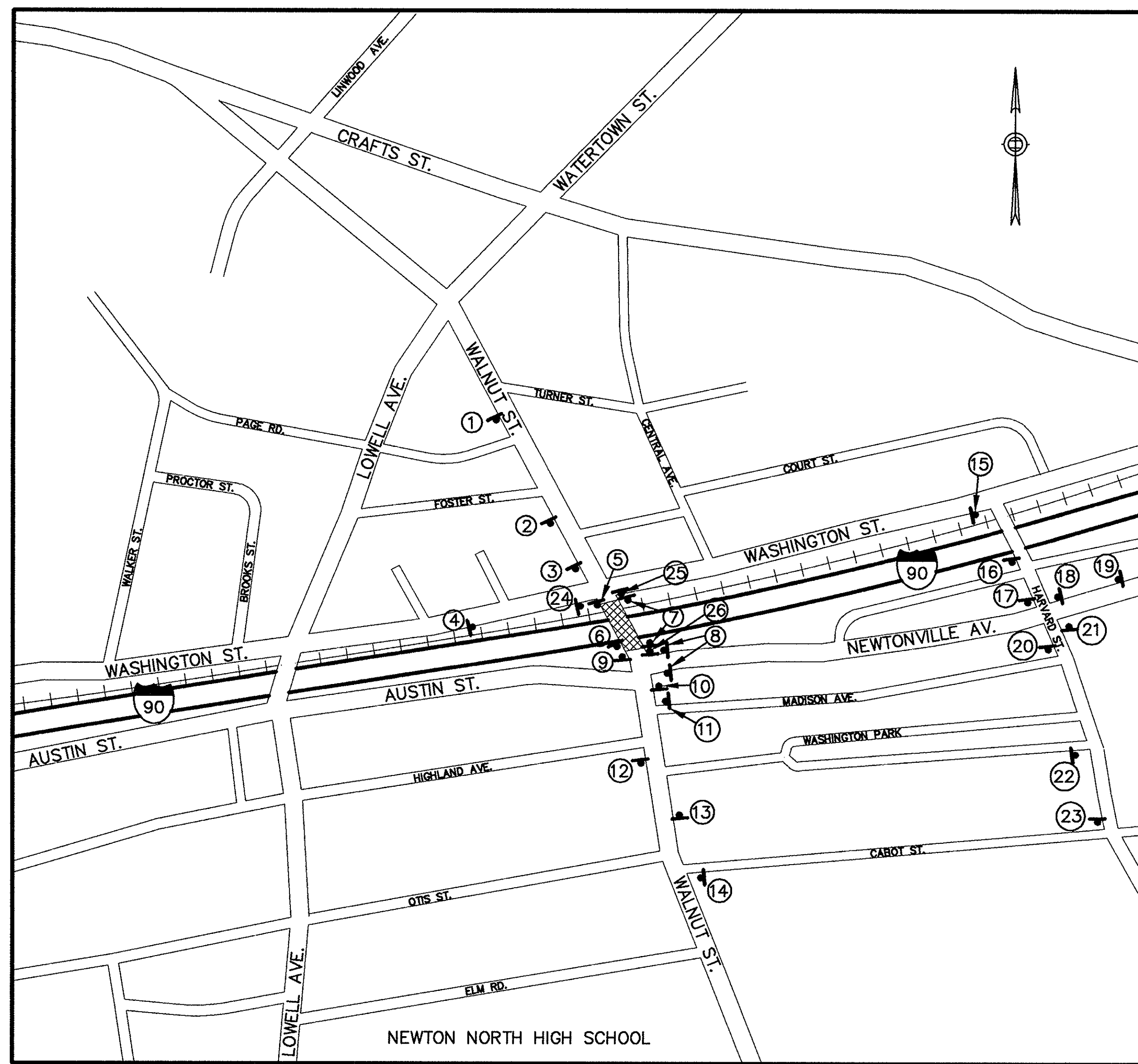
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

**BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
TRAFFIC PHASING PLAN**

Scale: AS NOTED Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 42



ADVANCE WARNING & DETOUR SIGN PLAN
NOT TO SCALE

CONSTRUCTION SIGN LOCATION SCHEDULE

LOCATION NO.	SIGNS REQUIRED	LOCATION NO.	SIGNS REQUIRED
1	W20-1 (AHEAD)	14	M4-8a (PHASE 1 ONLY)
2	CS-2	15	CS-1a, M4-10R (PHASE 1 ONLY)
3	W1-3L	16	CS-3
4	CS-1 (PHASE 1 ONLY)	17	CS-3a
5	CS-7 (PHASE 1 ONLY)	18	CS-3b, M4-10L
6	R3-2, CS-2a	19	CS-3
7	CS-4 (PHASE 3 ONLY)	20	CS-3b, M4-10R
8	R3-2	21	M4-8a
9	CS-6 (PHASE 1 ONLY)	22	CS-2b, M4-10L
10	W1-3L (PHASE 3 ONLY)	23	CS-1a, M4-10R (PHASE 1 ONLY)
11	CS-3c, M4-10R	24	CS-5 (PHASE 1 ONLY)
12	CS-2b, M4-10L	25	CS-6 (PHASE 3 ONLY)
13	W20-1 (AHEAD)	26	CS-7 (PHASE 3 ONLY)

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		BY	DATE		
		DESIGNED:	T.A.Z.		12/93
		DRAWN:	S.B.S.		12/93
		CHECKED:	L.M.B.		12/93

IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
R3-2	24"	24"		SEE FHWA STANDARD HIGHWAY SIGNS 1979			3	SEE FHWA STANDARD HIGHWAY SIGNS 1979		
W1-3L	36"	36"					2			
W20-1 (AHEAD)	36"	36"					2			
M4-10R M4-10L	48"	18"					7			
M4-8a	24"	18"					2			
CS-1	72"	30"		5" C 5" C 5" C	3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-1a	48"	48"		6" C 6" C	4" 4"		2	ORANGE	BLACK	BLACK
CS-2	72"	30"		5" C 5" C 5" C	3" 3"		1	ORANGE	BLACK	BLACK
CS-2a	72"	24"		5" C 5" C	3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-2b	72"	24"		5" C 5" C	3"		2	ORANGE	BLACK	BLACK
CS-3	72"	36"		5" C 5" C 5" C 5" C	3" 3" 3" 3"		2	ORANGE	BLACK	BLACK
CS-3a	72"	30"		5" C 5" C 5" C 5" C	3" 3" 3" 3"	5" x 8.33" @ 90°	1	ORANGE	BLACK	BLACK
CS-3b	72"	24"		5" C 5" C	3"		2	ORANGE	BLACK	BLACK
CS-3c	48"	48"		6" C 6" C	4"		1	ORANGE	BLACK	BLACK
CS-4	72"	30"		5" C 5" C 5" C	3" 3"		1	ORANGE	BLACK	BLACK
CS-5	48"	48"		6" C 6" C 6" C	4" 4"		2	ORANGE	BLACK	BLACK
CS-6	72"	30"		5" C 5" C	3"	6" X 10" @ 180°	2	ORANGE	BLACK	BLACK
CS-7	72"	30"		5" C 5" C	3"	6" X 10" @ 0°	2	ORANGE	BLACK	BLACK

GENERAL NOTE:
ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PART VI AND "STANDARD HIGHWAY SIGNS", CURRENT EDITION.

- NOTES:
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - ALL DETOUR SIGNING TO BE PLACED PRIOR TO PHASE 1 AND MAINTAINED BY THE CONTRACTOR UNTIL THE PROJECT IS COMPLETED.
 - MISSING OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT NO COST TO THE AUTHORITY.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

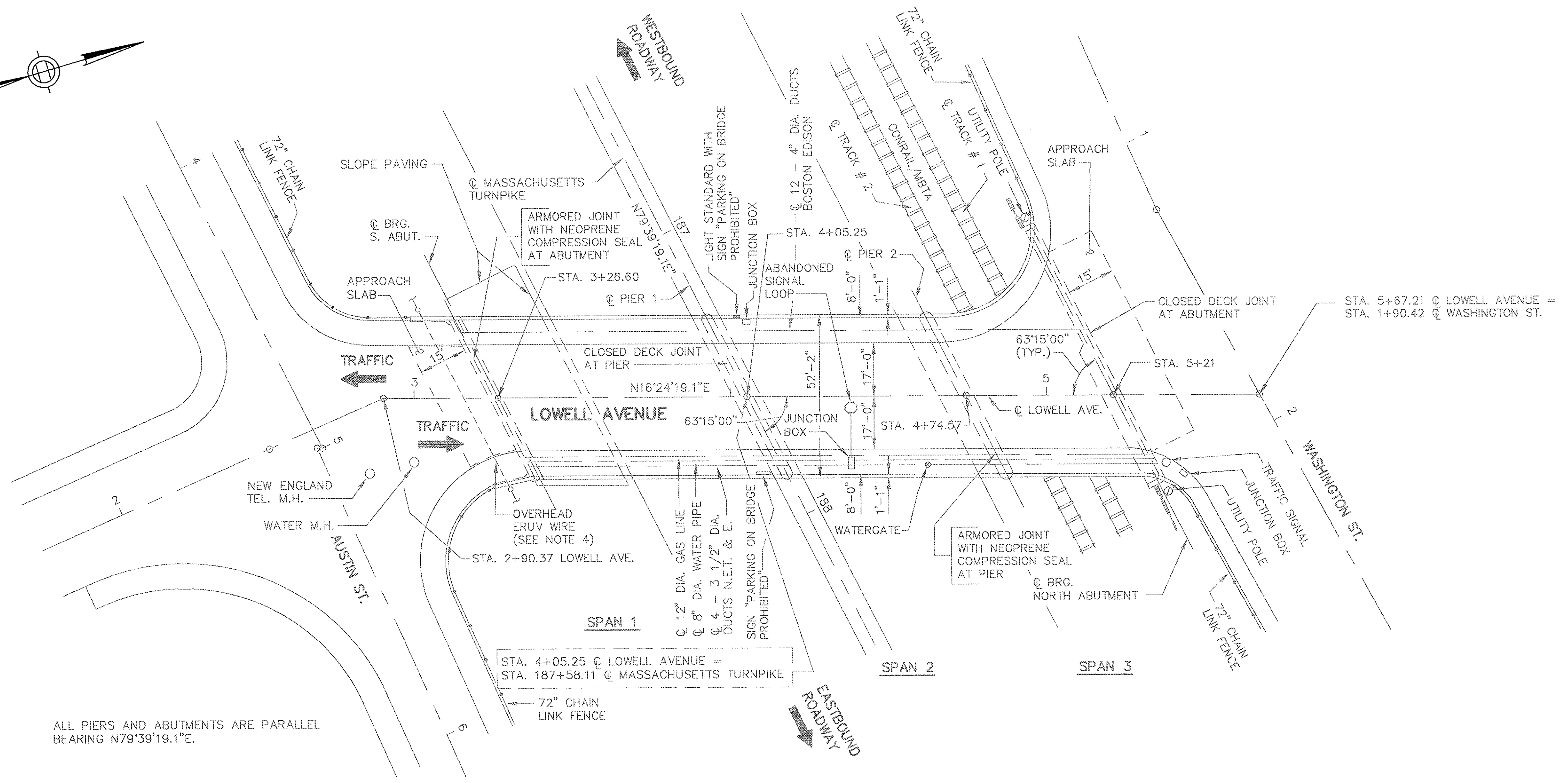
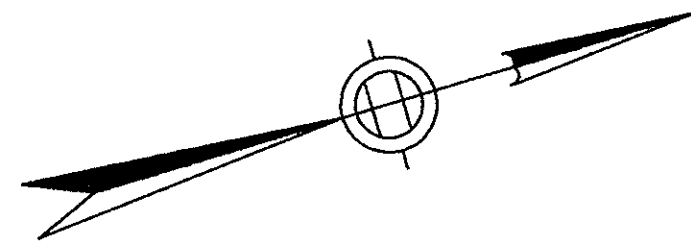
BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)

TRAFFIC DETOUR PLAN AND SIGNING

Scale: NOT TO SCALE Contract No. 521-024

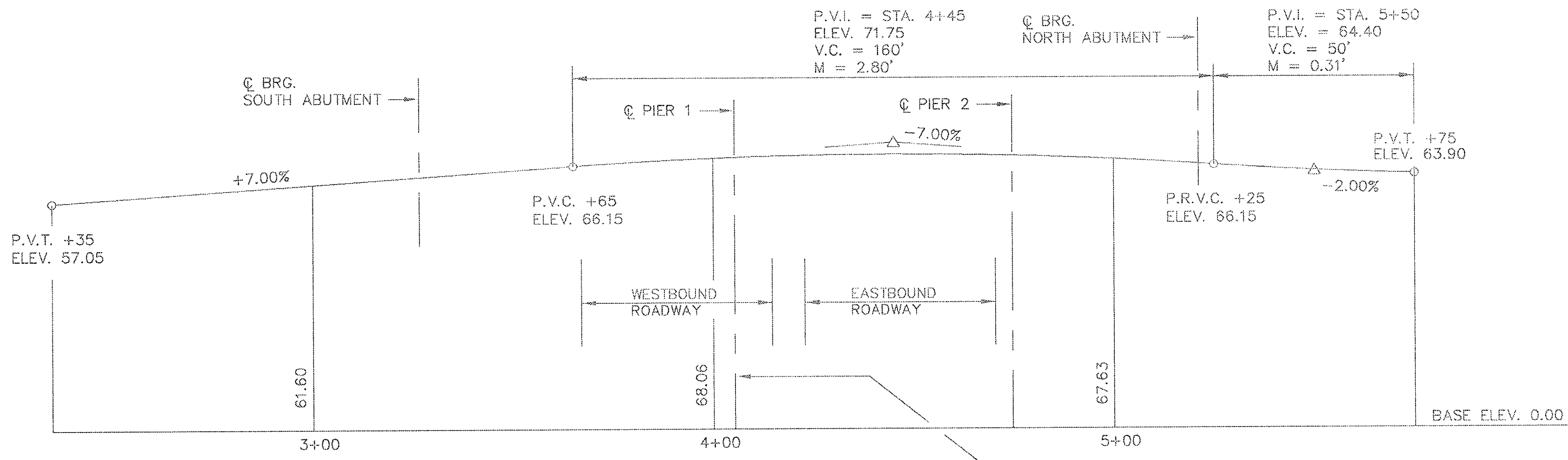
EDWARDS AND KELCEY, INC. Sheet No. 43

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



ALL PIERS AND ABUTMENTS ARE PARALLEL BEARING N79°39'19.1"E.

EXISTING PLAN
SCALE: 1" = 20'



PROFILE - LOWELL AVENUE
SCALE: HORIZ. 1" = 20'
VERT. 1" = 20'

NOTES

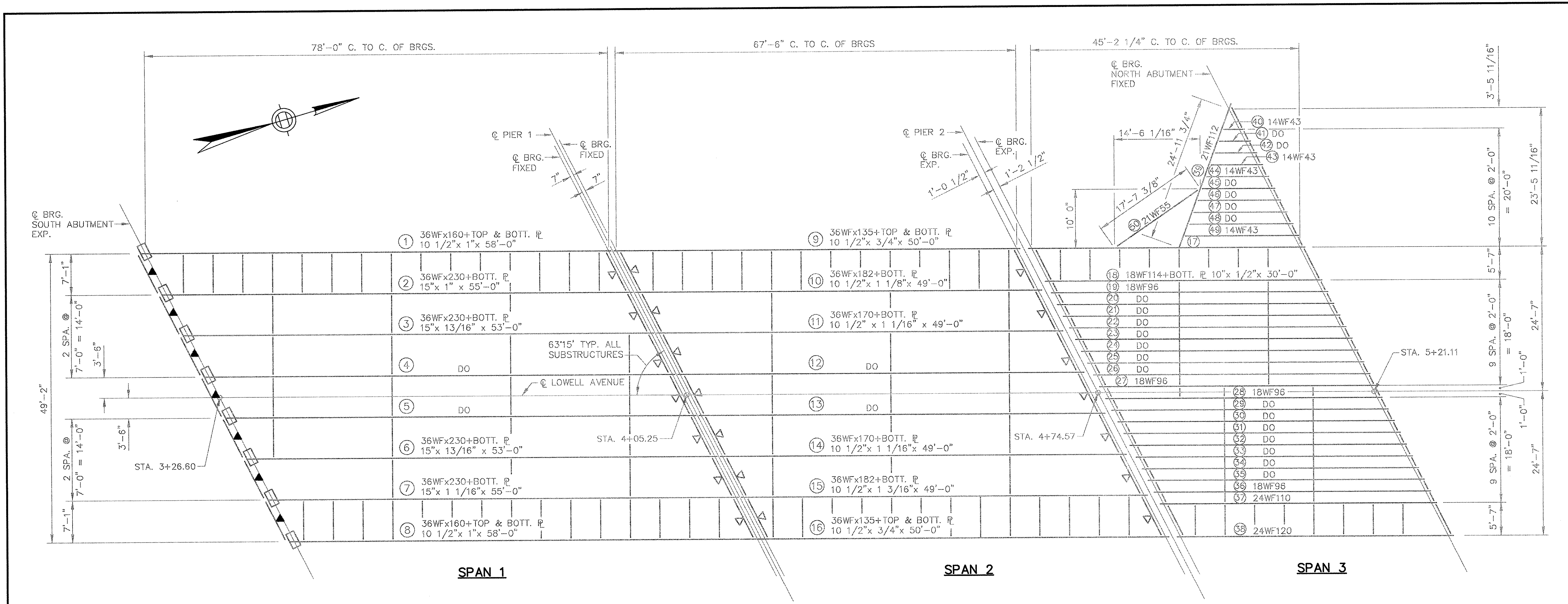
- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILTS AND NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS BASED ON USC & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LOWELL AVENUE (STR. NO. S-22)	
EXISTING PLAN AND PROFILE	
Scale: 1" = 20'	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schraft Center 525 Main Street Boston, Massachusetts 02129	Sheet No. 44

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



FRAMING PLAN
SCALE: 1/8" = 1'-0"

LEGEND

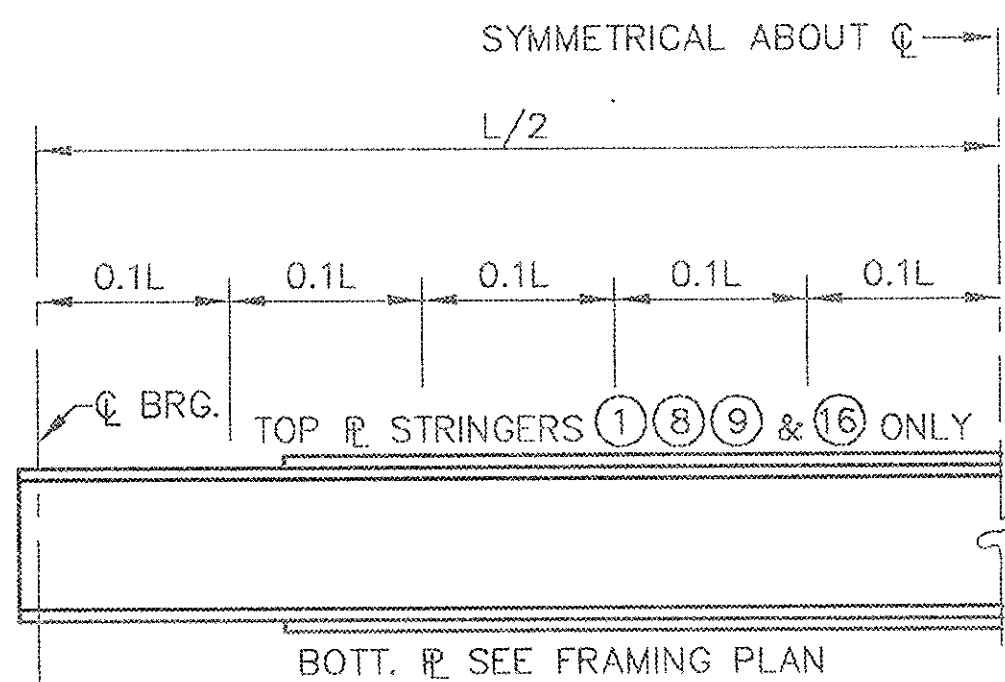
- 1. DENOTES EXISTING EXPANSION BEARING.
- 2. DIAPHRAGM WITH EXISTING SHEAR CONNECTORS (7/8" DIA. x 4" @ 8" CENTERS)
- 2. EXISTING DIAPHRAGM (PROPOSED 7/8" DIA. x 4" HIGH SHEAR STUD CONNECTORS @ 8" O.C.)

NOTES

- 1. DIMENSIONS FOR THE FRAMING PLAN ARE FROM THE "AS BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
- 2. SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.

EXISTING SHEAR CONNECTOR SCHEDULE

STRINGER NO.	0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	NO. OF 3/4" DIA. STUDS/ROW	HEIGHT
① ⑧ ⑨ ⑬	12"	12"	12"	12"	12"	2	6"
② ⑦	6"	7"	6"	11"	15"	3	4"
③ THRU ⑥ & ⑪ THRU ⑭	7 1/2"	9"	11"	12 1/2"	16"	3	4"
⑩ & ⑮	5 1/2"	6 1/2"	8 1/2"	10 1/2"	15"	3	4"
⑳ THRU ⑳	12"	12"	12"	12"	12"	2	3"
⑱	9"	10"	12 1/2"	15 1/2"	19"	2	4"
⑲ THRU ⑳	17"	20"	24"	24"	24"	2	3"
⑳ ㉑ ㉒ ㉓	12"	12"	12"	12"	12"	2	4"

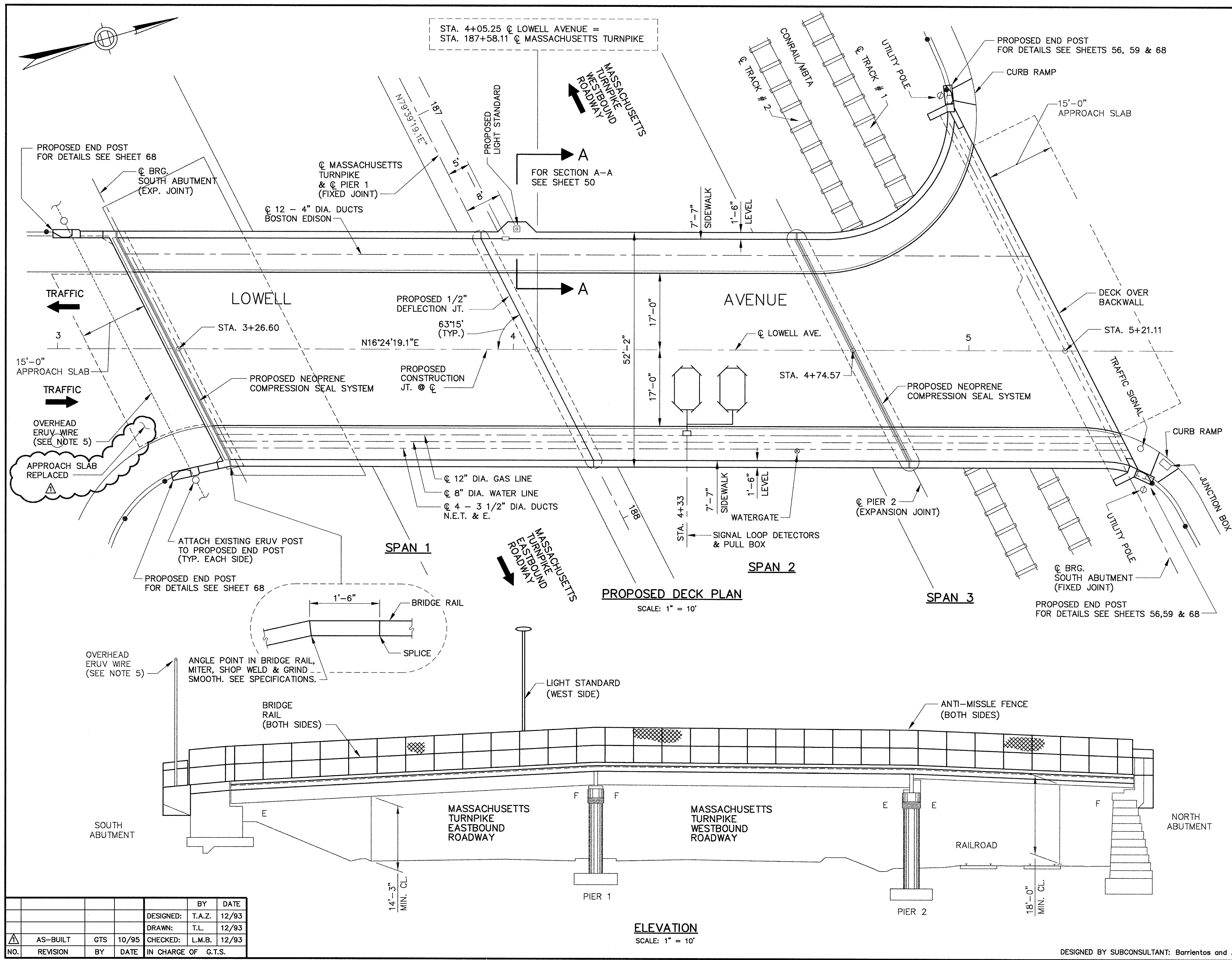


AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
FRAMING PLAN
 Scale: AS SHOWN Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 45
 523 Main Street
 Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



GENERAL NOTES

- DESIGN LOADING:**
A.A.S.H.T.O. LOADING HS20-44.
- MATERIALS:**
- SPAN 3 DECK SLAB SHALL BE COMPOSED OF POLYMER MODIFIED CONCRETE (PMC) (ITEM C6S-4). CONCRETE FOR DECK SLAB, SIDEWALKS & END POSTS SHALL BE CLASS 'D' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4500$ PSI.
 - CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=5000$ PSI.
 - ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
 - ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
 - ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
 - FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

NOTES

- IT IS THE RESPONSIBILITY OF THE CONTRACTOR, TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
- STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SPECIFICATIONS SECTION C25A OF SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1c.
- TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
- E DENOTES EXPANSION BEARING. F DENOTES FIXED BEARING.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- POLYMER MODIFIED CONCRETE (PMC) FOR SPAN 3 SHALL BE PAID FOR ON A LUMP SUM BASIS IN ITEM C6S-4.
- CONCRETE SIDEWALK IN SPAN 3 SHALL BE INCLUDED IN ITEM C6S-4.
- STEEL BAR REINFORCING ON SPAN 3 IS INCLUDED IN ITEM C6S-4.

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	T.A.Z.	12/93
		DRAWN:	T.L.	12/93
		CHECKED:	L.M.B.	12/93
		BY	G.T.S.	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
PROPOSED DECK PLAN

Scale: AS SHOWN Contract No. 521-024

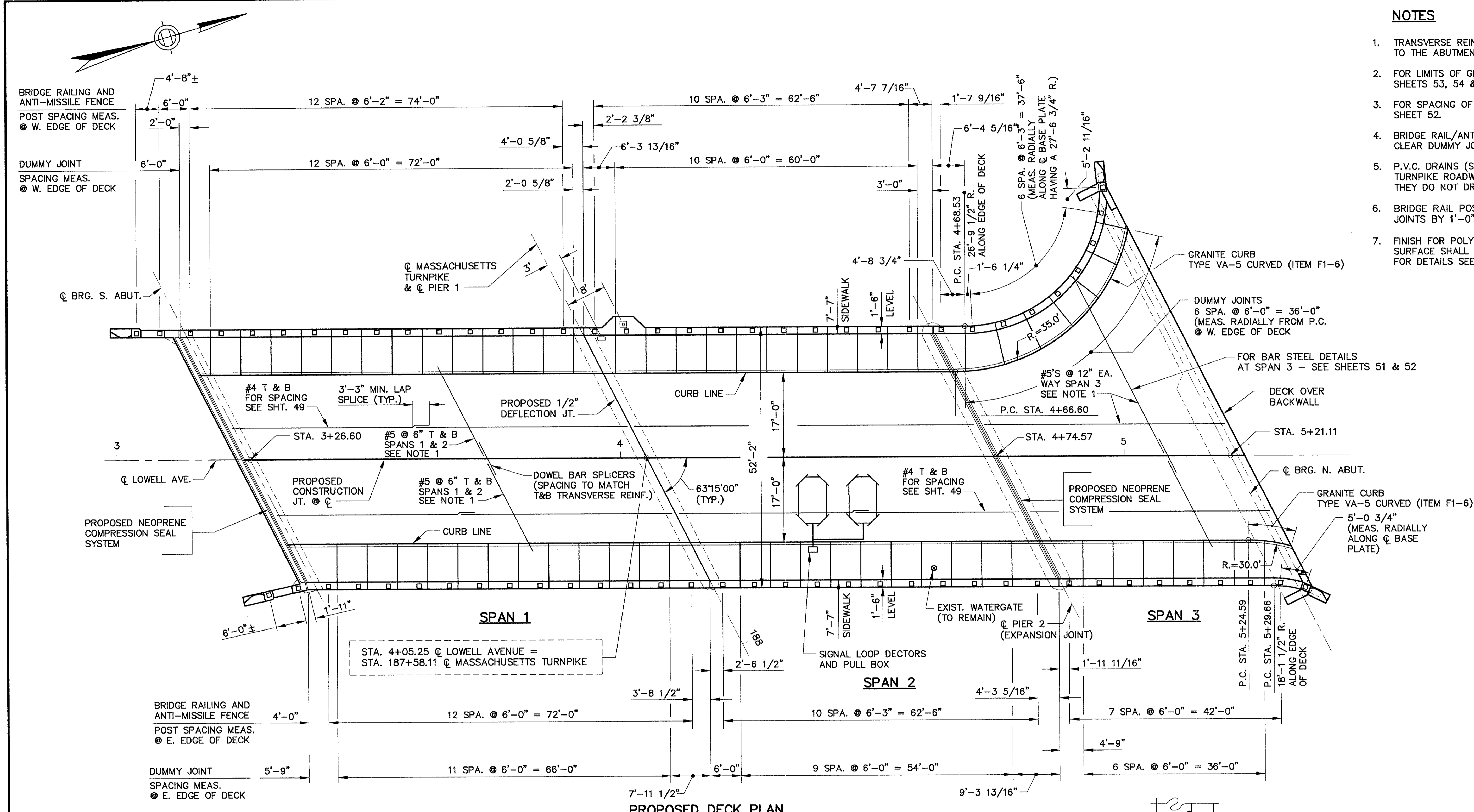
EDWARDS AND KELCEY, INC.
The Schreffel Center
229 Main Street
Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

Sheet No. 46

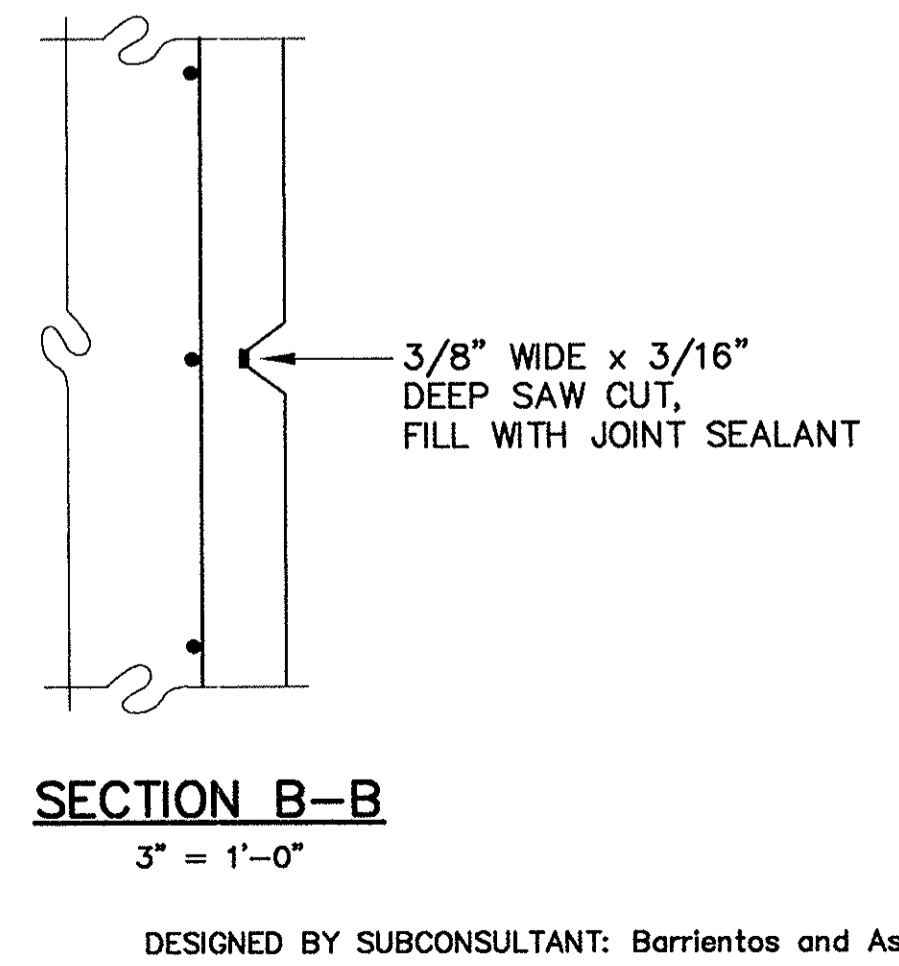
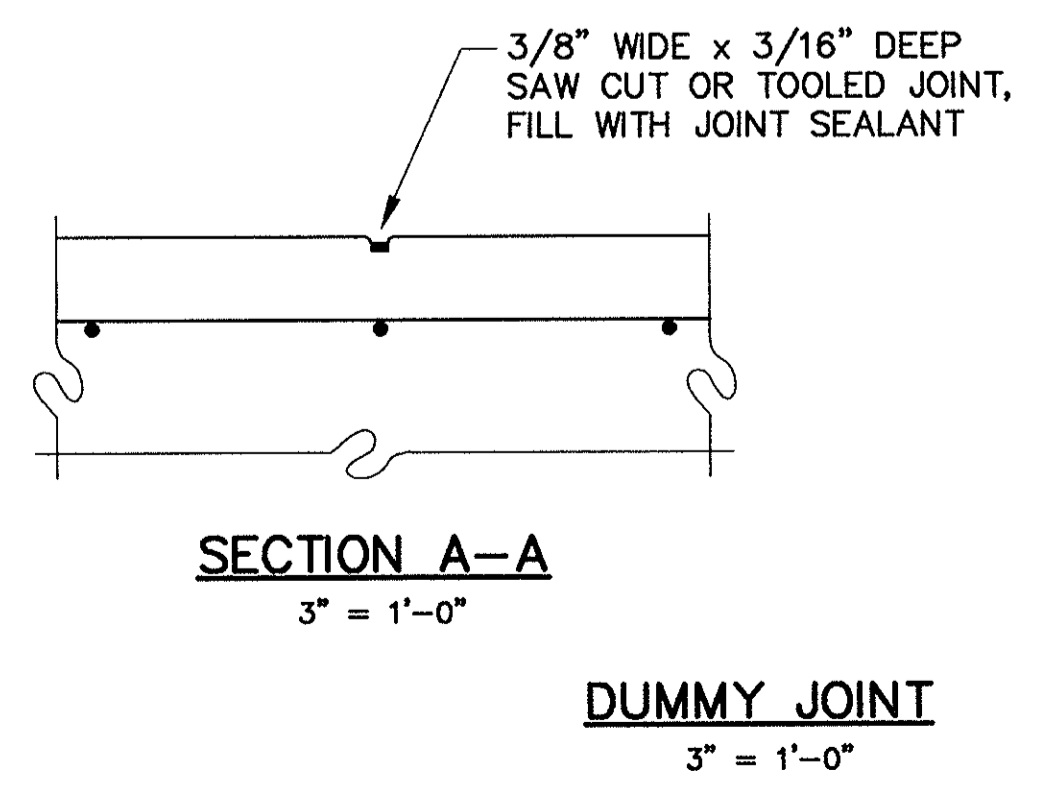
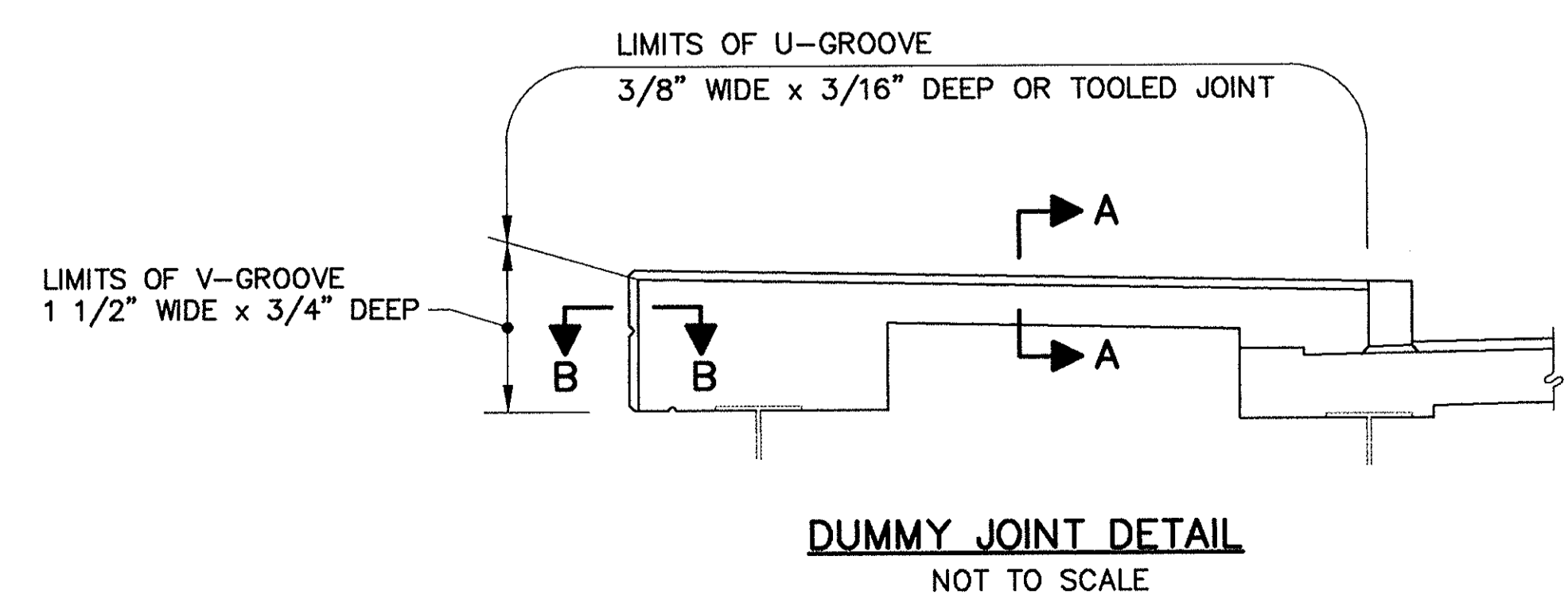
NOTES

1. TRANSVERSE REINFORCEMENT SHALL BE PARALLEL TO THE ABUTMENTS AND PIERS.
2. FOR LIMITS OF GRANITE CURB AT ROADWAY JOINTS SEE SHEETS 53, 54 & 55.
3. FOR SPACING OF REINFORCING STEEL NOT SHOWN, SEE SHEET 52.
4. BRIDGE RAIL/ANTI-MISSILE FENCE POST SPACING SHALL CLEAR DUMMY JOINTS BY 12" MINIMUM.
5. P.V.C. DRAINS (SEE SHEET 50) LOCATED ABOVE THE TURNPIKE ROADWAY SHALL BE POSITIONED SO THAT THEY DO NOT DRAIN ONTO THE TRAVELED WAY.
6. BRIDGE RAIL POST SPACING SHALL CLEAR DUMMY JOINTS BY 1'-0" MINIMUM.
7. FINISH FOR POLYMER MODIFIED CONCRETE WEARING SURFACE SHALL BE SAWCUT TRANSVERSE GROOVES. FOR DETAILS SEE SHEET 49.



DUMMY JOINT NOTES

1. A MORTARED JOINT IN THE CURB SHALL BE PLACED AT EACH DUMMY JOINT.
2. JOINT SEALER TO BE SAME COLOR AS CONCRETE.
3. JOINTS TO BE SQUARE TO FACE OF CURB.



AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	G.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
DECK PLAN AND DETAILS

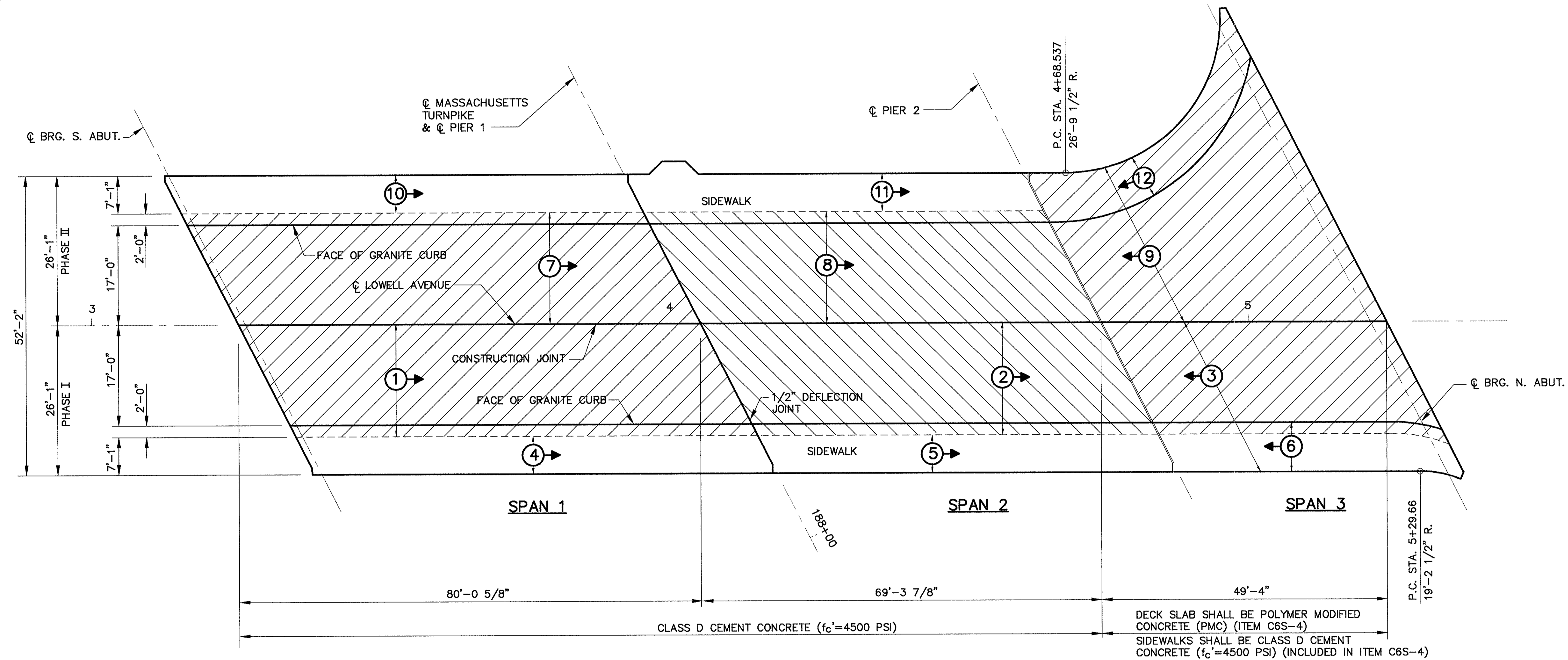
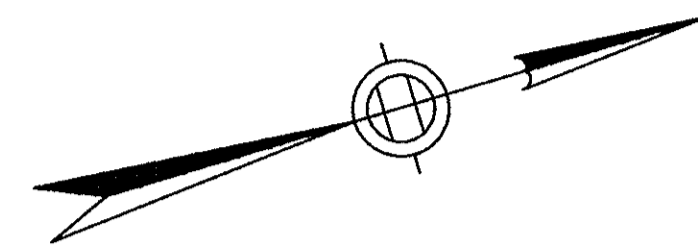
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 47

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

NOTES

1. (X) NUMBERS INDICATE SEQUENCE OF PLACEMENT.
2. PLACEMENT SHALL BE CONTINUOUS FOR EACH PLACING BLOCK.
3. PLACEMENT OF BLOCKS SHALL BEGIN ON THE LOW SIDE OF THE BLOCK.
4. FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEET 62.



PLACING SEQUENCE FOR CONCRETE DECK

SCALE: 1" = 10'

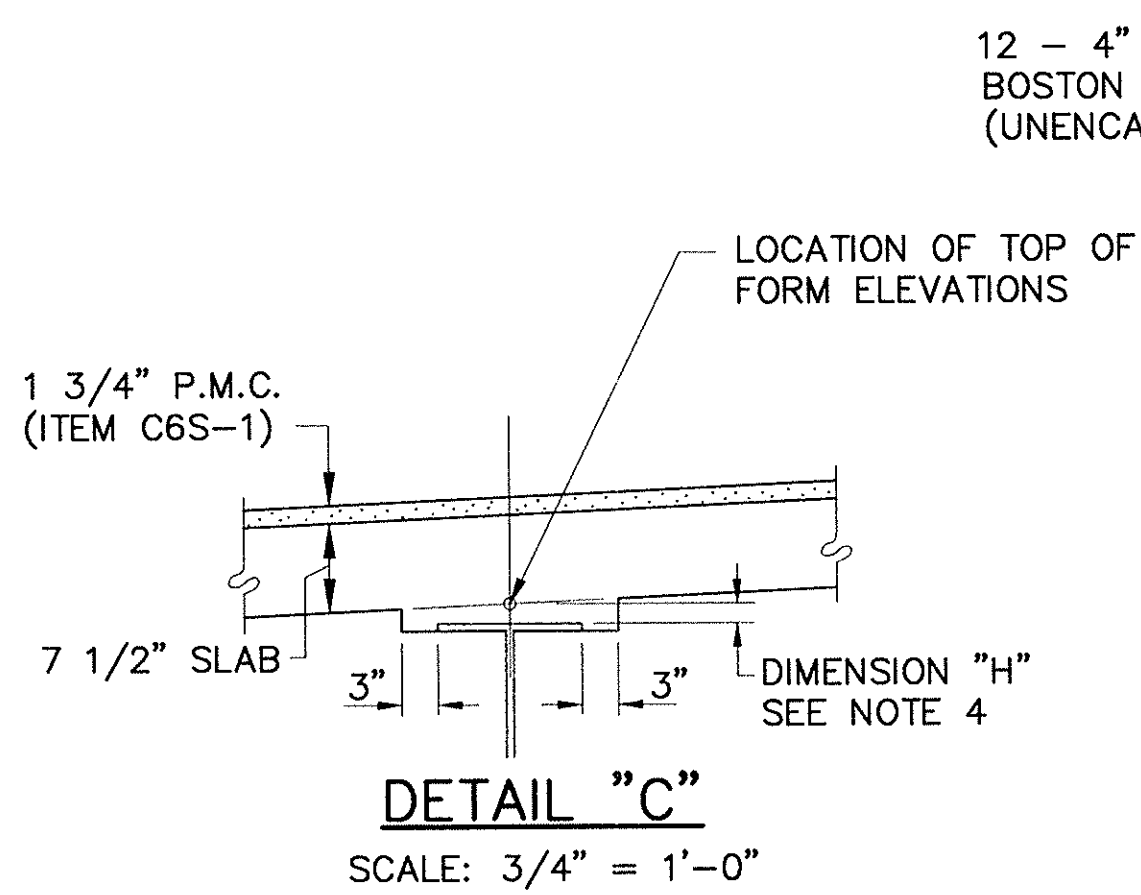
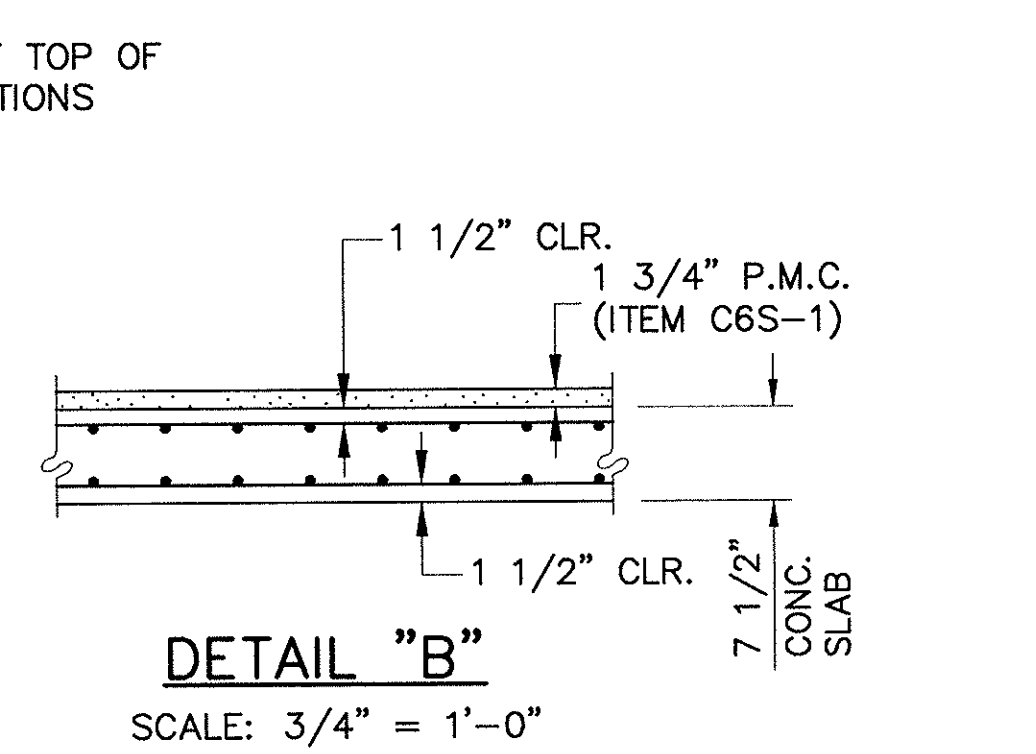
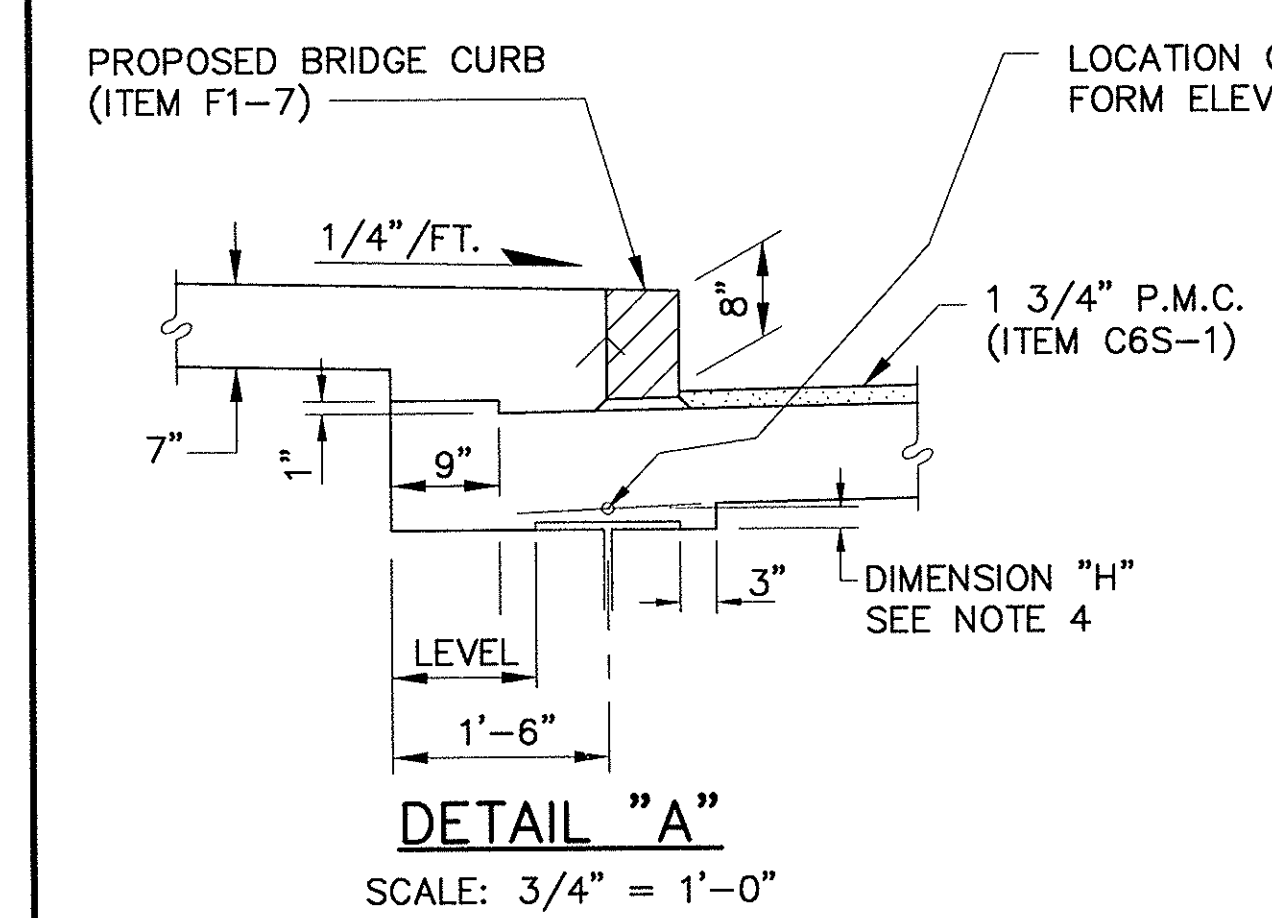
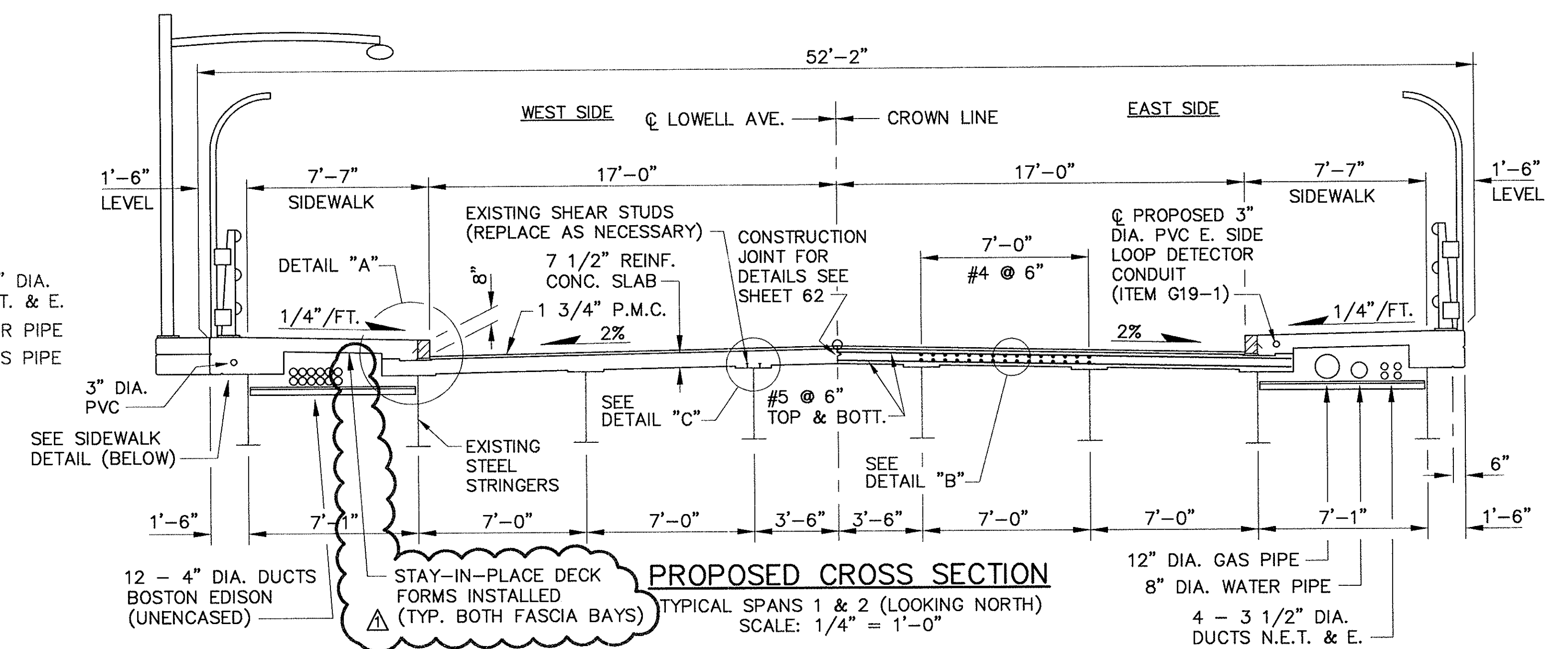
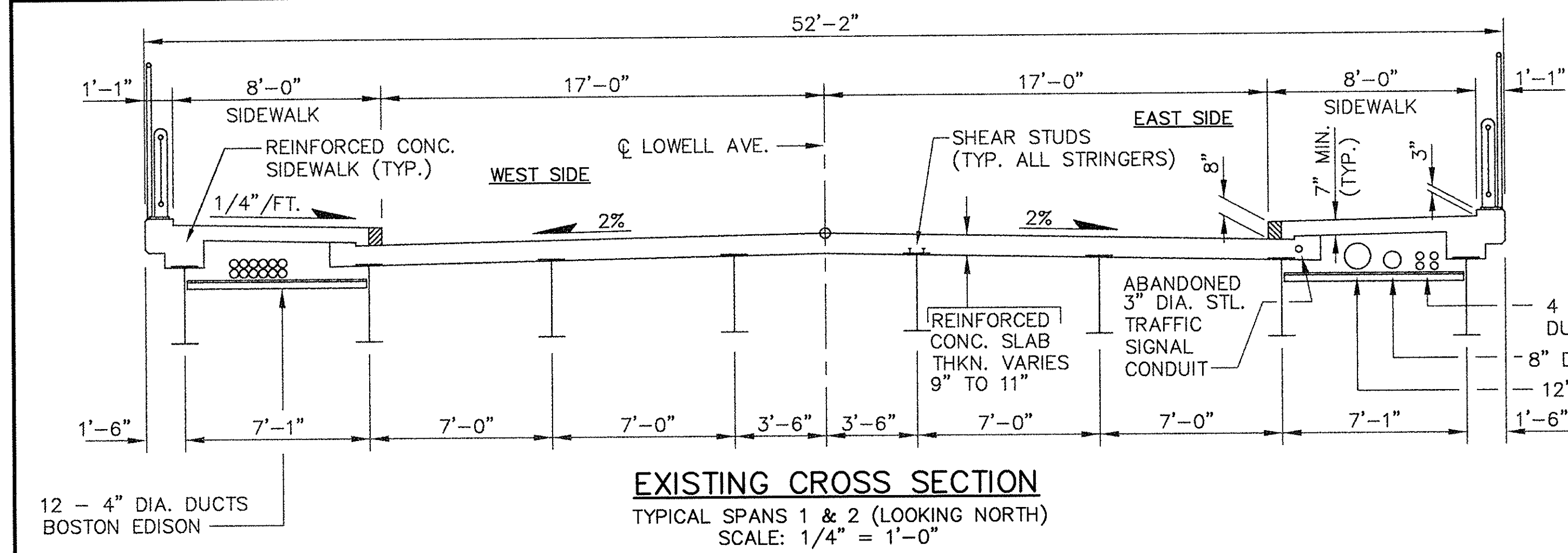
DECK SLAB SHALL BE POLYMER MODIFIED CONCRETE (PMC) (ITEM C6S-4)
 SIDEWALKS SHALL BE CLASS D CEMENT CONCRETE ($f'_c=4500$ PSI) (INCLUDED IN ITEM C6S-4)

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LOWELL AVENUE (STR. NO. S-22) CONCRETE PLACING SEQUENCE	
Scale: AS SHOWN	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schrafft Center 329 Main Street Boston, Massachusetts 02129	Sheet No. 48

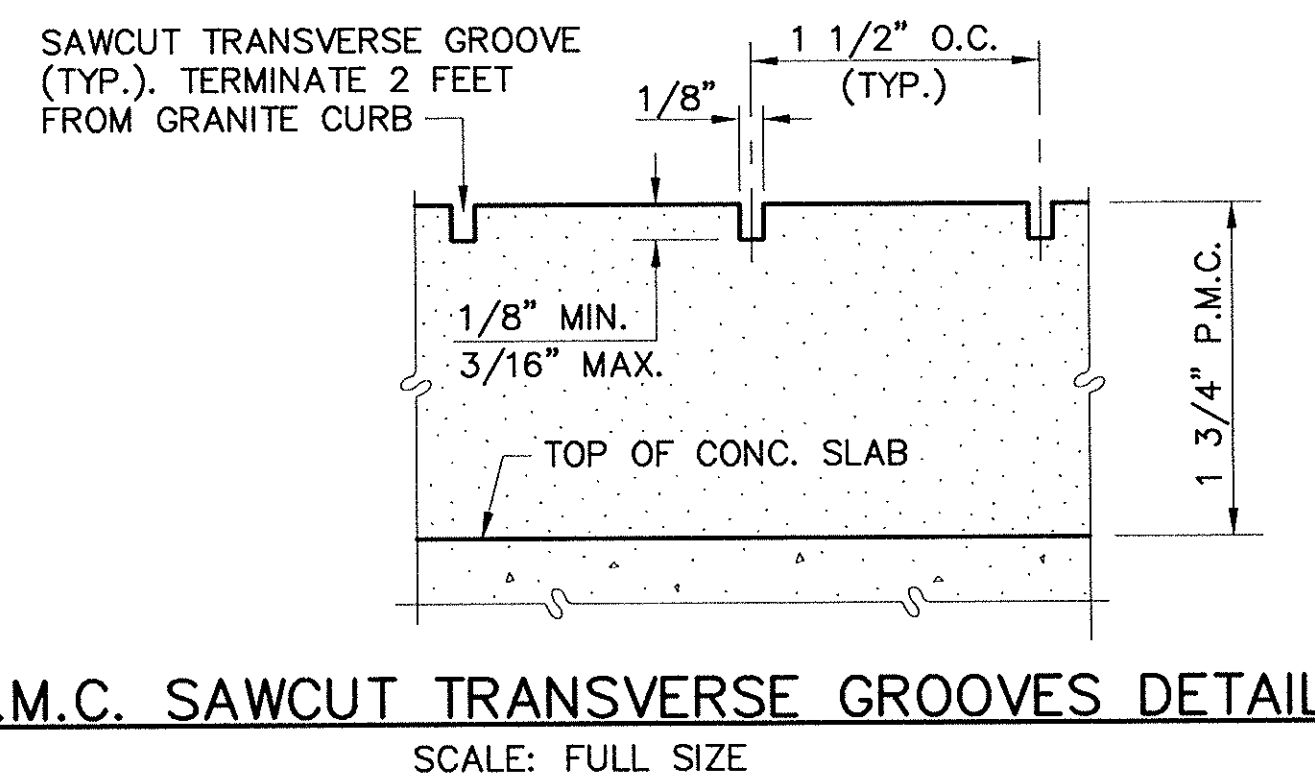
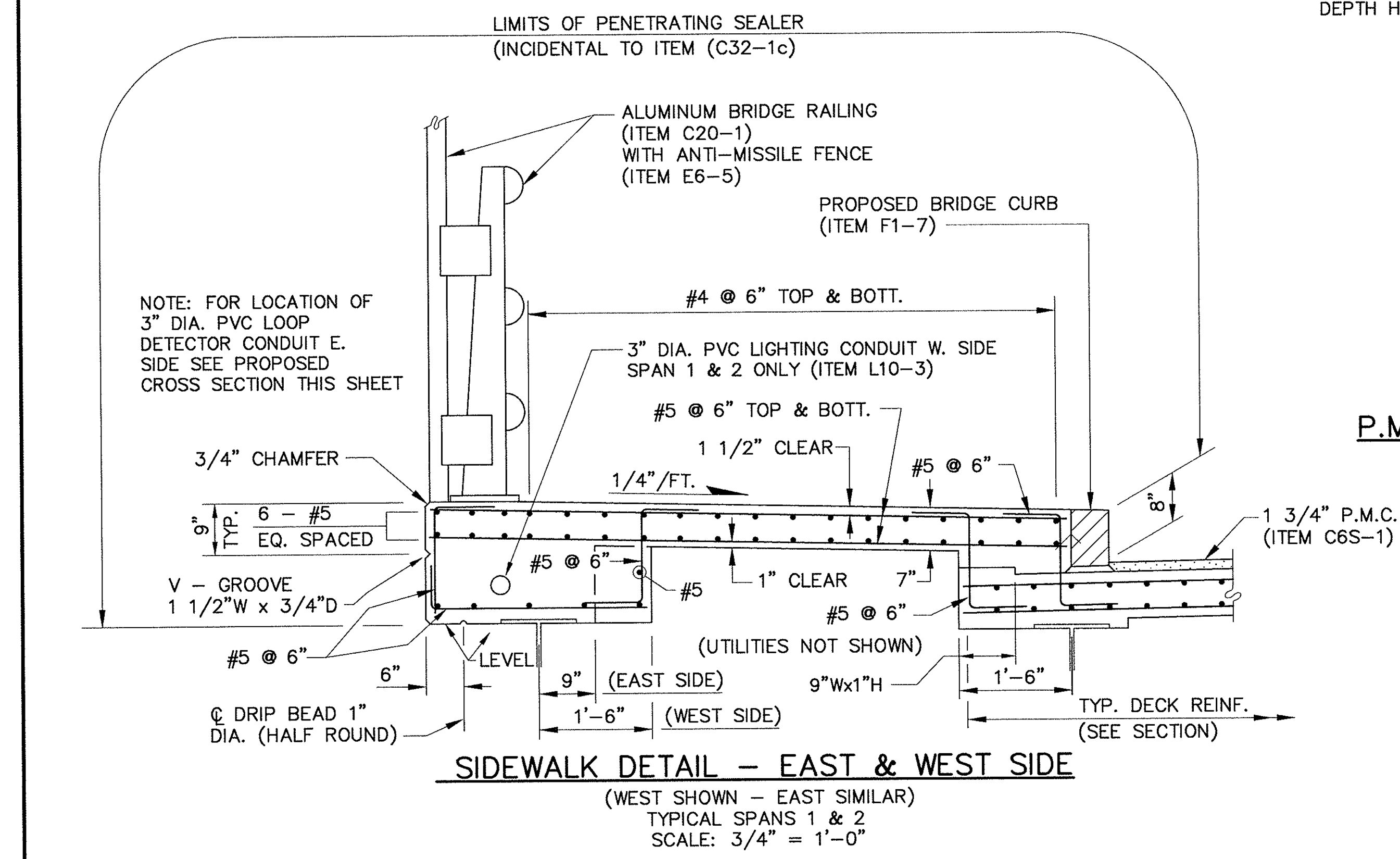
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



* FOR LOCATION OF TOP OF FORM ELEVATIONS SEE DETAILS "A" AND "C"

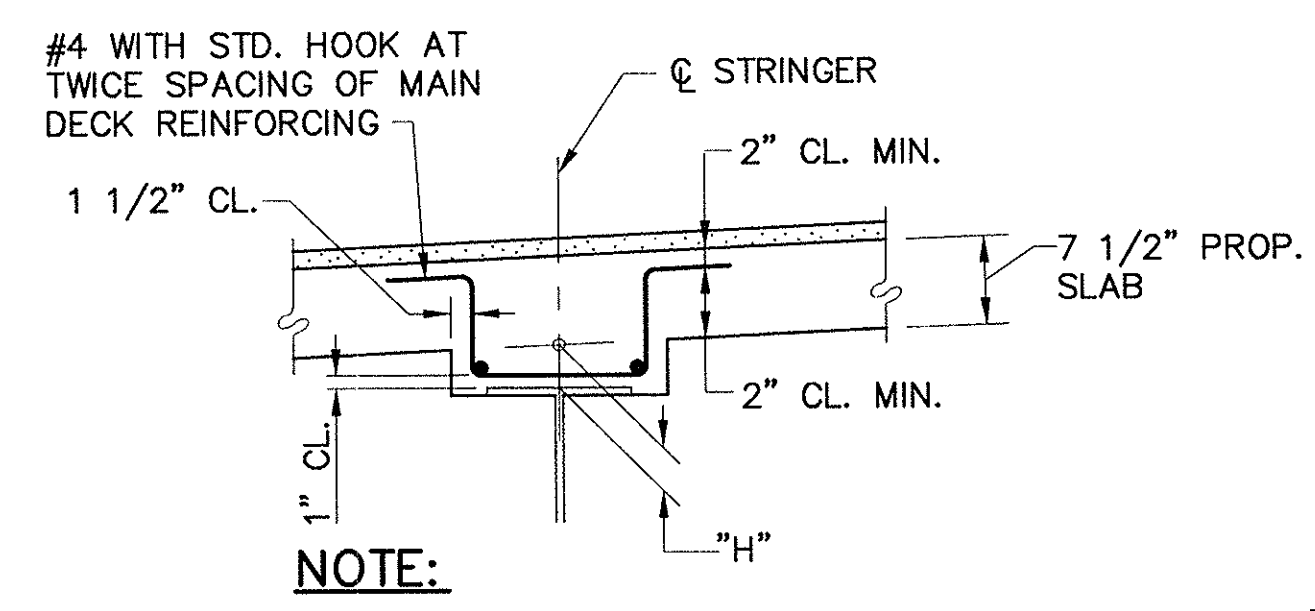
* HAUNCH DEPTH "H" (INCHES) FOR SETTING TOP OF FORMS FOR DECK SLAB PRIOR TO PLACEMENT OF CONCRETE

BEAM NO.	INCREASING STATIONS								
	¢ BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	¢ BRG.
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									
11									
12									
13									
14									
15									
16									



NOTES (SPANS 1 & 2):

- ALL REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK AND SAFETY WALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
- TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
- CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG CENTERLINE STRINGERS PRIOR TO CONCRETE REMOVAL, AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED. SEE SPECIAL PROVISIONS C1-D.
- SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE ($f_c = 4500$ PSI).



NOTE:
1. THIS DETAIL APPLIES ONLY WHEN "H" IS GREATER THAN 3".

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	
		BY	G.T.S.	10/95	

AS BUILT

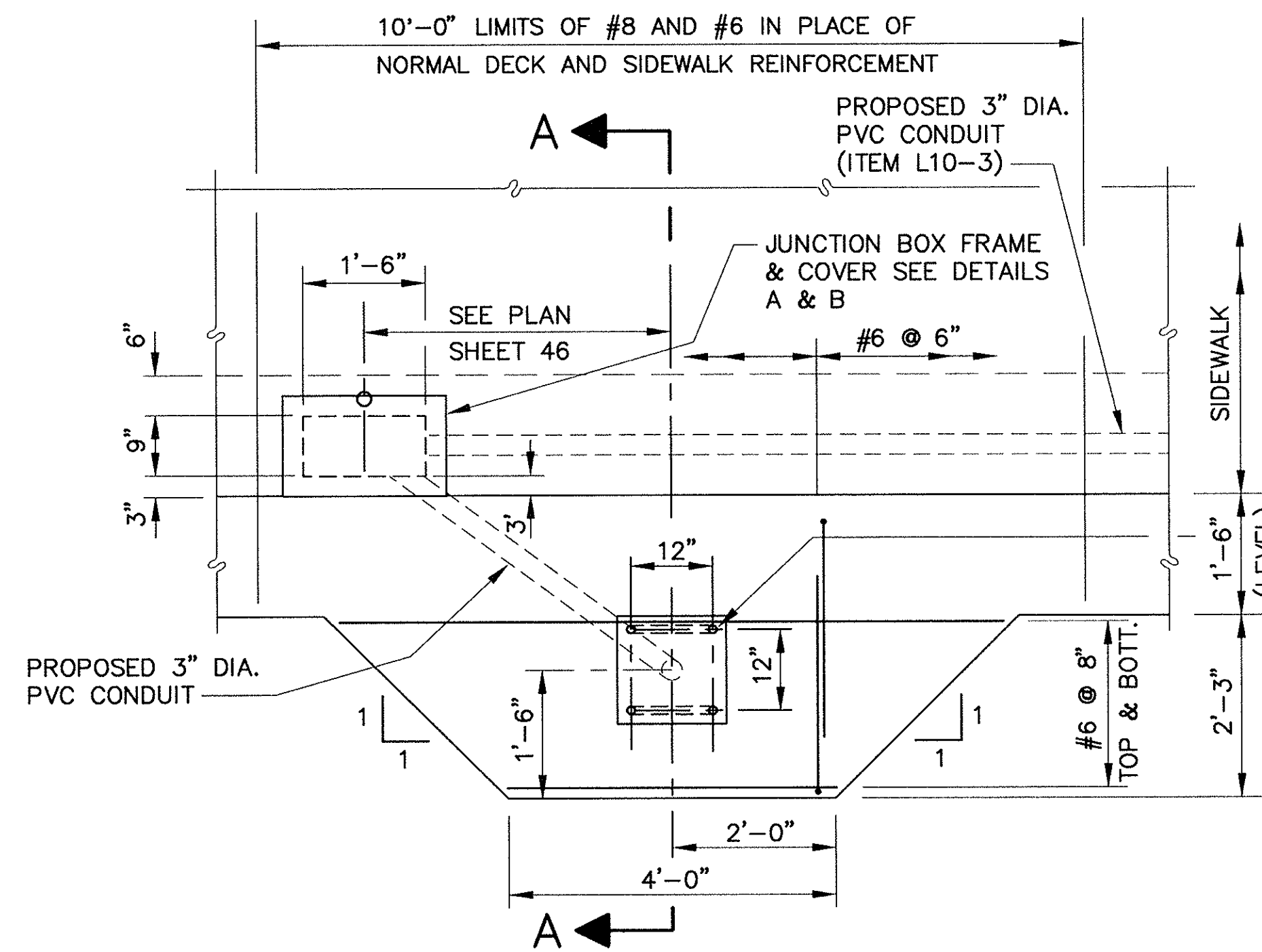
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SECTIONS AND DETAILS
SPANS 1 & 2

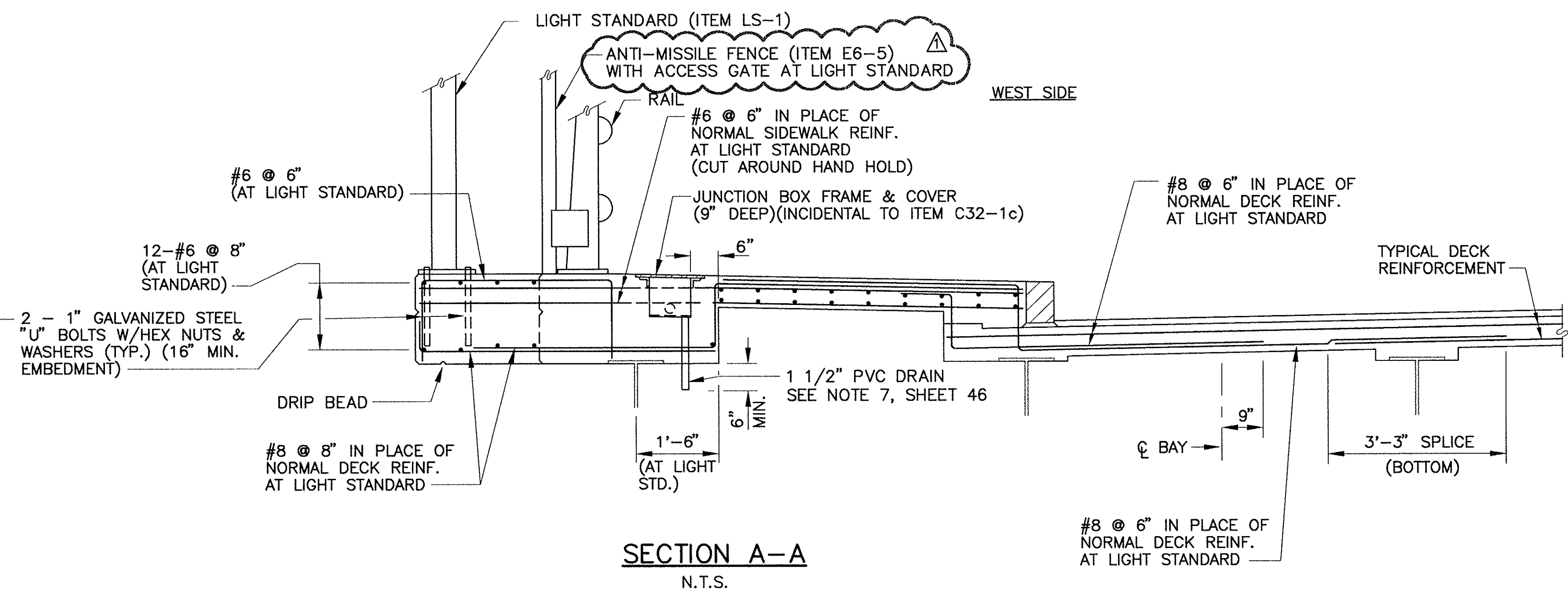
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 49

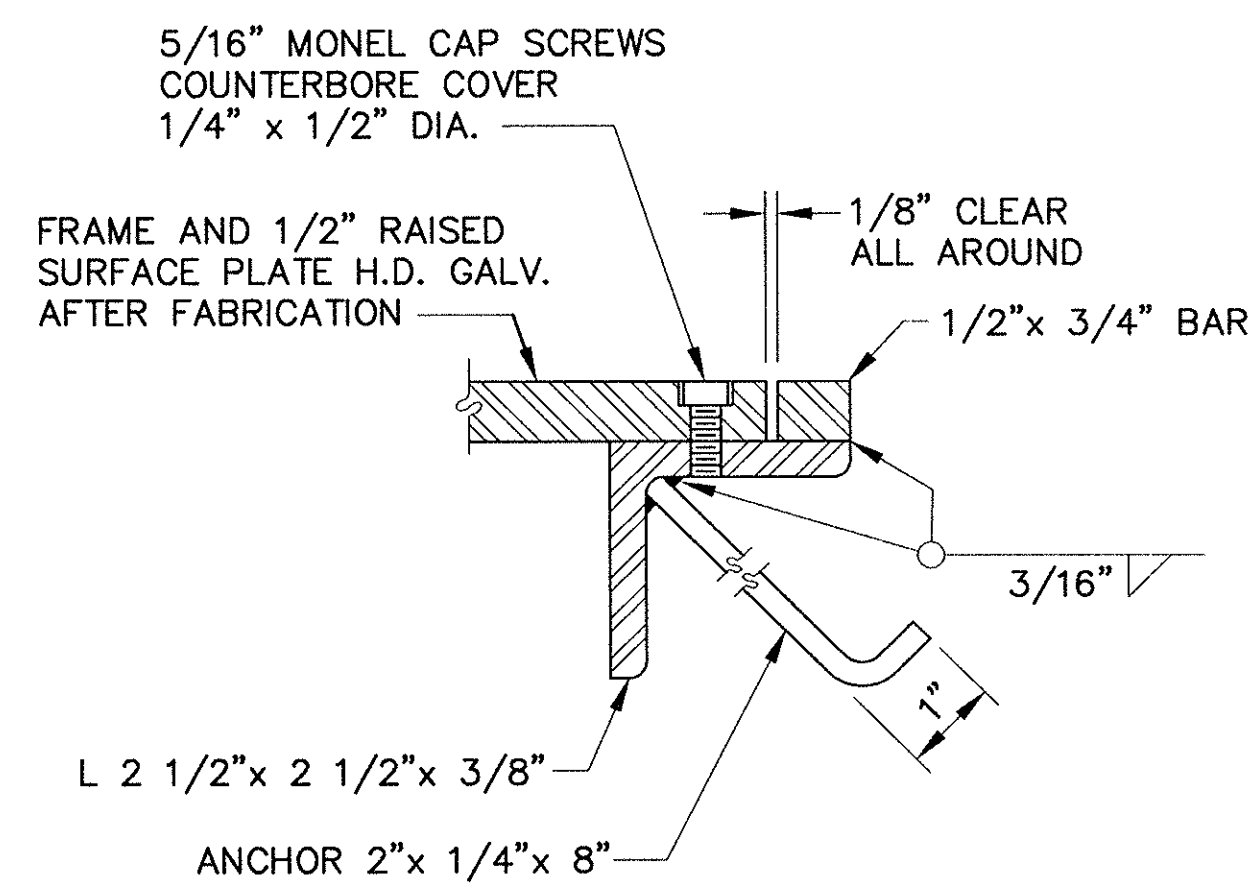
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



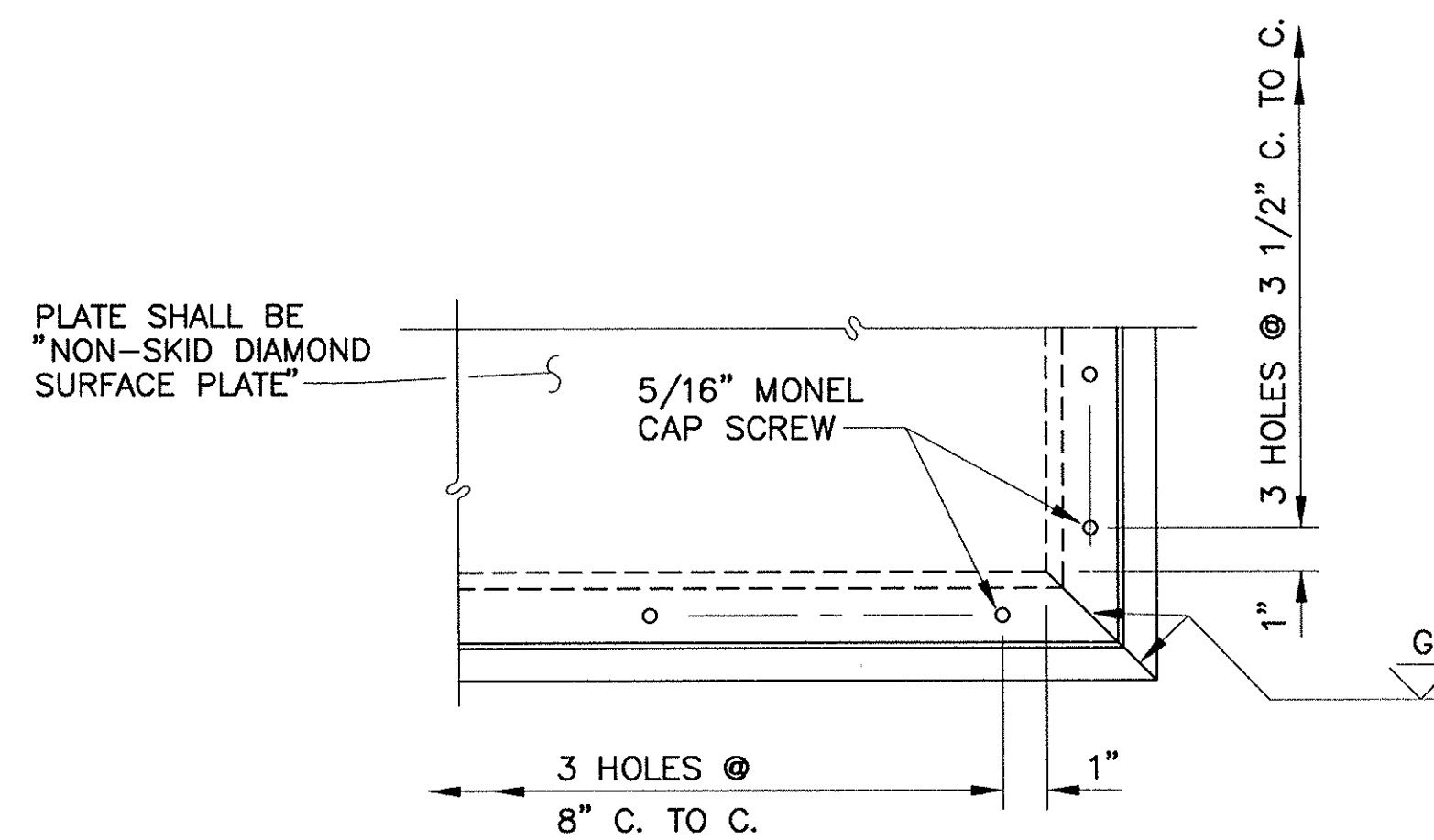
PLAN PROPOSED LIGHT POLE SUPPORT (WEST SIDE)
N.T.S.



SECTION A-A
N.T.S.



DETAIL B
SCALE: HALF SIZE



DETAIL A
SCALE: 3" = 1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
				DESIGNED:	T.A.Z. 12/93
				DRAWN:	T.L. 12/93
				CHECKED:	L.M.B. 12/93
				BY	G.T.S. 10/95

AS BUILT

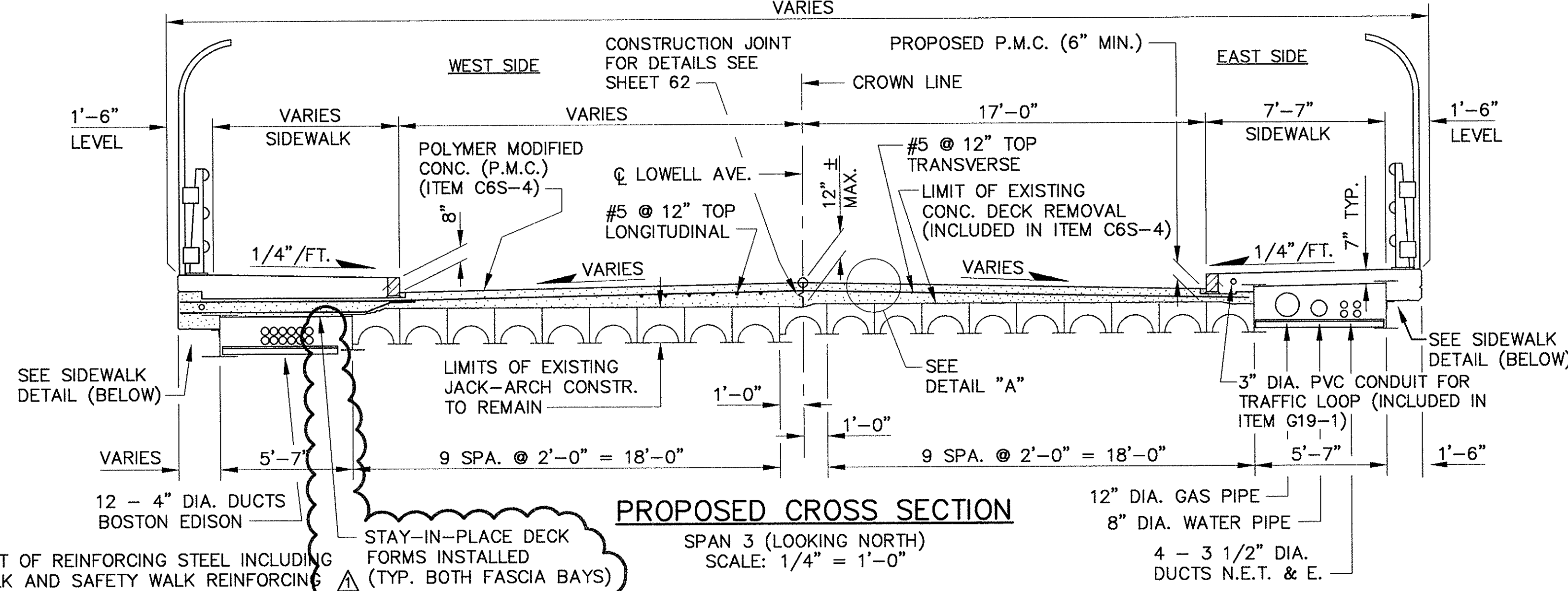
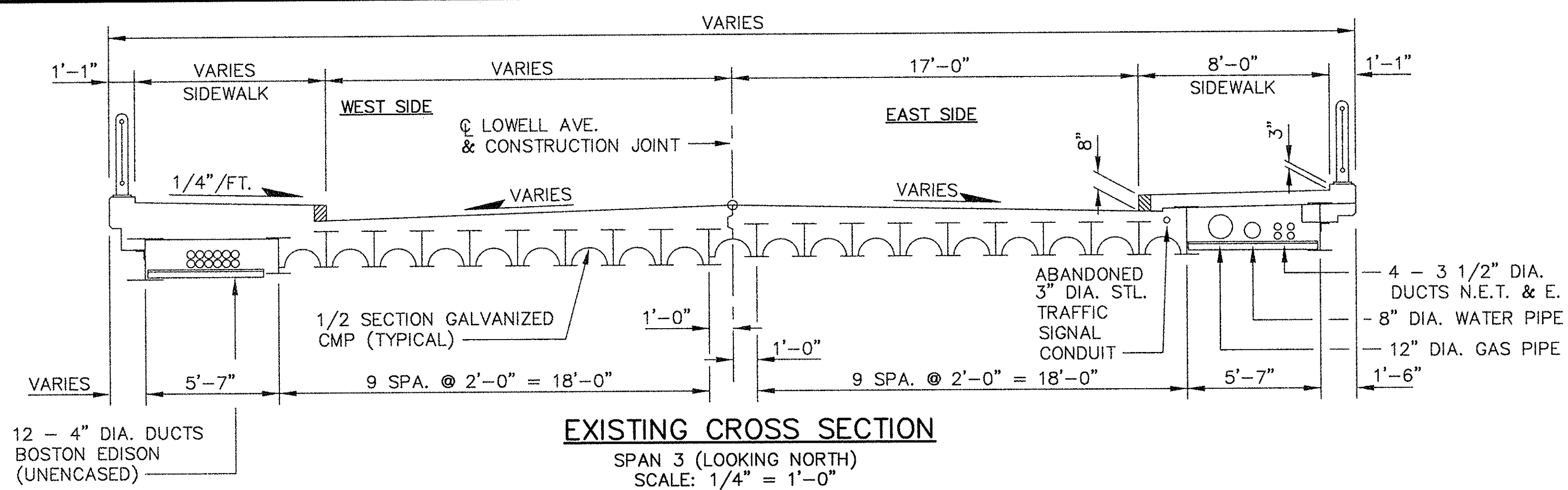
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
DECK DETAILS AT LIGHT POLE SPAN 2

Scale: AS SHOWN Contract No. 521-024

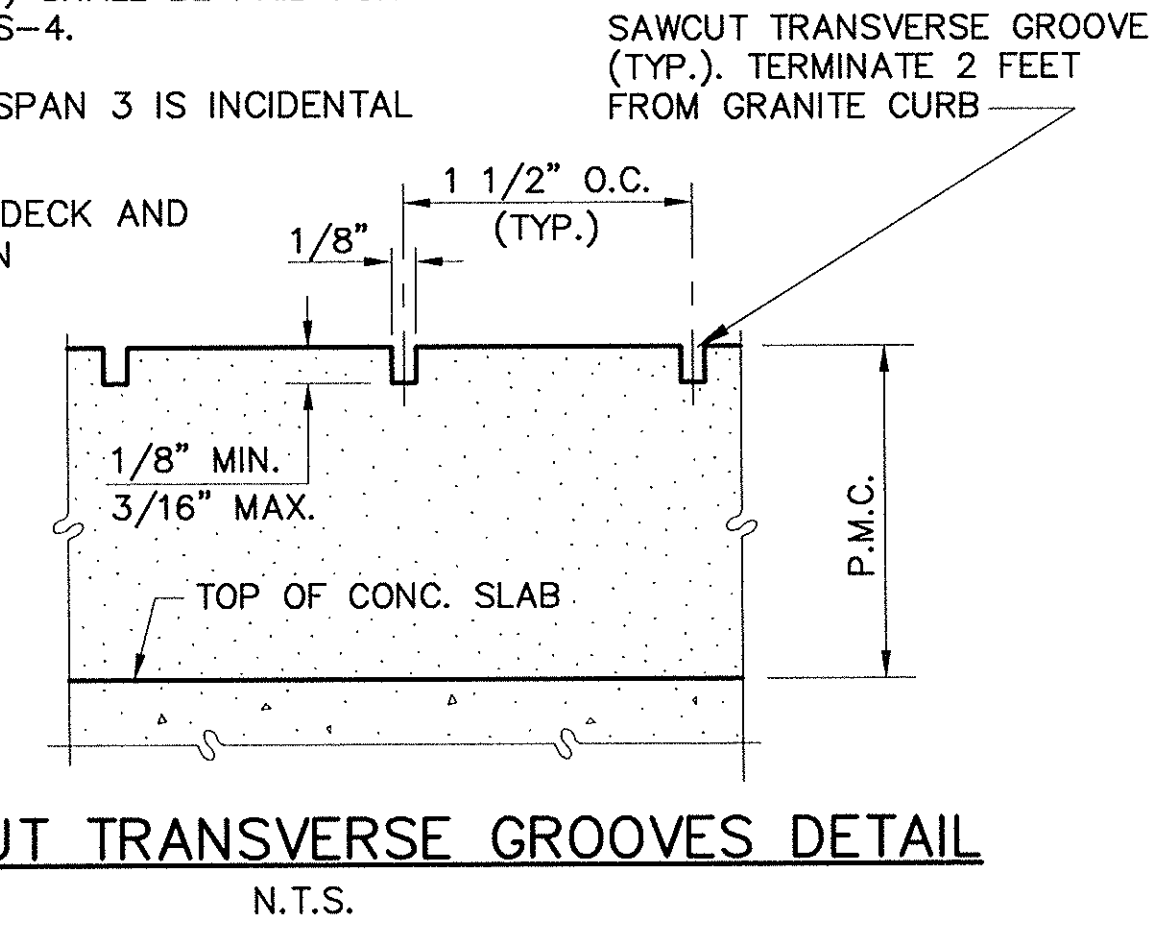
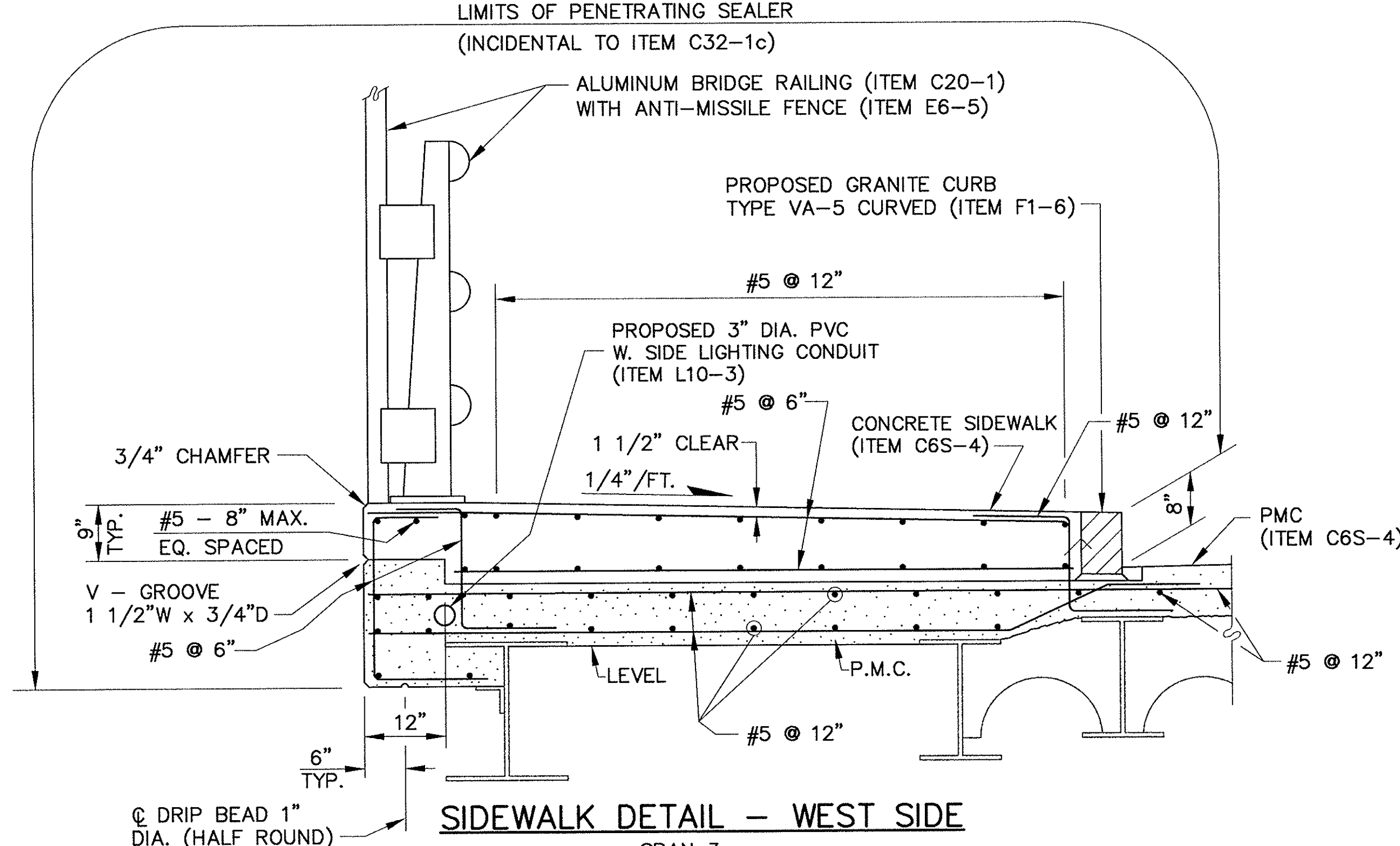
EDWARDS AND KELCEY, INC. Sheet No. 50
The Schwitt Center
 229 Main Street
 Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



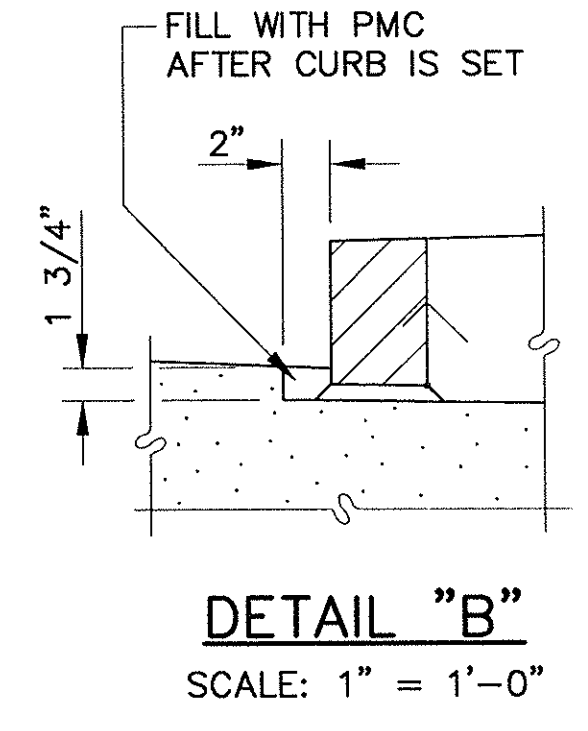
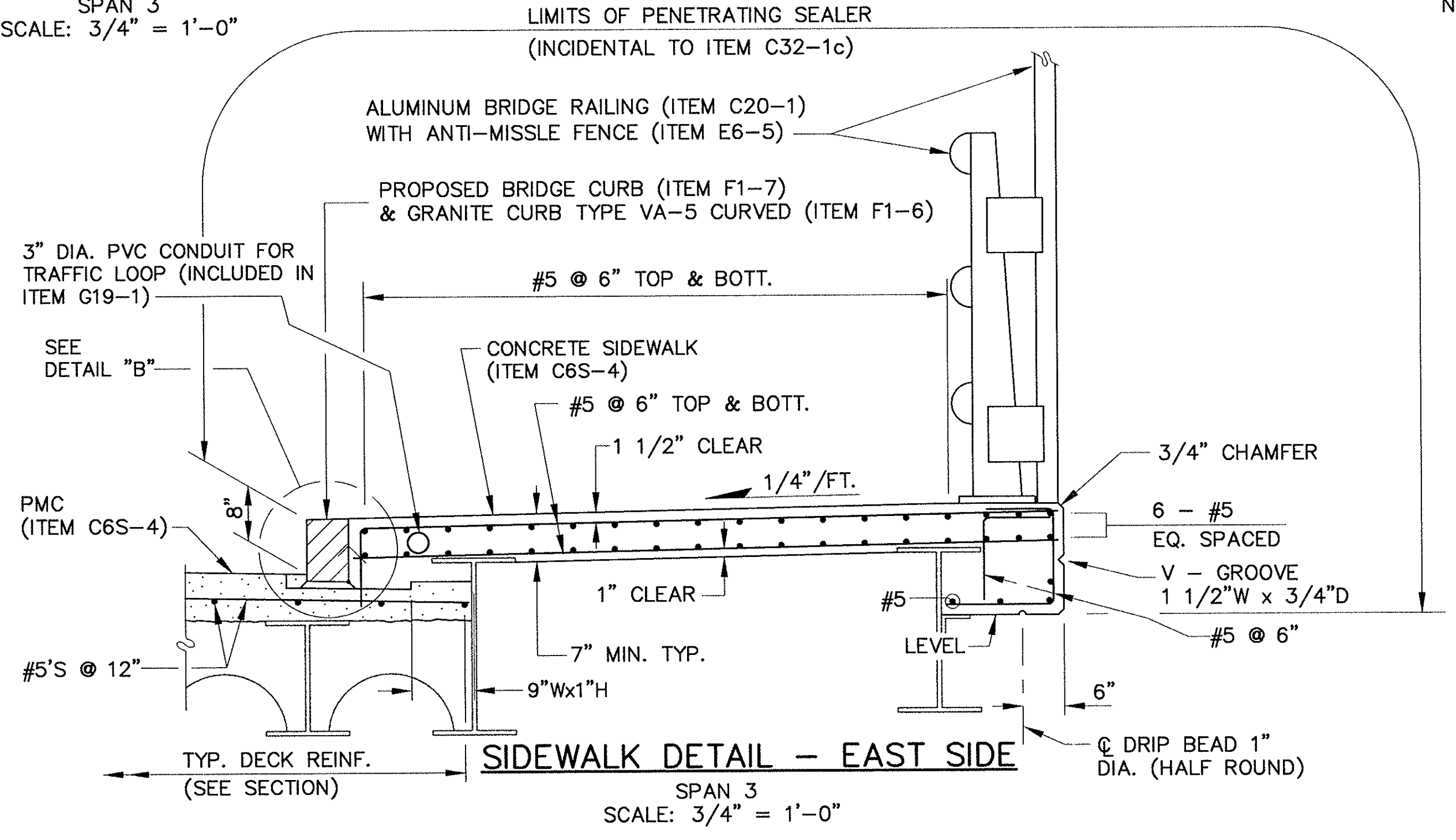
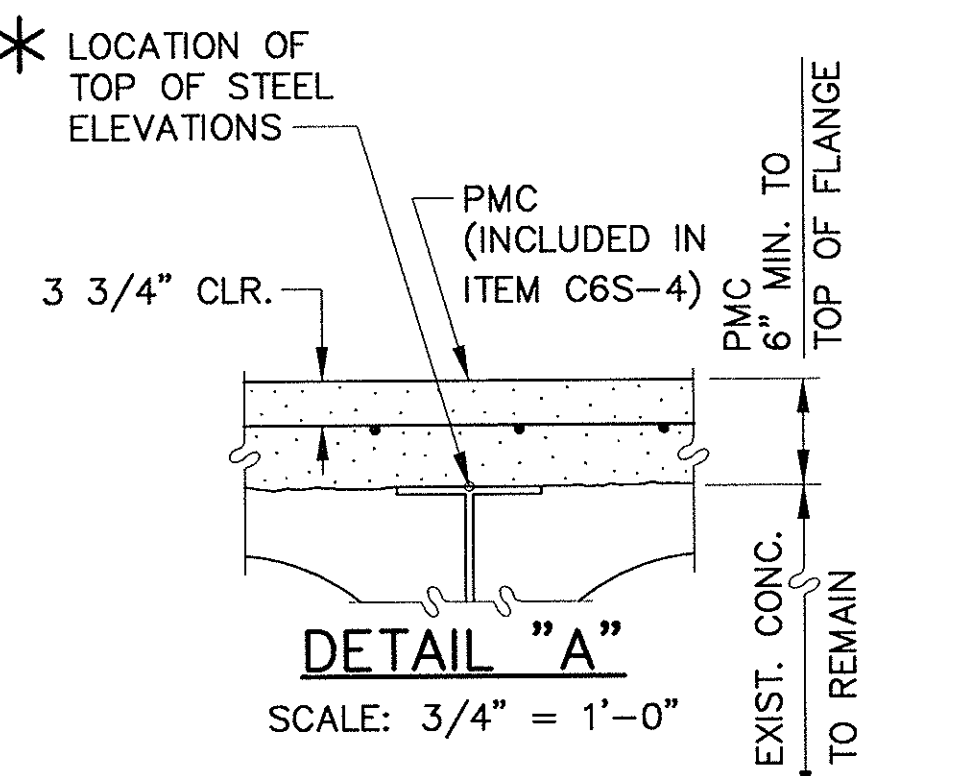
NOTES:

1. THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK AND SAFETY WALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
2. TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
3. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
4. SIDEWALK CONCRETE TO BE CLASS D CEMENT CONCRETE ($f'_c = 4500$ PSI) INCLUDED IN ITEM C6S-4.
5. POLYMER MODIFIED CONCRETE (PMC) SHALL BE PAID FOR AT A LUMP SUM PRICE IN ITEM C6S-4.
6. STEEL BAR REINFORCEMENT FOR SPAN 3 IS INCIDENTAL TO ITEM C6S-4.
7. DEMOLITION OF EXIST. CONCRETE DECK AND SIDEWALKS SHALL BE INCLUDED IN ITEM C6S-4.



*** ELEVATION OF TOP OF STEEL PRIOR TO PLACEMENT OF CONCRETE**

BEAM NO.	INCREASING STATIONS							
	Q BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT. Q BRG.
17								
18								
19								
20								
21								
22								
23								
24								
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50								



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.

AS BUILT

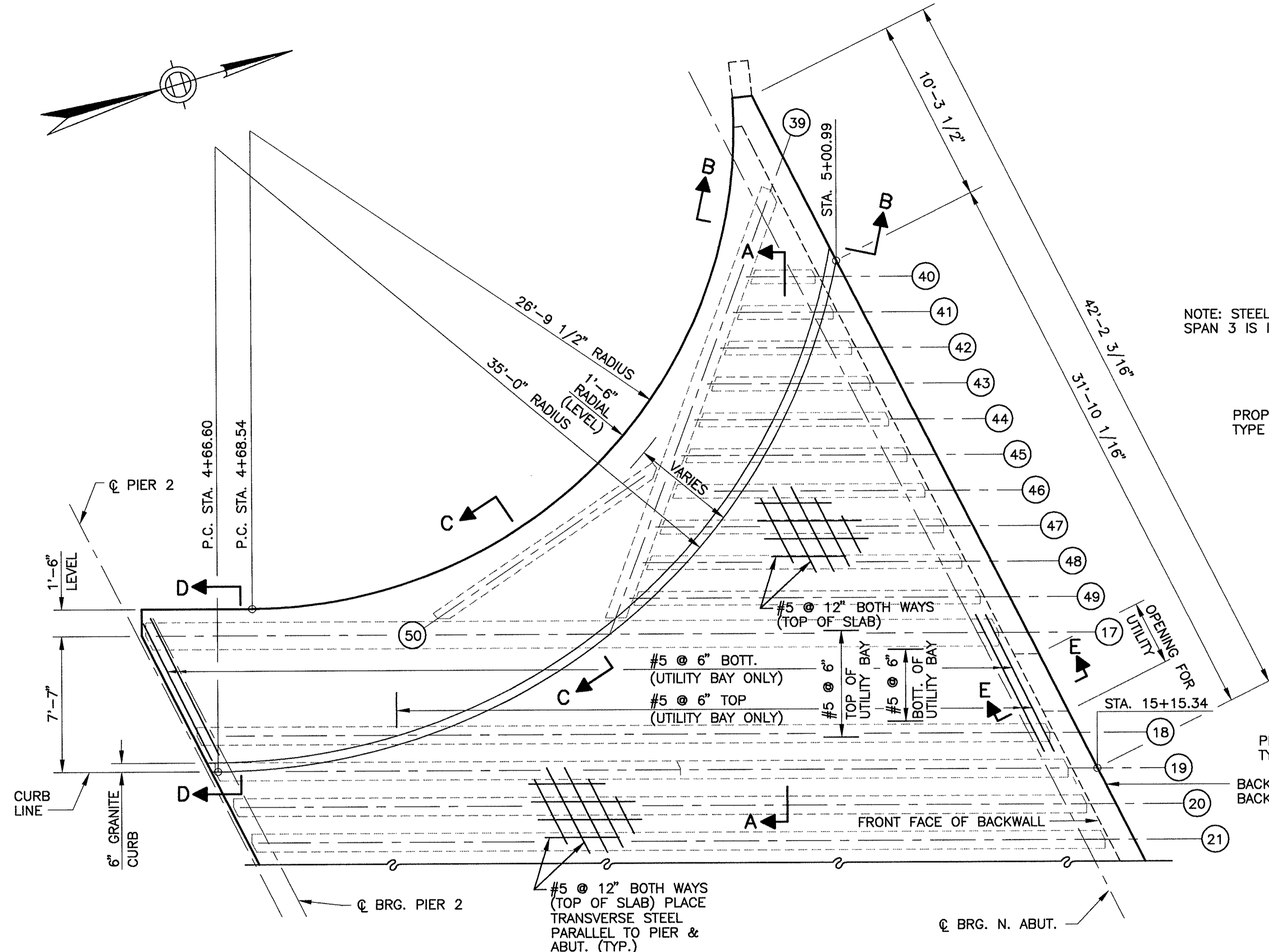
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SECTIONS AND DETAILS - SPAN 3

Scale: AS SHOWN Contract No. 521-024

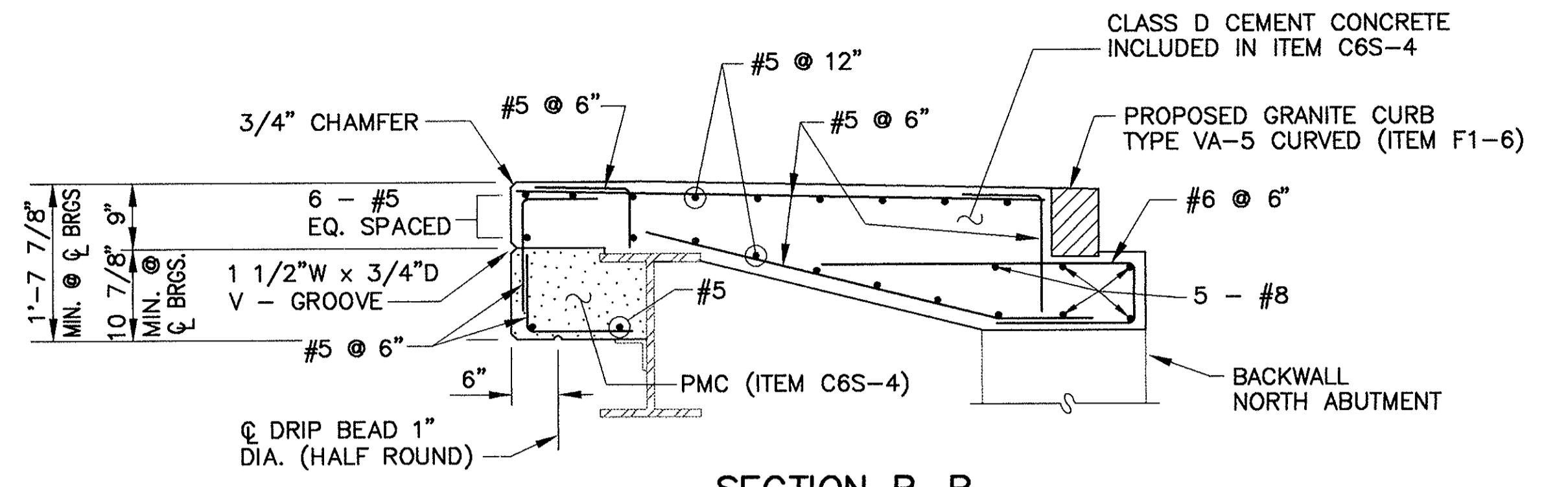
EDWARDS AND KELCEY, INC. Sheet No. 51

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



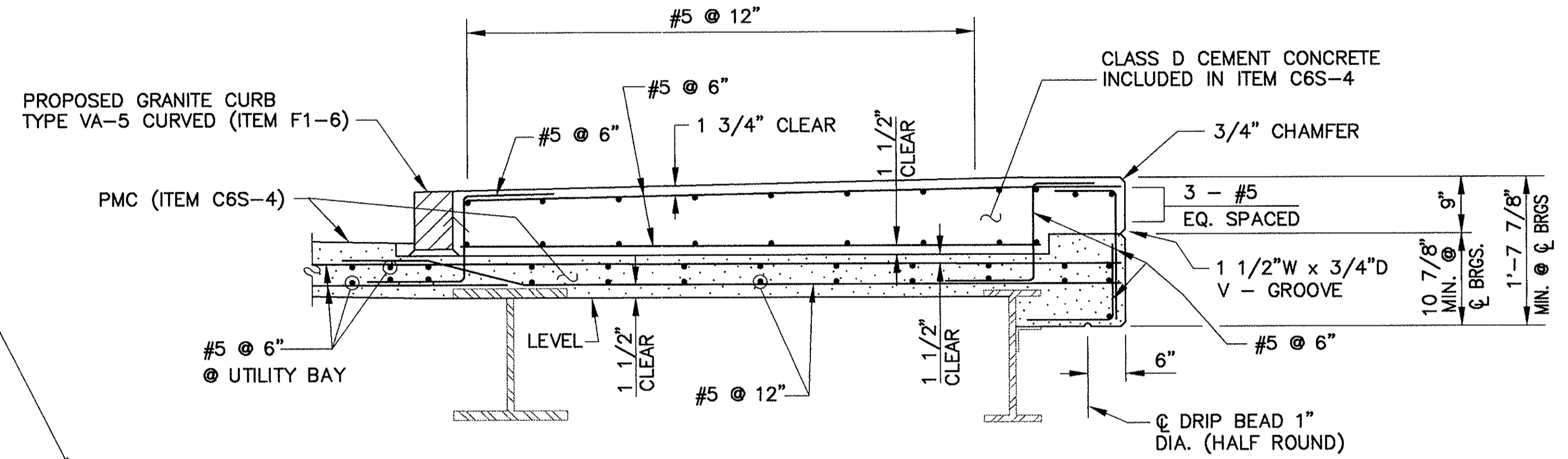
DECK PLAN AT NORTHWEST CORNER

SPAN 3
SCALE 1/4" = 1'-0"

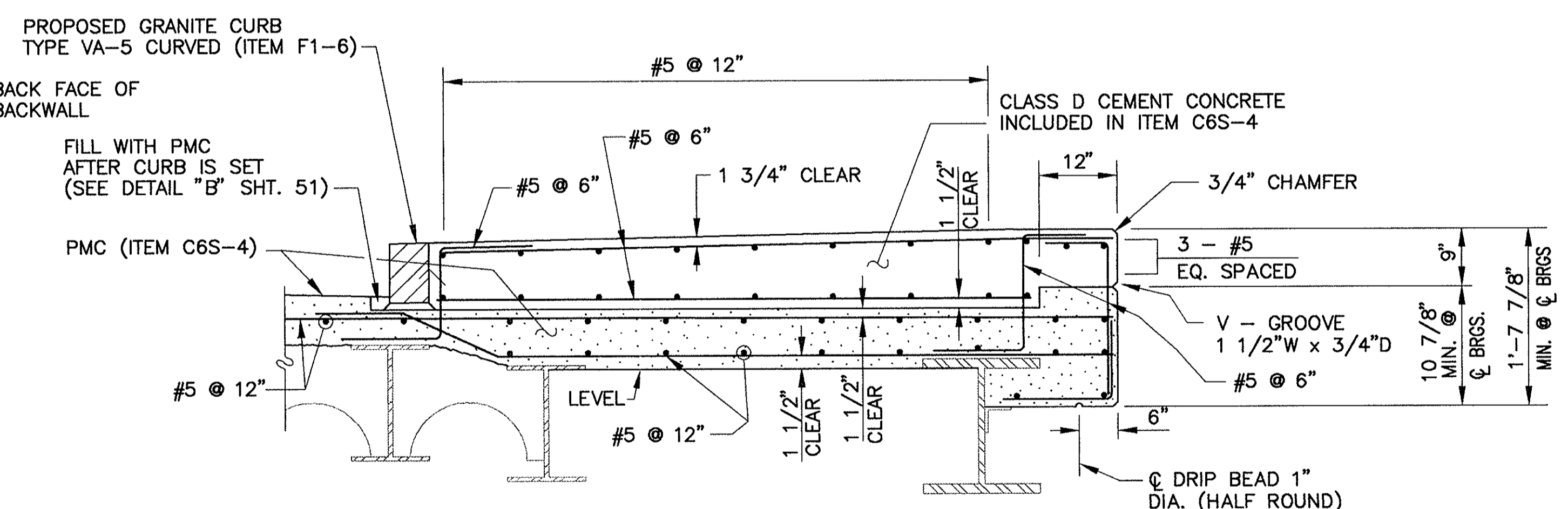


SECTION B-B
SCALE: 3/4" = 1'-0"

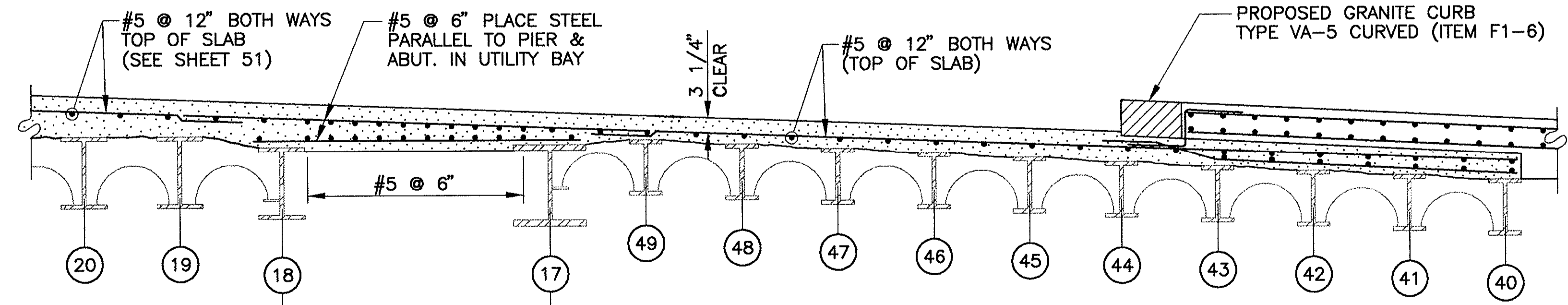
NOTE: STEEL BAR REINFORCEMENT FOR SPAN 3 IS INCIDENTAL TO ITEM C6S-4.



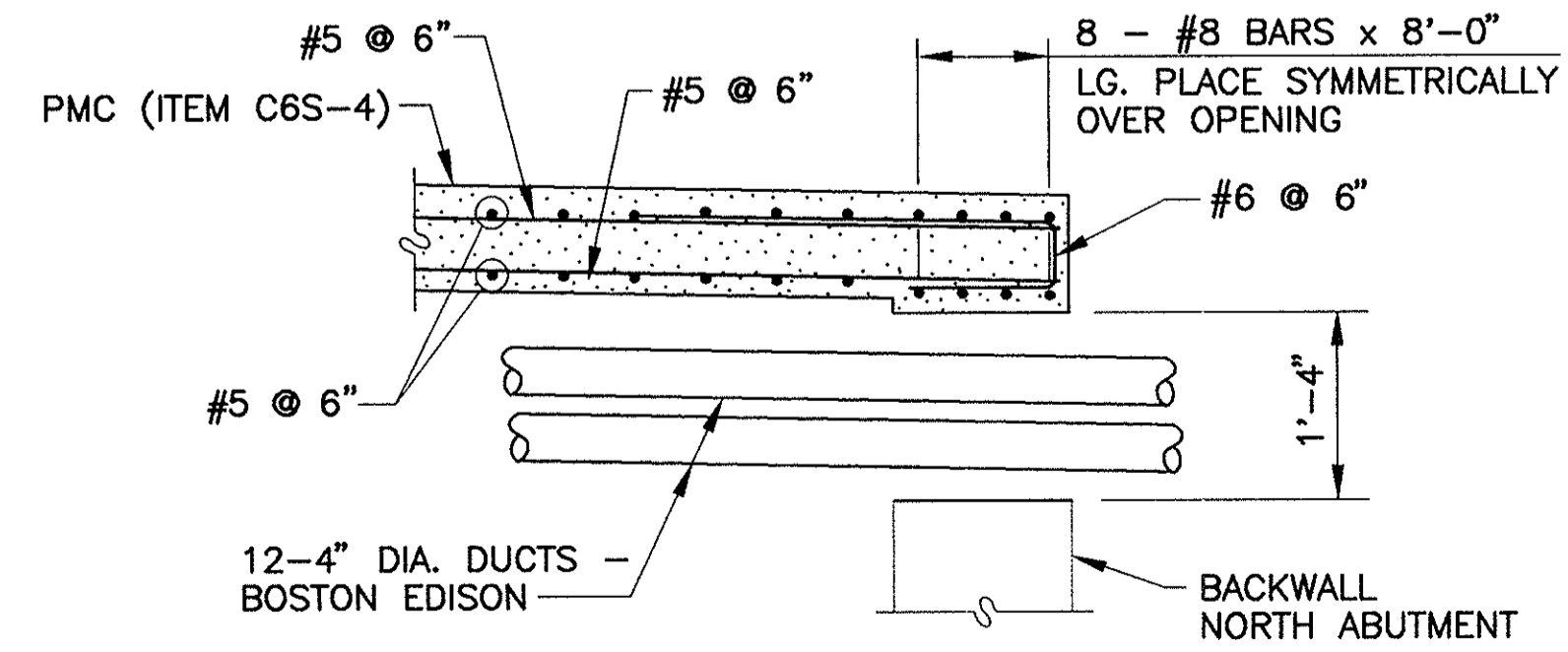
SECTION C-C
SCALE: 3/4" = 1'-0"



SECTION D-D
SCALE: 3/4" = 1'-0"



SECTION A-A
SCALE 1/2" = 1'-0"



SECTION E-E
SCALE: 3/4" = 1'-0"

AS BUILT

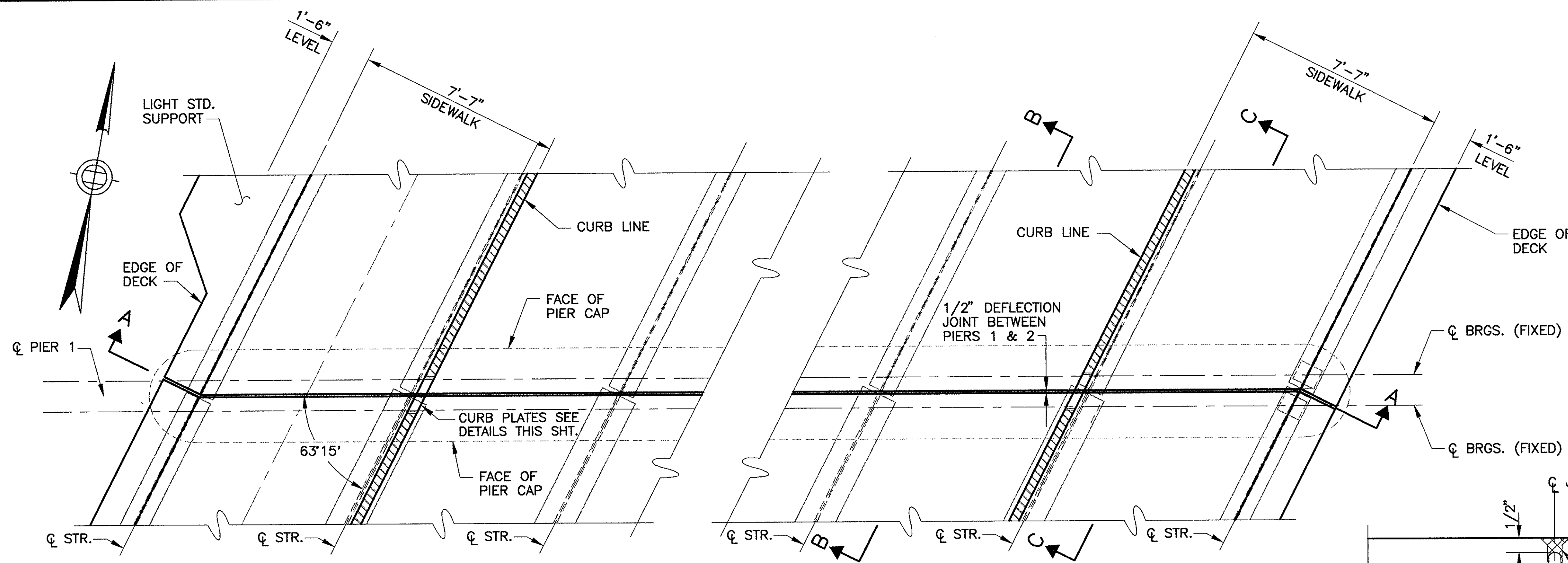
NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
 ADDITIONAL DECK DETAILS - SPAN 3

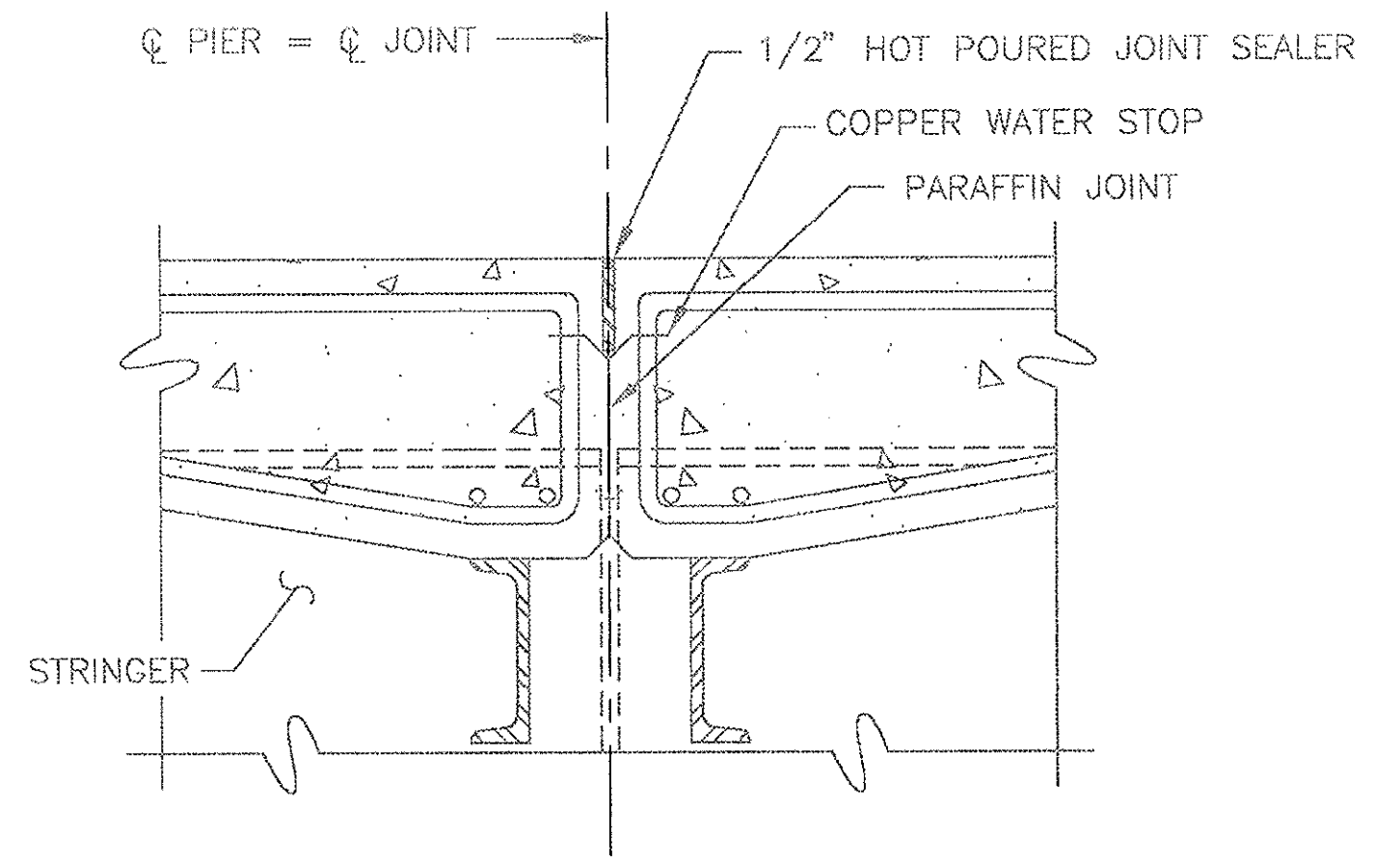
Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 52

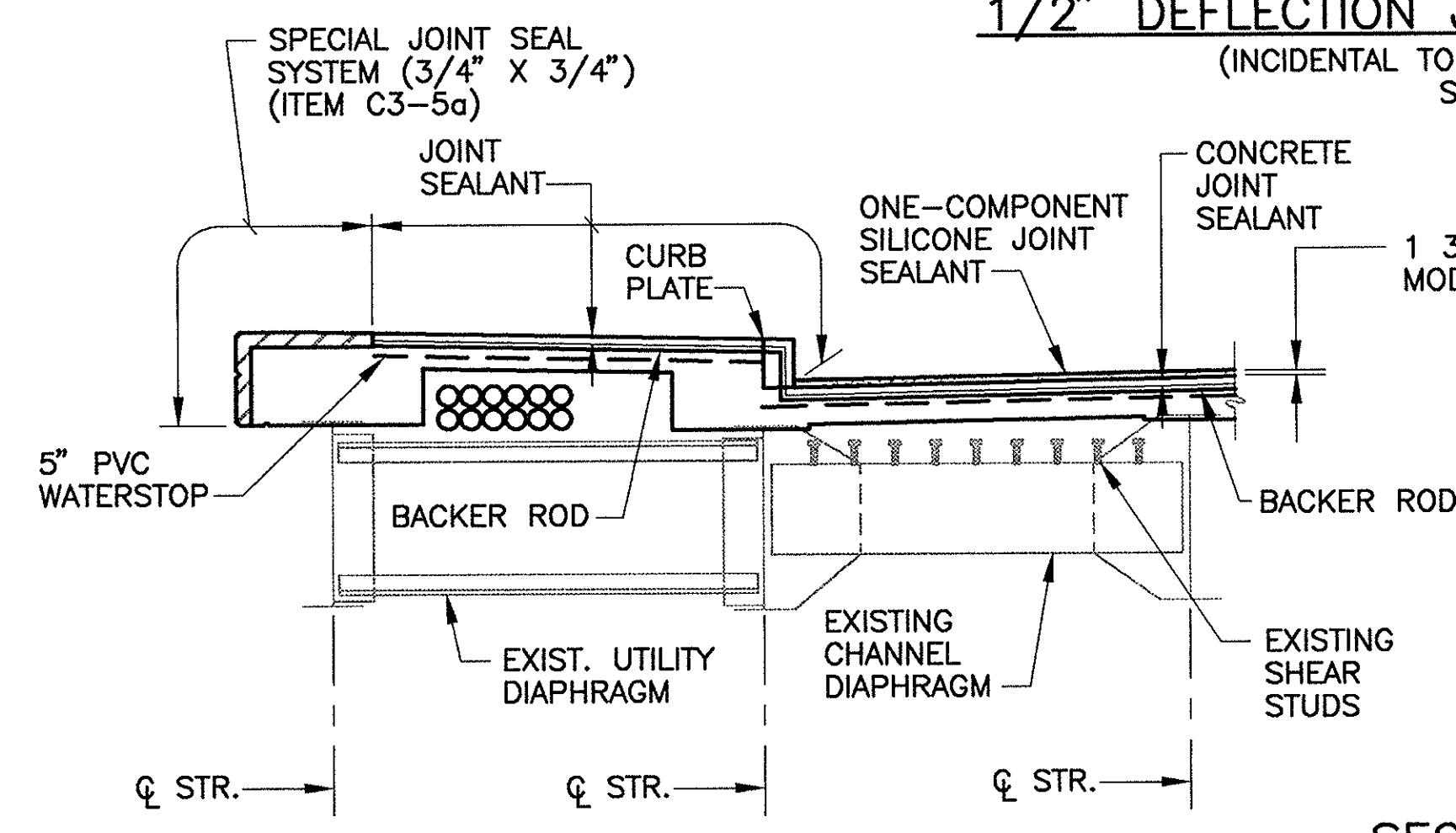
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



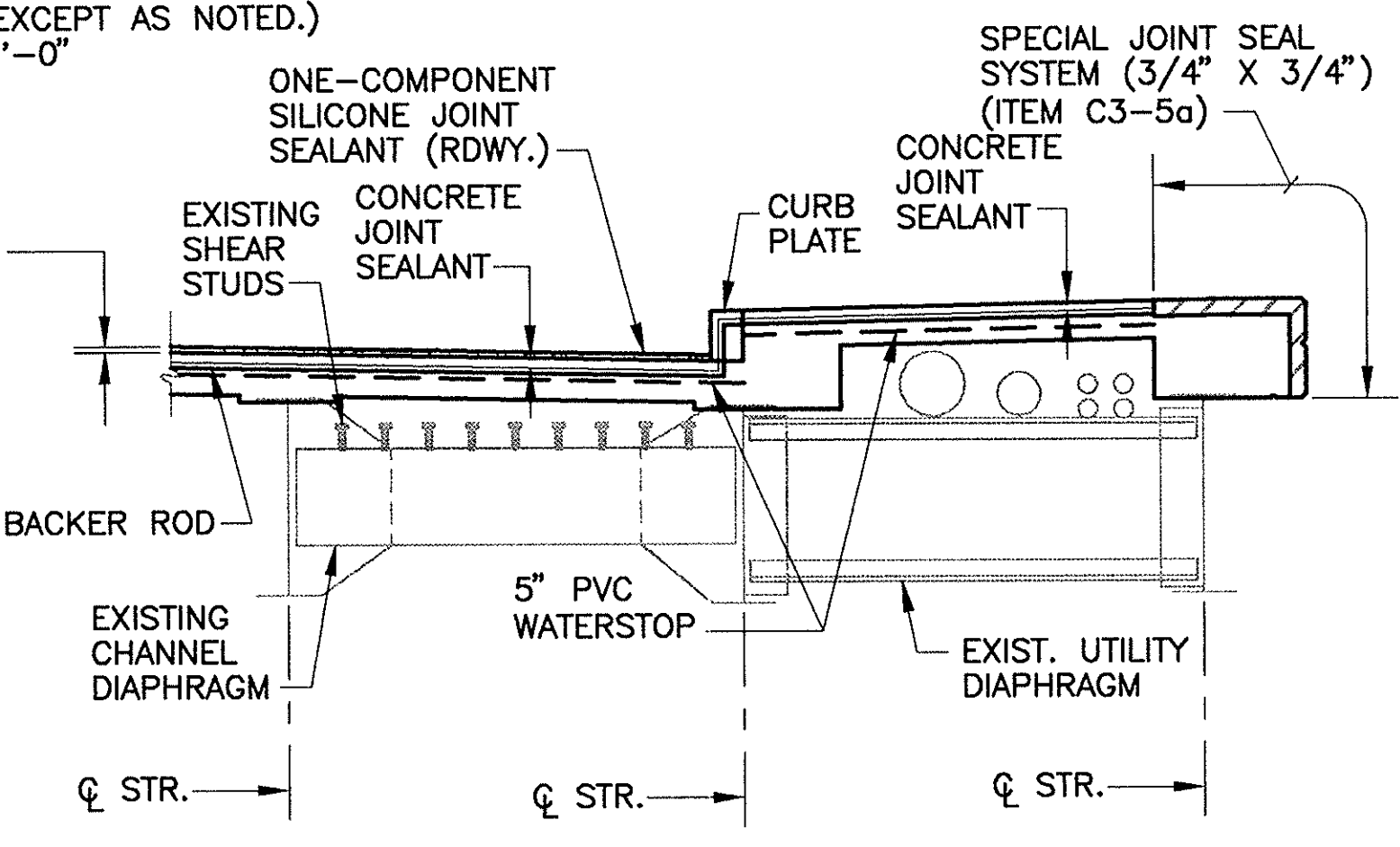
PLAN
1/2" DEFLECTION JOINT BETWEEN SPANS 1 & 2
 (INCIDENTAL TO ITEM C32-1c, EXCEPT AS NOTED.)
 SCALE: 3/8" = 1'-0"



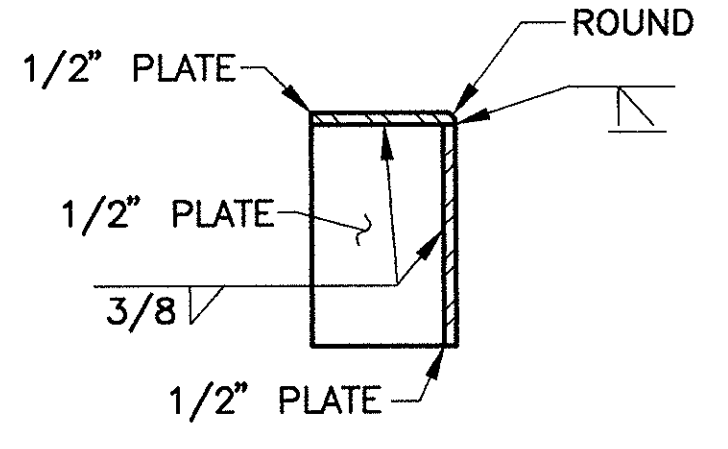
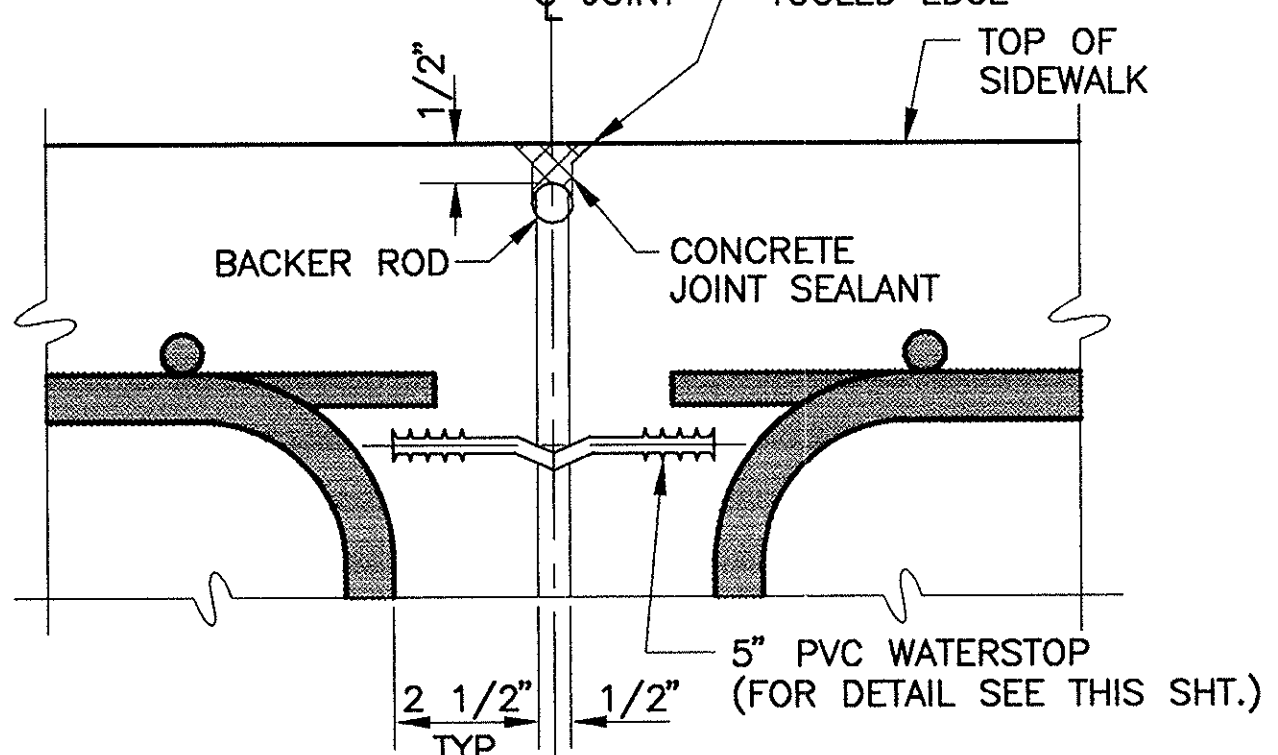
EXISTING CLOSED DECK JOINT @ PIER 1
 SCALE: 1 1/2" = 1'-0"



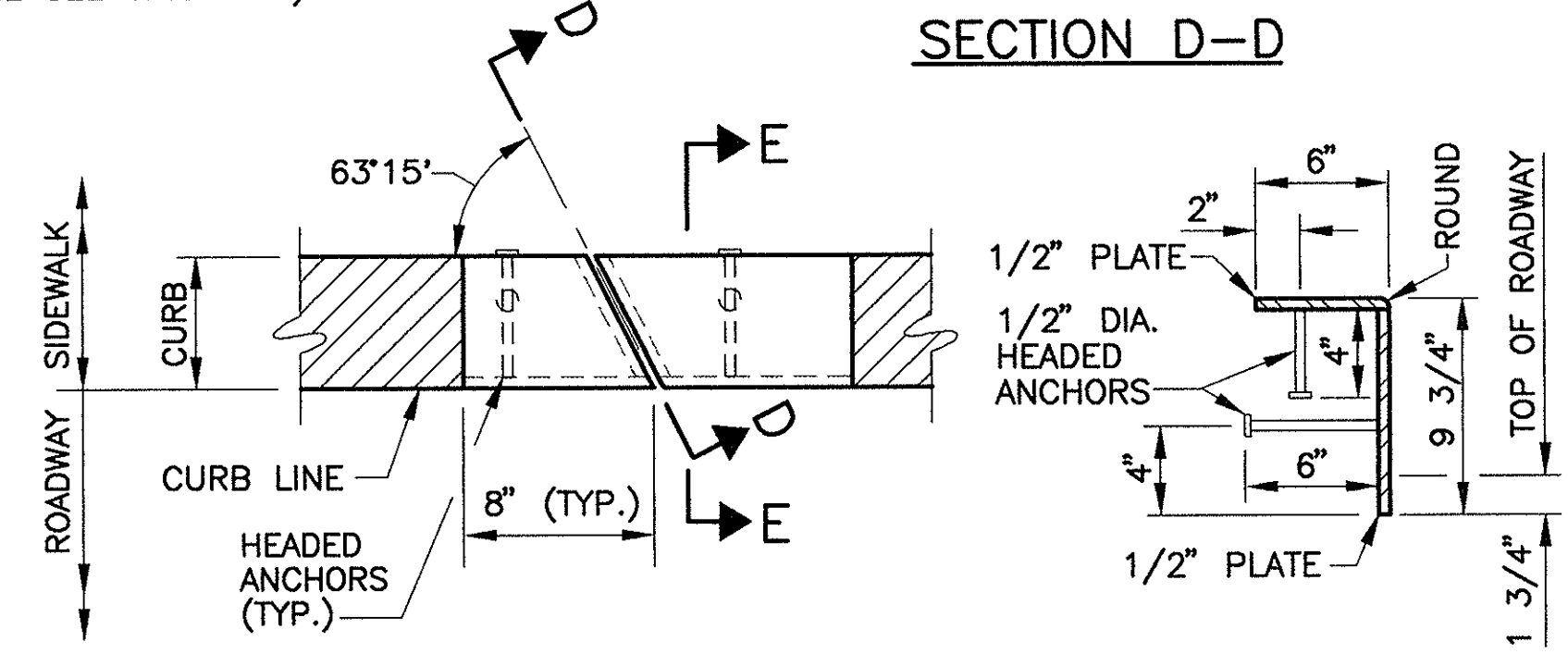
SECTION A-A
 SCALE: 3/8" = 1'-0"



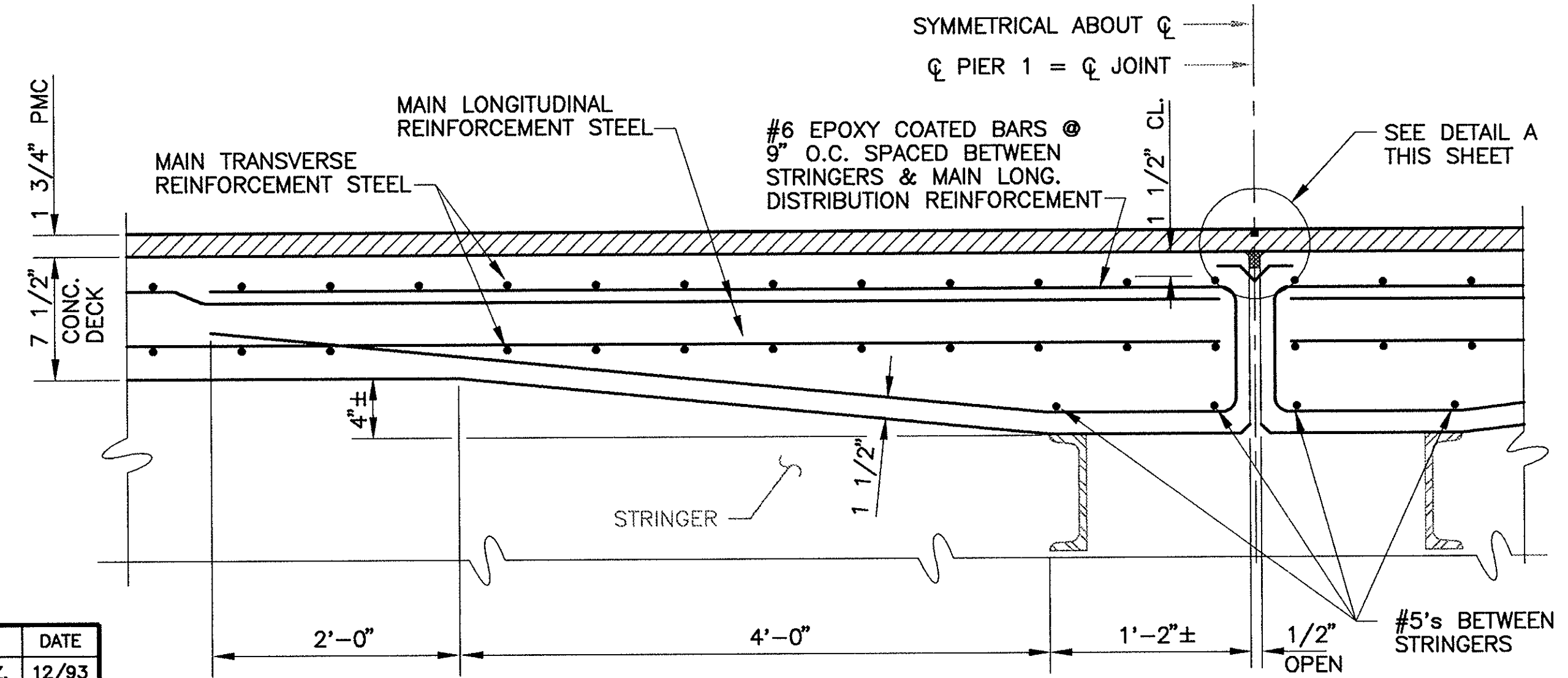
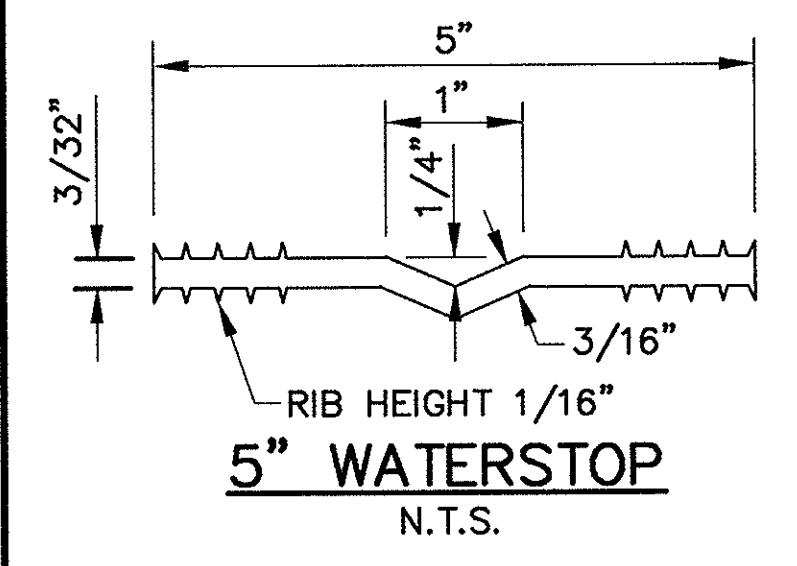
SECTION C-C
 NTS



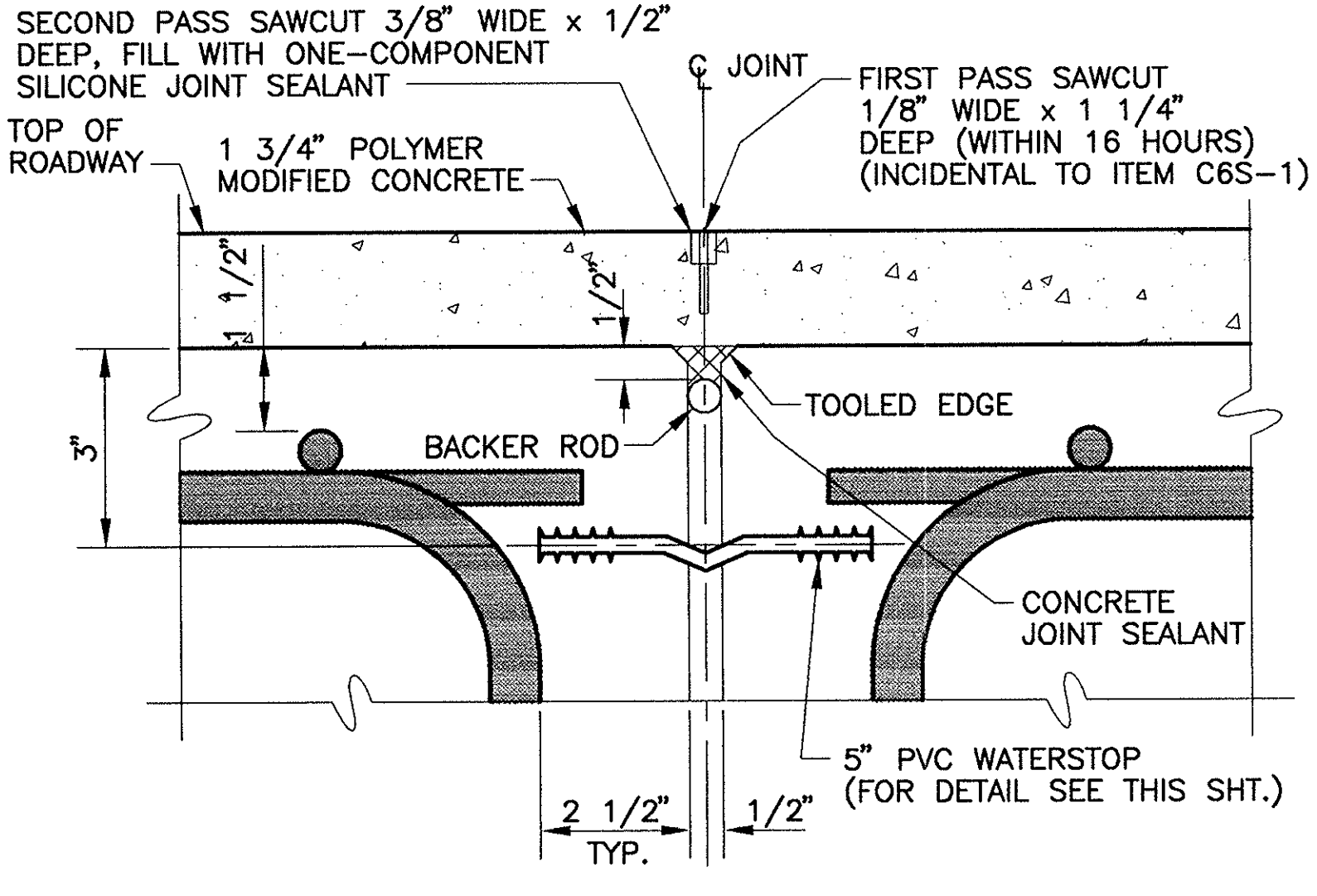
SECTION D-D



SECTION E-E
CURB PLATE DETAILS AT SIDEWALKS
 (INCIDENTAL TO ITEM C32-1c)
 SCALE: 1 1/2" = 1'-0"



SECTION B-B
 NTS



DETAIL A
 NTS

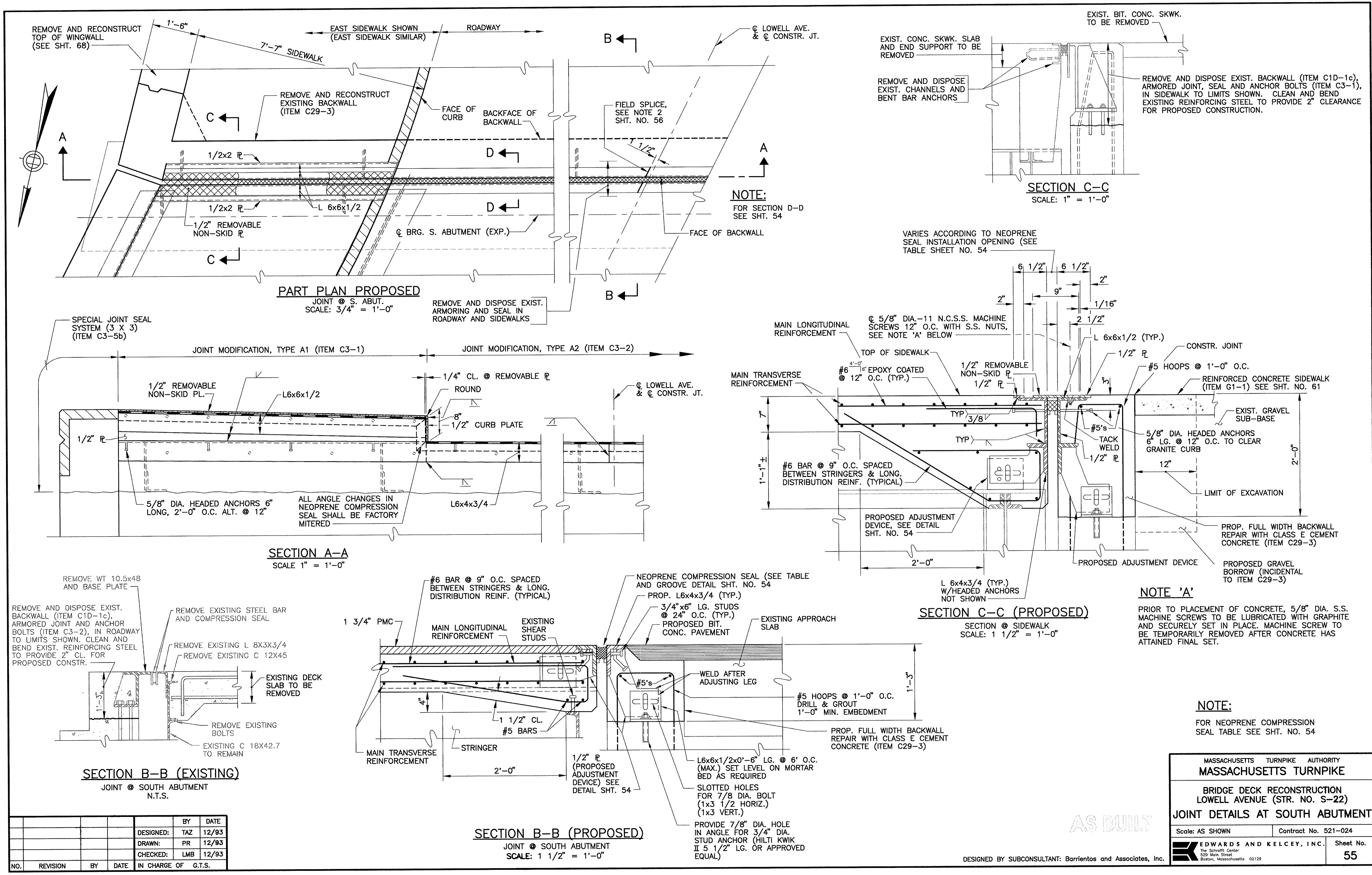
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
JOINT DETAILS AT PIER 1

Scale: AS SHOWN Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 53
The Schraft Center
 529 Main Street
 Boston, Massachusetts 02129

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	TAZ	12/93	
		DRAWN:	PR	12/93	
		CHECKED:	LMB	12/93	

PART PLAN PROPOSED
JOINT @ S. ABUT.
SCALE: 3/4" = 1'-0"

SECTION A-A
SCALE 1" = 1'-0"

SECTION B-B (EXISTING)
JOINT @ SOUTH ABUTMENT
N.T.S.

SECTION B-B (PROPOSED)
JOINT @ SOUTH ABUTMENT
SCALE: 1 1/2" = 1'-0"

SECTION C-C (PROPOSED)
SECTION @ SIDEWALK
SCALE: 1 1/2" = 1'-0"

SECTION C-C
SCALE: 1" = 1'-0"

NOTE 'A'

PRIOR TO PLACEMENT OF CONCRETE, 5/8" DIA. S.S. MACHINE SCREWS TO BE LUBRICATED WITH GRAPHITE AND SECURELY SET IN PLACE. MACHINE SCREW TO BE TEMPORARILY REMOVED AFTER CONCRETE HAS ATTAINED FINAL SET.

NOTE:

FOR NEOPRENE COMPRESSION SEAL TABLE SEE SHT. NO. 54

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

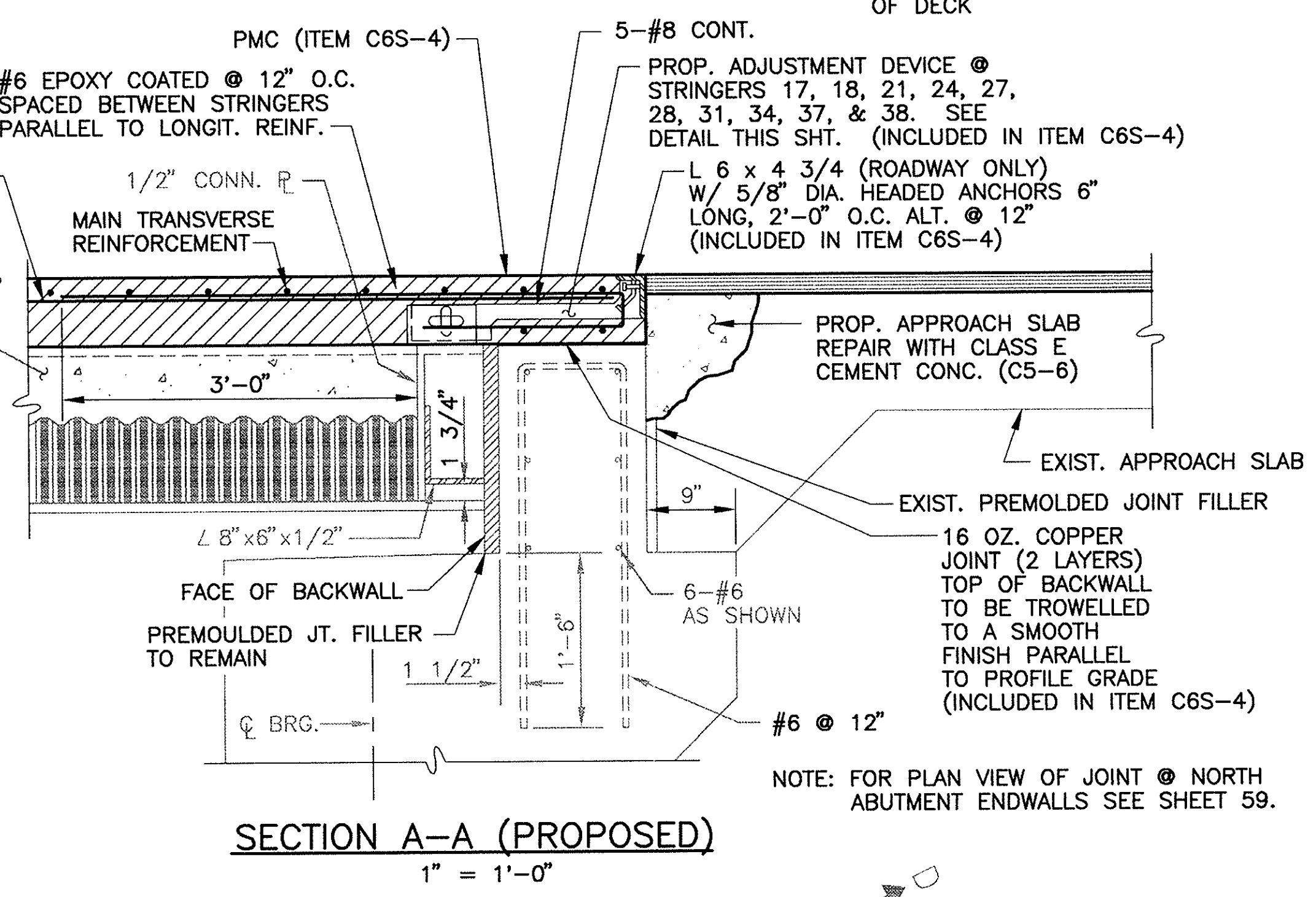
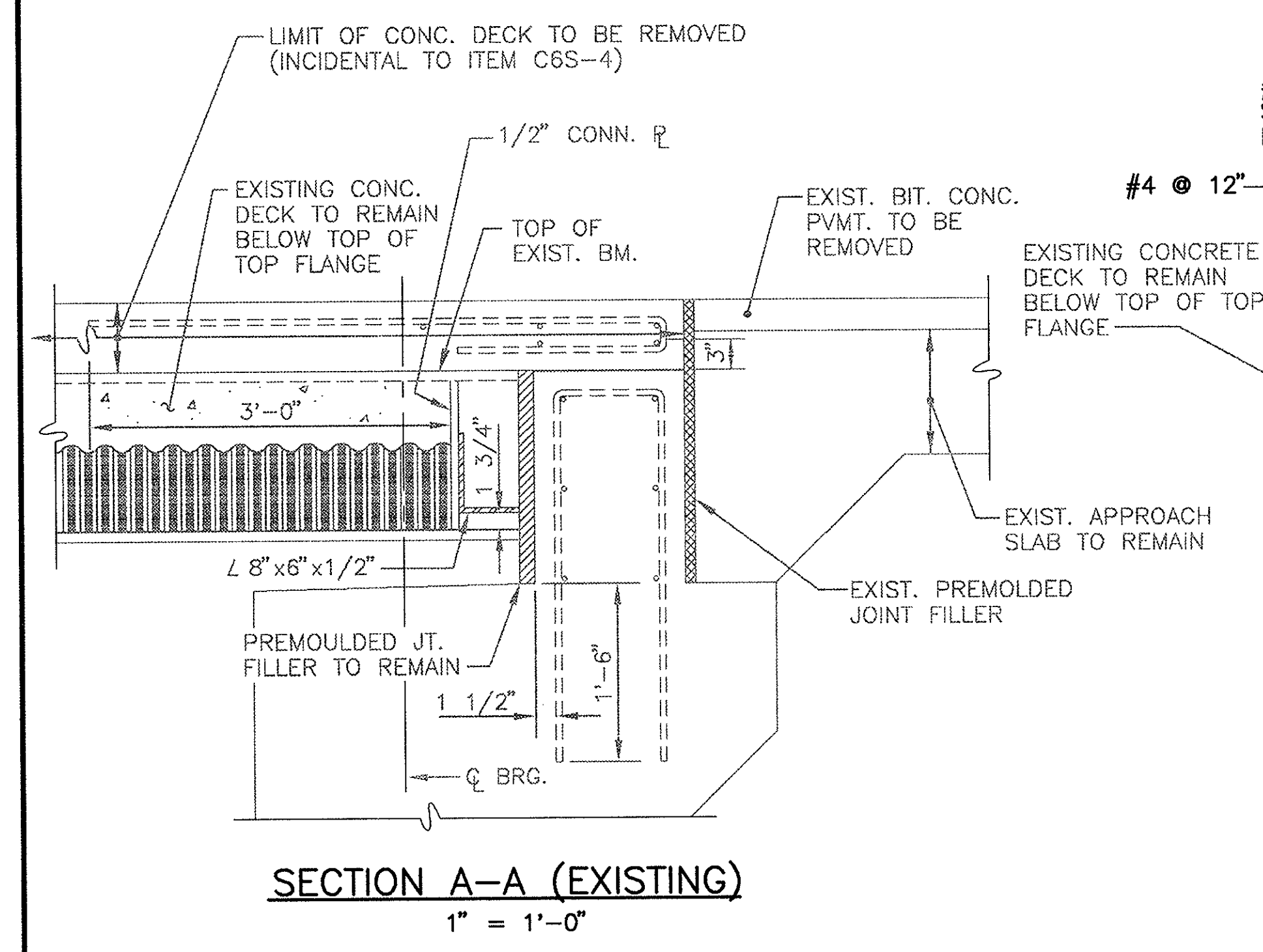
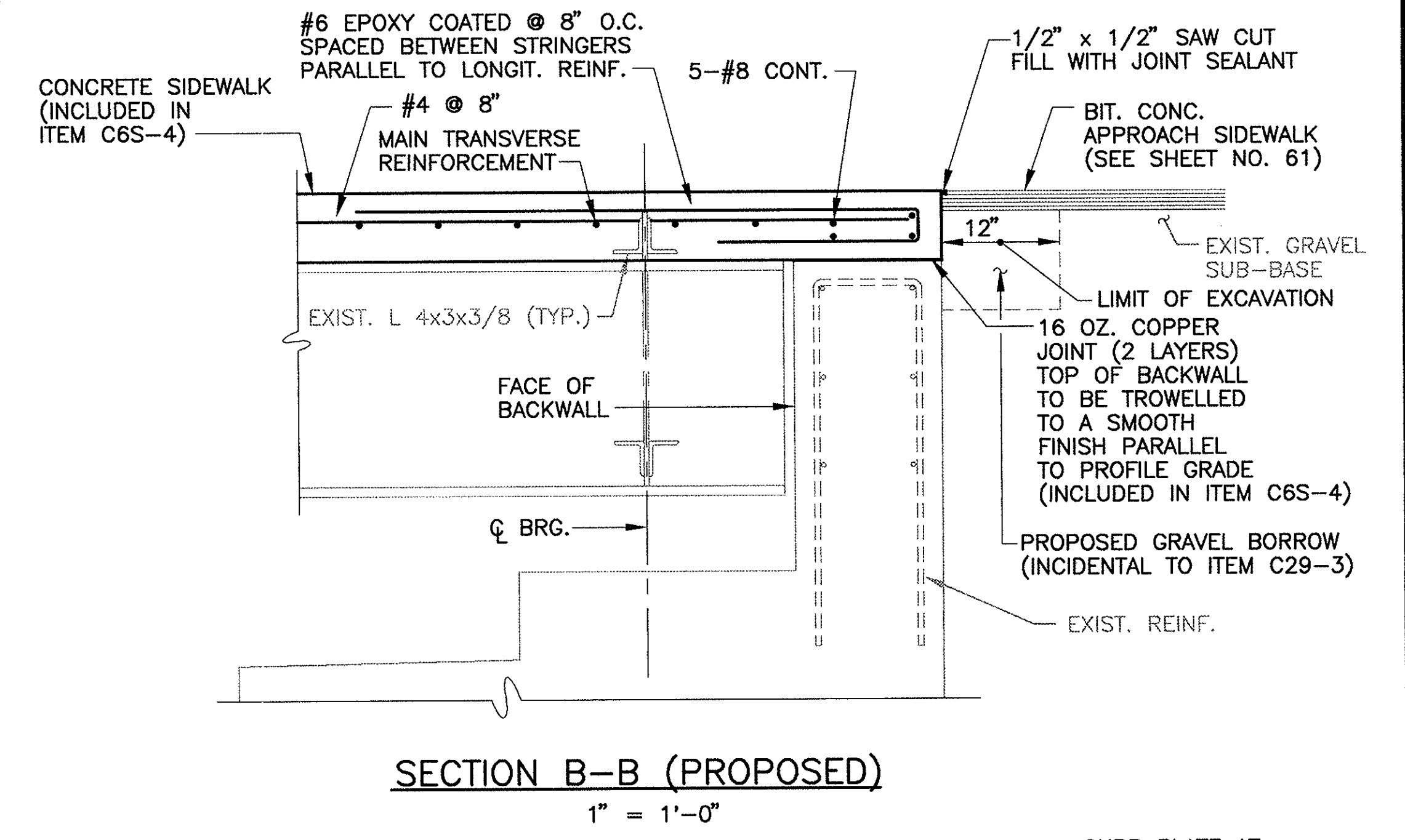
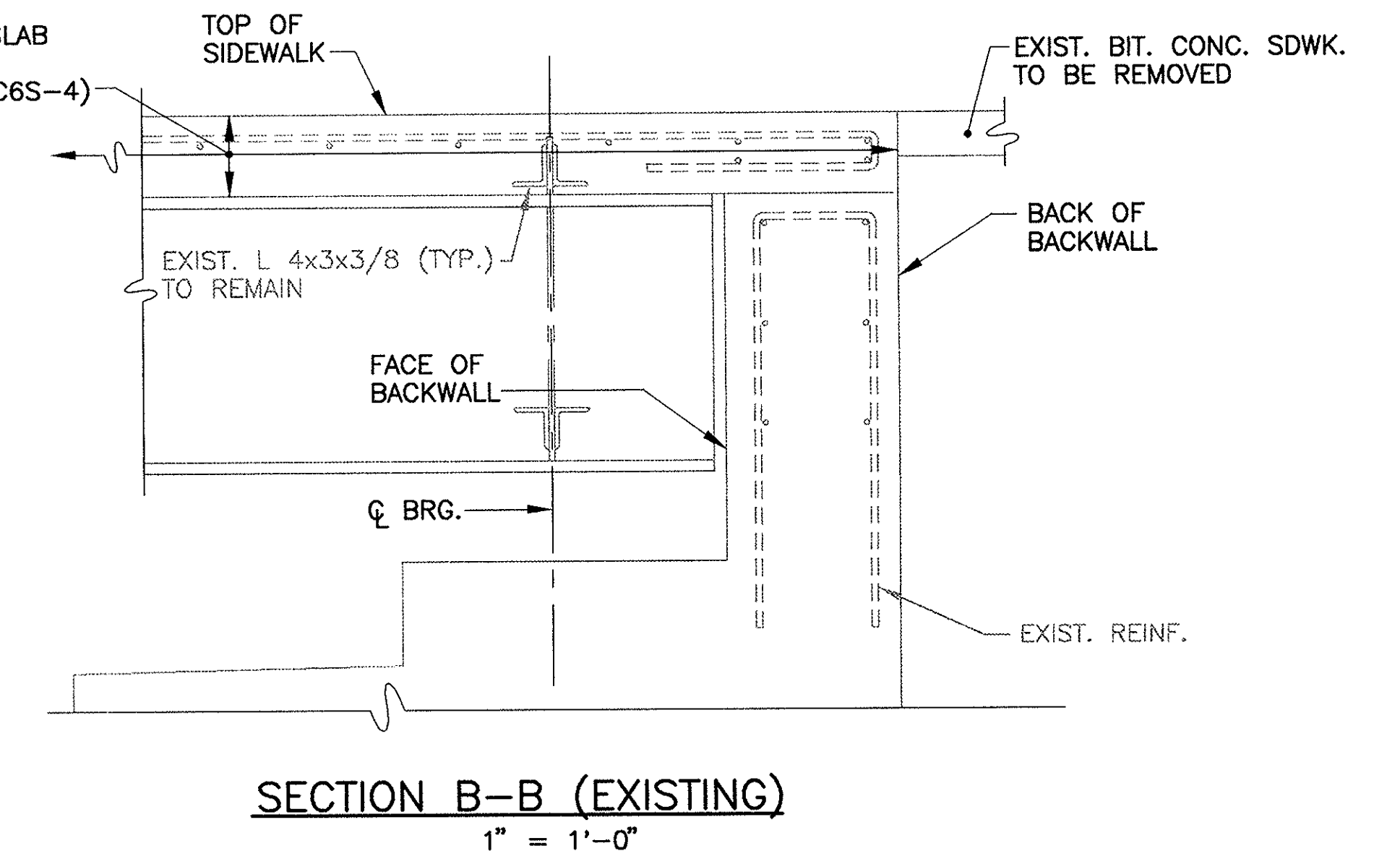
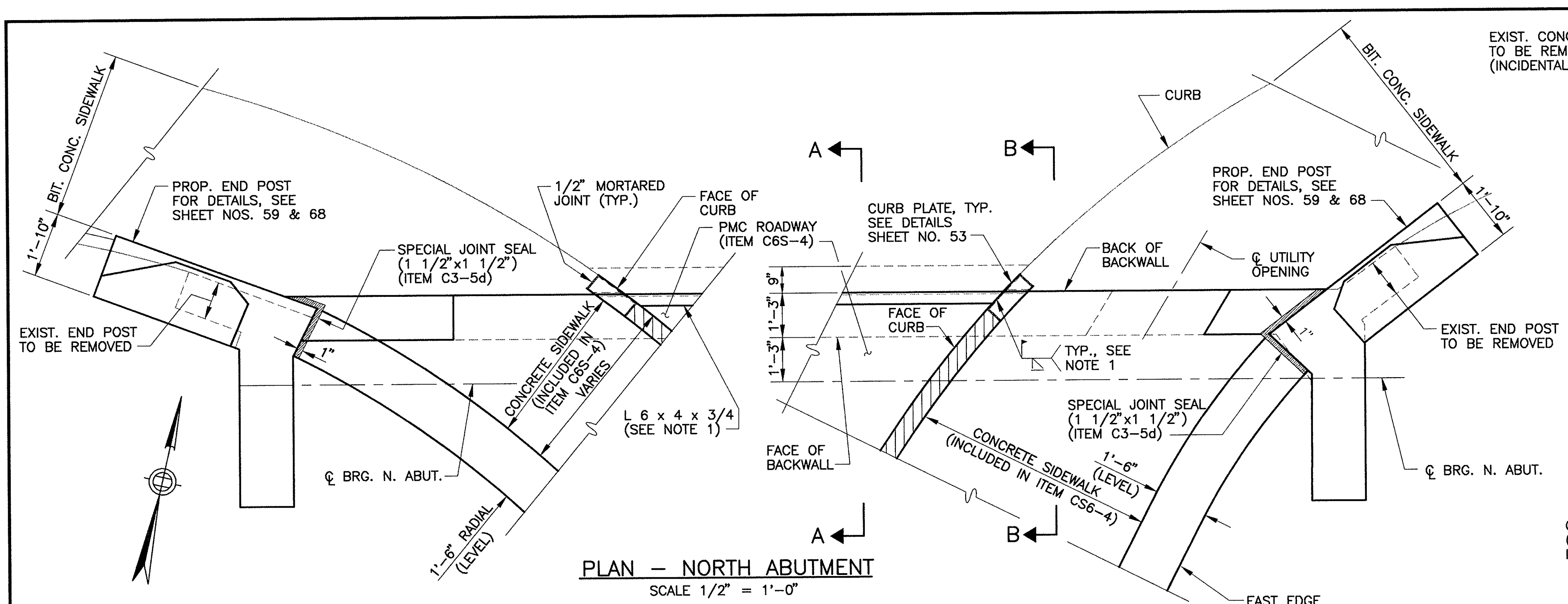
BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
JOINT DETAILS AT SOUTH ABUTMENT

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 55
The Schmitt Center
929 Main Street
Boston, Massachusetts 02129

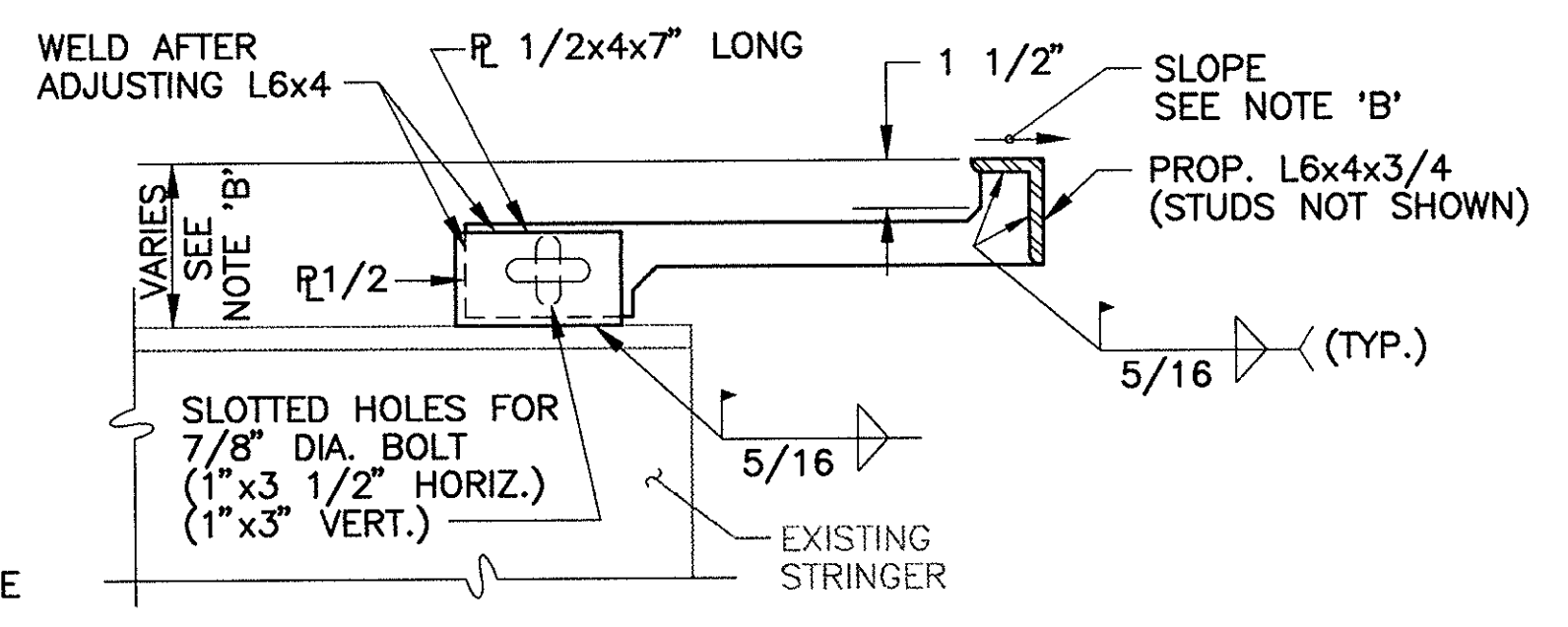
AS BUILT

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



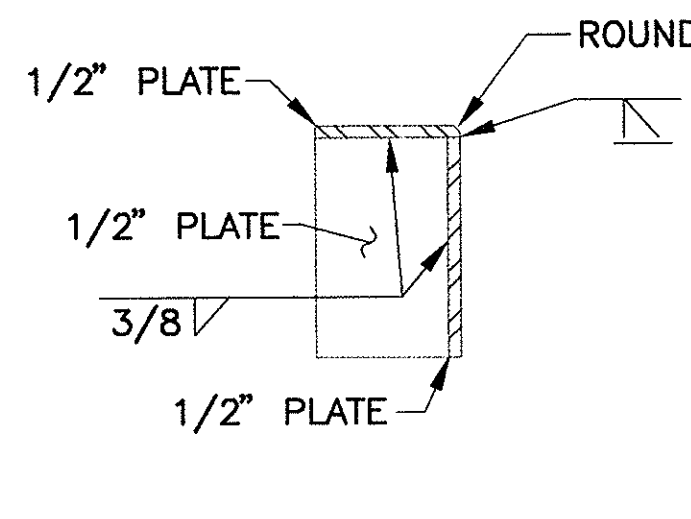
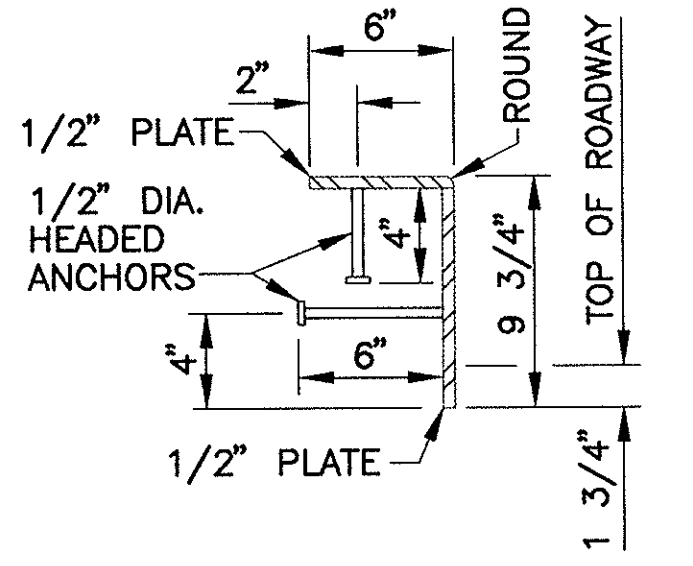
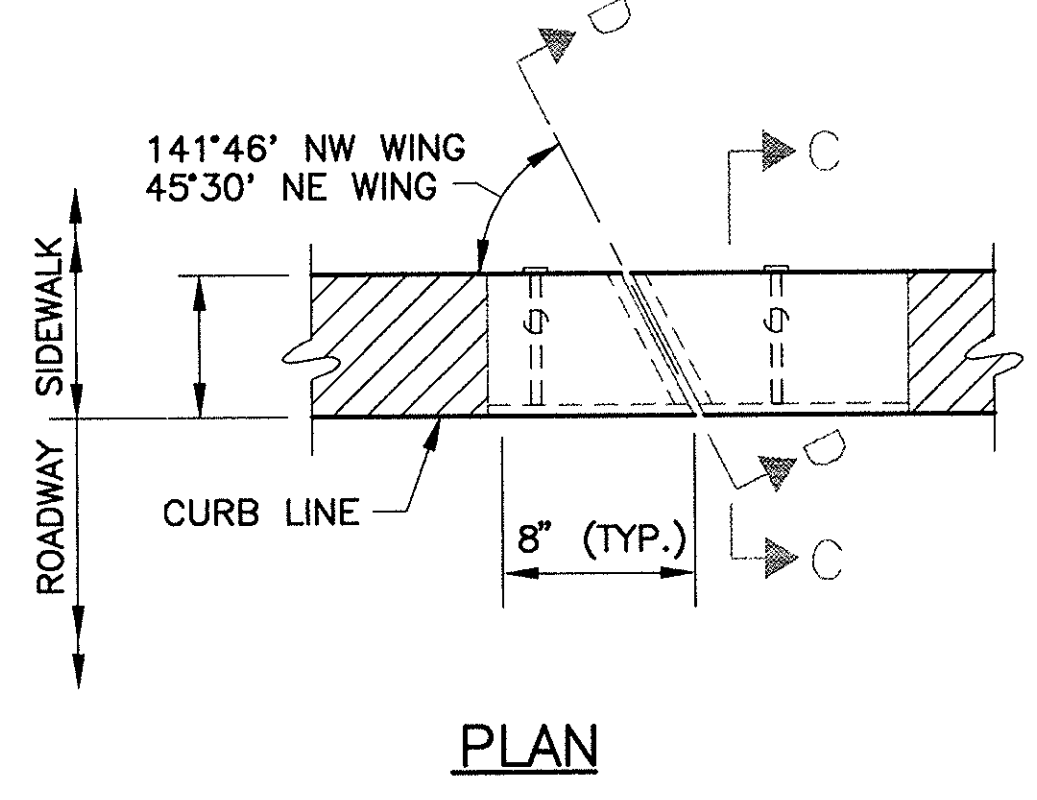
NOTE: FOR PLAN VIEW OF JOINT @ NORTH ABUTMENT ENDWALLS SEE SHEET 59.

- NOTES:**
- AFTER ARMORING IS SET IN FINAL POSITION, FIELD WELD ROADWAY ANGLE TO CURB PLATE AND GRIND SMOOTH.
 - PHASE I CONSTRUCTION ROADWAY ANGLE SHALL EXTEND 1 1/2' BEYOND CONSTRUCTION JOINT AT C&U LOWELL AVENUE. ROADWAY ANGLE FOR PHASE II CONSTRUCTION SHALL BE FIELD SPLICED USING FULL PENETRATION GROOVE WELD. GRIND SMOOTH AT EXPOSED SURFACE.

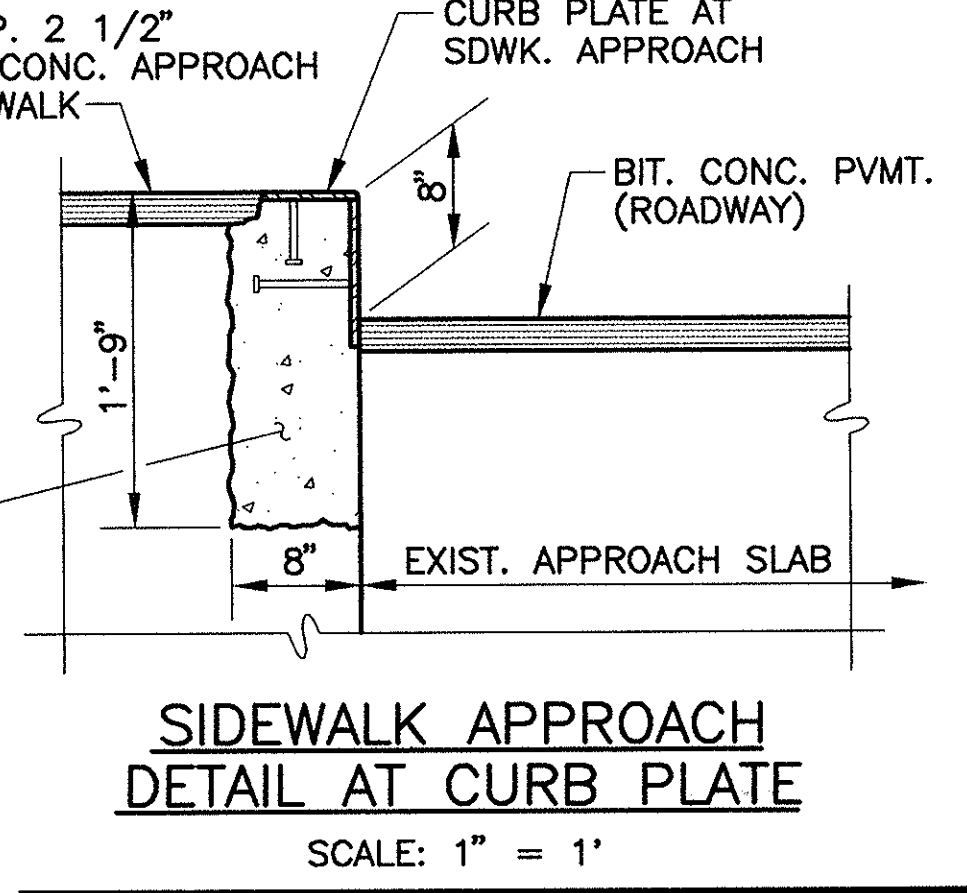


NOTE 'B'
SLOPE AND DIMENSION FROM TOP OF ANGLE TO TOP OF EXIST. STR. SHALL BE VERIFIED BY THE CONTRACTOR.

PROPOSED ADJUSTMENT DEVICE
SCALE: 1 1/2" = 1'-0"



CURB PLATE DETAILS AT SIDEWALKS
(INCIDENTAL TO ITEM C6S-4)
SCALE: 1 1/2" = 1'-0"



MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)

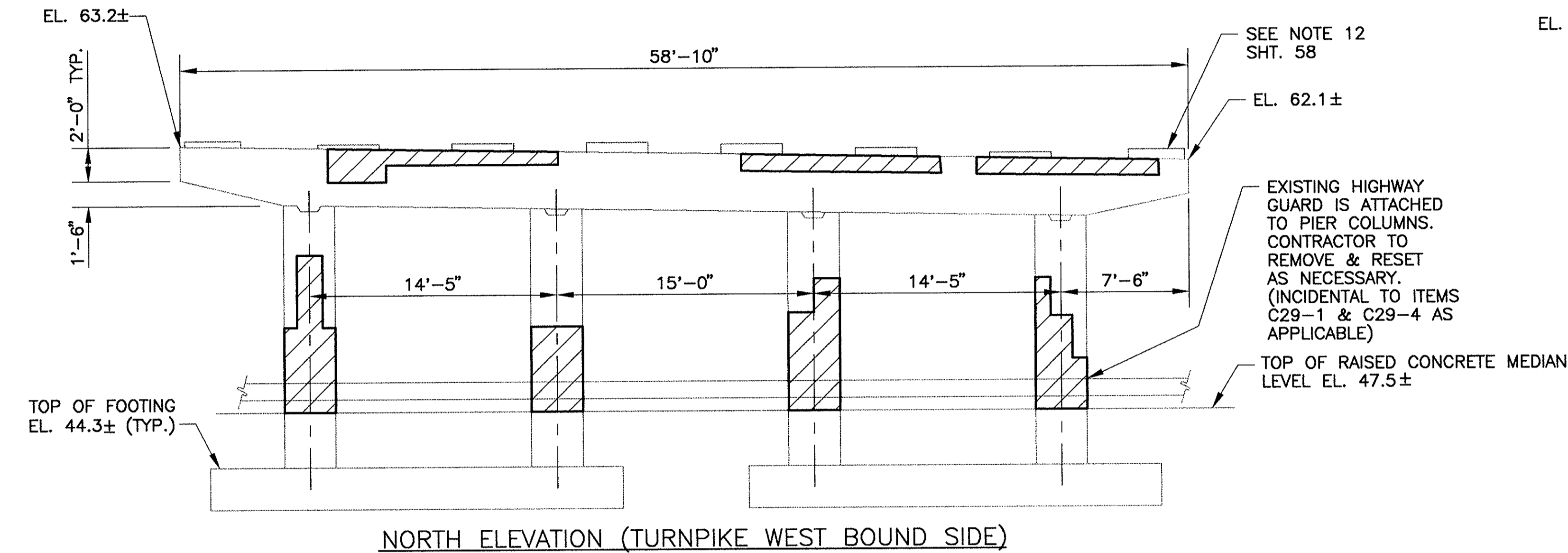
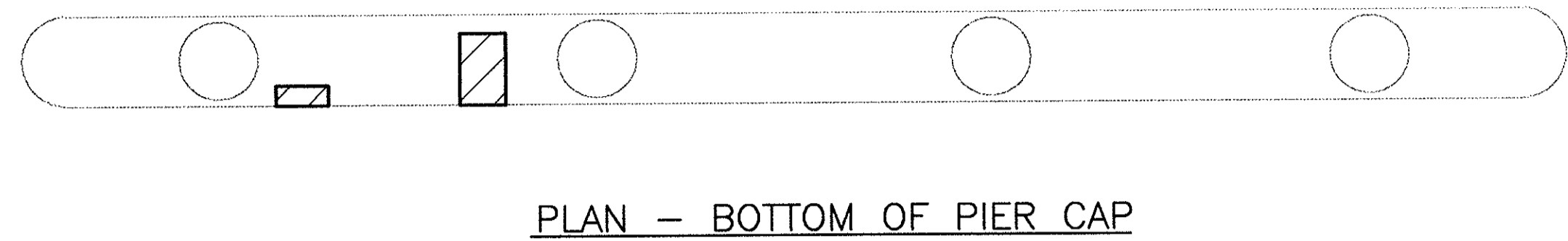
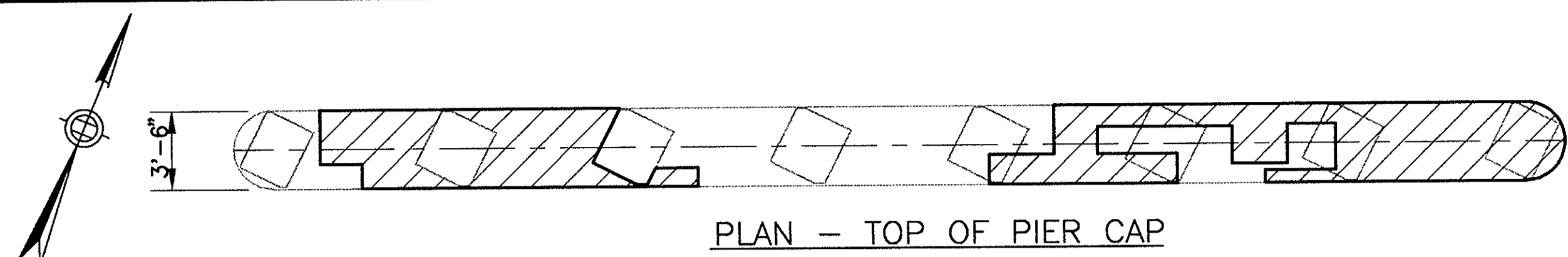
JOINT DETAILS AT NORTH ABUTMENT

Scale: AS SHOWN Contract No. 521-024

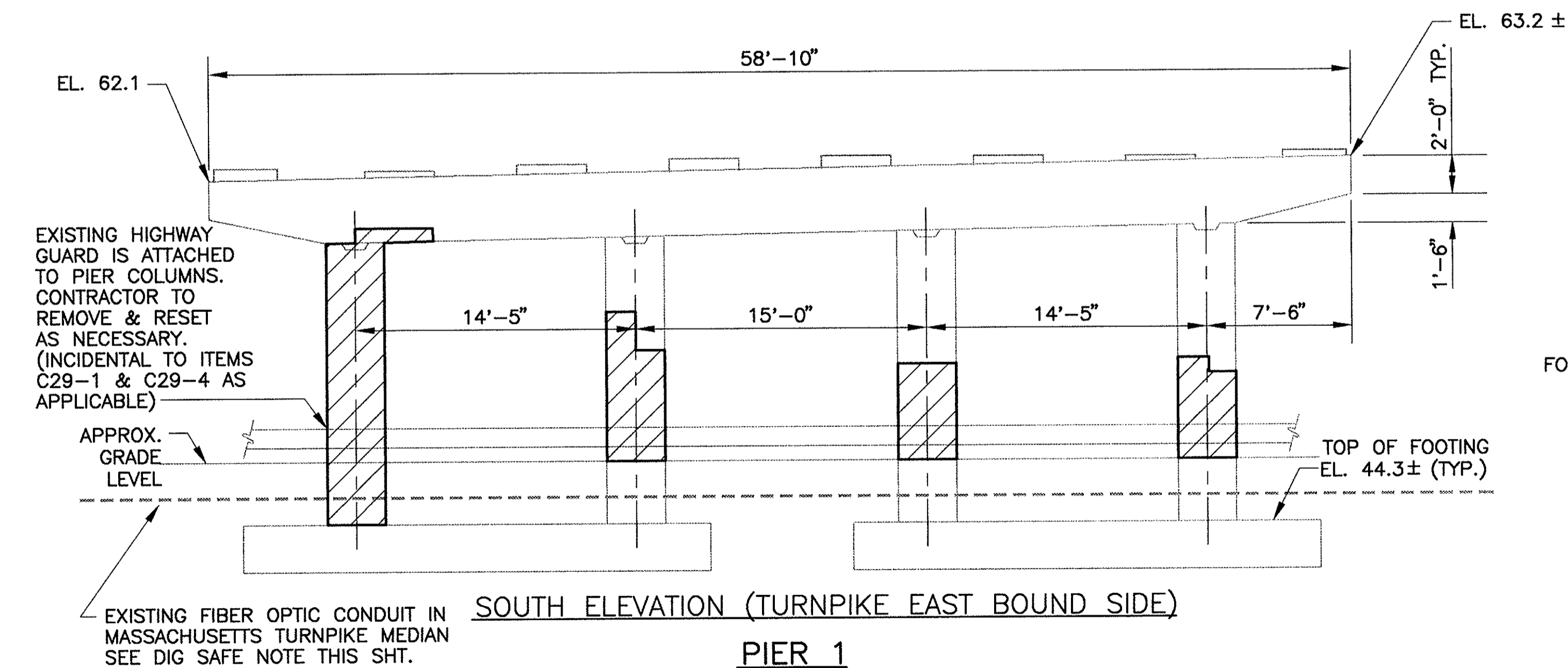
EDWARDS AND KELCEY, INC. Sheet No. 56

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	



NORTH ELEVATION (TURNPIKE WEST BOUND SIDE)

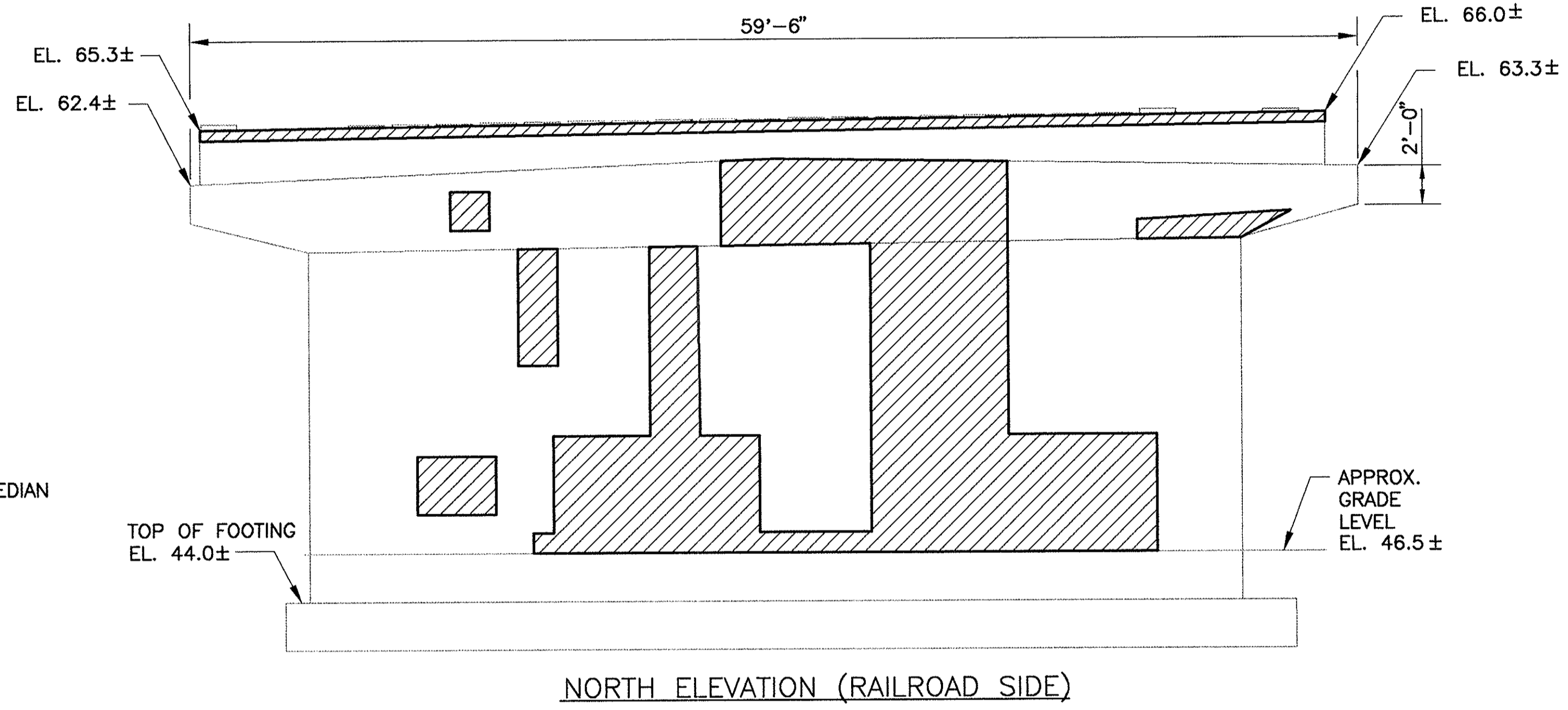
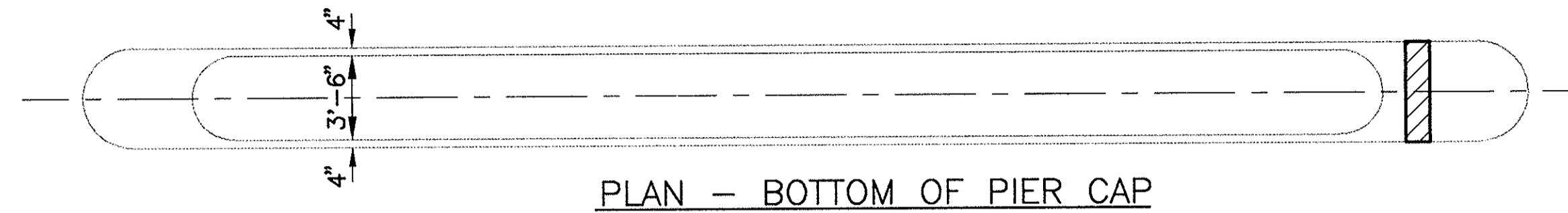
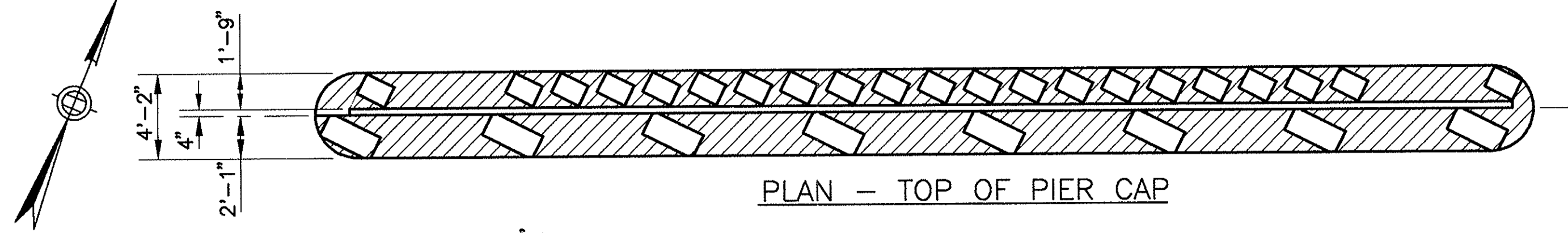


SOUTH ELEVATION (TURNPIKE EAST BOUND SIDE)

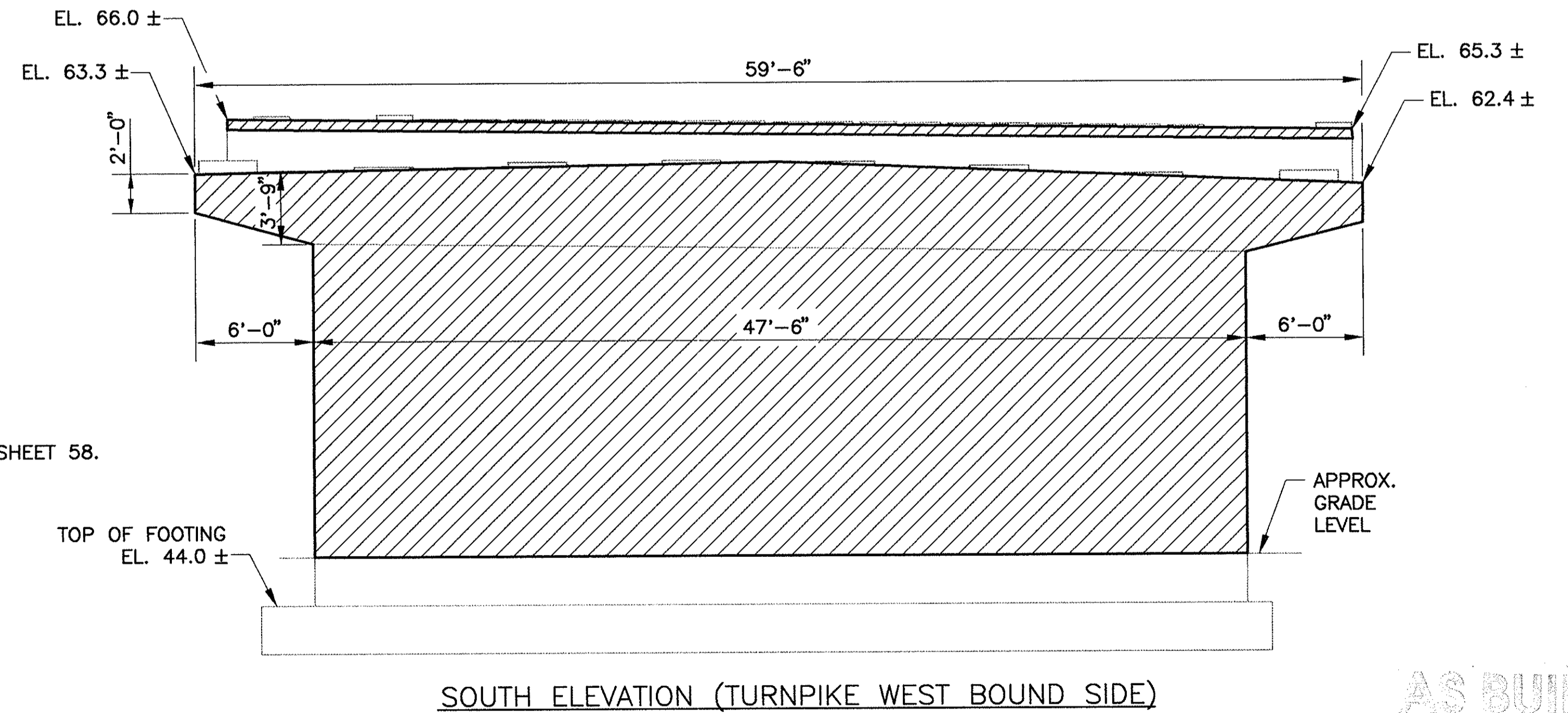
PIER 1

DIG SAFE NOTE

THE CONTRACTOR SHALL NOTE THAT A FIBER OPTIC CONDUIT AND OTHER UTILITIES EXIST IN THE TURNPIKE MEDIAN AND THE BRIDGE APPROACHES. THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION DURING ANY DIGGING OPERATIONS NEAR THE FIBER OPTIC CONDUIT AND UTILITIES. AT LEAST 24 HOURS BEFORE ANY DIGGING BEGINS THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 1-800-322-4844.



NORTH ELEVATION (RAILROAD SIDE)



SOUTH ELEVATION (TURNPIKE WEST BOUND SIDE)

PIER 2

NOTES:
FOR NOTES, SEE SHEET 58.

LEGEND

APPROXIMATE AREA OF REPAIR (ITEM C29-1 AND C29-4 AS APPLICABLE)

TOTAL REPAIR AREA FOR PIERS 1 & 2 = 1405 S.F.±

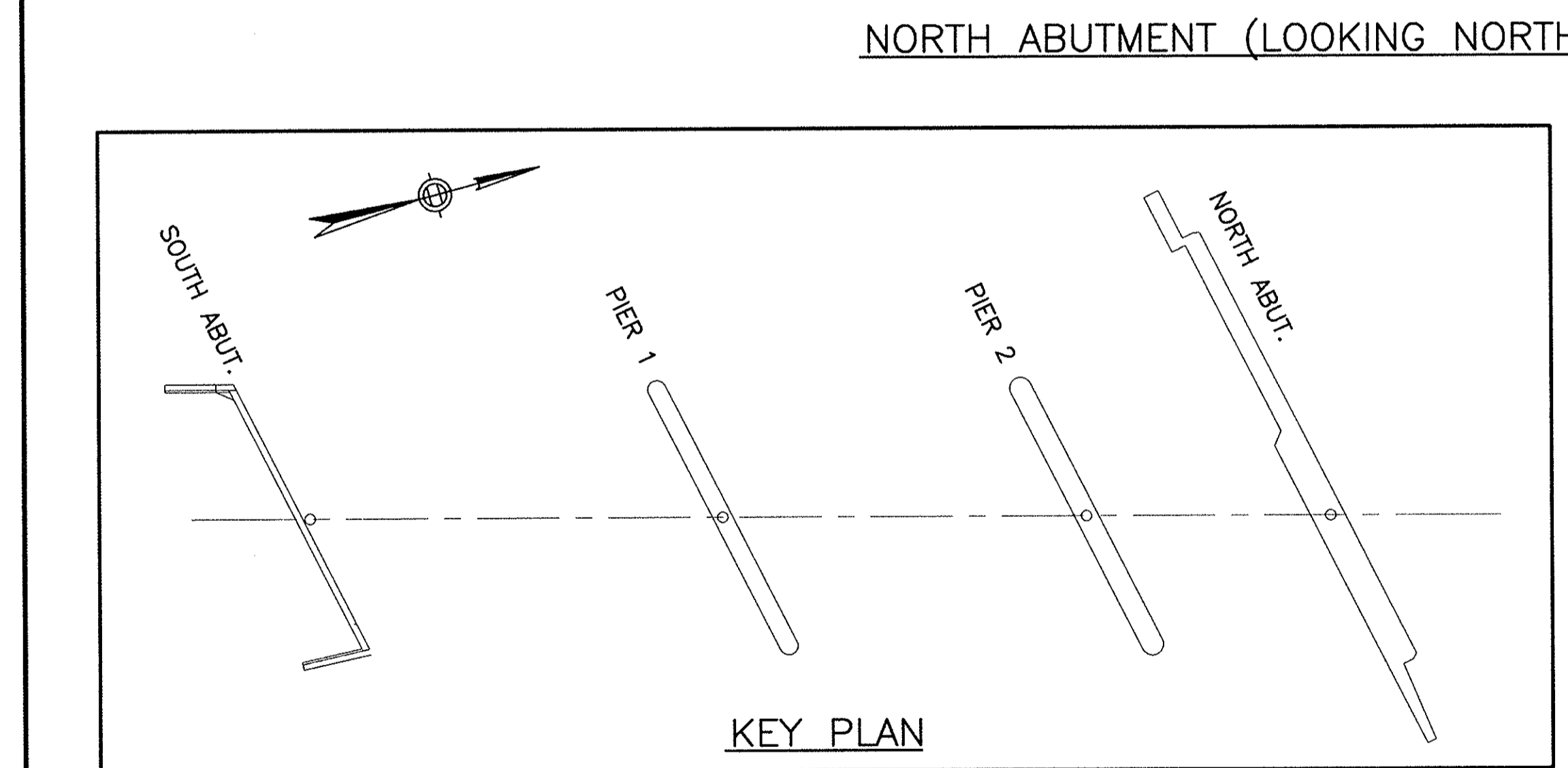
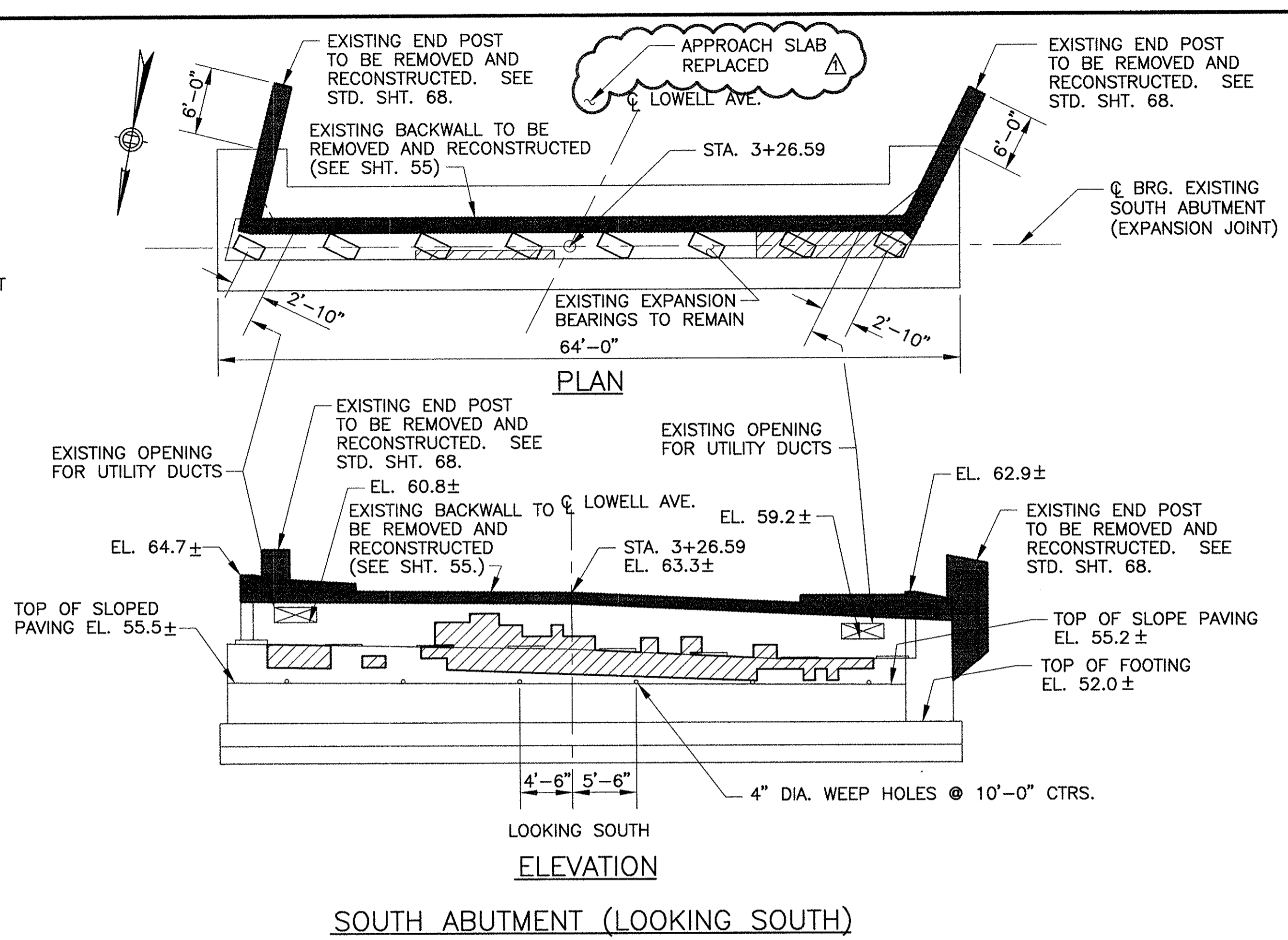
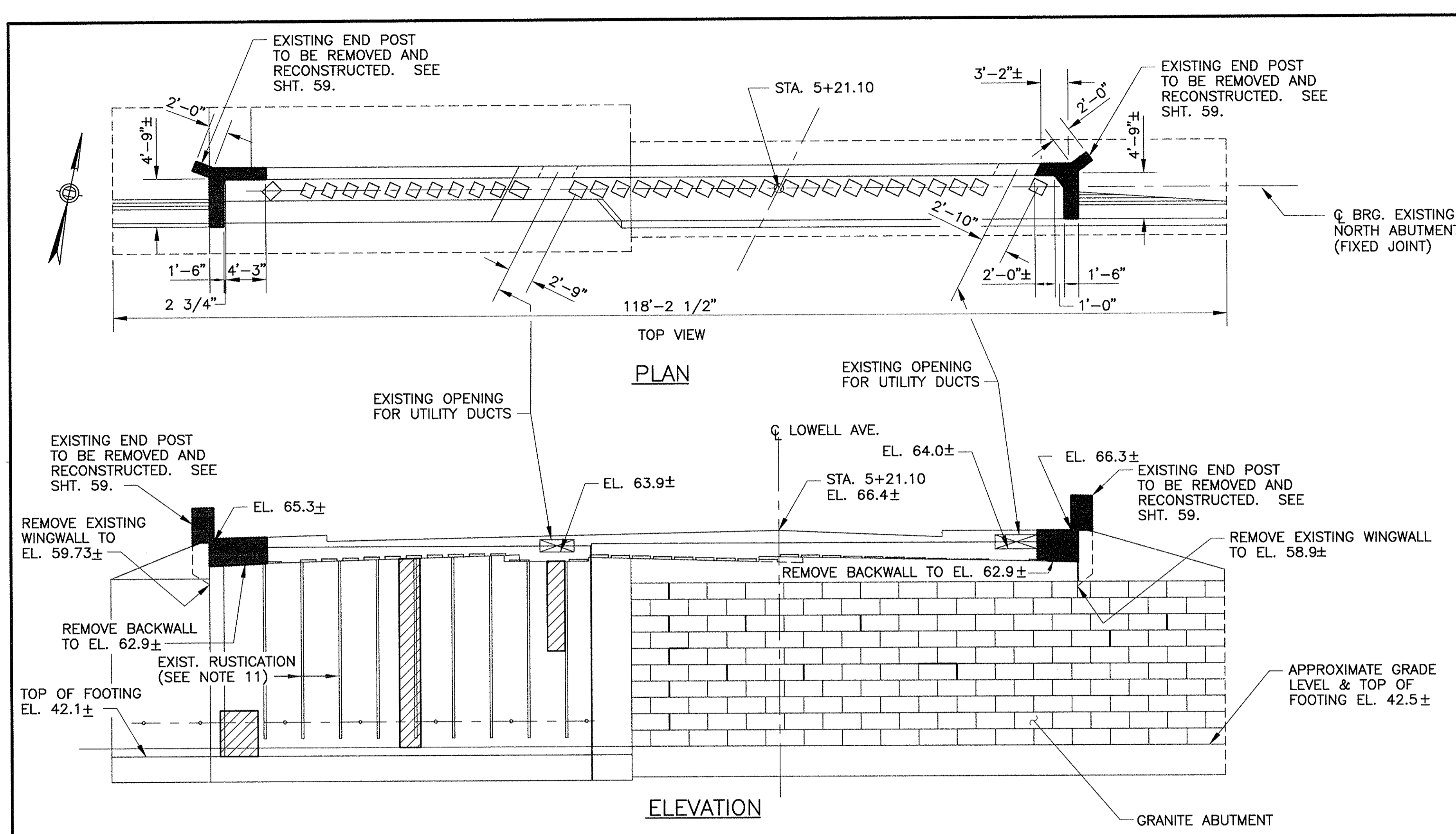
NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

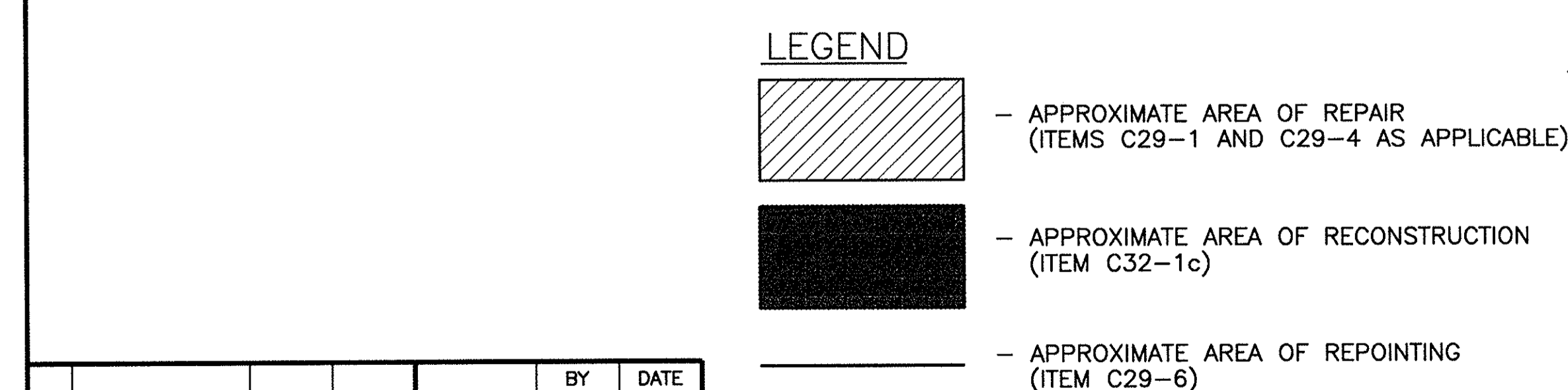
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
SUBSTRUCTURE CONCRETE REPAIR
PIERS 1 & 2

Scale: NTS Contract No. 521-024
EDWARDS AND KELCEY, INC. Sheet No. 57
The Schraft Center
 529 Main Street
 Boston, Massachusetts 02129

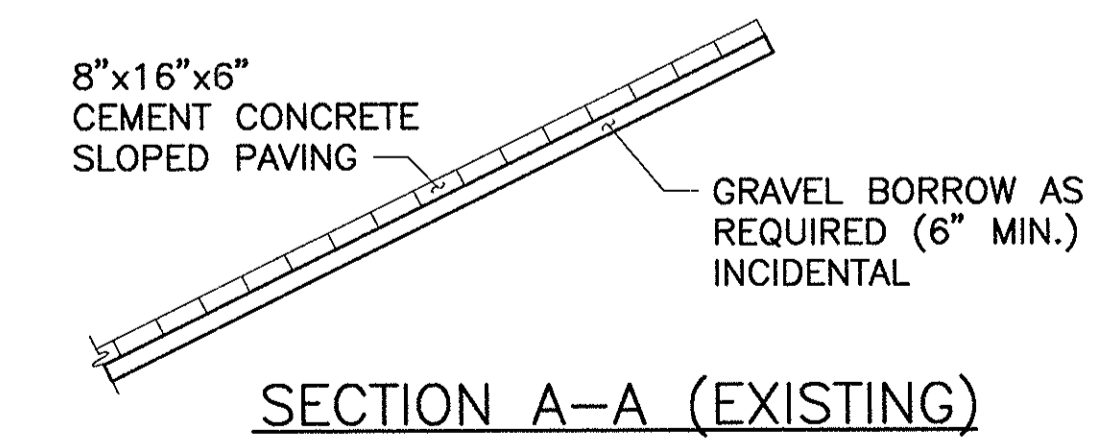
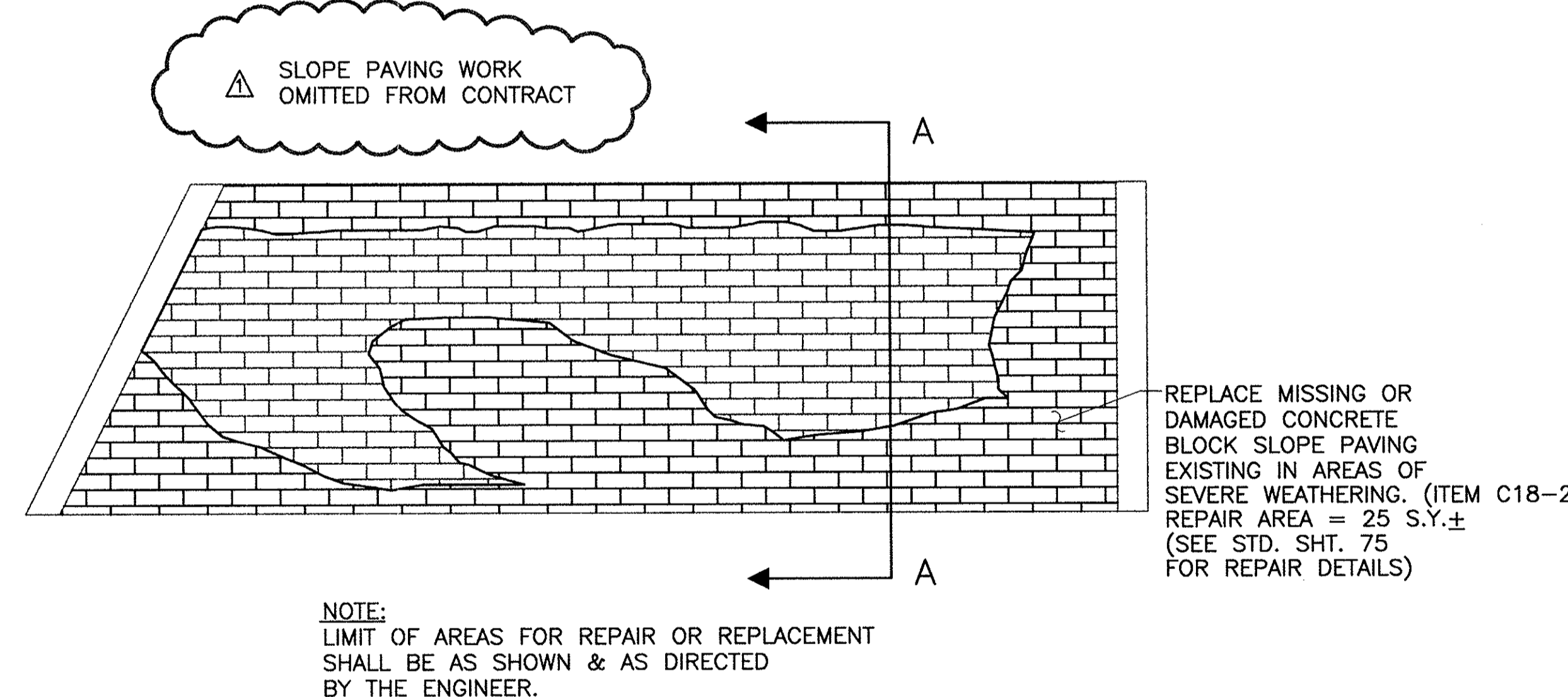
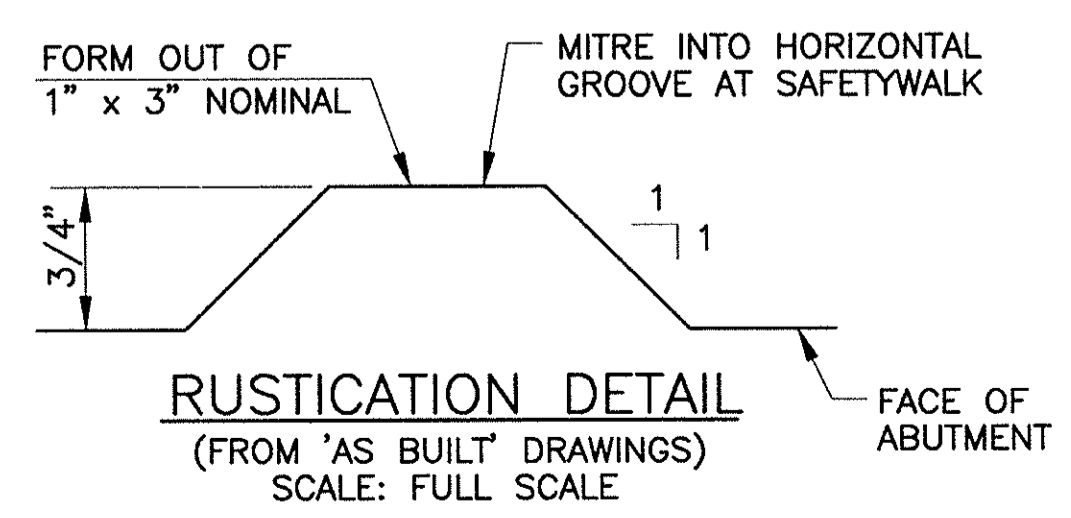


- NOTES:**
1. AREAS AND QUANTITIES INDICATED ARE APPROXIMATE.
 2. ACTUAL AREAS AND QUANTITIES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
 3. CONCRETE REPAIRS MAY EXTEND BELOW EXISTING GRADE AS DIRECTED BY THE ENGINEER (FOR DETAIL SEE SHEET 16).
 4. FOR SUBSTRUCTURE CONCRETE REPAIR DETAILS, SEE SHT. 67.
 5. FOR LIMITS OF PENETRATING SEALER SEE SHT. 67.
 6. FOR REPOINTING OF THE GRANITE BLOCK ABUTMENT WALLS SEE CONTRACT SPECIAL PROVISIONS FOR MATERIALS AND CONSTRUCTION METHODS. (ITEM C29-6)
 7. ELEVATIONS AND DIMENSIONS SHOWN ARE TAKEN FROM "AS BUILT" DRAWINGS AND ARE NOT GUARANTEED TO BE CORRECT. THEY ARE PROVIDED FOR INFORMATION ONLY.
 8. THE CONTRACTOR SHALL SUBMIT FORMWORK PLANS TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCING ANY SUBSTRUCTURE WORK.
 9. ALL PIER CAPS, BEAM SEATS, & DRAINAGE TROUGHS SHALL BE CLEANED OF DEBRIS (ROCKS, STICKS, LEAVES, & TRASH) AND DISPOSED OF BY CONTRACTOR.
 10. SEAL ALL EXPOSED SURFACES OF PIER CAPS, COLUMNS AND ABUTMENT BACKWALL, BRIDGE SEAT AND STEM FULL HEIGHT WITH PENETRATING SEALER (C12-1).
 11. THE CONTRACTOR SHALL PROVIDE RUSTICATIONS TO MATCH EXISTING WHERE APPLICABLE. SEE DETAIL THIS SHEET.
 12. IF DETERIORATED CONCRETE IS EVIDENT UNDER MASONRY PLATE, STRINGER MAY HAVE TO BE TEMPORARILY SUPPORTED. SEE SPECIFICATIONS SECTION C-29 (ITEM C29-5).



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
	AS-BUILT	GTS	10/95	CHECKED:	L.M.B. 12/93
				DESIGNED:	T.A.Z. 12/93
				DRAWN:	T.L. 12/93

REPAIR AREA (NORTH ABUTMENT) = 56 S.F. ±
 REPAIR AREA (SOUTH ABUTMENT) = 155 S.F. ±

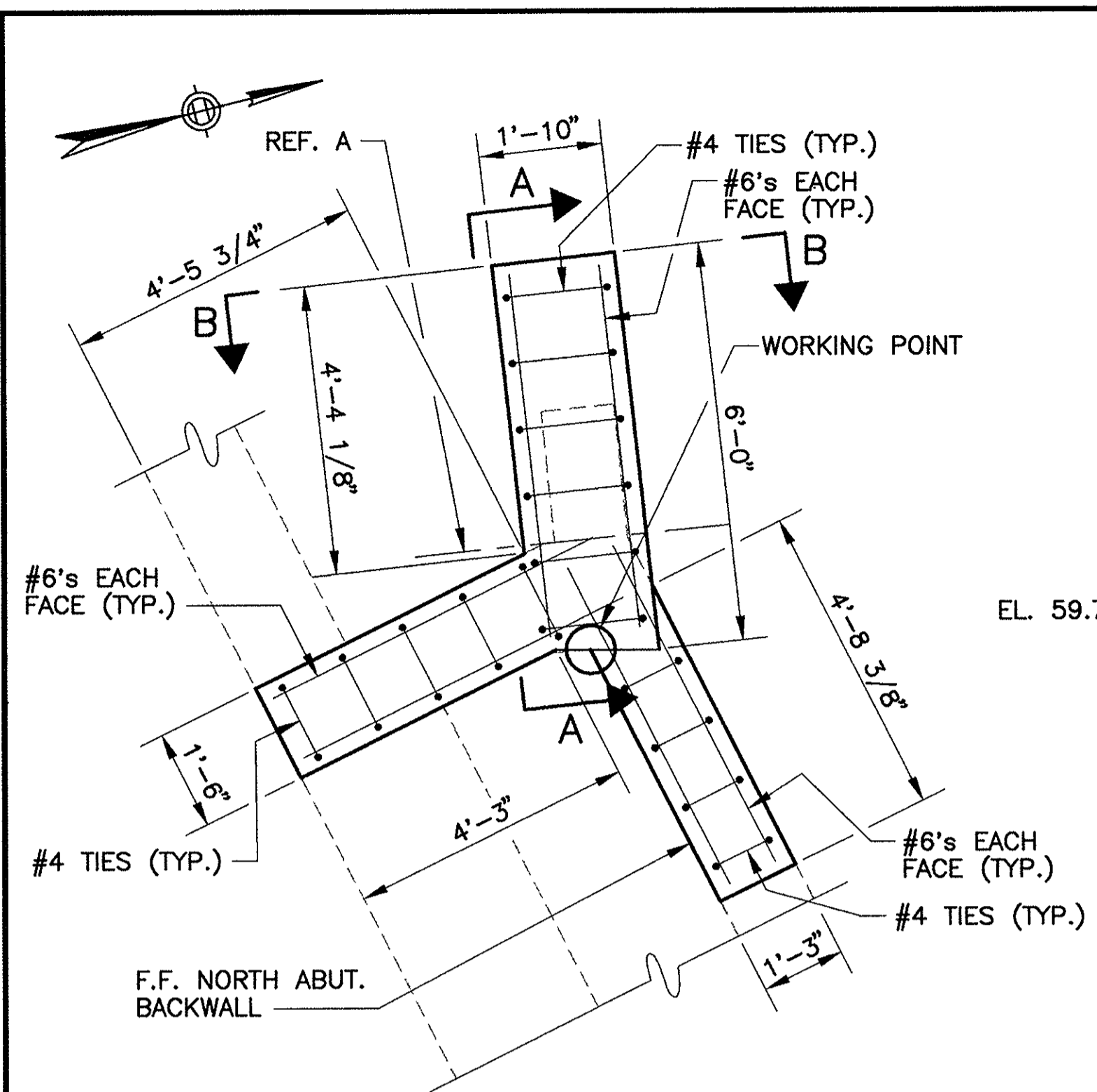


AS BUILT

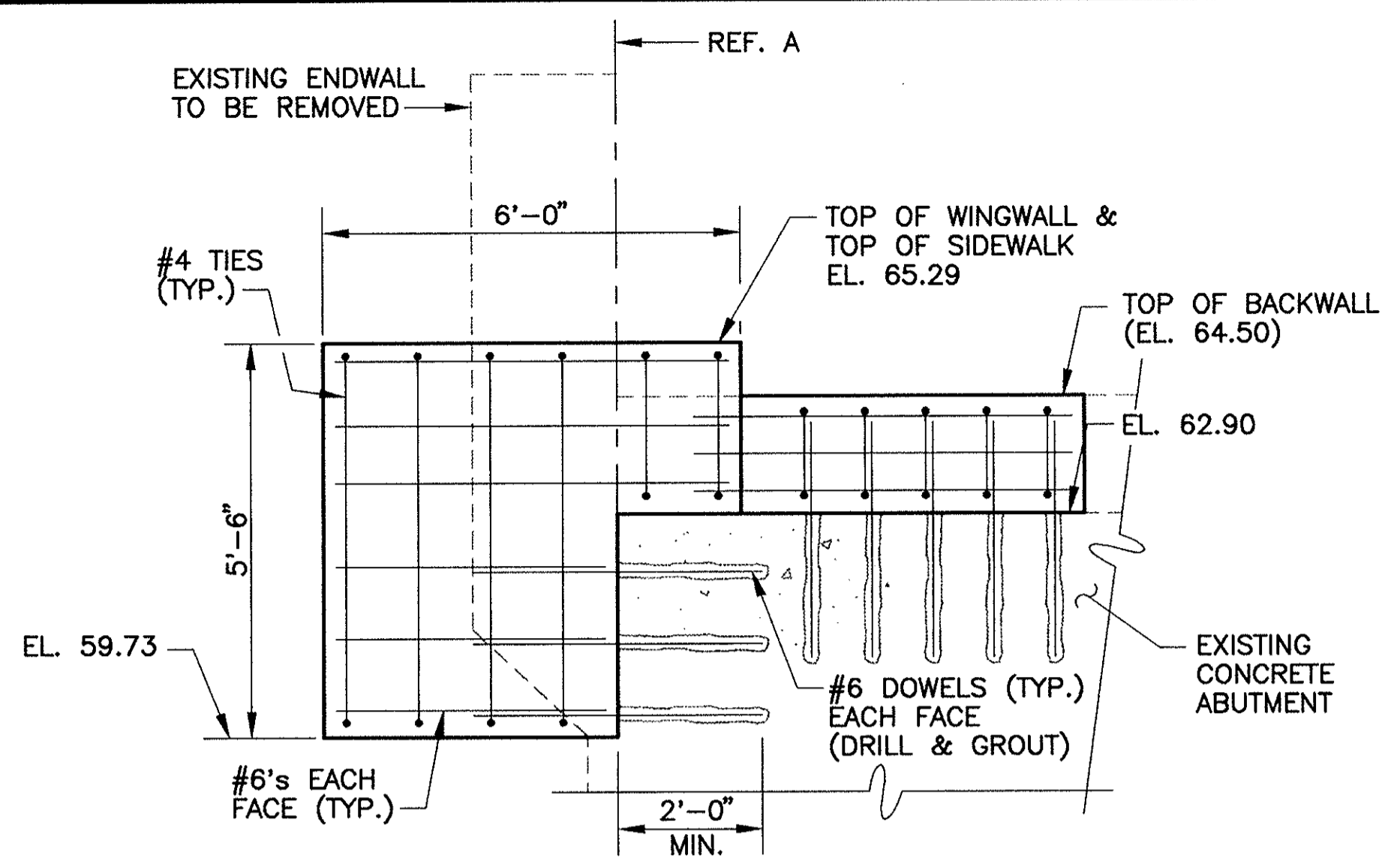
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
**SUBSTRUCTURE CONCRETE REPAIRS
 NORTH & SOUTH ABUTMENTS**

Scale: NTS Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 58
The Schmitt Center
 529 Main Street
 Boston, Massachusetts 02129

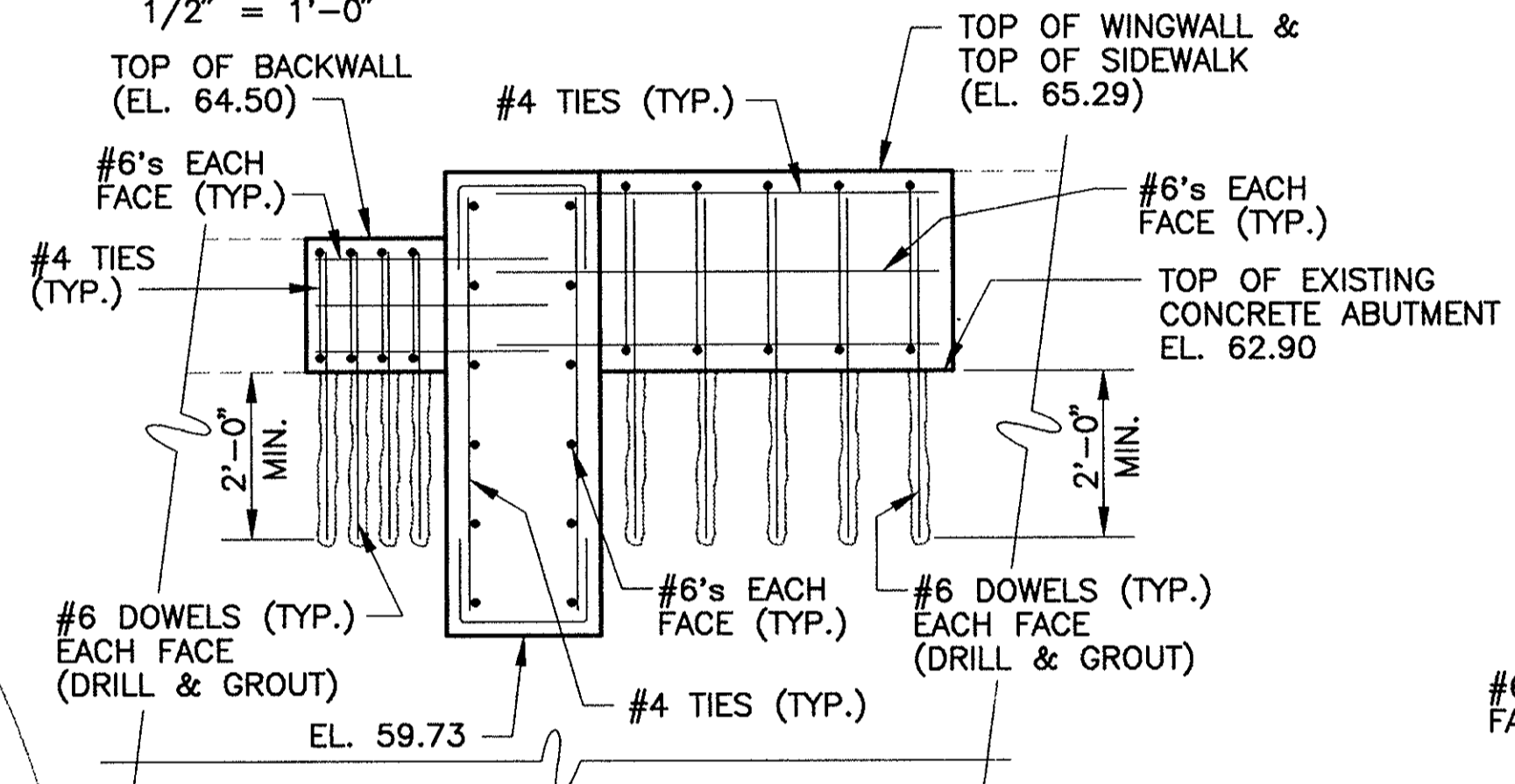
DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



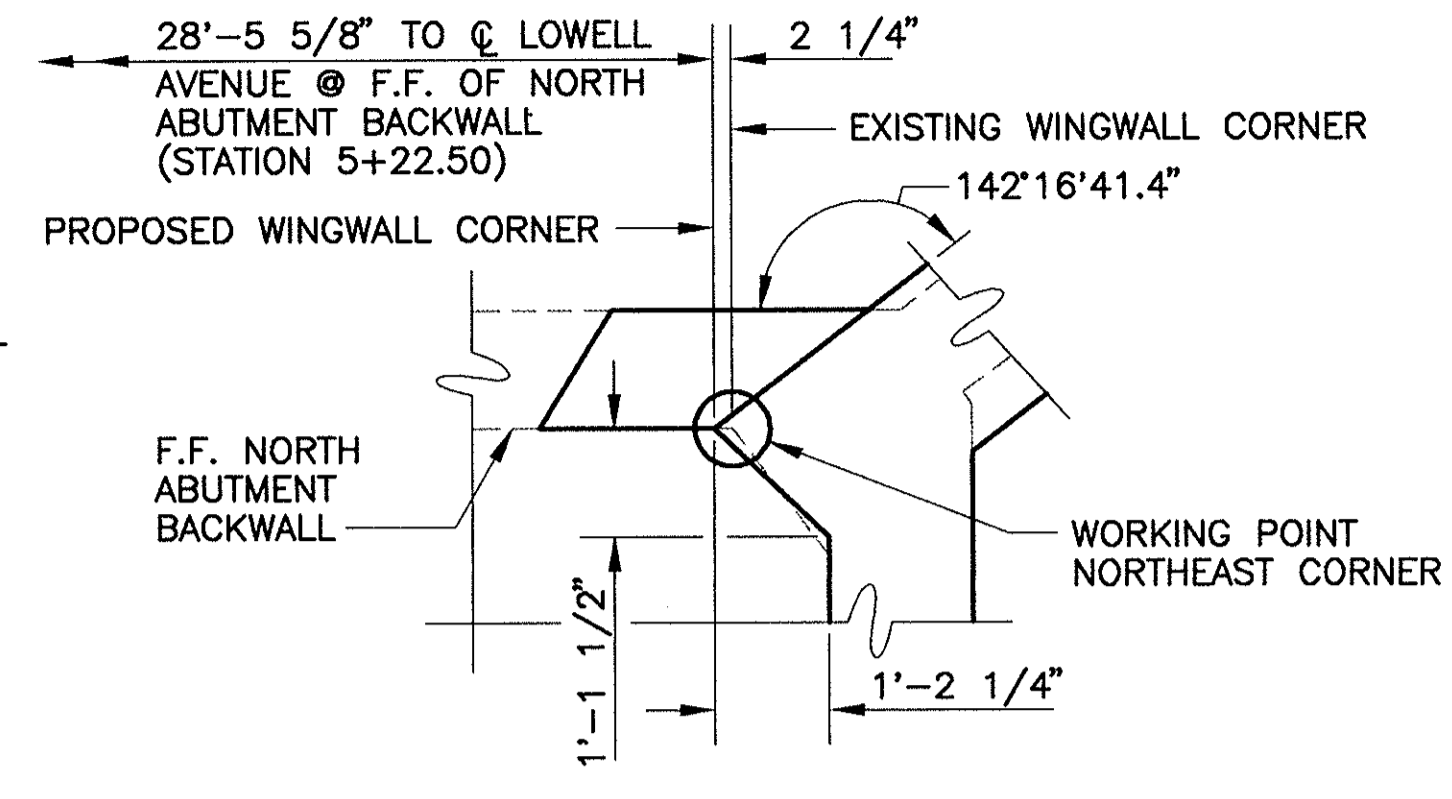
PLAN VIEW @ NORTHWEST WINGWALL
1/2" = 1'-0"
RAILING ENDWALL NOT SHOWN



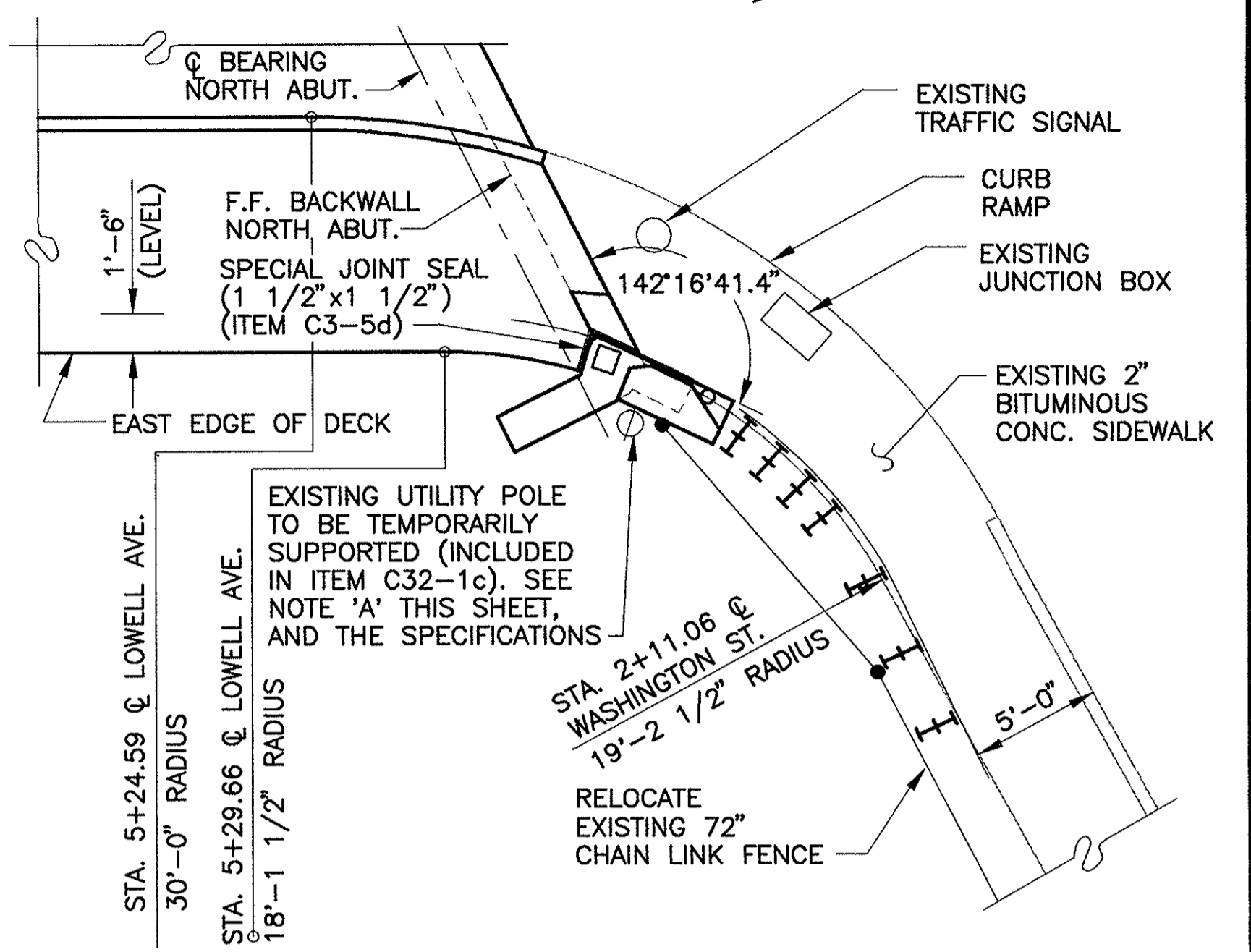
SECTION A-A
RAILING ENDWALL NOT SHOWN
1/2" = 1'-0"



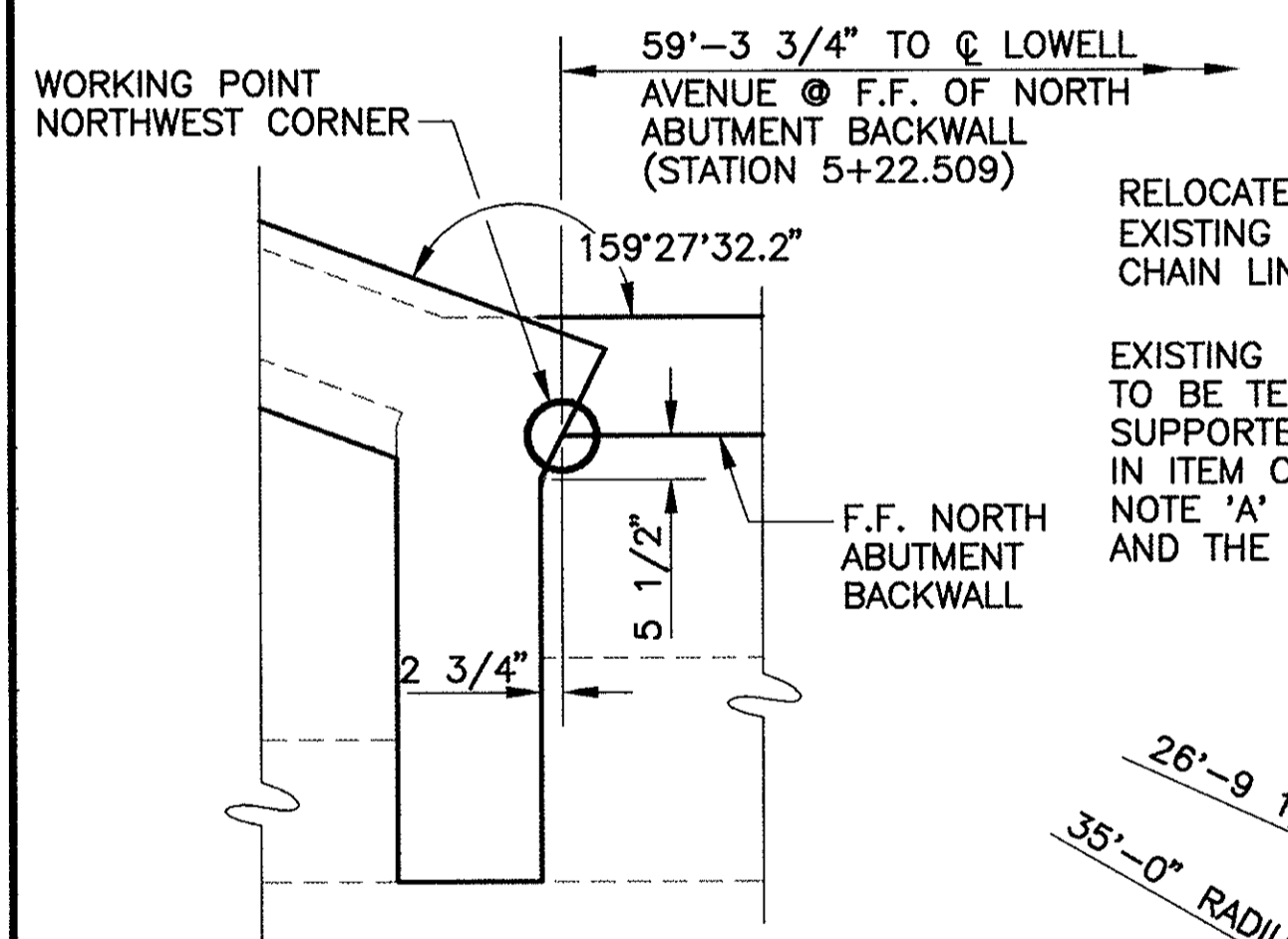
SECTION B-B
RAILING ENDWALL NOT SHOWN
1/2" = 1'-0"



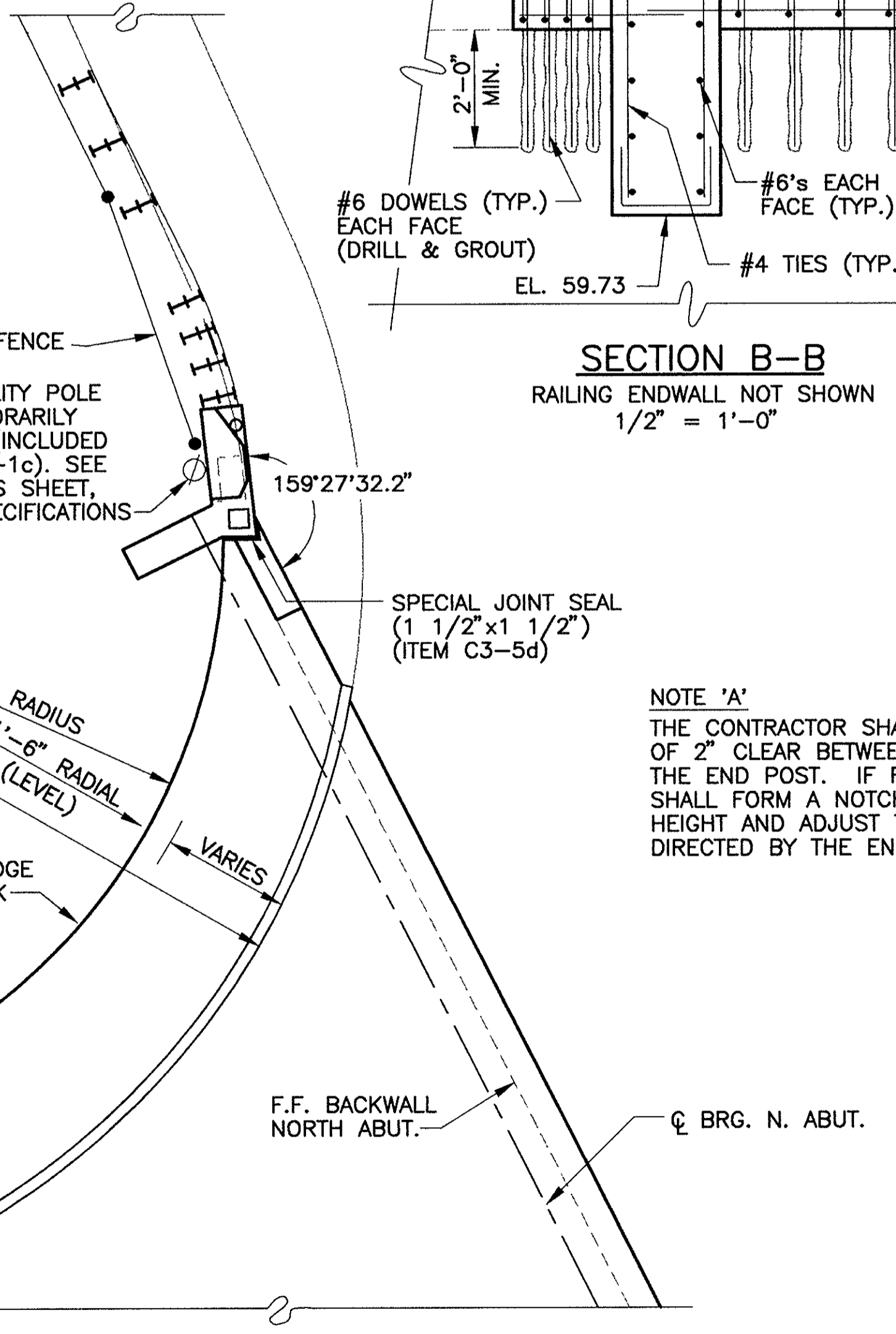
DETAIL @ WORKING POINT
1/2" = 1'-0"



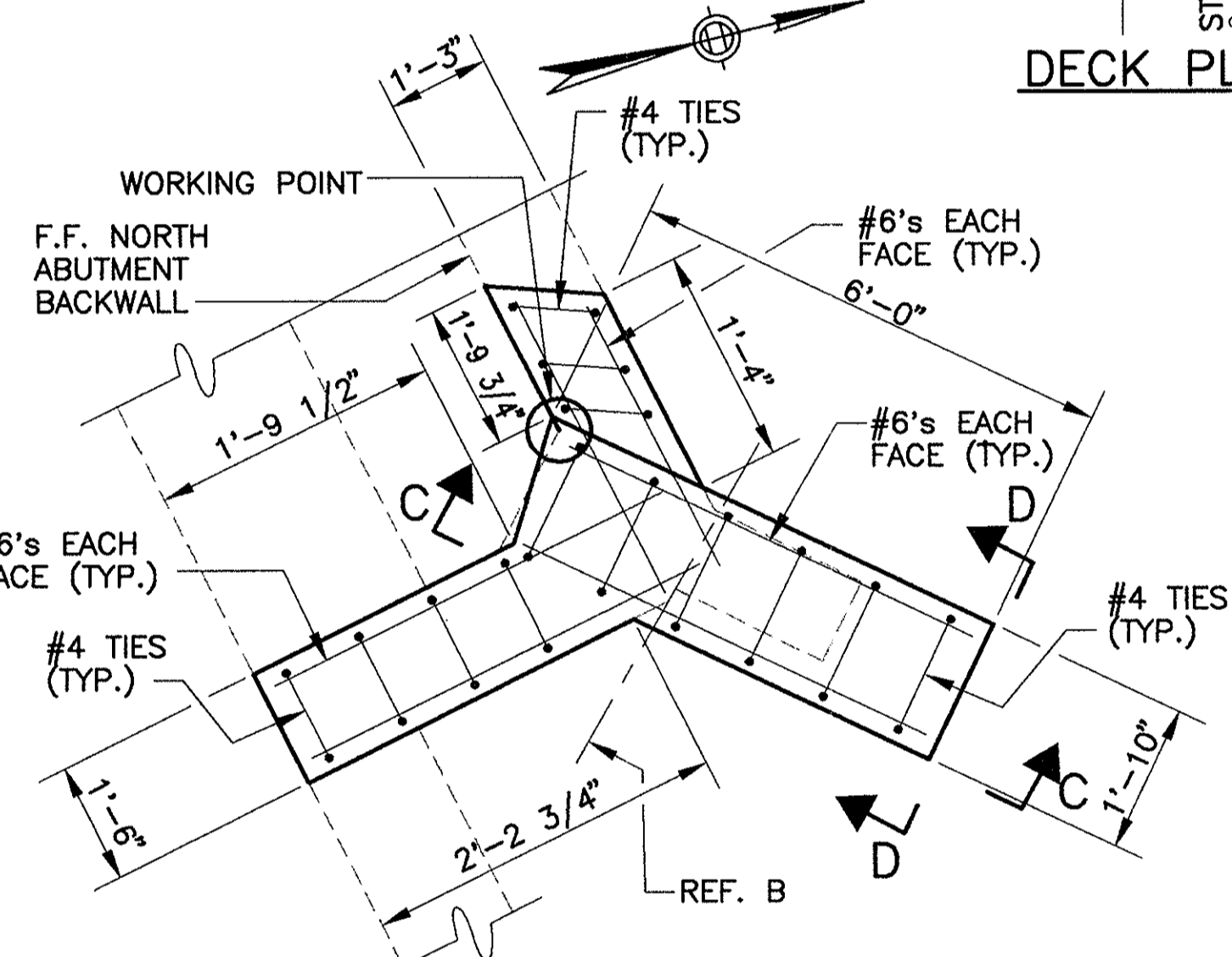
DECK PLAN AT NORTHEAST CORNER
SPAN 3
SCALE 3/16" = 1'-0"



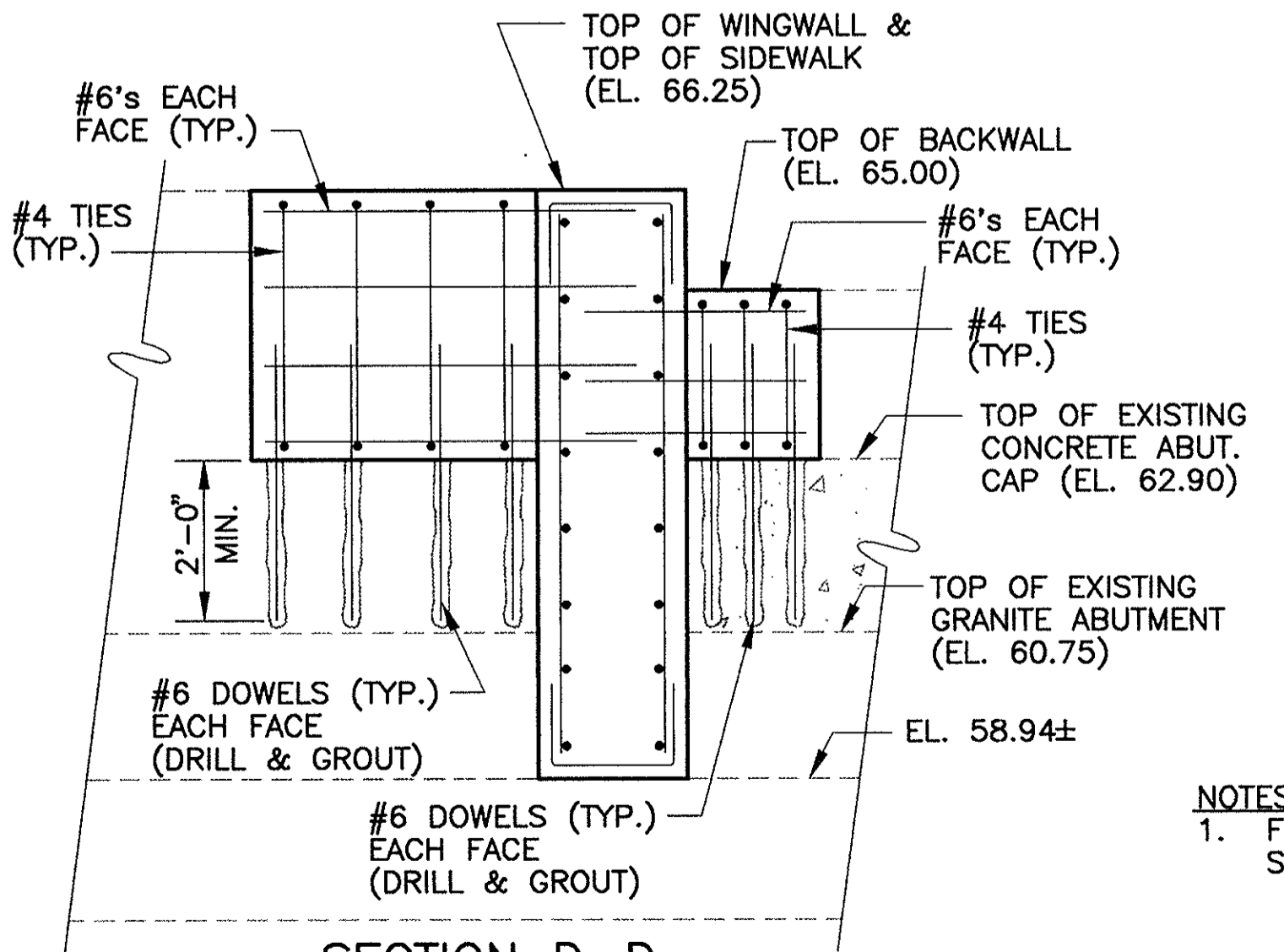
DETAIL @ WORKING POINT
1/2" = 1'-0"



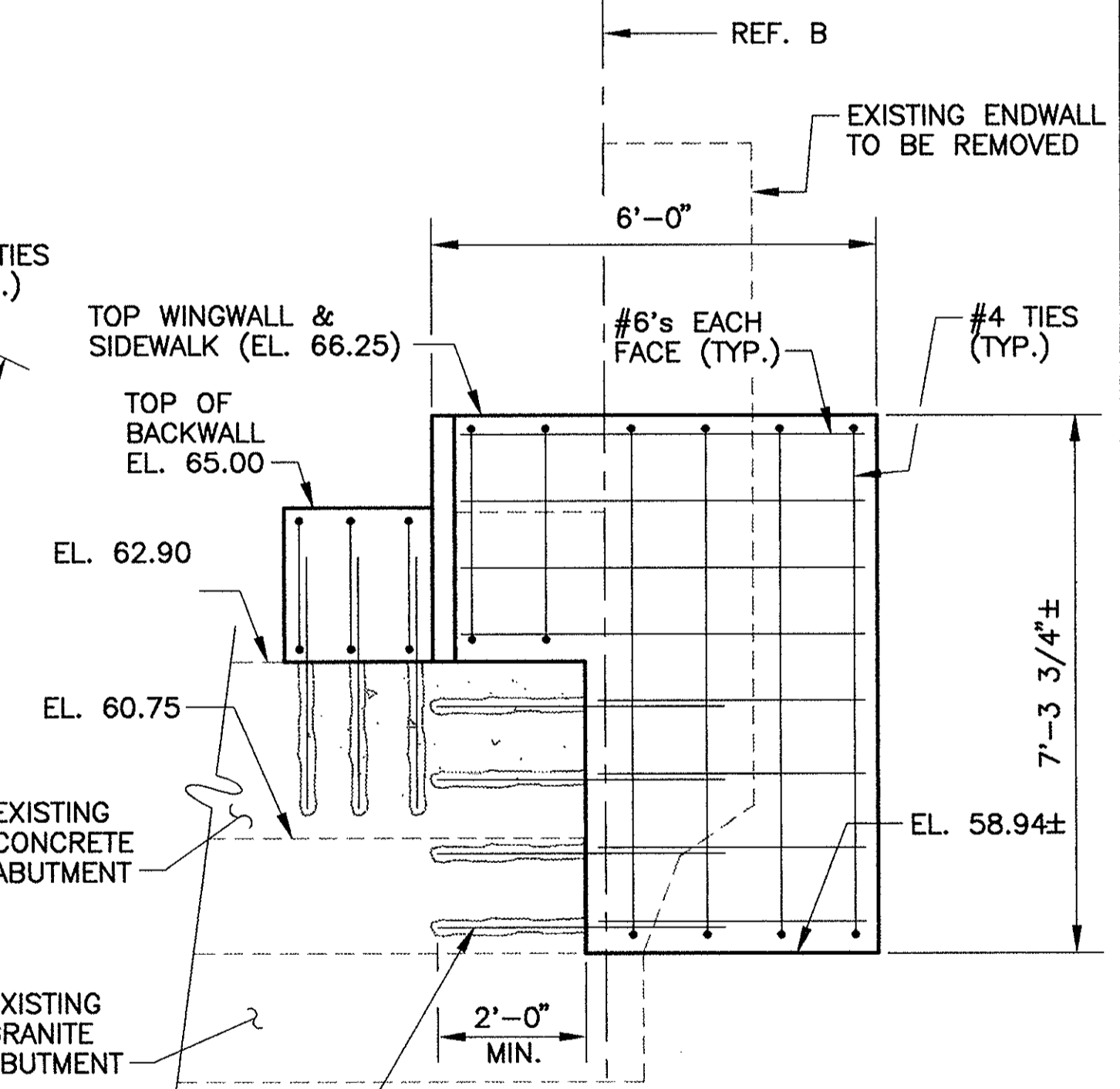
DECK PLAN AT NORTH WEST CORNER
SCALE 3/16" = 1'-0"
SPAN 3



PLAN VIEW @ NORTHEAST WINGWALL
1/2" = 1'-0"



SECTION D-D
RAILING ENDWALL NOT SHOWN
1/2" = 1'-0"



SECTION C-C
RAILING ENDWALL NOT SHOWN

NOTE 'A'
THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 2" CLEAR BETWEEN THE UTILITY POLE AND THE END POST. IF REQUIRED, THE CONTRACTOR SHALL FORM A NOTCH IN THE END POST FULL HEIGHT AND ADJUST THE REINFORCING AS DIRECTED BY THE ENGINEER.

NOTES:
1. FOR RAILING ENDWALL SEE STD. SHT. 68.

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

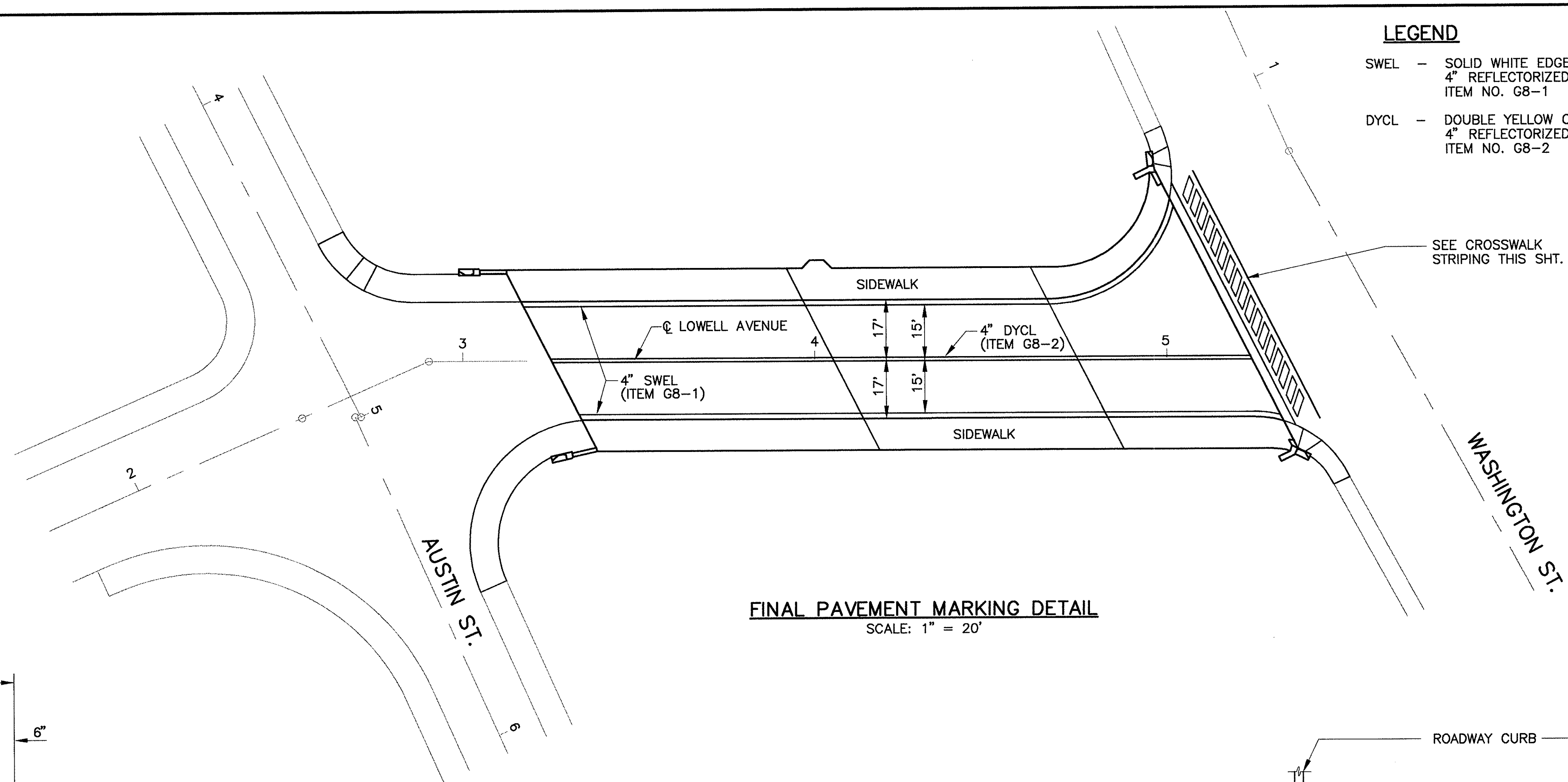
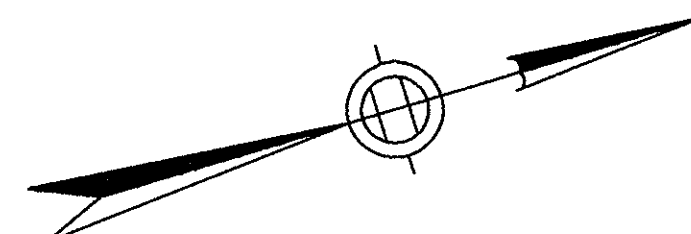
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
NORTH ABUTMENT ENDWALL DETAILS

Scale: AS SHOWN Contract No. 521-024

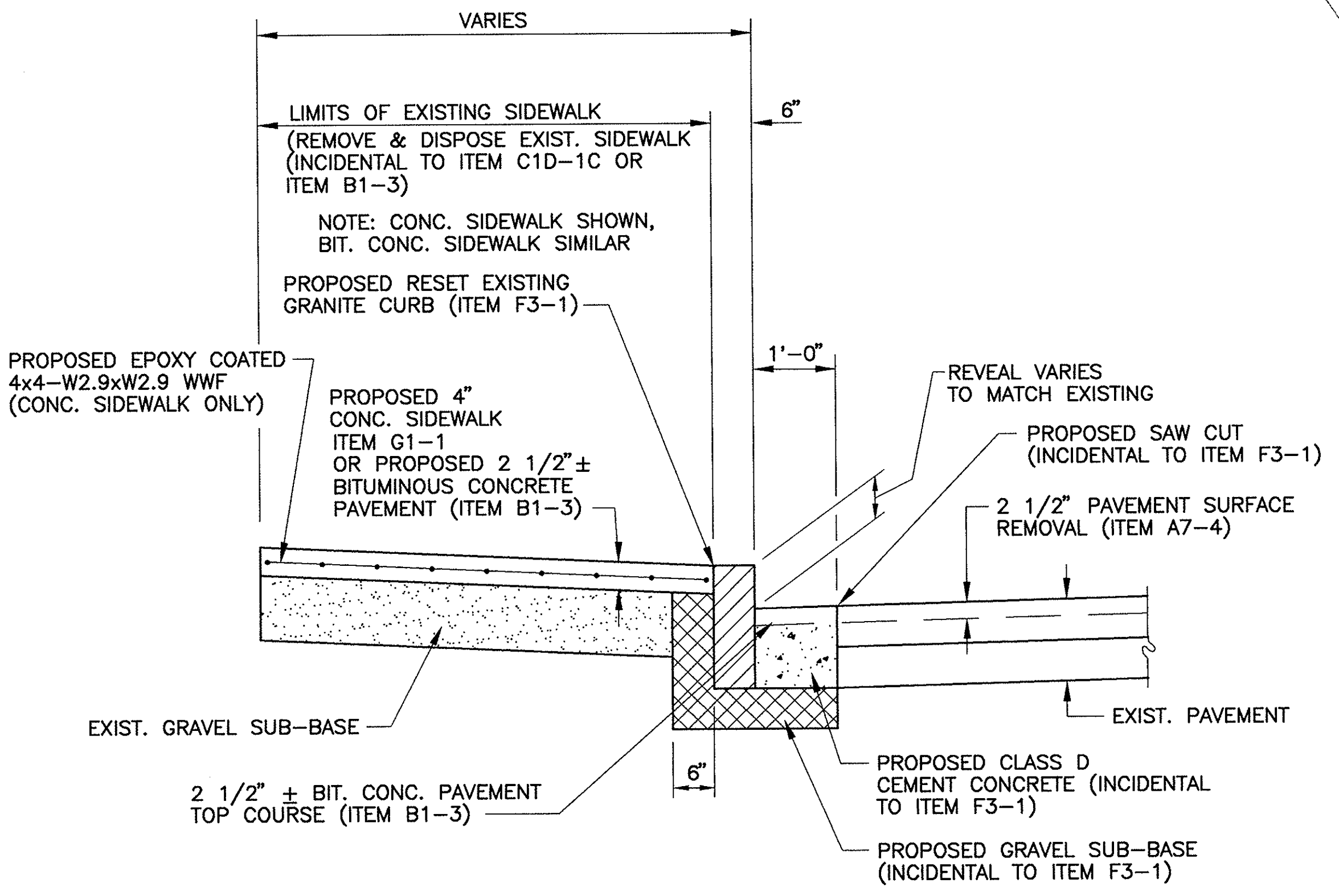
EDWARDS AND KELCEY, INC. Sheet No. 59

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

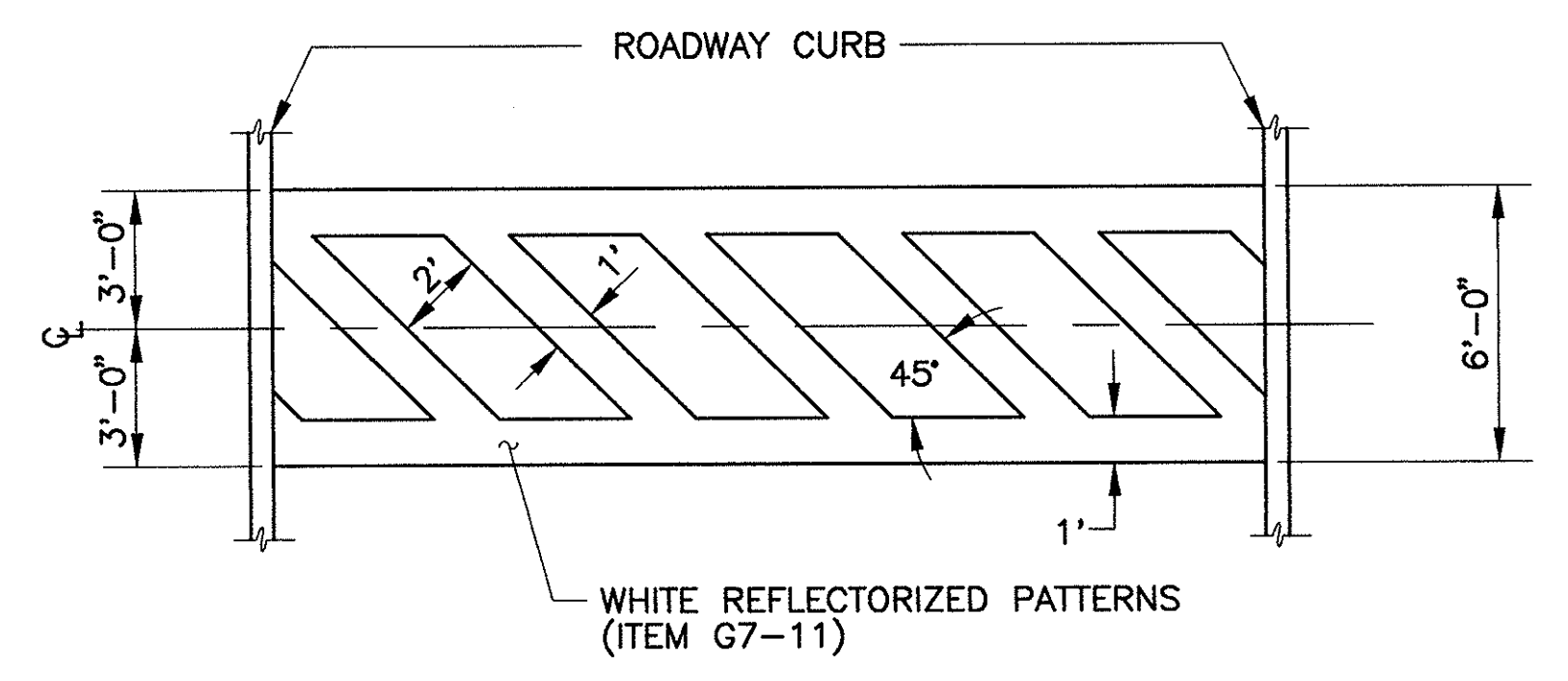


- LEGEND**
- SWEL - SOLID WHITE EDGE LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
ITEM NO. G8-1
 - DYCL - DOUBLE YELLOW CENTER LINE
4" REFLECTORIZED THERMOPLASTIC YELLOW LINE
ITEM NO. G8-2

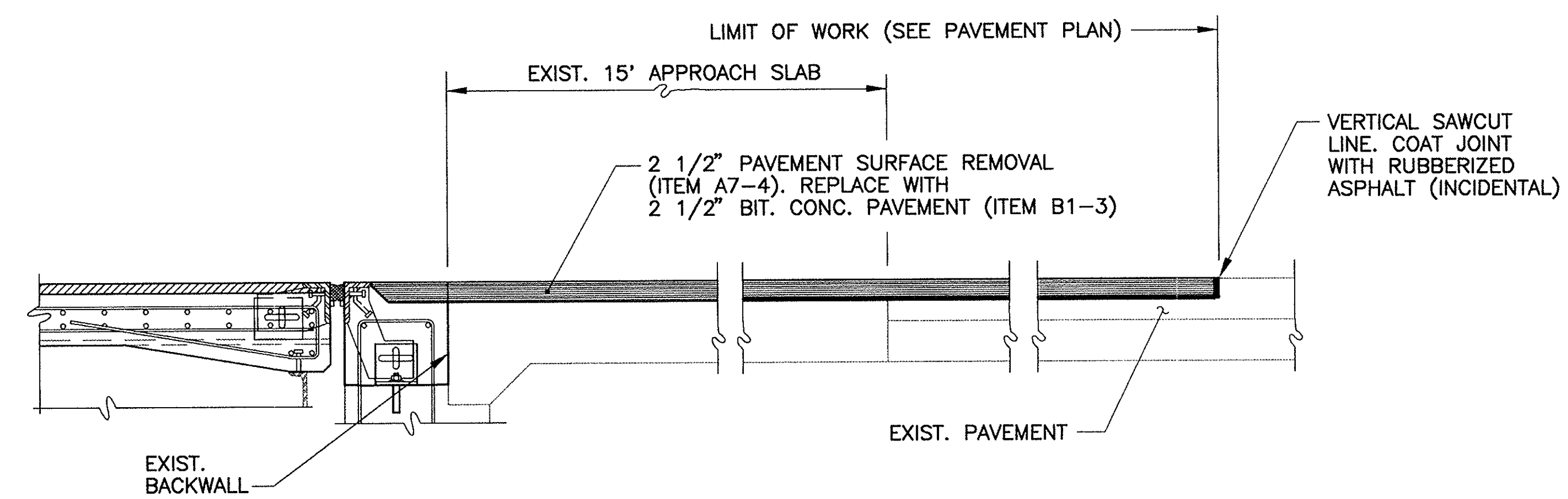
FINAL PAVEMENT MARKING DETAIL
SCALE: 1" = 20'



METHOD OF RESETTING GRANITE CURB AND SIDEWALK DETAIL:
SCALE: 3/4" = 1'-0"



CROSSWALK STRIPING
NOT TO SCALE



PAVEMENT TRANSITION AT ABUTMENTS:
SCALE: 3/4" = 1'-0"

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

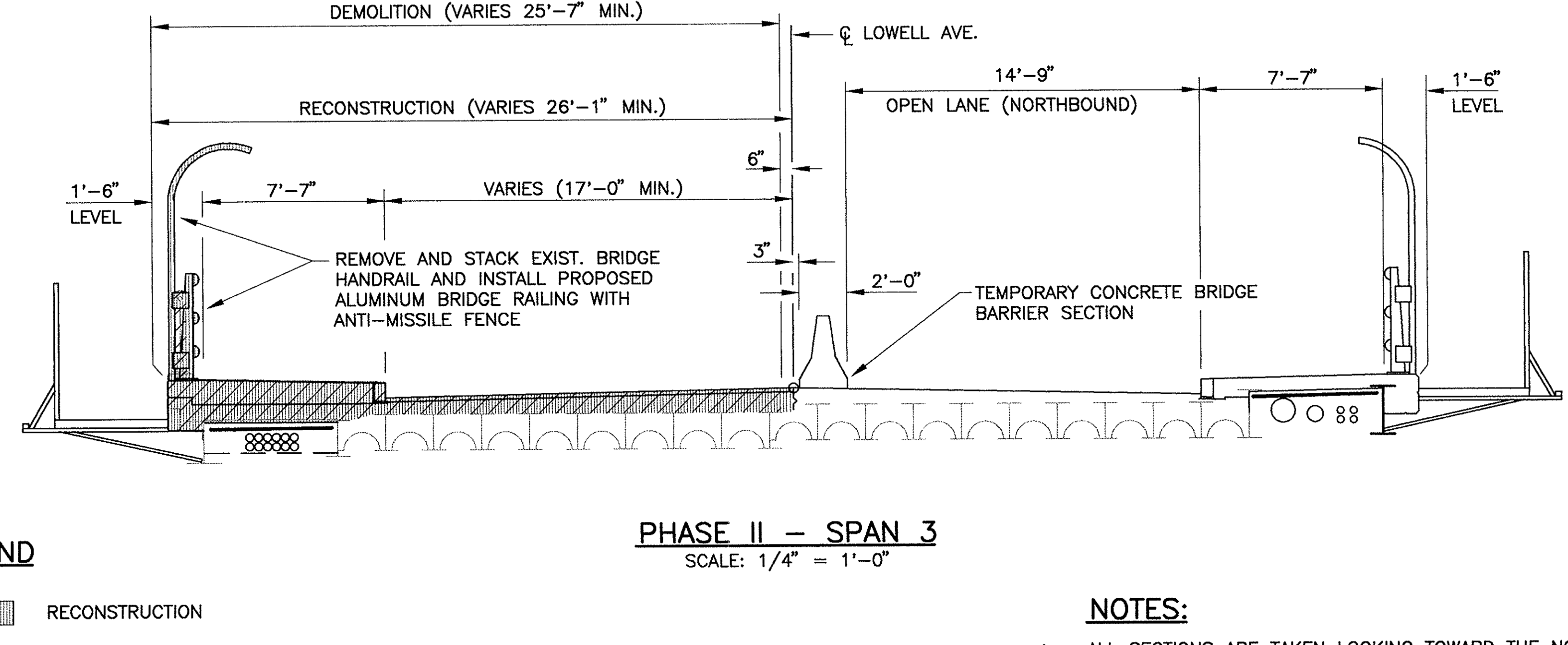
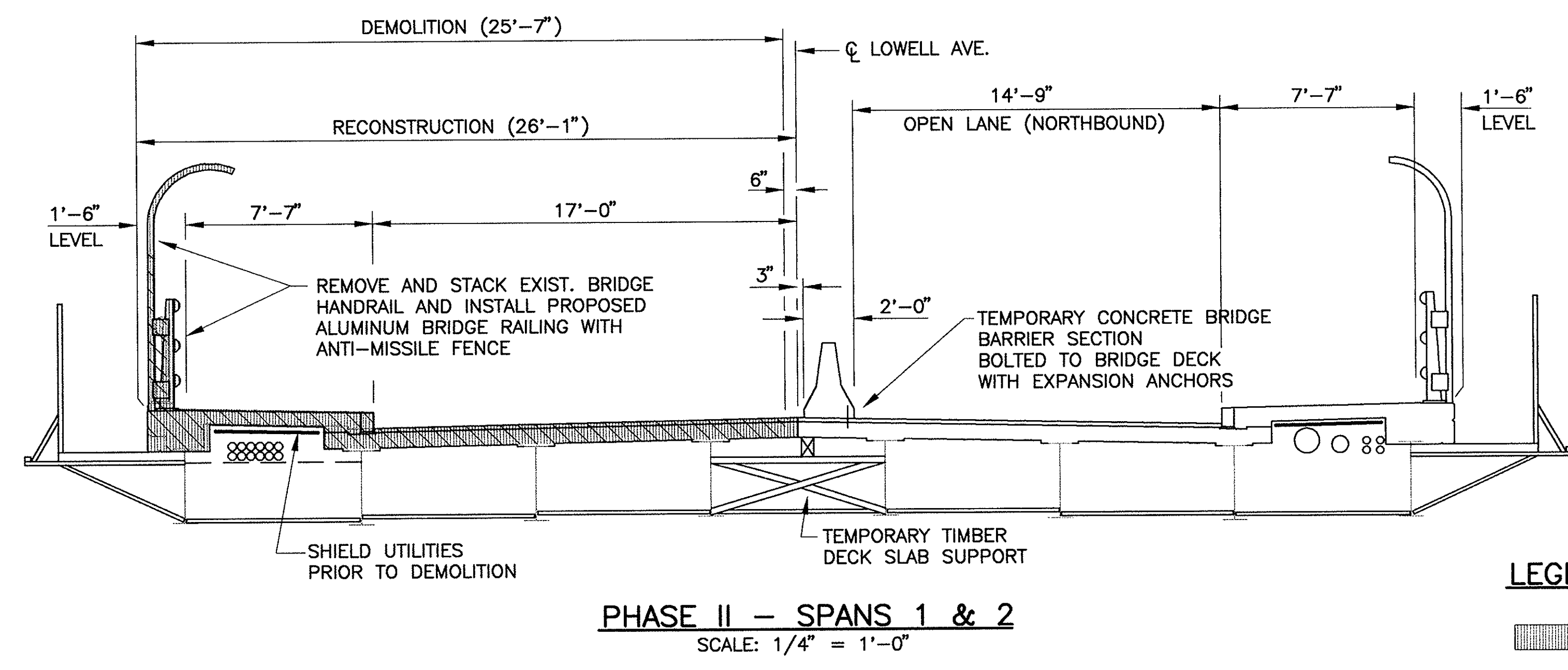
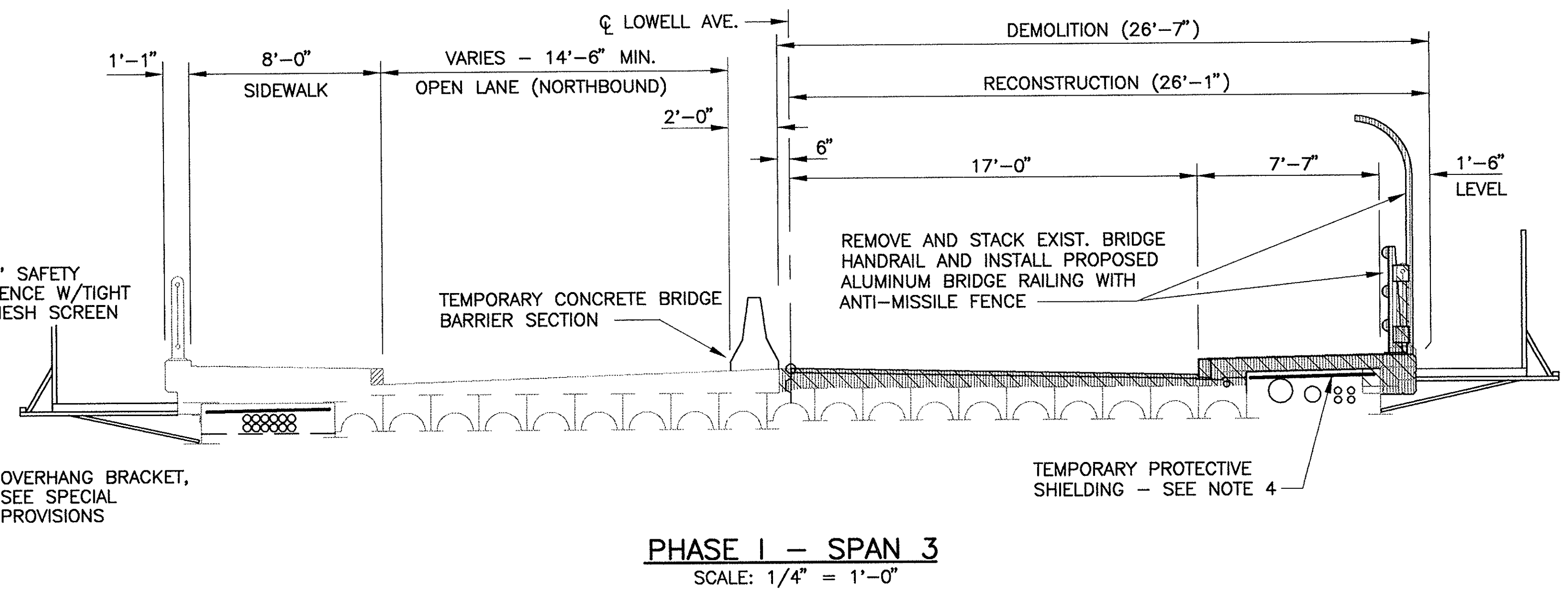
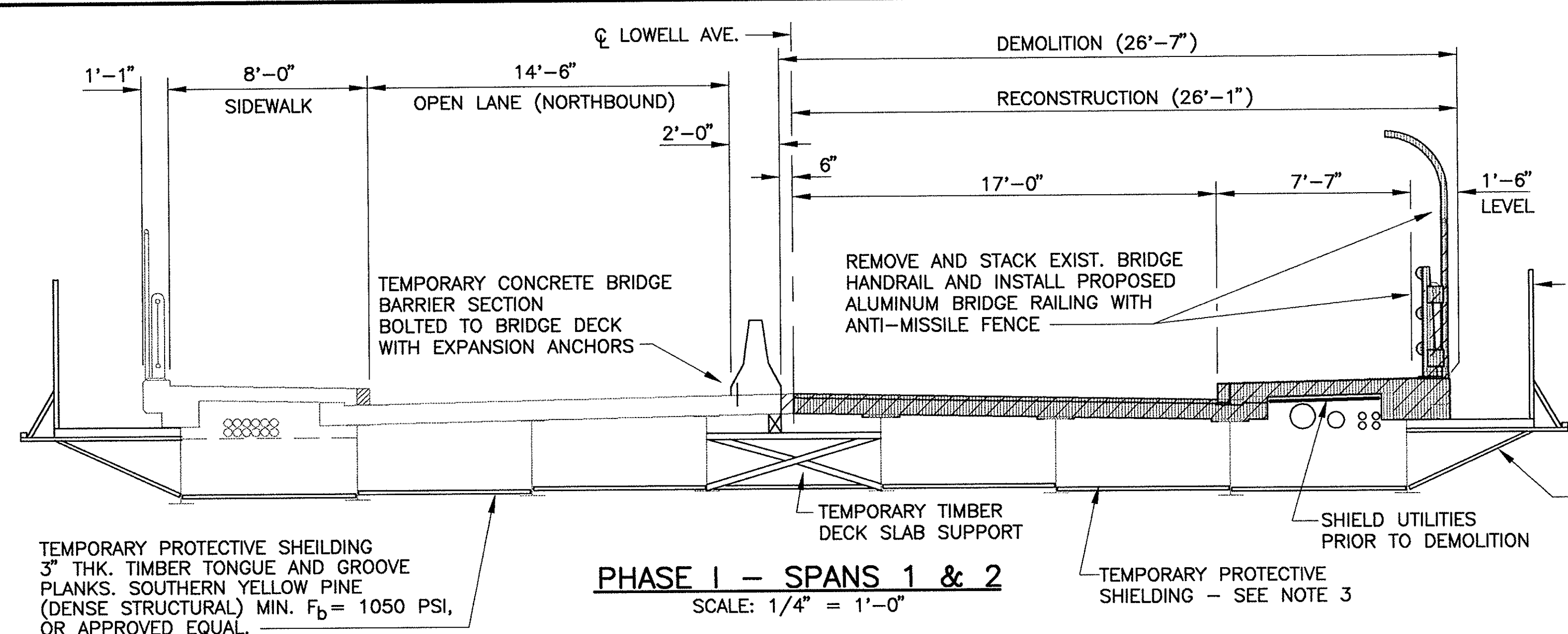
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
PAVEMENT DETAILS

Scale: 1" = 20' Contract No. 521-024

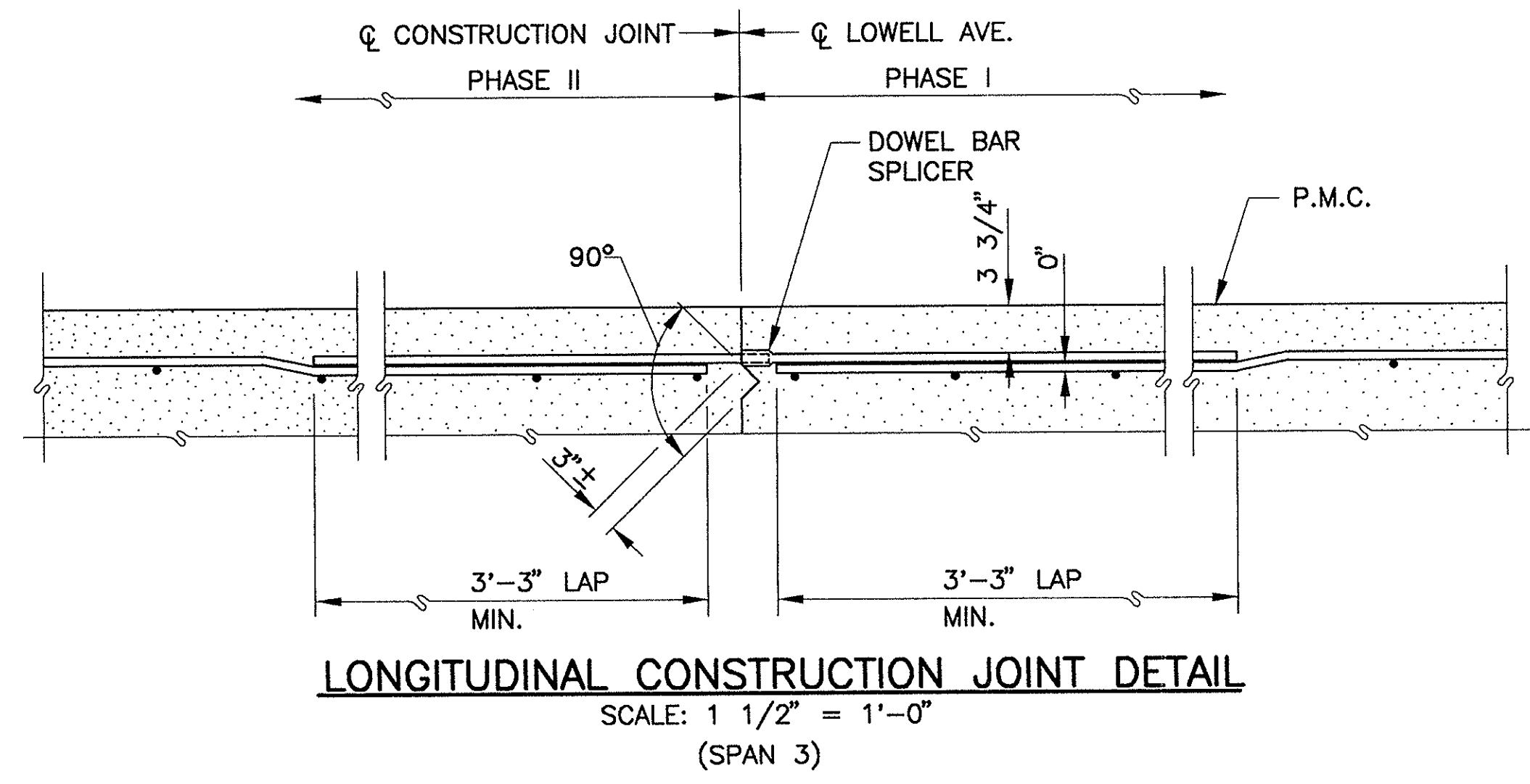
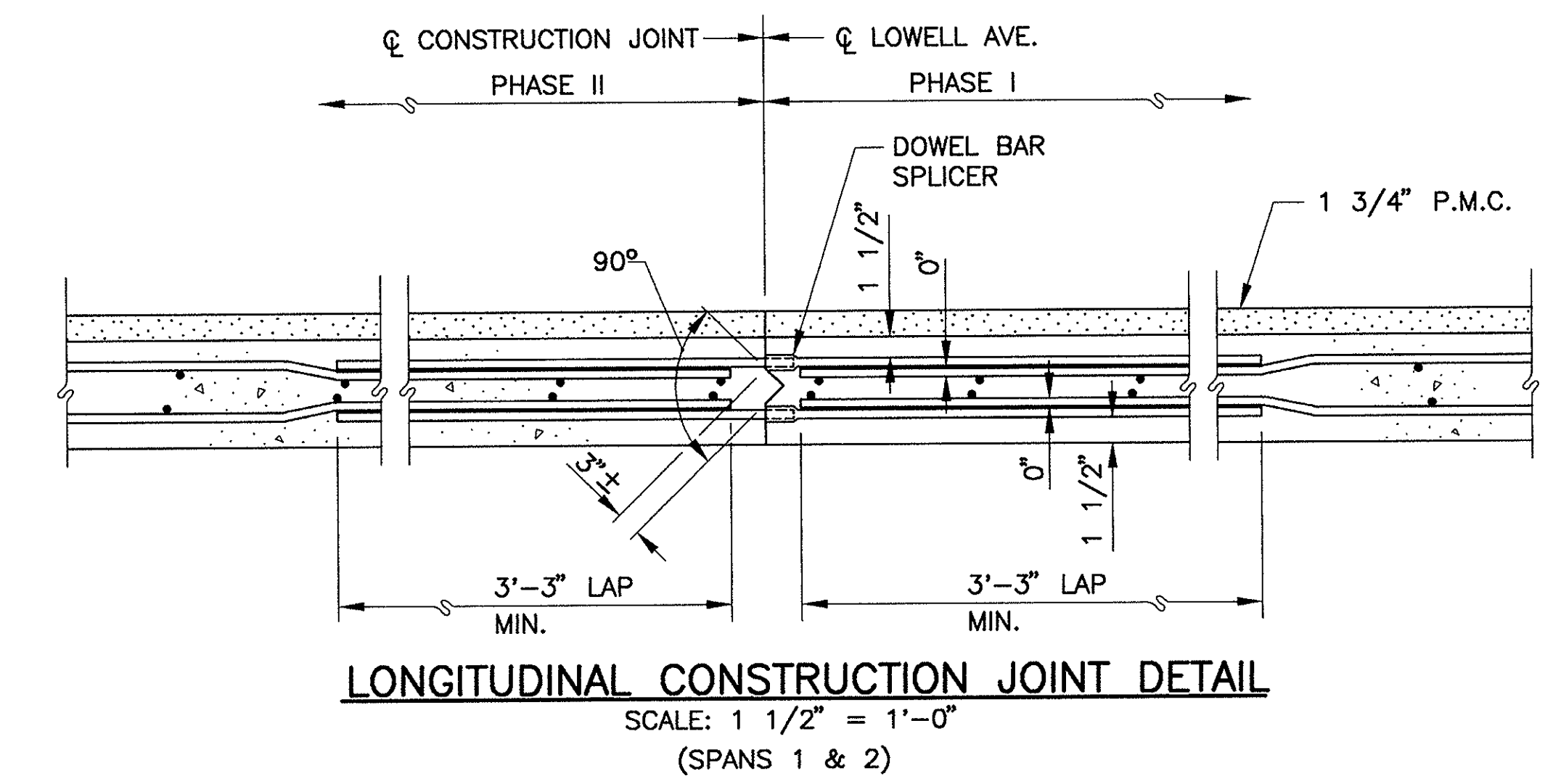
EDWARDS AND KELCEY, INC. Sheet No. 61

DESIGNED BY SUBCONSULTANT: Borrientos and Associates, Inc.



LEGEND

- RECONSTRUCTION
- DEMOLITION



NOTES:

1. ALL SECTIONS ARE TAKEN LOOKING TOWARD THE NORTH ABUTMENT.
2. A TIMBER DECK SLAB SUPPORT SHALL BE FURNISHED AND INSTALLED AT THE LOCATIONS SHOWN. (SEE SPECIFICATIONS FOR DETAILS).
3. AT SPANS 1 & 2 TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN STRINGERS AND AROUND THE FASCIA PRIOR TO ANY DEMOLITION WORK.
4. AT SPAN 3 TEMPORARY PROTECTIVE SHIELDING SHALL BE PLACED BETWEEN STRINGERS AT EXTERIOR UTILITY BAYS ONLY, AND AROUND THE FASCIA PRIOR TO ANY DEMOLITION WORK.
5. TEMPORARY BRIDGE & ROADWAY BARRIERS WILL BE PROVIDED BY THE TURNPIKE AUTHORITY AND TRANSPORTED AND PLACED BY THE CONTRACTOR.

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

AS BUILT

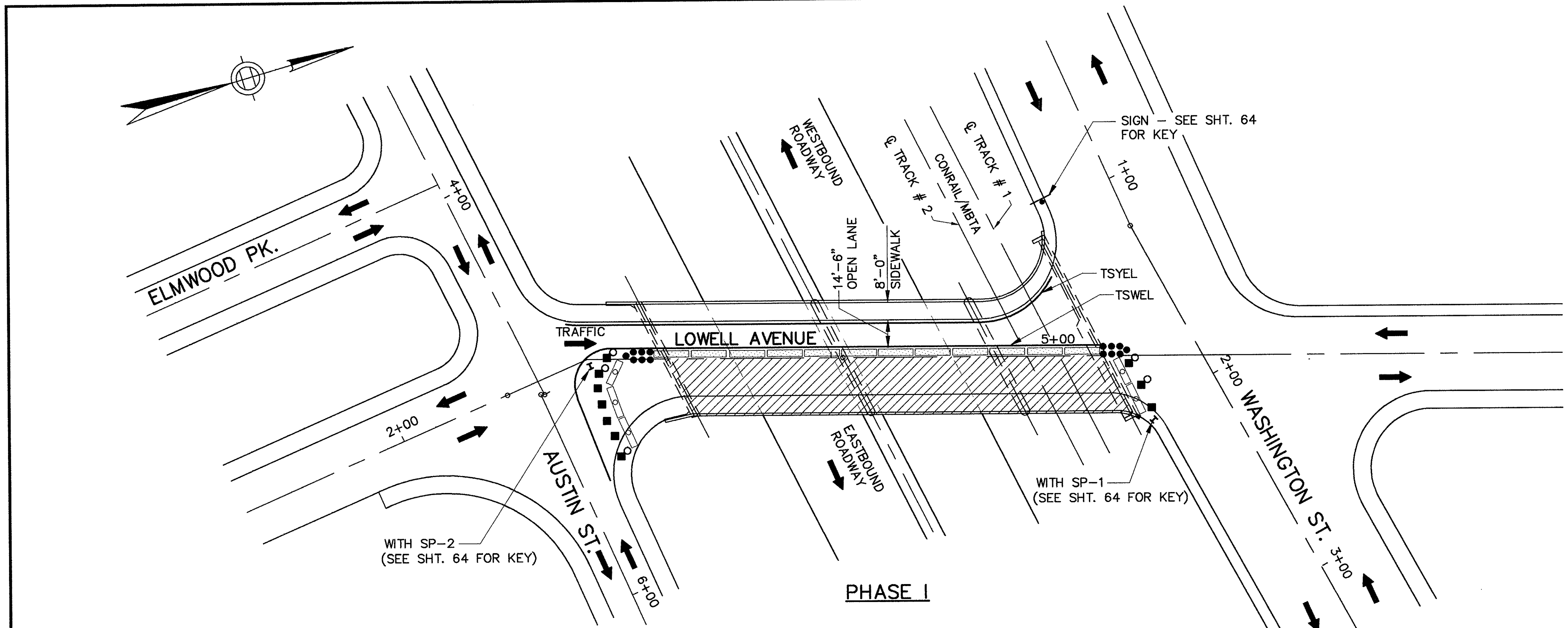
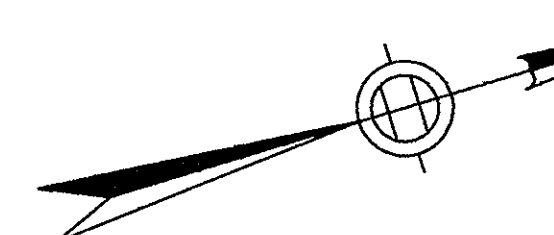
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
SEQUENCE OF CONSTRUCTION

Scale: AS SHOWN Contract No. 521-024

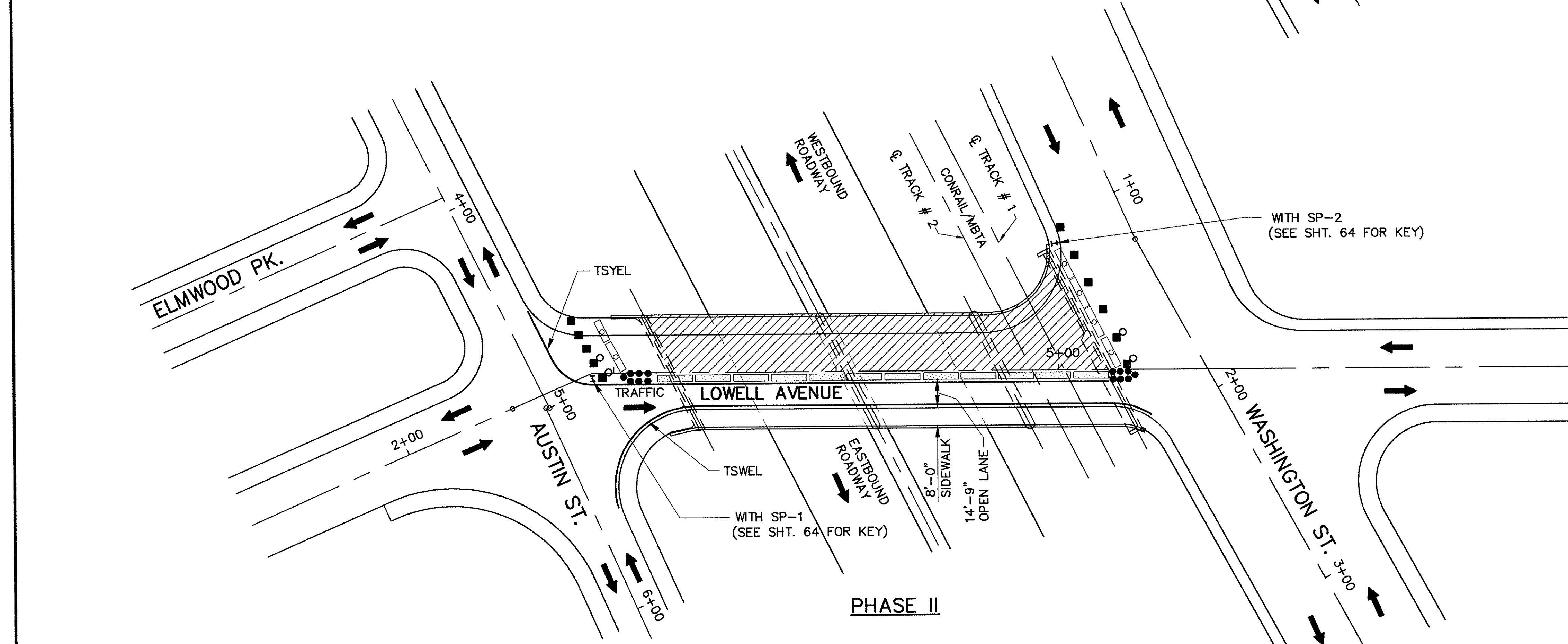
EDWARDS AND KELCEY, INC. Sheet No. 62
The Schrafft Center
329 Main Street
Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



NOTES:

1. TEMPORARY CONCRETE BRIDGE BARRIER SHALL BE PLACED AND BOLTED ON THE BRIDGE DECK ONLY. TEMPORARY CONCRETE ROADWAY BARRIER SHALL BE PLACED AT ALL OTHER LOCATIONS AS SHOWN AND AS DIRECTED BY THE ENGINEER.
2. A FLASHING LIGHT SHALL BE PLACED ON THE FIRST TWO UNITS AT THE APPROACH END OF EACH SEQUENCE OF DRUMS.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING UNAUTHORIZED ACCESS TO THE WORK AREA. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A DESIGN FOR A SAFETY FENCE TO BE CONSTRUCTED TO THE LIMITS SHOWN ON THIS PLAN.
4. ALL EXISTING SIGNS AND PAVEMENT MARKINGS NOT APPLICABLE TO VARIOUS STAGES OF CONSTRUCTION SHALL BE REMOVED OR COVERED AS DIRECTED.
5. THE SEQUENCING OF VARIOUS CONSTRUCTION OPERATIONS WITHIN EACH STAGE SHALL BE APPROVED BY THE ENGINEER.
6. AT THE COMPLETION OF PHASE II CONSTRUCTION THE DETOURS SHALL BE REMOVED AND PERMANENT PAVEMENT MARKINGS INSTALLED AS SHOWN ON SHEET 61, OR AS DIRECTED BY THE ENGINEER.



LEGEND

- WORK AREA
- TEMPORARY CONCRETE BRIDGE BARRIERS WITH REFLECTORIZED MARKERS
- TEMPORARY CONCRETE ROADWAY BARRIERS WITH STEADY BURN LIGHTS AND REFLECTORIZED MARKERS
- REFLECTORIZED DRUMS WITH STEADY BURN LIGHTS AT 20' O.C.
- REFLECTORIZED DRUMS WITH FLASHING LIGHTS AT 20' O.C.
- DIRECTION OF TRAFFIC
- INERTIAL BARRIER SYSTEM (SEE SPECIFICATIONS)
- TYPE II BARRICADE
- 4" TEMPORARY PAVEMENT MARKING TAPE
- TSWEL TEMPORARY SOLID WHITE EDGE LINE
- TSYEL TEMPORARY SOLID YELLOW EDGE LINE

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

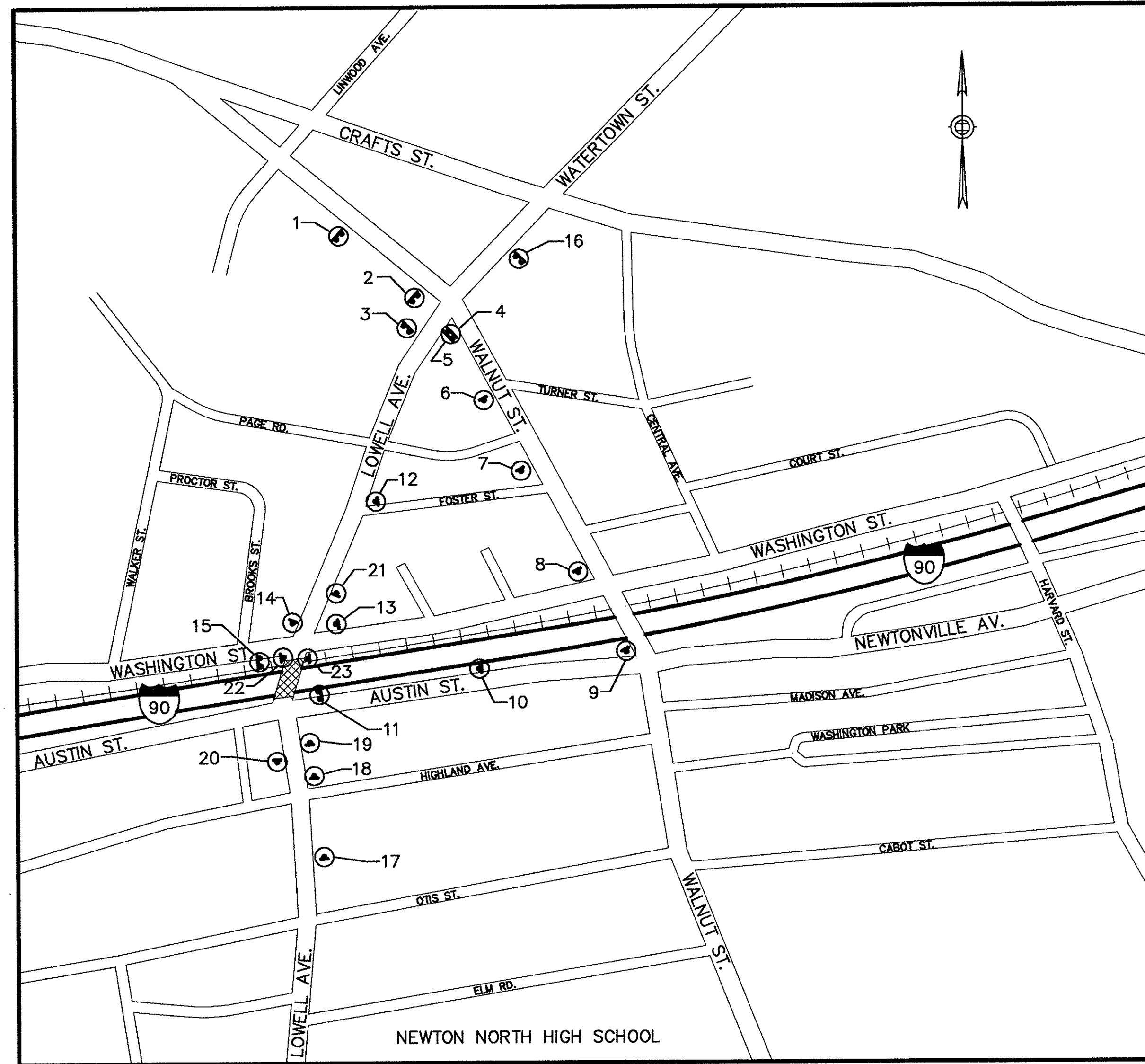
BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
TRAFFIC PHASING PLAN

Scale: 1" = 30' Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. **63**

The Schroll Center
529 Main Street
Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



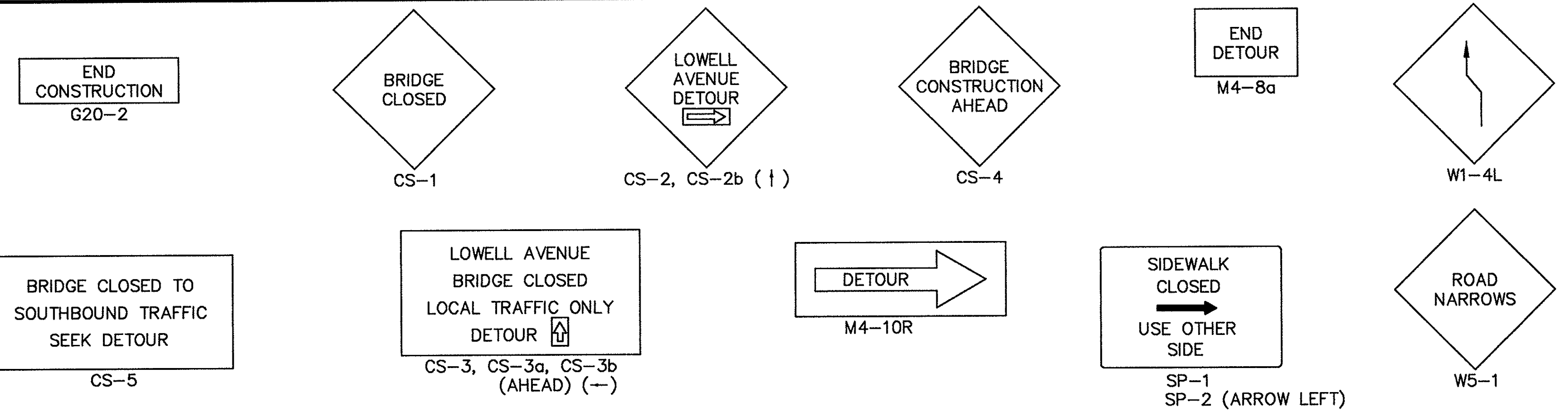
DETOUR PLAN

NOT TO SCALE

CONSTRUCTION SIGN LOCATION SCHEDULE

LOCATION NO.	SIGNS REQUIRED	LOCATION NO.	SIGNS REQUIRED
①	CS-3a	⑫	CS-1, M4-10R
②	CS-3	⑬	CS-1, M4-10R
③	CS-5	⑭	CS-1
④	CS-3b	⑮	CS-3
⑤	CS-2	⑯	CS-3a
⑥	CS-2b	⑰	CS-4
⑦	CS-2b	⑱	W5-1
⑧	CS-2b	⑲	W1-4L (PHASE I ONLY)
⑨	CS-2	⑳	M4-8a, G20-2
⑩	CS-2b	㉑	G20-2
⑪	CS-3b	㉒	SP-4
		㉓	SP-3

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
				DESIGNED:	T.A.Z. 12/93
				DRAWN:	S.B.S. 12/93
				CHECKED:	L.M.B. 12/93



IDENTIFICATION NUMBER	SIZE OF SIGN		TEXT	TEXT DIMENSIONS (INCHES)			MINIMUM NUMBER OF SIGNS REQUIRED	COLOR		
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR.		BACK-GROUND	LEGEND	BORDER
CS-1	48"	48"	BRIDGE CLOSED	7"C 7"C	4 3/4"		3	ORANGE	BLACK	BLACK
CS-2	48"	48"	LOWELL AVENUE DETOUR	6"C 6"C 6"C	4"	10"x 6" @ 180?	2	ORANGE	BLACK	BLACK
CS-2b	48"	48"	LOWELL AVENUE ↑ DETOUR	6"C 6"C 6"C	4"	10"x 6" @ 90?	4	ORANGE	BLACK	BLACK
CS-3	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR ↑	5"C 5"C 5"C	3" 3" 3"	5"x 8.33" @ 90?	2	ORANGE	BLACK	BLACK
CS-3a	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR AHEAD	5"C 5"C 5"C	3" 3" 3"		2	ORANGE	BLACK	BLACK
CS-3b	72"	36"	LOWELL AVENUE BRIDGE CLOSED LOCAL TRAFFIC ONLY DETOUR ↓	5"C 5"C 5"C	3" 3" 3"	5"x 8.33" @ 180?	2	ORANGE	BLACK	BLACK
CS-4	48"	48"	BRIDGE CONSTRUCTION AHEAD	7"C 7"C 7"C	4 3/4" 4 3/4"		1	ORANGE	BLACK	BLACK
CS-5	72"	30"	BRIDGE CLOSED TO SOUTHBOUND TRAFFIC SEEK DETOUR	5"C 5"C 5"C	3" 3"		1	ORANGE	BLACK	BLACK
M4-10R	48"	18"	DETOUR	SEE FHWA STANDARD HIGHWAY SIGNS 1979			2	SEE M.U.T.C.D. 1988		
M4-8a	24"	18"	END DETOUR				1			
W1-4L	30"	30"					1			
W5-1	36"	36"	ROAD NARROWS				1			
G20-2	60"	24"	END CONSTRUCTION				2			
SP-1	24"	18"	SIDEWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 180?	1	WHITE	BLACK	BLACK
SP-2	24"	18"	SIDEWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 0?	1	WHITE	BLACK	BLACK
SP-3	24"	18"	CROSSWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 180?	1	WHITE	BLACK	BLACK
SP-4	24"	18"	CROSSWALK CLOSED USE OTHER SIDE	2"C 2"C 2"C	1" 1" 1"	2"x 8" @ 0?	1	WHITE	BLACK	BLACK

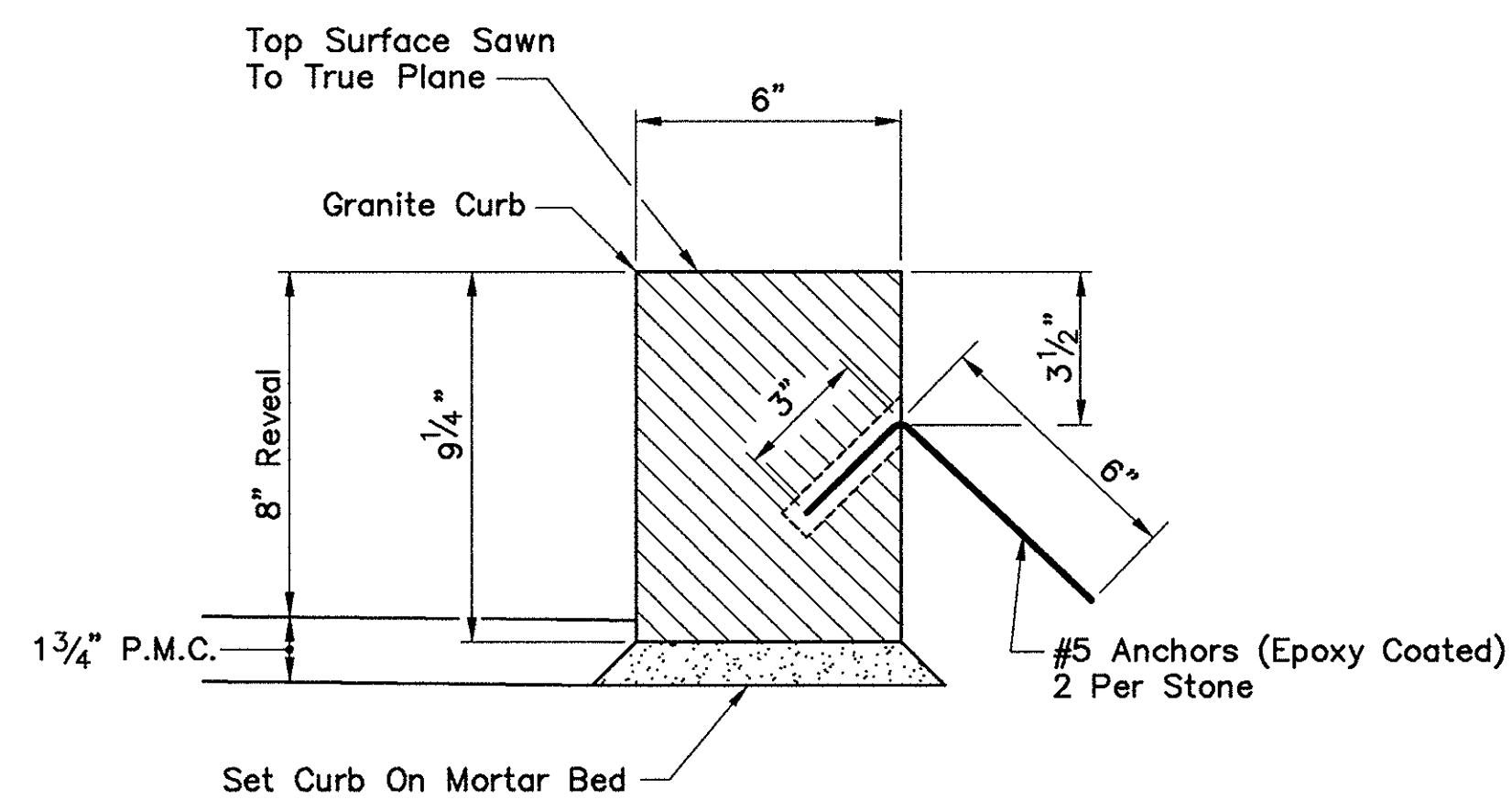
GENERAL NOTE:
ALL TRAFFIC CONTROL DEVICES, UNLESS OTHERWISE NOTED, SHALL CONFORM TO APPLICABLE SPECIFICATIONS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" PART VI AND "STANDARD HIGHWAY SIGNS", CURRENT EDITION.

- NOTES:**
- SIGN LOCATIONS TO BE DETERMINED BY THE ENGINEER IN THE FIELD.
 - ALL DETOUR SIGNING TO BE PLACED PRIOR TO PHASE I AND MAINTAINED BY THE CONTRACTOR UNTIL THE PROJECT IS COMPLETED.
 - MISSING OR DAMAGED SIGNS SHALL BE REPLACED IMMEDIATELY AT NO COST TO THE AUTHORITY.
 - SEE SHEET 63 FOR SIGNS SP-1 & SP-2 LOCATION.

AS BUILT

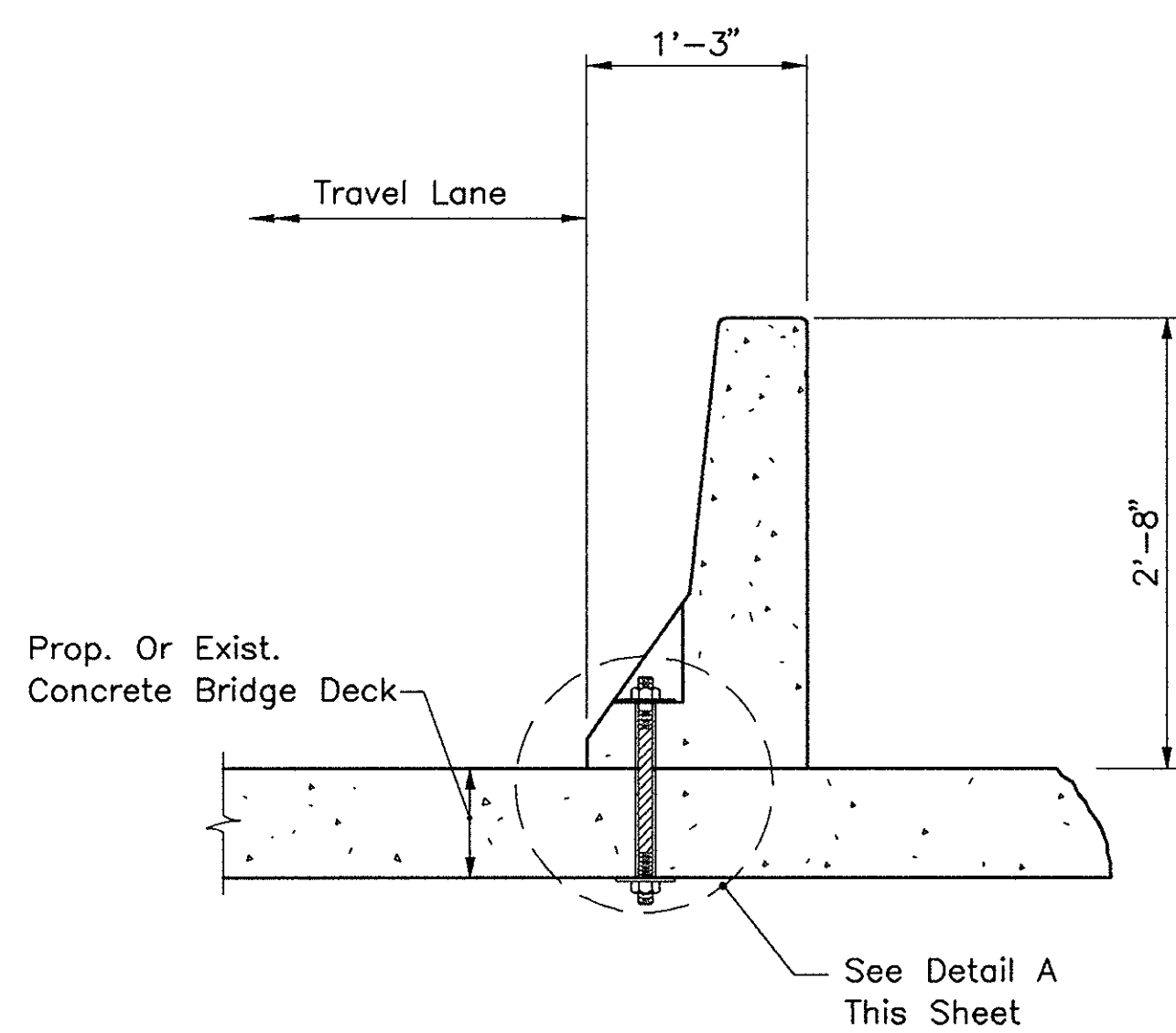
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
TRAFFIC DETOUR PLAN AND SIGNING
 Scale: NOT TO SCALE Contract No. 521-024
 EDWARDS AND KELCEY, INC. Sheet No. 64
 329 Main Street
 Boston, Massachusetts 02129

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



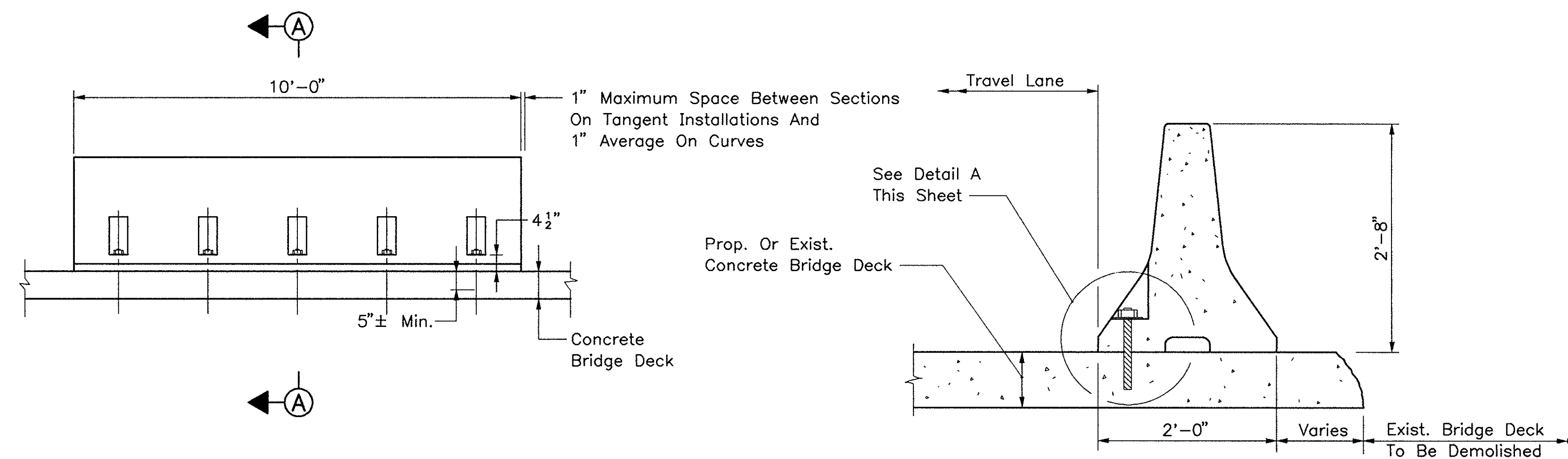
GRANITE BRIDGE CURB AND TYPE VA-5 CURVED CURB DETAIL

(ITEM F1-7 AND ITEM F1-6)
SCALE: 3" = 1'-0"



**TEMPORARY SINGLE FACE
CONCRETE BRIDGE BARRIER SECTION**

SCALE: 1" = 1'-0"

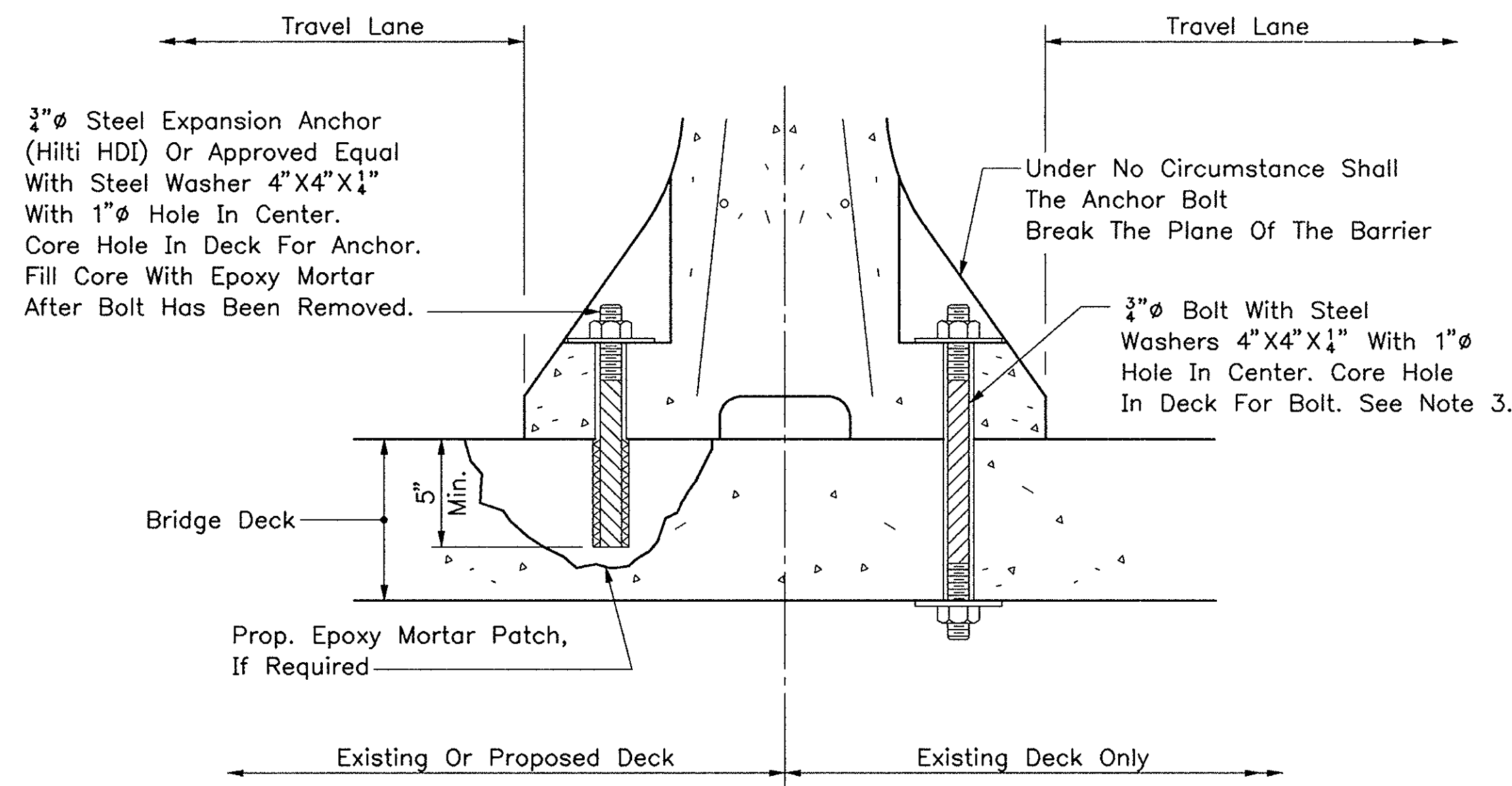


TEMPORARY CONCRETE BRIDGE BARRIER ELEVATION

1/2" = 1'-0"

SECTION A-A

1" = 1'-0"



**DETAIL A
(Barrier Mounted On Existing
Or Proposed Structure)**

2" = 1'-0"

TEMPORARY CONCRETE BRIDGE BARRIER DETAILS

2" = 1'-0"

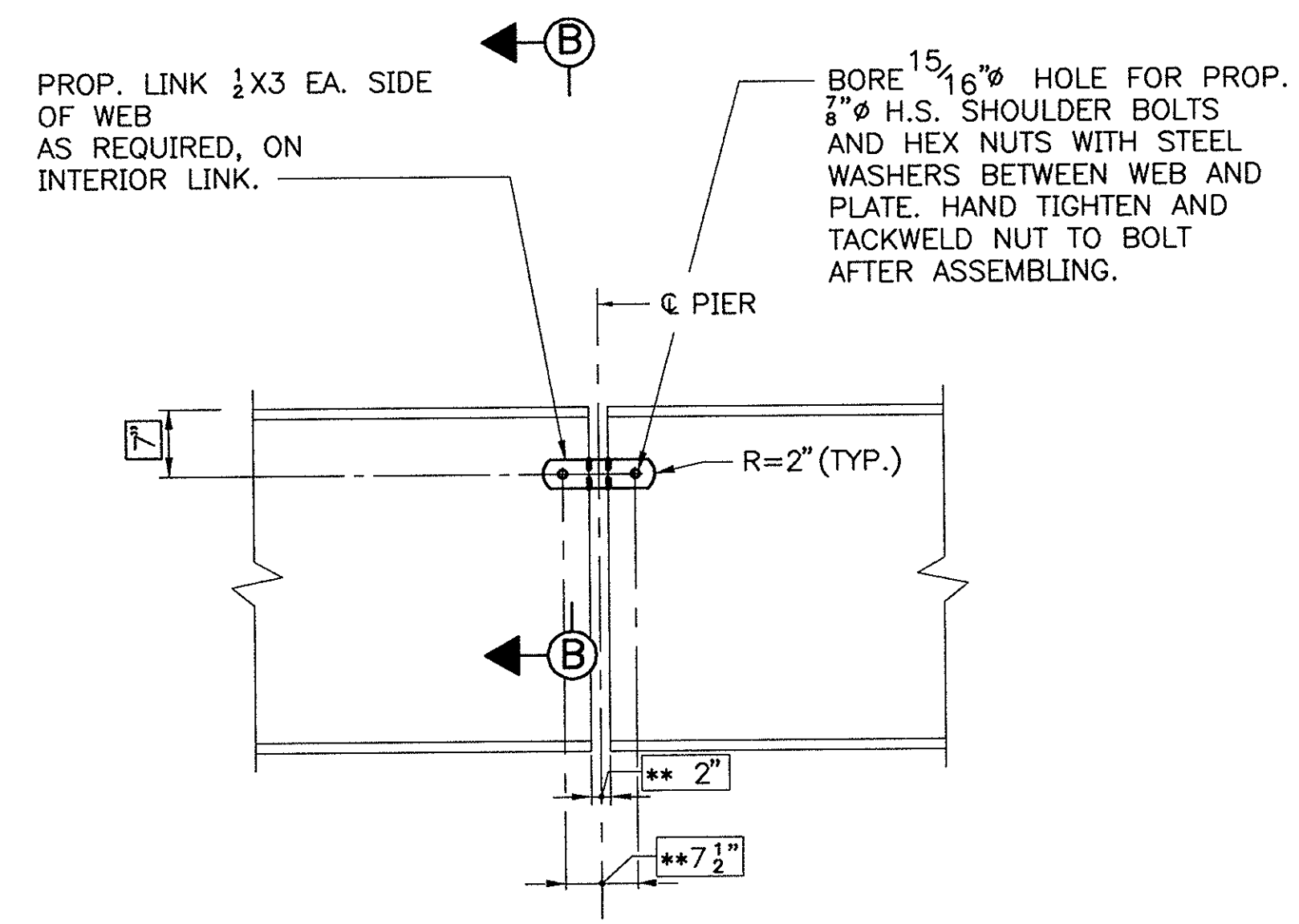
NOTES

- Expansion Anchors Installed On Existing Deck Are To Be Of Steel Conforming To ASTM A108. Those Installed On Proposed Deck Are To Be Of Stainless Steel Conforming To AISI Type 303.
- Bolts And Nuts Shall Conform To A.S.T.M. A307.
- Where The Through Bolt Interferes With The Top Flange Of A Stringer, Use The Expansion Anchor Detail Shown For The Proposed Deck.
- After The Barrier Is Removed, The Contractor Shall Remove The Stainless Steel Bolts And Patch The Holes In The New Deck With Epoxy Mortar To The Satisfaction Of The Engineer.
- All Temporary Single Face Concrete Bridge Barriers, Temporary Double Face Concrete Bridge Barriers, and Temporary Double Face Concrete Roadway Barriers Will Be Furnished By The Authority, And Transported And Placed By The Contractor.
- Connecting Rods For Roadway Barriers Shall Be Furnished By The Contractor and Shall Not Extend Above The Top Of The Barrier.

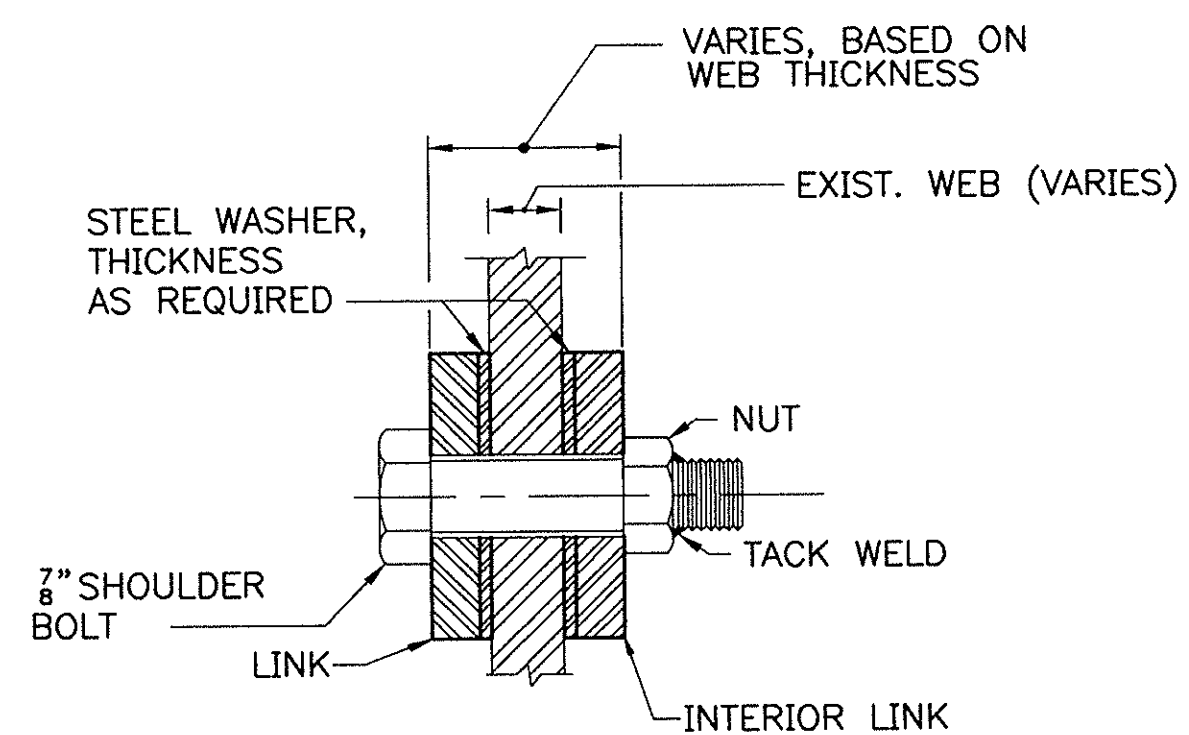
NO.	REVISION	BY	DATE
1	DELETED SPECIAL BR. CURB	E&K	12/93
2	ADDED BR. CURB & SINGLE FACE BARRIER	E&K	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
BRIDGE CURB & TEMPORARY CONCRETE BARRIER DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 65



LINK REPLACEMENT DETAIL (ITEM C7-3)
 3/4" = 1'-0"



SECTION B-B
 HALF SIZE

LINK REPLACEMENT NOTES

1. ** DIMENSIONS ARE FROM M.T.A. STANDARDS, DATED 1954. CONTRACTOR MUST VERIFY, IN FIELD, PRIOR TO FABRICATION.
2. EXISTING BOLT HOLES IN WEB SHALL BE FILLED WITH WELD AND REBORED.
3. NEW BOLTS AND NUTS SHALL CONFORM TO A.S.T.M. A325 HIGH STRENGTH BOLTS.
4. LINK REPLACEMENT, IF REQUIRED, SHALL BE AS DIRECTED BY THE ENGINEER.
5. REPLACE ONE LINK ASSEMBLY AT A TIME.

NOTES

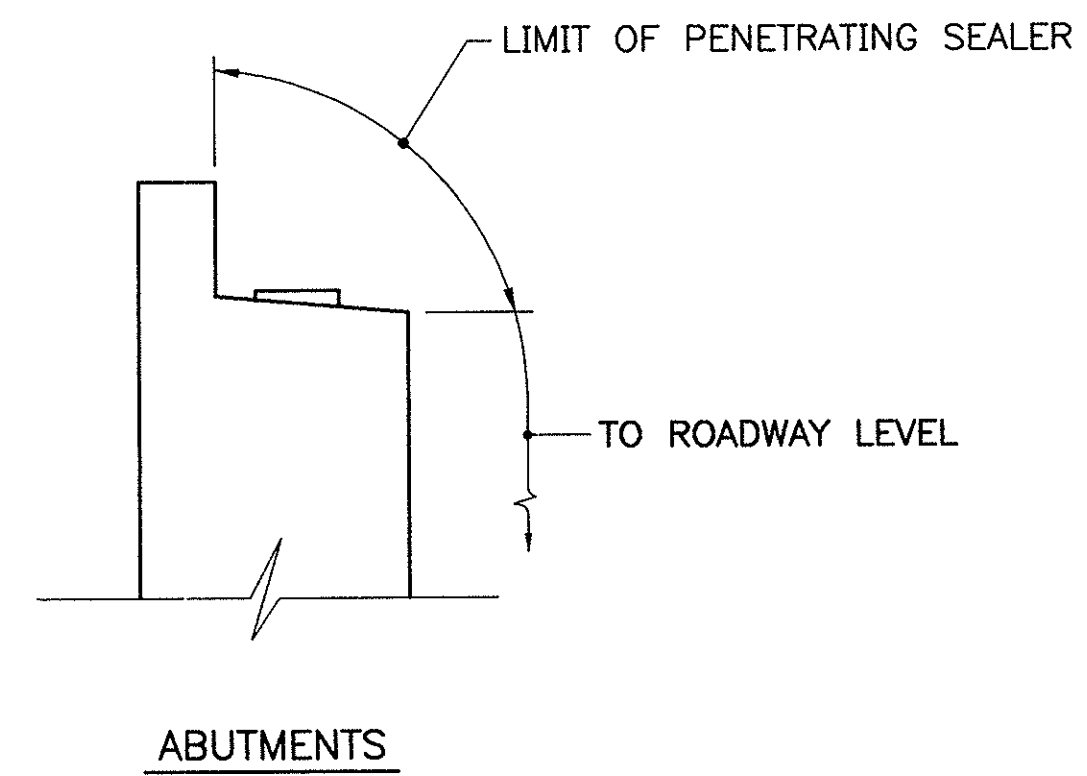
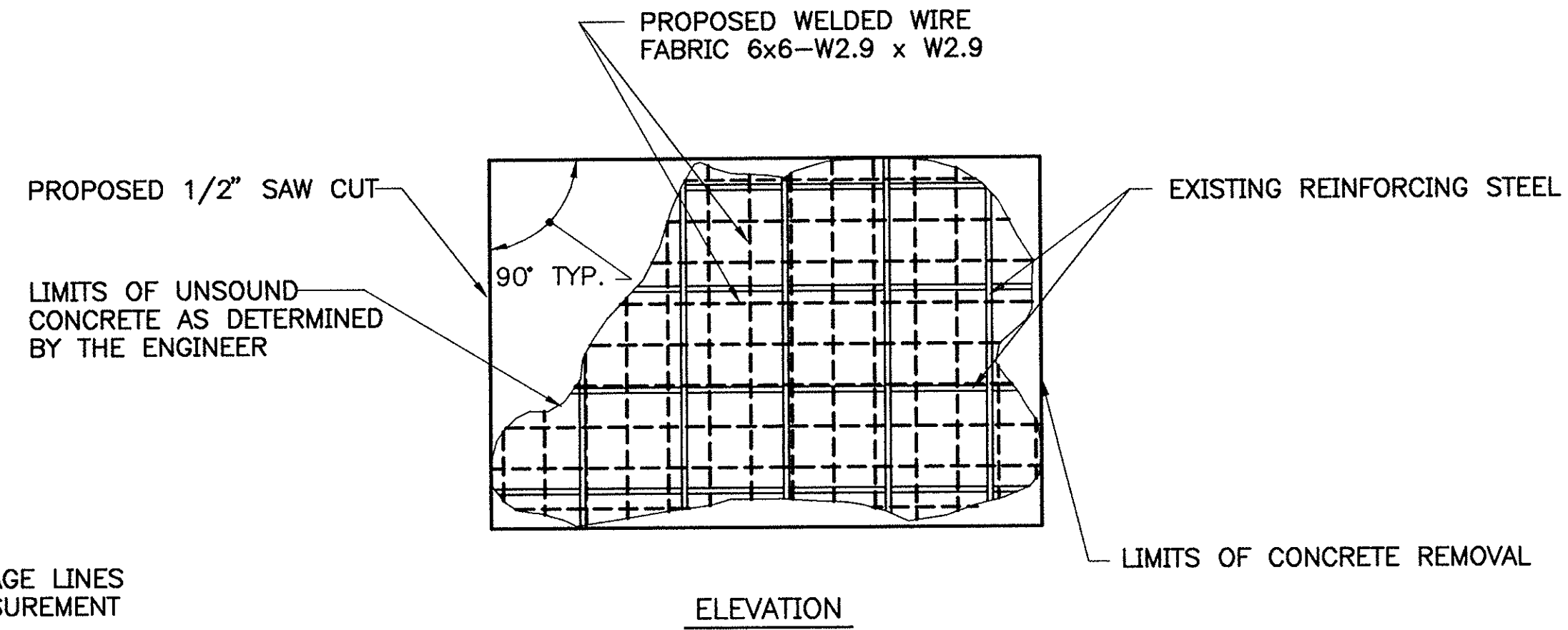
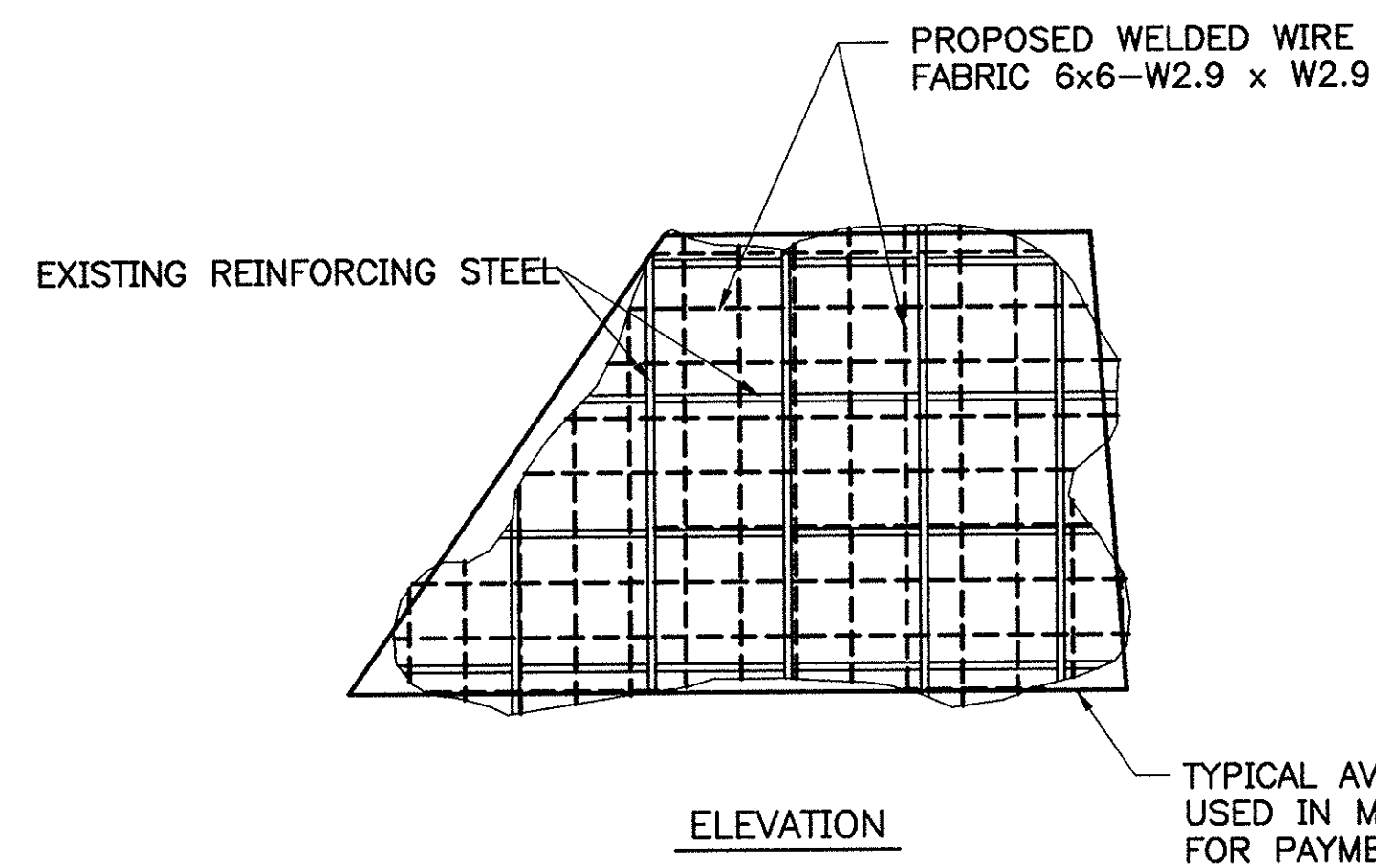
1. FOR DESCRIPTION, MATERIALS AND CONSTRUCTION METHODS, SEE SPECIFICATIONS.

NO.	REVISION	BY	DATE



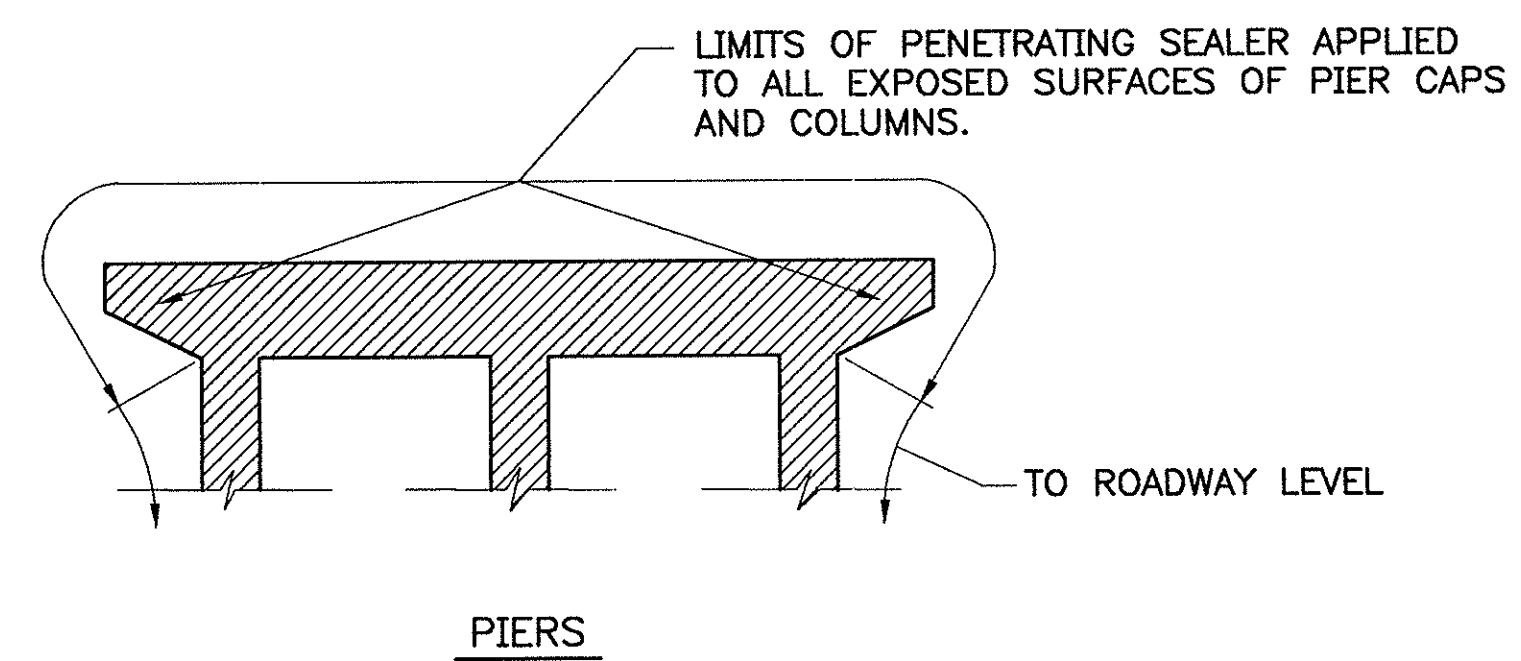
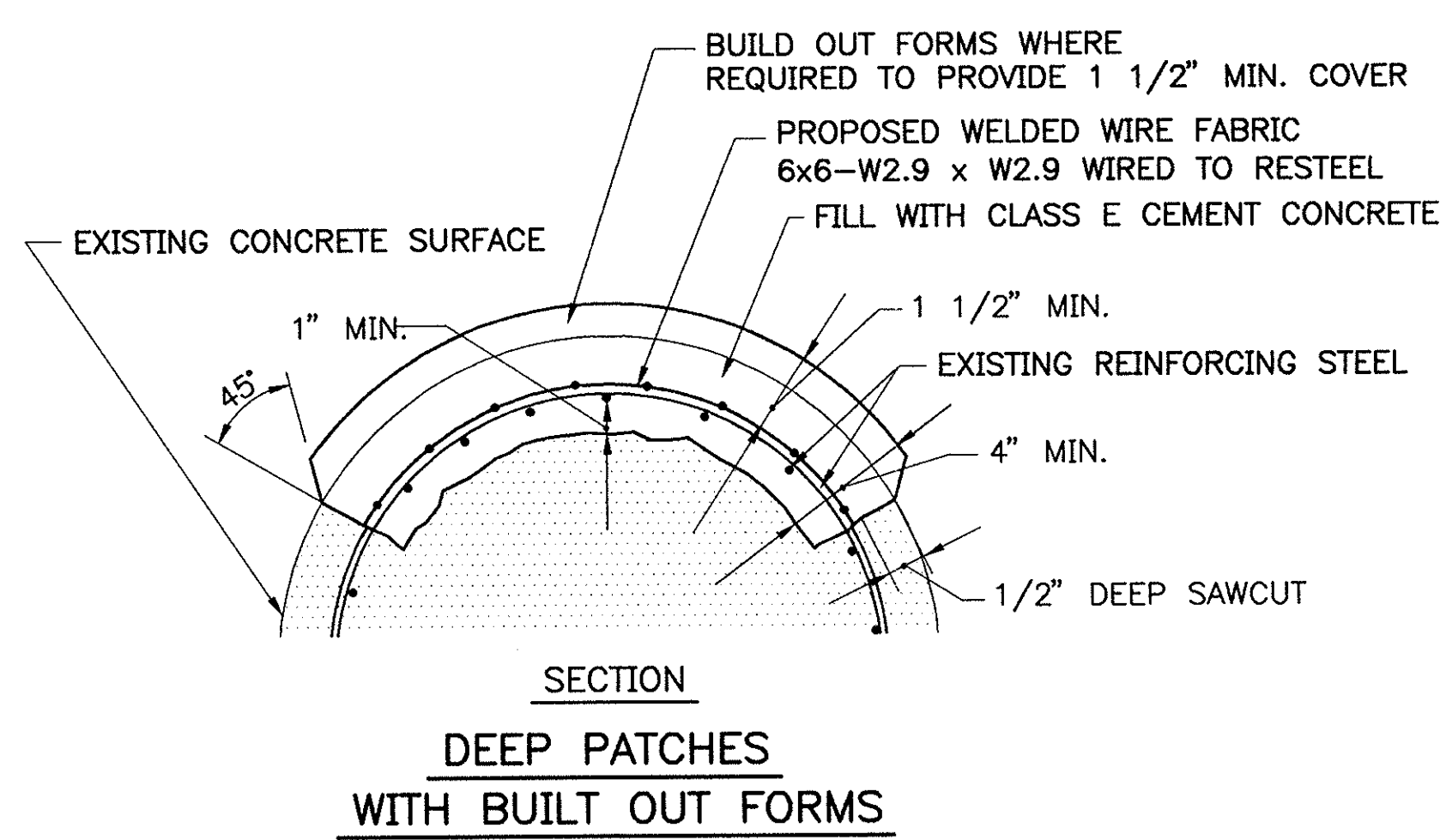
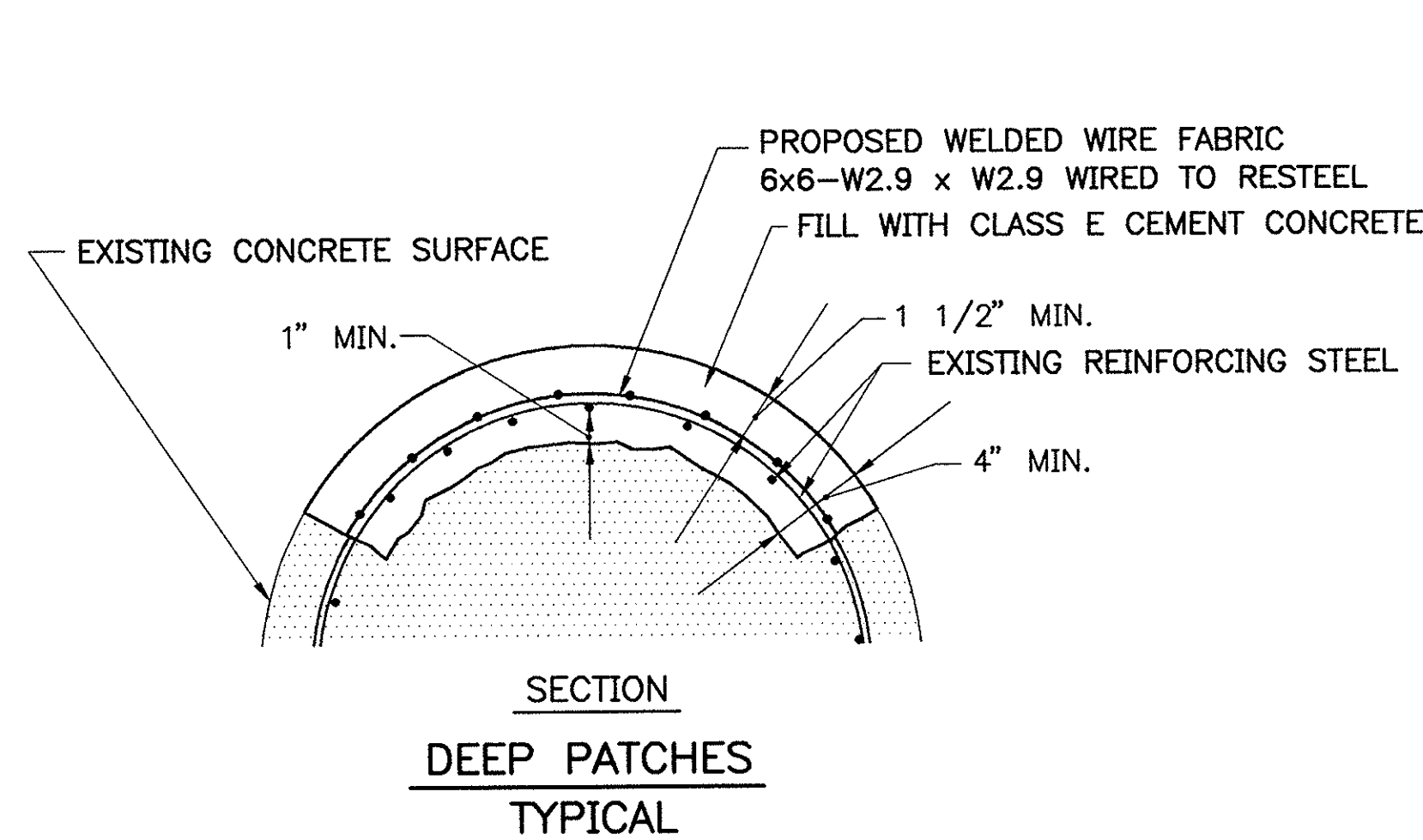
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
STRUCTURAL STEEL DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 66

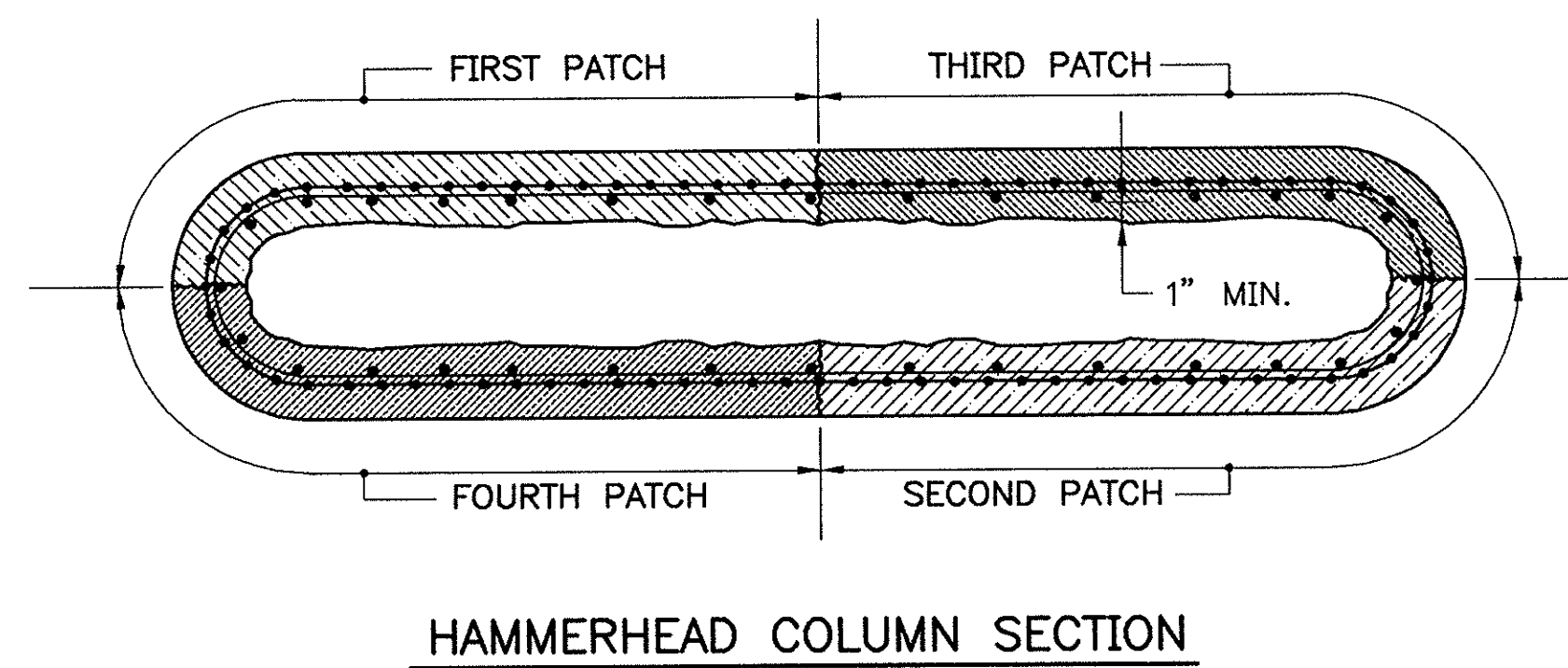
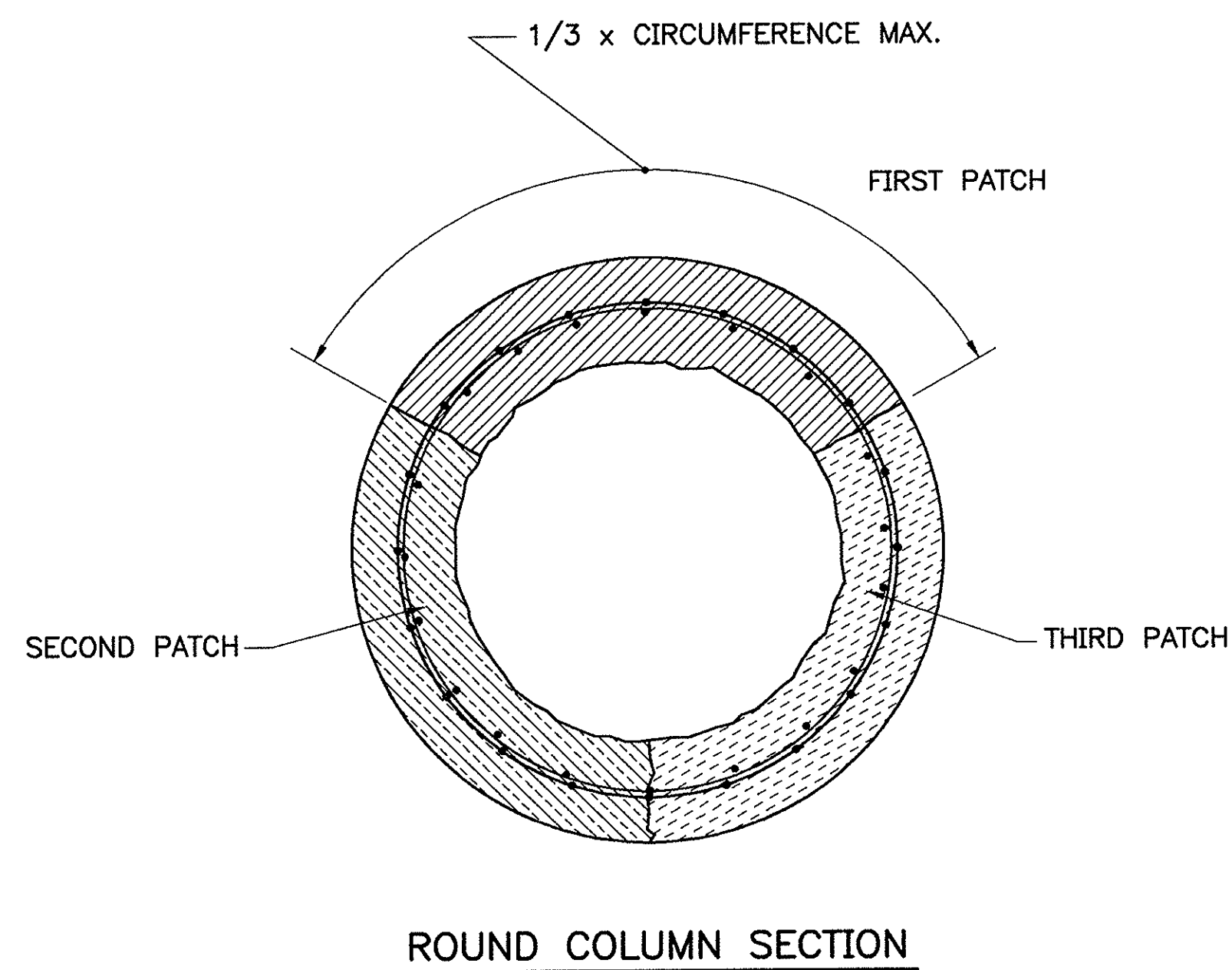
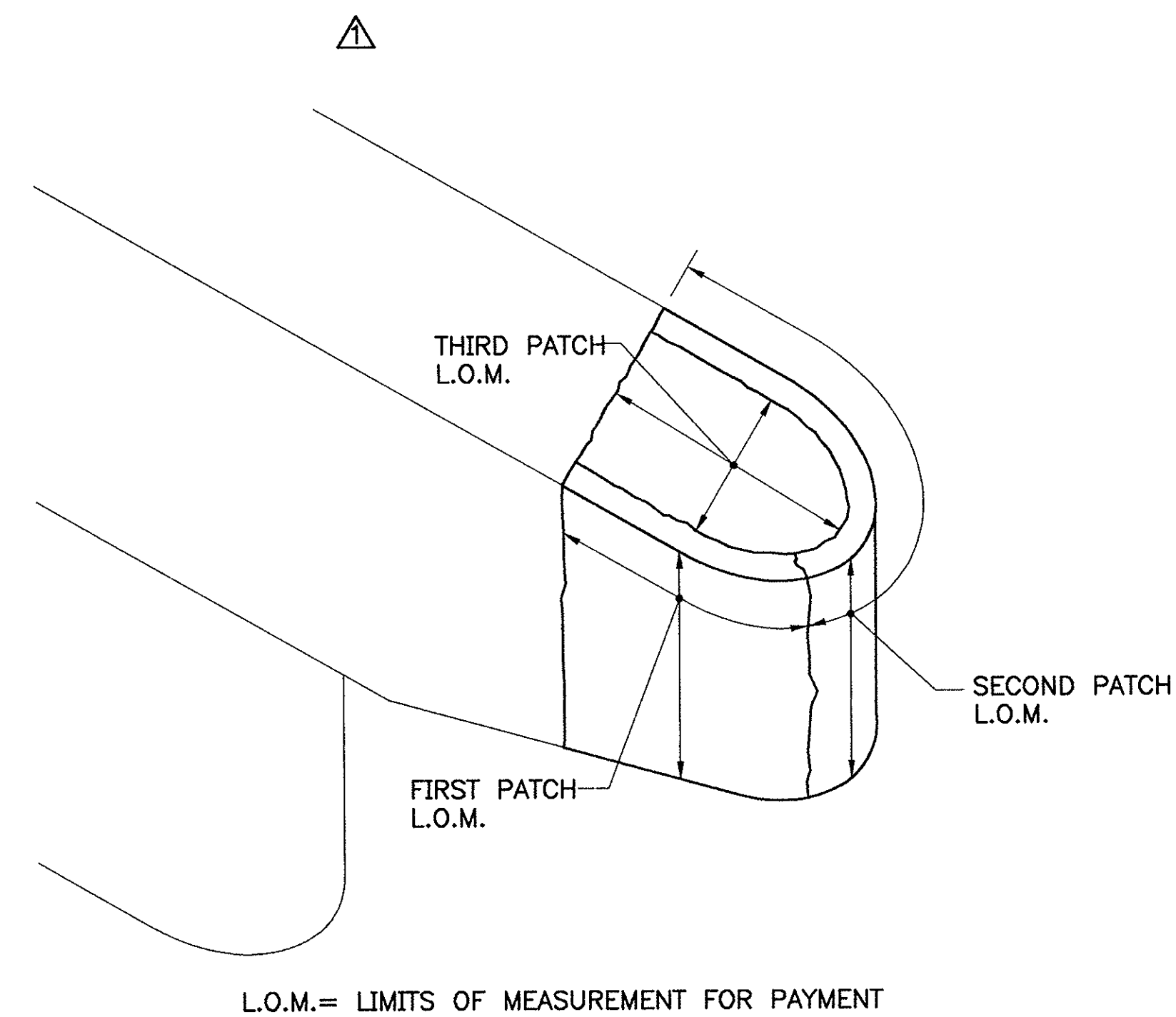


SEQUENCE OF CONSTRUCTION FOR DEEP PATCH

1. REMOVE CONCRETE ON FIRST SURFACE ONLY.
2. FORM AND PATCH SURFACE.
3. A MINIMUM OF 72 HOURS SHALL ELAPSE BETWEEN PLACING OF CONCRETE AND START OF NEXT PATCH.
4. REMOVE CONCRETE ON NEXT SURFACE.
5. REPEAT STEPS 2 AND 3.
6. REPAIR REMAINING SIDES IN A SIMILAR MANNER.
7. ALL WELDED WIRE FABRIC SHALL BE GALVANIZED OR EPOXY COATED.
8. ALL CONCRETE SHALL BE CLASS E.
9. ALL SURFACES SHALL BE RUBBED TO PRODUCE A SMOOTH FINISH.
10. ALL EXISTING REINF. STEEL SHALL BE COATED WITH EPOXY BONDING COMPOUND AFTER BLAST CLEANING. SEE SPECIFICATIONS.
11. PENETRATING SEALER SHALL BE APPLIED TO THE LIMITS SHOWN. SEE SPECIFICATIONS.
12. DETAILS FOR HAMMERHEAD COLUMNS SIMILAR TO THOSE FOR ROUND COLUMNS.



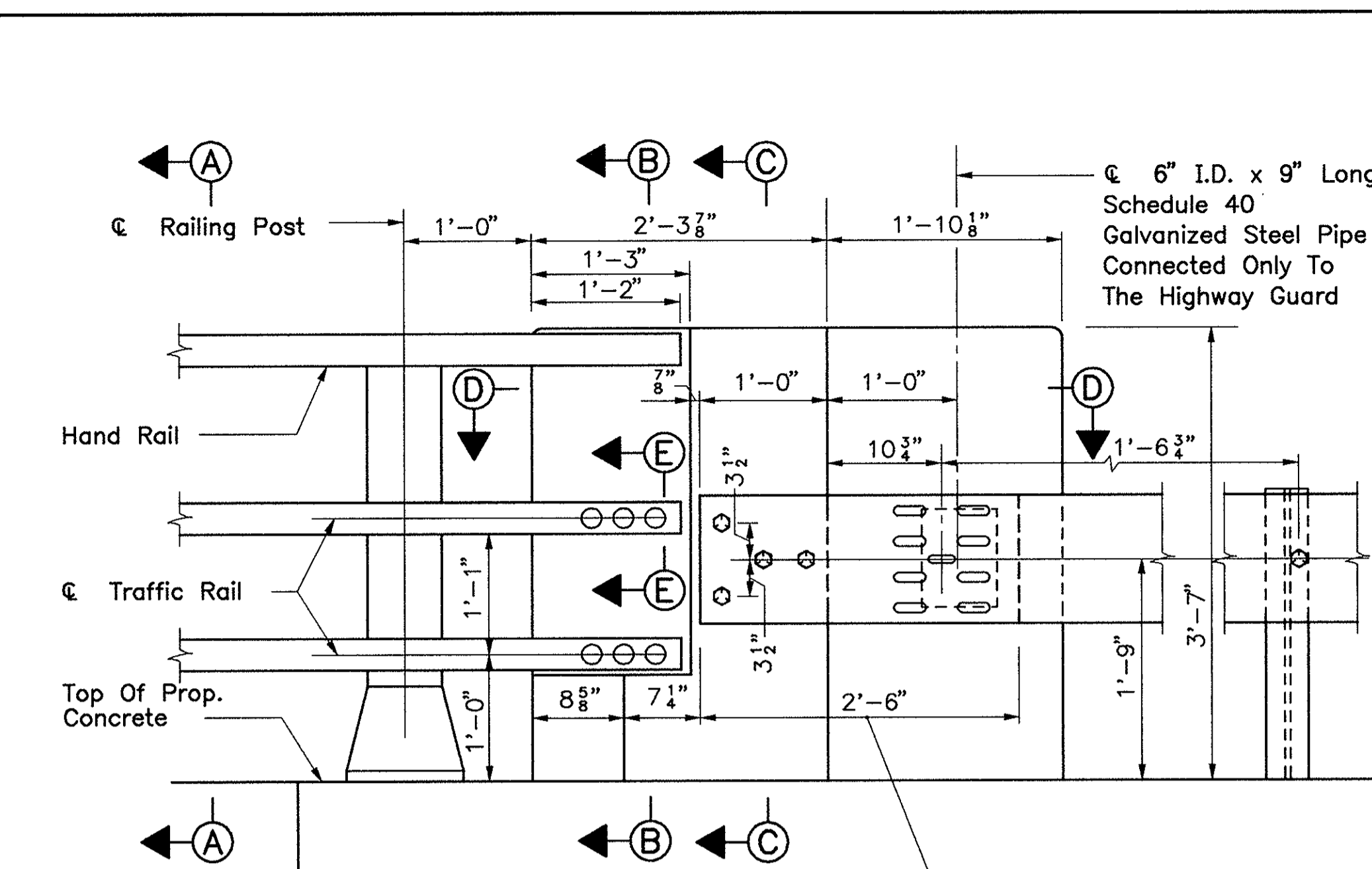
LIMITS OF PENETRATING SEALER



AS BUILT

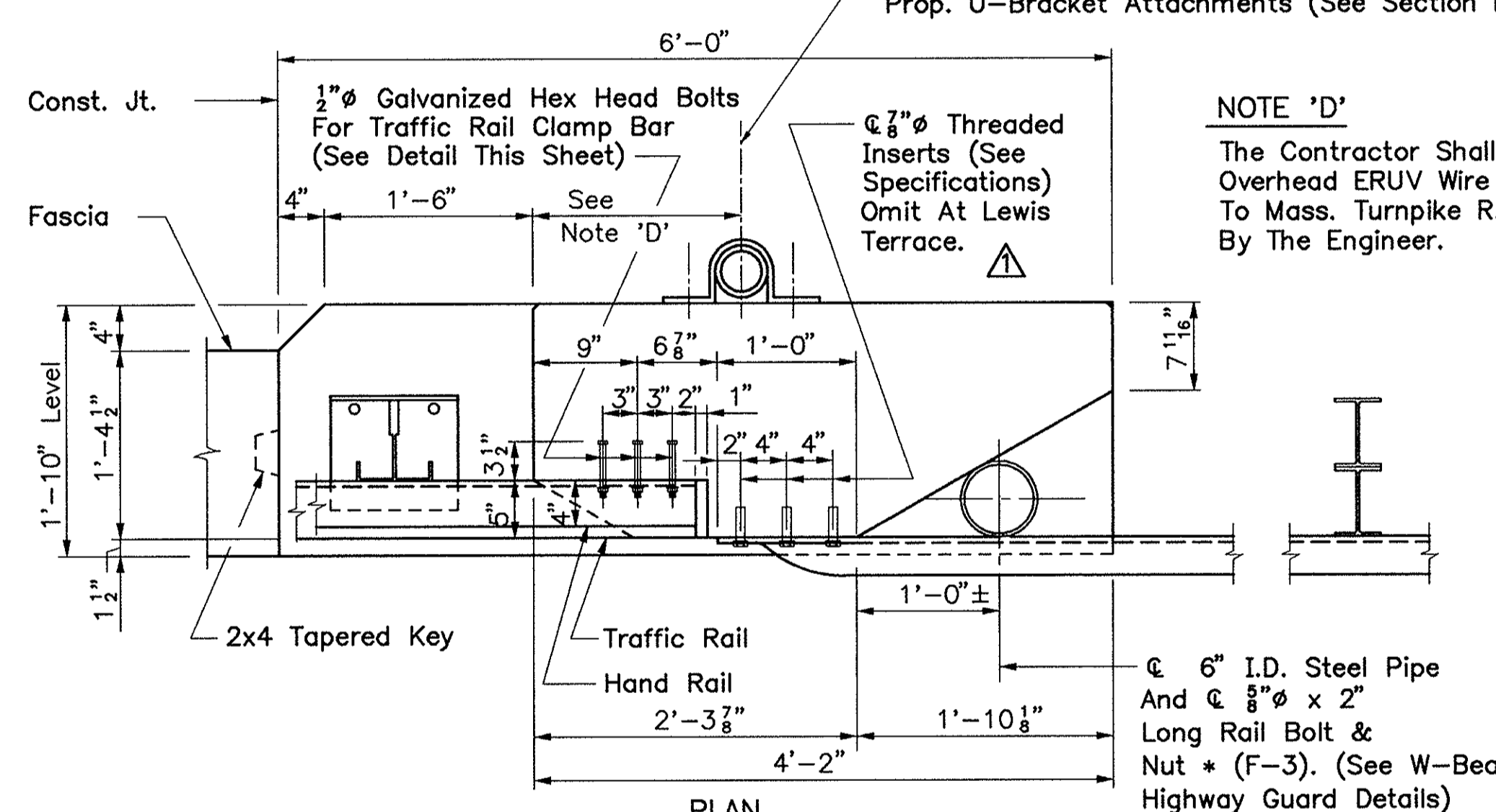
NO.	REVISION	BY	DATE
1	REVISED NOTE 7 AND LIMITS OF PENETR. SEALER	E&K	12/93

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
SUBSTRUCTURE CONCRETE REPAIRS	
DETAILS (BOSTON EXTENSION)	
Scale: NOT TO SCALE	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 67

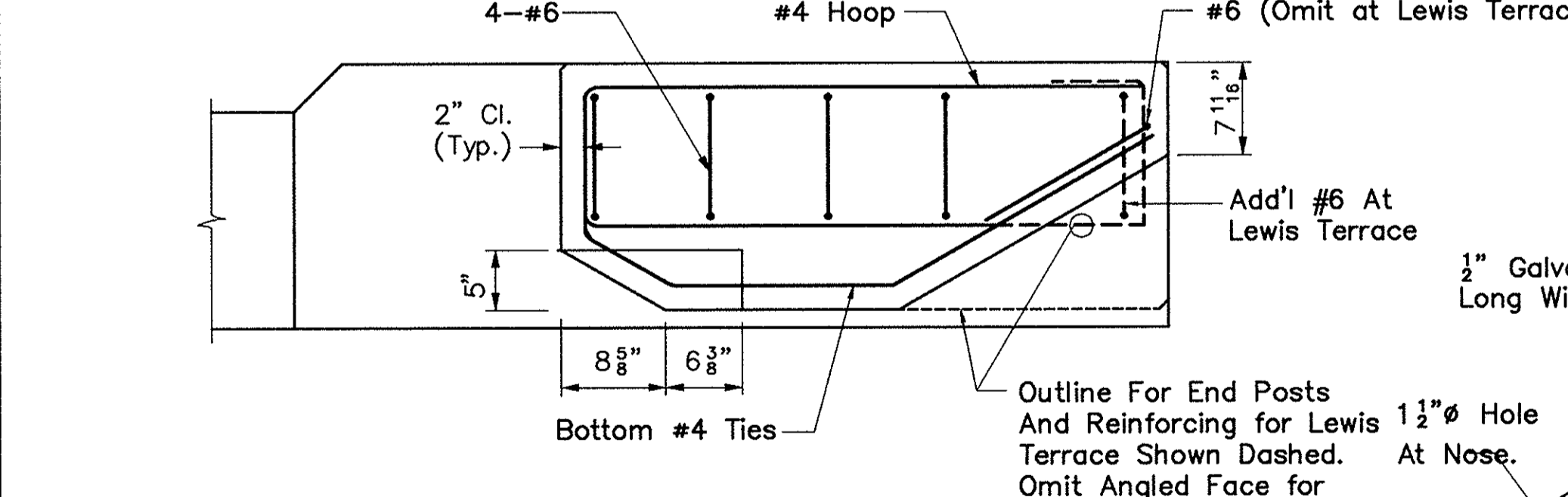


NOTE
 3/4" Chamfer At All Exposed Edges Of Concrete, Unless Otherwise Indicated

ELEVATION
 1"=1'-0"

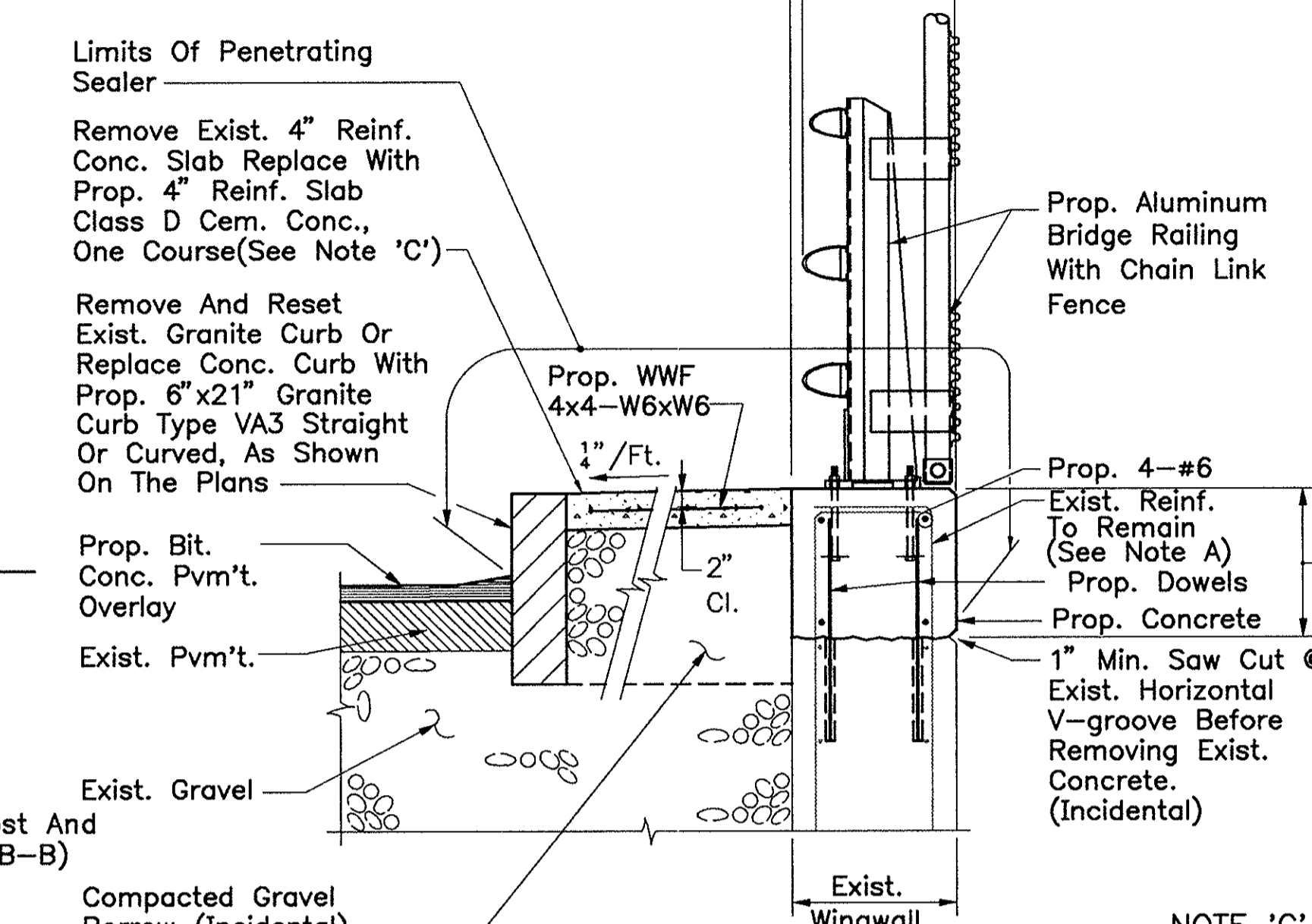


PLAN
 1"=1'-0"



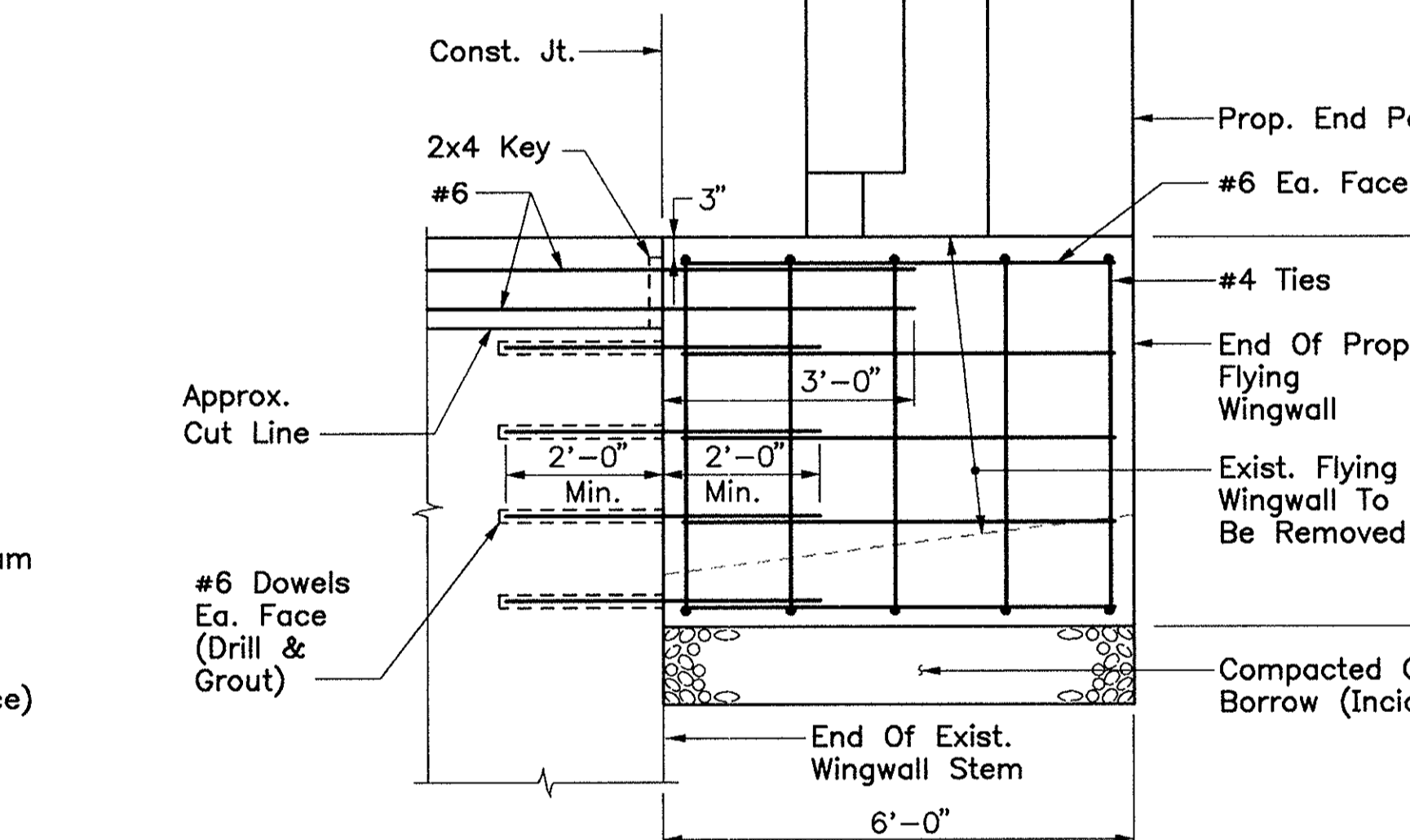
SECTION D-D
 1"=1'-0"

END POST DETAILS
 Scale: AS NOTED



SECTION A-A
 1/2"=1'-0"

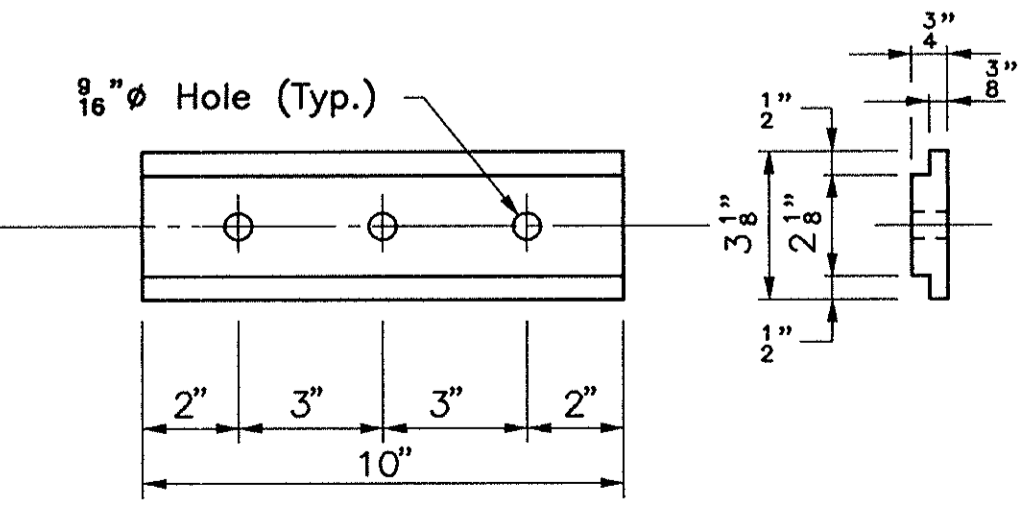
NOTE 'D'
 The Contractor Shall Relocate The Existing Overhead ERUV Wire Posts And Make Connections To Mass. Turnpike R.O.W. Fencing As Directed By The Engineer.



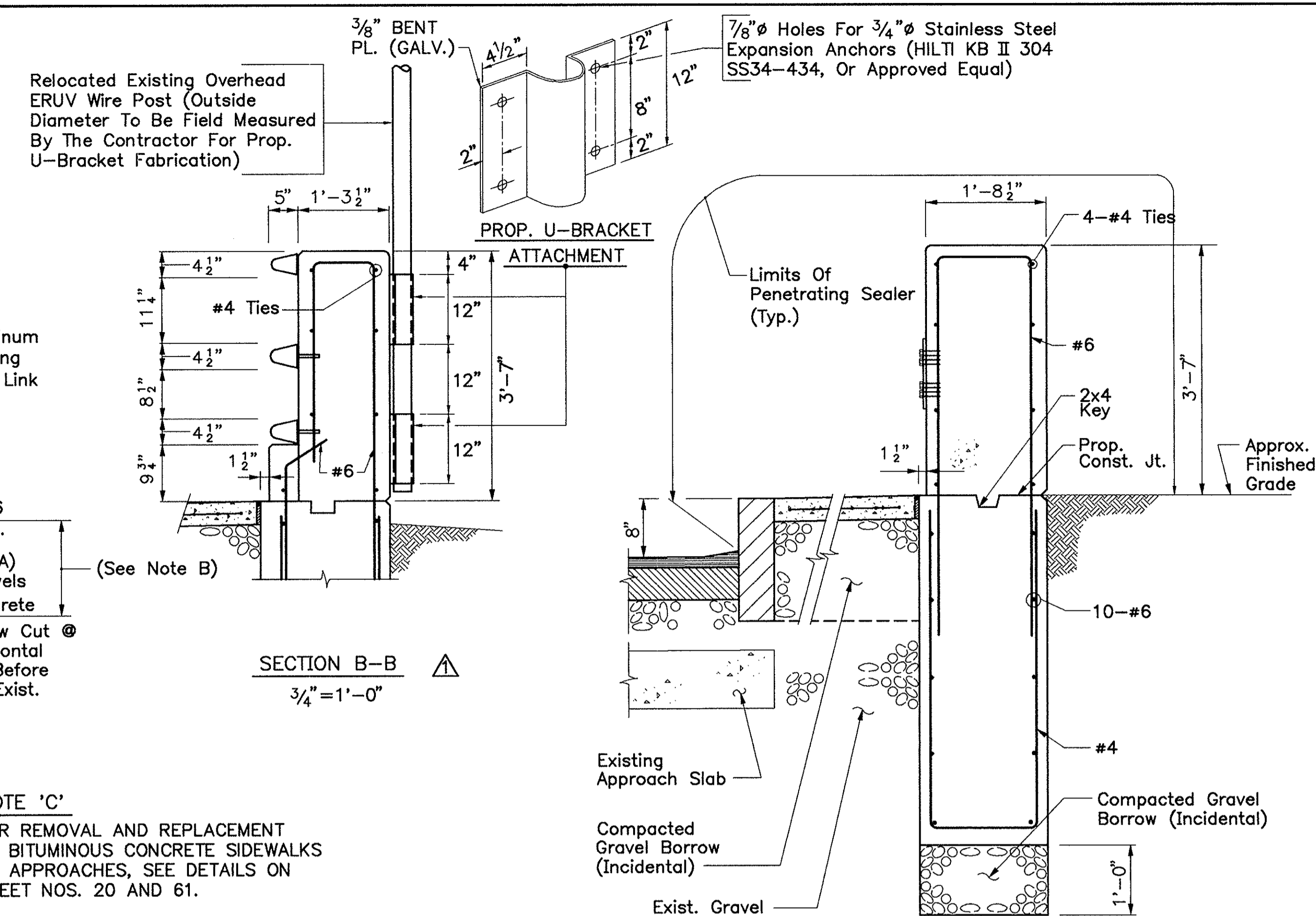
ELEVATION
 1/2"=1'-0"

FLYING WINGWALL
 1/2"=1'-0"

SECTION E-E
 3"=1'-0"



CLAMP BAR DETAIL
 3"=1'-0"



NOTE 'C'
 FOR REMOVAL AND REPLACEMENT OF BITUMINOUS CONCRETE SIDEWALKS AT APPROACHES, SEE DETAILS ON SHEET NOS. 20 AND 61.

HIGHWAY GUARD ATTACHMENT (LOCAL ROAD) (ITEM E4-12)

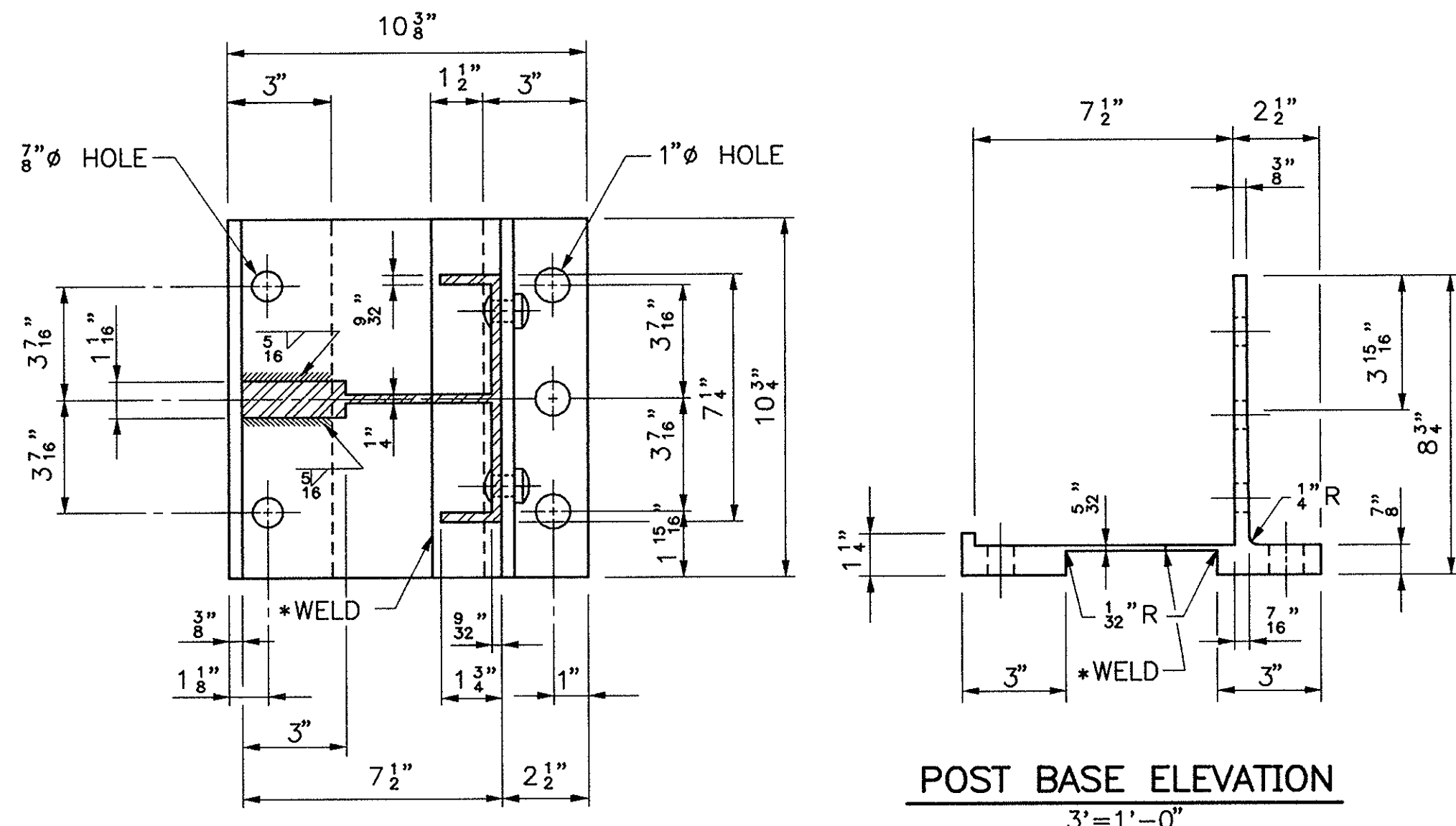
TRANSITION DETAIL
 1"=1'-0"

NOTES

- A Cut, Clean And Bend Existing Reinforcing Steel To Provide A 2" Clearance. The Contractor Will Be Required To Dowel 12" Deep Into Existing Concrete And Place #4 @ 1'-0"± When, As Determined By The Engineer, The Exist. Reinforcing Steel Is Unsuitable Or Missing. The Work Involved In Drilling And Grouting Will Be Considered Incidental To The Deck Re-construction Item.
 - B V-Groove 1 1/2" W x 3/4" D To Align With Fascia Groove, See Typical Cross Section For Bridge.
- * Identification Letters And Numbers On Drawings Refer To The Standard Detail Drawings Shown In "A Guide To Standardized Highway Barrier Rail Hardware" By AASHTO-AGC-ARTBA Joint Cooperative Committee.

AS BUILT

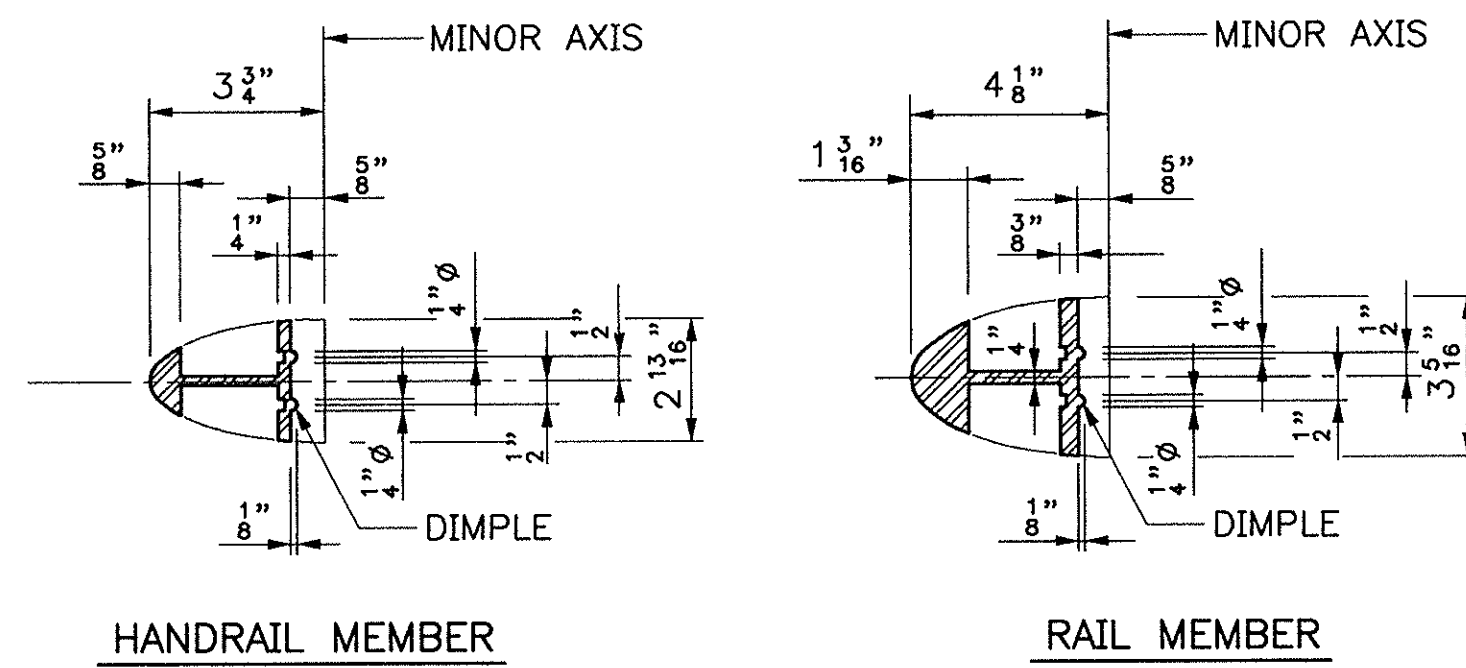
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
TYPICAL WINGWALL AND	
END POST DETAILS (LOCAL ROAD)	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 68



NOTE

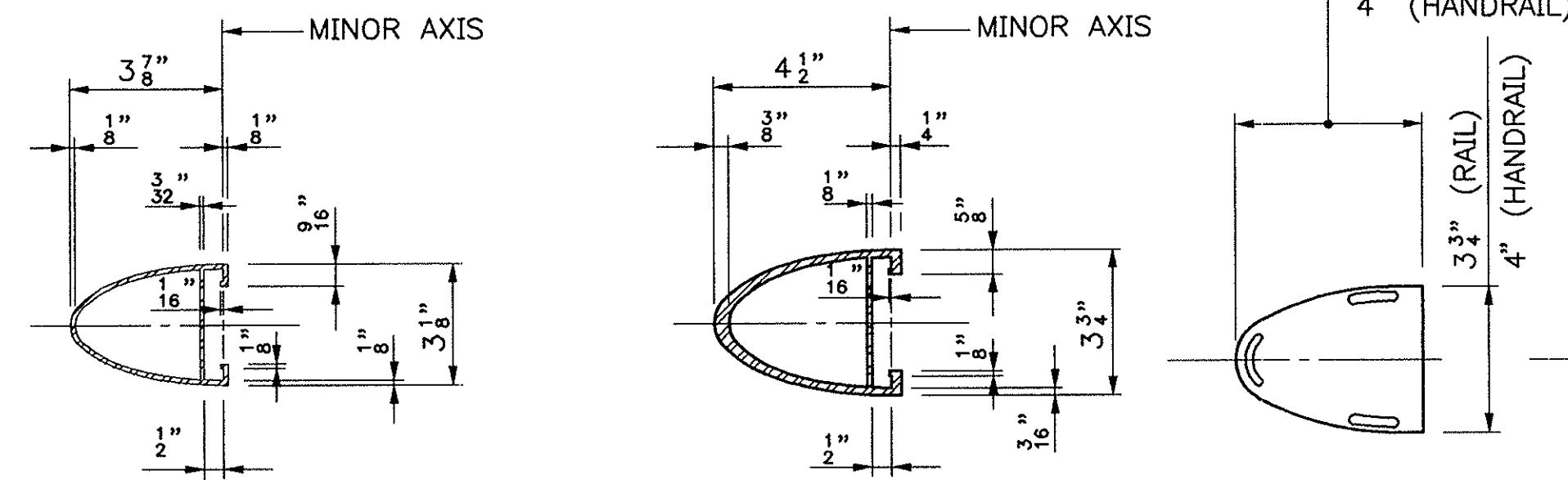
* ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE. WELDING SHALL BE PERFORMED BY METAL INERT GAS ("MIG") PROCESS.

SECTION B-B
3'-1'-0"



HANDRAIL MEMBER

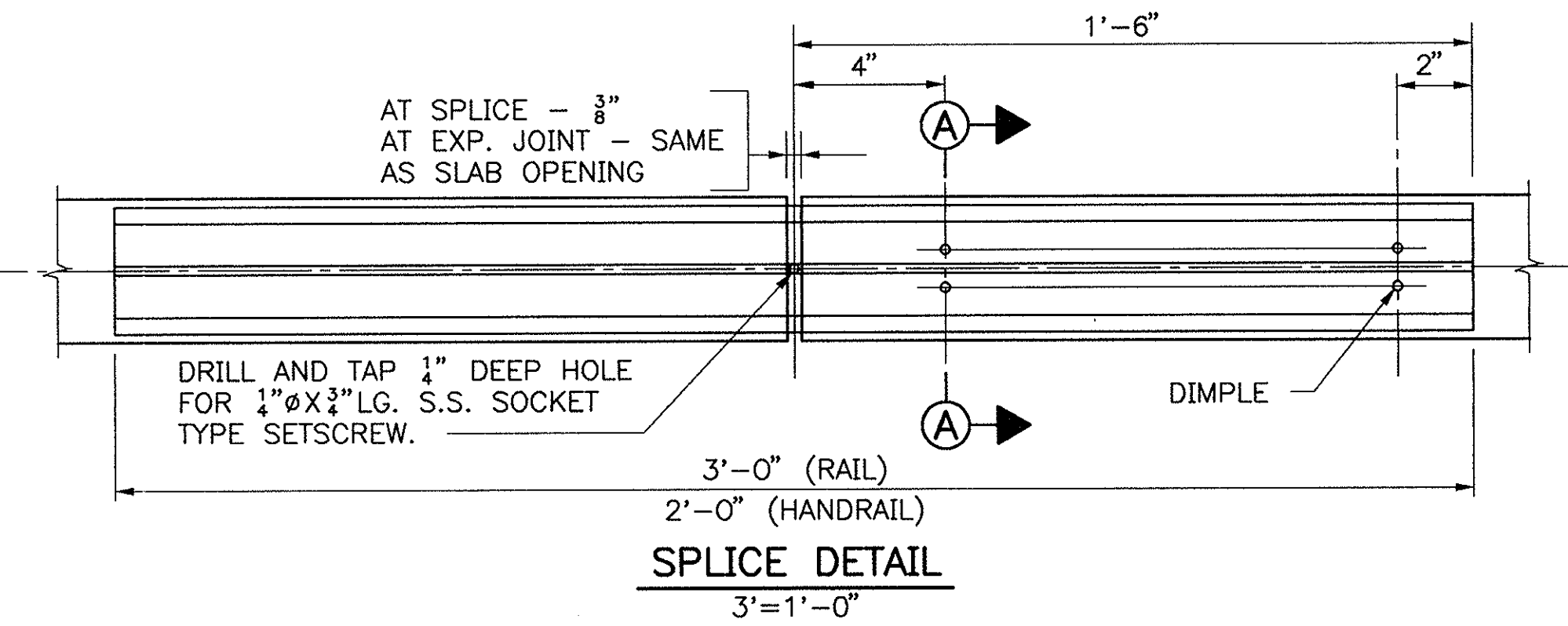
RAIL MEMBER



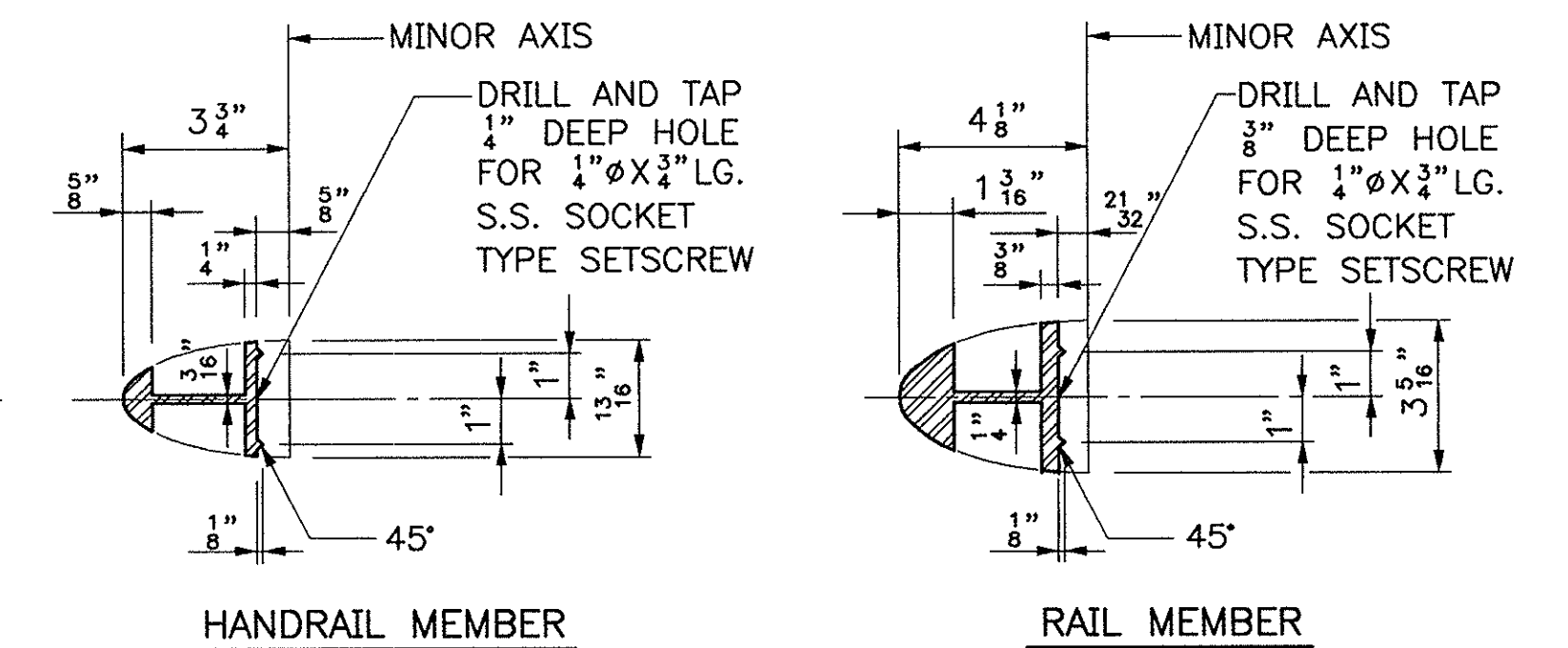
HANDRAIL MEMBER

RAIL MEMBER

CAST ALUMINUM DRIVE FIT RAIL CAP
3'-1'-0"



SPLICE DETAIL
3'-1'-0"

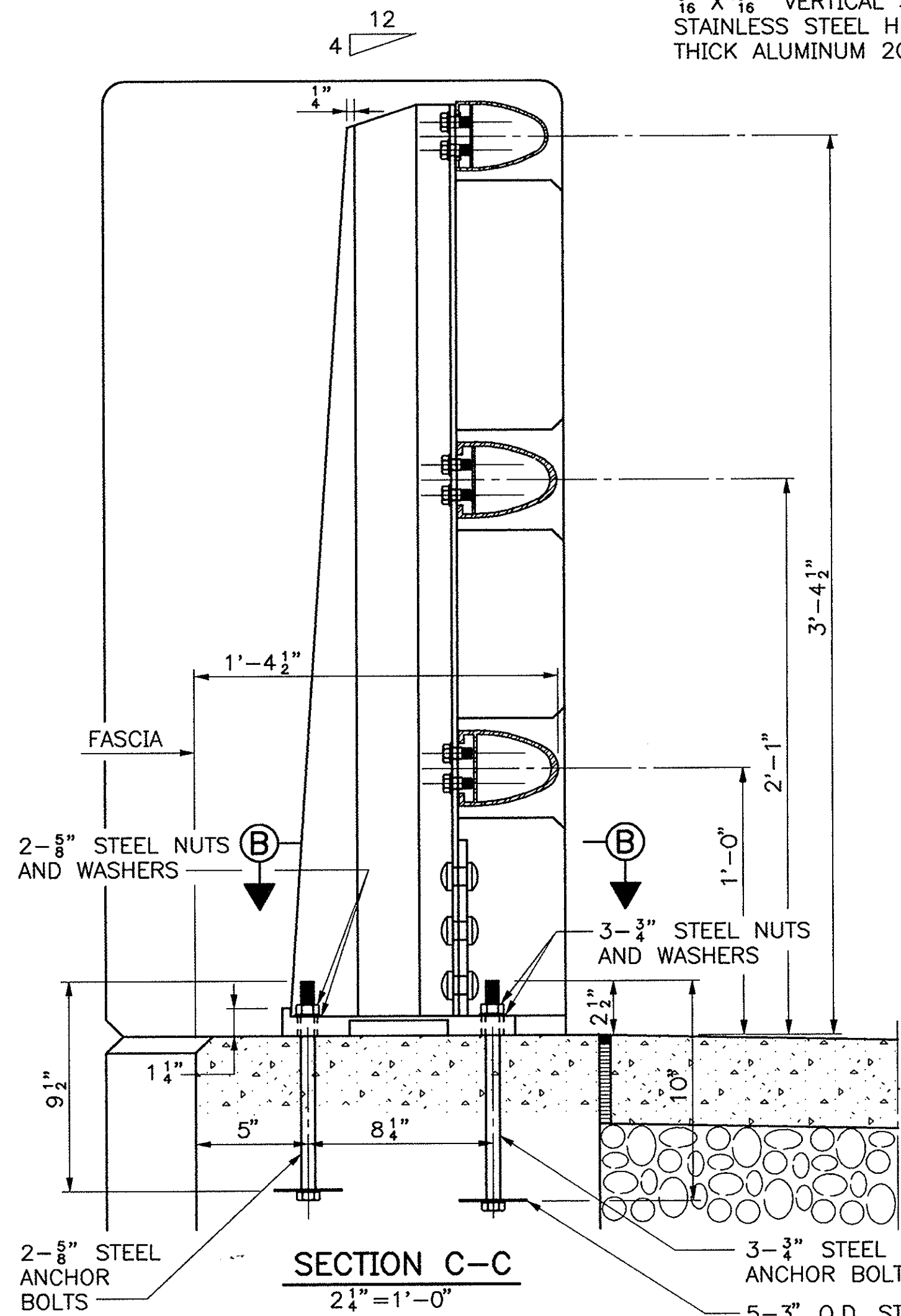


HANDRAIL MEMBER

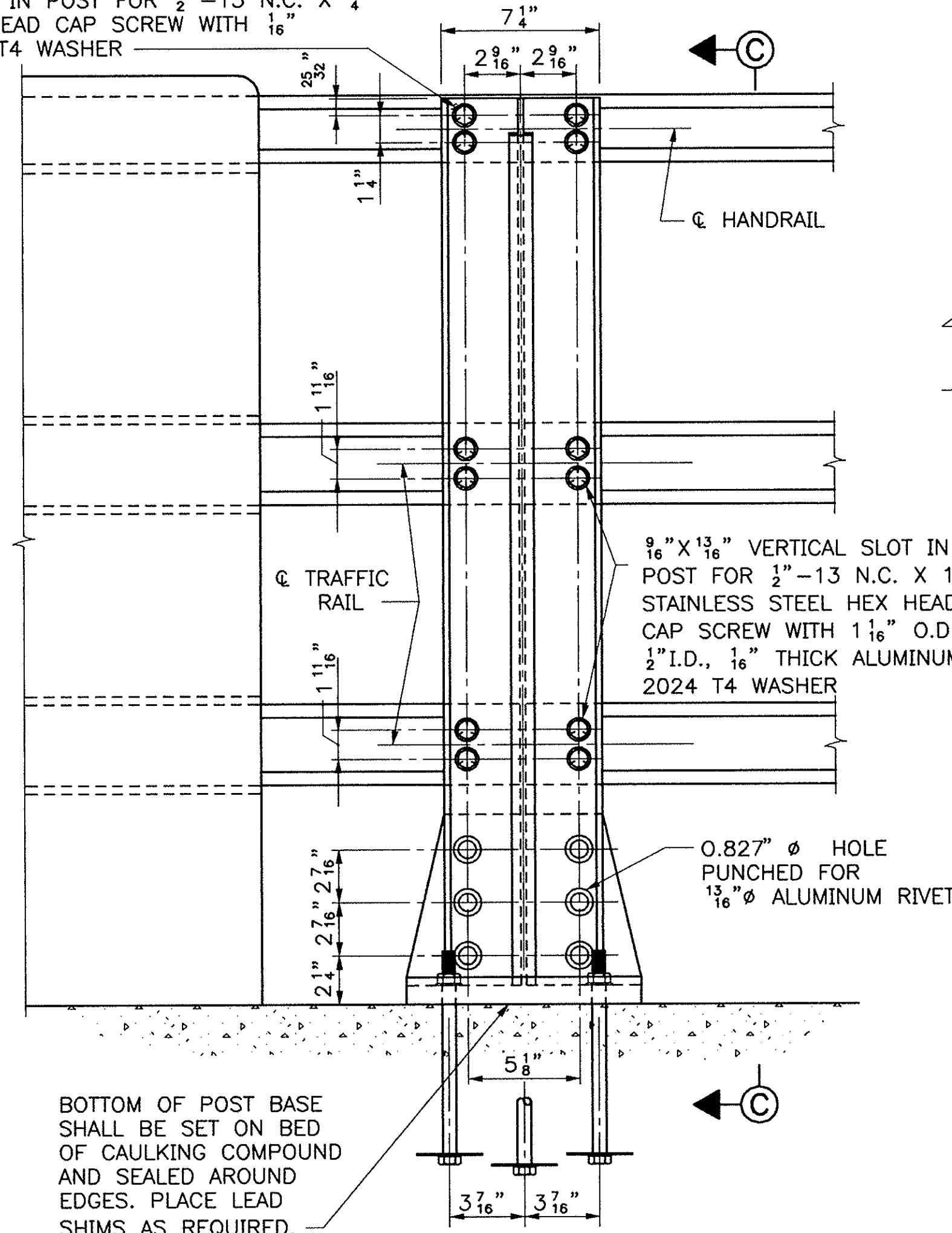
RAIL MEMBER

SECTION D-D
3'-1'-0"

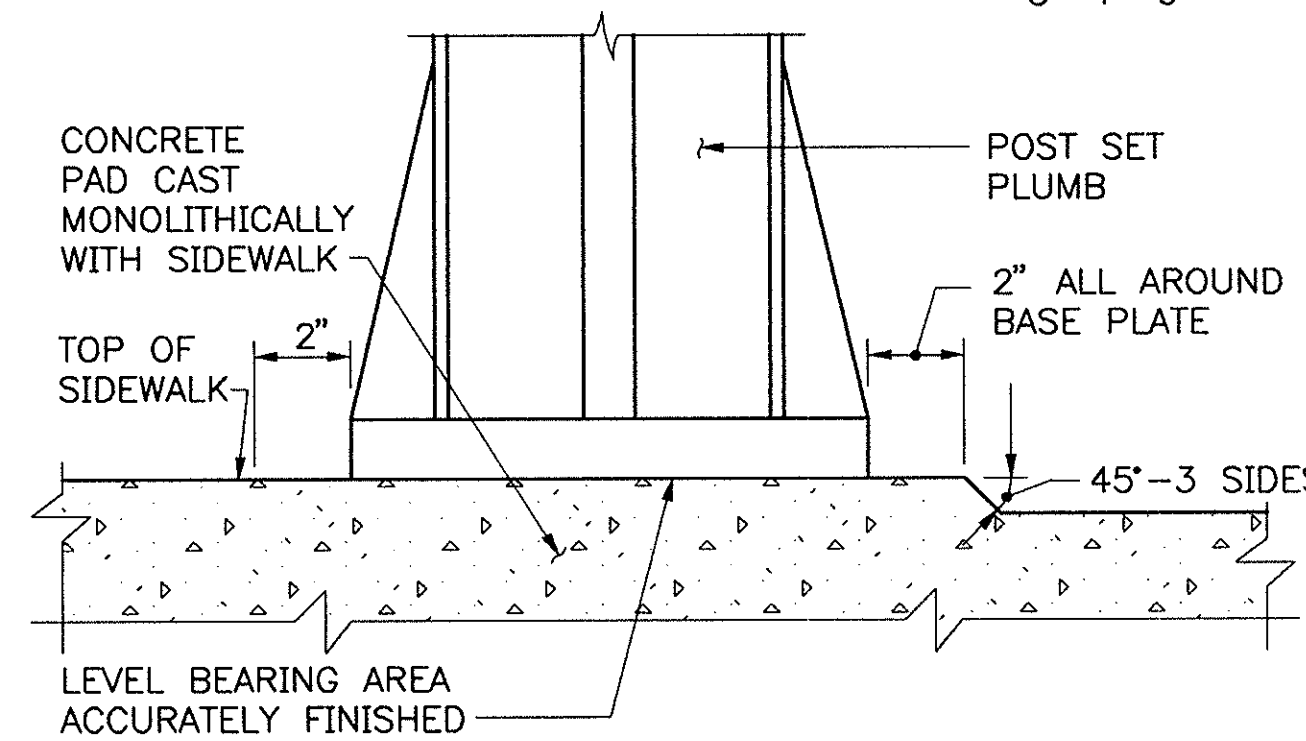
9/16" X 1 1/16" VERTICAL SLOT IN POST FOR 1/2"-13 N.C. X 3/4" STAINLESS STEEL HEX HEAD CAP SCREW WITH 1/16" THICK ALUMINUM 2024 T4 WASHER



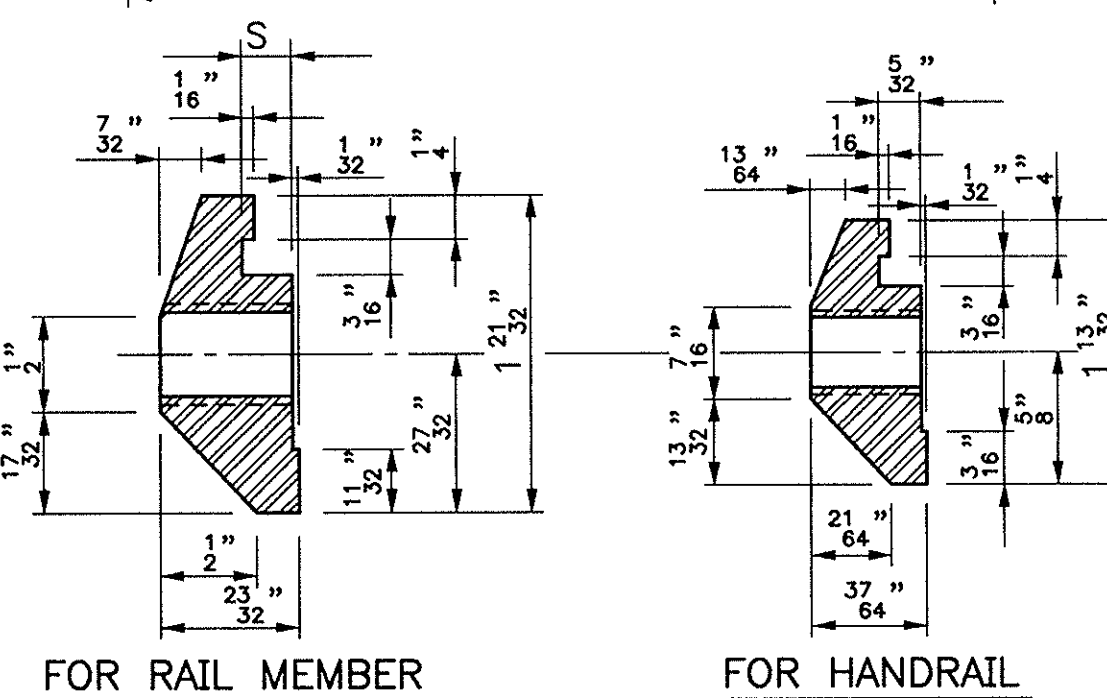
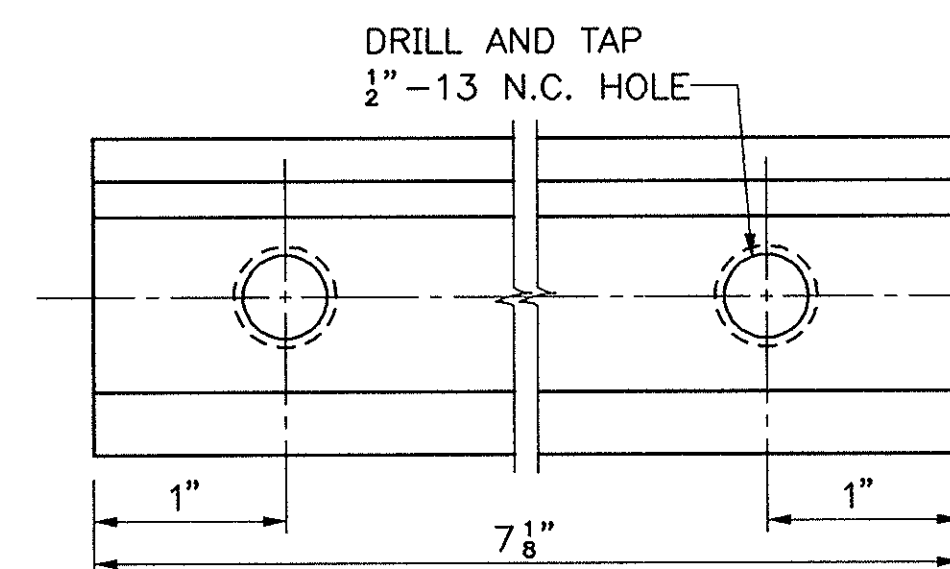
SECTION C-C
2 1/4'-1'-0"



OUTSIDE ELEVATION OF POST
2 1/4'-1'-0"



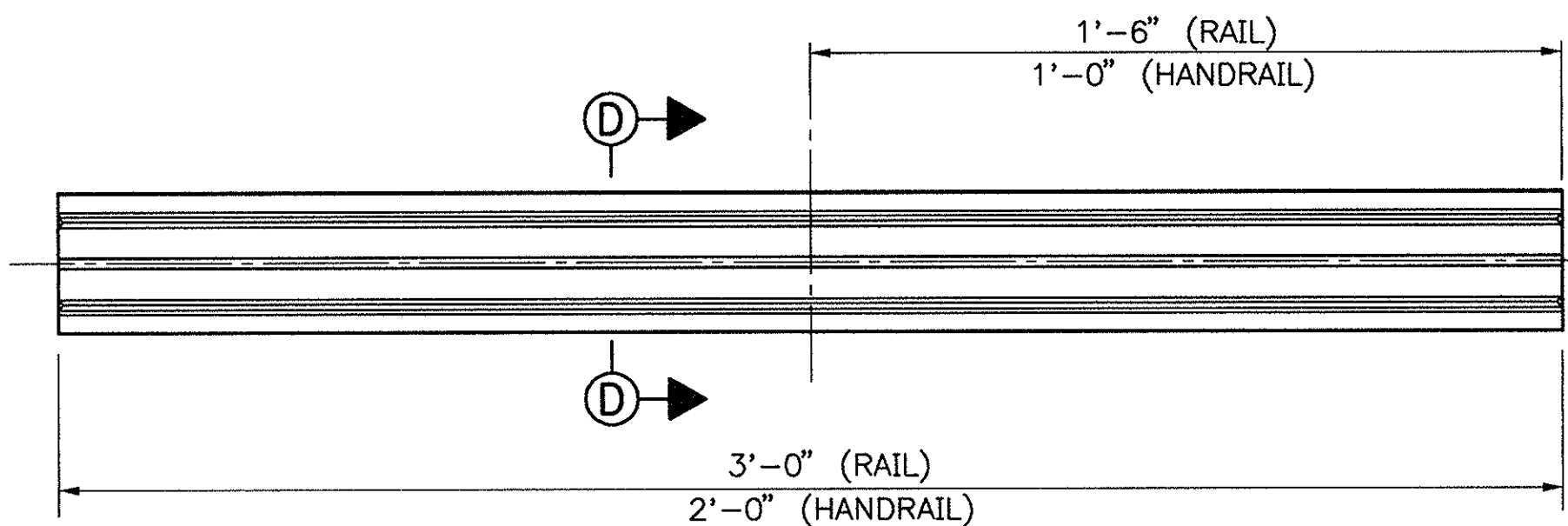
SETTING OF POSTS
(PROFILE GRADE OVER 1.5%)
3'-1'-0"



FOR RAIL MEMBER

FOR HANDRAIL

CLAMP BAR DETAILS
FULL SIZE



SPLICE BAR DETAIL (ALTERNATE)
1/4" SIZE

NOTES

MAXIMUM POST SPACING = 6'-6"
RAILS SHALL BE CONTINUOUS FROM END TO END OF BRIDGE WITH SPLICES, AS NECESSARY. RAILS SHALL BE CONTINUOUS OVER A MIN. OF FOUR POSTS WITHOUT SPLICES, WHERE POSSIBLE. RAILS SHALL BE SPLICED IN PANEL OVER EXPANSION JOINTS. SPLICES SHALL BE LOCATED 2'-0" FROM C. OF POST, OR AS NOTED ON THE PLANS. POSTS SHALL BE SET PERPENDICULAR TO GRADE. DESIGN IN ACCORDANCE WITH A.A.S.H.T.O. 1992 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND A.A.S.H.T.O. INTERIM SPECIFICATIONS.

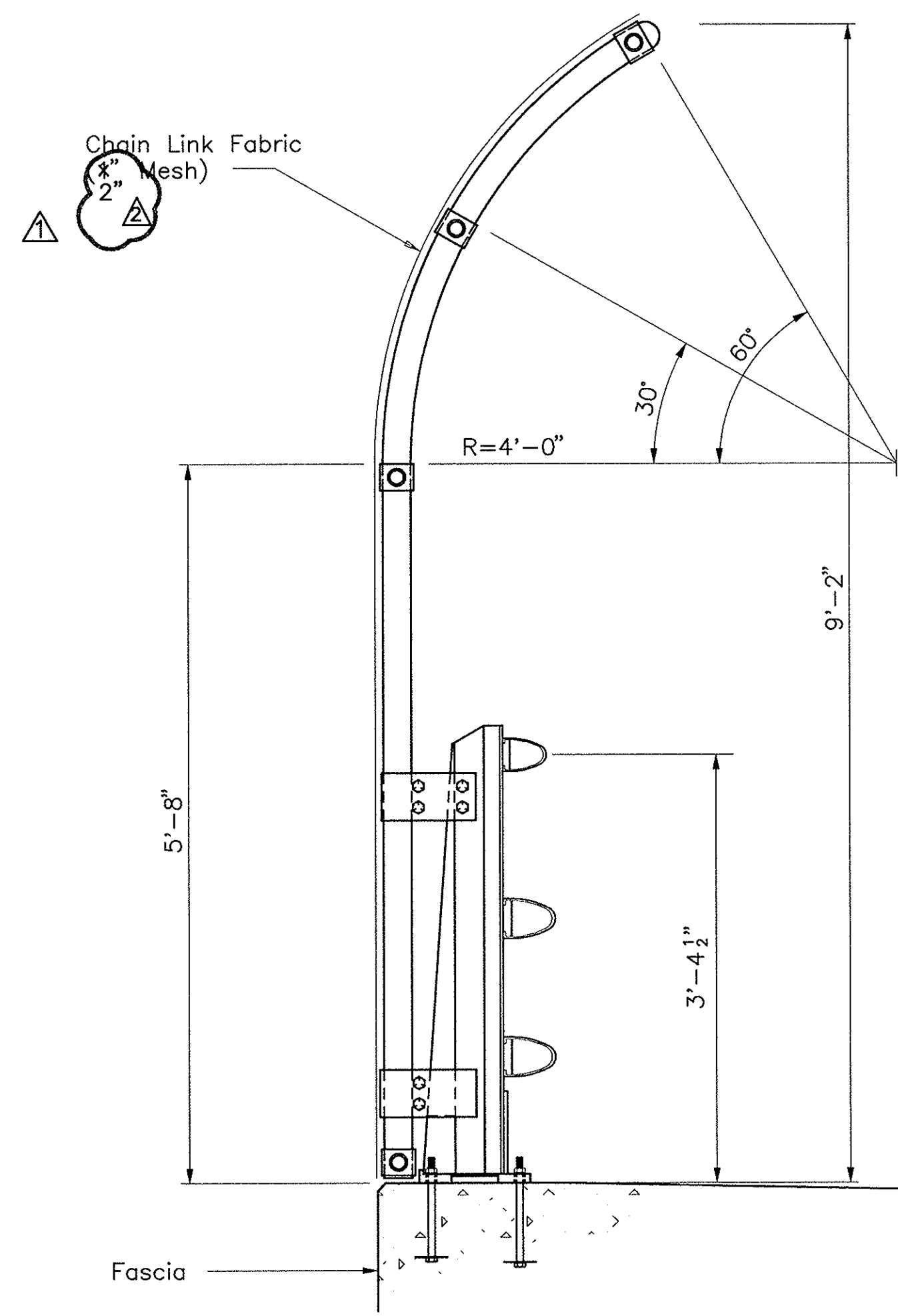
ALL EXPOSED EDGES OF HANDRAIL AND POSTS SHALL BE GROUND SMOOTH. TOPS OF POSTS SHALL BE GROUND SMOOTH BELOW TOP RAIL.

WHERE GALVANIZING IS DAMAGED, THE DAMAGED AREAS SHALL BE THOROUGHLY CLEANED AND GIVEN ONE COAT OF ZINC DUST-ZINC OXIDE PAINT CONFORMING TO THE REQUIREMENTS FOR TYPE III AS SPECIFIED IN FEDERAL SPECIFICATION TT-P-641b.

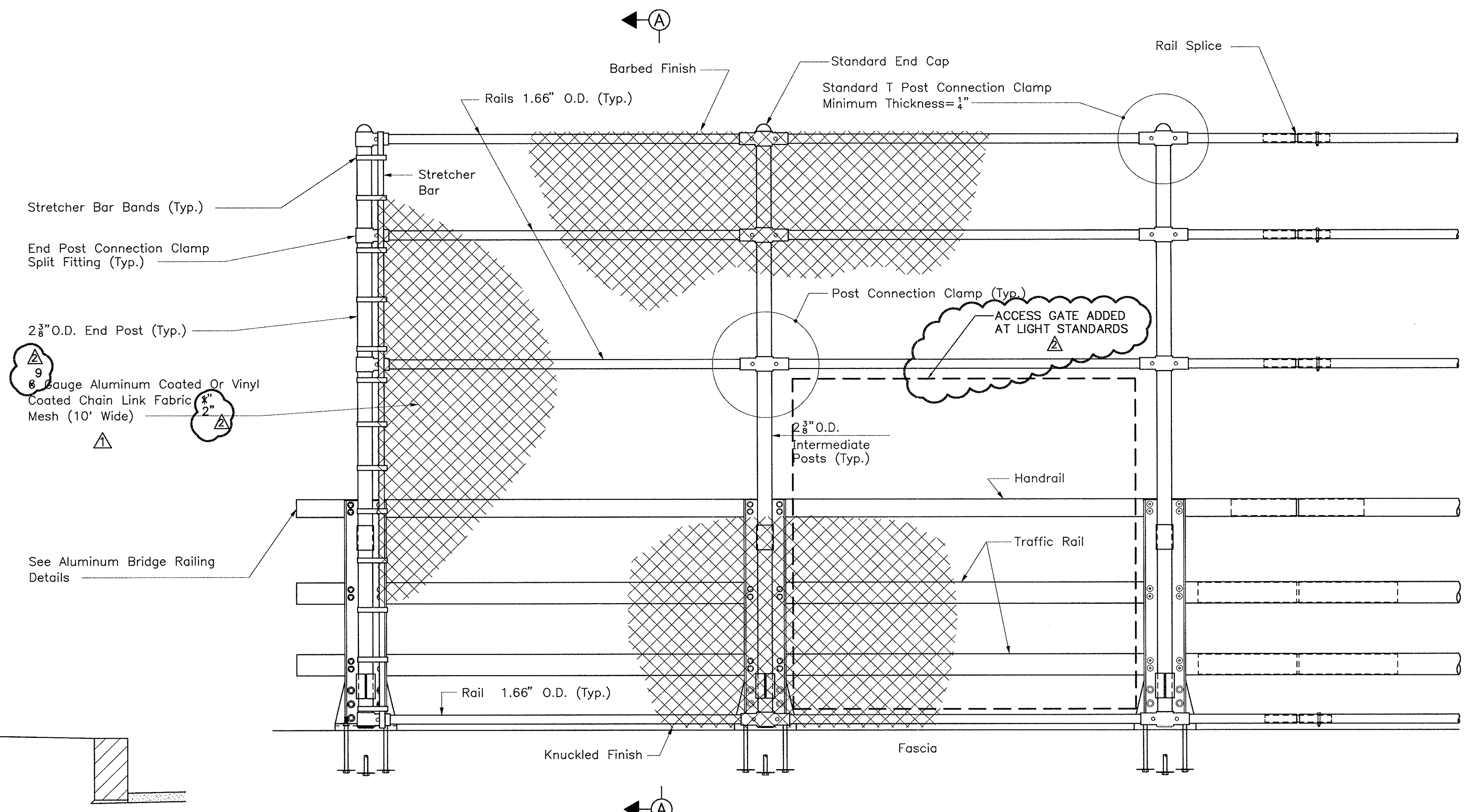
MATERIAL NOTES

RAILS, POSTS, POST BASES ———— ASTM B-221 ALLOY 6061-T6
SPLICES, CLAMP BARS ———— ASTM B-221 ALLOY 6061-T6
RIVETS ———— ASTM B-316 ALLOY 6061-T6
ALUMINUM WASHERS ———— ASTM B-209 ALLOY ALCLAD 2024-T4
END PLUGS ———— ASTM B-26 ALLOY 43F OR 356F
STAINLESS STEEL CAP AND SET SCREWS ———— ASTM A-193 GRADE B8
STEEL BOLTS, NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ASTM A-325 AND SHALL BE GALVANIZED.

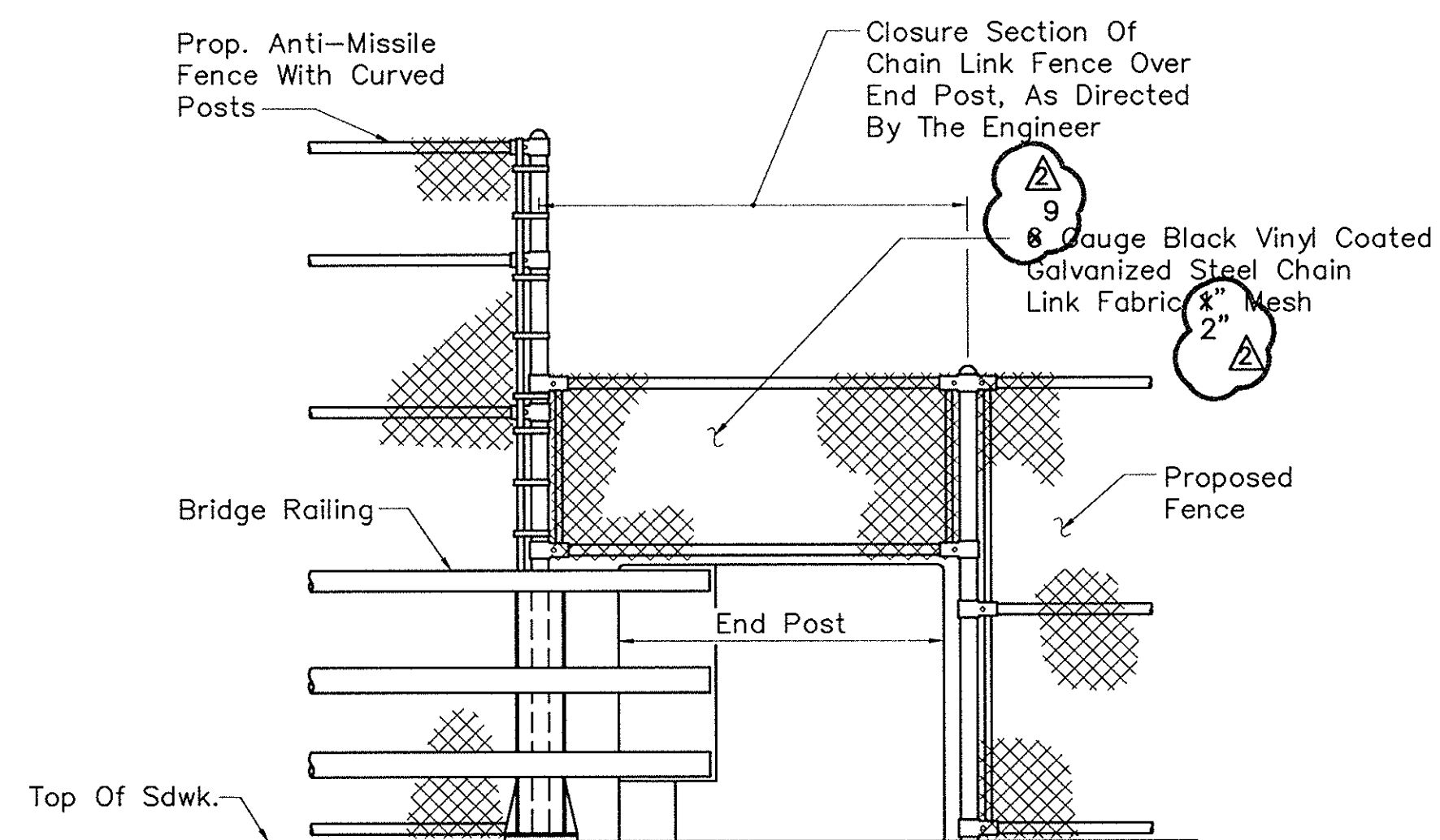
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
STANDARD DETAILS ALUMINUM BRIDGE RAILING DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 69



SECTION A-A
SCALE: 1" = 1'-0"



ELEVATION
SCALE: 1" = 1'-0"



CHAIN LINK FENCE CLOSURE SECTION AT END POST
SCALE: 1/2" = 1'-0"

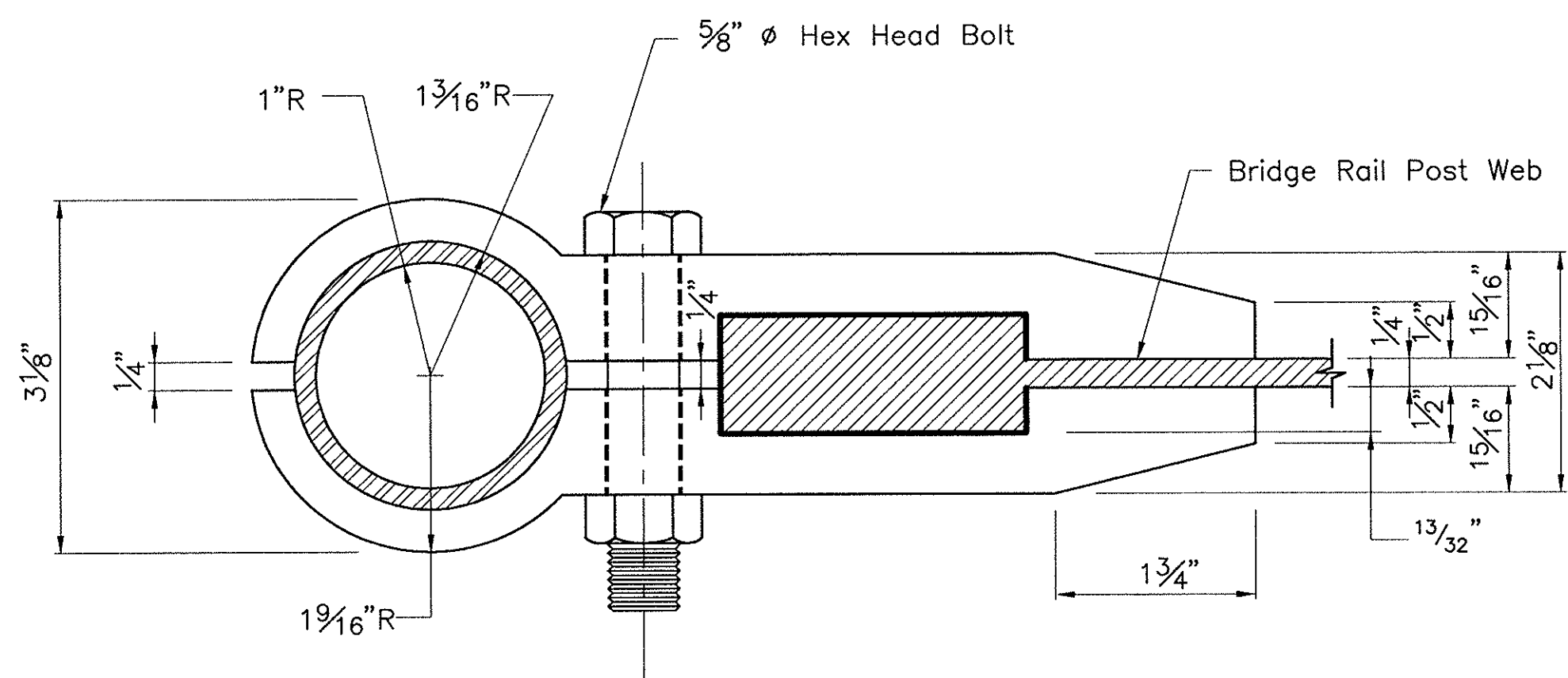
NOTES

1. Fabric Ties To All Posts And Top Three Rails Shall Be Spaced At 12" O.C. Ties To Bottom Rail Shall Be Spaced At 6" O.C.
2. Provide Splices At Each Bridge Deck Joint And At Bridge Railing Splices.

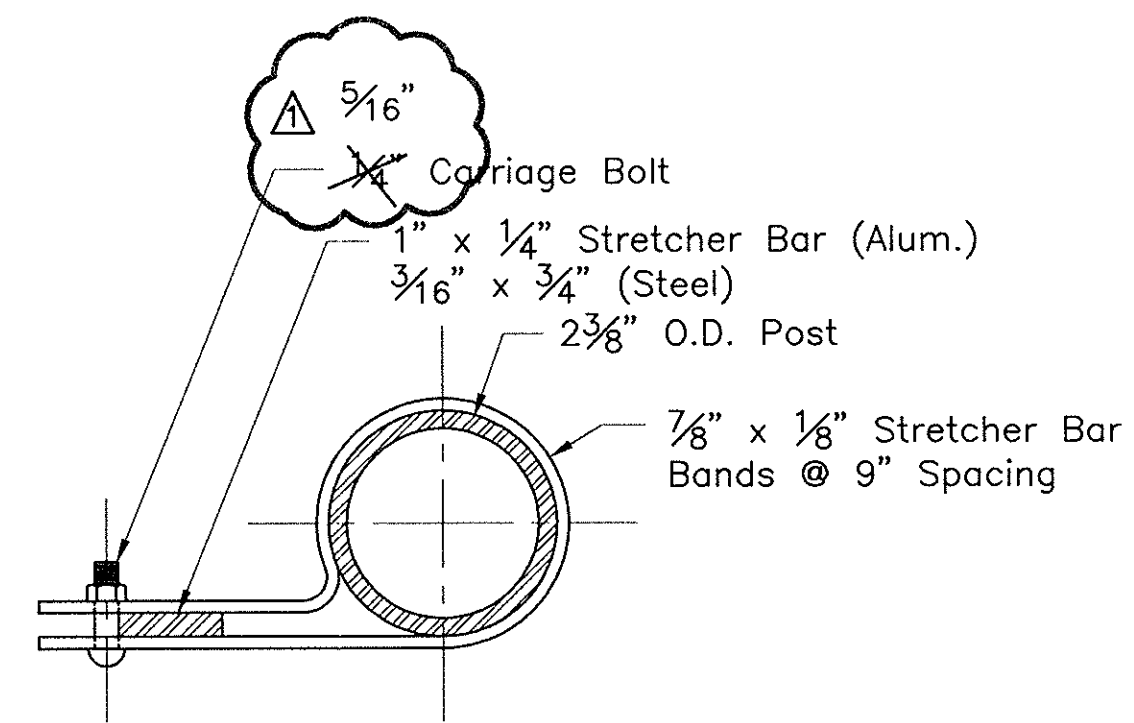
NO.	REVISION	BY	DATE
AS-BUILT	GTS	10/95	
CHANGED GAUGE AND MESH SIZE	E&K	12/93	

AS BUILT

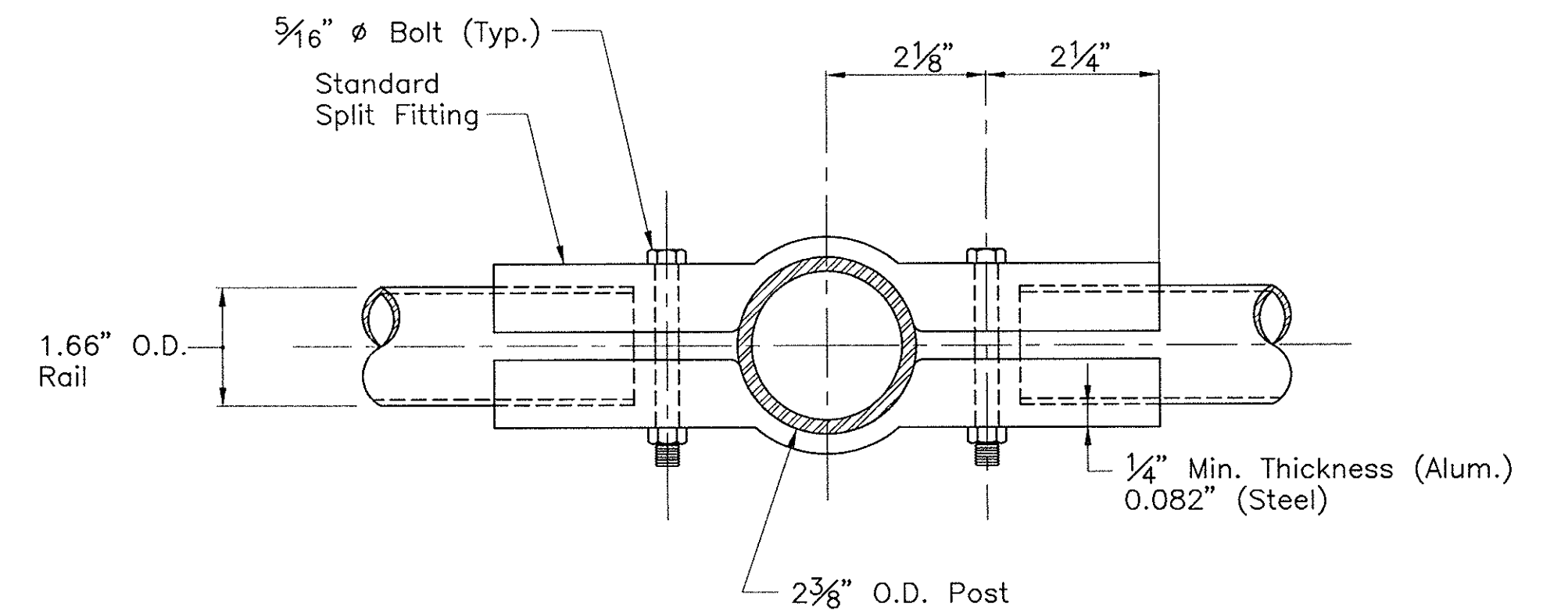
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
CHAIN LINK FENCE FOR BRIDGES	
DETAILS I	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 70



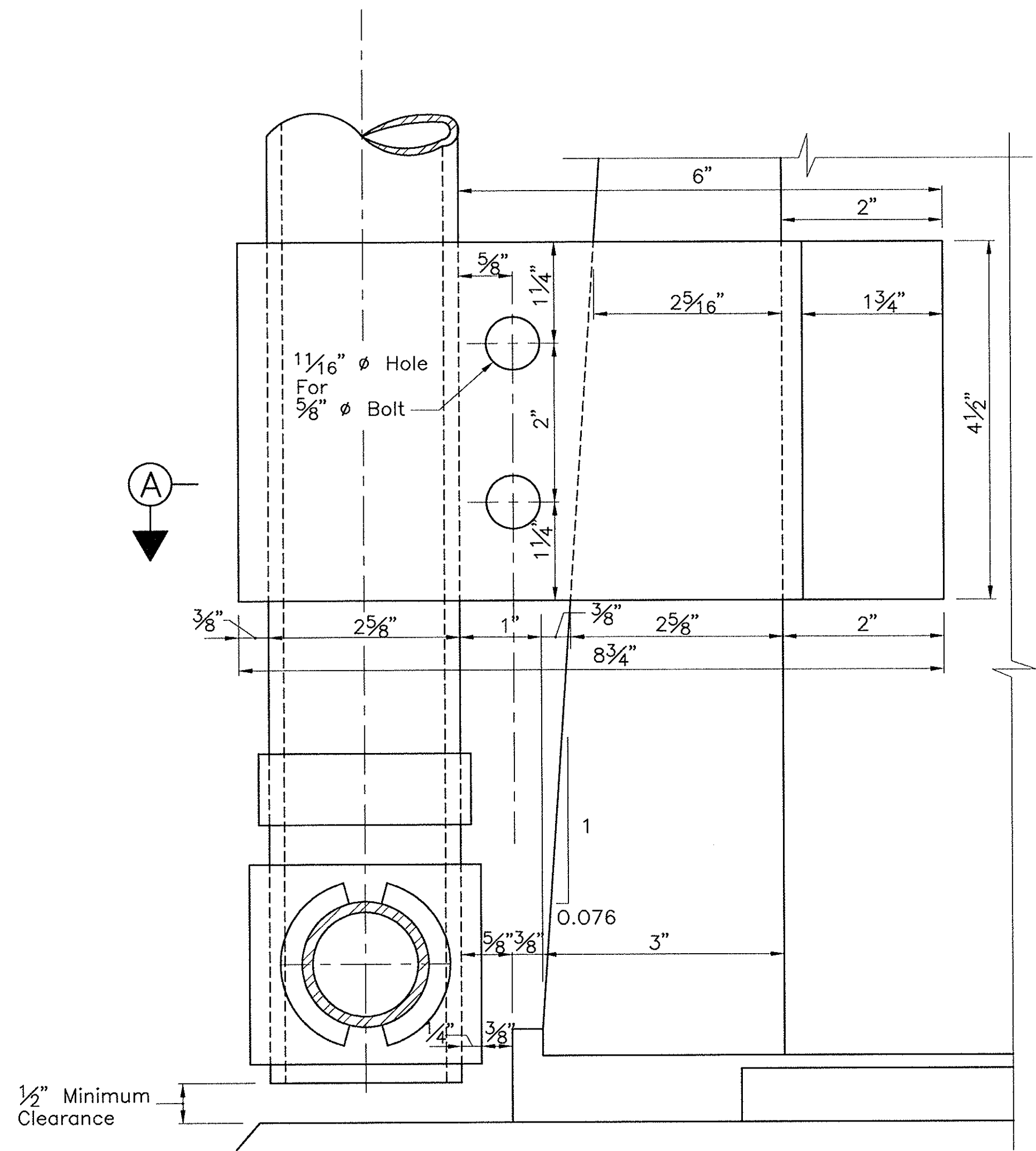
SECTION A-A
3/4 SIZE



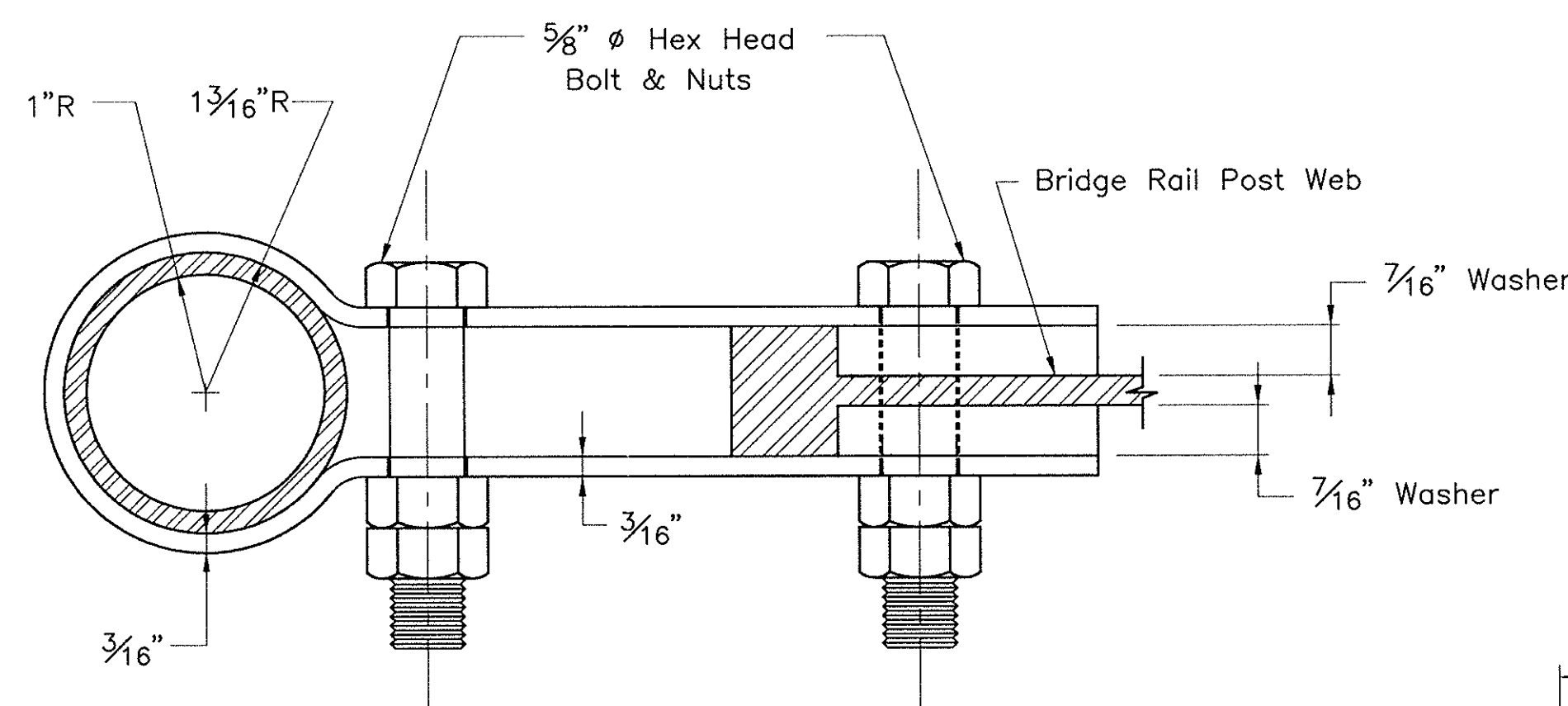
PLAN
STRETCHER BAR BAND CONNECTION
HALF SIZE



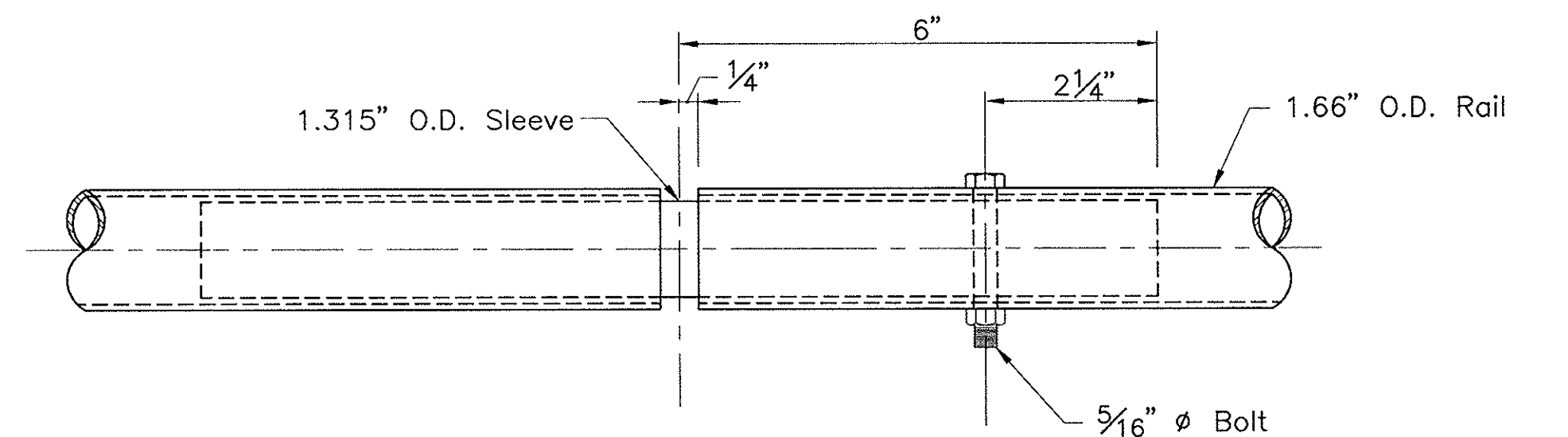
PLAN
POST CONNECTION CLAMP
HALF SIZE



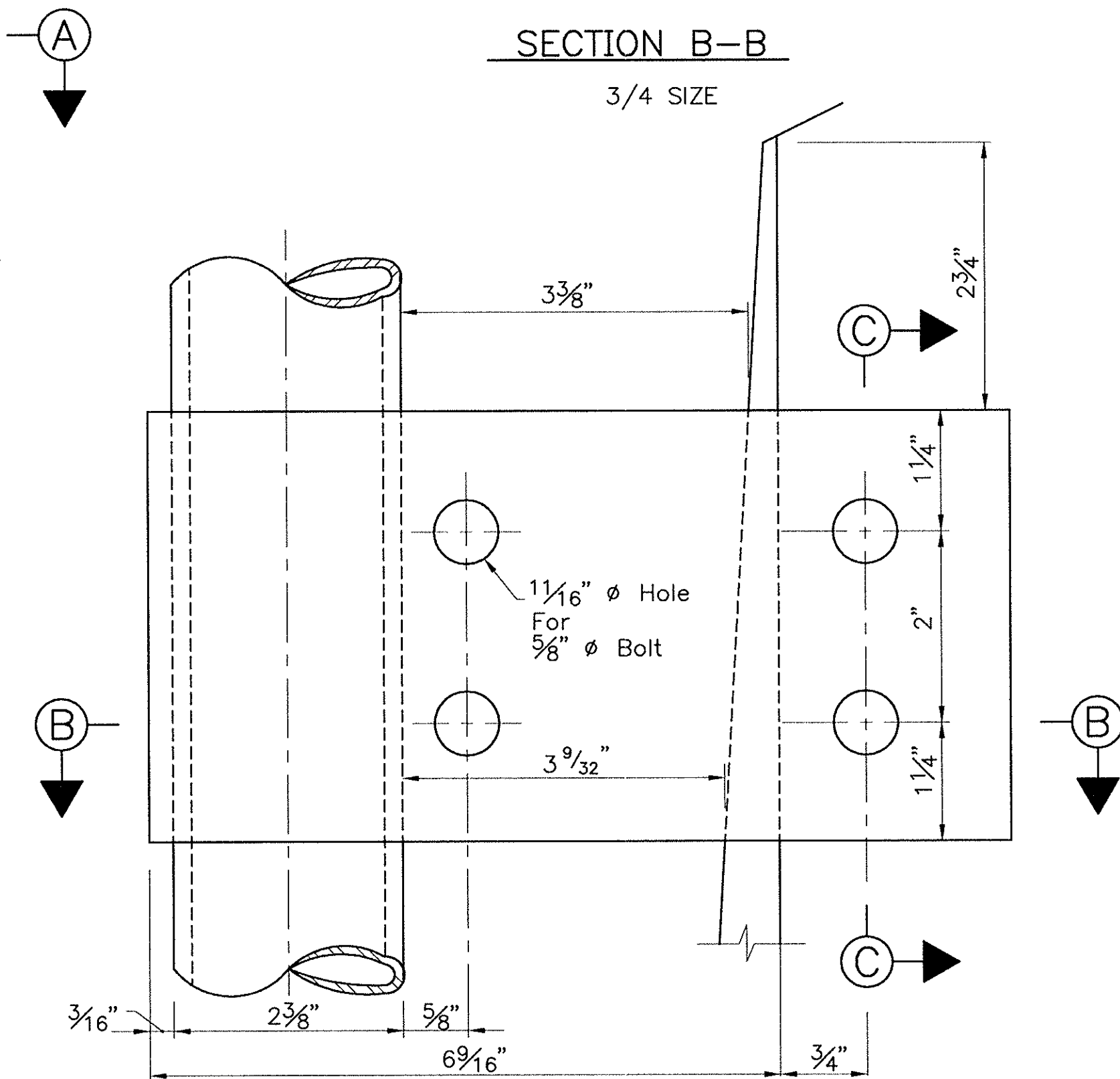
ELEVATION
LOWER CLAMP
3/4 SIZE



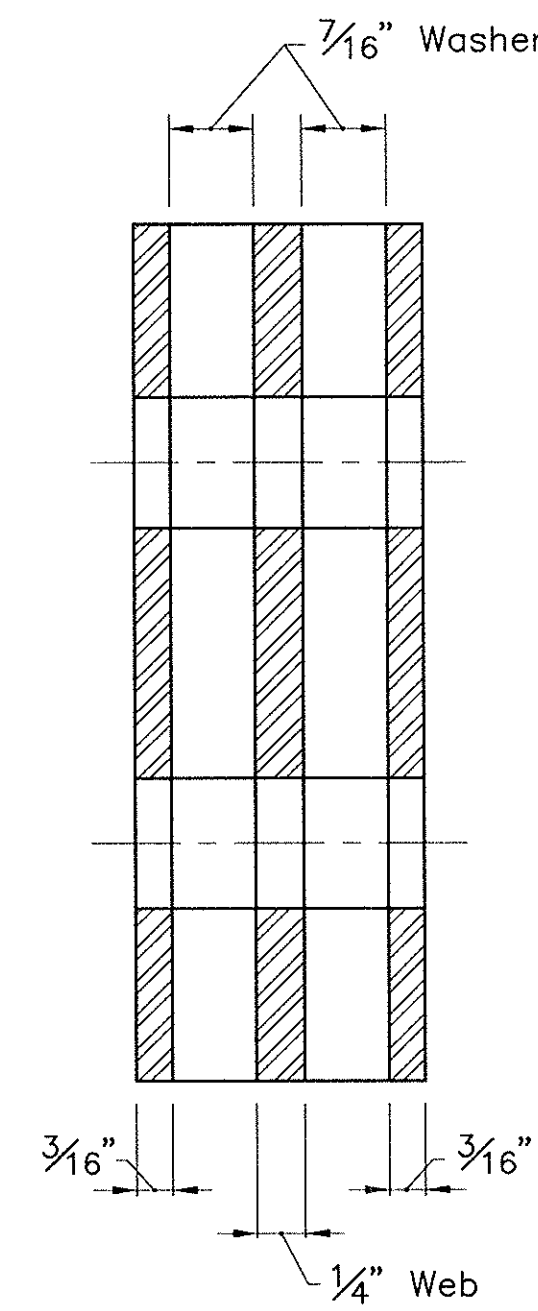
SECTION B-B
3/4 SIZE



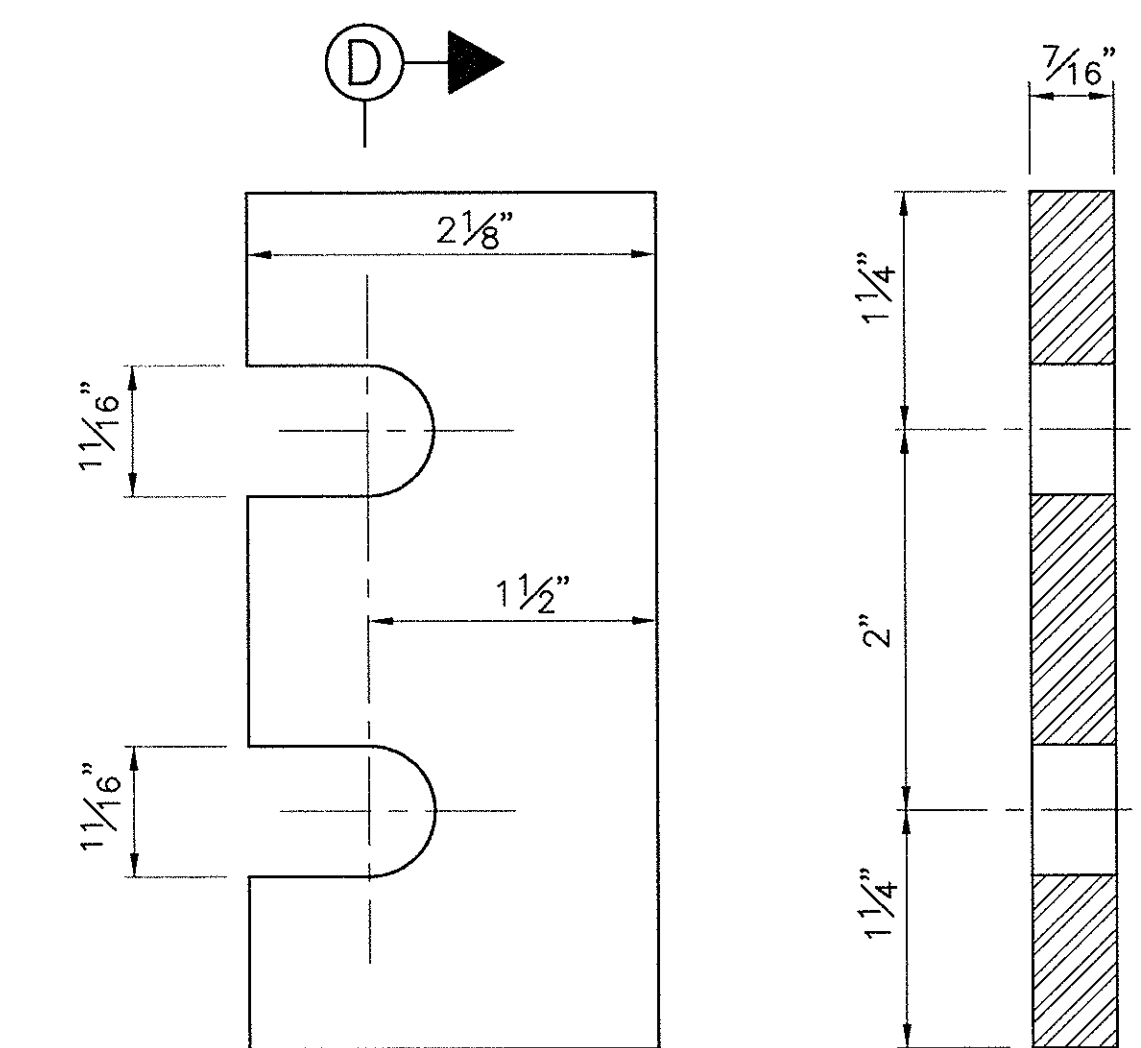
RAIL SPLICE DETAIL
HALF SIZE



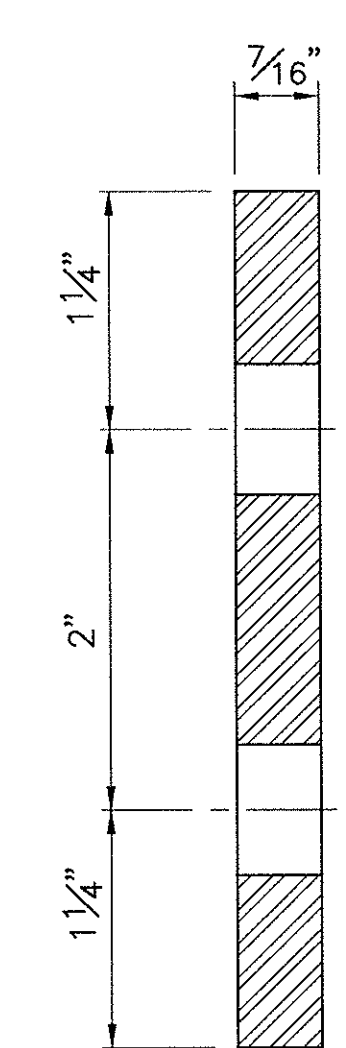
ELEVATION
UPPER CLAMP
3/4 SIZE



SECTION C-C
FULL SIZE



ELEVATION
UPPER CLAMP WASHER
FULL SIZE



SECTION D-D
FULL SIZE

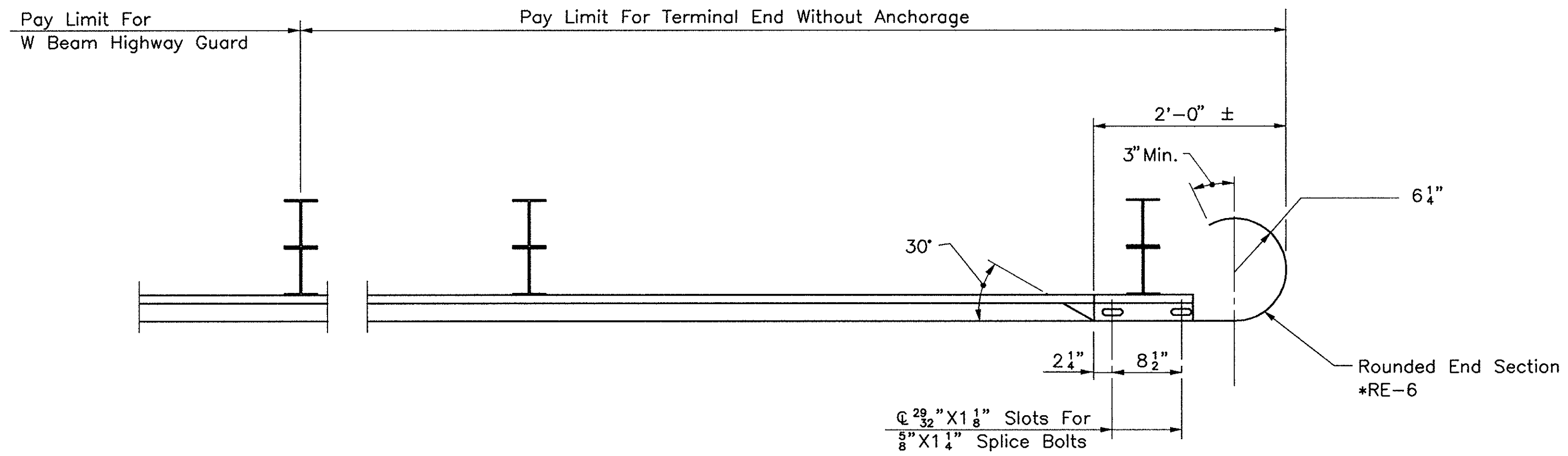
NOTE

1. Clamp Details Are For Attachment To AL-3 Type Bridge Rail Posts.
2. Lower Clamps Shall Be Fabricated From Aluminum Alloy 356-T6 Conforming To ASTM B26 Or B108.
3. Lower Clamps Shall Be Fabricated From Aluminum Alloy 6061-T6 Or 6063-T6 Conforming To ASTM B221.
4. Upper Clamp Washer Shall Be Fabricated From Aluminum Alloy 6061-T6 Conforming To ASTM B221.

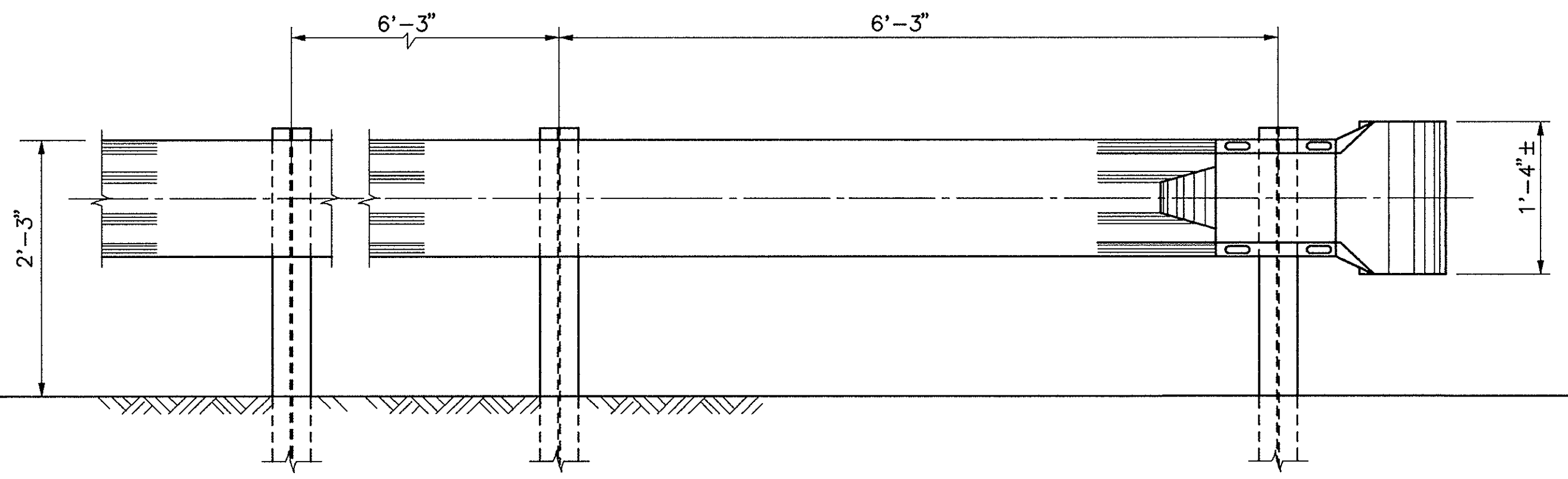
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
CHAIN LINK FENCE FOR BRIDGES	
DETAILS II	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 71

NO.	REVISION	BY	DATE



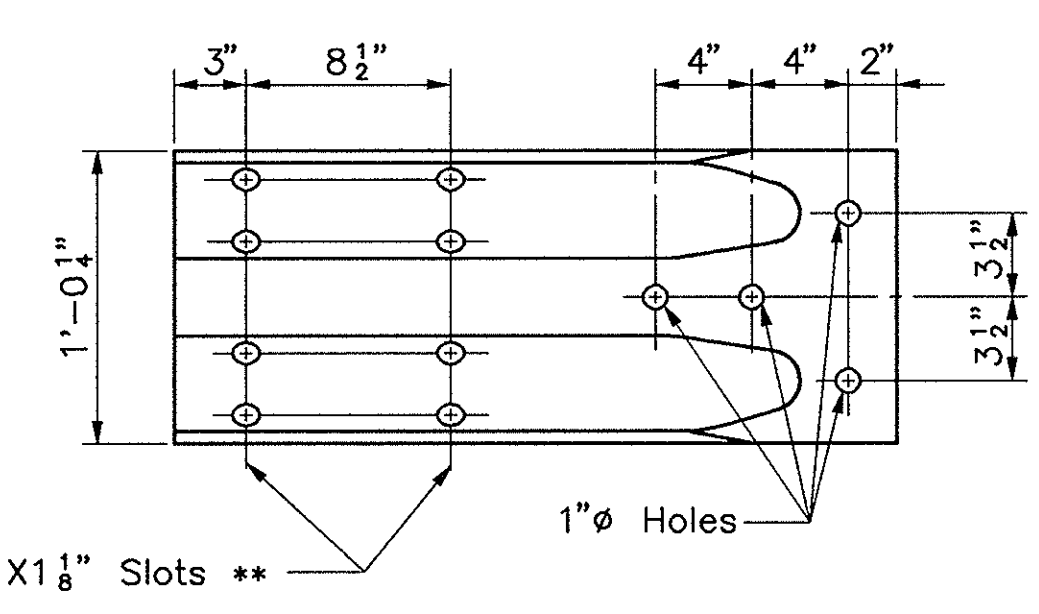
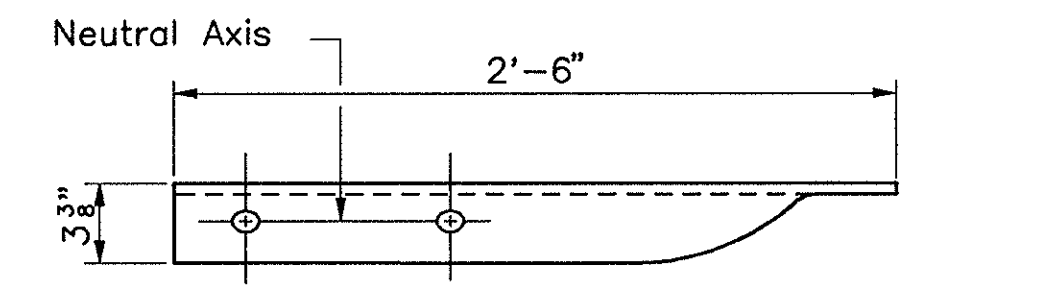
PLAN



ELEVATION

TERMINAL END WITHOUT ANCHORAGE (ITEM E4-9b)

1" = 1'-0"

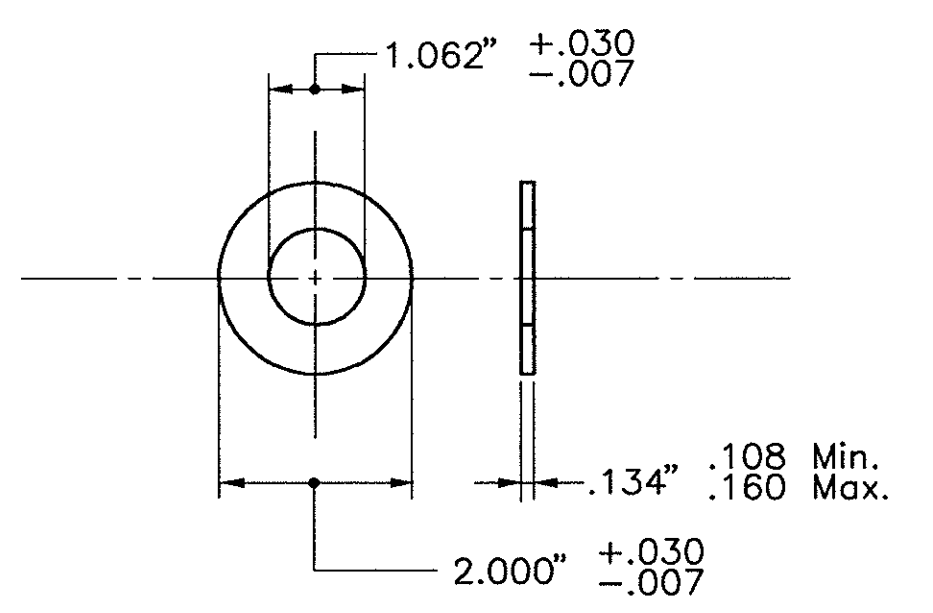


* RE-8

W BEAM TERMINAL CONNECTOR

1 1/2" = 1'-0"

**An Acceptable Alternative Is 2 3/8" X 3" Slots Used In Conjunction With 1" I.D., 2" O.D., Narrow, Type A Plain Washers *F-45 On The Splice Bolts.



* F-45

1" I.D., 2" O.D.
NARROW TYPE A PLAIN WASHER
HALF SIZE

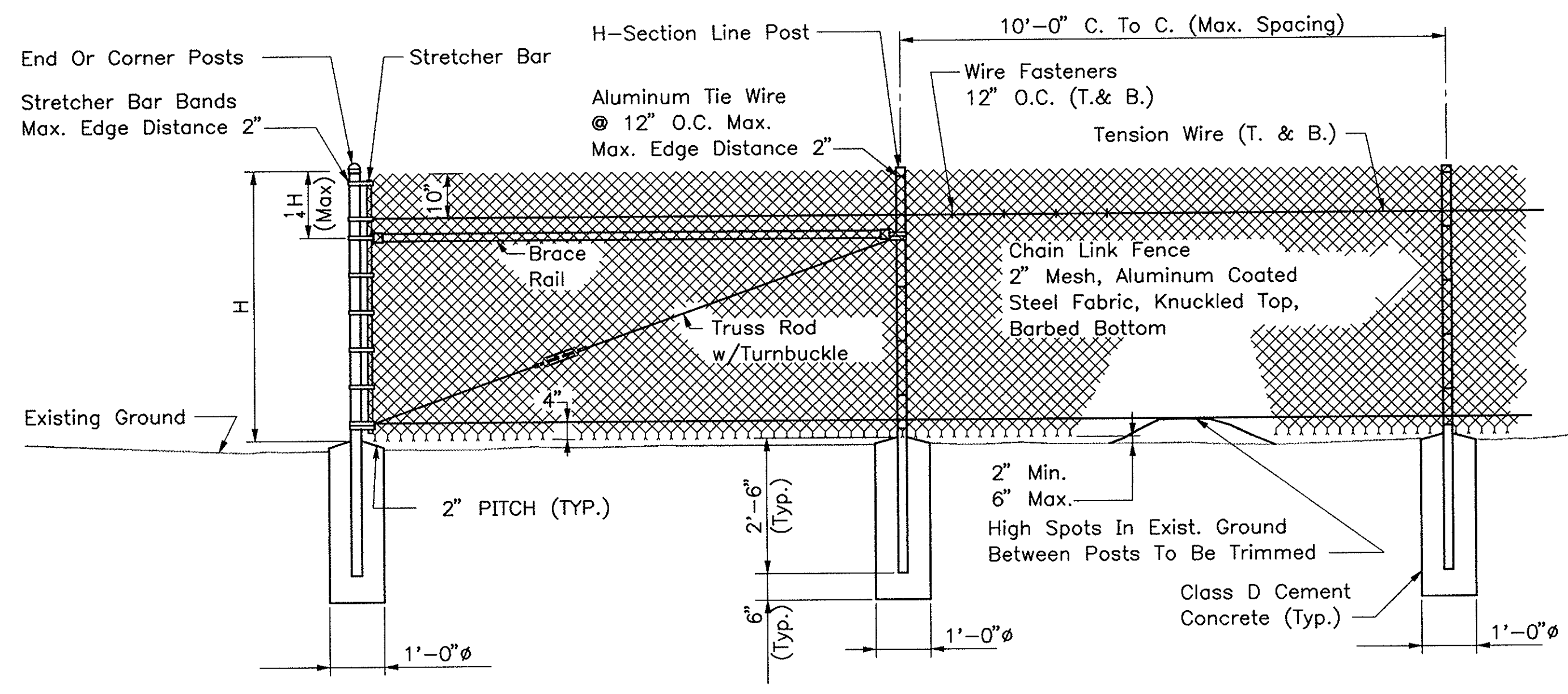
NOTE

* Identification letters and numbers on drawings refer to the standard detail drawings shown in "A Guide To Standardized Highway Barrier Rail Hardware" by AASHTO-AGC-ARTBA Joint Cooperative Committee.

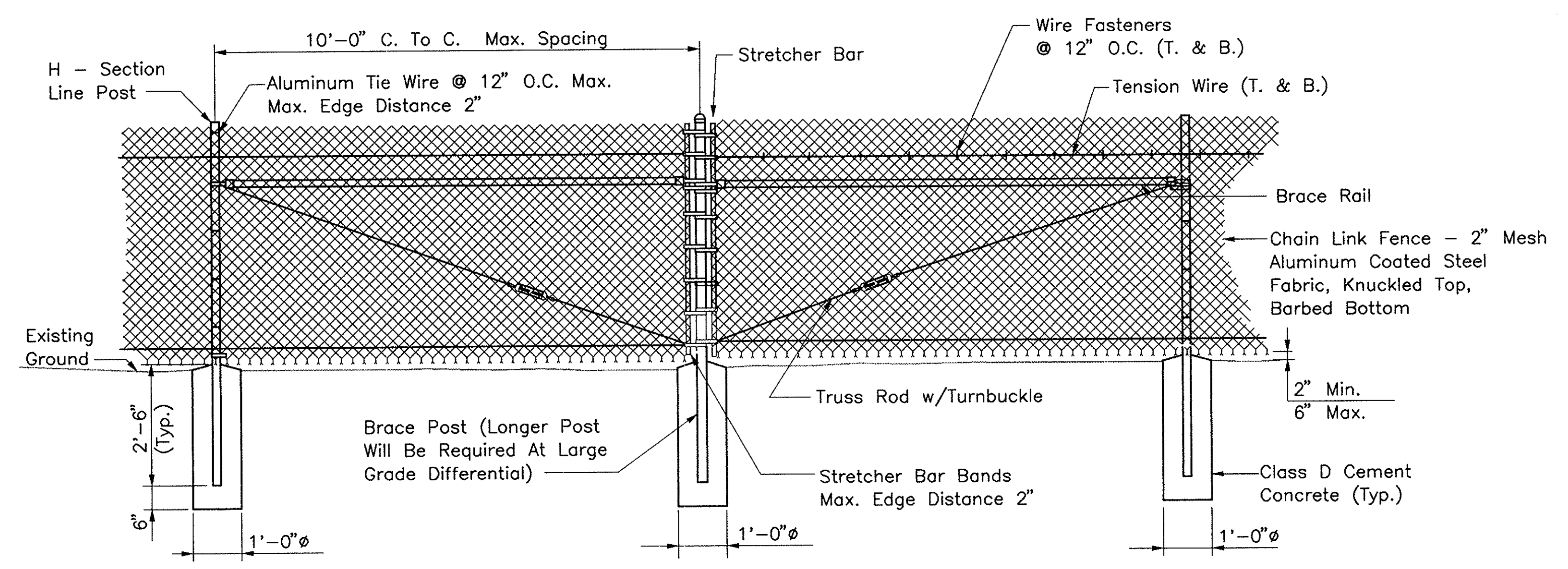
NO.	REVISION	BY	DATE
		E&K	12/93

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
DETAILS II	
W BEAM HIGHWAY GUARD	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 73

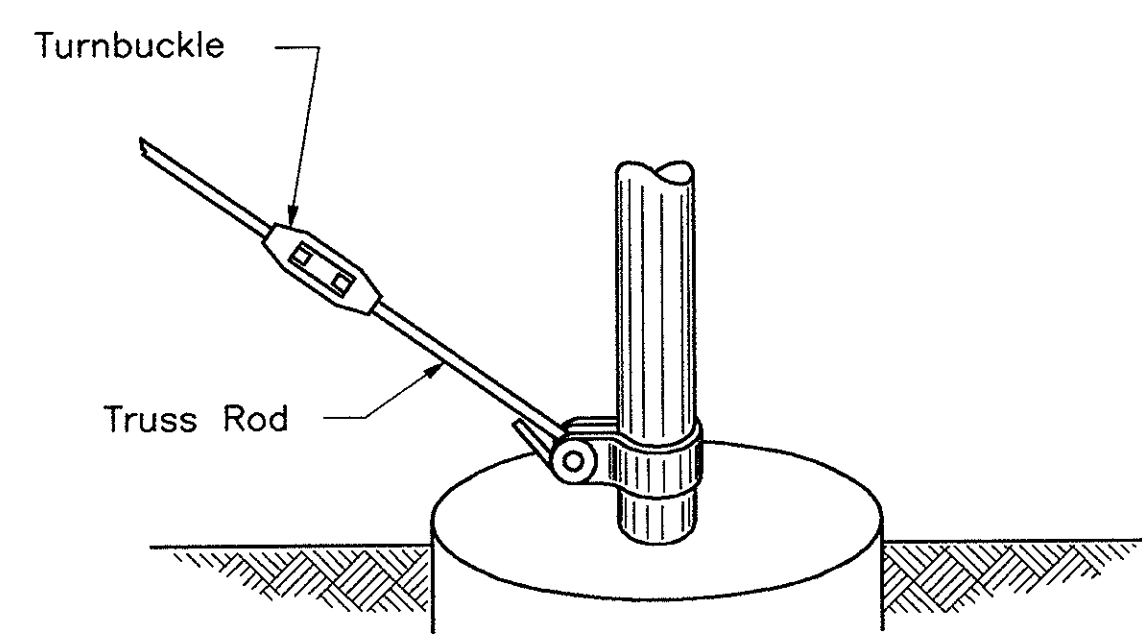


TYPICAL END OR CORNER PANEL

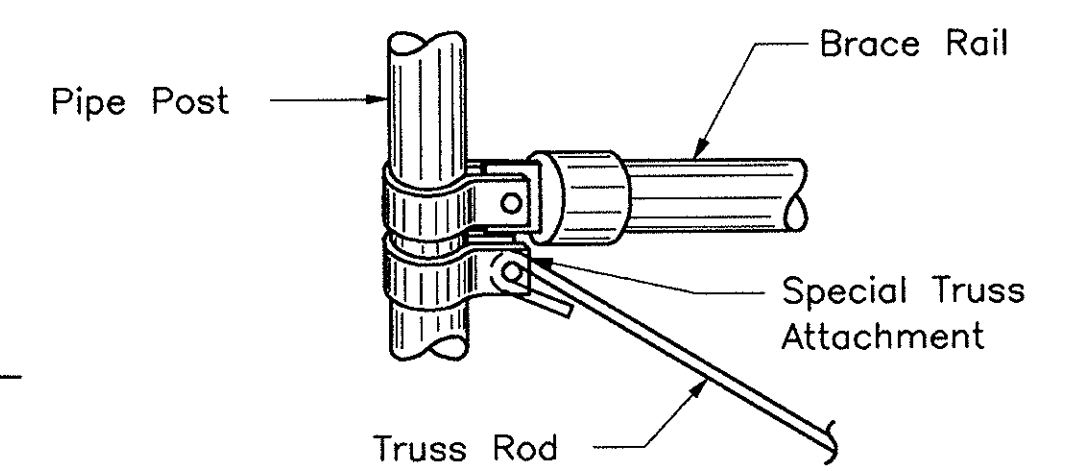


TYPICAL BRACE PANEL

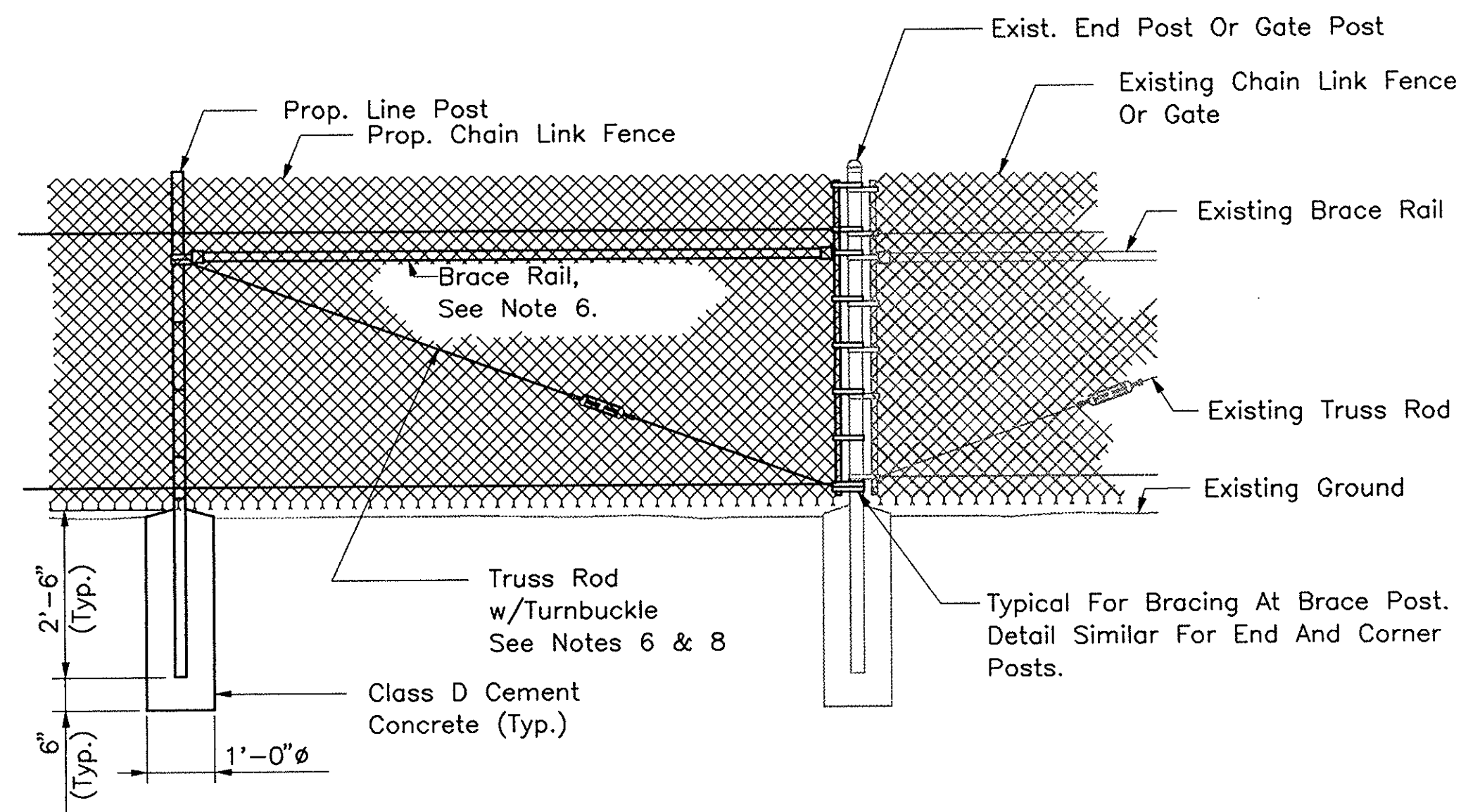
TYPICAL INTERMEDIATE PANEL



TRUSS ROD ATTACHMENT TO END, CORNER AND BRACE POSTS



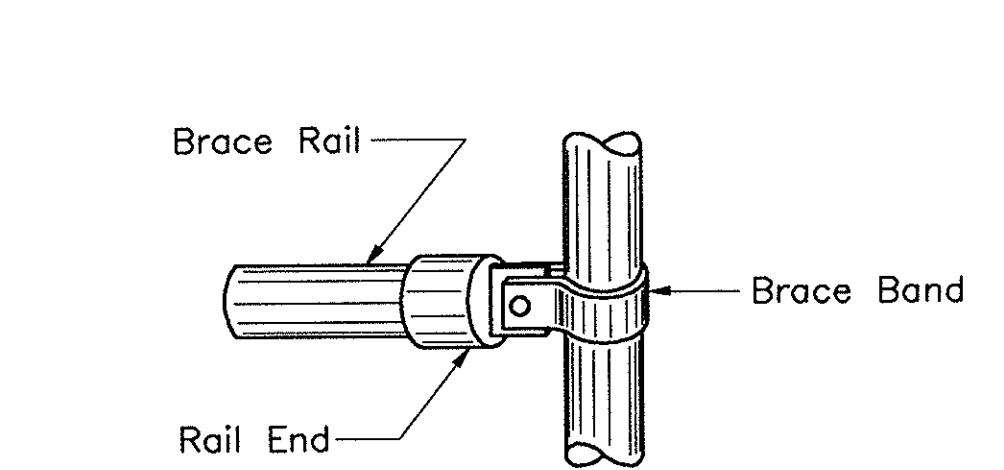
BRACE AND TRUSS ATTACHMENT AT LINE POST



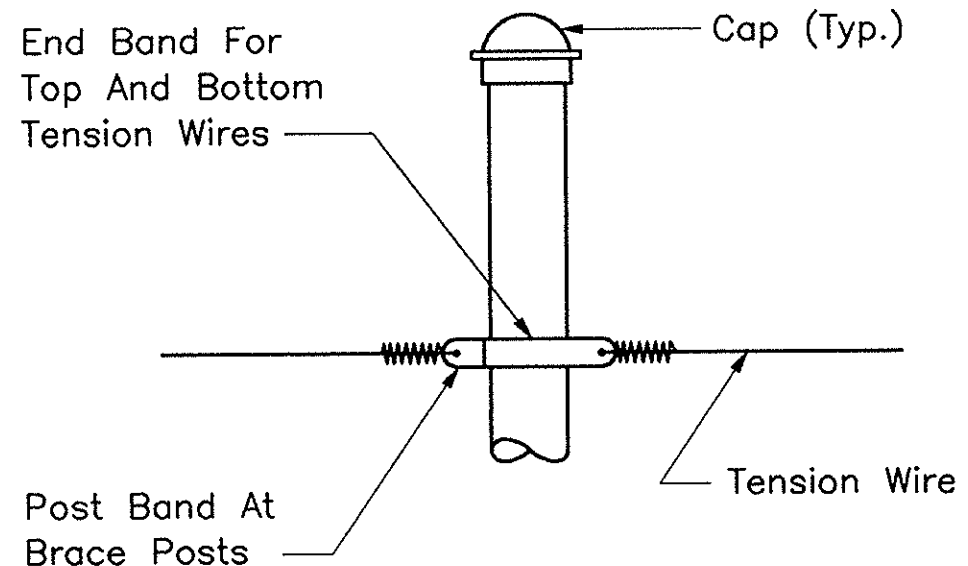
MEETING EXISTING CHAIN LINK FENCE

NOTES

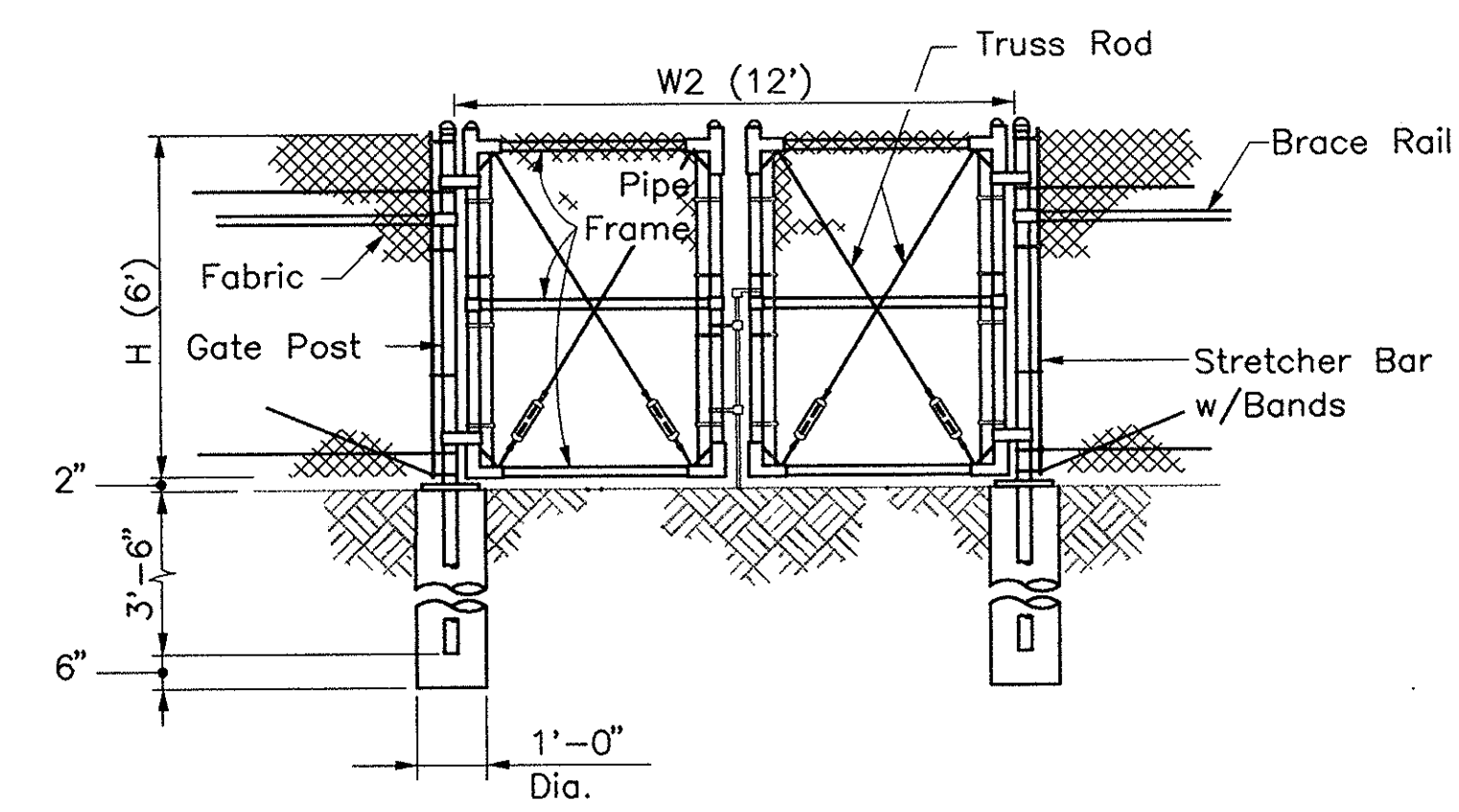
1. Brace Panels Shall Be Installed At 300' Maximum Intervals.
2. Brace Panels Shall Be Installed Where The Change In Grade Between Any Three Posts Exceeds 15%.
3. No Additional Payment Will Be Made For Longer Posts Necessitated By Large Grade Differential.
4. Two Panels Will Be Required At Corner Posts.
5. Changes In Line Of 30 Degrees Or More Shall Be Considered As Corners.
6. When Proposed Chain Link Fence Meets Existing Chain Link Fence, A Brace Rail And Truss Rod And All Necessary Hardware Shall Be Installed, And Shall Be Considered Incidental To And Paid For Under The Item For Chain Link Fence Of The Height Installed.
7. All Bands Shall Be Rectangular On "H" Posts And Round On Round Posts.
8. Secure Turnbuckle To Wire Fabric With 2 Tie Wires.



HORIZONTAL BRACE RAIL ATTACHMENT TO END, CORNER AND BRACE POSTS



TENSION WIRE ATTACHMENT TO END, CORNER AND BRACE POSTS



DOUBLE GATE

Gate Width		Gate Post O.D.
W1 to 6'	W2 to 12'	3 3/4"
6' to 12'	12' to 24'	4 1/2"
12' to 18'	24' to 36'	6 5/8"

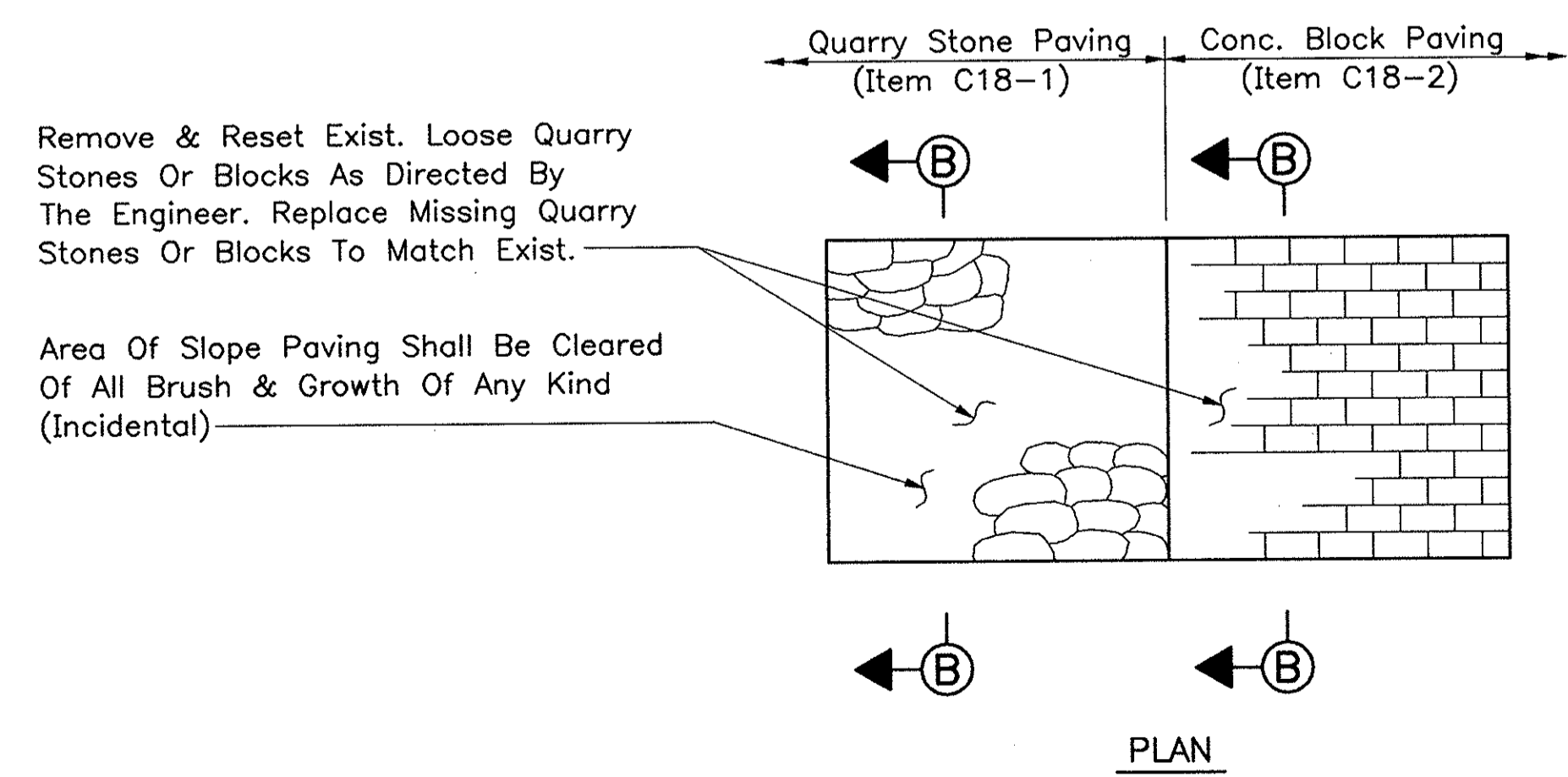
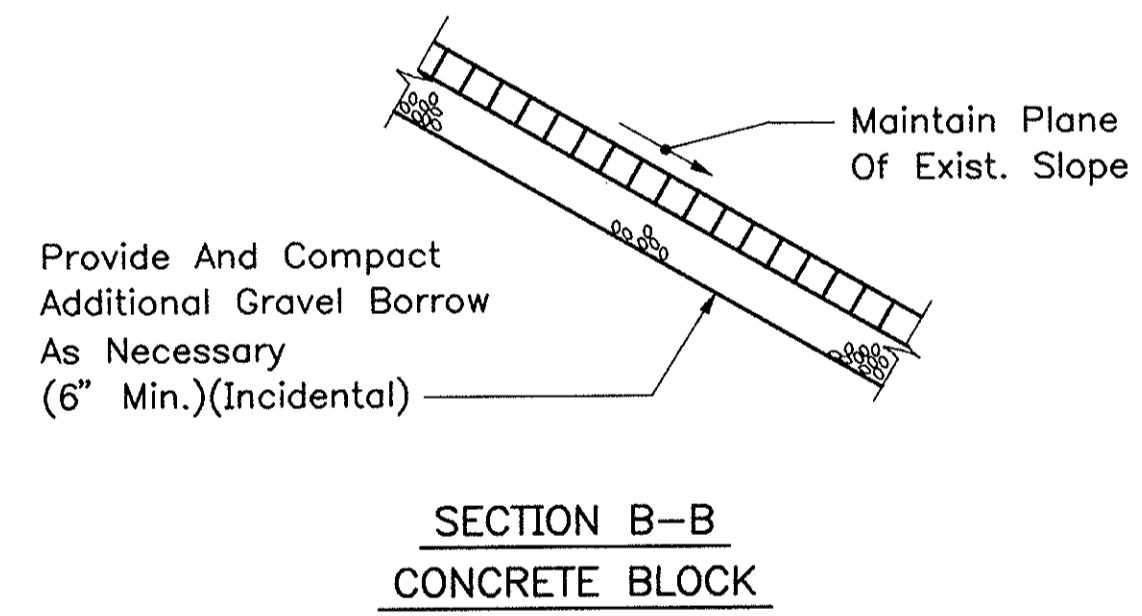
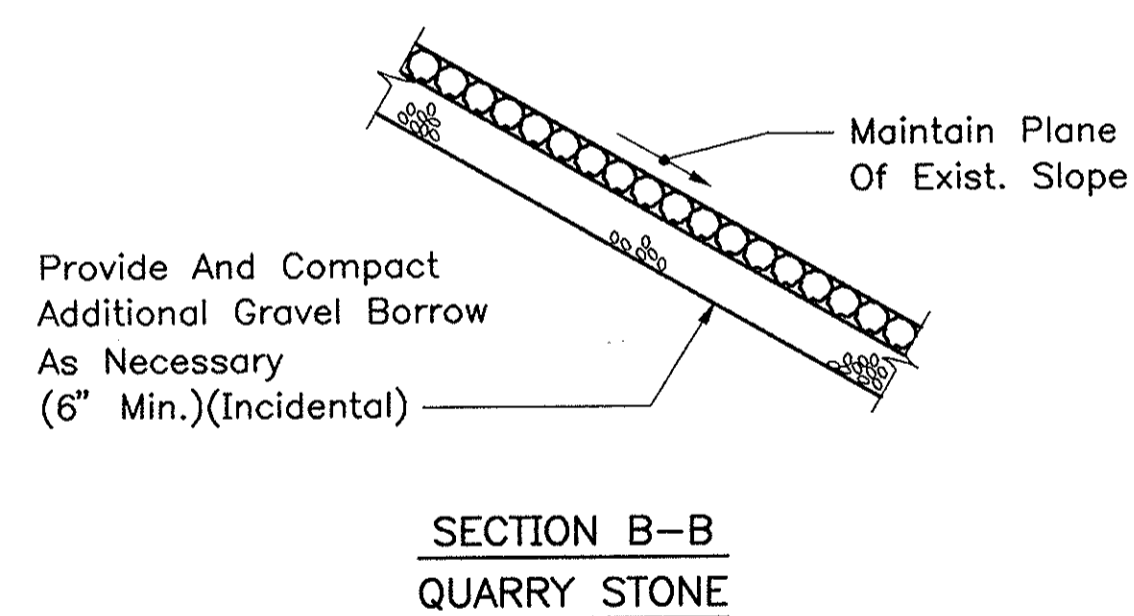
AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 STANDARD DETAILS
CHAIN LINK FENCE DETAILS

Scale: NOT TO SCALE Contract No. 521-024

MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. **74**

NO.	REVISION	BY	DATE



SLOPE PAVING UNDER BRIDGES (ITEMS C18-1 & C18-2)
Not To Scale

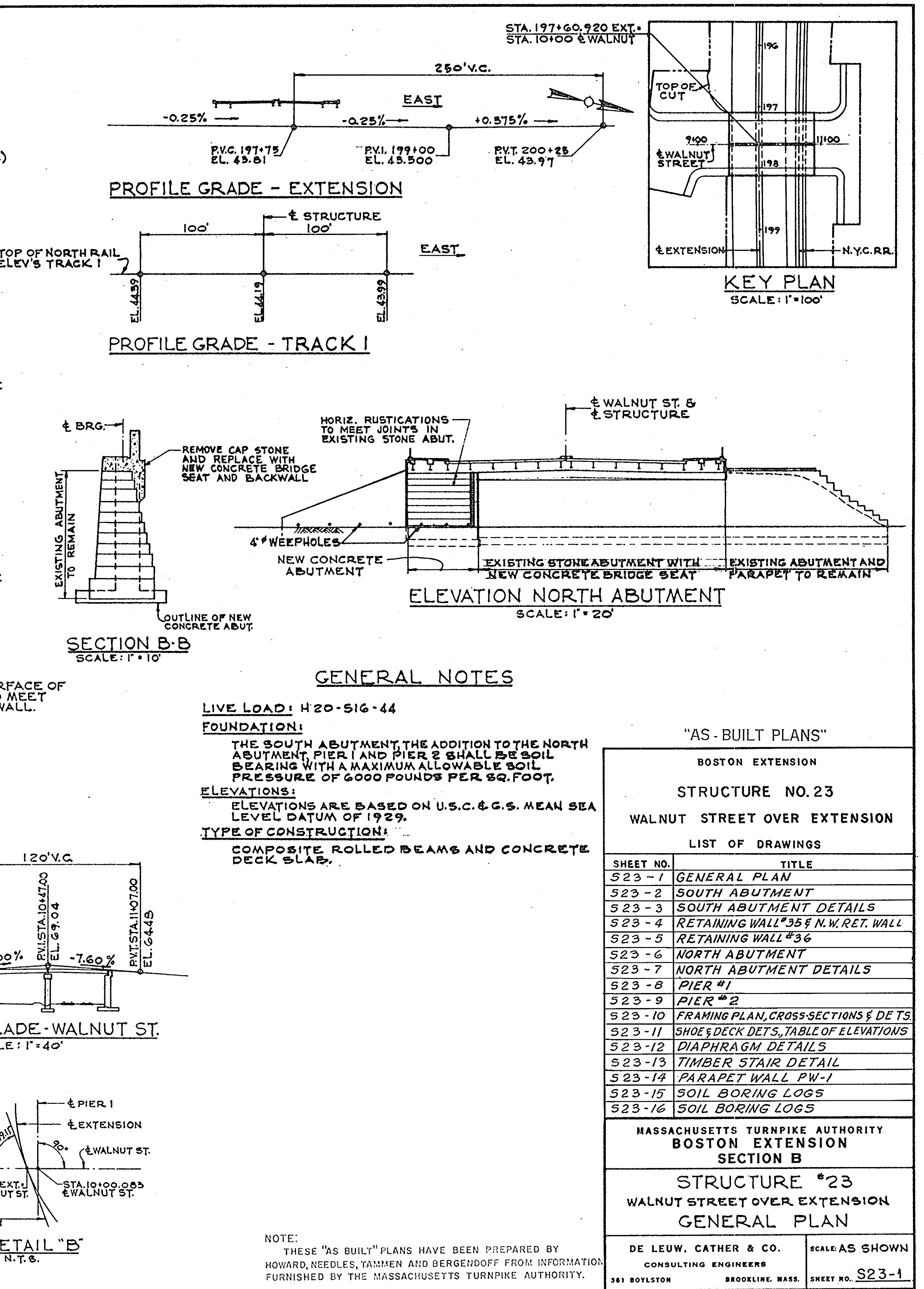
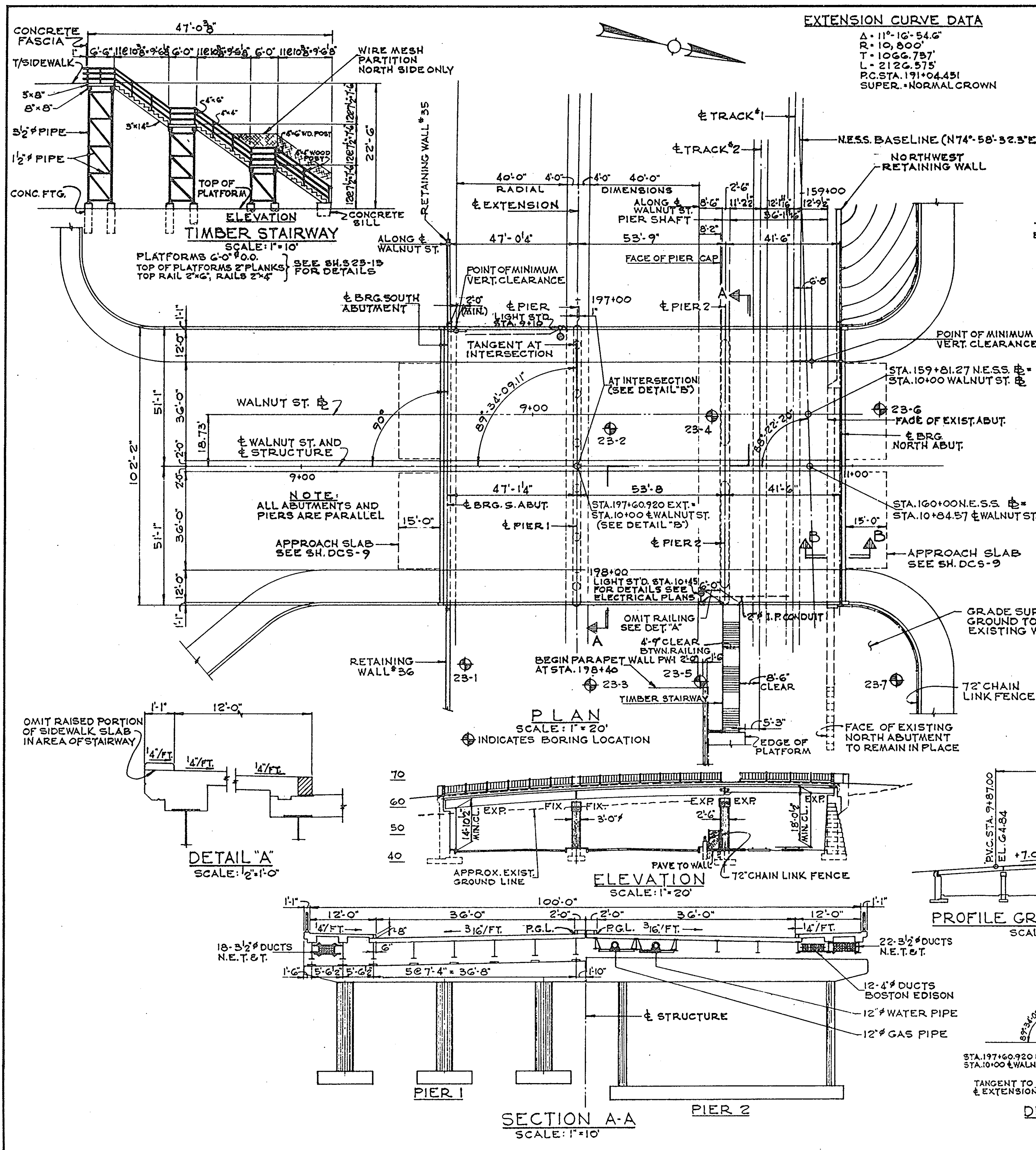
NOTES

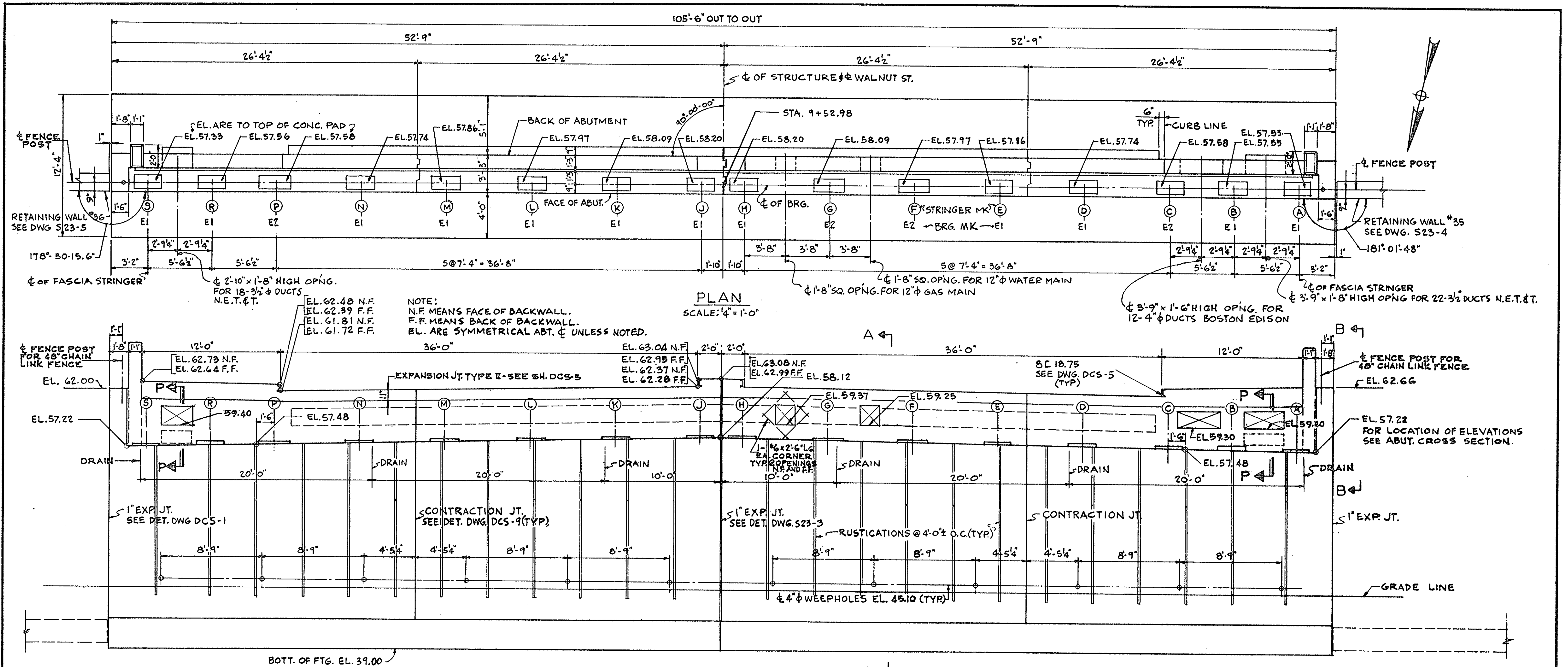
1. For Description, Materials And Construction Methods, See Specifications.
2. Limit Of Areas For Repair Or Replacement Shall Be As Shown On Plans And As Directed By The Engineer In The Field.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
SLOPE PAVEMENT	
REPAIR DETAILS	
Scale: AS NOTED	Contract No. 521-024
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 75

NO.	REVISION	BY	DATE

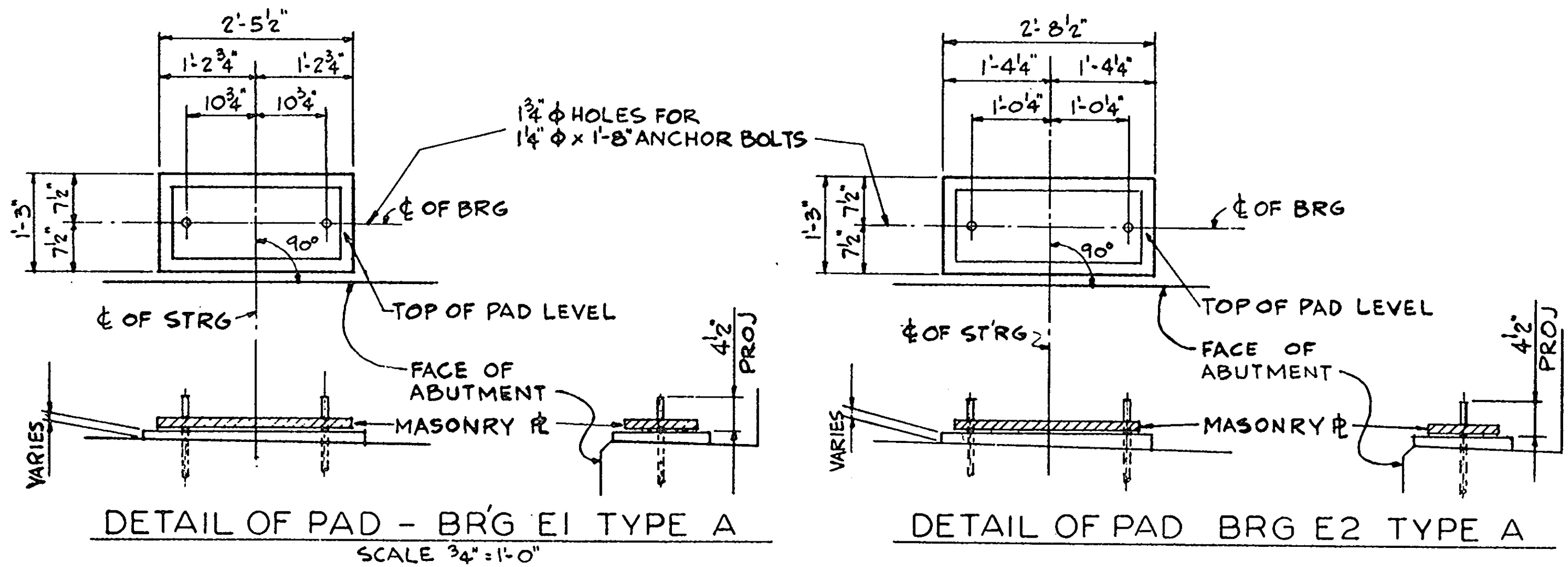




PLAN
SCALE: 1/4" = 1'-0"

NOTE:
N.F. MEANS FACE OF BACKWALL.
F.F. MEANS BACK OF BACKWALL.
EL. ARE SYMMETRICAL ABT. & UNLESS NOTED.

ELEVATION
SCALE: 1/4" = 1'-0"



NOTE:
FOR GENERAL NOTES - SEE DWG. DCS-3
FOR GENERAL PLAN - SEE DWG. S23-1
FOR SECTIONS & DETAILS SEE S23-3
FOR FENCE POST DETAILS SEE SH. SD-6.

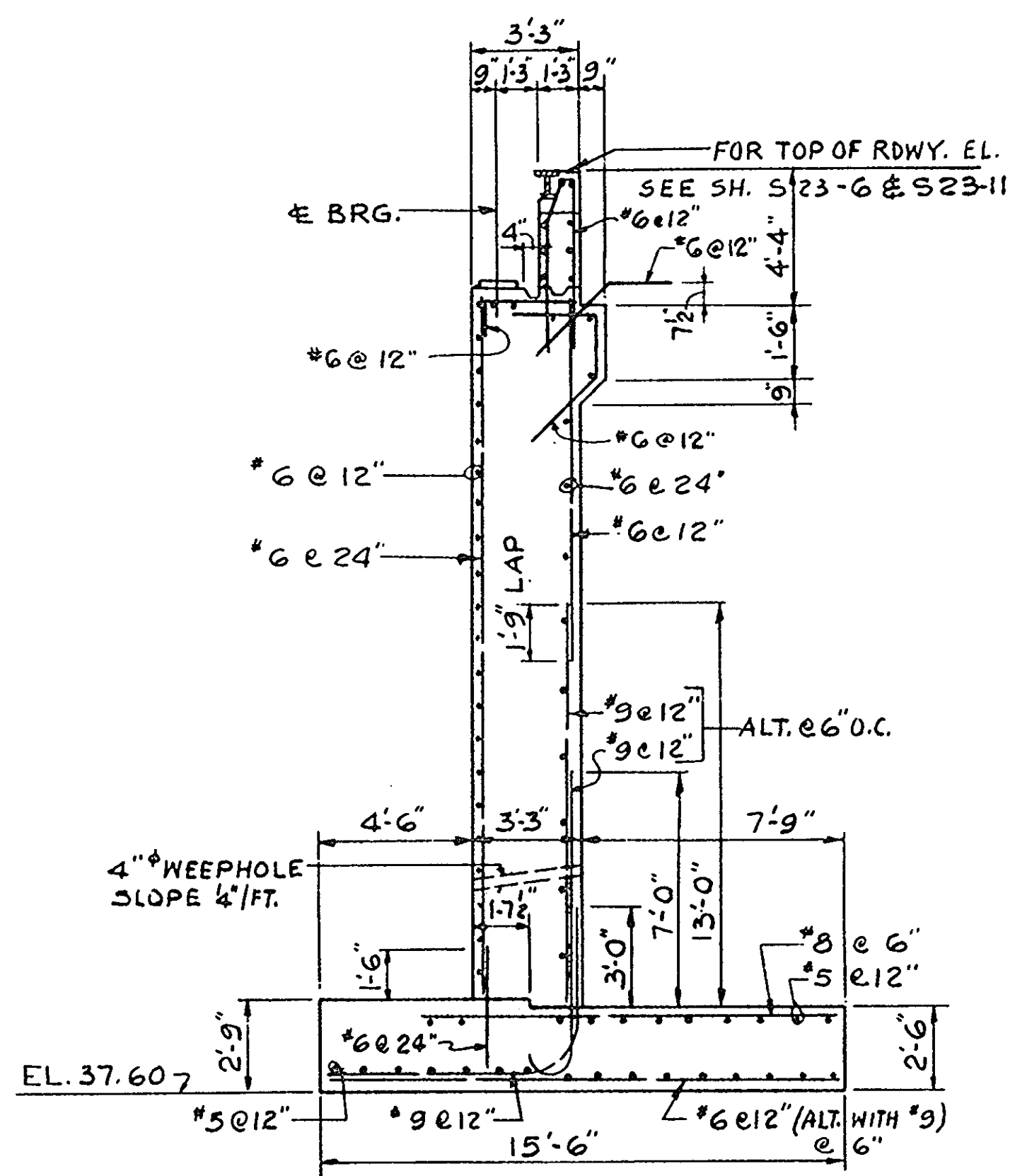
"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

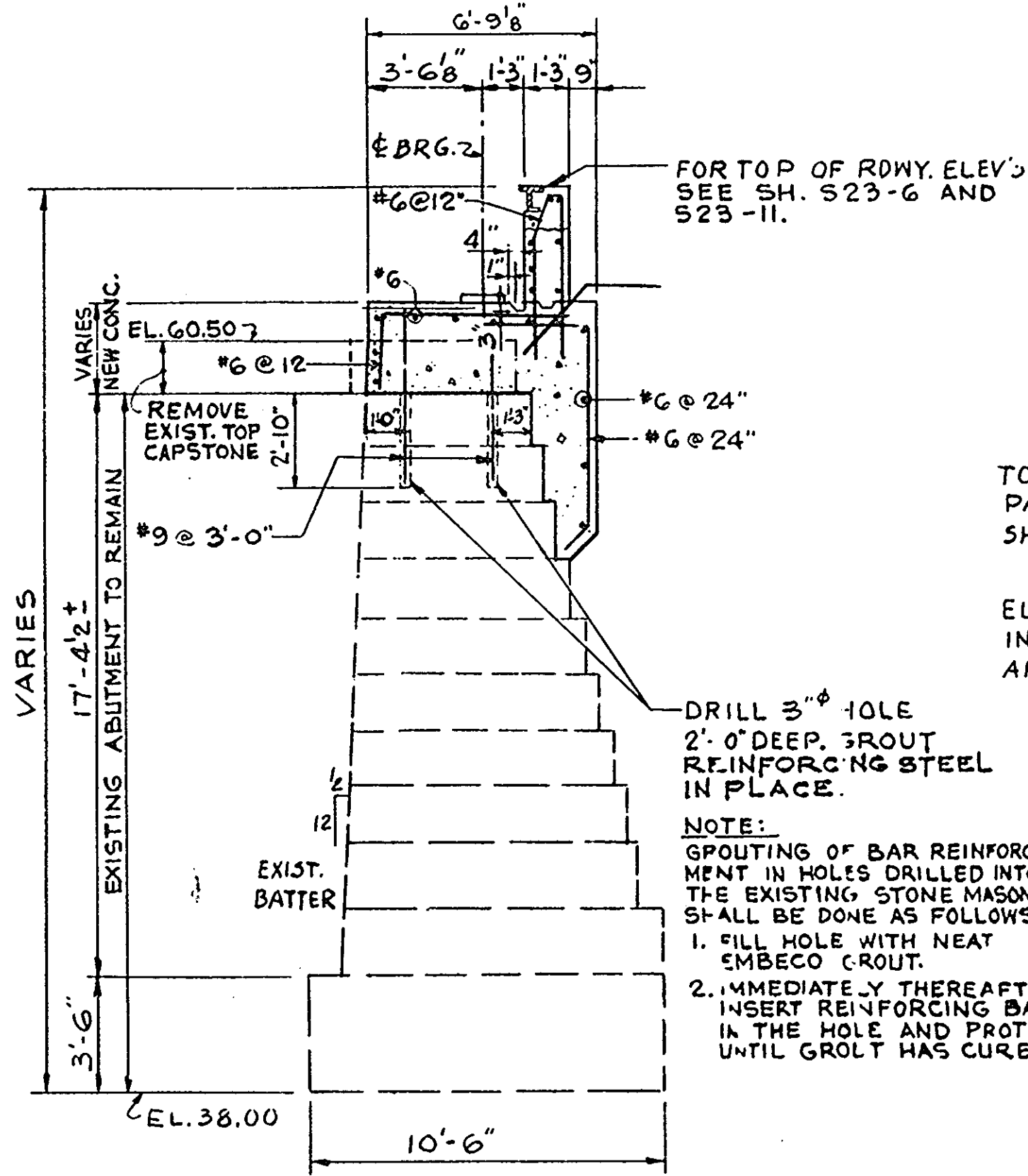
**STRUCTURE #23
WALNUT ST. OVER EXTENSION
SOUTH ABUTMENT**

DE LEUW, CATHER & CO. CONSULTING ENGINEERS
381 BOYLSTON BROOKLINE, MASS. SHEET NO. S23-2

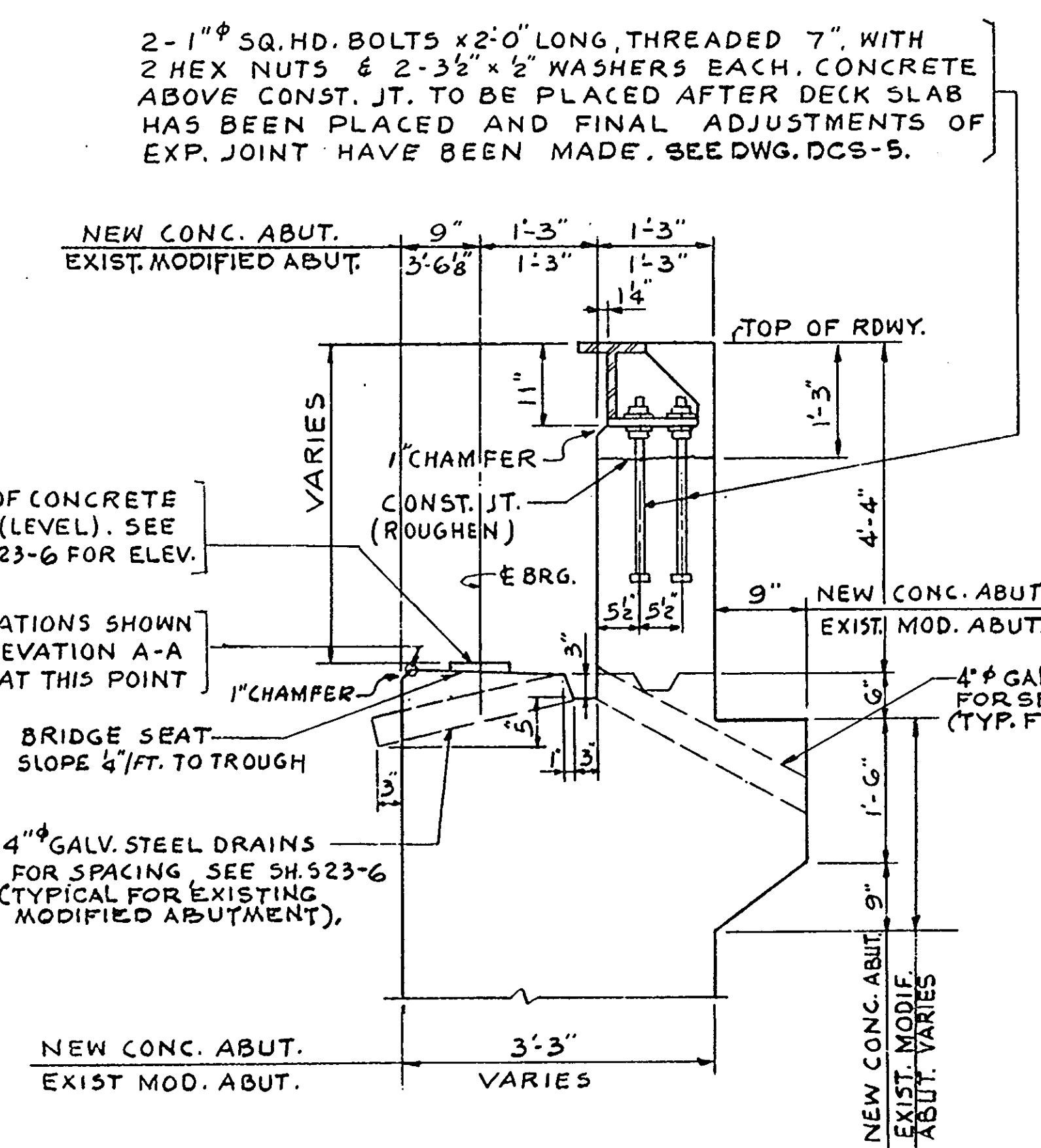
SCALE AS NOTED



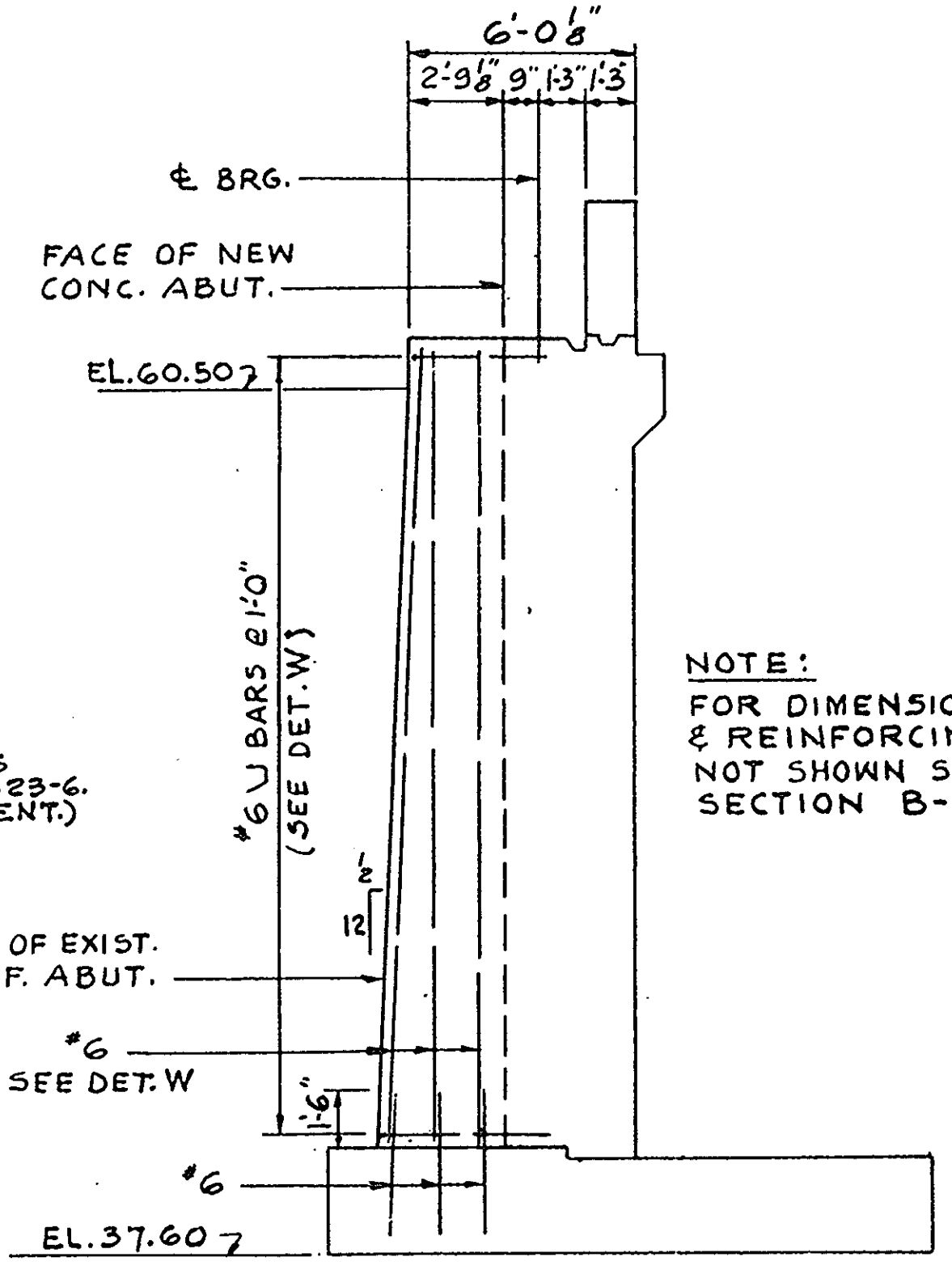
SECTION B-B
SCALE: 4"=1'-0"



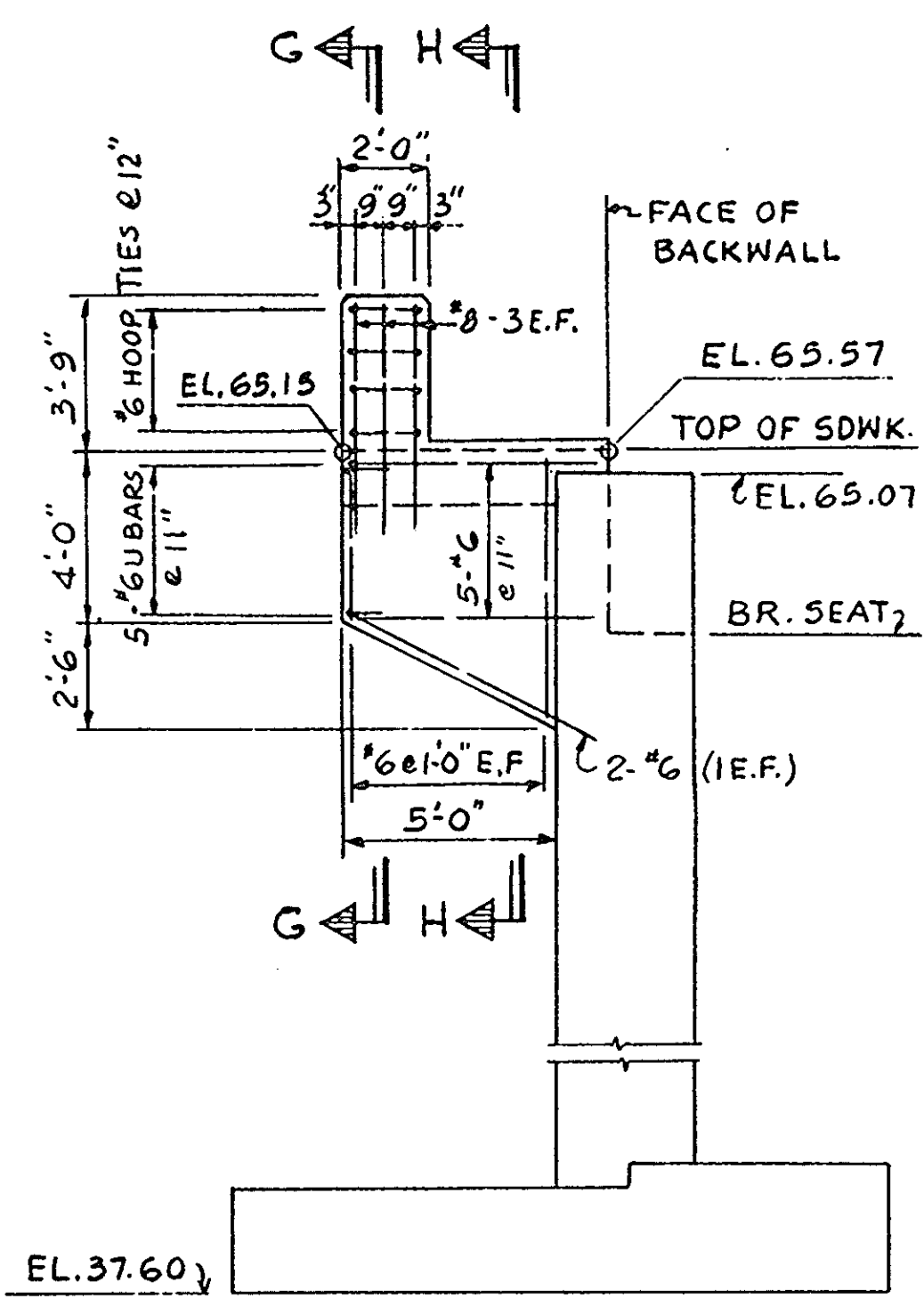
SECTION C-C
SCALE: 4"=1'-0"



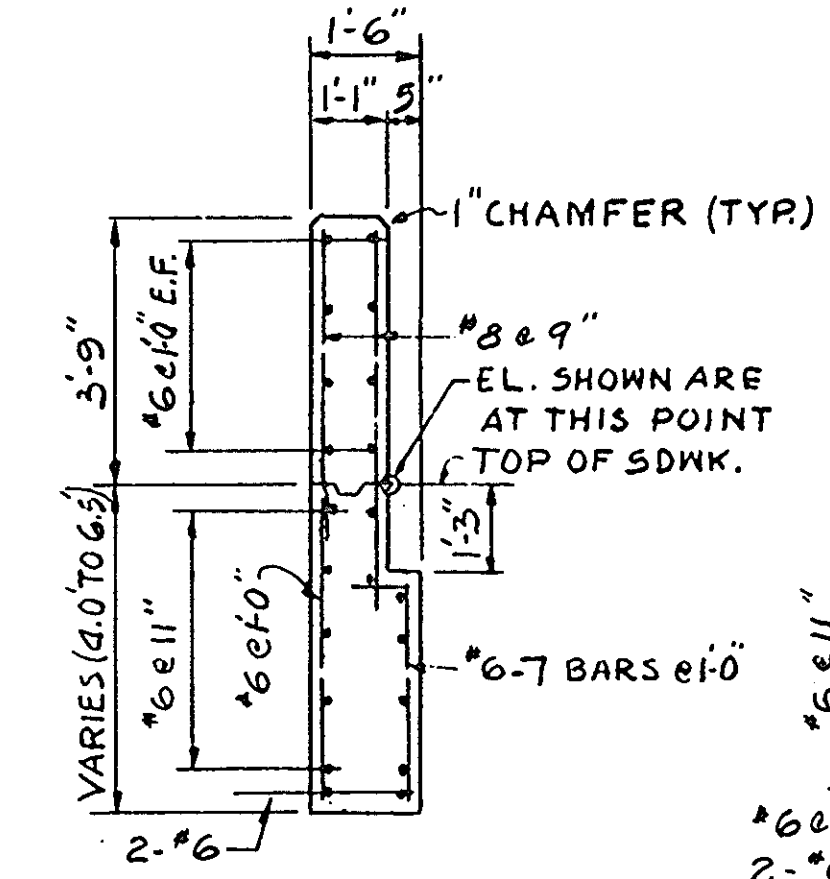
TYPICAL CROSS SECTION
THRU ABUTMENT
SCALE: 3/4"=1'-0"



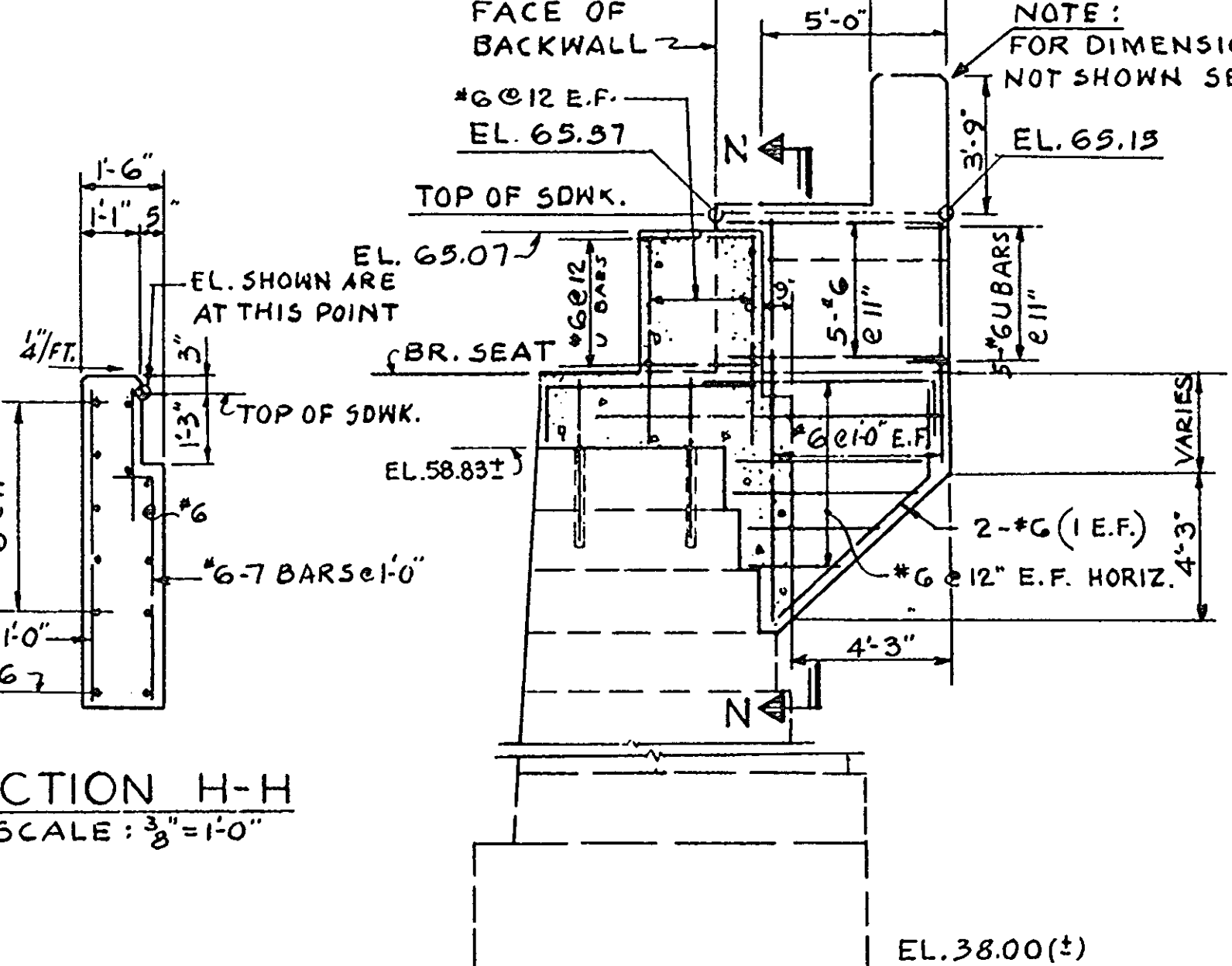
ELEVATION D-D
SCALE: 4"=1'-0"



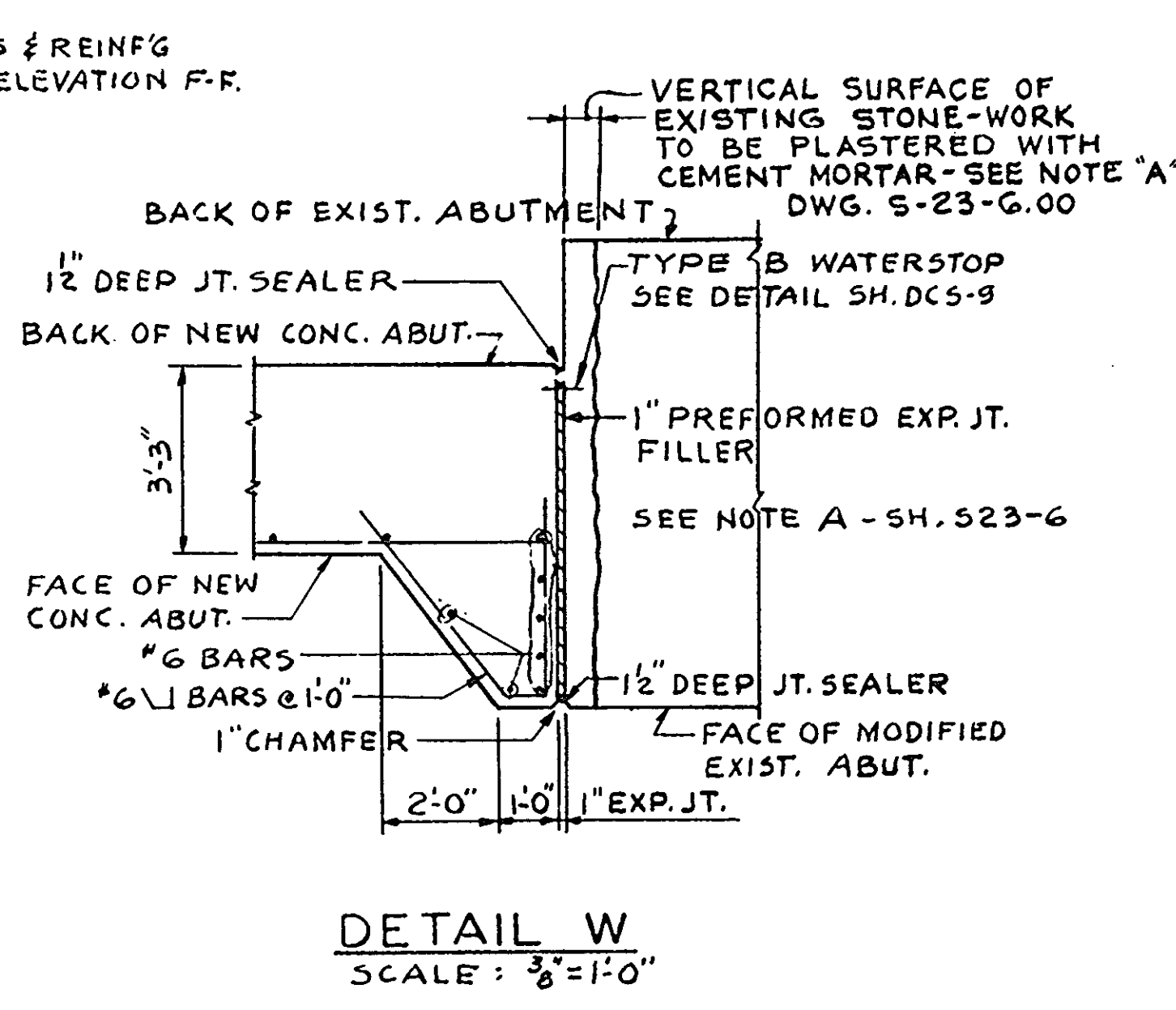
ELEVATION F-F
SCALE: 4"=1'-0"



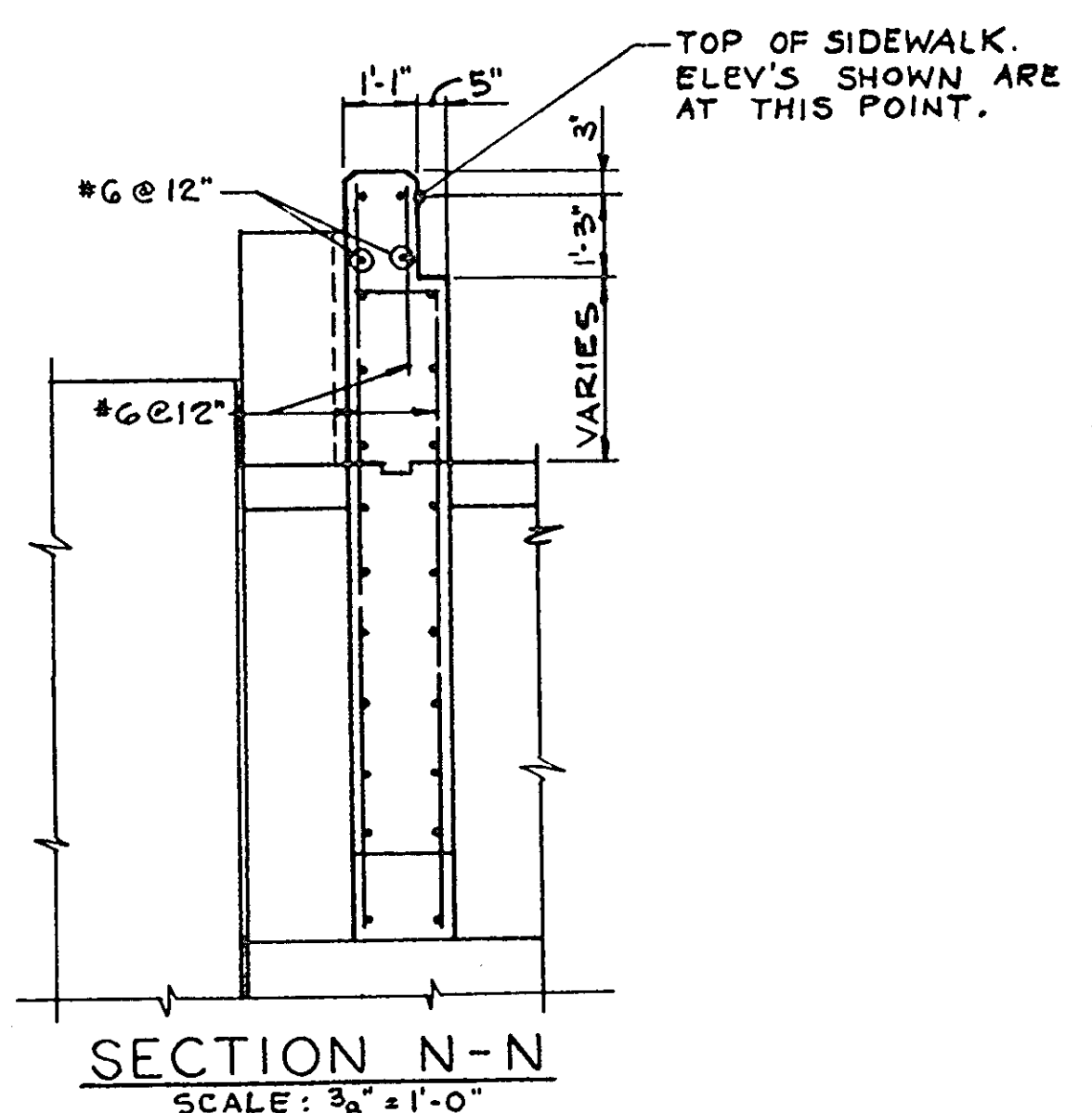
SECTION G-G
SCALE: 3/8"=1'-0"



ELEVATION K-K
SCALE: 4"=1'-0"



DETAIL W
SCALE: 3/8"=1'-0"



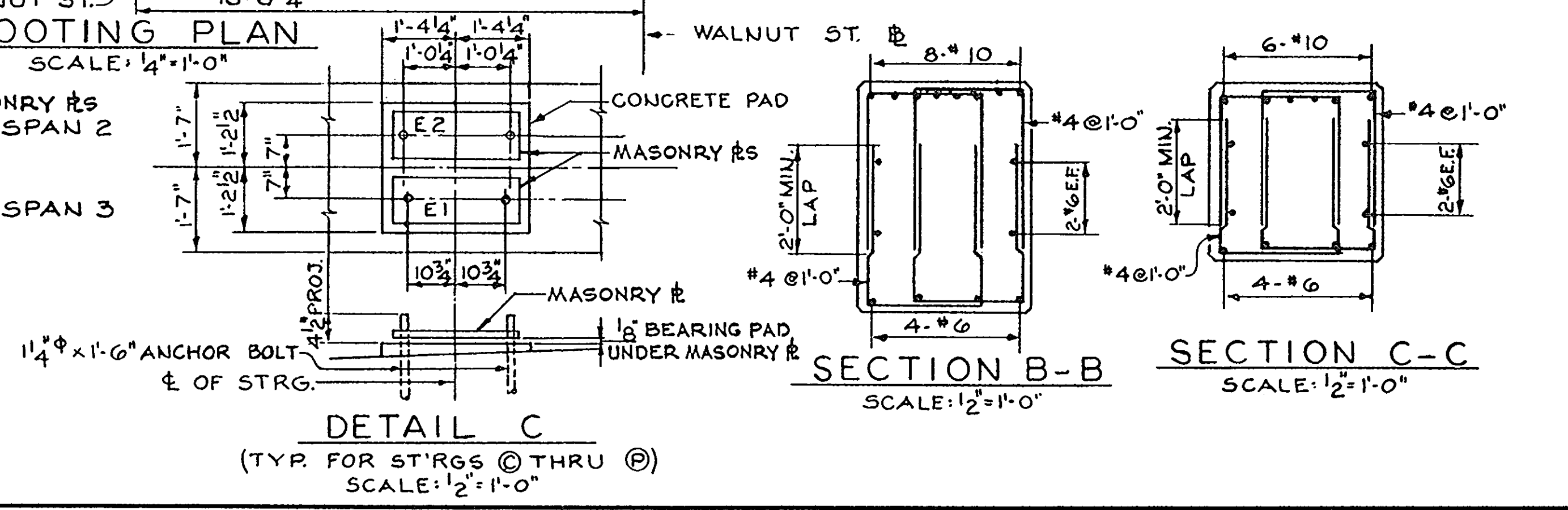
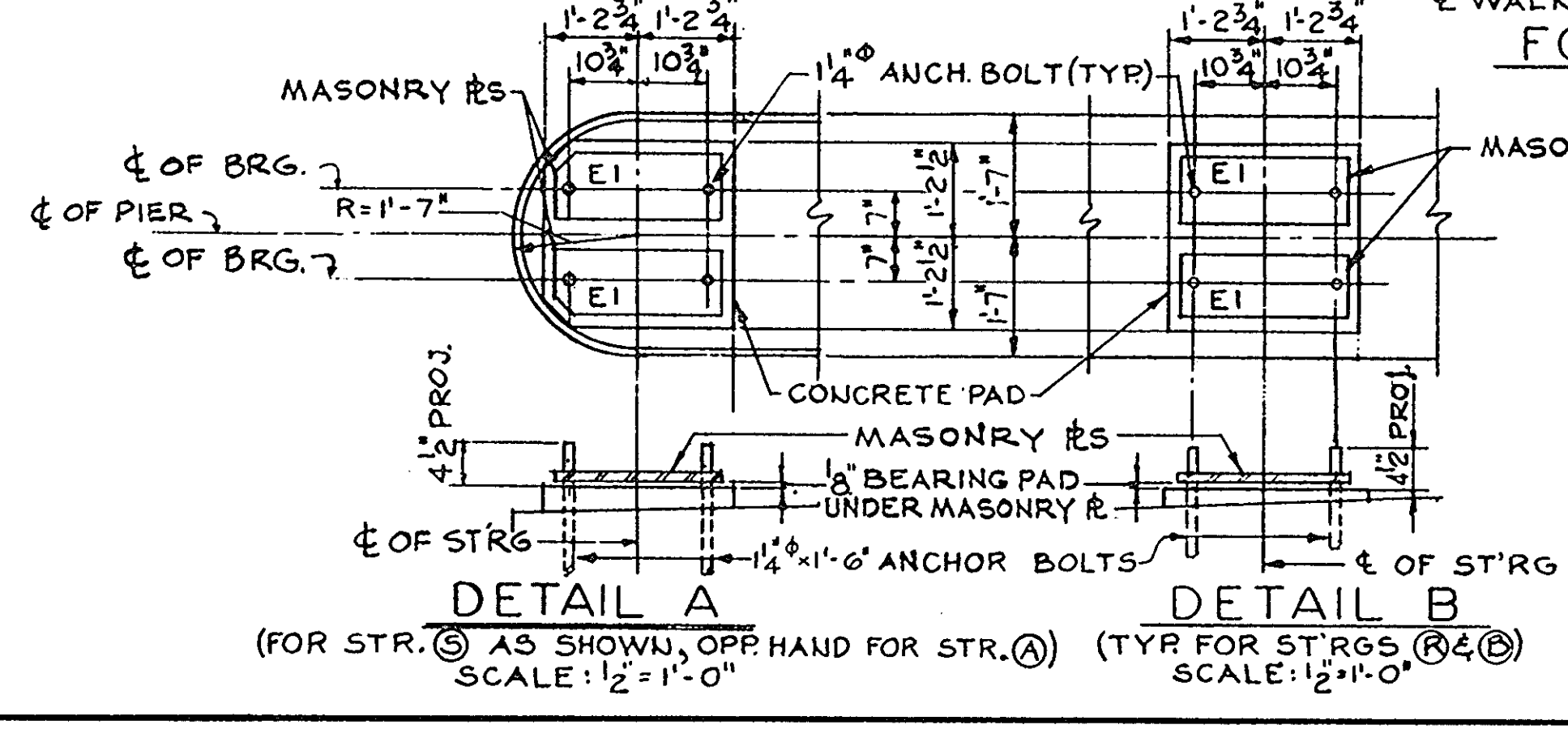
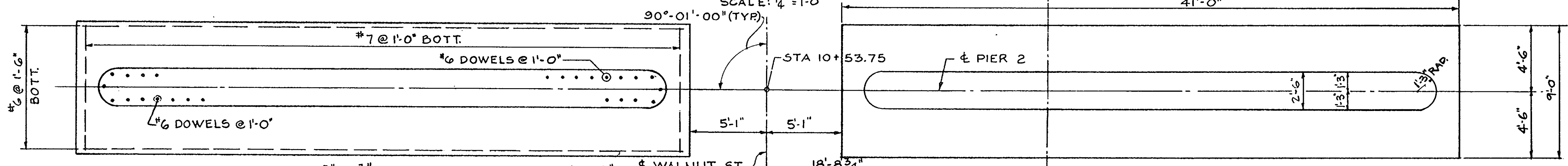
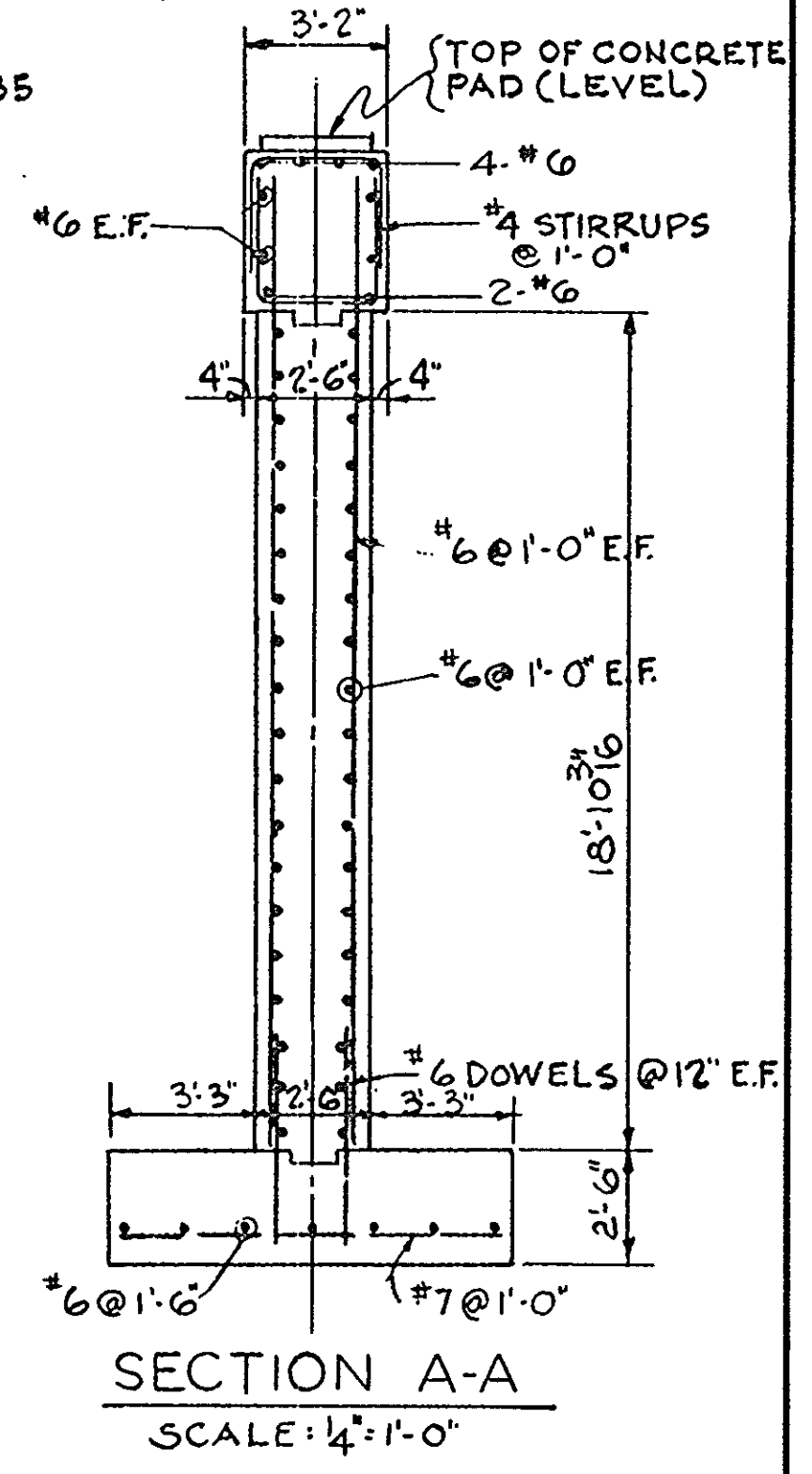
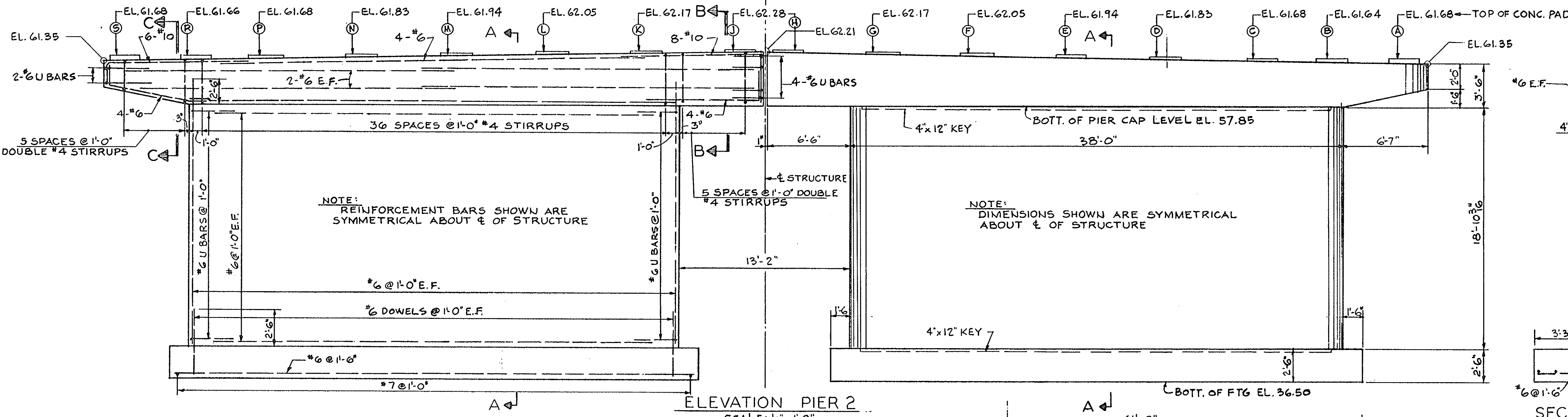
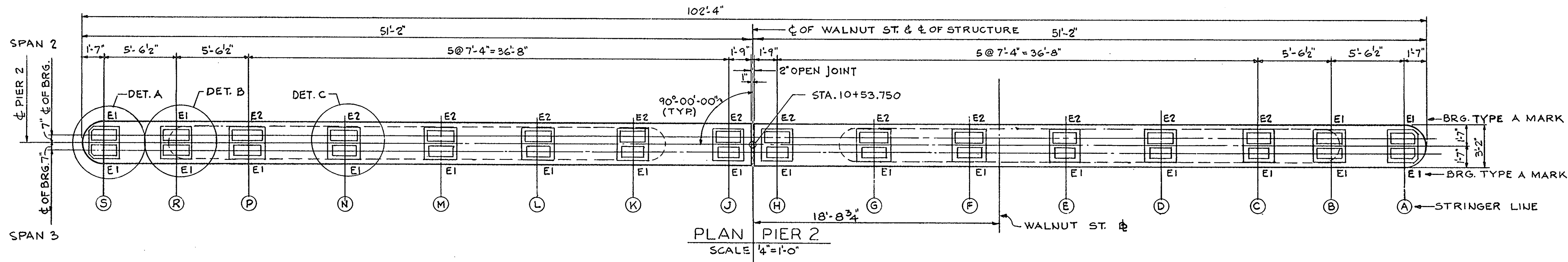
SECTION N-N
SCALE: 3/8"=1'-0"

"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

STRUCTURE # 23
WALNUT ST. OVER EXTENSION
NORTH ABUTMENT DETAILS

DE LEUW, CATHER & CO. CONSULTING ENGINEERS 361 BOYLSTON	SCALE AS SHOWN BROOKLINE, MASS. SHEET NO. S23-7
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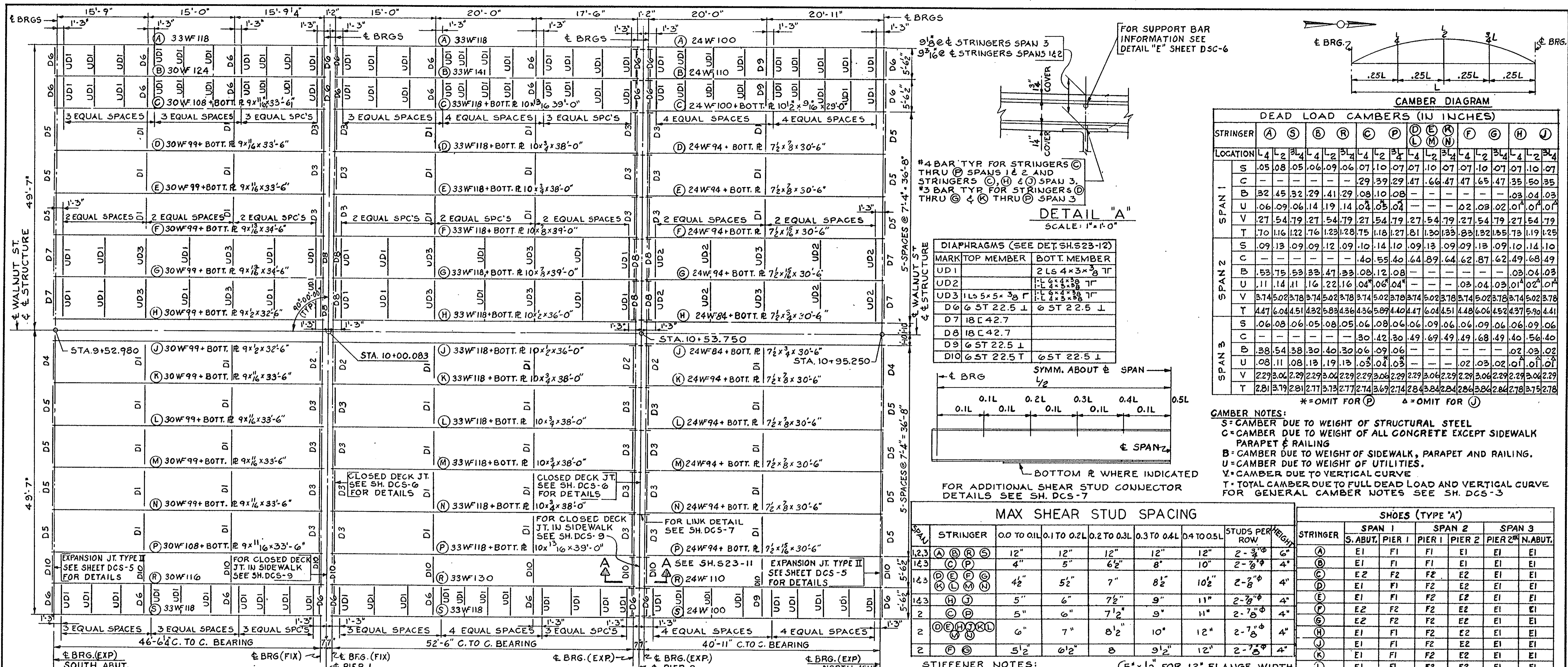
NOTE:
 (1) TOP OF PIER CAP IS A STRAIGHT LINE BETWEEN ELEVATIONS SHOWN.
 (2) CONCRETE PADS FOR STRINGERS (A) & (C) PROJECT MORE THAN 3" ABOVE TOP OF PIER CAP. REINFORCE WITH #6 U BARS @ 12" E.W.

"AS-BUILT PLANS"

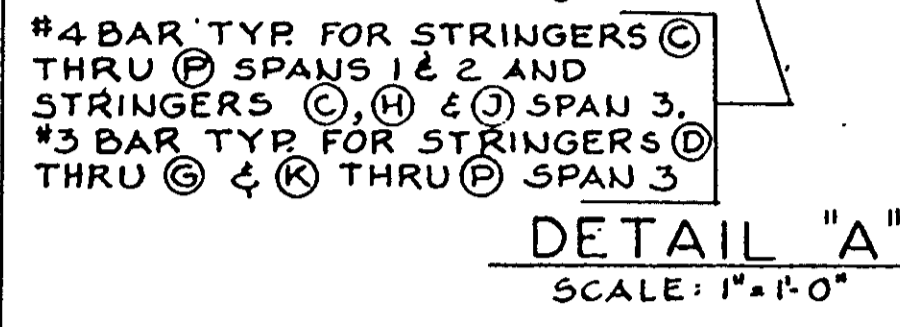
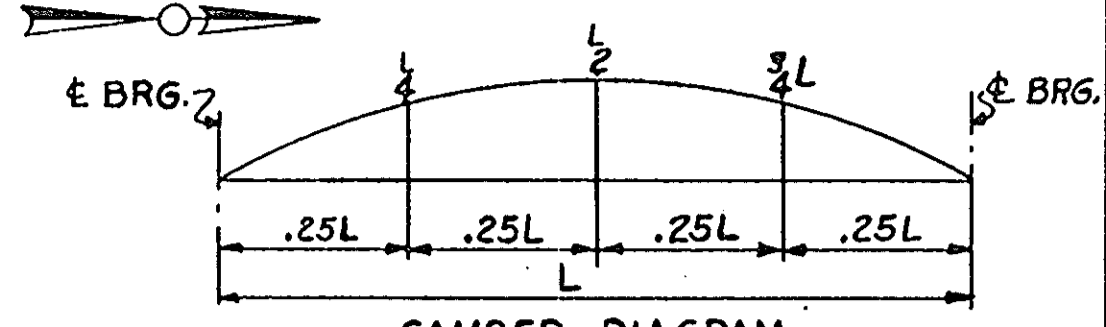
MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION B

STRUCTURE #23
 WALNUT ST. OVER EXTENSION
 PIER 2

DE LEUW, CATHER & CO. SCALE: AS SHOWN
 CONSULTING ENGINEERS
 361 BOYLSTON BROOKLINE, MASS. SHEET NO. S23-9

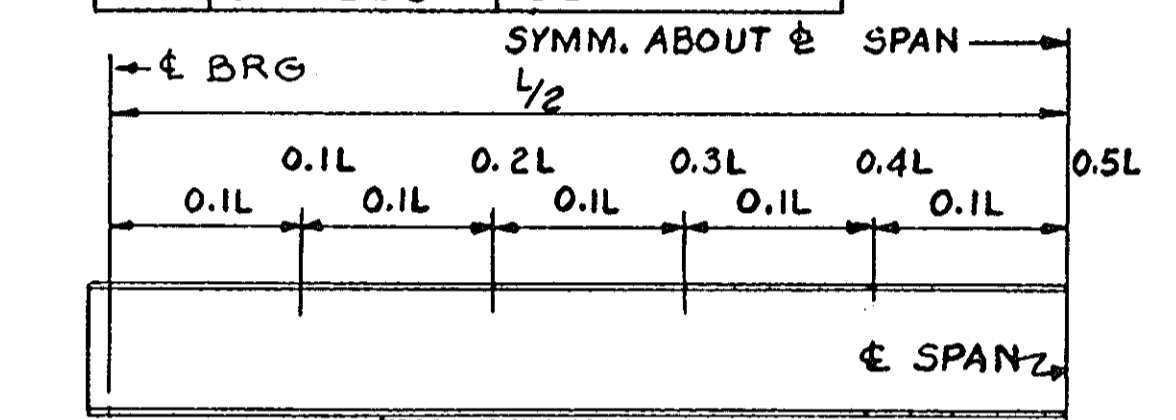


FOR SUPPORT BAR INFORMATION SEE DETAIL "E" SHEET DSC-6



DIAPHRAGMS (SEE DET. SH. S23-12)

MARK	TOP MEMBER	BOTT. MEMBER
UD1	2 Ls 4x3x3/8 TF	
UD2	1 L 4x4x3/8 TF	1 L 4x4x3/8 TF
UD3	1 L 5x5x3/8 TF	1 L 4x4x3/8 TF
D6	6 ST 22.5 L	6 ST 22.5 L
D7	18 C 42.7	
D8	18 C 42.7	
D9	6 ST 22.5 L	
D10	6 ST 22.5 L	



FOR ADDITIONAL SHEAR STUD CONNECTOR DETAILS SEE SH. DCS-7

MAX SHEAR STUD SPACING

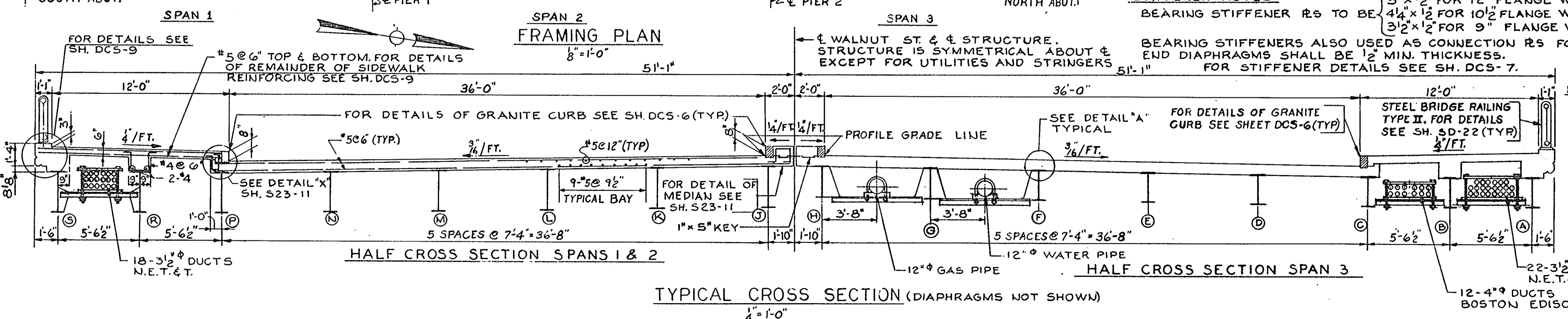
SPAN	STRINGER	0.0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	STUDS PER ROW	HEIGHT
1,2,3	(A) (B) (R) (S)	12"	12"	12"	12"	12"	2-3/8"	6"
1,2,3	(C) (P)	4"	5"	6 1/2"	8"	10"	2-7/8"	4"
1,2,3	(D) (E) (F) (G) (H) (J) (K) (L) (M) (N) (O)	4 1/2"	5 1/2"	7"	8 1/2"	10 1/2"	2-7/8"	4"
2	(P) (Q) (R) (S)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(T) (U) (V) (W) (X) (Y) (Z)	6"	7"	8 1/2"	10"	12"	2-7/8"	4"
2	(AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ)	5 1/2"	6 1/2"	8"	9 1/2"	12"	2-7/8"	4"

SHOES (TYPE 'A')

STRINGER	SPAN 1		SPAN 2		SPAN 3	
	S. ABUT.	PIER 1	PIER 1	PIER 2	PIER 2	N. ABUT.
(A)	E1	F1	F1	E1	E1	E1
(B)	E1	F1	F1	E1	E1	E1
(C)	E2	F2	F2	E2	E1	E1
(D)	E1	F1	F2	E2	E1	E1
(E)	E1	F1	F2	E2	E1	E1
(F)	E2	F2	F2	E2	E1	E1
(G)	E2	F2	F2	E2	E1	E1
(H)	E1	F1	F2	E2	E1	E1
(J)	E1	F1	F2	E2	E1	E1
(K)	E1	F1	F2	E2	E1	E1
(L)	E1	F1	F2	E2	E1	E1
(M)	E1	F1	F2	E2	E1	E1
(N)	E1	F1	F2	E2	E1	E1
(P)	E2	F2	F2	E2	E1	E1
(R)	E1	F1	F1	E1	E1	E1
(S)	E1	F1	F1	E1	E1	E1

STIFFENER NOTES:
BEARING STIFFENER RS TO BE 5"x12" FOR 12" FLANGE WIDTH, 4 1/2"x12" FOR 10 1/2" FLANGE WIDTH, 3 1/2"x12" FOR 9" FLANGE WIDTH.
BEARING STIFFENERS ALSO USED AS CONNECTION RS FOR END DIAPHRAGMS SHALL BE 1/2" MIN. THICKNESS.
FOR STIFFENER DETAILS SEE SH. DCS-7.

NOTE:
FOR DETAILS OF MASONRY RS AND SOLE RS SEE SH. S23-11.
FOR ALL OTHER SHOE DETAILS SEE SH. SD-21
FOR DIAPHRAGMS D1, D2, D3, D4 & D5 SEE SH. DCS-7
FOR GENERAL NOTES SEE SH. DCS-3



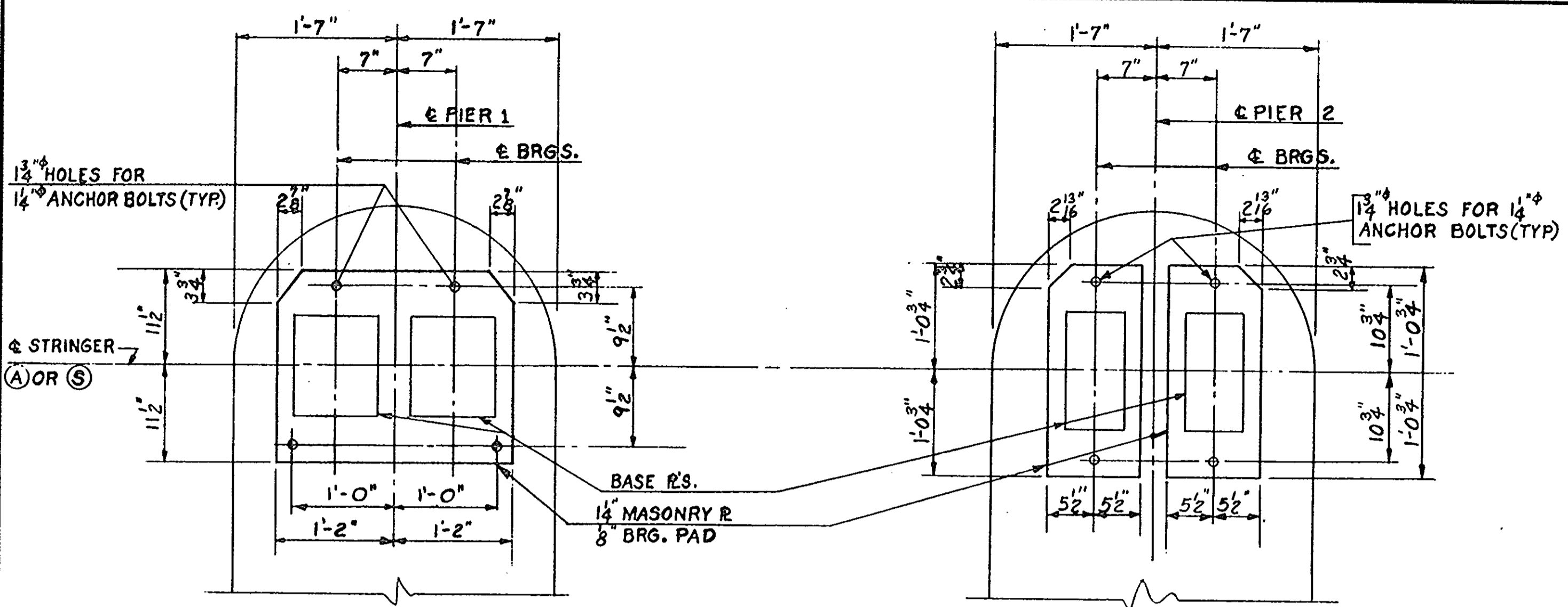
"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

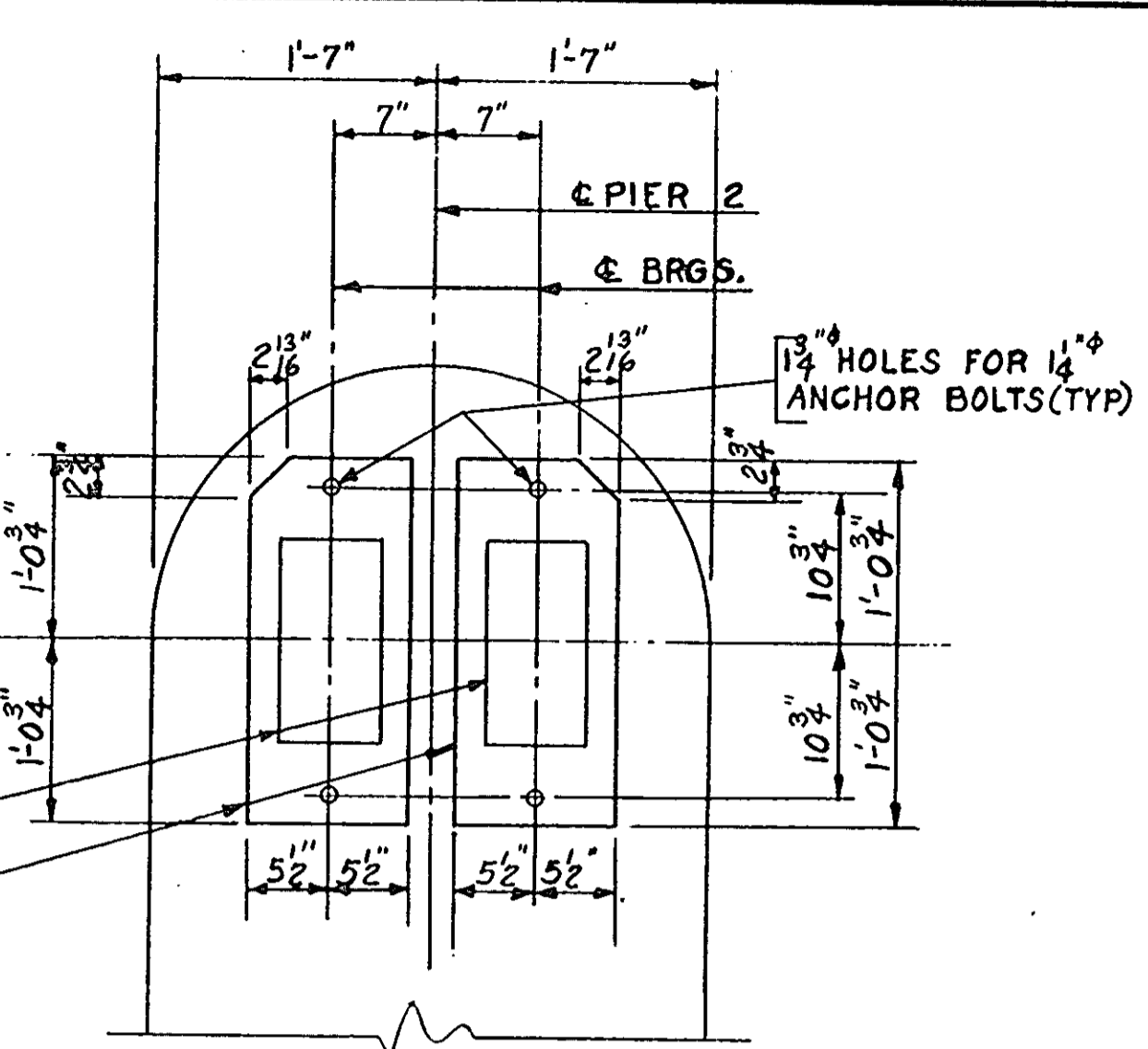
STRUCTURE #23
FRAMING PLAN
CROSS SECTION AND DETAILS

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
361 BOYLSTON BROOKLINE, MASS.

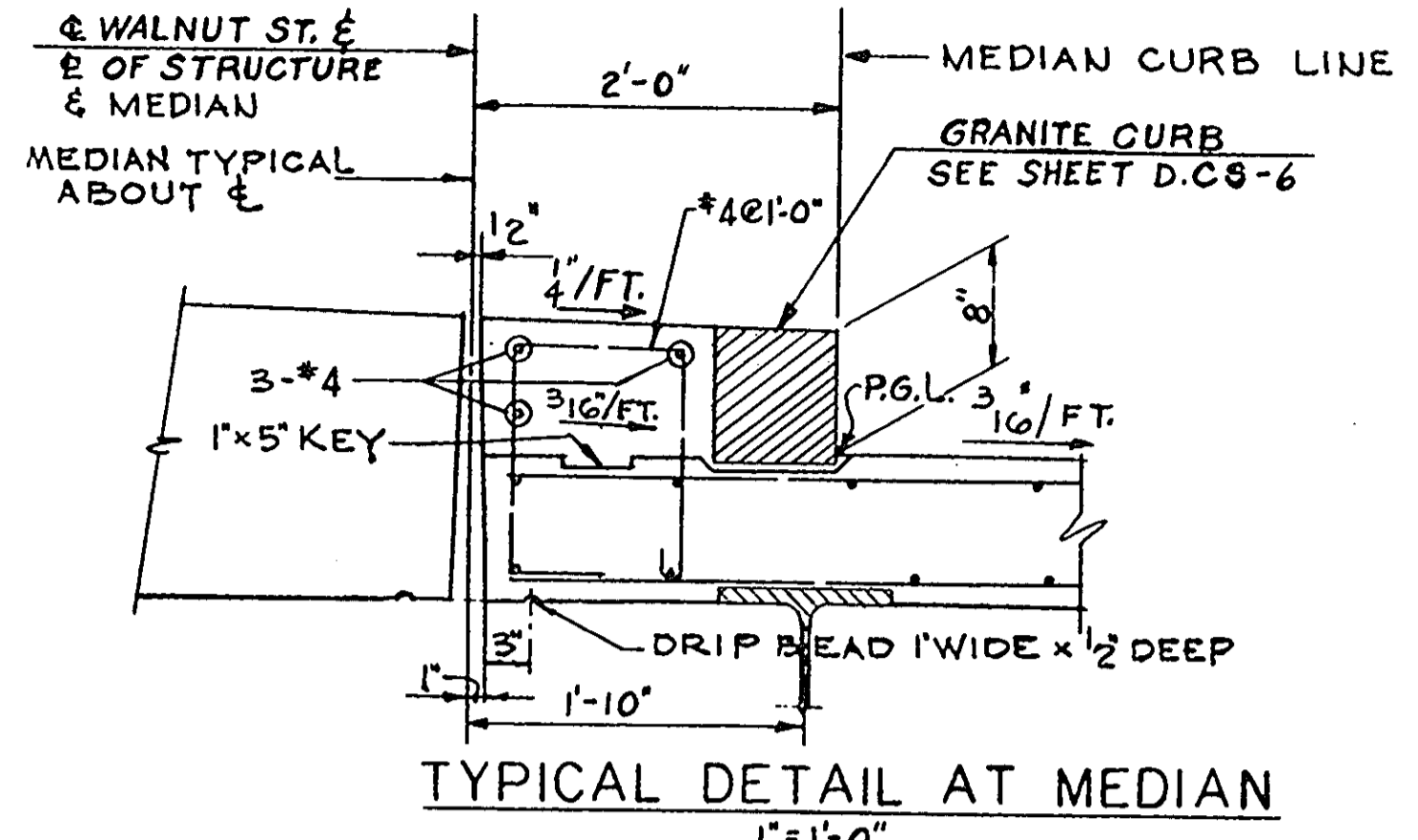
SCALE: AS NOTED
SHEET NO. S23-10



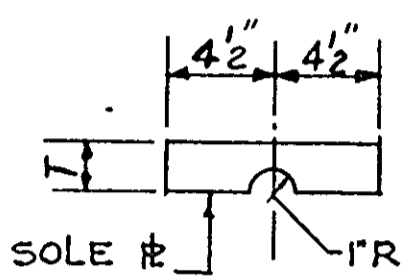
DETAIL OF MASONRY PLATES FOR FIX. SHOES FI AT PIER 1 STRINGERS (A) AND (S)
1" = 1'-0"



DETAIL OF MASONRY PLATES FOR EXP SHOES EI AT PIER 2 STRINGERS (A) AND (S)
1" = 1'-0"

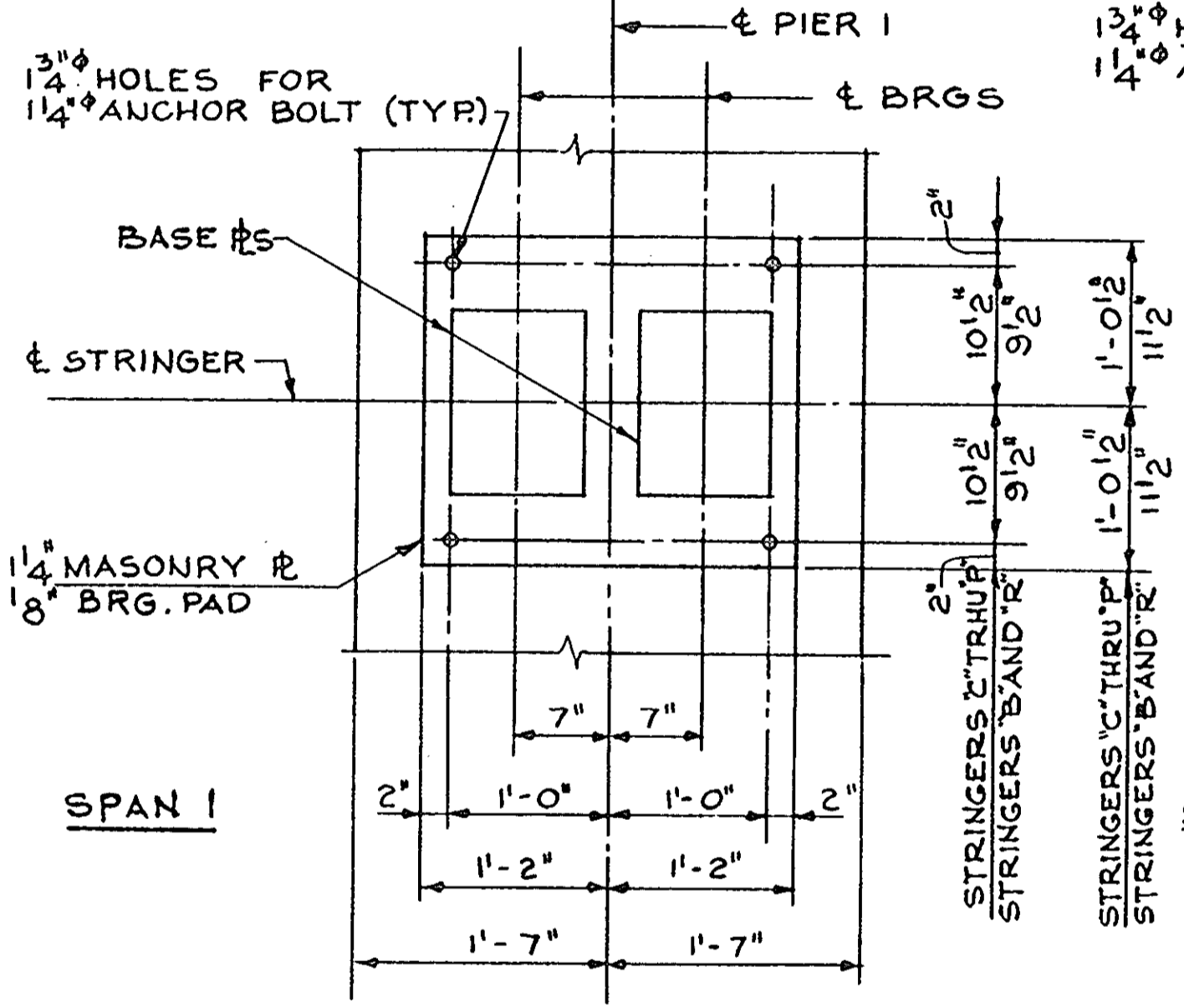


TYPICAL DETAIL AT MEDIAN
1" = 1'-0"

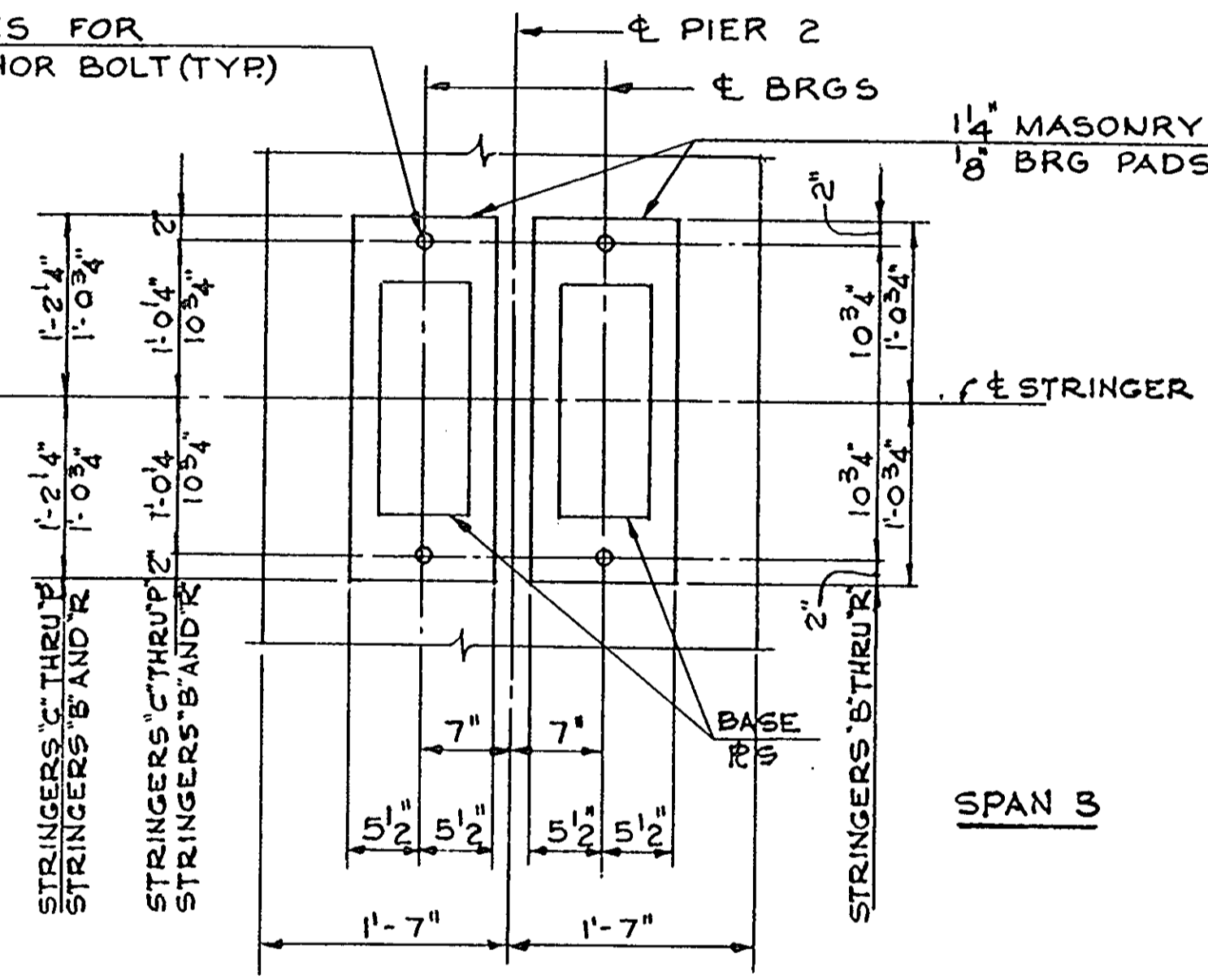


SOLE PLATE THICKNESS "T"												
STRINGER	(A)	(S)	(C)	(D)	(N)	(E)	(M)	(F)	(L)	(K)	(J)	(R)
SPAN 1	2"	4 3/8"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"	4 1/2"
SPAN 2	2 1/4"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"	2"

SOLE PLATE THICKNESSES FOR SHOES AT PIER 1

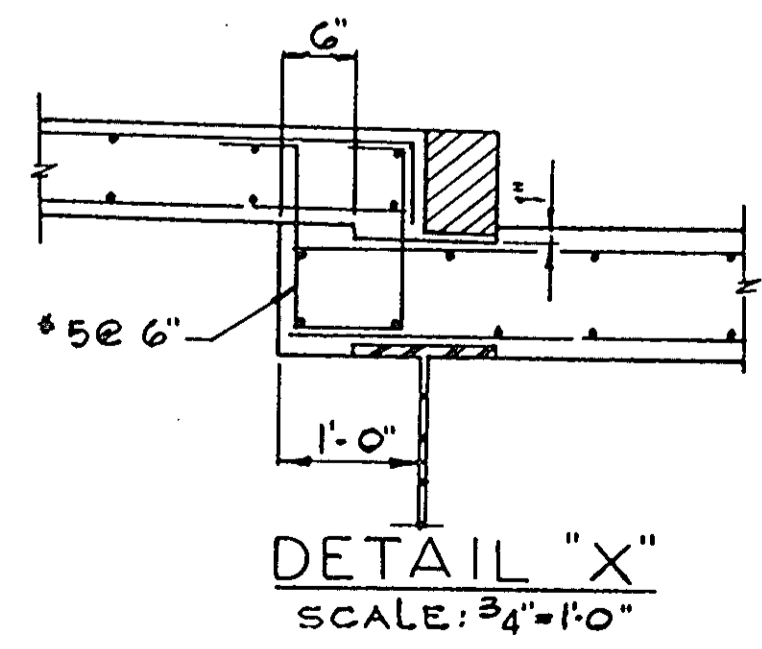


DETAIL OF MASONRY PLATES FOR FIX. SHOES FI & F2 AT PIER 1 STRINGERS (B) THRU (R)
SCALE: 1" = 1'-0"

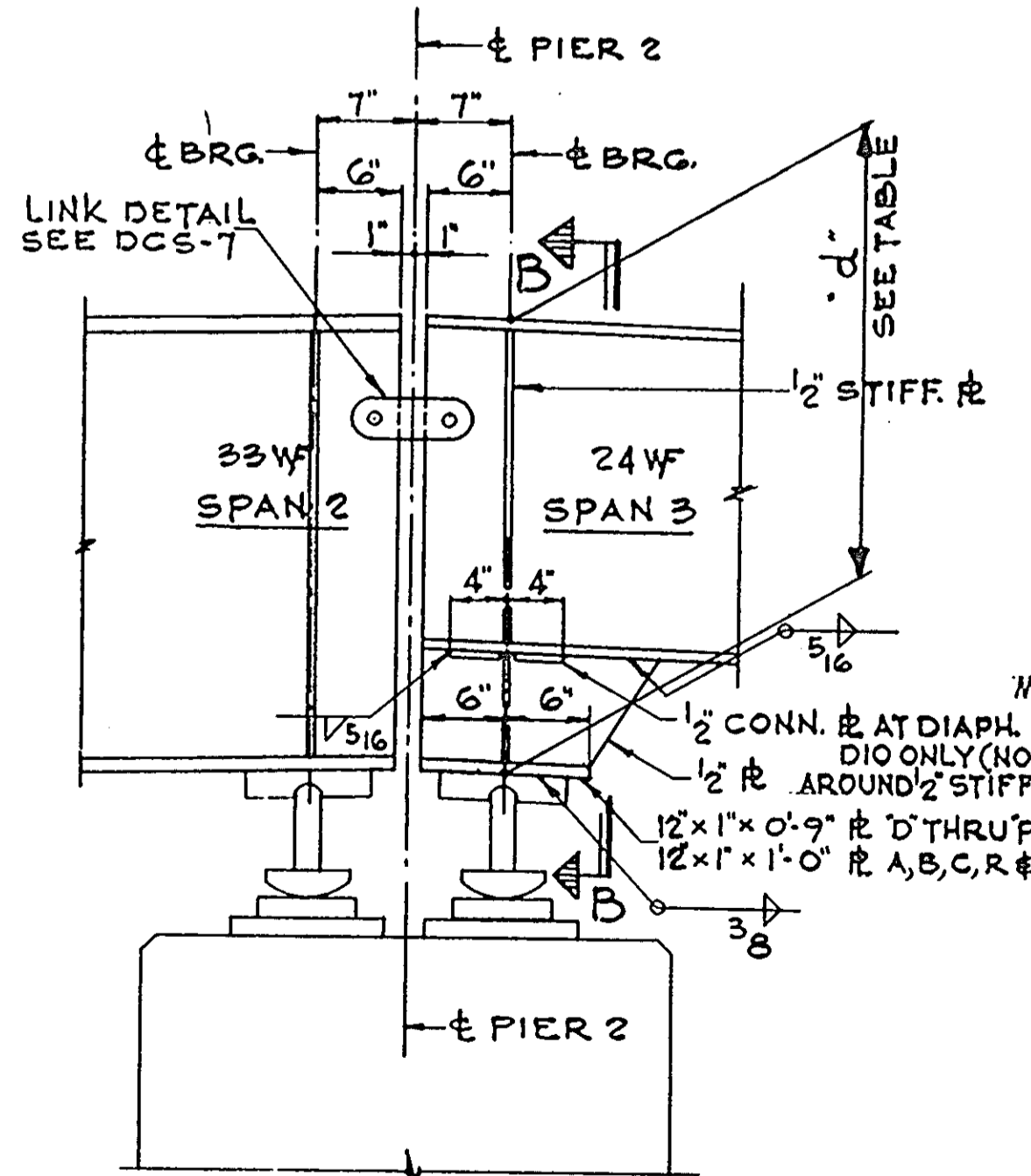


DETAIL OF MASONRY PLATES FOR EXP SHOES EI & E2 AT PIER 2 STRINGERS (B) THRU (R)
SCALE: 1" = 1'-0"

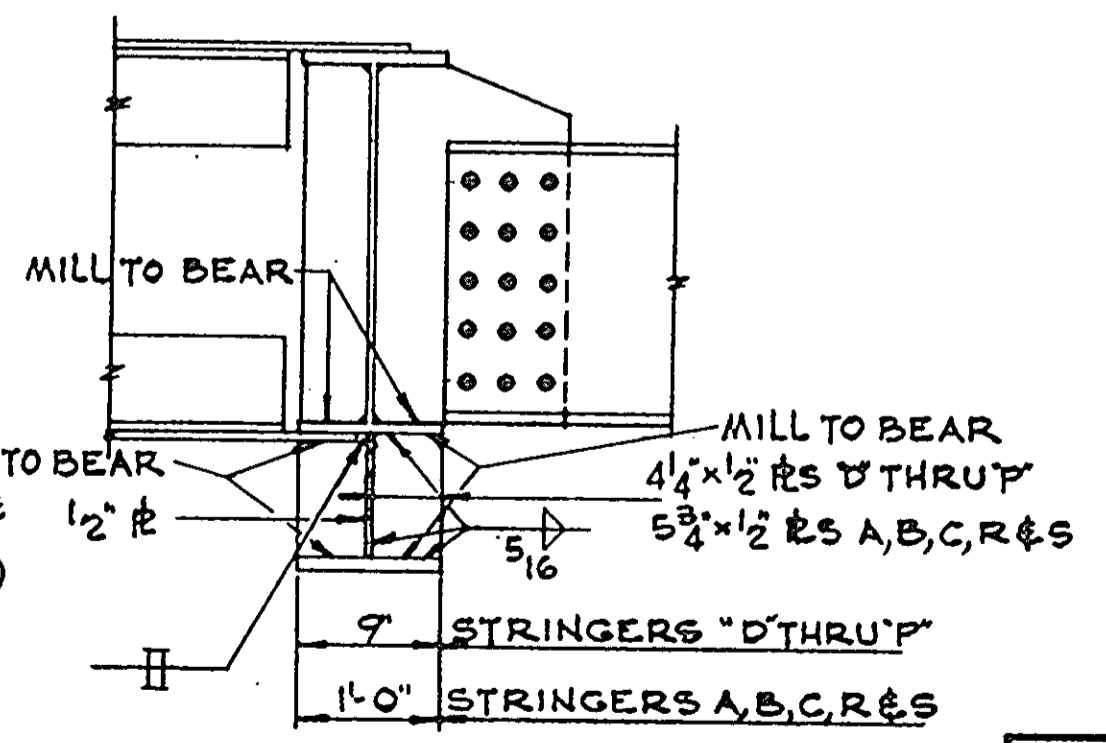
NOTE: SEE TABLE ON SH. S23-10 FOR LOCATION OF SHOE MARKS



DETAIL "X"
SCALE: 3/4" = 1'-0"



SECTION A-A (SH. S23-10)



SECTION B-B
SCALE: 1" = 1'-0"

BOLSTER DETAILS PIER 2
SCALE: 1" = 1'-0"

TABLE OF ELEVATIONS						
STRINGER &	STEEL ELEVATIONS			DECK ELEVATIONS		
	SOUTH END	NORTH END	FACE OF BACKWALL S. ABUT.	PIER 1	PIER 2	FACE OF BACKWALL N. ABUT.
SPAN 1						
(A) & (S)	61.138	64.300	62.717	65.998		
(B) & (R)	61.138	64.300	62.600	65.881		
(C) & (P)	61.138	64.300	62.486	65.766		
(D) & (N)	61.246	64.408	61.915	65.196		
(E) & (M)	61.361	64.522	62.030	65.311		
(F) & (L)	61.475	64.637	62.144	65.425		
(G) & (K)	61.590	64.751	62.259	65.540		
(H) & (J)	61.704	64.866	62.374	65.654		
SPAN 2						
(A) & (S)	64.363	65.488		65.998	67.148	
(B) & (R)	64.363	65.488		65.881	67.031	
(C) & (P)	64.363	65.488		65.766	66.917	
(D) & (N)	64.470	65.595		65.196	66.346	
(E) & (M)	64.584	65.710		65.311	66.461	
(F) & (L)	64.700	65.824		65.425	66.575	
(G) & (K)	64.814	65.939		65.540	66.690	
(H) & (J)	64.928	66.054		65.654	66.805	
SPAN 3						
(A) & (S)	65.475	63.969			67.148	65.557
(B) & (R)	65.475	63.969			67.031	65.440
(C) & (P)	65.475	63.969			66.917	65.326
(D) & (N)	65.584	64.077			66.346	64.641
(E) & (M)	65.698	64.192			66.461	64.870
(F) & (L)	65.813	64.307			66.575	64.984
(G) & (K)	65.927	64.421			66.690	65.099
(H) & (J)	66.042	64.536			67.471	65.880
LOCATION OF ELEVATIONS						
EL. FASCIA LINE			62.996	66.277	67.427	65.836
EL. SIDEWALK CURB LINE			61.809	65.089	66.240	64.648
EL. PROFILE GRADE LINE			62.371	65.652	66.802	65.211
EL. MEDIAN CURB LINE			62.371	65.652	66.802	65.211
EL. & MEDIAN			62.402	65.683	66.833	65.242

* DECK ELEVATIONS FOR STRINGERS A, B, R & S ARE GIVEN AT TOP OF SIDEWALK.

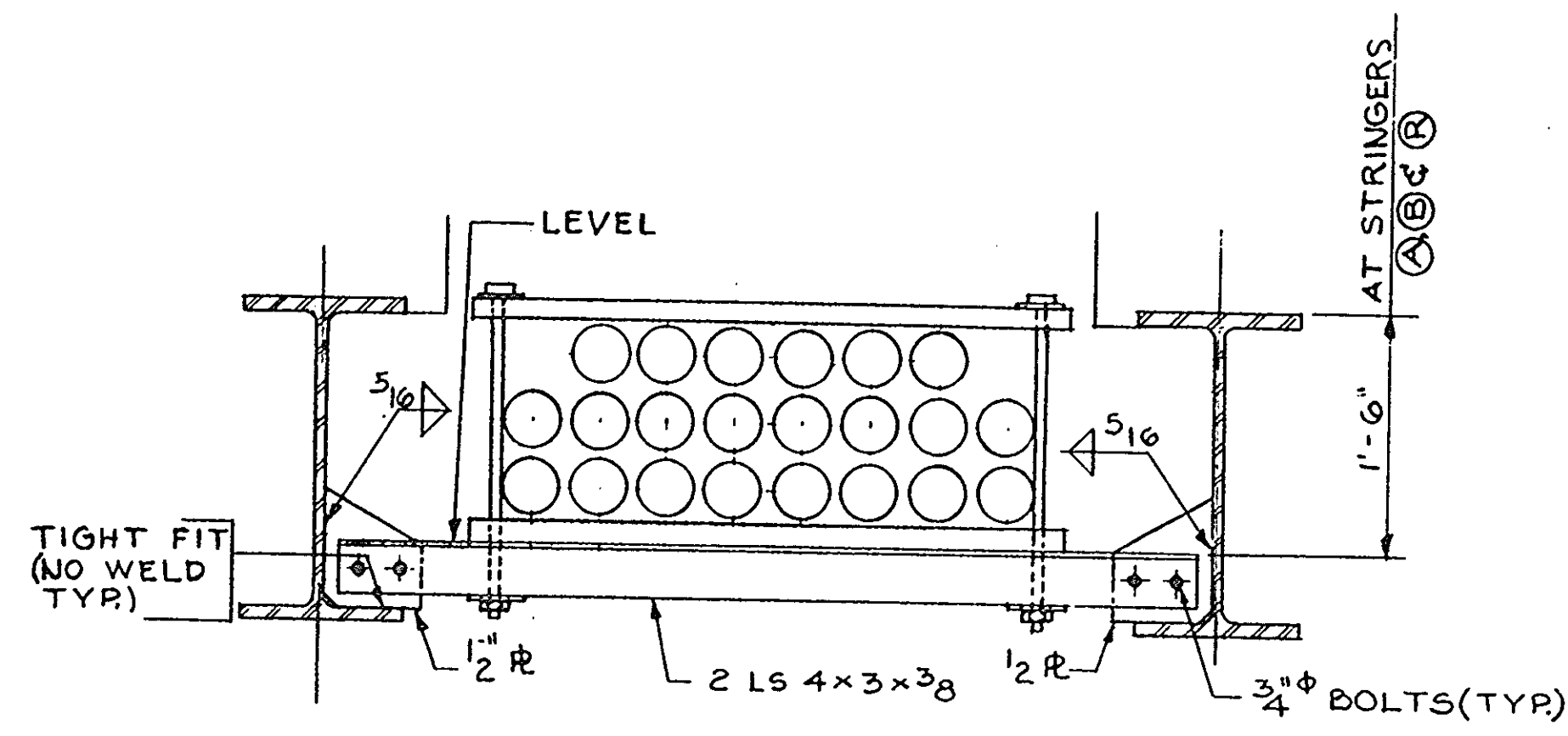
"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

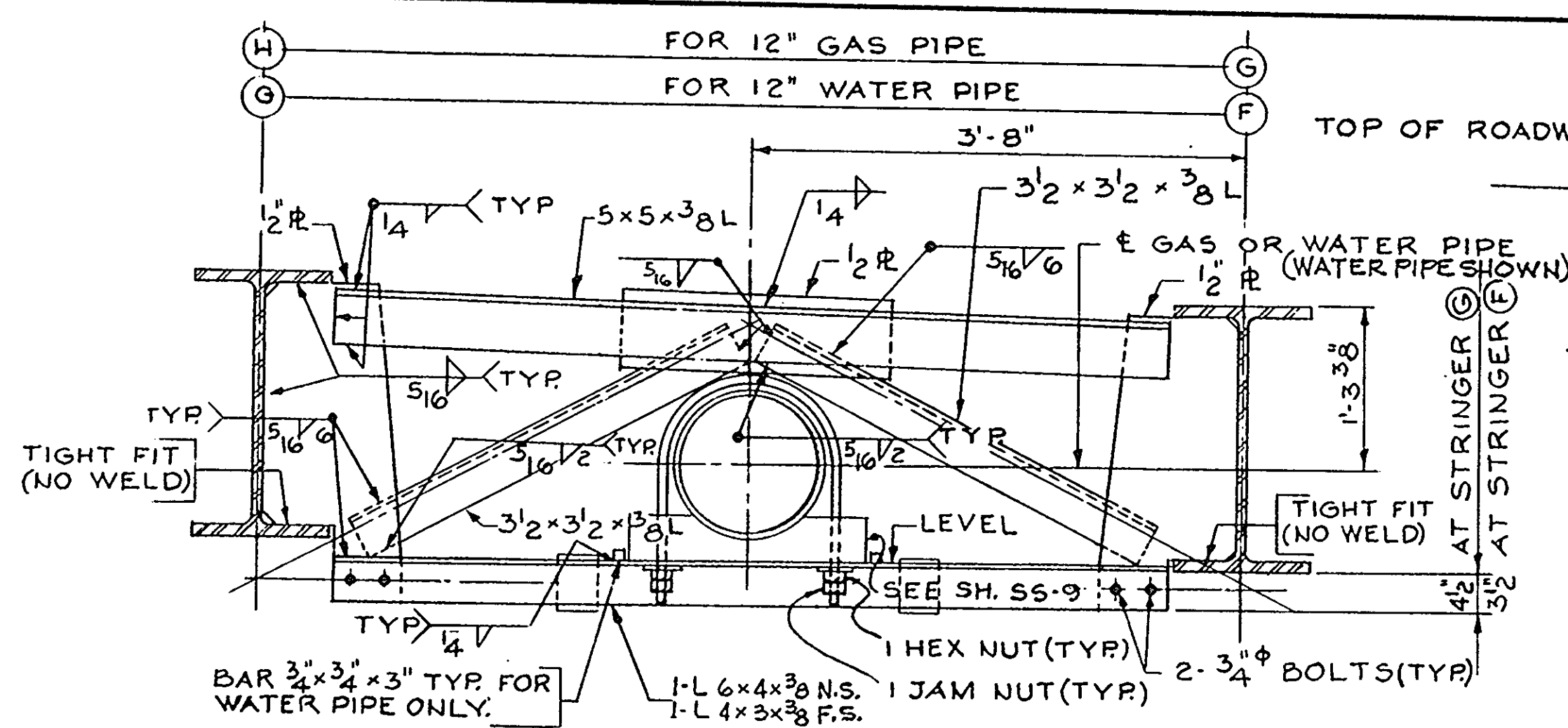
STRUCTURE #23
SHOE AND DECK DETAILS.
TABLE OF ELEVATIONS

DE LEUW, CATHER & CO. CONSULTING ENGINEERS
381 BOYLSTON BROOKLINE, MASS.

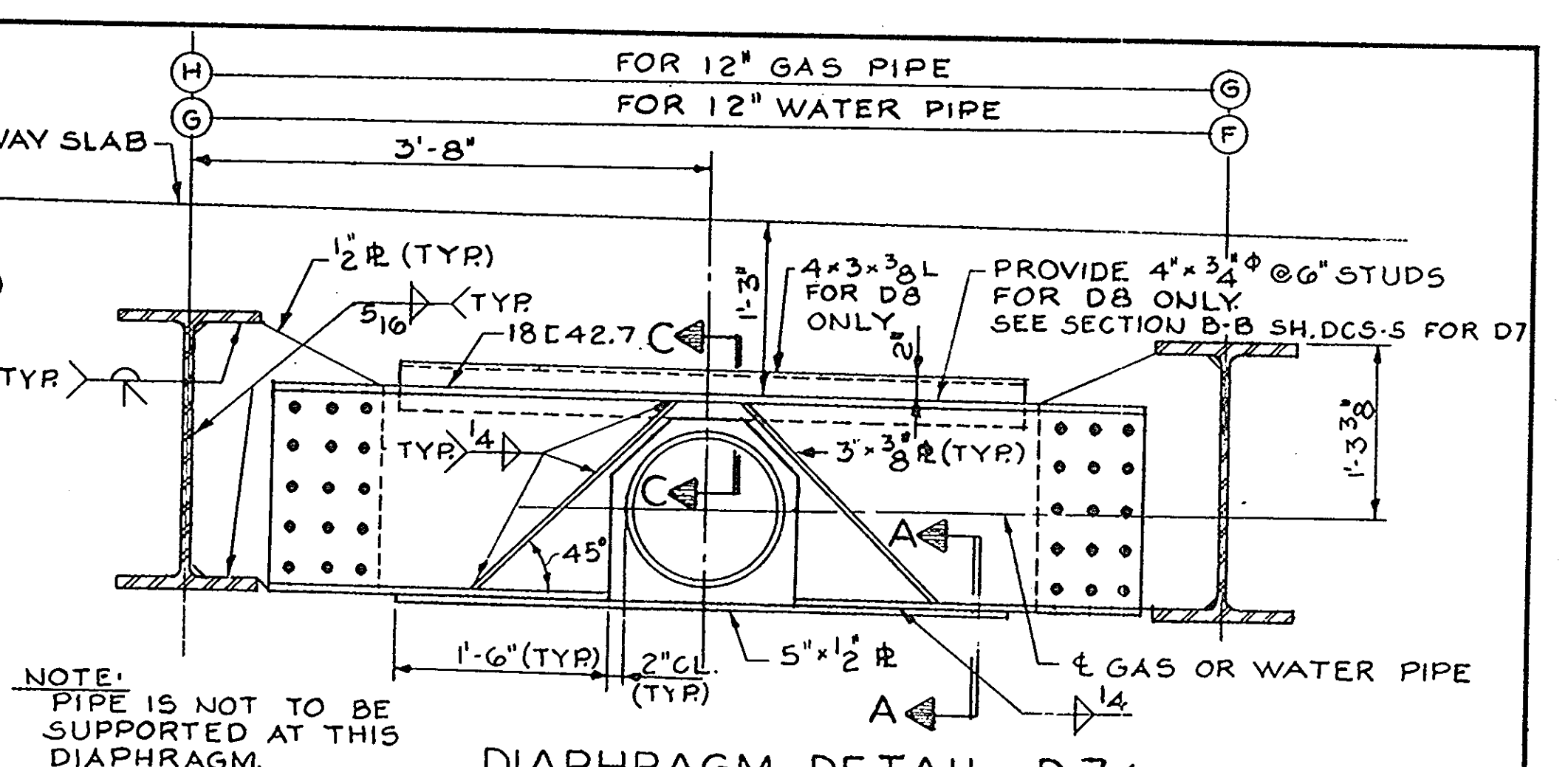
SCALE: AS NOTED
SHEET NO. S23-11



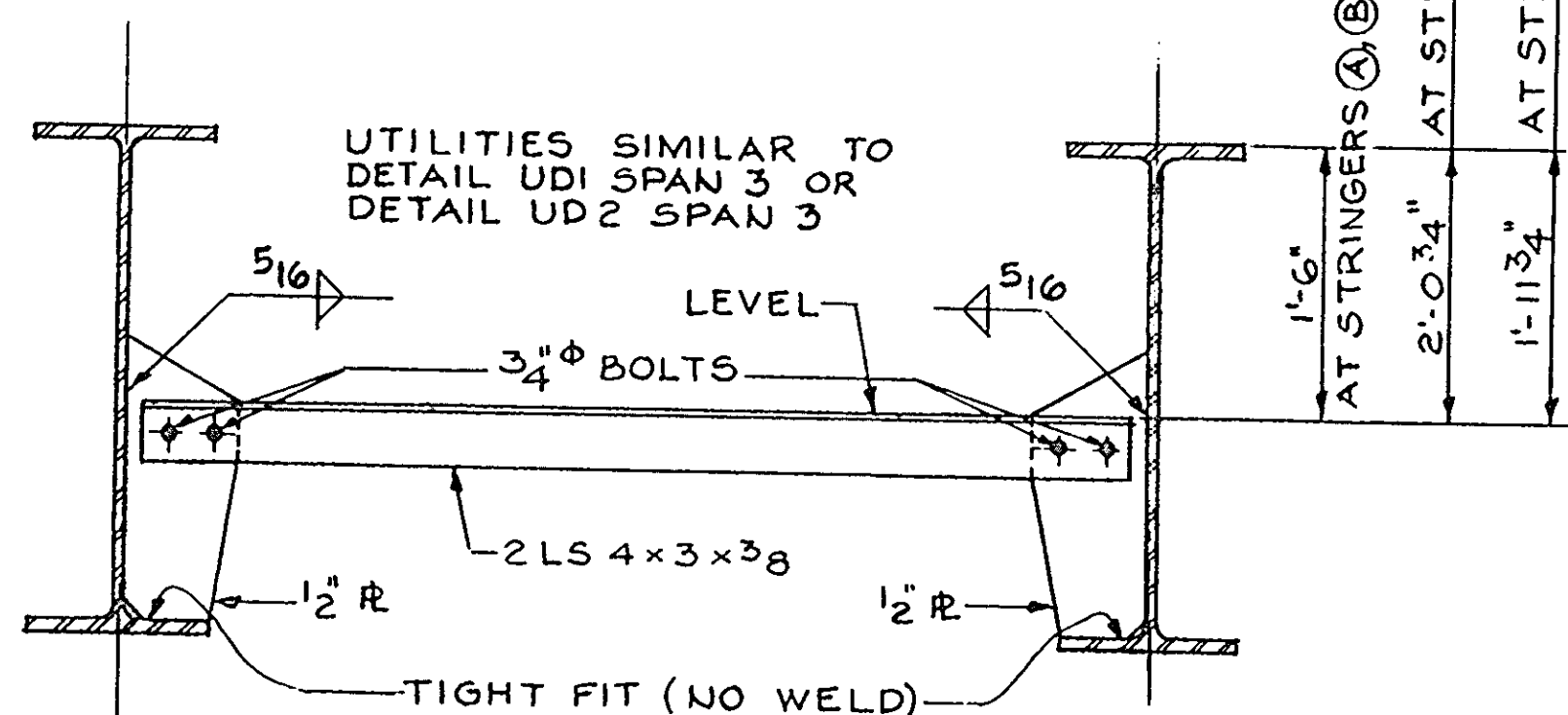
DIAPHRAGM DETAIL UDI SPAN 3
SCALE: 1"=1'-0"



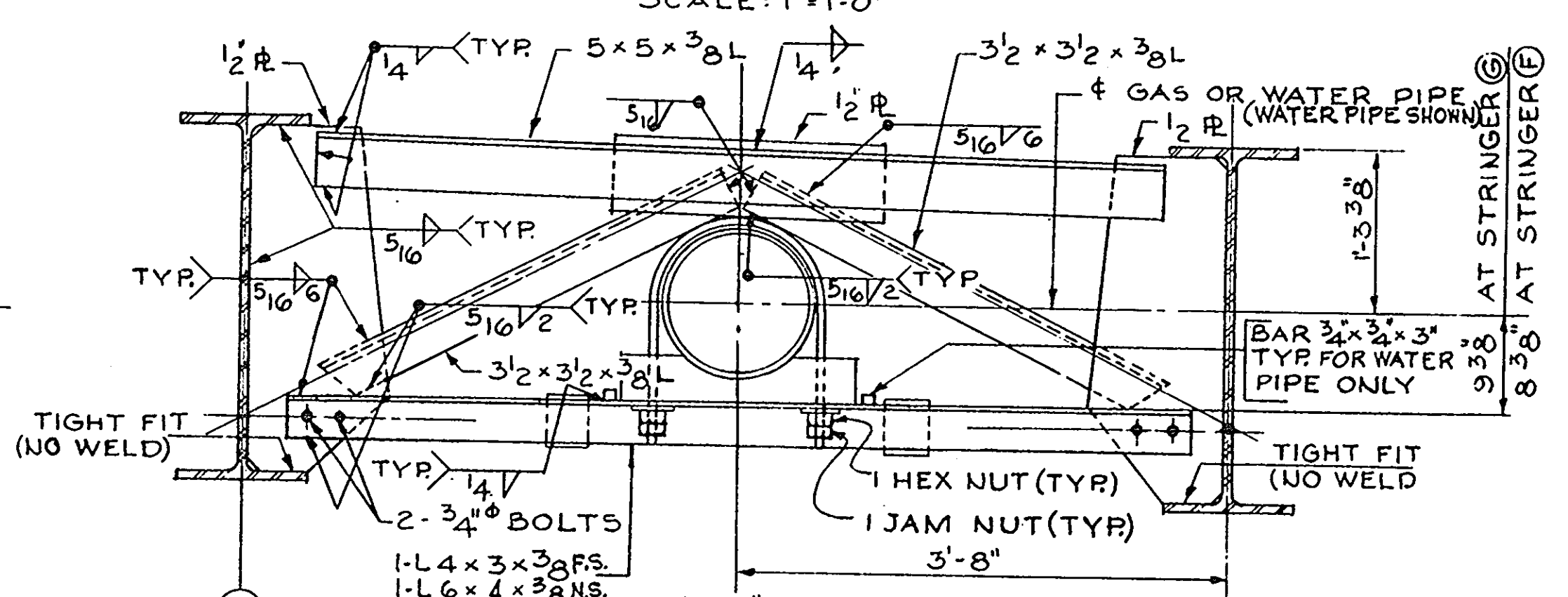
DIAPHRAGM DETAIL UD3 SPAN 3
SCALE: 1"=1'-0"



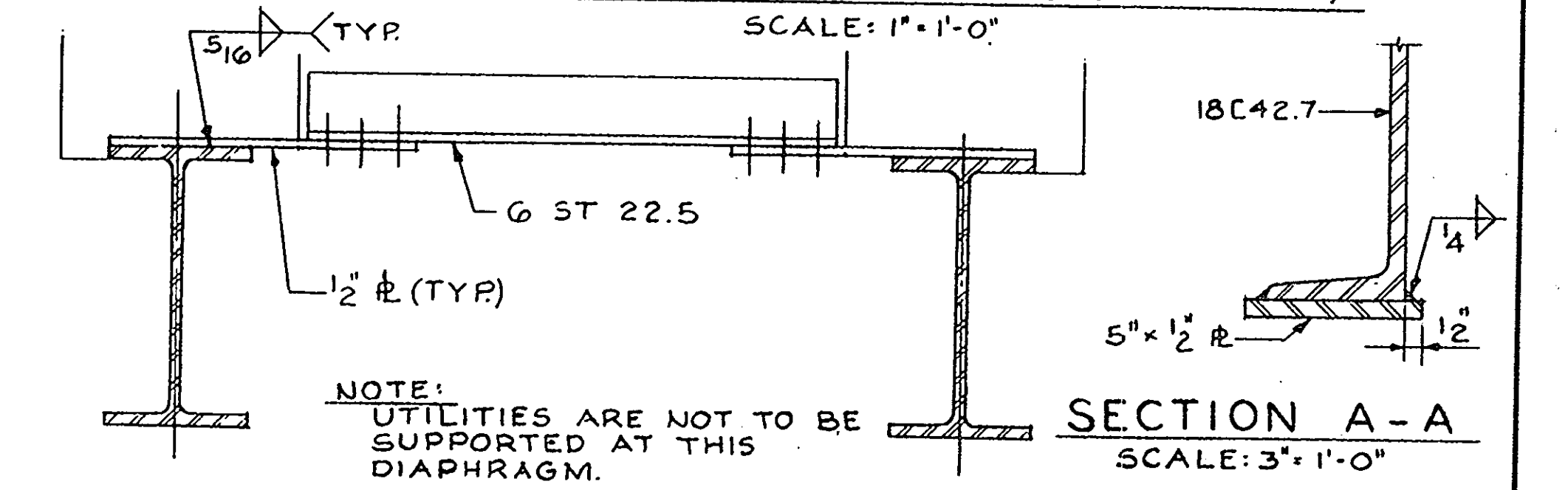
DIAPHRAGM DETAIL D7 (AS SHOWN)
DIAPHRAGM DETAIL D8 (AS NOTED)
SCALE: 1"=1'-0"



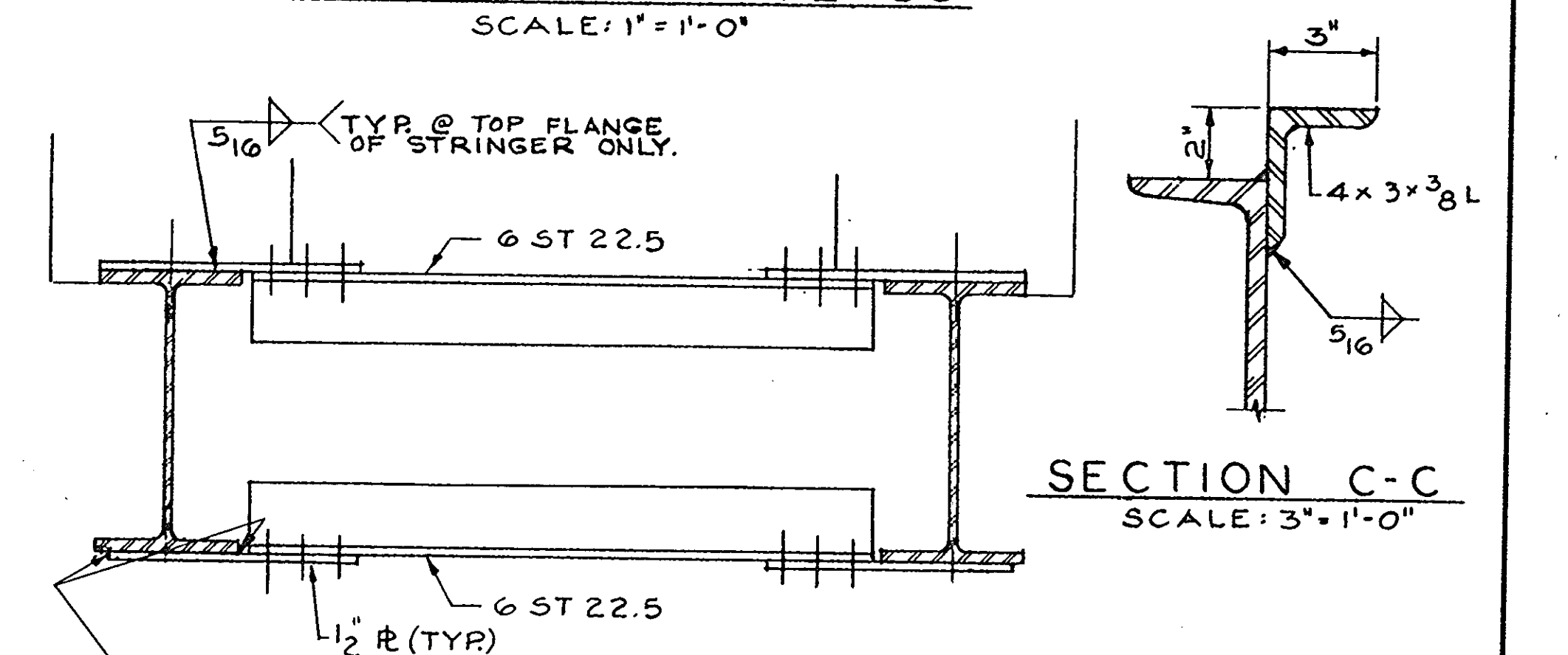
DIAPHRAGM DETAIL UDI SPANS 1 & 2
SCALE: 1"=1'-0"



DIAPHRAGM DETAIL UD3 SPANS 1 & 2
SCALE: 1"=1'-0"

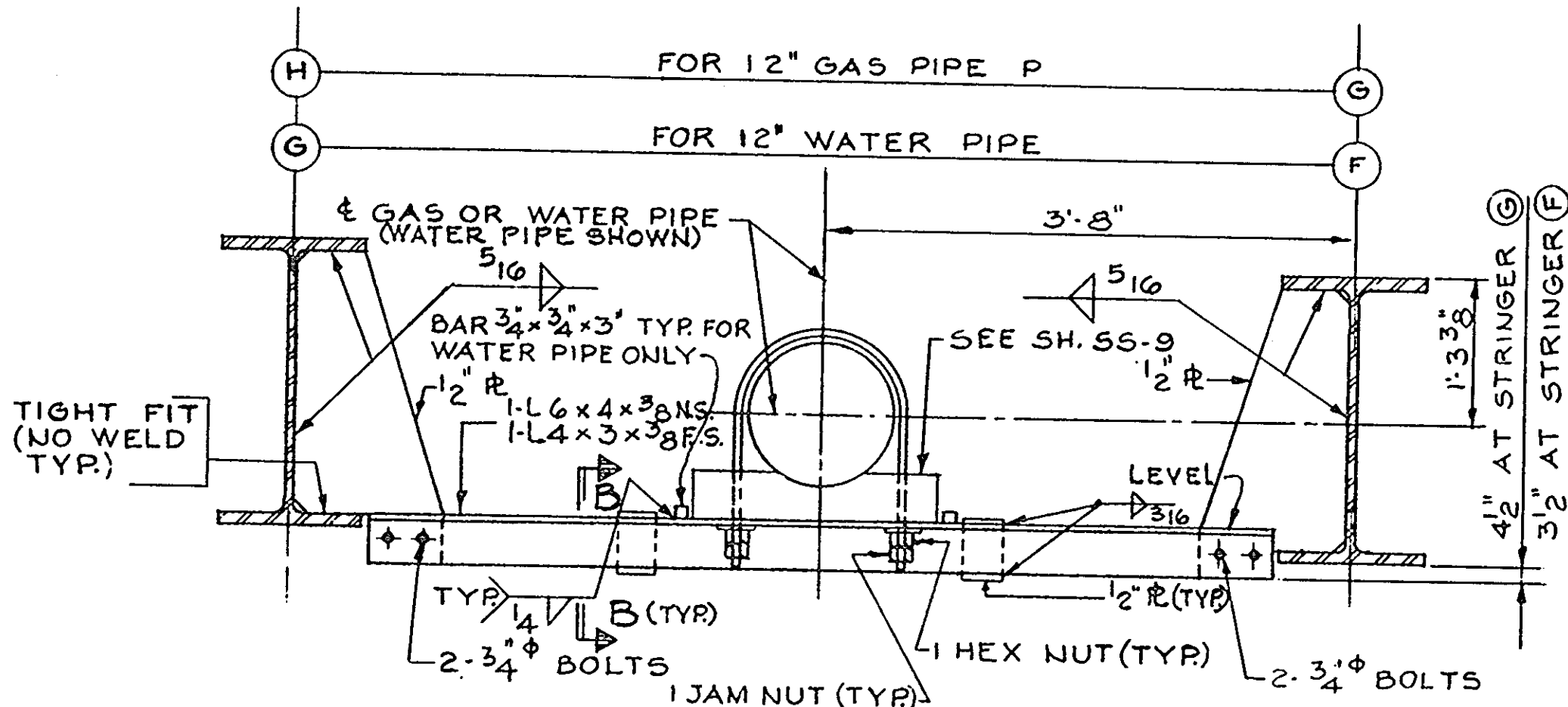


DIAPHRAGM DETAIL D9
SCALE: 1"=1'-0"

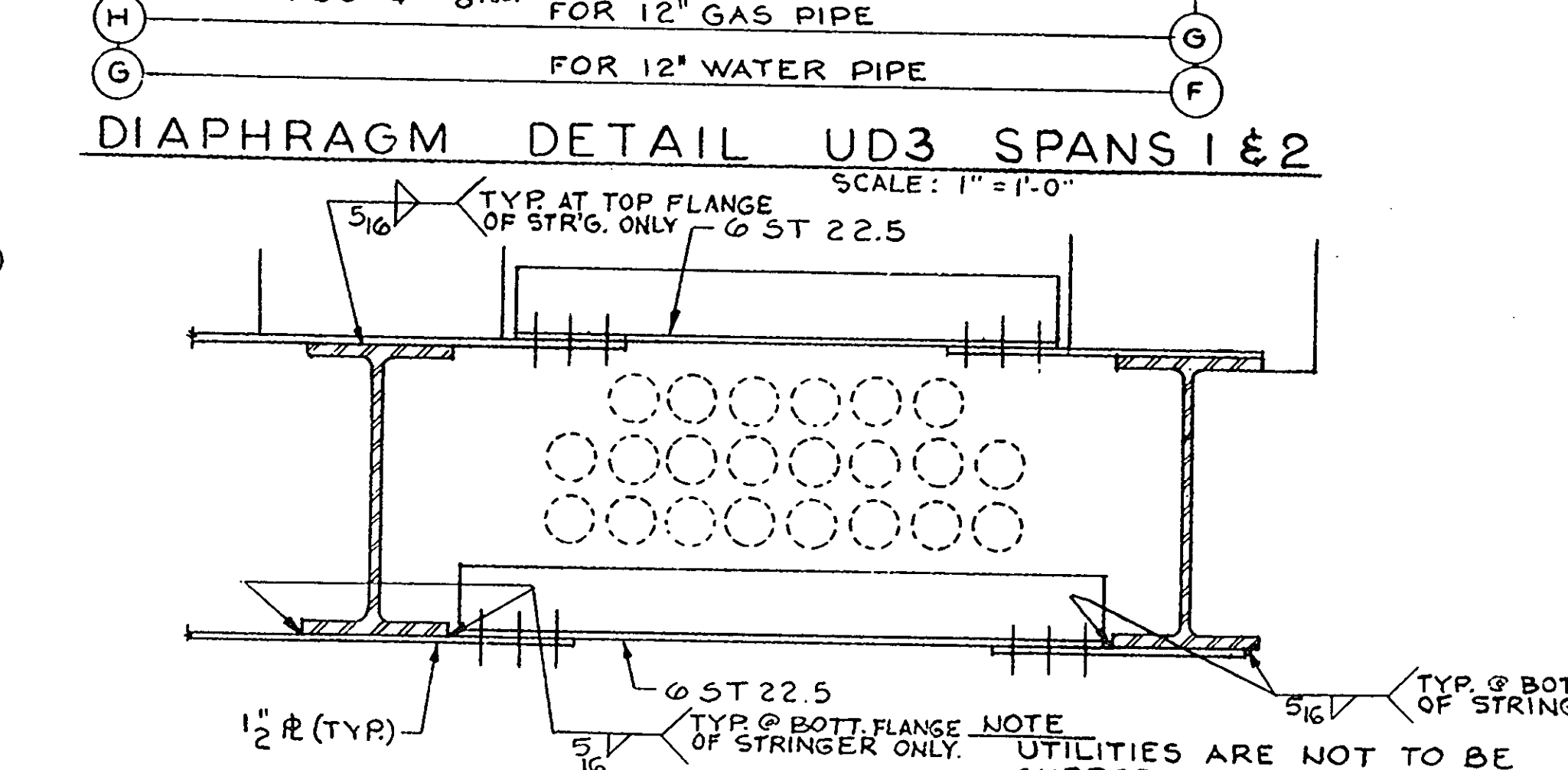


SECTION C-C
SCALE: 3"=1'-0"

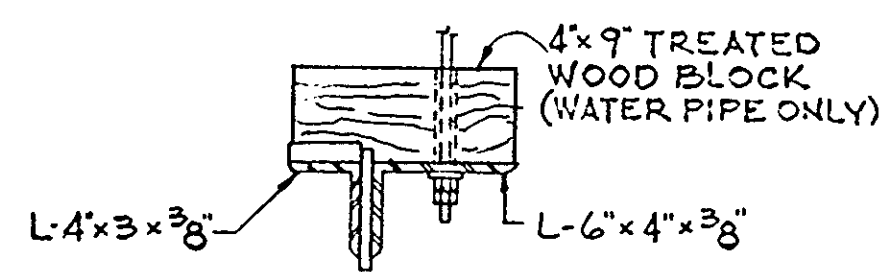
DIAPHRAGM DETAIL D10
SCALE: 1"=1'-0"



DIAPHRAGM DETAIL UD2 SPAN 3
SCALE: 1"=1'-0"



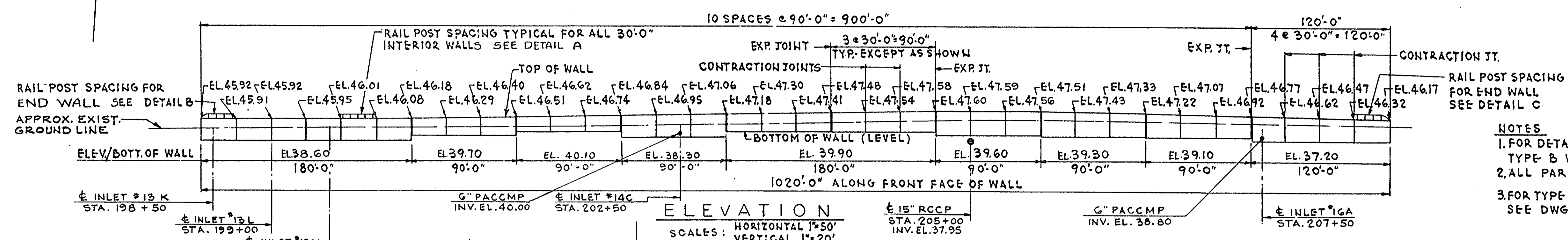
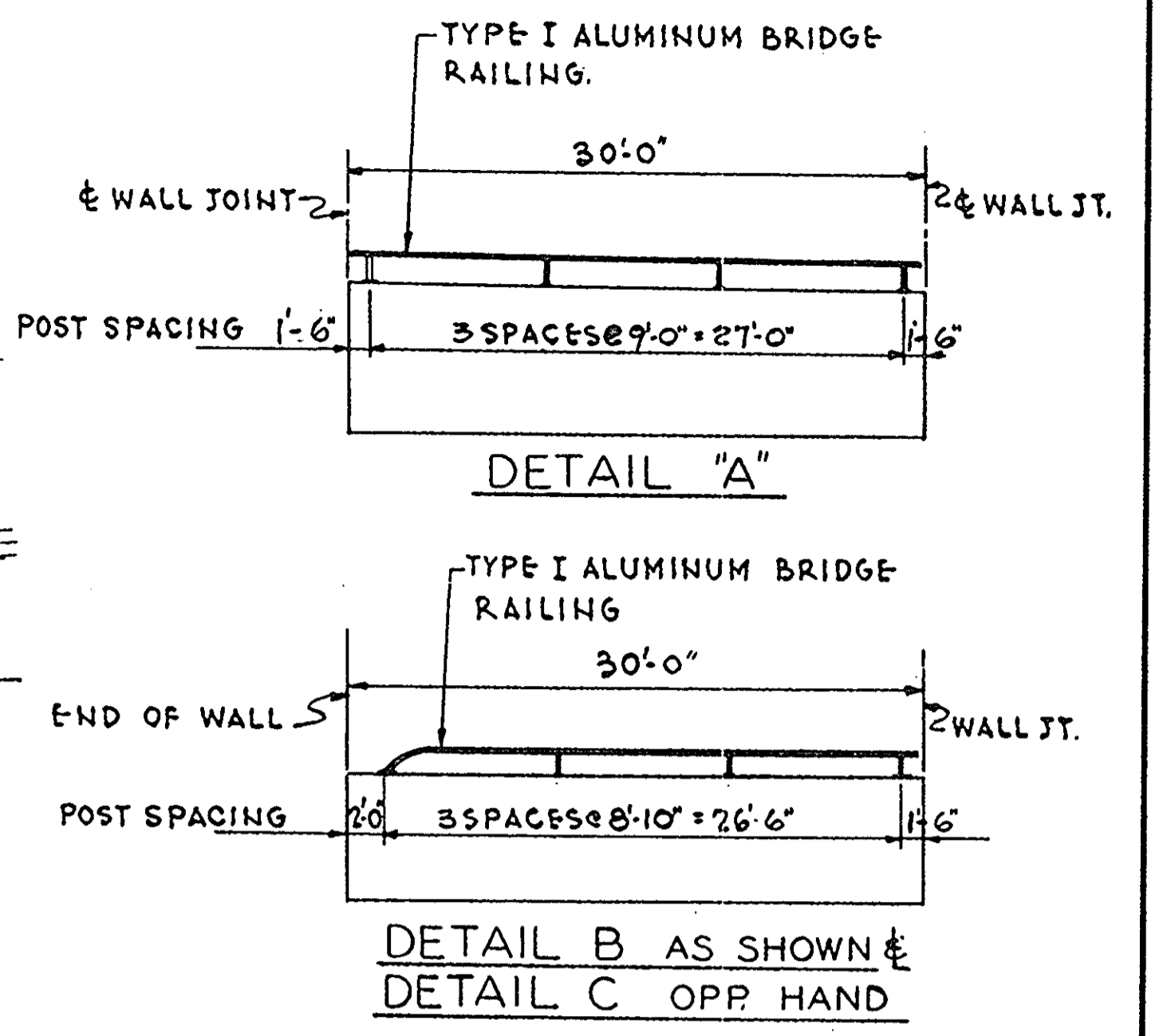
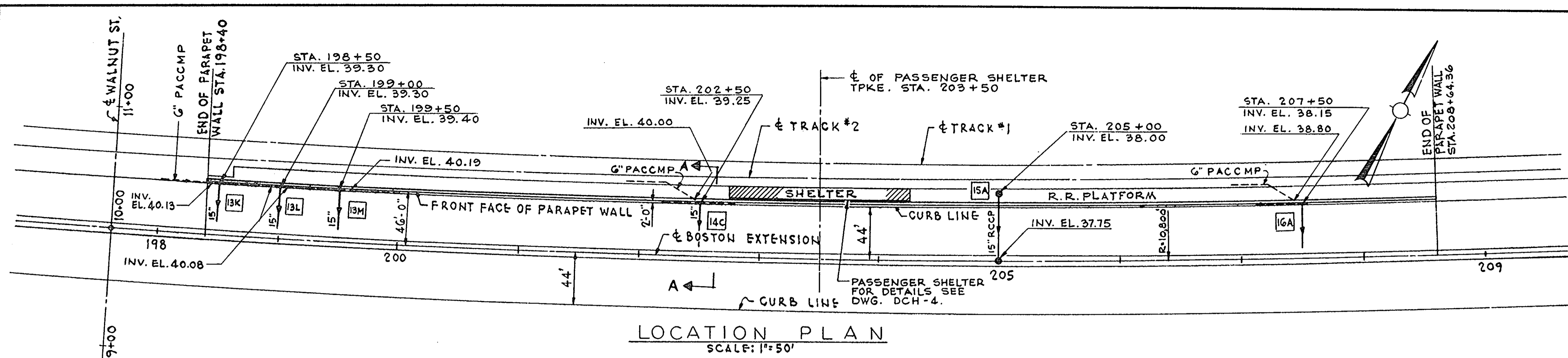
DIAPHRAGM DETAIL D6
SCALE: 1"=1'-0"



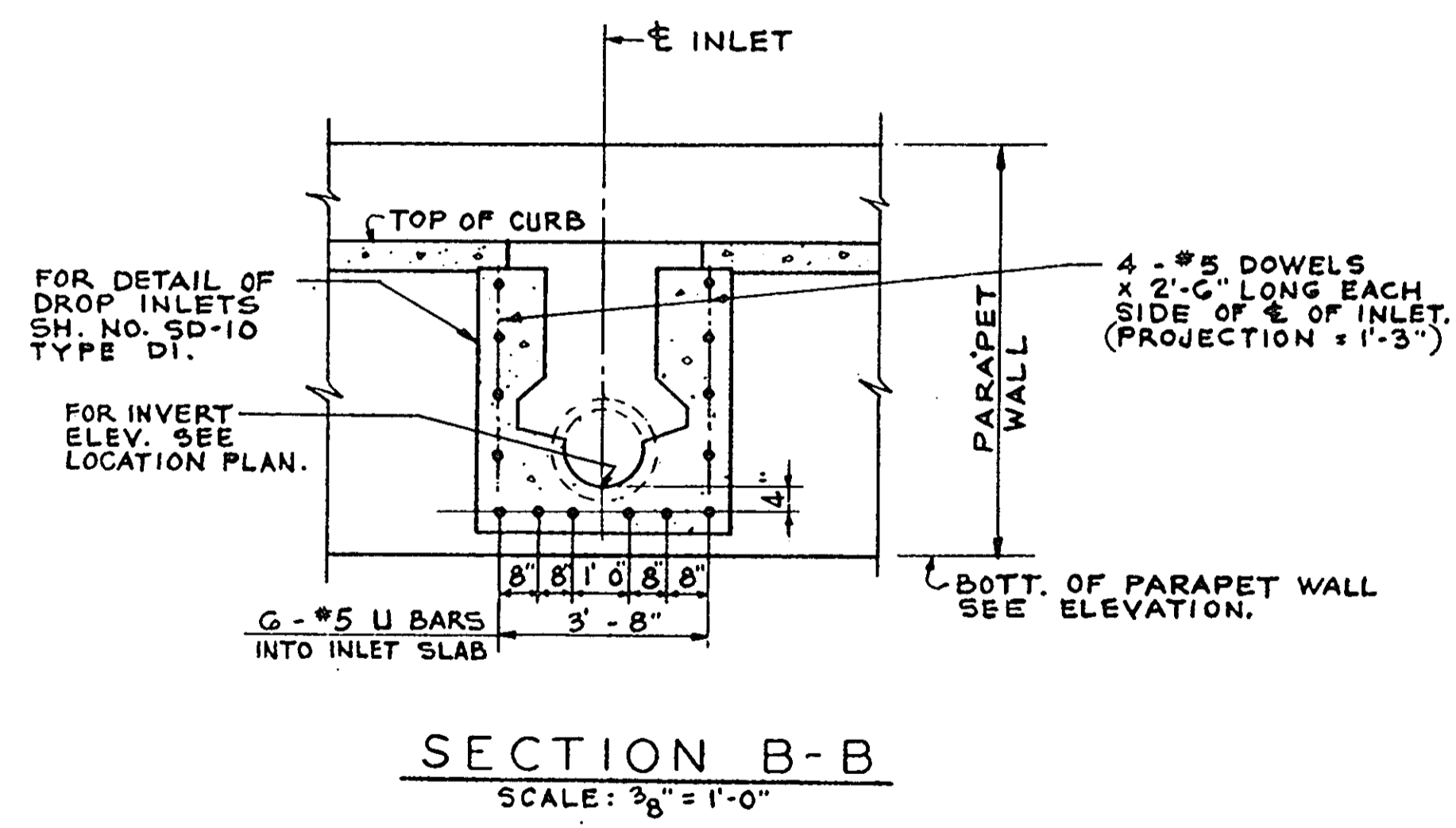
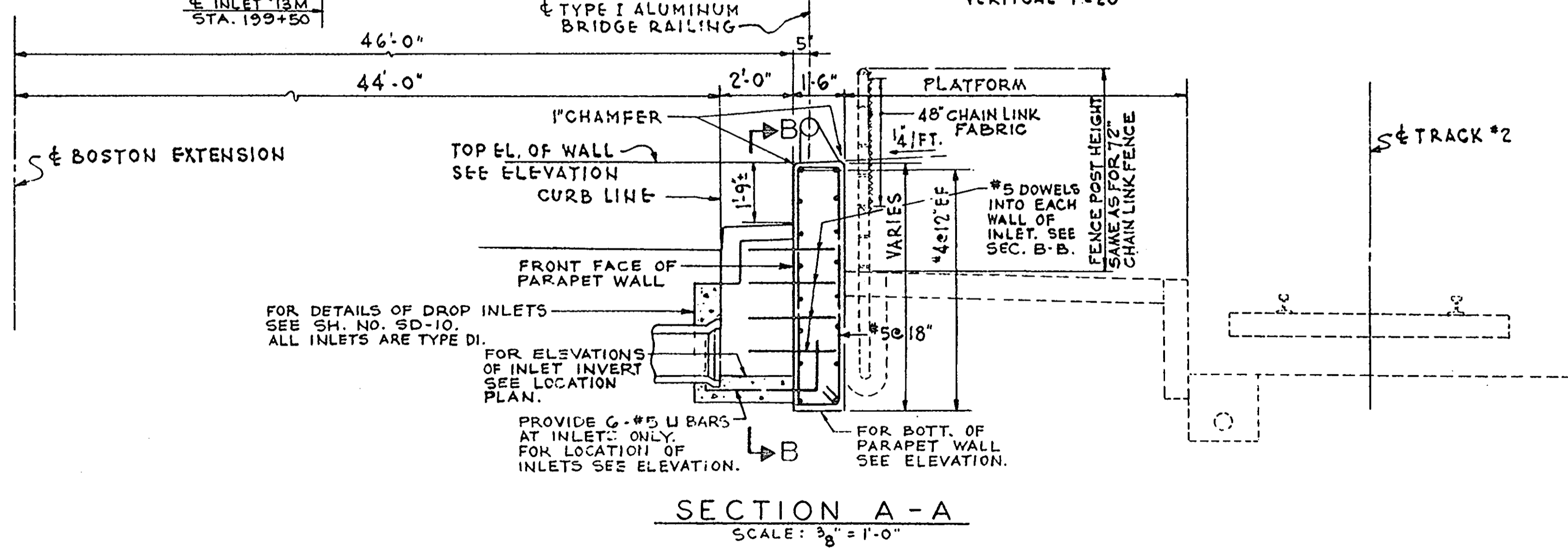
SECTION B-B
SCALE: 1 1/2"=1'-0"

NOTE:
FOR DETAILS OF UTILITIES AND METHOD
OF SUPPORTING UTILITIES SEE SH. SS-9
SEE GENERAL NOTES FOR STEELWORK
SH. DCS-3

"AS-BUILT PLANS"	
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION B	
STRUCTURE #23 WALNUT ST. OVER EXTENSION DIAPHRAGM DETAILS	
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 381 BOYLSTON BROOKLINE, MASS.	SCALE AS NOTED SHEET NO. S23-12



- NOTES**
1. FOR DETAILS OF EXPANSION JOINT, CONTRACTION JOINT AND TYPE B WATER STOP SEE SH. NO. DCS-1
 2. ALL PARAPET WALL LENGTHS BASED ON 30'-0" CHORDS
 3. FOR TYPE I RAILING AND RAILING ANCHOR BOLTS SEE DWG. NO. SD-22



"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

STRUCTURE #23
WALNUT STREET OVER EXTENSION
PARAPET WALL PW-1

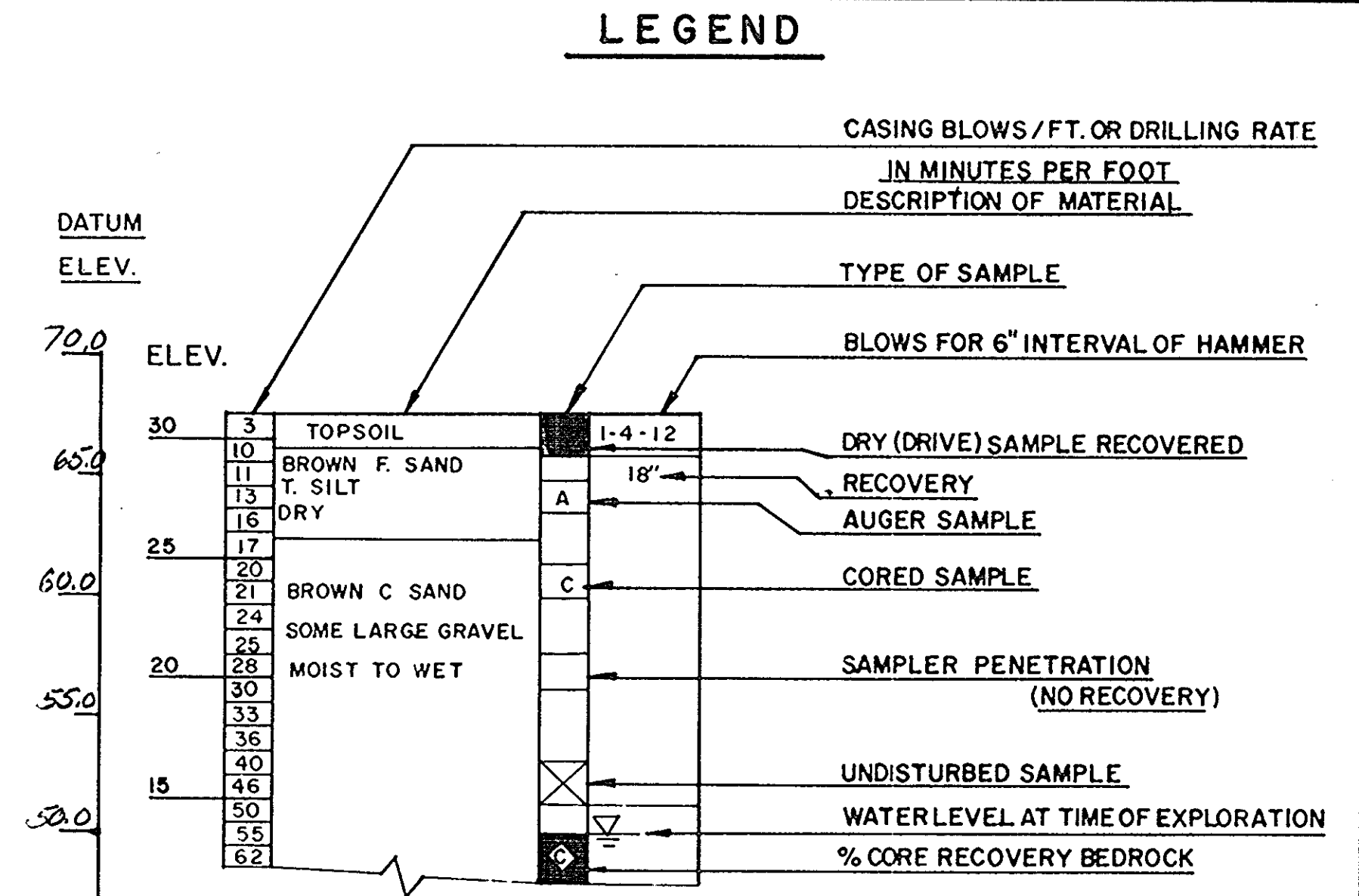
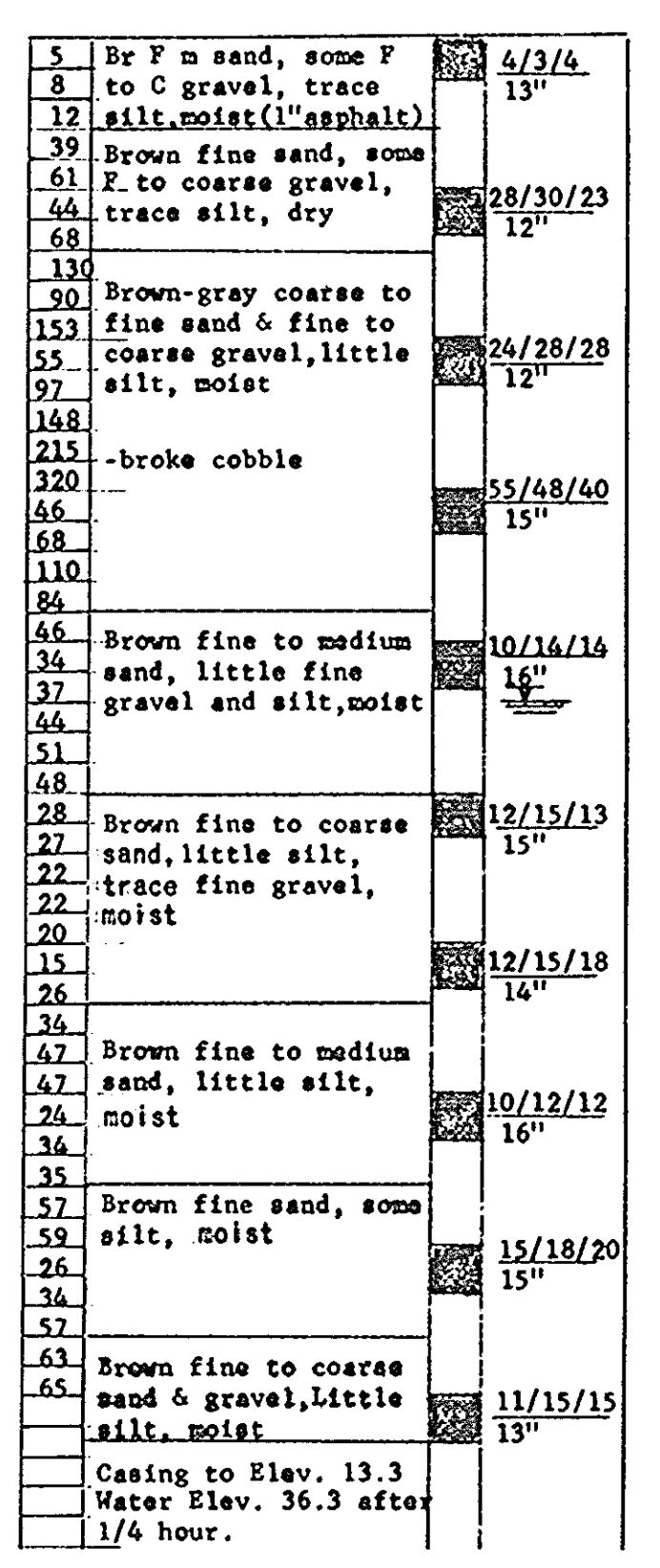
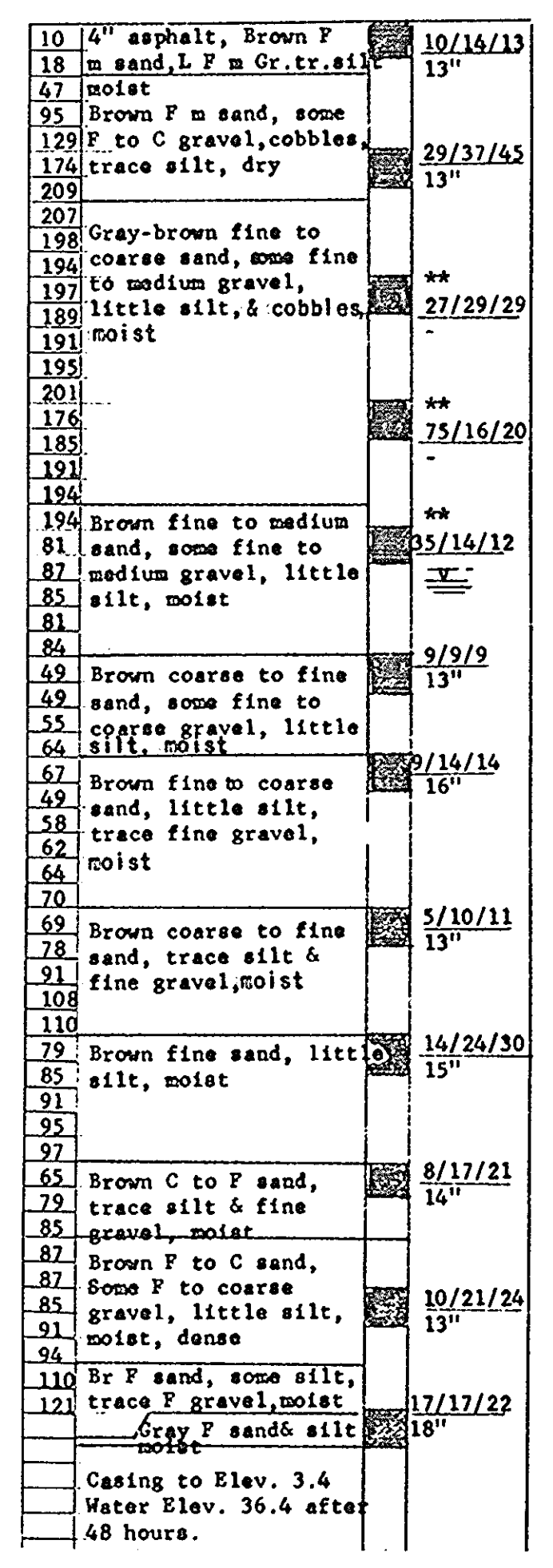
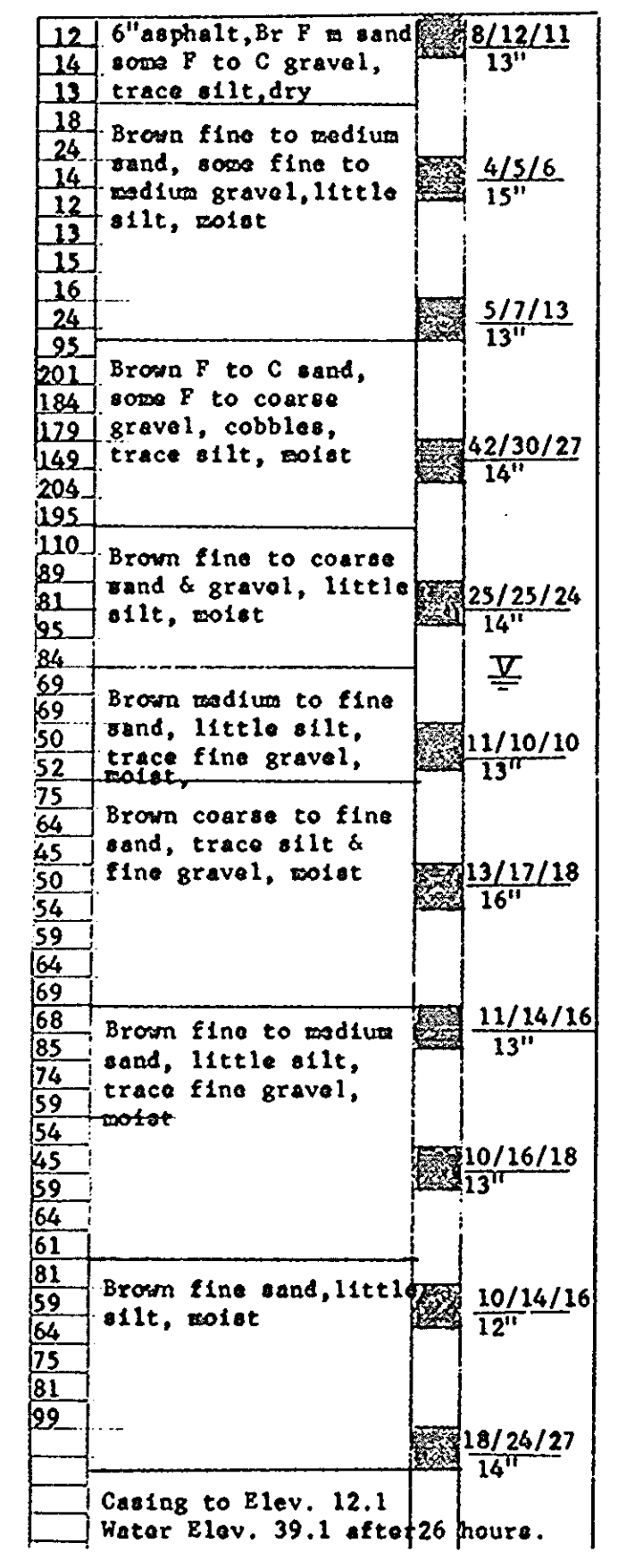
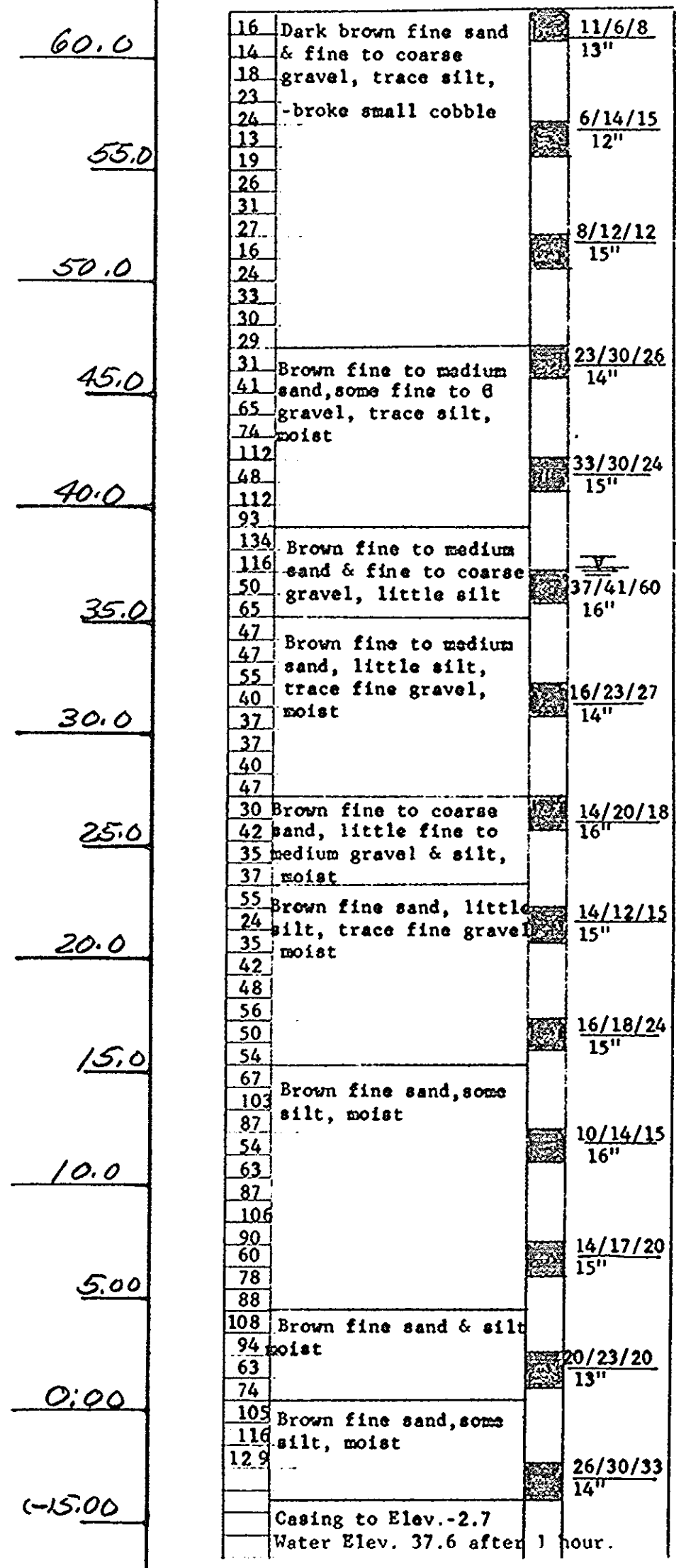
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 381 BOYLSTON	SCALE: AS SHOWN BROOKLINE, MASS. SHEET NO. 823-14
---	---

DATUM ELEV. 70.0
 BORING NO. 23-6
 GND. ELEV. 62.3
 STATION
 OFFSET
 DATE 6/19/62

BORING NO. 23-7
 GND. ELEV. 62.1
 STATION
 OFFSET
 DATE 6/13/62

BORING NO. W 36-1
 GND. ELEV. 58.4
 STATION
 OFFSET
 DATE 6/18/62

BORING NO. W 36-2
 GND. ELEV. 58.3
 STATION
 OFFSET
 DATE 6/21/62



GENERAL NOTES

VERT. SCALE 1" = 6'
 CASING I.D. 2 1/2" SAMPLER I.D. 1 3/8"
 HAMMER WT. 300 LB. HAMMER WT. 140 LB.
 HAMMER FALL 24" HAMMER FALL 30"
 * DENOTES 140 LB. WT. FALLING 30" ON A 1 1/4" I.D. OPEN END A ROD SAMPLER.
 ** DENOTES 300 LB. WT. FALLING 24" ON A 1 1/4" I.D. OPEN END A ROD SAMPLER.
 REFUSAL MEANS FAILURE OF A 1 1/4" I.D. OPEN END ROD TO PENETRATE AFTER 100 BLOWS, OR AS NOTED.
 DENSITY/CONSISTENCY IS DETERMINED BY COMBINING THE LAST TWO SETS OF BLOWS ON SAMPLER.

— ABBREVIATIONS —
 C = COARSE F = FINE L = LITTLE
 m = MEDIUM T = TRACE D = DRY
 M = MOIST W = WET R = REFUSAL

APPROXIMATE LOCATION OF BORINGS ARE SHOWN ON GENERAL PLAN SHEET AND ON BORING LOCATION PLAN THIS:

BORINGS WERE TAKEN FOR PURPOSE OF DESIGN AND SHOW CONDITIONS AT BORING POINTS ONLY, BUT DO NOT NECESSARILY SHOW NATURE OF MATERIALS TO BE ENCOUNTERED DURING CONSTRUCTION.
 ELEVATIONS ARE APPROXIMATE ONLY AND ARE BASED ON U.S.C. & G.S. SURVEY: MEAN SEA LEVEL DATUM OF 1929.

ADDITIONAL INFORMATION

CONTRACT NO. 556-001
 LOCATION OF BORINGS STRUCTURE NO 23 & WALL 36
 INSPECTOR HOWARD LAKE
 SOILS ENGINEER M. SALISBURY
 SAMPLES FOR THIS PROJECT ARE AT THE OFFICE OF:
 DE LEUW CATHEN & COMPANY

"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION "B"

STRUCTURE #23 & WALL #36
 WALNUT STREET OVER EXTENSION
 SOIL BORING LOGS

AMERICAN DRILLING CO. INC.
 94 WATER ST.
 EAST PROVIDENCE, RHODE ISLAND

SCALE: VERT. 1" = 6' 0"
 HORIZ. —
 SHEET NO. S23-16

NO.	REVISION	BY	DATE	IN CHARGE
		MADE		
		TRACED		
		CHECKED	CED	10-16-62

MASSACHUSETTS TURNPIKE AUTHORITY

MASSACHUSETTS TURNPIKE

JAMES J. KERASIOTES CHAIRMAN

THOMAS J. CURLEY, JR. VICE CHAIRMAN

ANN M. HERSHFANG MEMBER

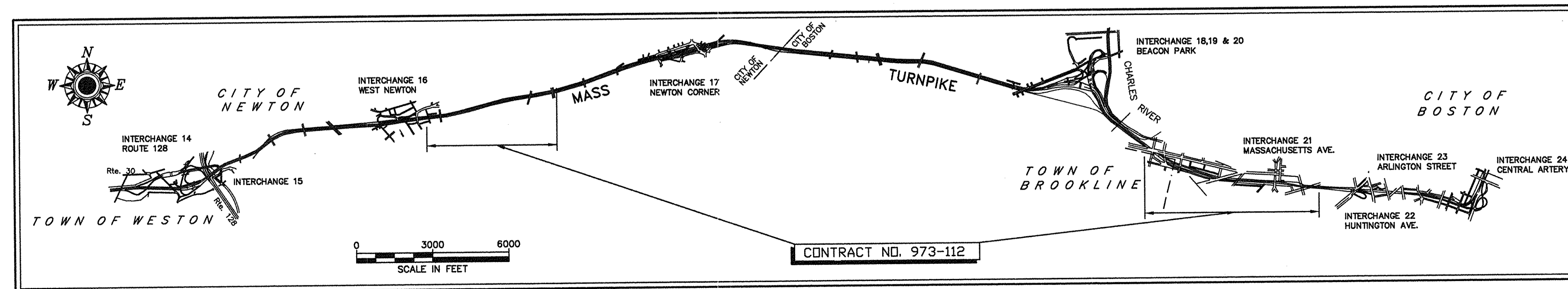
CLEANING AND PAINTING OF BRIDGES

MILE 125.4 TO MILE 126.4 AND MILE 131.7 TO MILE 133.0

- MILE 125.4 - HIGHLAND STREET (STR. S-18)
- MILE 125.5 - CHESTNUT STREET (STR. S-19)
- MILE 126.2 - LOWELL AVENUE (STR. S-22)
- MILE 126.4 - WALNUT STREET (STR. S-23)
- MILE 131.7 - CARLTON STREET (STR. S-48A)
- MILE 131.9 - ST. MARY'S STREET (STR. S-49)
- MILE 132.2 - BEACON STREET (STR. S-50)
- MILE 132.3 - BROOKLINE AVE & UTILITY BRIDGE (STR. S-51 & 51U)
- MILE 132.6 - CHARLES GATE WEST (STR. S-52)
- MILE 132.8 - MASSACHUSETTS AVE (STR. S-54)
- MILE 132.9 - BOYLSTON STREET (STR. S-55)
- MILE 133.0 - DALTON STREET (STR. S-55A)

IN THE TOWN OF BROOKLINE
AND
IN THE CITIES OF NEWTON AND BOSTON

CONTRACT NO. 973-112



LOCATION PLAN

MASSACHUSETTS TURNPIKE AUTHORITY
APPROVED:

Joseph P. Hill
CHIEF ENGINEER

DATE 4/9/97

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R2	FRAMING PLAN
R3	PROPOSED PLAN AND ELEVATION
R4	PROPOSED DECK SECTIONS
R5	PROPOSED SIDEWALK DETAILS AND PLACING SEQUENCE FOR CONCRETE
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R28	GENERAL PLAN AND ELEVATION
R29	FRAMING PLAN & CROSS SECTIONS
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R50	CHAIN LINK FENCE FOR BRIDGES DETAILS II


BRIDGE INFORMATION													
BRIDGES	STR. NO.	COMMENTS	GENERAL INFORMATION										
			EST. S.F. OF STEEL TO BE PAINTED		WT. OF STEEL TOTAL STRUCT. (TONS)	TURNPIKE IS OVER OR UNDER	MIN. VERTICAL CLEARANCE	C=CLOSED JOINT O=OPEN JOINT		NO. OF BEARINGS (TYPE OF JOINT)			** JACK ARCHES
			ML (W/BEARINGS)	*RR (NO BEARINGS)				SOUTH ABUT	PIER 1	PIER 2	PIER 3	PIER 4	
MILE 125.4 - HIGHLAND STREET	18		12,140	280	124	U	15± TO 16±	7 (0)	7/7 (C)	7/20** (0)	—	—	20 (0)
MILE 125.5 - CHESTNUT STREET	19		12,560	300	140	U	14± TO 15'-6"±	8 (0)	8/8 (C)	8/22** (0)	—	—	22 (0)
MILE 126.2 - LOWELL AVENUE	22		16,160	360	234	U	14'-4"± TO 17'-9"±	8 (0)	8/8 (C)	8/22** (0)	—	—	33 (0)
MILE 126.4 - WALNUT STREET	23		21,860	300	202	U	15± TO 17'-3"±	16 (0)	16/16 (C)	16/16 (C)	—	—	16 (0)
MILE 131.7 - CARLTON STREET	48A		—	385	263	U	14'-7"± TO 17'-6"±	11 (0)	—	10/10 (0)	—	—	—
MILE 131.9 - ST. MARY'S STREET	49		—	195	132	U	16± TO 17'-3"±	19** (C)	19/7 (0)	—	—	—	—
MILE 132.2 - BEACON STREET	50		—	630	1,159	U	15± TO 18±	—	16 (0)	16/16 (0)	—	—	—
MILE 132.3 - BROOKLINE AVE & UTIL.	51/51U		—	765	264	U	14'-6"± TO 18±	9 / 2 (0) / (-)	9/9 / 2/2 (C) / (-)	—	—	—	—
MILE 132.6 - CHARLESGATE WEST	52	MDC BRIDGE	—	720	276	U	14± TO 15'-4"±	14 (0)	14/14 (C)	14/15 (0)	—	—	—
MILE 132.8 - MASSACHUSETTS AVE.	54		—	310	270	U	14'-9"± TO 16'-6"±	14 (0)	—	14/14 (0)	—	—	—
MILE 132.9 - BOYLSTON STREET	55		—	170	700	U	15'-6"± TO 19'-6"±	48 (?)	—	—	—	14/72/10 (C)	—
MILE 133.0 - DALTON STREET	55A	CITY OF BOSTON BRIDGE	—	255	300	U	16'-8"± TO 19±	—	—	11/11 (?)	—	11 (?)	—

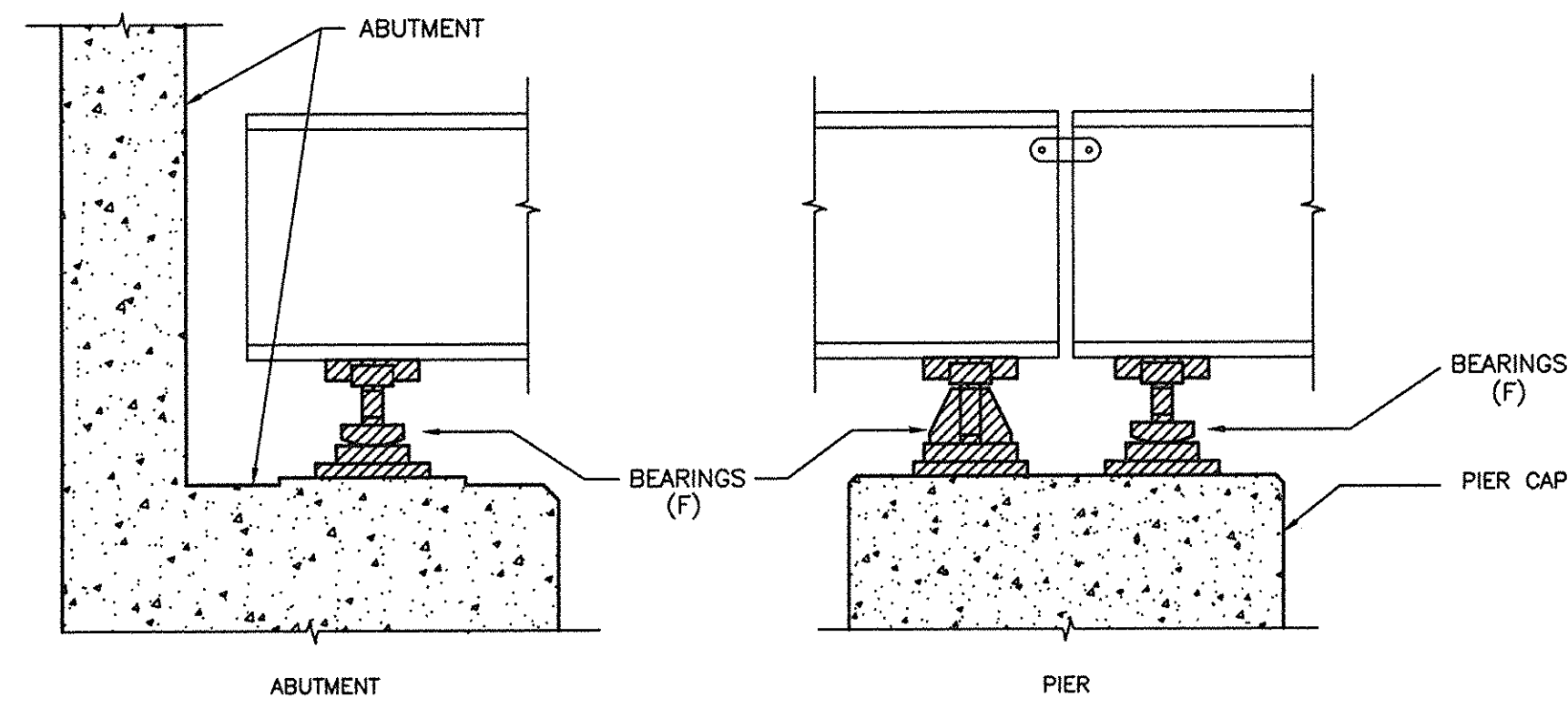
* FASCIA STEEL ONLY ON RAILROAD SPANS:
ON ALL RAILROAD SPANS ONLY THE FASCIA WEB, FASCIA WEB STIFFENERS AND FASCIA BEAMS' BOTTOM FLANGE'S OUTER EDGE TO BE INCLUDED IN THE CLEANING AND OVERCOATING.

NOTE:

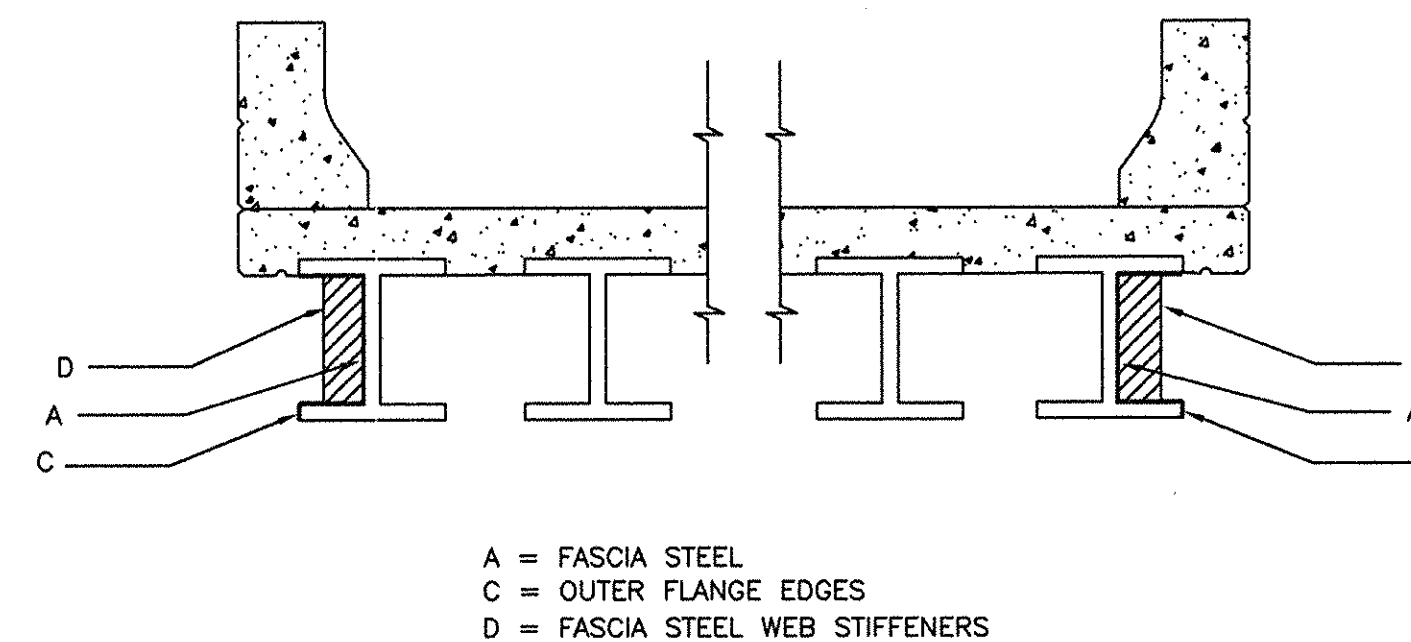
REFERENCE PLANS ARE DISTRIBUTED IN HALF SIZE FORMAT. FULL SIZE PLAN SHEETS MAY BE VIEWED AT THE MASS. TURNPIKE'S WESTON ENGINEERING FACILITY'S PLAN ROOM.

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	KGB 3/97	
		DRAWN:	KGB 3/97	
		CHECKED:		

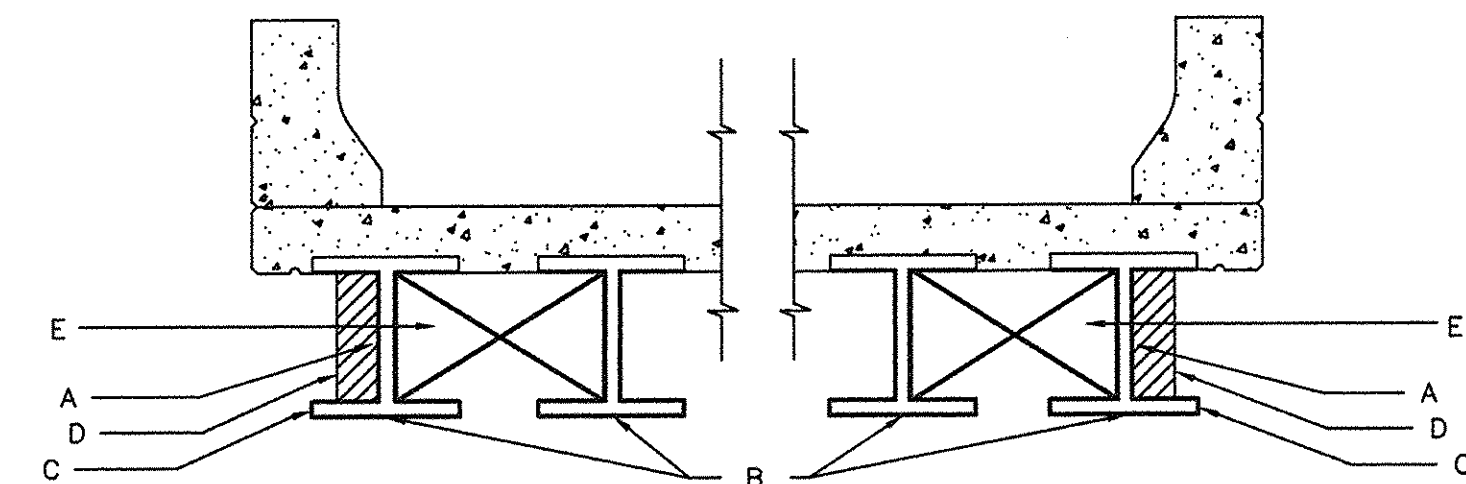
MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
CLEANING AND PAINTING OF BRIDGES MILE 125.4 TO MILE 126.4 AND MILE 131.7 TO MILE 133.0	
INDEX AND BRIDGE INFORMATION	
Scale: AS NOTED	Contract No. 973-112
 MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No. 2



DETAIL-D
TYPICAL BEARINGS
(SEE NOTE 3)

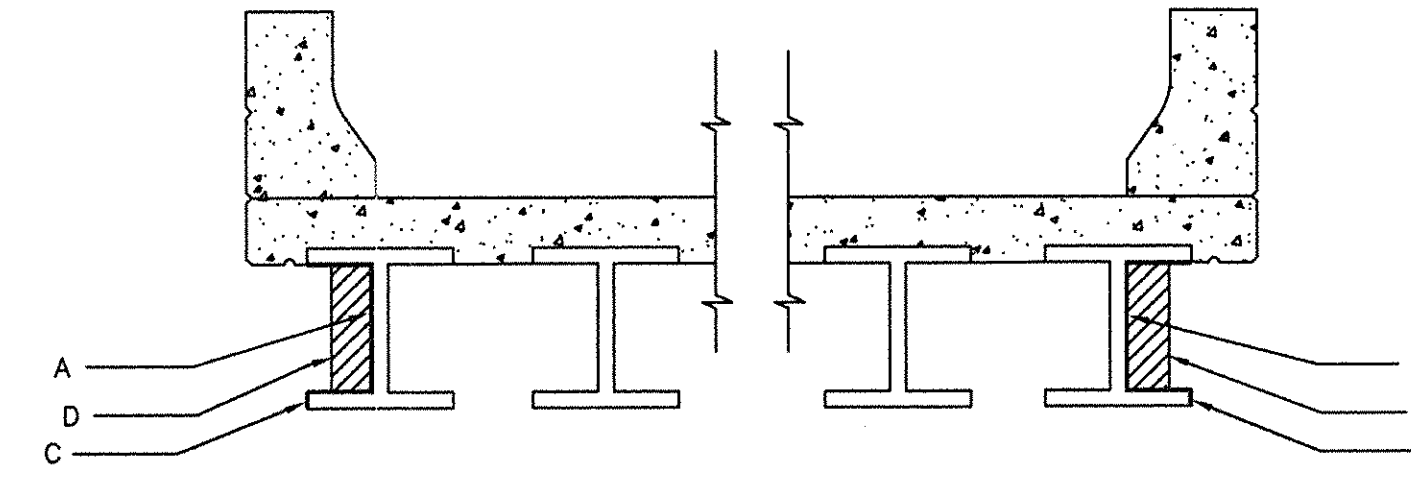


DETAIL-B
SURFACES TO BE CLEANED AND OVERCOATED ON RAILROAD SPANS
(SEE NOTES 4, 8 AND 9)



DETAIL-A
SURFACES TO BE CLEANED AND PAINTED ON MAINLINE SPANS
(SEE NOTE 3)

A = FASCIA STEEL
B = BOTTOM FLANGE FACES
C = BOTTOM FLANGE EDGES
D = STEEL FASCIA WEB STIFFENERS
E = INTERNAL STEEL SURFACES (INCLUDING DIAPHRAGMS, STRUTS, BRACING, INTERIOR BEAM WEB STIFFENERS, ETC...)



DETAIL-C
SURFACES TO BE POLYURETHANE CLEAR COATED ON RAILROAD SPANS
(BETWEEN MILE 131.7 AND MILE 133.0 ONLY)
(SEE NOTE 10)

A = FASCIA STEEL
C = OUTER FLANGE EDGES
D = FASCIA STEEL WEB STIFFENERS

TYPICAL CROSS SECTIONS
SHOWING PROPOSED PAINT DETAILS

GENERAL NOTES:

- WORK TO BE DONE ON THE BRIDGES BETWEEN MILE 125.4 AND MILE 126.4, HIGHLAND STREET, CHESTNUT STREET, LOWELL AVE AND WALNUT STREET, SHALL INCLUDE THE SPANS OVER THE MASS TURNPIKE MAINLINE AS WELL AS THE SPANS OVER THE RAILROAD.
- WORK TO BE DONE ON THE BRIDGES BETWEEN MILE 131.7 AND MILE 133.0, CARLTON STREET, ST. MARY'S STREET, BEACON STREET, BROOKLINE AVE & BROOKLINE AVE UTILITY BRIDGE, CHARLES GATE WEST, MASSACHUSETTS AVE, BOYLSTON STREET AND DALTON STREET, SHALL INCLUDE ONLY THE SPANS OVER THE RAILROAD. THESE SPANS WERE SCHEDULED TO BE CLEANED AND OVERCOATED IN PRIOR CONTRACT NO. 521-222. CLEANING AND PAINTING OF BRIDGES IN THE BOSTON EXTENSION "GATEWAY OF COLOR".
- SPANS OVER THE MASS TURNPIKE MAINLINE SHALL BE CLEANED TO BARE STEEL AND PAINTED AS PER CONTRACT AND SHALL INCLUDE ALL SUPERSTRUCTURE STEEL AS WELL AS THE BEARINGS. SEE DETAIL "A" AND "D" ON THIS SHEET.
- SPANS OVER THE RAILROAD SHALL BE CLEANED AND OVERCOATED, AND SHALL ONLY INCLUDE THE FASCIA STEEL AND OUTER FLANGE EDGES OF THE FASCIA STEEL. SEE DETAIL "C" ON THIS SHEET.
- RAILROAD SPAN BEARINGS SHALL NOT BE INCLUDED IN THE WORK.

NOTES FOR RAILROAD SPANS BETWEEN MILE 131.7 AND MILE 133.0:

- THE COLORS FOR THE RAILROAD SPANS BETWEEN MILE 131.7 AND MILE 133.0 AS SHOWN IN THE BRIDGE COLOR PLAN INDEX BELOW ARE CUSTOM COLORS, DEVELOPED BY TMECC COMPANY INC. FOR THE MASS. TURNPIKE AUTHORITY.
- STEEL FASCIA WEB COLOR VARIES FROM BRIDGE TO BRIDGE, AND EAST SIDE FASCIA VARIES FROM WEST SIDE FASCIA FOR EACH BRIDGE.
- STIFFENERS ON ALL BRIDGE STEEL BEAM WEB FASCIA SHALL BE PAINTED THE SAME COLOR AS THE BOTTOM FLANGE OUTER EDGE FOR THAT BRIDGE. SPECIFIC COLOR VARIES FROM BRIDGE TO BRIDGE.
- PERIMETER STEEL BEAM FASCIA WEB, STIFFENERS AND BOTTOM FLANGE OUTER EDGE SHALL RECEIVE A POLYURETHANE CLEAR COAT. (SEE DETAIL "C" ON THIS SHEET)
- COLORS ARE BASED ON FEDERAL NUMBERS BUT HAVE BEEN MODIFIED. CONTRACTOR IS RESPONSIBLE FOR MATCHING PAINT COLORS TO COLOR BARS, KEPT AT THE ENGINEERING DEPARTMENT, USING COMPUTER TESTING METHODS TO DETERMINE, AND VERIFY EXACT COLOR OF PAINT AND ENSURE EXACT MATCH WITH NUMBERS ON COLOR BARS.

DESCRIPTION OF EXISTING PAINT SYSTEM TYPES:

MAINLINE SPANS

- TYPE I: ORGANIC ZINC PRIME
BITUMASTIC COVER
- TYPE II: LEAD PRIME
ALKYD COVER
- TYPE III: METALLIC ZINC PRIME } { ON BOTTOM FLANGE, FLANGE }
EPOXY COVER } { EDGE & UP WEB APPROX. 4" }
- TYPE VI: ZINC-RICH, MOISTURE CURED, URETHANE PRIMER
HIGH-BUILD, SELF-PRIMING EPOXY INTERMEDIATE COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT
CLEAR ALIPHATIC ACRYLIC POLYURETHANE PROTECTIVE COAT

RAILROAD SPANS

- TYPE II: LEAD PRIME
ALKYD COVER

PROPOSED PAINT SYSTEM TYPE:

MAINLINE SPANS

- TYPE VI: ZINC-RICH, MOISTURE CURED, URETHANE PRIMER
HIGH-BUILD, SELF-PRIMING EPOXY INTERMEDIATE COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT

RAILROAD SPANS

- TYPE VI: HIGH-BUILD, SELF-PRIMING EPOXY PRIME COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT
*** (CLEAR ALIPHATIC ACRYLIC POLYURETHANE PROTECTIVE COAT)
- *** PROTECTIVE COAT TO BE APPLIED TO THE RAILROAD SPANS BETWEEN MILE 131.7 AND MILE 133.0 ONLY.

BRIDGE COLOR PLAN INDEX (SEE NOTE 11)

BRIDGES	STR. NO.	SPANS INCLUDED IN WORK		COMMENTS	PROPOSED COMPONENT COLORS						EXISTING PAINT INFORMATION						
		MAINLINE (CLEAN/PAINT)	RAILROAD (CLEAN/OVERCOAT)		E=EAST SIDE W=WEST SIDE		A				E		F				
					A	B	(STEEL FASCIA WEB)	(BOTTOM FLANGE FACES)	(BOTTOM FLANGE EDGES)	(FASCIA WEB STIFFENERS)	(INTERIOR STEEL)	(BEARINGS)	MAILINE SPANS	RAILROAD SPANS			
E	W	E & W	E & W	E & W	E & W	E & W	E & W	E & W	LAST PAINTED	SYSTEM TYPE	LAST PAINTED	SYSTEM TYPE					
MILE 125.4 - HIGHLAND STREET	18	ML	RR	*FASCIA STEEL ONLY ON RR	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	1978	I & II	1978	I & II
MILE 125.5 - CHESTNUT STREET	19	ML	RR	*FASCIA STEEL ONLY ON RR	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	1978	I & II	1978	I & II
MILE 126.2 - LOWELL AVENUE	22	ML	RR	*FASCIA STEEL ONLY ON RR	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	1978	I & II	1978	I & II
MILE 126.4 - WALNUT STREET	23	ML	RR	*FASCIA STEEL ONLY ON RR	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	FED GREEN (24172)	1978	I & II	1978	I & II
MILE 131.7 - CARLTON STREET	48A	---	RR	*FASCIA STEEL ONLY ON RR	YELLOW (13538)	BLUE (15125)	---	GREEN (14193)	GREEN (14193)	---	---	---	---	1995 (FASCIA ONLY)	VI	1982	I, II & III
MILE 131.9 - ST. MARY'S STREET	49	---	RR	*FASCIA STEEL ONLY ON RR	GREEN (14193)	PURPLE (15056)	---	YELLOW (13538)	YELLOW (13538)	---	---	---	---	1995 (FASCIA ONLY)	VI	1982	I, II & III
MILE 132.2 - BEACON STREET	50	---	RR	*FASCIA STEEL ONLY ON RR	GREEN (14109)	BLUE (15125)	---	GREEN (14193)	GREEN (14193)	---	---	---	---	1995	VI	1982	I, II & III
MILE 132.3 - BROOKLINE AVE & UTIL.	51/51U	---	RR	*FASCIA STEEL ONLY ON RR	GREEN (14193)	BLUE (15125)	---	YELLOW (13538)	YELLOW (13538)	---	---	---	---	1995	VI	1982	I, II & III
MILE 132.6 - CHARLES GATE WEST	52	---	RR	*FASCIA STEEL ONLY ON RR MDC BRIDGE	RED (12197)	RED (11086)	---	BLUE (15125)	BLUE (15125)	---	---	---	---	1995 (FASCIA ONLY)	VI	?	?
MILE 132.8 - MASSACHUSETTS AVE.	54	---	RR	*FASCIA STEEL ONLY ON RR	YELLOW (13538)	PURPLE (15056)	---	RED (11086)	RED (11086)	---	---	---	---	1995	VI	1975	I & II
MILE 132.9 - BOYLSTON STREET	55	---	RR	*FASCIA STEEL ONLY ON RR	---	PURPLE (15056)	---	RED (11086)	RED (11086)	---	---	---	---	1995	VI	1975	I & II
MILE 133.0 - DALTON STREET	55A	---	RR	*FASCIA STEEL ONLY ON RR CITY OF BOSTON BRIDGE	---	YELLOW (13538)	---	PURPLE (15056)	PURPLE (15056)	---	---	---	---	1995 (FASCIA ONLY)	VI	?	?

* FASCIA STEEL ONLY ON RAILROAD SPANS INDICATES THAT ON ALL RAILROAD SPANS ONLY THE FASCIA WEB, FASCIA WEB STIFFENERS AND FASCIA BEAMS' BOTTOM FLANGE'S OUTER EDGE TO BE INCLUDED IN THE CLEANING AND OVERCOATING.

DESIGNED:	KGB	3/97		
DRAWN:	KGB	3/97		
CHECKED:				
NO.	REVISION	BY	DATE	IN CHARGE OF

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

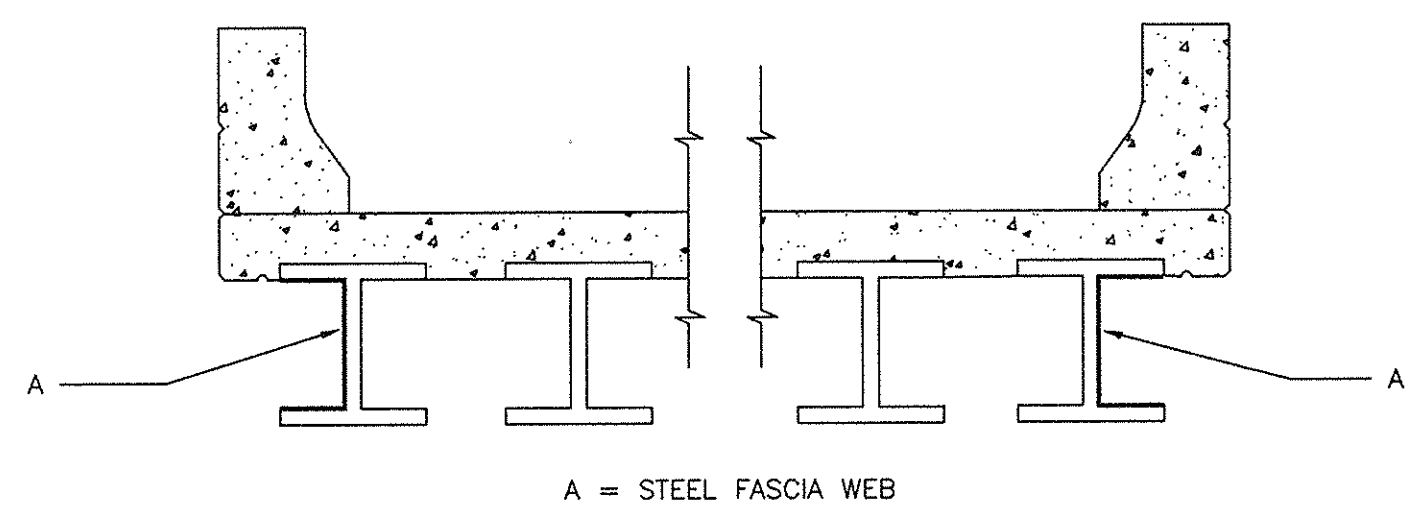
CLEANING AND PAINTING OF BRIDGES
MILE 125.4 TO MILE 126.4 AND MILE 131.7 TO MILE 133.0

PAINT DETAILS

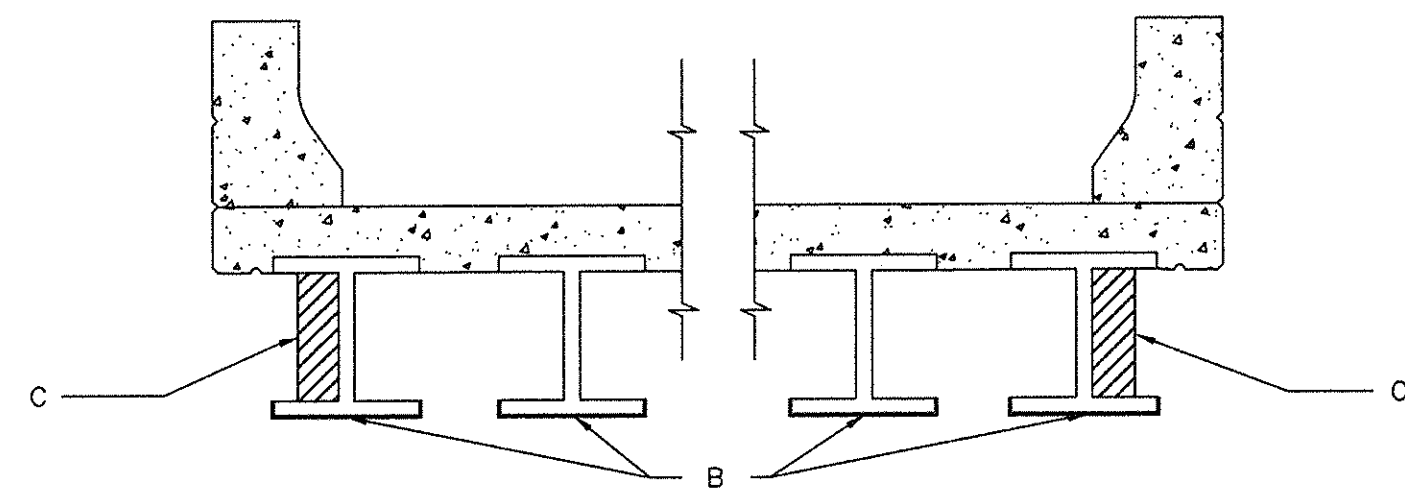
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MASSACHUSETTS TURNPIKE AUTHORITY

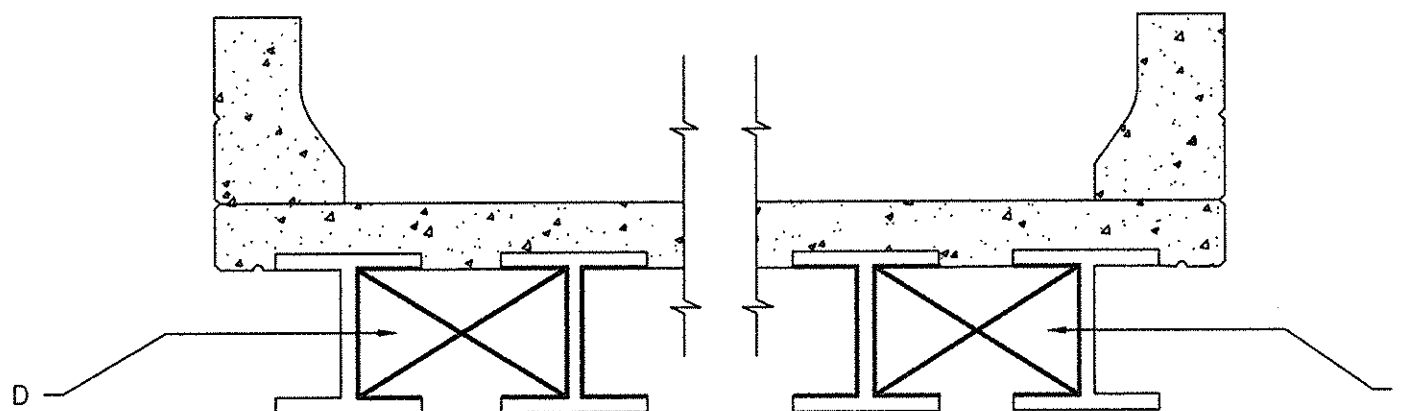
Sheet No. 3



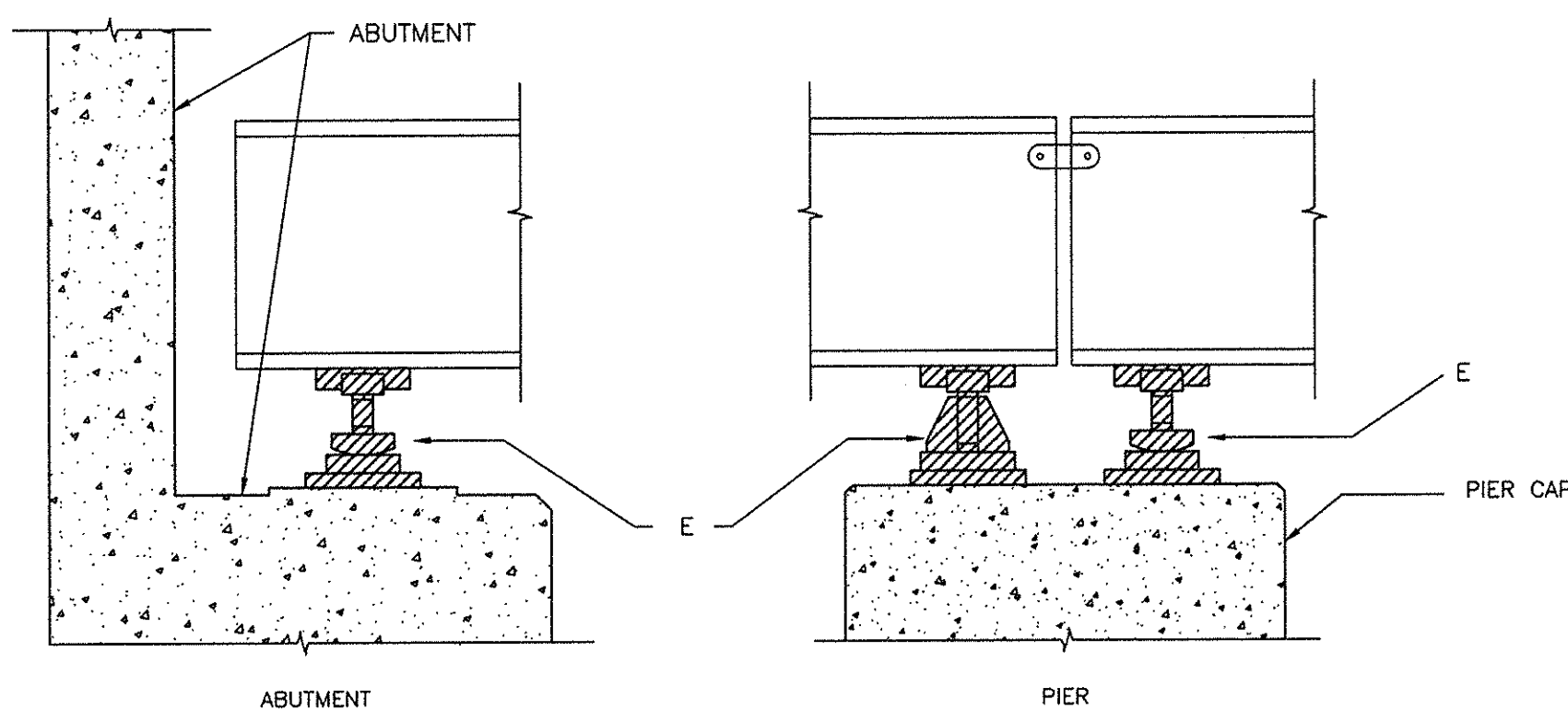
A = STEEL FASCIA WEB



B = UNDERSIDE STEEL FLANGE FACES & FLANGE EDGES
C = STEEL FASCIA WEB STIFFENERS
(SEE NOTE 9)

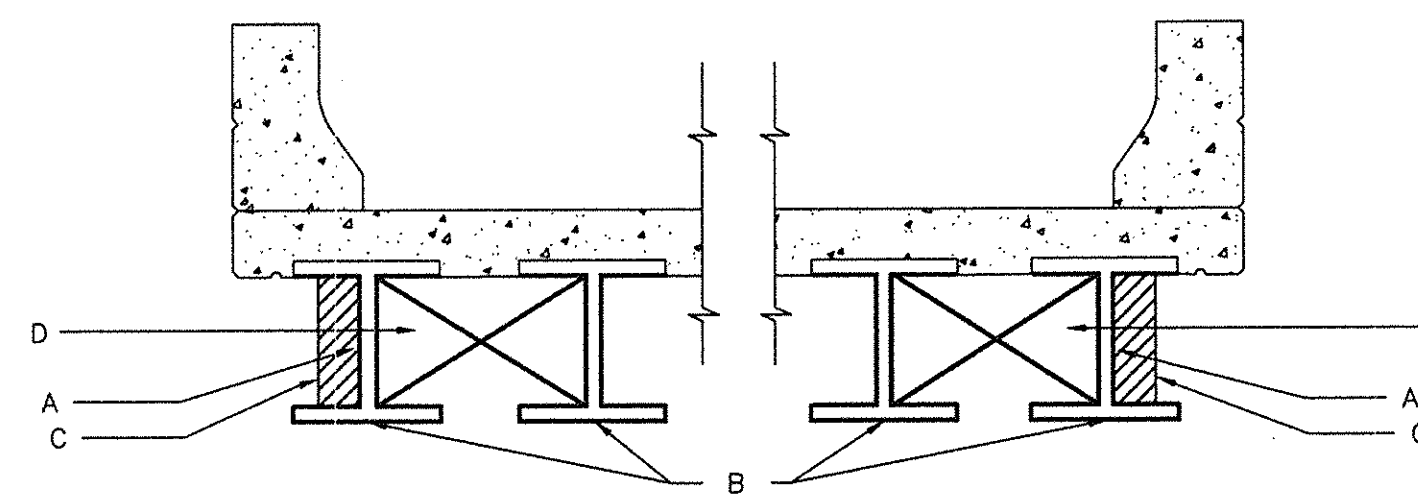


D = INTERNAL STEEL SURFACES (INCLUDING DIAPHRAGMS, STRUTS, BRACING, INTERIOR BEAM WEB STIFFENERS, ETC...)
(SEE NOTE 10)



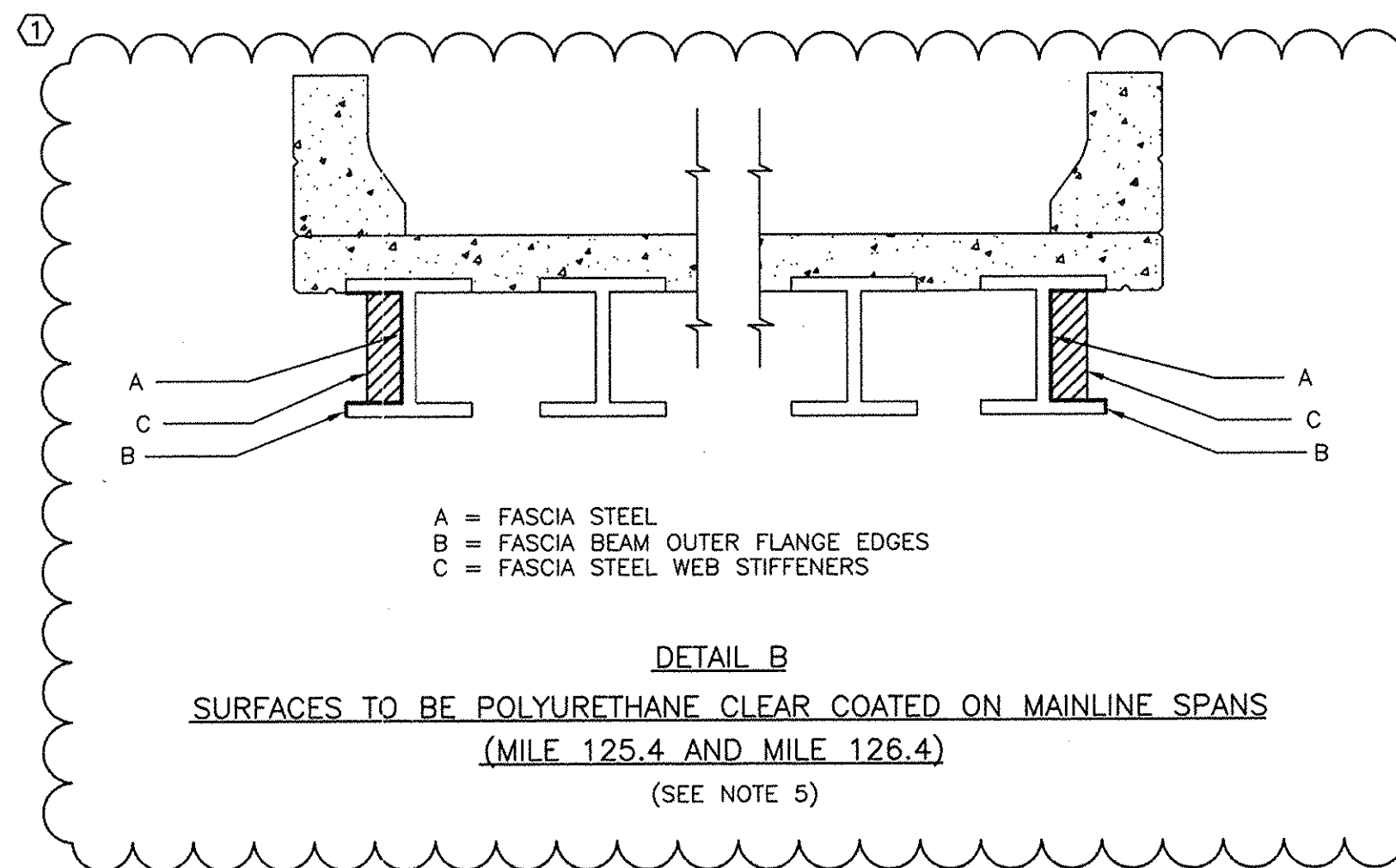
E = BEARINGS
(SEE NOTE 11)

TYPICAL CROSS SECTIONS IDENTIFYING COMPONENTS TO BE PAINTED



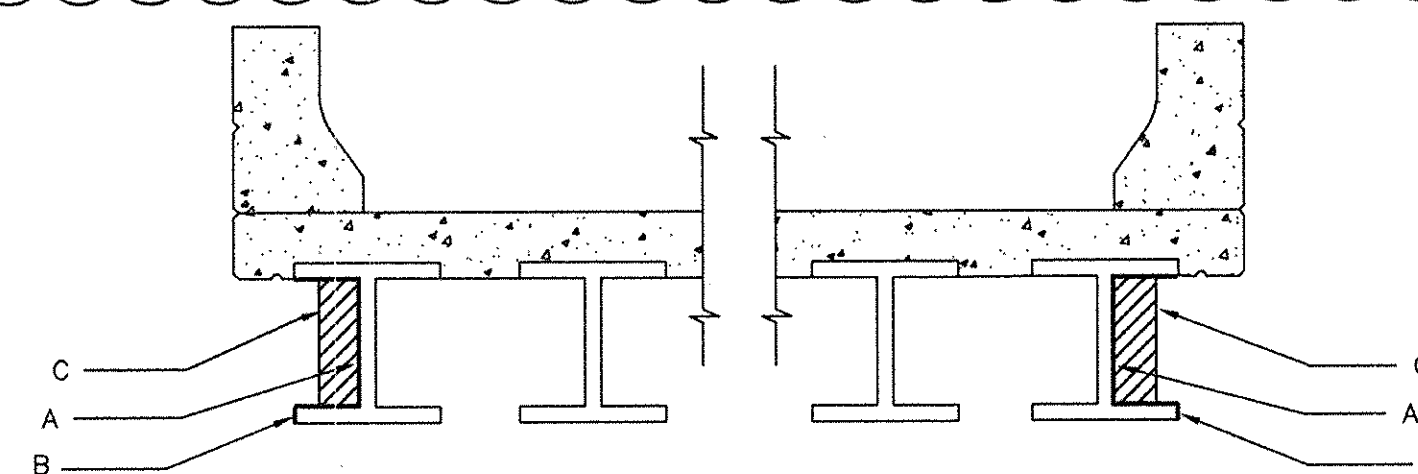
A = STEEL FASCIA WEB
B = BOTTOM FLANGE FACES AND EDGES
C = FASCIA WEB STIFFENERS
D = INTERIOR STEEL (INCLUDING DIAPHRAGMS, STRUTS, BRACING, INTERIOR BEAM WEB STIFFENERS, ETC...)

DETAIL A
SURFACES TO BE CLEANED AND PAINTED ON MAINLINE SPANS
(SEE NOTES 2, 9 AND 10)



A = FASCIA STEEL
B = FASCIA BEAM OUTER FLANGE EDGES
C = FASCIA STEEL WEB STIFFENERS

DETAIL B
SURFACES TO BE POLYURETHANE CLEAR COATED ON MAINLINE SPANS
(MILE 125.4 AND MILE 126.4)
(SEE NOTE 5)



A = FASCIA STEEL
B = FASCIA BEAM OUTER FLANGE EDGES
C = FASCIA STEEL WEB STIFFENERS

DETAIL C
SURFACES TO BE CLEANED, OVERCOATED AND POLYURETHANE CLEAR COATED ON RAILROAD SPANS
(SEE NOTES 3, 4, 6 AND 9)

NOTES:

- WORK TO BE DONE ON THE BRIDGES BETWEEN MILE 125.4 AND MILE 126.4, HIGHLAND STREET, CHESTNUT STREET, LOWELL AVE AND WALNUT STREET, SHALL INCLUDE THE SPANS OVER THE MASS TURNPIKE MAINLINE AS WELL AS THE SPANS OVER THE RAILROAD.
- SPANS OVER THE MASS TURNPIKE MAINLINE SHALL BE CLEANED TO BARE STEEL AND PAINTED AS PER CONTRACT AND SHALL INCLUDE ALL SUPERSTRUCTURE STEEL AS WELL AS THE BEARINGS. SEE DETAILS "A", "B" AND "D" ON THIS SHEET.
- SPANS OVER THE RAILROAD SHALL BE CLEANED AND OVERCOATED, FASCIA ONLY AS DESCRIBED IN THE CONTRACT, AND SHALL ONLY INCLUDE THE FASCIA STEEL AND OUTER FLANGE EDGES OF THE FASCIA STEEL. SEE DETAIL "C" ON THIS SHEET.
- RAILROAD SPAN BEARINGS SHALL NOT BE INCLUDED IN THE WORK.
- FOR MAINLINE SPANS, THE FASCIA STEEL BEAMS' WEB, WEB STIFFENERS, AND OUTER FLANGE EDGE SHALL RECEIVE A POLYURETHANE CLEAR COAT. SEE DETAIL "B" ON THIS SHEET.
- FOR RAILROAD SPANS, THE FASCIA STEEL BEAMS' WEB, WEB STIFFENERS AND BOTTOM FLANGE OUTER EDGE SHALL RECEIVE A POLYURETHANE CLEAR COAT. SEE DETAIL "C" ON THIS SHEET.
- PROPOSED PAINT COLORS VARY FROM BRIDGE TO BRIDGE.
- ALL COLORS INDICATED IN THE BRIDGE COLOR PLAN INDEX ON THIS SHEET ARE CUSTOM COLORS, DEVELOPED BY TNEEC COMPANY INC., FOR THE MASS. TURNPIKE AUTHORITY. COLORS ARE BASED ON FEDERAL NUMBERS BUT HAVE BEEN MODIFIED. CONTRACTOR IS RESPONSIBLE FOR MATCHING PAINT COLORS TO COLOR BARS, KEPT AT THE ENGINEERING DEPARTMENT, USING COMPUTER TESTING METHODS TO DETERMINE AND VERIFY EXACT COLOR OF PAINT AND ENSURE EXACT MATCH WITH COLOR BARS.
- WEB STIFFENERS ON ALL FASCIAS SHALL BE PAINTED THE SAME COLOR AS THE BOTTOM FLANGE FACES AND FLANGE EDGES FOR THAT BRIDGE. SPECIFIC COLOR VARIES FROM BRIDGE TO BRIDGE.
- ON MAINLINE SPANS BRIDGE STEEL DIAPHRAGMS, STRUTS AND INTERIOR BEAM WEB SHALL BE PAINTED COOL GREY COLOR #26231 BUT MODIFIED. SEE NOTE 8.
- ON MAINLINE SPANS BEARING SHOES SHALL BE PAINTED BLACK COLOR #27038. SEE NOTE 2.

DESCRIPTION OF EXISTING PAINT SYSTEM TYPES:

MAINLINE SPANS

- TYPE I: ORGANIC ZINC PRIME
BITUMASTIC COVER
- TYPE II: LEAD PRIME
ALKYD COVER
- TYPE III: METALLIC ZINC PRIME } { ON BOTTOM FLANGE, FLANGE }
EPOXY COVER } { EDGE & UP WEB APPROX. 4" }
- TYPE VI: ZINC-RICH, MOISTURE CURED, URETHANE PRIMER
HIGH-BUILD, SELF-PRIMING EPOXY INTERMEDIATE COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT
CLEAR ALIPHATIC ACRYLIC POLYURETHANE PROTECTIVE COAT

RAILROAD SPANS

- TYPE II: LEAD PRIME
ALKYD COVER

PROPOSED PAINT SYSTEM TYPE:

MAINLINE SPANS

- TYPE VI: ZINC-RICH, MOISTURE CURED, URETHANE PRIMER
HIGH-BUILD, SELF-PRIMING EPOXY INTERMEDIATE COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT
① CLEAR ALIPHATIC ACRYLIC POLYURETHANE PROTECTIVE COAT

RAILROAD SPANS

- TYPE VI: HIGH-BUILD, SELF-PRIMING EPOXY PRIME COAT
HI-BUILD ACRYLIC POLYURETHANE ENAMEL COVER COAT
① CLEAR ALIPHATIC ACRYLIC POLYURETHANE PROTECTIVE COAT

BRIDGE COLOR PLAN INDEX (SEE NOTE 1)

BRIDGES	STR. NO.	SPANS INCLUDED IN WORK		COMMENTS	PROPOSED COMPONENT COLORS					EXISTING PAINT INFORMATION				
		MAINLINE (CLEAN/PAINT)	RAILROAD (CLEAN/OVERCOAT)		E=EAST SIDE W=WEST SIDE					MAILINE SPANS		RAILROAD SPANS		
					A (STEEL FASCIA WEB)	B (BOTTOM FLANGE FACES AND/OR FLANGE EDGES)	C (FASCIA WEB STIFFENERS)	D (INTERIOR STEEL)	E (BEARINGS)	LAST PAINTED	SYSTEM TYPE	LAST PAINTED	SYSTEM TYPE	
MILE 125.4 - HIGHLAND STREET	18	ML	RR	* FASCIA STEEL ONLY ON RR	PURPLE (15056)	PURPLE (15056)	YELLOW (13538)	YELLOW (13538)	COOL GREY (26231)	BLACK (27038)	1978	I & II	1978	I & II
MILE 125.5 - CHESTNUT STREET	19	ML	RR	* FASCIA STEEL ONLY ON RR	GREEN (14109)	GREEN (14109)	RED (11086)	RED (11086)	COOL GREY (26231)	BLACK (27038)	1978	I & II	1978	I & II
MILE 126.2 - LOWELL AVENUE	22	ML	RR	* FASCIA STEEL ONLY ON RR	ORANGE (12197)	ORANGE (12197)	YELLOW (13538)	YELLOW (13538)	COOL GREY (26231)	BLACK (27038)	1978	I & II	1978	I & II
MILE 126.4 - WALNUT STREET	23	ML	RR	* FASCIA STEEL ONLY ON RR	BLUE (15125)	BLUE (15125)	GREEN (14193)	GREEN (14193)	COOL GREY (26231)	BLACK (27038)	1978	I & II	1978	I & II

* FASCIA STEEL ONLY ON RAILROAD SPANS INDICATES THAT ON ALL RAILROAD SPANS ONLY THE FASCIA WEB, FASCIA WEB STIFFENERS AND FASCIA BEAMS' BOTTOM FLANGE'S OUTER EDGE TO BE INCLUDED IN THE CLEANING AND OVERCOATING.

NO.	REVISION	BY	DATE	IN CHARGE OF
	DESIGNED:	KGB	6/97	
	DRAWN:	KGB	6/97	
①	REVISION	KGB	6/97	CHECKED:
	REVISION	BY	DATE	IN CHARGE OF

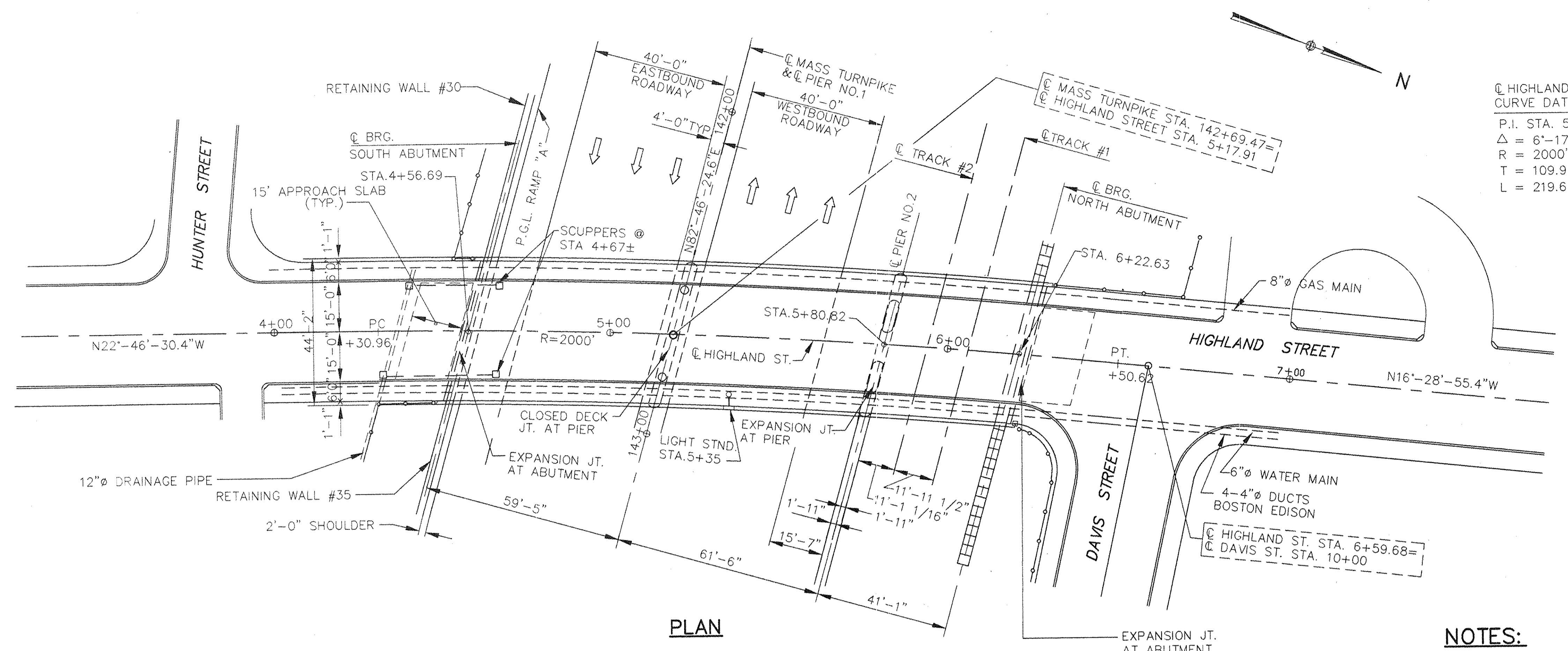
① THIS SHEET IS A SUPPLEMENT TO SHEET 3 OF THE CONTRACT, AND REVISIONS AS SHOWN ON THIS SHEET PERTAIN TO THE BRIDGES BETWEEN MILE 125.4 AND MILE 126.4.
REVISIONS INCLUDE A CHANGE IN COLOR PLAN FOR THE FOUR BRIDGES LISTED (MAINLINE AND RAILROAD SPANS), AND THE ADDITION OF A PROTECTIVE CLEAR COAT, AS DESCRIBED ON THIS SHEET.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

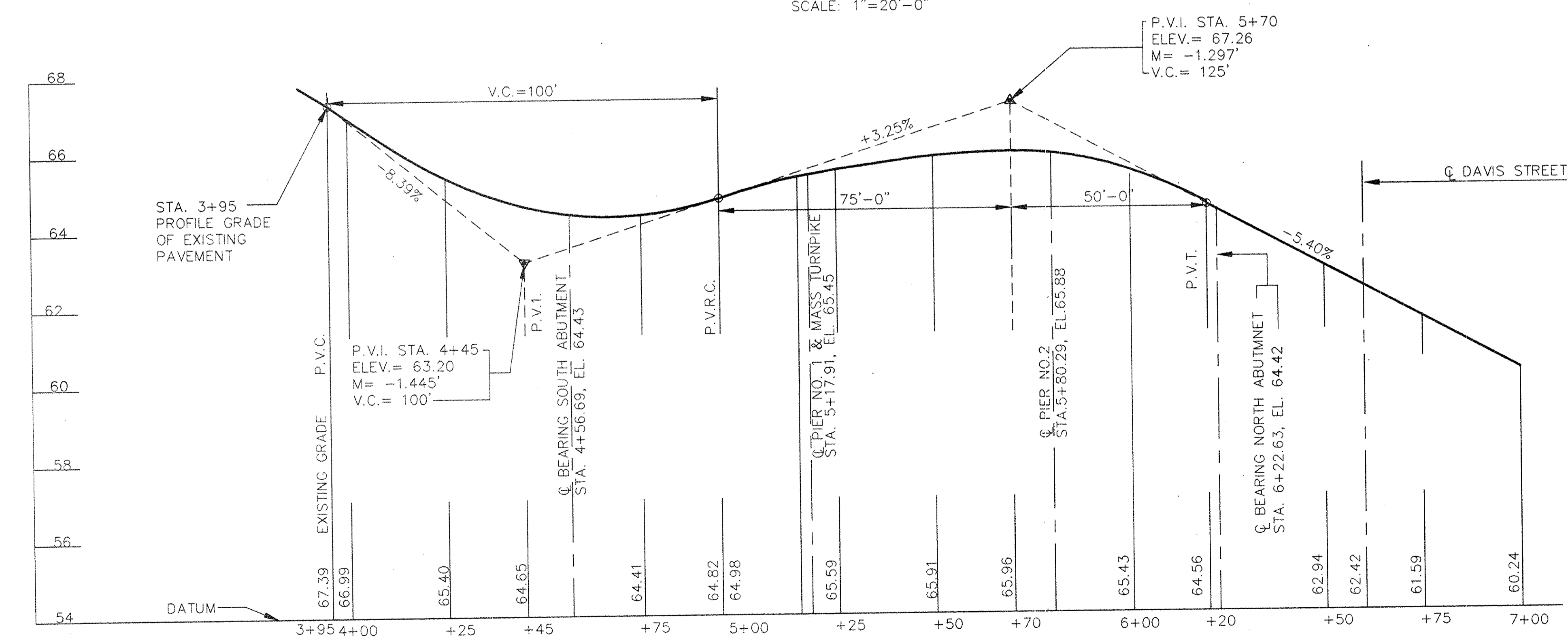
CLEANING & PAINTING OF BRIDGES
MILE 125.4 TO MILE 126.4 AND MILE 131.7 TO MILE 133.0
"COLOR PLAN FOR MILE 125.4 TO MILE 126.4"
HIGHLAND ST.-MILE 125.4, CHESTNUT ST.-MILE 125.5,
LOWELL AVE.-MILE 126.2 AND WALNUT ST.-MILE 126.4

Scale: NO SCALE Contract No. 973-112

MASSACHUSETTS TURNPIKE AUTHORITY Sheet No. 3.01



@ HIGHLAND STREET
 CURVE DATA
 P.I. STA. 5+40.90
 $\Delta = 6^\circ-17'-35''$
 $R = 2000'$
 $T = 109.95'$
 $L = 219.67'$



PROFILE
 HIGHLAND STREET OVER MASSACHUSETTS TURNPIKE
 SCALE: HORIZ. 1"=20'-0"
 VERT. 1"=2'-0"

NOTES:

- DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE "AS-BUILT" DRAWINGS AND ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE, AND EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.
- ALL EXISTING UTILITIES SHALL BE LOCATED AND PROTECTED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO INSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS AND UTILITIES DURING DEMOLITION AND CONSTRUCTION, UNTIL THE NEW STRUCTURE IS COMPLETE.
- CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
- STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED IN ACCORDANCE WITH SSPC-SP11 AS PER SPECIFICATIONS IMMEDIATELY PRIOR TO INSTALLATION OF REINFORCING STEEL.
- FOR GENERAL NOTES, SEE SHEET NO. 7.
- ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM (NGVD). FORMERLY REFERRED TO AS MEAN SEA LEVEL DATUM OF 1929.

04/01/1994 K:\4471\1818\PLAN

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: AM	1/94	
		DRAWN: HR	1/94	
		CHECKED: SAA	1/94	
				PWM

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE BRIDGE DECK RECONSTRUCTION HIGHLAND STREET STRUCTURE NO. S-18 EXISTING PLAN AND PROFILE	
Scale: As Noted	Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC. NEEDHAM, MASSACHUSETTS	
Sheet No. 3	

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

JAMES J. KERASIOTES CHAIRMAN

THOMAS J. CURLEY, JR.

VICE CHAIRMAN

ANN M. HERSHFANG

MEMBER

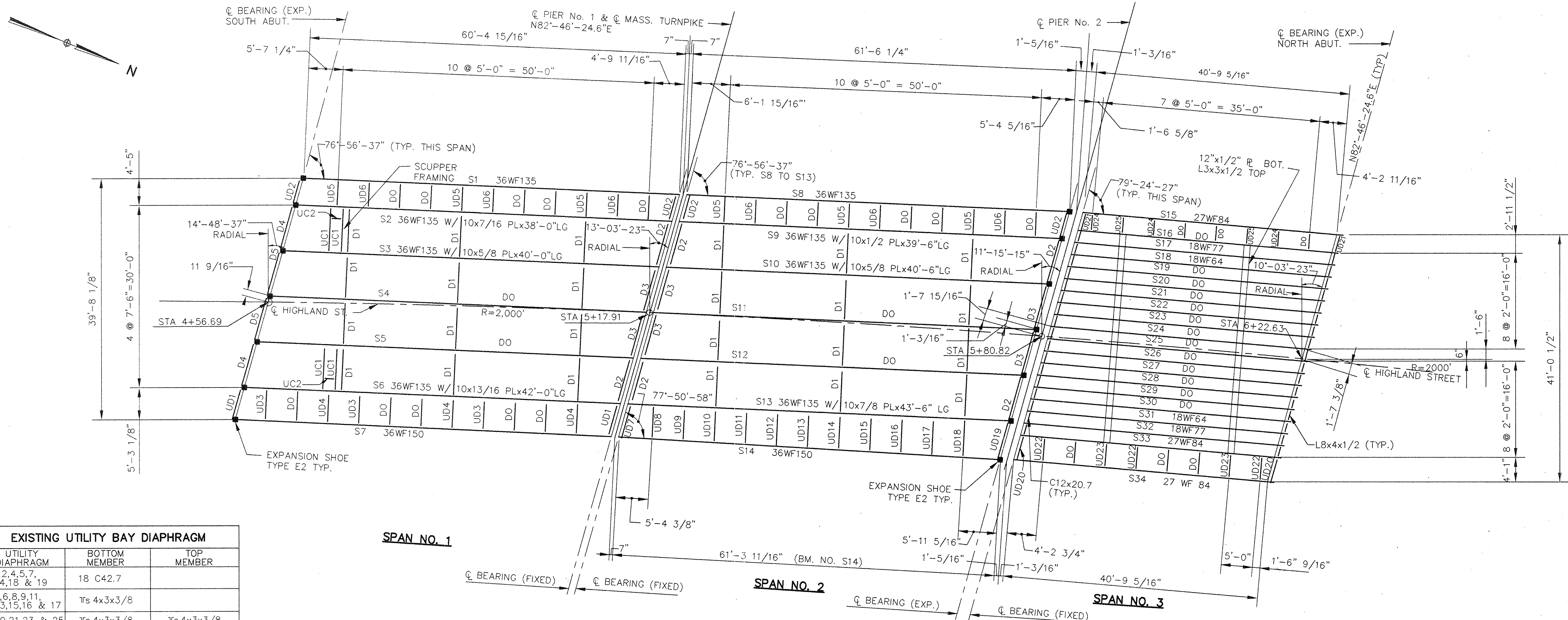
CLEANING AND PAINTING OF BRIDGES
MILE 125.4 TO MILE 126.4 AND MILE 131.7 TO MILE 133.0

MILE 125.4 - HIGHLAND STREET (STR. S-18)
MILE 125.5 - CHESTNUT STREET (STR. S-19)
MILE 126.2 - LOWELL AVENUE (STR. S-22)
MILE 126.4 - WALNUT STREET (STR. S-23)
MILE 131.7 - CARLTON STREET (STR. S-48A)
MILE 131.9 - ST. MARY'S STREET (STR. S-49)
MILE 132.2 - BEACON STREET (STR. S-50)
MILE 132.3 - BROOKLINE AVE & UTILITY BRIDGE (STR. S-51 & 51U)
MILE 132.6 - CHARLESGATE WEST (STR. S-52)
MILE 132.8 - MASSACHUSETTS AVE (STR. S-54)
MILE 132.9 - BOYLSTON STREET (STR. S-55)
MILE 133.0 - DALTON STREET (STR. S-55A)

IN THE TOWN OF BROOKLINE
AND
IN THE CITIES OF NEWTON AND BOSTON

CONTRACT NO. 973-112

REFERNECE DRAWINGS
(SHEETS R1 TO R50)



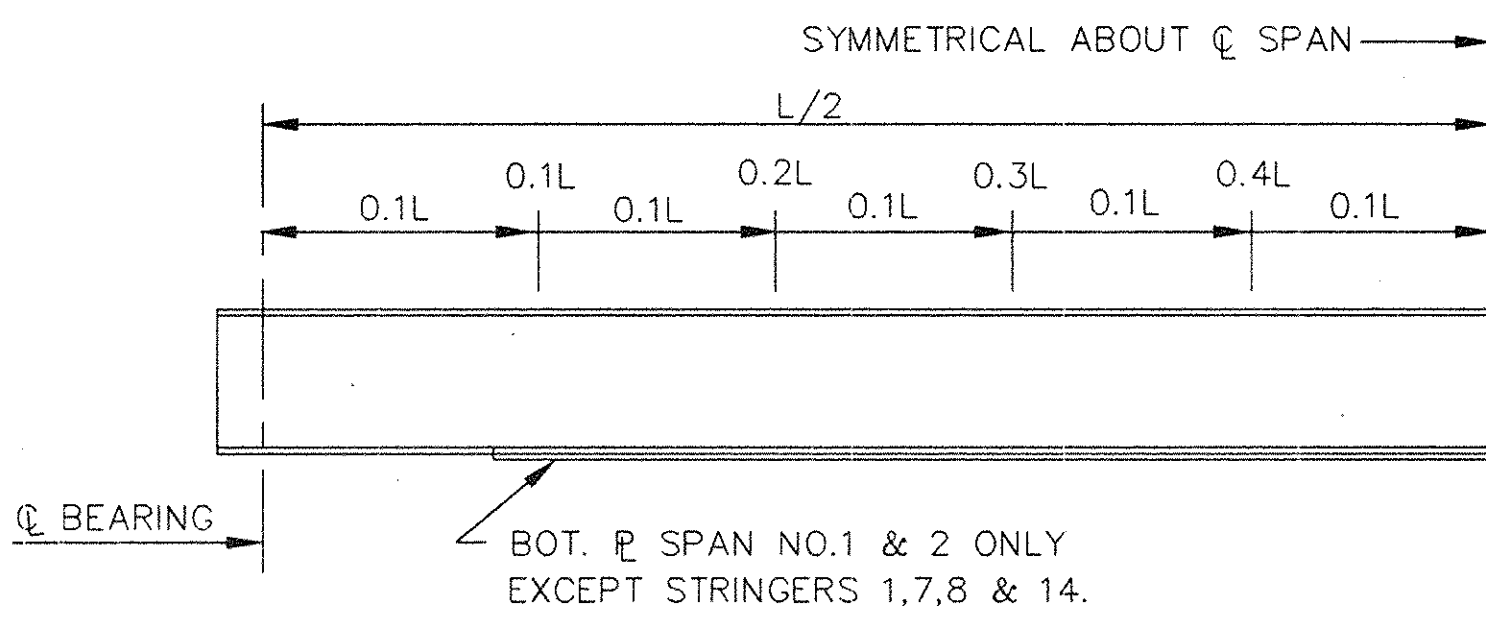
EXISTING UTILITY BAY DIAPHRAGM		
UTILITY DIAPHRAGM	BOTTOM MEMBER	TOP MEMBER
UD1,2,4,5,7,10,14,18 & 19	18 C42.7	
UD3,6,8,9,11,12,13,15,16 & 17	Trs 4x3x3/8	
UD20,21,23 & 25	Trs 4x3x3/8	Trs 4x3x3/8
UD22,24	Trs 4x3x3/8	
UC1	SC13x31.8	
UC2	C12x20.7	

EXISTING END DIAPHRAGM AT PIERS NO. 1, NO. 2 & SOUTH ABUTMENT	
DIAPHRAGM NO.	DIAPHRAGM SIZE
D2	18 SC 42.7 WITH SHEAR CONNECTORS 7/8" @ 8" O.C.
D3	18 SC 42.7 WITH SHEAR CONNECTORS 7/8" @ 8" O.C.
D4 & D5	18 SC 42.7

EXISTING INTERMEDIATE DIAPHRAGMS			
DIAPHRAGM NO.	BOTTOM MEMBER	TOP MEMBER	DIAGONALS
SPAN NO. 1 & 2	L7x4x3/8	L7x4x3/8	L3 1/2x3 1/2x3/8
SPAN NO. 3	P 1/2x12	L3x3x1/2	

EXISTING SHEAR STUD SPACING						
STRINGER NO.	0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	NO. OF 7/8" STUDS/ROW
1,7,8,14,15-34	12"	12"	12"	12"	12"	2
2,6,9 & 13	6"	7"	9"	11"	12"	2
3-5, 10-12	8"	10"	12"	12"	12"	2

EXISTING END DIAPHRAGM AT PIER NO.2 AND NORTH ABUTMENT	
DIAPHRAGM LOCATION	DIAPHRAGM SIZE
PIER NO.2 - NORTH END	C12x20.7
NORTH ABUTMENT	L8x4x1/2



- NOTES:**
- THE FRAMING PLAN DIMENSIONS AND MEMBER INFORMATION ARE TAKEN FROM "AS-BUILT" DRAWINGS AND THEIR ACCURACY ARE NOT GUARANTEED. ANY INFORMATION NOT SHOWN, INCLUDING THE LOCATION AND MAKE-UP OF DIAPHRAGMS IS AVAILABLE UPON REQUEST BY THE CONTRACTOR.
 - EXISTING SHEAR STUDS ARE 4" HIGH IN SPANS NO. 2 & 3 EXCEPT FOR BEAMS 16,17,18,31,32 & 33 WHICH ARE 3" HIGH.
 - FOR EXISTING 7/8" SHEAR STUDS, SEE TABLE.
 - SHEAR STUDS ARE 6" HIGH IN SPAN NO.1 FROM 0.0L TO 0.1L SOUTHWEND OF BMS. 2-6 & 0.8L TO 1.0L NORTHWEND OF BMS. 2-6.
 - SHEAR STUDS ARE 4" HIGH IN SPAN NO.1 FROM 0.1L TO 0.8L BMS. 2-6 SHEAR STUDS ARE 6" HIGH IN SPAN NO.1 BMS. 1 & 7.
 - DENOTES EXPANSION BEARINGS TYPE E2 TO BE REPLACED. FOR DETAILS SEE SHEET NO. 45.
 - ALL PIERS AND ABUTMENTS ARE PARALLEL.
 - EXISTING SHEAR CONNECTORS ON STRINGERS AND DIAPHRAGMS WHICH ARE DAMAGED BY THE CONTRACTOR OR ARE MISSING, SHALL BE **REMOVED & REPLACED** AS PER THE SPECIFICATIONS.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 HIGHLAND STREET STRUCTURE NO. S-18

FRAMING PLAN

Scale: 1/8" = 1'-0" Contract No. 521-038

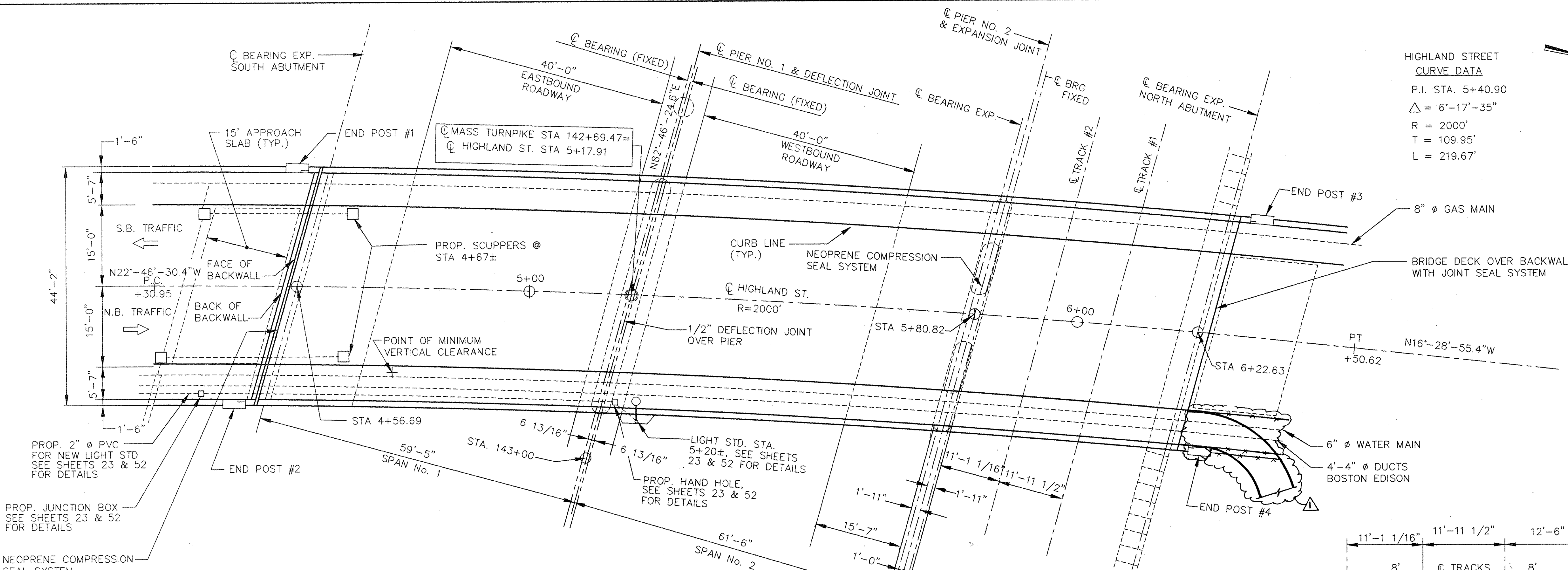
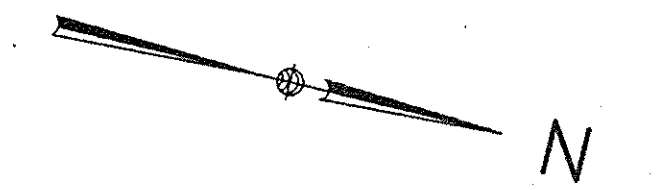
LOUIS BERGER & ASSOCIATES, INC.
 NEEDHAM, MASSACHUSETTS

Sheet No. 4

04/01/1994 K:\447.1\18FRAME

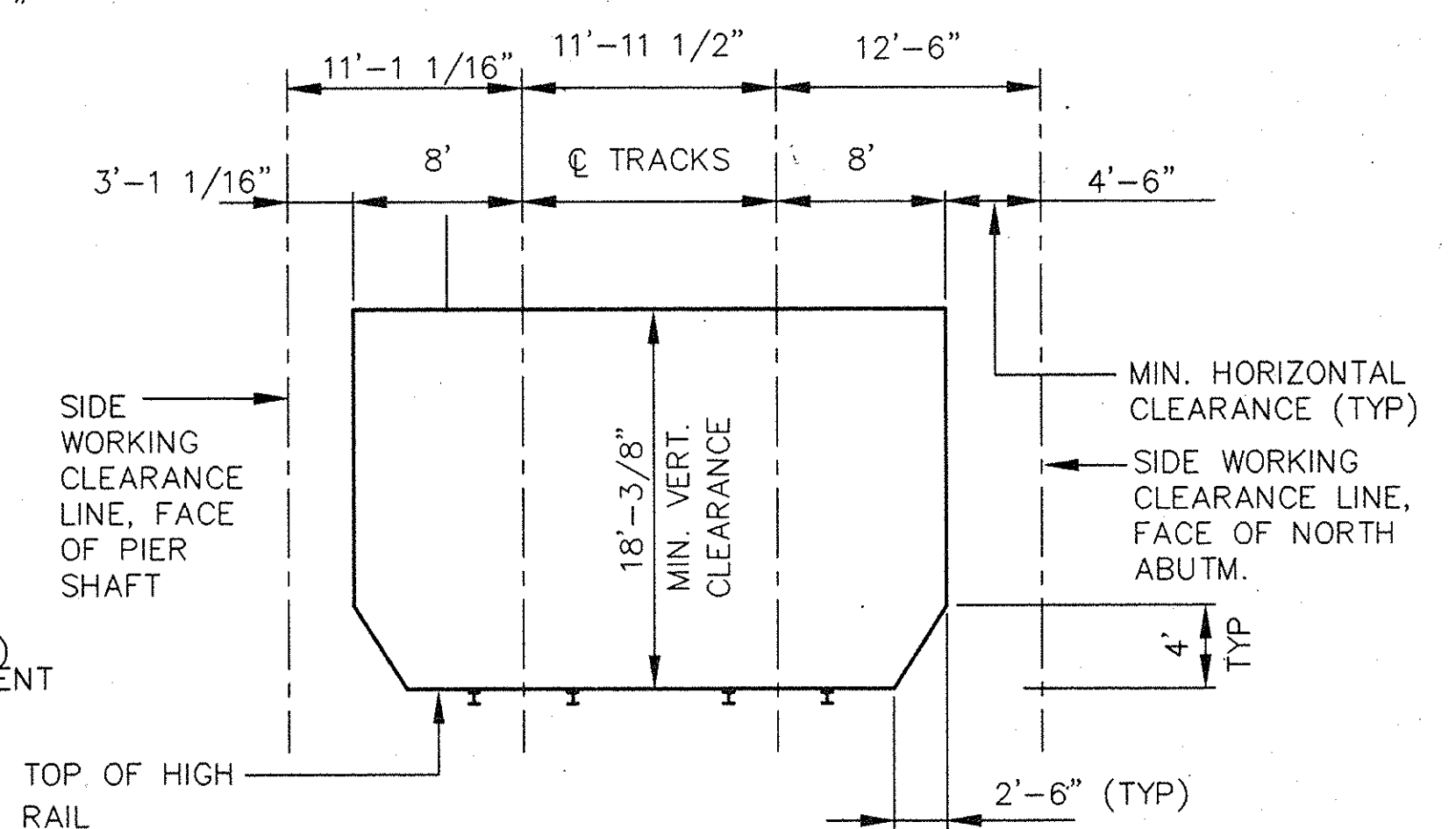
NO.	REVISION	BY	DATE	IN CHARGE OF	PWM
		DESIGNED: MMG	1/94		
		DRAWN: CEA	1/94		
		CHECKED: SAA	1/94		

HIGHLAND STREET
 CURVE DATA
 P.I. STA. 5+40.90
 $\Delta = 6^{\circ}-17'-35''$
 R = 2000'
 T = 109.95'
 L = 219.67'



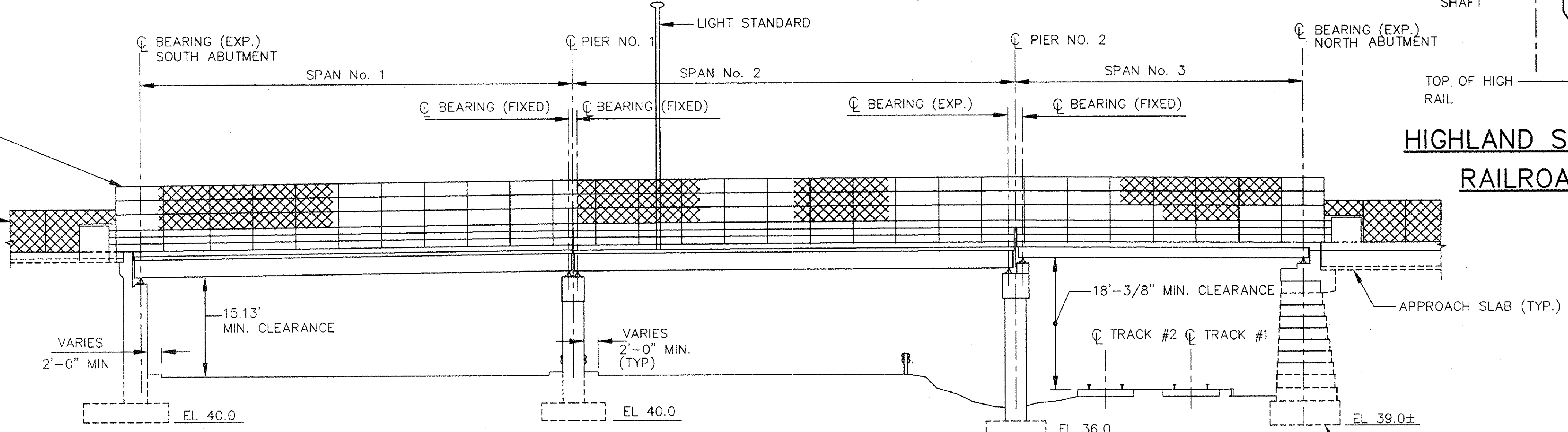
PLAN
HIGHLAND STREET OVER MASSACHUSETTS TURNPIKE

SCALE: 1"=10'-0"



HIGHLAND STREET STRUCTURE NO. S-18
RAILROAD CLEARANCE DIAGRAM

SCALE: 1/8"=1'-0"



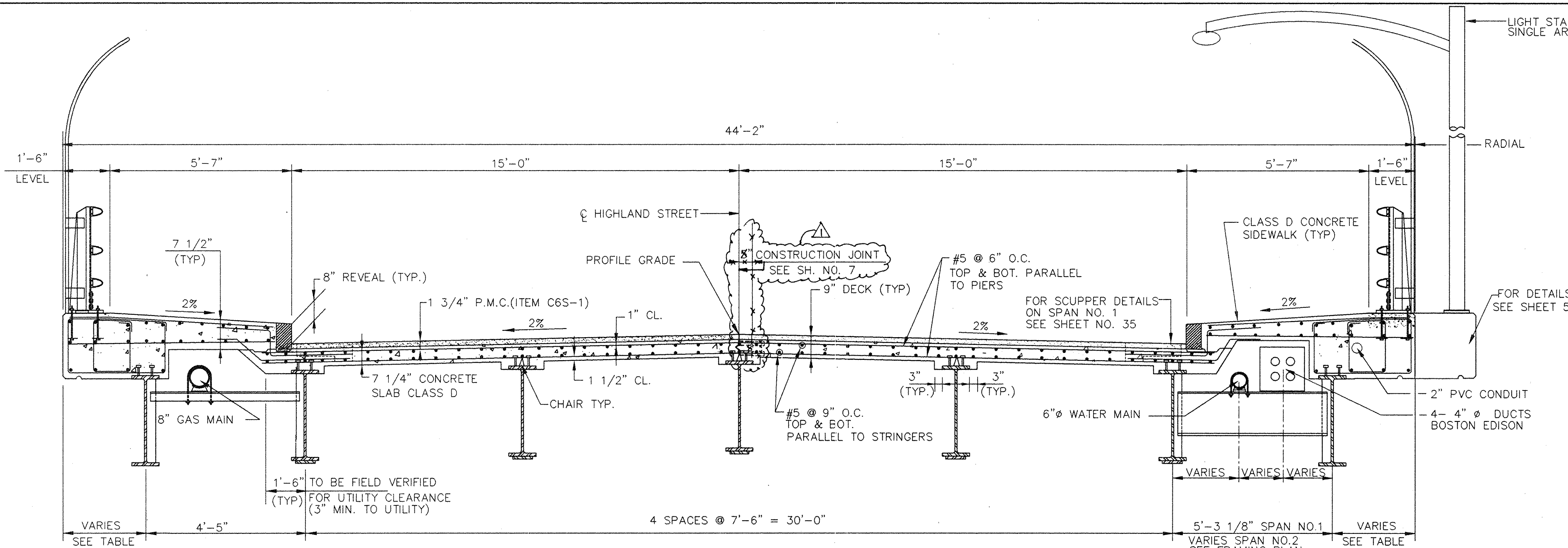
ELEVATION

SCALE: 1"=10'-0"

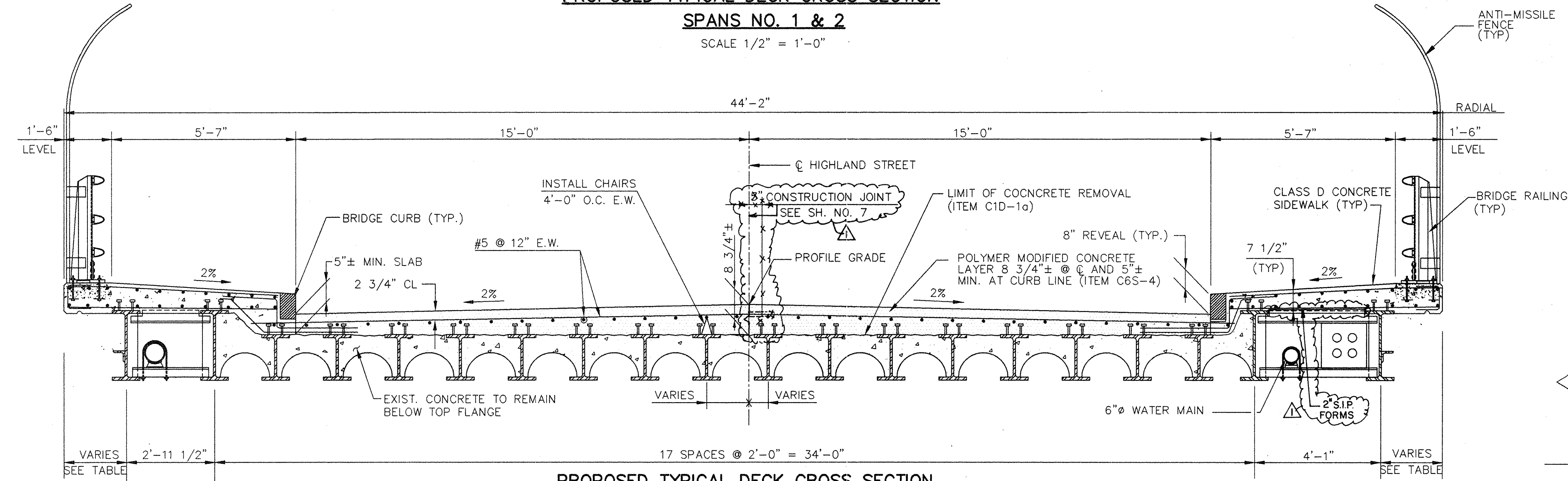
04/01/1994 K:\4471\18DKPLN1

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED:	AM	1/94
		DRAWN:	CMA	1/94
		CHECKED:	SAA	1/94
				PWM
▲	"AS-BUILT"	HR	8/95	

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION HIGHLAND STREET STRUCTURE NO. S-18	
PROPOSED PLAN AND ELEVATION	
Scale: AS NOTED	Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC. NEEDHAM, MASSACHUSETTS	
	Sheet No. 6



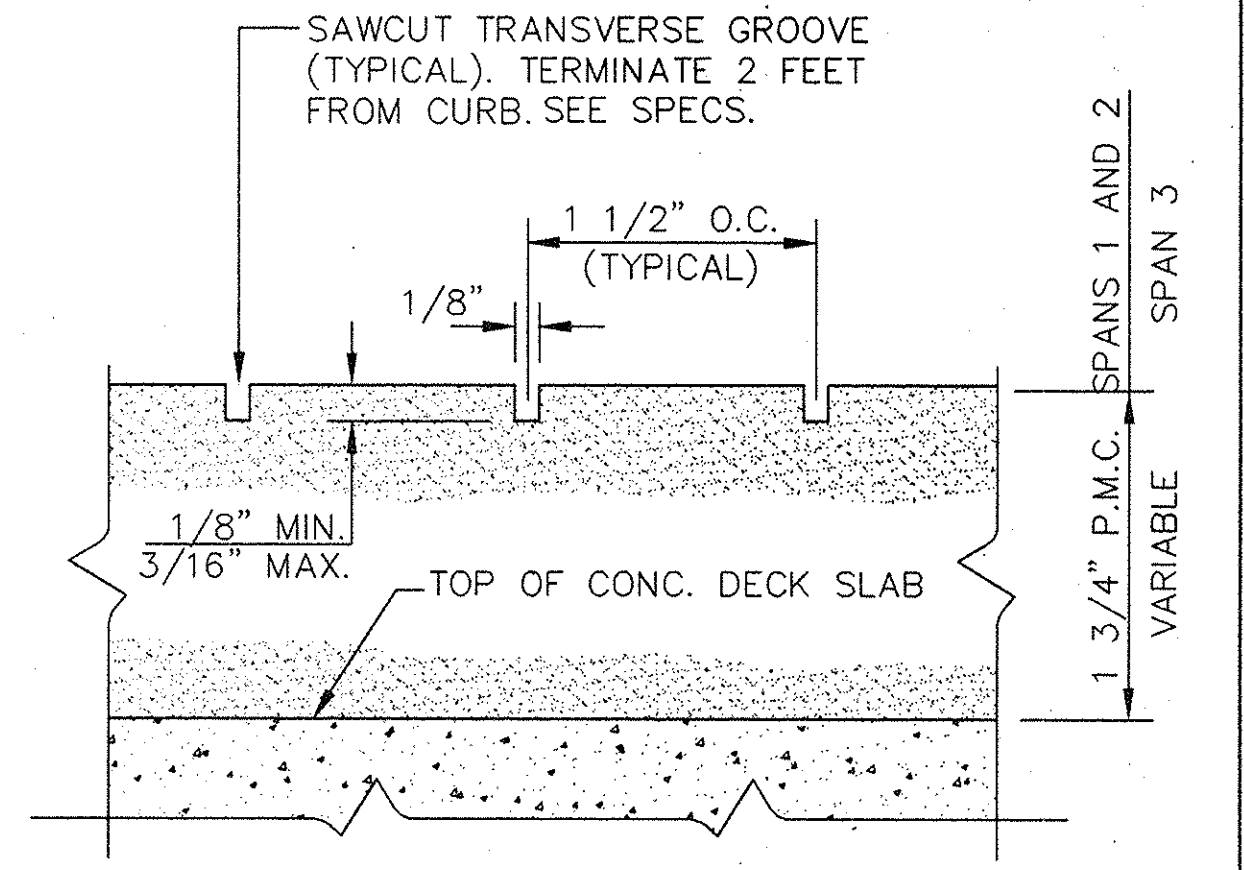
**PROPOSED TYPICAL DECK CROSS SECTION
SPANS NO. 1 & 2**
SCALE 1/2" = 1'-0"



**PROPOSED TYPICAL DECK CROSS SECTION
SPAN NO. 3**
SCALE 1/2" = 1'-0"

LOCATION	DISTANCE BETWEEN FASCIA LINE AND C FASCIA STRINGERS
SPAN No. 1	
STR. No. S1 SOUTH END	22 3/8"
1/6 L *	25 1/2"
1/3 L	28"
1/2 L	29 7/8"
1/3 L	31 1/8"
1/6 L	31 3/4"
STR. No. S1 NORTH END	31 7/8"
STR. No. S7 SOUTH END	34 7/8"
1/6 L	31 1/4"
1/3 L	28 1/8"
1/2 L	25 5/8"
1/3 L	23 3/4"
1/6 L	22 1/2"
STR. No. S7 NORTH END	21 7/8"
SPAN No. 2	
STR. No. 8 SOUTH END	32 1/4"
1/6 L	31 5/8"
1/3 L	30 1/4"
1/2 L	28 3/8"
1/3 L	25 7/8"
1/6 L	22 5/8"
STR. No. 8 NORTH END	18 7/8"
STR. No. 14 SOUTH END	21 7/8"
1/6 L	19 7/8"
1/3 L	18 5/8"
1/2 L	18 1/8"
1/3 L	18 1/8"
1/6 L	18 3/4"
STR. No. 14 NORTH END	20"
SPAN No. 3	
STR. No. 15 SOUTH END	18 1/8"
1/4 L	19"
1/2 L	19 1/8"
1/4 L	18 5/8"
STR. No. 15 NORTH END	17 5/8"
STR. No. 34 SOUTH END	19 3/4"
1/4 L	18 1/2"
1/2 L	17 7/8"
1/4 L	17 3/4"
STR. No. 34 NORTH END	18 3/8"

* L = LENGTH OF STRINGER SPAN



P.M.C. SAWCUT TRANSVERSE GROOVES DETAIL
SCALE: FULL SIZE

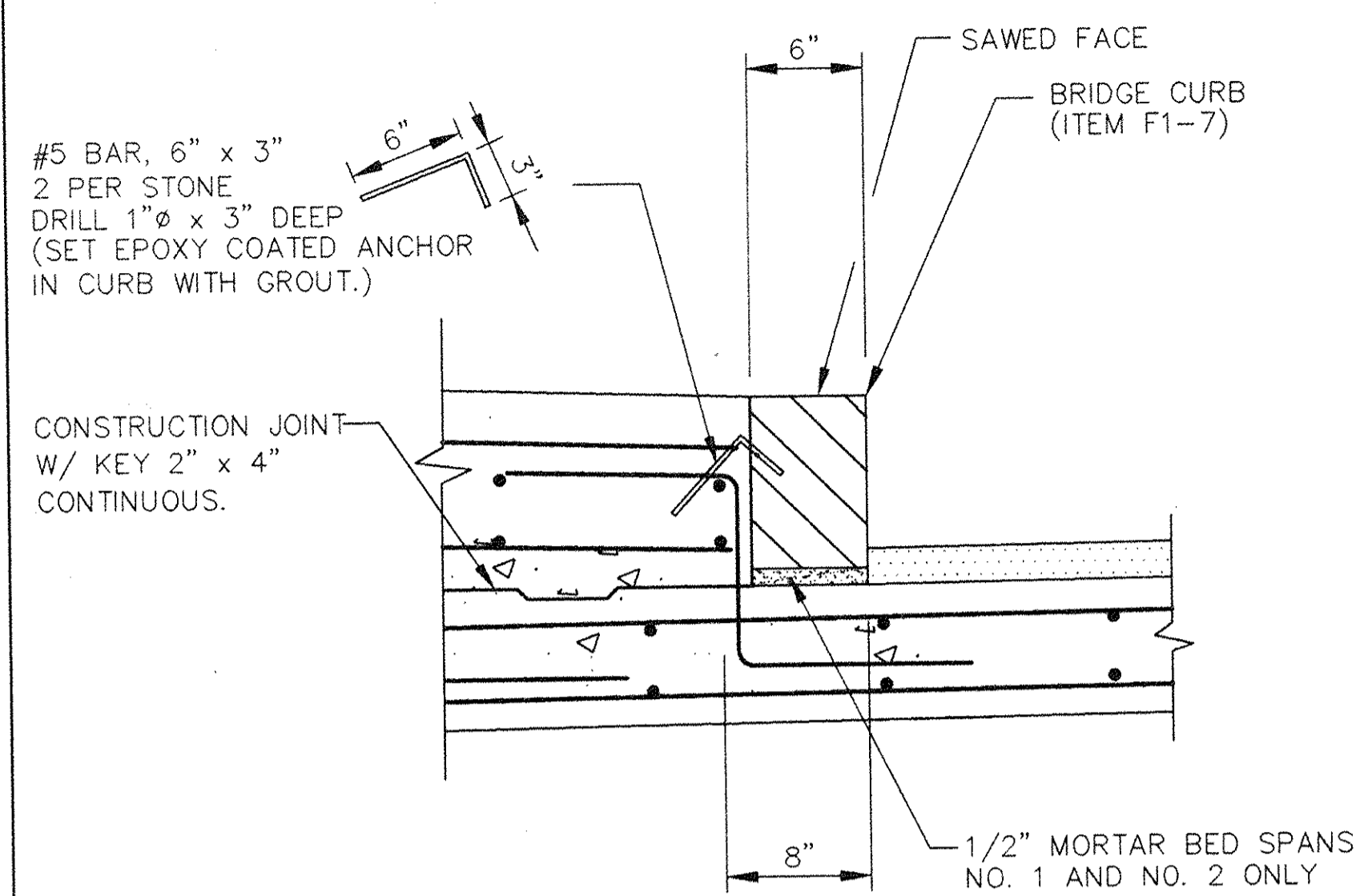
NOTES:

- TRANSVERSE REINFORCING STEEL SHALL BE PLACED TO MATCH THE CROSS SLOPE OF THE CONCRETE DECK.
- THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, PARAPET REINFORCING STEEL TIE WIRE AND CURB ANCHORS, SHALL BE EPOXY COATED. SUPPORT TOP AND BOTTOM MATS SEPARATELY. SEE THE SPECIFICATIONS.
- TOP AND BOTTOM MAT OF THE REINFORCING STEEL SHALL BE SUPPORTED BY CHAIRS AND/OR BOLSTERS AT MIN. 4'-0" EACH WAY AND FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
- CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- PREVIOUSLY PLACED CONCRETE AT CONSTRUCTION JOINTS SHALL BE ABRASIVE BLASTED PRIOR TO PLACEMENT OF ADJACENT CONCRETE. SEE SPECIFICATIONS FOR PREPARATION OF HORIZONTAL AND VERTICAL CONSTRUCTION JOINTS.
- HAUNCH DEPTH "H" (VARIABLE) WILL BE FURNISHED BY THE AUTHORITY WITHIN 7 WORKING DAYS (SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED) FROM THE TIME THE EXISTING DECK IS REMOVED AND SURVEY DATA HAS BEEN PROVIDED BY THE CONTRACTOR.
- TYPICAL CROSS SECTION LOOKING NORTH.
- FOR REINFORCING SPACING AND DETAILS SEE SHEETS 7 AND 9.
- FOR SIDEWALK DETAILS SEE SHEET NO. 9.

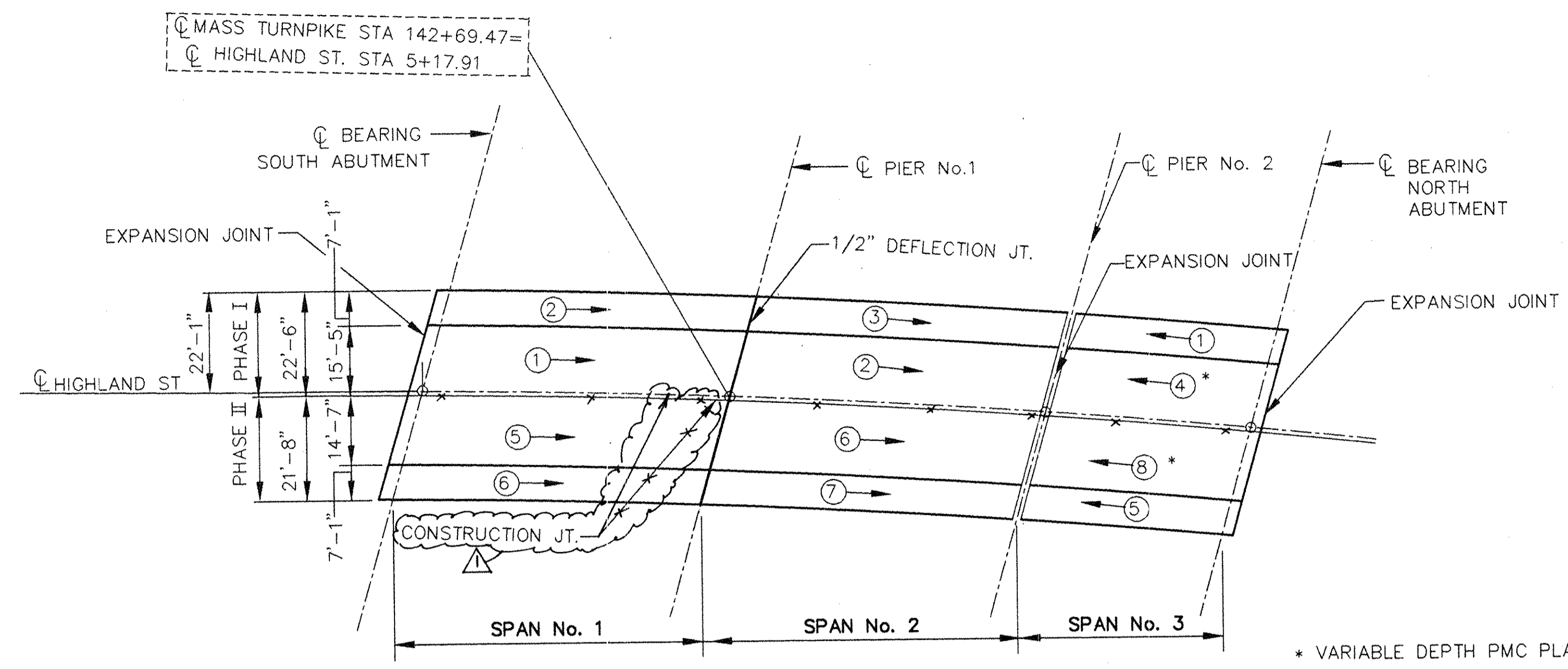
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: MMG	1/94	
		DRAWN: HR	1/94	
		CHECKED: SAA	1/94	
		BY	DATE	IN CHARGE OF
		HR	8/95	PWM

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 HIGHLAND STREET STRUCTURE NO. S-18
PROPOSED DECK SECTIONS
 Scale: As Noted Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC.
 NEEDHAM, MASSACHUSETTS
 Sheet No. 8

04/01/1994 K:\447\18PRSECI



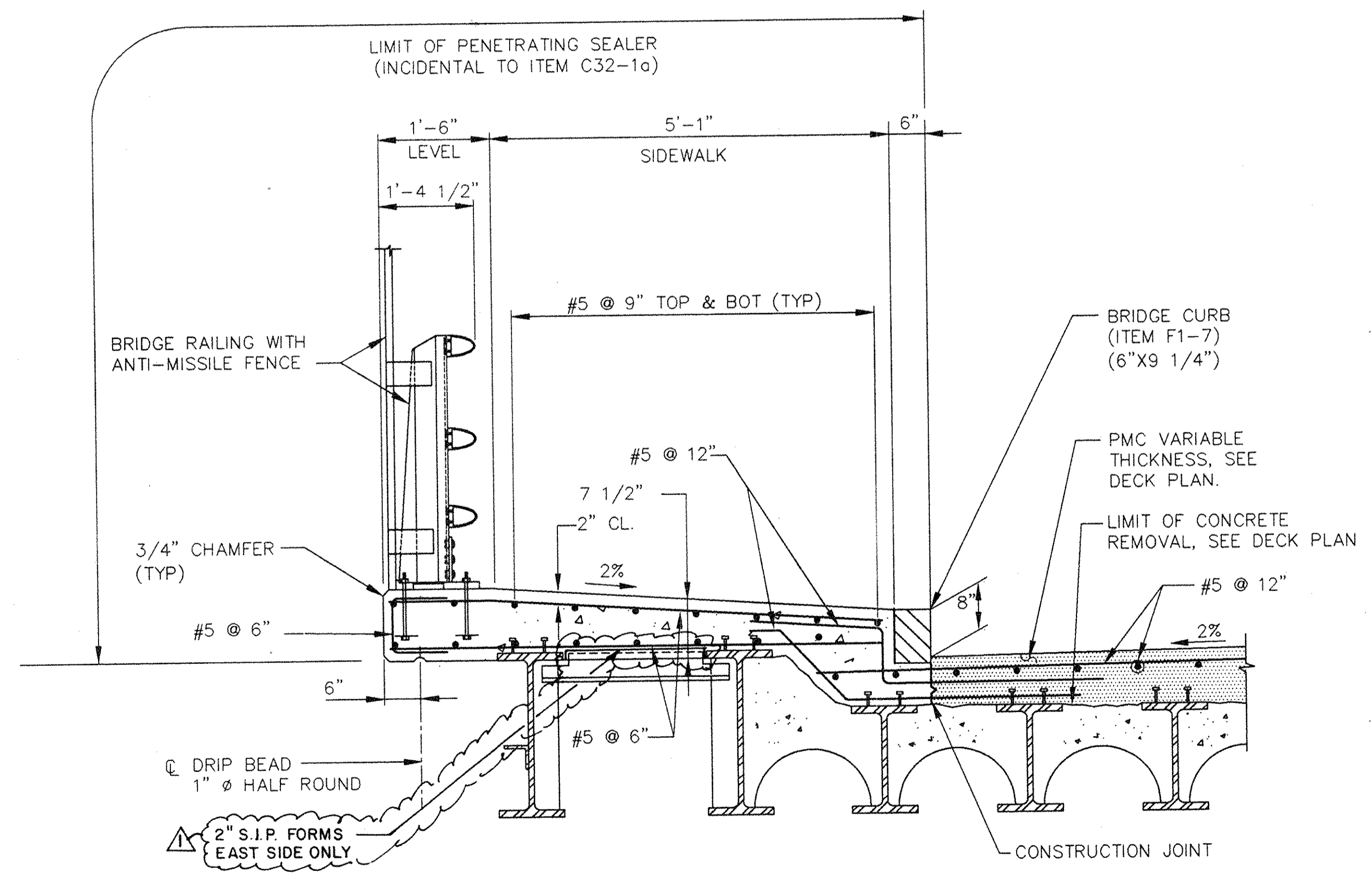
SIDEWALK CURB DETAIL
SCALE: 1 1/2"=1'-0"



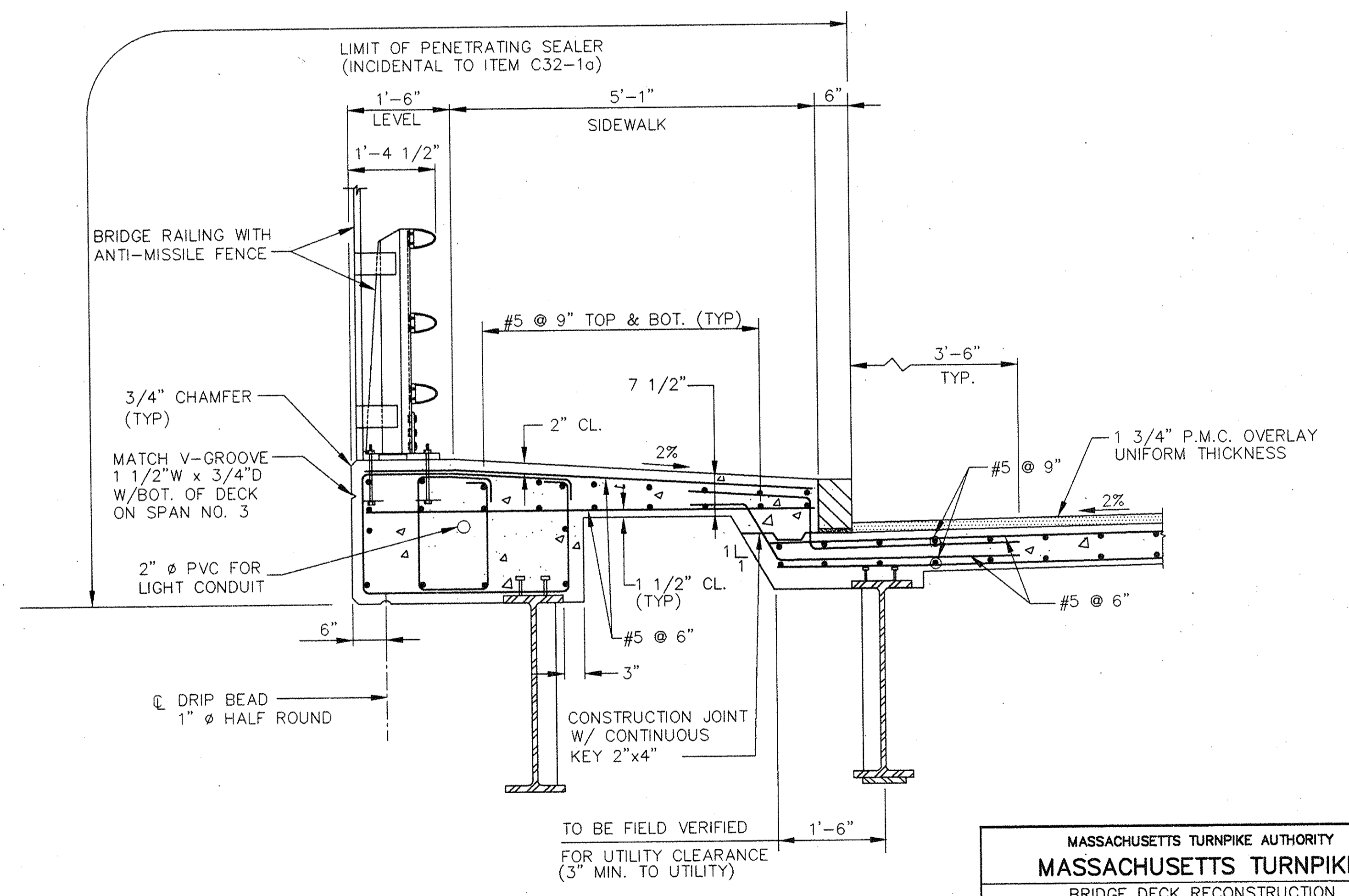
**PLACING SEQUENCE FOR CONCRETE DECK
HIGHLAND STREET**
SCALE: 1"=20'-0"

- PLACING SEQUENCE NOTES:**
- ① NUMBERS INDICATE SEQUENCE OF PLACEMENT. ARROWS INDICATE DIRECTION OF PLACEMENT.
 - PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
 - FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEETS NO. 16 AND 17.
 - BLOCKS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY.
 - BEGIN PLACEMENT AT THE LOW END OF THE POURING BLOCK.

* VARIABLE DEPTH PMC PLACEMENT (ITEM C6S-4)
NOTE:
1 3/4" PMC PLACEMENT FOR SPANS 1 AND 2 NOT SHOWN



**SIDEWALK DETAIL (UTILITIES NOT SHOWN)
SPANS No. 3**
SCALE: 3/4"=1'-0"



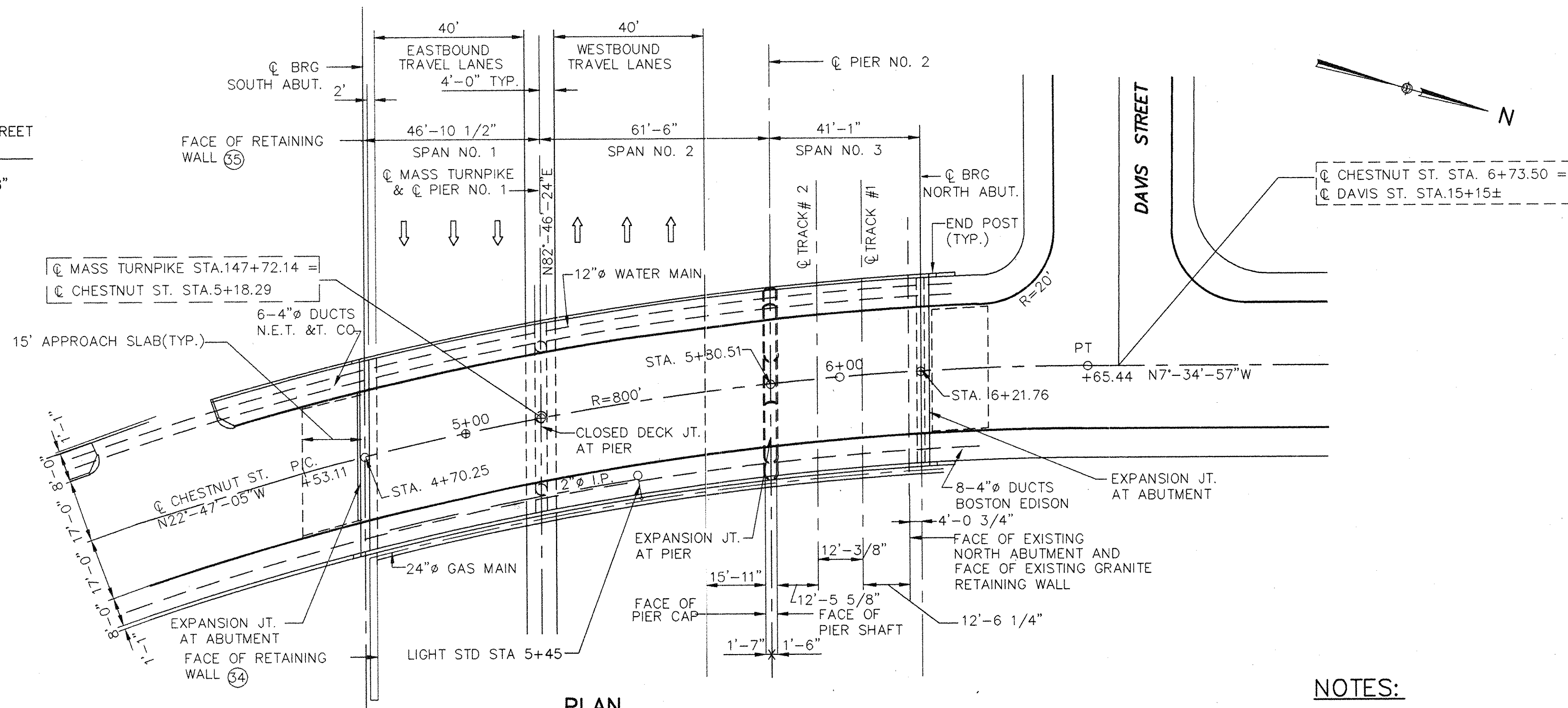
**SIDEWALK DETAIL (UTILITIES NOT SHOWN)
SPANS No. 1 & 2**
SCALE: 3/4"=1'-0"

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
HIGHLAND STREET STRUCTURE NO. S-18
PROPOSED SIDEWALK DETAILS AND
PLACING SEQUENCE FOR CONCRETE.
Scale: AS NOTED Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC.
NEEDHAM, MASSACHUSETTS
Sheet No. 9

04/01/1994 K:\447\1\18SIDWVK

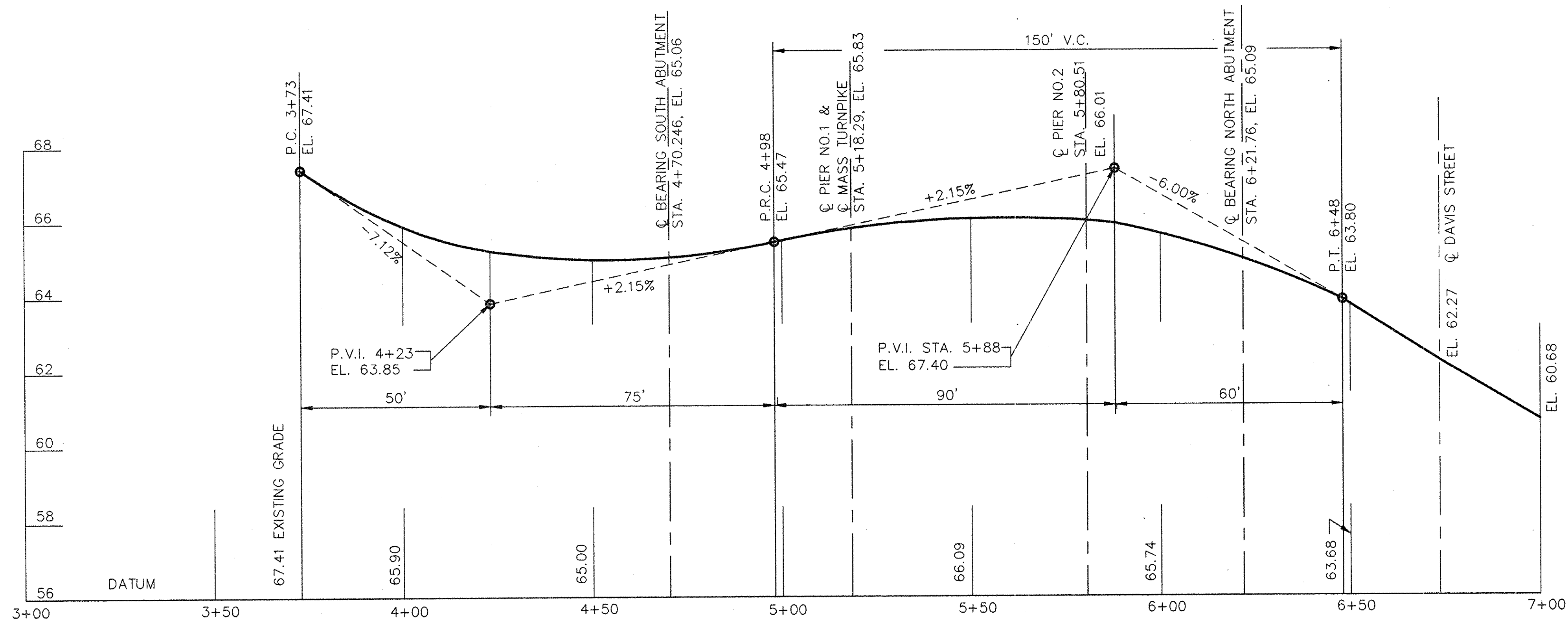
NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: MMG	1/94	
		DRAWN: CMA	1/94	
		CHECKED: SAA	1/94	
		BY: HR	8/95	
		IN CHARGE OF: PVM		

☉ CHESTNUT STREET
 CURVE DATA
 R = 800'
 Δ = 15°-12'-08"
 L = 212.26'
 T = 106.76'



NOTES:

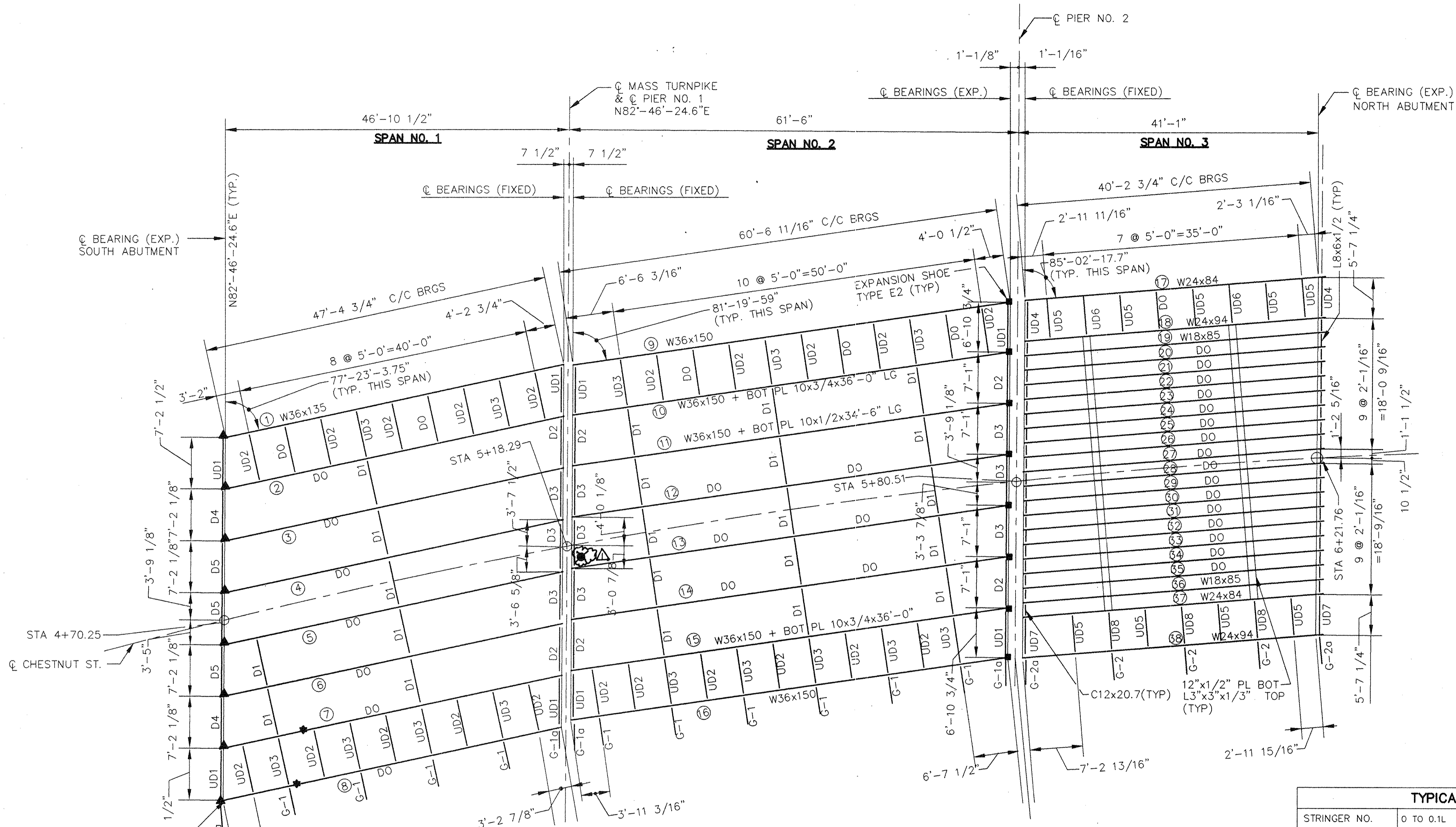
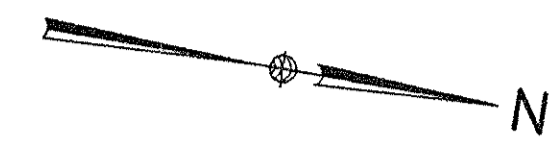
- DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DRAWINGS AND ACCURACY IS NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE, AND EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE BY THE REVIEWER.
- ALL EXISTING UTILITIES SHALL BE LOCATED AND PROTECTED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO INSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS AND UTILITIES DURING DEMOLITION AND CONSTRUCTION, UNTIL THE NEW STRUCTURE IS COMPLETE.
- CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
- STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED IN ACCORDANCE WITH SSPC-SP11 AS PER SPECIFICATIONS IMMEDIATELY PRIOR TO INSTALLATION OF REINFORCING STEEL.
- FOR GENERAL NOTES, SEE SHEET NO. 7.
- ALL ELEVATIONS REFER TO NATIONAL GEODETIC VERTICAL DATUM (NGVD). FORMERLY REFERRED TO AS MEAN SEA LEVEL DATUM OF 1929.



04/04/1994 K:\4472\19GNPLAN

NO.	REVISION	BY	DATE	IN CHARGE OF	PWM
		DESIGNED: MMG	1/94		
		DRAWN: MJF	1/94		
		CHECKED: SAA	1/94		

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE BRIDGE DECK RECONSTRUCTION CHESTNUT STREET STRUCTURE NO. S-19 EXISTING PLAN AND PROFILE	
Scale: As Noted	Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC. NEEDHAM, MASSACHUSETTS	
	Sheet No. 24



EXISTING END DIAPHRAGMS AT N. ABUTMENT & PIER NO. 2 - SPAN NO. 3

DIAPHRAGM	DIAPHRAGM SIZE
PIER NO. 2 END	C 12 x 20.7
N. ABUTMENT END	L 8x6x1/2

EXISTING END DIAPHRAGMS AT PIERS NO.1 & 2 AND S. ABUTMENT

DIAPHRAGM NO.	DIAPHRAGM SIZE
D2	MC 18 x 42.7 w/ SHEAR CONNECTORS 7/8" @ 8" O.C.
D3	MC 18x42.7 w/ SHEAR CONNECTORS
D4, D5	MC 18x42.7

EXISTING INTERMEDIATE DIAPHRAGMS

DIAPHRAGM NO.	BOTTOM MEMBER	TOP MEMBER	DIAGONALS
D1	L7x4x3/8	L7x4x3/8	L3 1/2x3 1/2x3/8
SPAN NO. 3	L 1/2x12	L3x3x1/2	---

EXISTING UTILITY BAY DIAPHRAGMS

UTILITY DIAPHRAGM	BOTTOM MEMBER	TOP MEMBER
UD1	MC 18"x42.7	---
UD2	2- L4x3x3/8	---
UD3	MC 18"x42.7	---
UD4	2- L4x3x3/8	2- L4x3x3/8
UD5	2- L4x3x3/8	---
UD6	2- L4x3x3/8	2- L4x3x3/8
UD7	W 24x68	---
UD8	W 24x68	---

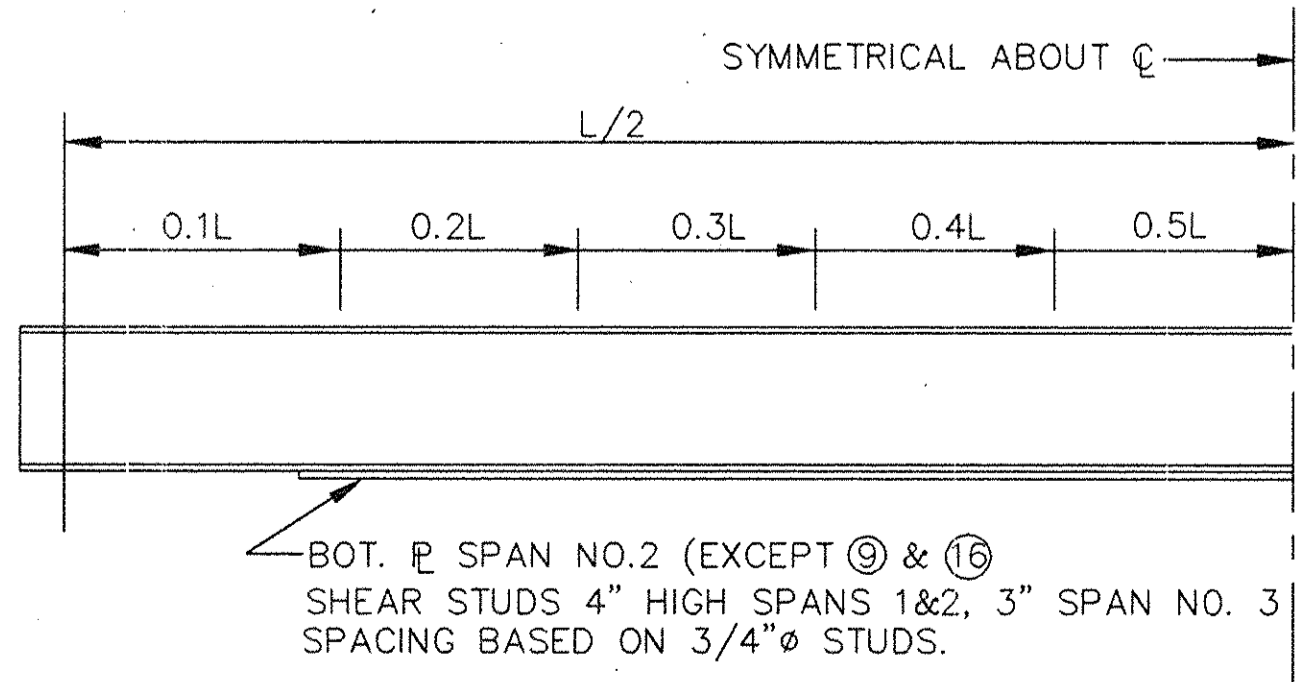
TYPICAL EXISTING SHEAR STUD SPACING

STRINGER NO.	0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	NO. OF 7/8" STUDS/ROW
① & ⑧	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	2
② & ⑦	6"	7 1/2"	8 3/4"	10 3/4"	11 1/16"	2
③ THRU ⑥	6 3/4"	8"	9 1/2"	12"	11 1/16"	2
⑩ & ⑮	6"	7 1/2"	8 3/4"	11 1/2"	1'-3 5/8"	2
⑪ THRU ⑭	6 3/4"	8"	10"	1'-3/4"	1'-4 1/4"	2
⑰ THRU ⑳	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	1'-1 1/4"	2

- NOTES:**
- DIMENSIONS AND STRUCTURAL MEMBERS INFORMATION ARE TAKEN FROM AS BUILT AND SHOP DRAWINGS AND ARE NOT GUARANTEED FOR ACCURACY.
 - EXISTING SHEAR STUDS 4" HIGH IN SPANS NO. 2 & 3 EXCEPT BEAMS 16,17,18,31,32 & 33 WHICH ARE 3" HIGH.
 - SPACING BASED ON 7/8" SHEAR STUDS.
 - SHEAR STUDS 6" HIGH IN SPAN NO. 1 FROM 0.0L TO 0.1L SOUTHEND OF BMS. 2-6 & 0.8L TO 0.1L NORTHEMND OF BMS. 2-6.
 - SHEAR STUDS 4" HIGH IN SPAN NO.1 FROM 0.1L TO 0.8L BMS. 2-6 SHEAR STUDS 6" HIGH IN SPAN NO.1 BMS. 1 & 7.
 - ▲ DENOTES EXPANSION BEARINGS TYPE E1 TO BE REPLACED. FOR DETAILS SEE SHEET NO. 45.
 - DENOTES EXPANSION BEARINGS TYPE E2 TO BE REPLACED. FOR DETAILS SEE SHEET NO. 45.
 - DENOTES END DIAPHRAGM CONNECTION TO BE REPLACED. FOR DETAILS SEE SHEET NO. 35.
 - ★ DENOTES STRENGTHENING EXISTING STRINGERS. FOR DETAILS SEE SHEET NO. 35.
 - ALL PIERS AND ABUTMENTS ARE PARALLEL.
 - EXISTING SHEAR CONNECTORS ON STRINGERS AND DIAPHRAGMS WHICH ARE DAMAGED BY THE CONTRACTOR OR ARE MISSING, SHALL BE REPLACED AS PER SPECIFICATIONS.

FRAMING PLAN

SCALE: 1/8"=1'-0"



04/04/1994 K:\4472\19FRAME

NO.	REVISION	BY	DATE	IN CHARGE OF	PWM
1	"AS-BUILT"	HR	8/95	CHECKED: SAA	01/94
		DESIGNED: MMG	01/94		
		DRAWN: HR	01/94		

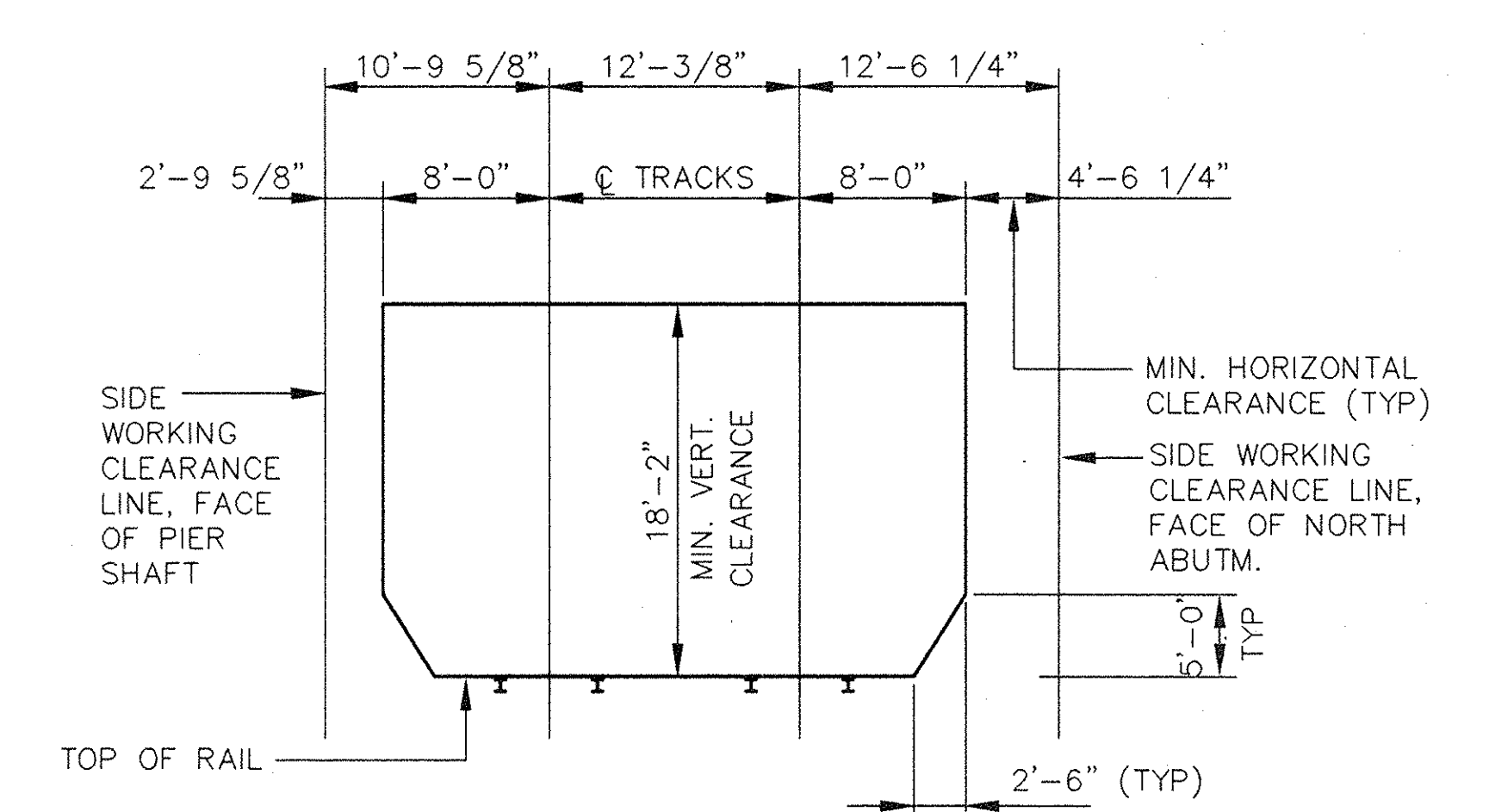
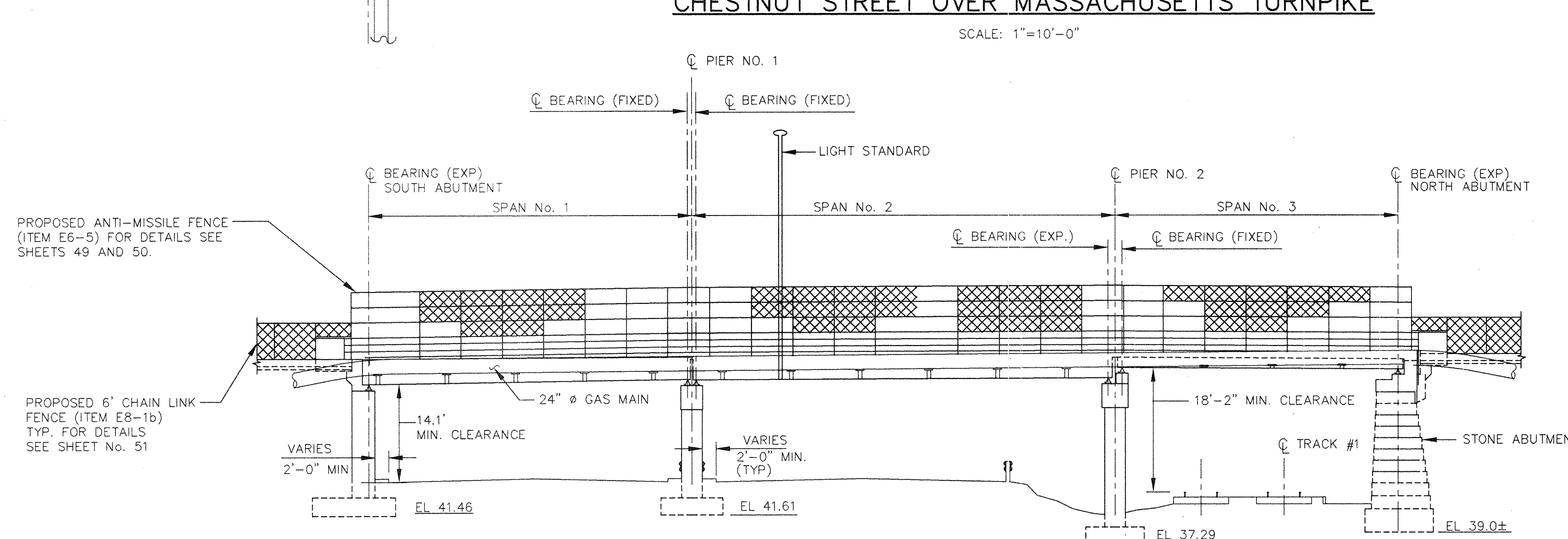
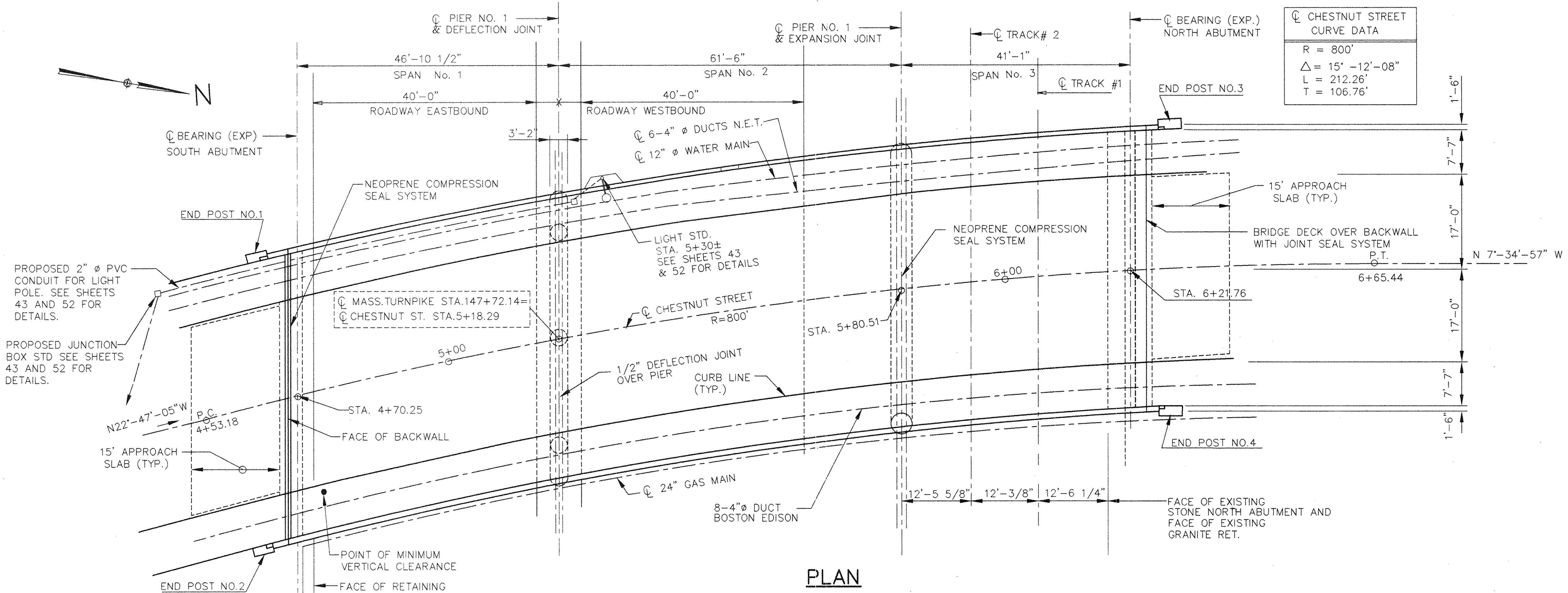
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 CHESTNUT STREET STRUCTURE NO. S-19

FRAMING PLAN

Scale: 1/8" = 1'-0" Contract No. 521-038

LOUIS BERGER & ASSOCIATES, INC.
 NEEDHAM, MASSACHUSETTS

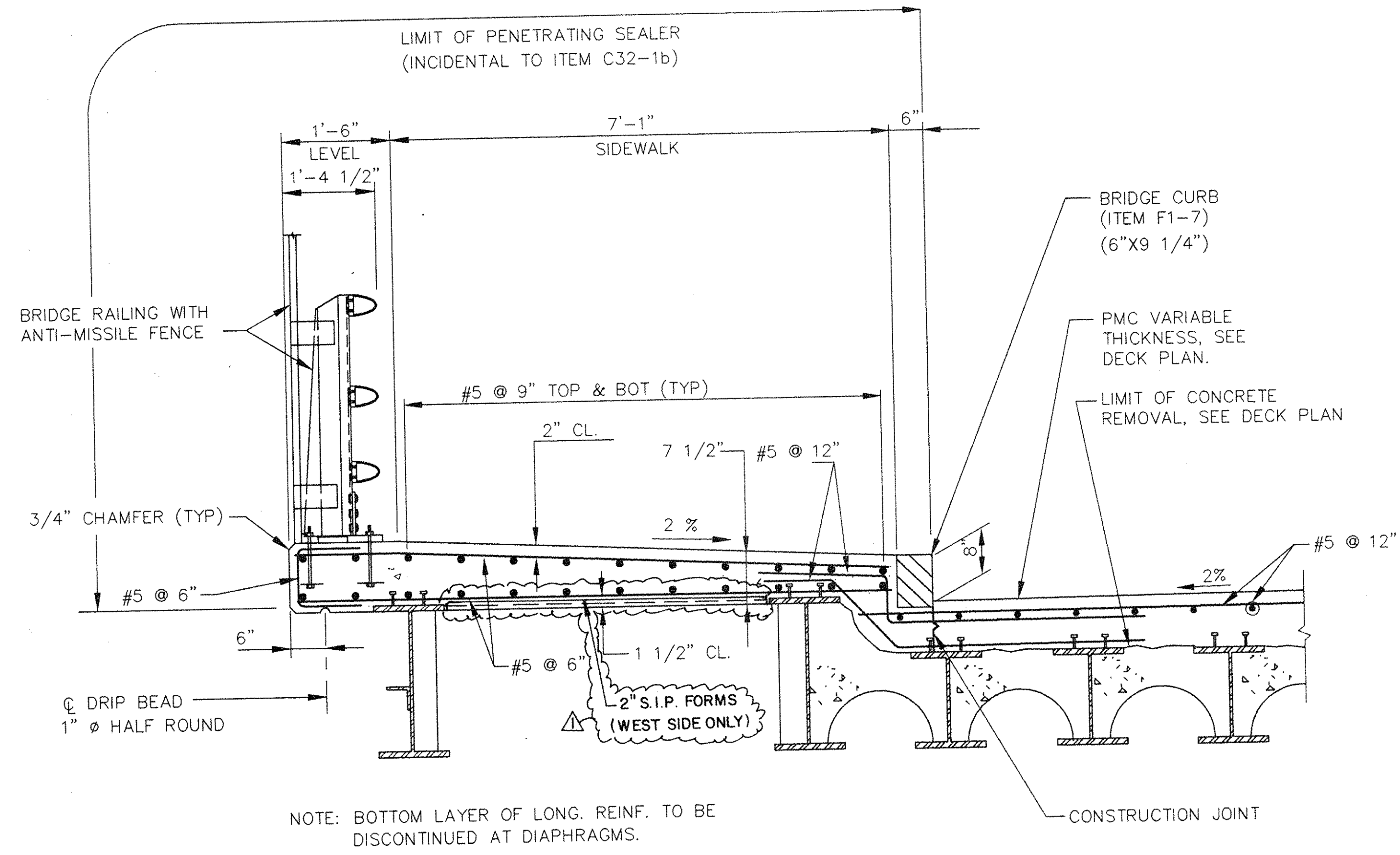
Sheet No. 25



MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION	
CHESTNUT STREET STRUCTURE NO. S-19	
PROPOSED PLAN AND ELEVATION	
Scale: AS NOTED	Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC. NEEDHAM, MASSACHUSETTS	Sheet No. 27

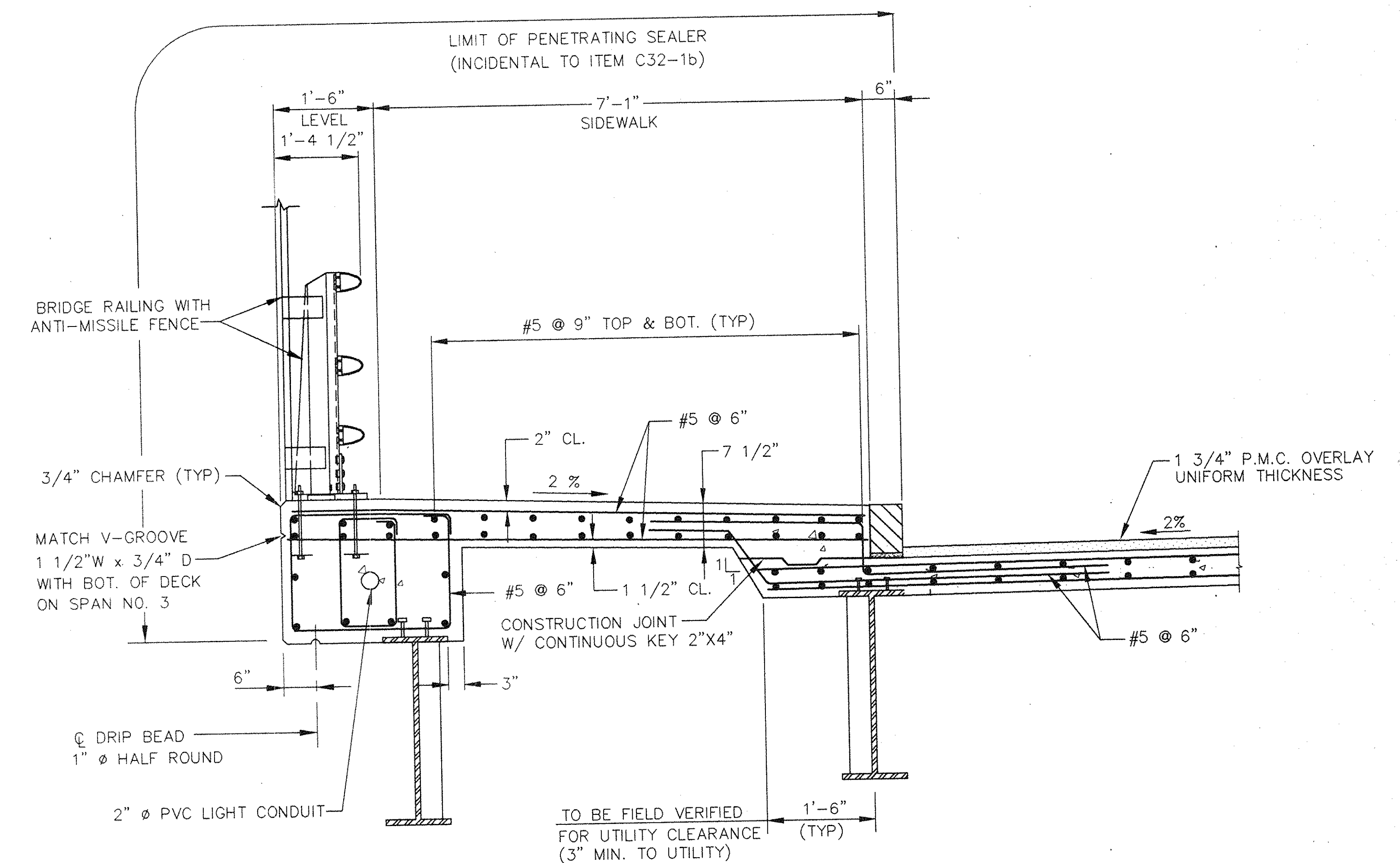
04/04/1994 K:\4472\19DKPLN1

NO.	REVISION	BY	DATE	IN CHARGE OF	PWM
		DESIGNED: MMG	1/94		
		DRAWN: CEA	1/94		
		CHECKED: SAA	1/94		

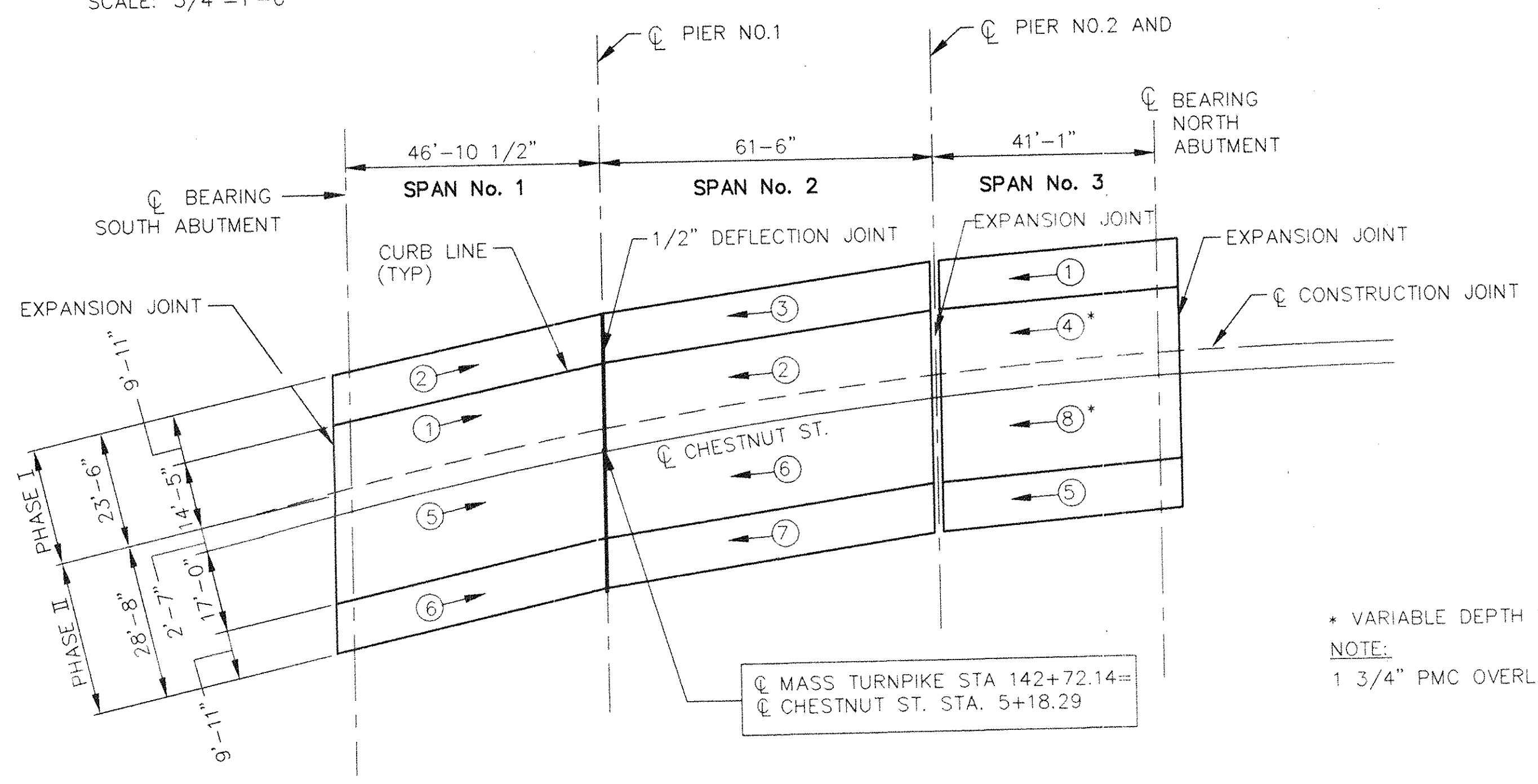


NOTE: BOTTOM LAYER OF LONG. REINF. TO BE DISCONTINUED AT DIAPHRAGMS.

SIDEWALK DETAIL (UTILITIES NOT SHOWN)
SPAN No. 3
 SCALE: 3/4"=1'-0"



SIDEWALK DETAIL (UTILITIES NOT SHOWN)
SPANS No. 1 & 2
 SCALE: 3/4"=1'-0"



PLACING SEQUENCE FOR CONCRETE DECK
CHESTNUT STREET
 SCALE: 1"=20'-0"

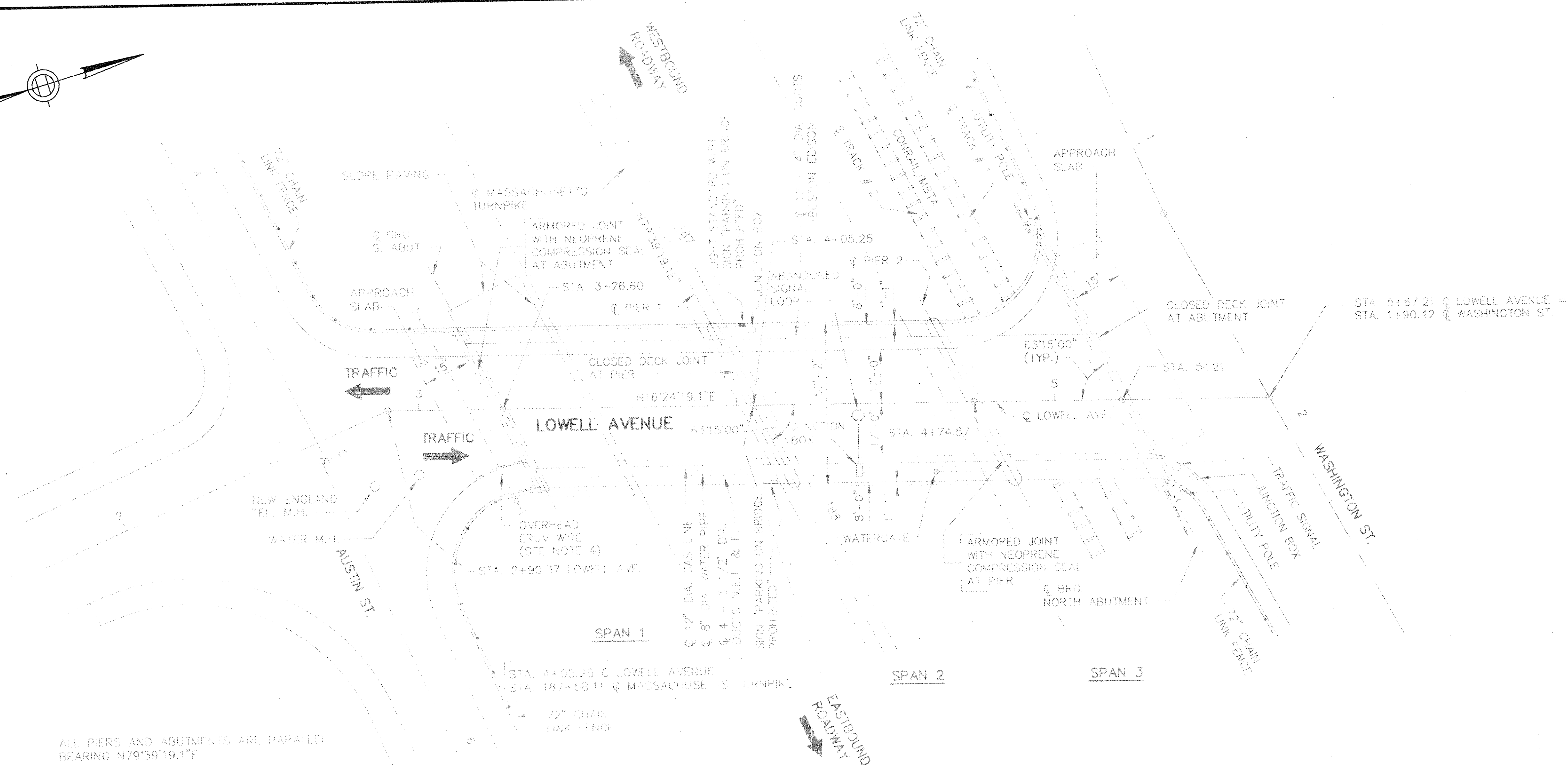
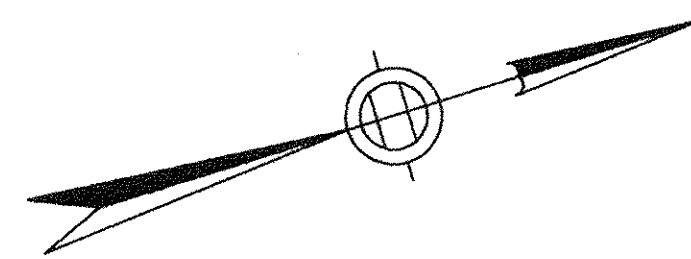
- PLACING SEQUENCE NOTES:**
- ① NUMBERS INDICATE SEQUENCE OF PLACEMENT. ARROWS INDICATE DIRECTION OF PLACEMENT.
 - PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
 - FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEETS NO. 36 AND 37.
 - BLOCKS DESIGNATED BY THE SAME NUMBER DO NOT NECESSARILY HAVE TO BE POURED THE SAME DAY.
 - BEGIN PLACEMENT AT THE LOW END OF THE POURING BLOCK.

* VARIABLE DEPTH PMC PLACEMENT
 NOTE:
 1 3/4" PMC OVERLAY FOR SPANS 1 AND 2 ARE NOT SHOWN.

04/04/1994 K:\4472\19SIDWK

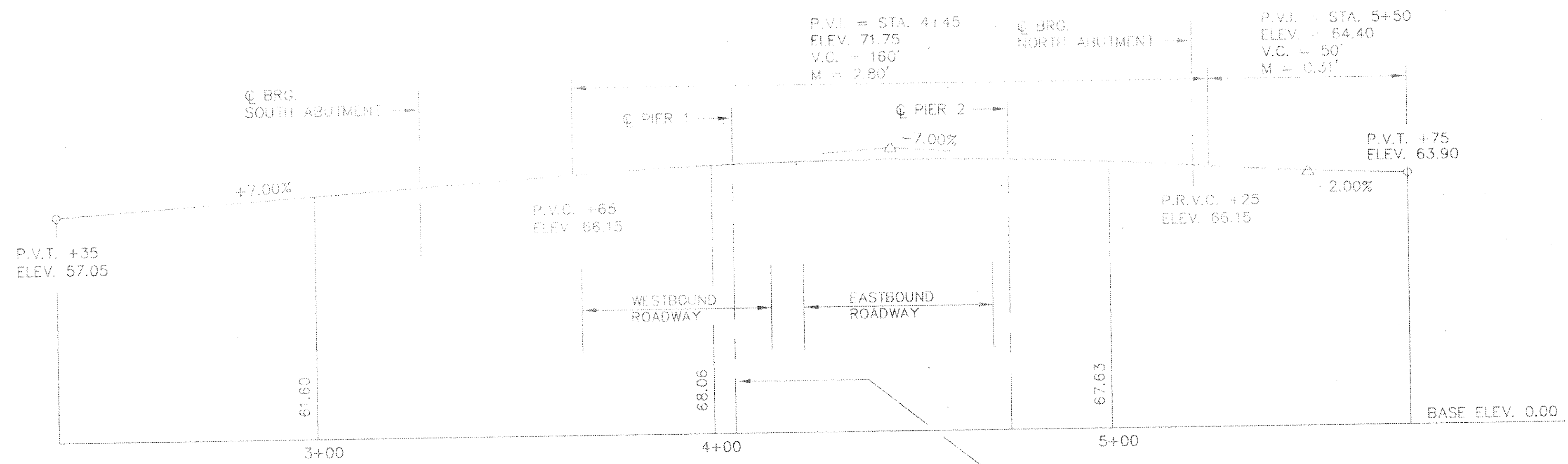
NO.	REVISION	BY	DATE	IN CHARGE OF
	"AS-BUILT"	HR	8/95	PWM
		DESIGNED:	MMG	1/94
		DRAWN:	AM	1/94
		CHECKED:	SAA	1/94

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 CHESTNUT STREET STRUCTURE NO. S-19
**PROPOSED SIDEWALK DETAILS AND
 PLACING SEQUENCE FOR CONCRETE**
 Scale: AS NOTED Contract No. 521-038
LOUIS BERGER & ASSOCIATES, INC.
 NEEDHAM, MASSACHUSETTS
 Sheet No. 30



ALL PIERS AND ABUTMENTS ARE PARALLEL BEARING N79°59'19.1\"/>

EXISTING PLAN
SCALE: 1" = 20'



STA. 4+05.25 @ LOWELL AVENUE =
STA. 187+58.11 @ MASSACHUSETTS TURNPIKE

NOTES

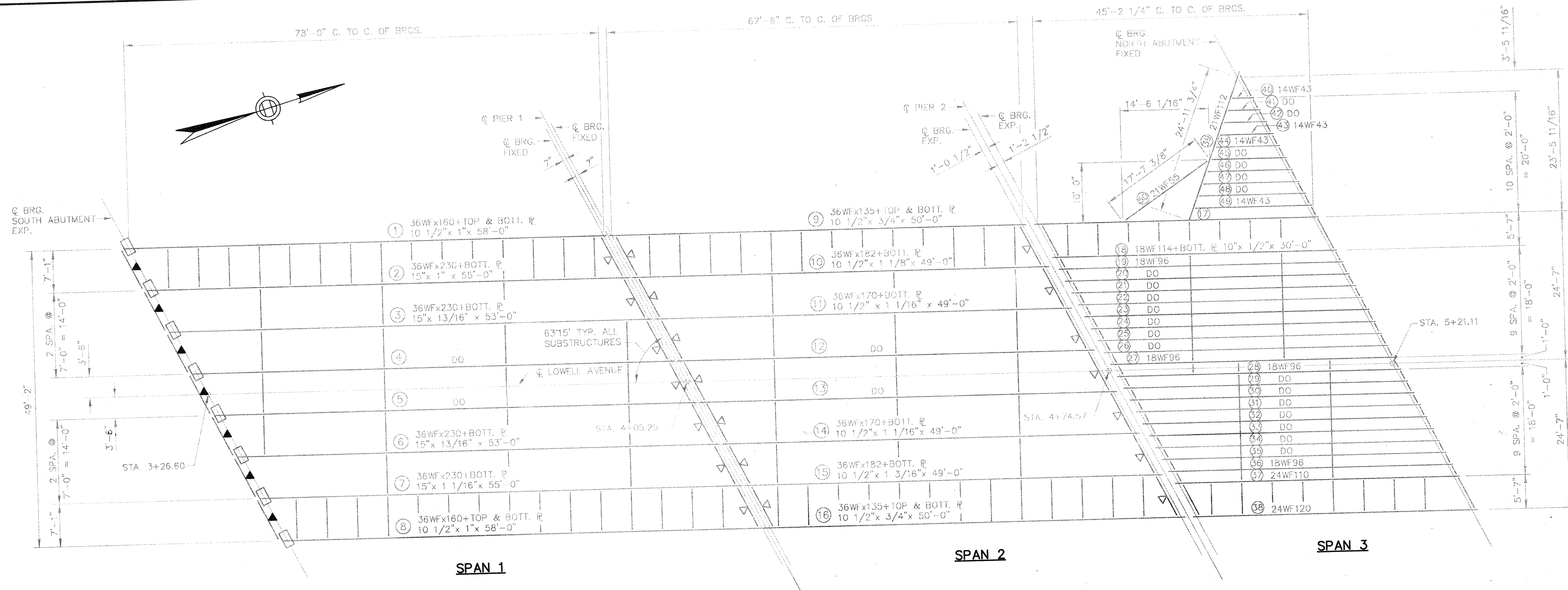
- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILTS AND NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS BASED ON USC & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION LOWELL AVENUE (STR. NO. S-22) EXISTING PLAN AND PROFILE	
Scale: 1" = 20'	Contract No. 521-024
EDWARDS AND KELCEY, INC. The Schreffl Center 529 Main Street Boston, Massachusetts 02129	Sheet No. 44

NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.



FRAMING PLAN
SCALE: 1/8" = 1'-0"

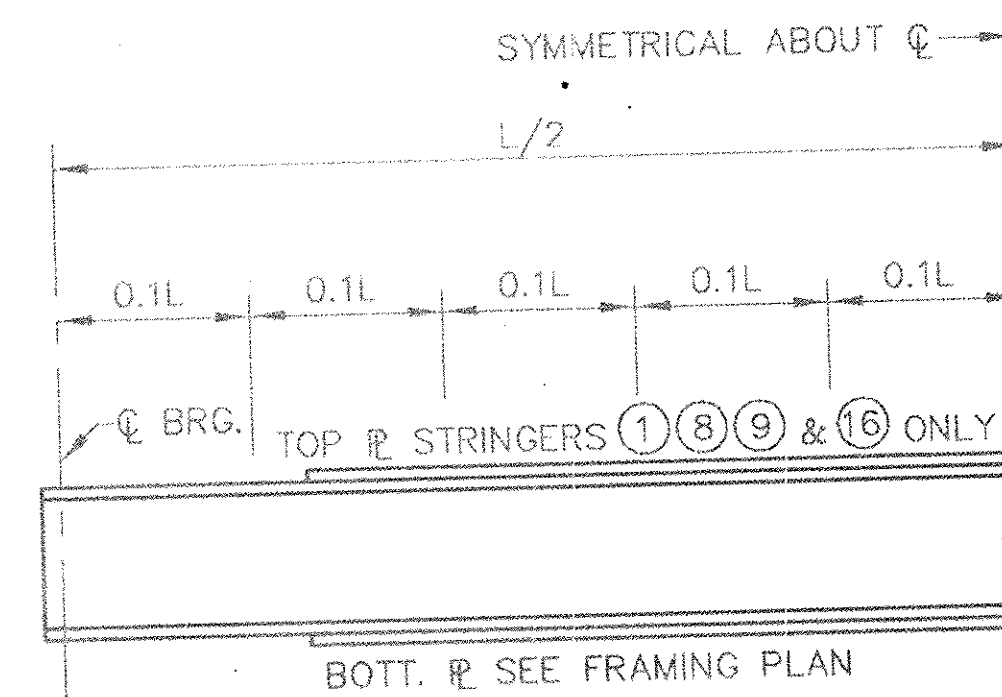
LEGEND

- 1. □ DENOTES EXISTING EXPANSION BEARING.
- 2. △ DIAPHRAGM WITH EXISTING SHEAR CONNECTORS (7/8" DIA. x 4" @ 8" CENTERS)
- 2. ▲ EXISTING DIAPHRAGM (PROPOSED 7/8" DIA. x 4" HIGH SHEAR STUD CONNECTORS @ 8" O.C.)

NOTES

- 1. DIMENSIONS FOR THE FRAMING PLAN ARE FROM THE "AS BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
- 2. SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.

STRINGER NO.	0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	NO. OF 3/4" DIA. STUDS/ROW	HEIGHT
① ⑧ ⑨ ⑬	12"	12"	12"	12"	12"	2	6"
② ⑦	6"	7"	6"	11"	15"	3	4"
③ THRU ⑥ & ⑪ THRU ⑭	7 1/2"	9"	11"	12 1/2"	16"	3	4"
⑩ & ⑮	5 1/2"	6 1/2"	8 1/2"	10 1/2"	15"	2	3"
⑲ THRU ⑳	12"	12"	12"	12"	12"	2	4"
⑱	9"	10"	12 1/2"	15 1/2"	19"	2	3"
⑲ THRU ⑳	17"	20"	24"	24"	24"	2	4"
⑳ ⑳ ⑳ ⑳	12"	12"	12"	12"	12"	2	4"



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
		DESIGNED:	T.A.Z.	12/93	
		DRAWN:	T.L.	12/93	
		CHECKED:	L.M.B.	12/93	

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

AS BUILT

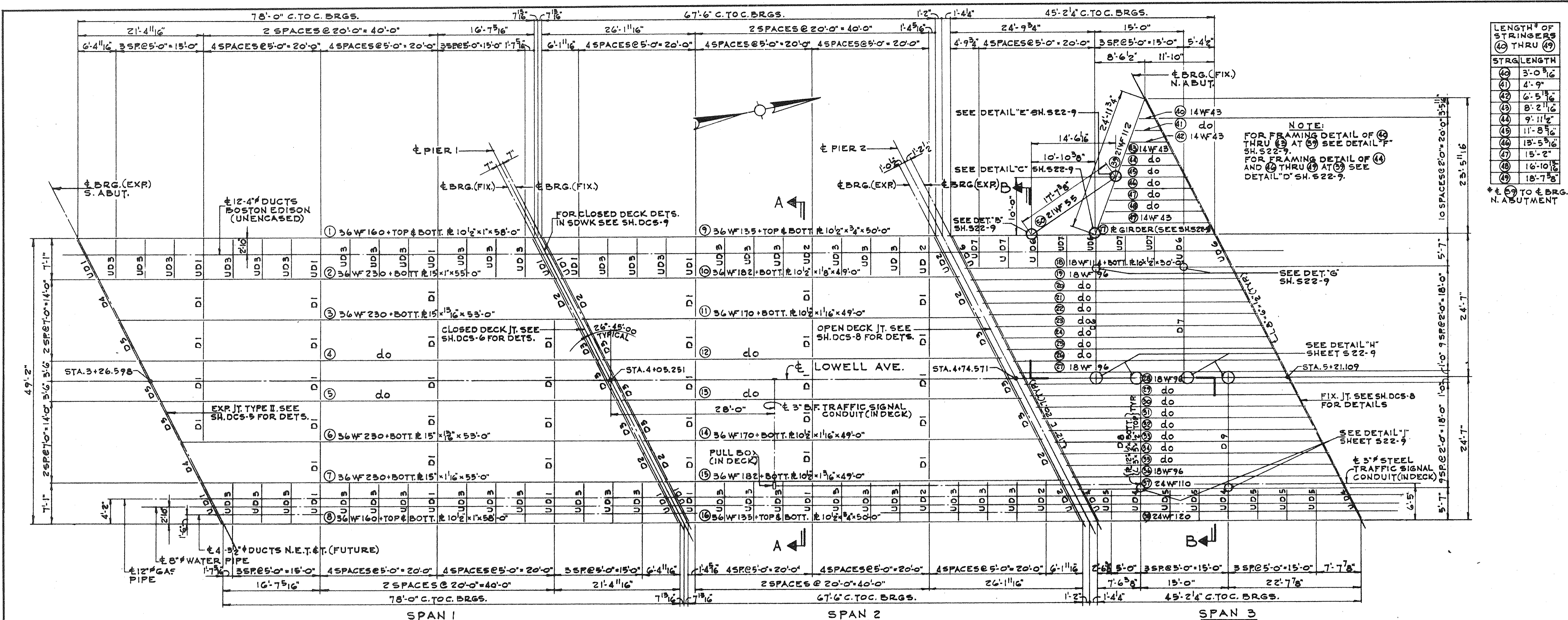
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
FRAMING PLAN

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC. Sheet No. 45
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

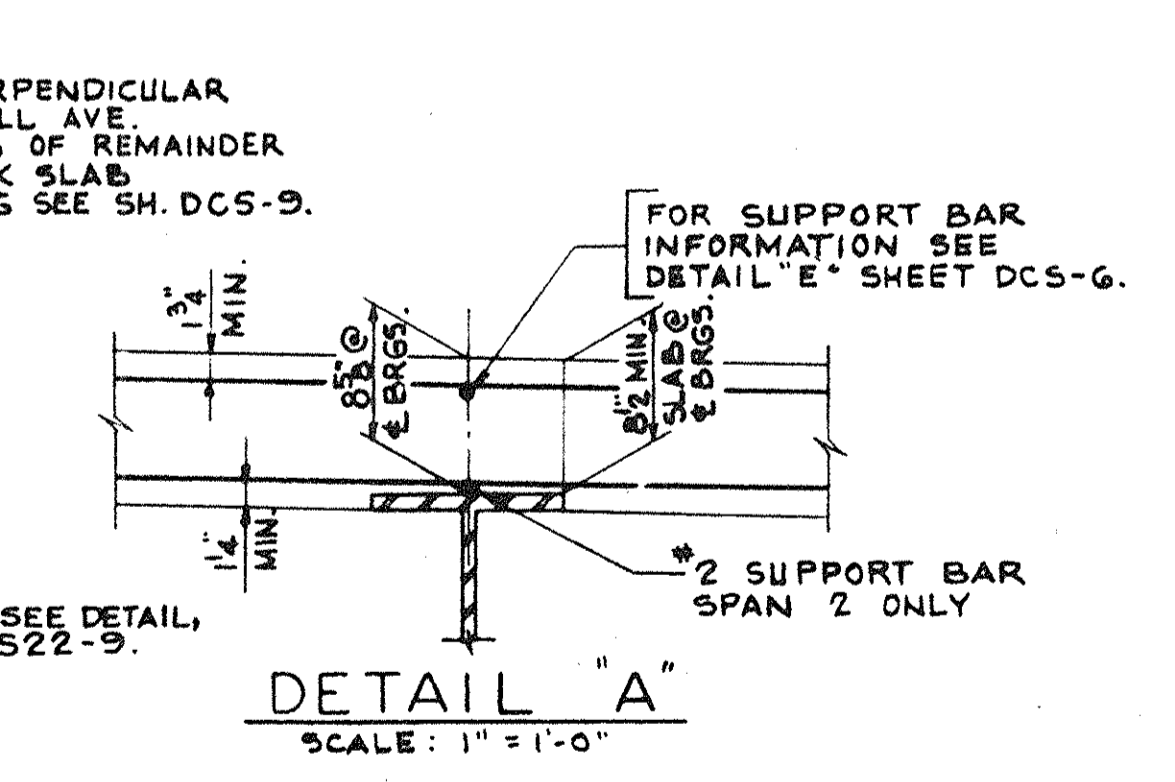
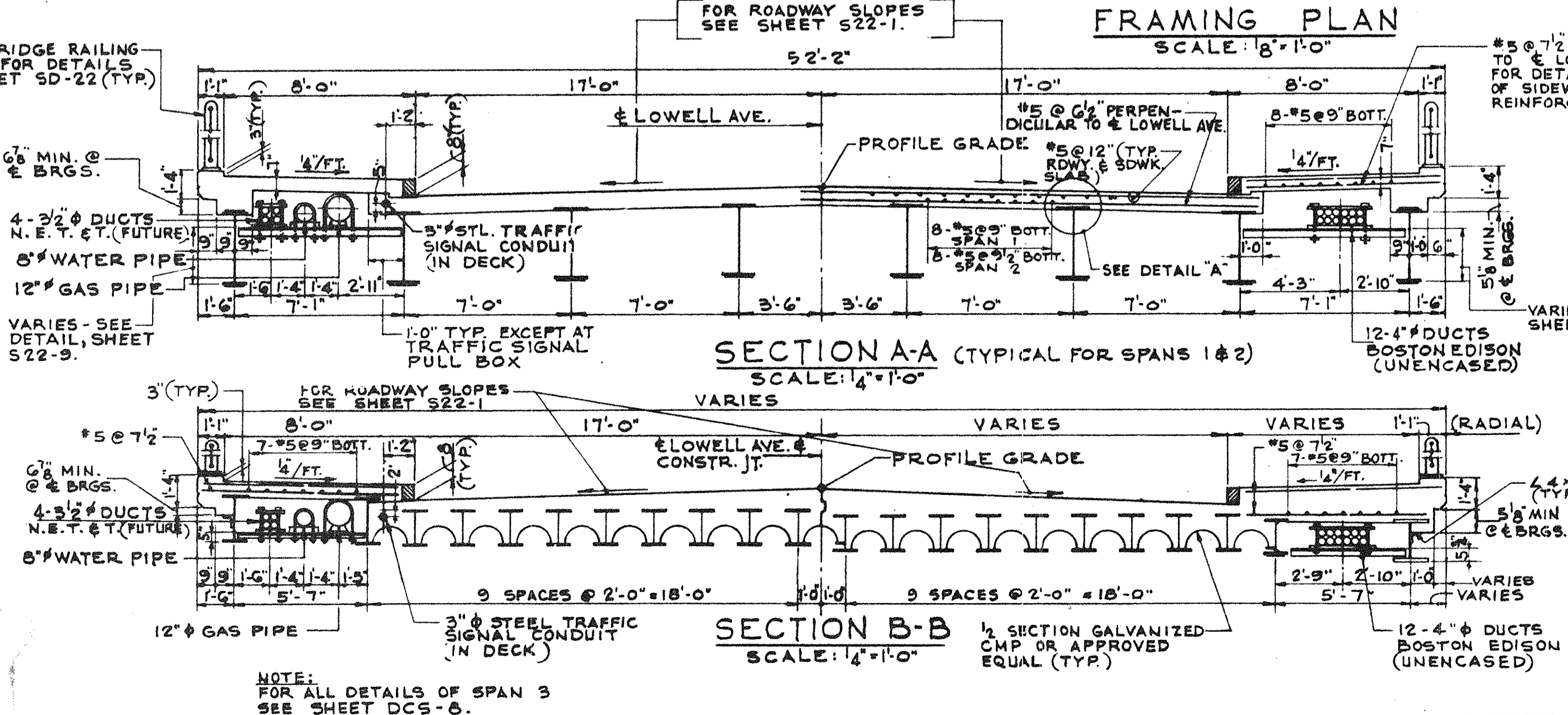
(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R12



SHOES (TYPE A)					
STRG.	SPAN 1	SPAN 2	SPAN 2	SPAN 3	STRG.
	S. ABUT.	PIER 1	PIER 2	PIER 2	
(1)	E1	F1	F1	E1	(9)
(2)	E3	F3	F3	E3	(10)
(3)			F2	E2	(11)
(4)					(12)
(5)					(13)
(6)			F2	E2	(14)
(7)	E3	F3	F3	E3	(15)
(8)	E1	F1	F1	E1	(16)

NOTE: FOR DETAILS OF MASONRY RIS AND SOLE RIS, SEE SH. S22-8. FOR ALL OTHER DETAILS SEE SHEET SD-21.

NOTE: FOR DETAILS OF SPAN 3 SHOES SEE SHEET S22-8.



UTILITY DIAPHRAGM	MEMBER
UD 1	1T8 4x3x3/8 TOP 1T5 4x3x3/8 BOTT.
UD 2	1B SC 42.7
UD 3	1T5 4x3x3/8 BOTT.
UD 4	1T5 4x3x3/8 TOP 1T5 4x3x3/8 BOTT.
UD 5	1T5 4x3x3/8 BOTT.
UD 6	1L5 4x3x3/8 TOP 1T5 4x3x3/8 BOTT.
UD 7	1T5 4x3x3/8 BOTT.

NOTE: FOR DETAILS SEE SH. S22-9

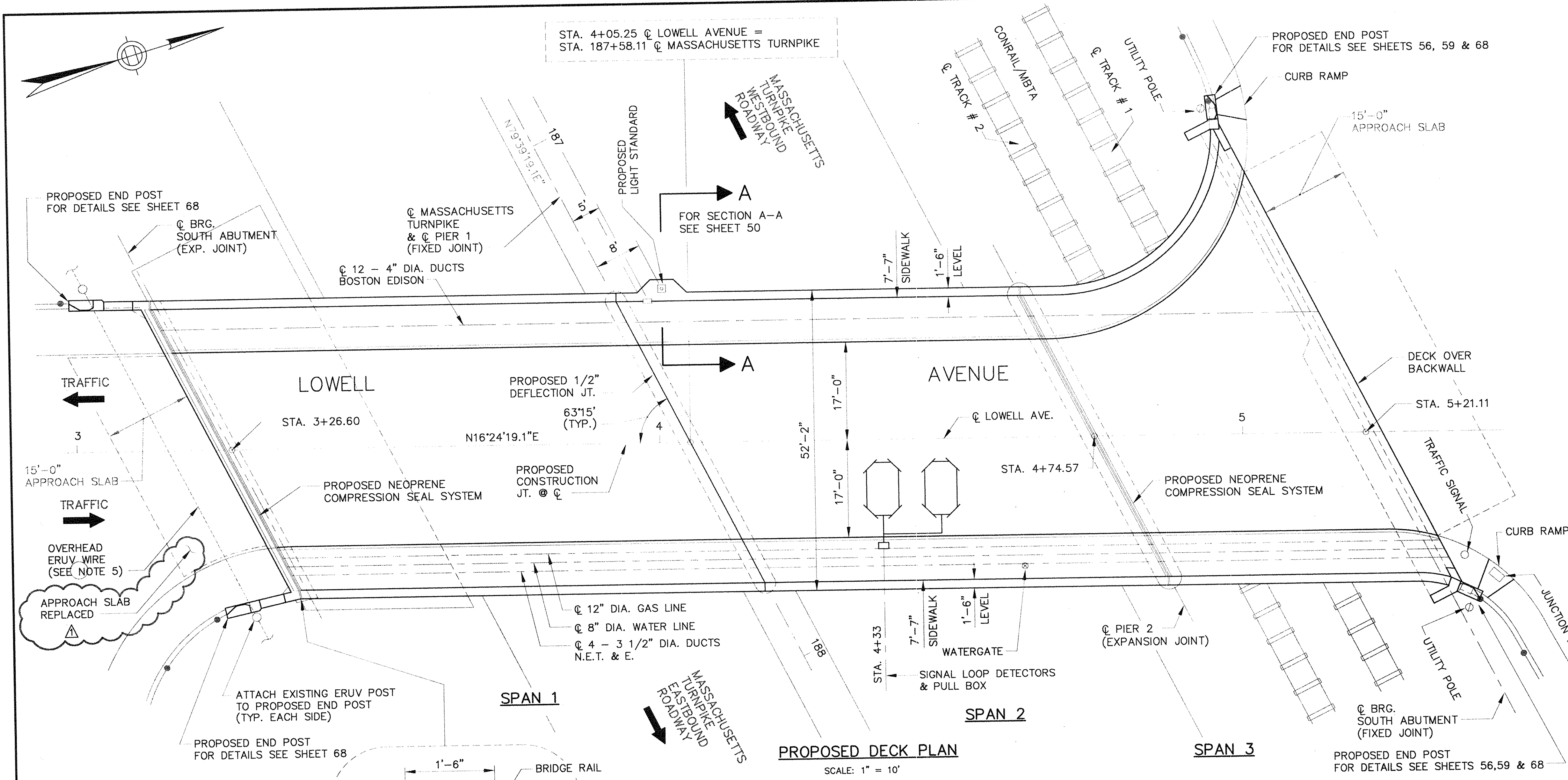
AS-BUILT PLANS

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

STRUCTURE 22
LOWELL AVE. OVER EXTENSION
FRAMING PLAN
CROSS-SECTIONS AND DETAILS

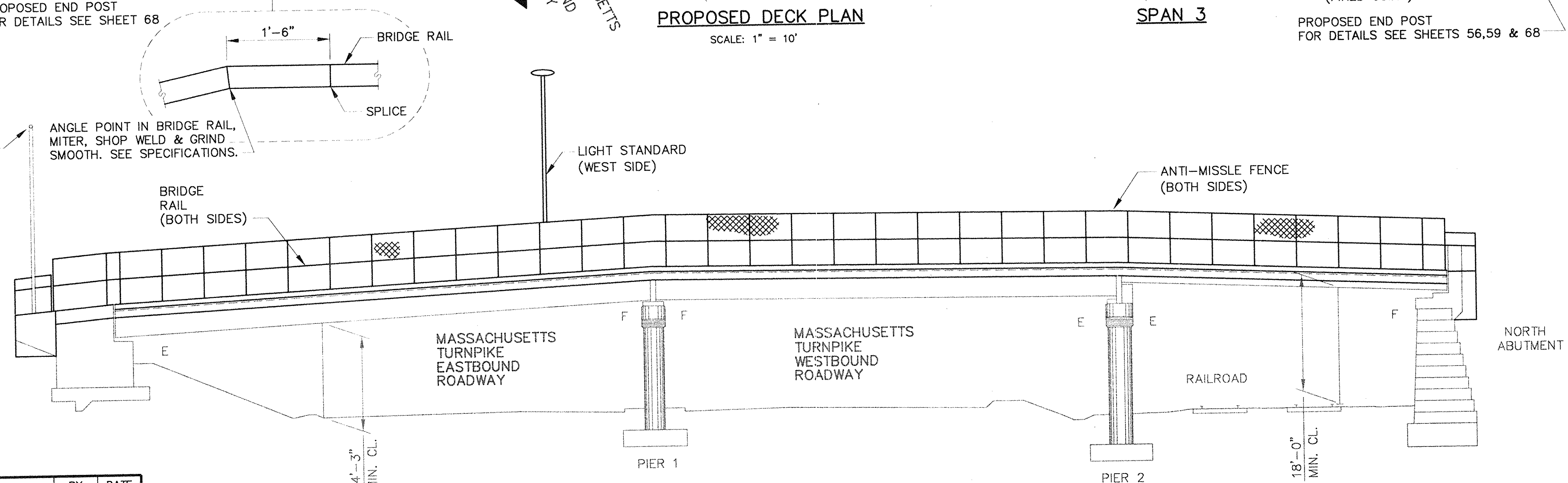
DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
361 BOYLSTON BROOKLINE, MASS.

SCALE AS NOTED
SHEET NO. S22-7



- ### GENERAL NOTES
- DESIGN LOADING:**
A.A.S.H.T.O. LOADING HS20-44.
- MATERIALS:**
- SPAN 3 DECK SLAB SHALL BE COMPOSED OF POLYMER MODIFIED CONCRETE (PMC) (ITEM C6S-4). CONCRETE FOR DECK SLAB, SIDEWALKS & END POSTS SHALL BE CLASS 'D' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4500$ PSI.
 - CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=5000$ PSI.
 - ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
 - ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
 - ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
 - FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

- ### NOTES
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR, TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
 - STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SPECIFICATIONS SECTION C25A OF SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1c.
 - TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
 - E DENOTES EXPANSION BEARING. F DENOTES FIXED BEARING.
 - EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.
 - POLYMER MODIFIED CONCRETE (PMC) FOR SPAN 3 SHALL BE PAID FOR ON A LUMP SUM BASIS IN ITEM C6S-4.
 - CONCRETE SIDEWALK IN SPAN 3 SHALL BE INCLUDED IN ITEM C6S-4.
 - STEEL BAR REINFORCING ON SPAN 3 IS INCLUDED IN ITEM C6S-4.



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
	AS-BUILT	GTS	10/95	CHECKED: L.M.B.	12/93
				DESIGNED: T.A.Z.	12/93
				DRAWN: T.L.	12/93

ELEVATION
SCALE: 1" = 10'

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

AS BUILT

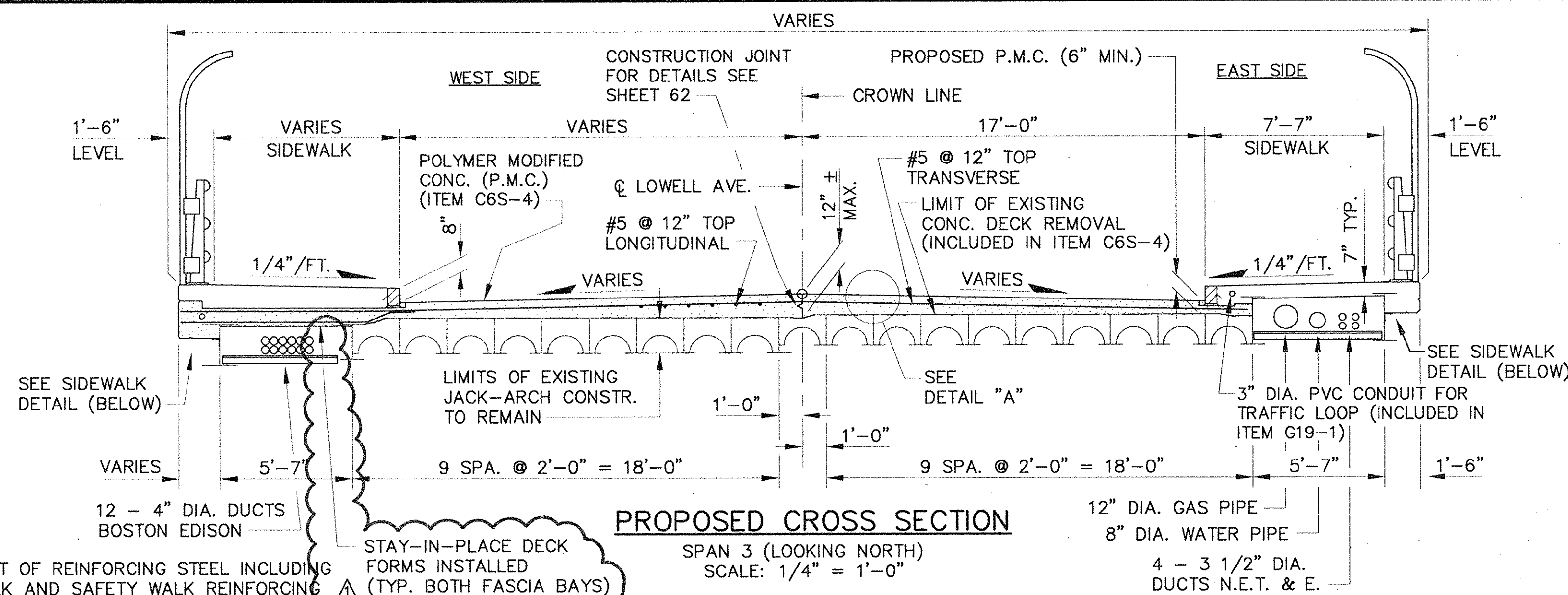
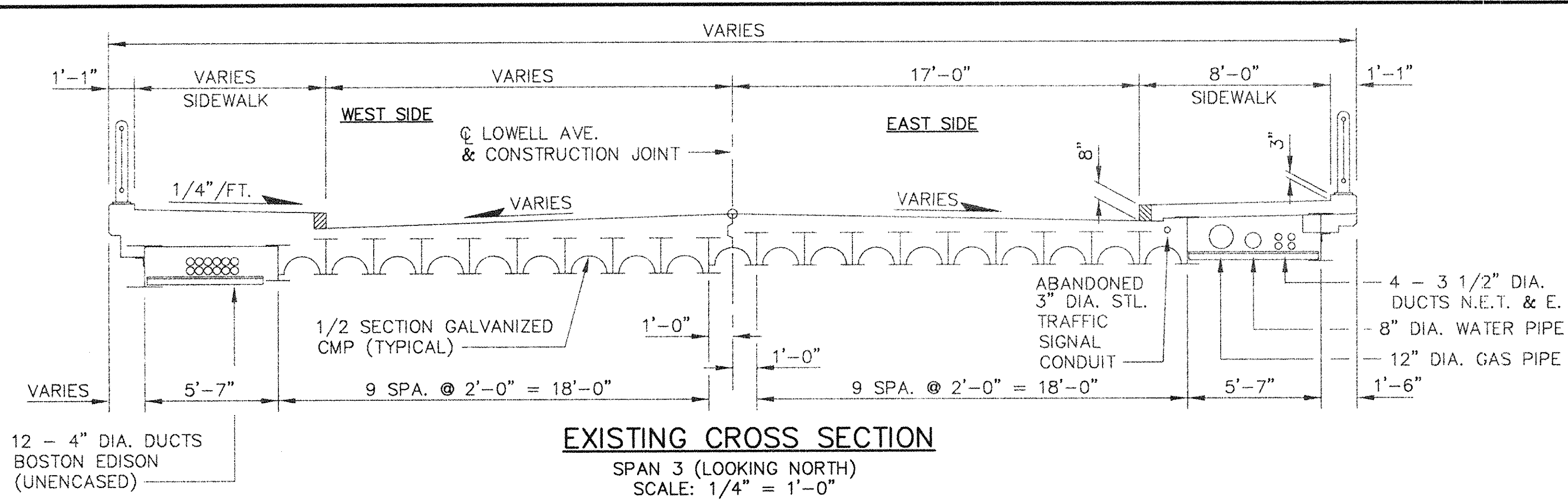
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
LOWELL AVENUE (STR. NO. S-22)
PROPOSED DECK PLAN

Scale: AS SHOWN Contract No. 521-024

EDWARDS AND KELCEY, INC.
The Schmitt Center
529 Main Street
Boston, Massachusetts 02129

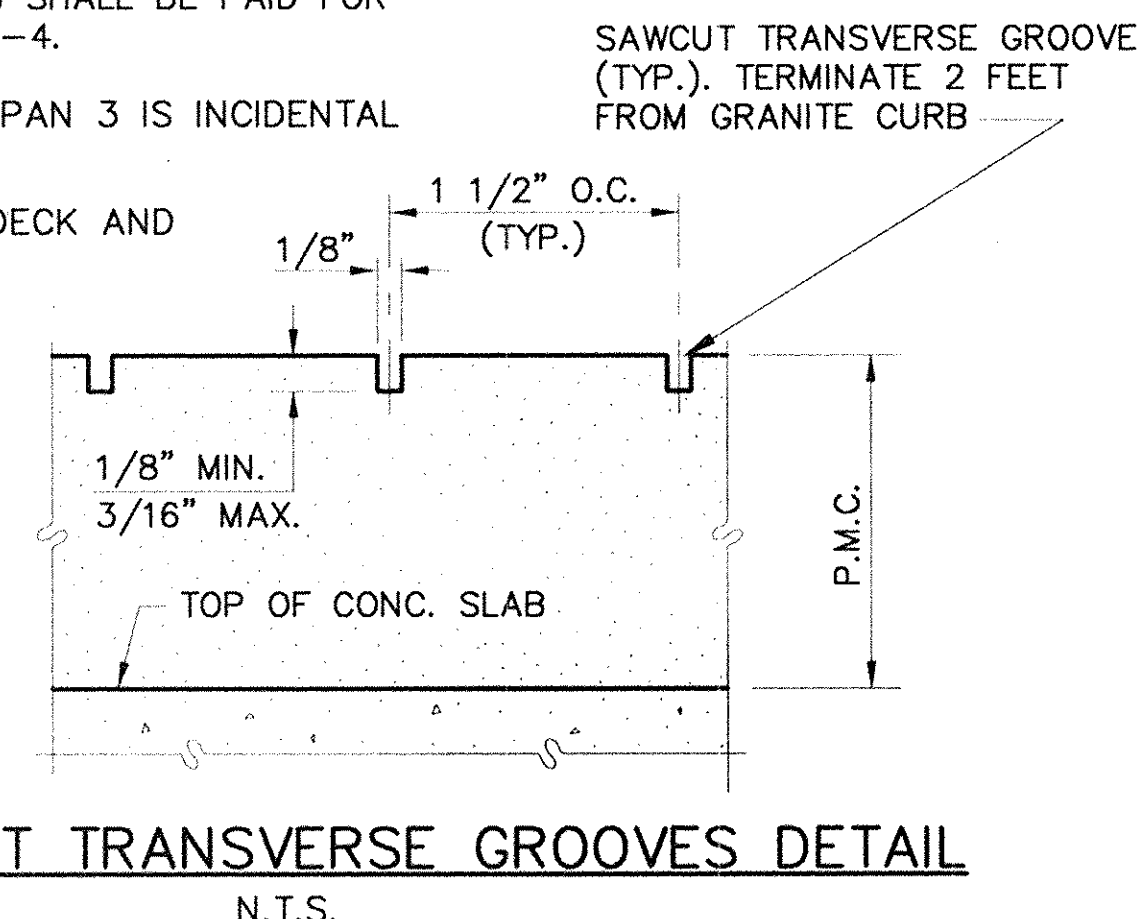
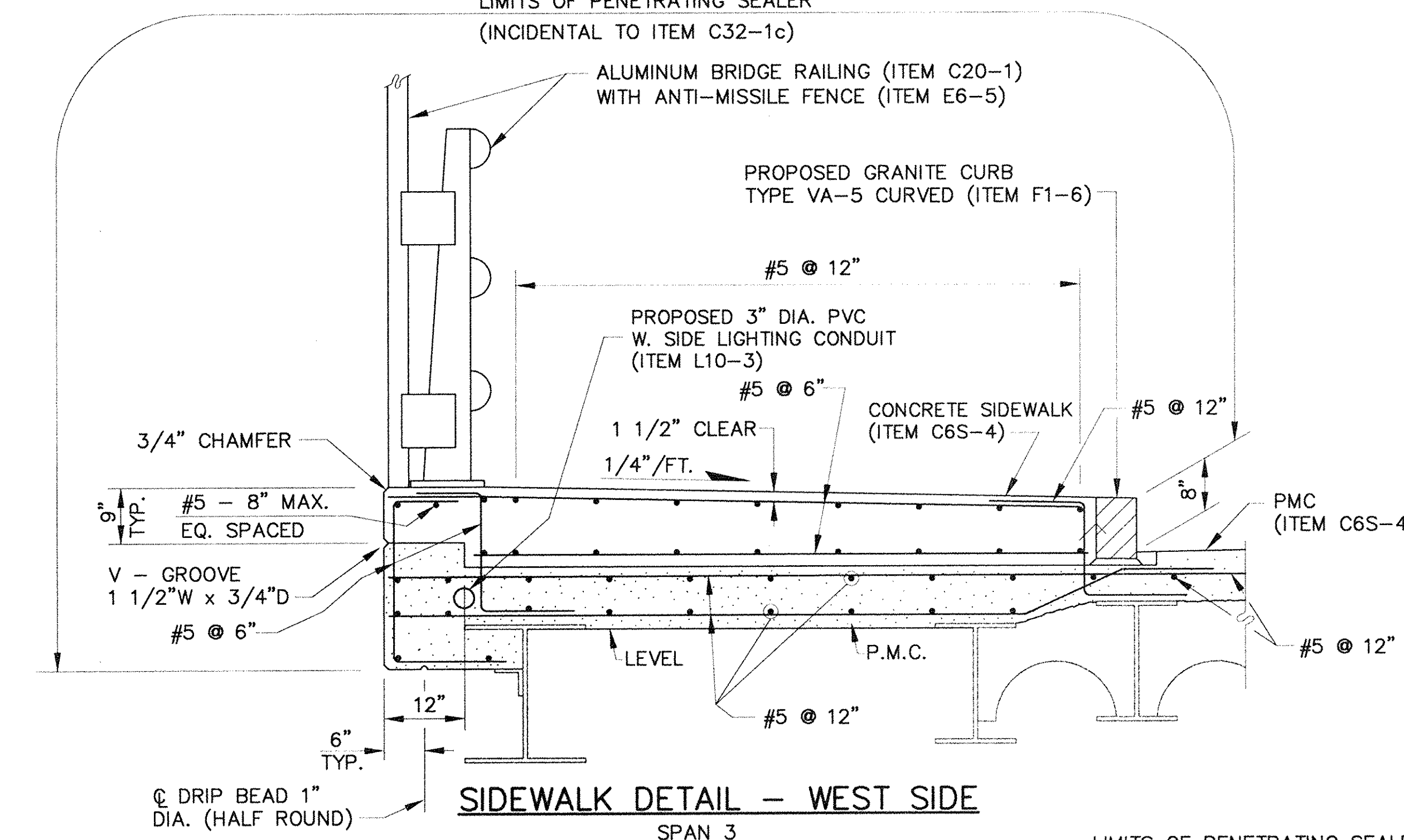
Sheet No. **46**



NOTES:

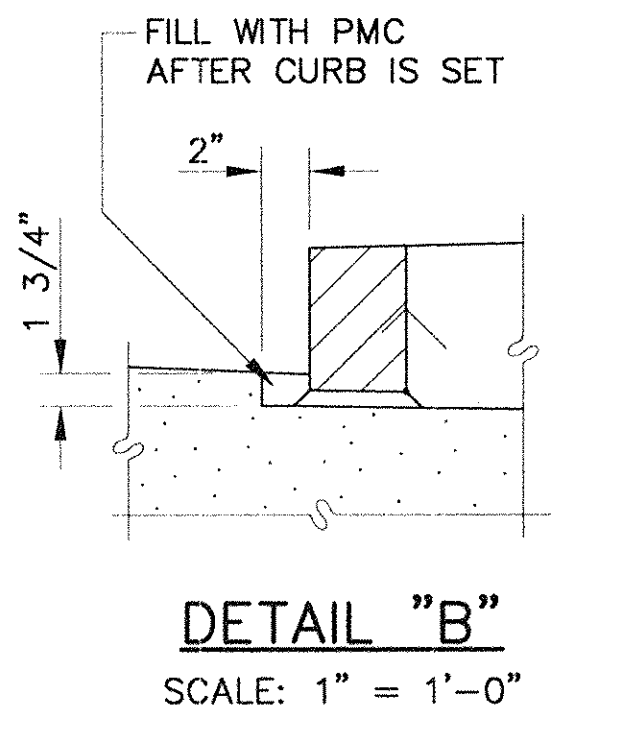
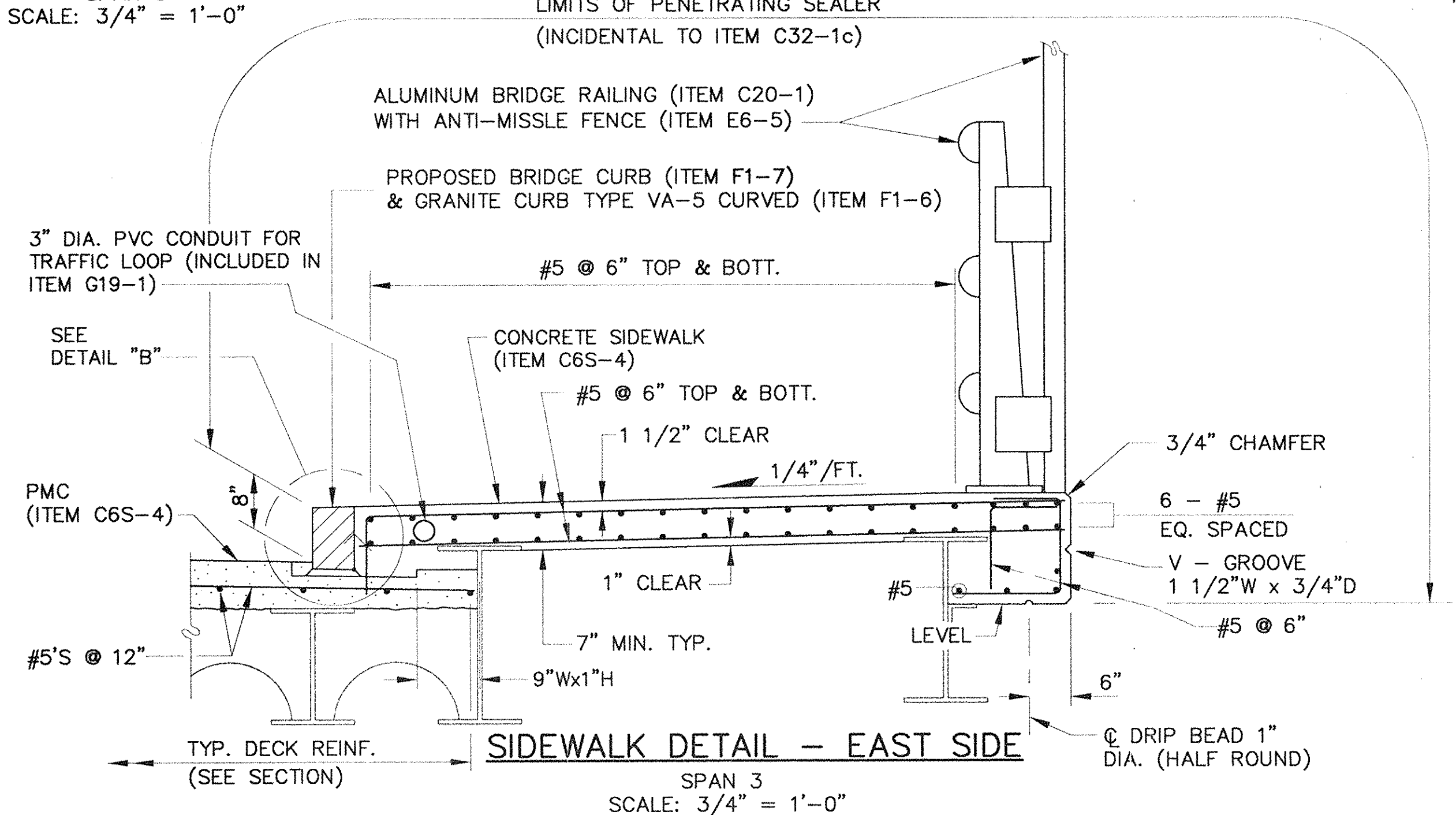
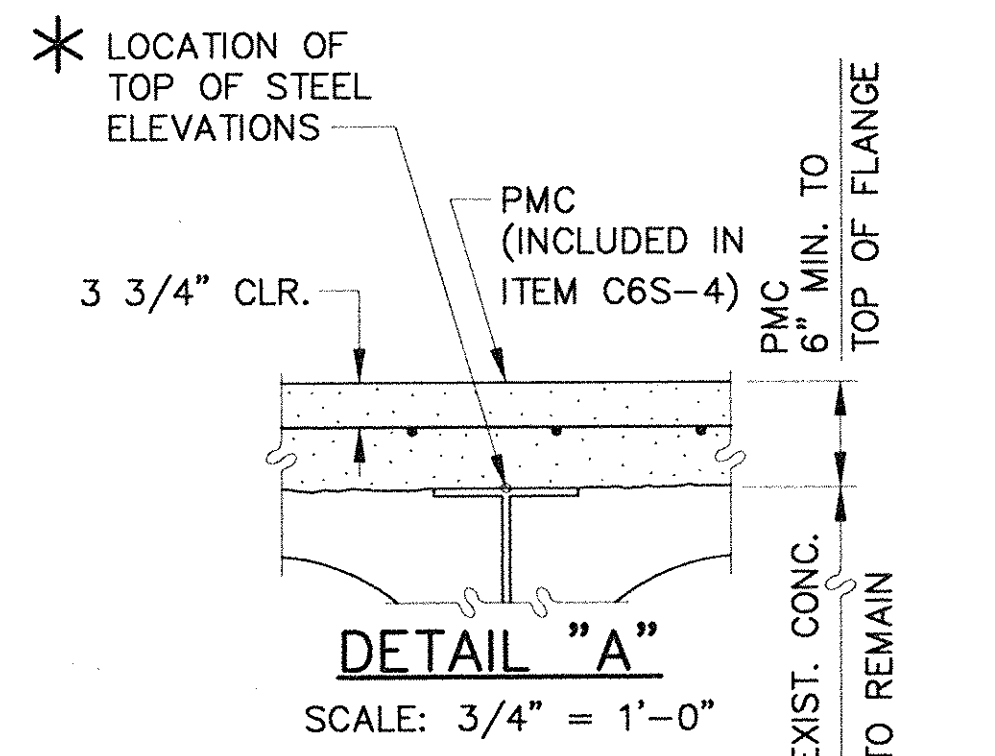
1. THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK AND SAFETY WALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
2. TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
3. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
4. SIDEWALK CONCRETE TO BE CLASS D CEMENT CONCRETE ($f_c = 4500$ PSI) INCLUDED IN ITEM C6S-4.
5. POLYMER MODIFIED CONCRETE (PMC) SHALL BE PAID FOR AT A LUMP SUM PRICE IN ITEM C6S-4.
6. STEEL BAR REINFORCEMENT FOR SPAN 3 IS INCIDENTAL TO ITEM C6S-4.
7. DEMOLITION OF EXIST. CONCRETE DECK AND SIDEWALKS SHALL BE INCLUDED IN ITEM C6S-4.

STAY-IN-PLACE DECK FORMS INSTALLED (TYP. BOTH FASCIA BAYS)



*** ELEVATION OF TOP OF STEEL PRIOR TO PLACEMENT OF CONCRETE**

BEAM NO.	INCREASING STATIONS								
	© BRG.	1/8 PT.	1/4 PT.	3/8 PT.	1/2 PT.	5/8 PT.	3/4 PT.	7/8 PT.	© BRG.
17									
18									
19									
20									
21									
22									
23									
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28									
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48									
49									
50									



NO.	REVISION	BY	DATE	IN CHARGE OF	G.T.S.
	AS-BUILT	GTS	10/95	CHECKED:	L.M.B.
				DRAWN:	T.L.
				DESIGNED:	T.A.Z.

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
 BRIDGE DECK RECONSTRUCTION
 LOWELL AVENUE (STR. NO. S-22)
SECTIONS AND DETAILS - SPAN 3
 Scale: AS SHOWN Contract No. 521-024
 EDWARDS AND KELCEY, INC.
 The Sawloff Center
 209 Main Street
 Boston, Massachusetts 02129
 Sheet No. **51**

DESIGNED BY SUBCONSULTANT: Barrientos and Associates, Inc.

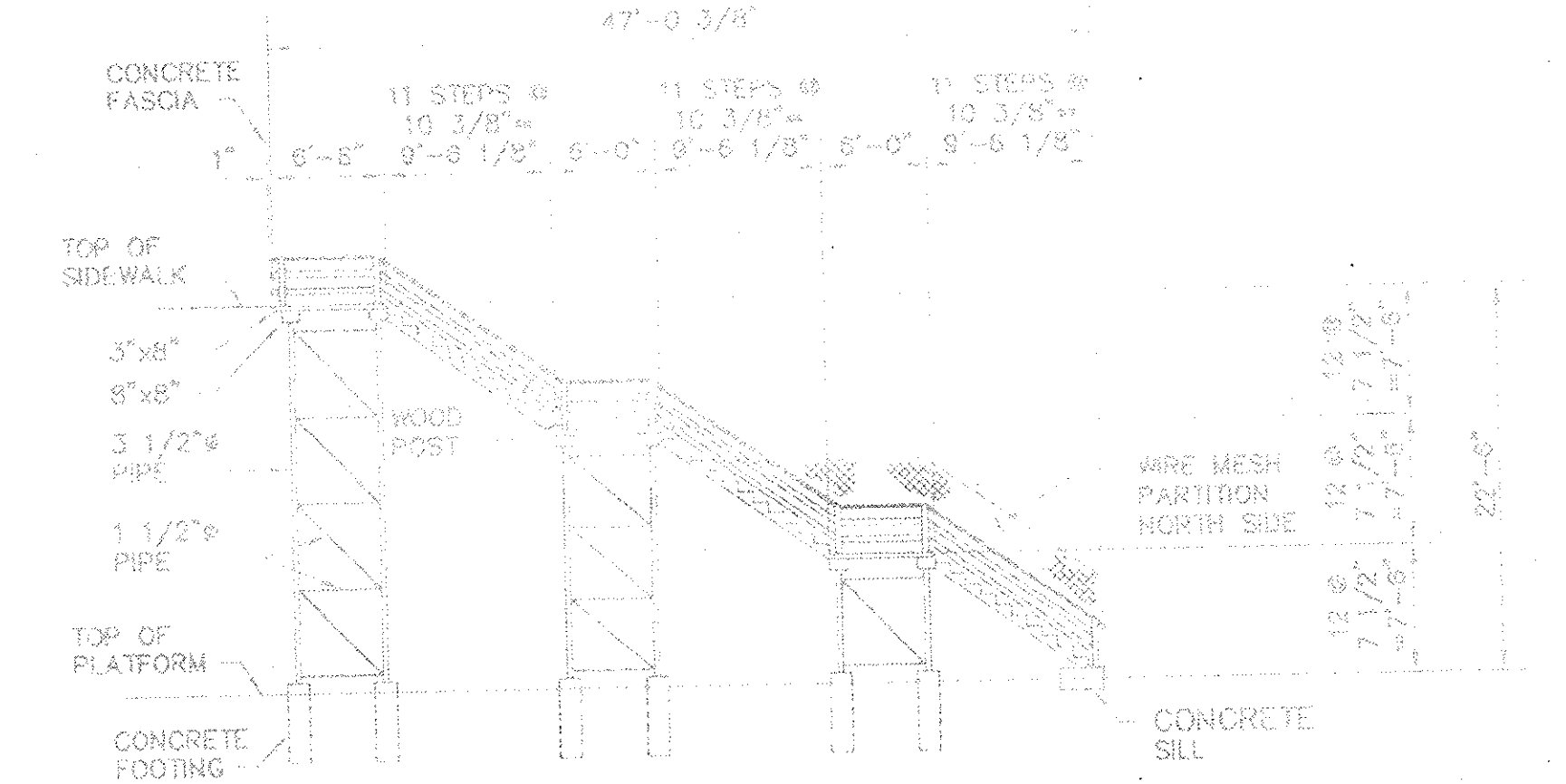
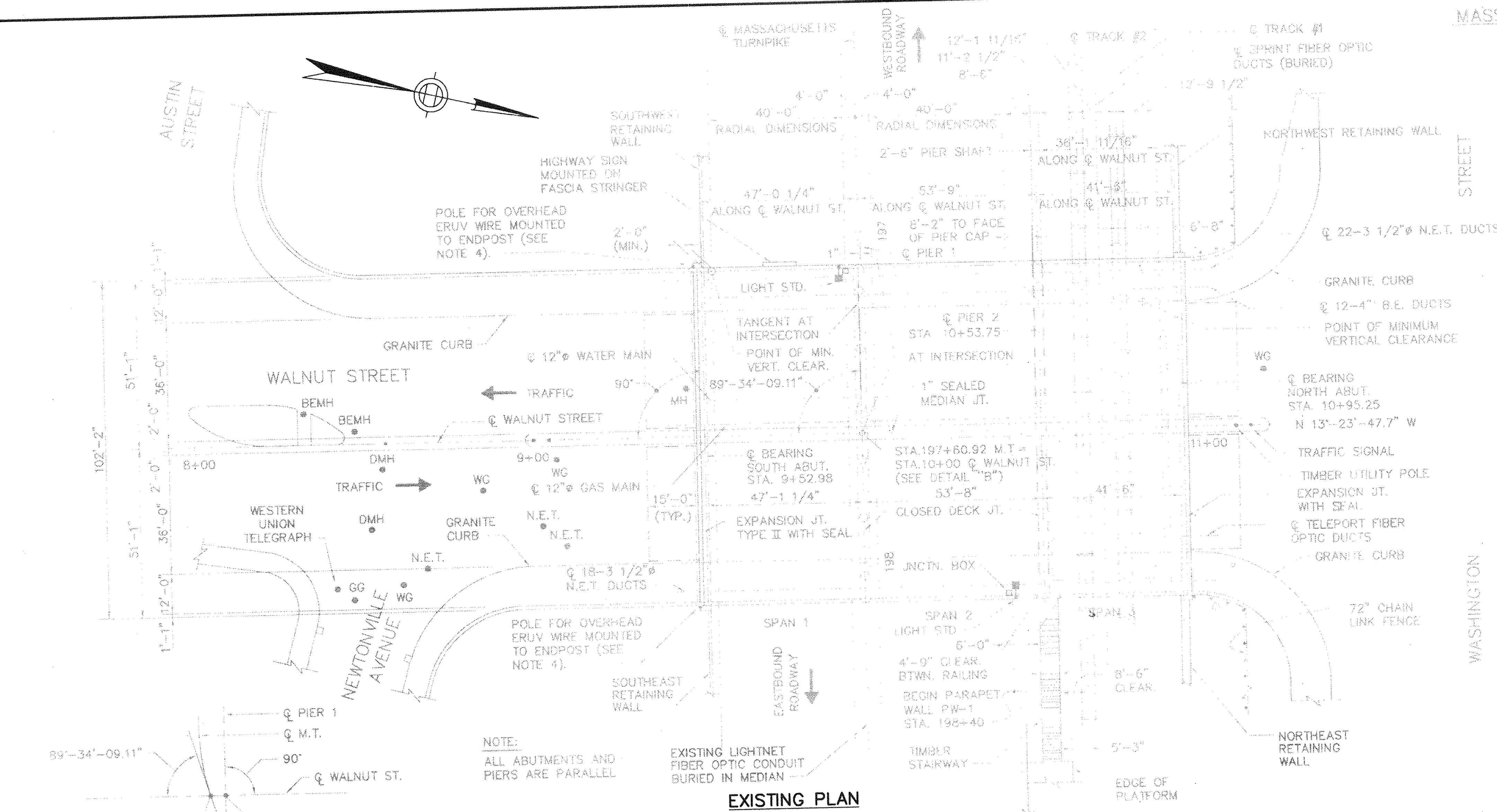
MASSACHUSETTS TURNPIKE

CURVE DATA

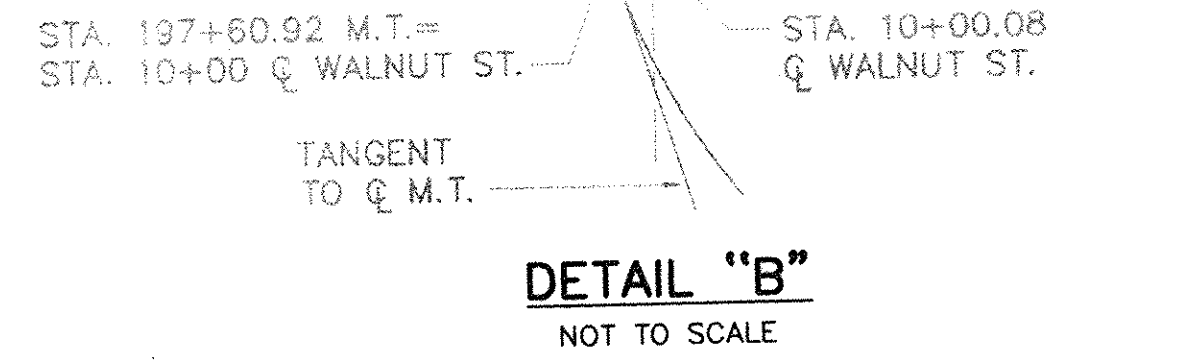
Δ = 11°-16'-34.8"
 R = 10,800'
 L = 1086.737'
 P.C. STA. 1914+09.40

NOTES

- DIMENSIONS AND ELEVATIONS ARE FROM AS-BUILT PLANS AND ARE NOT GUARANTEED TO BE CORRECT.
- ELEVATIONS ARE BASED ON U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929.
- PROFILE SHOWN IS ORIGINAL DESIGN AND IS FOR CONTRACTOR'S GENERAL INFORMATION ONLY.
- EXISTING OVERHEAD ERUV WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



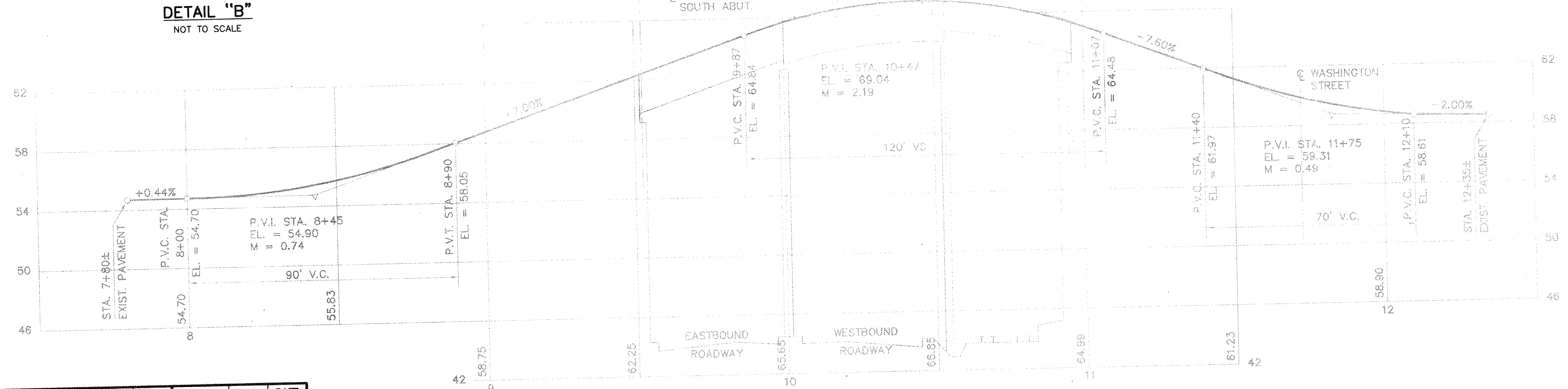
ELEVATION
TIMBER STAIRWAY
SCALE: 1" = 10'



DETAIL "B"
NOT TO SCALE

NOTE:
ALL ABUTMENTS AND PIERS ARE PARALLEL

EXISTING PLAN
SCALE: 1" = 20'



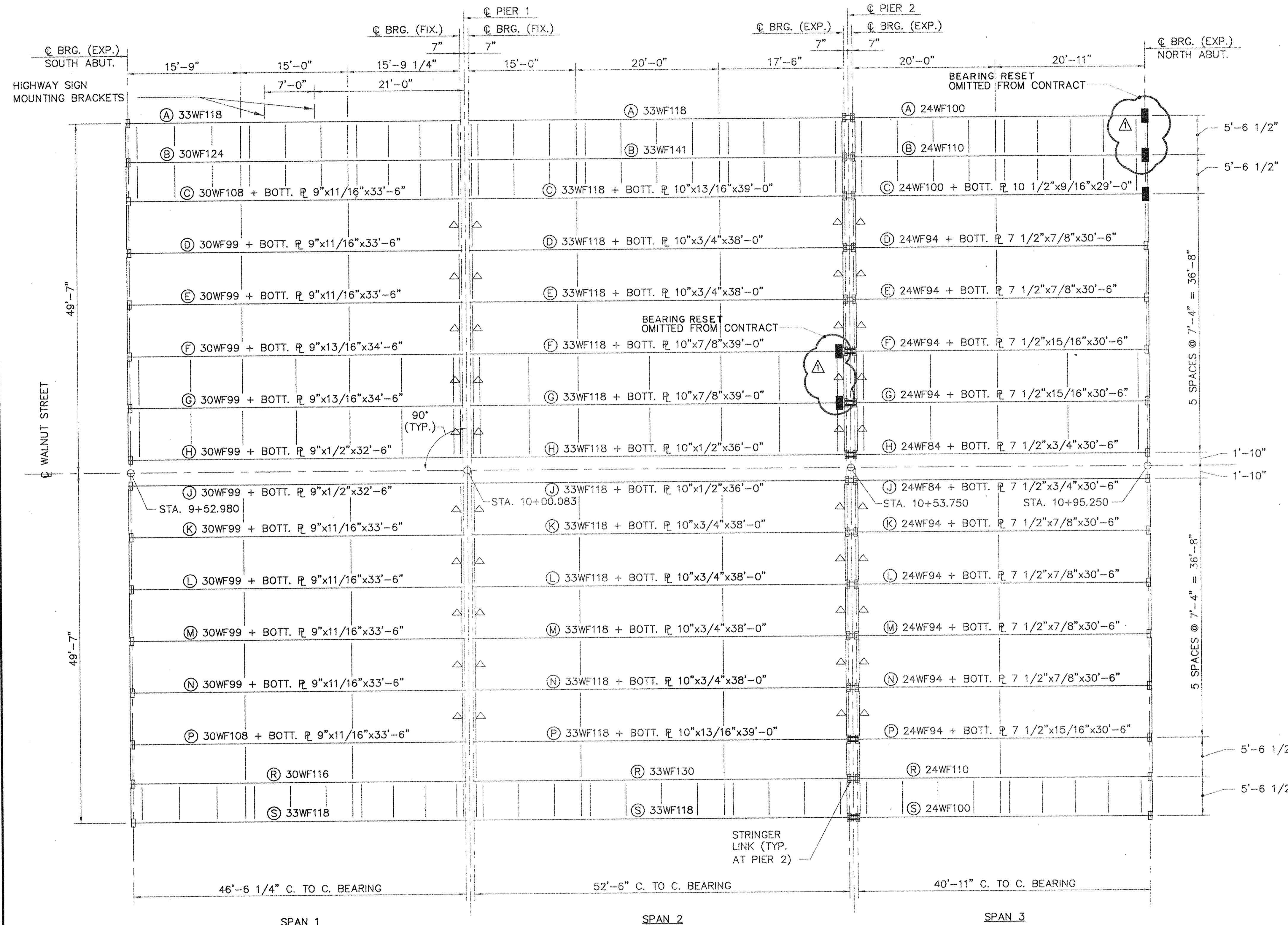
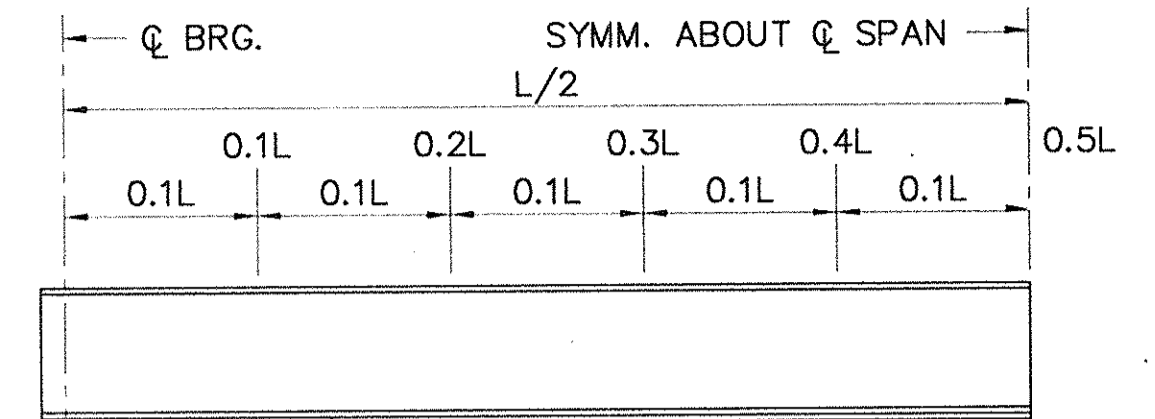
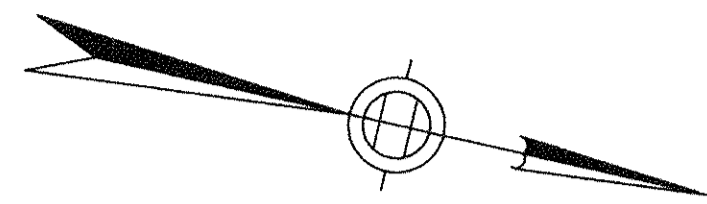
PROFILE-WALNUT STREET
PROFILE SCALE
1" = 20' H
1" = 4' V

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR. NO. S-23) EXISTING PLAN & PROFILE	
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116	EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129
Sheet No.	26

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
	DESIGNED:	GRI	12/93	
	DRAWN:	SAS	12/93	
	CHECKED:	EMM	12/93	

(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R17



EXISTING STUD SHEAR CONNECTOR SCHEDULE

SPAN	STRINGER	0.0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	STUDS PER ROW	HEIGHT
1,2,3	(A) (B) (R) (S)	12"	12"	12"	12"	12"	2-3/4"φ	6"
1&3	(C) (P)	4"	5"	6 1/2"	8"	10"	2-7/8"φ	4"
1&3	(D) (E) (F) (G) (K) (L) (M) (N)	4 1/2"	5 1/2"	7"	8 1/2"	10 1/2"	2-7/8"φ	4"
1&3	(H) (J)	5"	6"	7 1/2"	9"	11"	2-7/8"φ	4"
2	(C) (P)	5"	6"	7 1/2"	9"	11"	2-7/8"φ	4"
2	(D) (E) (H) (J) (K) (L) (M) (N)	6"	7"	8 1/2"	10"	12"	2-7/8"φ	4"
2	(F) (G)	5 1/2"	6 1/2"	8"	9 1/2"	12"	2-7/8"φ	4"

NOTES:

- DIMENSIONS FOR FRAMING PLAN ARE FROM THE "AS-BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED.
- SHEAR STUD SPACING SHOWN FOR INFORMATION ONLY. THE CONTRACTOR SHALL REPAIR OR REPLACE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.
- FOR LINK AND BEARING DETAILS SEE SHEET NOS. 36 AND 66.

FRAMING PLAN
SCALE: 1/8" = 1'-0"

LEGEND

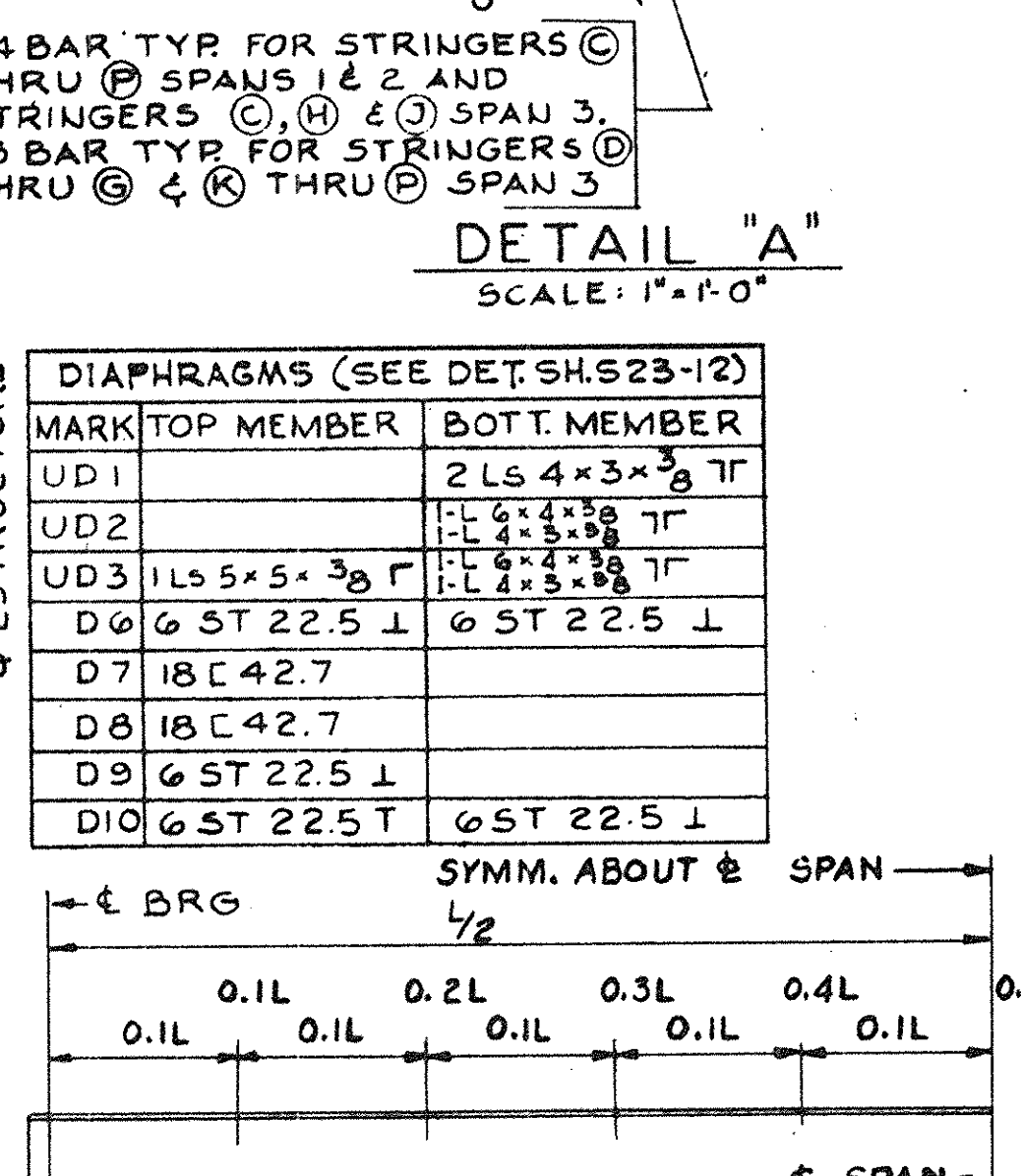
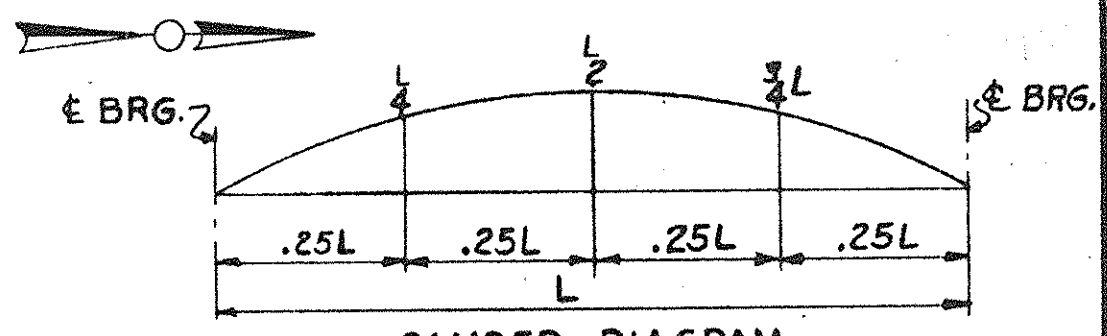
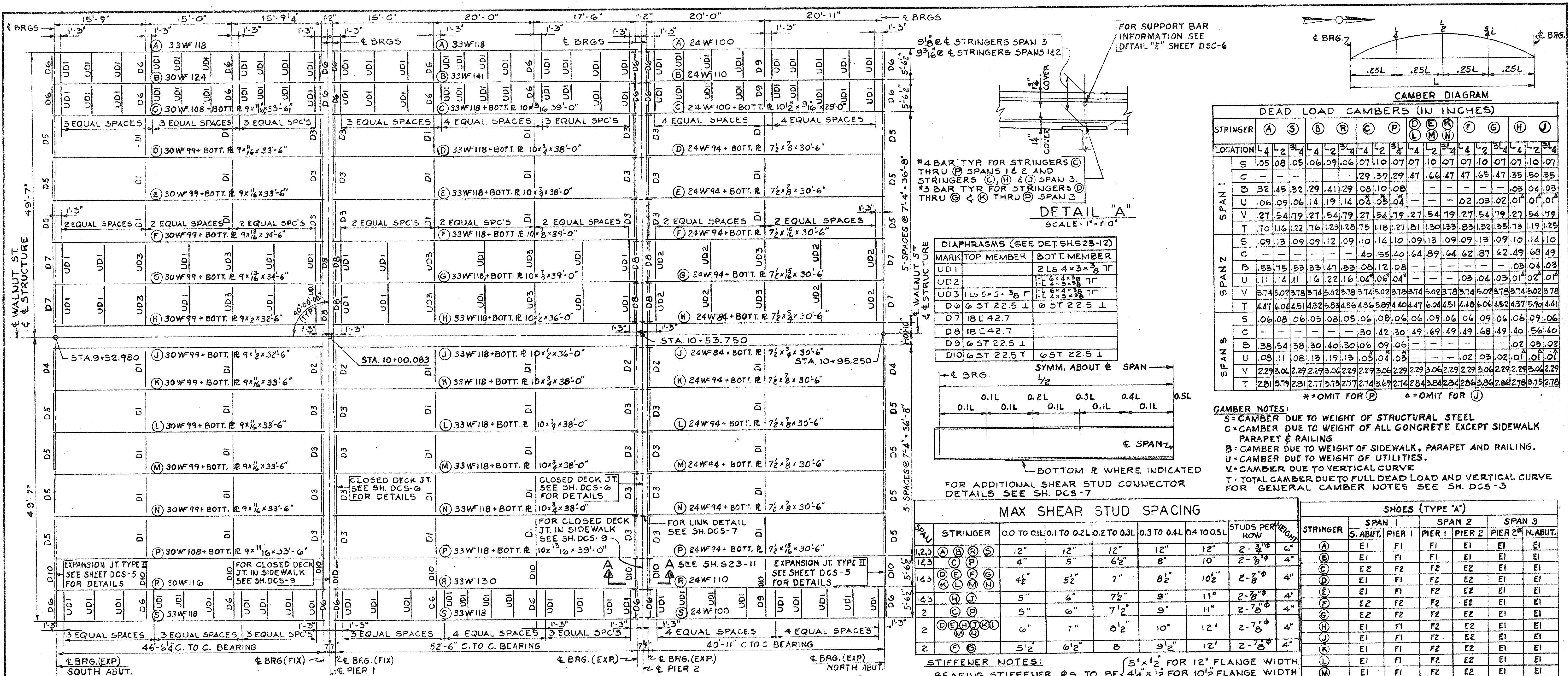
- - EXISTING EXPANSION SHOE ROCKER BEARING
- △ - EXISTING DIAPHRAGM WITH 7/8"φ X 4" HIGH SHEAR CONNECTORS @ 8" O.C. CONTRACTOR SHALL REPLACE CONNECTORS IF MISSING OR DAMAGED.
- - LINK TO BE REMOVED, DISPOSED AND REPLACED
- - EXPANSION BEARING TO BE RESET

AS BUILT

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	RRS	12/93
		DRAWN:	SAS	12/93
		CHECKED:	EMM	12/93
		BY	GTS	10/95

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION WALNUT STREET (STR. NO. S-23) FRAMING PLAN	
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116	
	Sheet No. 27

(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R18



DIAPHRAGMS (SEE DET. SH. S23-12)

MARK	TOP MEMBER	BOTT. MEMBER
UD1	2LS 4x3x3/8 TF	2LS 4x3x3/8 TF
UD2	2LS 4x3x3/8 TF	2LS 4x3x3/8 TF
UD3	1LS 5x5x3/8 TF	1LS 4x3x3/8 TF
D6	6 ST 22.5 L	6 ST 22.5 L
D7	18 C 42.7	6 ST 22.5 L
D8	18 C 42.7	6 ST 22.5 L
D9	6 ST 22.5 L	6 ST 22.5 L
D10	6 ST 22.5 T	6 ST 22.5 L

MAX SHEAR STUD SPACING

SPAN	STRINGER	0.0 TO 0.1L	0.1 TO 0.2L	0.2 TO 0.3L	0.3 TO 0.4L	0.4 TO 0.5L	STUDS PER ROW	HEIGHT
1,2,3	(A) (B) (C) (D)	12"	12"	12"	12"	12"	2-3/8"	6"
1,2,3	(E) (F) (G)	4"	5"	6"	8"	10"	2-3/8"	4"
1,2,3	(H) (I) (J) (K) (L) (M) (N)	4 1/2"	5 1/2"	7"	8 1/2"	10 1/2"	2-3/8"	4"
2	(O) (P)	5"	6"	7 1/2"	9"	11"	2-7/8"	4"
2	(Q) (R) (S) (T) (U) (V) (W) (X) (Y) (Z)	6"	7"	8 1/2"	10"	12"	2-7/8"	4"
2	(AA) (AB) (AC) (AD) (AE) (AF) (AG) (AH) (AI) (AJ) (AK) (AL) (AM) (AN) (AO) (AP) (AQ) (AR) (AS) (AT) (AU) (AV) (AW) (AX) (AY) (AZ)	5 1/2"	6 1/2"	8"	9 1/2"	12"	2-7/8"	4"

STIFFENER NOTES:

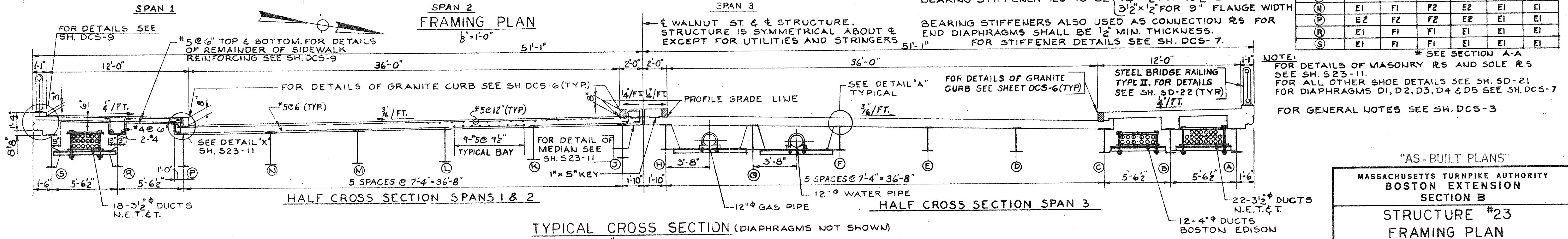
BEARING STIFFENER RS TO BE: 5"x12" FOR 12" FLANGE WIDTH, 4 1/2"x12" FOR 10 1/2" FLANGE WIDTH, 3 1/2"x12" FOR 9" FLANGE WIDTH

BEARING STIFFENERS ALSO USED AS CONNECTION RS FOR END DIAPHRAGMS SHALL BE 1/2" MIN. THICKNESS. FOR STIFFENER DETAILS SEE SH. DCS-7.

DEAD LOAD CAMBERS (IN INCHES)

STRINGER	(A)	(S)	(B)	(R)	(C)	(P)	(D)	(E)	(M)	(F)	(G)	(H)	(J)
LOCATION	L4	L2	L4	L2	L4	L2	L4	L2	L4	L2	L4	L2	L4
SPAN 1	S	.05	.08	.05	.06	.09	.06	.07	.10	.07	.07	.10	.07
	C	-	-	-	-	.29	.39	.29	.47	.66	.47	.65	.47
	B	.32	.45	.32	.29	.41	.29	.08	.10	.08	-	-	.03
	U	.06	.09	.06	.14	.19	.14	.08	.08	.08	-	-	.02
	V	.27	.54	.27	.54	.79	.27	.54	.79	.27	.54	.79	.27
	T	.70	1.16	1.22	.76	1.23	1.28	.75	1.18	1.27	.81	1.30	1.33
SPAN 2	S	.09	.13	.09	.09	.12	.09	.10	.14	.10	.09	.13	.09
	C	-	-	-	-	.40	.55	.40	.64	.89	.64	.87	.62
	B	.53	.75	.53	.33	.47	.33	.08	1.2	.08	-	-	.03
	U	.11	.14	.11	.16	.22	.16	.04	.06	.04	-	-	.03
	V	3.74	5.02	3.78	3.74	5.02	3.78	3.74	5.02	3.78	3.74	5.02	3.78
	T	4.47	6.04	4.51	4.32	5.89	4.36	4.36	5.89	4.40	4.47	6.04	4.51
SPAN 3	S	.06	.08	.06	.05	.08	.05	.06	.08	.06	.06	.09	.06
	C	-	-	-	-	.30	.42	.30	.49	.69	.49	.68	.49
	B	.38	.54	.38	.30	.40	.30	.06	.09	.06	-	-	.02
	U	.08	.11	.08	.13	.19	.13	.05	.04	.05	-	-	.02
	V	2.29	3.04	2.29	2.29	3.04	2.29	2.29	3.04	2.29	2.29	3.04	2.29
	T	2.81	3.79	2.81	2.77	3.73	2.77	2.74	3.69	2.74	2.84	3.84	2.84

* OMIT FOR (P) A OMIT FOR (J)



NOTE:

* SEE SECTION A-A

FOR DETAILS OF MASONRY RS AND SOLE RS SEE SH. S23-11.

FOR ALL OTHER SHOE DETAILS SEE SH. SD-21

FOR DIAPHRAGMS D1, D2, D3, D4 & D5 SEE SH. DCS-7

FOR GENERAL NOTES SEE SH. DCS-3

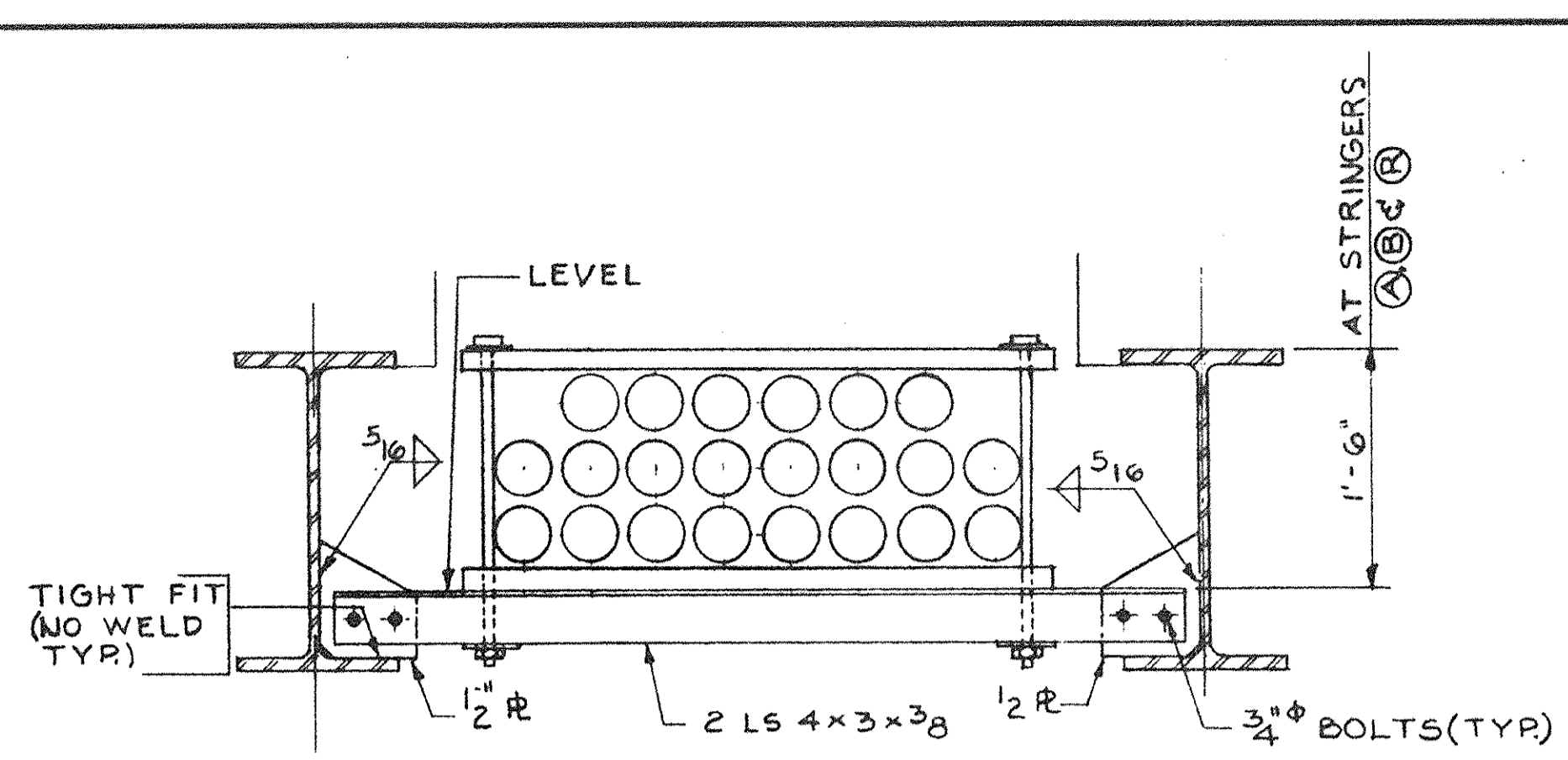
"AS-BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION B

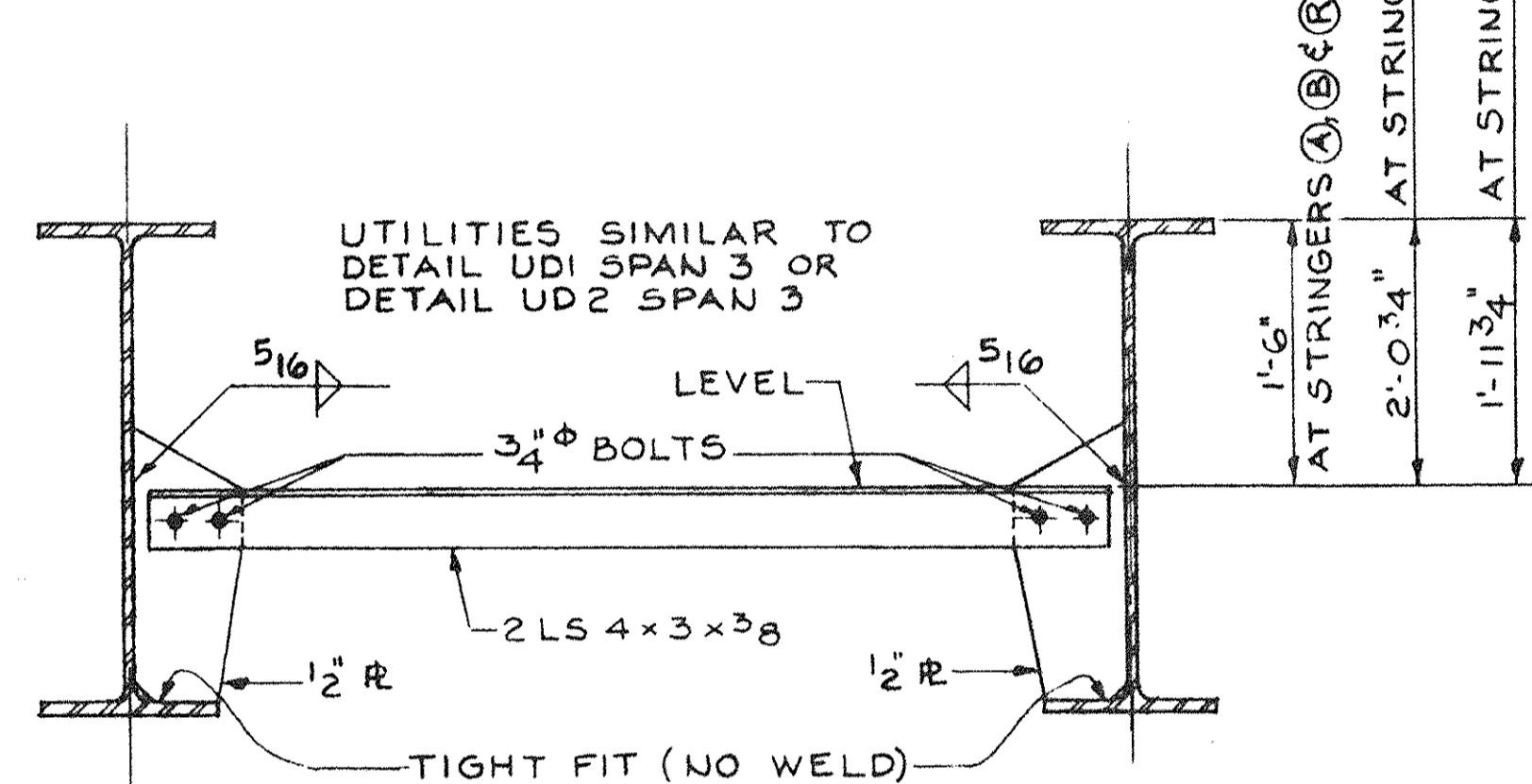
STRUCTURE #23
FRAMING PLAN
CROSS SECTION AND DETAILS

DE LEUW, CATHER & CO.
CONSULTING ENGINEERS
381 BOYLSTON BROOKLINE, MASS. SHEET NO. S23-10

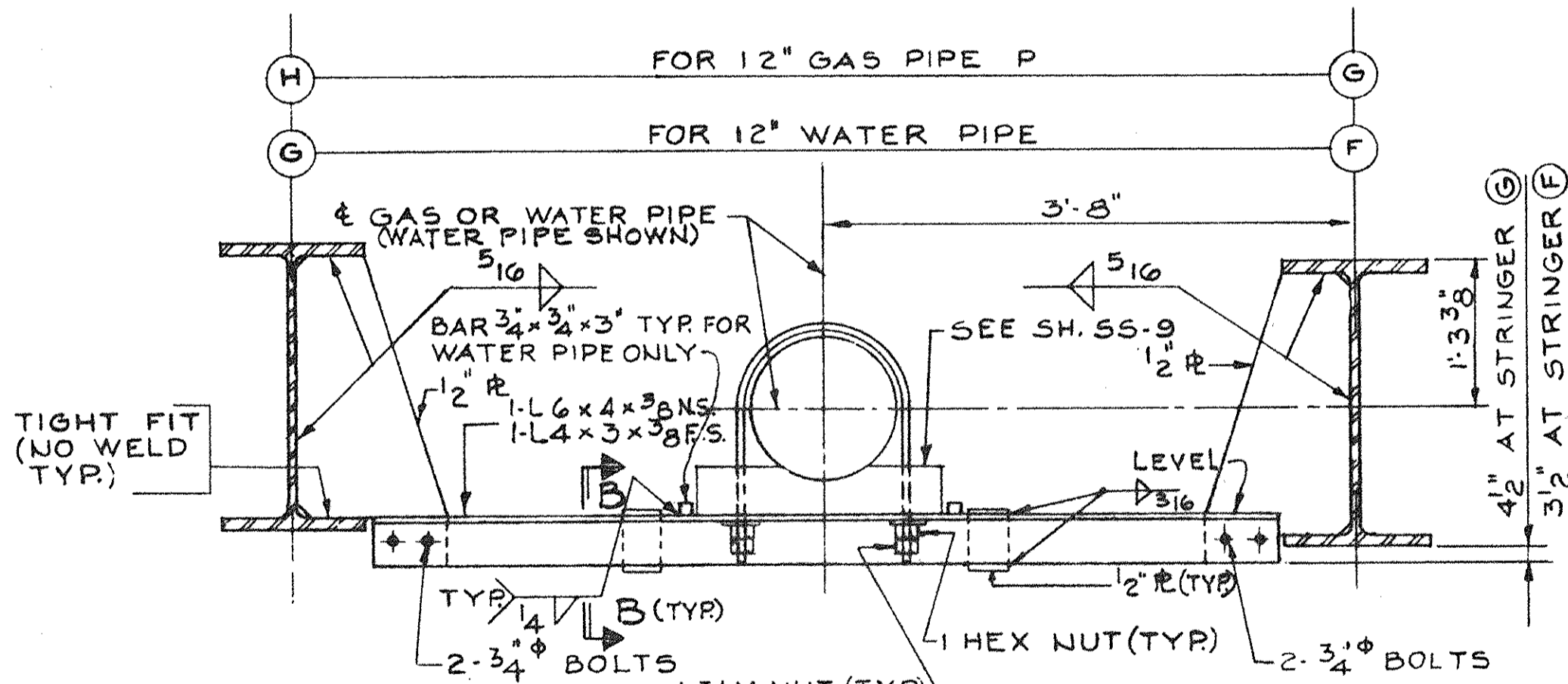
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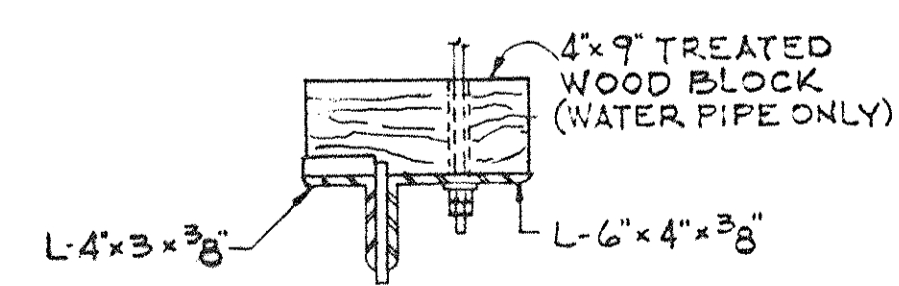
DIAPHRAGM DETAIL UDI SPAN 3
SCALE: 1"=1'-0"



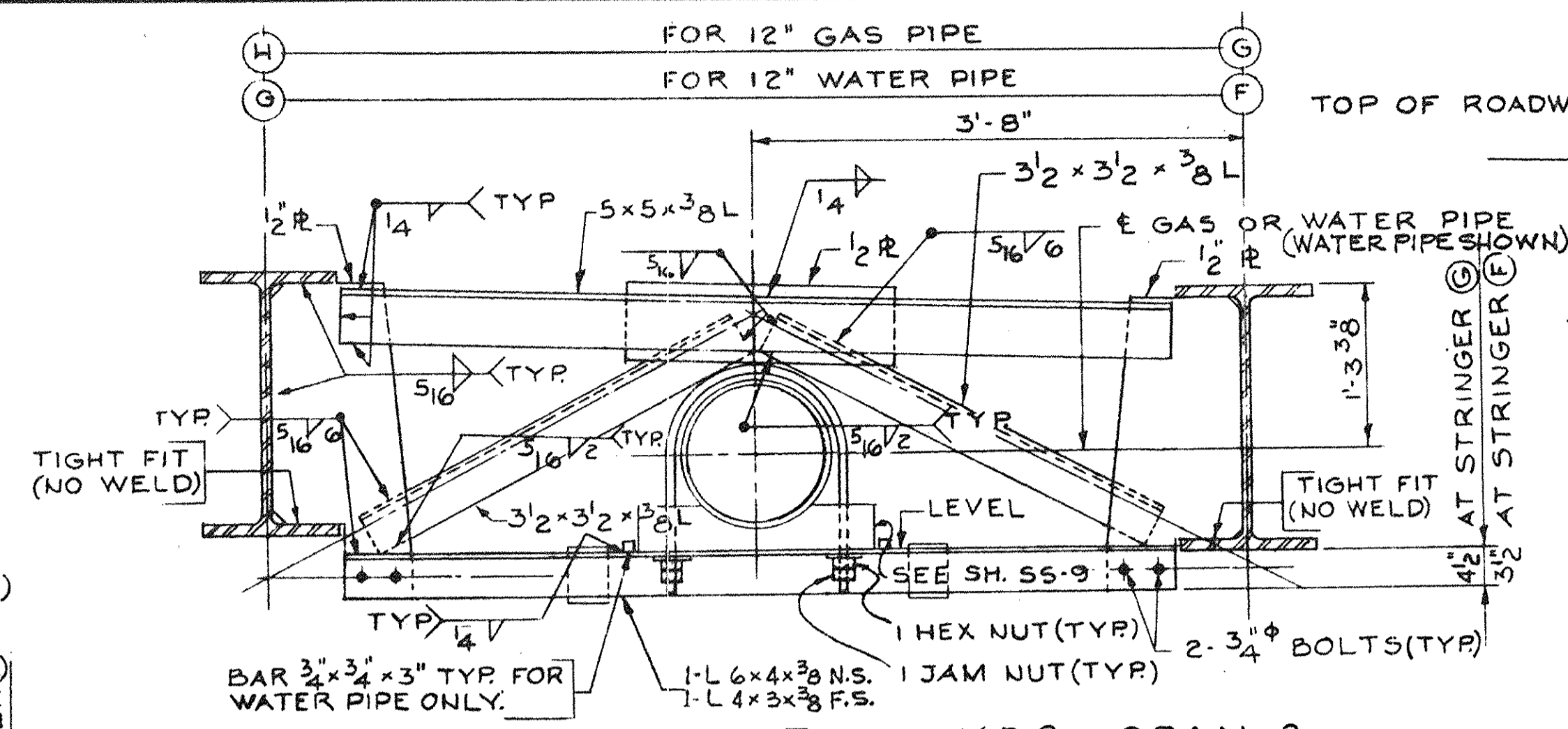
DIAPHRAGM DETAIL UDI SPANS 1 & 2
SCALE: 1"=1'-0"



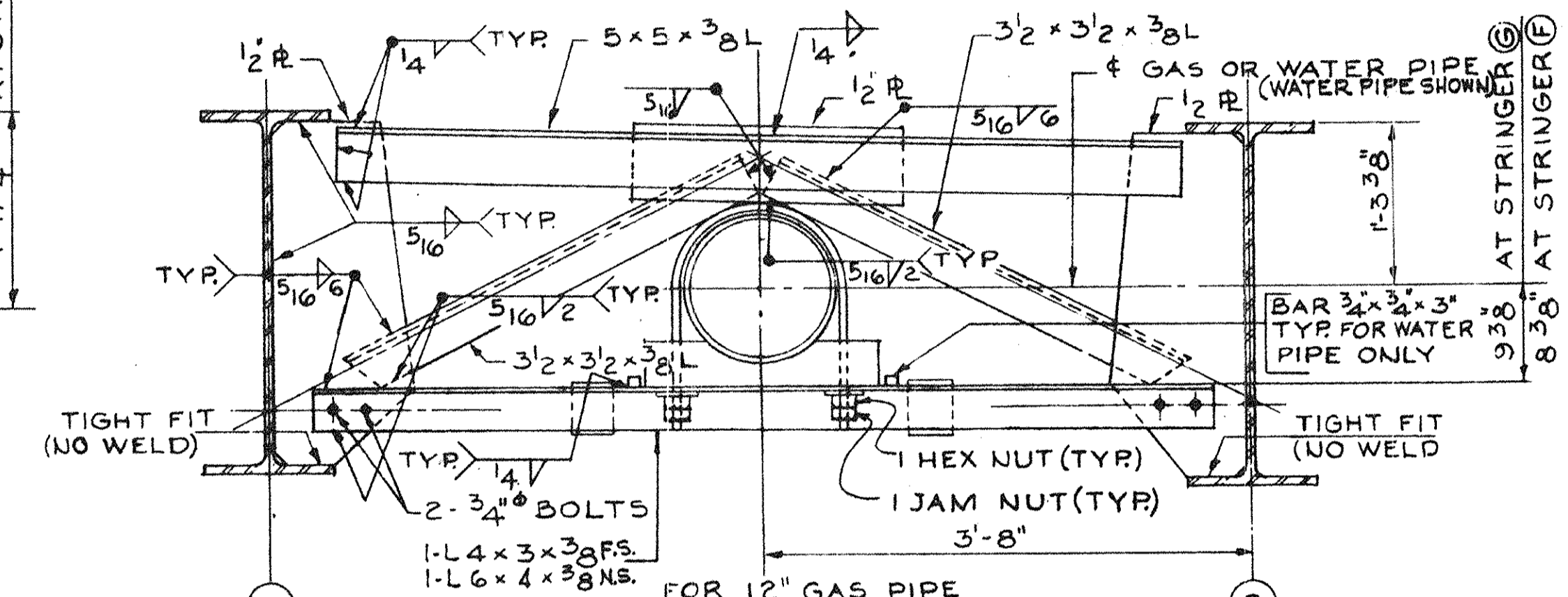
DIAPHRAGM DETAIL UD2 SPAN 3
SCALE: 1"=1'-0"



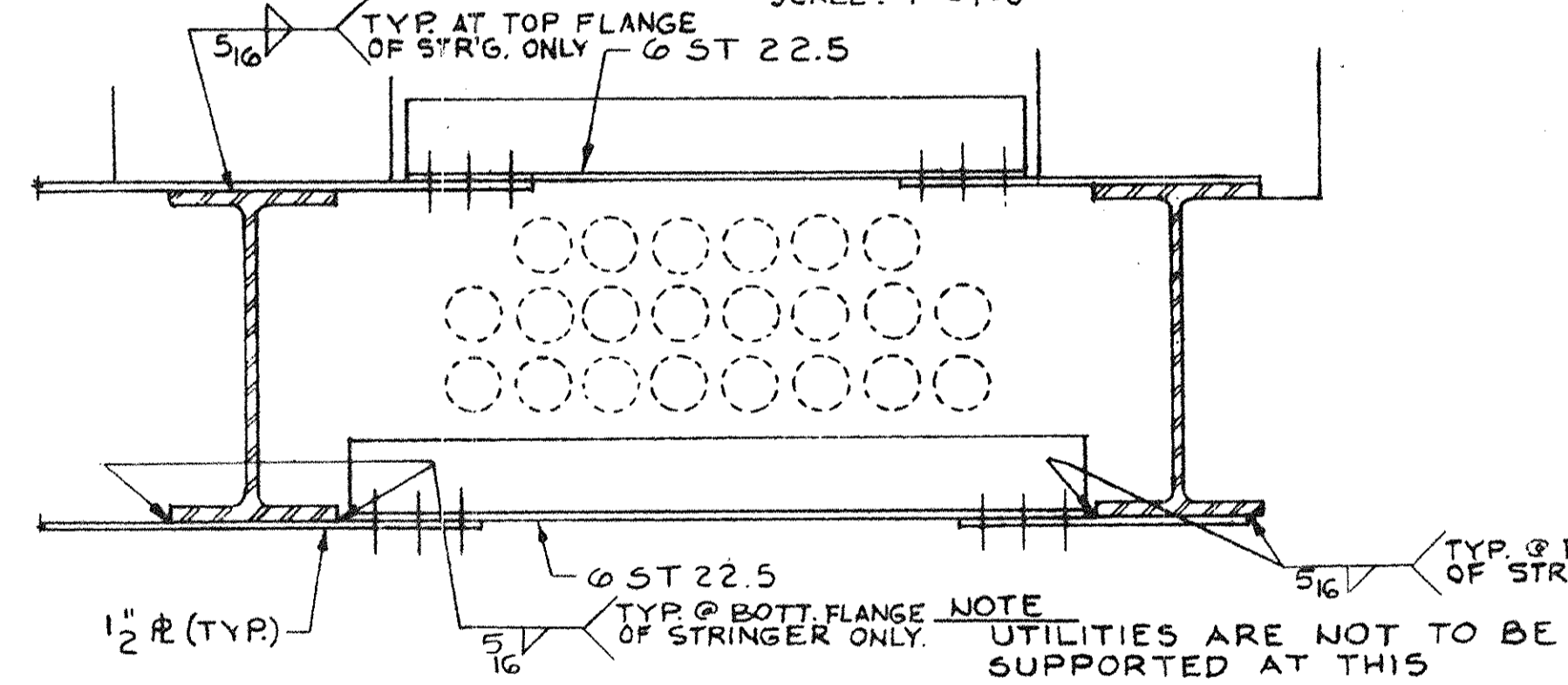
SECTION B-B
SCALE: 1/2"=1'-0"



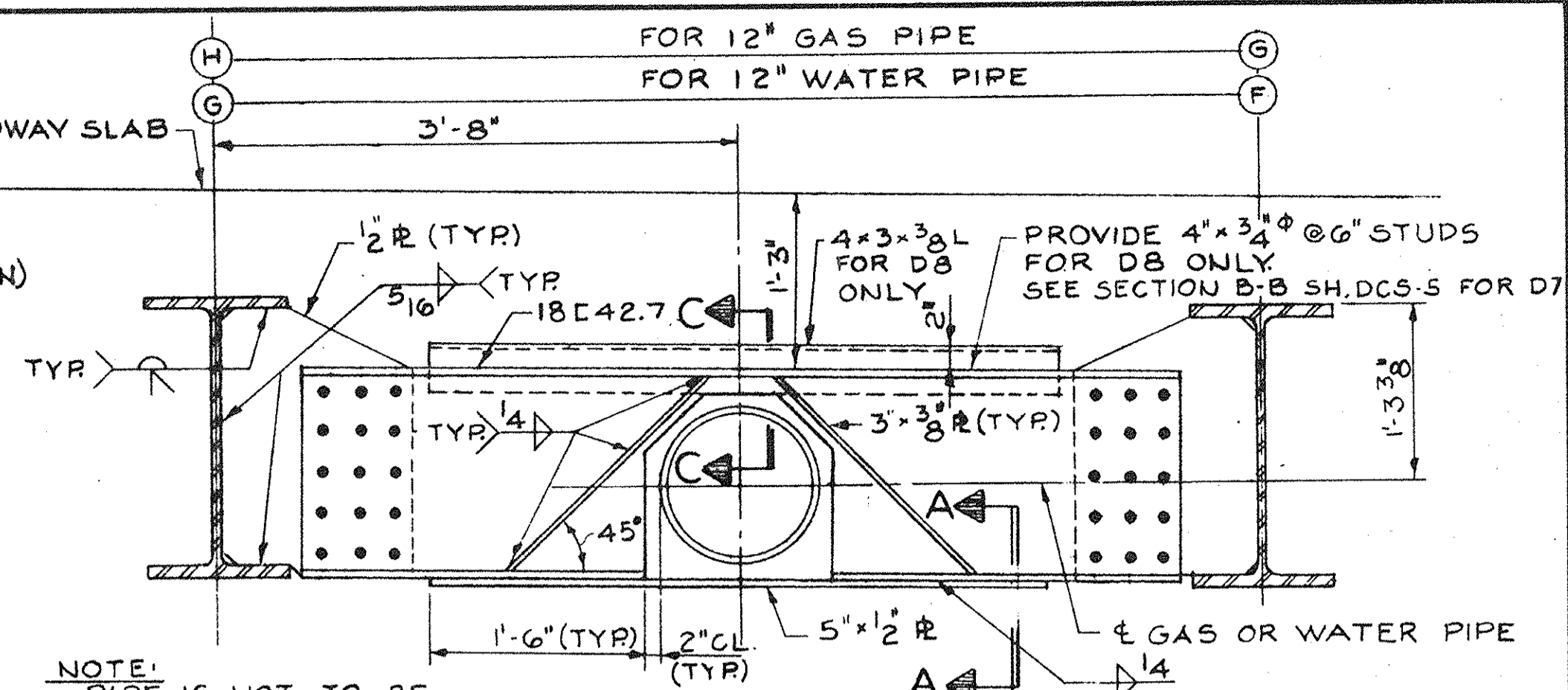
DIAPHRAGM DETAIL UD3 SPAN 3
SCALE: 1"=1'-0"



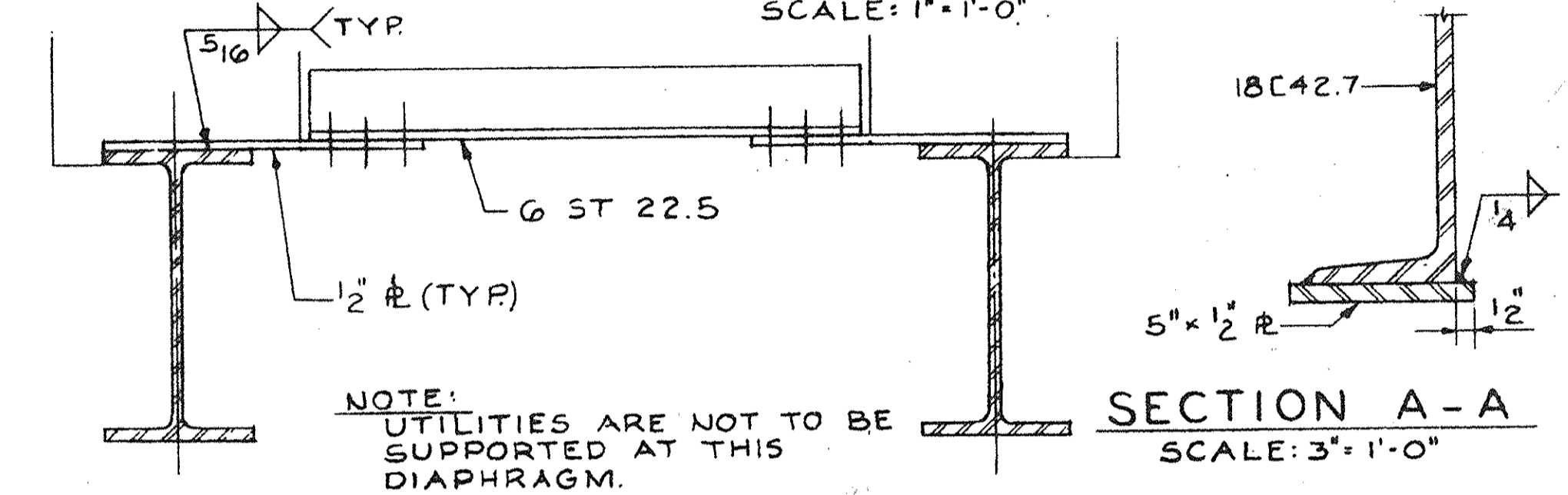
DIAPHRAGM DETAIL UD3 SPANS 1 & 2
SCALE: 1"=1'-0"



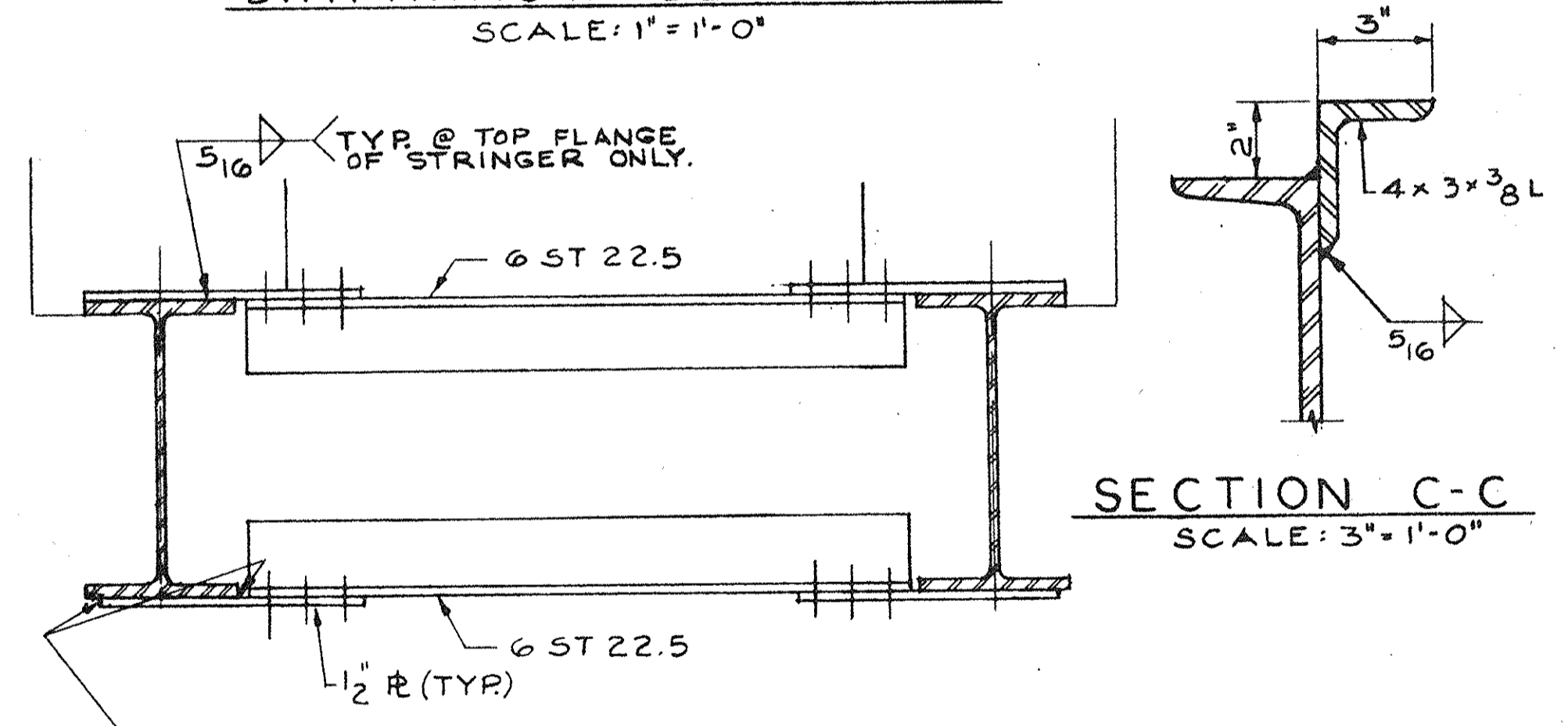
DIAPHRAGM DETAIL D6
SCALE: 1"=1'-0"



DIAPHRAGM DETAIL D7 (AS SHOWN)
DIAPHRAGM DETAIL D8 (AS NOTED)
SCALE: 1"=1'-0"



DIAPHRAGM DETAIL D9
SCALE: 1"=1'-0"



DIAPHRAGM DETAIL D10
SCALE: 1"=1'-0"

NOTE:
FOR DETAILS OF UTILITIES AND METHOD OF SUPPORTING UTILITIES SEE SH. 55-9
SEE GENERAL NOTES FOR STEELWORK SH. DCS-3

"AS-BUILT PLANS"	
MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION B	
STRUCTURE #23 WALNUT ST. OVER EXTENSION DIAPHRAGM DETAILS	
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 381 BOYLSTON BROOKLINE, MASS.	SCALE AS NOTED SHEET NO. S23-12

GENERAL NOTES:

DESIGN LOADING:

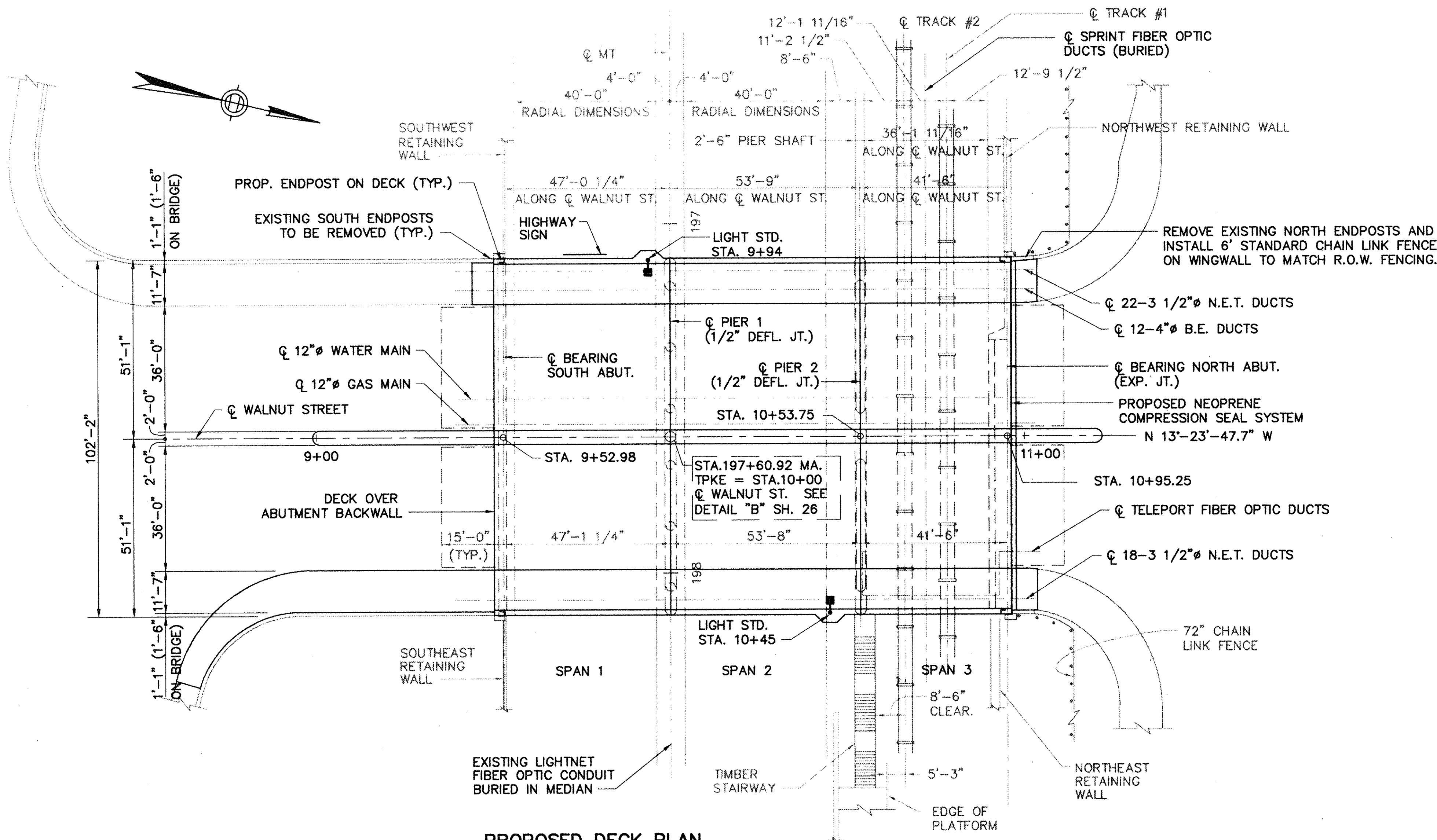
A.A.S.H.T.O. LOADING HS20-44

MATERIALS:

1. CONCRETE FOR DECK SLAB, SIDEWALKS, MEDIANS, AND END POSTS SHALL BE CLASS "D" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c = 4500$ PSI.
2. CONCRETE FOR ABUTMENT BACKWALL MODIFICATIONS SHALL BE CLASS "E" CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f_c = 5000$ PSI.
3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s = 24,000$ PSI.
4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

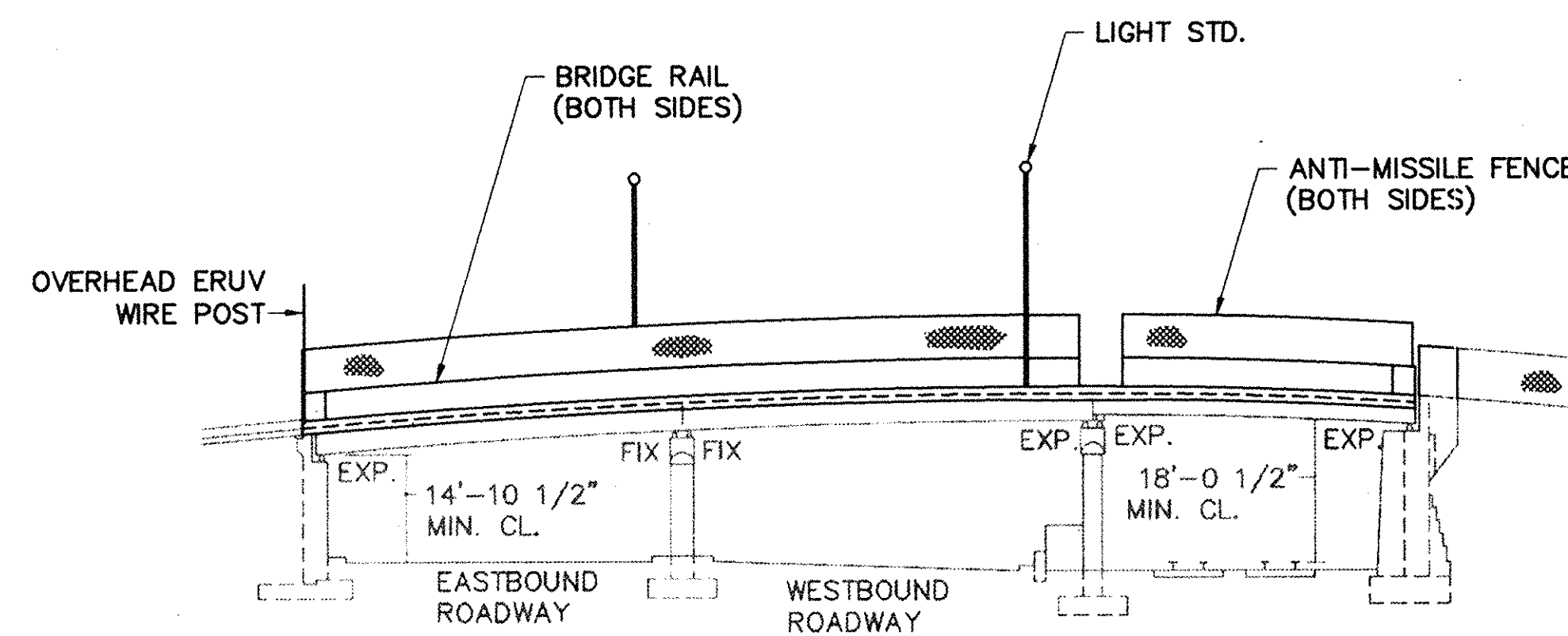
NOTES:

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY ALL DIMENSIONS IN THE FIELD TO INSURE HORIZONTAL AND VERTICAL ALIGNMENT.
2. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH FRESH CONCRETE SHALL BE POWER TOOL CLEANED CONFORMING TO SSPC SP-11 AS PER SECTION C25A OF THE SPECIFICATIONS AND IS INCIDENTAL TO ITEM C32-1b.
3. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
4. FOR END POST DETAILS, SEE SHEET NO. 33.
5. EXISTING OVERHEAD "ERUV" WIRE MUST BE IN PLACE AND CONNECTED TO MASS. TURNPIKE R.O.W. FENCING FROM 3 P.M. ON EACH FRIDAY UNTIL 8 A.M. EACH SUNDAY DURING ALL PHASES OF CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION.



PROPOSED DECK PLAN

SCALE: 1" = 20'



ELEVATION (EAST)

SCALE: 1" = 20'

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED:	GRI 12/93	BY DATE
		DRAWN:	JNC 12/93	
		CHECKED:	EMM 12/93	

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
WALNUT STREET (STR. NO. S-23)
PROPOSED DECK PLAN

Scale: AS NOTED Contract No. 521-024

DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, MA 02116

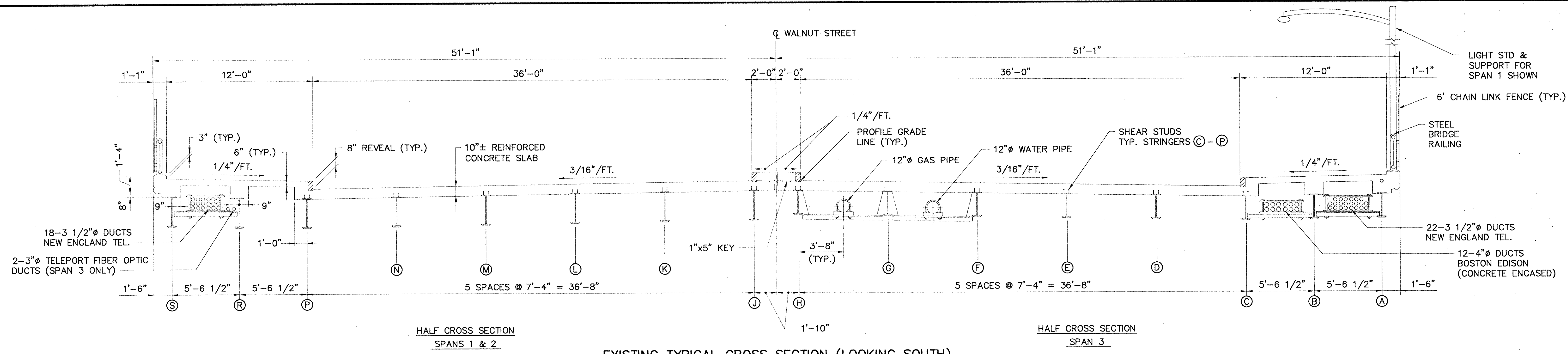
EDWARDS AND KELCEY, INC.
The Schreffl Center
229 Main Street
Boston, Massachusetts 02129

Sheet No.

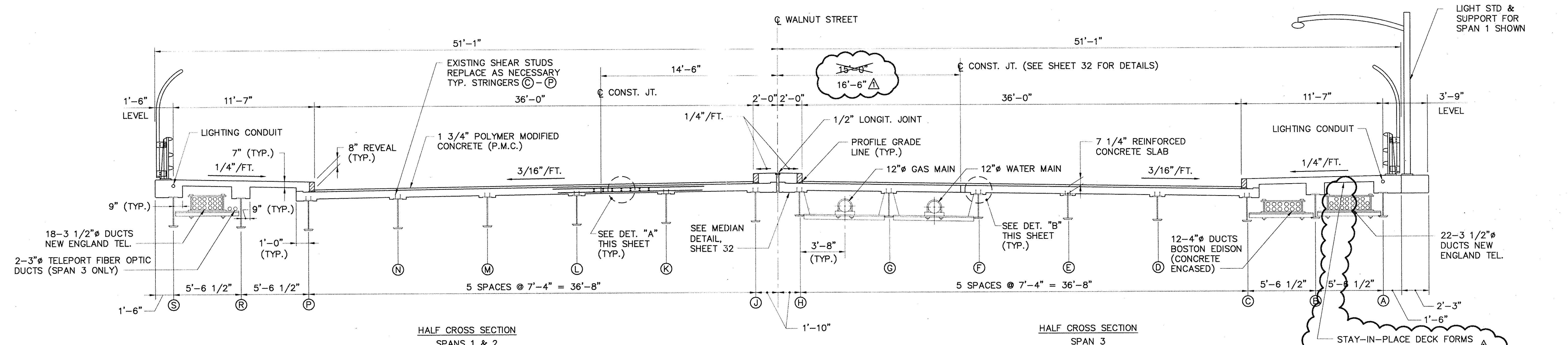
28

(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R21

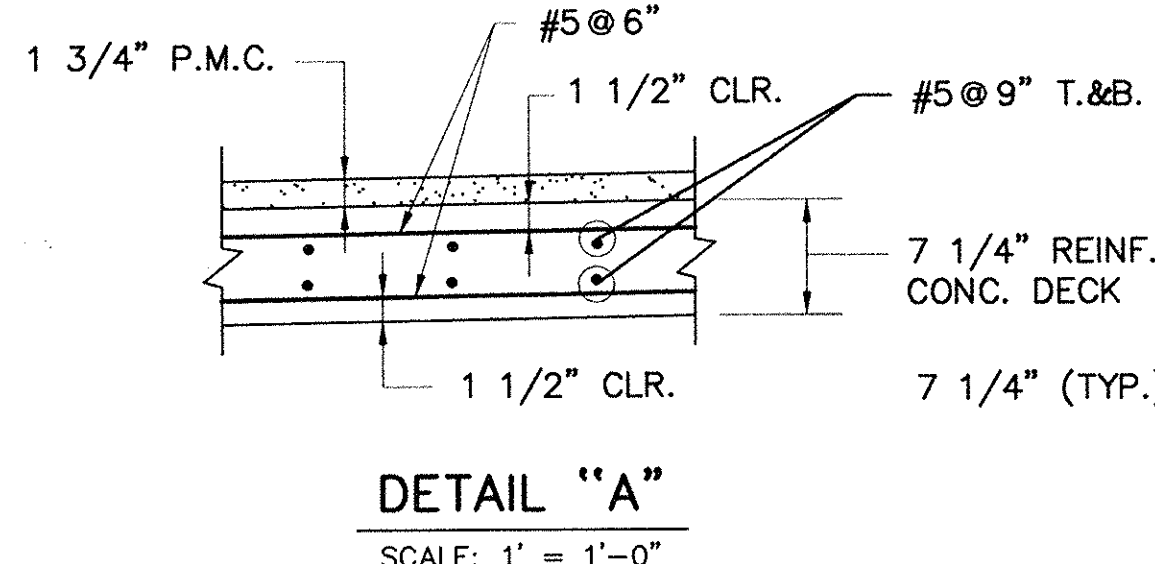
DOOCIE:\STRUCTUR\TURNPIKE\WALNUTST\09011-28.DWG (PLOT 1=20) 01/06/94



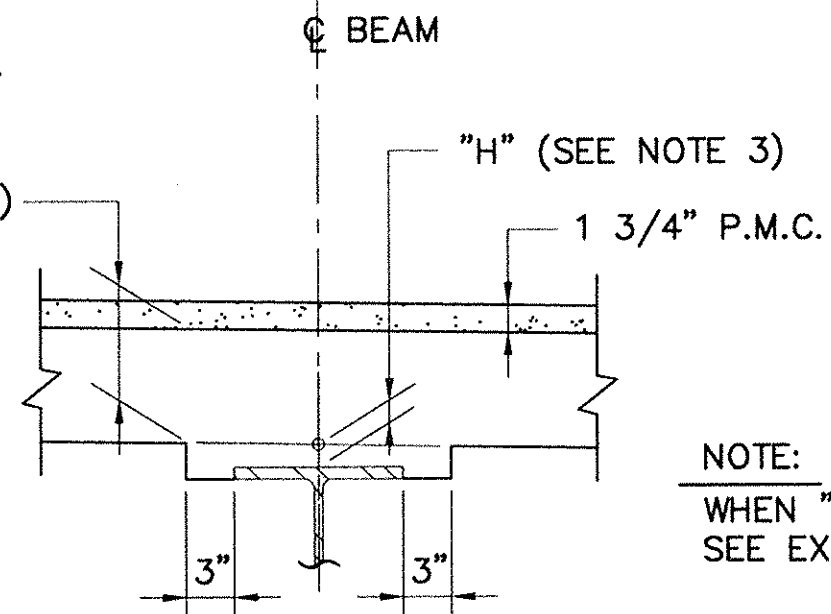
EXISTING TYPICAL CROSS SECTION (LOOKING SOUTH)
(DIAPHRAGMS NOT SHOWN)
SCALE: 1/4" = 1'-0"



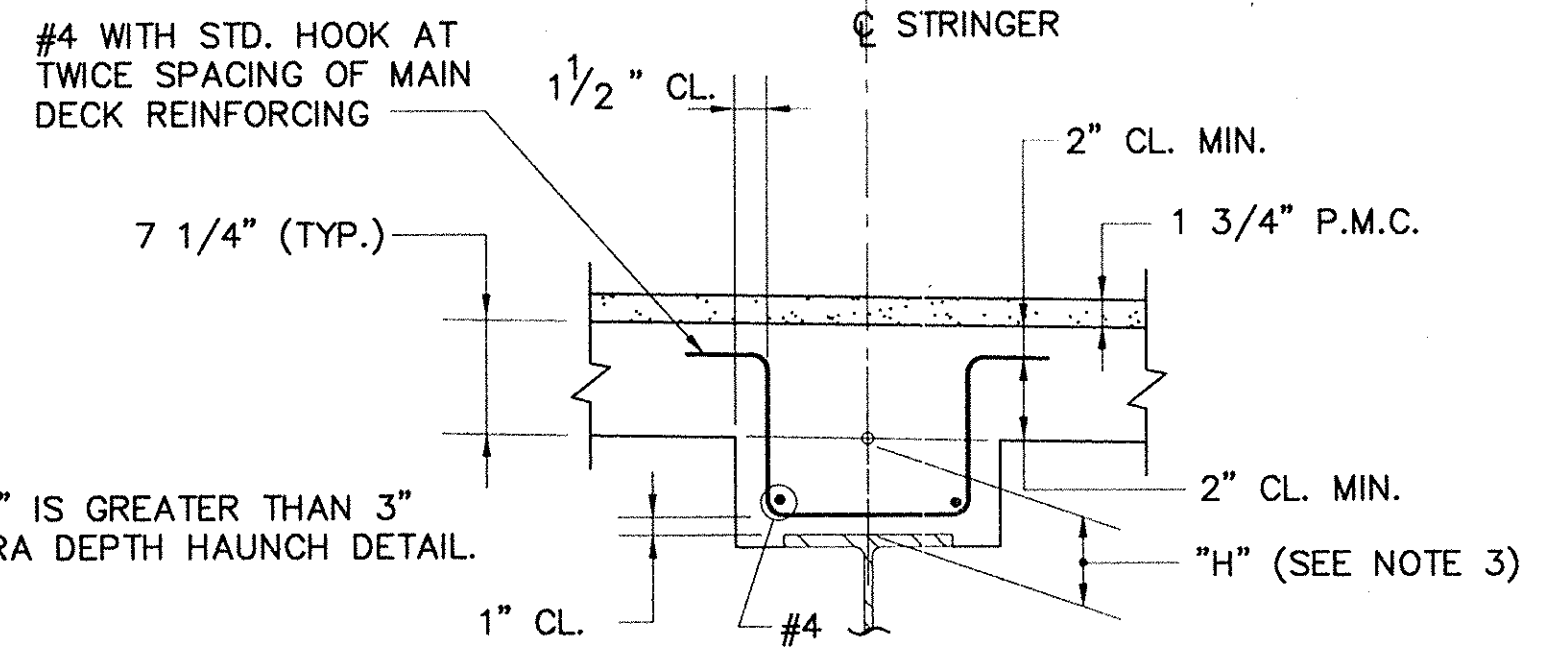
PROPOSED TYPICAL CROSS SECTION (LOOKING SOUTH)
(DIAPHRAGMS NOT SHOWN)
SCALE: 1/4" = 1'-0"



DETAIL "A"
SCALE: 1" = 1'-0"



DETAIL "B"
SCALE: 1" = 1'-0"
(REINF. IS NOT SHOWN)



EXTRA DEPTH HAUNCH DETAIL
SCALE: 1" = 1'-0"

NOTES

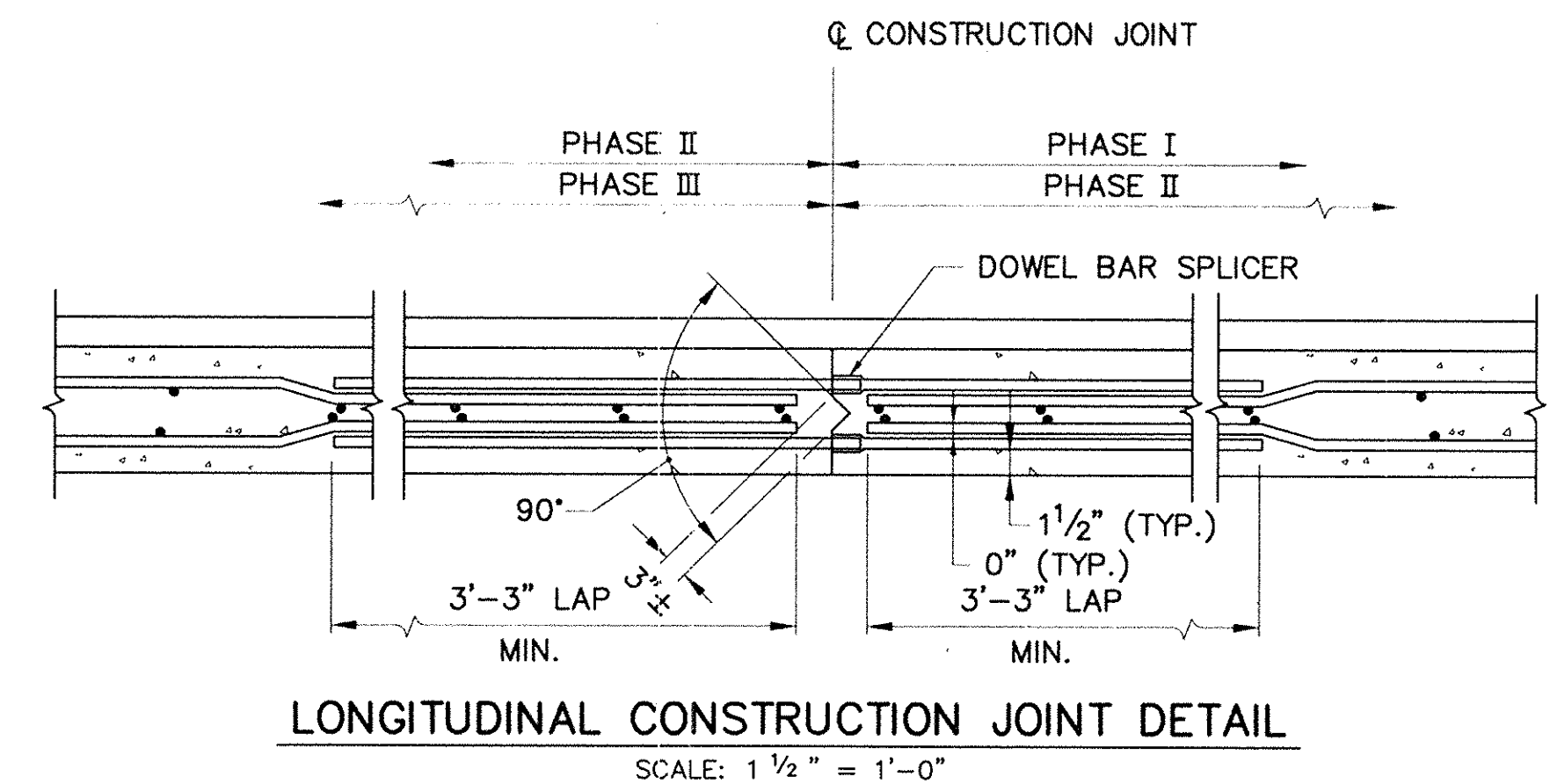
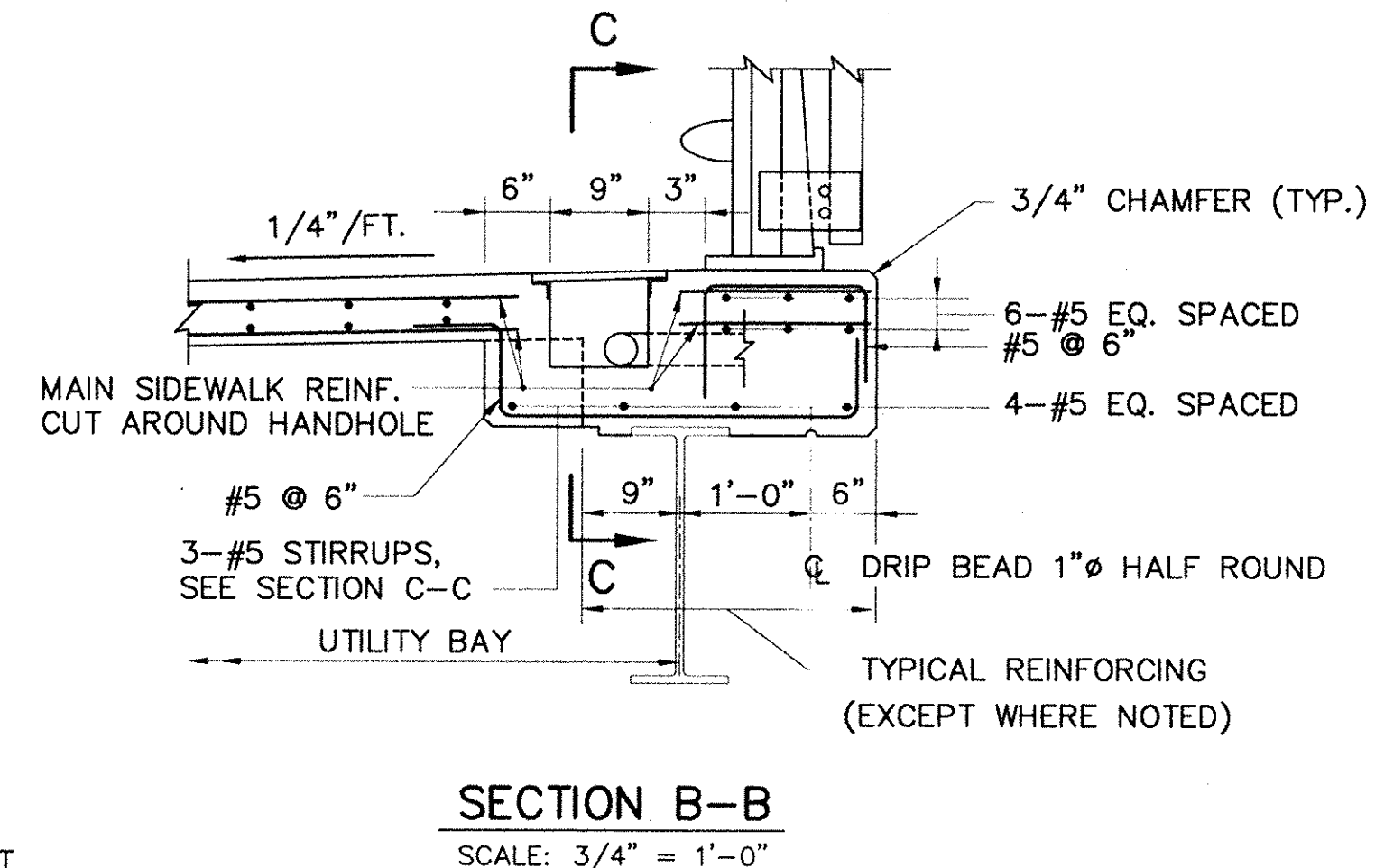
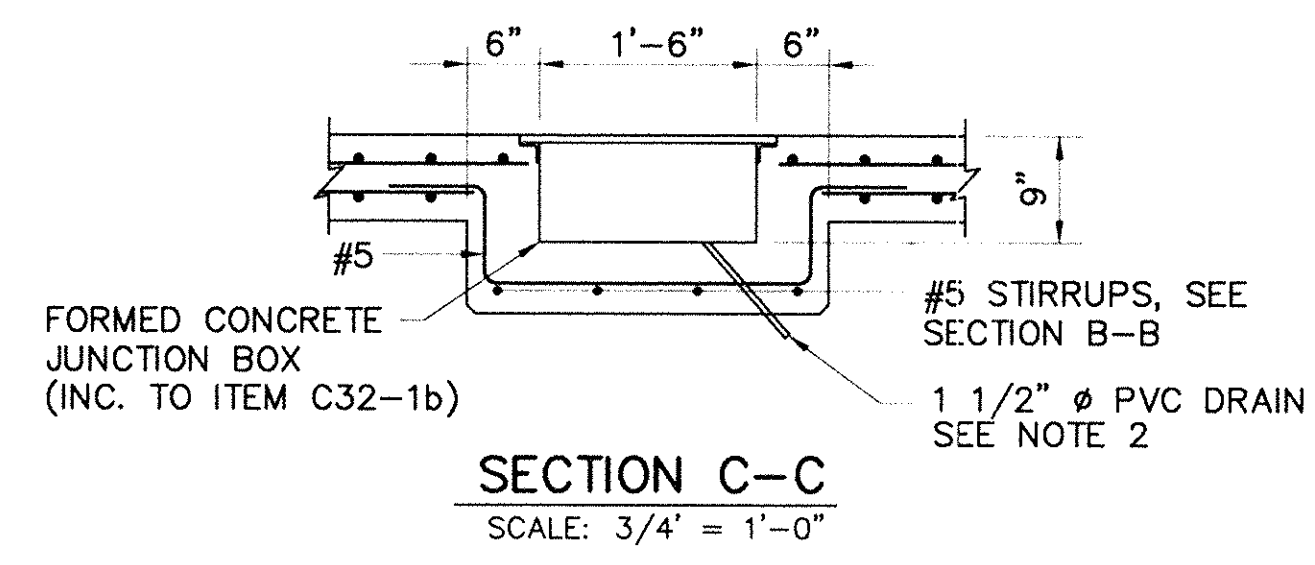
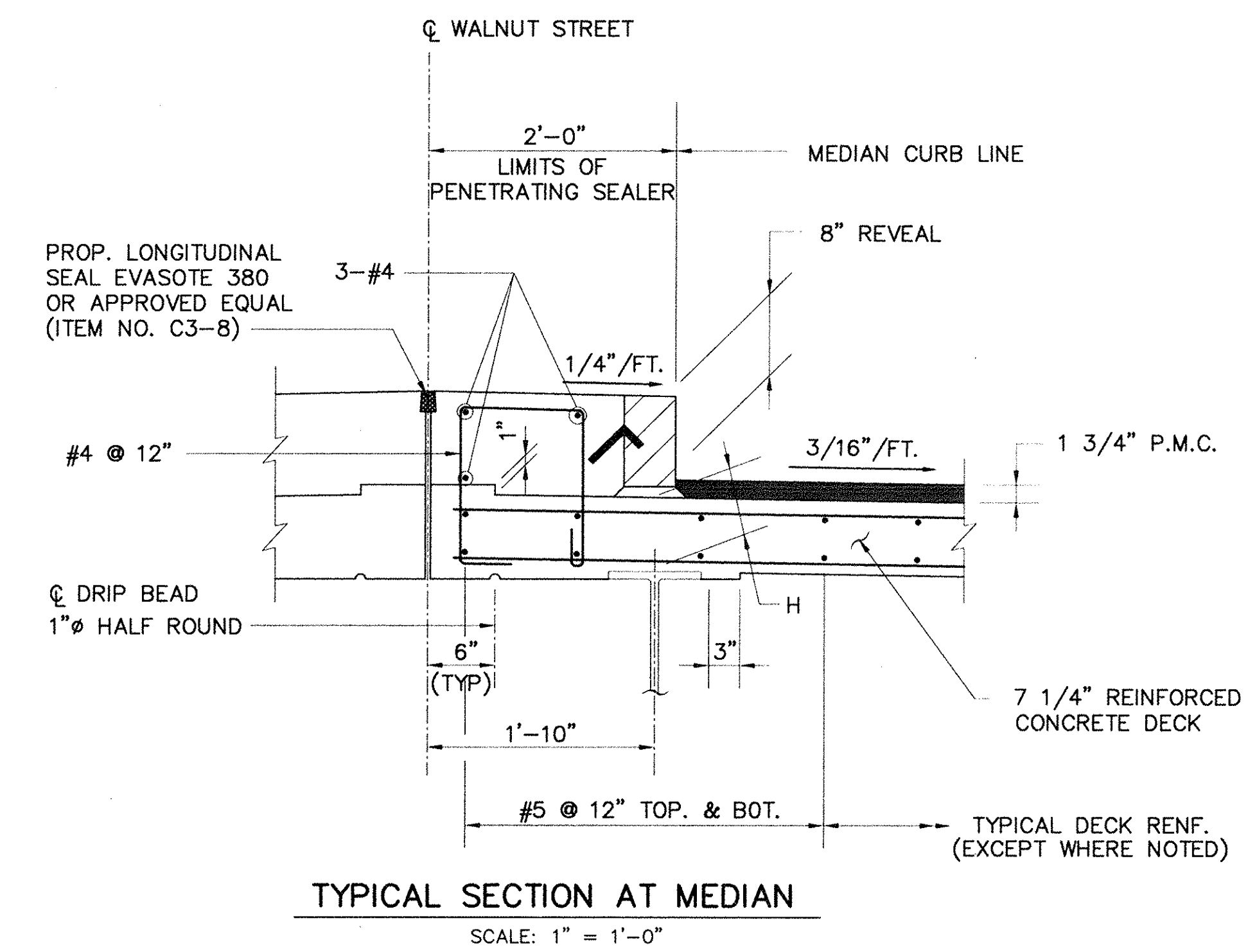
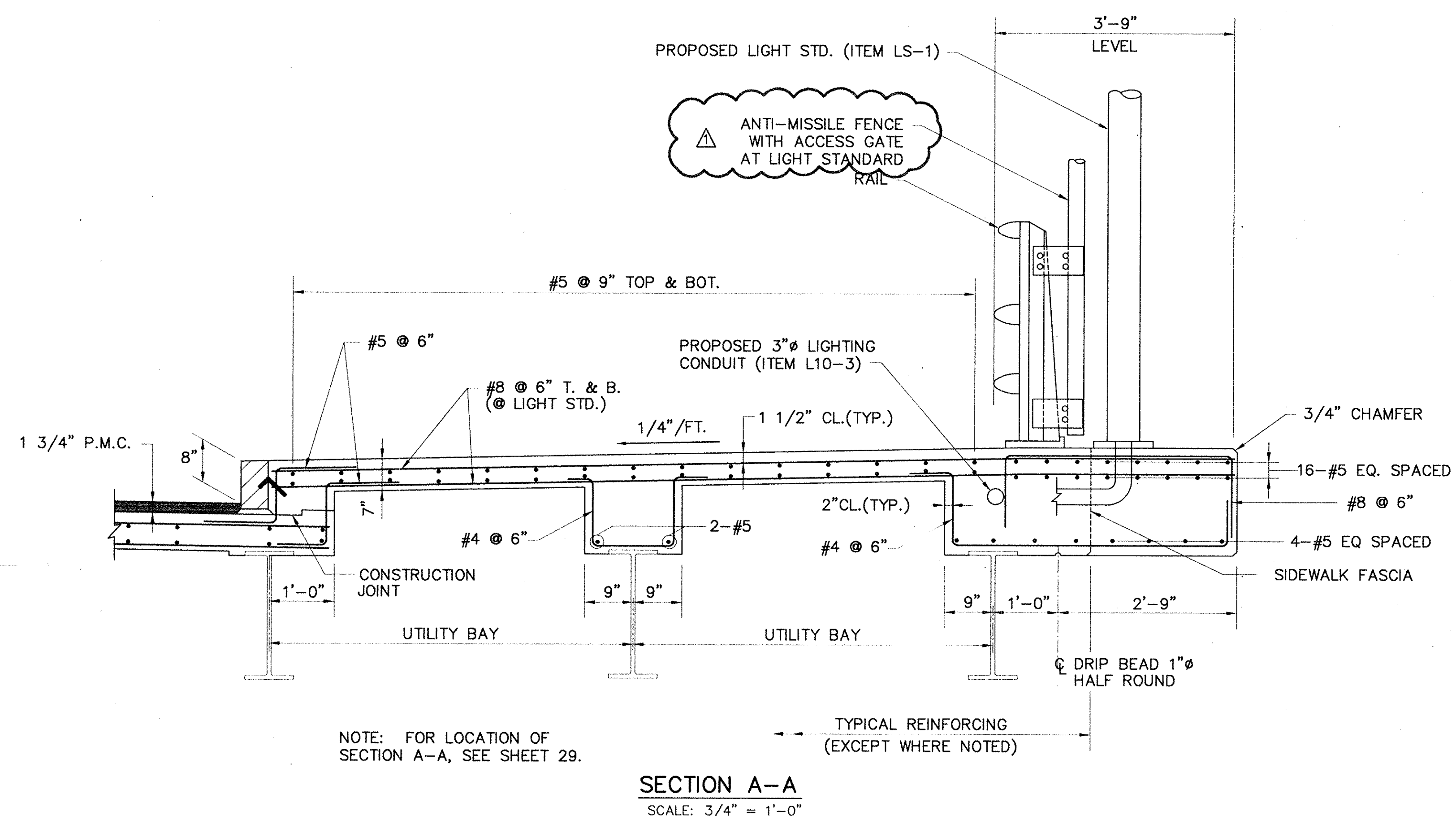
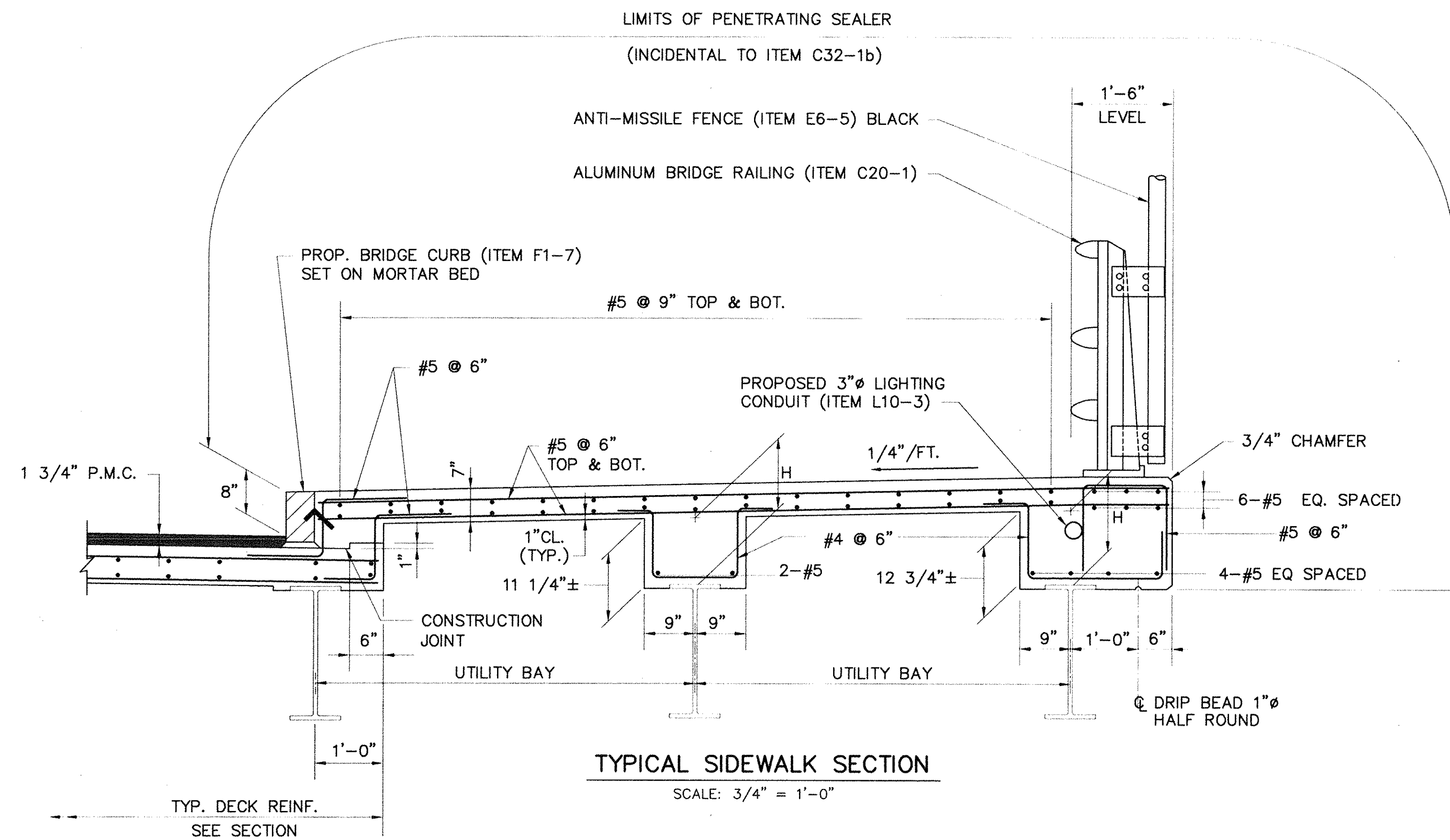
- FOR TYPICAL SIDEWALK DETAILS, SEE SHEET NO. 32.
- FOR MEDIAN DETAIL, SEE SHEET NO. 32.
- HAUNCH DEPTH "H" VARIES, WILL BE FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY WITHIN 7 DAYS (SATURDAY, SUNDAY AND HOLIDAYS EXCLUDED) FROM THE TIME THE CONTRACTOR PROVIDES THE EXISTING GRADES ALONG @ STRINGERS PRIOR TO CONCRETE REMOVAL, AND TOP OF STRINGER ELEVATIONS AFTER DECK IS REMOVED, SEE SPECIAL PROVISIONS SECTION C1-D.
- FOR HAUNCH DEPTH SETTING CHART SEE SHEET NO. 30.
- THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL BE EPOXY COATED. SEE THE SPECIFICATIONS.
- THE TOP AND BOTTOM MAT OF REINFORCING STEEL SHALL BE FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
- CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
- SUPERSTRUCTURE CONCRETE TO BE CLASS D CEMENT CONCRETE. (f'c = 4500 PSI).

AS BUILT

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
BRIDGE DECK RECONSTRUCTION	
WALNUT STREET (STR. NO. S-23)	
TYPICAL CROSS SECTIONS	
Scale: AS NOTED	Contract No. 521-024
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc. 80 Boylston Street Boston, MA 02116	EDWARDS AND KELCEY, INC. The Schmitt Center 529 Main Street Boston, Massachusetts 02129
Sheet No.	31

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: SAS	12/93	
		CHECKED: EMM	12/93	
		BY: GTS	10/95	

(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R22



- NOTES:**
1. LOCATION OF SECTIONS A-A & B-B ARE SHOWN ON SHEET 29.
 2. P.V.C. DRAINS LOCATED ABOVE THE TURNPIKE SHALL BE POSITIONED NOT TO DRAIN ONTO THE TRAVELED WAY AND SHALL EXTEND BELOW UTILITIES.
 3. FOR JUNCTION BOX FRAME DETAILS SEE SHT. NO. 29.

NO.	REVISION	BY	DATE	IN CHARGE OF GTS
		DESIGNED: GRI	12/93	
		DRAWN: WC	12/93	
		CHECKED: EMM	12/93	
		BY	DATE	

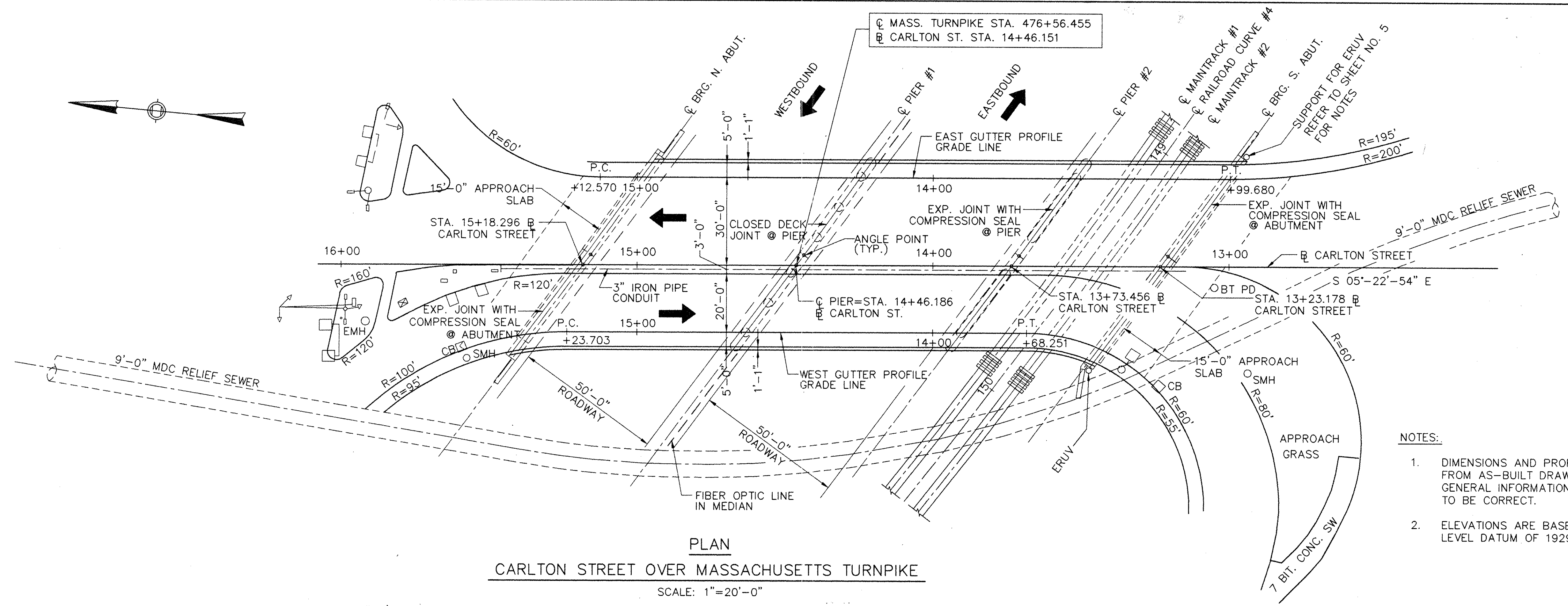
DESIGNED BY SUBCONSULTANT: Barnes and Jarnis, Inc.
80 Boylston Street
Boston, Massachusetts 02116

EDWARDS AND KELCEY, INC.
The Schreffel Center
229 Main Street
Boston, Massachusetts 02129

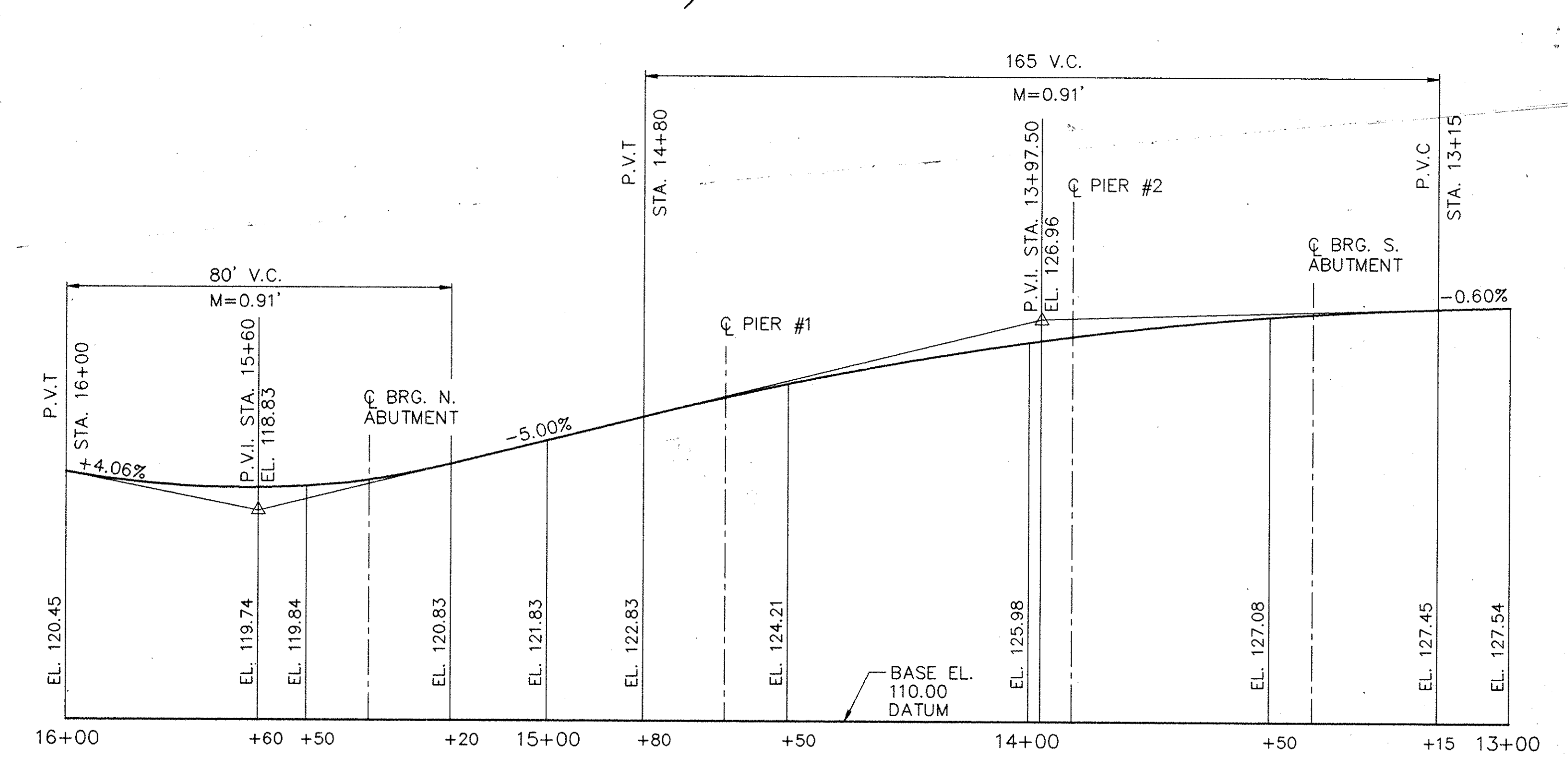
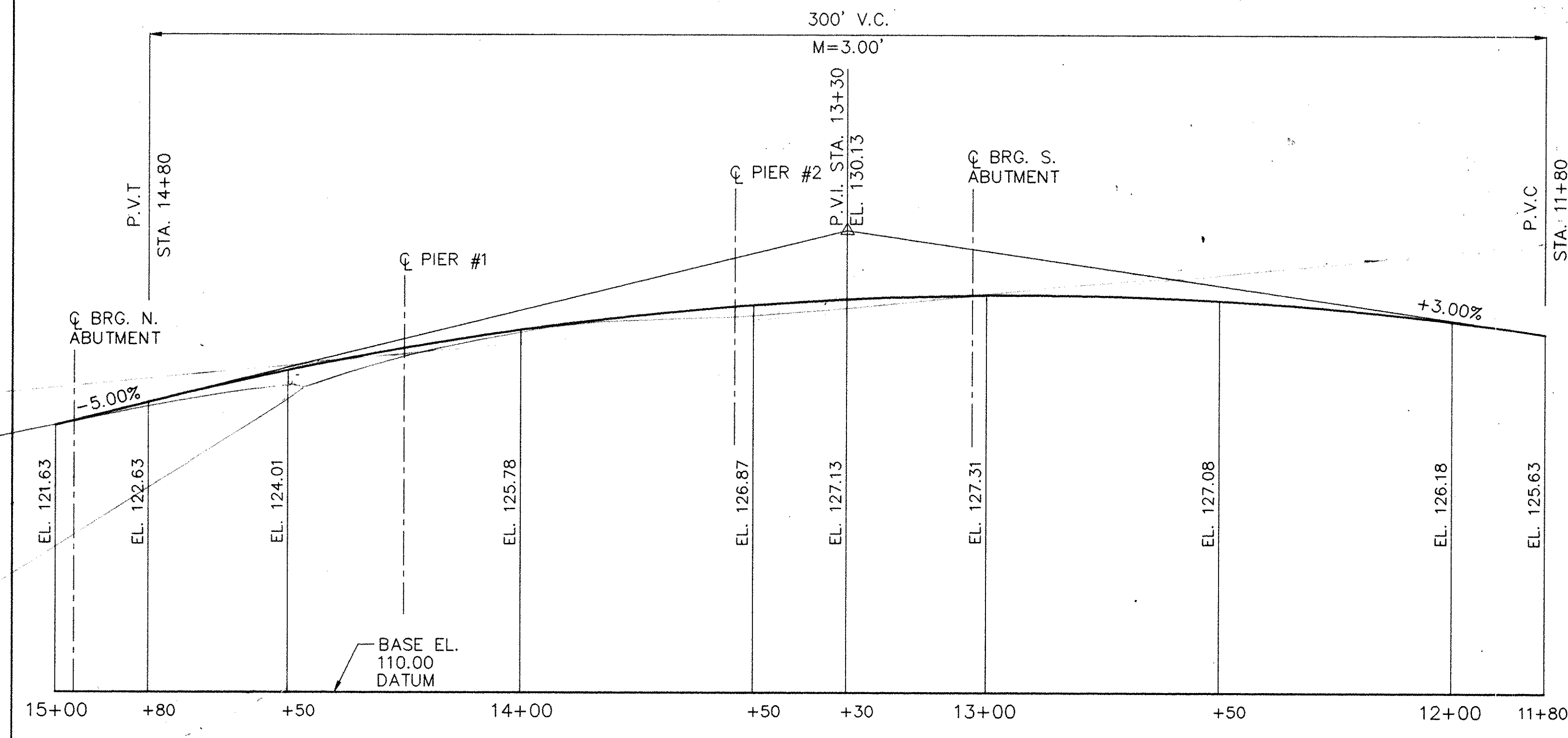
Scale: AS NOTED Contract No. 521-024

Sheet No. 32

(FOR REFERENCE ONLY) CONTRACT NO. 973-112 SHT. NO. R23



- NOTES:
- DIMENSIONS AND PROFILE SHOWN HAVE BEEN OBTAINED FROM AS-BUILT DRAWINGS AND ARE FOR CONTRACTOR'S GENERAL INFORMATION ONLY. THEY ARE NOT GUARANTEED TO BE CORRECT.
 - ELEVATIONS ARE BASED ON U.S.C. & G.S. MEAN SEA LEVEL DATUM OF 1929 PLUS 100 FT.



NO.	REVISION	BY	DATE	IN CHARGE OF	ACH
		DESIGNED:	PWW	2/94	
		DRAWN:	RRD	2/94	
		CHECKED:	MHA	2/94	

SCALE: HOR. 1"=20'-0"
VERT. 1"=4'-0"

AS-BUILT DRAWINGS
PREPARED BY
ASEC CORPORATION

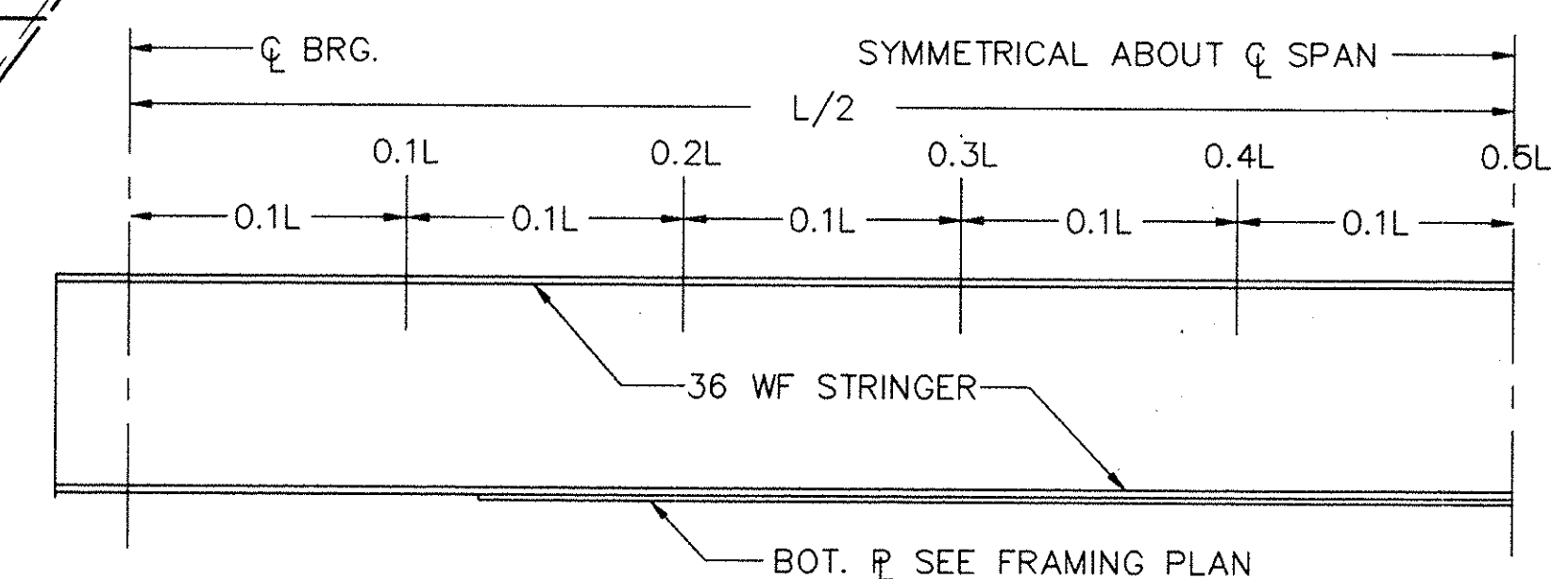
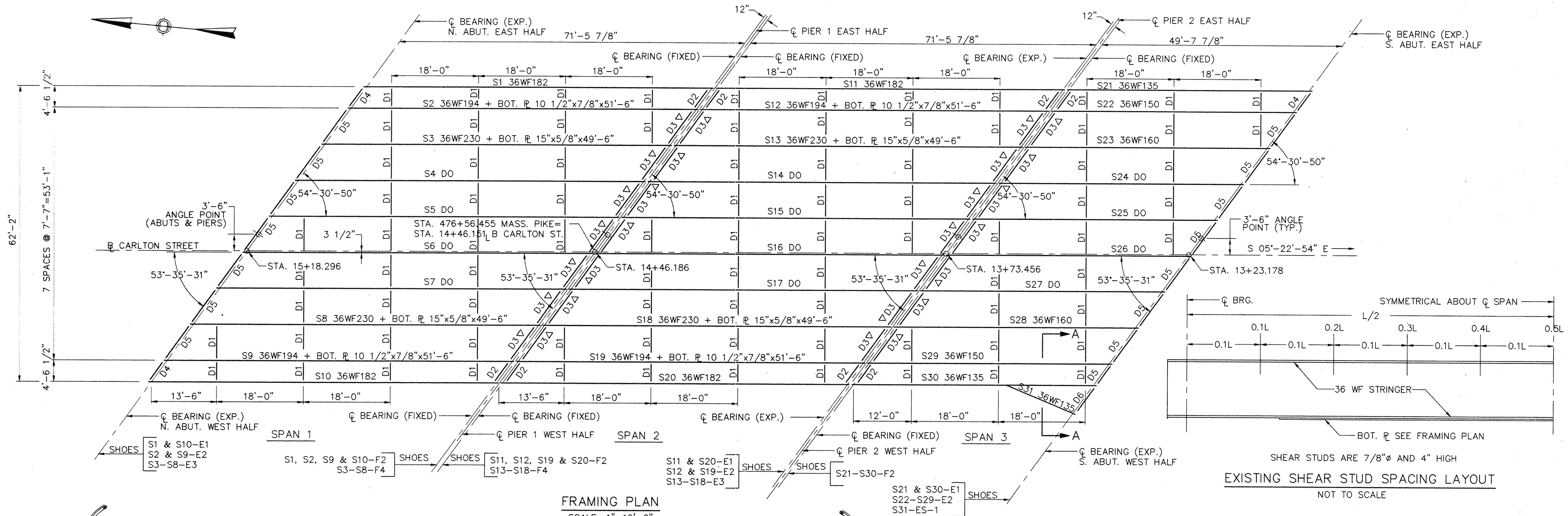
WEST GUTTER PROFILE
CARLTON STREET OVER MASSACHUSETTS TURNPIKE
SCALE: HOR. 1"=20'-0"
VERT. 1"=4'-0"

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
CARLTON STREET (STRUCTURE NO. 48A)
EXISTING STRUCTURE
PLAN AND PROFILE

Scale: AS SHOWN Contract No. 521-039

ASEC
ENGINEERS • ARCHITECTS • LAND SURVEYORS

Sheet No. 3



EXISTING SHEAR STUD SPACING						
STRINGER NOS.	0. TO 0.1L	0.1L TO 0.2L	0.2L TO 0.3L	0.3L TO 0.4L	0.4L TO 0.5L	NO. STUDS/ROW
S1, S10, S11, S20, S21, S30 & S31	12"	12"	12"	12"	12"	2
S2 THRU S9 S12 THRU S19	6 1/2"	7"	9"	9 1/2"	10 1/2"	2
S22 AND S29	6 1/2"	7 1/2"	8 1/2"	10"	11"	2
S23 THRU S28	6"	7"	8 1/2"	9"	10"	2

- NOTES:**
- DIMENSIONS FOR THE FRAMING PLAN ARE FROM "AS-BUILT" DRAWINGS. ACCURACY IS NOT GUARANTEED. STRUCTURAL SHOP DRAWINGS ARE AVAILABLE UPON REQUEST.
 - EXISTING DECK SLAB THICKNESS SHOWN IS FOR INFORMATION ONLY, ACTUAL THICKNESS OF EXISTING SLAB MAY VARY.
 - DIAPHRAGMS MARKED WITH \triangleright HAVE 15 SHEAR STUDS (3/4" STUDS). SEE SHEAR STUD DETAIL THIS SHEET. WHEN EXISTING SHEAR STUDS ARE DAMAGED OR MISSING, CONTRACTOR SHALL REPLACE THE SHEAR STUDS. SEE SPECIFICATIONS.
 - REPLACEMENT OF BEARINGS SHALL BE AS DIRECTED BY THE ENGINEER.
 - SEE SHEET NO. 15 FOR BRIDGE BEARING REPLACEMENT DETAILS.
 - EXISTING SHEAR STUD SPACING ON STRINGERS ARE AS SHOWN IN THE TABLE ON THIS SHEET. WHEN EXISTING SHEAR STUDS ARE DAMAGED OR MISSING, CONTRACTOR SHALL REPLACE THE SHEAR STUDS AS REQUIRED. SEE SPECIFICATIONS.

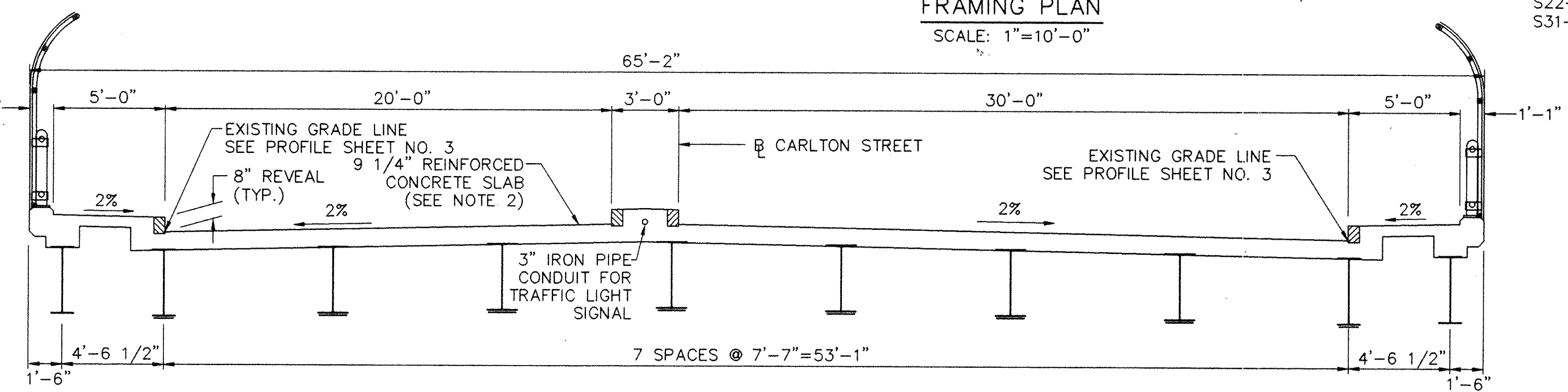
AS-BUILT DRAWINGS
PREPARED BY
ASEC CORPORATION

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
CARLTON STREET (STRUCTURE NO. 48A)
FRAMING PLAN SECTIONS
AND DETAILS

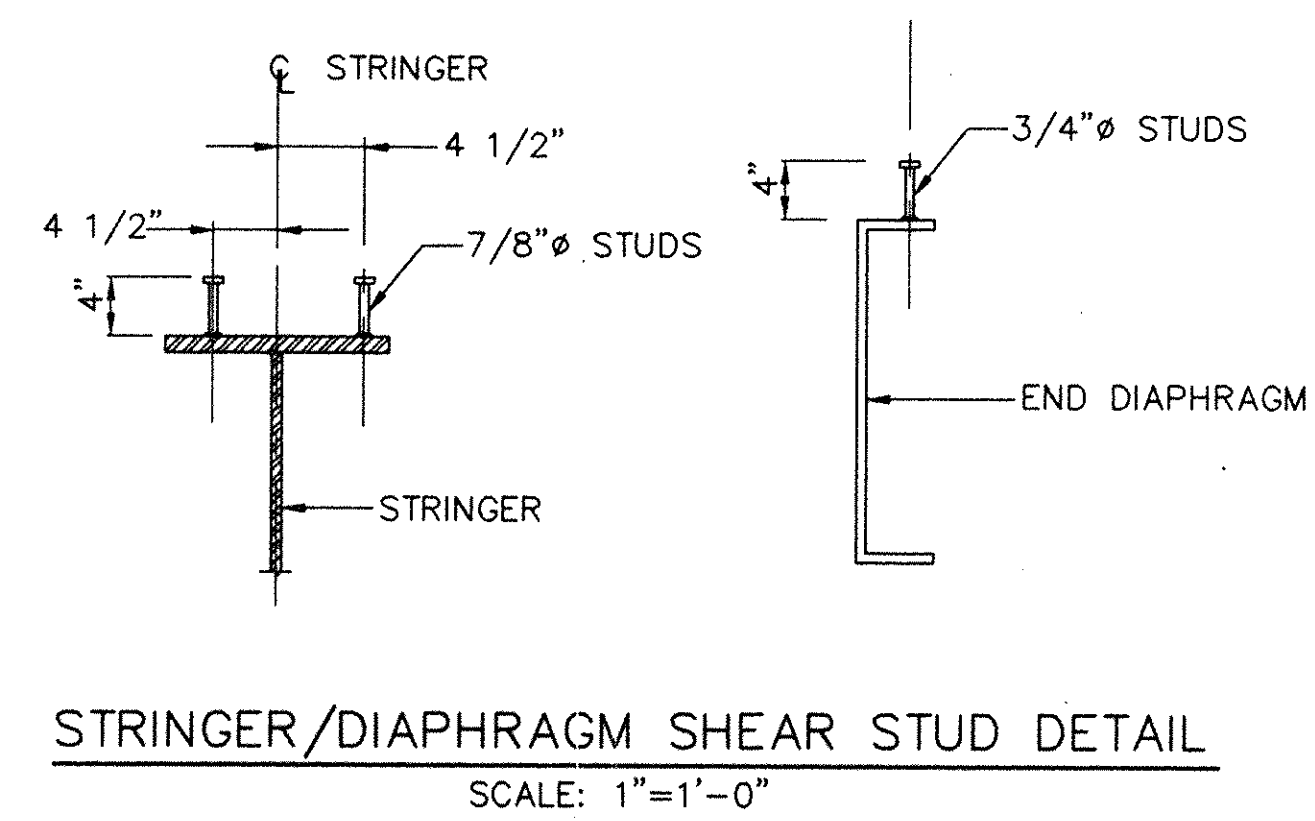
Scale: AS SHOWN Contract No. 521-039

ASEC CORPORATION
ENGINEERS - ARCHITECTS - LAND SURVEYORS

Sheet No. **4**

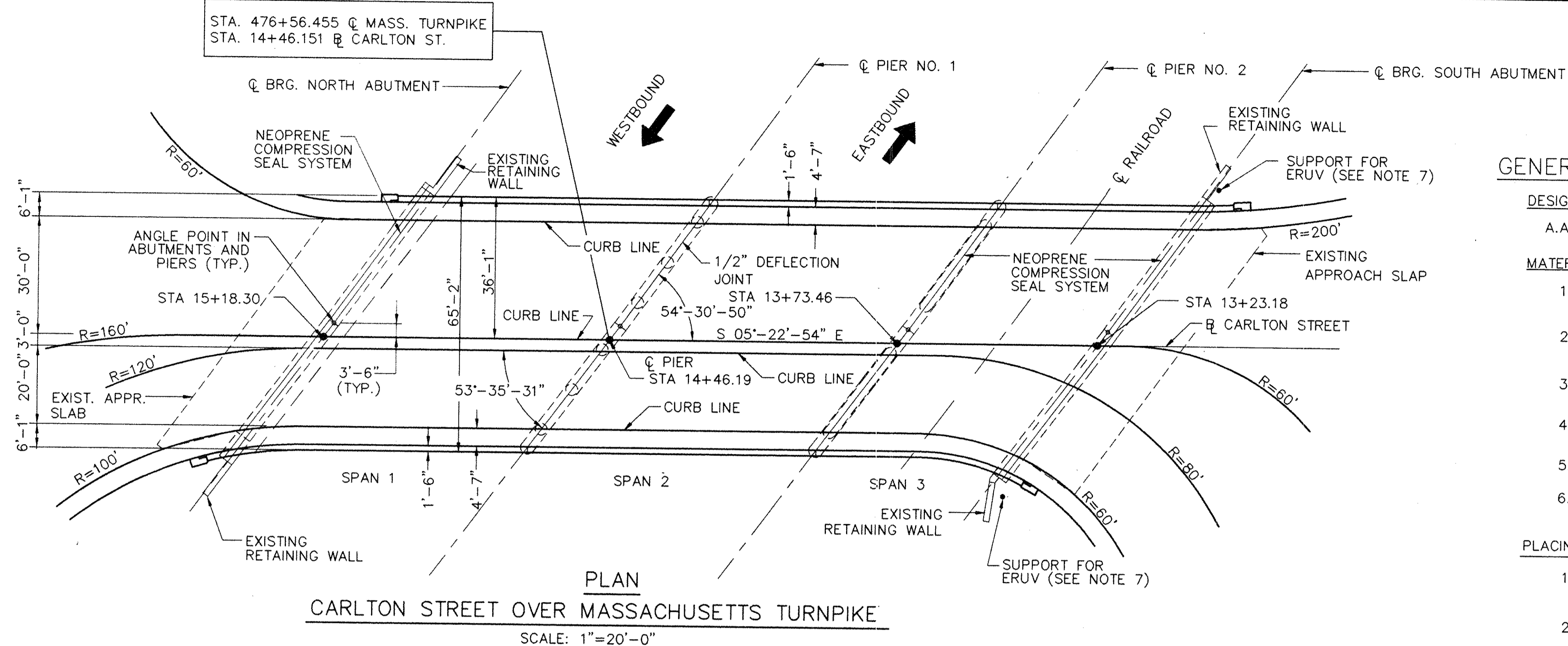
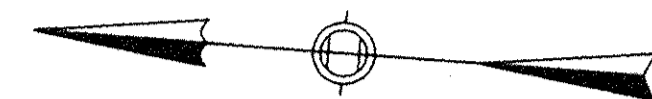


EXISTING DIAPHRAGMS		
DIAPHRAGM NO.	TYPE	DIAPHRAGM SIZE
D1	CROSS FRAME	TOP AND BOTTOM ANGLES 7"x4"x3/8" DIAGONAL ANGLES 3 1/2"x3 1/2"x3/8"
D3	CHANNELS	18[42.7 WITH 3/4" 4" LONG SHEAR STUDS
D2, D4 TO D6	CHANNELS	18[42.7



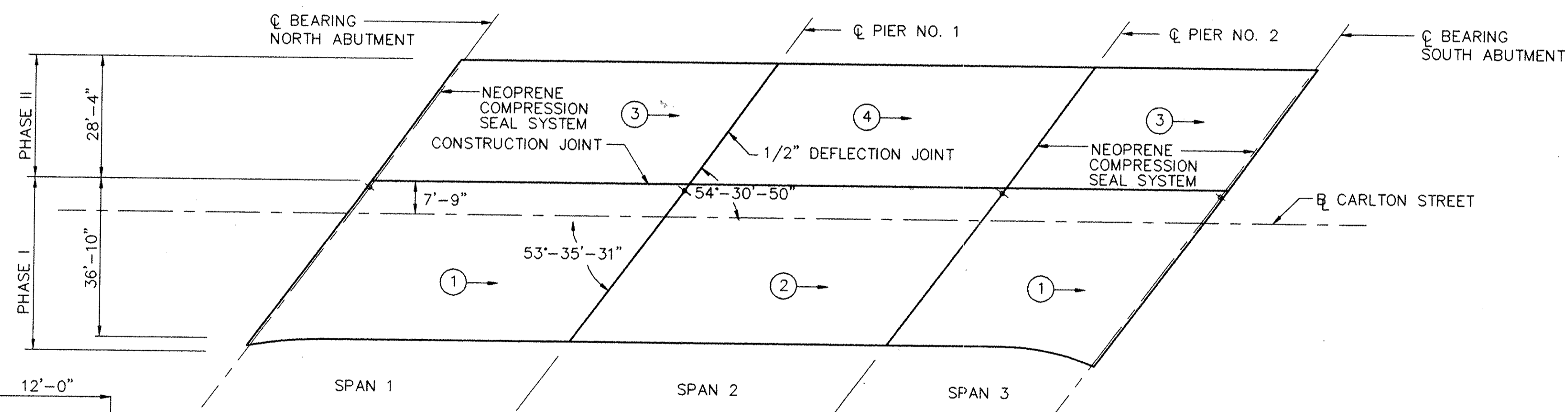
SECTION A-A
SCALE: 1/4"=1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF
		DESIGNED: PWV	2/94	
		DRAWN: RRD	2/94	
		CHECKED: MHA	2/94	



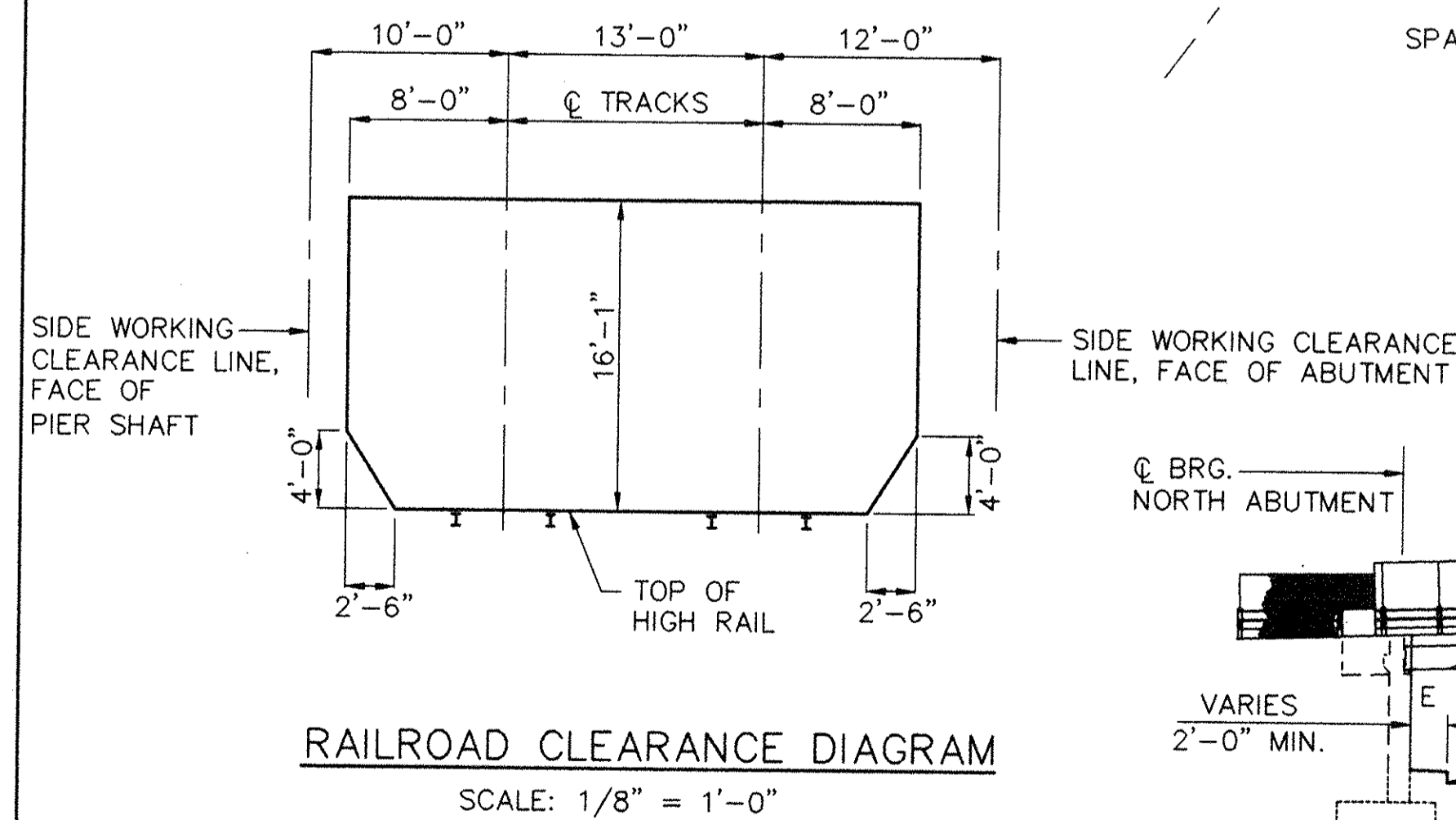
CARLTON STREET OVER MASSACHUSETTS TURNPIKE

SCALE: 1"=20'-0"



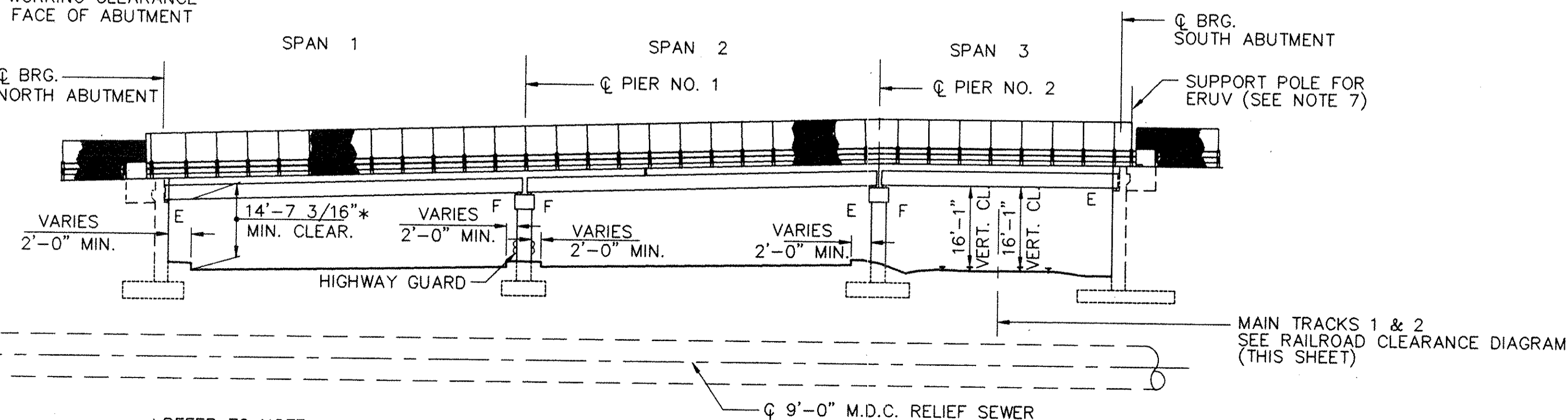
PLACING SEQUENCE FOR CONCRETE DECK

SCALE: 1"=20'-0"



RAILROAD CLEARANCE DIAGRAM

SCALE: 1/8" = 1'-0"



ELEVATION

SCALE: 1"=20'-0"

*REFER TO NOTE 1 ON THIS SHEET.

GENERAL NOTES:

DESIGN LOADING

A.A.S.H.T.O. LOADING HS20-44

MATERIALS

1. CONCRETE FOR BRIDGE DECK, END POSTS AND SIDEWALKS SHALL BE CLASS D CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c=4,500$ PSI.
2. CONCRETE FOR SUBSTRUCTURE REPAIRS SHALL BE CLASS 'E' CEMENT CONCRETE HAVING A MINIMUM COMPRESSIVE STRENGTH OF $f'_c = 5000$ PSI.
3. ALL REINFORCING STEEL TO BE A.S.T.M. DESIGNATION A-615 GRADE 60, $f_s=24,000$ PSI.
4. ALL REINFORCING STEEL AND CURB ANCHORS ARE TO BE EPOXY COATED.
5. ALL STRUCTURAL STEEL TO BE A.S.T.M. DESIGNATION A709 GRADE 36.
6. FOR ADDITIONAL INFORMATION, SEE SPECIFICATIONS.

PLACING SEQUENCE NOTES:

1. (X) NUMBERS INDICATE SEQUENCE OF PLACEMENT. ARROWS INDICATE DIRECTION OF PLACEMENT.
2. PLACEMENT SHALL BE CONTINUOUS FOR EACH BLOCK.
3. BEGIN PLACEMENT AT THE LOW END OF THE BLOCK.
4. FOR CONSTRUCTION PHASING, SEE SEQUENCE OF CONSTRUCTION, SHEET NO. 17.

NOTES:

1. DIMENSIONS AND ELEVATIONS OF THE EXISTING STRUCTURE SHOWN ON THESE PLANS ARE FOR GENERAL REFERENCE ONLY. THEY HAVE BEEN TAKEN FROM THE ORIGINAL DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUACY AND ACCURACY THEREOF AND SHALL NOT ORDER ANY MATERIAL OR COMMENCE ANY FABRICATION UNTIL HE HAS MADE THE REQUIRED MEASUREMENTS ON THE ACTUAL STRUCTURE, AND EXTENT OF THE PROPOSED WORK HAS BEEN APPROVED BY THE ENGINEER. WHEN SHOP DRAWINGS BASED ON FIELD MEASUREMENTS ARE SUBMITTED FOR APPROVAL, THE FIELD MEASUREMENTS SHALL ALSO BE SUBMITTED FOR REFERENCE TO THE REVIEWER.
2. ALL EXISTING UTILITIES SHALL BE LOCATED AND PROTECTED BY THE CONTRACTOR.
3. THE CONTRACTOR SHALL TAKE THE PROPER PRECAUTIONS TO INSURE THE STABILITY AND SAFE PERFORMANCE OF ALL STRUCTURAL ELEMENTS AND UTILITIES DURING DEMOLITION AND CONSTRUCTION, UNTIL THE NEW STRUCTURE IS COMPLETE.
4. CONSTRUCTION JOINTS, OTHER THAN THOSE SHOWN ON THE PLANS, WILL NOT BE PERMITTED WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
5. TEMPORARY PROTECTIVE SHIELDING AND SUPPORT SYSTEM SHALL NOT PROTRUDE BELOW STRINGERS. EXISTING MINIMUM CLEARANCE SHALL BE MAINTAINED.
6. STRUCTURAL STEEL THAT WILL COME IN CONTACT WITH THE FRESH CONCRETE SHALL BE POWER TOOL CLEANED (SSPC-SP1) AS PER SPECIFICATIONS IMMEDIATELY PRIOR TO INSTALLATION OF REINFORCING STEEL.
7. CONTRACTOR SHALL NOTIFY THE GREATER BOSTON ERUV CORPORATION (653 CHESTNUT HILL AVE., BROOKLINE, MA. 02146) REGARDING RELOCATION OF POLES FROM THE BRIDGE END POSTS PRIOR TO CONTRACTOR COMMENCING DEMOLITION WORK.
8. E-DENOTES EXPANSION BEARING
F-DENOTES FIXED BEARING

AS-BUILT DRAWINGS
PREPARED BY
ASEC CORPORATION

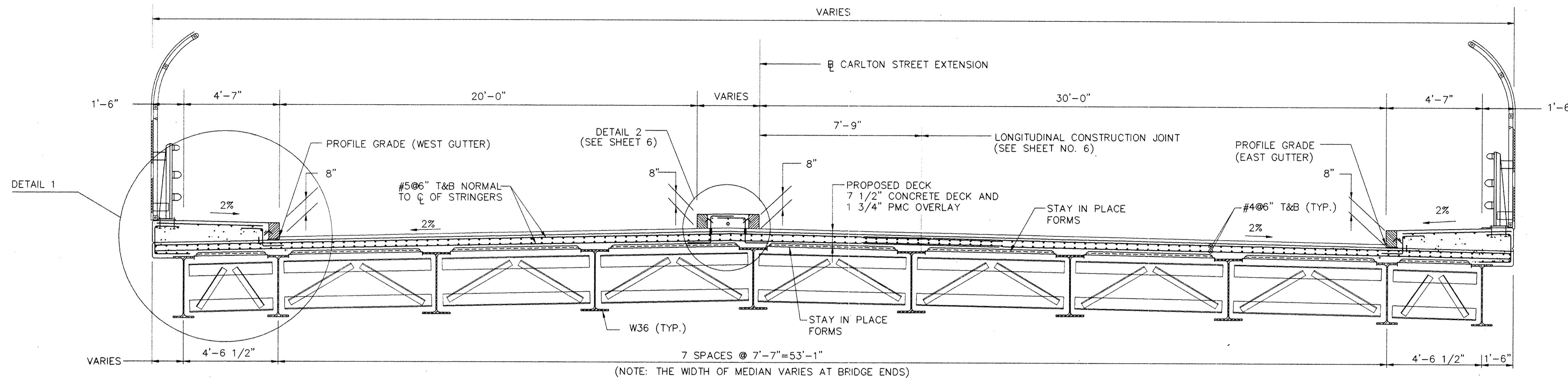
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BRIDGE DECK RECONSTRUCTION
CARLTON STREET (STRUCTURE NO. 48A)
PROPOSED PLAN AND ELEVATION

Scale: AS SHOWN Contract No. 521-039



Sheet No.
5

NO.	REVISION	BY	DATE	IN CHARGE OF	ACH
		DESIGNED: PWV	2/94		
		DRAWN: LR	2/94		
		CHECKED: MHA	2/94		



TYPICAL PROPOSED CROSS SECTION AT SPAN 3

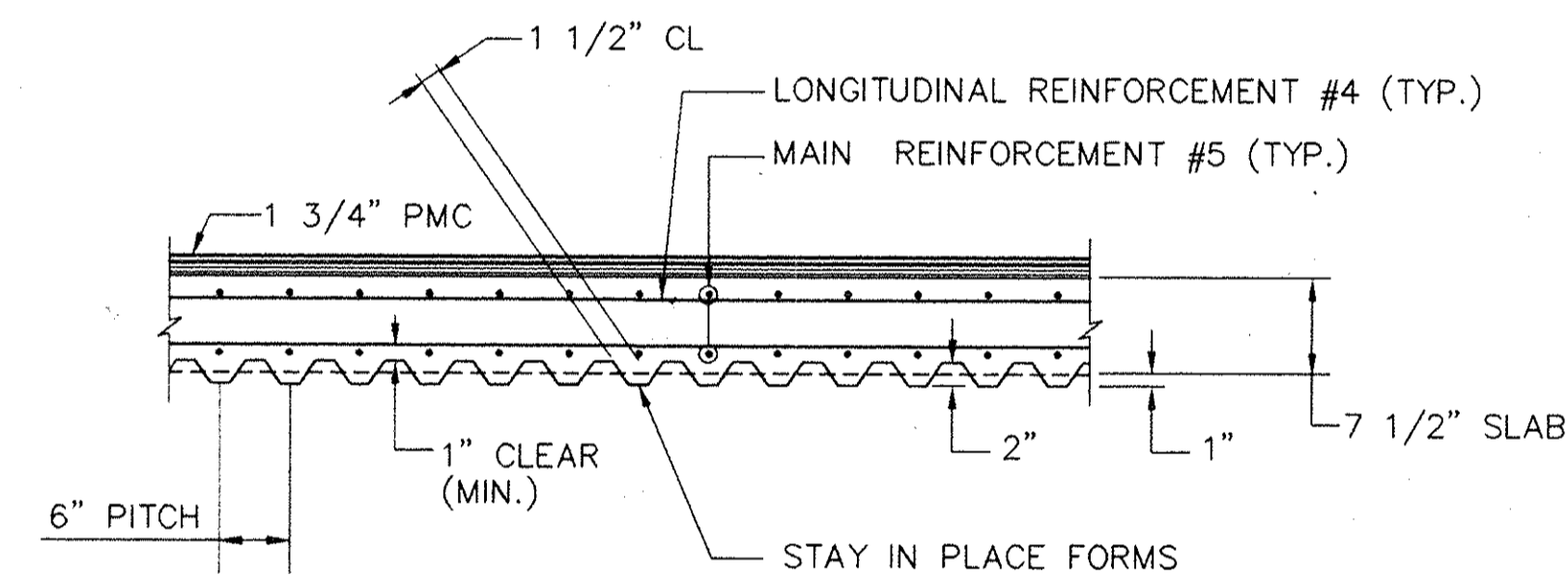
SCALE: 3/8"=1'-0"

NOTES:

1. TRANSVERSE REINFORCING STEEL SHALL BE FABRICATED TO MATCH THE CROSS SLOPE OF THE CONCRETE DECK.
2. THE TOP AND BOTTOM MAT OF REINFORCING STEEL INCLUDING SUPPORT CHAIRS, SIDEWALK REINFORCING STEEL AND CURB ANCHORS SHALL ALL BE EPOXY COATED. SUPPORT TOP AND BOTTOM MATS SEPARATELY, SEE THE SPECIFICATIONS.
3. TOP AND BOTTOM MAT OF THE REINFORCING STEEL SHALL BE SUPPORTED BY CHAIRS AND/OR BOLSTERS AT MIN. 3'-0" EACH WAY AND FIGURE EIGHT TIED AT EVERY THIRD INTERSECTION.
4. CROSS SLOPES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR.
5. TYPICAL CROSS SECTION LOOKING NORTH.

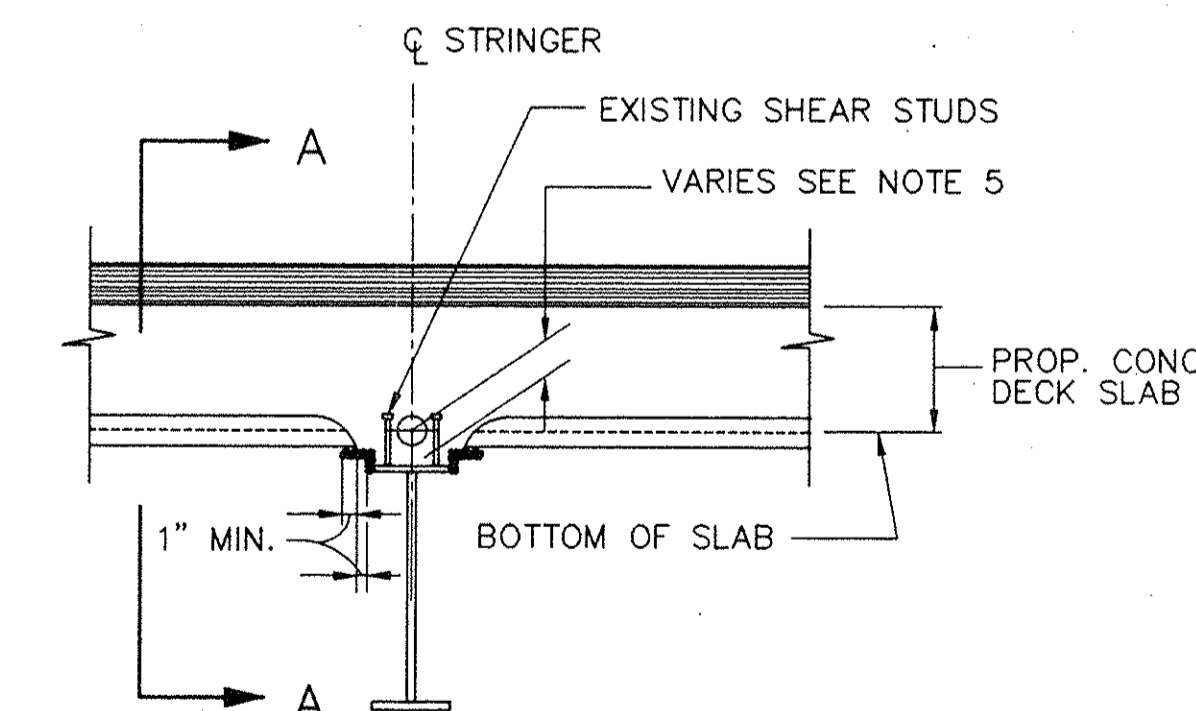
STAY IN PLACE FORMS NOTES:

1. FOR TWO (2) INCH SIP FORM SET BOTTOM OF FORM ONE (1) INCH BELOW BOTTOM OF SLAB. FOR TWO AND ONE HALF (2 1/2) INCH SIP FORM SET BOTTOM OF FORM ONE AND ONE HALF (1 1/2) INCHES BELOW BOTTOM OF SLAB.
2. FORM ENDS SHALL BE CRIMPED CLOSED IN A TAPERED MANNER. SEPARATE END CLOSER PIECES WILL NOT BE ALLOWED.
3. SUPPORT ANGLES SHALL BE PLACED IN THE "LEG DOWN" POSITION WHERE POSSIBLE. WHERE "LEG UP" POSITION IS NECESSARY THE UPPER MOST PORTION OF THE ANGLE SHALL PROJECT NO MORE THAN 1/2" ABOVE THE TOP FLANGE OR COVER PLATE. THE CONTRACTOR SHALL HAVE AN ASSORTMENT OF ANGLES OF VARIOUS SIZES AVAILABLE ON THE SITE TO CONFORM TO THIS REQUIREMENT.
4. ALL MAIN STEEL REINFORCEMENT IN THE LOWER MAT SHALL BE CENTERED OVER THE VALLEY OF THE SIP FORM.
5. HAUNCH DEPTH (VARIABLE) WILL BE FURNISHED BY THE AUTHORITY WITHIN 7 WORKING DAYS (SATURDAY, SUNDAY, AND HOLIDAYS EXCLUDED) FROM THE TIME THE EXISTING DECK IS REMOVED AND TOP OF STRINGER ELEVATIONS ARE PROVIDED BY CONTRACTOR.
6. POWER TOOL CLEAN IN ACCORDANCE WITH SSPC-SP11 THE EDGES OF STRINGERS PRIOR TO INSTALLING FORM SUPPORTS.
7. UNDER NO CIRCUMSTANCES WILL A TRANSVERSE WELD BE ALLOWED ACROSS A TENSION FLANGE INCLUDING FORM SUPPORT WORK.



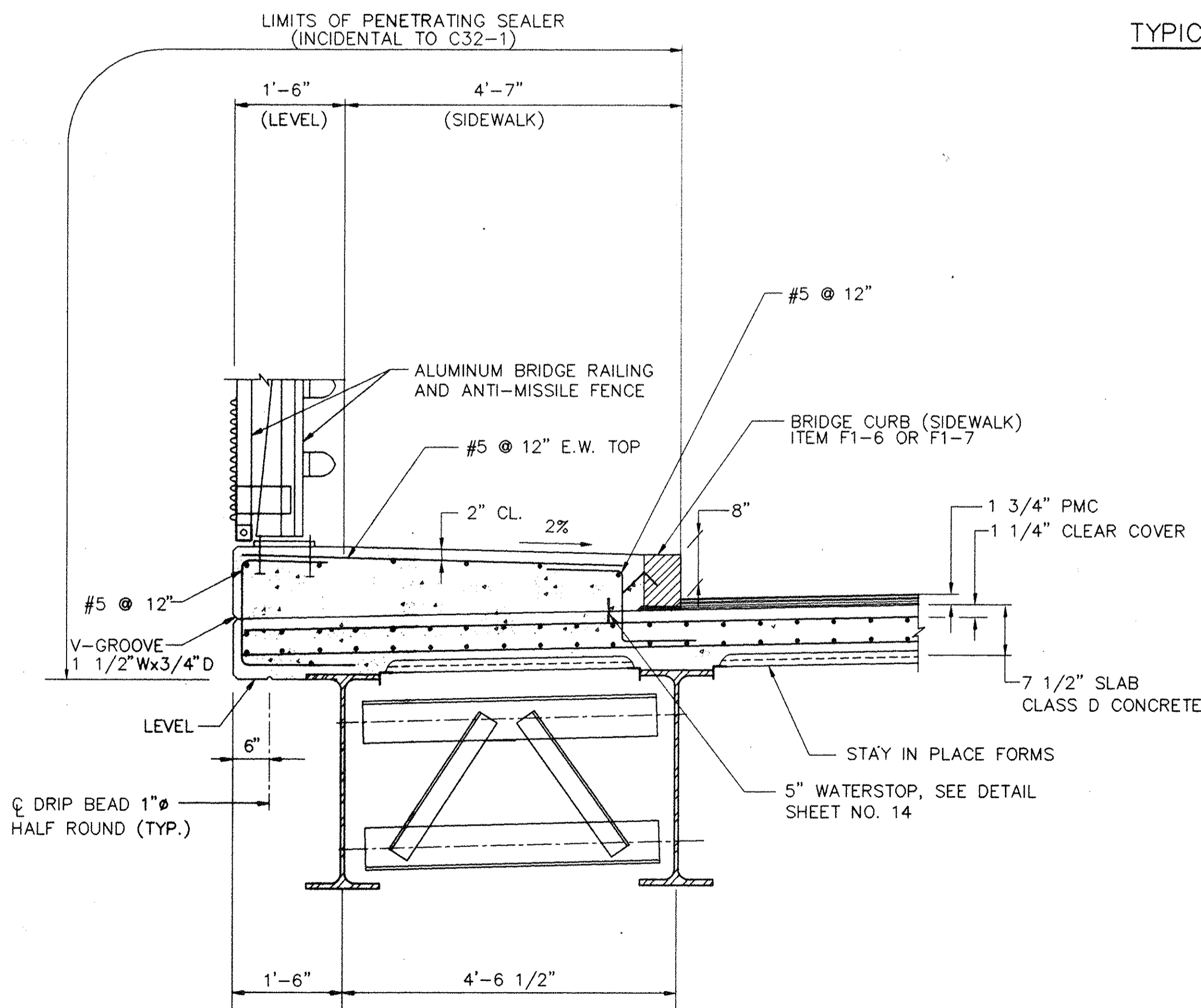
SECTION A-A

SCALE: 3/4"=1'-0"



HAUNCH DETAIL

SCALE: 1"=1'-0"



DETAIL 1

SCALE: 3/4"=1'-0"

NO.	REVISION	BY	DATE	IN CHARGE OF	ACH
		DESIGNED:	PWW	2/94	
		DRAWN:	LMR	2/94	
		CHECKED:	MHA	2/94	

AS-BUILT DRAWINGS
PREPARED BY
ASEC CORPORATION

MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE

BRIDGE DECK RECONSTRUCTION
CARLTON STREET (STRUCTURE NO. 48A)
PROPOSED DECK CROSS SECTION-2

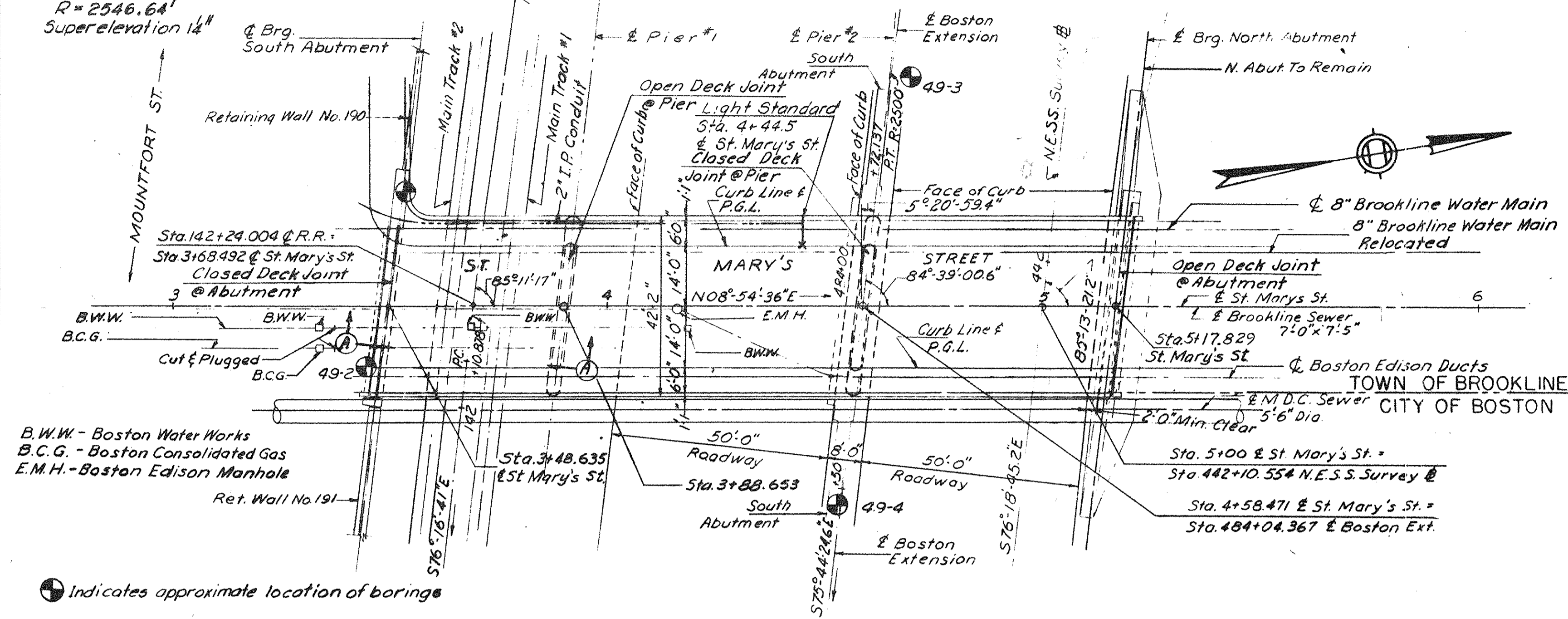
Scale: AS SHOWN Contract No. 521-039

ASEC CORPORATION
ENGINEERS • ARCHITECTS • LAND SURVEYORS

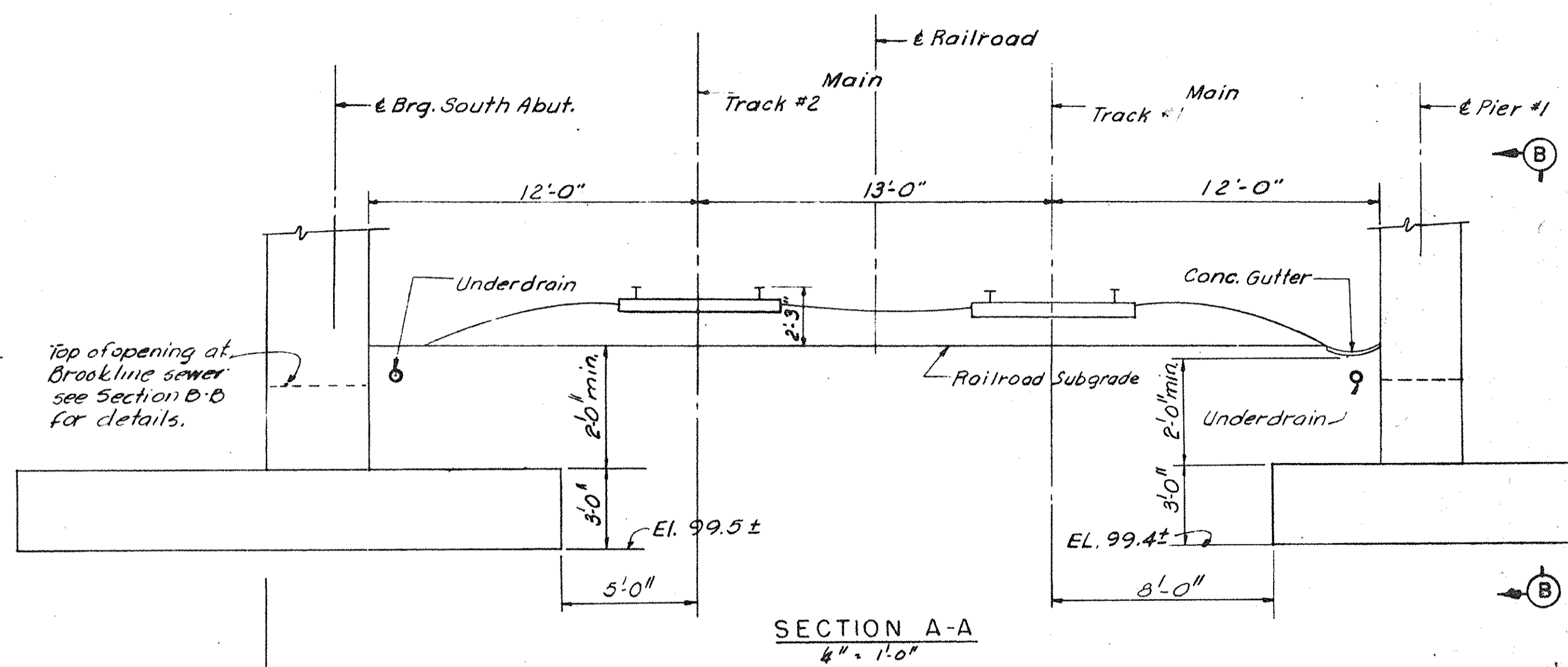
Sheet No.
7

RAILROAD CURVE
DATA
D = 2° 15'
R = 2546.64'
Superelevation 1/4"

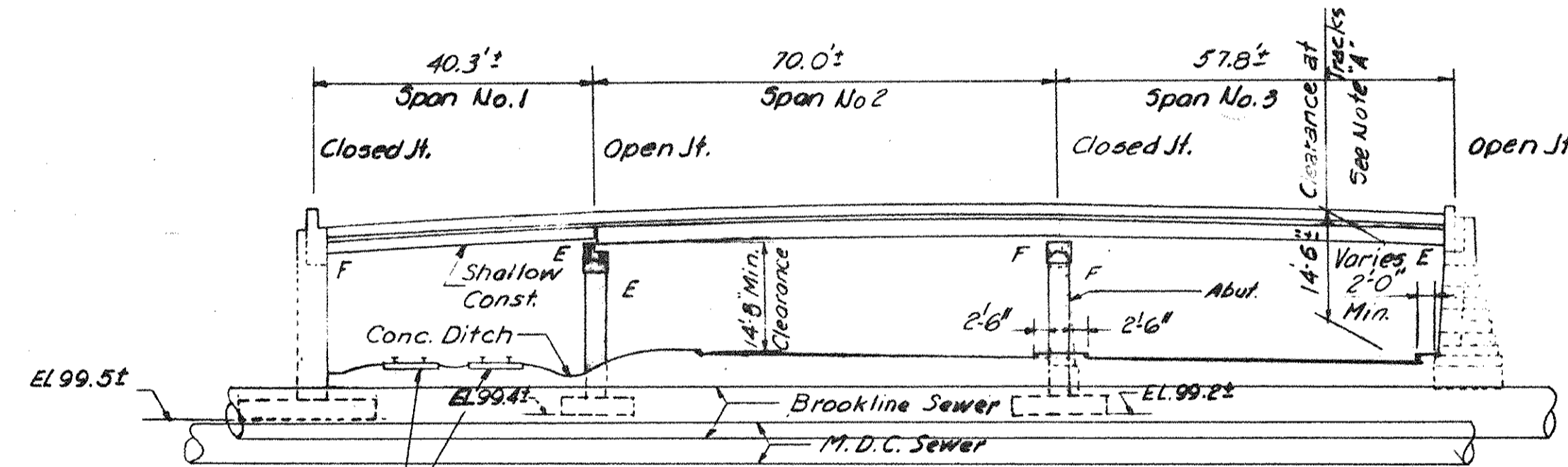
TOWN OF BROOKLINE
CITY OF BOSTON



PLAN
1" = 20'

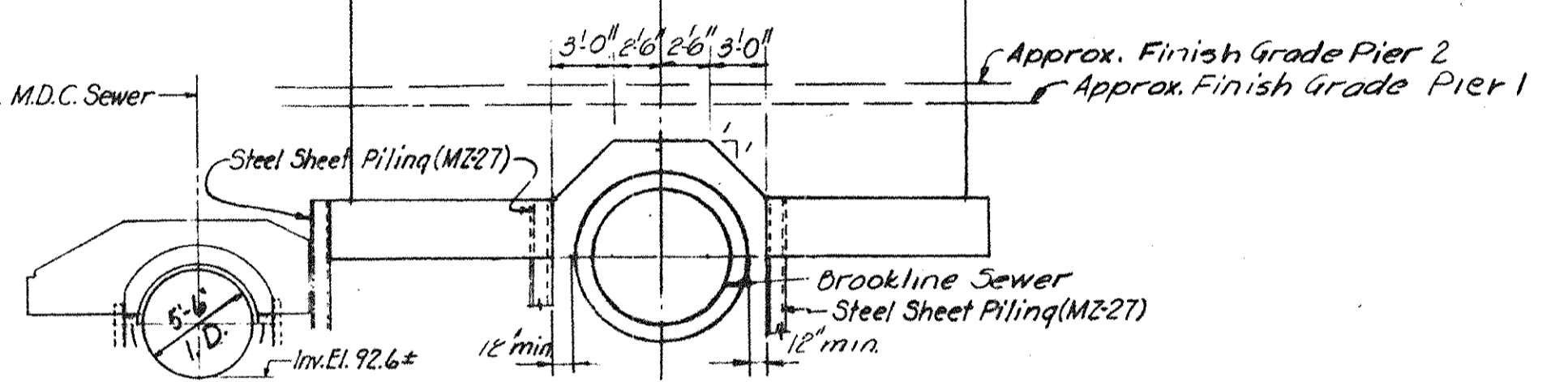


SECTION A-A
1/4" = 1'-0"



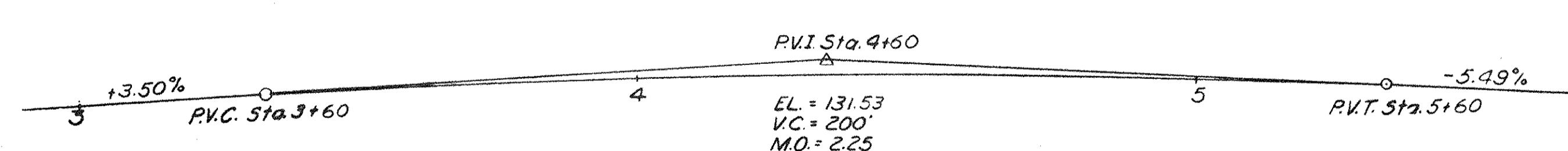
ELEVATION
1" = 20'

Note "A"
Structural steel for Span 3
was not placed until
relocated tracks were in
operation.

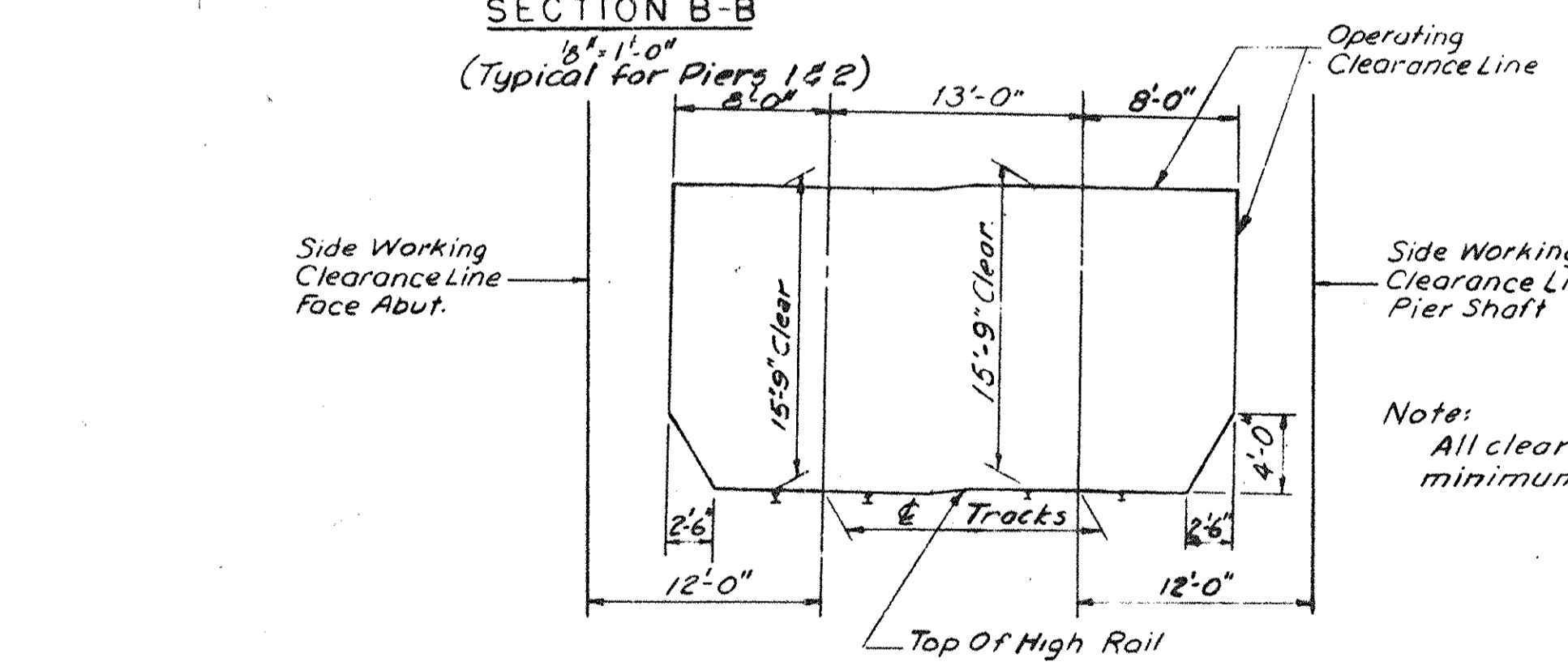


SECTION B-B
1/4" = 1'-0"
(Typical for Piers 1 & 2)

Note:
All clearances shown are
minimum.



GUTTER PROFILE
1" = 20'



RAILROAD CLEARANCE DIAGRAM
3/4" = 1'-0"

Datum used on these plans
is U. S. G. S. plus 100 feet.

"AS-BUILT PLANS"

BOSTON EXTENSION	
STRUCTURE NO. 49	
ST. MARY'S STREET	
OVER BOSTON EXTENSION	
LIST OF DRAWINGS	
SHEET NO.	TITLE
549-1	General Plan and Elevation
549-2	Footing Plan
549-3	South Abutment
549-4	North Abutment
549-5	Piers
549-6	Framing Plan
549-7	Soil Boring Logs

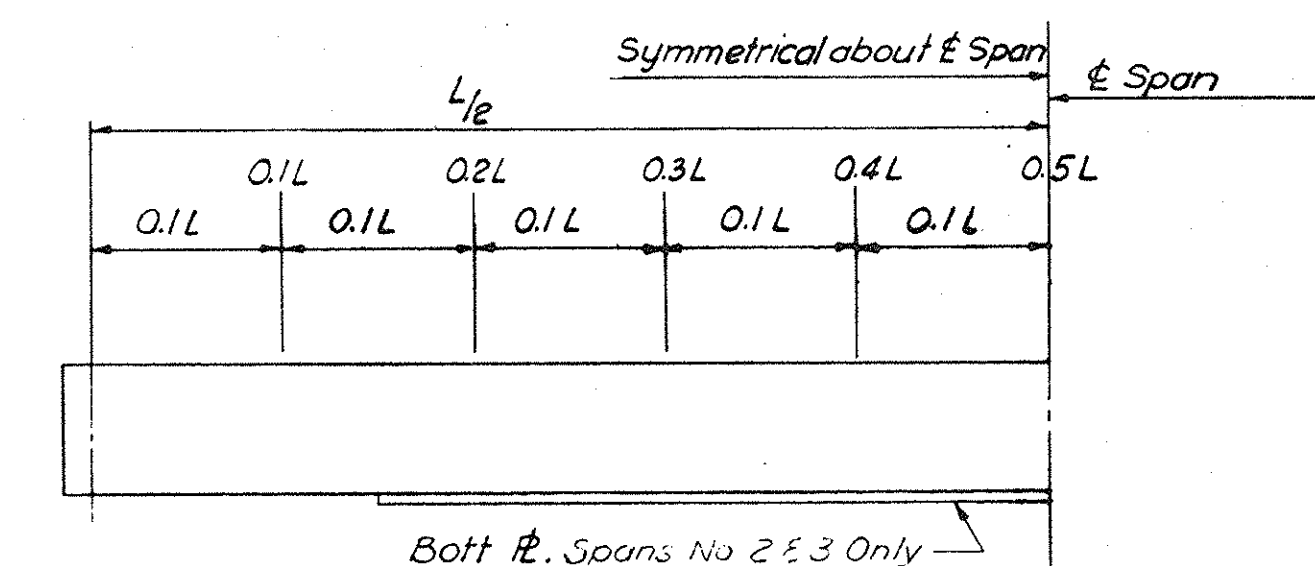
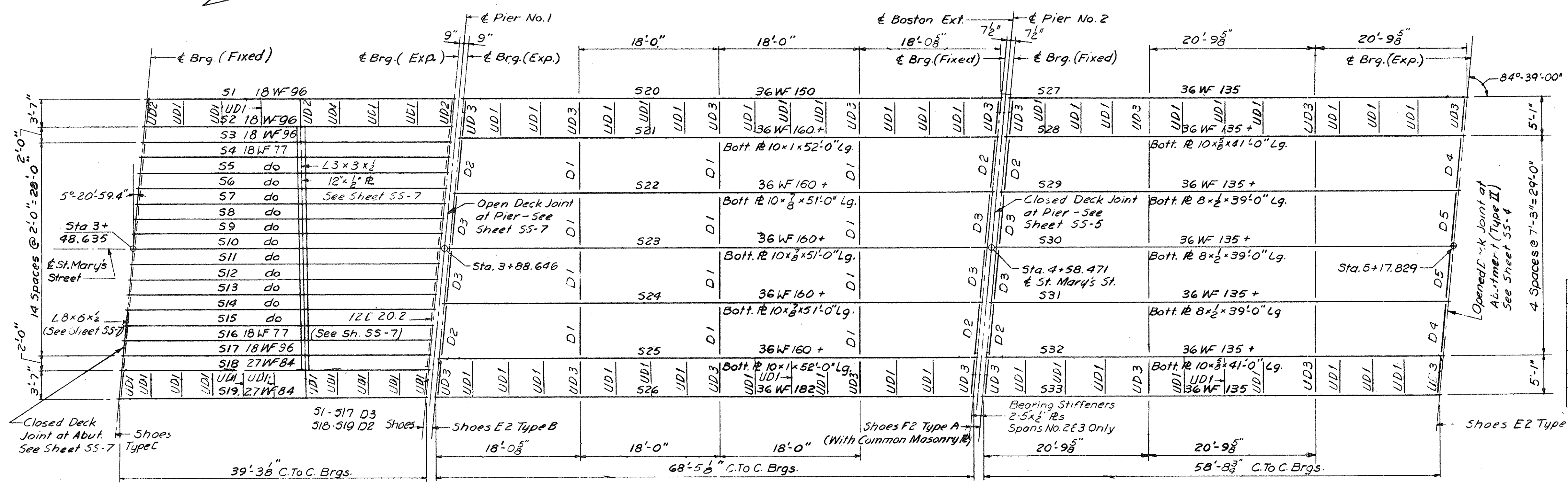
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION NO. C-3

STRUCTURE NO. 49
ST. MARY'S STREET
GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY SHEET NO. S49-1

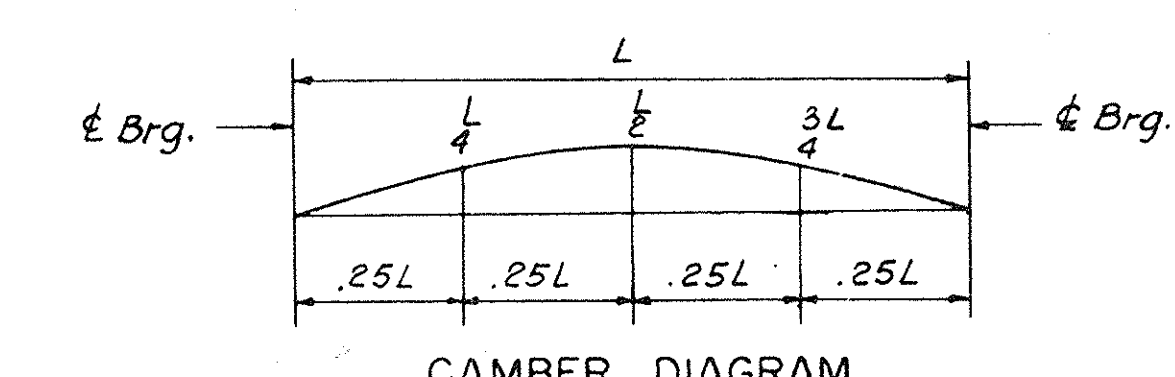
Design:
Highway Live Load: H20-44
Max. Soil Bearing Pressure (D.L.+L.L.) = 3.0 Tons/S.F.

NOTE:
THESE "AS-BUILT" PLANS HAVE BEEN PREPARED BY
HOWARD, NEEDLES, TAMMEN AND BERGENDOFF FROM INFORMATION
FURNISHED BY THE MASSACHUSETTS TURNPIKE AUTHORITY.



MAXIMUM SHEAR STUD SPACING

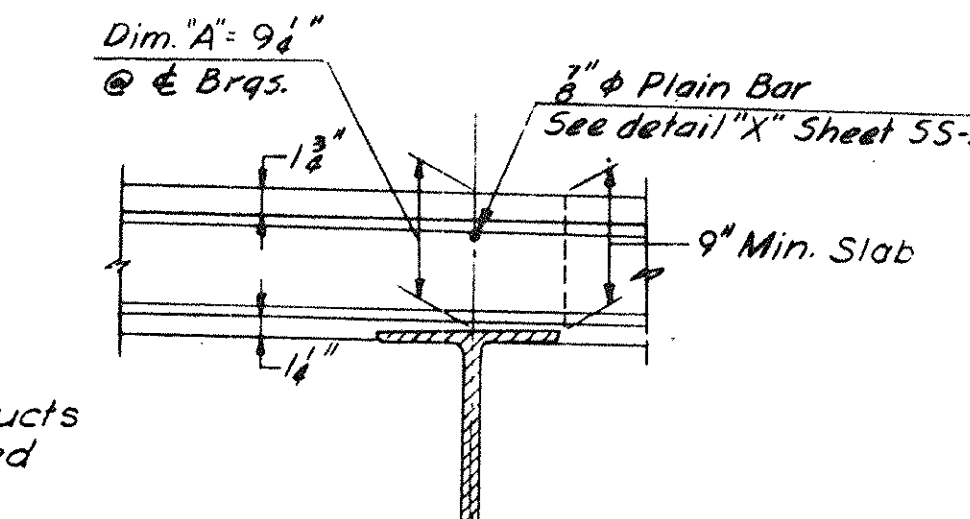
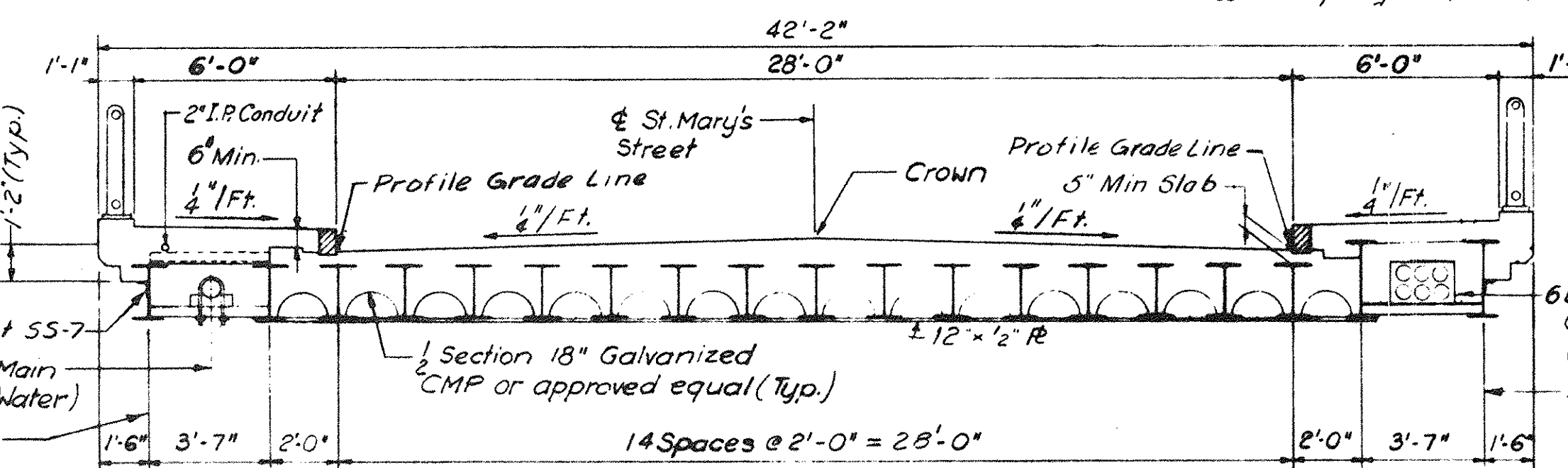
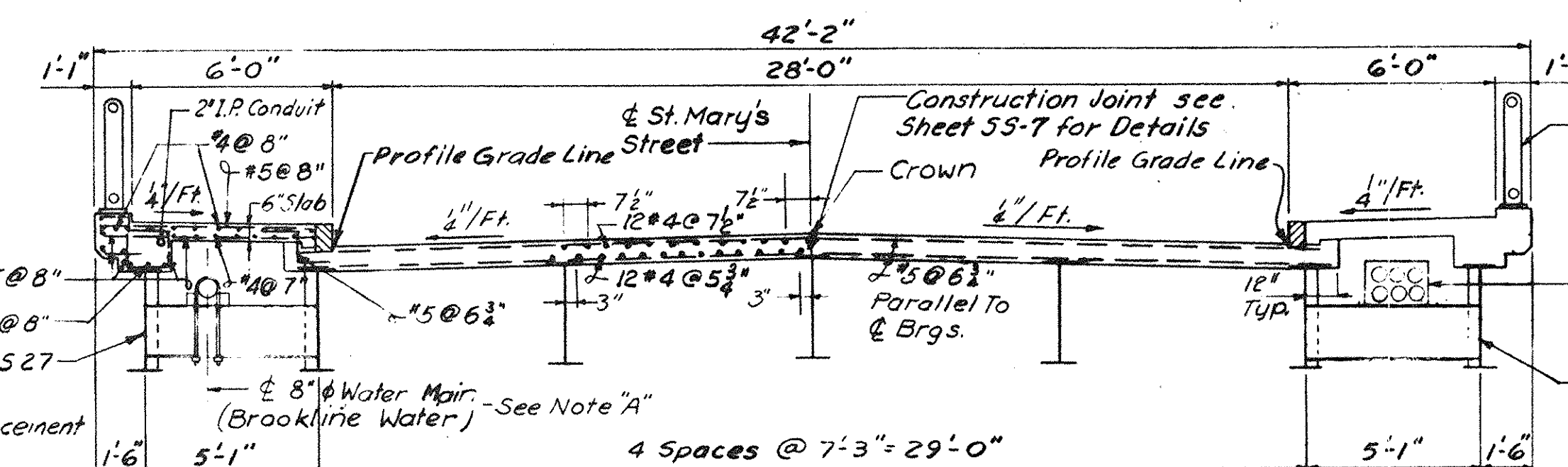
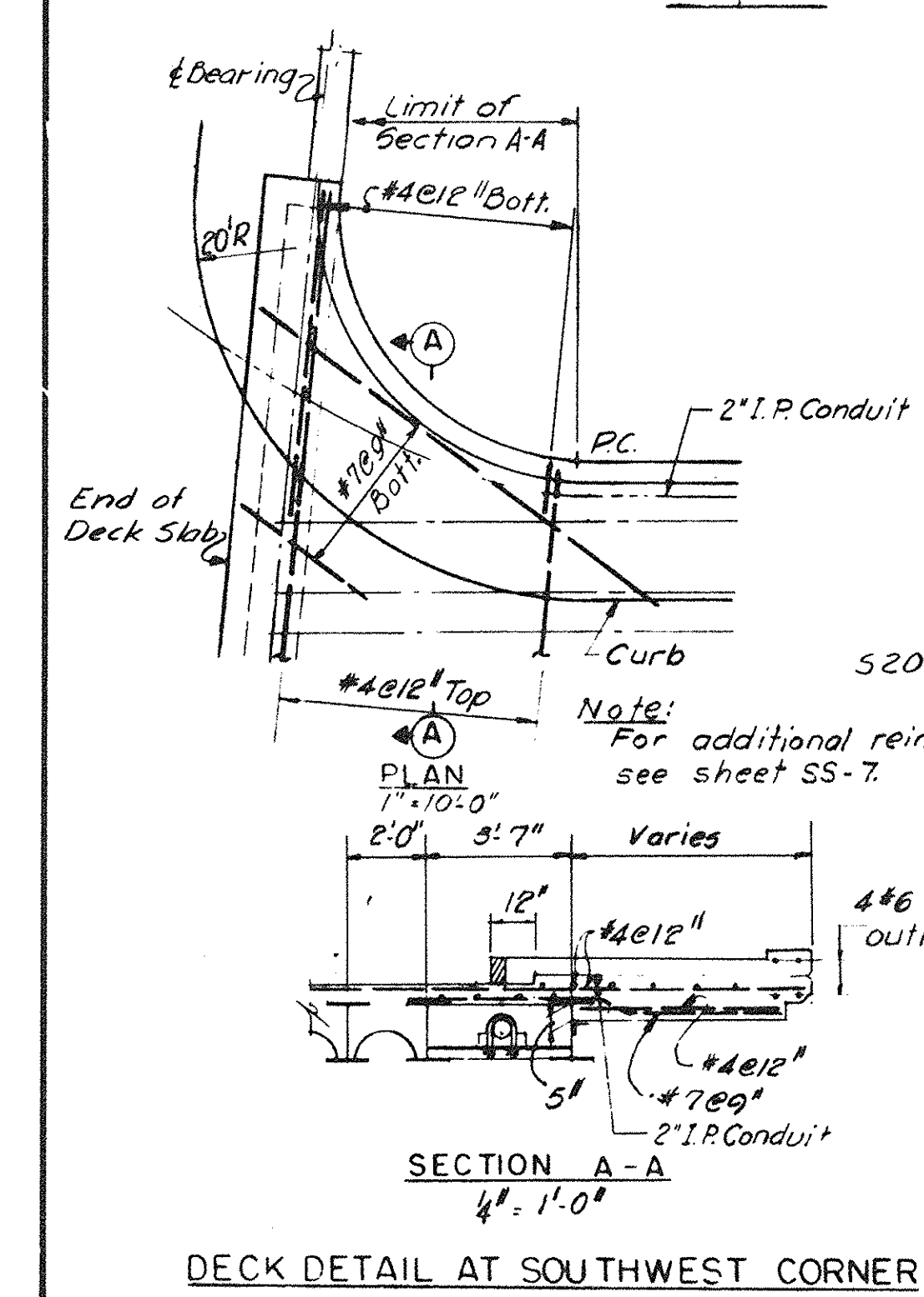
Stringer Nos	0 to 0.1L	0.1 to 0.2L	0.2 to 0.3L	0.3 to 0.4L	0.4 to 0.5L	No. Studs/Row
S20, S26, S27, S33	12"	12"	12"	12"	12"	2
S21, S25	5"	6"	8"	9"	10"	2
S22, S23, S24	6"	7"	8 1/2"	9"	10"	2
S28, S32	5"	6"	7 1/2"	9"	10"	2
S29, S30, S31	6 1/2"	7"	8 1/2"	9 1/2"	10"	2



CAMBER NOTES
S=Camber due to weight of structural steel.
C=Camber due to weight of all concrete except sidewalk, parapet, and railing.
B=Camber due to weight of sidewalk, parapet and railing.
U=Camber due to weight of utilities.
T=Total Camber due to full dead load.
All deflections in inches.

Utility Diaphragm	Bottom Member	Top Member
UD1	754.3x3 3/8	
UD2	754.3x3 3/8	1154.3x3 3/8
UD3	185C42.7	

Stringer Location	S1 & S2	S19	S18	S3 & S17	S4 thru S16
Span 1	.11, .05, .08, .08, .08, .17, .06, .12, .08, .17, .06, .12, .13, .10, .14, .0.10	.38, .29, .46, .35, .79, .59, .78, .0.59	.63, .47, .71, .53, .92, .69, .92, .0.69	.15, .08, .11, .06, .18, .15, .14, .10, .17, .12, .15, .32, .11, .28	.87, .67, .10, .07, .91, .65, .89, .65
Span 2	.11, .05, .08, .08, .08, .17, .06, .12, .08, .17, .06, .12, .13, .10, .14, .0.10	.38, .29, .46, .35, .79, .59, .78, .0.59	.63, .47, .71, .53, .92, .69, .92, .0.69	.15, .08, .11, .06, .18, .15, .14, .10, .17, .12, .15, .32, .11, .28	.87, .67, .10, .07, .91, .65, .89, .65
Span 3	.11, .05, .08, .08, .08, .17, .06, .12, .08, .17, .06, .12, .13, .10, .14, .0.10	.38, .29, .46, .35, .79, .59, .78, .0.59	.63, .47, .71, .53, .92, .69, .92, .0.69	.15, .08, .11, .06, .18, .15, .14, .10, .17, .12, .15, .32, .11, .28	.87, .67, .10, .07, .91, .65, .89, .65



Note "A"
8" Water Main, U-bolts and wood blocks not in this contract; Future installation by others.

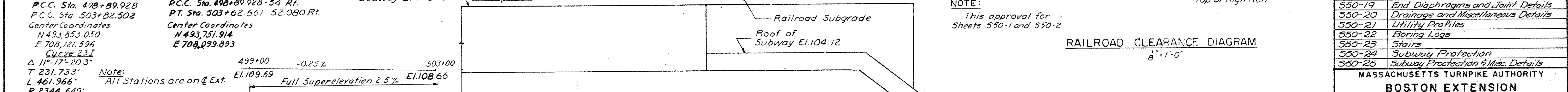
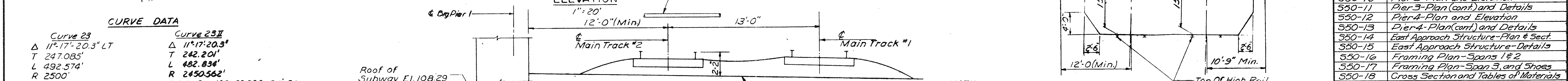
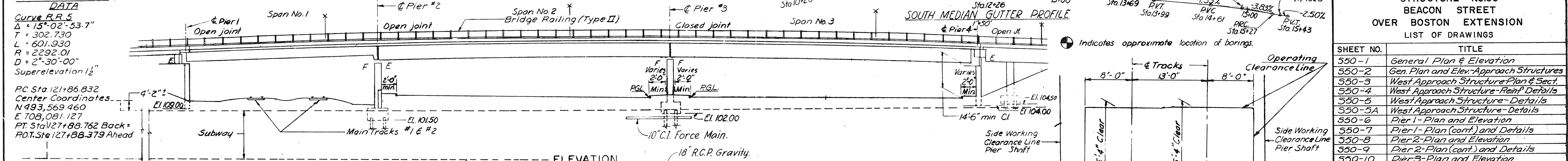
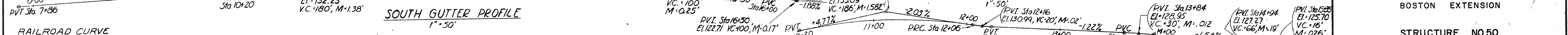
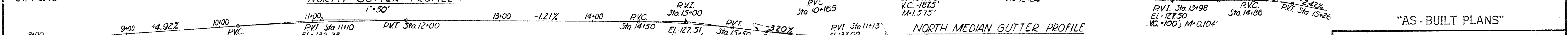
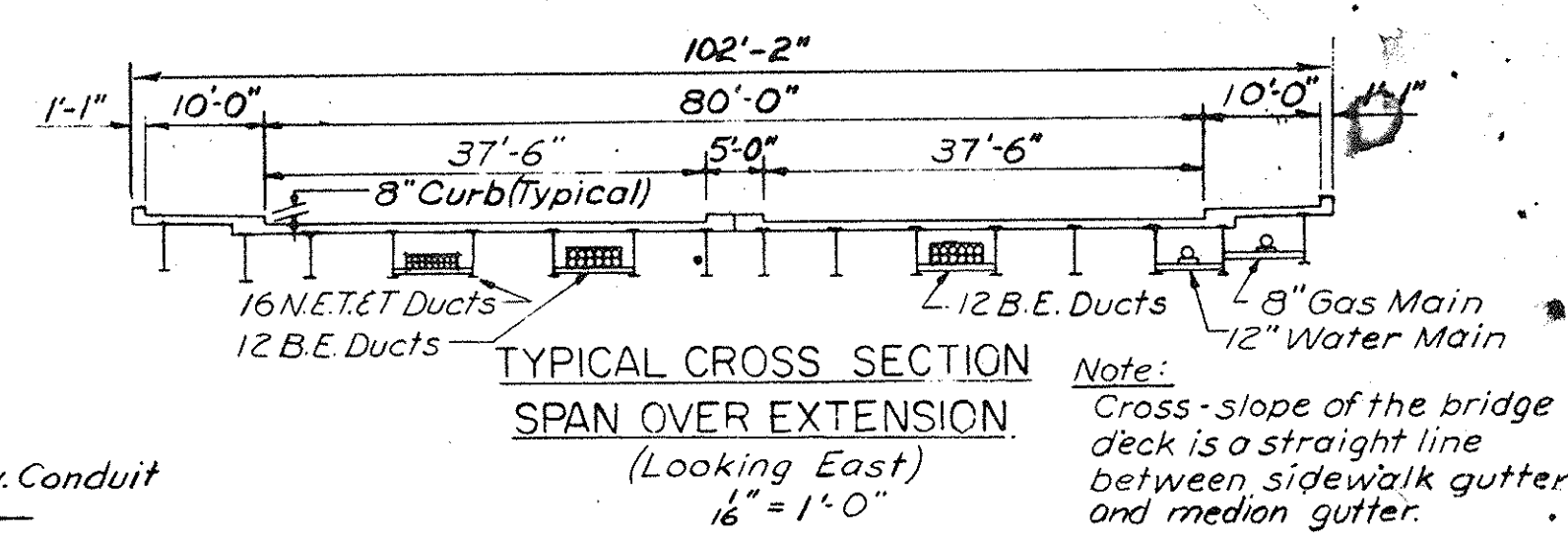
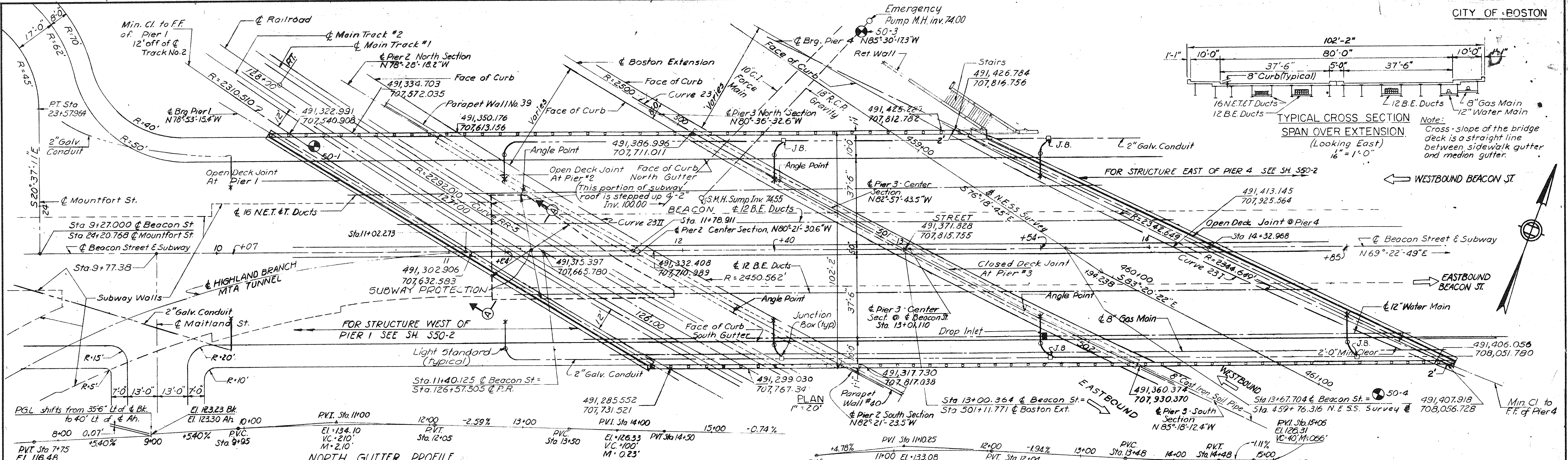
NOTE:
All steel conforms to ASTM Specifications A36.

Datum used on these plans is U. S. G. S. plus 100 feet.

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION NO. C-3
STRUCTURE NO. 49
ST. MARY'S STREET
FRAMING PLAN & CROSS SECTIONS

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY SHEET NO. S49-6

SCALE: AS NOTED



RAILROAD CURVE DATA

Curve R.R. 5 Δ = 15°-02'-53.7" T = 302.730 L = 601.930 R = 2292.01 D = 2°-30'-00" Superelevation 1/2"	Curve 23 Δ = 11°-17'-20.3" LT T = 247.085' L = 492.574' R = 2500' P.C.C. Sta. 498+89.928 P.C. Sta. 503+82.502 Center Coordinates N 493,853.050 E 708,081.127 PT. Sta. 127+88.762 Back + POT. Sta. 127+88.379 Ahead	Curve 23I Δ = 11°-17'-20.3" LT T = 247.085' L = 492.574' R = 2500' P.C.C. Sta. 498+89.928 P.C. Sta. 503+82.502 Center Coordinates N 493,853.050 E 708,081.127 PT. Sta. 127+88.762 Back + POT. Sta. 127+88.379 Ahead	Curve 23II Δ = 11°-17'-20.3" LT T = 247.085' L = 492.574' R = 2500' P.C.C. Sta. 498+89.928-54' Rt. P.T. Sta. 503+62.661-52.080 Rt. Center Coordinates N 493,751.914 E 708,099.893
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RAILROAD CURVE DATA

Curve 23I Δ = 11°-17'-20.3" LT T = 231.733' L = 461.966' R = 2344.649' P.C. Sta. 499+10.602 P.C. Sta. 503+82.502 N 493,749.710 Center E 708,120.108 Coord.	Curve 23II Δ = 11°-17'-20.3" LT T = 242.201' L = 482.834' R = 2450.562' P.C.C. Sta. 498+89.928-54' Rt. P.T. Sta. 503+62.661-52.080 Rt. Center Coordinates N 493,751.914 E 708,099.893
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NOTES:
 Design: Highway live load: H20-S16-44
 Foundations: 14BP 89 Steel H Piles - 80 Ton Cap
 For Lighting Details see Sheet EC4-4 and EC4-10.
 All piles within a line 25 feet from exterior of subway walls were placed in pre-drilled holes to a depth 10 feet below bottom of subway.

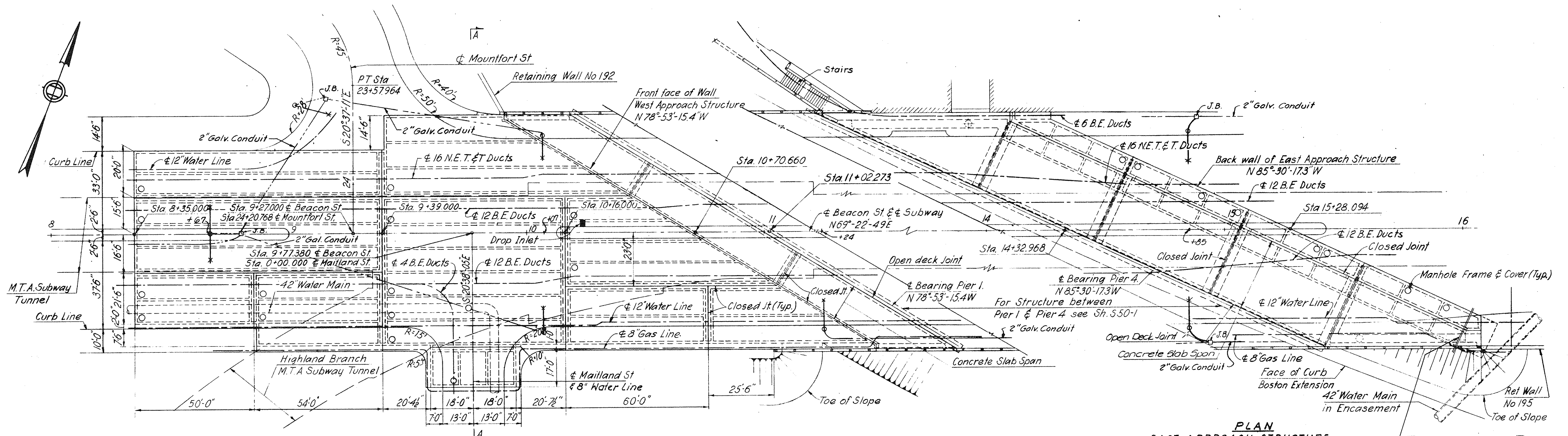
"AS-BUILT PLANS"

BOSTON EXTENSION
 STRUCTURE NO. 50
 BEACON STREET
 OVER BOSTON EXTENSION
 LIST OF DRAWINGS

SHEET NO.	TITLE
550-1	General Plan & Elevation
550-2	Gen. Plan and Elev. Approach Structures
550-3	West Approach Structure-Plan & Sect.
550-4	West Approach Structure-Reinf. Details
550-5	West Approach Structure-Details
550-5A	West Approach Structure-Details
550-6	Pier 1-Plan and Elevation
550-7	Pier 1-Plan (cont.) and Details
550-8	Pier 2-Plan and Elevation
550-9	Pier 2-Plan (cont.) and Details
550-10	Pier 3-Plan and Elevation
550-11	Pier 3-Plan (cont.) and Details
550-12	Pier 4-Plan and Elevation
550-13	Pier 4-Plan (cont.) and Details
550-14	East Approach Structure-Plan & Sect.
550-15	East Approach Structure-Details
550-16	Framing Plan-Spans 1 & 2
550-17	Framing Plan-Spans 3 and Shoes
550-18	Cross Section and Tables of Materials
550-19	End Diaphragms and Joint Details
550-20	Drainage and Miscellaneous Details
550-21	Utility Profiles
550-22	Boring Logs
550-23	Stairs
550-24	Subway Protection
550-25	Subway Protection & Misc. Details

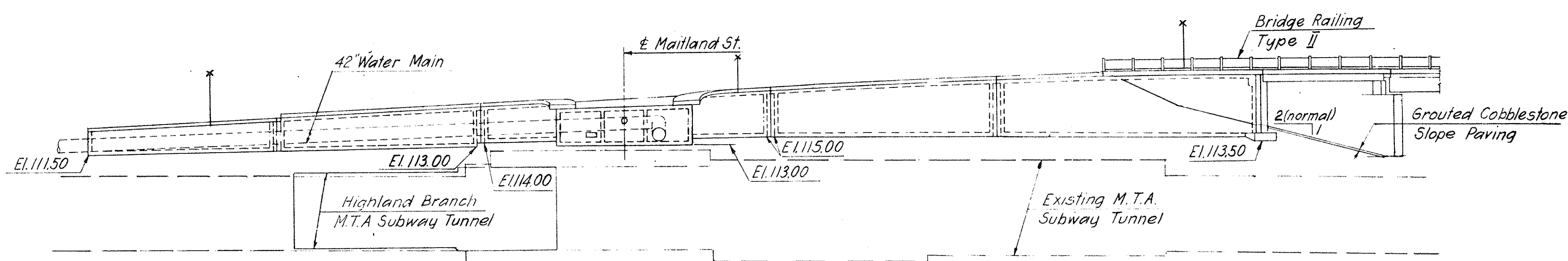
MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION NO. C-4
 STRUCTURE NO. 50
 BEACON STREET
 GENERAL PLAN AND ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY
 SCALE: AS NOTED
 SHEET NO. S50-1

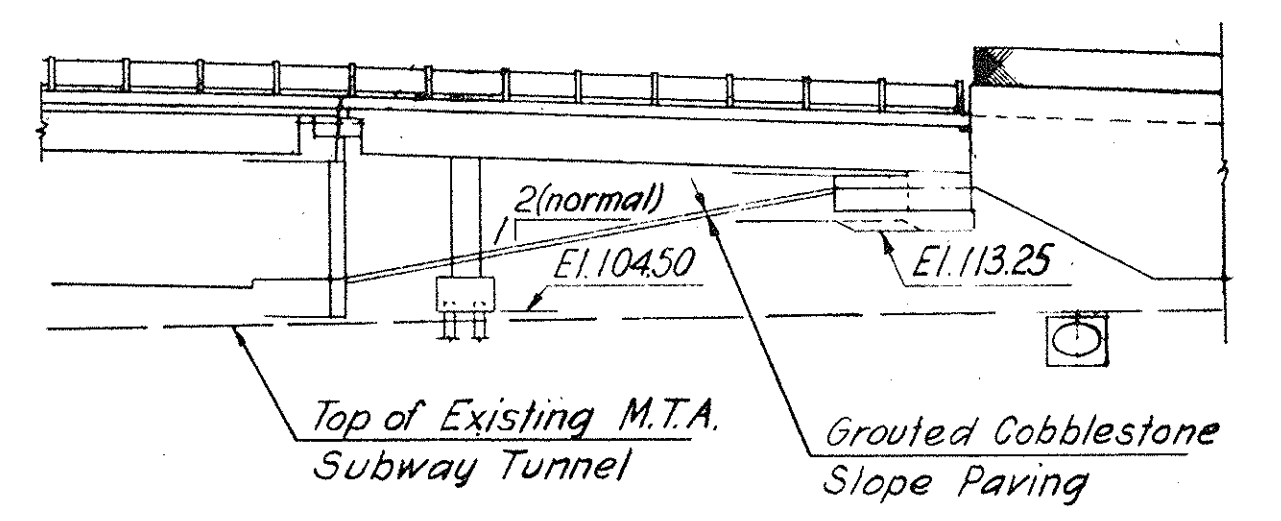


PLAN WEST APPROACH STRUCTURE

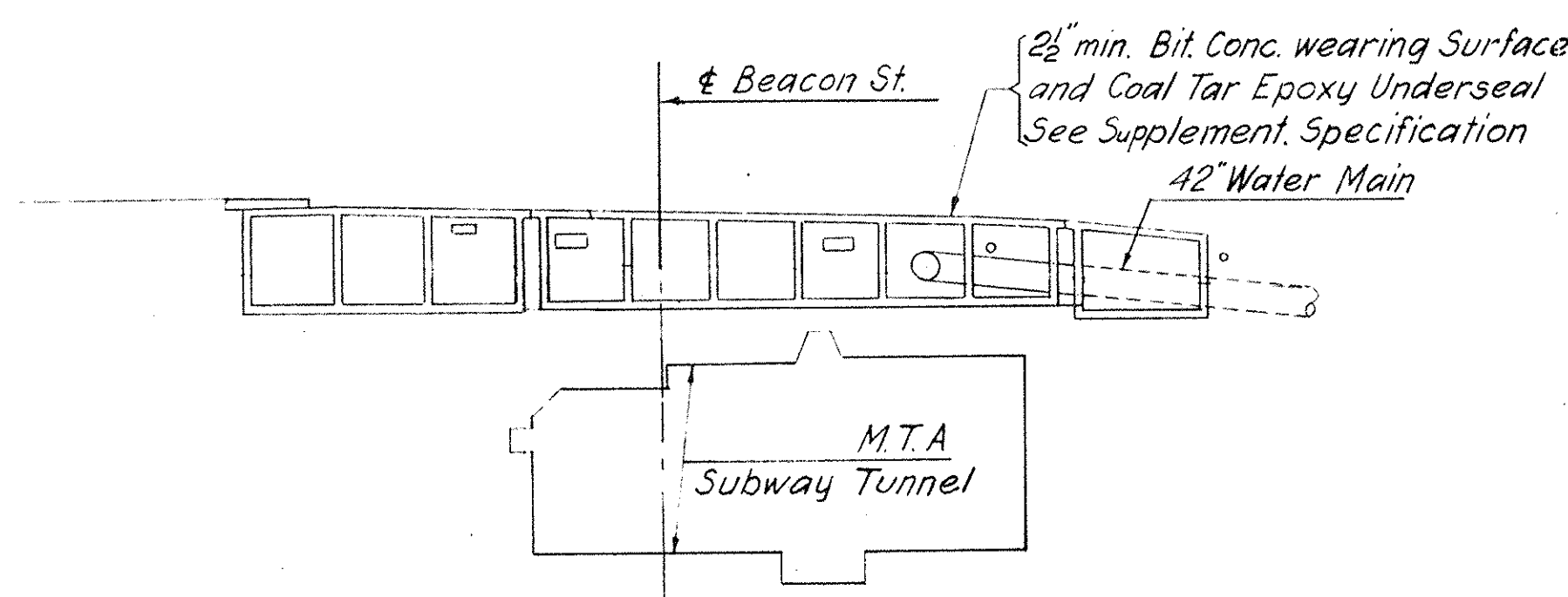
PLAN EAST APPROACH STRUCTURE



ELEVATION WEST APPROACH STRUCTURE



ELEVATION EAST APPROACH STRUCTURE



SECTION A-A

BITUMINOUS CONCRETE WEARING SURFACE ON WEST APPROACH STRUCTURE AND WEST SLAB SPAN

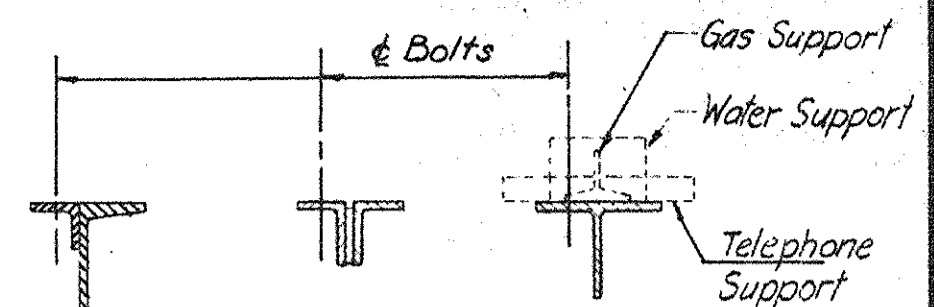
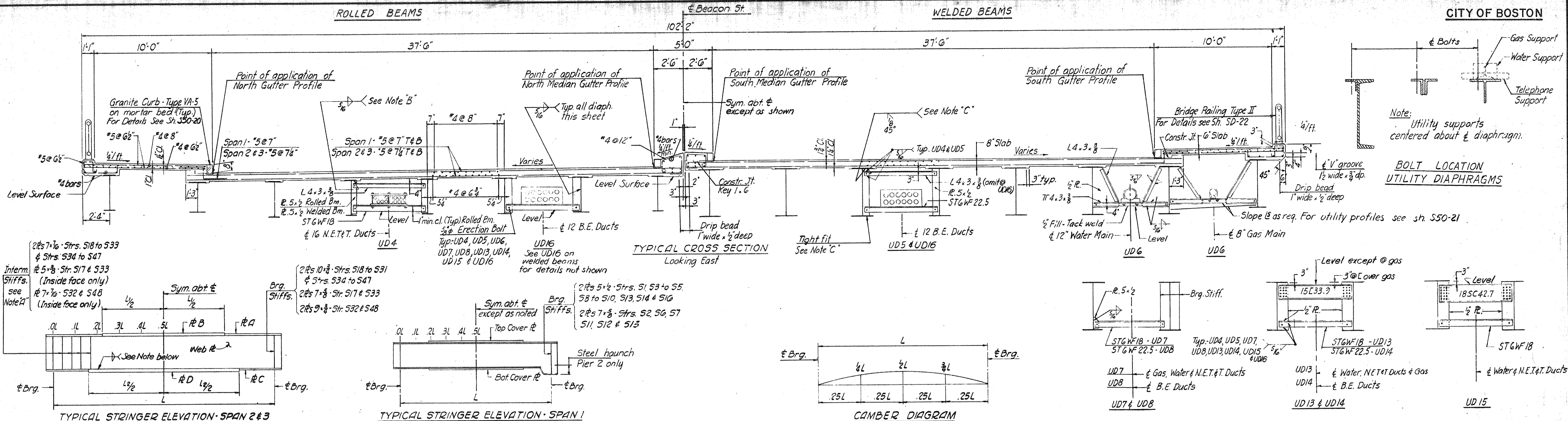
In general, the difference in elevation between the top of the cement concrete and the top of the finished pavement is approximately 2 1/2 inches. Where such difference does not exceed 2 1/2 inches, the wearing surface consists of bituminous concrete bottom course material 1 1/2" thick and top course material 1" thick. Where this difference exceeds 2 1/2", the thicknesses of the top and bottom courses are governed by the following criteria
 Top Course: 1" min. to 2" max.
 Bottom Courses: 1 1/2" min. to 2" max.
 The wearing surface is laid continuously over closed joints in the slabs.

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION NO. C-4 STRUCTURE NO. 50 BEACON STREET GENERAL PLAN AND ELEVATION APPROACH STRUCTURES	
HOWARD, NEEDLES, TAMMEN & BERGENDOFF CONSULTING ENGINEERS NEW YORK	SCALE: 1" = 20' KANSAS CITY SHEET NO. S50-2

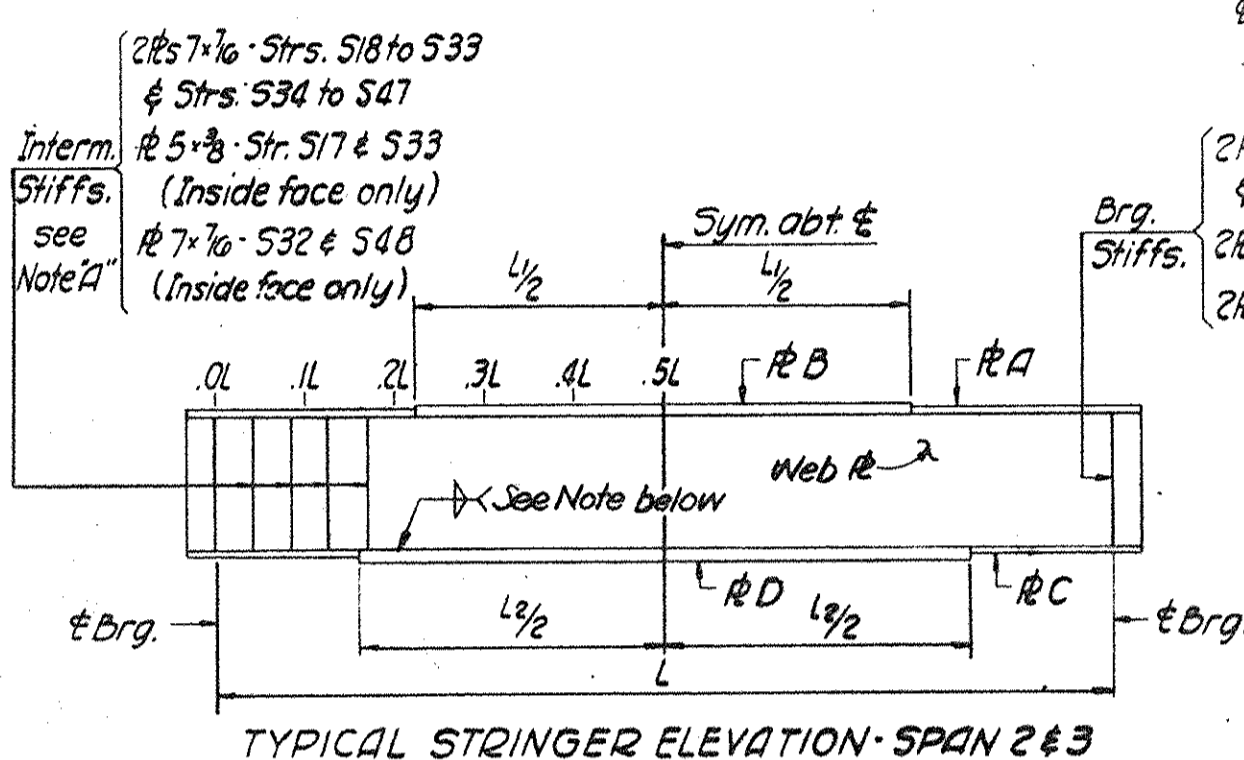
ROLLED BEAMS

WELDED BEAMS

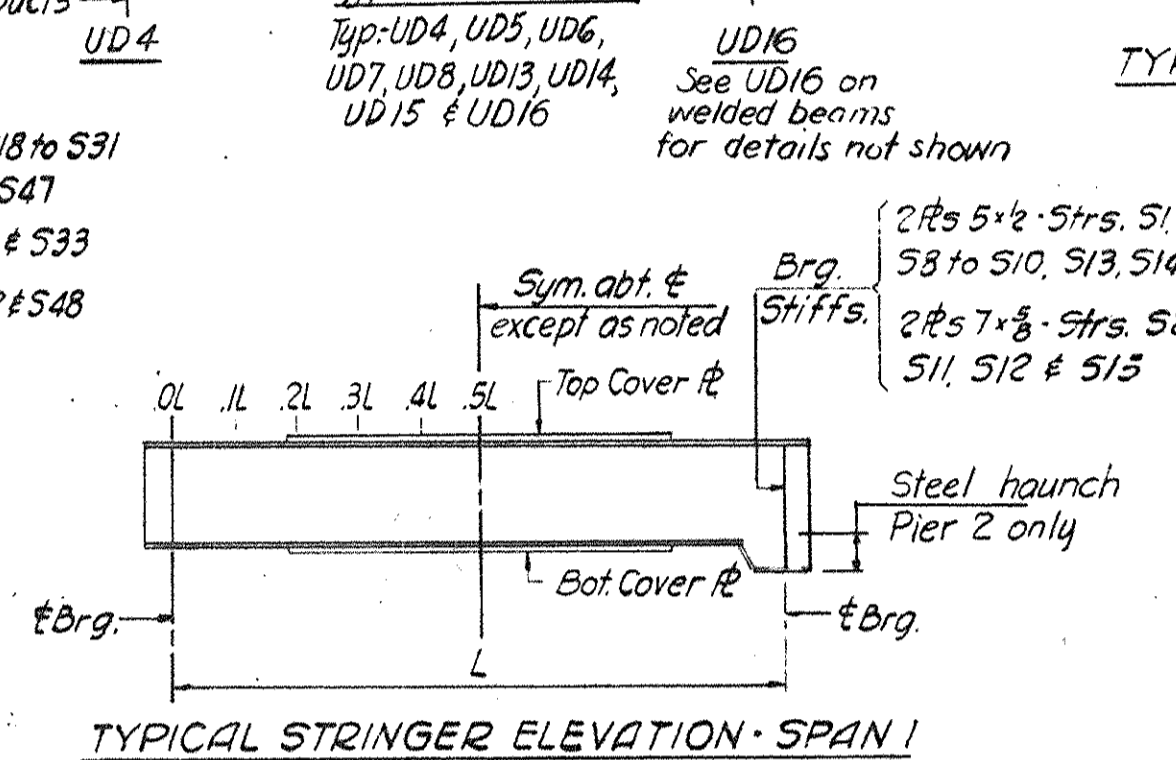
CITY OF BOSTON



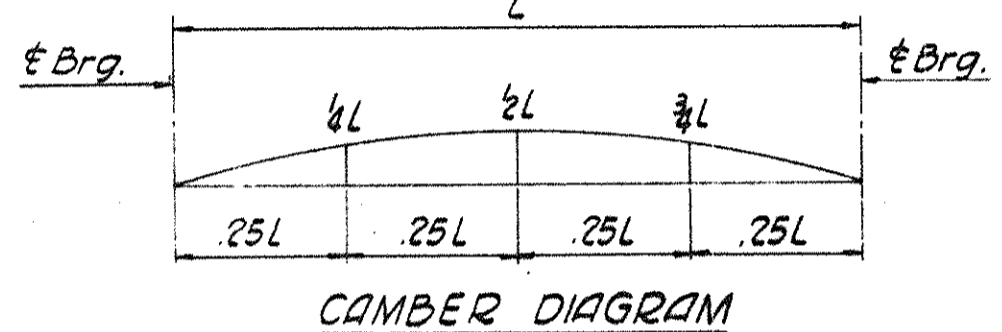
BOLT LOCATION UTILITY DIAPHRAGMS



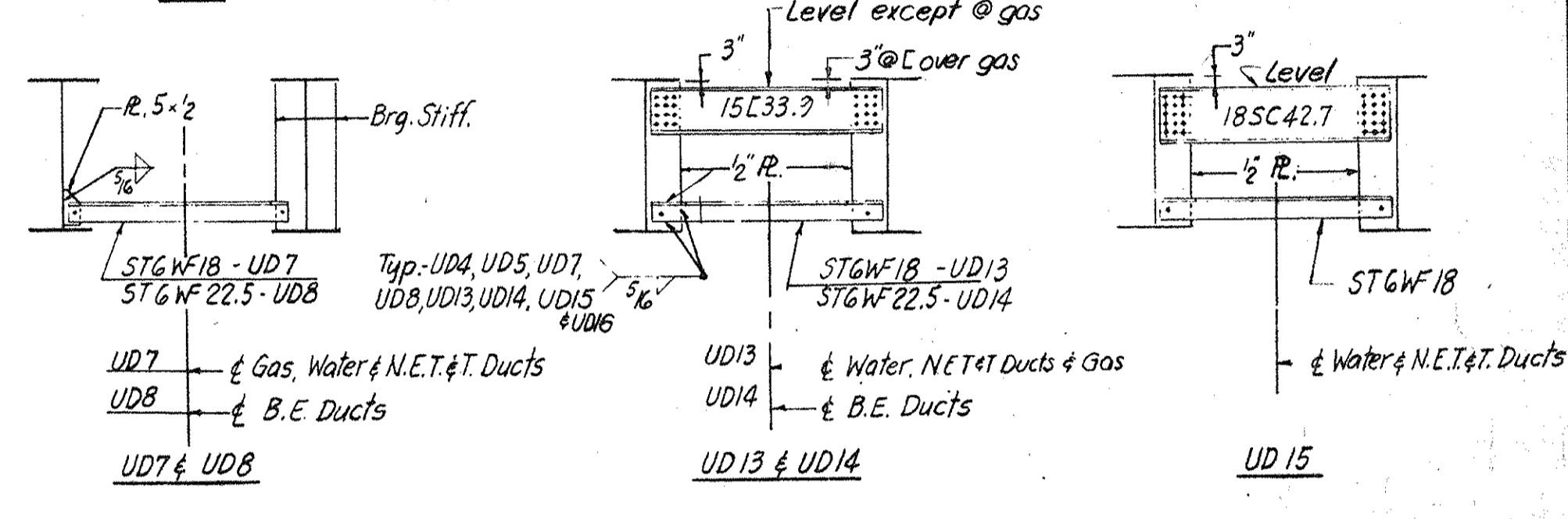
TYPICAL STRINGER ELEVATION - SPAN 2 & 3



TYPICAL STRINGER ELEVATION - SPAN 1



CAMBER DIAGRAM



SPAN	STRINGER	MATERIAL						
		Web R	R.A.	R.B.	L1	R.C.	R.D.	L2
2	S 17	48x3/8	10x1/4	10x1/4	68'-0"	10x1/4	10x1/4	70'-0"
	S 18	-	22x1/8	F.L.	22x1/4	22x1/8	69'-0"	
	S 19 & S 20	-	22x1/8	F.L.	22x1/4	22x1/8	68'-0"	
	S 21	-	22x1/4	F.L.	22x1/4	22x1/8	70'-0"	
	S 22	-	22x1/4	22x1/8	54'-6"	22x1/8	22x2/8	63'-6"
	S 23	-	22x1/4	22x1/8	70'-0"	22x1/8	22x2/8	76'-0"
	S 24 & S 25	-	22x1/4	F.L.	22x1/4	22x1/8	73'-0"	
	S 26	-	22x1/8	22x1/8	47'-0"	22x1/8	22x2	73'-0"
	S 27	-	22x1/8	22x2	72'-0"	22x1/8	22x2/8	78'-0"
	S 28	-	22x1/8	22x2	73'-0"	22x1/8	22x2/8	78'-0"
	S 29	-	22x1/8	22x1/8	50'-0"	22x1/8	22x2	75'-0"
	S 30	-	22x1/8	22x1/2	64'-0"	22x1/8	22x2/8	82'-0"
3	S 31	-	22x1/8	22x2	71'-0"	22x1/8	22x2/8	81'-0"
	S 32	48x3/8	20x1/2	20x2/8	80'-0"	20x1/2	20x2/8	83'-0"
	S 33	48x3/8	16x1/8	16x2/8	72'-0"	16x1/8	16x2/8	75'-0"
	S 34	-	22x1/8	22x1/8	48'-0"	22x1/8	22x2/8	75'-0"
	S 35	-	22x1/4	F.L.	22x1/4	22x1/8	76'-0"	
	S 36	-	22x1/8	22x1/2	63'-6"	22x1/8	22x2/8	81'-0"
	S 37	-	22x1/8	22x1/2	66'-0"	22x1/8	22x2/8	83'-0"
	S 38	-	22x1/2	22x2/4	76'-0"	22x1/8	22x2/8	82'-0"
	S 39	-	22x1/8	22x2/8	75'-0"	22x2	22x3	82'-0"
	S 40 & S 41	-	22x1/8	22x1/2	67'-0"	22x1/2	22x2/4	81'-0"
	S 42	-	24x1/4	24x1/8	62'-0"	24x1/2	24x2/4	83'-0"
	S 43	-	24x1/8	24x2/8	79'-0"	24x1/8	24x2/8	88'-0"
S 44	-	24x1/8	24x2/8	80'-0"	24x1/8	24x2/8	89'-0"	
S 45	-	24x1/4	24x1/8	67'-0"	24x1/2	24x2/4	86'-0"	
S 46	-	24x1/4	24x1/8	75'-0"	24x1/8	24x2/8	84'-0"	
S 47	-	24x1/2	24x2/4	69'-0"	24x1/8	24x2/8	80'-0"	
S 48	48x3/8	20x1/8	20x2/8	84'-0"	20x1/8	20x2/8	83'-0"	

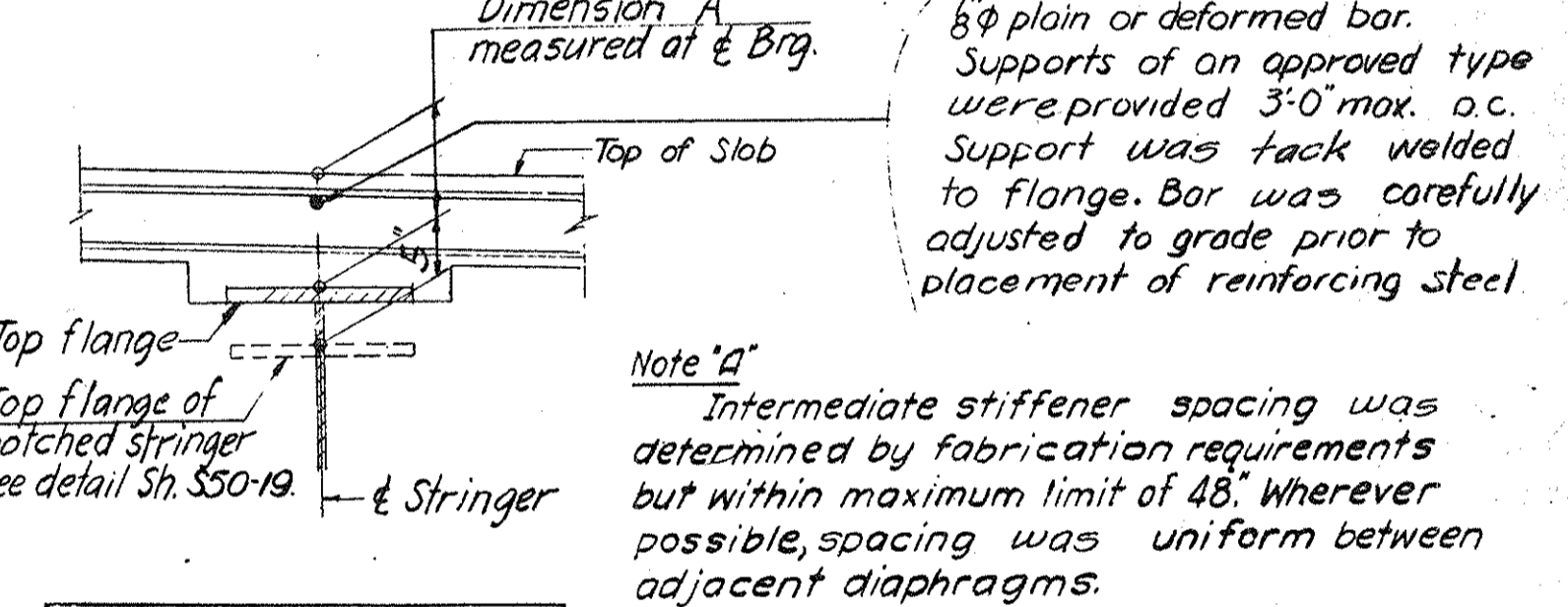
* At S 20, R.D. = 22x1 1/2" and L2 = 74'-0". All other sizes and lengths as tabulated above.
 Note: Flange to web weld for Flange R's over 2 1/2" thick are 1/2" fillet welds. For other Flange to Web welding see Sh. 55-B.01

SPAN	STRINGER	MAX. SHEAR CONN. (STUD) SPACING							
		OL	IL	IL-2L	2L-3L	3L-4L	4L-5L	5L	5L
1	S 2	6 1/2	7 1/2	9 1/2	11 1/2	13			
	S 3 & S 4	8 1/2	9 1/2	11 1/2	12 1/2	13 1/2			
	S 5	8 1/2	9 1/2	12	12 1/2	14			
	S 6	9	10	12 1/2	13 1/2	14 1/2			
	S 7	8 1/2	10	12	13	14 1/2			
	S 8 & S 9	8 1/2	9 1/2	12	13	14 1/2			
	S 10	8	9	11 1/2	12 1/2	13 1/2			
	S 11	9	10	12 1/2	13 1/2	14 1/2			
	S 12	9	10 1/2	12 1/2	13 1/2	14 1/2			
	S 13	8 1/2	10	12	12 1/2	14			
	S 14	8 1/2	9 1/2	12	13	14			
	S 15	7 1/2	8 1/2	11	13 1/2	15 1/2			
2	S 18	10	12	15	18 1/2	22 1/2			
	S 19 & S 20	13 1/2	15	17	19	20 1/2			
	S 21	14	15 1/2	18	19 1/2	21			
	S 22	13 1/2	15 1/2	17 1/2	21 1/2	23 1/2			
	S 23	13	15	18	22	24			
	S 24 & S 25	13 1/2	15	18 1/2	20 1/2	22 1/2			
	S 26	12 1/2	14	17 1/2	18 1/2	21 1/2			
	S 27	14	16	18 1/2	22 1/2	24			
	S 28	15	16 1/2	19	23	24			
	S 29	14	15 1/2	18	20	21 1/2			
	S 30	14	15 1/2	18	20 1/2	22 1/2			
	S 31	10 1/2	12 1/2	16 1/2	24	24			
3	S 34	10	12	15	20	24			
	S 35	14	15 1/2	18	19 1/2	21			
	S 36	14	15 1/2	18	20 1/2	22 1/2			
	S 37	14	15 1/2	18	20 1/2	22 1/2			
	S 38	14 1/2	16 1/2	19 1/2	23 1/2	24			
	S 39	14	16	19 1/2	23 1/2	24			
	S 40 & S 41	13	15	18	22	24			
	S 42	13	15	18	21	23			
	S 43	14 1/2	17	20 1/2	24	24			
	S 44	15 1/2	18	21	24	24			
	S 45	14	16 1/2	19	21 1/2	23			
	S 46	14 1/2	16 1/2	19	22 1/2	24			
S 47	10 1/2	13	16 1/2	24	24				

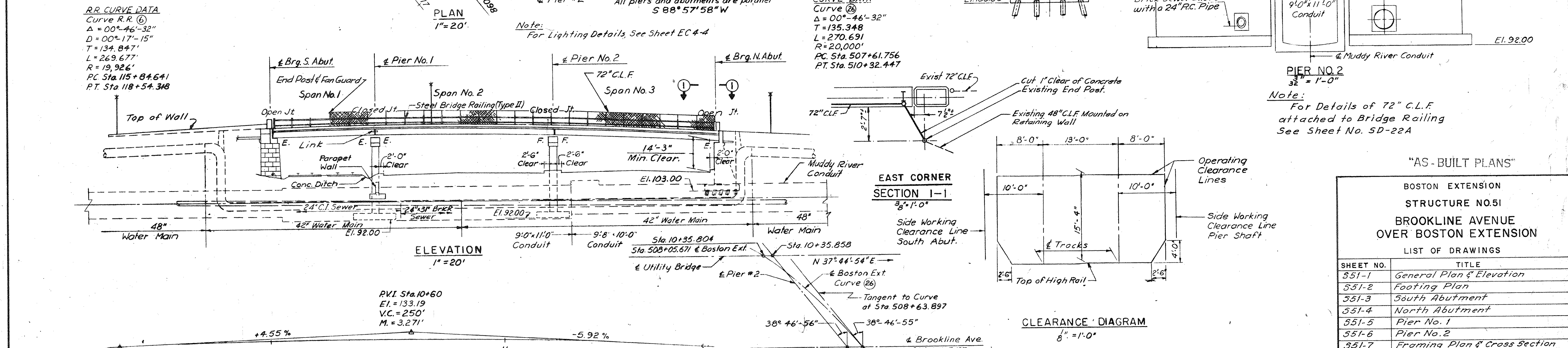
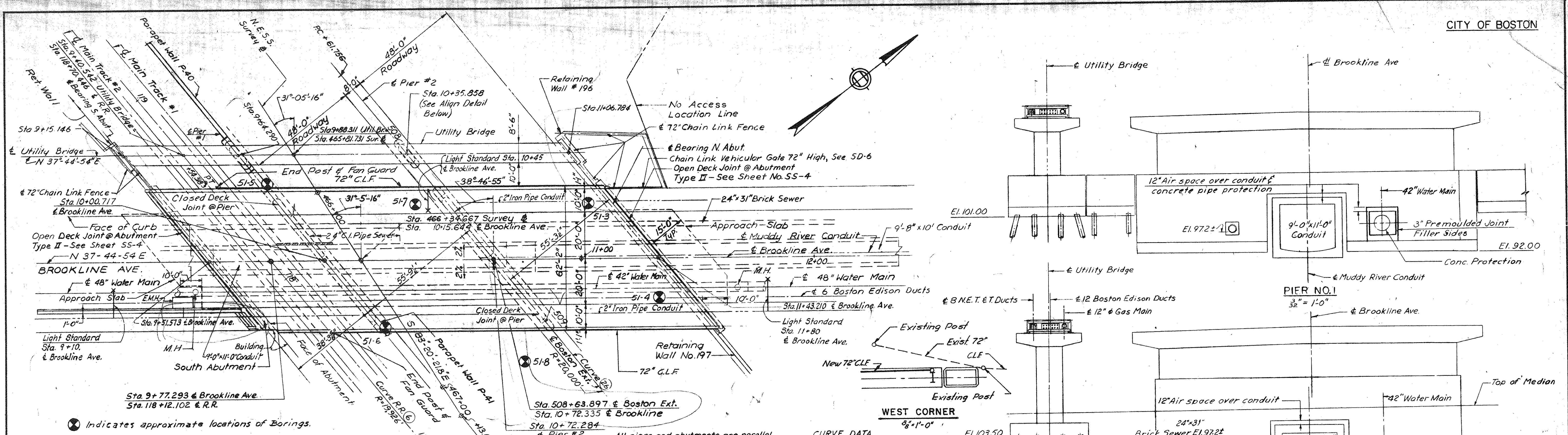
2-3/8" Studs per row @ 12" o.c. - Str. S1, S16, S17, S32, S33
 3-3/4" Studs per row - all others
 Stud spacing given in inches.
 All studs 4" High

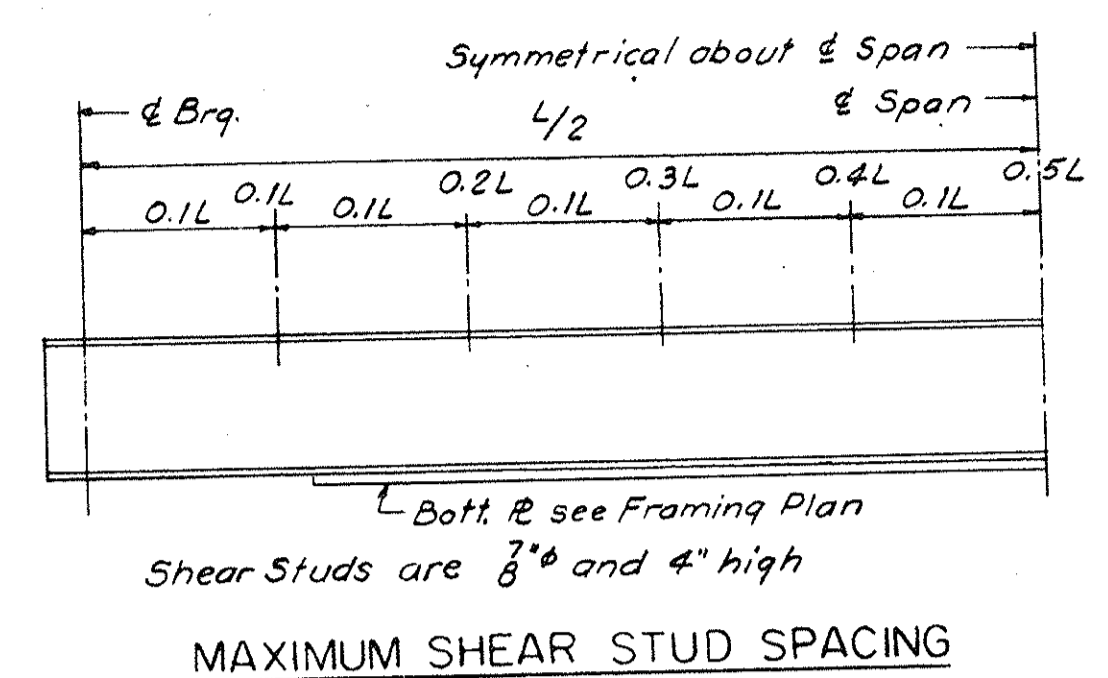
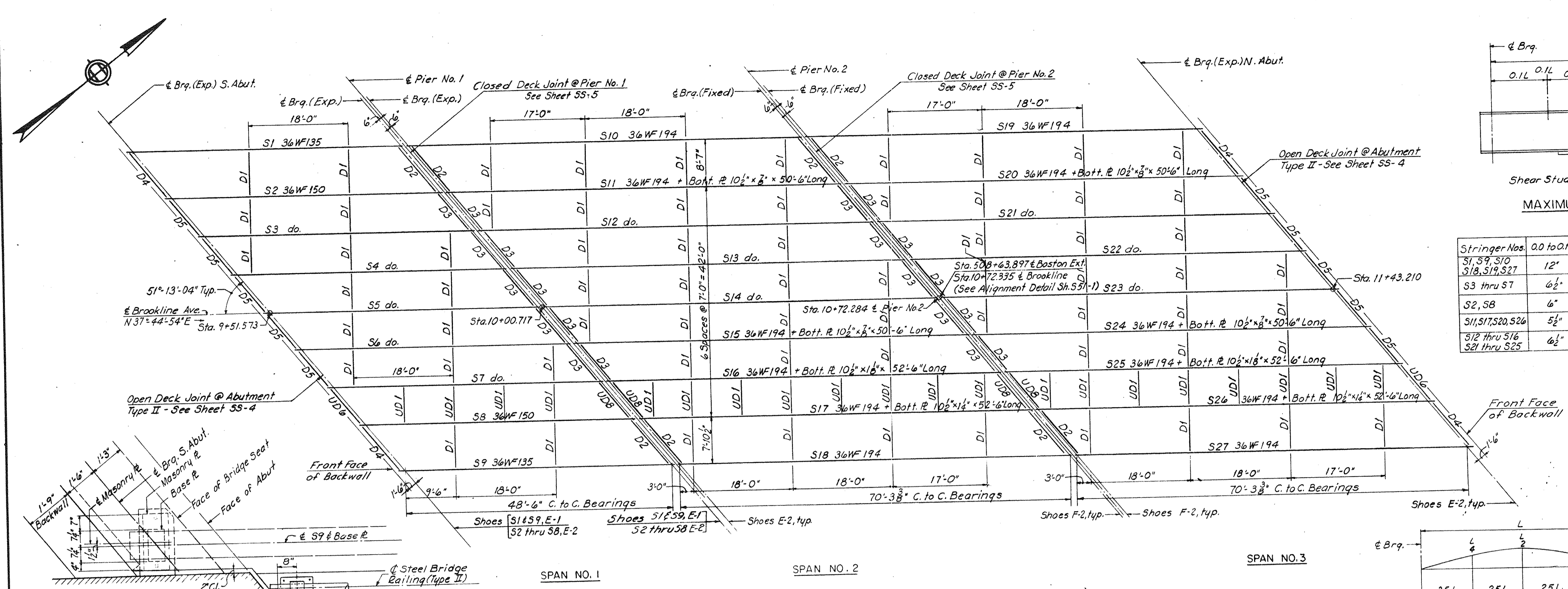
SPAN	STRINGER	LOCATION	DEAD LOAD			CAMBER			SCHEDULE - INCHES			
			S	C	U	B	T	S	C	U	B	T
1	S 1	1/2L	.36	.146			.182					
		1/4L & 3/4L	.26	1.03			1.29					
		1/2L	.54	.81			.38	1.73				
2	S 2	1/2L	.38	.58			.27	1.23				
		1/4L & 3/4L	.38	1.18			1.56					
		1/2L	.76	.85			1.12					
3	S 3	1/2L	.38	.112	.18		1.68					
		1/4L & 3/4L	.27	.80	.13		1.20					
		1/2L	.54	.89	.56	.03	1.85					
1	S 4	1/2L	.26	.64	.40	.02	1.32					
		1/4L & 3/4L	.26	.93	.57	.05	1.93					
		1/2L	.52	.66	.41	.04	1.38					
2	S 5	1/2L	.41	1.12	.09		1.62					
		1/4L & 3/4L	.29	.80	.06	.15	1.15					
		1/2L	.44	1.24	.07	1.75						
3	S 6	1/2L	.43	1.02	.03		2.11					
		1/4L & 3/4L	.31	.73	.45	.02	1.51					
		1/2L	.44	1.05	.66		2.15					
1	S 7	1/2L	.49	1.39			1.88					
		1/4L & 3/4L	.35	.99			1.34					
		1/2L	.52	1.44	.12		2.08					
2	S 8	1/2L	.37	1.03	.09		1.48					
		1/4L & 3/4L	.37	.89	.17	.43	2.03					
		1/2L	.54	.89	.17	.43	2.03					
3	S 9	1/2L	.39	.64	.12	.31	1.46					
		1/4L & 3/4L	.39	.64	.12	.31	1.46					
		1/2L	.56	.81	.06		2.43					
1	S 10	1/2L	.84	2.45			3.29					
		1/4L & 3/4L	.61	1.77			2.38					
		1/2L	.92	1.45		.74	3.11					
2	S 11	1/2L	.66	1.04		.53	2.23					
		1/4L & 3/4L	.66	1.04		.53	2.23					
		1/2L	.99	2.36			3.35					
3	S 12	1/2L	.71	1.69			2.40					
		1/4L & 3/4L	.71	1.69			2.40					
		1/2L	1.00	2.19	.34		3.53					
1	S 13	1/2L	.72	1.57	.24		2.53					
		1/4L & 3/4L	.72	1.57	.24		2.53					
		1/2L	1.02	1.80	1.10	.07	3.99					
2	S 14	1/2L	.74	1.32	.80	.05	2.91					
		1/4L & 3/4L	.74	1.32	.80	.05	2.91					
		1/2L	1.02	1.72	1.05	.12	3.91					
3	S 15	1/2L	.74	1.24	.76	.09	2.89					
		1/4L & 3/4L	.74	1.24	.76	.09	2.89					
		1/2L	1.14	2.22		.23	3.59					
1	S 16	1/2L	.82	1.59		.16	2.57					
		1/4L & 3/4L	.82	1.59		.16	2.57					
		1/2L	1.24	2.55		.17	3.96					
2	S 17	1/2L	.90	1.85		.12	2.87					
		1/4L & 3/4L	.90	1.85		.12	2.87					
		1/2L										

Camber Notes:
 U = Camber due to weight of utilities
 For other camber notes see Sh. 55-1.



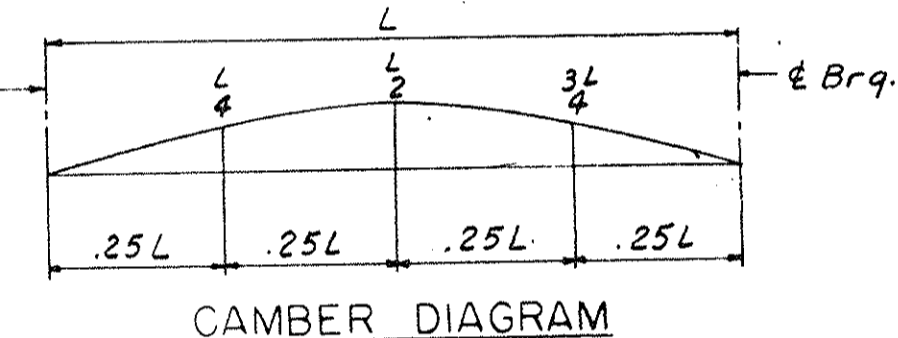
STRINGER	DIMENSION "A"
S 2 to S 15, S 18 to S 21, S 24	9 1/2"
S 29, S 34, S 35	9 1/2"
S 30, S 41, S 42, S 45, S 46	9 3/4"





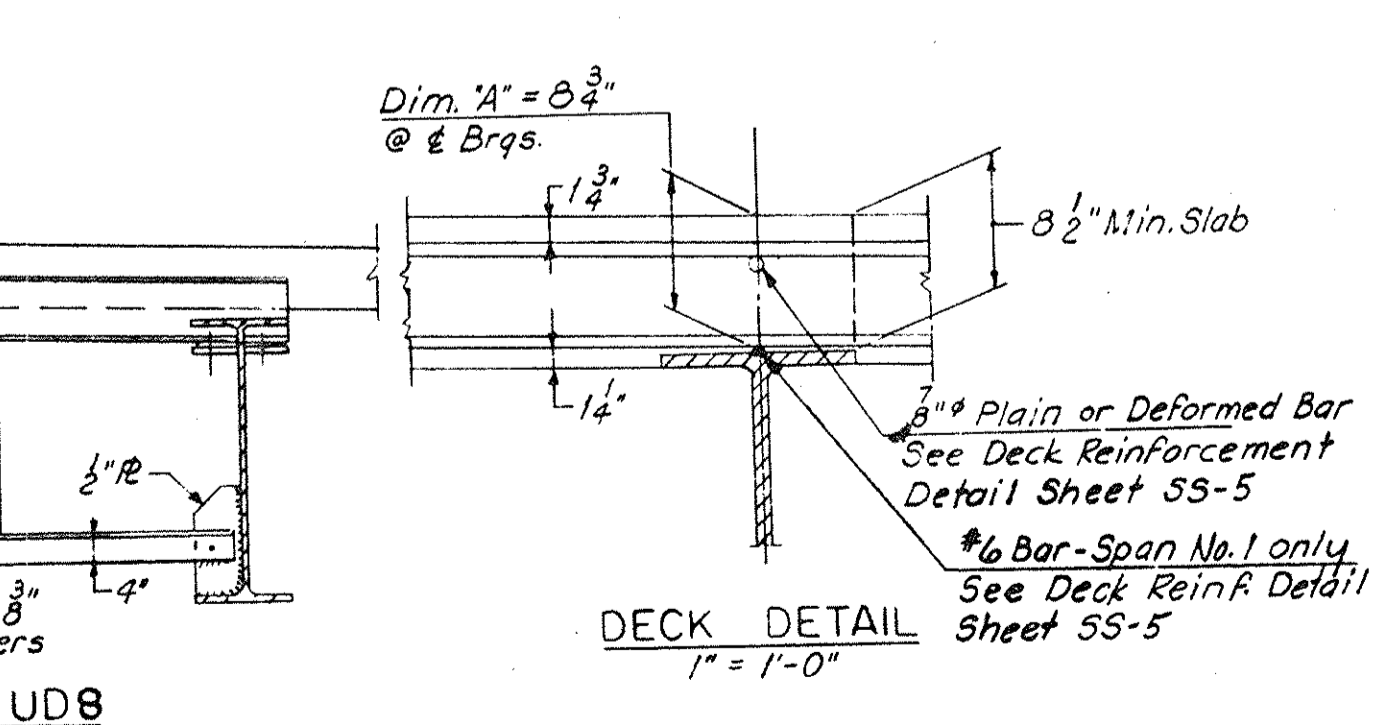
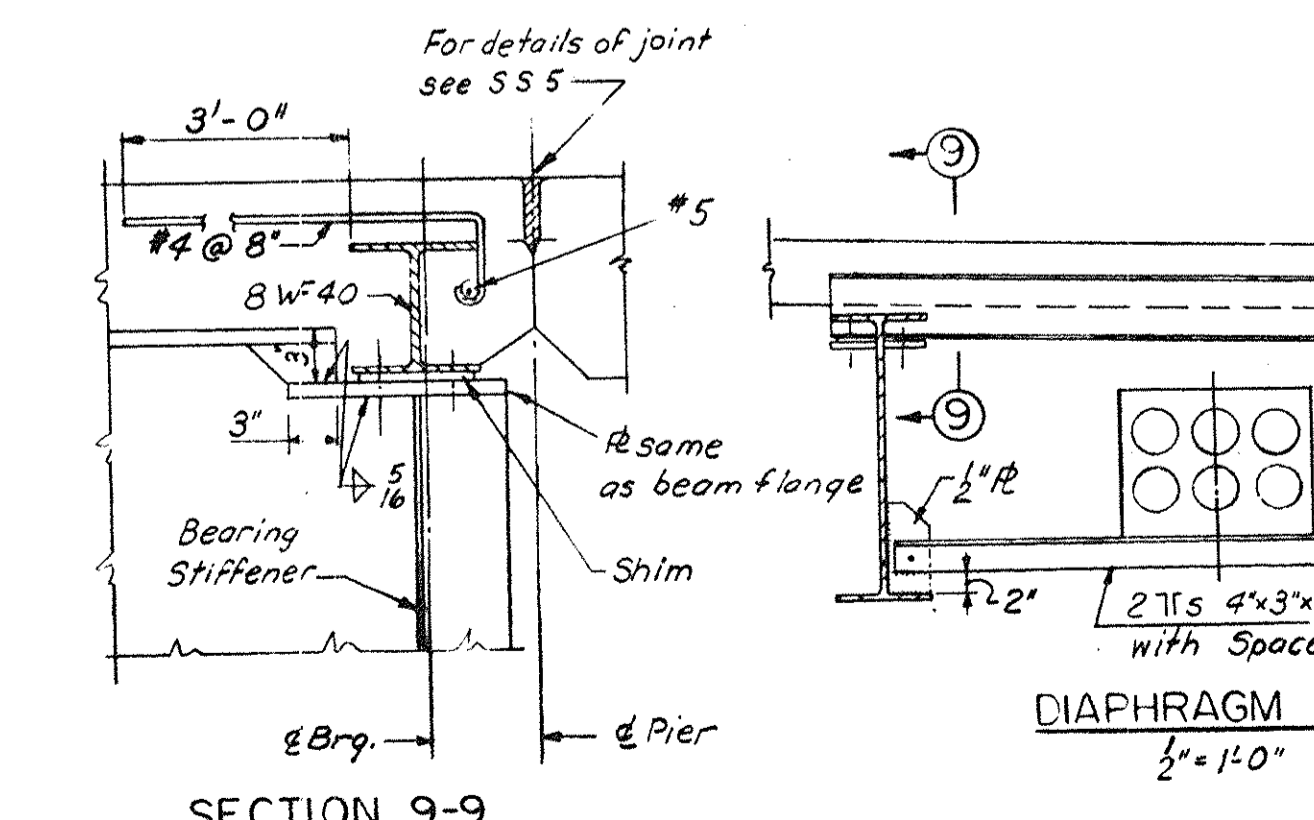
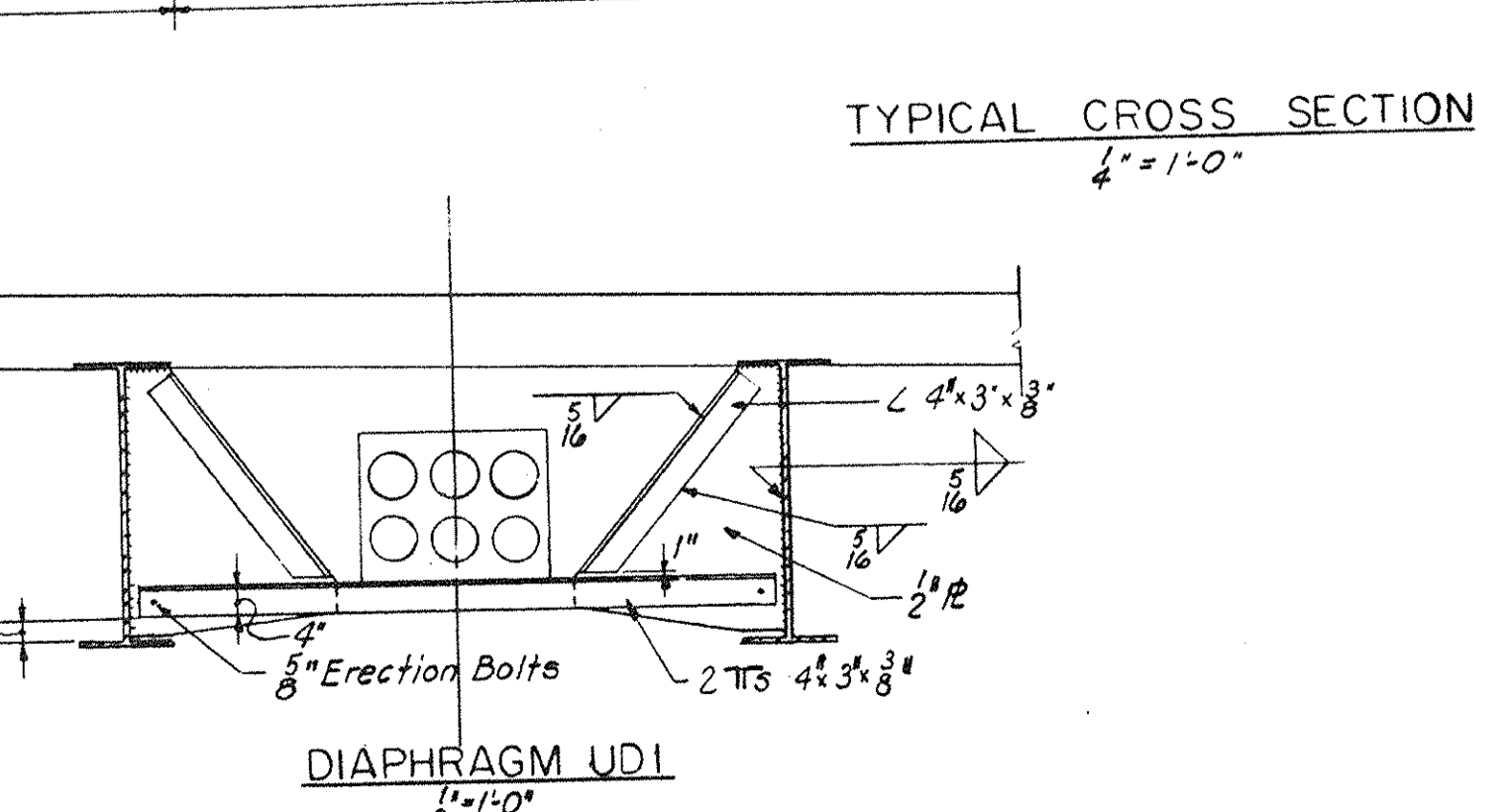
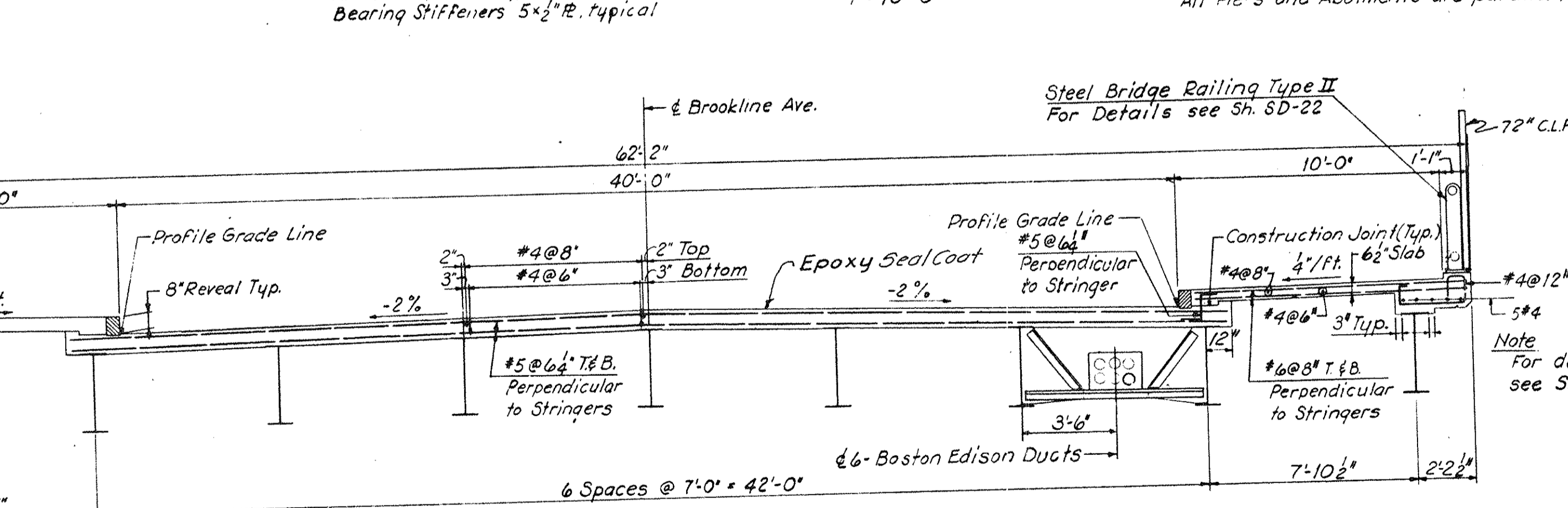
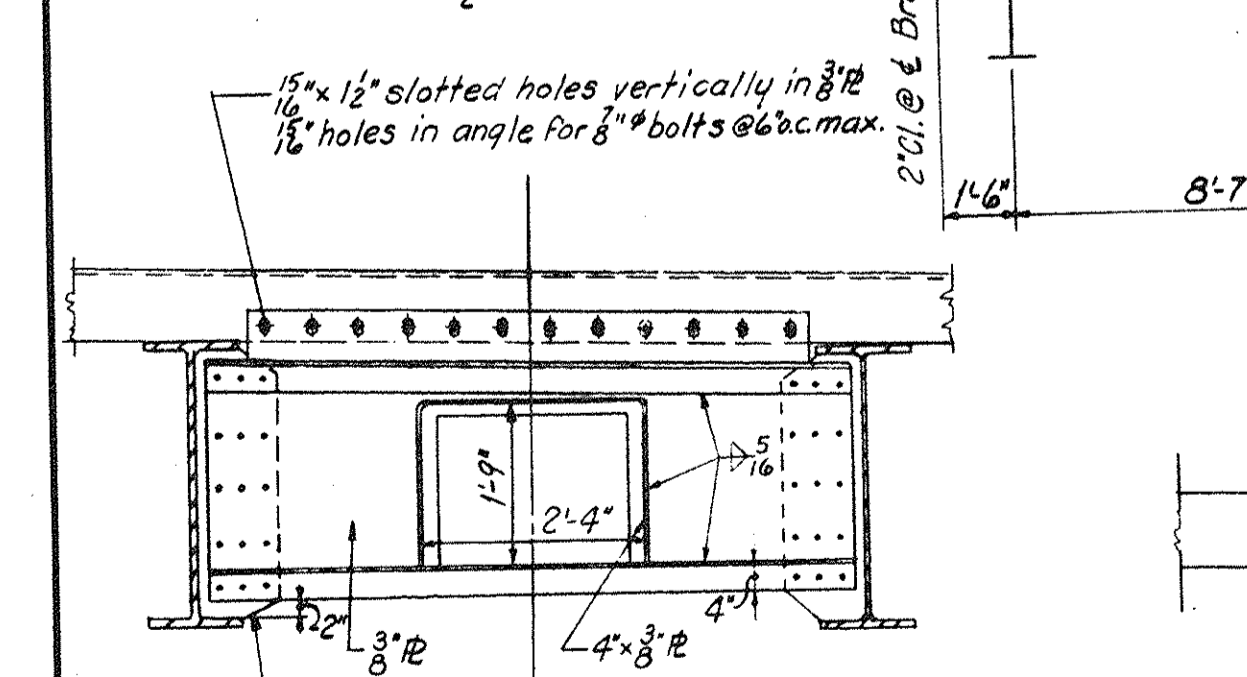
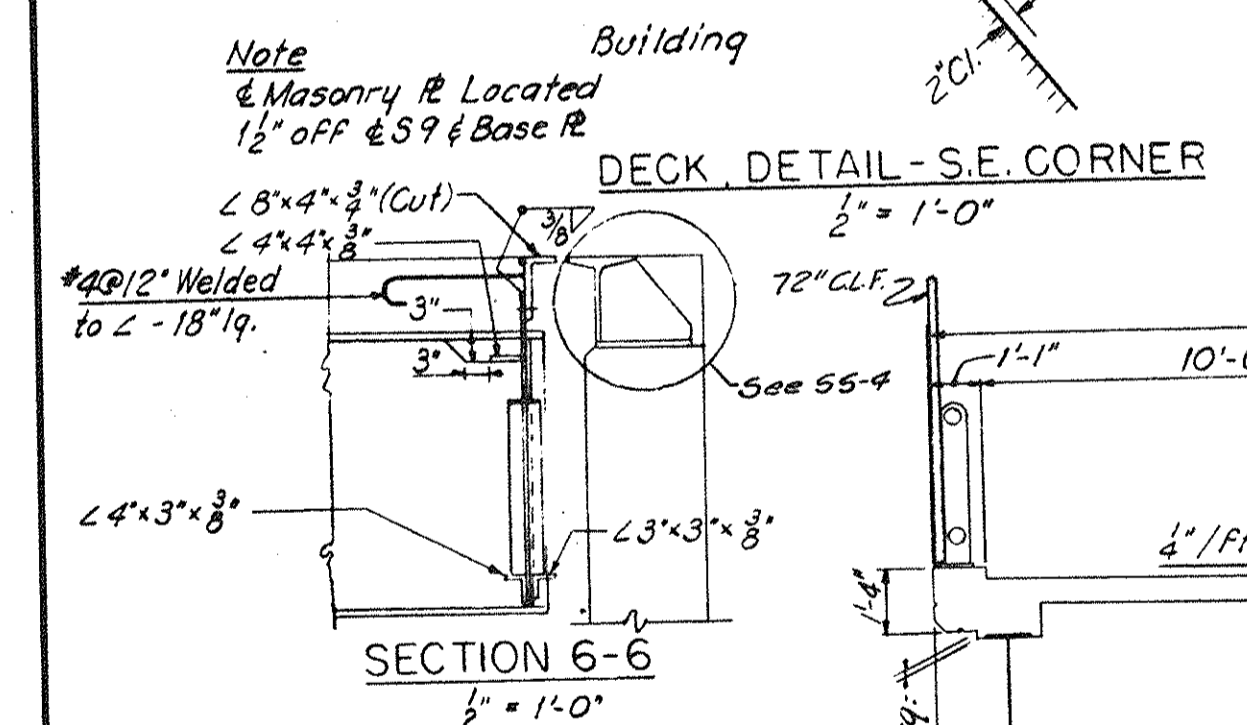
Stringer Nos.	0.0 to 0.1L	0.1 to 0.2L	0.2 to 0.3L	0.3 to 0.4L	0.4 to 0.5L	No. Studs/Row
S1, S9, S10, S18, S19, S27	12"	12"	12"	12"	12"	2
S3 thru S7	6 1/2"	7 1/2"	9"	10"	11"	2
S2, S8	6"	7"	8 1/2"	10"	11"	2
S11, S17, S20, S26	5 1/2"	6 1/2"	8 1/2"	10"	11"	2
S12 thru S16, S21 thru S25	6 1/2"	7 1/2"	9 1/2"	10 1/2"	11 1/2"	2

- NOTES**
- Loose shims provided for UDB. One shim at each support was bevelled to provide full bearing.
 - For details of Utility Supports see SS-9.



Stringer	S1, S9	S2	S3 thru S6	S7	S8	S10, S18, S19, S27	S11, S20	S12 thru S16, S21 thru S24	S16, S25	S17, S26
Location	1/2	1/4 & 3/4	1/2	1/4 & 3/4	1/2	1/4 & 3/4	1/2	1/4 & 3/4	1/2	1/4 & 3/4
S	.08	.06	.09	.06	.09	.06	.09	.06	.34	.24
C	.54	.38	.27	.20	.42	.30	.42	.30	.27	.20
B	—	—	.05	.04	.02	.01	.02	.01	.05	.04
U	—	—	—	—	.07	.05	.12	.09	—	—
T	.62	.44	.41	.30	.53	.37	.60	.42	.53	.37

- CAMBER NOTES**
- S = Camber due to weight of structural steel.
 - C = Camber due to weight of all concrete except sidewalk, parapet and railing.
 - B = Camber due to weight of sidewalk, parapet and railing.
 - U = Camber due to weight of utilities.
 - T = Total camber due to full dead load.
- All deflections in inches.
Camber for profile grade vertical curvature was added where applicable to totals shown in schedule.



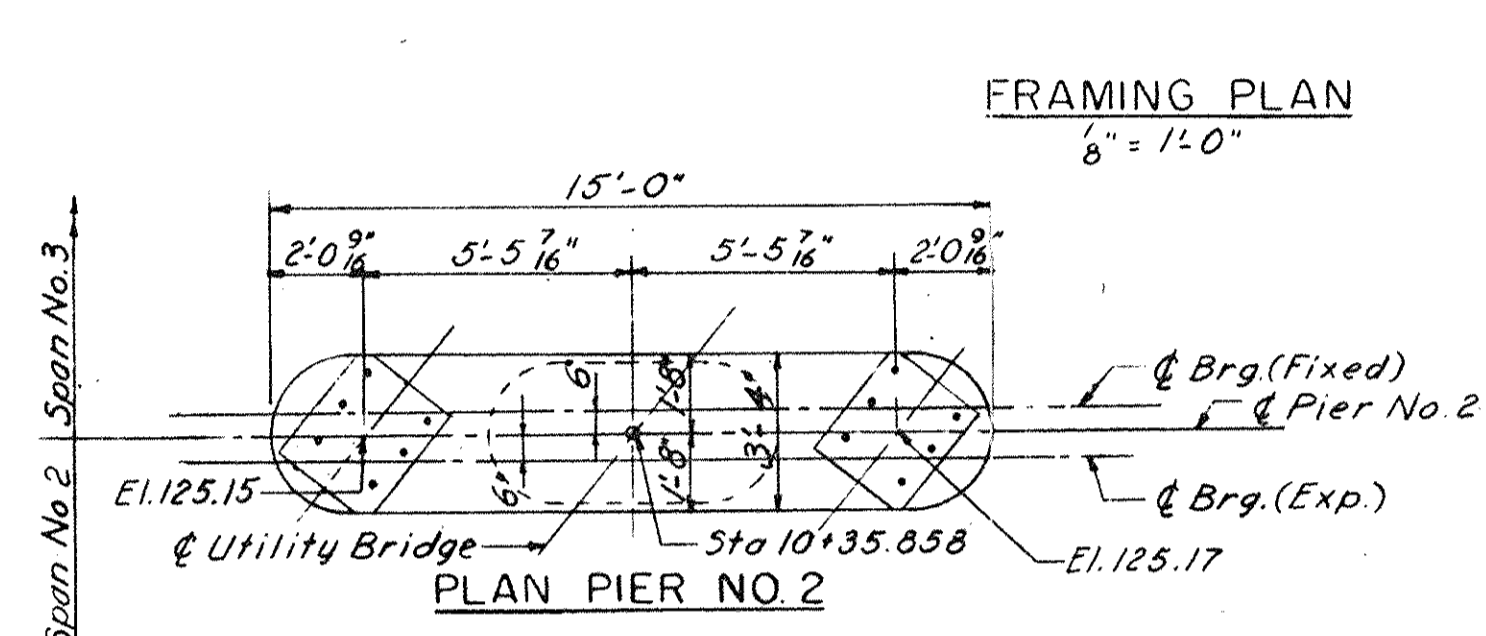
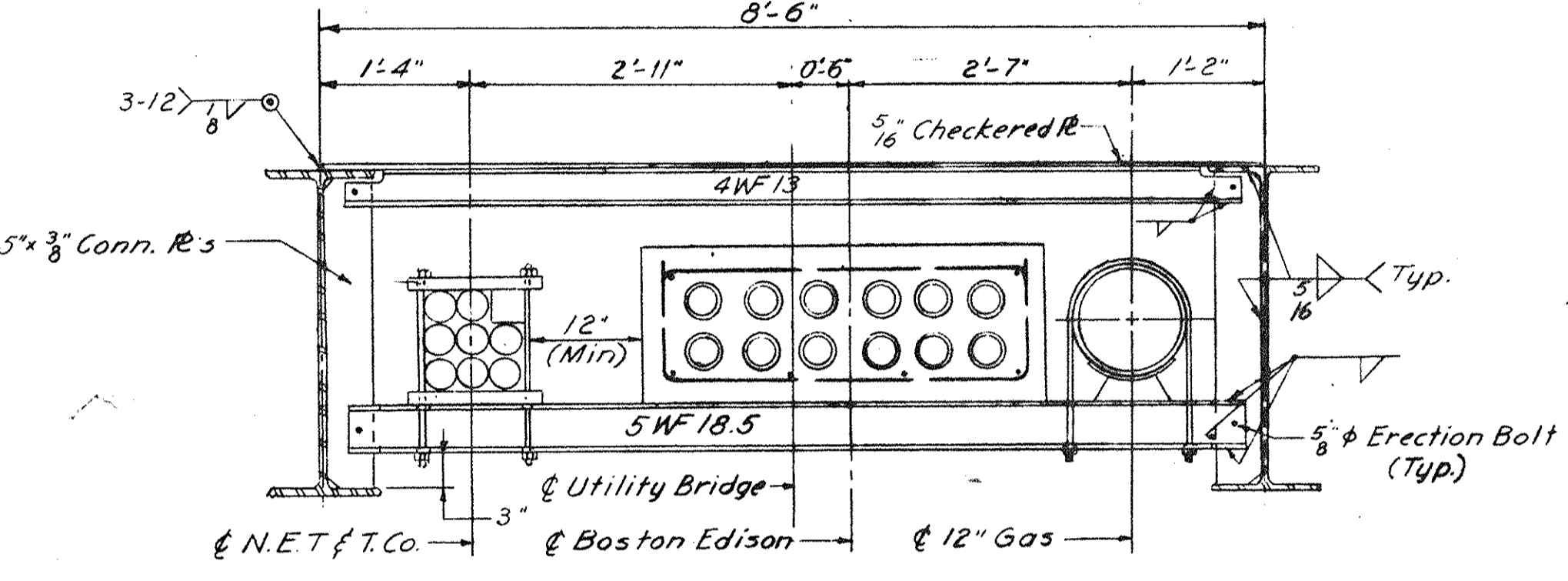
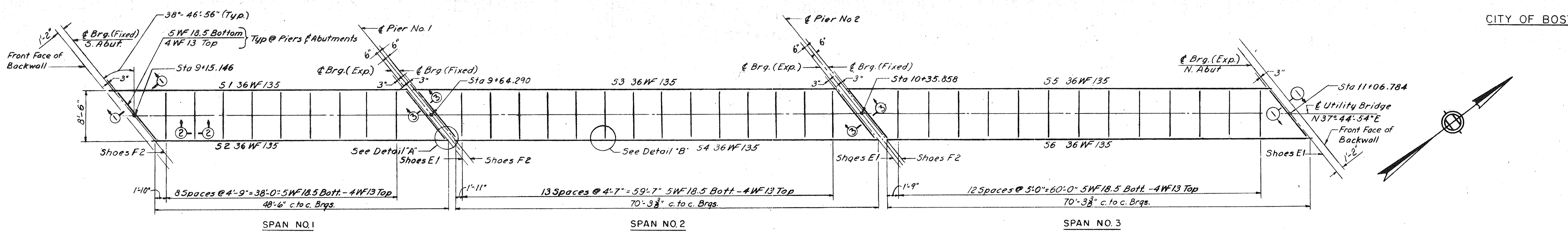
Datum used on these plans is U. S. G. S. plus 100 feet.

730 BUILT PLANS

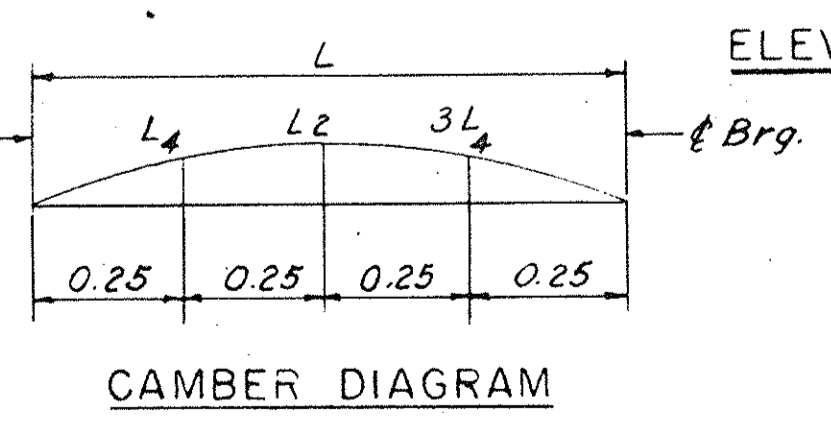
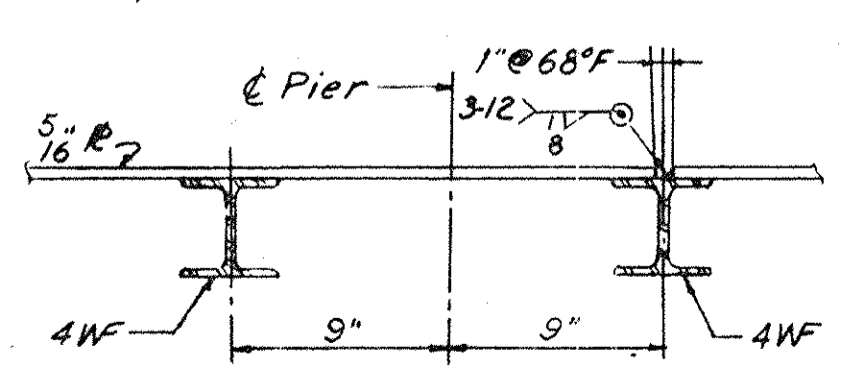
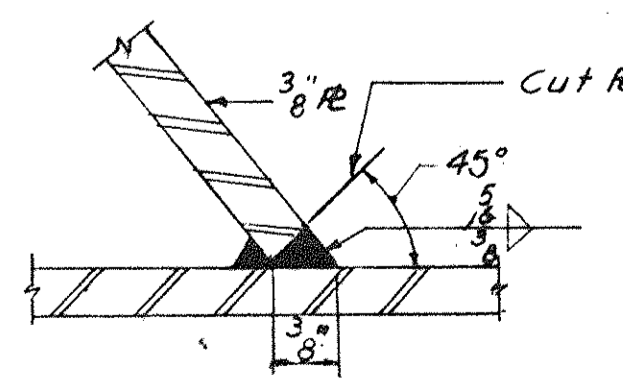
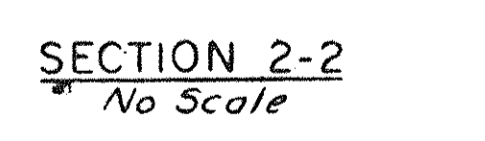
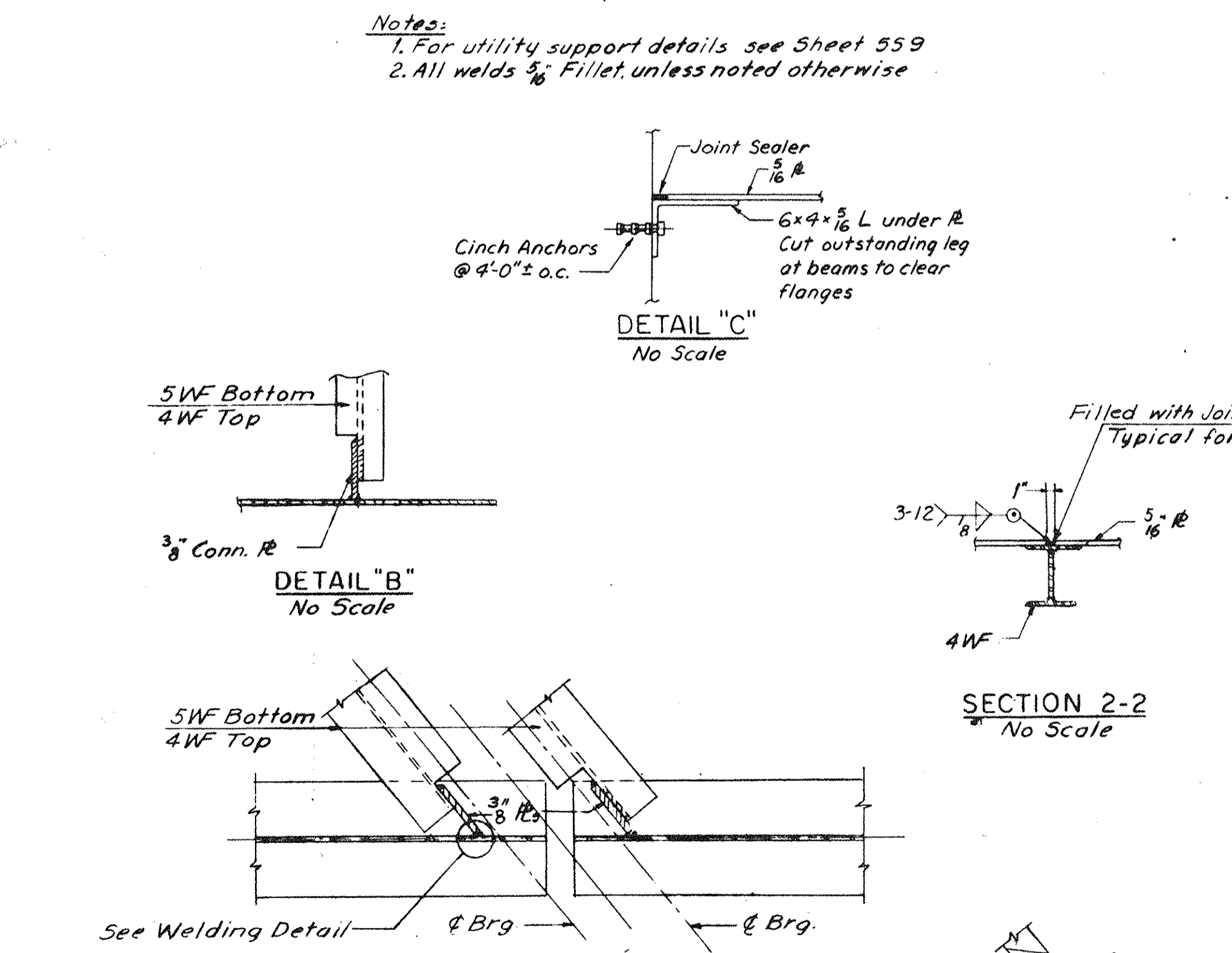
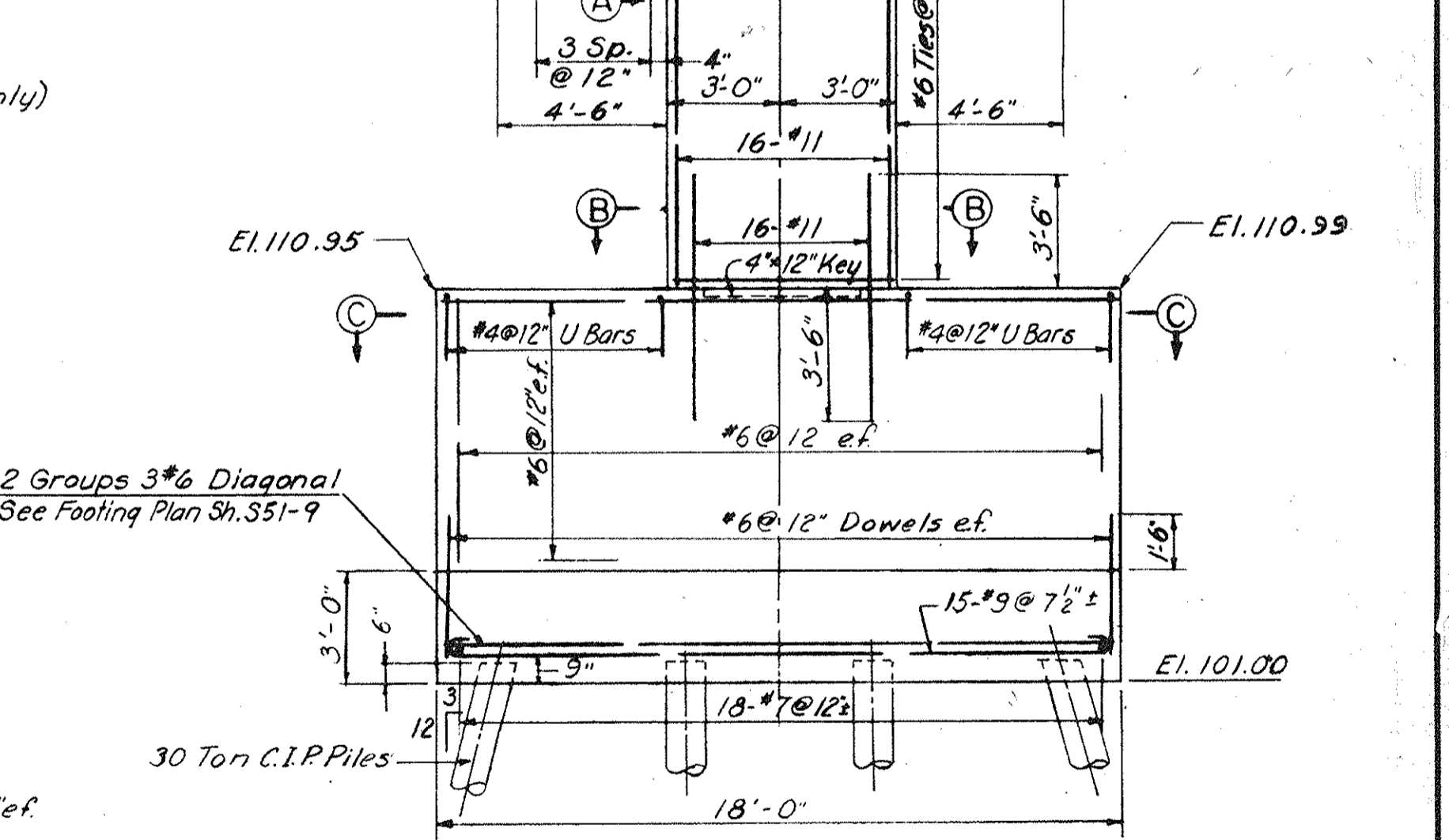
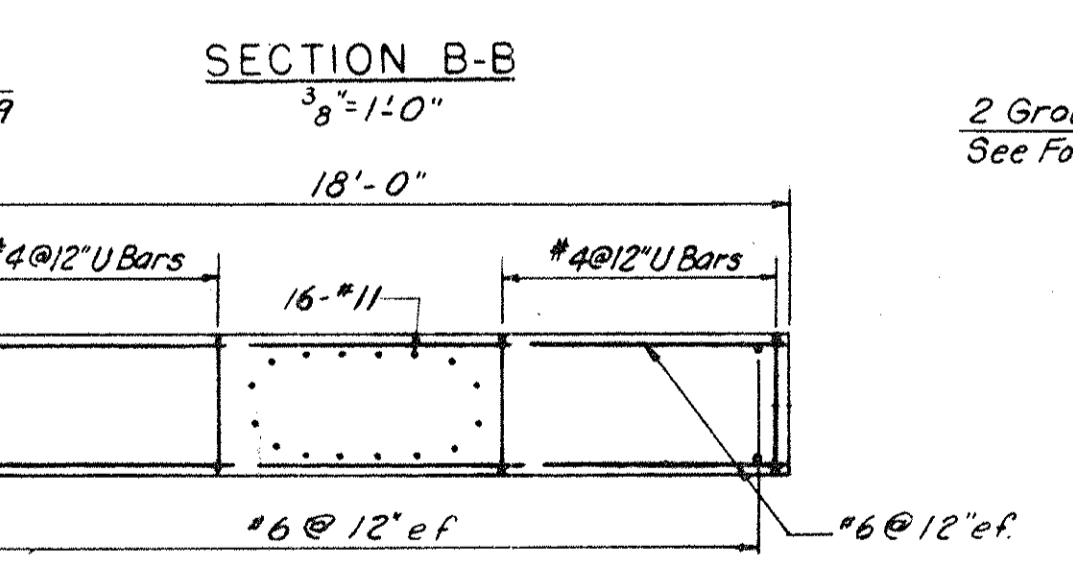
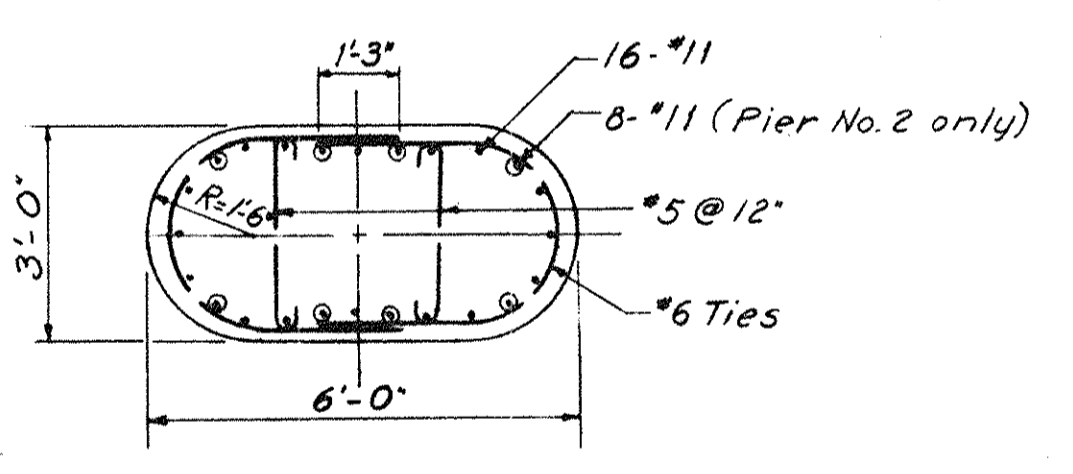
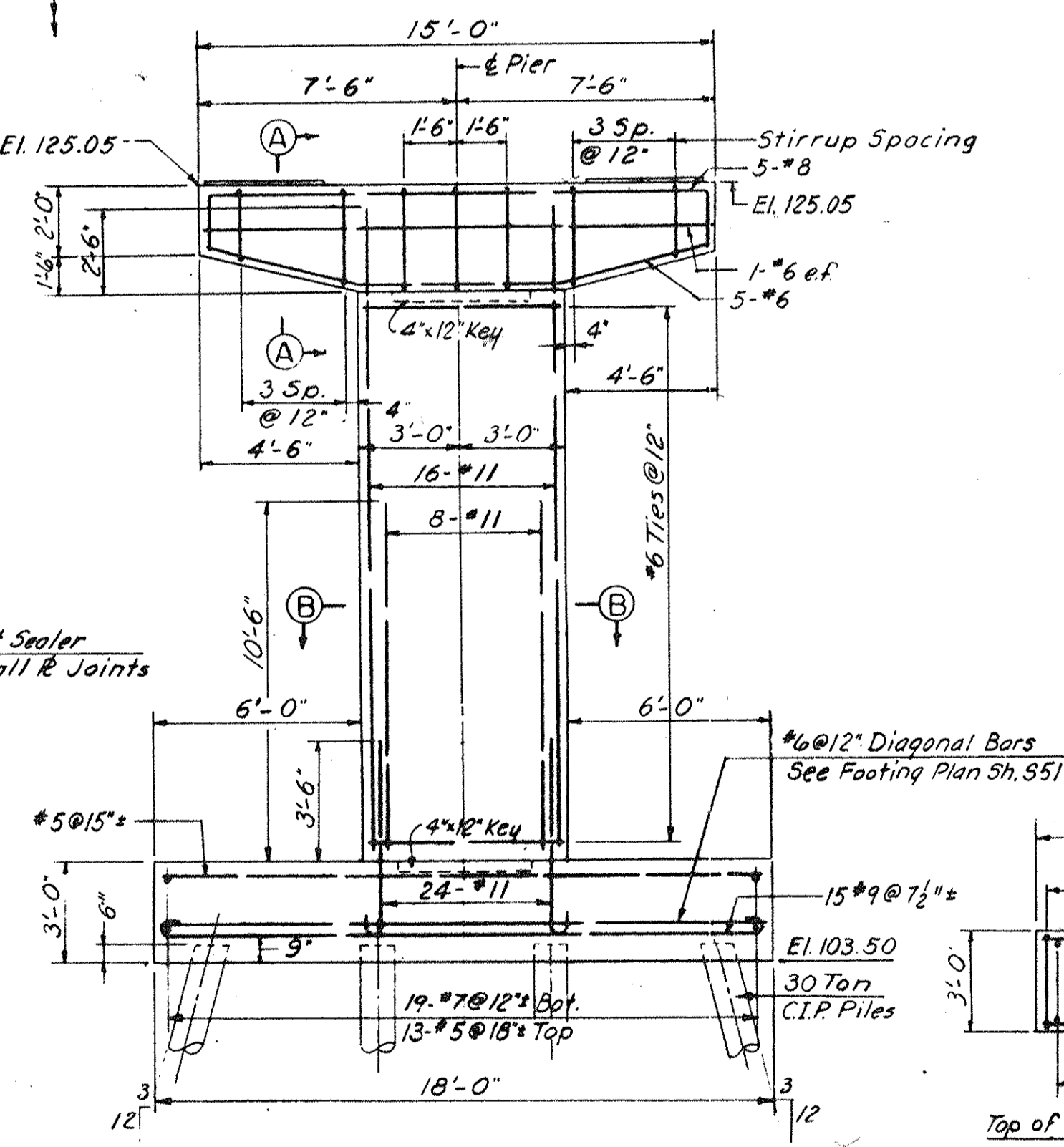
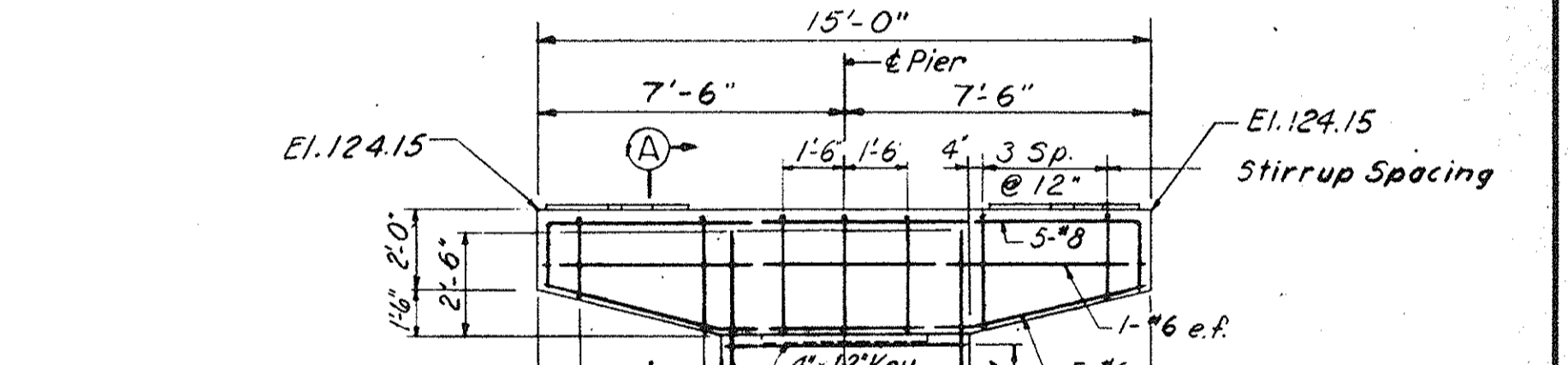
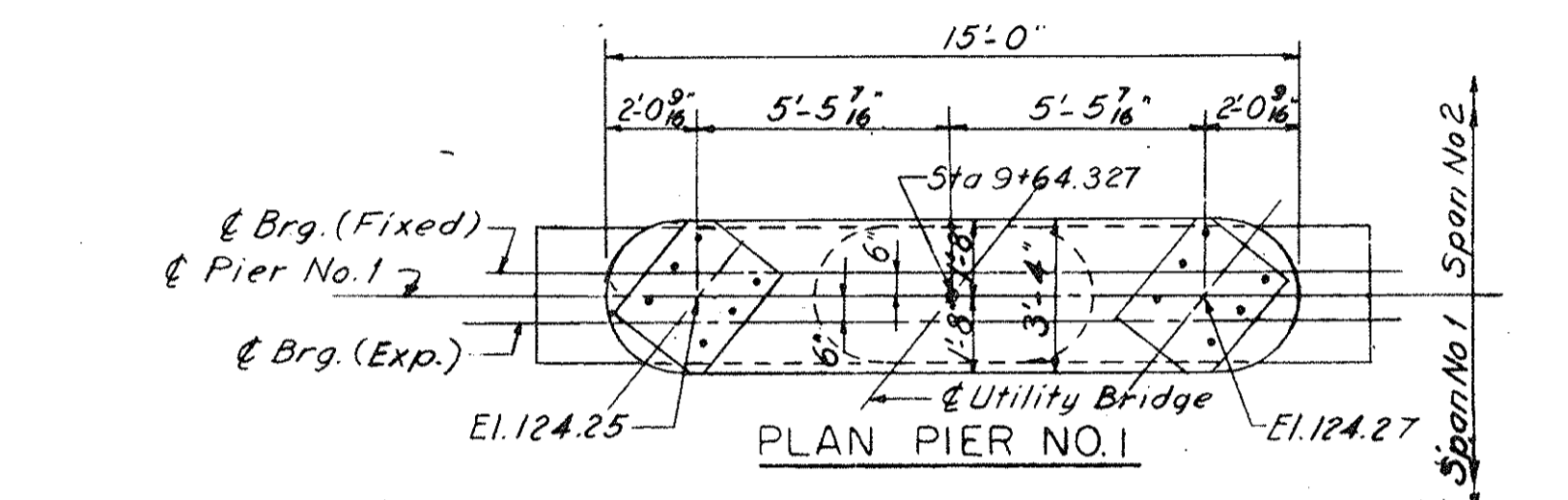
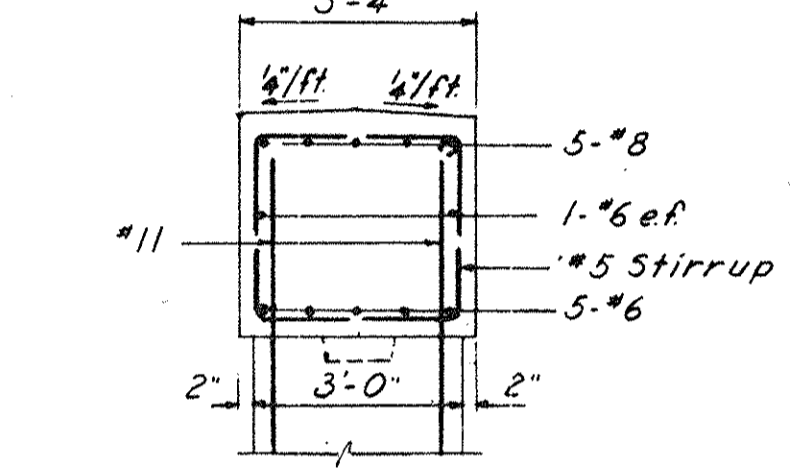
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION NO. C4
STRUCTURE NO. 51
BROOKLINE AVENUE
FRAMING PLAN AND CROSS SECTION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY SHEET NO. S51-7

SCALE: AS NOTED



Note:
1. All piers and abutments are parallel Bearing 58°-57'-58"W
2. All Bearing Shoes Type A
3. Stations on & Utility Bridge are referred to & Brookline Ave.
4. See Sheet 551-9 for Pile Plan.



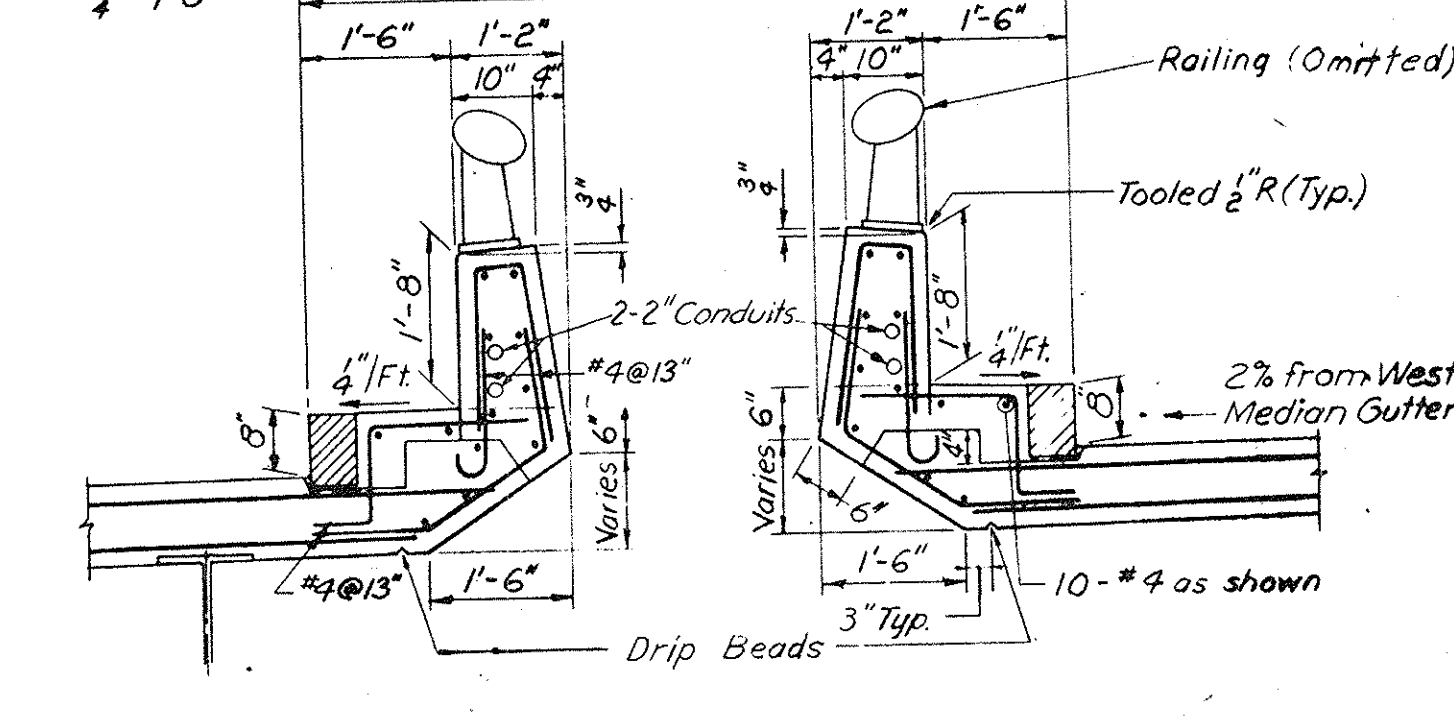
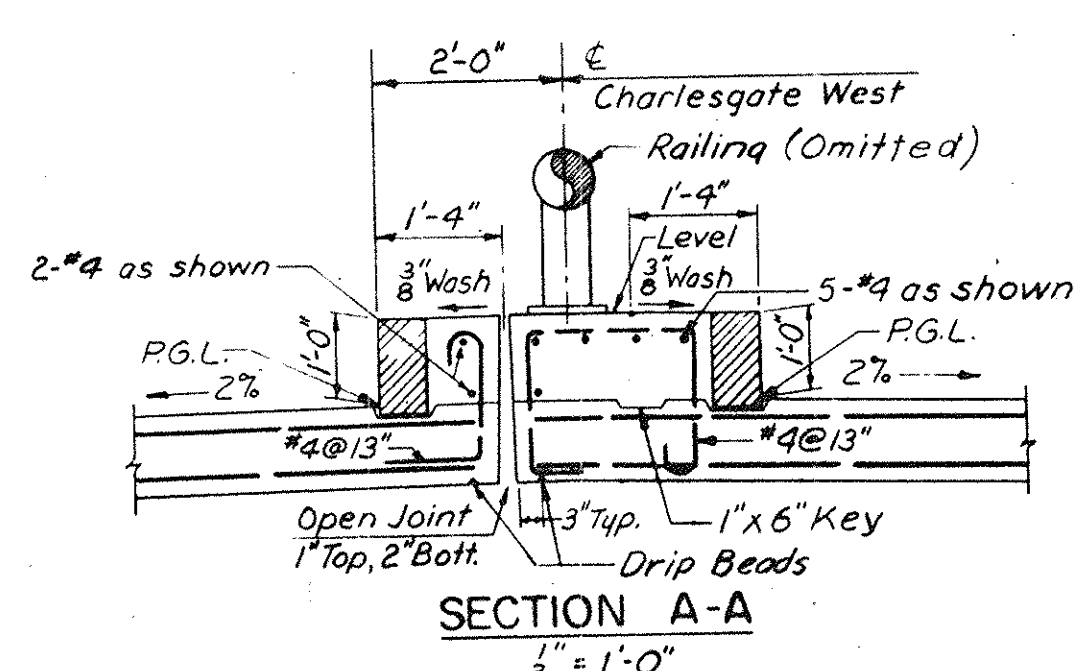
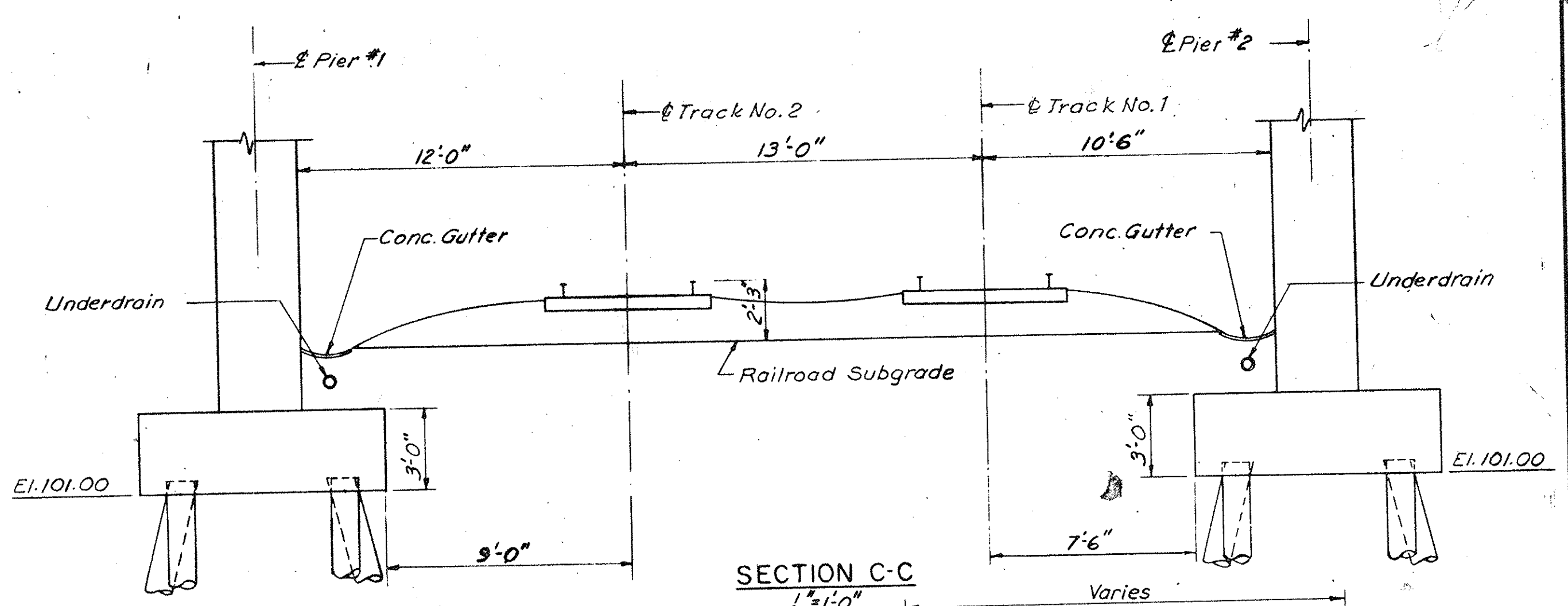
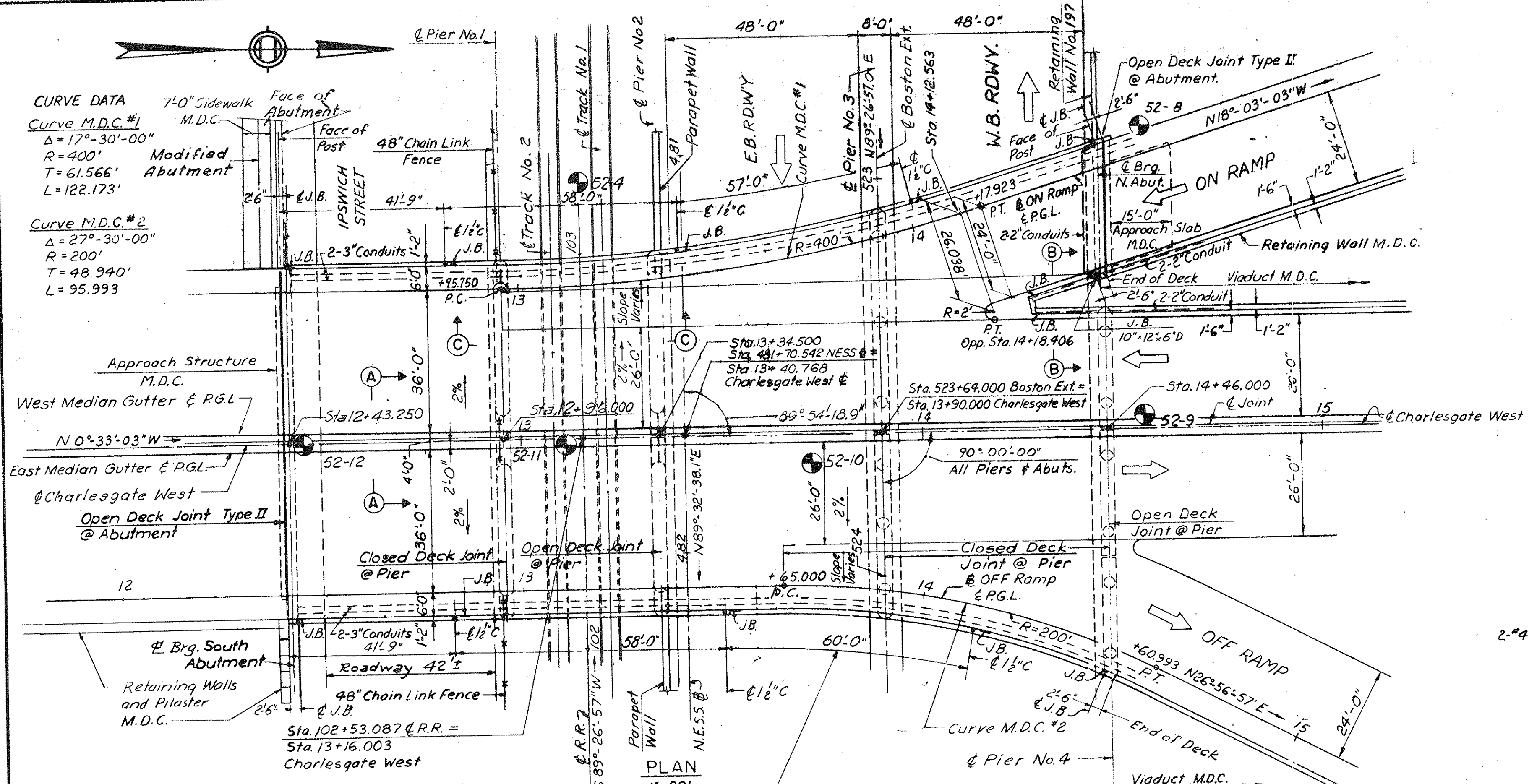
Datum used on these plans is U. S. G. S. plus 100 feet.

"AS-BUILT PLANS"

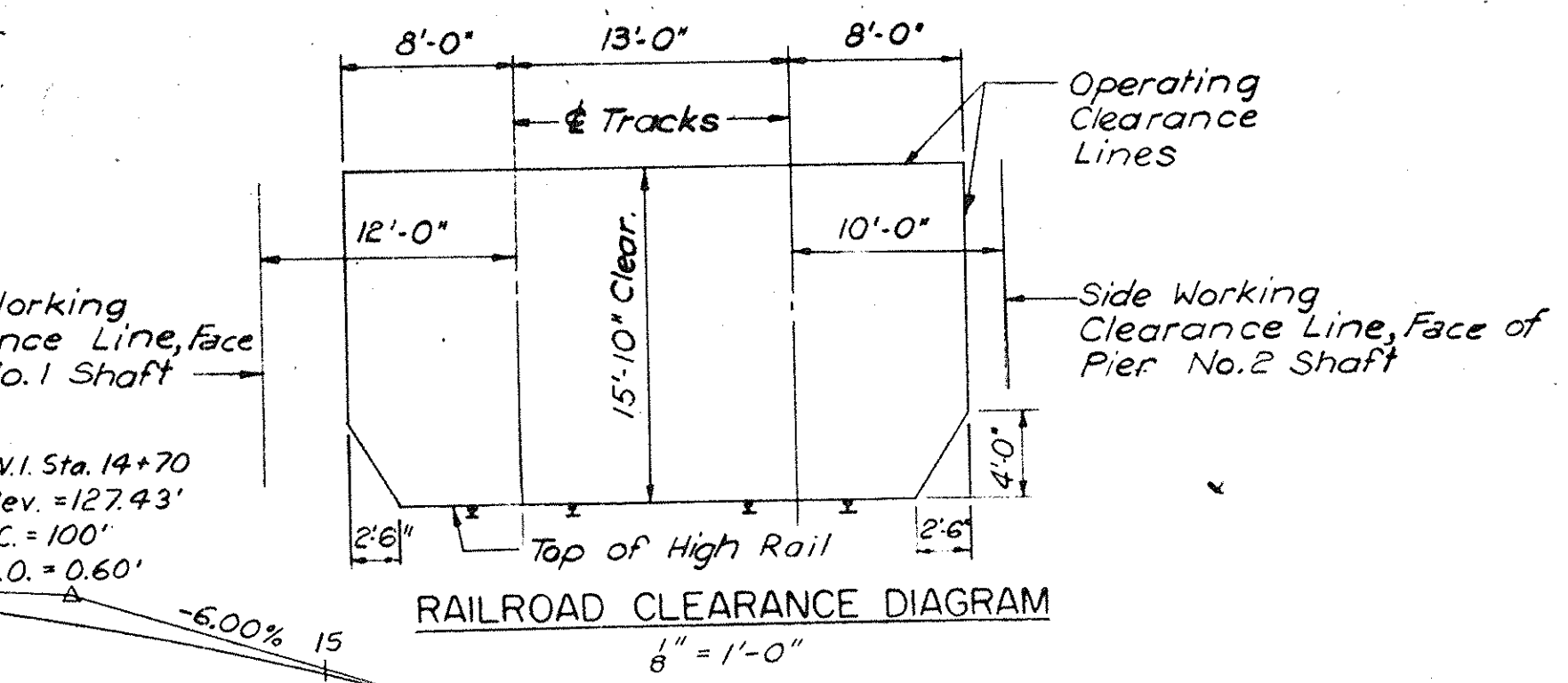
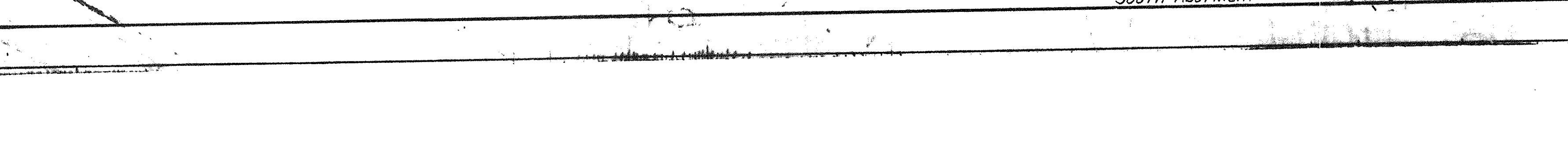
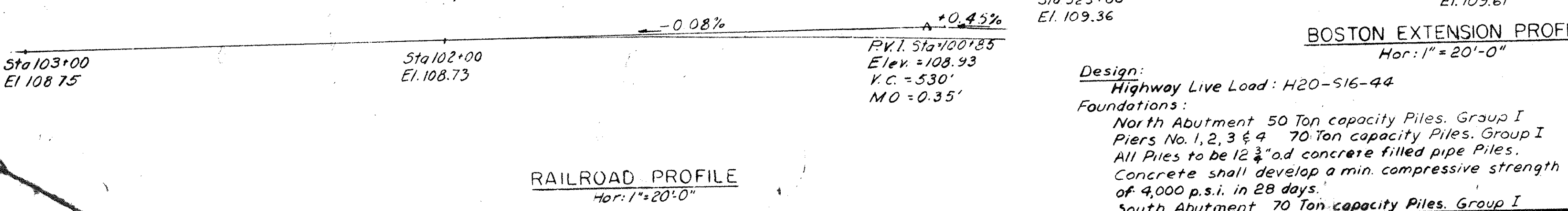
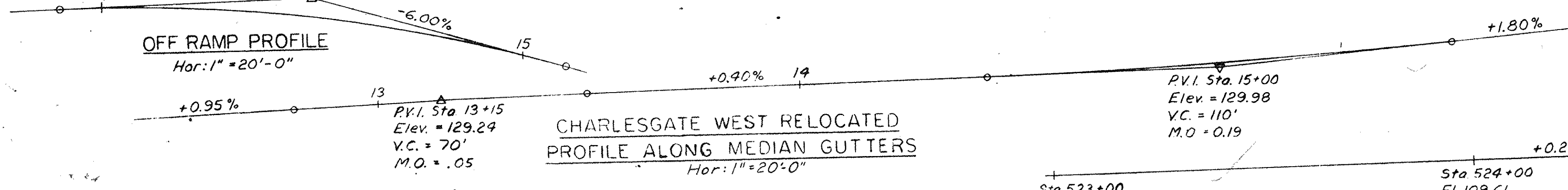
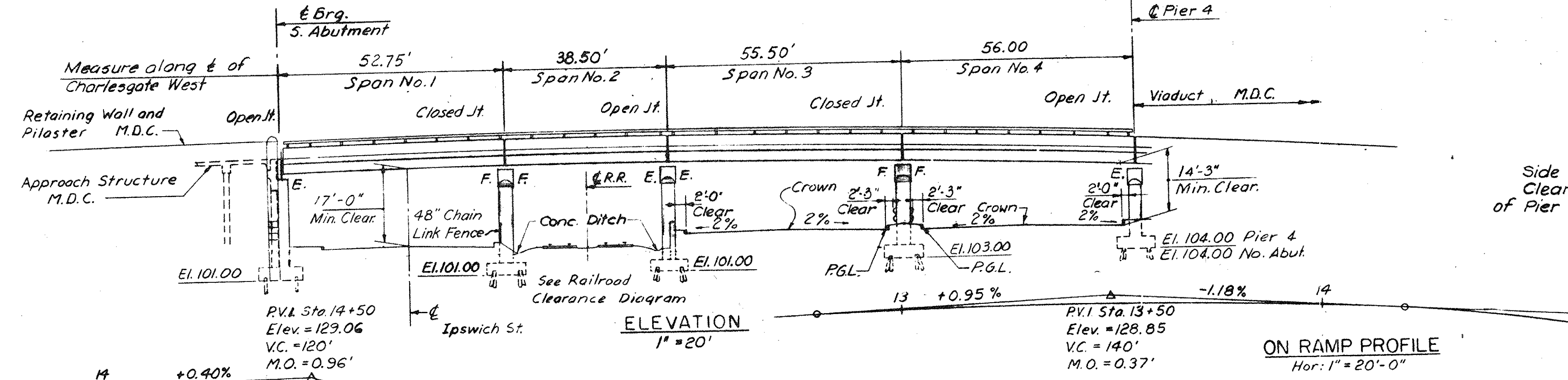
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION NO.
STRUCTURE NO 51-U
BROOKLINE AVENUE
UTILITY BRIDGE

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY

SCALE: AS NOTED
SHEET NO. 551-10



Indicates approximate location of borings
 Note:
 All Piers and Abutments are parallel, Bearing N 39° - 26' - 57" E
 J.B. = Junction Box
 All conduit to be galvanized steel conduit.



"AS-BUILT PLANS"

BOSTON EXTENSION
 STRUCTURE NO 52
 CHARLESGATE WEST
 OVER BOSTON EXTENSION
 LIST OF DRAWINGS

SHEET NO	TITLE
S 52-1	General Plan and Elevation
S 52-2	Footing Plan
S 52-3	South Abutment
S 52-4	North Abutment and Pier 4
S 52-5	Piers 1 and 2
S 52-6	Pier 3
S 52-7	Framing Plan
S 52-8	Soil Boring Logs
S 52-9	Miscellaneous Details

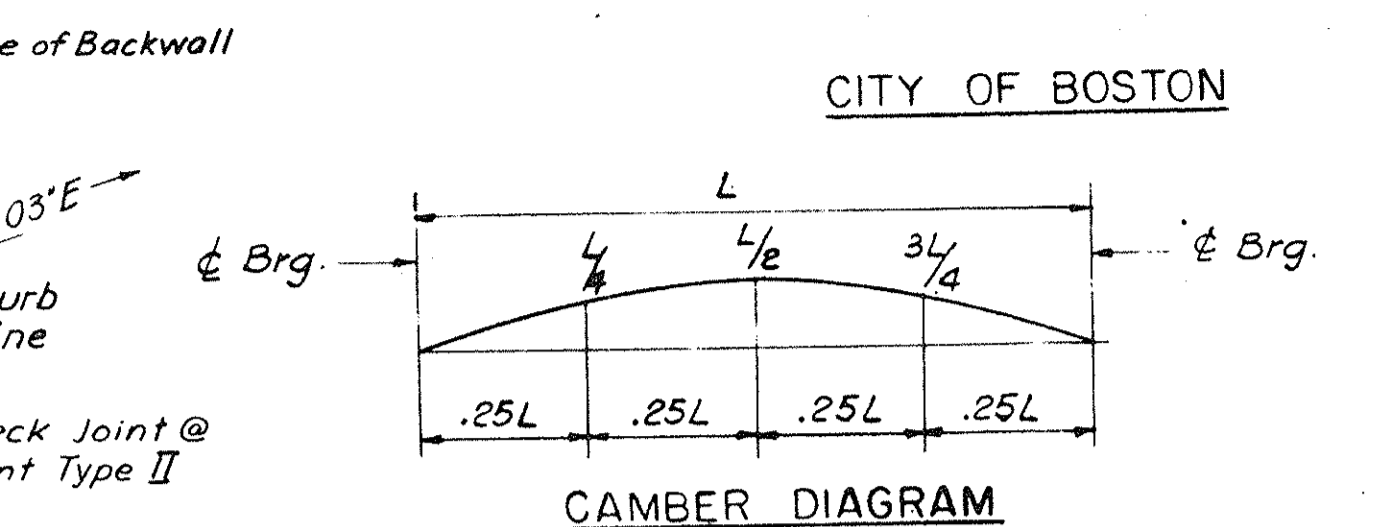
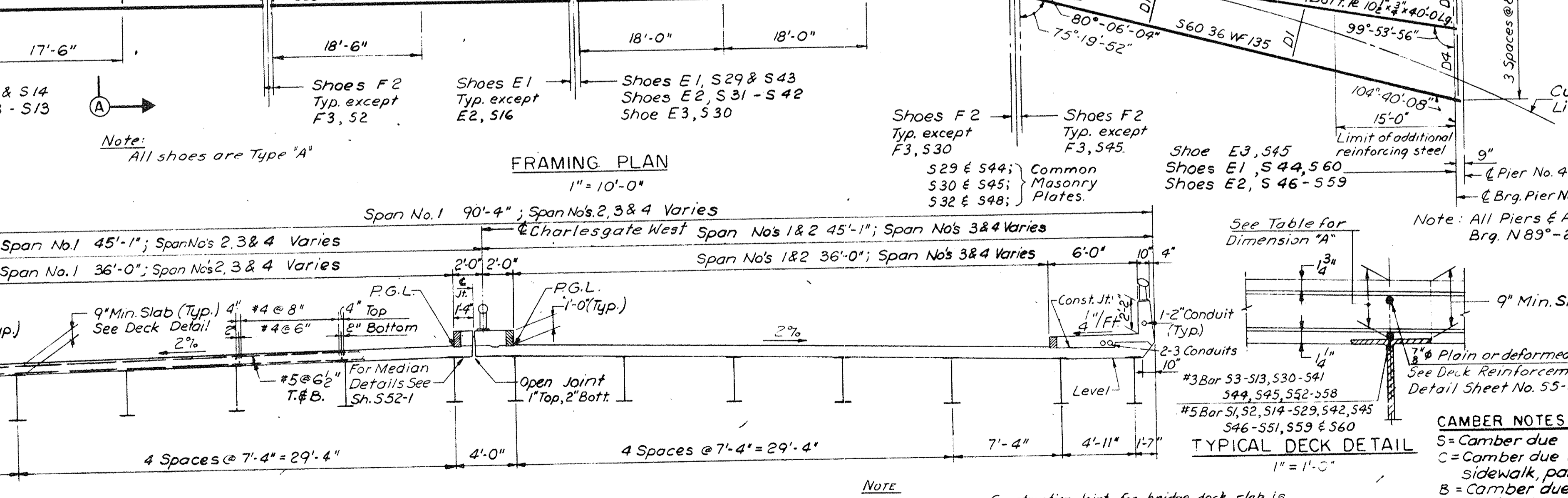
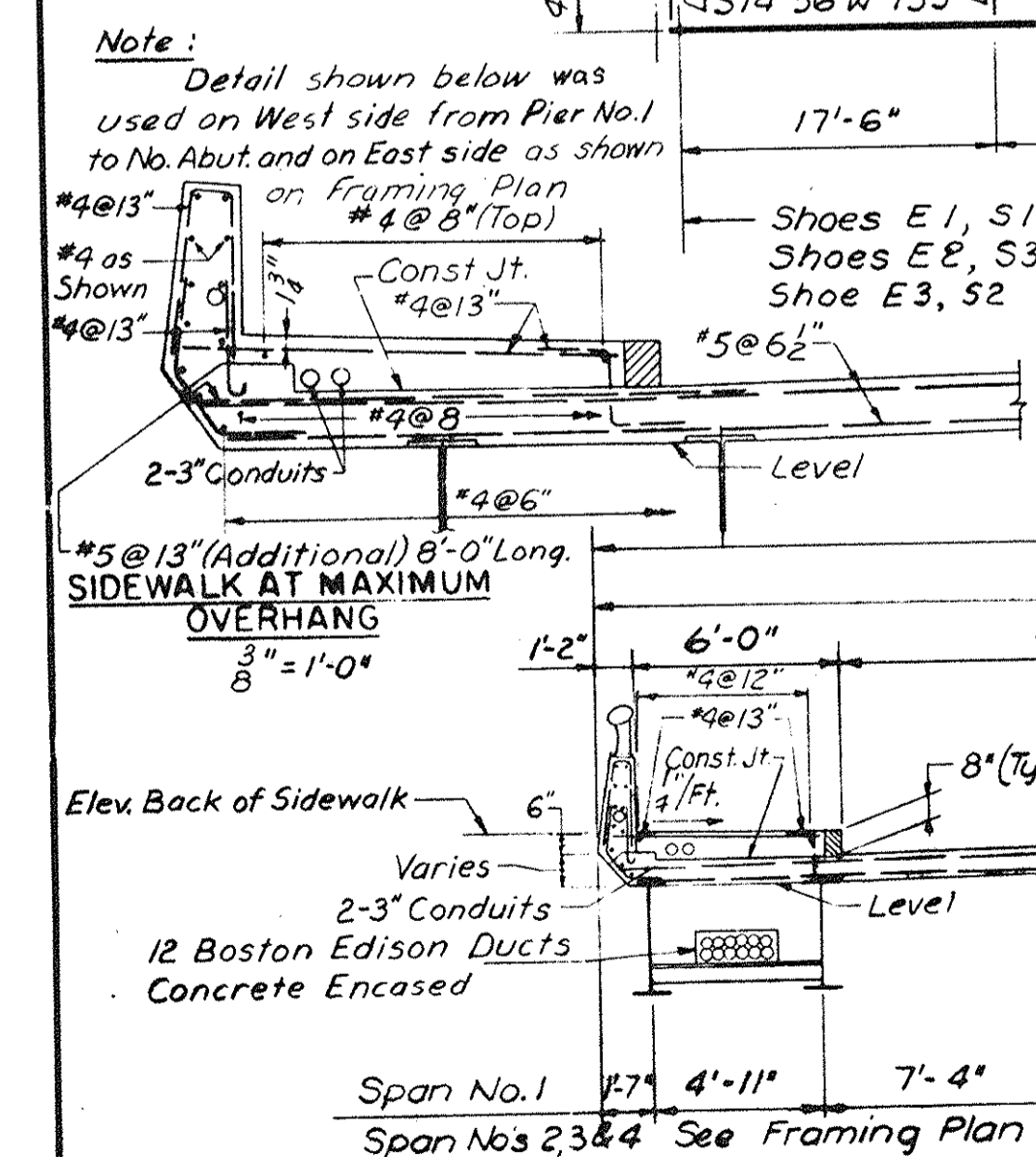
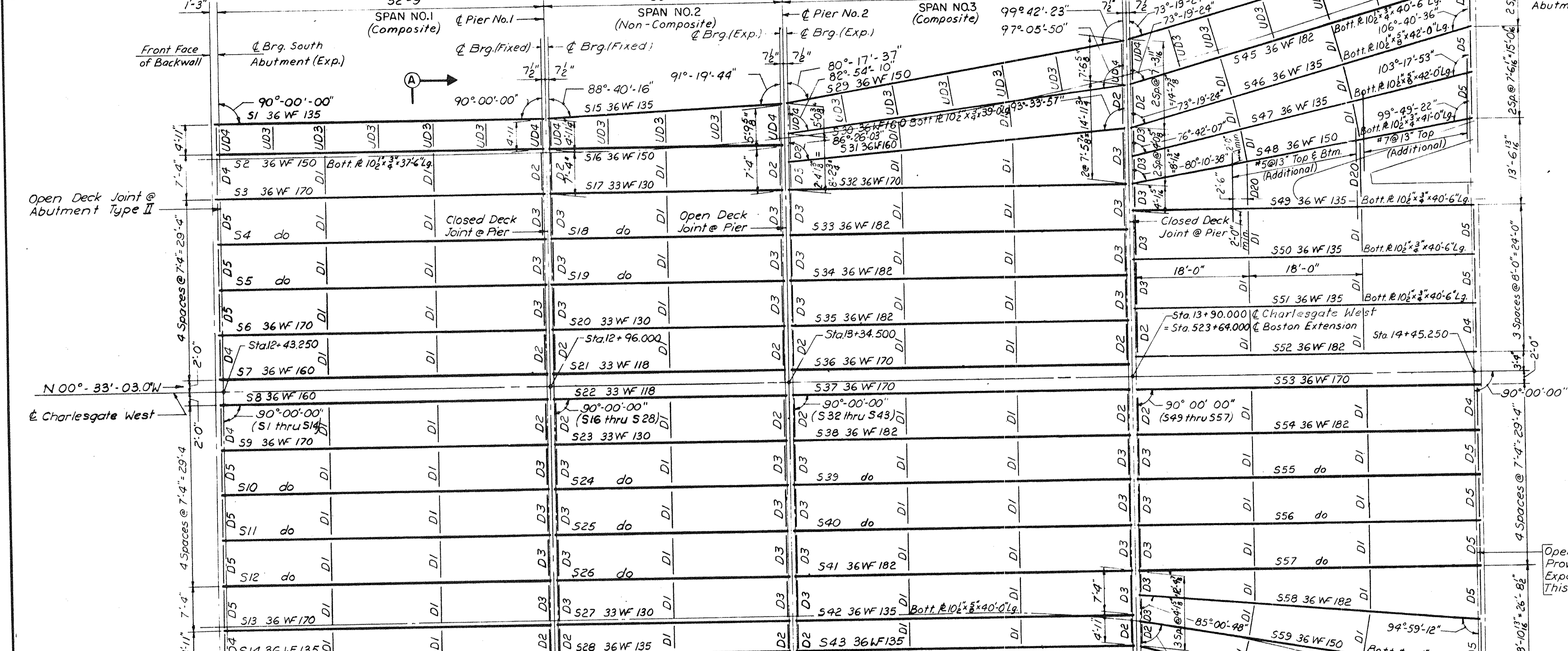
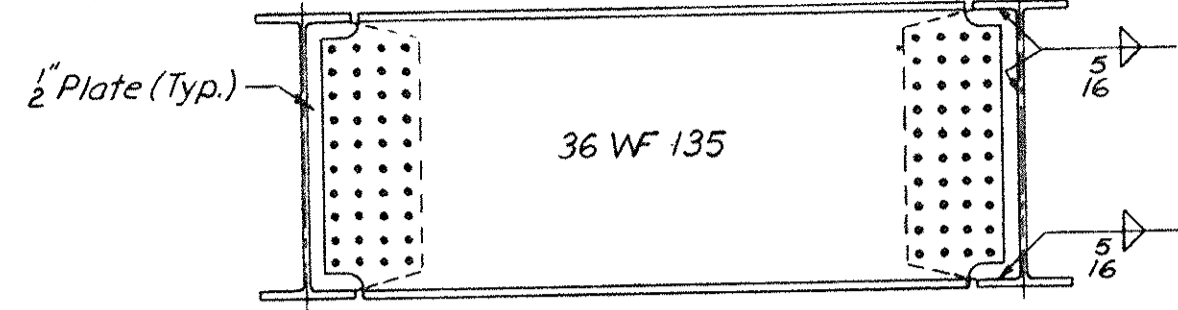
MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION NO. C-4
 STRUCTURE NO 52
 CHARLESGATE WEST
 GENERAL PLAN & ELEVATION

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY SHEET NO. S52-1

Datum used on these plans is U.S.G.S. plus 100 feet

Design:
 Highway Live Load: H20-S16-44
Foundations:
 North Abutment 50 Ton capacity Piles, Group I
 Piers No. 1, 2, 3 & 4 70 Ton capacity Piles, Group I
 All Piles to be 12" ad concrete filled pipe Piles.
 Concrete shall develop a min. compressive strength of 4,000 p.s.i. in 28 days.
 South Abutment 70 Ton capacity Piles, Group I

Utility Diaphragm	Bottom Member	Top Member
UD3	27x6x6x $\frac{3}{4}$	
UD4	27x6x6x $\frac{3}{4}$	27x6x6x $\frac{3}{4}$

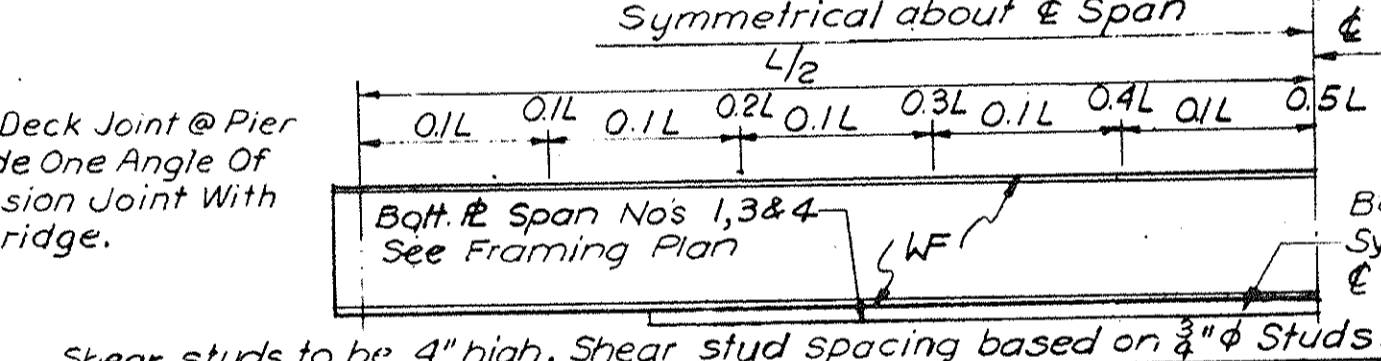


Stringer	S1	S2	S3-S12	S7, S8	S13	S14
Location	1/2	1/4	1/2	1/2	1/2	1/2
S	.11	.08	.10	.07	.11	.08
U	.31	.22	.22	.15	—	—
C	.42	.30	.40	.29	.50	.36
B	.18	.13	.06	.05	.04	.03
T	1.02	.73	.78	.56	.65	.47

Stringer	S15	S16	S17-S20	S21, S22	S27	S28
Location	1/2	1/4	1/2	1/2	1/2	1/2
S	.03	.02	.03	.02	.03	.02
U	.08	.06	.07	.05	—	—
C	.11	.08	.13	.10	.21	.15
B	.11	.08	.05	.04	.03	.06
T	.33	.24	.28	.21	.28	.20

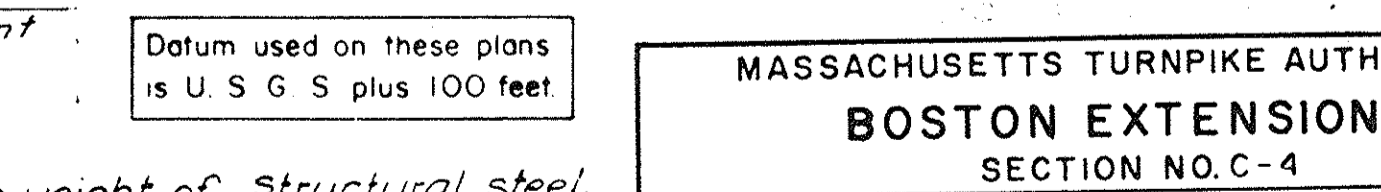
Stringer	S29	S30	S31, S42	S32-S35	S36, S37	S43
Location	1/2	1/4	1/2	1/2	1/2	1/2
S	.13	.09	.12	.09	.13	.09
U	.33	.24	.25	.17	—	—
C	.54	.38	.48	.35	.58	.41
B	.20	.14	.08	.05	.04	.03
T	1.20	.85	.93	.66	.76	.54

Stringer	S44	S45	S46-S48	S49-S51	S52-S58	S59	S60
Location	1/2	1/4	1/2	1/2	1/2	1/2	1/2
S	.15	.11	.14	.10	.16	.11	.13
U	.37	.26	.26	.19	—	—	—
C	.60	.43	.56	.40	.76	.55	.73
B	.21	.15	.08	.06	.08	.05	.04
T	1.33	.95	1.04	.75	1.00	.71	.90



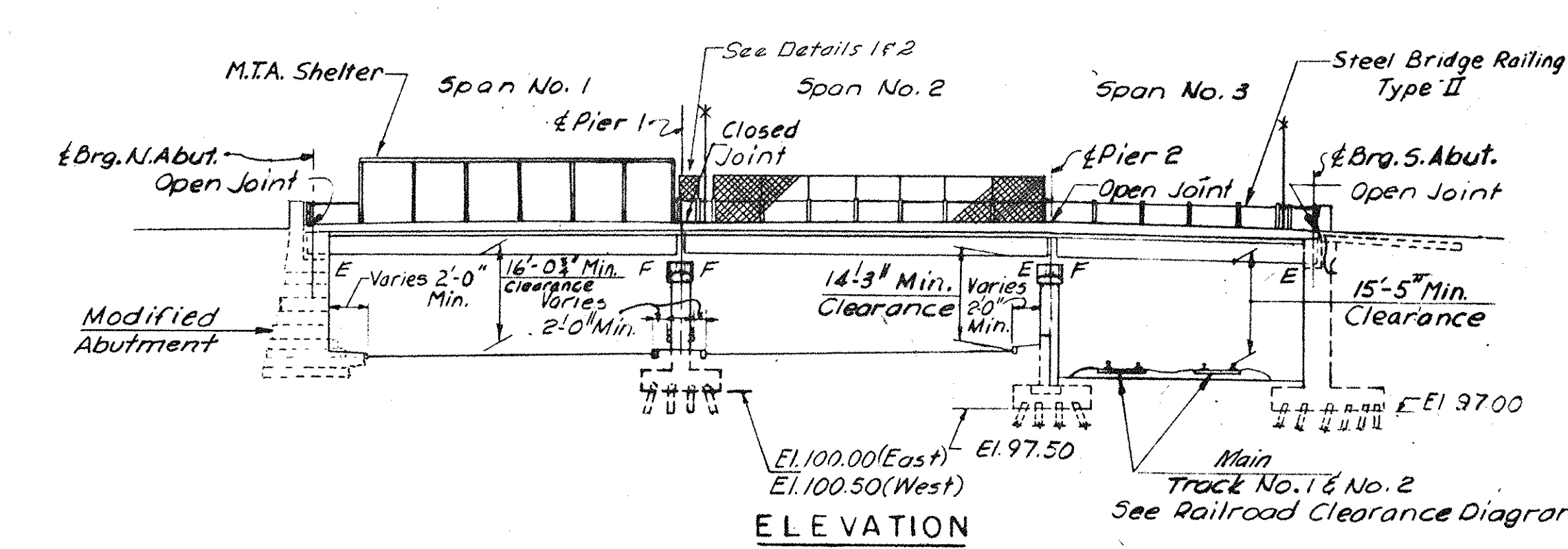
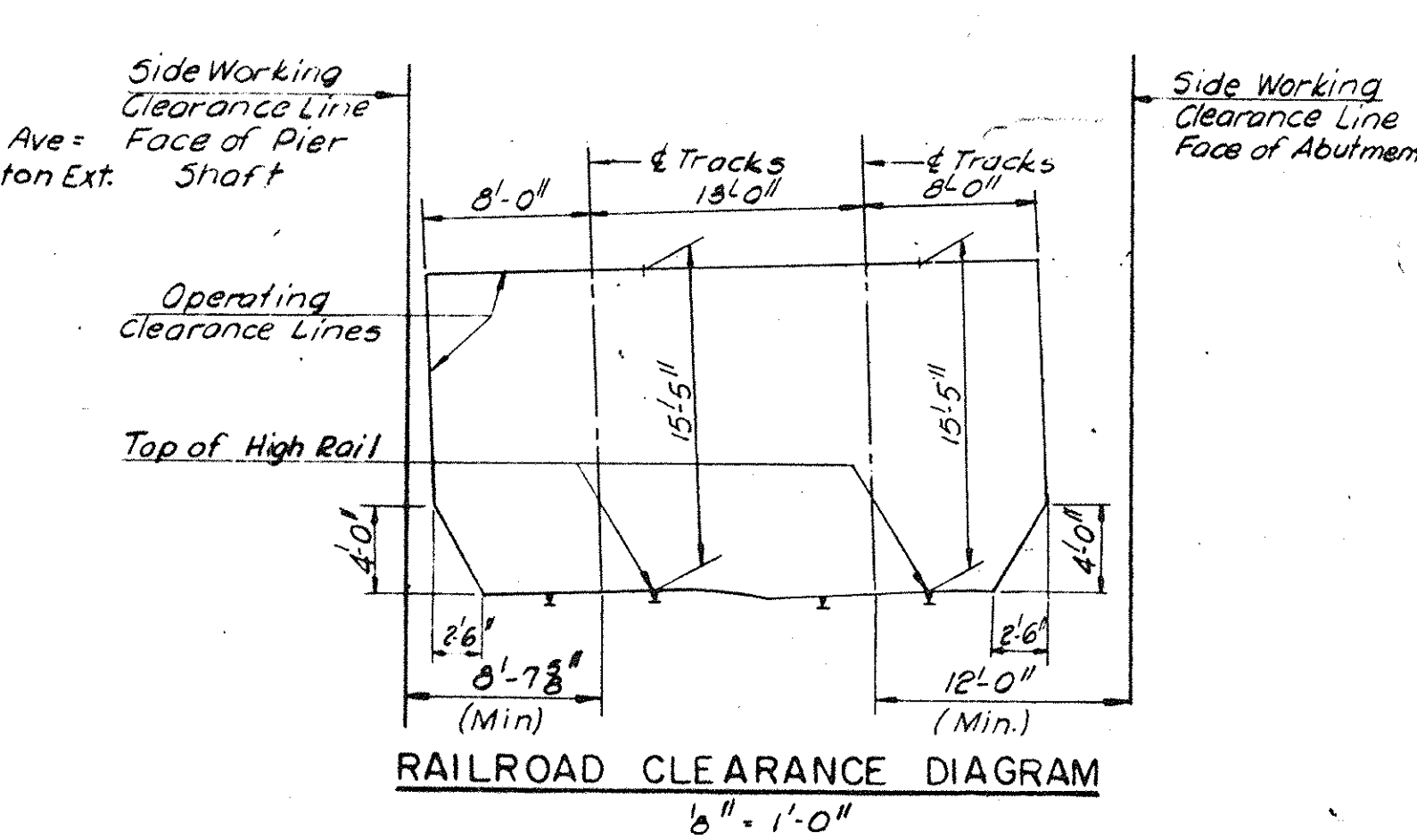
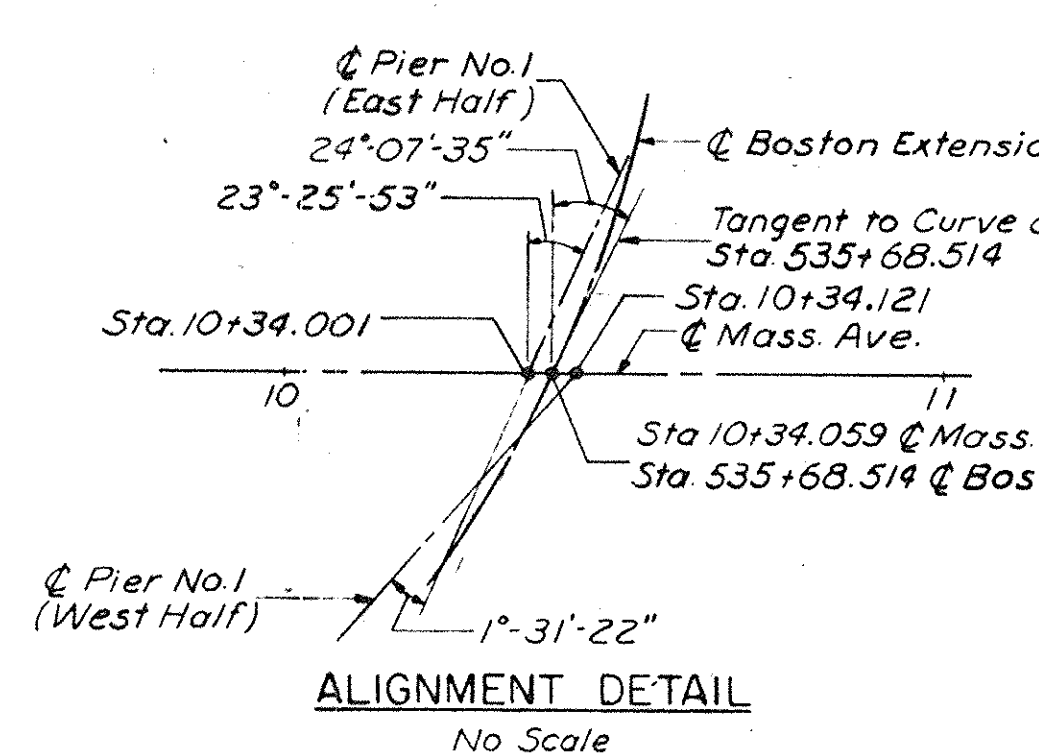
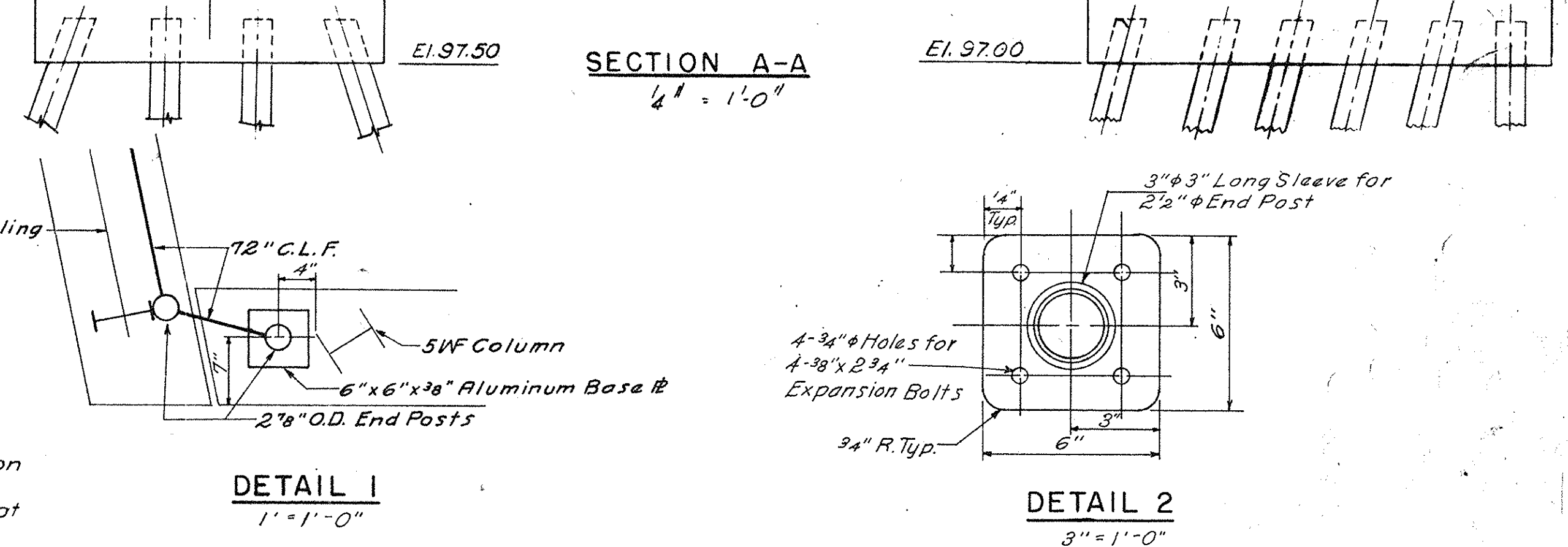
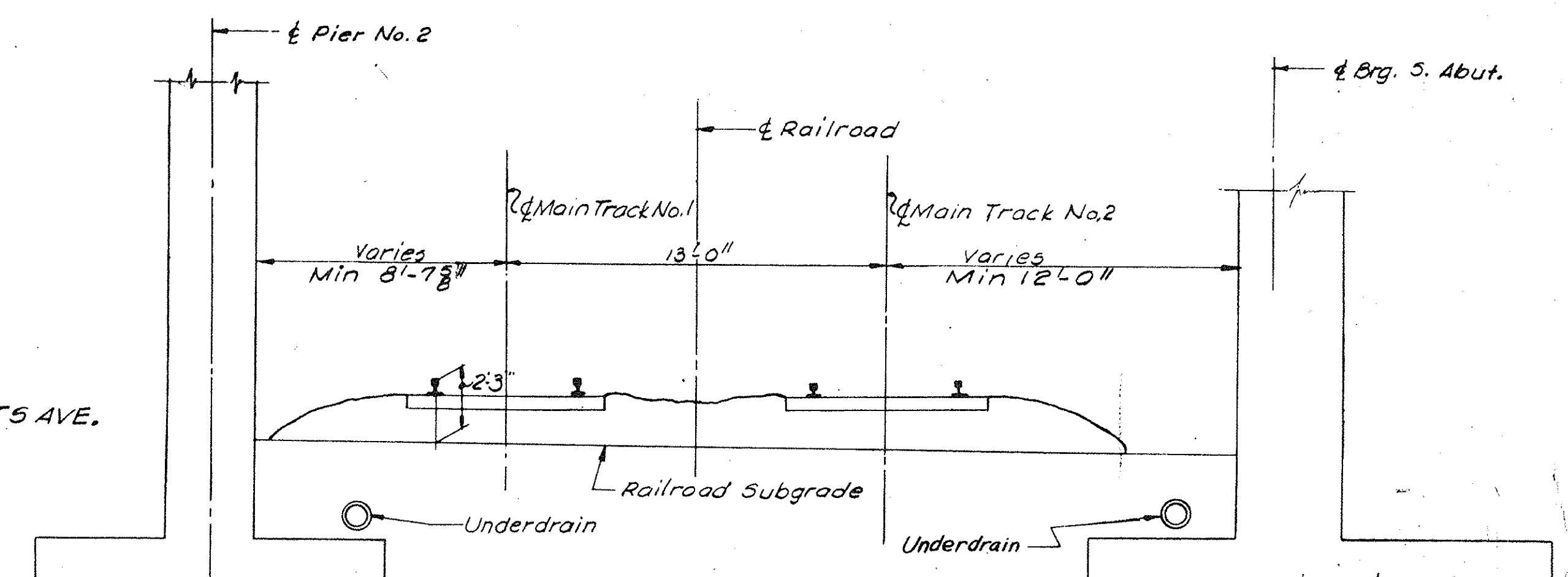
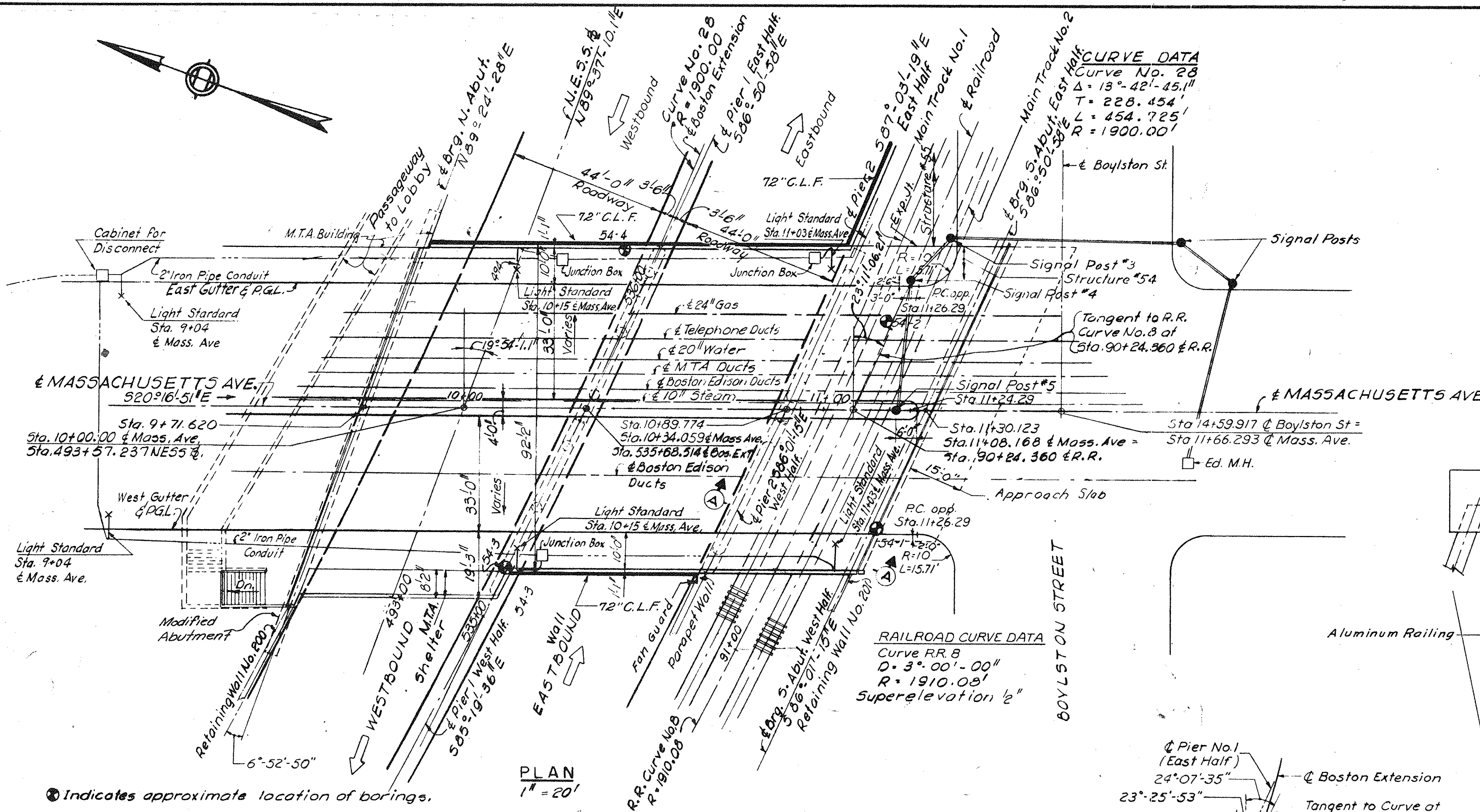
Stringer No's	0 to 0.1L	0.1L to 0.2L	0.2L to 0.3L	0.3L to 0.4L	0.4L to 0.5L	NO. STUDS ROW
S1, S14, S29, S43, S44	18"	18"	18"	18"	18"	3
S2, S13, S42, S45-S48	52"	62"	8"	9 1/2"	10 1/2"	3
S3-S12, S31-S41	7"	8"	9 1/2"	10 1/2"	11 1/2"	3
S49, S53-S58	6 1/2"	7 1/2"	9 1/2"	11 1/2"	13"	3
S60	15 1/2"	18"	18"	18"	18"	3
S15, S28	12"	12"	12"	12"	12"	3

Stringer No.	Dimension 'A'
S1 & S15	9 1/2"
S2-S14, S16-S29	9 1/4"
S31-S44, S46-S58 & S60	Varies 9 1/4" @ Pier No. 2 to 10 1/4" @ Pier No. 3
S30	Varies 10 1/4" @ Pier No. 3 to 10" @ N. Abut.
S45	Varies 9 1/4" @ Pier No. 3 to 12" @ Pier No. 4
S59	Varies 9 1/4" @ Pier No. 3 to 12" @ Pier No. 4



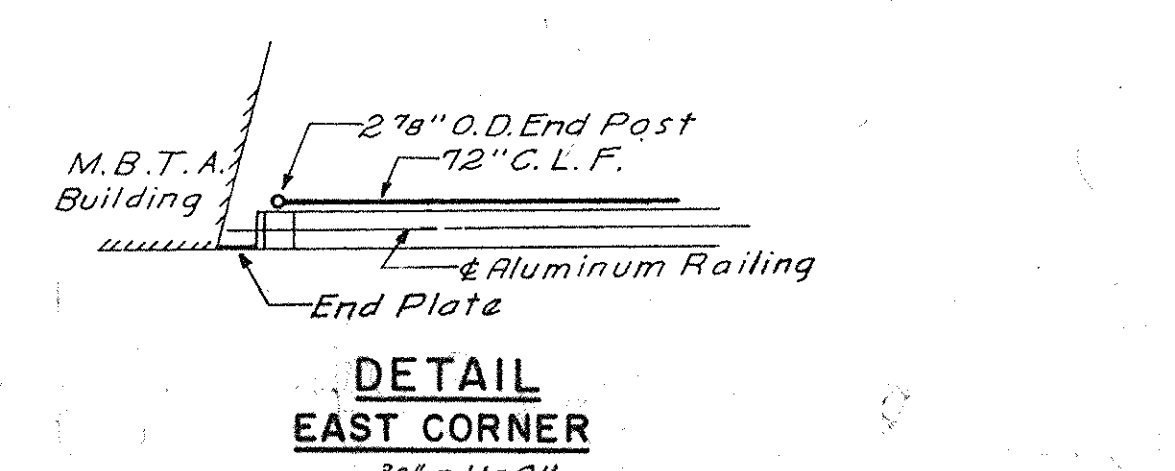
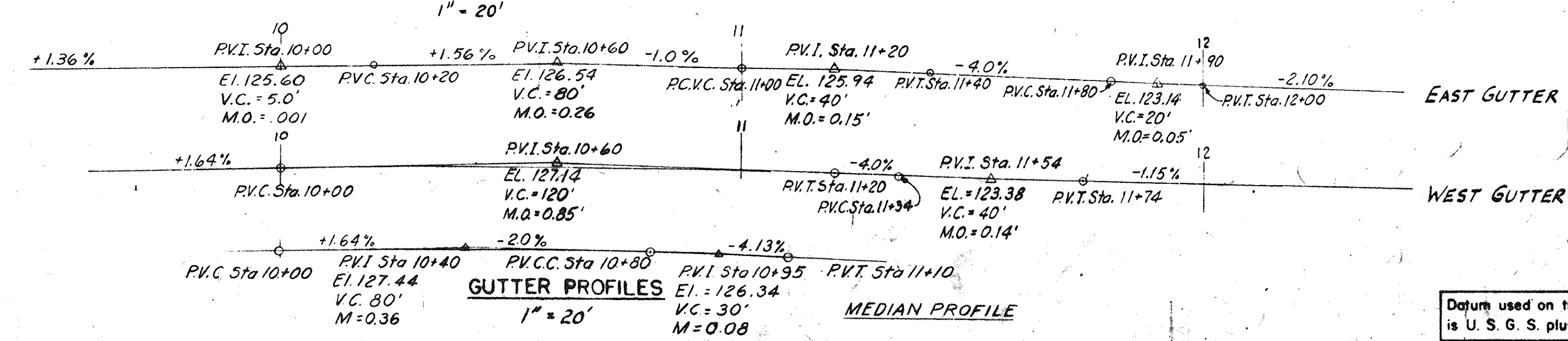
CAMBER NOTES
 S = Camber due to weight of structural steel.
 C = Camber due to weight of all concrete except sidewalk, parapet and railing.
 B = Camber due to weight of sidewalk, parapet and railing.
 U = Camber due to weight of utilities.
 T = Total Camber due to full dead load.
 All deflections are in inches.
 For additional camber notes see Sheer SS-1

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
 SECTION NO. C-4
 STRUCTURE NO. 52
 CHARLES GATE WEST
 FRAMING PLAN & CROSS SECTION
 HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY SHEET NO. S52-7



DESIGN:
Highway Live Load: -H20-S16-44
Foundations: Untreated Timber (12" Tip)
Piles: 20 Ton (Group I)

Note:
For Details of 72" C.L.F. attached to Bridge Railing See Sheet No. 5D-22A



"AS-BUILT PLANS"

BOSTON EXTENSION
STRUCTURE NO. 54

MASSACHUSETTS AVE.
LIST OF DRAWINGS

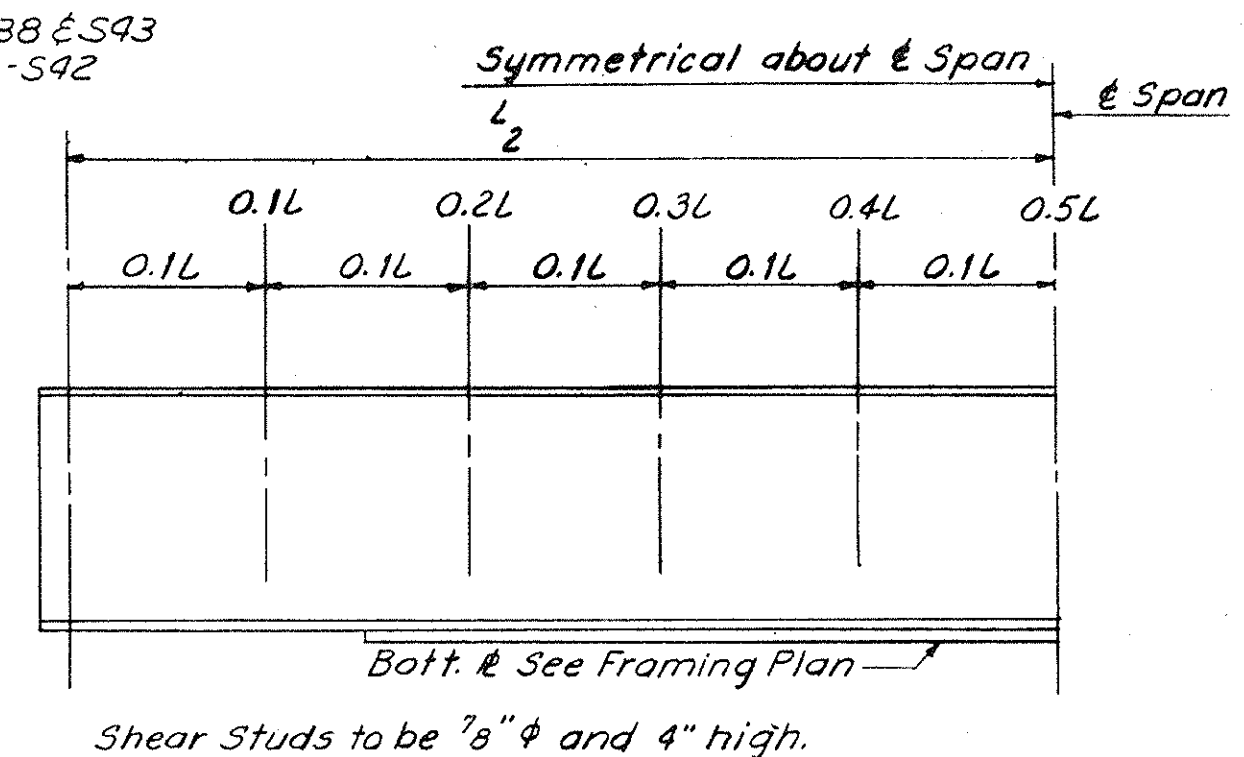
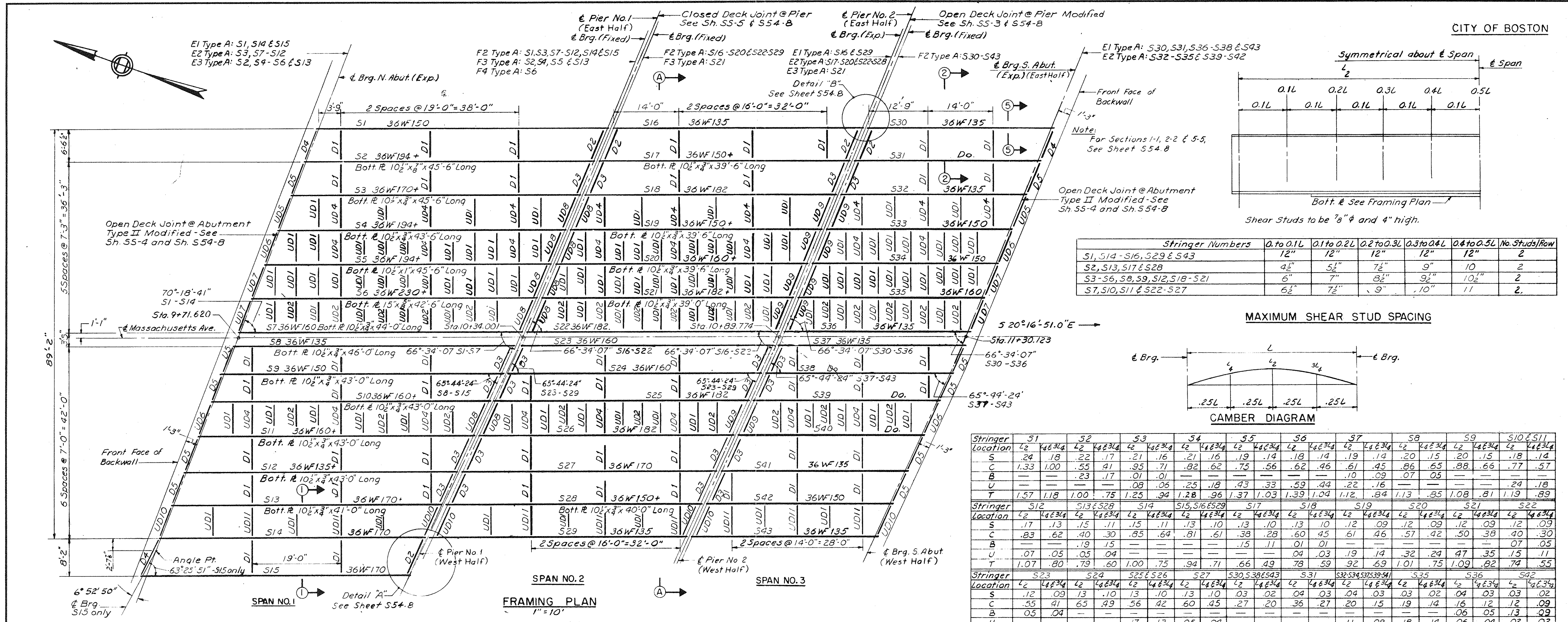
SHEET NO.	TITLE
554-1	General Plan and Elevation
554-2	Footings Plan
554-3	North Abutment
554-4	South Abutment
554-5	Pier No. 1
554-6	Pier No. 2
554-7	Framing Plan
554-8	Miscellaneous Superstructure Details
554-9	Boring Logs
554-10	Extension of North Abutment
554-11	Mass. Ave. M.T.A. Shelter Framing Plan

MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
SECTION NO. C4
STRUCTURE NO. 54
MASSACHUSETTS AVE.
GENERAL PLAN AND ELEVATION

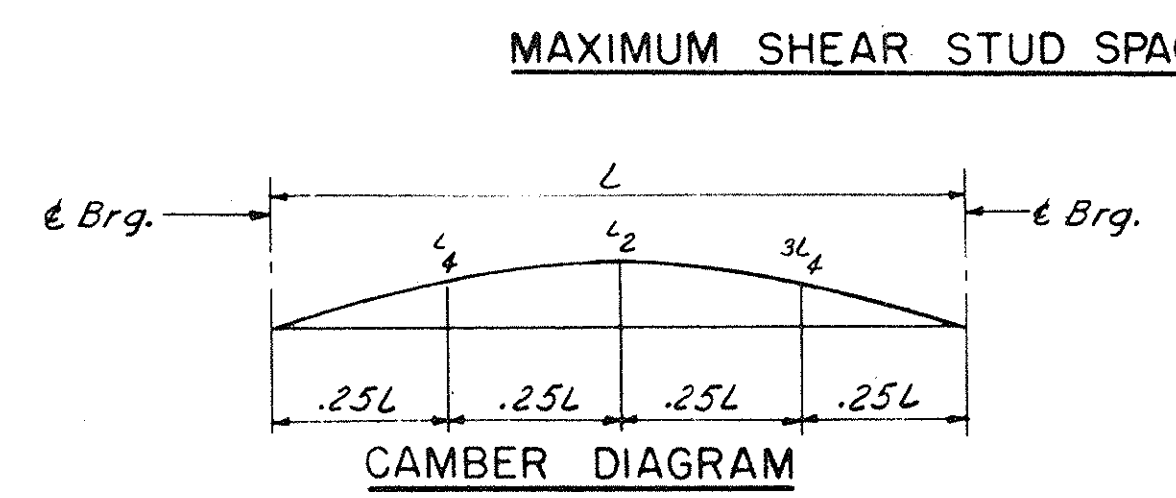
HOWARD, NEEDLES, TAMMEN & BERGENDOFF
CONSULTING ENGINEERS
NEW YORK KANSAS CITY SHEET NO. 554-1

SCALE: AS NOTED

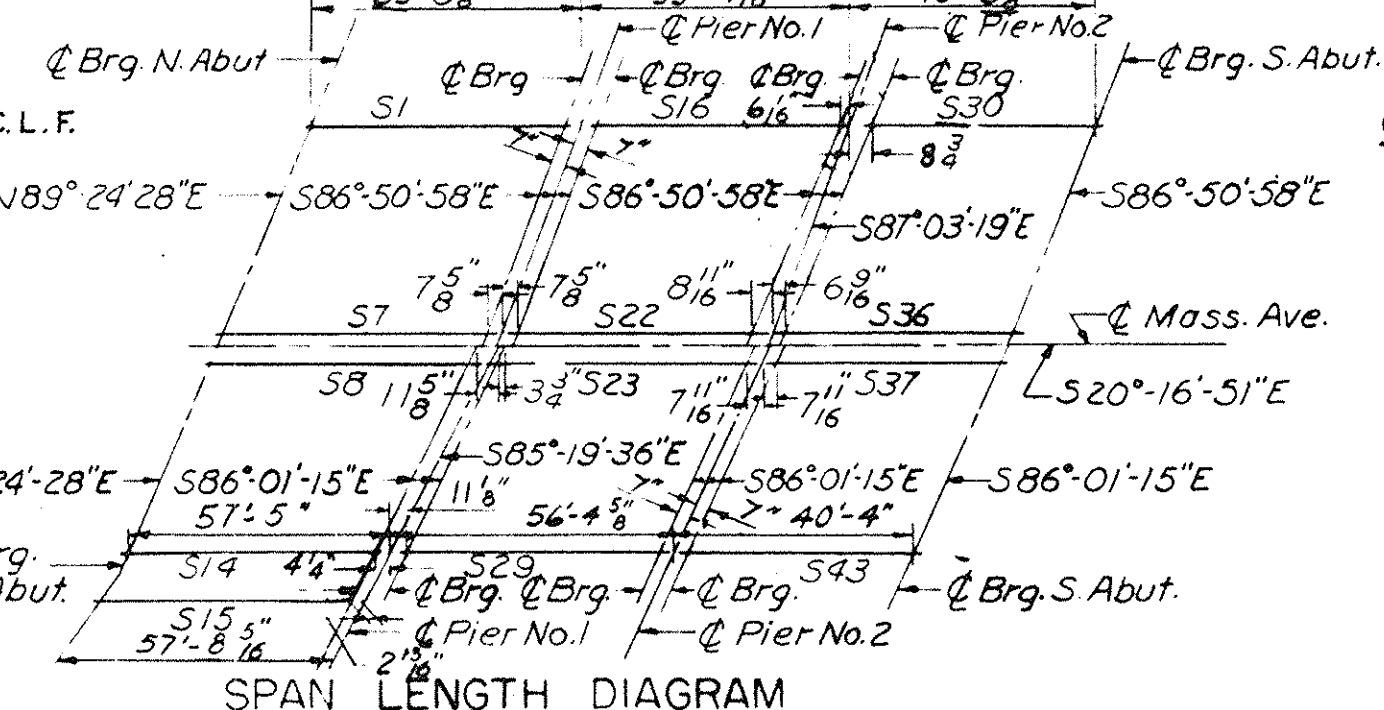
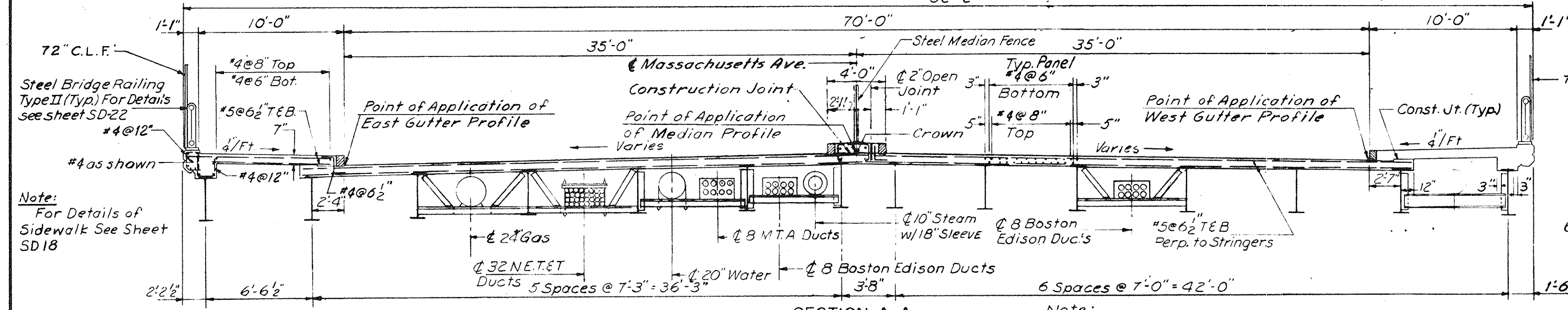
Datum used on these plans is U. S. G. S. plus 100 feet.



Stringer Numbers	0.1 to 0.1L	0.1 to 0.2L	0.2 to 0.3L	0.3 to 0.4L	0.4 to 0.5L	No. Studs/Row
S1, S14-S16, S29 & S43	12"	12"	12"	12"	12"	2
S2, S13, S17 & S28	4"	5 1/2"	7 1/2"	9"	10"	2
S3-S6, S8, S9, S12, S18-S21	6"	7"	8 1/2"	9 1/2"	10 1/2"	2
S7, S10, S11 & S22-S27	6 1/2"	7 1/2"	9"	10"	11"	2



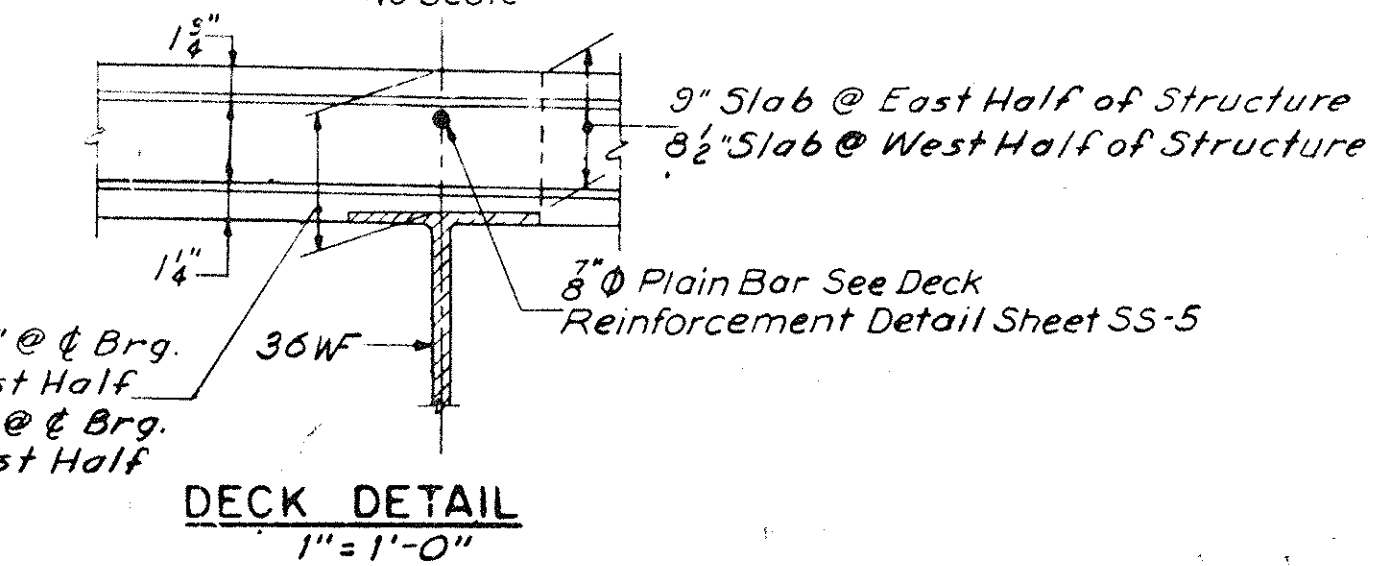
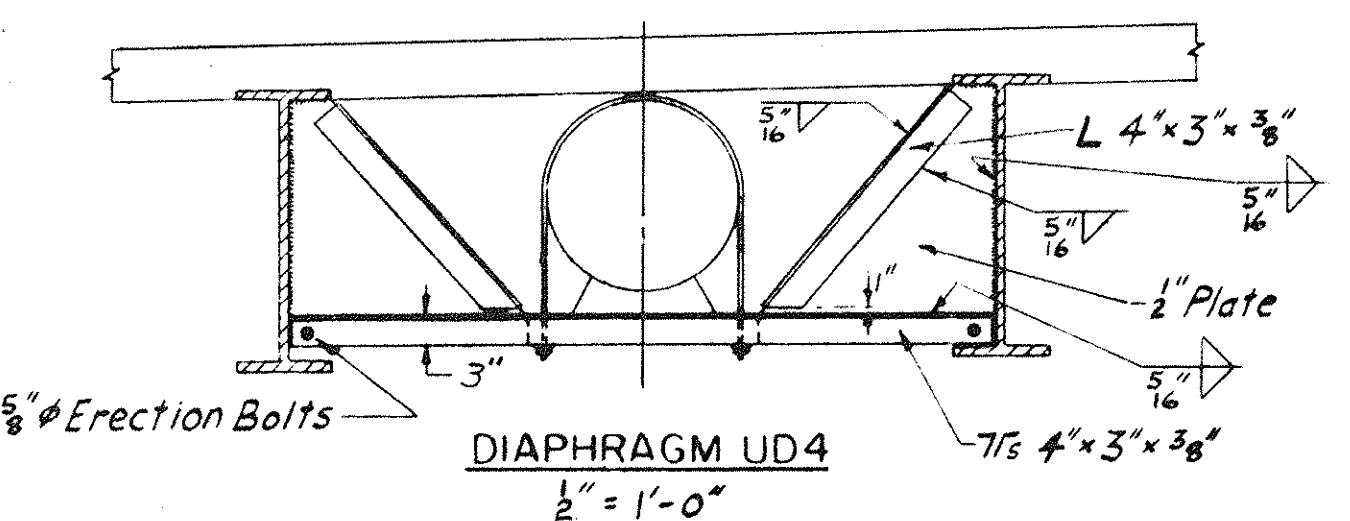
Stringer Location	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10 & S11
S	.24	.18	.22	.17	.21	.16	.21	.16	.19	.14
C	1.33	1.00	.55	.41	.95	.71	.82	.62	.75	.56
B	—	—	.23	.17	.01	.01	—	—	.10	.09
U	—	—	—	—	.08	.06	.25	.18	.43	.33
T	1.57	1.18	1.00	.75	1.25	.94	1.28	.96	1.37	1.03



CAMBER NOTES:

S = Camber due to weight of structural steel.
 C = Camber due to weight of all concrete except sidewalk, parapet, and railing.
 B = Camber due to weight of sidewalk, parapet, and railing.
 U = Camber due to weight of utilities (water included).
 T = Total camber due to full dead load.
 All deflections in inches.
 Camber for profile grade vertical curvature was added where applicable to totals shown in schedule.

Utility Diaphragm	Bottom Member	Top Member
UD 1	7/8 4x3 x 3/8	1 1/2 4x3 x 3/8
UD 2	7/8 4x3 x 3/8	1 1/2 4x3 x 3/8
UD 11	10E30	



MASSACHUSETTS TURNPIKE AUTHORITY
 BOSTON EXTENSION
 SECTION NO. C-4
 STRUCTURE NO. 54
 MASSACHUSETTS AVE.
 FRAMING PLAN & CROSS SECTION

HOWARD, NEEDLES, TAMMEN & BERGENOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY SHEET NO. S54-7

SCALE: AS NOTED

Unit	00 to 02L	02 to 04L	04 to 06L	06 to 08L	08 to 10L
20	4 1/2"	7"	11 1/2"	7"	4 1/2"
22	4"	6 1/2"	8 1/2"	6 1/2"	4"
23*	4 1/2"	7"	9"	7"	5"
24*	4 1/2"	7"	10"	8"	5 1/2"
25*	4 1/2"	6 1/2"	11 1/2"	10 1/2"	8 1/2"
26*	5"	9"	17"	14"	9"

Shear Stud Notes:

* 00 is at E Brg. N Abut for Units 23 to 26.
 Shear Studs are 3/4" dia and 4" high, 3 studs to a row, except FB 22-6 and FB 23-1 where the shear studs are 3/4" dia and 6" high, 3 studs to a row. See Sheet S55-15 for further details concerning shear studs on FB 22-6 & 23-1.
 For other shear stud notes, see Sheet S55-11

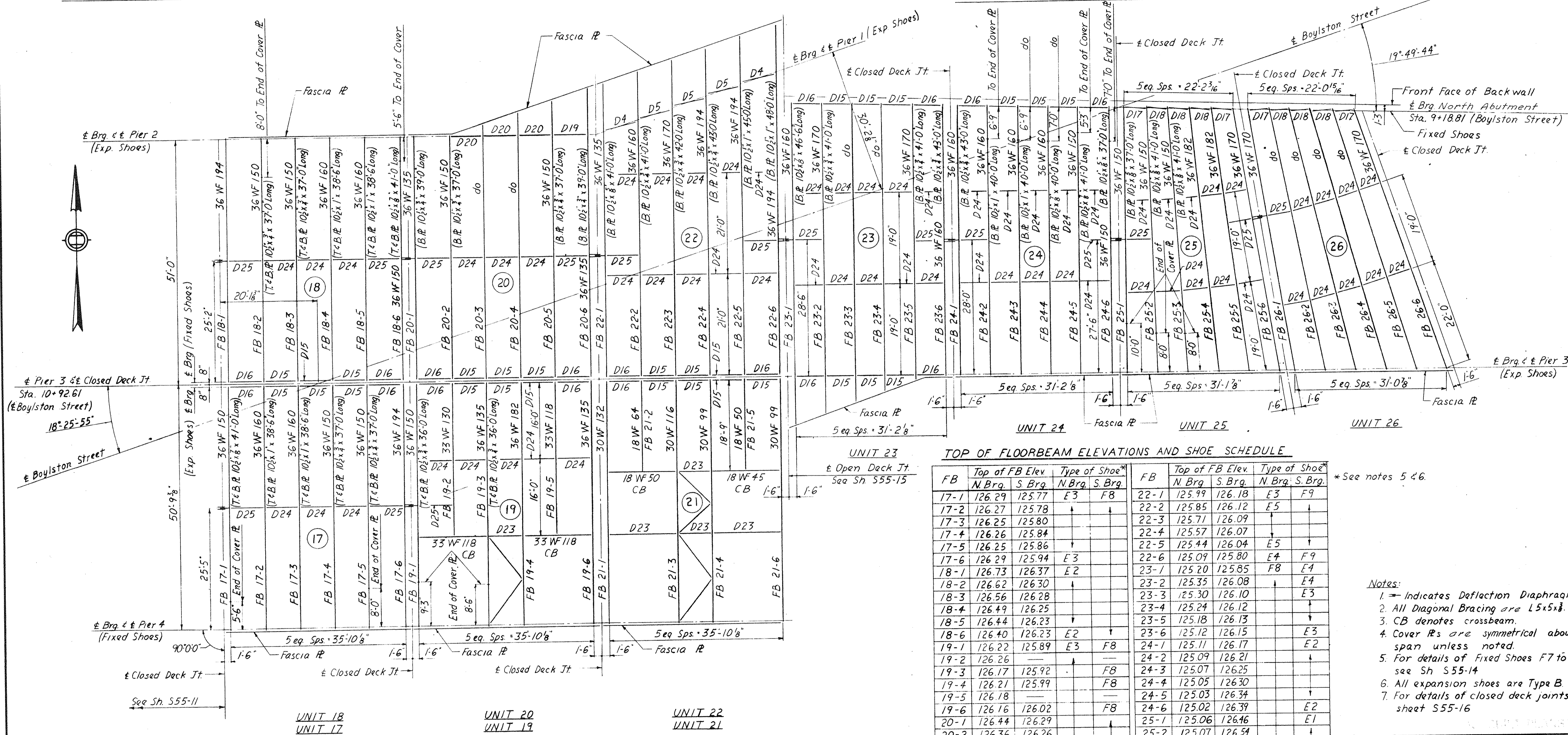
MAXIMUM SHEAR STUD SPACING

Thickness of Bearing Stiff or Conn. R.	Thickness	
	N Brg.	S Brg.
Floorbeam	1/2"	1/2"
All Floorbeams Unit 10	1/2"	1/2"
" " " 20	1/2"	1/2"
" " " 22	1/2"	1/2"
" " " 23	1/2"	1/2"
All other Floorbeams	1/2"	1/2"

Bearing Stiffener Notes:

All floorbeams have a 1/2" brg. stiffener or a 1/2" connection plate on each side at each centerline of bearing except as shown in chart. Bearing stiffeners on 10 1/2" flanges are 5" wide; those on 12" flanges are 5 1/2" wide.

BEARING STIFFENER SUMMARY



TOP OF FLOORBEAM ELEVATIONS AND SHOE SCHEDULE

FB	Top of FB Elev.		Type of Shoe		FB	Top of FB Elev.		Type of Shoe	
	N Brg.	S Brg.	N Brg.	S Brg.		N Brg.	S Brg.	N Brg.	S Brg.
17-1	126.29	125.77	E3	F8	22-1	125.99	126.18	E3	F9
17-2	126.27	125.78			22-2	125.85	126.12	E5	
17-3	126.25	125.80			22-3	125.71	126.09		
17-4	126.26	125.84			22-4	125.57	126.07		
17-5	126.25	125.86			22-5	125.44	126.04	E5	
17-6	126.29	125.94	E3		22-6	125.09	125.80	E4	F9
18-1	126.73	126.37	E2		23-1	125.20	125.85	F8	E4
18-2	126.62	126.30			23-2	125.35	126.08		
18-3	126.56	126.28			23-3	125.30	126.10		E3
18-4	126.49	126.25			23-4	125.24	126.12		
18-5	126.44	126.23			23-5	125.18	126.13		
18-6	126.40	126.23	E2		23-6	125.12	126.15		E3
19-1	126.22	125.89	E3	F8	24-1	125.11	126.17		E2
19-2	126.26				24-2	125.09	126.21		
19-3	126.17	125.92		F8	24-3	125.07	126.25		
19-4	126.21	125.99		F8	24-4	125.05	126.30		
19-5	126.18				24-5	125.03	126.34		
19-6	126.16	126.02		F8	24-6	125.02	126.39		E2
20-1	126.44	126.29			25-1	125.06	126.46		E1
20-2	126.36	126.26			25-2	125.07	126.54		
20-3	126.27	126.24			25-3	125.08	126.62		
20-4	126.17	126.21			25-4	125.09	126.69		
20-5	126.11	126.18			25-5	125.10	126.77		
20-6	126.03	126.16	E3	F8	25-6	125.11	126.85		
21-1	126.15	126.03	E1	F7	26-1	125.12	126.90		
21-2	126.12				26-2	125.15	126.99		
21-3	126.10	126.09		F7	26-3	125.18	127.08		
21-4	126.07	126.13		F7	26-4	125.21	127.18		
21-5	126.05				26-5	125.24	127.27		
21-6	126.02	126.19	E1	F7	26-6	125.27	127.36	F8	E1

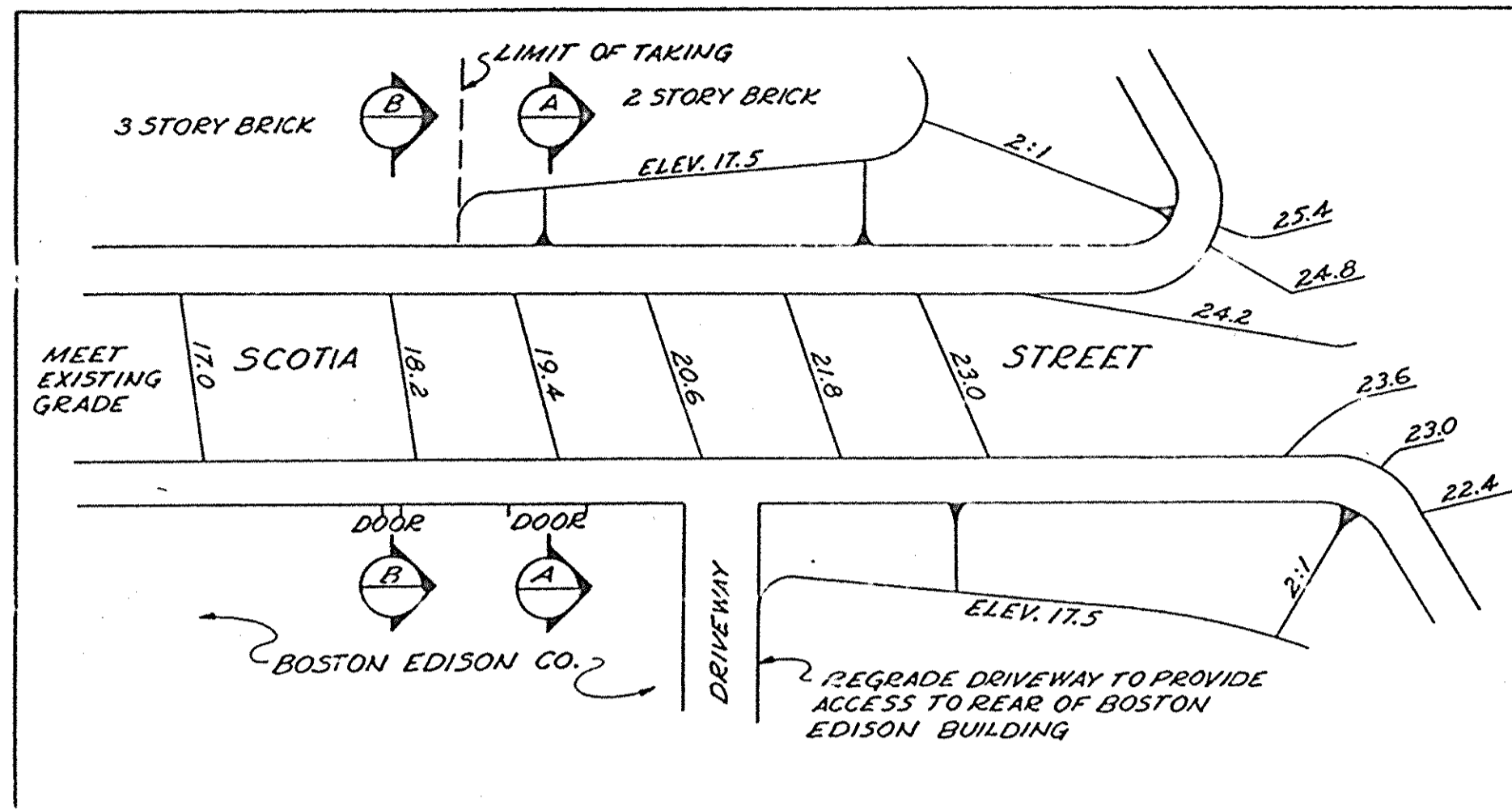
Notes:

- Indicates Deflection Diaphragm.
- All Diagonal Bracing are L5x5x8.
- CB denotes crossbeam.
- Cover R's are symmetrical about E of span unless noted.
- For details of Fixed Shoes F7 to F11, see Sh S55-14.
- All expansion shoes are Type B. See Sh SD21.
- For details of closed deck joints, see sheet S55-16.

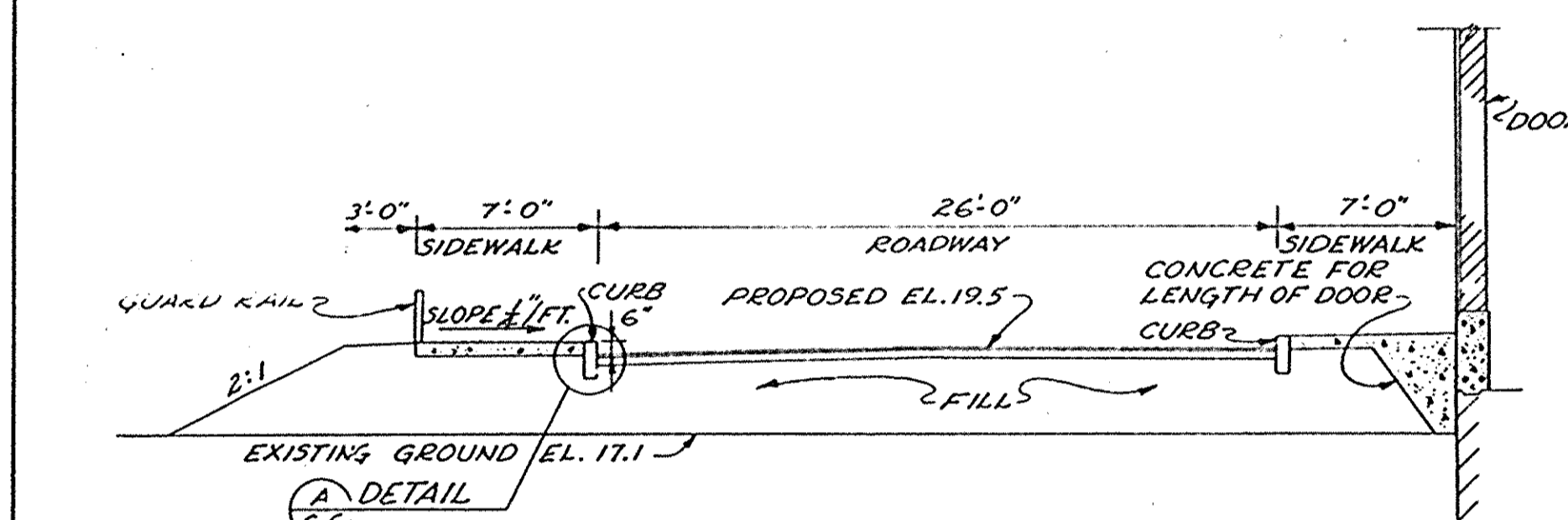
MASSACHUSETTS TURNPIKE AUTHORITY
BOSTON EXTENSION
 SECTION NO. C-4
 STRUCTURE NO. 55
 BOYLSTON STREET
 FRAMING PLAN

HOWARD, NEEDLES, TAMMEN & BERGENDOFF
 CONSULTING ENGINEERS
 NEW YORK KANSAS CITY

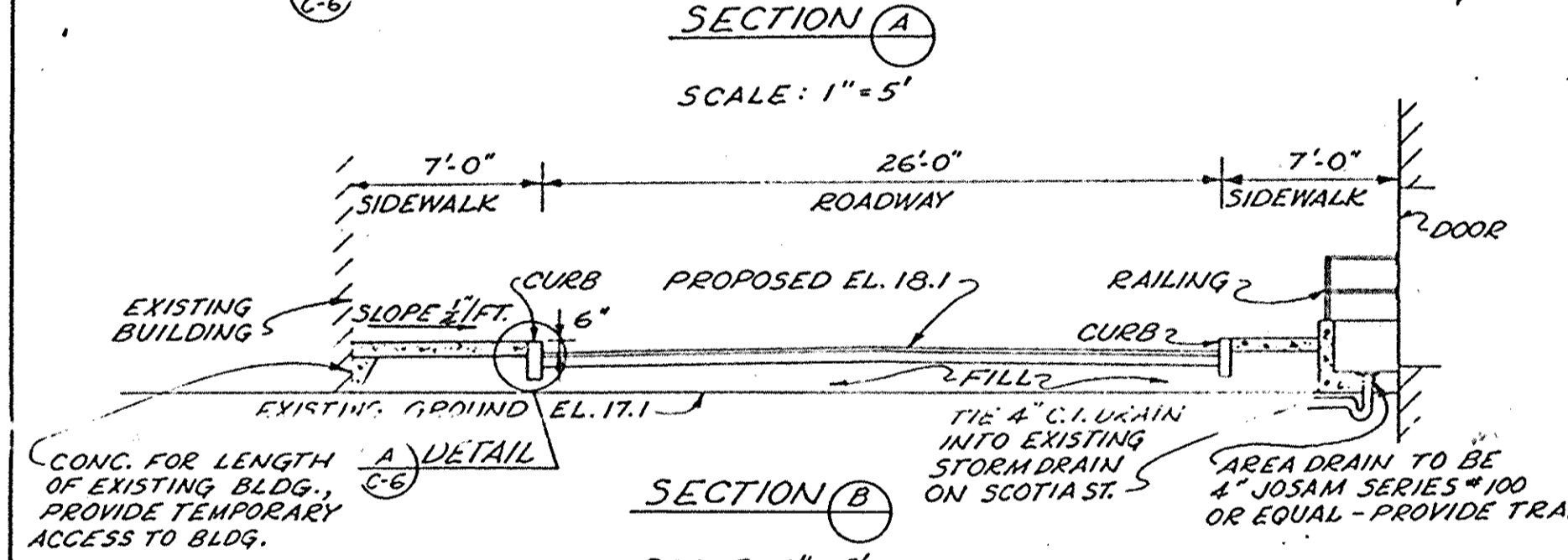
SCALE: 1" = 10'-0"
 SHEET NO. S55-12



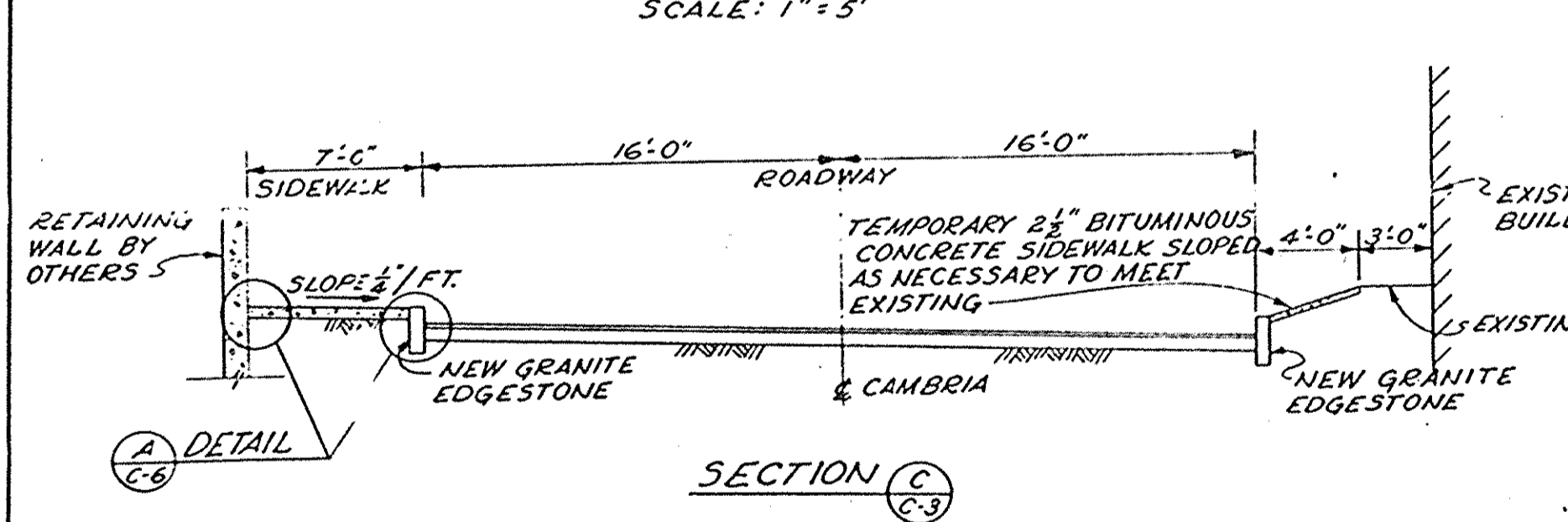
PLAN OF SCOTIA STREET
SCALE: 1" = 20'



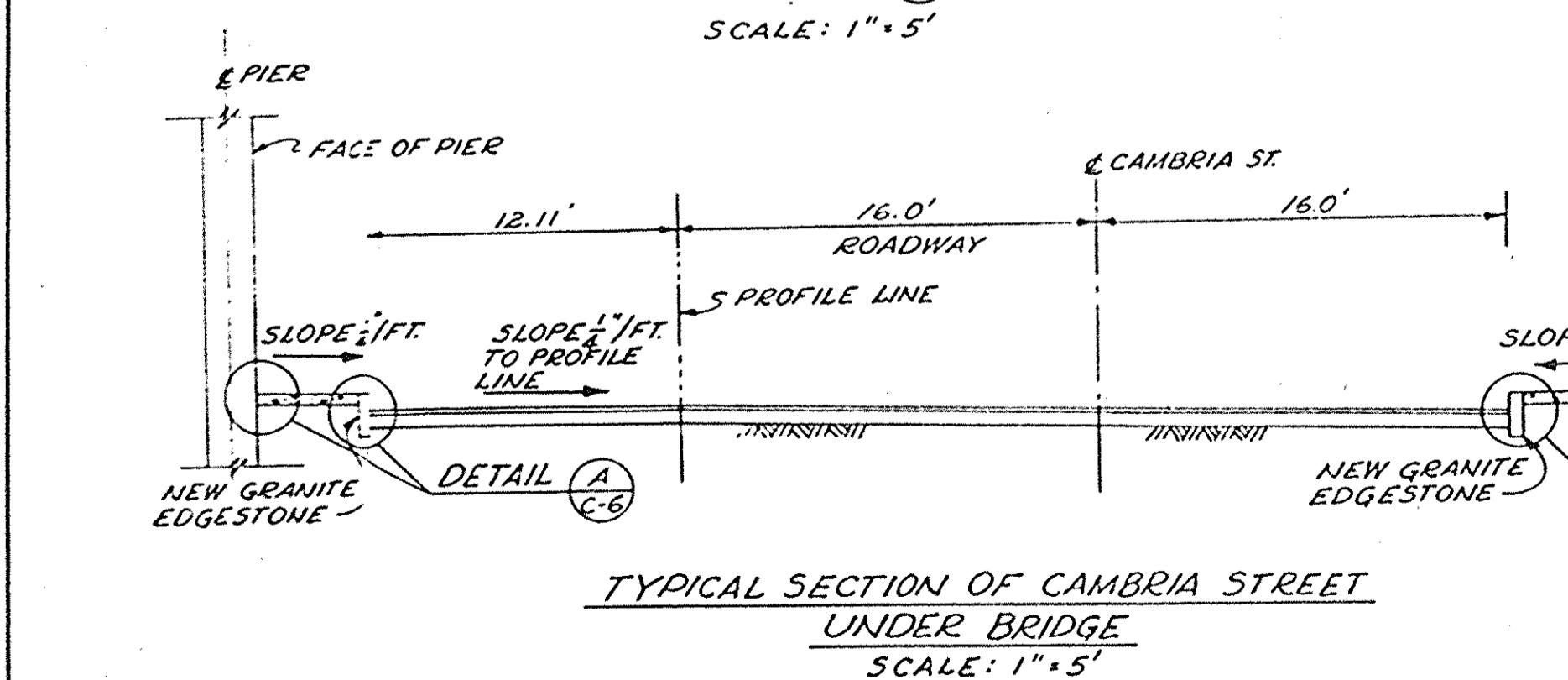
SECTION A
SCALE: 1" = 5'



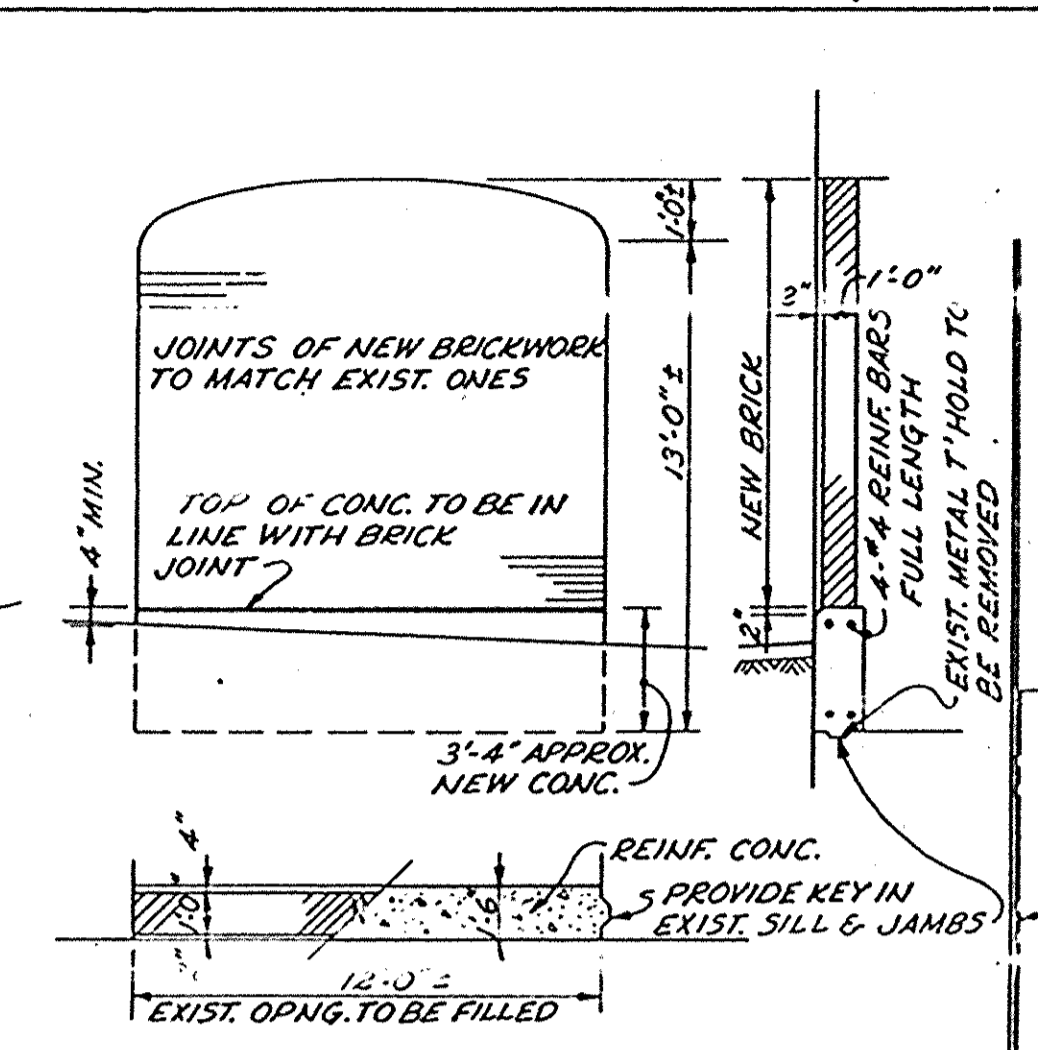
SECTION B
SCALE: 1" = 5'



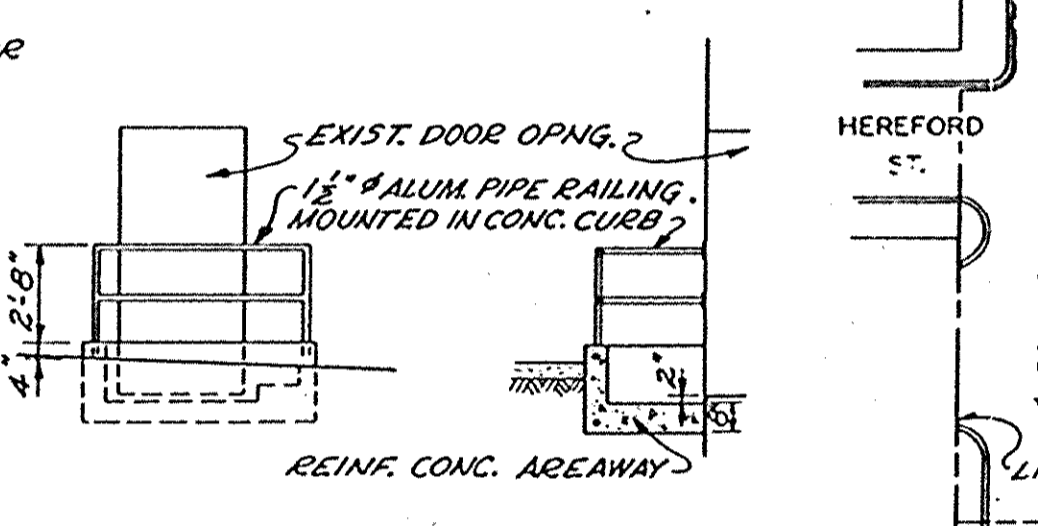
SECTION C
SCALE: 1" = 5'



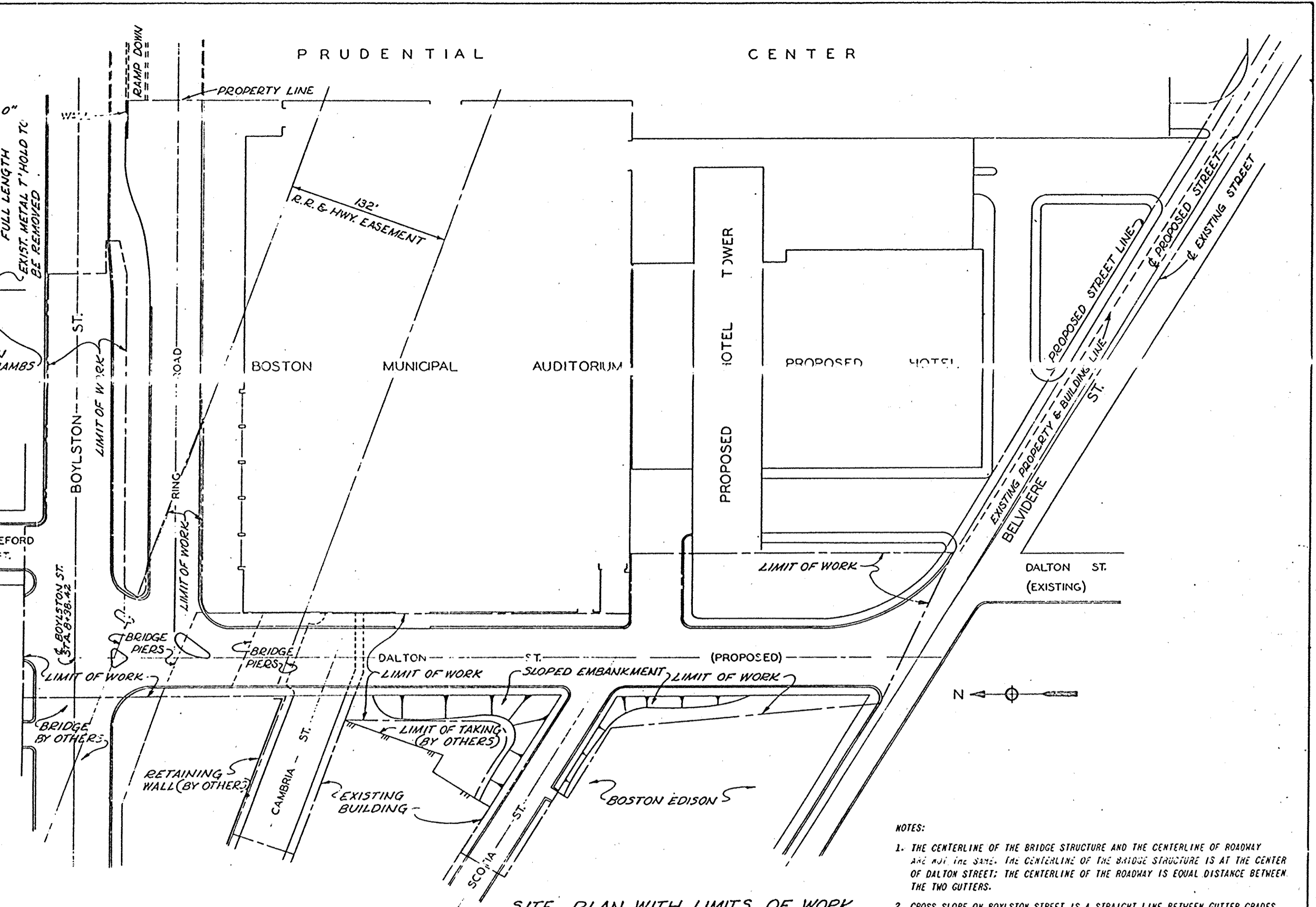
TYPICAL SECTION OF CAMBRIA STREET UNDER BRIDGE
SCALE: 1" = 5'



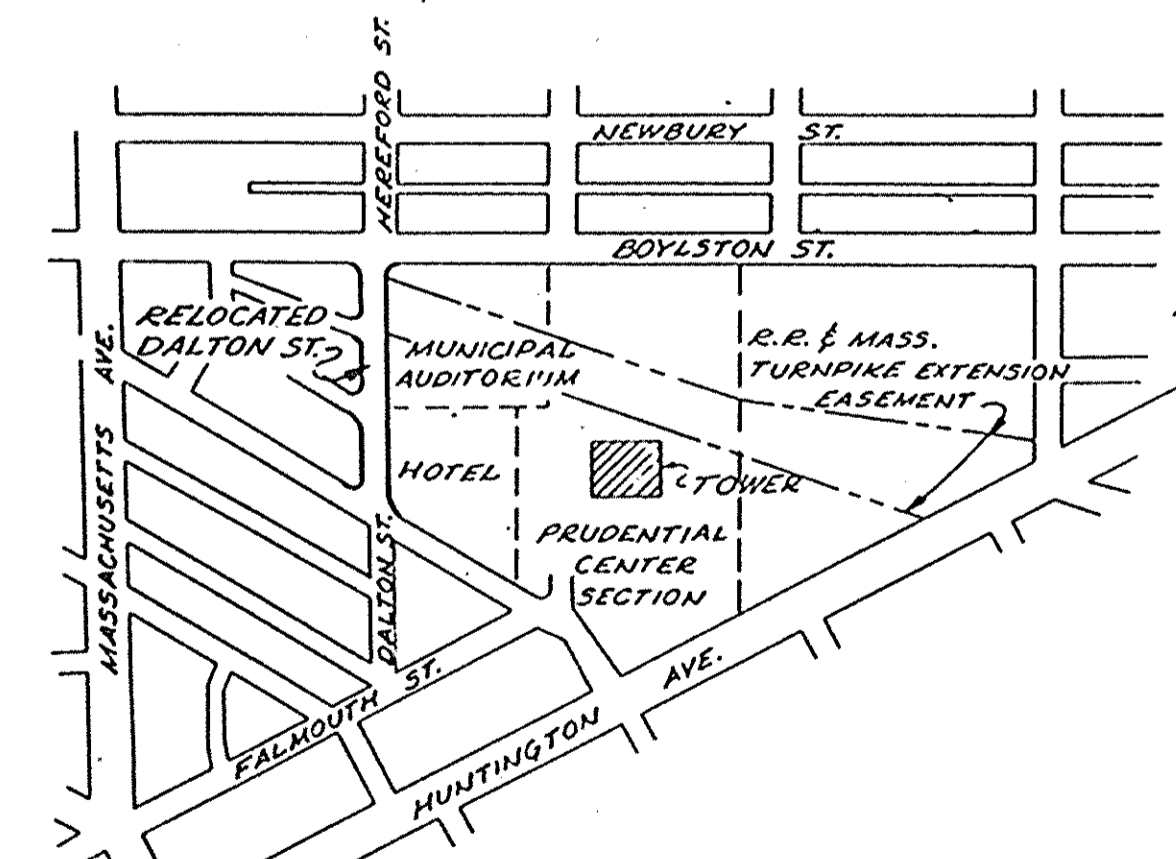
TRUCK DOOR
NO SCALE



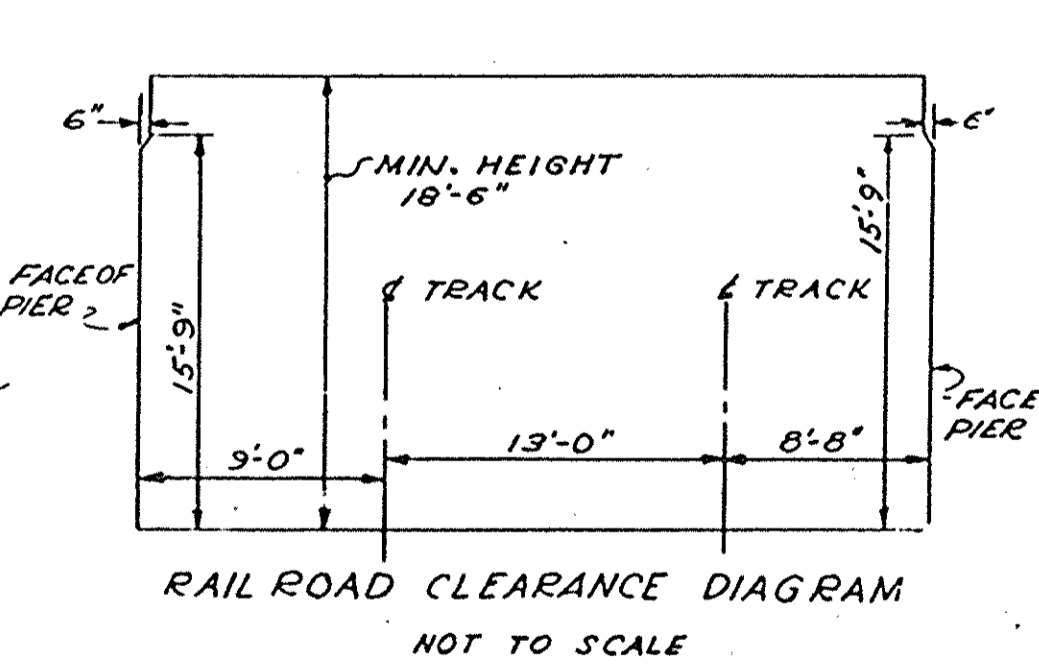
PERSONNEL DOOR
NO SCALE



SITE PLAN WITH LIMITS OF WORK
SCALE: 1" = 50'



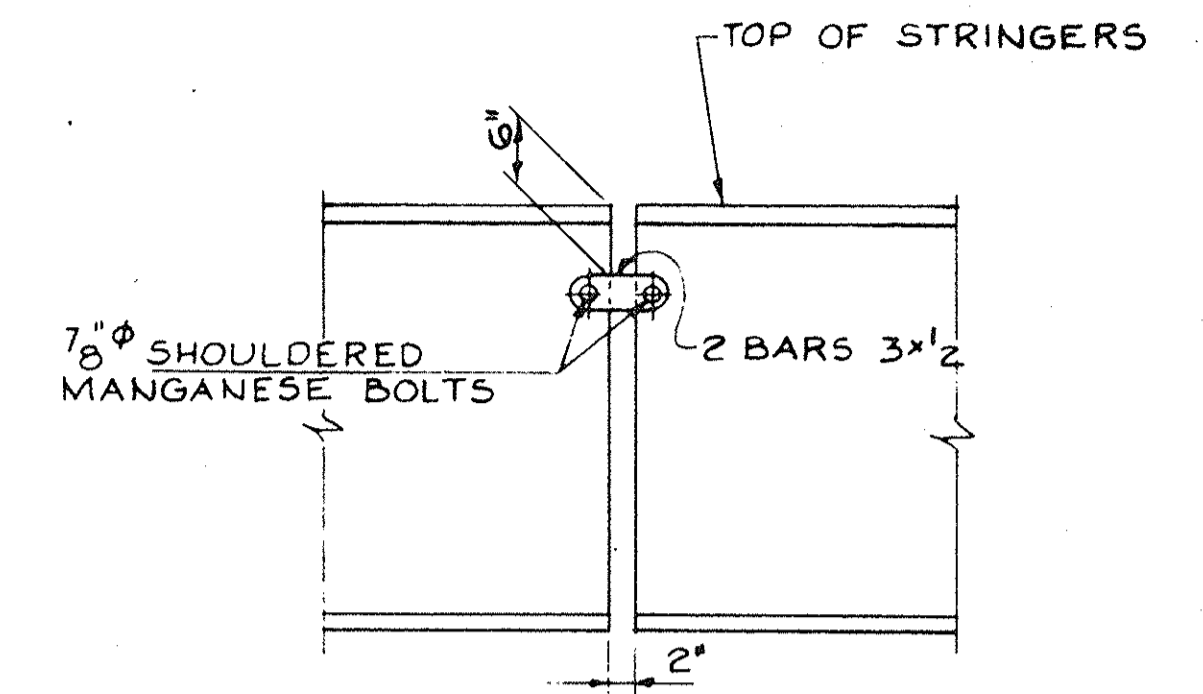
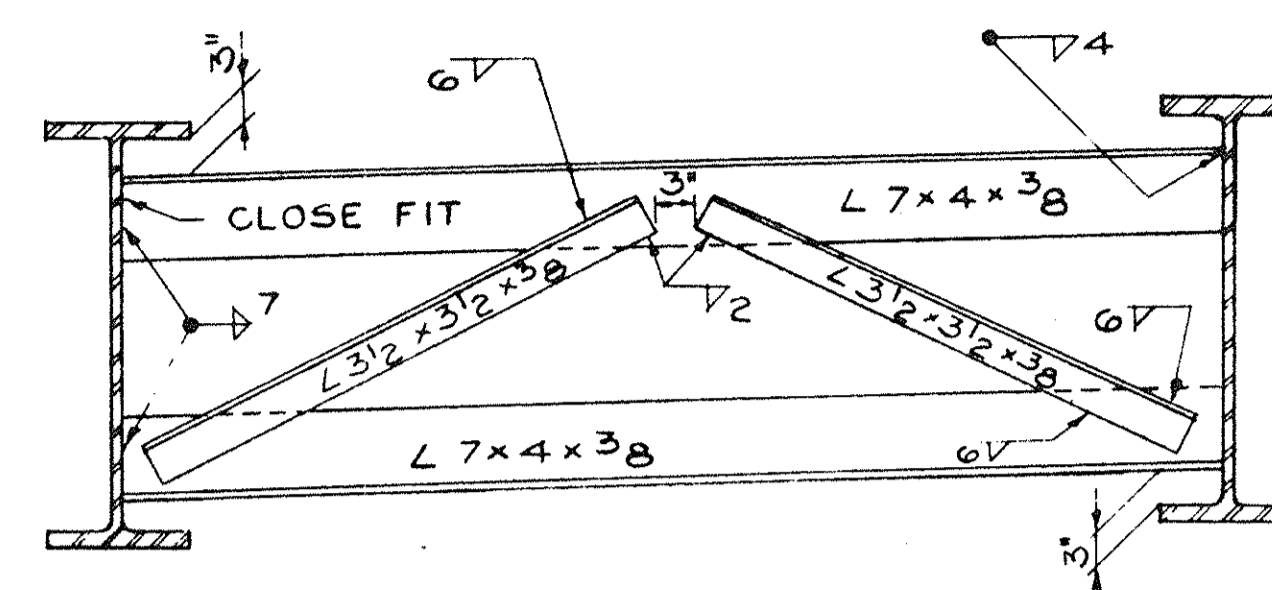
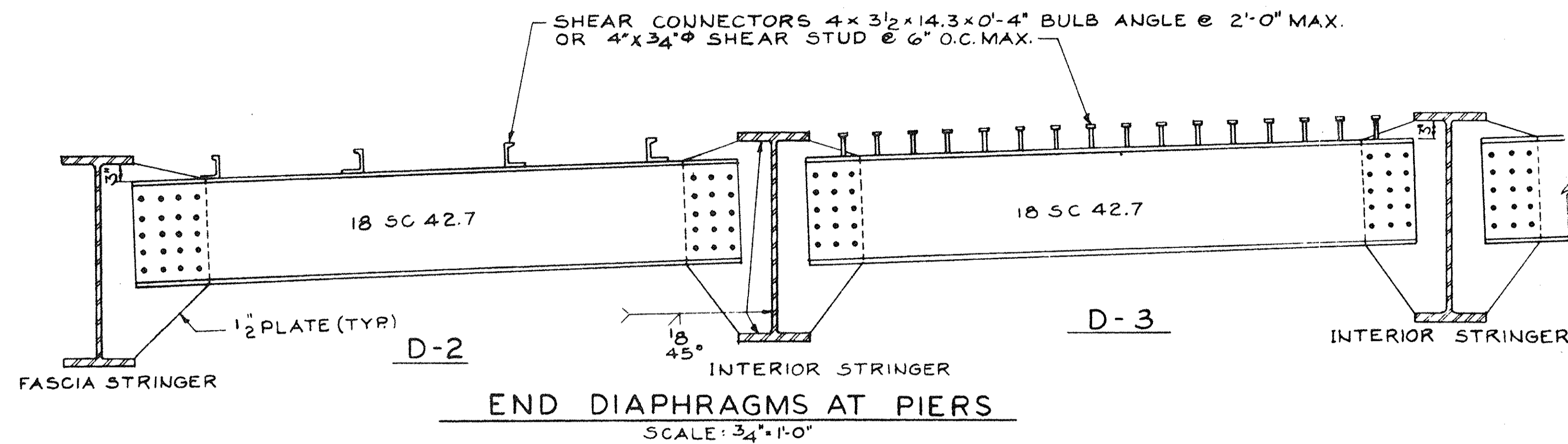
KEY PLAN
SCALE 1" = 400'
SCALE IN FEET



RAIL ROAD CLEARANCE DIAGRAM
NOT TO SCALE

- NOTES:
1. THE CENTERLINE OF THE BRIDGE STRUCTURE AND THE CENTERLINE OF ROADWAY ARE NOT THE SAME. THE CENTERLINE OF THE BRIDGE STRUCTURE IS AT THE CENTER OF DALTON STREET; THE CENTERLINE OF THE ROADWAY IS EQUAL DISTANCE BETWEEN THE TWO GUTTERS.
 2. CROSS SLOPE ON BOYLSTON STREET IS A STRAIGHT LINE BETWEEN GUTTER GRADES.
 3. ALL UNSATISFACTORY MATERIAL UNDER THE APPROACHES TO THE BRIDGES AND THE SLOPE ENHANCEMENTS MUST BE REMOVED.
 4. ALL SLOPED ENHANCEMENTS MUST BE LOANED AND SEEDED.
 5. EXISTING WATER LINES IN CAMBRIA STREET TO BE CAPPED AS CLOSE AS POSSIBLE TO THE PROPOSED AUDITORIUM, BUT AT A POINT WITH AT LEAST 5 FEET OF COVER.
 6. EXISTING WATER LINE IN SCOTIA STREET TO BE CAPPED AFTER VERTICAL RISE TO NEW LOW SERVICE IN DALTON STREET.
 7. NEW HIGH SERVICE (H.S.) AND NEW LOW SERVICE (L.S.) IN DALTON STREET TO BE INSTALLED AT NEW PROPOSED GRADE WITH A MINIMUM 5 FEET OF COVER.
 8. INFORM BOSTON GAS COMPANY TO CAP GAS LINE IN CAMBRIA STREET.
 9. ALL BEARINGS ARE REFERENCED TO THE PRUDENTIAL GRID SYSTEM WITH STREET LINES OF BOYLSTON STREET ASSUMED EAST-WEST LINES.
 10. ANGLE FROM ASSUMED TO TRUE NORTH, 20° 15' 23"
 11. THE STATIONING INDICATED ON BOYLSTON STREET IS COORDINATED WITH TURNPIKE AUTHORITY WORK TO WEST.
 12. DATUM PLAN IS BOSTON CITY BASE IN ALL INSTANCES.
 13. UTILITY LOCATIONS SHOWN ARE NOT TO BE CONSIDERED GUARANTEES OF LOCATIONS OR NON-EXISTENCE OF ANY OTHERS IN WORK AREA.
 14. STEEL SHEETING LEFT IN PLACE IS TO ALLOW OPERATION OF RAILROAD WHILE CONSTRUCTION IS IN PROGRESS.

 REG. PROF. ENGR. MASS. NO. 705 1-21-68 DATE		 DIVISION ENGINEER COMMISSIONER OF PUBLIC WORKS REVISION		CITY OF BOSTON, MASSACHUSETTS PUBLIC WORKS DEPARTMENT DALTON STREET BRIDGE SITE PLAN	
DRAWN BY	CHECKED BY	ENGINEERS	SHEET NO.		
C.L.H.	B.R.H.	NETCALF & EDDY, INC. BOSTON, MASS.	C-1		
DATE	SCALE				
1/31/64	AS SHOWN				

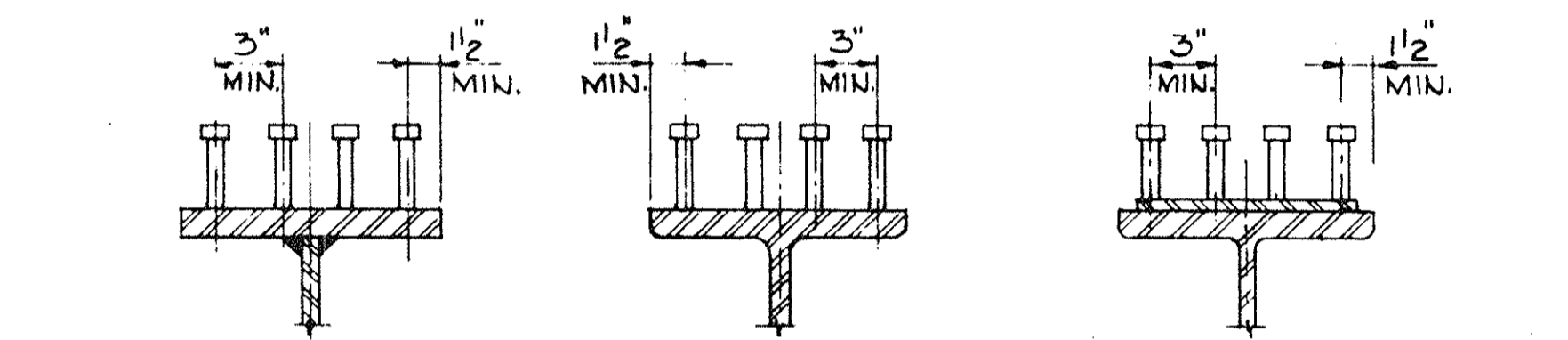
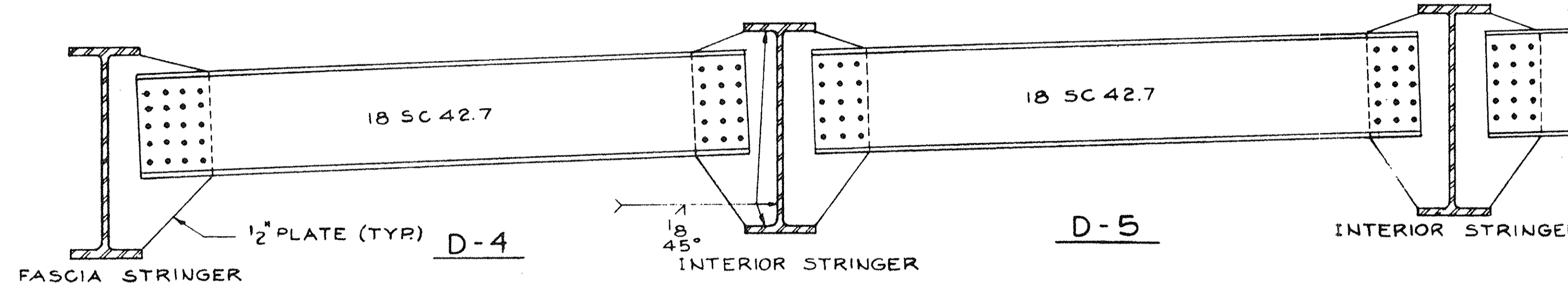


NOTE: ALL FILLET WELDS SHOWN SHALL BE 5/16"

INTERMEDIATE DIAPHRAGM D-1
SCALE: 3/4" = 1'-0"

LINK DETAIL
SCALE: 3/4" = 1'-0"

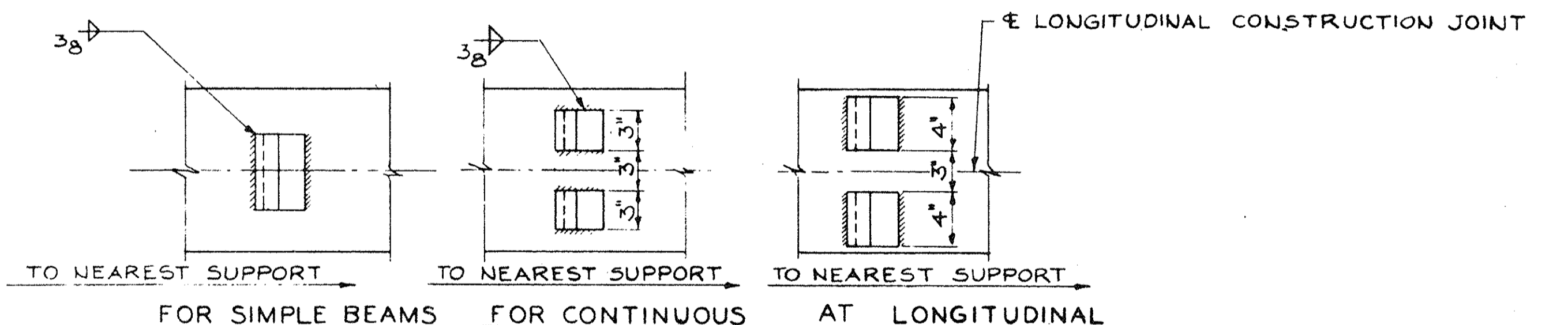
NOTE: WHEN THE SKEW ANGLE BETWEEN STRINGERS AND THE PIER IS 12° OR LESS A BENT PLATE SHALL BE USED AS A COMMON DIAPHRAGM CONNECTION PLATE AND BEARING STIFFENER.



FOR WELDED GIRDER FOR ROLLED BEAM AT ROLLED BEAMS WITH COVER PLATES

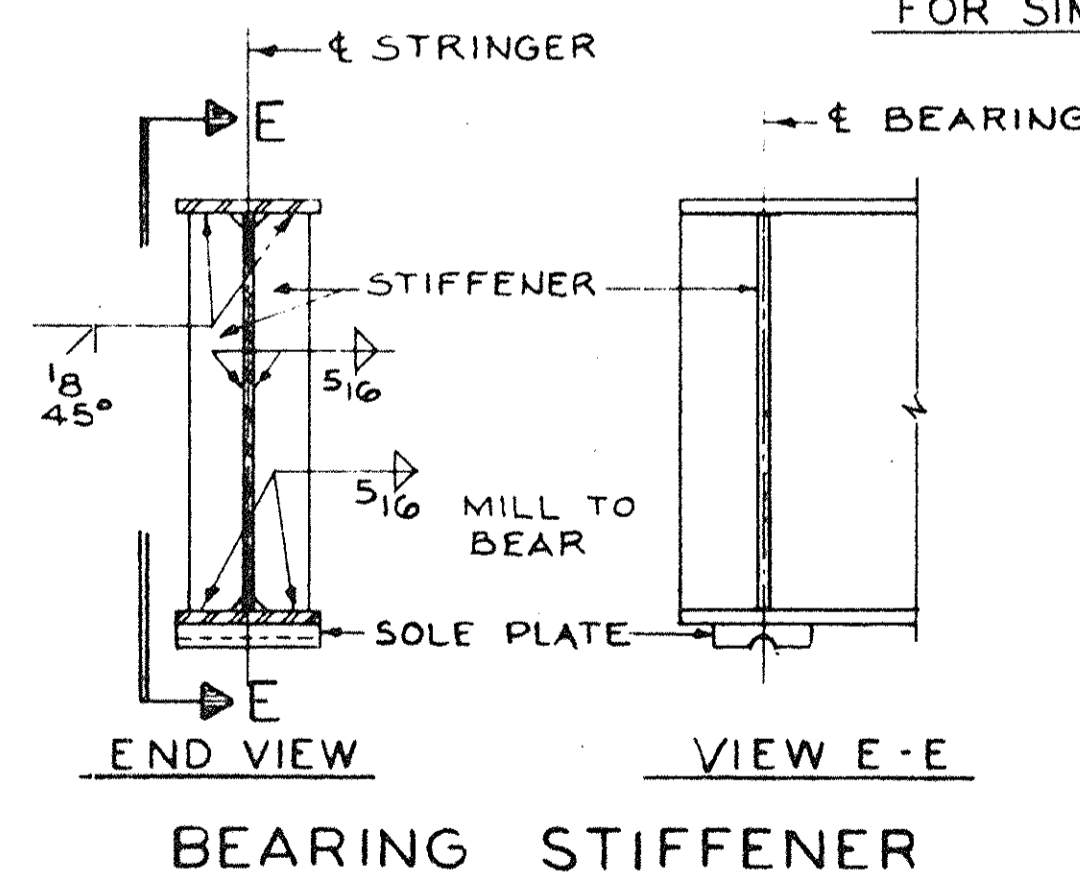
STUD TYPE CONNECTOR
SCALE: 1/2" = 1'-0"

END DIAPHRAGMS AT ABUTMENTS
SCALE: 3/4" = 1'-0"

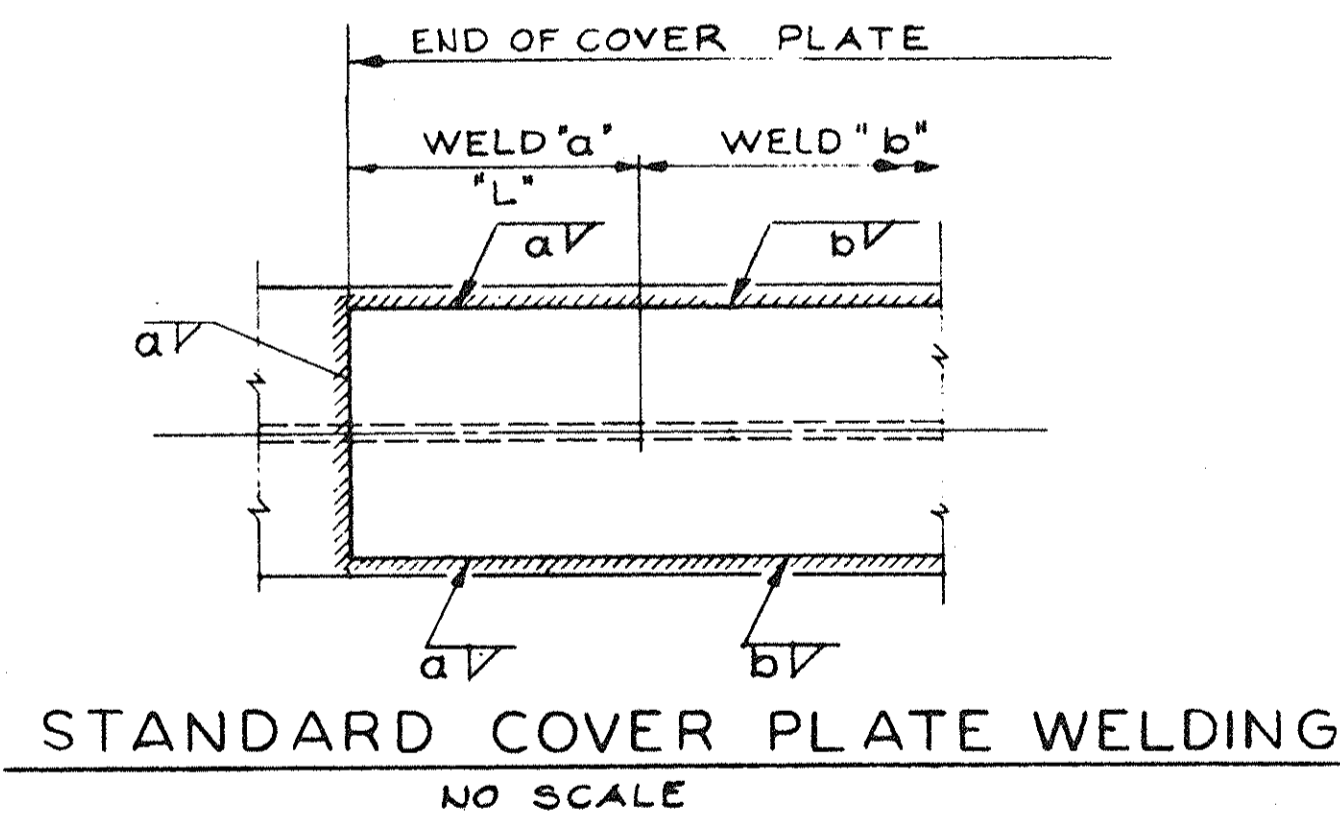


BULB ANGLE TYPE CONNECTORS
SCALE: 1/2" = 1'-0"

NOTES:
AT THE CONTRACTORS' OPTION SHEAR CONNECTORS MAY BE BULB ANGLES, 3/4" STUDS, OR 7/8" STUDS.
BULB ANGLE 4x3 1/2x14.3 SHALL BE SUBSTITUTED FOR STUDS LESS THAN 6" HIGH AND BULB ANGLE 6x3 1/2x17.4 FOR STUDS 6" OR MORE HIGH.
ONLY ONE TYPE OF SHEAR CONNECTOR SHALL BE USED FOR A STRUCTURE.
IF THE CONTRACTOR ELECTS TO USE A TYPE OTHER THAN THAT DETAILED ON THE FRAMING PLANS HE SHALL SUBMIT SUITABLE CALCULATIONS WITH THE SHOP DRAWINGS TO SUBSTANTIATE THE DETAILS SHOWN THERE-ON.
DESIGN CAPACITY SHALL BE AS FOLLOWS:
3/4" STUDS - 3400# PER STUD.
7/8" STUDS - 4600# PER STUD.
BULB ANGLES - 2500# PER INCH OF ANGLES.



BEARING STIFFENER



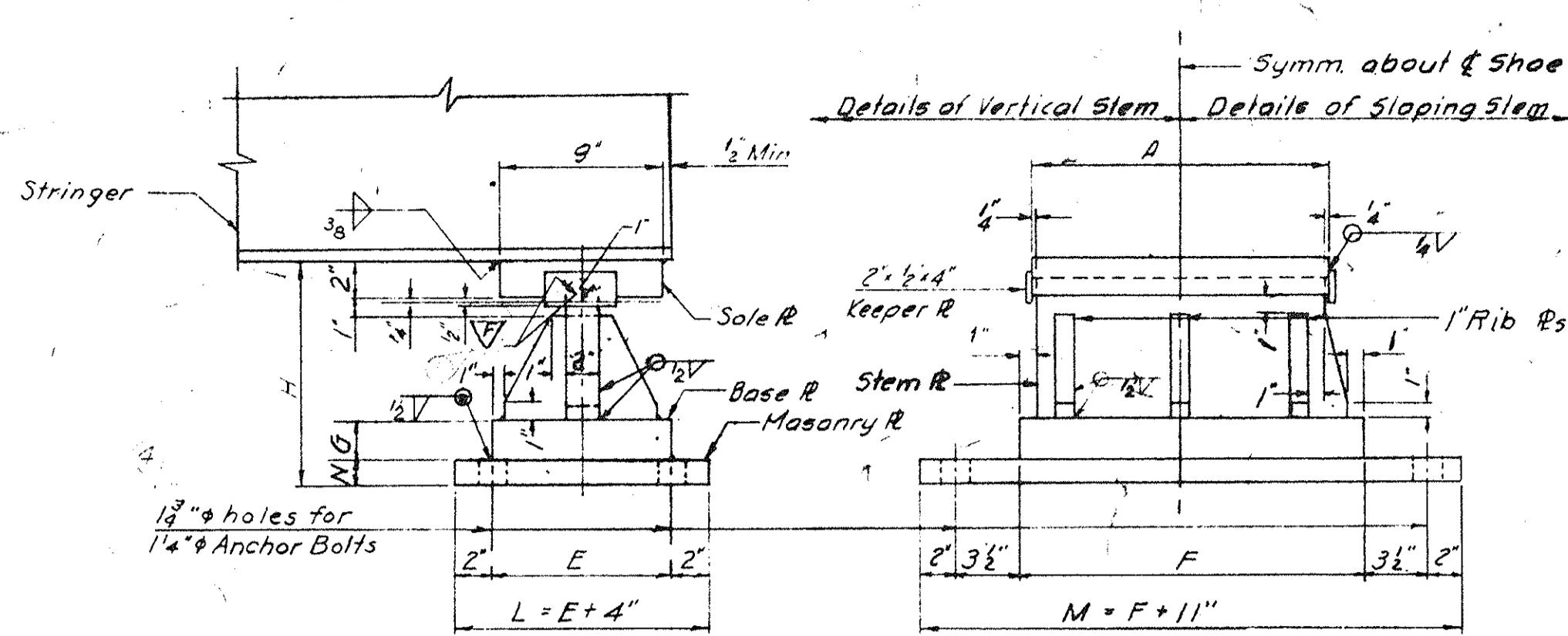
STANDARD COVER PLATE WELDING
NO SCALE

MAXIMUM THICKNESS OF ANY PART	SIZE OF FILLET WELD "b"
1/2	3/16
3/4	1/4
1 1/4	5/16
2	3/8
OVER 2	1/2

THK.	7 1/2 TO 11" INCL		15"	
	a	L	a	L
3/8"	5/16	1'-6"	-	-
7/16"	5/16	1'-6"	-	-
1/2"	5/16	1'-6"	-	-
9/16"	5/16	1'-6"	1/2	2'-0"
5/8"	3/8	1'-6"	1/2	2'-0"
1 1/16"	3/8	1'-6"	1/2	2'-0"
3/4"	7/16	1'-6"	1/2	2'-0"
13/16"	7/16	1'-6"	1/2	2'-0"
7/8"	1/2	1'-6"	5/8	2'-0"
15/16"	1/2	1'-6"	1/2	2'-0"
1"	1/2	2'-0"	5/8	2'-0"
1 1/16"	1/2	2'-0"	5/8	2'-6"
1 1/8"	1/2	2'-0"	5/8	2'-6"
1 3/16"	1/2	2'-0"	5/8	2'-6"
1 1/4"	5/8	2'-0"	5/8	2'-6"
1 5/16"	5/8	2'-0"	5/8	2'-6"
1 3/8"	5/8	2'-0"	5/8	2'-6"
1 7/16"	5/8	2'-0"	-	-
1 1/2"	5/8	2'-0"	-	-
1 9/16"	5/8	2'-0"	-	-
1 5/8"	5/8	2'-0"	-	-
1 11/16"	5/8	2'-0"	-	-

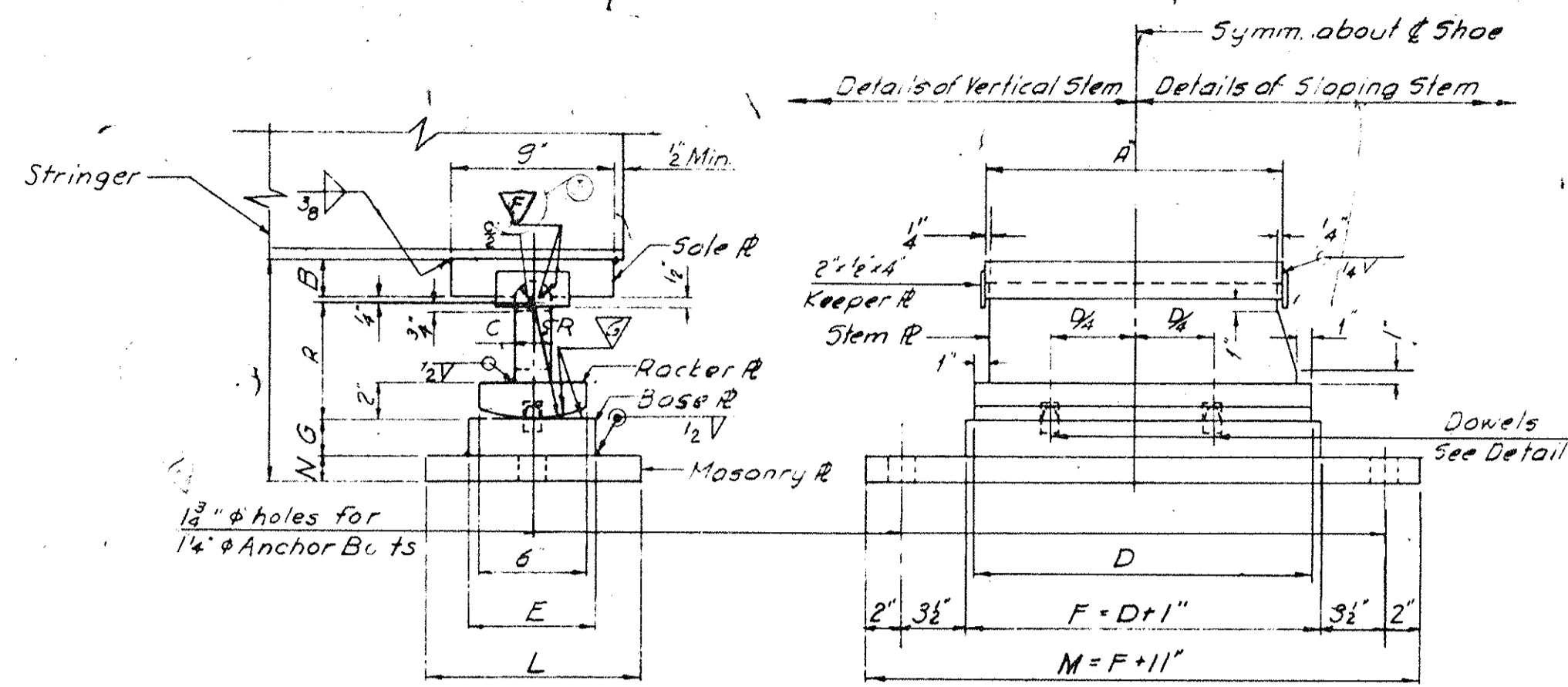
"AS BUILT PLANS"

MASSACHUSETTS TURNPIKE AUTHORITY BOSTON EXTENSION SECTION B	
DIAPHRAGMS FOR ROLLED STRINGERS AND MISCELLANEOUS STEEL DETAILS	
DE LEUW, CATHER & CO. CONSULTING ENGINEERS 381 BOYLSTON BROOKLINE, MASS.	SCALE: NONE SHEET NO. DCS-7.00

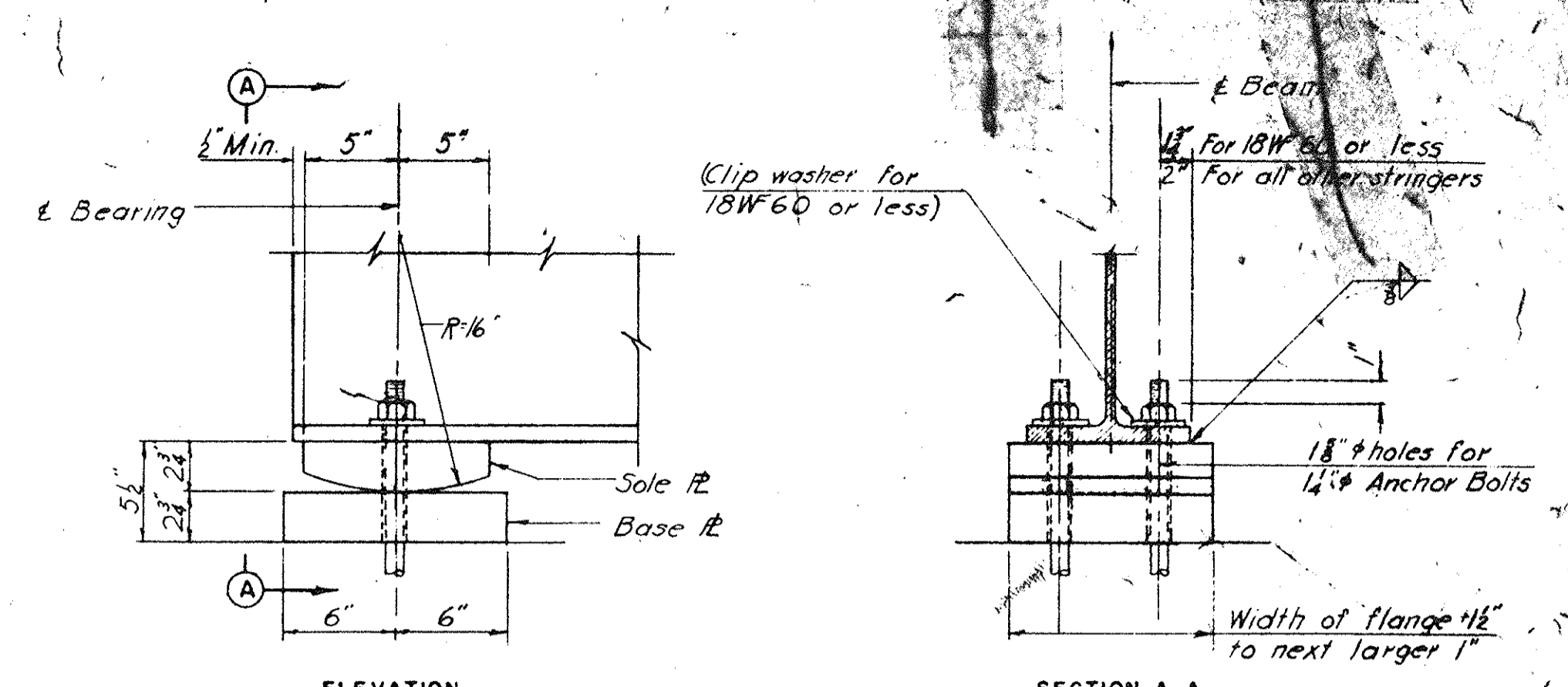


FIXED SHOES TYPE A

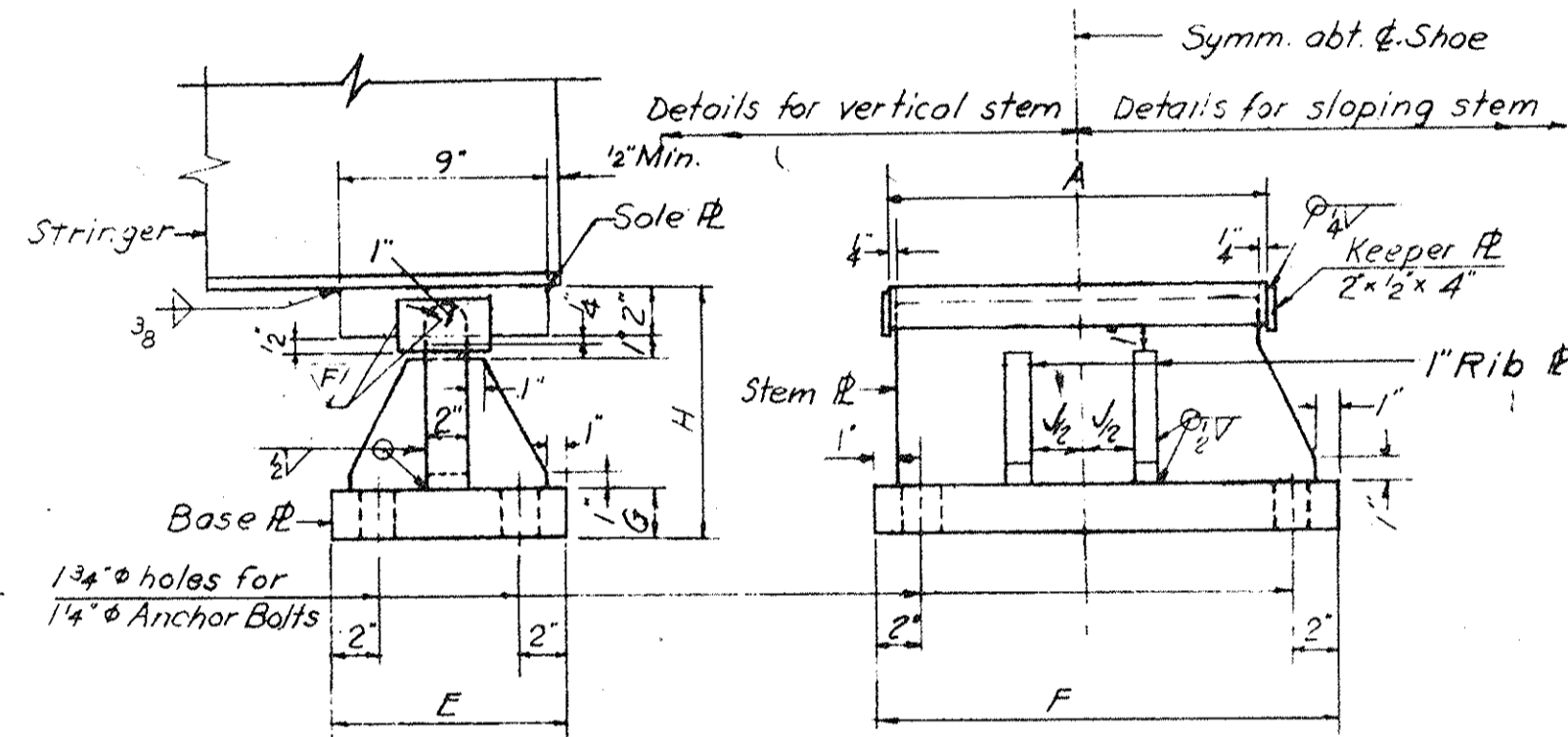
NOTE:
For field adjustment of Fixed and Expansion Shoes, Type A the base plate may be offset a maximum of 1/2" in any direction from position shown with respect to masonry plate.



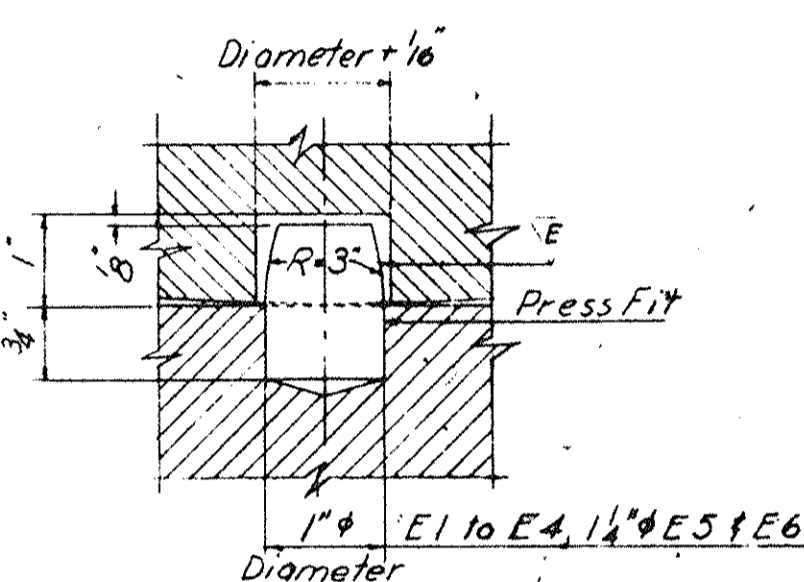
EXPANSION SHOES TYPE A



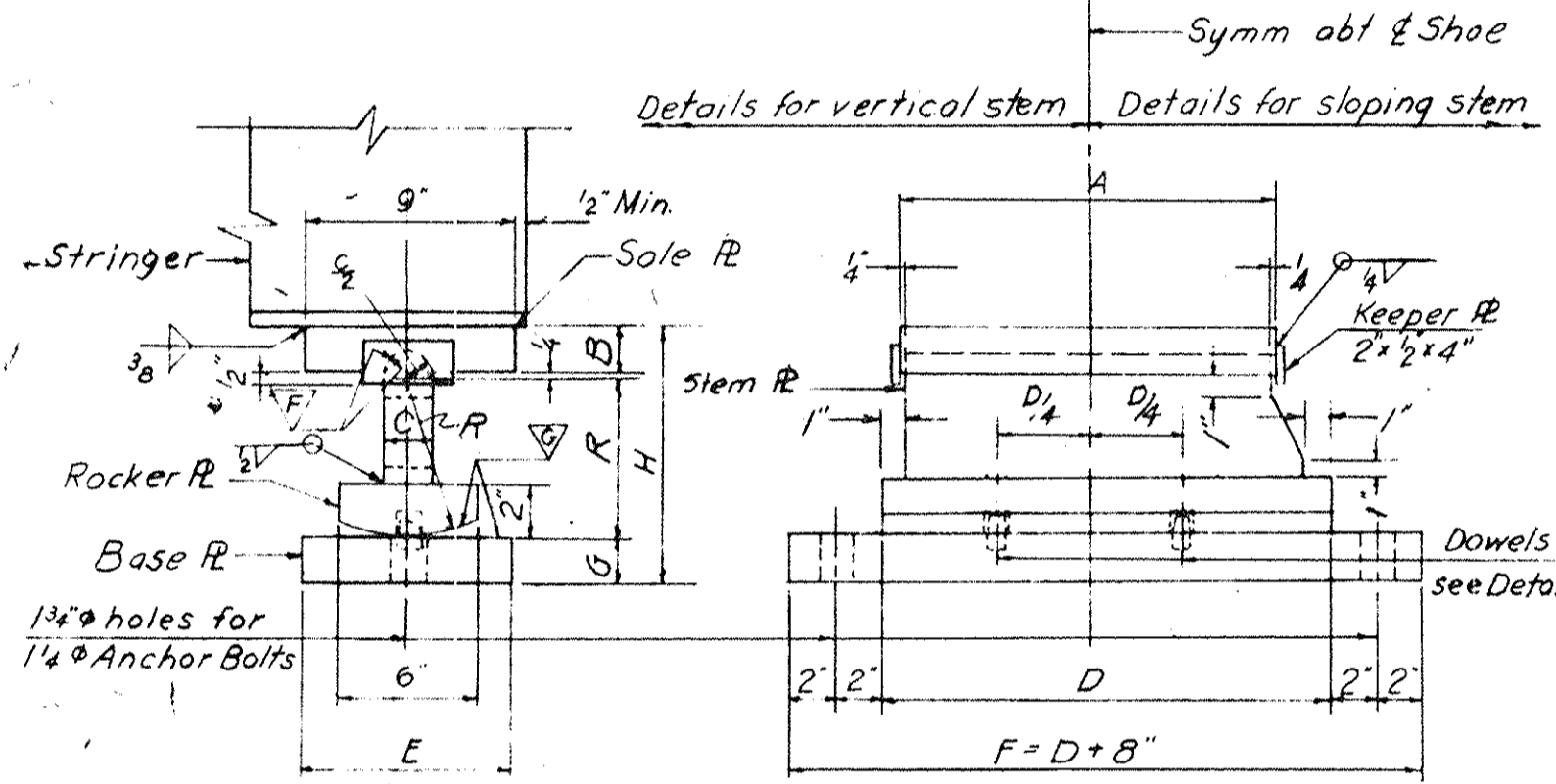
FIXED SHOES TYPE C



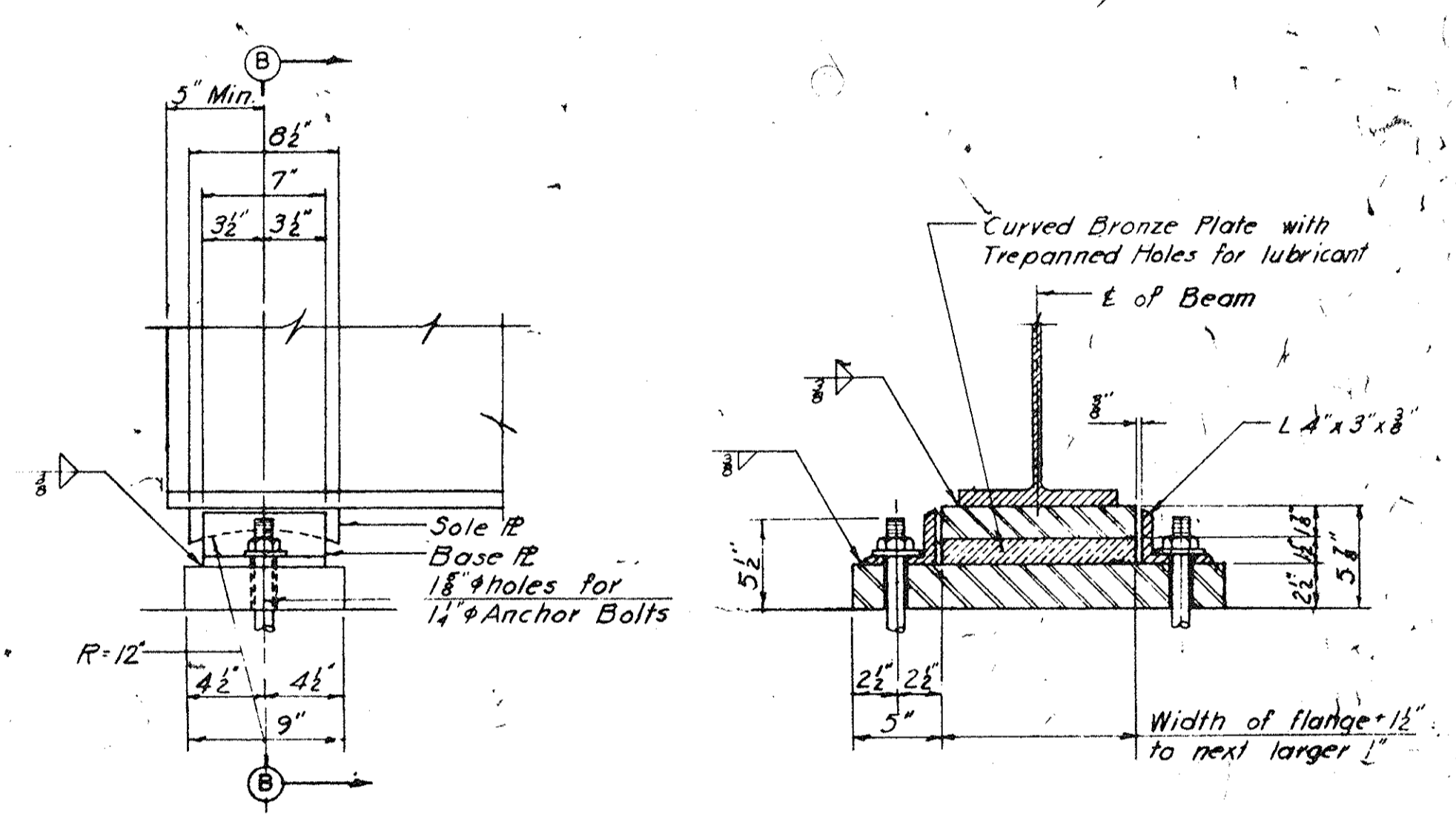
FIXED SHOES TYPE B



DOWEL DETAIL
Half Scale



EXPANSION SHOES TYPE B



EXPANSION SHOE TYPE D

SHOE SCHEDULE - FIXED SHOES - TYPE A						
MARK	F1	F2	F3	F4	F5	F6
CAPACITY (KIPS)	75	100	125	150	175	200
SOLE PLATE	A (MAX)	10 1/2	12 1/2	14 1/2	16 1/2	18 1/2
	A (MIN)	7	8	9	10	11
BASE PLATE	E	10	10	10	12	14
	F	12	14	16	18	19
MASONRY PLATE	L	14	14	14	16	18
	M	23	25	27	29	29
HEIGHT	N	13 1/2	14 1/2	15 1/2	16 1/2	17 1/2
	H	12 1/2	13 1/2	14	14	15 1/2

SHOE SCHEDULE - FIXED SHOES - TYPE B						
MARK	F1	F2	F3	F4	F5	F6
SOLE PLATE	A (MAX)	15 1/2	17 1/2	19 1/2	21 1/2	22 1/2
	A (MIN)	9	10	11	12	12
BASE PLATE	E	14	14	14	16	18
	F	17	19	21	23	24
HEIGHT	N	14	14	14	16	18
	H	11	11	12 1/2	12 1/2	14 1/2

SHOE NOTES

General:
All dimensions shown are inches except where otherwise noted.

Types A & B:
The following contact surfaces shall be finished in accordance with Standard No. 3, "Standards for Machined Surface Finishes" of the Association of Iron and Steel Engineers to the class of finish prescribed.
Tops of rocker stems and grooves in sole plates - Semi-fine Finish - Symbol F.
Top surfaces of base plates, for expansion shoes only, and bottoms of rockers - Medium Finish - Symbol M.

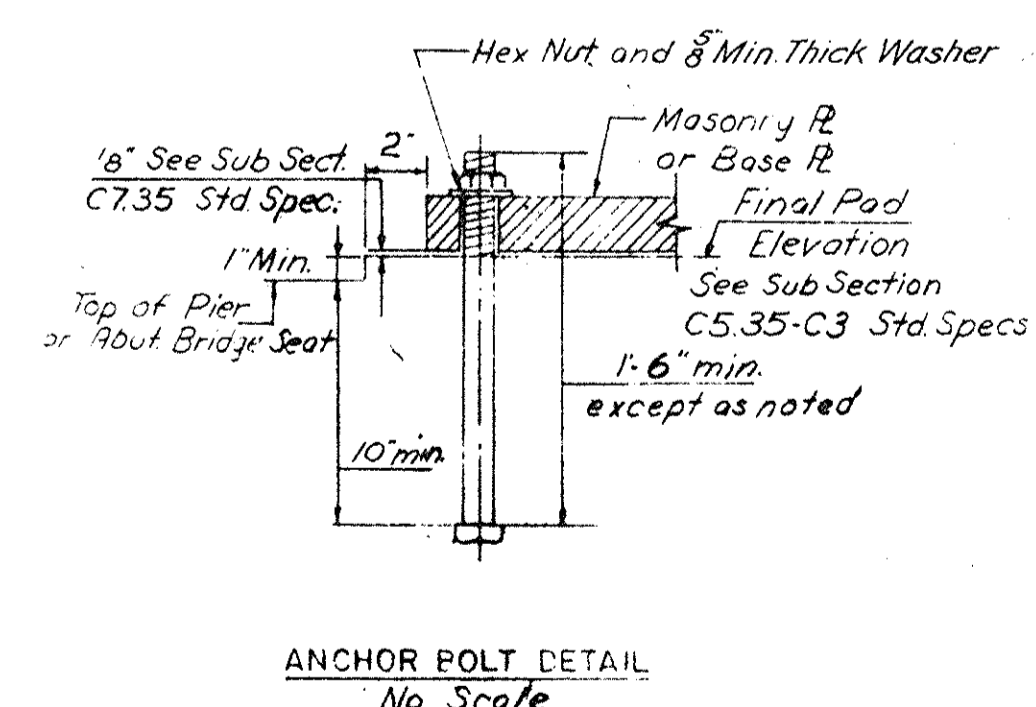
Types C & D:
Top of sole plates and masonry plates, and top and bottom of base plates, shall be planed, straightened or otherwise treated to secure true level surfaces.
Radius on sole plate to be finished to radius on main vertical stem plus 0.01 in.
Rockers on Expansion Shoes are to be set so as to be vertical under full dead load at a temperature of 68°F.

Types C and D:
All dimensions shown are for simple spans. For continuous spans and groups of simple spans connected by links, fixed shoes shall be checked for resulting increased lateral forces and expansion shoes for eccentricities resulting from increased horizontal movement.

Types C and D:
All base plates shall be Mayari-R, Cor-Ten or an approved equivalent and shall be planed, straightened or otherwise treated to secure true level surfaces top and bottom.
Sole plates shall be beveled as required by profile and planed, straightened or otherwise treated to secure a true even top surface.
On Type C Shoes anchor bolt nuts to be drawn hand tight, then backed off 1/2 turn and threads buried off at face of nut with a pointed tool.

SHOE SCHEDULE - EXPANSION SHOES - TYPE A						
MARK	E1	E2	E3	E4	E5	E6
CAPACITY (KIPS)	75	100	125	150	175	200
SOLE PLATE	A (MAX)	12	15	16 1/2	18	20
	A (MIN)	8 1/2	11 1/2	12 1/2	13 1/2	14 1/2
STEM PLATE	C	2	2	2 1/2	2 1/2	3
	D	2	2	2 1/2	2 1/2	3
ROCKER PLATE	R	7	7	8	8	9
	D	13 1/2	16 1/2	18	19 1/2	21 1/2
BASE PLATE	E	7	7	7	7	7
	F	14 1/2	17 1/2	19	20 1/2	22 1/2
MASONRY PLATE	L	11	11	12	12	13
	M	25 1/2	28 1/2	30	31 1/2	33 1/2
HEIGHT	N	14	14	14	14	14
	H	12 1/2	12 1/2	14	14	15 1/2

SHOE SCHEDULE - EXPANSION SHOES - TYPE B						
MARK	E1	E2	E3	E4	E5	E6
BASE PLATE	E	7	8	9	10	11
	F	21 1/2	24 1/2	26	27 1/2	29 1/2
HEIGHT	N	13 1/2	13 1/2	14	14	14 1/2
	H	11	11	12 1/2	12 1/2	14 1/2



ANCHOR BOLT DETAIL
No Scale

GENERAL NOTES

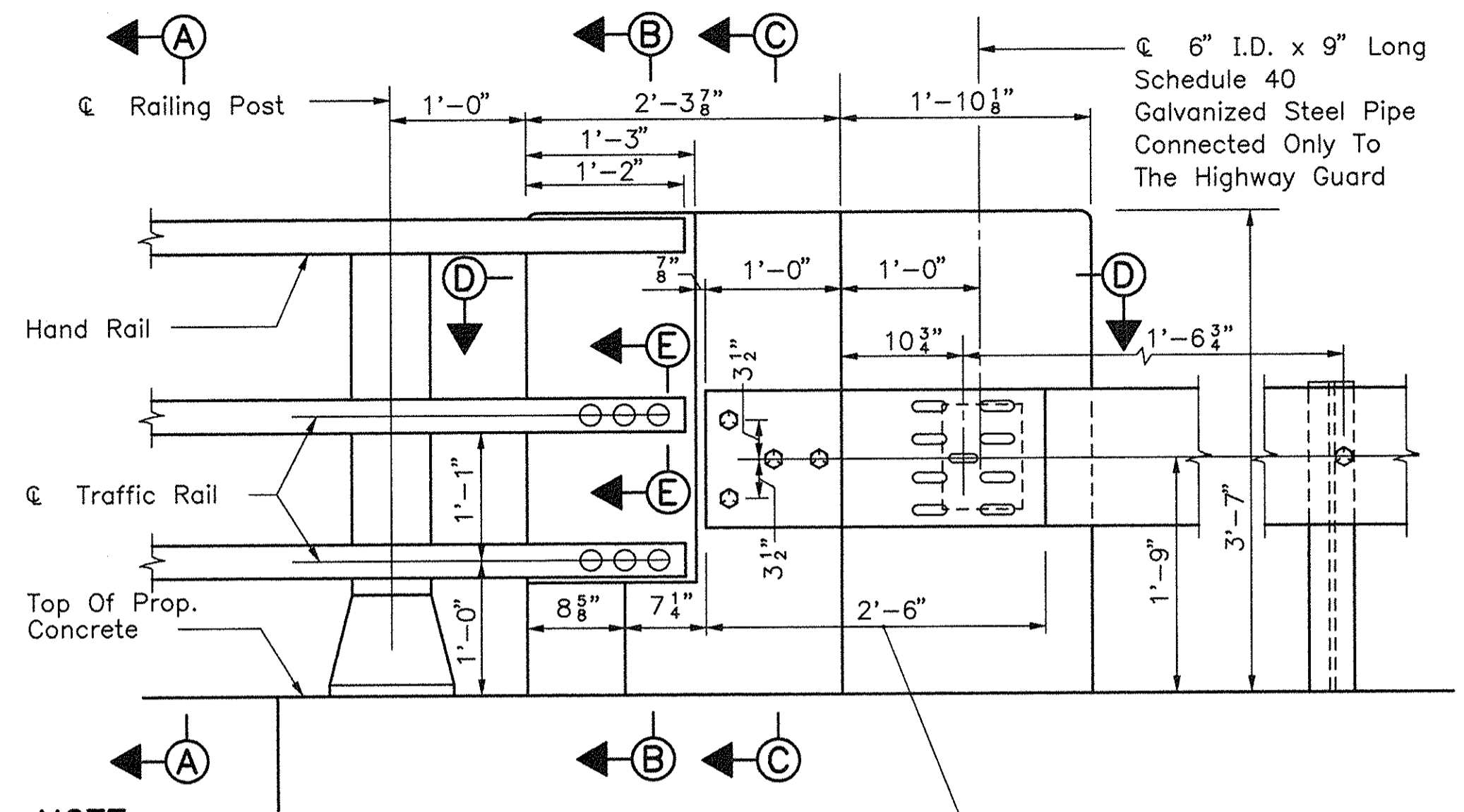
Type C & D Shoes are to be used for shallow type superstructures shown on Sheet No. 5D-20.

Type A Shoes are to be used for all other superstructures wherever possible and permitted by economic substructure dimensions. Where necessary due to pier cap width, Type A Shoes with common masonry plate as shown on 5D-15 shall be used. Type B shoes shall be used only where absolutely necessary due to space limitations on the substructure.
For additional masonry plate details, see Sheet No. 5D-15.

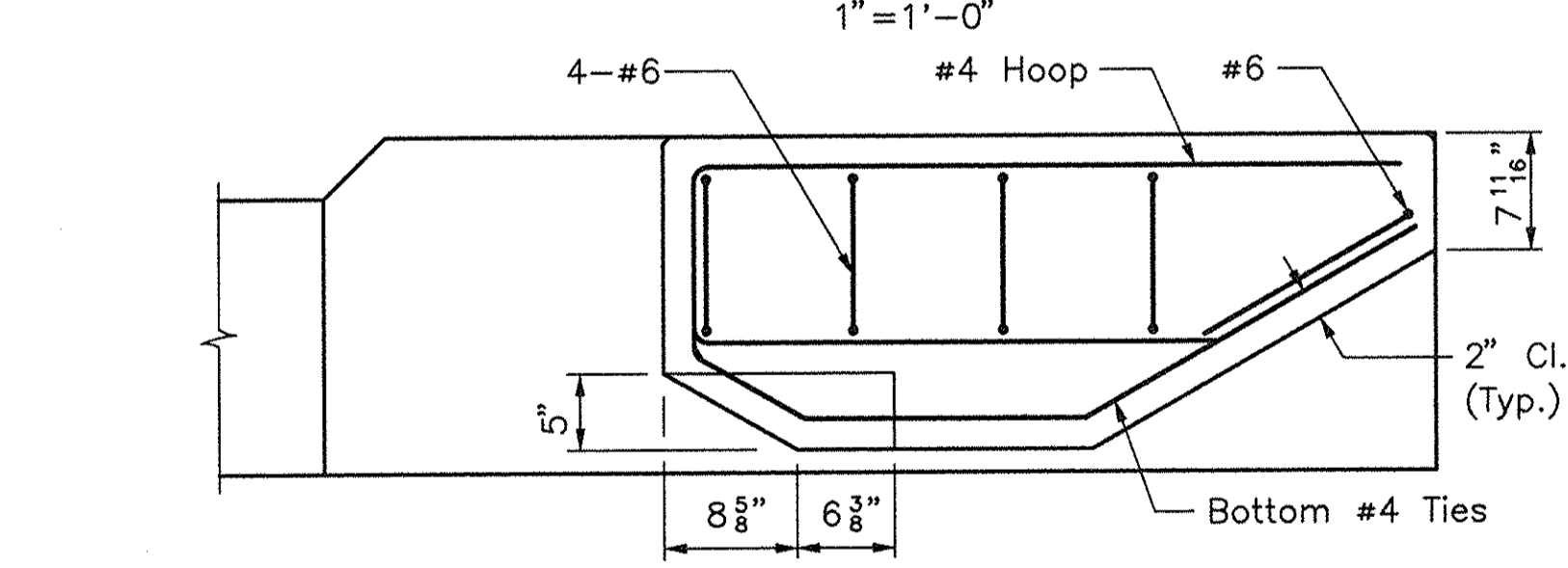
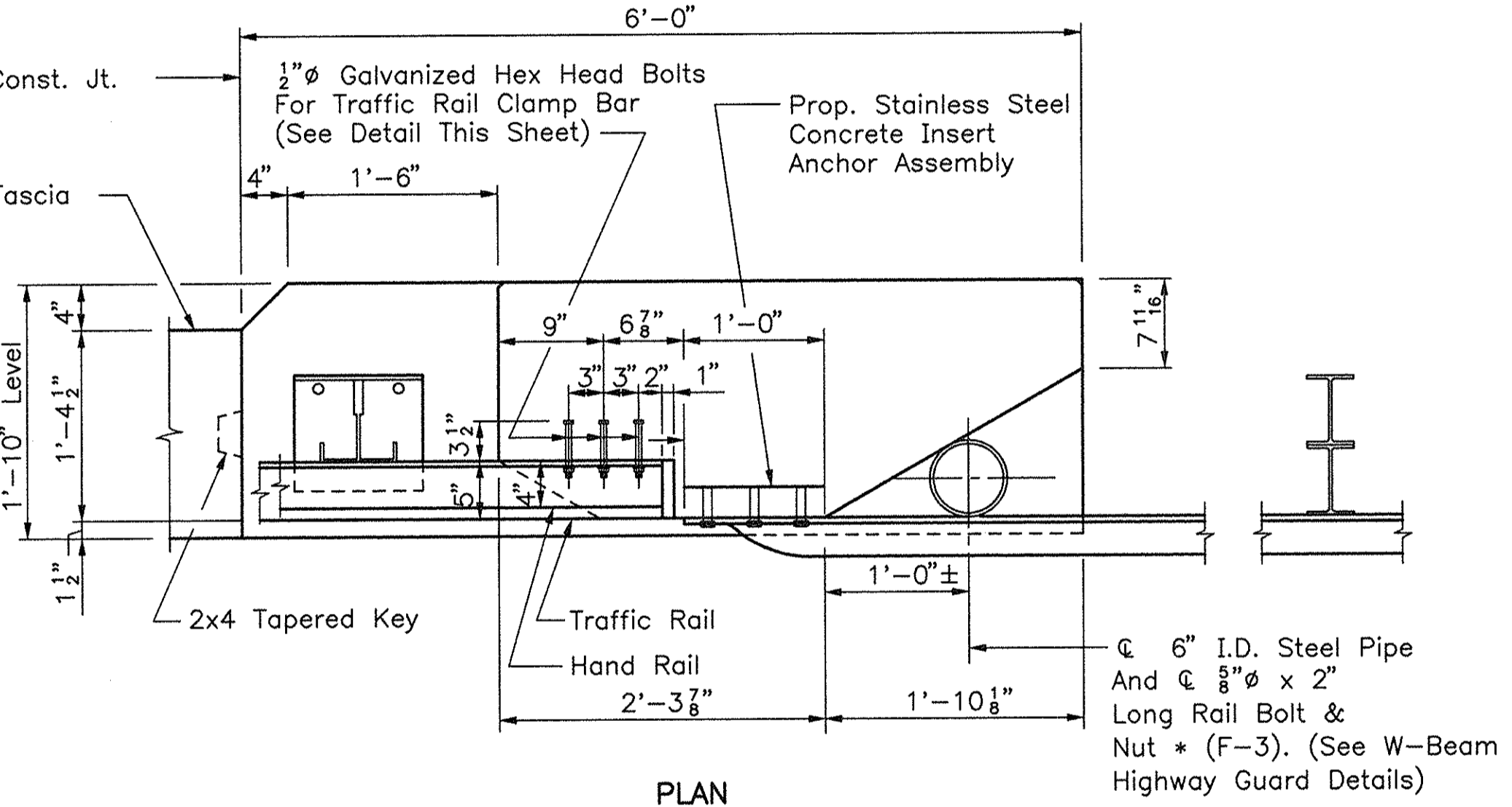
5	Shoe Finish	AJM	9-62
4	Minor Chg	RDF	5-62
3	Minor Chg	WHB	3-62
2	Misc. Corr.	CHP	2-62
1	FINAL CORRECTIONS	CP	9-60

APPROVED
MASSACHUSETTS TURNPIKE AUTHORITY
CHIEF ENGINEER
DATE 4-9-62

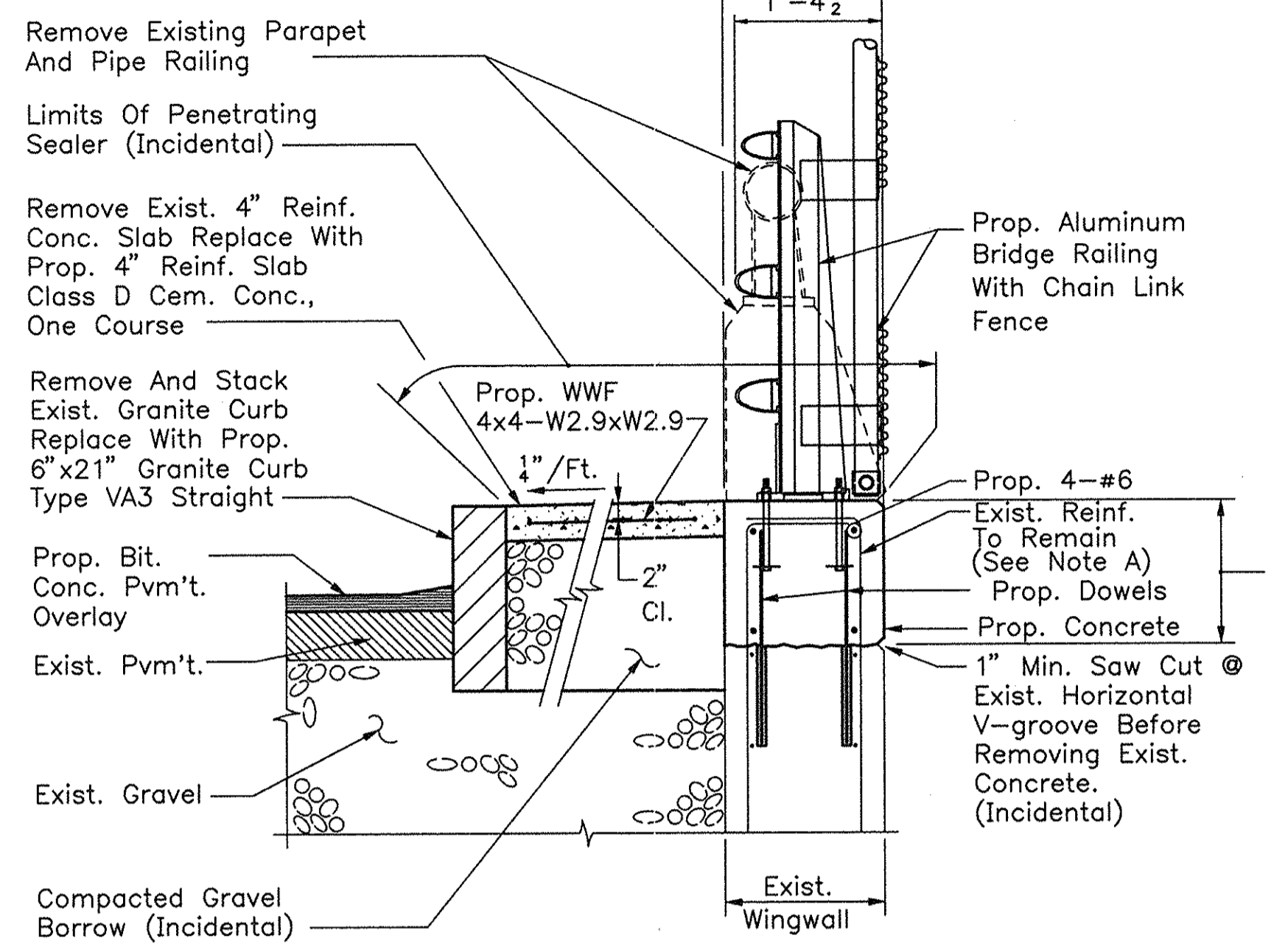
MASSACHUSETTS TURNPIKE AUTHORITY
MASSACHUSETTS TURNPIKE
BOSTON EXTENSION STANDARD BRIDGE SHOES
HOWARD, NEEDLES, TAMMEN & BERENSON CONSULTING ENGINEERS
NEW YORK KANSAS CITY
SCALE: 1/2" = 1'-0" UNLESS NOTED
SHEET NO. 5D-21 OF



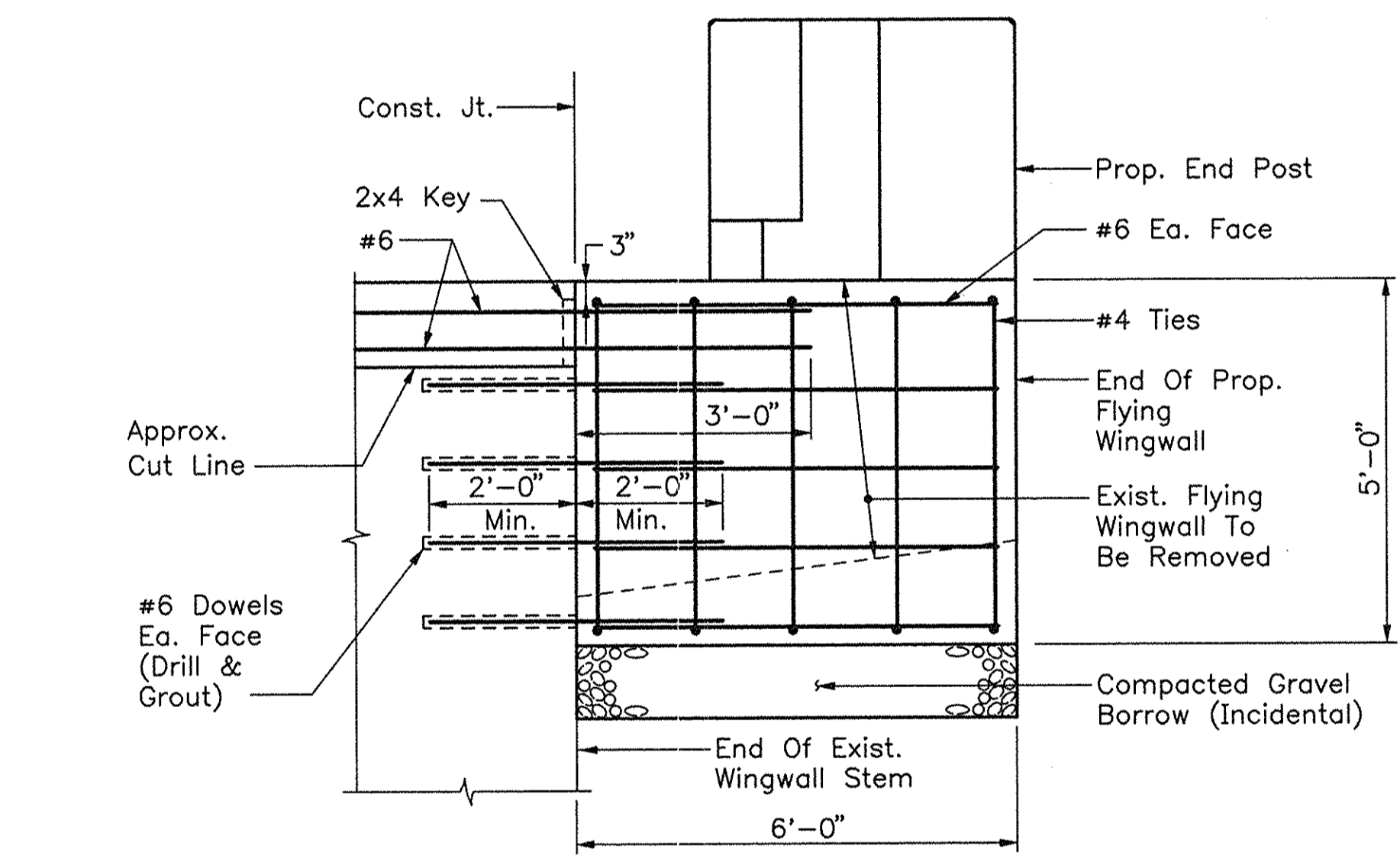
NOTE
3/4" Chamfer At All Exposed Edges Of Concrete, Unless Otherwise Indicated



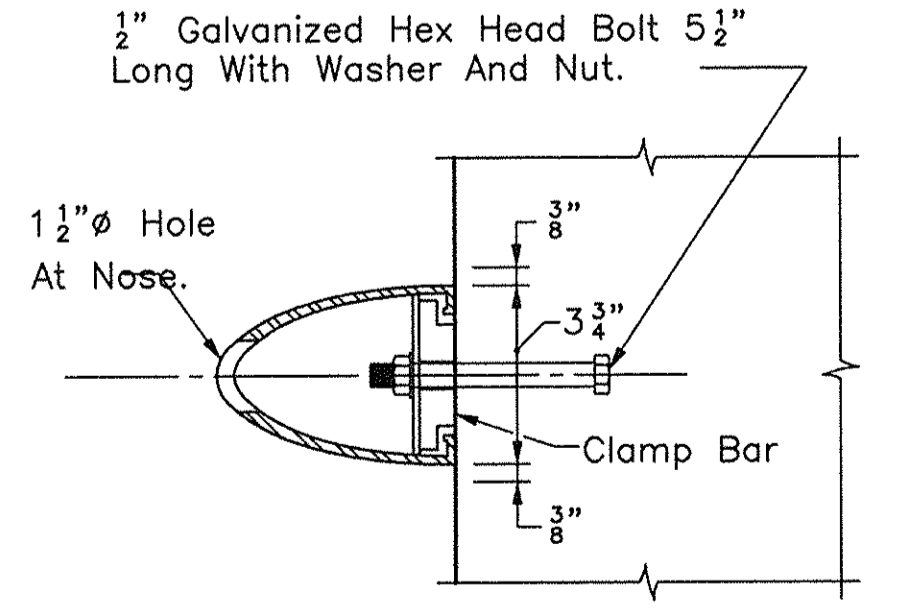
END POST DETAILS
Scale: AS NOTED



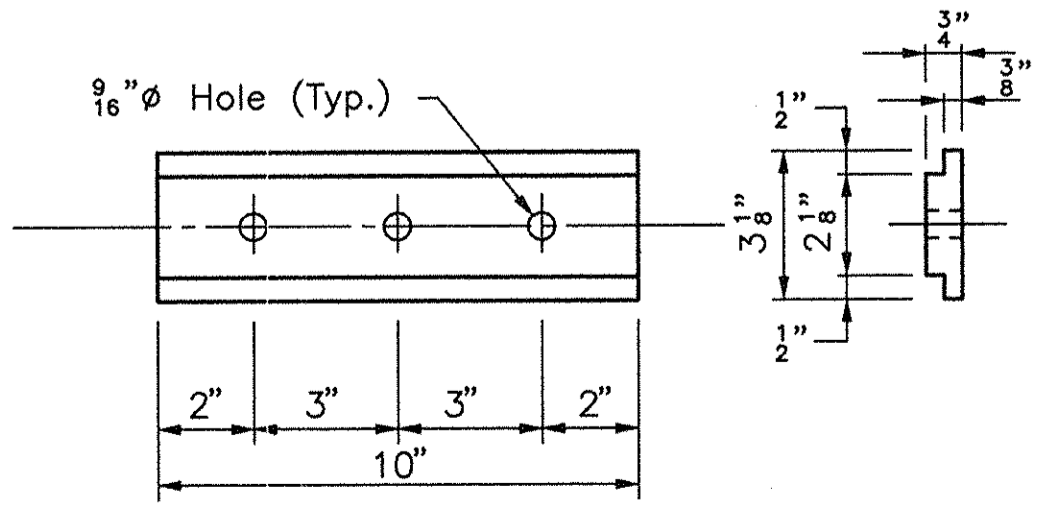
SECTION A-A
3/4" = 1'-0"



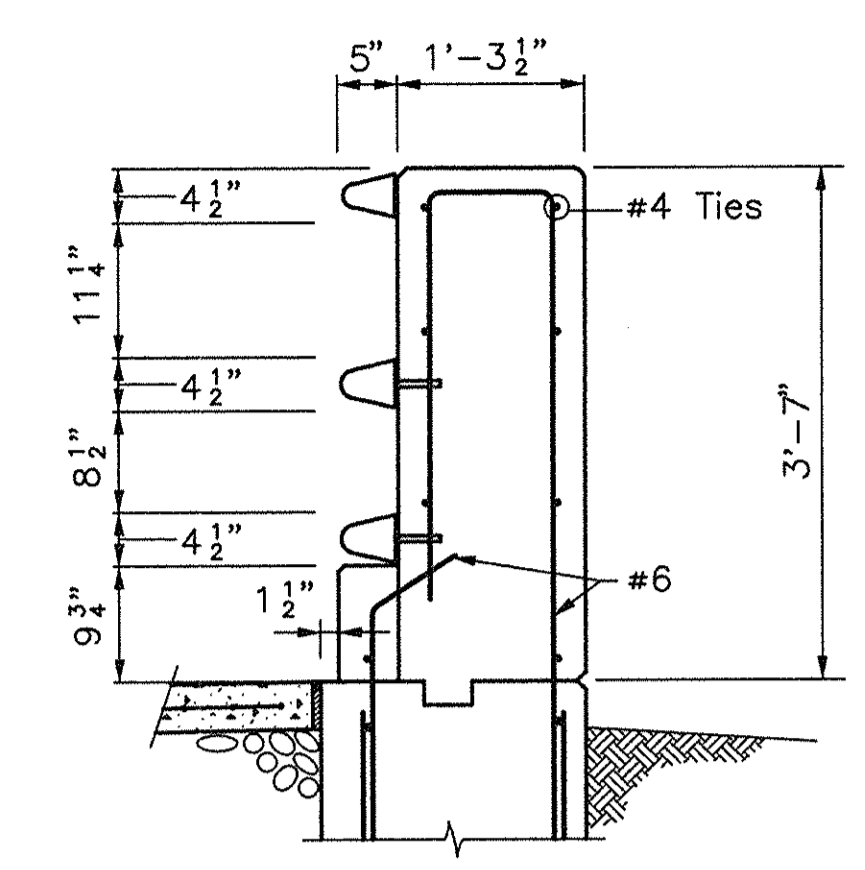
ELEVATION
FLYING WINGWALL
1/2" = 1'-0"



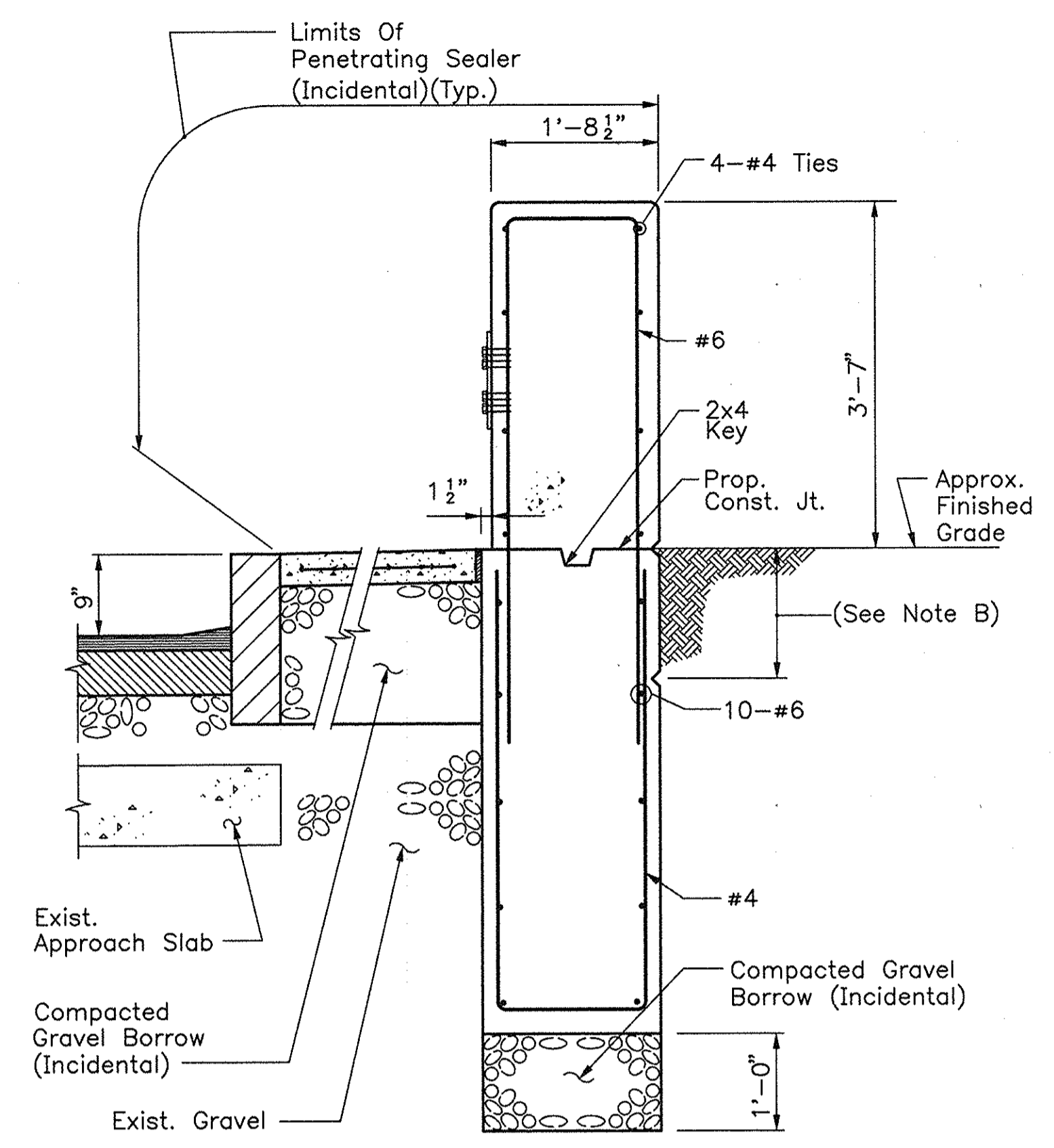
SECTION E-E
3" = 1'-0"



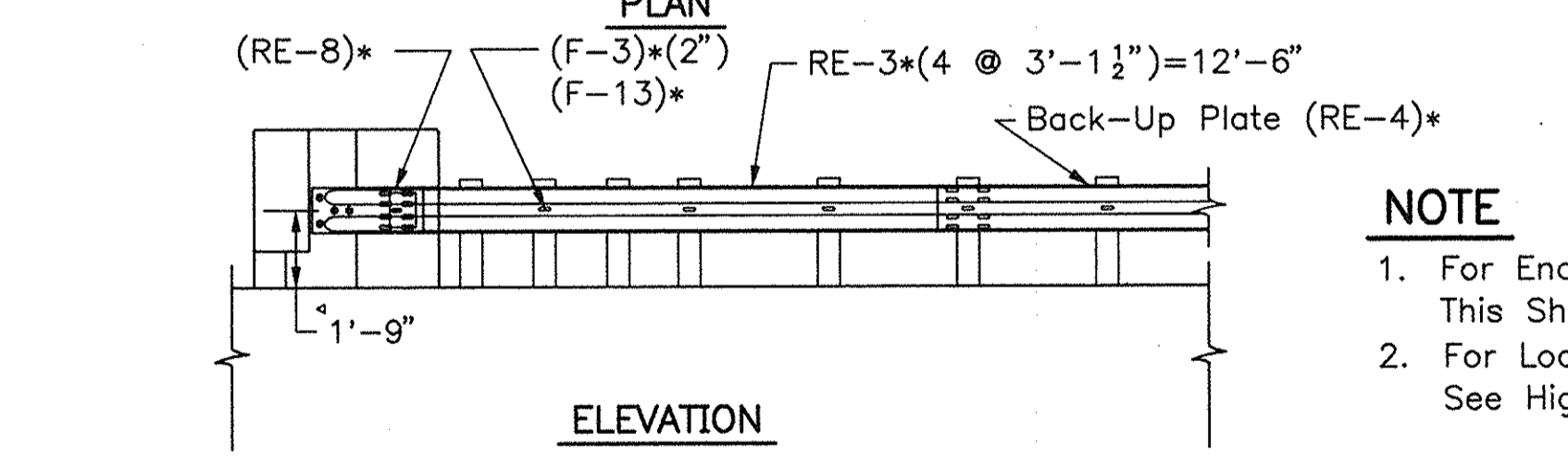
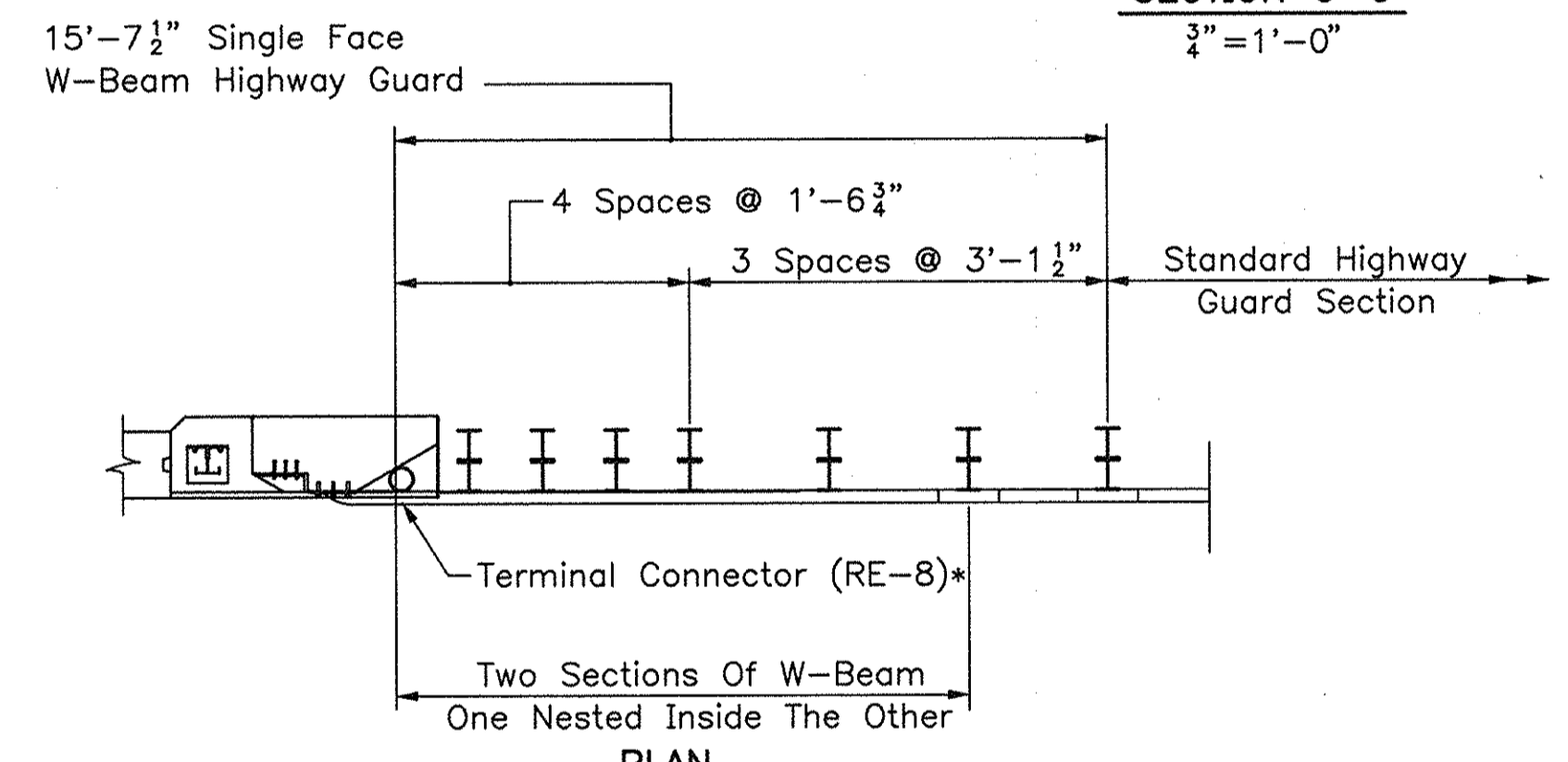
CLAMP BAR DETAIL
3" = 1'-0"



SECTION B-B
1/2" = 1'-0"



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



HIGHWAY GUARD ATTACHMENT (LOCAL ROAD) (ITEM E4-12)
TRANSITION DETAIL
1" = 1'-0"

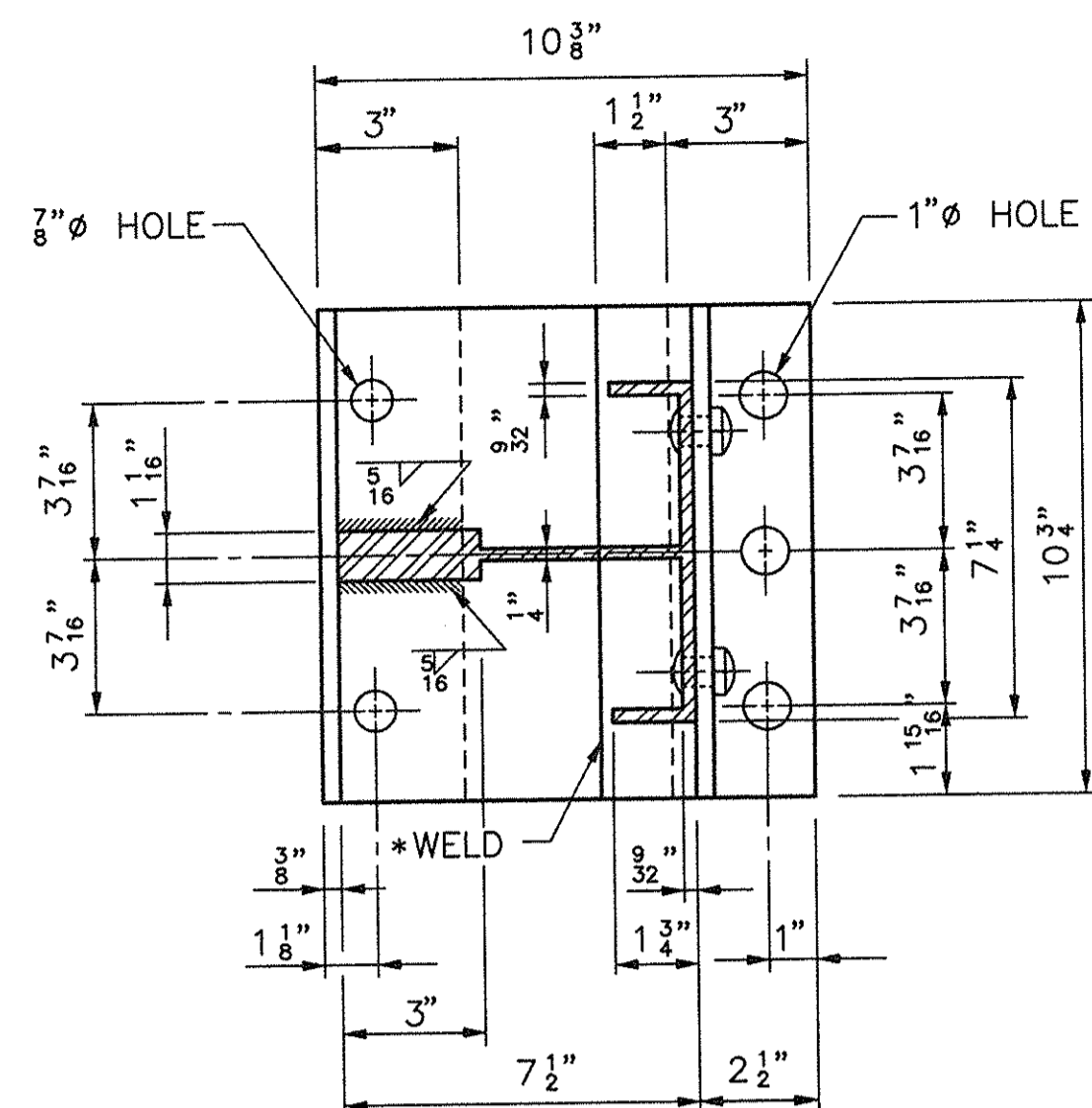
NOTE
1. For End Post Detail See This Sheet
2. For Location Of Attachments See Highway Guard Plans

NOTES

- A Cut, Clean And Bend Existing Reinforcing Steel To Provide A 2" Clearance. The Contractor Will Be Required To Dowel 12" Deep Into Existing Concrete And Place #4 @ 1'-0"±. When, As Determined By The Engineer, The Exist. Reinforcing Steel Is Unsuitable Or Missing. The Work Involved In Drilling And Grouting Will Be Considered Incidental To The Deck Re-construction Item.
 - B V-Groove 1 1/2" W x 3/4" D To Align With Fascia Groove, See Typical Cross Section For Bridge.
- * Identification Letters And Numbers On Drawings Refer To The Standard Detail Drawings Shown In "A Guide To Standardized Highway Barrier Rail Hardware" By AASHTO-AGC-ARTBA Joint Cooperative Committee.

MASSACHUSETTS TURNPIKE AUTHORITY	
MASSACHUSETTS TURNPIKE	
STANDARD DETAILS	
TYPICAL WINGWALL AND	
END POST DETAILS (LOCAL ROAD)	
Scale: AS NOTED	Contract No.
MASSACHUSETTS TURNPIKE AUTHORITY	Sheet No.

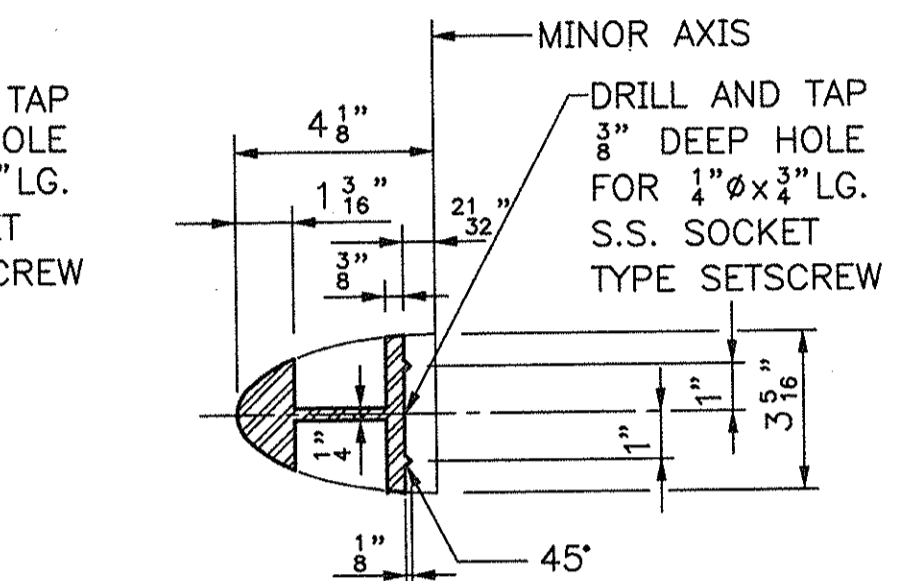
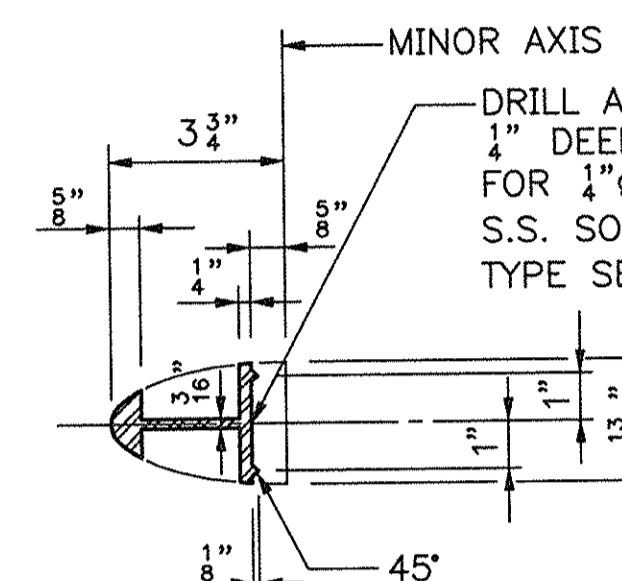
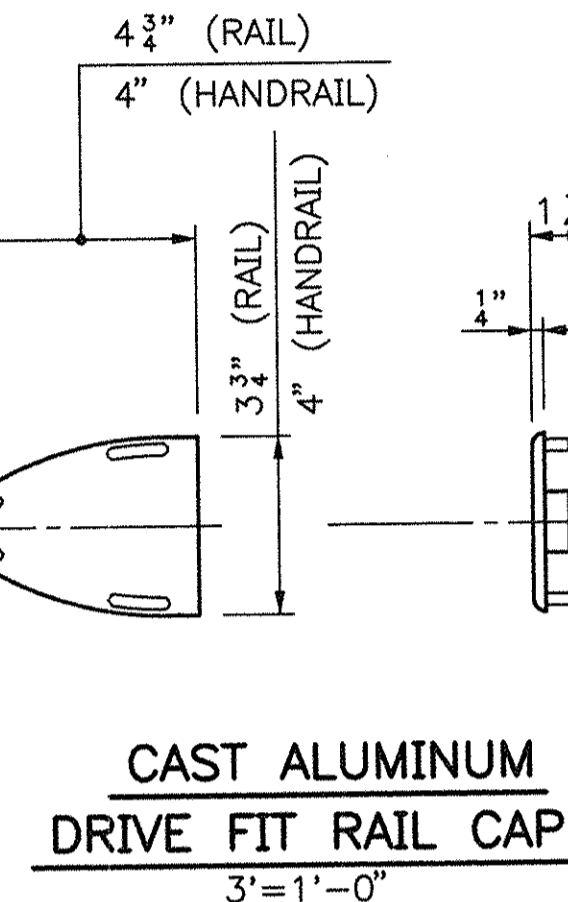
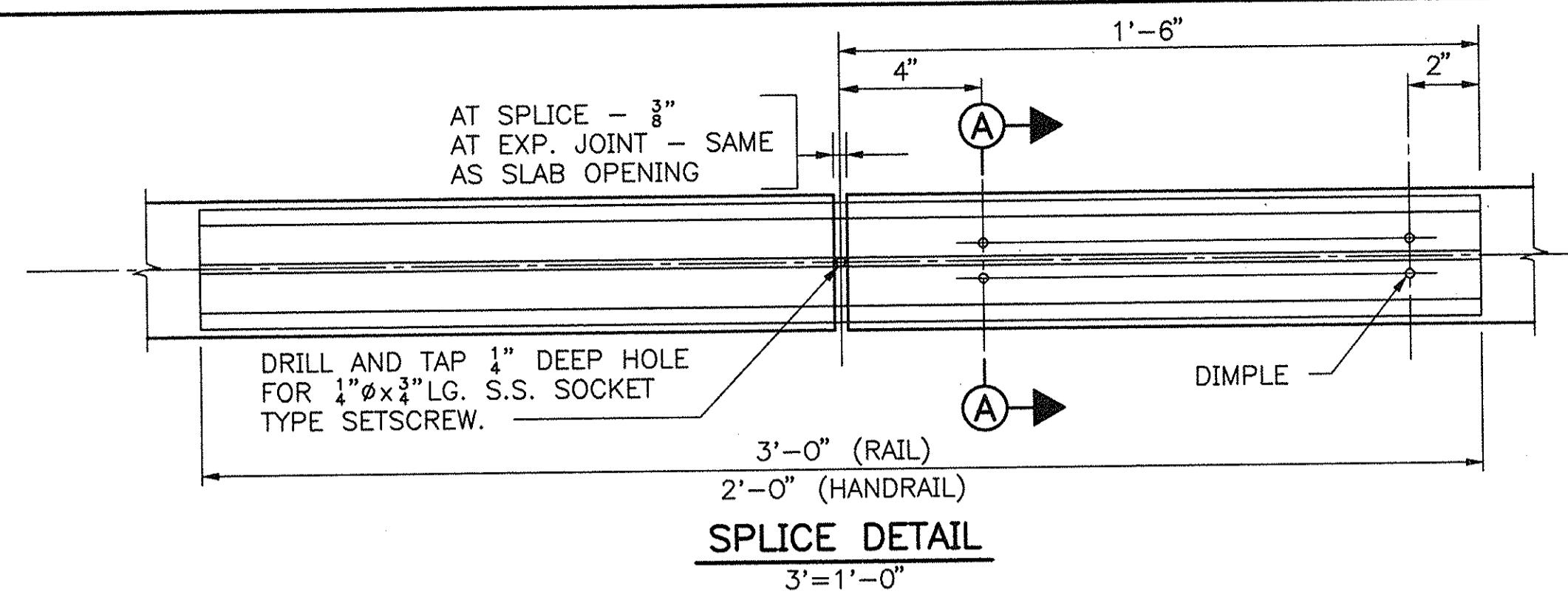
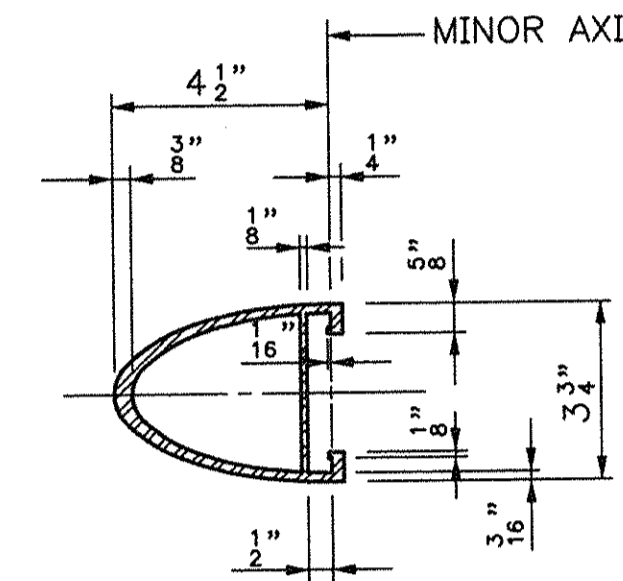
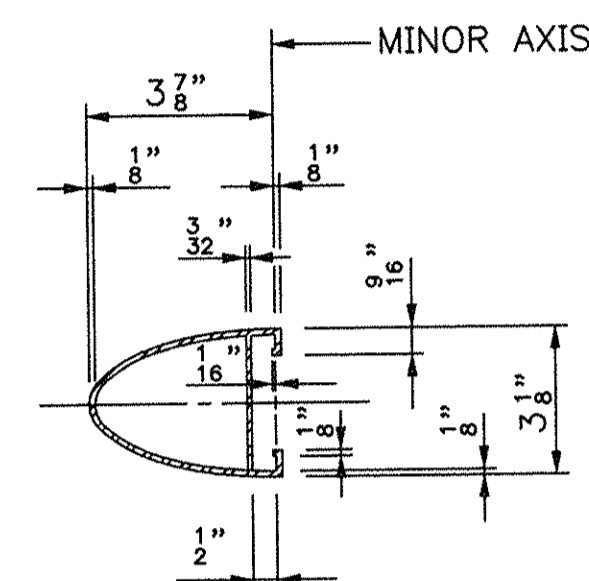
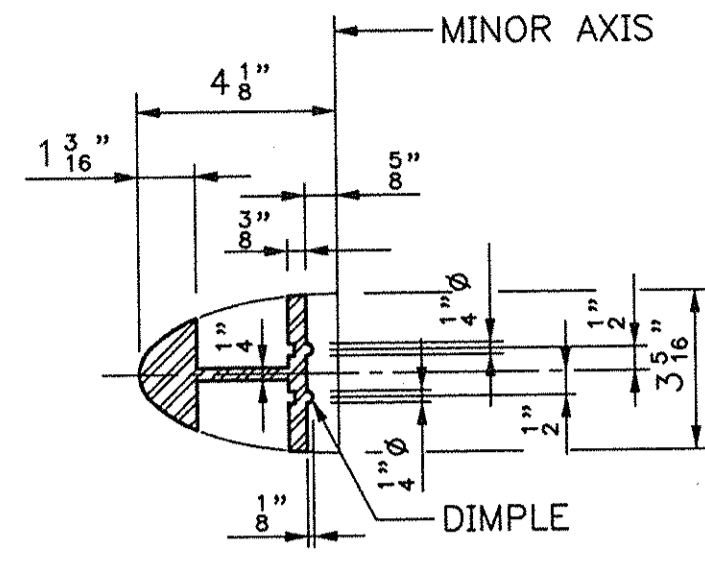
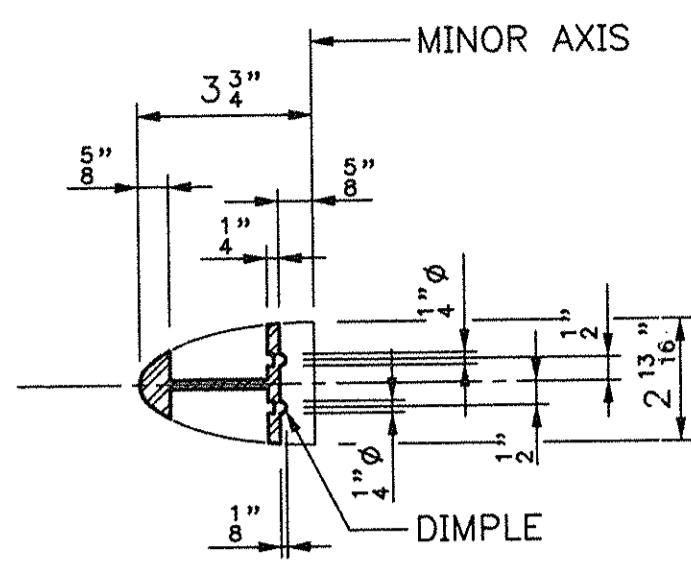
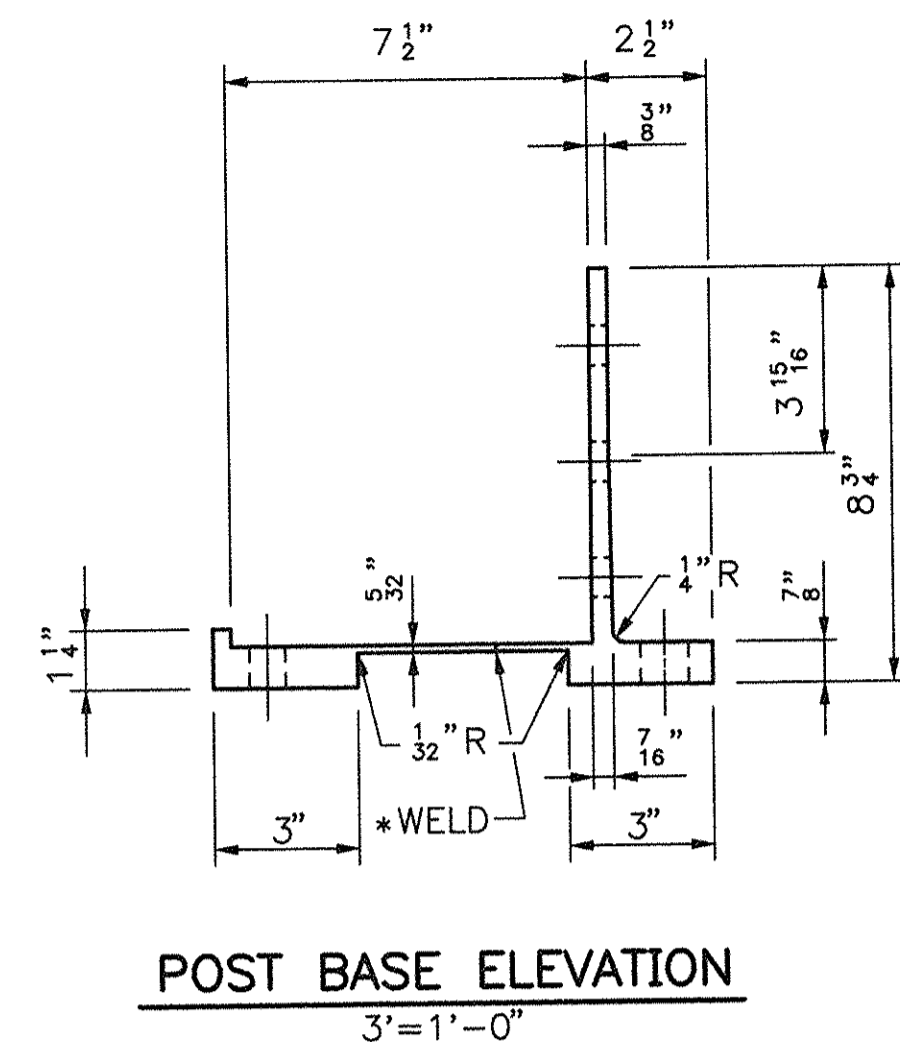
NO.	REVISION	BY	DATE



NOTE

* ONE-PIECE BASE PLATE MAY BE SUBSTITUTED, PROVIDED THAT THE REQUIRED LENGTH IS CUT FROM A ONE-PIECE EXTRUSION AND HAS THE GEOMETRIC SHAPE OF THE TWO-PIECE BASE PLATE. WELDING SHALL BE PERFORMED BY METAL INERT GAS ("MIG") PROCESS.

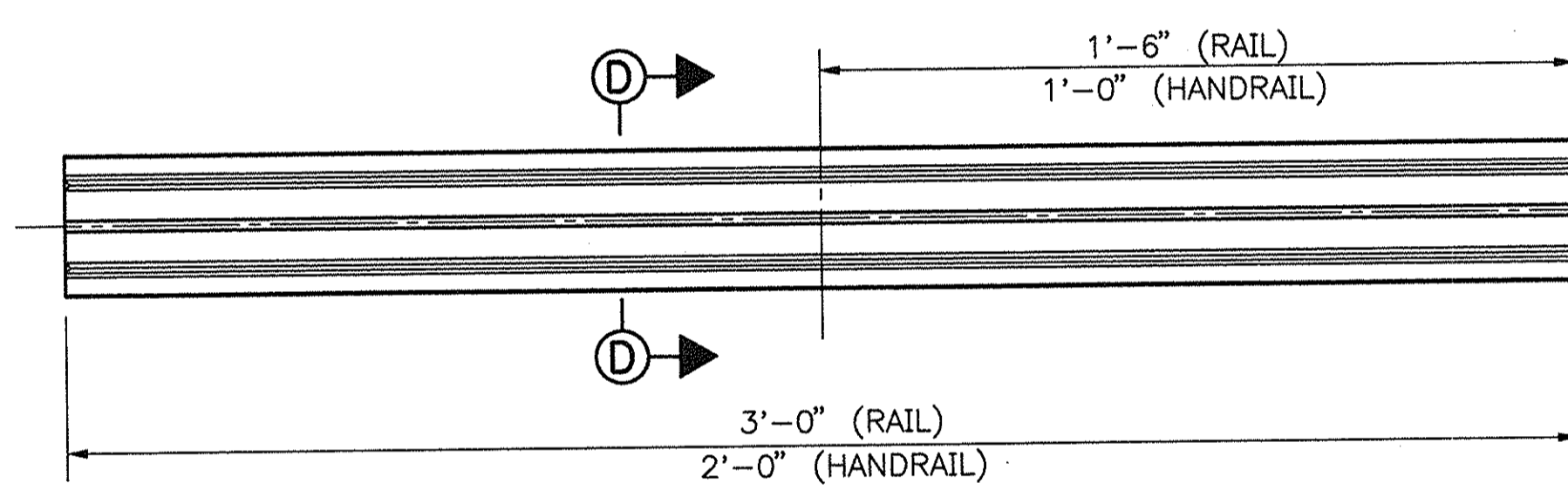
SECTION B-B
3'-1'-0"



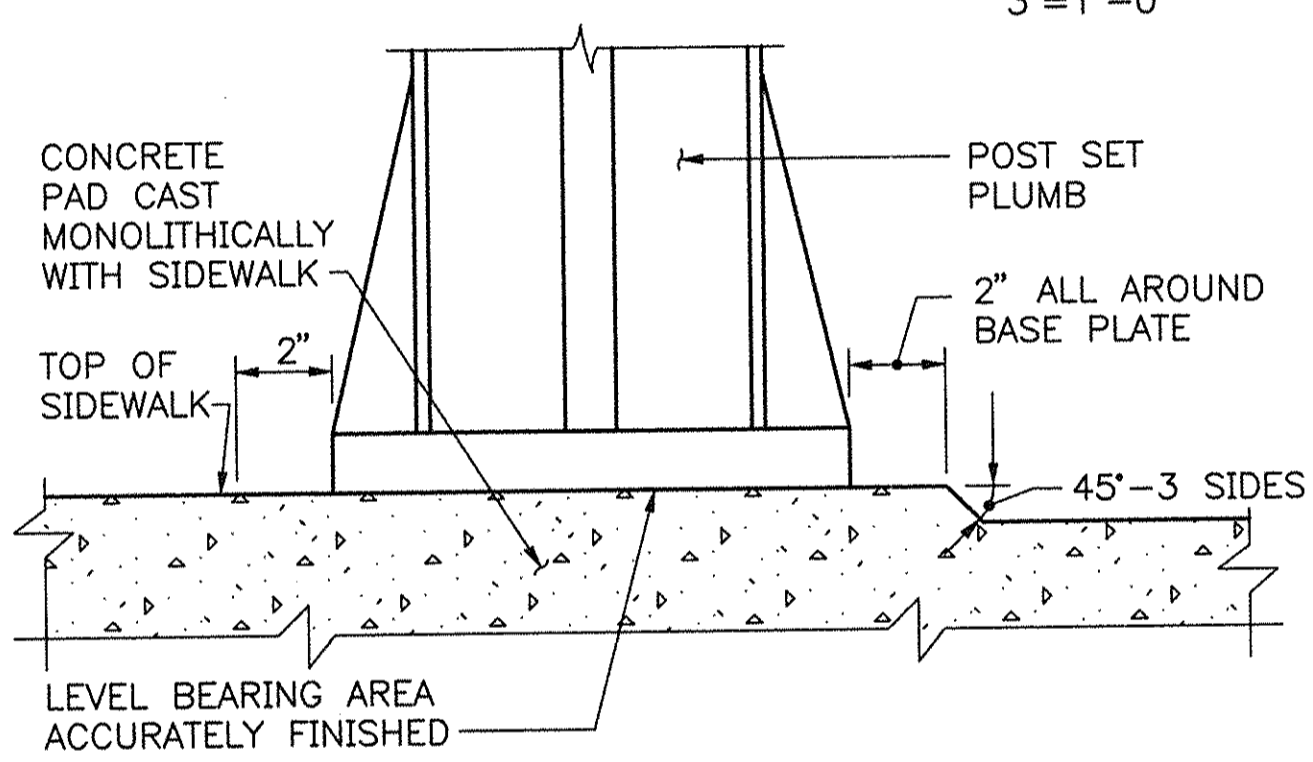
HANDRAIL MEMBER
SECTION D-D
3'-1'-0"

RAIL MEMBER
SECTION D-D
3'-1'-0"

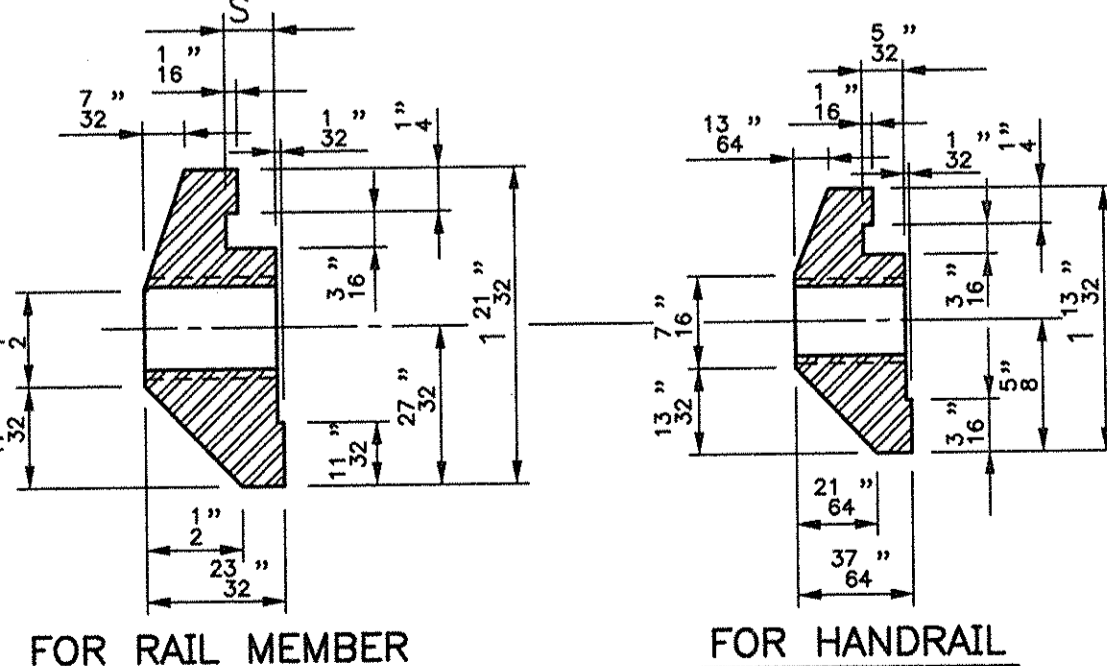
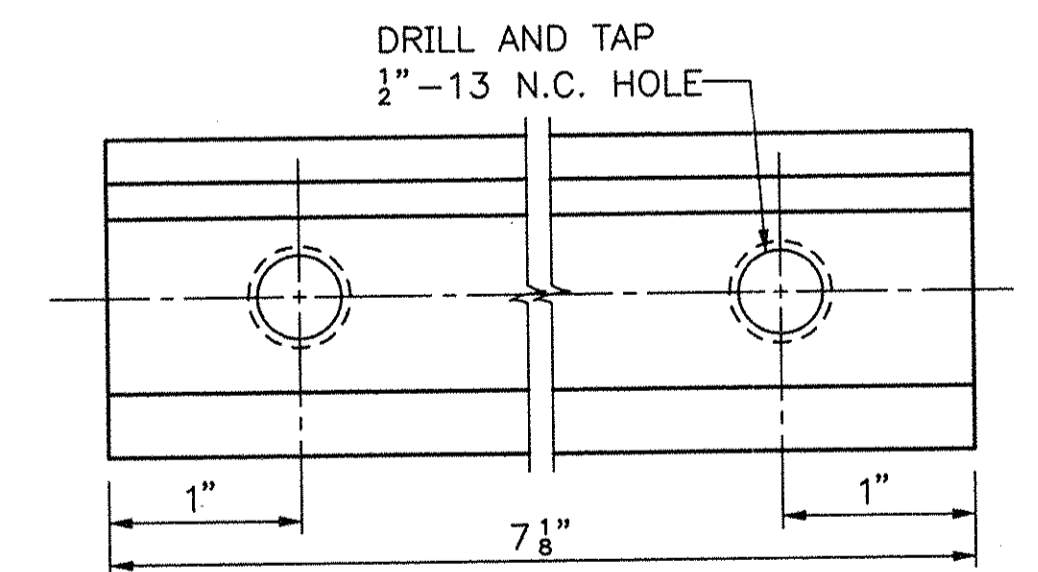
SECTION D-D
3'-1'-0"



ALL POSTS SHALL BE PLUMB WHEN PROFILE GRADE EXCEEDS 1.50%. SEE DETAIL THIS SHEET.



SETTING OF POSTS
(PROFILE GRADE OVER 1.5%)
3'-1'-0"

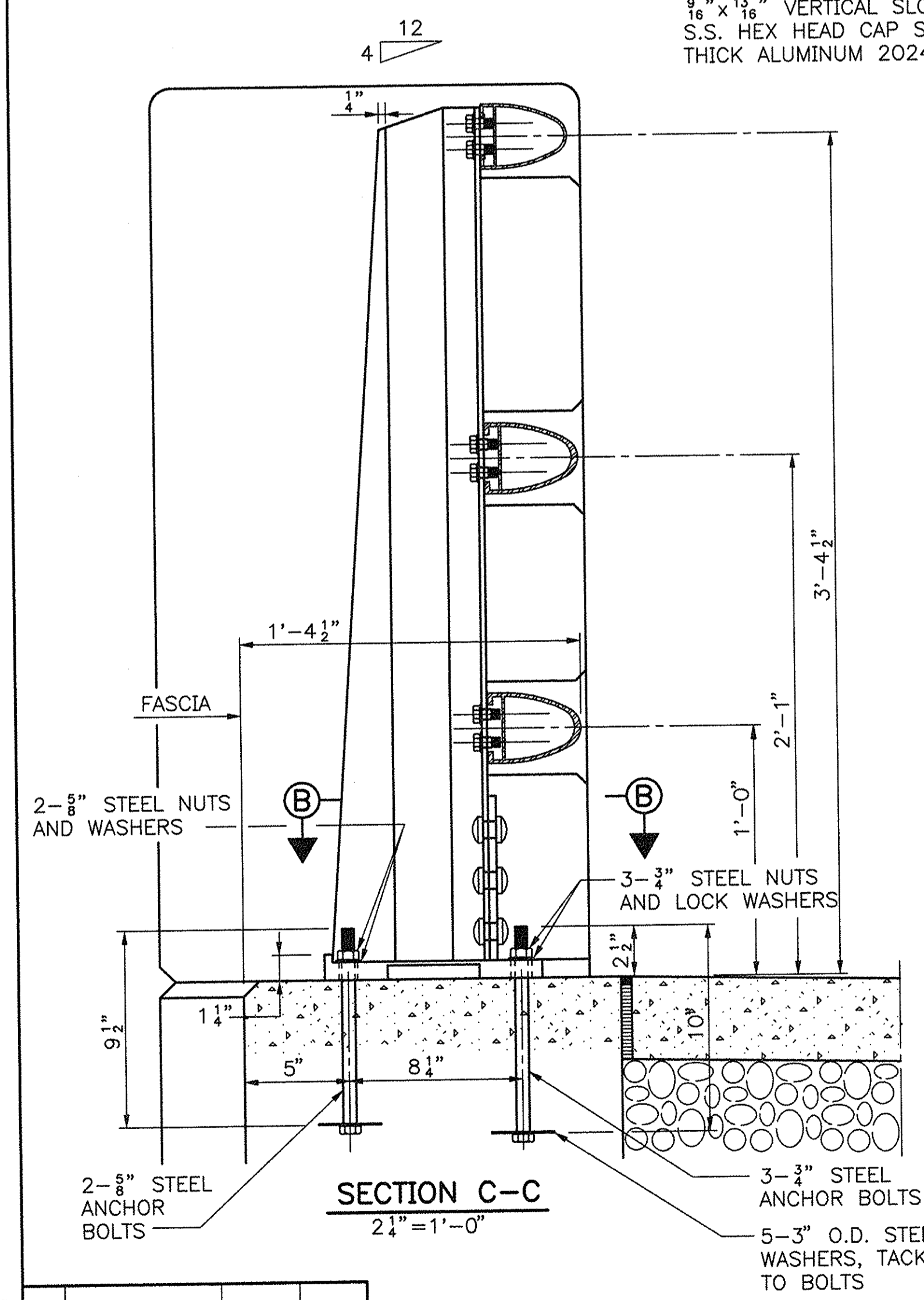


CLAMP BAR DETAILS
FULL SIZE

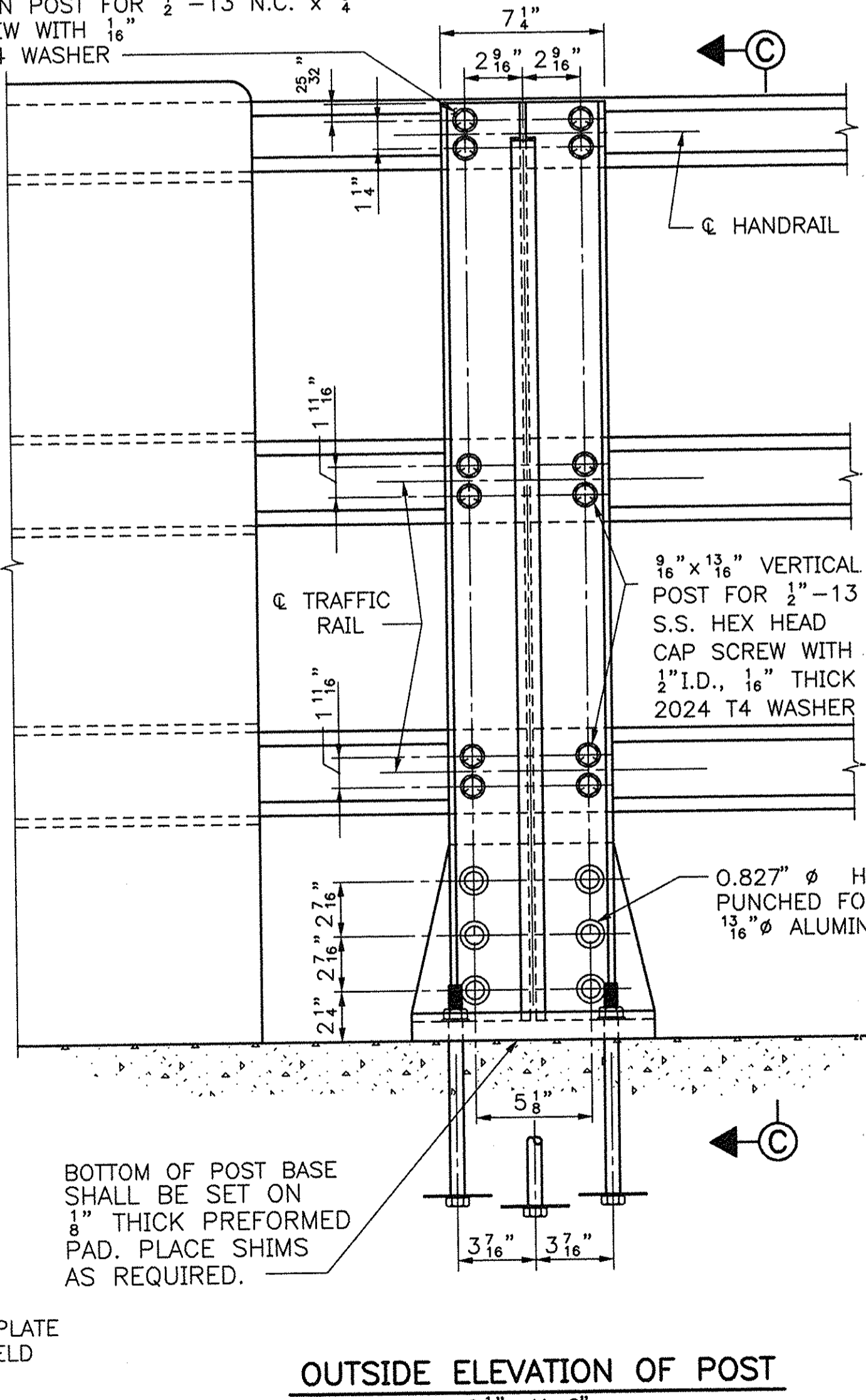
NOTES
MAXIMUM POST SPACING = 6'-6"
RAILS SHALL BE CONTINUOUS FROM END TO END OF BRIDGE WITH SPLICES, AS NECESSARY.
RAILS SHALL BE CONTINUOUS OVER A MIN. OF FOUR POSTS WITHOUT SPLICES, WHERE POSSIBLE.
RAILS SHALL BE SPLICED IN PANEL OVER EXPANSION JOINTS.
SPLICES SHALL BE LOCATED 2'-0" FROM C OF POST.
POSTS SHALL BE SET PERPENDICULAR TO GRADE.
DESIGN IN ACCORDANCE WITH A.A.S.H.T.O. 1992 STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES AND A.A.S.H.T.O. INTERIM SPECIFICATIONS.

ALL EXPOSED EDGES OF HANDRAIL AND POSTS SHALL BE GROUND SMOOTH.
TOPS OF POSTS SHALL BE GROUND SMOOTH BELOW TOP RAIL.

MATERIAL NOTES
RAILS, POSTS, POST BASES ———— ASTM B-221 ALLOY 6061-T6
SPLICES, CLAMP BARS ———— ASTM B-221 ALLOY 6061-T6
RIVETS ———— ASTM B-316 ALLOY 6061-T6
ALUMINUM WASHERS ———— ASTM B-209 ALLOY ALCLAD 2024-T4
END PLUGS ———— ASTM B-26 ALLOY 43F OR 356F
STAINLESS STEEL CAP AND SET SCREWS ———— ASTM A-193 GRADE B8
STEEL BOLTS, NUTS AND WASHERS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ASTM-325 AND SHALL BE GALVANIZED.



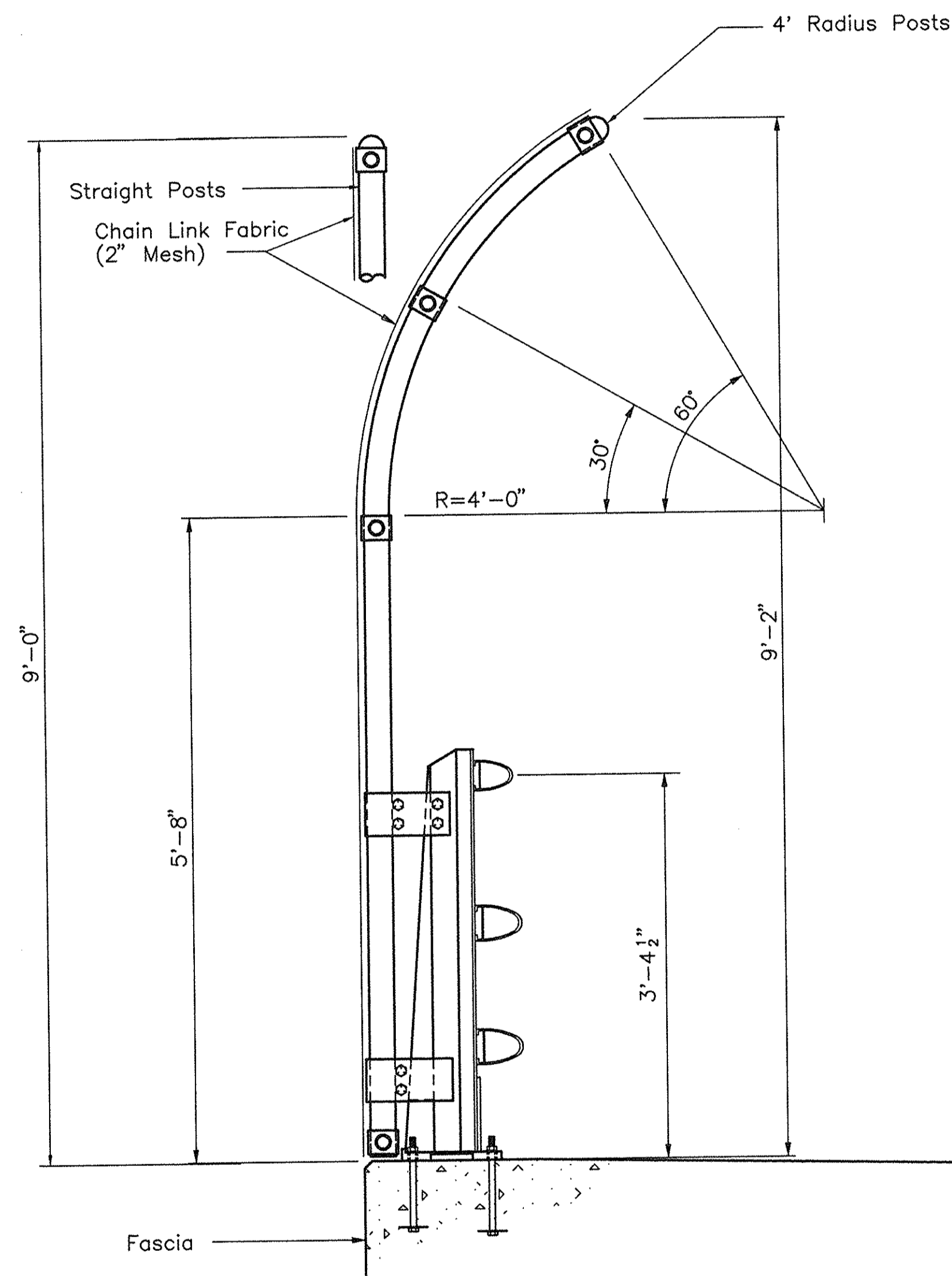
SECTION C-C
2'-4"



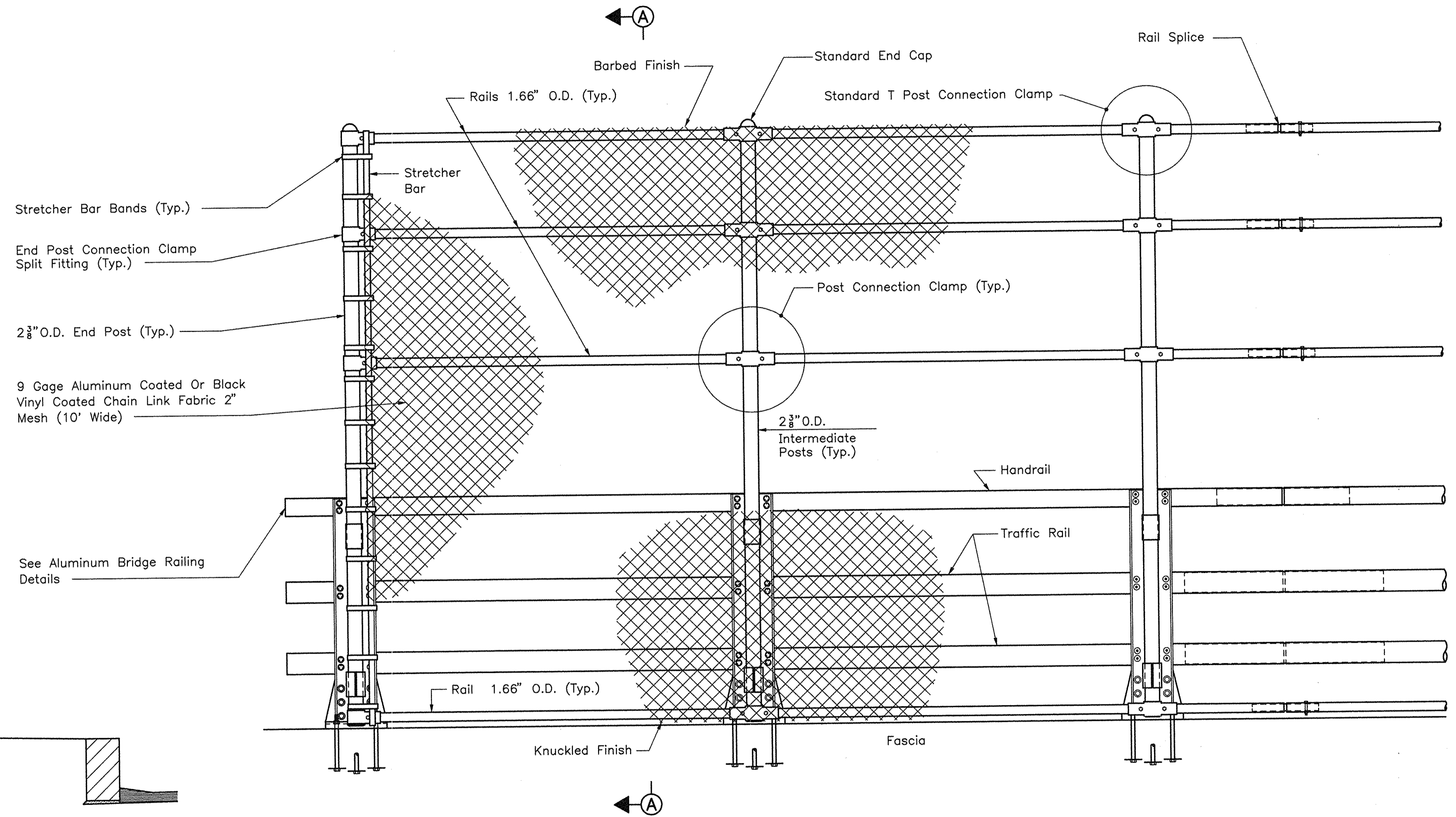
OUTSIDE ELEVATION OF POST
2'-4"

NO.	REVISION	BY	DATE

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE STANDARD DETAILS ALUMINUM BRIDGE RAILING DETAILS	
Scale: AS NOTED	Contract No.
MASSACHUSETTS TURNPIKE AUTHORITY	
Sheet No.	



SECTION A-A



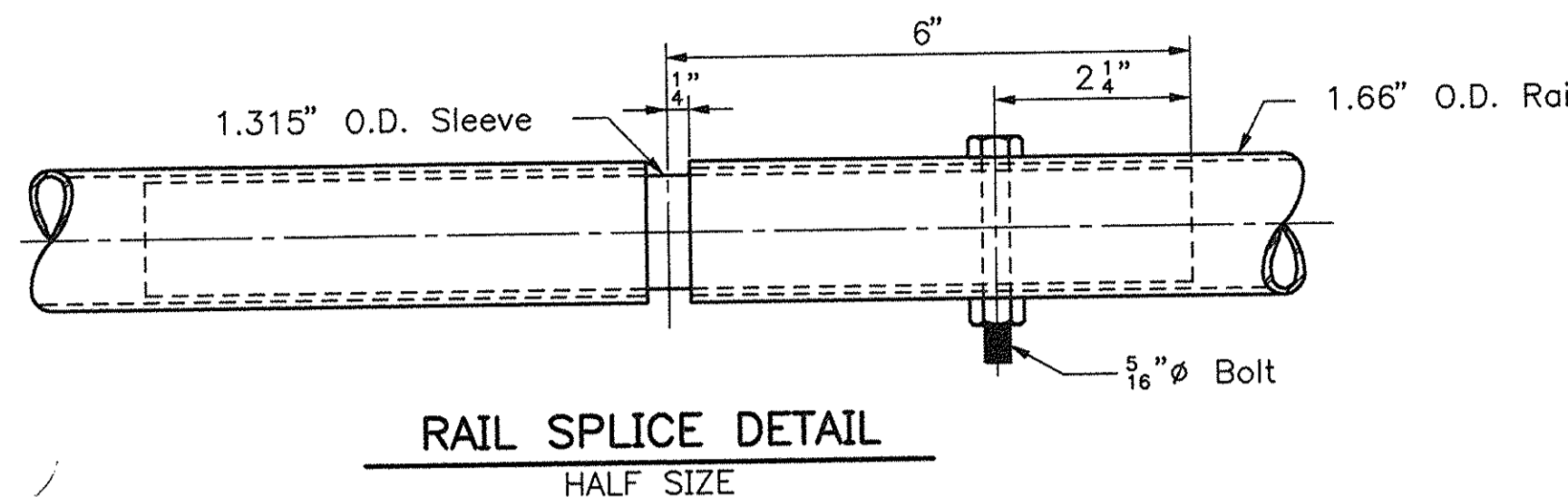
ELEVATION

NOTES

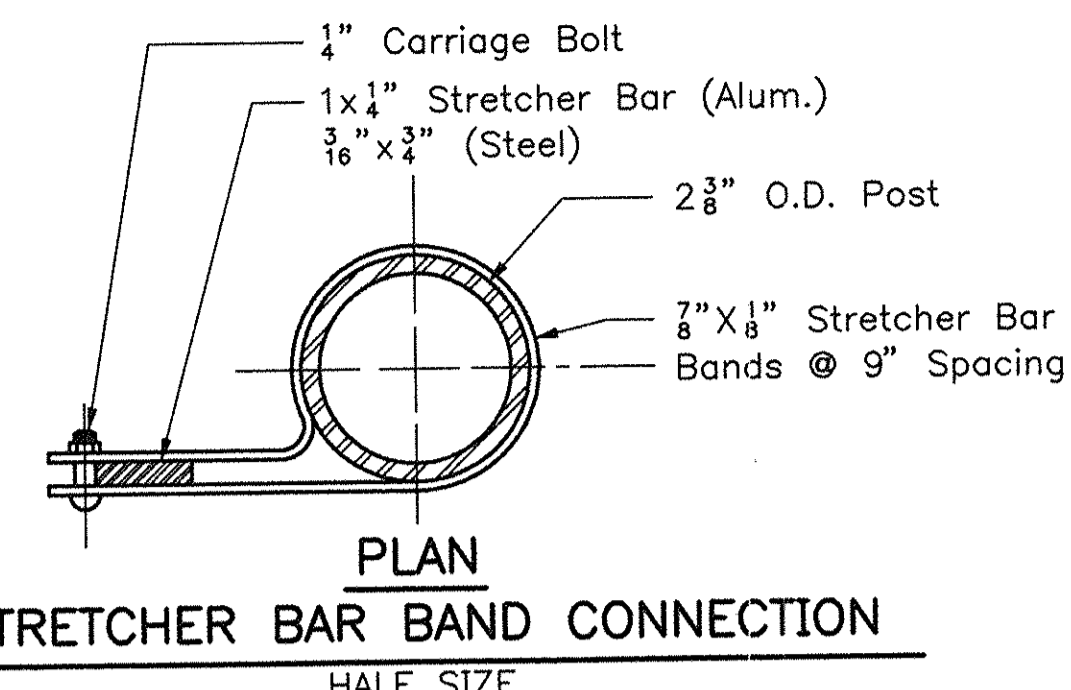
1. Fabric Ties (Tie Wire) To All Posts And Top Three Rails Shall Be Spaced At 12" O.C. Ties To Bottom Rail Shall Be Spaced At 6" O.C.
2. Provide Splices At Each Bridge Deck Joint And At Bridge Railing Splices.

NO.	REVISION	BY	DATE

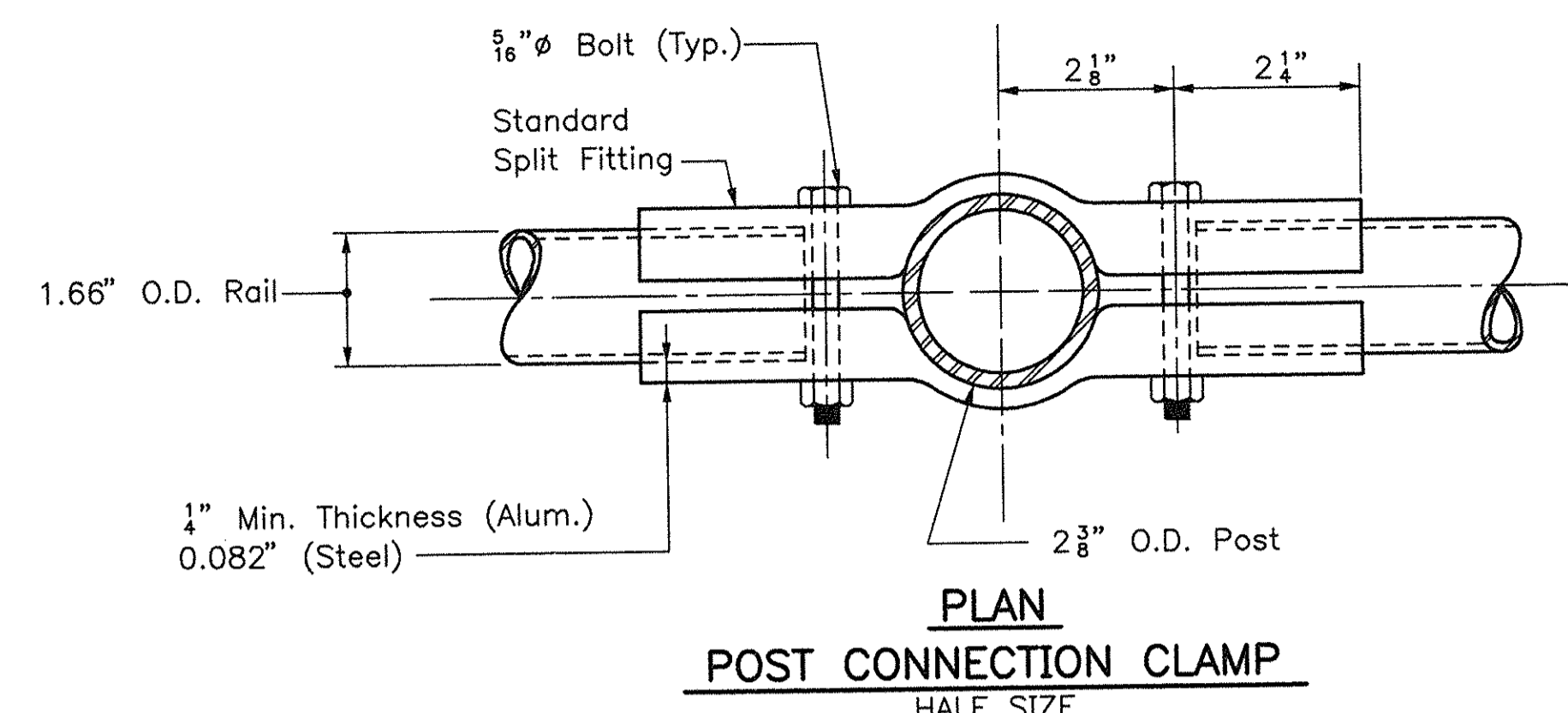
MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE STANDARD DETAILS CHAIN LINK FENCE FOR BRIDGES DETAILS I	
Scale: 1" = 1'-0"	Contract No.
MASSACHUSETTS TURNPIKE AUTHORITY	
Sheet No.	



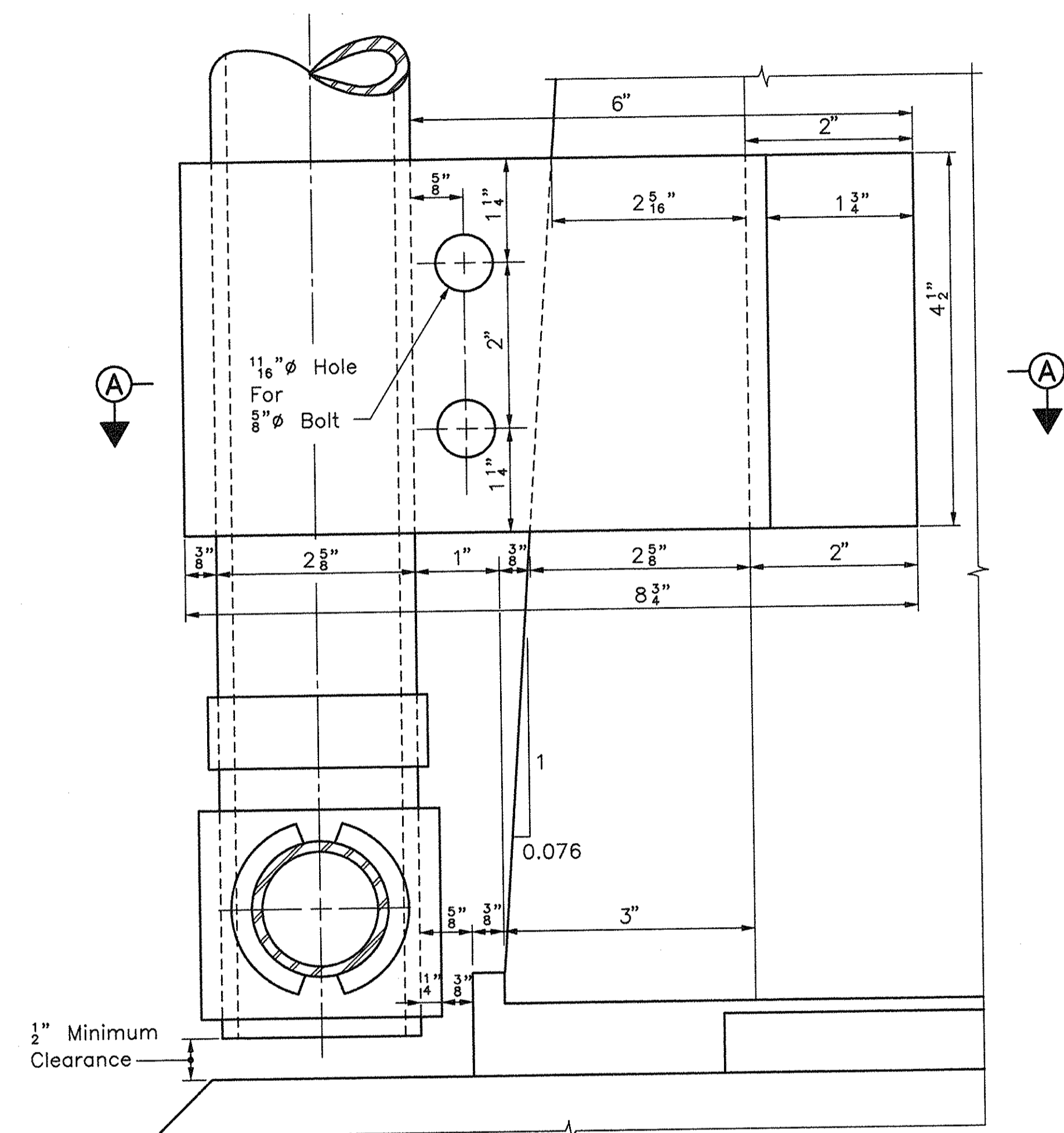
RAIL SPLICE DETAIL
HALF SIZE



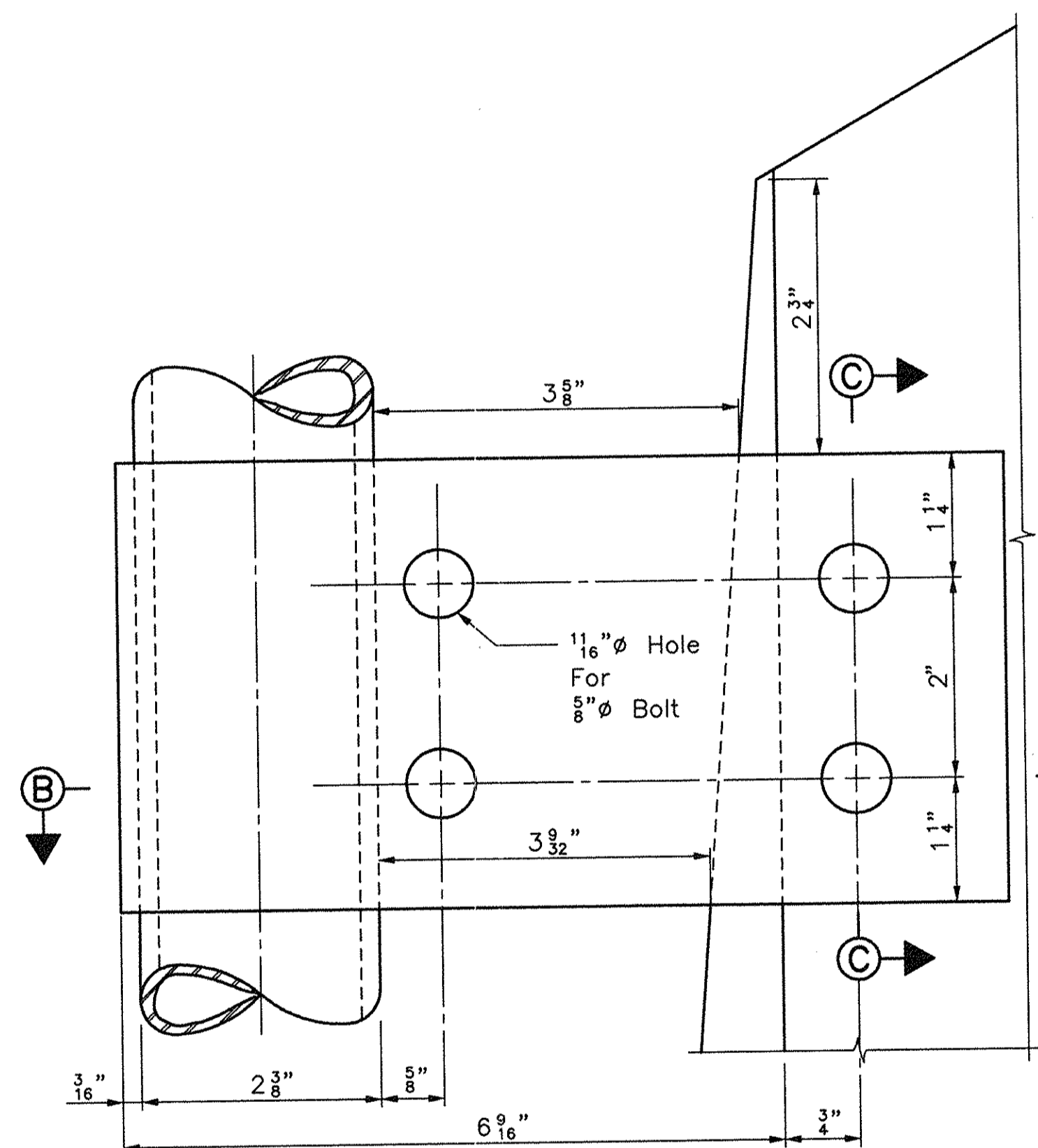
PLAN STRETCHER BAR BAND CONNECTION
HALF SIZE



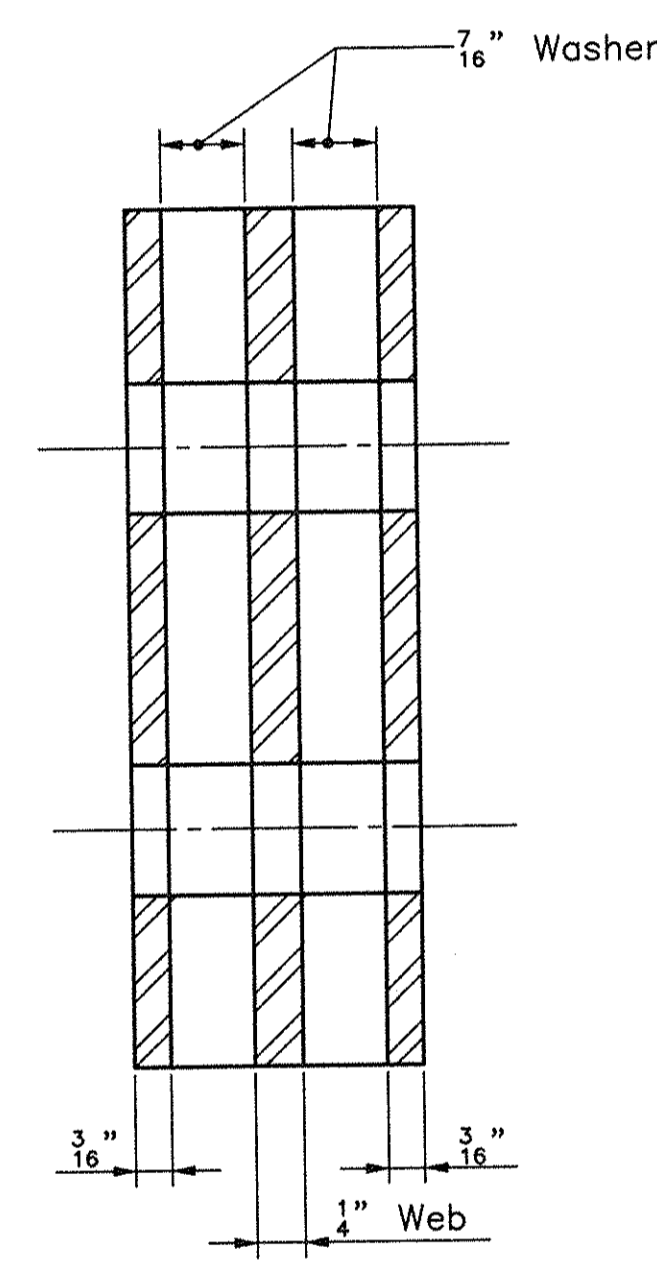
PLAN POST CONNECTION CLAMP
HALF SIZE



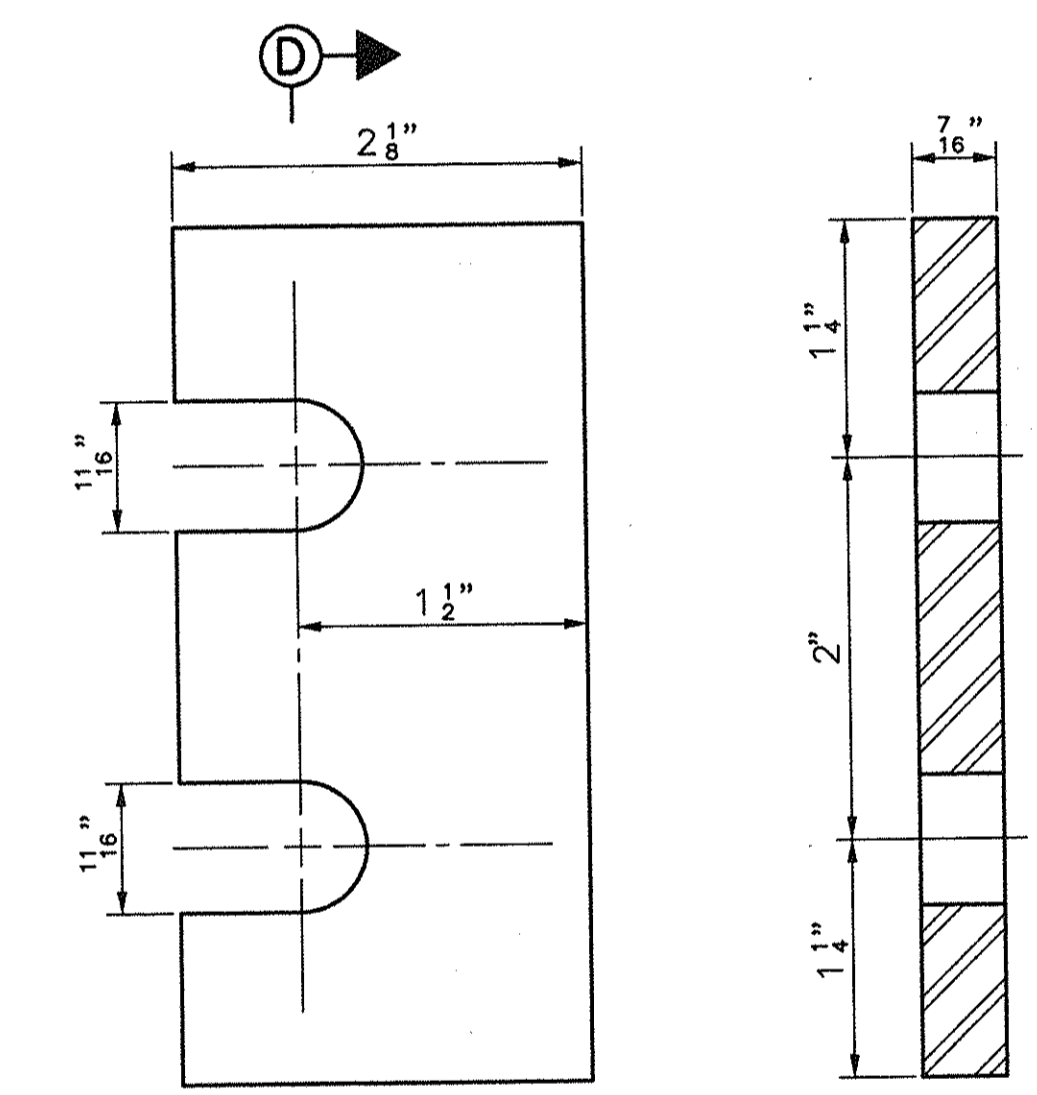
ELEVATION LOWER CLAMP
3/4 SIZE



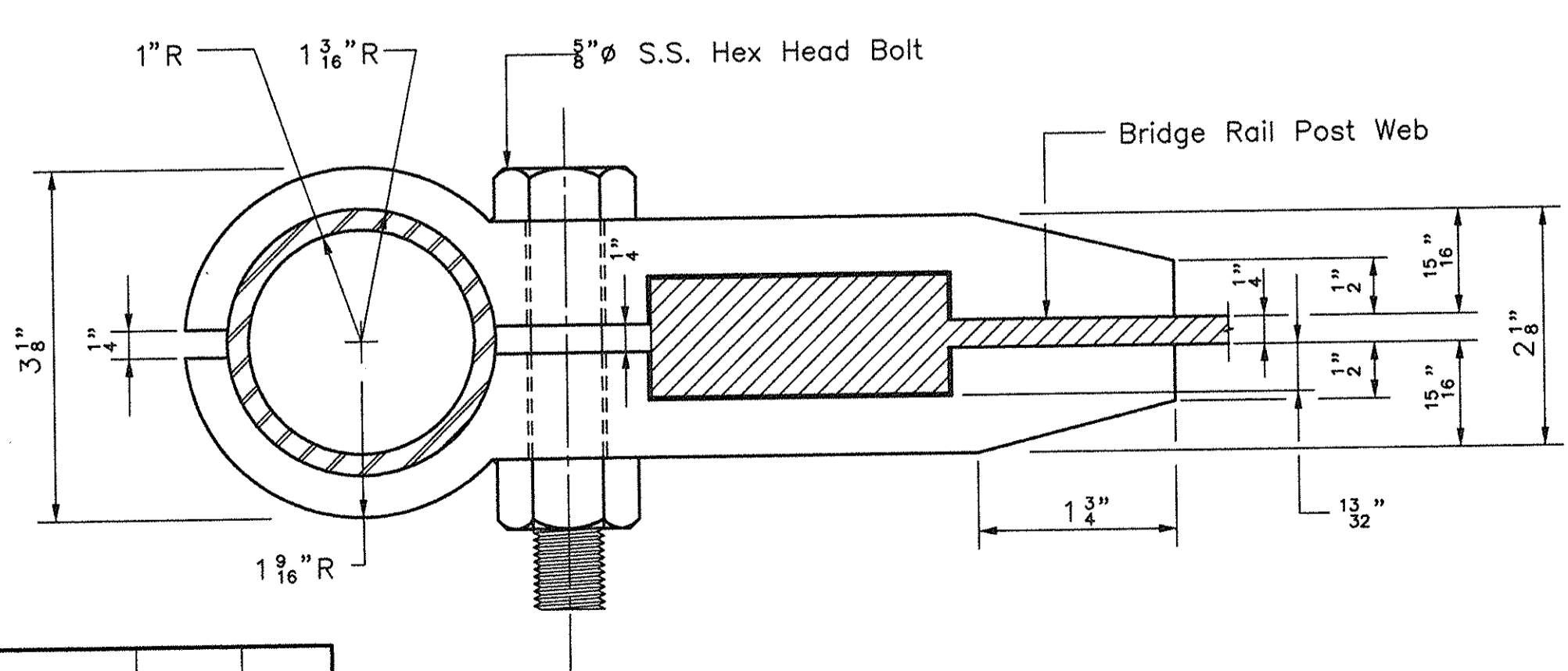
ELEVATION UPPER CLAMP
3/4 SIZE



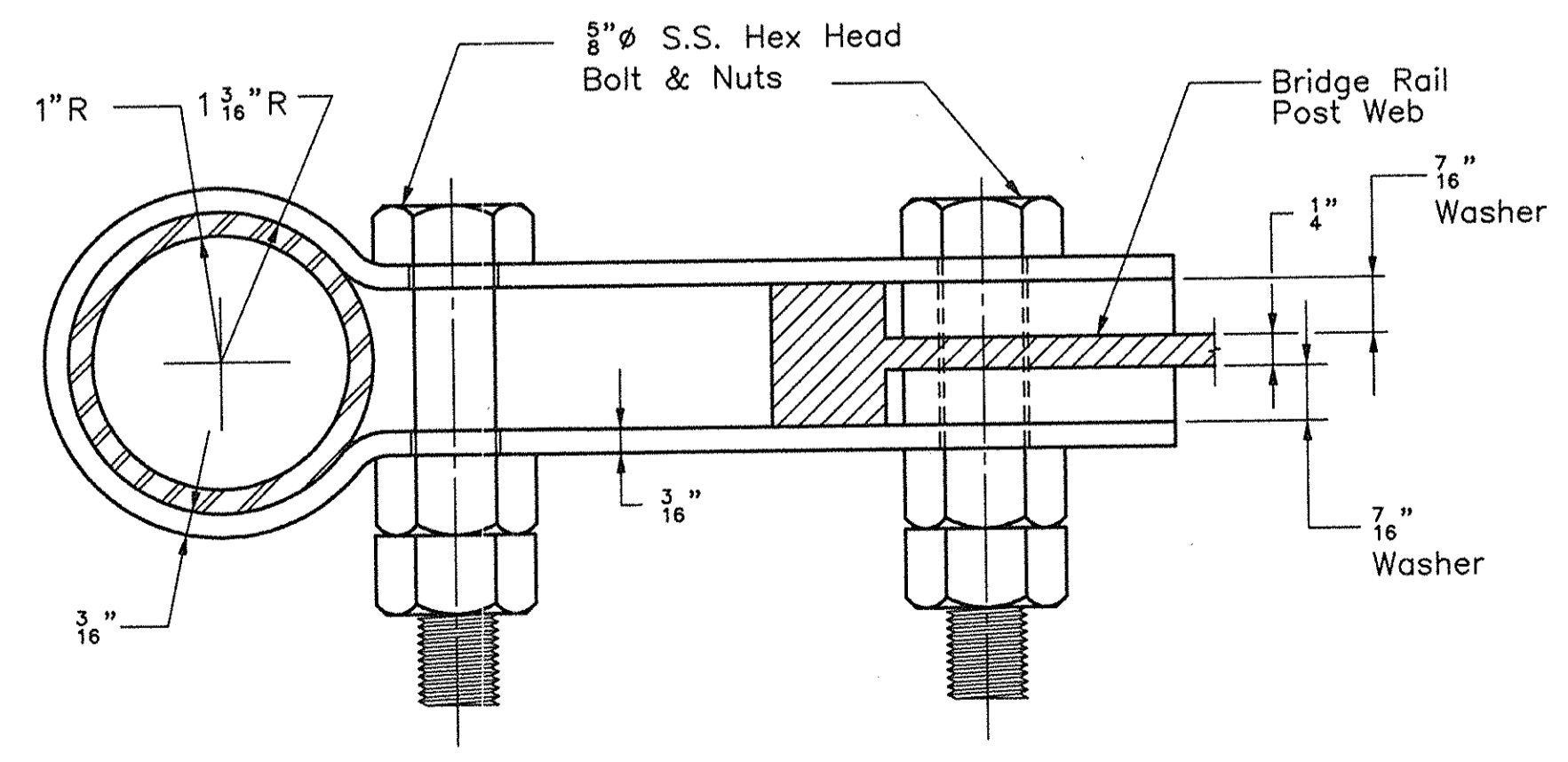
SECTION C-C
FULL SIZE



ELEVATION SECTION D-D
UPPER CLAMP WASHER
FULL SIZE



SECTION A-A
3/4 SIZE



SECTION B-B
3/4 SIZE

NOTES

1. Clamp Details Are For Attachment To AL-3 Type Bridge Rail Posts.
2. Lower Clamps Shall Be Fabricated From Aluminum Alloy 356-T6 Conforming To ASTM B26 Or B108.
3. Upper Clamps Shall Be Fabricated From Aluminum Alloy 6061-T6 Or 6063-T6 Conforming To ASTM B221.
4. Upper Clamp Washer Shall Be Fabricated From Aluminum Alloy 6061-T6 Conforming To ASTM B221.

NO.	REVISION	BY	DATE

MASSACHUSETTS TURNPIKE AUTHORITY MASSACHUSETTS TURNPIKE	
STANDARD DETAILS CHAIN LINK FENCE FOR BRIDGES DETAILS II	
Scale: As Noted	Contract No.
MASSACHUSETTS TURNPIKE AUTHORITY	
Sheet No.	